TOWN OF EXETER
PLANNING DEPARTMENT MEMORANDUM

Date: November 7th, 2023
To: Conservation Commission Board Members
From: Kristen Murphy, Natural Resource Planner
Subject: November 14th Conservation Commission Meeting

Sewer Pump Station
DPW is proposing to upsize the existing pump station and ancillary facilities to meet current and future demand. The work will involve both permanent and temporary impacts to the tidal buffer as well as impacts within the highest observable tide line (HOTL).

Suggested Motion: Send a memo to the State indicating:

____ *We have reviewed this application and have no objection to the application as proposed.*

____ *We have reviewed this application and recommend that the application be (approved)(denied) as noted below:*

Committee Reports:
Property Management

- $20k Mooseplate Grant received for Raynes. Submitted Hometown Grant appln. **CIP Town Funding request recommended for deferral until 2025.**
- All mowing is now complete.

Trails

- Eversource – work ongoing. Trail closure still in effect. Toby (FRR) reported cars parking within corridor. Eversource to install posts to deter.
- Sig Sauer volunteer bridge repair project
- Met with NHDES DWTF reps for both Rugg and Rider parcels

Outreach

- Bird outreach idea for conservation lands using Merlin
- Pop-Up Pup Walks

Other Committee Reports (River Study, Sustainability, Energy/CPAC, Tree, CC Roundtable)

- Energy: $200,000 EECBG Grant awarded for improving energy efficiency in 100 low-income manufactured housing parks (60% SMI)
- Tree: Planted final 15 elm trees
- River Study Committee:
- SAC: Discussing alternatives for committee (quarterly, merge with EC, outcome tbd)

Other Business

- NHACC Annual meeting
- Seed swap this Saturday in Kingston: Details

TOWN OF EXETER

OCTOBER 2023

New Hampshire Department of Environmental Services
Wetland Permit Application

Webster Avenue Pump Station and Force Main Upgrades

Exeter, NH

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

WETLAND PERMIT APPLICATION

Webster Avenue Pump Station and Force Main Upgrades

Exeter, NH

OCTOBER 2023

PREPARED FOR:

TOWN OF EXETER
10 FRONT STREET
EXETER, NH 03833

PREPARED BY:

WRIGHT-PIERCE
230 Commerce Way, Suite 302
Portsmouth, NH 03801
Phone: 603.430.3728 | Fax:
603.430.4083

Table of Contents

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Application and Fee

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: Town of Exeter **TOWN NAME:** Exeter

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?
  ○ If yes, species or habitat name(s): Northern Black Racer
  ○ NHB Project ID #: 23-2431
	☒ 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: • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year:	☐ Yes ☒ No

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):
0.08 sq mi

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 Town of Exeter, NH, owns, operates, and maintains sewer utilities in Exeter, NH, which includes the Webster Avenue Pump Station and force main. The Webster Avenue Pump Station receives flow from portions of the Portsmouth Avenue area, the Jady Hill area, and the Town's Water Treatment Plant discharge. The pump station and force main were originally constructed in 1965. The pump station underwent a major upgrade in 2000; but the force main is still original construction. The proposed project upgrades pump station infrastructure that is near the end of its useful life and increases the capacity of the Webster Avenue Pump Station to accommodate future development within the pump station sewershed.

To meet the present and future need of the Town, the proposed project includes construction of a new pump station, generator, channel grinder, and replacing the existing 8-inch asbestos cement force main with a 12-inch high density polyethylene (HDPE) force main. The proposed project also includes in-kind replacement of an existing 24-inch CMP culvert. The culvert crosses Webster Avenue near the pump station and is currently in poor condition due to significant corrosion.

The proposed impact area within the previously disturbed tidal buffer zone for the project includes 9,762 sq ft of temporary impact (trenchwork to install force main, test pits, paving to match existing grade, erosion & sediment control installation/maintenance) and 8,747 sq ft of permanent impacts (new pump station building, generator enclosure, site grading (including driveway pavement improvements/turnaround), security fencing, paving) within the previously disturbed 100-ft Tidal Buffer Zone (TBZ). Additionally, 93 sq ft of temporary and 117 sq ft of permanent wetland impacts are proposed below the HOTL associated with culvert replacement. See Wetland Impact Figures (Section 3).

SECTION 3 - PROJECT LOCATION

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

ADDRESS: 21 Webster Avenue

TOWN/CITY: Exeter

TAX MAP/BLOCK/LOT/UNIT: 52-12

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Wheelwright Creek
☐ N/A

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): ° North
° 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: Town of Exeter (Paul Vlasich)		
MAILING ADDRESS: 13 Newfields Road		
TOWN/CITY: Exeter	STATE: NH	ZIP CODE: 03833
EMAIL ADDRESS: pvlasich@exeternh.gov		
FAX: 603.772.1355	PHONE: 603.773.6160	

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.: Eckstrom, Britt		
COMPANY NAME: Wright-Pierce		
MAILING ADDRESS: 230 Commerce Way Suite 302		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: britt.eckstrom@wright-pierce.com		
FAX:	PHONE: 603.570.7126	

ELECTRONIC COMMUNICATION: By initialing here BE, 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):
The proposed wetland impacts are located primarily within a previously developed Tidal Buffer Zone (TBZ). The proposed impacts will be for a new pump station building, generator enclosure, a culvert replacement, and site grading. The majority of impacts are temporary and will be restored to match existing ground cover condition. Standard erosion control practices will be used through construction to prevent erosion and sedimentation impacts to Wheelwright Creek and adjacent jurisdictional wetlands. Jurisdictional wetlands, including the HOTL were delineated by a certified wetland scientist. See Wetland Report and Coastal Functional Assessments included in Attachment 6. The proposed project will not permanently impact the ability for the buffer area to provide habitat value and provide stability of the coastal shoreline. A Coastal Resource Worksheet has been prepared and included as Attachment 16, in accordance with requirements set forth in Env-Wt 600.

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/rivers, 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	117		☐	93		☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ	8,747		☐	9,762		☐
	Docking - Tidal Water			☐			☐
TOTAL		8,864			**9,855**		

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):	18,719 SF	× $0.40 =	$ 7487.60
Seasonal docking structure:	SF	× $2.00 =	$
Permanent docking structure:	SF	× $4.00 =	$
Projects proposing shoreline structures (including docks) add $400 =			$

Total =	$ 7487.60
The application fee for minor or major impact is the above calculated total or $400, whichever is greater =	$ 7487.60

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: PV BE	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: PV BE	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: PV BE	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: PV BE	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): Paul Vlasich	PRINT NAME LEGIBLY: PAUL VLASICH	DATE: 10/6/23
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE): Britt Eckstrom	PRINT NAME LEGIBLY: Britt Eckstrom	DATE: 10.6.2023

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”.

Town of Exeter, NH	PAGE: 1 OF 1	CHECK NUMBER:	00062602

INVOICE DATE	INVOICE NUMBER	DESCRIPTION	INVOICE AMOUNT
10/04/2023	10042023	wetlands permit	$7,487.60

Vendor No.	Vendor Name	Check No.	Check Date	Check Amount
1113	TREASURER STATE OF NH	62602	10/20/2023	$7,487.60

DO NOT ACCEPT UNLESS THIS CHECK IS PRINTED WITH A COLOR BACKGROUND, CONTAINS A VOID PANTOGRAPH, MICROPRINTING FACE AND BACK, UV FIBERS AND A WATERMARK ON THE REVERSE SIDE

Town of Exeter, NH
10 Front St.
Exeter, NH 03833

Citizen's Bank- AP

Vendor Number	Check Date	Check Number
1113	10/20/2023	62602

VOID 90 DAYS

$7,487.60

Seven Thousand Four Hundred Eighty-seven Dollars and 60 Cents

Pay To the Order Of
TREASURER STATE OF NH
DBA NHDES WETLANDS BUREAU
PO BOX 95
CONCORD, NH 03302-2456

Susan Perry MP
Treasurer

⑈0006260 2⑈ ⑆011401533⑆ 3308920745⑈

2

US Army Corps of Engineers

US Army Corps of Engineers ®
New England District

Appendix B
New Hampshire General Permits
Required Information and USACE Section 404Checklist

USACE Section 404 Checklist

1. Attach any explanations to this checklist. Lack of information could delay a USACE permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 3 for information on single and complete projects.
4. Contact USACE at (978) 318-8832 with any questions.
5. The information requested below is generally required in the NHDES Wetland Application. See page 61 for NHDES references and Admin Rules as they relate to the information below.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See the following to determine if there is an impaired water in the vicinity of your work area. * https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/ https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to tidal SAS, prime wetlands, or priority resource areas? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at https://www4.des.state.nh.us/NHB-DataCheck/.	X	
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	N/A	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	N/A	
2.7 What is the area of the proposed fill in wetlands?	N/A	
2.8 What % of the overall project sire will be previously and proposed filled wetlands?	N/A	
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://www4.des.state.nh.us/NHB-DataCheck/. USFWS IPAC website: https://ipac.ecosphere.fws.gov/	X	

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: https://wildlife.state.nh.us/wildlife/wap-high-rank.html. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 31?	N/A	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	N/A	
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the RPR Form (www.nh.gov/nhdhr/review) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 37 GC 14(d) of the GP document**	X	
6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)	Yes	No
Projects with greater than 1 acre of permanent impact must include the following: • Functional assessment for aquatic resources in the project area. • On and off-site alternative analysis. • Provide additional information and description for how the below criteria are met.	N/A	
6.1 Will there be complete loss of aquatic resources on site?		
6.2 Have the impacts to the aquatic resources been avoided and minimized to the greatest extent practicable?		
6.3 Will all aquatic resource function be lost?		
6.4 Does the aquatic resource (s) have regional significance (watershed or ecoregion)?		
6.5 Is there an on-site alternative with less impact?		
6.6 Is there an off-site alternative with less impact?		
6.7 Will there be a loss to a resource dependent species?		
6.8 Are indirect impacts greater than 1 acre within and adjacent to the project area?		
6.9 Does the proposed mitigation replace aquatic resource function for direct, indirect, and cumulative impacts?	N/A	

*Although this checklist utilizes state information, its submittal to USACE is a federal requirement.

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

National Flood Hazard Layer FIRMette

FEMA

70°56'38"W 42°59'33"N

70°56'1"W 42°59'7"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/10/2020 at 9:09 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Please mail the completed form and required material to:

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

RECEIVED JAN 0 9 2023

DHR Use Only	
R&C #	14560
Log In Date	1/9/23
Response Date	3/20/23
Sent Date	3/21/23

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

☐ This is a new submittal
☒ This is additional information relating to DHR Review & Compliance (R&C) #: 11789 & 14102

GENERAL PROJECT INFORMATION

Project Title W[illegible] Avenue Pump Station and Force Main Upgrades

Project Location We[illegible]nue

City/Town Exeter Tax [illegible] Mult. Lot # Mult.

NH State Plane - Feet Geogra[illegible]oordinates: Easting 1179590 Northing 178670
(See RPR Instructions and R&C FA[illegible] for guidance.)

Lead Federal Agency and Contact *(if applicable)* N/A
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference # N/A

State Agency and Contact *(if applicable)* NHDES, Jennifer Brady

Permit Type and Permit or Job Reference # N/A

APPLICANT INFORMATION

Applicant Name Town of Exeter

Mailing Address 10 Front Street Phone Number 6035707169

City Exeter State NH Zip 03833 Email pvlasich@exeternh.gov

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Lauren King/Wright-Pierce

Mailing Address 230 Commerce Ave Suite 302 Phone Number 6035707150

City Portsmouth State NH Zip 03801 Email lauren.king@wright-pierce.com

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

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION 15560

Project Boundaries and Description

- ☐ Attach the Project Mapping ***using EMMIT or relevant portion of a 7.5' USGS Map.*** *(See RPR Instructions and R&C FAQs for guidance.)*
- ☐ Attach a detailed narrative description of the proposed project.
- ☐ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- ☐ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
- ☐ A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1.** *(Blank table forms are available on the DHR website.)* Please note, using EMMIT Guest View for an RPR records search does not provide the necessary information needed for DHR review.
  EMMIT or in-house records search conducted on / / .

Architecture

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

Approximate age(s):

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

Archaeology

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

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

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

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

☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.

☐ No Potential to cause Effects ☑ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

Comments: CONCUR WITH RESULTS OF PHASE 1-A SURVEY & RECOMMENDATION OF NO ADDITIONAL STUDY.

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

Authorized Signature: Naomi Miller, DSHPO Date: 3/20/23

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:
Project Code: 2023-0129153
Project Name: Webster Ave PS

September 14, 2023

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

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

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

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (**Updated 4/12/2023**) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

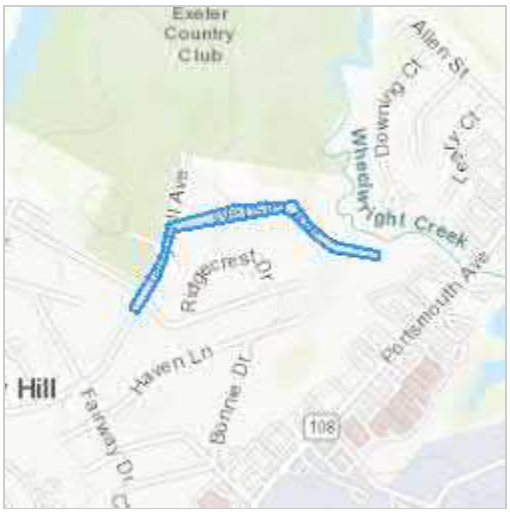
PROJECT SUMMARY

Project Code: 2023-0129153
Project Name: Webster Ave PS
Project Type: Wastewater Pipeline - Maintenance / Modification - Below Ground
Project Description: The Town of Exeter, NH, owns, operates, and maintains sewer utilities in Exeter, NH, which includes the Webster Avenue Pump Station and force main. The Webster Avenue Pump Station receives flow from portions of the Portsmouth Avenue area, the Jady Hill area, and the Town's Water Treatment Plant discharge. The pump station and force main were originally constructed in 1965. The pump station underwent a major upgrade in 2000; but the force main is still original construction. The Town is looking to renew its infrastructure and increase the capacity of the Webster Avenue Pump Station to foster future development within the pump station sewershed.

To meet the present and future need of the Town, the proposed project includes construction of a new pump station, generator, channel grinder, and replacing the existing 8-inch asbestos cement force main with a 12-inch high density polyethylene (HDPE) force main.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.9879669,-70.93655662433122,14z



Counties: Rockingham County, New Hampshire

ENDANGERED SPECIES ACT SPECIES

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

MAMMALS

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

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Exeter town
Name: Miranda Pierre
Address: 230 Commerce Way Suite 302
City: Portsmouth
State: NH
Zip: 03801
Email miranda.pierre@wright-pierce.com
Phone: 6035707159

LEAD AGENCY CONTACT INFORMATION

Lead Agency: New Hampshire Department of Environmental Services

3

Project Plans

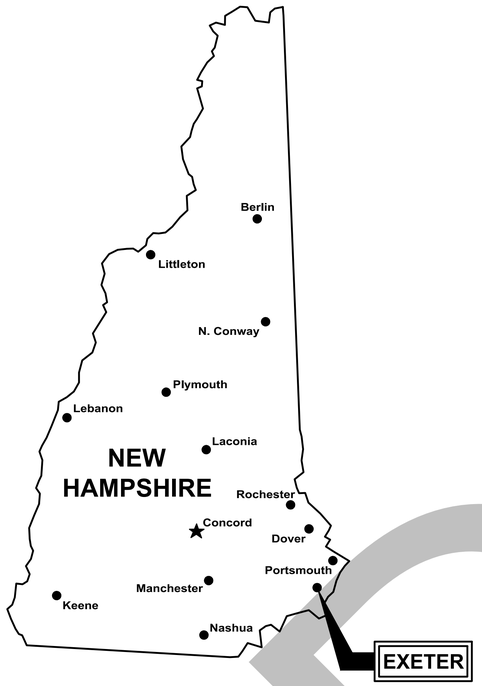
TOWN OF EXETER, NEW HAMPSHIRE

CONTRACT DRAWINGS FOR

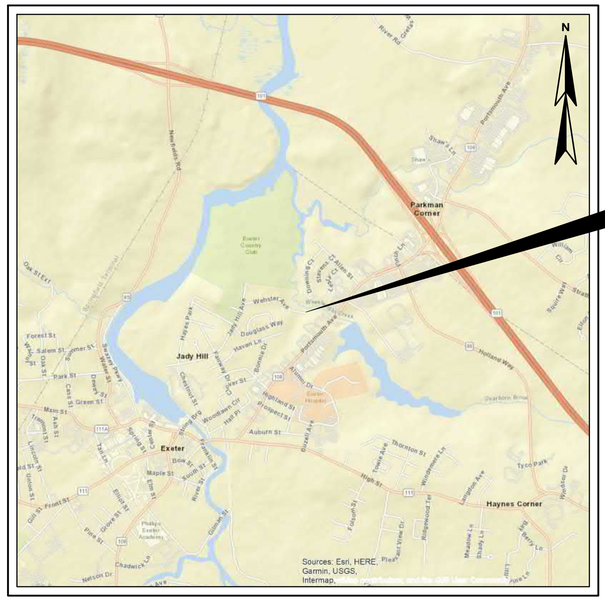
WEBSTER AVENUE PUMP STATION AND FORCE MAIN UPGRADES

AUGUST 2023

60% DESIGN REVIEW



DRAWING INDEX



LOCATION PLAN
SCALE: 1"=2,000'

WRIGHT-PIERCE
Engineering a Better Environment

603.606.4420 | www.wright-pierce.com

WP PROJECT No. 21244

GENERAL NOTES

1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER OR ENGINEER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS-OF-WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE MUTCD AND ALL STATE AND LOCAL REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO COMMENCING CONSTRUCTION. THE POLICE DEPARTMENT AND FIRE DEPARTMENT ARE TO BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. REFER TO SPECIFICATION SECTION 01570.
4. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
5. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.
6. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.
7. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.
8. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE OWNER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.
9. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE PLANS. TESTS PITS ARE REQUIRED WHERE SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG PRIOR TO CONNECTING PROPOSED SEWERS TO EXISTING SEWERS. THE RESULTS OF TEST PITS DUG TO DETERMINE EXISTING SEWER ELEVATIONS AND LOCATIONS WILL BE REPORTED TO THE ENGINEER. ADJUSTMENTS TO INVERTS, LENGTHS, AND SLOPES OF PROPOSED SEWER MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. THE HORIZONTAL ALIGNMENT OF THE NEW SEWERS AND FORCE MAINS MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR APPROVAL OF THE ENGINEER.
10. INITIAL PAVING SHALL BE CONDUCTED WITHIN TWO WEEKS OF COMPLETION OF PLACEMENT OF FINAL BACKFILL UNLESS OTHERWISE AUTHORIZED BY ENGINEER. INITIAL PAVEMENT SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR FOR A MINIMUM PERIOD OF TWO MONTHS BEFORE FINAL PAVEMENT IS PLACED. FINAL PAVEMENT MAY BE PLACED OVER THE INITIAL PAVING PROVIDED INITIAL PAVING COURSE IS IN GOOD REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND SHIMMING THE INITIAL PAVEMENT AS NECESSARY TO ACCEPT THE FINAL PAVING COURSE. IF CONDITIONS WARRANT, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE INITIAL PAVING PRIOR TO FINAL PAVING.

EXISTING SITE CONDITIONS

1. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.
2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

   ELECTRIC:
   UNITIL-ELECTRIC
   TEL. (800) 582-7276

   WATER/SEWER/DRAIN:
   TOWN OF EXETER
   PUBLIC WORKS DEPARTMENT
   13 NEWFIELDS ROAD
   EXETER, NH 03833
   TEL. (603) 773-6157

   TELEPHONE/CABLE TV:
   COMCAST
   115 EPPING ROAD
   EXETER, NH 03833
   (800) 266-2278

   DIG SAFE:
   TEL. (800) DIGSAFE

   GAS:
   UNITIL-GAS
   (866) 933-3820

3. HAZARDOUS ENVIRONMENTAL CONDITIONS HAVE BEEN IDENTIFIED WITHIN THE AREA OF WORK. REFER TO SPECIFICATION SECTION 00800-SC-5.06. IF THE PRESENCE OF ADDITIONAL HAZARDOUS ENVIRONMENTAL CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY. ALL ACTIVITIES, HANDLING AND DISPOSAL OF HAZARDOUS ENVIRONMENTAL CONDITIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.

SITE DEMOLITION

1. REFER TO THE EXISTING SITE PLAN, FOR ADDITIONAL INFORMATION REGARDING EXISTING FACILITIES. REFER TO THE LAYOUT DRAWING FOR LIMITS OF WORK.
2. REFER TO SPECIFICATION SECTION 01010, WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.
3. REFER TO ARCHITECTURAL, STRUCTURAL, PROCESS, MECHANICAL, PLUMBING, INSTRUMENTATION AND ELECTRICAL DRAWINGS FOR SPECIFIC INFORMATION REGARDING DEMOLITION AND REMOVAL.
4. DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES, BUT IS TO REMAIN, SHALL BE REINSTALLED/REPLACED AS NEEDED. EXISTING PIPES AND CONDUIT DESIGNATED AS "ABANDONED" MAY BE REMOVED IF THE CONTRACTOR SO CHOOSES. IF ABANDONED PIPE CONFLICTS WITH NEW SITE PIPING OR FACILITIES, THEN A PORTION OF THE ABANDONED PIPE SHALL BE REMOVED, AND THE NEW ENDS OF ABANDONED PIPE CAPPED OR PLUGGED WITH CONCRETE.
5. ALL EXISTING PIPING AND UTILITIES WHICH ARE BENEATH PROPOSED STRUCTURES, AND ARE TO BE ABANDONED, SHALL BE REMOVED TO A MINIMUM OF 5-FEET OUTSIDE OF THE STRUCTURE. PIPE AND UTILITIES BENEATH PROPOSED STRUCTURES THAT ARE TO REMAIN SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE INDICATED. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS.
6. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER. REFER TO SPECIFICATION SECTION 02050A.
8. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.
9. THE CONTRACTOR WILL ENCOUNTER ASBESTOS CEMENT (AC) PIPE DURING EXECUTION OF THE WORK. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF OSHA AND ALL OTHER FEDERAL, STATE AND LOCAL REGULATIONS WHEN HANDLING, REMOVING AND DISPOSING OF AC PIPES. A BID ITEM HAS BEEN INCLUDED IN THE BID FORM TO ESTABLISH A UNIT PRICE FOR THE REMOVAL AND DISPOSAL OF AC PIPE. REFER TO SPECIFICATION SECTION 02076.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THAT ALL PROCESS FLOWS ARE MAINTAINED DURING CONSTRUCTION. GRAVITY OR PUMPED BYPASSES AND OTHER MEANS OF MAINTAINING FLOW SHALL BE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY STOPPAGES OR BYPASSES WITH THE OWNER AND ENGINEER. FEDERAL AND STATE REGULATIONS REQUIRE THAT THE PUMP STATION REMAIN IN OPERATION. REFER TO SPECIFICATION SECTION 01010.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND GROUNDWATER DEWATERING OPERATIONS.

SITE CLEARING, GRUBBING AND GRADING

1. STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115. REFER TO THE LAYOUT AND GRADING DRAWINGS FOR LIMIT OF WORK AND STRIPPING.
2. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS-OF-WAY AND PROPERTY LINES ON STATE OR COUNTY OWNED PROPERTY OR EASEMENTS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.
3. CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.
4. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY HAY BALE FILTERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM. REFER TO THE CIVIL DETAIL DRAWINGS.
5. TEST PIT AND/OR BORING LOGS FOR THE PROJECT SITE ARE INCLUDED IN APPENDIX A OF THE SPECIFICATIONS. THESE ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. PLEASE NOTE THAT THE SOIL DESCRIPTIONS PROVIDED ON THE TEST PIT BORING LOGS DO NOT REPRESENT FIELD CONDITIONS OTHER THAN AT THE SPECIFIC TEST BORING LOCATIONS. THE CONDITIONS BETWEEN BORING LOCATIONS MAY VARY FROM THOSE SHOWN ON THE TEST BORING LOGS.
6. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562.
7. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.
8. ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.
9. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.
10. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.
11. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.
12. ALL ROAD AND DRIVE CROSS SLOPES SHALL PITCH 1/4-INCH PER FOOT MINIMUM. ALL PAVED SURFACES SHALL PITCH 1% UNLESS OTHERWISE NOTED. REFER TO THE CIVIL DETAIL DRAWINGS.
13. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE TOPSOILED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4 INCHES OF SOIL SHALL BE TOPSOIL. REFER TO SPECIFICATION SECTION 02485.
14. THE CONTRACTOR SHALL FOLLOW ALL ENDANGERED SPECIES ACT 4(D) RULES REGARDING THE NORTHERN LONG EARED BAT. THIS INCLUDES AVOIDANCE OF TREE REMOVAL DURING THE MONTHS OF JUNE AND JULY. CONTRACTOR SHALL PLAN ACCORDINGLY.

CIVIL SITE LAYOUT

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
2. REFER TO THE SITE PIPING AND SITE GRADING DRAWINGS FOR ADDITIONAL LAYOUT INFORMATION.
3. IN GENERAL, THE GIVEN STRUCTURE LOCATIONS ARE TO THE OUTSIDE FACE OF THE STRUCTURE FOUNDATION WALL, NOT FOOTINGS. RADII SHOWN FOR ROADS ARE TO EDGE OF PAVEMENT.
4. PLACE CRUSHED STONE MOWING STRIP AROUND THOSE STRUCTURES AS INDICATED ON THE DRAWINGS. REFER TO THE CIVIL DETAIL DRAWINGS.
5. THE LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND ENGINEER. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO THESE AREAS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF NEW HAMPSHIRE, AT NO ADDITIONAL COST TO THE OWNER.
7. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
8. BOLLARD LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE BOLLARD LOCATIONS WITH THE ENGINEER. REFER TO THE CIVIL DETAIL DRAWINGS.
9. EXISTING CONDITIONS SITE PLAN DEVELOPED FROM SURVEY DRAWING PREPARED BY DOUCET SURVEY, LLC, DATED OCTOBER 1, 2020, AND EXISTING AVAILABLE RECORD DRAWING INFORMATION.

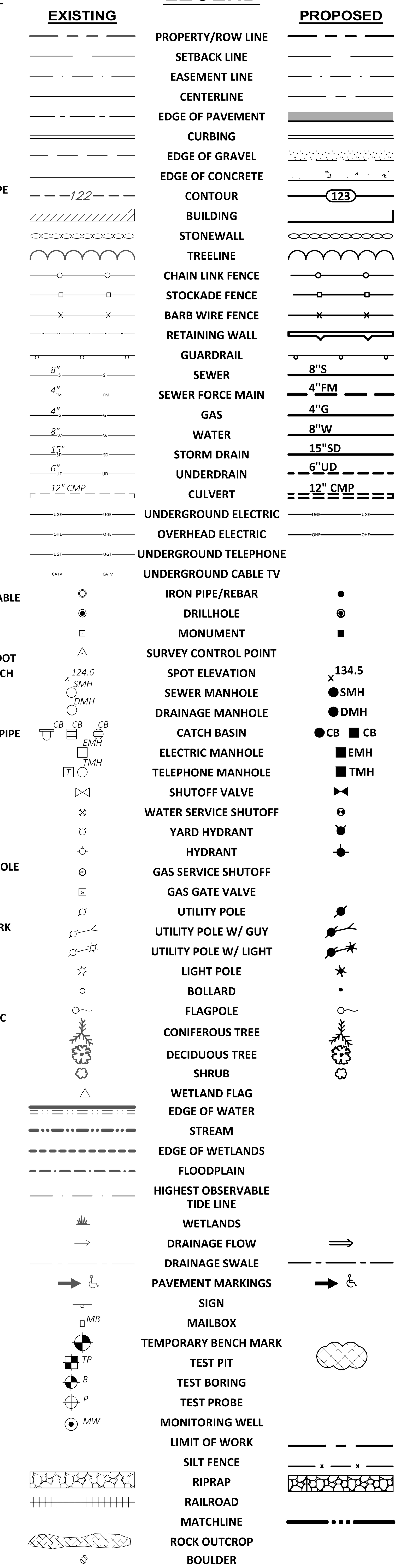
CIVIL SITE PIPING

1. THE PIPING SCHEDULE AND ADDITIONAL PIPING NOTES ARE LOCATED IN SPECIFICATION SECTION 15050.
2. ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN PIPING WILL BE PERMITTED. CONCRETE THRUST BLOCKS OR OTHER ACCEPTABLE RESTRAINT SYSTEM IS REQUIRED ON ALL FITTINGS ON PRESSURE PIPE. WHERE A RESTRAINED JOINT SYSTEM IS USED, THE NUMBER OF PIPES WITH RESTRAINED JOINTS ON EITHER SIDE OF THE FITTING SHALL BE DESIGNED TO REFLECT THE PROJECT SOIL CONDITIONS AND PEAK SURGE PRESSURE IN THE PIPING SYSTEM. SEE THE CIVIL DETAIL DRAWINGS FOR THRUST BLOCK DETAILS. PROVIDE ALL BENDS (HORIZONTAL AND VERTICAL) AS REQUIRED TO MEET THE GRADES AND ALIGNMENT INDICATED ON THE DRAWINGS.
3. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING PIPING AND UTILITIES IN THE FIELD BY TEST PIT EXCAVATION PRIOR TO COMMENCING INSTALLATION OF ANY OF THE NEW PIPING AFFECTED. WHERE NEW PIPE CONNECTS TO EXISTING PIPING OR STRUCTURAL PENETRATION, CONTRACTOR SHALL VERIFY ELEVATION BY TEST PIT, AS REQUIRED, PRIOR TO INSTALLATION OF ANY OF THE ASSOCIATED/AFFECTED NEW PIPING. IDENTIFIED CONFLICTS WITH EXISTING PIPING AND UTILITIES WILL BE REVIEWED WITH THE ENGINEER PRIOR TO COMMENCING INSTALLATION. THE HORIZONTAL ALIGNMENT OF NEW PIPING MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR REVIEW AND ACCEPTANCE OF THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
4. ALL WASTEWATER PIPING AND PRESSURIZED PIPES (EXCLUDING BUILDING DRAINS AND ANY PVC PIPING) INSTALLED BENEATH STRUCTURES SHALL BE ENCASED IN CONCRETE. SEE STRUCTURAL DRAWING FOR DETAILS.
5. ALL BURIED CONNECTIONS TO STRUCTURES SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4-FEET FROM THE STRUCTURES. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED (SOLID SLEEVE). REFER TO SPECIFICATION SECTION 15088.
6. PROVIDE CAST OR DUCTILE IRON WALL CASTINGS, OR GALVANIZED STEEL PIPE SLEEVES, FOR ALL PIPE PENETRATIONS MADE THROUGH CONCRETE FOUNDATIONS, WALLS AND SLABS. ALL WALL SLEEVES AND WALL CASTINGS SHALL HAVE WATERSTOPS. SEE PROCESS, MECHANICAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF PENETRATIONS. NEW PENETRATIONS THROUGH EXISTING STRUCTURE WALLS SHALL BE BY CORING MACHINE AND LINK-TYPE SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK SEAL SIZES. SEE PROCESS DETAIL DRAWINGS. REFER TO SPECIFICATION SECTION 15092.
7. TRENCH INSULATION SHALL BE USED WHERE DEPTH OF COVER IS LESS THAN 5-FEET. REFER TO THE CIVIL DETAIL DRAWINGS FOR THE TRENCH INSULATION DETAIL.
8. TRENCH INSULATION SHALL BE USED WHEN THERE IS LESS THAN 2-FEET BETWEEN THE SEWER OR FORCE MAIN AND A CULVERT. REFER TO THE CIVIL DETAIL DRAWINGS FOR THE TRENCH INSULATION DETAIL.
9. MANHOLES ARE 4-FEET IN DIAMETER UNLESS OTHERWISE NOTED. THE TOP OF MANHOLE FRAMES SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE NOTED ON DRAWINGS. SEWER MANHOLE INVERTS SHOWN ON THE DRAWINGS ARE TO THE INSIDE FACE OF THE MANHOLE.
10. PIPES WITHIN VALVE PITS (MANHOLES) SHALL BE SUPPORTED 12-INCHES ABOVE BOTTOM OF MANHOLE ON ADJUSTABLE PIPE SADDLE SUPPORTS, IN ACCORDANCE WITH SPECIFICATION SECTION 15094, UNLESS OTHERWISE INDICATED.
11. CONTRACTOR SHALL RE-SHAPE INVERTS AS REQUIRED WHEN CONNECTING INTO EXISTING MANHOLES.
12. REFER TO SPECIFICATION SECTION 02200 FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.
13. COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE-YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
14. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF THE WORKDAY. OPEN TRENCHES OUTSIDE OF THE ROADWAY MAY BE LEFT OPEN IF THE CONTRACTOR PROVIDES ADEQUATELY SAFE BARRICADING AND LIGHTS.
15. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.
16. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE CIVIL EXISTING CONDITIONS AND DEMOLITION PLAN. ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
17. WHERE POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER LINES. A MINIMUM SEPARATION OF 18-INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED, IF POSSIBLE. WHERE A WATER LINE CROSSES UNDER A WASTEWATER LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE 18-INCHES OF VERTICAL SEPARATION IS NOT POSSIBLE, THE CONTRACTOR SHALL OBTAIN A SEPARATION REQUIREMENT WAIVER FROM DES. ADD
18. PIPING ON THE SITE PIPING PLAN HAS BEEN SHOWN BROKEN FOR CLARITY ONLY. PIPE BREAKS DO NOT INDICATE RELATIVE ELEVATIONS OF PIPING.
19. ELECTRICAL CONDUIT RUNS ARE INDICATED ON THE ELECTRICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION, EXCAVATION AND BACKFILLING REQUIRED FOR THE ELECTRICAL CONDUITS. COORDINATE ALL UNDERGROUND INSTALLATIONS WITH ALL TRADES.

CIVIL ABBREVIATIONS

&	AND
Ø, DIA	DIAMETER
#, NO	NUMBER
AC	ASBESTOS CEMENT
APP'D	APPROVED
BLDG	BUILDING
CB	CATCH BASIN
CEN	CENTER
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DEMO	DEMOLITION
DMH	DRAIN MANHOLE
DI	DUCTILE IRON
DR	DRAIN
DWG	DRAWING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
FM	FORCE MAIN
FT	FEET
G	GAS
HYD	HYDRANT
IN	INCH
INF	INFLUENT
INV	INVERT
LBS	POUNDS
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MW	MONITORING WELL
N	NORTH
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N/A	NOT AVAILABLE/APPLICABLE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PC	PERFORATED CLAY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PS	PRIMARY SLUDGE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
RD	ROOF DRAIN
REQ'D	REQUIRED
ROW	RIGHT OF WAY
S	SLOPE, SEWER
SD	STORM DRAIN
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
SQ	SQUARE
STA	STATION
T, XFMR	TRANSFORMER
TBM	TEMPORARY BENCH MARK
THK	THICKNESS
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VERT	VERTICAL
VC	VITRIFIED CLAY
W/	WITH
W	POTABLE WATER

LEGEND



NO	REVISIONS	APP'D	DATE
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PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

WRIGHT-PIERCE
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TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

GENERAL NOTES, LEGEND & ABBREVIATIONS

DRAWING
C-001

SURVEY NOTES:

1. HORIZONTAL DATUM BASED ON NEW HAMPSHIRE STATE PLANE(2800) NAD83(2011) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK.
2. VERTICAL DATUM IS BASED ON NGVD29 PER DISK B 14 1934 WITH A PUBLISHED ELEVATION OF 37.67'.
3. WETLAND BOUNDARIES DELINEATED BY MARC JACOBS, CSS CWS, PWS, CPESC, IN AUGUST 2020. WETLANDS FLAGS SURVEYED BY DOUCET SURVEY, LLC.

NEW HAMPSHIRE FISH AND GAME RECOMMENDED PERMIT CONDITIONS:

1. NORTHERN BLACK RACER (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THIS SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THIS SPECIES, ALONG WITH NHFG CONTACT INFORMATION.
2. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT.
3. OBSERVATIONS OF NORTHERN BLACK RACERS IN THE MONTHS OF APRIL-MAY AND SEPTEMBER-OCTOBER MAY INDICATE THE POTENTIAL FOR A DEN SITE ON OR NEAR THE PROJECT SITE. OBSERVATIONS OF THIS SPECIES DURING THIS TIMEFRAME SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM. PLEASE CONTACT MELISSA WINTERS (603-479-1129) OR BRENDAN CLIFFORD (603-944-0885). OBSERVATIONS OF THIS SPECIES OUTSIDE OF THIS TIMEFRAME CAN FOLLOW GENERAL REPORTING GUIDANCE. PLEASE INCLUDE PHOTOGRAPH WITH TEXT IF FEASIBLE.
4. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES.
5. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION.
6. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE.
7. IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.
   A) SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE IF IN DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.
8. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

BLACK RACER SNAKE (STATE THREATENED):

- SOLID BLACK WITH A WHITE THROAT AND CHIN
- SLENDER WITH GLOSSY SCALES, 3-6 FT. LONG
- HATCHLINGS ARE VERY SMALL AND PATTERNED

ALL OBSERVATIONS OF NORTHERN BLACK RACER SNAKES ENCOUNTERED FROM THE END OF SEPTEMBER THROUGH THE MONTH OF APRIL MUST BE IMMEDIATELY REPORTED TO THE NHFG DEPARTMENT (MELISSA DOPERALSKI 603-479-1129 (CELL) OR BRENDAN CLIFFORD 603-944-0885) AS THIS INDICATES A POTENTIAL HIBERNACULUM IN THE AREA. PLEASE ATTEMPT TO PHOTOGRAPH THIS SPECIES IF POSSIBLE.

NO	REVISIONS	APP'D	DATE
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PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

WRIGHT-PIERCE
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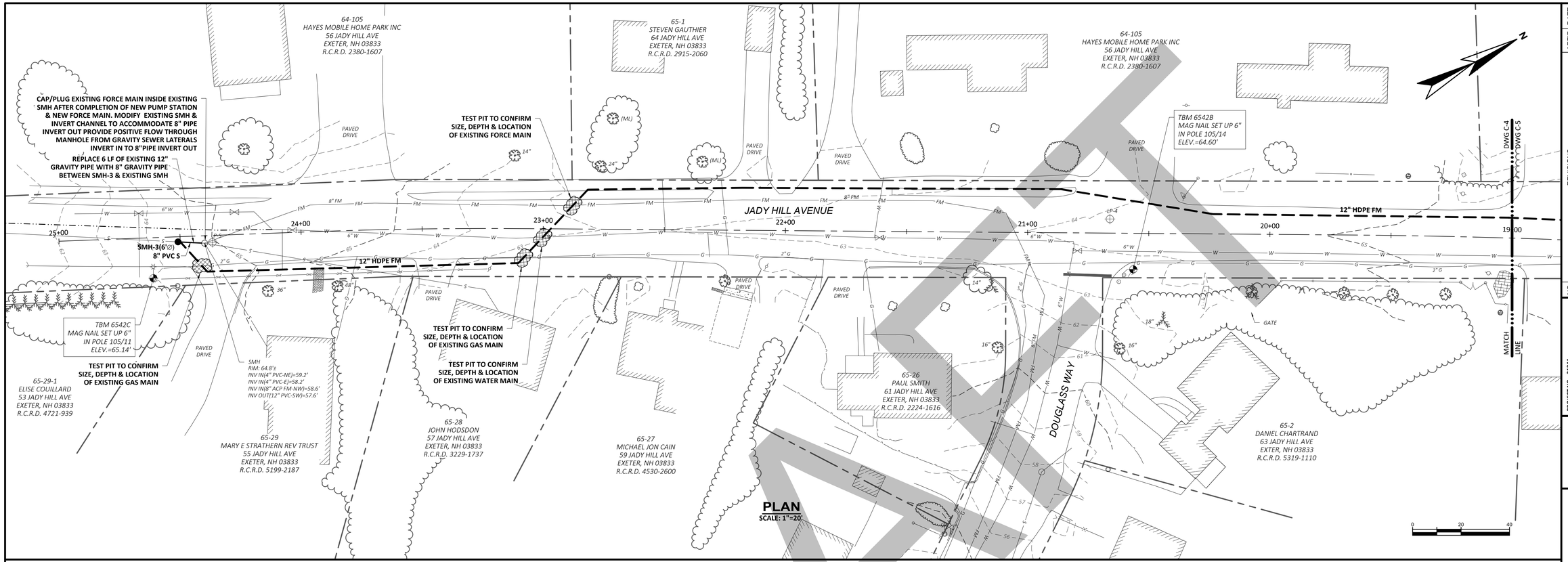
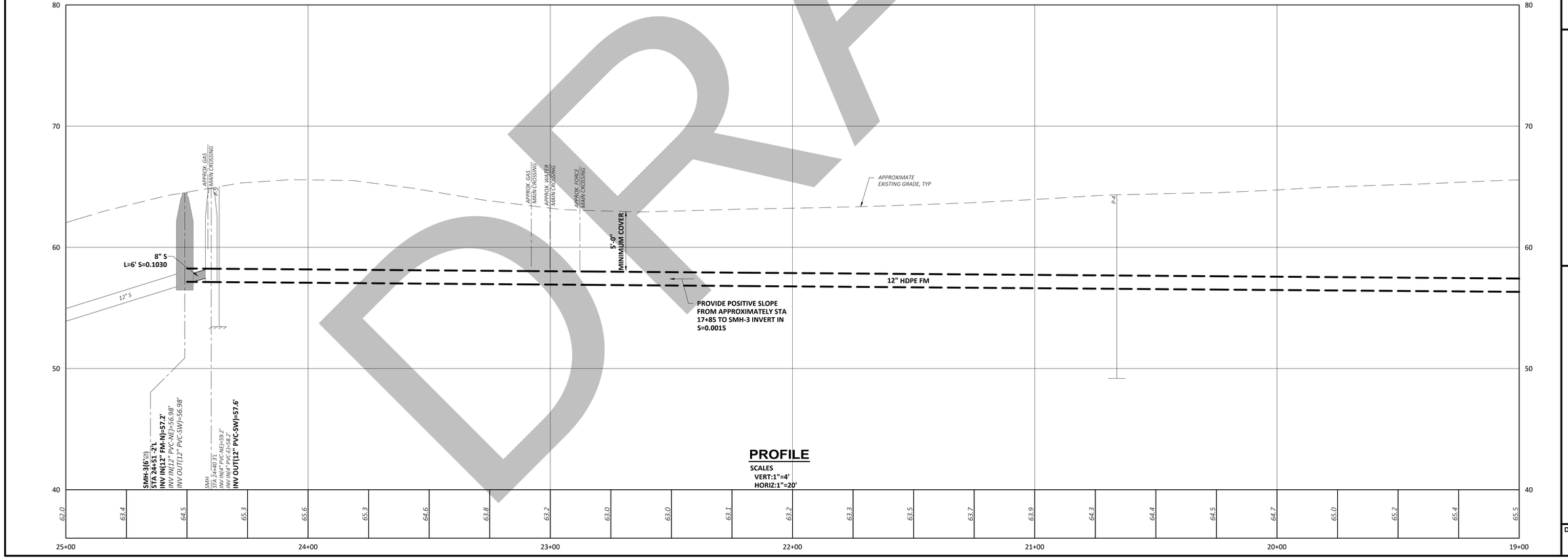
TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION &
FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

GENERAL NOTES (CONT.)

DRAWING
C-002



PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

NO	REVISIONS	APP'D	DATE
1			
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4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
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WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

JADY HILL AVENUE
PLAN & PROFILE: STA 25+00 TO STA 19+00

DRAWING
C-101

LAST SAVED BY: RYAN.BEISAW 9/15/2023 11:53 AM

TBM 7589B
'X' CUT IN BONNET BOLT
OVER MAIN OF HYDRANT
ELEV.=60.72'

CB
RIM: 58.7'±
INV OUT(10" PVC-NE)=55.69'
DEBRIS ELEV=54.14'

TEST PIT TO CONFIRM
SIZE, DEPTH & LOCATION
OF EXISTING WATER MAIN

DMH
RIM: 53.5'±
INV IN(12" RCP-NW)=49.11'
INV IN(12" RCP-SW)=47.96'
INV OUT(12" RCP-E)=46.56'

CB
RIM: 53.3'±
INV IN(10" PVC-NW)=49.52'
INV OUT(12" RCP-SE)=49.26'

TAX MAP 52, LOT 3
MARIA I. CARRASQUILLO GEORGE
C/O JONATHAN EDWARD GEORGE
77 JADY HILL AVE
EXETER, NH 03833
R.C.R.D. BOOK 5985, PAGE 579

TAX MAP 52, LOT 4
MARSHMAN FAMILY TRUST
C/O MARSHMAN PAMELA & ARTHUR TRUSTEES
2 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 6402, PAGE 1467

TAX MAP 52, LOT 1
STEVEN R. GAUTHIER
64 JADY HILL AVE
EXETER, NH 03833
R.C.R.D. BOOK 2915, PAGE 2060

TAX MAP 52, LOT 5
GREGORY MCCARTHY
4 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 5383, PAGE 1401

TAX MAP 52, LOT 24
LEON N. MORSE
C/O GAIL E. MORSE
73 JADY HILL AVE
EXETER, NH 03833
R.C.R.D. BK. 2533, PG. 786

CB
RIM: 53.6'±
INV OUT(UNK-NE)=49.12'
DEBRIS ELEV.=48.21'

SMH
RIM: 52.9'±
INV IN(8" PVC-W)=49.09'
INV OUT(8" PVC-E)=48.99'

TAX MAP 52, LOT 23
ALEXANDER JOHN PERSSON
C/O CHANTHAVONE HONGMANI
1 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 5362, PAGE 322

TAX MAP 52, LOT 25
MICHAEL S. JOHNSON
C/O REBECCA H. ZOLLNER
71 JADY HILL AVE
EXETER, NH 03833
R.C.R.D. BOOK 5497, PAGE 681

TAX MAP 52, LOT 22
CHESTER FAMILY REV TR
C/O SHERMAN JR & DOREEN CHESTER TTEES
3 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 5882, PAGE 817

TAX MAP 52, LOT 27
THOMAS NASH
C/O ANNA NASH
67 JADY HILL AVE
EXETER, NH 03833
R.C.R.D. BOOK 5954, PAGE 1279

TAX MAP 52, LOT 26
TIMOTHY GAGNON
C/O AMY GAGNON
69 JADY HILL AVE
EXETER, NH 03833
R.C.R.D. BOOK 5601, PAGE 2630

JADY HILL AVENUE
WEBSTER AVENUE
EXETER COUNTRY CLUB
PAVED DRIVE
16+00
15+00
14+00
13+00
17+00
18+00
19+00
12" HDPE FM
8" PVC
LP
DWG C-5
DWG C-4
DWG C-6
MATCH LINE

PLAN
SCALE: 1"=20'

PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

PROVIDE POSITIVE SLOPE
FROM APPROXIMATELY STA
17+85 TO SMH-3 INVERT IN
S=0.0015

5'-0"
MINIMUM COVER

APPROXIMATE
EXISTING GRADE, TYP

APPROX. WATER
MAIN CROSSING

B-2

P-3

12" HDPE FM

12" SD

8" S

EXISTING CB

EXISTING CB

EXISTING SMH

19+00	18+00	17+00	16+00	15+00	14+00	13+00
65.5	65.2	64.7	63.9	62.9	62.0	61.4	60.9	60.5	60.2	59.6	58.7	57.4	55.7	54.2	53.0	52.0	50.9	50.0	49.2	48.4	47.7	46.9	46.0

70 60 50 40 30

DRAFT

NO	REVISIONS	APP'D	DATE
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PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
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SUBMISSION: 90% DESIGN REVIEW

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EXETER, NEW HAMPSHIRE

JADY HILL AVENUE & WEBSTER AVENUE
PLAN & PROFILE: STA 19+00 TO STA 13+00

DRAWING
C-102

J:\ENGNH\EXETER\21244-WEBSTERAVEPS_DRAWINGS\CIV\21244-CS-PLANPROFILE01.DWG | 21244-CS-PlanProfile01 | 1:2.5849 | --- | 9/20/2023 3:48:13 PM | RYAN.BEISAW

LAST SAVED BY: RYAN.BEISAW 9/15/2023 11:54 AM

TAX MAP 52, LOT 5
GREGORY MCCARTHY
4 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 5383, PAGE 1401

TBM 7589A
'X' CUT IN BONNET BOLT
OVER MAIN OF HYDRANT
ELEV.=41.83'

TAX MAP 52, LOT 6
DOUGLAS B. EASTMAN
12 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 3172, PAGE 776

TAX MAP 52, LOT 7
JACQUES P. WAGEMAKER
C/O LEAH N. WAGEMAKER
14 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 5517, PAGE 405

TAX MAP 52, LOT 8
TOWN OF EXETER
10 FRONT STREET
EXETER, NH 03833
R.C.R.D. BOOK 2887, PAGE 268

WEBSTER AVENUE

DWG C-5
DWG C-6

MATCH LINE

12" HDPE FM

DMH
RIM: 39.6'±
INV IN(12" RCP-SW)=33.51'
INV OUT(12" RCP-E)=33.42'

SMH
RIM: 35.9'±
INV IN(8" VCP-SW)=31.14'
INV IN(8" VCP-SW)=25.09'
INV OUT(8" VCP-E)=25.04'

CB
RIM: 29.2'±
INV IN(12" RCP-W)=22.75'
INV OUT(24" RCP-SE)=22.67'

SMH
RIM: 20.8'±
INV IN(4" PVC-SW)=18.2'
INV IN(4" PVC-SE)=11.2'
INV IN(8" VCP-W)=9.9'
INV IN(8" VCP STUB-NW)=10.0'
INV IN(8" VCP STUB-W)=14.8'
INV OUT(8" VCP-SE)=9.9'

TEST PIT TO CONFIRM SIZE, DEPTH & LOCATION OF EXISTING STORM DRAIN

TEST PIT TO CONFIRM SIZE, DEPTH & LOCATION OF EXISTING WATER MAIN

TEST PIT TO CONFIRM SIZE, DEPTH & LOCATION OF EXISTING WATER MAIN

TAX MAP 52, LOT 20
SEAN BOURBEAU
C/O JOHANNA BOURBEAU
7 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 5682, PAGE 358

TAX MAP 52, LOT 19
BERNARD A. CALDER
9 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 4848, PAGE 1775

TAX MAP 52, LOT 18
GEORGE & EILEEN THING REV TR
C/O GEORGE & EILEEN THING TEES
11 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 6376, PAGE 2615

TAX MAP 52, LOT 17
MARTHA R. KIRSCH
13 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 3658, PAGE 850

TAX MAP 52, LOT 16
DAIVD F. CARROLL
C/O EMILY R. CARROLL
15 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 5628, PAGE 2216

TAX MAP 52, LOT 15
DANIEL M. WORTH
C/O TEKARA A. WORTH
17 WEBSTER AVE
EXETER, NH 03833
R.C.R.D. BOOK 6422, PAGE 718

TAX MAP 52, LOT 14
TOWN OF EXETER
10 FRONT STREET
EXETER, NH 03833
R.C.R.D. BOOK 2316, PAGE 1378

PAVED DRIVE

PLAN
SCALE: 1"=20'

0 20 40

PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

APPROXIMATE EXISTING GRADE, TYP

12" HDPE FM

5'-0" MINIMUM COVER

12" SD

24" SD

8" S

12" S

INSTALL RIGID INSULATION

APPROX. WATER MAIN CROSSING

EXISTING CB

EXISTING SMH

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

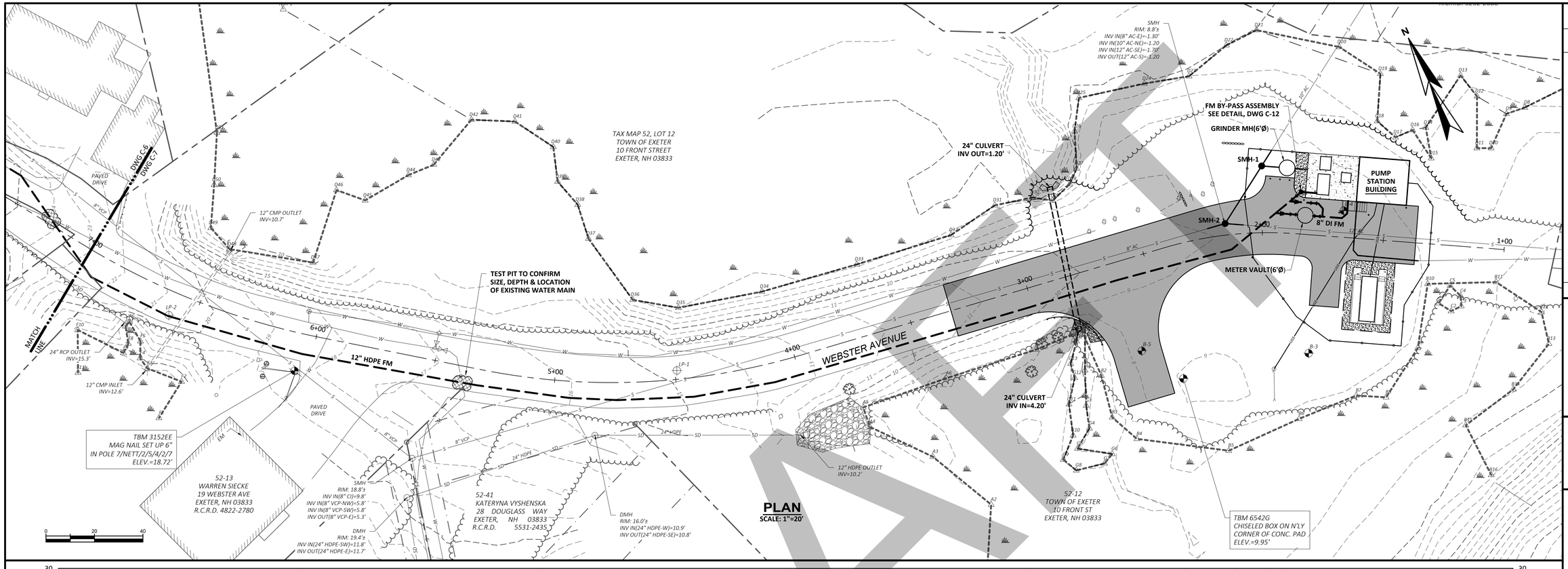
WRIGHT-PIERCE
603.430.3728 | www.wright-pierce.com
230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

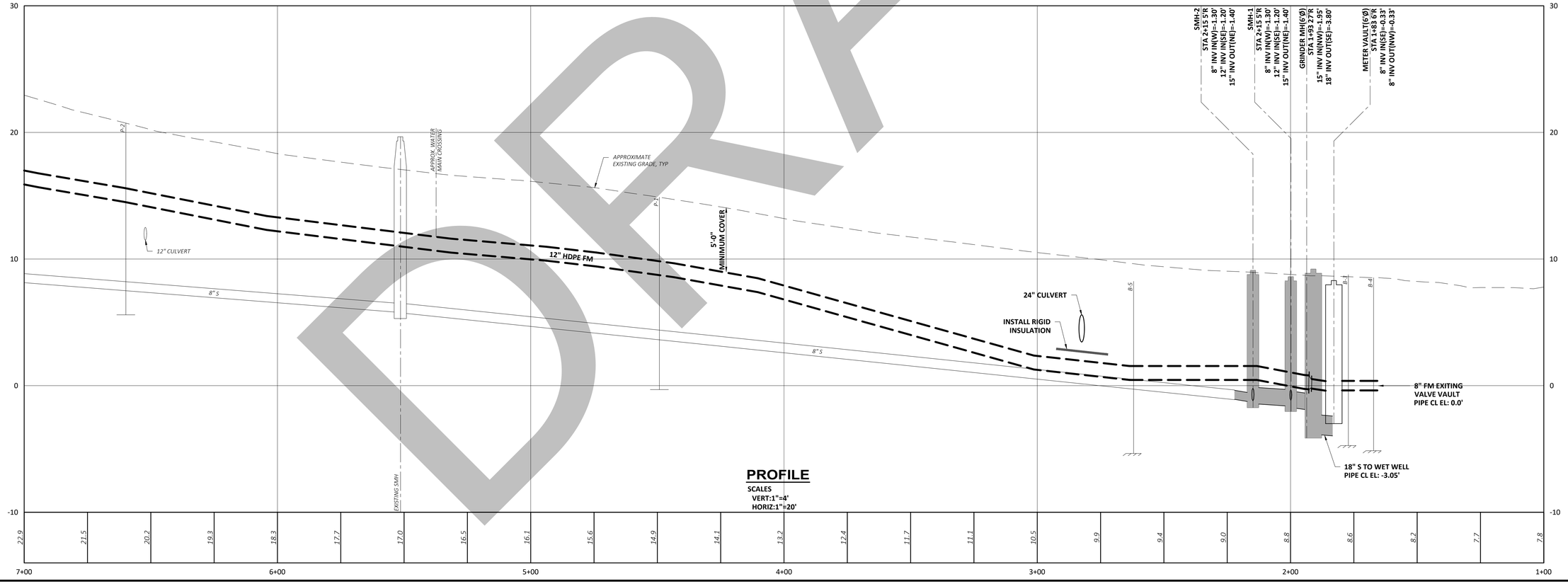
WEBSTER AVENUE
PLAN & PROFILE: STA 13+00 TO STA 7+00

DRAWING
C-103

J:\ENGINH\EXETER\21244-WEBSTERAVEPS_DRAWINGS\CIV\21244-CS-PLANPROFILEILDWG | 21244-CS-PlanProfileIII | 1:2.5849 | ---- | 9/20/2023 3:48:23 PM | RYAN.BEISAW



PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.REISAW
CAD: R.REISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

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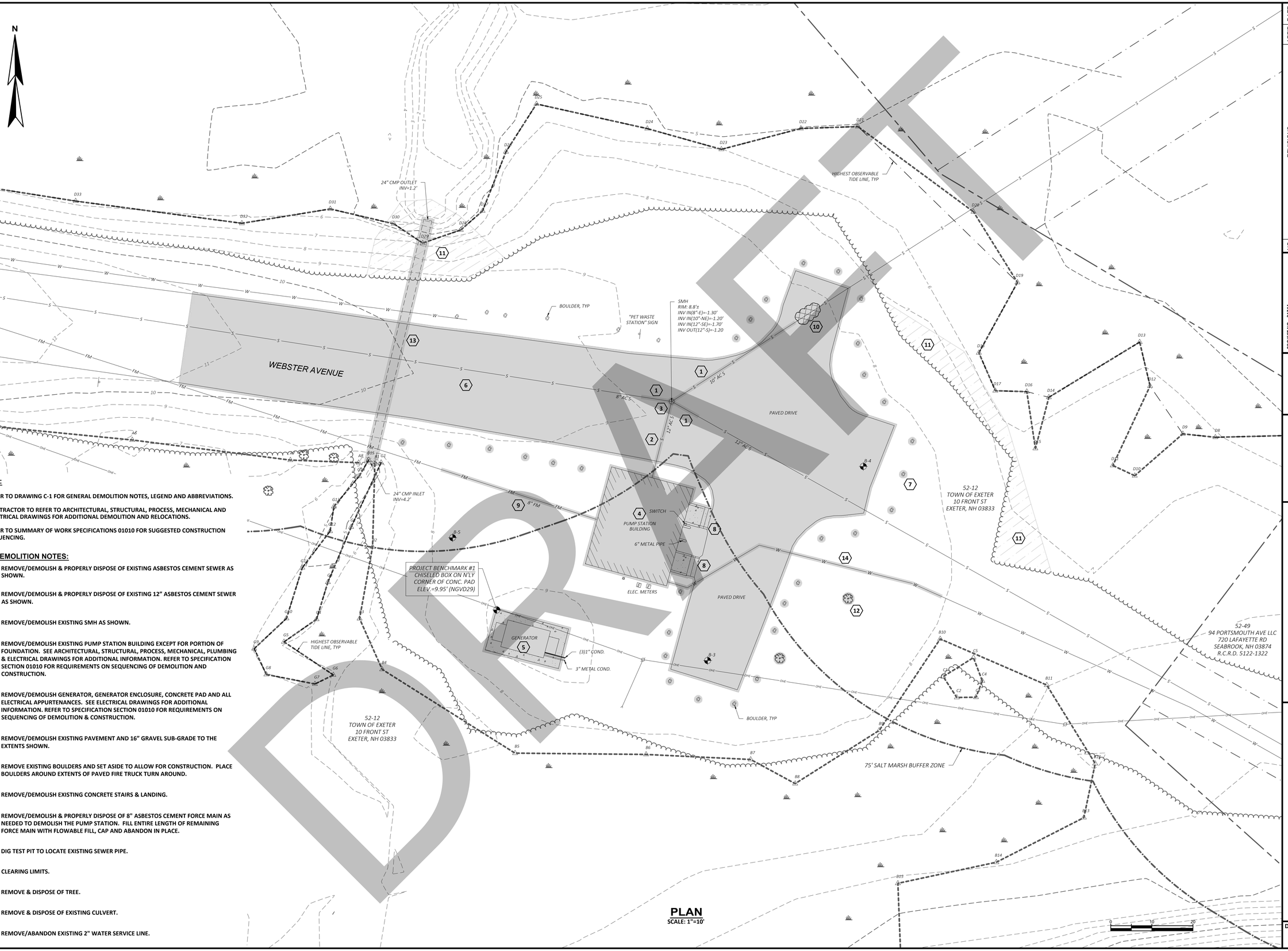
TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

WEBSTER AVENUE
PLAN & PROFILE: STA 7+00 TO STA 1+00

DRAWING
C-104



PLAN
SCALE: 1"=10'

0 10 20

NOTES:

1. REFER TO DRAWING C-1 FOR GENERAL DEMOLITION NOTES, LEGEND AND ABBREVIATIONS.
2. CONTRACTOR TO REFER TO ARCHITECTURAL, STRUCTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION AND RELOCATIONS.
3. REFER TO SUMMARY OF WORK SPECIFICATIONS 01010 FOR SUGGESTED CONSTRUCTION SEQUENCING.

SITE DEMOLITION NOTES:

1. REMOVE/DEMOLISH & PROPERLY DISPOSE OF EXISTING ASBESTOS CEMENT SEWER AS SHOWN.
2. REMOVE/DEMOLISH & PROPERLY DISPOSE OF EXISTING 12" ASBESTOS CEMENT SEWER AS SHOWN.
3. REMOVE/DEMOLISH EXISTING SMH AS SHOWN.
4. REMOVE/DEMOLISH EXISTING PUMP STATION BUILDING EXCEPT FOR PORTION OF FOUNDATION. SEE ARCHITECTURAL, STRUCTURAL, PROCESS, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. REFER TO SPECIFICATION SECTION 01010 FOR REQUIREMENTS ON SEQUENCING OF DEMOLITION AND CONSTRUCTION.
5. REMOVE/DEMOLISH GENERATOR, GENERATOR ENCLOSURE, CONCRETE PAD AND ALL ELECTRICAL APPURTENANCES. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. REFER TO SPECIFICATION SECTION 01010 FOR REQUIREMENTS ON SEQUENCING OF DEMOLITION & CONSTRUCTION.
6. REMOVE/DEMOLISH EXISTING PAVEMENT AND 16" GRAVEL SUB-GRADE TO THE EXTENTS SHOWN.
7. REMOVE EXISTING BOULDERS AND SET ASIDE TO ALLOW FOR CONSTRUCTION. PLACE BOULDERS AROUND EXTENTS OF PAVED FIRE TRUCK TURN AROUND.
8. REMOVE/DEMOLISH EXISTING CONCRETE STAIRS & LANDING.
9. REMOVE/DEMOLISH & PROPERLY DISPOSE OF 8" ASBESTOS CEMENT FORCE MAIN AS NEEDED TO DEMOLISH THE PUMP STATION. FILL ENTIRE LENGTH OF REMAINING FORCE MAIN WITH FLOWABLE FILL, CAP AND ABANDON IN PLACE.
10. DIG TEST PIT TO LOCATE EXISTING SEWER PIPE.
11. CLEARING LIMITS.
12. REMOVE & DISPOSE OF TREE.
13. REMOVE & DISPOSE OF EXISTING CULVERT.
14. REMOVE/ABANDON EXISTING 2" WATER SERVICE LINE.

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

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TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

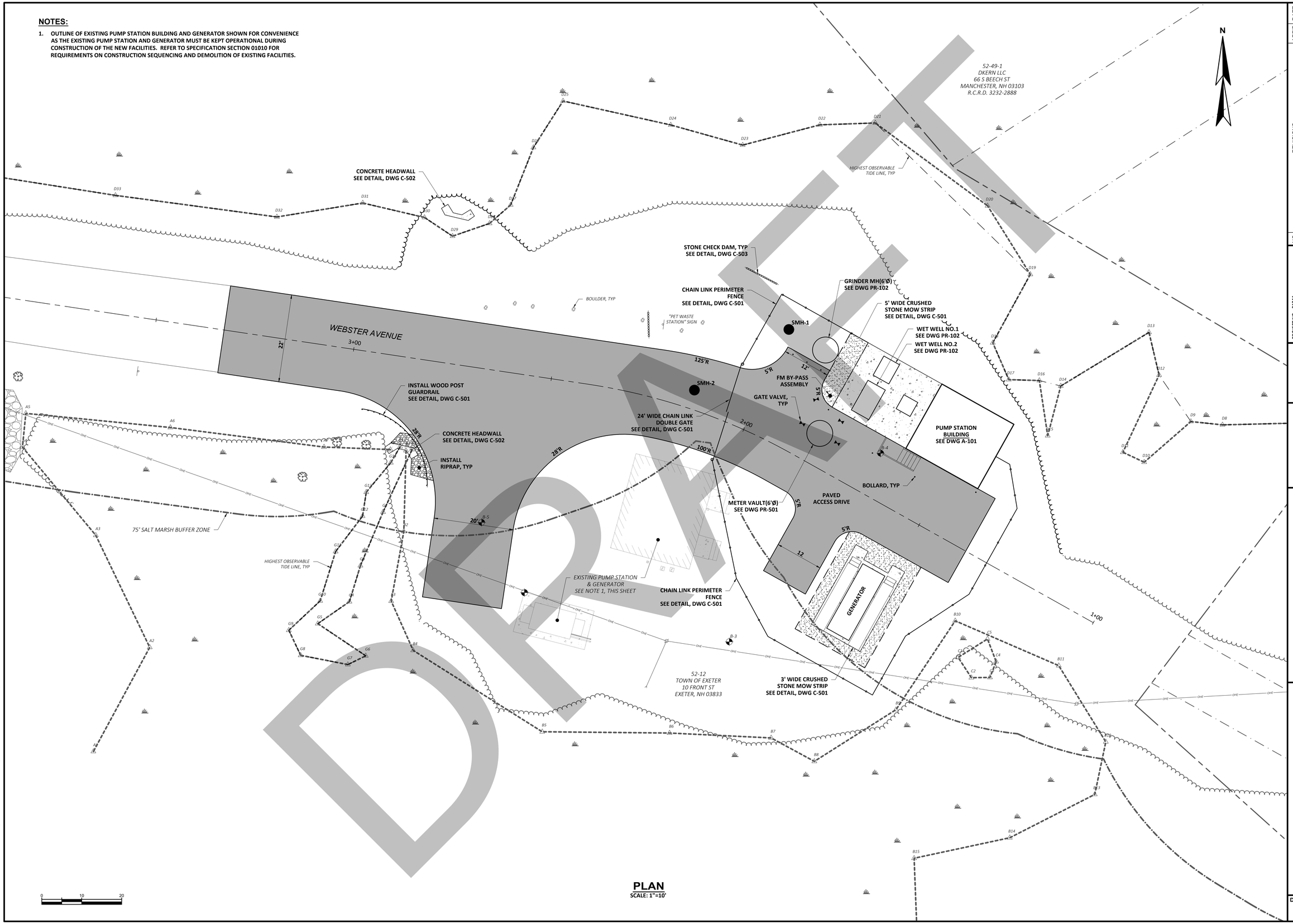
WEBSTER AVENUE PUMP STATION
EXISTING CONDITIONS & DEMOLITION PLAN

DRAWING
C-401

LAST SAVED BY: RYAN.BEISAW 9/20/2023 3:31 PM

NOTES:

1. OUTLINE OF EXISTING PUMP STATION BUILDING AND GENERATOR SHOWN FOR CONVENIENCE AS THE EXISTING PUMP STATION AND GENERATOR MUST BE KEPT OPERATIONAL DURING CONSTRUCTION OF THE NEW FACILITIES. REFER TO SPECIFICATION SECTION 01010 FOR REQUIREMENTS ON CONSTRUCTION SEQUENCING AND DEMOLITION OF EXISTING FACILITIES.



DRAFT

PLAN
SCALE: 1"=10'

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
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APPROVED: A.MORRILL
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TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION &
FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

WEBSTER AVENUE PUMP STATION
SITE LAYOUT PLAN

DRAWING
C-402

I:\ENGNH\EXETER\21244-WEBSTERAVEPS_DRAWINGS\CIV\21244-CS-PS_LAYOUTPLAN.DWG | 21244-CS-PS_LayoutPlan | 1:2.5849 | ---- | 9/20/2023 3:48:51 PM | RYAN.BEISAW

N

TURBIDITY CURTAIN

24" CULVERT
INV OUT=1.20'

CONCRETE HEADWALL
SEE DETAIL, DWG C-502

INSTALL SILT FENCE, TYP
SEE DETAIL, DWG C-503

STONE CHECK DAM, TYP
SEE DETAIL, DWG C-503

52-49-1
DKERN LLC
66 S BEECH ST
MANCHESTER, NH 03103
R.C.R.D. 3232-2888

HIGHEST OBSERVABLE
TIDE LINE, TYP

SMH-1
RIM: 8.6'±
15" INV IN(SW)=-1.60'
10" INV IN(NE)=-1.15'
15" INV OUT(SE)=-1.70'

15" PVC S
L=6' S=0.0417

GRINDER MH
RIM: 9.2'±
15" INV IN(NW)=-1.95'
18" INV OUT(SE)=-3.80'

5' WIDE CRUSHED
STONE MOW STRIP
SEE DETAIL, DWG C-501

18" PVC S
L=5' S=0.0268

FM BY-PASS ASSEMBLY
SEE DETAIL, DWG C-502

APPROXIMATE
LIMITS OF SHEETING

BOULDER, TYP

GRASS TREATMENT
SWALE

"PET WASTE
STATION" SIGN

15" PVC S
L=24' S=0.0083

12" GATE VALVE WITH
STEM EXTENSION &
VALVE BOX TO GRADE

12" FM

WEBSTER AVENUE

3+00

APPROX. LOCATION
OF HDPE PIPE TO DI
MJ CONNECTION

12" WYE

METER VAULT
RIM: 9.2'±

TOC: 11.0'

8" WYE

PUMP STATION BUILDING
FFE: 11.0'
SEE ARC DWGS

8" x 12"
REDUCER

8" FM

2" W

INSTALL SILT FENCE, TYP
SEE DETAIL, DWG C-503

INSTALL WOOD POST
GUARDRAIL
SEE DETAIL, DWG C-501

CONCRETE HEADWALL
SEE DETAIL, DWG C-502

INSTALL
RIPRAP, TYP

SMH-2
RIM: 9.1'±
12" INV IN(SE)=-1.20'
8" INV IN(W)=-1.30'
15" INV OUT(NE)=-1.40'

24' WIDE CHAIN
LINK DOUBLE GATE

24" CULVERT
INV IN=4.20'

8" GATE VALVE WITH
STEM EXTENSION &
VALVE BOX TO GRADE

PAVED
ACCESS DRIVE

CHAIN LINK
FENCE, TYP

75' SALT MARSH BUFFER ZONE

PROJECT BENCHMARK #1
CHISELED BOX ON N'LY
CORNER OF CONC. PAD
ELEV.=9.95' (NGVD29)

CHAIN LINK
FENCE, TYP

52-12
TOWN OF EXETER
10 FRONT ST
EXETER, NH 03833

GENERATOR

HIGHEST OBSERVABLE
TIDE LINE, TYP

1+00

3' WIDE CRUSHED
STONE MOW STRIP
SEE DETAIL, DWG C-501

INSTALL SILT FENCE, TYP
SEE DETAIL, DWG C-503

PLAN
SCALE: 1"=10'

0 10 20

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.REISAW
CAD: R.REISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

WRIGHT-PIERCE
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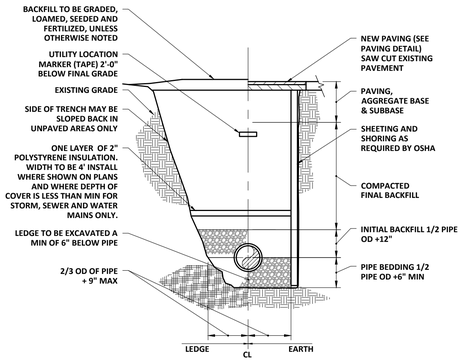
TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION &
FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

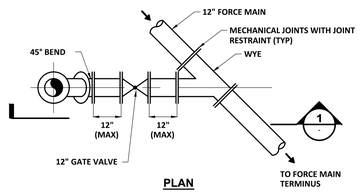
WEBSTER AVENUE PUMP STATION
SITE GRADING & PIPING PLAN

DRAWING
C-403

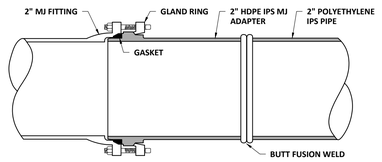


NOTES:
1. ALL EXCAVATION MUST MEET OSHA STANDARDS.
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' AND WHERE SHOWN ON PLANS TO PREVENT TRENCH GROUNDWATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.
3. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS.

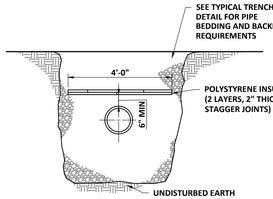
PIPE TRENCH
SCALE: "NTS"



PLAN
REFER TO PIPING PLAN, DWG C-2 FOR ORIENTATION

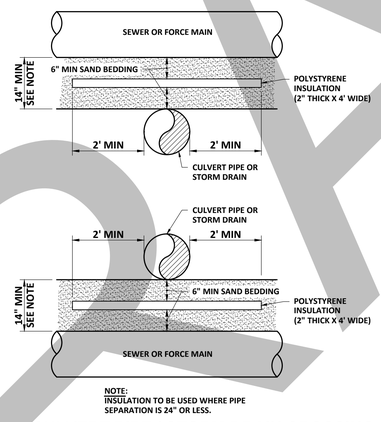


HIGH DENSITY POLYETHYLENE PIPE TO MECHANICAL JOINT CONNECTION DETAIL
SCALE: NTS



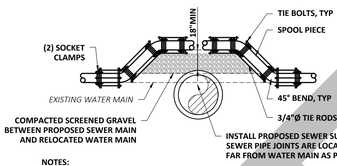
NOTE:
TRENCH PIPE INSULATION TO BE USED WHERE DEPTH OF COVER IS LESS THAN ** FEET OR AS DIRECTED BY THE ENGINEER

TRENCH PIPE INSULATION
SCALE: NTS



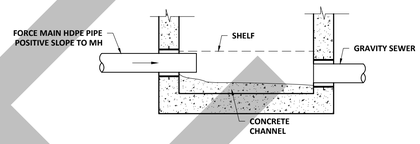
NOTE:
INSULATION TO BE USED WHERE PIPE SEPARATION IS 24" OR LESS.

CULVERT PIPE / STORM DRAIN CROSSING
SCALE: NTS

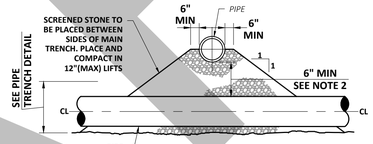


NOTES:
1. WATER MAIN MATERIALS TO BE CLASS 52 DUCTILE IRON. JOINT RESTRAINT TO BE BY MECHANICAL JOINT WITH RETAINER GLANDS, OR WITH TIE BOLTS AS SHOWN.
2. TIE RODS, TIE BOLTS, SOCKET CLAMPS AND BRIDLES SHALL BE COATED WITH A BITUMINOUS PAINT AFTER ASSEMBLY OR IF NECESSARY PRIOR TO ASSEMBLY.
3. TIE RODS: 10" DIA WATER MAIN OR LARGER - 4 REQUIRED.
   8" DIA WATER MAIN OR SMALLER - 2 REQUIRED.
4. EXISTING WATER MAINS TO BE RELOCATED OVER NEW SEWERS WHEREVER SUFFICIENT GROUND COVER EXISTS (5' MINIMUM COVER).

WATER MAIN RELOCATION
SCALE: NTS



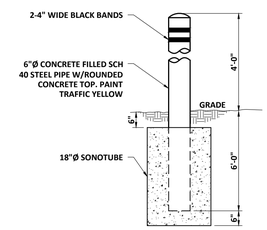
FORCE MAIN TERMINUS
SCALE: NTS



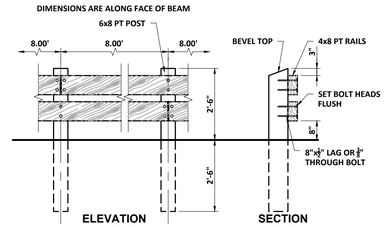
NOTES:
1. JOINTS ON EACH PIPE TO BE AS FAR FROM INTERSECTION AS POSSIBLE.
2. IF LESS THAN 12", FLOWABLE FILL MAY BE REQUIRED RATHER THAN SCREENED STONE TO FACILITATE PROPER PIPE BEDDING AND COMPACTION AT ENGINEER'S DISCRETION. REFER TO SPECIFICATIONS SECTION 02225 FOR ADDITIONAL INFORMATION.

PIPE CROSSING
SCALE: NTS

CRUSHED STONE MOWING STRIP
SCALE: "NTS"

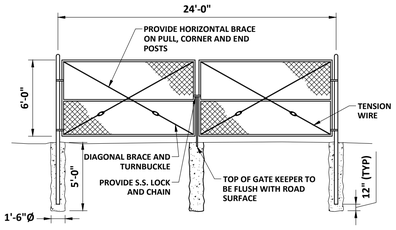


BOLLARD
SCALE: NTS



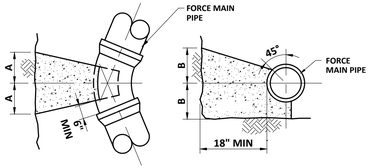
NOTES:
1. ALL HARDWARE TO BE GALVANIZED.
2. ALL TIMBER TO BE PRESSURE TREATED SOUTHERN YELLOW PINE.

WOOD GUARDRAIL - NON-HIGHWAY APPLICATION
SCALE: NTS



NOTES:
1. SECURE POSTS IN CONCRETE AS SHOWN AT PULL, CORNER AND END POSTS (INCLUDING GATE POSTS)
2. IF CHAINLINK FENCE IS INSTALLED IN UNFRACTURED LEDGE, POST SHALL PENETRATE 2'-0" INTO THE LEDGE AND SHALL BE GROUTED INTO 6"Ø HOLE.

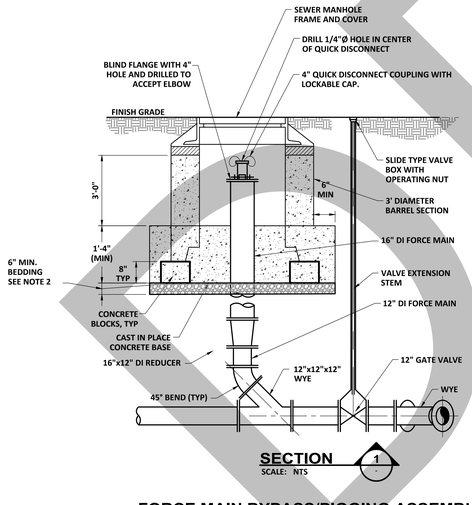
PERMANENT CHAINLINK FENCE AND LOCKING DOUBLE GATE
SCALE: "NTS"



PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND	
	A	B	A	B	A	B
2"	9"	9"	9"	9"	6"	6"
4"	18"	12"	12"	9"	9"	9"
6"	18"	12"	12"	9"	9"	9"
8"	24"	15"	15"	12"	12"	12"
10"	24"	20"	15"	15"	12"	12"
12"	24"	24"	18"	18"	15"	12"
14"	27"	27"	21"	21"	15"	15"
16"	30"	30"	24"	24"	18"	18"

NOTES:
1. THRUST BLOCK SIZES ABOVE ARE BASED ON A SOIL BEARING CAPACITY OF 1000 PSF AND TEST PRESSURES OF 100 PSI. CONTRACTOR SHALL NOTIFY THE ENGINEER IF LOW BEARING STRENGTH SOILS ARE ENCOUNTERED.
2. RETAINER GLANDS MAY BE USED IN LIEU OF THRUST BLOCKS ON DUCTILE IRON FORCE MAINS ONLY. INSTALL IN COMPLIANCE WITH DUCTILE IRON & PIPE MANUFACTURERS STANDARDS.

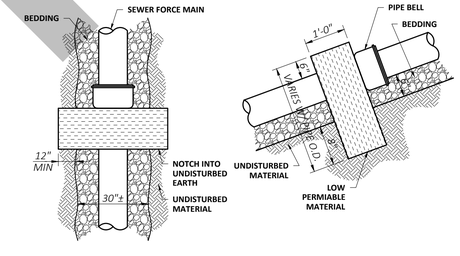
FORCE MAIN THRUST BLOCK
SCALE: "NTS"



SECTION
SCALE: NTS

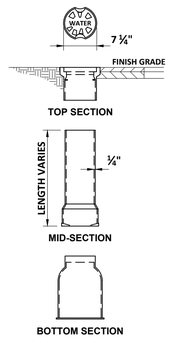
FORCE MAIN BYPASS/PIGGING ASSEMBLY
NTS

NOTE:
1. PROVIDE A "T" OPENING HANDLE FOR EACH ASSEMBLY.
2. 6 INCH MINIMUM LAYER OF COMPACTED BEDDING MATERIAL THAT CONFORMS TO ASTM C33/C33M NO. 67 AND CRUSHED STONE.

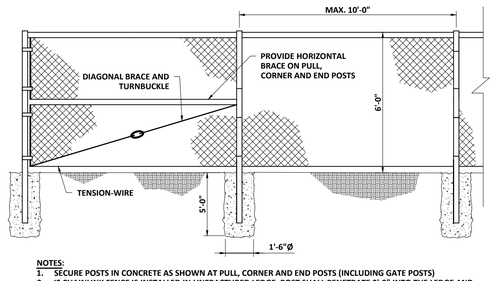


NOTES:
1. INSTALL LOW PERMEABLE TRENCH DAMS EVERY 100' ALONG THE FORCE MAINS.

LOW PERMEABLE TRENCH DAM DETAIL
NTS



VALVE BOX
SCALE: NTS



NOTES:
1. SECURE POSTS IN CONCRETE AS SHOWN AT PULL, CORNER AND END POSTS (INCLUDING GATE POSTS)
2. IF CHAINLINK FENCE IS INSTALLED IN UNFRACTURED LEDGE, POST SHALL PENETRATE 2'-0" INTO THE LEDGE AND SHALL BE GROUTED INTO 6"Ø HOLE.

CHAINLINK FENCE
SCALE: "NTS"

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			
6			

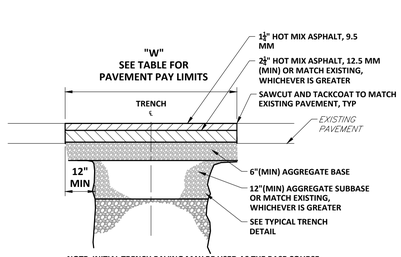
PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

WRIGHT-PIERCE
603.430.3728 | www.wright-pierce.com
230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

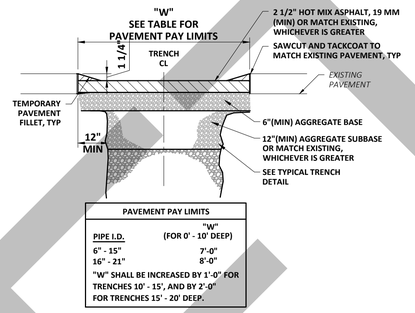
DETAILS II

DRAWING
C-501



NOTE: INITIAL TRENCH PAVING MAY BE USED AS THE BASE COURSE FOR FINAL PAVING IF IN GOOD REPAIR.

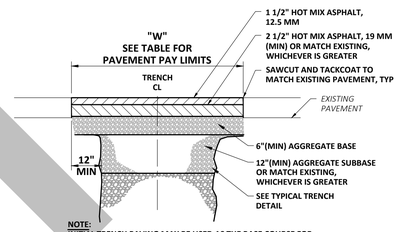
TRENCH PATCH - DRIVEWAY
NTS



PAVEMENT PAY LIMITS	
PIPE I.D.	"W" (FOR 0' - 10' DEEP)
6" - 15"	7'-0"
16" - 21"	8'-0"

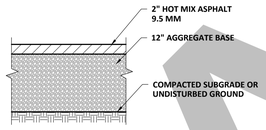
"W" SHALL BE INCREASED BY 1'-0" FOR TRENCHES 10' - 15', AND BY 2'-0" FOR TRENCHES 15' - 20' DEEP.

INITIAL TRENCH PAVING (WITHOUT OVERLAY)
SCALE: "NTS"

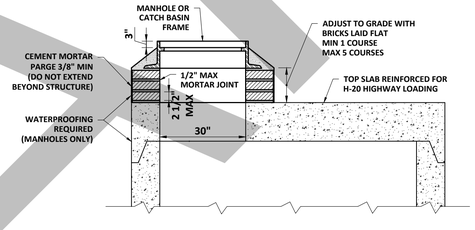


NOTE:
INITIAL TRENCH PAVING MAY BE USED AS THE BASE COURSE FOR FINAL PAVING IF IN GOOD REPAIR.

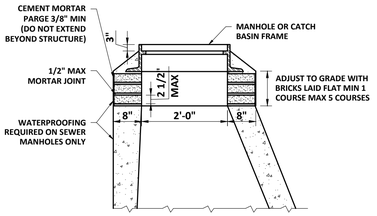
FINAL TRENCH PAVING (WITHOUT OVERLAY)
SCALE: "NTS"



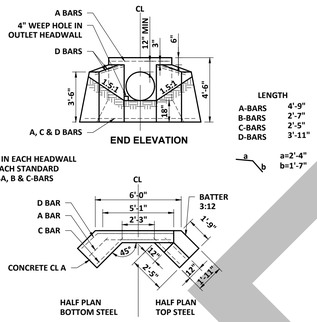
WALKWAY PAVEMENT
SCALE: "NTS"



FLAT SLAB TOP MANHOLE INSTALLATION
SCALE: NTS



MANHOLE AND CATCH BASIN FRAME INSTALLATION
SCALE: NTS

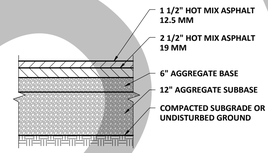


LENGTH	
A-BARS	4'-9"
B-BARS	2'-7"
C-BARS	2'-5"
D-BARS	3'-11"

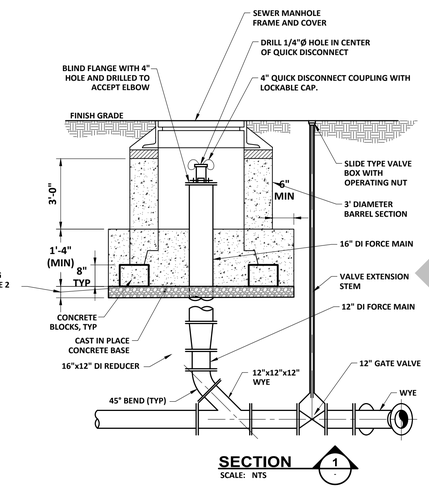
a=2'-4"
b=1'-7"

NOTE:
ALL LIKE BARS IN EACH HEADWALL ARE NO. 4's, EACH STANDARD HEADER HAS 4A, B & C-BARS & 2D-BARS.

HEADWALL DETAIL
SCALE: "NTS"



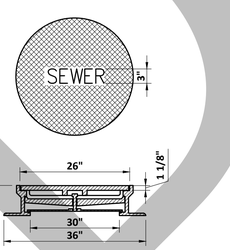
PUMP STATION ACCESS DRIVE PAVEMENT
SCALE: "NTS"



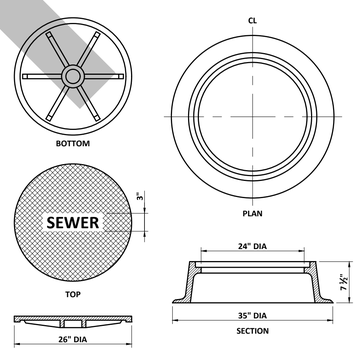
SECTION
SCALE: NTS

FORCE MAIN BYPASS/PIGGING ASSEMBLY
NTS

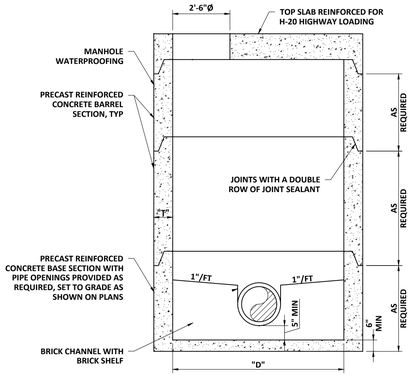
NOTE:
1. PROVIDE A "T" OPENING HANDLE FOR EACH ASSEMBLY.
2. 6 INCH MINIMUM LAYER OF COMPACTED BEDDING MATERIAL THAT CONFORMS TO ASTM C33/C33M NO. 67 AND CRUSHED STONE.



WATERTIGHT COVER AND FRAME
SCALE: NTS



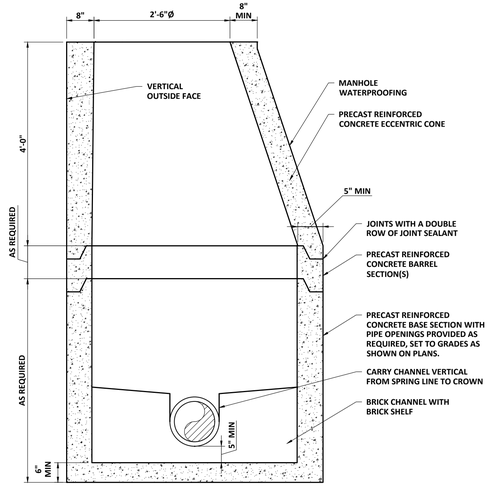
CATCH BASIN & MANHOLE STANDARD COVER AND FRAME
SCALE: NTS



NOTE:
MANHOLE CHANNELS REQUIRING CHANGE IN ALIGNMENT ARE TO BE BUILT ON A SMOOTH RADIUS. IF SIDE PIPES ENTER CHANNEL, SHAPE TO RECEIVE ADDED SIDE FLOW.

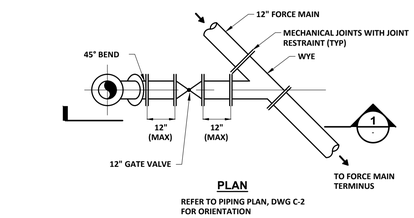
DIAMETER ("D")	MAX PIPE DIAMETER STRAIGHT THRU TO 45° DEFLECTION	MINIMUM WALL THICKNESS ("T")
48"	UP TO 30" O.D.	5"
60"	UP TO 44" O.D.	6"
72"	UP TO 51" O.D.	7"
96"	UP TO 72" O.D.	9"

FLAT SLAB TOP MANHOLE
SCALE: NTS



NOTES:
1. MANHOLE CHANNELS REQUIRING A CHANGE IN DIRECTION ARE TO BE BUILT ON A SMOOTH CURVE OF THE LONGEST POSSIBLE RADIUS. IF SIDE PIPES ENTER CHANNEL, SHAPE TO RECEIVE ADDED SIDE FLOW.
2. USE A FLAT SLAB TOP MANHOLE WHEN THE HEIGHT DIFFERENCE BETWEEN THE HIGHEST INVERT AND RIM IS LESS THAN 6'-0" AND WHEN MANHOLE DIAMETER IS GREATER THAN 4'-0".

TYPICAL 4-FT MANHOLE
SCALE: "NTS"



PLAN
REFER TO PIPING PLAN, DWG C-2 FOR ORIENTATION

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

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TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

DETAILS II

DRAWING
C-502

EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE NEW HAMPSHIRE STORMWATER MANUAL BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, TERRAIN ALTERATION BUREAU, DATED DECEMBER 2008

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES REQUIRED ARE SHOWN ON THE DRAWINGS. PROVIDE SILT FENCE, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT AS NOTED IN THE BMP.

ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL AND THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, ENV-Wq 1500: ALTERATION OF TERRAIN, DECEMBER 2008

1. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION, IN NO CASE AT MORE THAN 5 ACRES AT A TIME, WILL BE MAINTAINED IN AN UNTREATED OR UN-VEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
2. TEMPORARY STORAGE OF STOCKPILED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION.
3. EROSION CONTROL MEASURES SUCH AS SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) AND OUTLET PROTECTION (WHERE APPLICABLE) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OR EARTH MOVING OPERATIONS OF UPGRADIENT DRAINAGE AREAS.
4. FUGITIVE DUST MUST BE CONTROLLED IN ACCORDANCE WITH NEW HAMPSHIRE STANDARDS.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED AND/OR WILL NOT ERODE UNDER THE CONDITIONS OF A 10-YEAR STORM. STABILIZATION SHALL BE DEFINED AS ONE OF THE FOLLOWING:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% VEGETATIVE GROWTH HAS BEEN ESTABLISHED;
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIALS SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL NOT BE STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL (3 TO 1) UNLESS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES. IF MOWING IS TO OCCUR, MAXIMUM SLOPE ANGLE SHALL BE THREE HORIZONTAL TO ONE VERTICAL (3 TO 1). ON SLOPES FOUR HORIZONTAL TO ONE VERTICAL (4 TO 1), FINAL PREPARATION SHOULD INCLUDE SURFACE ROUGHING.
7. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND RE-GRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER. AT NO TIME SHALL THE INTEGRITY OF THE EROSION CONTROL FENCE BE IN DANGER DUE TO BUILD UP OF SEDIMENT.
8. RE-VEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND RE-VEGETATED.
9. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 2 BALES (70-90 LBS) PER 1,000 SQUARE FEET OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE.
10. DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
11. SEED MIX SELECTION AND APPLICATION RATES WILL BE CONSISTENT WITH THE FOLLOWING TABLES AS REFERENCED FROM MINNICK, E.L. AND H.T. MARSHALL, STORMWATER MANAGEMENT AND EROSION CONTROL FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE, ROCKINGHAM COUNTY CONSERVATION DISTRICT, AUGUST 1992, AND TABLES 4-1 THROUGH 4-3 OF SECTION 3 IN THE NEW HAMPSHIRE STORMWATER MANUAL. NOTE: REED CANARY GRASS SHALL NOT BE USED.
12. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE WORK AREA IS STABILIZED.
13. WETLANDS (EXCEPT THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
14. IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
15. FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

EROSION CONTROL DURING WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH MAY 1
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREAS SHOULD BE LIMITED TO WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY PRECIPITATION EVENT.
4. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
5. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
6. AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3

LIME AND FERTILIZER SCHEDULE

SEEDING TYPE	SEED DATES	LIME RATE [TONE/ACRE]	FERTILIZER RATE/RATIO (TYPE) [LBS/1,000 SQ. FT.]
PERMANENT AND/OR TEMPORARY	MAY. 1 - SEPT. 15	3	600/ENGINEER APPROVED (N-P205-K20)

NOTES:
1. USE LOW PHOSPHATE FERTILIZER AT ALL TIMES AND SLOW RELEASE NITROGEN FERTILIZER WHEN BETWEEN 25 AND 250 FEET OF A SURFACE WATER BODY.
2. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25 FEET OF THE SURFACE WATER.
3. APPLY LIMESTONE AT 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE.

TEMPORARY VEGETATION (TABLE 4-1)

ADDITIONAL TEMPORARY SEED MIXTURE (FOR PERIODS LESS THAN 12 MONTHS)

DATES	SEED	RATE
PRIOR TO MAY 15	OATS	80 LBS/ACRE
AUG. 15 - SEP. 15	ANNUAL RYE GRASS	40 LBS/ACRE
AUG. 15 - SEP. 15	WINTER RYE GRASS	112 LBS/ACRE
APR. 1 - JUN. 1 (AUG. 15 - SEP. 15)	PERENNIAL RYE GRASS	40 LBS/ACRE

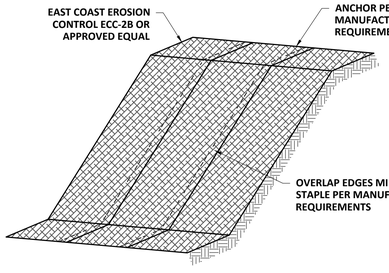
PERMANENT VEGETATION (TABLE 4-2)

USE	MIXTURE TABLES	I.	SOIL DRAINAGE II.	III.	IV.
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXC.	GOOD
	E	FAIR	EXC.	EXC.	POOR
WATERWAYS, EMERGENCY SPILLWAYS AND OTHER CHANNELS WITH FLOWING WATER	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXC.	EXC.	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXC.	EXC.	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF)	F	FAIR	EXC.	EXC.	
	G	FAIR	EXC.	EXC.	

NOTES:
1. I. DROUGHTY
   II. WELL DRAINED
   III. MODERATELY WELL DRAINED
   IV. POORLY DRAINED
2. EXC.= EXCELLENT
3. REFER TO TABLE 4-3 FOR SEED MIXTURE AND APPLICATION RATES

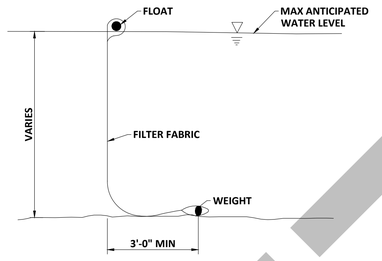
PERMANENT VEGETATION (TABLE 4-3)

MIXTURE	SPECIES	RATE-POUNDS PER ACRE	1,000 SQ. FT.
A	TALL FESCUE	20	0.45
	CREEPING RED FESCUE	20	0.45
	REDTOP	2	0.05
	TOTAL	*42*	*0.95*
B	TALL FESCUE	15	0.35
	CREEPING RED FESCUE	10	0.25
	CROWN VETCH/OR	15	0.35
	FLATPEA	30	0.75
	TOTAL	*40 OR 55*	*0.95 OR 1.35*
C	TALL FESCUE	20	0.45
	CREEPING RED FESCUE	20	0.45
	BIRDSFOOT TREFOIL	8	0.2
	TOTAL	*48*	*1.10*
E	CREEPING RED FESCUE	50	1.15
	KENTUCKY BLUEGRASS	50	1.15
	TOTAL	*100*	*2.30*
F	*TALL FESCUE*	*150*	*3.60*

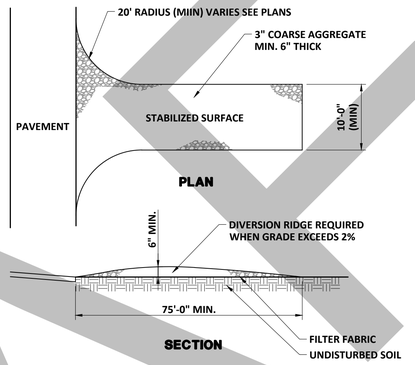


NOTE:
INSTALL ON SLOPES 3:1 OR GREATER

EROSION CONTROL MATTING - SLOPES
SCALE: NTS



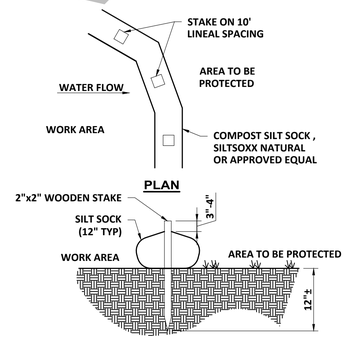
FLOATING SEDIMENT TURBIDITY CURTAIN
SCALE: "NTS"



(TEMPORARY, TO BE REMOVED PRIOR TO FINAL SITE PAVING)

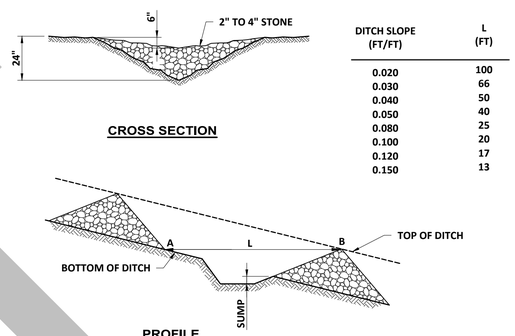
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. PROVIDE WASH WATER STATION TO CLEAN WHEELS AS NECESSARY.

STABILIZED CONSTRUCTION ENTRANCE
NTS



NOTES:
1. ALL MATERIAL TO MEET SPECIFICATIONS
2. SILT SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS
3. SILT SOCK DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

COMPOST SILT SOCK
SCALE: "NTS"



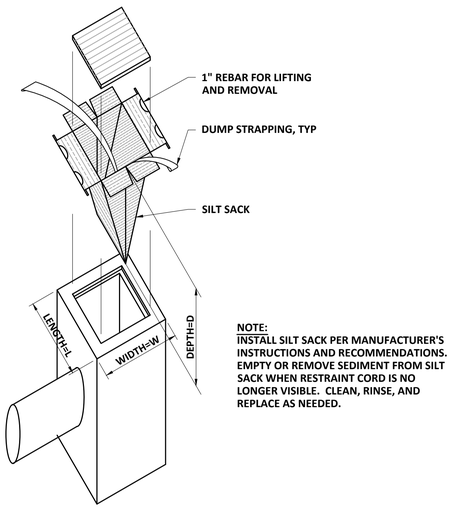
CROSS SECTION

DITCH SLOPE (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

PROFILE

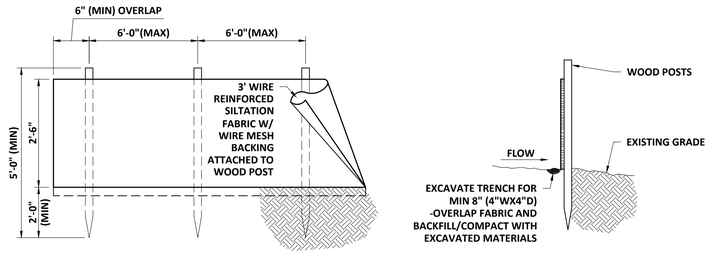
NOTE:
FOR DRAINAGE AREAS 1 ACRE OR LESS

STONE CHECK DAM
SCALE: "NTS"



NOTE:
INSTALL SILT SACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. EMPTY OR REMOVE SEDIMENT FROM SILT SACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.

SILT SACK CATCH BASIN INLET
SCALE: NTS



NOTES:
1. MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHALL BE 100 FEET
2. MAXIMUM SLOPE ABOVE FENCE SHALL BE 2H TO 1V

SILT FENCE INSTALLATION DETAIL
SCALE: "NTS"

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21244
DESIGNED: A.MORRILL
CAD COORD: R.BEISAW
CAD: R.BEISAW
CHECKED: A.MORRILL
DATE:
APPROVED: A.MORRILL
DATE:
SUBMISSION: 90% DESIGN REVIEW

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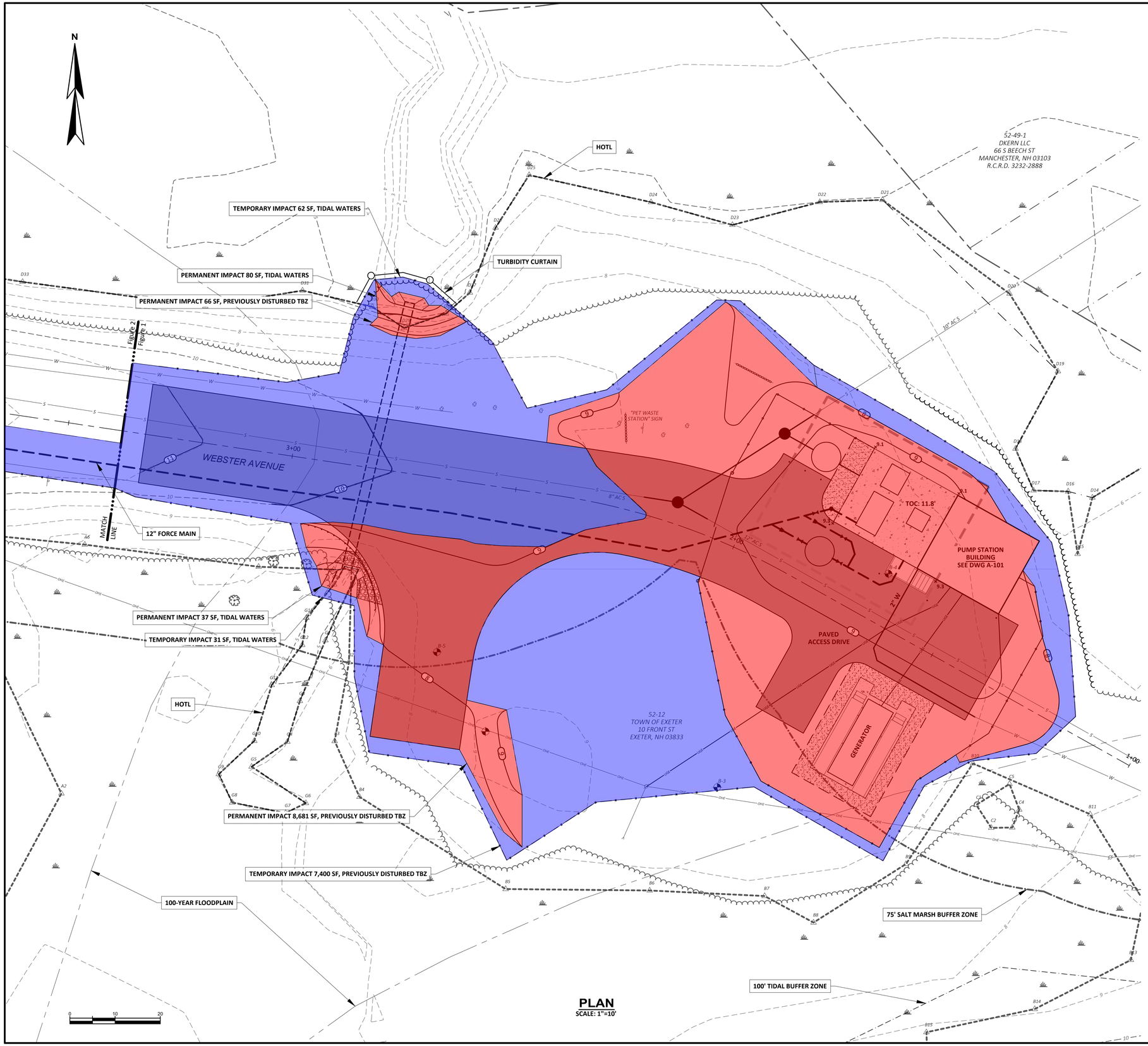
230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION & FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

EROSION CONTROL NOTES & DETAILS

DRAWING
C-503



PLAN
SCALE: 1"=10'

LEGEND:

TEMPORARY WETLAND IMPACT	
PERMANENT WETLAND IMPACT	
SILT FENCE	
EDGE OF WETLANDS	
100 YEAR FLOODPLAIN	
HOTL	
100' TIDAL BUFFER	
75' SALT MARSH BUFFER	

NOTE:

TEMPORARY IMPACTS TO PREVIOUSLY DISTURBED TBZ: 7,400 SF

PERMANENT IMPACTS TO PREVIOUSLY DISTURBED TBZ: 8,747 SF

TEMPORARY IMPACTS TO TIDAL WATERS: 93 SF

PERMANENT IMPACTS TO TIDAL WATERS: 117 SF

JURISDICTIONAL WETLANDS DEPICTED WERE DELINEATED IN FALL 2022 BY MARC JACOBS, CERTIFIED WETLANDS SCIENTIST NUMBER 090. A DELINEATION REPORT AND FUNCTIONAL ASSESSMENT ARE ATTACHED FOR REFERENCE. SURVEY OF THE PROJECT AREA WAS COMPLETED BY DOUCET SURVEY INC.

HORIZONTAL DATUM: NEW HAMPSHIRE STATE NAD83

VERTICAL DATUM: NVGD29 PER DISK B 14 1934

UNITS: US SURVEY FEET

PROPOSED IMPACTS OUTSIDE OF THE TIDAL BUFFER ZONE AND WITHIN 250 FT OF THE HOTL WILL BE ADDRESSED IN AN NHDES SHORELAND PERMIT APPLICATION

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

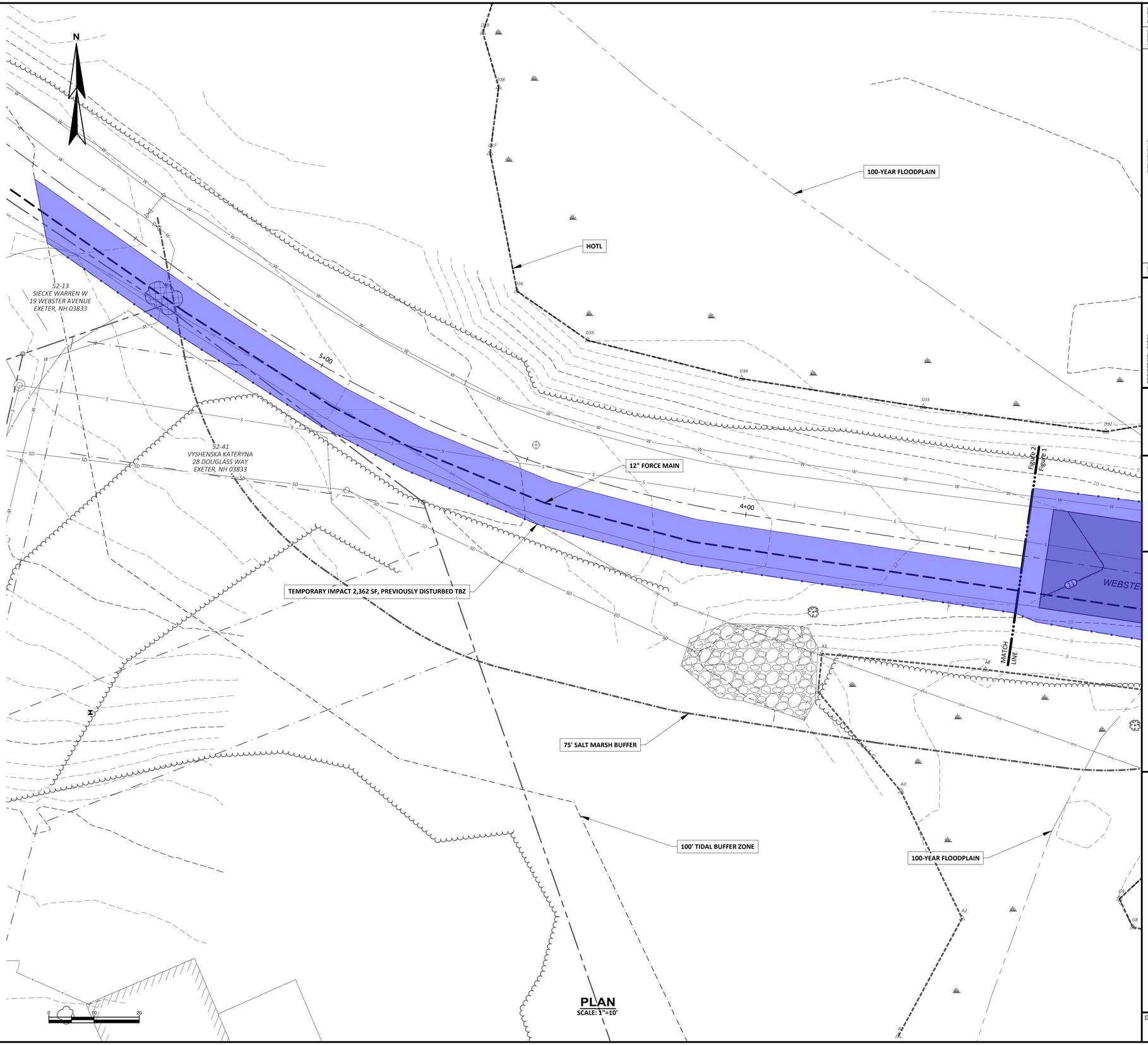
PROJECT NO: 21244
DESIGNED: M.PIERRE
CAD COORD: R.BEISAW
CAD: M.PIERRE
CHECKED: J.SHACTMAN
DATE:
APPROVED:
DATE:
SUBMISSION: PERMITTING

WRIGHT-PIERCE
603.430.3728 | www.wright-pierce.com
230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION &
FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

WETLAND IMPACT FIGURE 1

DRAWING
FIGURE 1



PLAN
SCALE: 1"=10'

LEGEND:

TEMPORARY WETLAND IMPACT	
PERMANENT WETLAND IMPACT	
SILT FENCE	
EDGE OF WETLANDS	
100 YEAR FLOODPLAIN	
HOTL	
100' TIDAL BUFFER	
75' SALT MARSH BUFFER	

NOTE:

TEMPORARY IMPACTS TO PREVIOUSLY DISTURBED TBZ: 2,362 SF

PERMANENT IMPACTS TO PREVIOUSLY DISTURBED TBZ: 0 SF

TEMPORARY IMPACTS TO TIDAL WATERS: 0 SF

PERMANENT IMPACTS TO TIDAL WATERS: 0 SF

JURISDICTIONAL WETLANDS DEPICTED WERE DELINEATED IN FALL 2022 BY MARC JACOBS, CERTIFIED WETLANDS SCIENTIST NUMBER 090. A DELINEATION REPORT AND FUNCTIONAL ASSESSMENT ARE ATTACHED FOR REFERENCE. SURVEY OF THE PROJECT AREA WAS COMPLETED BY DOUCET SURVEY INC.

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PROPOSED IMPACTS OUTSIDE OF THE TIDAL BUFFER ZONE AND WITHIN 250 FT OF THE HOTL WILL BE ADDRESSED IN AN NHDES SHORELAND PERMIT APPLICATION

NO	REVISIONS	APPD	DATE
1			
2			
3			
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PROJECT NO: 21244
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TOWN OF EXETER, NEW HAMPSHIRE
WEBSTER AVENUE PUMP STATION &
FORCE MAIN UPGRADES
EXETER, NEW HAMPSHIRE

WETLAND IMPACT FIGURE 2

DRAWING
FIGURE 2

4

Project Narrative

Project Narrative 4

Project Introduction

The Town of Exeter, NH, owns, operates, and maintains sewer utilities in Exeter, NH, which includes the Webster Avenue Pump Station and force main. The Webster Avenue Pump Station receives flow from portions of the Portsmouth Avenue area, the Jady Hill area, and the Town's Water Treatment Plant discharge. The pump station and force main were originally constructed in 1965. The pump station underwent a major upgrade in 2000; but the force main is still original construction. The proposed project upgrades pump station infrastructure that is near the end of its useful life and increases the capacity of the Webster Avenue Pump Station to accommodate future development within the pump station sewershed.

To meet the present and future needs of the Town, the proposed project includes construction of a new pump station, generator, channel grinder, and replacing the existing 8-inch asbestos cement force main with a 12-inch high density polyethylene (HDPE) force main. The proposed project also includes in-kind replacement of an existing 24-inch CMP culvert. The culvert crosses Webster Avenue adjacent to the pump station and is currently in poor condition due to significant corrosion.

Natural Resources

Wetlands

The project area is located along a tidally influence stream known as Wheelright Creek. Wheelright Creek outlets to the Squamscott River, north of the project area.

Wetlands and resource areas were delineated by Marc Jacobs, CWS in November 2022. Resource areas within the project area include the tidal wetlands, the 100-ft Tidal Buffer Zone (TBZ) and freshwater wetlands. Refer to wetland delineation report included within the Coastal Function Assessment Report prepared by Marc Jacobs included in Section 6. Salt marsh was observed in wetlands identified as series 'D' and 'G'. The Town of Exeter has municipally designated prime wetlands recognized by NHDES. The wetlands identified by flag series 'D' are prime wetlands. Prime wetlands in Exeter do not have a 100-ft state buffer.

Rare, Endangered and Threatened Species

A New Hampshire Natural Heritage Bureau DataCheck report determination was made on August 24, 2023. (NHB-24-2431) indicated the following species within the project vicinity: Norther Black Racer. NHB did not provide any comments as part of the DataCheck. FIS 1004.12 consultation was completed with NHFG August 29, 2023 and recommendations were incorporated into the project design. NHFG Recommended Conditions have been incorporated within the project plans on Sheet C-002. The NHB report and correspondence with NHFG is included in Section 13.

Proposed Project

The proposed project is to build a new submersible wastewater pump station with a channel grinder, construct a new sewer force main, and replace the existing 24-inch diameter culvert with a new 24-inch HDPE culvert and concrete headwalls. The scope of work for the pump station consists of constructing new stand-alone wet well housing submersible pumps on rails, as well as a new valve vault. A built-in-place or pre-cast building would be constructed to house all new electrical equipment and controls. A new generator would be placed in a stand-alone enclosure and the existing generator pad and station would be abandoned. The scope of work for the force main improvements includes installing a new 12-inch diameter, ±2,200 linear foot sewer force main located in the Town's right of way along Webster Avenue and Jady Hill Avenue that would replace the existing 8-inch force main.

Proposed Wetland Impacts

The proposed impact area within the previously disturbed tidal buffer zone for the project includes 9,762 sq ft of temporary impact (trenchwork to install force main, test pits, paving to match existing grade, erosion & sediment control installation/maintenance) and 8,747 sq ft of permanent impacts (new pump station building, generator enclosure, site grading (including driveway pavement improvements/turnaround), security fencing, paving) within the previously disturbed 100-ft Tidal Buffer Zone (TBZ). Additionally, 93 sq ft of temporary and 117 sq ft of permanent wetland impacts are proposed below the HOTL associated with culvert replacement. See Wetland Impact Figures (Section 3). Disturbance areas below the HOTL shall be restored with Panicum virgatum (Switchgrass) in accordance with restoration recommendations made by Marc Jacobs, CWS.

The project proposes temporary impacts to jurisdictional areas as follows:

Activity	Tidal Buffer Zone (sq ft)	Tidal Waters (sq ft)
Trench Excavation, Test Pits, Replace Paing In-Kind, Erosion Control Installation and Maintenance Construction Access/Staging	9,762	0
Culvert Replacement	0	93
Total	**9,762**	**93**

The project proposes permanent impacts to jurisdictional areas as follows:

Activity	Tidal Buffer Zone (sq ft)	Tidal Waters (sq ft)
Pump Station Building and Grading	8,747	0
Culvert Replacement	0	117
Total	**8,747**	**117**

Proposed Construction BMPs

In general, proposed construction will be completed in accordance with the Best Management Practices Manual: Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire.

The following sections describe how the proposed project will meet standard permit conditions required in Env-Wt 307.

Env-Wt 307.03 Protection of Water Quality

a. Best management practices (BMPs) will be used to protect water quality during construction.
b. Soil stockpiles will be managed to minimize risk of erosion and sedimentation to tidal waters.
c. All water quality measures will be designed to provide maximum protection during storm events during construction and will be removed when construction is complete and vegetated areas are stable. Wildlife friendly erosion control shall be used.

d. During construction, erosion and sedimentation controls will be inspected, replaced, and/or repaired every 7 days and immediately following any significant rainfall or snowmelt. Any accumulated sediments will be removed and disposed of to a stable and suitable site.
e. Areas disturbed outside of the roadway during construction will be permanently stabilized with 3 days of completion of final grades.
f. If used, the turbidity curtain will be removed after work within the turbidity control is completed, contained water has returned to background clarity.
g. The contractor will be required to inspect equipment daily for leaking fuel, oil and hydraulic fluid prior to initiating work. All leaks shall be contained and repaired to prevent fluids from reaching groundwater, surface water or wetlands.
h. Equipment will be staged and refueled in accordance with Env-Wt 307.15.

Env-Wt 307.04 Protection of Fisheries and Breeding Areas Required

The proposed project is not anticipated to have any impacts to fish and shellfish. FIS 1004.12 consultation was completed with NHFG, as a result, NHFG did not recommend a specific work window for the culvert replacement. Erosion and sedimentation BMPs will be utilized to prevent discharge of sediment with stormwater runoff.

Env-Wt 307.05 Protection Against Invasive Species

a. Not applicable.
b. Not applicable.
c. Not applicable.
d. Not applicable.
e. To prevent the use of soil or seed stock contain nuisance or invasive species, the Contractor will be required to follow the Invasive Plant BMPs.

During delineation of wetlands and other resource areas, Marc Jacobs observed the presence of Japanese knotweed, purple loosestrife, Asian bittersweet, glossy buckthorn, multiflora rose, common buckthorn, burning bush, autumn olive and honeysuckle. The Contractor will be required to complete the project such that the project will not cause the spread of invasive species. Any impacted invasive species will be removed and disposed of properly.

Env-Wt 307.06 Protection of Rare, Threatened or Endangered Species or Critical Habitat

a-c. All proposed activities will be conducted so as to minimize impacts to threatened and endangered species. See Section 13 for concurrence with NHB and NHFG that no impacts are anticipated as a result of the proposed project. Recommended permit conditions have been incorporated into the project plans. See Sheet C-002.

Env-Wt 307.07 Consistency with Shoreland Water Quality Protection Act

All project activities will be conducted in compliance with the applicable requirements of RSA 483-B and Env-Wq 1400 during and after construction. A Shoreland Permit will be submitted in concurrence for impacts outside of the TBZ and within 250 ft of the HOTL.

Env-Wt 307.08 Protection of Designated Prime Wetlands and Duly-Established 100-foot Buffers

a. The proposed project has been designed to minimize and avoid impacts to designated prime wetlands to the maximum extent practicable. The contractor will be required to install and maintain adequate erosion and sediment control measures through the duration of the project until the site reaches final stabilization.

b. Not applicable.

Env-Wt 307.09 Shoreline Structures

The proposed project does not involve the construction of any structures over public waters.

Env-Wt 307.10 Dredging Activity Conditions

Not applicable.

Env-Wt 307.11 Filling Activities

a. It is anticipated that suitable excavated materials (existing soil, crushed stone, gravel) will be used to restore the impacted areas. If fill needs to be brought from an offsite location is will not contain any material that could contaminate the surface, groundwater or tidal waters.
b. Limits of permitted impacts will be identified prior to commencement of work to ensure that fill does not spill over or erode into areas where filling is not authorized.
c. Slopes shall be immediately stabilized by methods specified in Env-Wq 1506 and in accordance with the NHDES Stormwater Manual to prevent erosion into adjacent wetlands and surface waters.
d. Not applicable.
e. The proposed project will not change the direction of surface water runoff.
f. Not applicable.
g. Not applicable.
h. Not applicable.
i. The use of corduroy is not proposed.
j. Temporary impact areas will be restored to pre-construction conditions and elevations.
k. Not applicable.
l. Not applicable.

Env-Wt 307.12 Restoring Temporary Impacts; Site Stabilization

a. Within 3 days of final grading or temporary suspension of work in an area that is in or adjacent to surface waters, all exposed soil areas shall be stabilized by seeding and mulching, if during the growing season or mulching with tackifiers on slopes less than 3:1 or all proposed vegetated areas that do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting, elsewhere. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events.
b. Impacts to the previously disturbed tidal buffer zone will be restored to match current conditions. Impacts below the HOTL will be restored with wetland seed mix containing non-invasive plant species only.
c. Any seed mix used shall not contain plant species that are exotic aquatic weeds.
d. Mulch used within an area being restored shall be natural straw or equivalent non-toxic, non-seedbearing organic material.
e. Wetland soils from areas vegetated with invasive plant species shall not be used in the area being restored.
f. If any temporary impact area that is stabilized with seeding or plantings does not have at least 75% successful establishment of wetlands vegetation after 2 growing seasons, the area shall be replanted or reseeded, as applicable.
g. If a temporary impact area is restored by seeding or plantings, then:

(1) The work shall not be deemed successful if the area is invaded invasive species during the first full growing season following the completion of construction; and
(2) The person responsible for the work shall submit a remediation plan to the department that proposes measures to be taken to eradicate nuisance species during this same period.

h. Unless otherwise authorized, any trees cut in an area of authorized temporary impacts shall be cut at ground level with the shrub and tree roots left intact, to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area. This permit application requests authorization to remove trees and roots from the TBZ and wetlands as shown in existing conditions and demolition plan included in Attachment 3.
i. Unless otherwise authorized, wetland areas where permanent impacts are not authorized shall be restored to their pre-impact conditions and elevation by replacing the removed soil and vegetation in their pre-construction location and elevation such that vegetation schemes areas close as practicable to pre-construction conditions.

Env-Wt 307.13 Property Line Setbacks

The proposed project includes impacts both in the Town ROW and on private property. Authorizations for jurisdictional impacts outside the ROW/Town property and within 10-ft of abutting property are included in Attachment 7.

Env-Wt 307.14 Rock Removal

The proposed project does not involve removing any rocks from surface waters.

Env-Wt 307.15 Use of Heavy Equipment in Wetlands

a. This permit application is requesting authorization to use heavy equipment within jurisdictional resource areas as shown on Impact Figures 1 & 2 included as Attachment 3.
b. Mobile heavy equipment will be prohibited from being stored, maintained, or repaired in wetlands, except where repairing or refueling cannot practicably be complete and secondary containment is provided.
c. The proposed project does not require operation of equipment over wetlands.
d. Timber mats are not anticipated, but if necessary, shall be in good condition prior to installation, use and removal and thoroughly cleaned before re-use.
e. Timber mats are not anticipated, but if necessary shall meet requirements (1)-(3).

Env-Wt 307.16 Adherence to Approved Plans Required

Construction documents will require that the contractor complete all work in accordance with the approved plans. A qualified professional will periodically inspect the construction site to confirm work is being performed in accordance with the approved permit conditions.

Env-Wt 307.18 Reports

All required reporting will be completed in accordance with the approved permit conditions.

Env-Wt 313.01 Criteria for Approving Standard Permit Applications

a. A Coastal Functional assessment was completed by Marc Jacobs (Section 6). Avoidance and minimization checklist is included in Section 15. No compensatory mitigation is anticipated. Resource and project specific criteria is included in Section 5 and 6 respectively. The proposed project will occur within the ROW and on property owned by the Town of Exeter.
b. Not applicable.

c. The proposed project has been designed to minimize adverse impact to jurisdictional resource areas. Completion of the project is intended to renew infrastructure in the Town of Exeter and to increase capacity of the Webster Avenue Pump Station and Force Main to meet present and future needs of the town.

5

Resource Specific Information

Resource Specific Information 5

Applicable resource specific information required by Env-Wt 311.09 is presented as follows:

a. *Project in tidal areas – Applicant shall submit information required by Env-Wt 600* – Refer to Section 6
b. *Project affecting non-tidal shoreline* – Not applicable
c. *Projects within the protected shoreland:*
    1. *Reference line* – HOTL, shown on Project Plans in Section 3
    2. *Location of existing structures* – shown on Project Plans in Section 3
    3. *Location of proposed structure* – shown on Project Plans in Section 3
    4. *Projects adjacent to tidal water, landward limit of the TBZ* – shown on Project Plans in Section 3
    5. *Total disturbed area within the protected shoreland:* TBD
d. *Stream crossing projects* – Not applicable

6

Project Specific Information

Project Specific Information 6

The information provided below indicates how the proposed project meets the requirements of Env-Wt 600. The following Sections 1 through 8 correspond to the sections specified on the Coastal Resource Worksheet. Refer to Section 16 for the completed worksheet.

Section 1. Required Information (Env-Wt 603.02; Env-Wt 603.06; Env-Wt 603.09)

Refer to Project Narrative in Section 4 for a description of the proposed project and natural resources present at the project site.

Section 2 Data Screening

The Wetland Permit Planning Tool and NH GRANIT were used to determine the presence of the following resource areas near the project site:

- Salt marsh – Salt marsh was found in mapping and observed by Marc Jacobs CWS. Refer to the Wetland Report in Section 6.
- Eel grass beds – Not present within the project area.
- Shellfish site – Not present within the project area.
- Projected sea-level rise (SLR) – The project area is located in an area that is projected to experience sea-level rise.
- 100-year flood plain – The project is partially located with the 100-year flood plain.

Refer to Wetland Permit Planning Tool map attached to the Coastal Resources Worksheet in Section 16.

Section 3 Coastal Functional Assessment

A Coastal Functional Assessment was completed by Marc Jacobs. Refer to Section 6.

Section 4 Vulnerability Assessment

A site-specific vulnerability assessment was completed for the project area. Refer to Section 16.

Section 5 Design Plans

Design plans are included in Section 3.

Section 6 Water Depth Supporting Information

Impacts will primarily occur within the 100-ft Tidal Buffer Zone. Any impacts below the HOTL will be associated with the in-kind culvert replacement and have been minimized to the maximum extent practicable.

Section 7 General Criteria for Tidal Beaches, Tidal Shoreline, and Sand Dunes

The proposed project only involves impacts to previously disturbed tidal buffer zone.

Section 8 How Project meets Relevant Standard Conditions and Approval Criteria

Refer to the Project Narrative included in Section 4 which describes how the proposed project will meet the general criteria for projects in the tidal buffer zone.

Coastal Functional Assessment

Of

Webster Avenue Sewer Pump Station
Exeter, NH

Prepared for

Wright-Pierce
230 Commerce Way
Suite 302
Portsmouth, NH 03801

By

Marc E. Jacobs Certified Wetland & Soil Scientist
P.O. Box 417 Greenland, NH 03840-0417

and

Adele Fiorillo Mattson
Professional Wetland Scientist

December 20, 2022

Webster Avenue Sewer Pump Station
Exeter, NH

Coastal Functional Assessment

TABLE OF CONTENTS

Coastal Functional Assessment

Webster Avenue Sewer Pump Station
Exeter, NH

1.0 Introduction

As a requirement for obtaining a wetland permit from the State of New Hampshire – Wetlands Bureau, this Coastal Functional Assessment (CFA) is being provided to supplement the permit application for the proposed replacement of a culvert under Webster Avenue, as well as temporary disturbance within the 100-foot previously developed Tidal Buffer Zone (TBZ) to install a proposed sewer force main. This CFA is being provided to supplement the permit application as required under the NH Code of Administrative Rules Env-Wt 100-900, specifically Env-Wt 311.10. The complete project includes culvert replacement at Webster Avenue, temporary TBZ impacts for a force main and other sewer line improvement work within existing roadways that are outside of Wetlands Bureau jurisdiction.

CFA's generally provide an inventory and survey of physical attributes, such as, but not limited to, topographic position, vegetative patterns, potential wildlife habitat, and soils, which then allow professional practitioners to assess functions and values that arise from those attributes. This report provides an assessment of the existing functions and values of the tidal marsh at this location according to the United States Army Corps of Engineers - New England District, Highway Methodology Workbook *Supplement* – September 1999 Edition (updated in 2015) and The Method for the Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire – June 1993 (Coastal Method). This study does not evaluate the potential effects of global climate change on the functions and values of the wetlands at this location. Where appropriate this assessment considers the larger wetland complex of the Squamscott River and associated tidal marshes. Otherwise; where noted, the limited project area for the culvert replacement and sewer force main within the previously developed TBZ at Webster Avenue is considered the area–of–interest (AOI). Attached is a copy of a United States Geological Survey topographic map upon which the subject property is identified (Refer to Attachment 1).

This assessment evaluates fourteen (14) functions and values for this location based upon current condition. Observations for this assessment were made on November 10 and December 10, 2022. The functions and values of a wetland or adjacent wetlands may be altered, or more specifically, the effectiveness of a wetland or adjacent wetlands to provide a particular function may be altered (increased or decreased) as a result of modifications to adjacent uplands and other properties, impacts to wetlands elsewhere on site or other development within the watershed.

2.0 Existing Conditions

The AOI involves tidally influenced lands adjacent to Webster Avenue where the Town of Exeter currently has a sewer pump station (Please note this AOI is different from the AOI encompassed by the wetland delineation report prepared for this project). The existing culvert beneath Webster Avenue is currently compromised and carries flows of fresh water toward the Squamscott River marsh. At certain high tides the culvert carries tidal flow upstream within a confined channel (see Figure 1). The tidal flow has no apparent influence on the vegetation present on the upstream side of the culvert because the flow is confined to the channel.

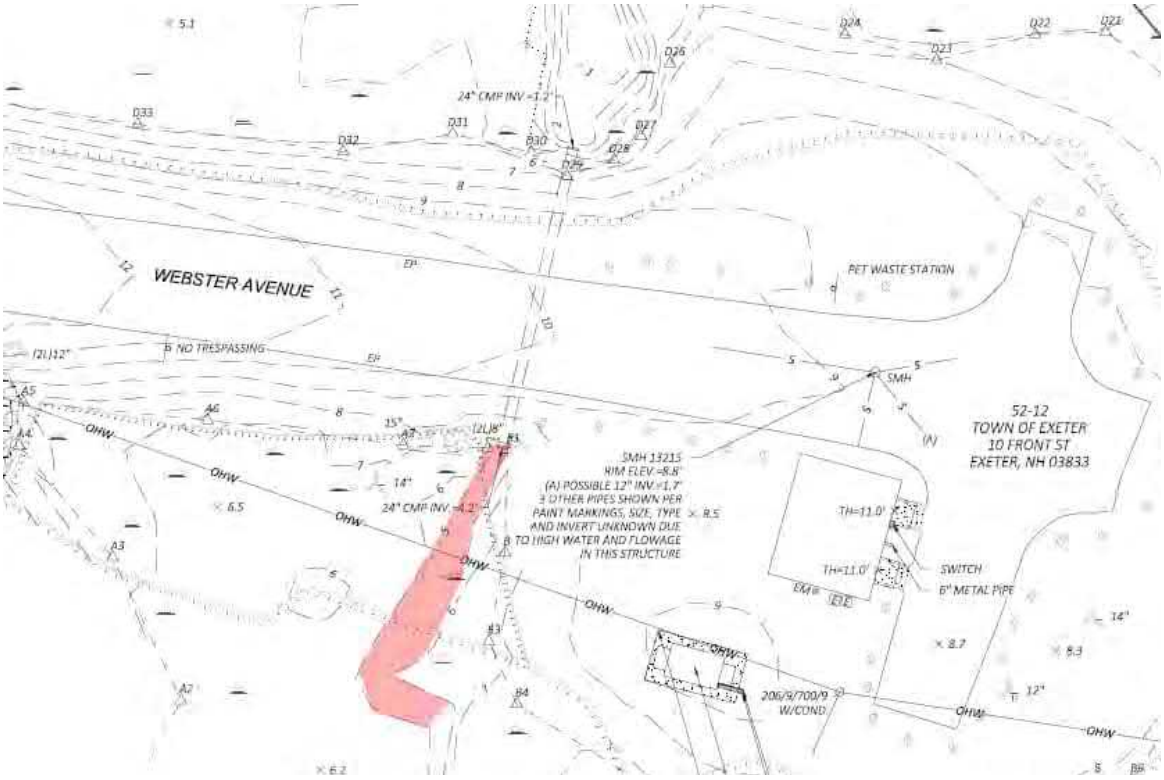


Figure 1: the pink shaded area is the limit of upstream tidal flow within a confined channel.

The salt marsh at the downstream end of the culvert is hydrologically connected to the salt marshes of the Squamscott River. The wetland area immediately adjacent to the salt marsh side of the culvert is dominated by a dense community of narrowleaf cattail (*Typha angustifolia*). Classification of the predominant site conditions according to the National Wetlands Inventory and the Cowardin *et.al.*[1] system is Estuarine, Intertidal, Emergent, Persistent, Irregularly Flooded (E2EM1P). Soils within the project area are Ipswich mucky peat on the downstream side of the culvert and Lim-Pootatuck Complex on the upstream side (Attachment 2). For further descriptive information refer to the Wetland Delineation Report dated December 16, 2022 (Attachment 3 and 3A).

Tidal salt marshes are considered Priority Resource Areas (PRA) according to Env-Wt 103.66 (f). Exeter has municipally designated prime wetlands recognized by DES. Prime wetlands are high functioning wetlands that receive additional protection under state law. The tidal area of the project site is a PRA and a prime wetland (Attachment 4).

An inquiry to the New Hampshire Natural Heritage Bureau (NHB-22-2192) regarding rare, threatened or endangered species identifies a record of an unnamed species in the vicinity, but NHB indicates that they do not expect the project will have any impact on the species. Refer to Attachment 5.

Additionally, included is a copy of the endangered species list for this area prepared based upon an inquiry to the United States Fish and Wildlife Service. The list identifies one mammal, one insect and numerous bird species that may potentially be present at this location, although the list does not identify critical supporting habitat and the impact area does not represent habitat for any of the species on the list. Refer to Attachment 6.

[1] Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U. S. Dept. of the Interior, Fish and Wildlife Service, Washington, D.C.

A review of information regarding the NH Fish and Game Department - 2020 Wildlife Action Plan (WAP) indicates the general study area and beyond is comprised of highest ranked habitat in the state, which is shown in magenta on Attachment 7.

Remote sensing and consultation with various mapping web sites indicate that the area does not contain any eel grass (*Zostera* sp.) and current or historic shellfish beds (Attachment 8). Direct observations confirm the absence of these resources. A query to the National Oceanographic and Atmospheric Administration's Essential Fish Habitat (EFH) web site indicates no EFH was identified (Attachment 9).

Regarding predicted sea level rise, the projection for a 2-foot rise in sea level shows some flooding from tides (Attachment 10). The potential for the development of transitional salt marsh and salt marsh migration is shown for the year 2050 scenario (Attachment 11). Portions of the project site, especially near the culvert, are also located within the 100-year floodplain (Attachment 12).

3.0 Wetland Functions and Values

Wetland functions are self-sustaining properties and physical attributes of wetlands that exist without regard to subjective human values. Wetland values are benefits derived from these functions and physical attributes. Ecological Integrity assessed utilizing the Coastal Method and the functions and values assessed by the US Army Corps of Engineers Highway Methodology are identified below with a brief explanation of what each function and value considers.

3.1 Functions

1 - Ecological Integrity – The overall health and stability of the wetland ecosystem including human development affecting the AOI.

3 - Fish & Aquatic Life Habitat – The potential for waterbodies associated with wetlands to provide suitable habitat for fish or shellfish.

4 - Flood Storage – The potential for a wetland to reduce flood damage by attenuating floodwaters through storage and desynchronization of peak flows.

5 - Groundwater Recharge / Discharge – The potential for a wetland to recharge water to an aquifer or discharge groundwater to the surface.

7 - Nutrient Trapping/Retention & Transformation – The effectiveness of wetlands to protect water quality and prevent adverse effects associated with excess nutrients in a watershed.

8 - Production Export – The ability of the wetland to produce food for humans or other organisms.

10 - Sediment Trapping – The potential for the wetland to protect water quality by trapping sediments, toxicants and pathogens.

11 - Shoreline Anchoring – The ability of a wetland to stabilize stream banks or shorelines against erosion.

14 - Wetland-dependent Wildlife Habitat – The effectiveness of the wetland to provide suitable habitat for important wetland wildlife.

3.2 Values

2 - Educational Potential – The value of the wetland as an outdoor classroom.

6 - Noteworthiness – The effectiveness of the wetland in supporting rare, threatened or endangered species.

9 - Scenic Quality – The visual or aesthetic qualities of a wetland.

12 - Uniqueness/Heritage – The value relating to the wetlands suitability to provide special values such as unique geologic features, archaeological sites and/or vernal pool habitat.

13 - Wetland-based Recreation – The suitability of the wetland and any associated waterbodies to provide consumptive and non-consumptive recreational opportunities.

3.3 Study Area

Selection of an appropriate study area is crucial to the outcome of any CFA. Determination of suitable study areas can be somewhat subjective depending upon the criteria used to define the study area, especially since wetlands are natural systems and do not recognize political boundaries such as property or town lines and because all wetland systems have variations in physical attributes within an otherwise seemingly discreet wetland area. Wetland systems are frequently comprised of numerous wetlands with differing classifications, each having differing physical attributes and therefore exhibiting differing functions and values. Altering the size of a study area can therefore influence the physical attributes which are assessed, affecting the interpretation or perception of functions and values and ultimately the results of an assessment. Further complicating the definition of a study area, and thus the CFA, some considerations are focused on the watershed while others target wetlands or specific, discreet project sites within a larger wetland complex.

The results of this CFA applies to the jurisdictional tidal resources at the project site with due consideration given to the larger wetland complex to which it is hydrologically connected (Squamscott River tidal marsh and Watershed). The Squamscott River Watershed (Hydrologic Unit Code 12) is shown in Attachment 13. Further complicating this assessment is the freshwater wetland upstream of the culvert which does not receive tidal flow except within a short reach of the stream channel. Rather than completing two assessments, one for tidal areas and one for freshwater wetlands, this assessment uses a tidal approach given that the Highest Observable Tide Line (HOTL) extends to both sides of the culvert proposed to be replaced.

Data forms for Ecological Integrity and the thirteen functions and values assessed utilizing the Highway Methodology were completed and are included herein (Attachments 14 and 15). Where functional assessment is required as part of the permitting process, the State of New Hampshire also requires the assessment of each wetland for Ecological Integrity. Note that the Highway Methodology does not consider Ecological Integrity. Ecological Integrity is a function identified in NH RSA 482-A: Fill and Dredge in Wetlands, specifically Section 482-A:2 XI. This functional wetland assessment utilizes the field criteria in the Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire (Coastal Method), June 1993, to assess this function.

The assessment of wetland functions and values can be an inherently subjective process. The Highway Methodology strives to eliminate potential bias through implementation of a qualitative and descriptive approach to functional assessment by requiring the evaluator to review a list of considerations and qualifiers for each function or value. The list of considerations/qualifiers is referred to as Appendix A and is included as Attachment 16.

4.0 SUMMARY AND DISCUSSION

The Highway Methodology identifies 13 primary functions and values which can potentially be ascribed to wetlands. The presence of these functions and values provide benefits for society and the environment.

It can be difficult to precisely implement many of the considerations/qualifiers provided in Attachment 16 since the salt marsh at the culvert under Webster Avenue is part of a larger contiguous wetland system. It is accepted however that conclusions about the effectiveness of a wetland study area to provide a particular function can change depending upon a host of factors which include the assessment area involved and the relative juxtaposition with other wetland resources. Conclusions regarding the functions and values associated with this wetland study area are briefly summarized below by principal function / value and in Table 1.

TABLE 1 TALLY OF PRINCIPAL FUNCTIONS / VALUES

FUNCTION / VALUE	PRINCIPAL
Ecological Integrity 1	Yes
*Educational Potential 2	No
Fish & Aquatic Life Habitat 3	Yes
Flood Storage 4	Yes
Groundwater Recharge 5	No
Noteworthiness 6	Yes
Nutrient Trapping/Retention & Transport 7	Yes
Production Export (Nutrient) 8	Yes
*Scenic Quality 9	No
Sediment Trapping 10	Yes
Shoreline Anchoring 11	Yes
Uniqueness/Heritage 12	Yes
*Wetland-based Recreation 13	No
Wetland-dependent Wildlife Habitat 14	Yes
TOTAL (14)	10

***NOTE: Values 2, 9 and 13 were assessed only at the limited project site since these values, although provided by the larger wetland complex, are far removed from the project site.**

Ecological Integrity

Ecological Integrity (EI) at this location is determined in two parts: a) The EI of the Ecological Unit (EU) and b) EI of the Zone of Influence on the EU. The assessment of the EU considered the marsh as a whole while EI of the Zone of Influence considers the 500-foot zone around the subject property. An exception to this is the determination of impervious area within 150-feet which considers only Webster Avenue. Attachment 17 is an aerial image which depicts a 500-foot radius circle around the subject property. Although the marsh is primarily developed on the southerly edges, the northerly end is relatively undeveloped.

Scoring for EI can be a maximum of 1.0. Scores closest to 1.0 indicate higher function. The EI for the EU is 0.40 and the Zone of Influence is 0.46. These scores are primarily due to restricted tidal flows due to the culvert at the project site, the presence of invasive species, ditching and the level of development within the 500 foot radius.

Educational Potential

The resources at the project location do not possess educational potential given the area for this activity is far removed from the project site. Therefore, educational potential is not a principal function of the marsh.

Fish and Aquatic Life Habitat

The Essential Fish Habitat report does not identify any fish species of concern. However, other fish and aquatic species, such as mummichogs (*Fundulus heteroclitus*), aquatic invertebrates and a variety of ducks, are likely to utilize the area. While it is unlikely that shellfish are present and there are no shellfish beds mapped in the marsh, fish and aquatic habitat are principal functions of this area.

Flood Storage

The broad and flat topography at this location provides flood storage from high tides and dense vegetation helps to desynchronize flood flows. Therefore, flood storage is a principal function of this area.

Groundwater Recharge / Discharge

Groundwater recharge / discharge are not functions that are applicable to tidal wetlands per se. Groundwater recharge and discharge are not principal functions of this area.

Noteworthiness

Salt marshes are inherently noteworthy given the ecological role they play in a coastal ecosystem. Additionally, the NHB identified a species of concern at this location and, due to New Hampshire's short coastline, salt marsh habitats are particularly noteworthy. Therefore, noteworthiness is considered a principal function of this area.

Nutrient Trapping / Retention and Transformation

The area-of-interest receives tidal flow which can often carry nutrients into the marsh providing for high primary productivity through the transformation of the nutrients, making this a principal function.

Production Export

Export of nutrients via tidal exchange make production export a principal function of the area.

Scenic Quality

With the character of the marsh, and broad sweeping views, scenic quality is suitable but because of the lack of topography at the project site viewing is limited and is not principal.

Sediment Trapping

The marsh provides opportunity for sediments brought in by the tides to drop out of the water column and the dense vegetation traps these sediments. Slow moving water within the tidal channels also allow for sediment deposition. Therefore, sediment trapping is a principal function of the area.

Shoreline Anchoring

The shoreline in this area is well vegetated. There are some erosive forces present within the channel upstream of the culvert and within Wheelright Creek. Shoreline anchoring is a principal function of the area.

Uniqueness / Heritage

The extensive salt marsh and the presence of rare, threatened or endangered species speak to the uniqueness of this area, which is a principal function.

Wetland-based Recreation

The marsh is suitable for non-consumptive recreational activities, especially photography, bird watching and wildlife observation. However, access to the area for these activities is far removed from the project site and is therefore not considered a principal function.

Wetland-dependent Wildlife Habitat

Wetland-dependent wildlife habitat is a principal function of the area based upon review of available resources referenced above as well as direct observations of the physical attributes exhibited by the area.

ATTACHMENTS

Attachment 1

USGS Topo and Project Locus Map

Legend

- State
- County
- City/Town

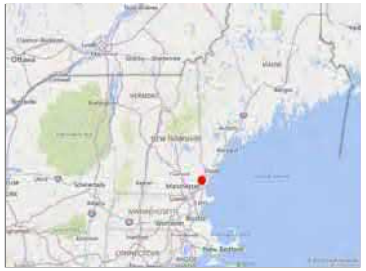
Map Scale

1: 10,000

Map Generated: 12/11/2022

Notes

Webster Avenue
Sewer Pump Station
Exeter, NH



Attachment 2 Soil Map—Rockingham County, New Hampshire

Webster Avenue
Sewer Pump Station
Exeter, NH

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 25, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
305	Lim-Pootatuck complex	1.0	32.7%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	0.1	3.1%
699	Urban land	0.0	0.0%
799	Urban land-Canton complex, 3 to 15 percent slopes	0.7	24.5%
997	Ipswich mucky peat, low salt	1.2	39.6%
Totals for Area of Interest		**3.0**	**100.0%**

Attachment 3

Marc E. Jacobs, *CSS, CWS, PWS, CPESC*
Professional Wetland / Soil Scientist
jacobs2wetsoil2004@yahoo.com

VIA EMAIL to andy.morrill@wright-pierce.com

December 16, 2022

Mr. Andy Morrill, P.E., Project Manager
Wright-Pierce
230 Commerce Way, Suite 302
Portsmouth, NH 03801

Re: Douglass Way, Jady Hill Avenue, Webster Avenue, Swazey Parkway – Wheelwright Creek, Squamscott River and Clemson Pond
Exeter, NH

Dear Mr. Morrill,

The following remarks summarize our preliminary observations made during the delineation of jurisdictional wetlands and other resources at the above-referenced locations. Site inspections were conducted on August 14 and 17, 2020 to identify and delineate wetlands according to the New Hampshire Department of Environmental Services (NHDES) – Code of Administrative Rules Section Env-Wt 100 – 900 and the Town of Exeter Zoning Ordinance – Article 9 – Natural Resource Protection – §9.1 Wetlands Conservation District. The area-of-interest (AOI) generally includes lands immediately adjacent to Clemson Pond, Douglass Way, Jady Hill Avenue, Swazey Parkway (partial) and Webster Avenue (near the existing sewer pump station). On October 23 and November 27, 2022 site inspections were conducted to delineate additional resources or extend previous delineations along and adjacent to Webster Avenue to accommodate an expansion of the original AOI. This report supersedes our previous delineation report issued on October 2, 2020.

Jurisdictional wetlands were identified and wetland-upland boundaries within the AOI were identified and delineated in the field based upon on-the-ground investigations conducted using the technical guidance identified in the certification note at the end of this report. Jurisdictional wetland-upland boundaries within the AOI were marked in the field with solid color pink survey flags. Each flag bears a letter and number to assist in their subsequent field location by instrument survey. The following flag sequences were used: A, B, C, D, E, F, G, and H. The flags were subsequently located via survey by Doucet Survey, LLC and are depicted on site plans prepared for Wright-Pierce which are included herein by reference. Only the wetland-upland boundaries closest to existing facilities and proposed work within the AOI were delineated.

Flag series 'E', 'F' and 'G' were inadvertently utilized twice for this project. Flags E1-E25, F1-F7 and F1a-F1j were originally utilized in August 2020 adjacent to Clemson Pond and the Squamscott River. Flags G1-G4 were originally utilized in August 2020 adjacent to Swazey Park and the Squamscott River.

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Additional investigations along Webster Avenue in the fall of 2022 inadvertently utilized flags series 'E', 'F' and 'G' again while series 'H' was utilized for the first time. The 'D' series flag line was extended from D37 to D55 during the November 2022 investigations. Normally, utilizing the same flag series twice on the same project might cause confusion, however the distance between flag series within the expansive AOI for this project should provide clarification. The discussion below provides additional clarification.

General Wetland Descriptions

The following section generally describes wetland hydrology, vegetation and soil conditions at this location. The information is organized by wetland flag series or, where appropriate, groups of flag series that generally define a discreet wetland area. Classification of the dominant wetland types according to the National Wetland Inventory and Cowardin system are also identified below.

Wetland Flag Series 'A'

The wetland area identified by flags A1-A8 represents a variety of conditions but generally comprise freshwater wetlands having poorly drained hydric soils that are subject to periodic flooding. Wetland flags A1-A4± generally represent a natural wetland-upland boundary associated with palustrine forested (PFO) freshwater wetlands that also have a significant palustrine scrub-shrub (PSS) component toward the interior. Wetland flags A4-A5± generally represent a possible man-made wetland-upland boundary associated with PSS wetlands at the edge of a riprap apron. The apron contains a significant population of wetland plants, such as jewelweed (*Impatiens capensis*), but we have assumed that it was constructed in uplands and the wetland plants have subsequently colonized the area. Wetland flags A5-A8± generally represent a man-made wetland-upland boundary located at the toe-of-fill associated with construction of Webster Avenue. Wetland flag A8 is located at a 24-inch diameter corrugated metal pipe (CMP) which conveys an unnamed brook beneath Webster Avenue to tidally influenced wetlands associated with Wheelwright Creek. The stream channel appears to have been modified by excavation and/or filling, though not recently. The brook was observed to be flowing as a trickle during our site investigations, suggesting that the stream may be intermittent, but our investigations were conducted in August and under drought conditions.

Wetland Flag Series 'B'

The wetland area identified by flags B1-B16 represents a variety of freshwater wetland conditions that have mostly been altered at one time or another. The dominant soil substrate involves poorly drained hydric soils. Wetland flag B1 starts at the 24-inch diameter CMP referenced above. Wetland flags B1-B10± generally represent a possible man-made wetland-upland boundary, associated with PFO/PSS wetlands, which appears to be the result of filling. Wetland flags B10-B12± generally represent a possible man-made wetland-upland boundary associated with PFO/PSS wetlands which appear to be the result of an altered plant community. Wetland flags B12-B16± represent PFO wetlands at the toe of a fill slope associated with a developed commercial property that fronts on Portsmouth Avenue (NH Route 108). Wetland flag B16± is located adjacent to a storm drain outlet having a significant plume of sand. This sandy area is infested with Japanese knotweed, an invasive species. It is likely that occasional shallow surface flow takes place between wet flags B10/B11 and the wetland identified by the "D" series flags, especially flags D10/D11 and D15, during heavy storm events, and possibly as a result of the storm drain, but we did not connect the 'B' and 'D' wetland areas. The lands between the 'B' and 'D' wetlands, which have no trees, were previously altered.

Wetland Flag Series 'C'

The upland area encompassed by flags C1-C5 represents a pile of fill comprised by soil and brush. We estimate the pile to be approximately 5 years old. We estimate that the area beneath the fill represents former wetlands. The dominant soil substrate involves poorly drained hydric soils.

Wetland Flag Series 'D'

The wetland area identified by flags D1-D55 represents a variety of conditions including both freshwater and tidal wetlands adjacent to Wheelwright Creek. Wetland flags D1-D6±, D9-D12±, D14-D16± and D19-D21± identify the boundary of densely vegetated PSS freshwater wetlands having poorly drained hydric soils. These wetlands generally classify as PFO.

Wetland flags D6-D9±, D12-D14±, D16-D19± and D21-D42± represent the wetland-upland boundary associated with tidally influenced wetlands classified as estuarine, intertidal, emergent, persistent, irregularly flooded (E2EM1P). The tidal wetlands represent the dominant condition along the wetland-upland boundary identified by the 'D' series flags. These flags identify the Highest Observable Tide Line (HOTL) and as such also represent the reference line for administration of the Shoreland Water Quality Protection Act discussed below. While there is a narrow band of poorly drained soils along the periphery and in the freshwater wetlands, the 'D' series flags should generally be interpreted to represent wetlands having very poorly drained soils for administration of wetland buffers under the local zoning ordinance described below. Wetland flags D26-D30± represent the top-of-bank. Wetland flags D28-D34± represent the toe-of-fill associated with the construction of Webster Avenue. Wetland flag D29± is located at a 24-inch diameter CMP which is completely rusted through on this end and is completely submerged during some (non-storm related) high tides. Wetland flags D35-D42± represent a natural wetland-upland boundary and the upland riparian buffer is steep and densely forested here. Wetland flags D42-D50± represent a wetland-upland boundary associated with freshwater wetlands adjacent to a stream (likely intermittent). The stream was flowing during site investigations. The bank of the stream was not delineated. Wetland flags D47-D49± represent the toe-of-fill associated with Webster Avenue. Wetland flag D48± is located at a severely rusted metal culvert beneath Webster Avenue. Wetland flags D49-D53± represent the toe-of-fill associated with construction of the residential dwelling at 18 Webster Avenue (Map 52, Lot 11).

Wetland flags D53-D55± represent a wetland-upland boundary associated with a strip of freshwater wetlands along the periphery of the tidal marsh north of 18 Webster Avenue. The freshwater wetland vegetation community is altered in this area by the conversion to mowed turf and other cultural practices. Three flags were hung downgradient of and parallel to wetland flags D53-D55± and represent the HOTL associated with the tidal wetlands in this area. The flags are labeled HOTL 1 – HOTL 3. Connect flags D42 and HOTL 1 to represent a continuation of the HOTL in this area (where the intermittent freshwater stream referenced above enters the tidal marsh). Portions of the 'D' flag series that involve tidal wetlands also represent designated prime wetlands, which are discussed below. Flags which identify tidal wetlands and the HOTL also embody soils which are generally considered very poorly drained.

Wetland Flag Series 'E' (along Clemson Pond)

The wetland area identified by flags E1-E16± generally represent the inside edge of the toe-of-fill from a berm that resulted in the creation of Clemson Pond, which sits immediately adjacent to the Squamscott River and is approximately 7 acres in size. Clemson Pond is man-made chiefly by filling / impoundment and serves as a Combined Wastewater Overflow Detention Pond. It appears that wetland resources may have been filled to create the pond. The flags identify freshwater wetlands that have developed near the

toe-of-fill around the perimeter of the inside of the berm and pond. The palustrine emergent (PEM) wetlands are dominated by broad-leaved cat-tail (*Typha latifolia*) with a PSS component a little further up the slope, especially between wetland flags E4-E8, where the wetland hydrology also appears to include a groundwater discharge component. However, the overarching wetland classification of the pond is palustrine, unconsolidated bottom, artificially flooded, excavated (PUBKx). Soils at the wetland-upland boundary are poorly drained. Very poorly drained soils may exist within 10-feet of the wetland-upland boundary but, due to the nature and use of Clemson Pond, we did not investigate this thoroughly.

Wetland Flag Series 'E' (along Webster Avenue)

The wetland area identified by flags E1-E4± generally represents the edge of wetlands having poorly drained hydric soils which are sustained by seasonal groundwater discharge that is perched on slowly permeable soils derived from marine sediments parent materials dominated by silt and clay textures. Wetland flags E2-E3± may also represent the toe-of-fill from the construction of Webster Avenue. The wetland best is classified as PFO/SS.

Wetland Flag Series 'F' (along the Squamscott River)

The wetland area identified by flags F1-F7± and F1a-F1j represent the HOTL associated with the Squamscott River. Wetland flags F1-F2± and F1a-F1j are located part way up the berm created by the construction of Clemson Pond. Wetland flags F2-F7 represent a natural wetland-upland boundary between forested riparian areas (which do not extend back from the river very far due to nearby development) and tidal wetlands dominated by a narrow band of narrow-leaved cat-tail (*Typha angustifolia*) that gives way to an expanse of salt marsh species such as salt hay grass (*Spartina patens*).

The dominant classification of vegetated wetlands closest to the delineated wetland-upland boundary is estuarine, intertidal, emergent, persistent, regularly flooded (E2EM1N). Looking toward Swazey Parkway from the berm that encloses Clemson Pond, there are other wetlands between the E2EM1N wetlands and the river which classify as estuarine, intertidal, unconsolidated shore, mud, regularly flooded (E2US3N). Finally, the river itself classifies as estuarine, subtidal (subsystem), unconsolidated bottom, subtidal (water regime) (E1UBL). The E1UBL classification extends all the way to the Swazey Parkway side of the AOI. Similar to most of the 'D' series flags, the 'F' series flags should generally be interpreted to represent wetlands having very poorly drained soils for administration of wetland buffers pursuant to the local wetland ordinance.

Wetland Flag Series 'F' (along Webster Avenue)

The wetland-upland boundary and area identified by flags F1-F11± involve freshwater wetlands that could generally be classified as PSS and which are adjacent to an intermittent stream. Flags 1-2 appear to identify the toe-of-fill associated with the construction of a residential dwelling at 19 Webster Avenue (Map 52, Lot 13). Wetland flags F2-F9 generally identify the toe-of-fill associated with the construction of Webster Avenue. Wetland flag F3 is located at a rusty, 12-inch dimeter culvert which conveys likely intermittent stream flows beneath Webster Avenue. Wetland flags F4-F9 generally identify intermittent storm runoff from a nearby catch basin and culvert. Dominant soils are considered poorly drained.

Wetland Flag Series 'G' (along the Squamscott River)

The wetland area identified by flags G1-G4± also represent the HOTL associated with the Squamscott River adjacent to the Swazey Parkway. Wetland flags G1-G4 are located part way up the slope which is man-made and heavily armored with large granite blocks. As described above, the river classifies as estuarine, subtidal (subsystem), unconsolidated bottom, subtidal (water regime) (E1UBL). The soil

between the blocks is vegetated with emergent / herbaceous vegetation species that include tall meadow-rue (*Thalictrum pubescens*), curly dock (*Rumex crispus*), purple loosestrife (*Lythrum salicaria*) and seaside goldenrod (*Solidago sempervirens*) among other species. Occasional tree species (growing as shrubs) such as green ash (*Fraxinus pennsylvanica*) and American elm (*Ulmus Americana*) were observed growing at and above the HOTL but it appears that the shrubby vegetation is periodically pruned, presumably to maintain a view of the river and protect the slope from tree roots which could eventually damage the armoring and stability of the slope. Trees can occasionally be found at the top-of-slope along the river but generally not within the AOI. Dominant tree species involve red maple (*Acer rubrum*). As with the 'D' and 'F' flag series, the 'G' series flags should generally be interpreted to represent wetlands having very poorly drained soils for administration of wetland buffers pursuant to the local wetland ordinance, in addition to other buffers that may apply.

Wetland Flag Series 'G' (along Webster Avenue)

Flags G1-G15± identify the top-of-bank of a stream channel and HOTL upstream (south) of Webster Avenue. The HOTL determination is based upon an observation timed to coincide with an 8.2-foot high tide on October 27, 2022. The tide backed up through the culvert but was confined to the channel. As a result, the occasional high tide appears to have no measurable influence on the vegetation community and freshwater PSS wetland adjacent to the channel. The water in the tidal marsh on the north side of Webster Avenue is brackish and also has limited visible effect on the freshwater plant community. Numerous minor and obscure freshwater stream channels are tributary to the delineated channel on the south side of Webster Avenue. The downstream (north) end of the culvert was completely submerged during this site visit. (It is unclear if replacement of the existing culvert with a larger diameter culvert set at different elevations would restore / increase the extent or influence of tidal flooding on the south side of Webster Avenue. More study would be necessary.)

Wetland Flag Series 'H' (along Webster Avenue)

The wetland-upland boundary and area identified by flags H1-H5± involve freshwater wetlands that are best classified as PEM. The dominant emergent vegetation involves typical turf grasses, as the natural wetland vegetation community has apparently been converted (although not recently). The turf grasses appear to receive regular mowing. Flags 3-4 appear to also identify the toe-of-fill associated with the construction of Webster Avenue. Dominant soils that have not been filled would be considered poorly drained and hydric.

Invasive Species

The following species, which are considered invasive according to commonly accepted sources, were observed within the AOI during our site investigations: Japanese knotweed (*Polygonum cuspidatum*), purple loosestrife, Asian bittersweet (*Celastrus orbiculata*), glossy buckthorn (*Frangula alnus*), multiflora rose (*Rosa multiflora*), common buckthorn (*Rhamnus cathartica*), burning bush (*Euonymus alatus*), autumn olive (*Elaeagnus umbellata*) and honeysuckle (*Lonicera* sp.). Japanese knotweed, bittersweet and purple loosestrife are considered Type II Priority Invasive Plant Species by the NH Department of Transportation (NHDOT). There is no NHDOT jurisdiction within the AOI however NHDOT Type II priority invasive plant species can be dispersed by seed *and* vegetative means (root and stem fragments) and thus are very easily spread by typical construction and infrastructure maintenance activities involving soil disturbance, transportation and deposition.

Local Zoning

The Town of Exeter Zoning Ordinance – Article 9 – Natural Resource Protection establishes the Wetlands Conservation Overlay District (§9.1). The zoning / district define wetlands similarly to the state (§9.1.4.J. and K). The district includes all wetlands, regardless of size, and surface waters of the state (§9.1.3.A and B.); in this case Wheelwright Creek and the Squamscott River. The district includes all streams depicted on United States Geological Survey topographic maps and includes intermittent streams (§9.1.3.C.). The district does not regulate man-made drainage structures (§9.1.3.D.); in this case the area identified by flags E1-E16 along the edge of Clemson Pond.

The district creates buffers between 25-feet and 125-feet depending upon the proposed use and the resource type involved. The district creates a limited use minimum 40-foot buffer to wetlands having poorly drained hydric soils and a limited use minimum 50-foot buffer to wetlands having very poorly drained hydric soils. Limited use is restricted to those uses which are listed as permitted or conditionally permitted. Site development such as utilities are considered a conditionally permitted use.

Uses in the Wetland Conservation Overlay District permitted by Conditional Use Permit (CUP), as issued by the Exeter Planning Board after recommendation by the Exeter Conservation Commission, include utilities and structures (§9.1.6.A.1.), provided, among seven (7) other criteria, there is no alternative design which does not impact the wetland or wetland buffer or which has less detrimental impact on the wetland or wetland buffer is feasible (§9.1.6.B.1-8.). It is not clear that municipal projects are exempted from the regulations.

The Town of Exeter Zoning Ordinance – Article 9 – Natural Resource Protection establishes the Shoreland Protection District (§9.3). The district includes all land within 300-feet of the shoreline of the salt water section of the Squamscott River and the seasonal high water level of its fresh major tributaries, including Wheelwright Creek (§9.3.3.C.1.). The district also regulates all land within 150-feet horizontal distance of the upland extent of any tidal marsh adjacent to the river (§9.3.3.C.3.).

The district does not specifically permit or prohibit (municipal) utilities and says that industrial or commercial uses not otherwise prohibited in §9.3.4.F. are permitted by conditional use. The district requires a CUP for alteration of the land surface within 150 feet of the vegetative buffer within 75 feet of the shoreline, which may be more applicable to an underground utility project. (Refer to §9.3.4.D. and §9.3.4.E.)

The Exeter Planning Board may grant a CUP for proposed uses in the Shoreland Protection District, provided, among four (4) other criteria, the proposed use will not detrimentally affect the surface water quality of the adjacent river or otherwise result in unhealthful conditions. (§9.3.4.G.2.a-e.)

State Jurisdiction

All wetlands and any banks are jurisdictional under NH RSA 482:A and the NH Code of Administrative Rules – Chapter Env-Wt 100-900. With the exception of prime wetlands in certain communities, the NHDES does not require a buffer to freshwater wetlands, to the extent that any work in adjacent uplands does not cause indirect impacts, such as sedimentation, to areas under NHDES jurisdiction. Portions of the site adjacent to tidal wetlands and waters are subject to the 100-foot tidal buffer zone according to Env-Wt 602.52.

Shoreland Protection

Wheelwright Creek is not identified on the New Hampshire Department of Environmental Services – Consolidated List of Waterbodies Subject to the Shoreland Water Quality Protection Act (SWQPA – RSA 483-B). However, Wheelwright Creek and associated wetlands are tidally influenced and thus subject to the SWQPA. The Squamscott River is tidally influenced at this location and is also subject to the SWQPA. The SWQPA encumbers all areas falling within 250-feet of the reference line. The HOTL serves as the reference line for administration of the SWQPA. The SWQPA involves various buffers (waterfront, woodland etc.) which have different requirements for compliance.

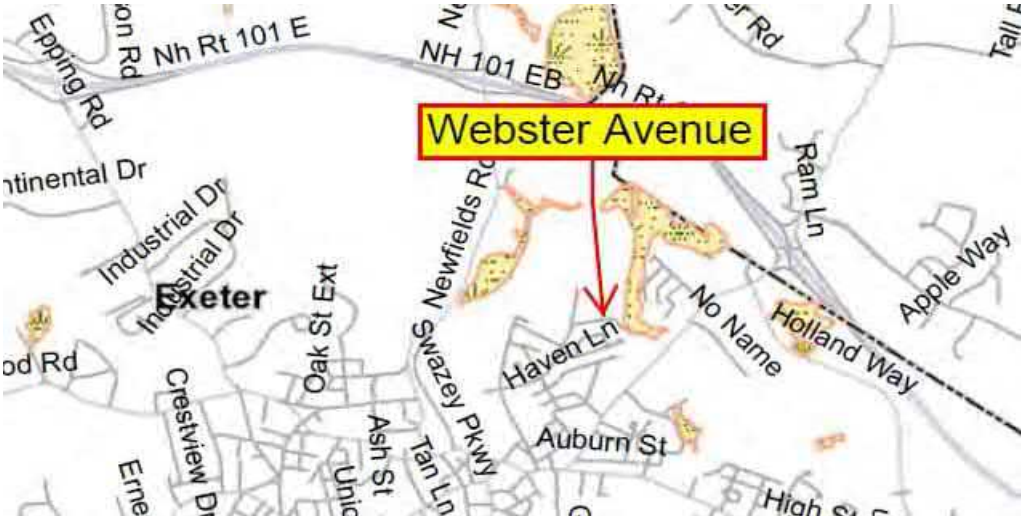
Priority Resource Areas

Areas that embody bogs, sand dunes, tidal waters, tidal wetlands, undeveloped tidal buffer zone, floodplain wetlands adjacent to a tier 3 or higher watercourse, designated prime wetland or duly established prime wetland buffer zone and/or documented occurrences of protected rare species or habitat are considered Priority Resource Areas (PRA). Projects which propose impacts to jurisdictional areas that involve PRA's are elevated to major project classification for permitting review purposes, with a couple of exceptions. With the possible exception of rare species, remote sensing and direct observation confirm that the PRA's underlined above exist within the AOI. We have not contacted the Natural Heritage Bureau for information regarding rare species, which we presume will take place during the permitting process for any proposed project going forward. (Previously developed tidal buffer zone also exists within the AOI but is not considered a PRA.)

Prime Wetlands

The NHDES applies applicable rules and law to all municipally designated prime wetlands (and in certain municipalities all land within 100-feet of municipally designated prime wetlands). Prime wetlands are those wetlands with higher functions and values and receive additional protection under the law. Exeter has municipally designated prime wetlands recognized by NHDES. Prime wetlands in Exeter do not have a 100-foot state buffer. (Local buffers apply however.) Prime wetlands exist adjacent to the existing sewer pump station at the end of Webster Avenue as identified by the 'D' wetland flags series. Prime wetlands associated with the Squamscott River exist and are located well downstream of the AOI. Refer to Figure 1 below.

FIGURE 1



Designated Rivers

Designated Rivers are managed and protected for their outstanding natural and cultural resources in accordance with NH RSA 483, the Rivers Management and Protection Act. The Exeter-Squamscott River was designated in 2011. Major activities on designated rivers such as dams and interbasin transfers and other activities within 1,320 feet of the river such as new or expanding solid waste facilities, among others, are subject to review and may require coordination with the Exeter-Squamscott River Local Advisory Committee. The committee is usually comprised of one member from each of the communities within the river's watershed. William Meserve is the current chairperson of the committee. Contact Theresa Walker at the Rockingham Planning Commission (603-778-0885) to coordinate any review.

Vernal Pools

Vernal pools are temporary bodies of water that provide essential breeding habitat for certain amphibians and invertebrates as well as important supporting habitat for numerous other species, especially reptiles such as turtles. It should be noted that August, October and November do not typically represent ideal circumstances for observation of primary vernal pool indicators, even during non-drought conditions. That fact notwithstanding, we did not observe any areas within the AOI that, in our opinion, and based upon our prior experience, constitute likely vernal pools according to the NH Code of Administrative Rules – Env-Wt 103.64, Env-Wt 104.15 and Env-Wt 104.44, based on our prior experience.

The above represents a brief summary of the applicable local wetland zoning and state jurisdiction. We recommend that you consult this office, the Exeter Planning Department, especially the Natural Resource Planner for the Town of Exeter - Kristen Murphy, or the NHDES for further guidance before proceeding with any design, permitting or construction at this location.

Wetland Function

Keeping in mind the altered status of many areas that are the subject of this report, and the large and varied AOI represented, the dominant functions and values, now often referred to as ecological services, of the major wetland areas along the Squamscott River and Wheelwright Creek are educational potential (primarily along the Squamscott River due to ease of access), fisheries habitat, wetland-based recreation (primarily near Swazey Park) and wetland-dependent wildlife habitat. Wetlands, particularly along the river, also have the opportunity to provide shoreline anchoring functions. Statements regarding wetland function are based upon initial observations only and are intended to address rule Env-Wt 306.05(a)(1); these statements do not represent a formal wetland functional assessment.

Other

Due to the observations above and the altered nature of wetlands at this location, delineation methodology required the use of best professional judgment in addition to guidance on altered conditions found in the technical manuals cited below. Wetland alterations undertaken without permits after 1967 in tidal wetlands and 1969 in freshwater wetlands may be considered violations by NHDES. With the possible exception of wetland flag series 'C', wetland alterations at this location do not appear to have taken place recently but may have taken place after the wetlands law became effective. Additional investigations would be needed to establish the extent or timing of alterations. Where used in this report, 'recent' (filling or earth alteration) is defined as having occurred within the previous year and is based upon preliminary observations only.

The status of streams as ephemeral, intermittent or perennial is based upon a single observation only and is therefore preliminary. If the definitive jurisdictional status of any stream is required for future design or permitting efforts, additional inspections or investigations will be necessary.

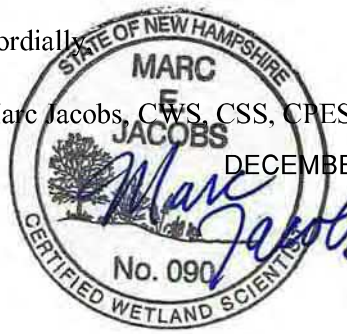
Certification Note

The following certification note should be inserted into any drawings that reflect the delineated wetland-upland boundary:

Manmade and natural jurisdictional wetland boundaries were delineated by Marc Jacobs, N.H. Certified Wetland Scientist number 090, in August 2020 according to the standards of the US Army Corps of Engineers - *Wetlands Delineation Manual, Technical Report Y-87-1*, January 1987; the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2, January 2012; NH RSA 482-A:; the Code of Administrative Rules, NH Department of Environmental Services-Wetlands Bureau – Chapter Env-Wt 100-900; as well as the Town of Exeter Zoning Ordinance – Article 9. Predominant hydric soils were identified utilizing the *Field Indicators for Identifying Hydric Soils in New England*, Version 4, June 2020 and the *Field Indicators of Hydric Soils in the United States*, Version 8, October 2016. The indicator status of vegetation as hydrophytic was determined using the *Northcentral and Northeast 2020 Regional Wetland Plant List*, U.S. Army Corps of Engineers. Copies of site plans depicting the wetland delineation which have been reviewed by the wetland scientist are individually stamped, signed and dated. This note has been customized for this project. Highest Observable Tide Line was identified according to Env-Wt 602.23. Bank associated with streams is identified per Env-Wt 102.15.

Please contact the undersigned with any questions regarding the above-referenced information.

Cordially,



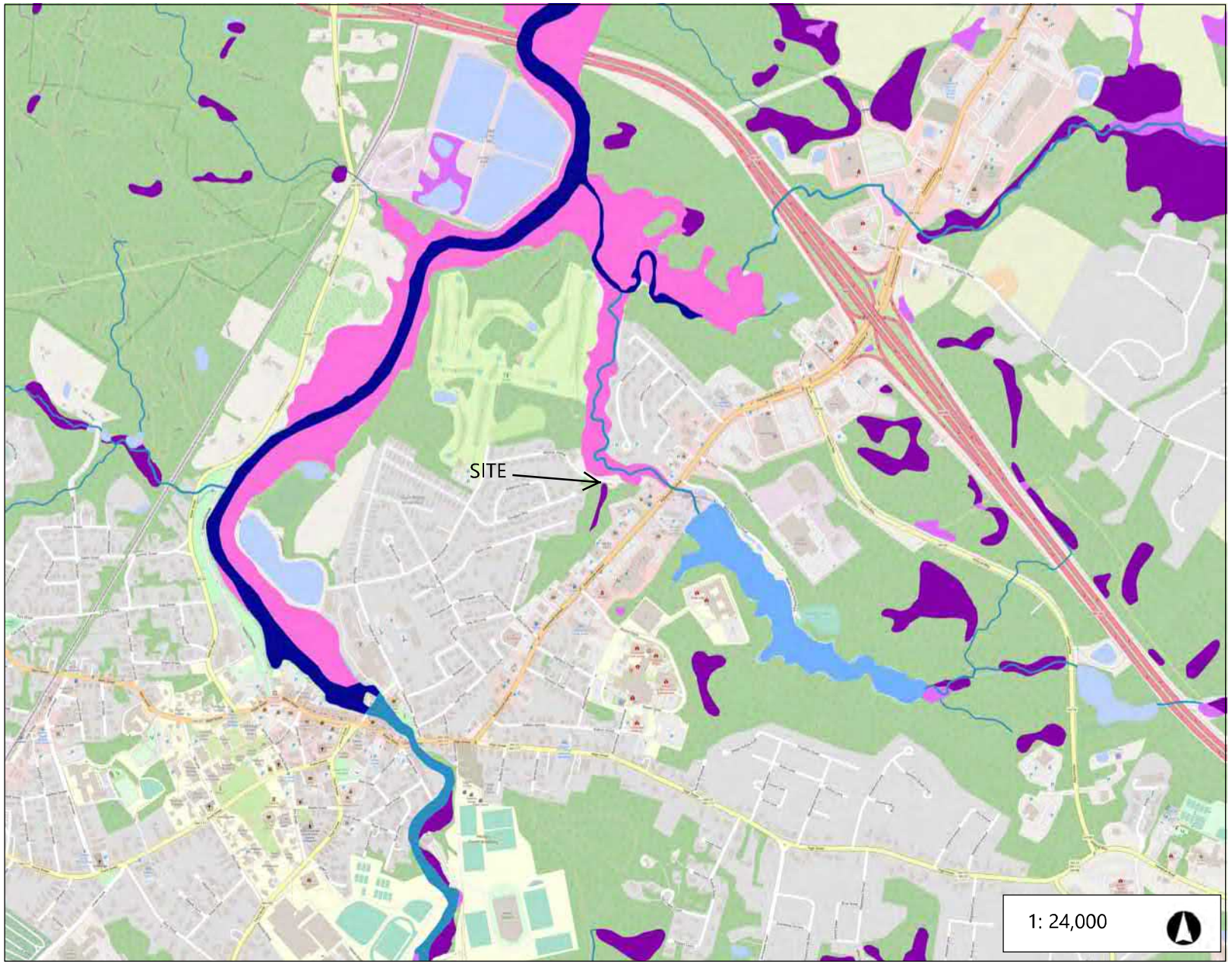
Marc Jacobs, CWS, CSS, CPESC

DECEMBER 16, 2022

WP-ExeterNH-WebsterAve-Rpt-WD-121622

Attachment 3A

National Wetland Inventory Map



Legend

Wetland Types and NWIPlus

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetlan
- Freshwater Pond
- Lake
- Other
- Riverine

0.8 0 0.38 0.8 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

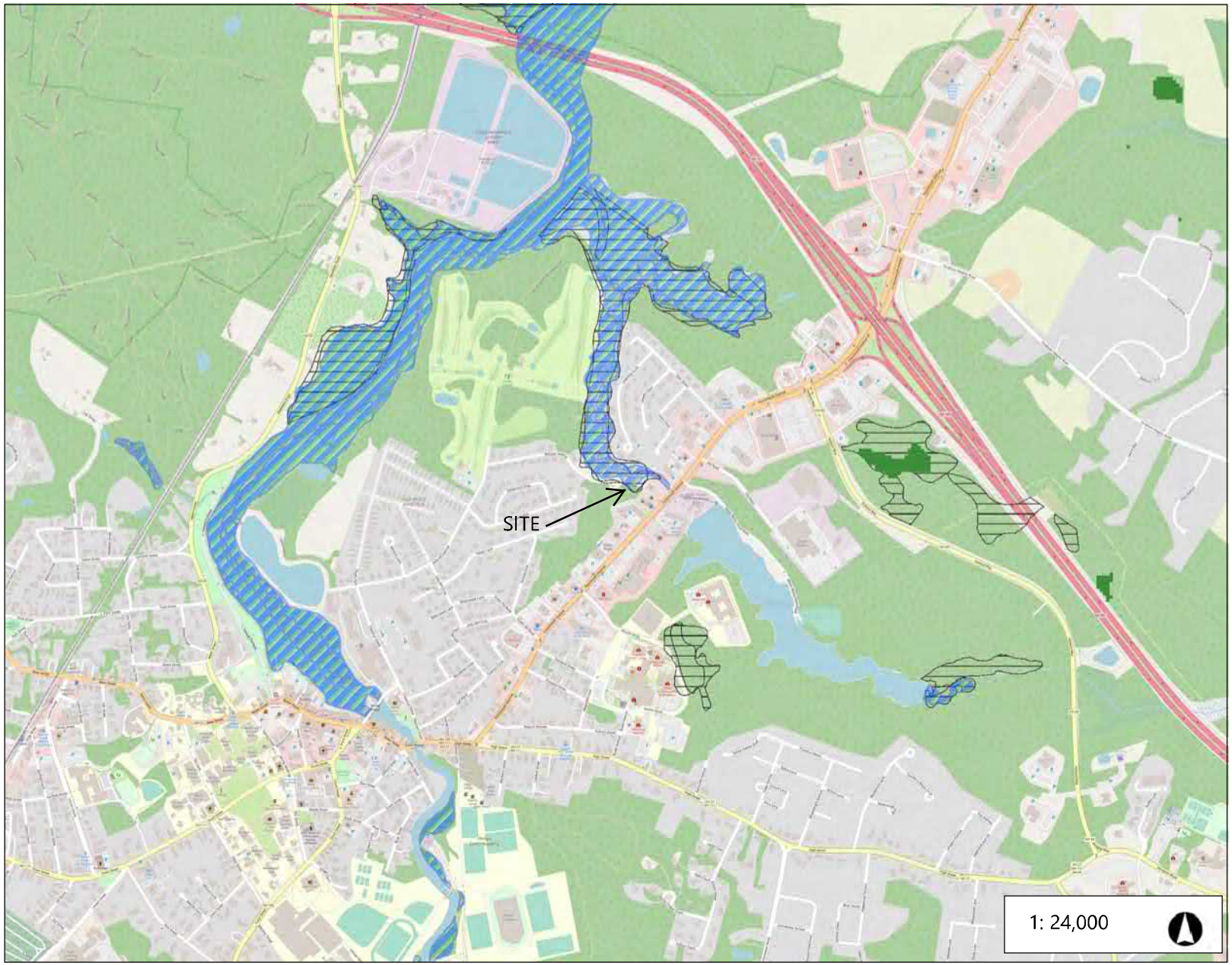
This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

Webster Avenue
Sewer Pump Station
Exeter, NH

Attachment 4 Priority Resources Map with Flood Plain and Prime Wetlands



Legend

- Flood Plain Wetlands Adjacent to Tier 3 Streams
- Prime Wetlands
- Prime Wetlands with 100 ft Buffer

Notes

Webster Avenue
Sewer Pump
Station Exeter,NH

0.8 0 0.38 0.8 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

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

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Attachment 5

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: Jacob Shactman, Wright-Pierce
230 Commerce Way
Suite 302
Portsmouth, NH 03801

From: NH Natural Heritage Bureau
Date: 7/12/2022 (valid until 7/12/2023)
Re: Review by NH Natural Heritage Bureau of request submitted 6/23/2022
Permits: NHDES - Wetland Standard Dredge & Fill - Minor

NHB ID: **NHB22-2192** **Applicant:** Jake Shactman

Location: Exeter
Webster Avenue

Project Description: The proposed project scope consists of upgrading the Webster Avenue Pump Station and replacing its existing connecting force main. A 24" CMP culvert adjacent to the pump station on Webster Avenue is proposed for replacement due to significant corrosion.

This project was previously included under NHB21-1968. An additional alternative force main layout (under consideration in design process) has also been included in the project footprint.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 6/23/2022 9:30:52 AM, and cannot be used for any other project.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

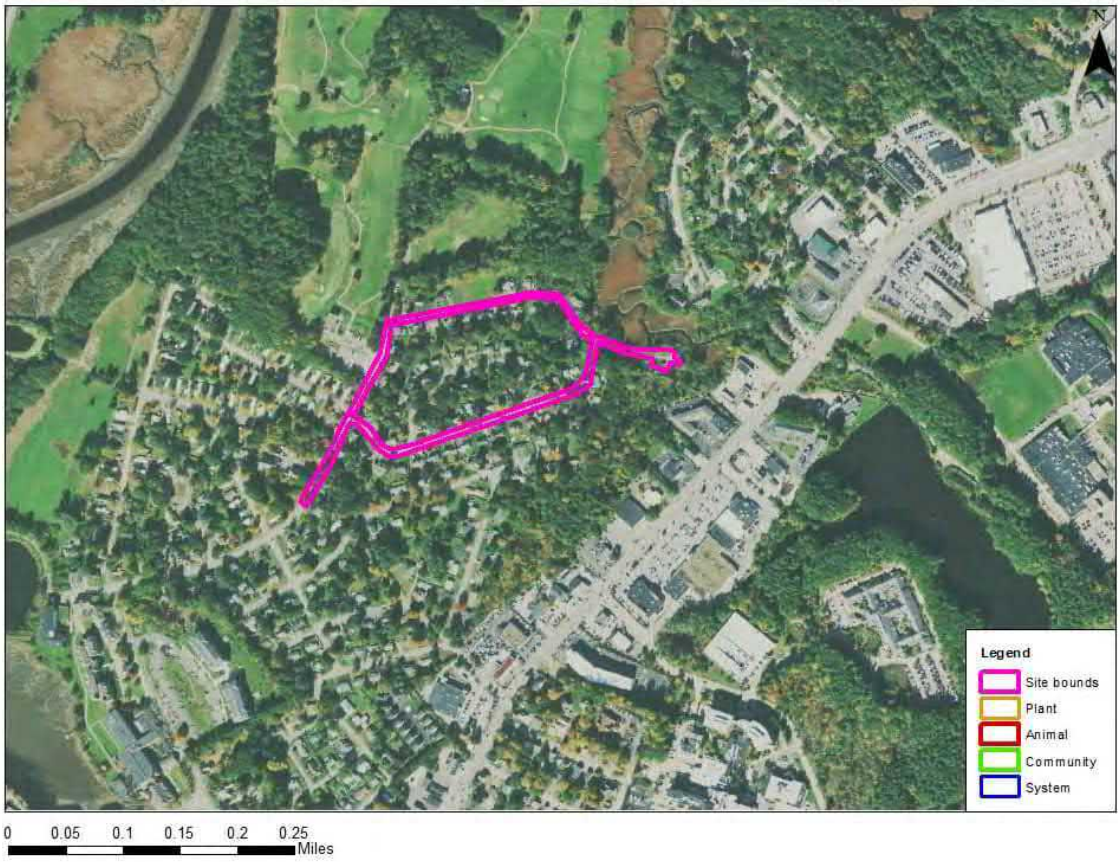
Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: **NHB22-2192**

NHB22-2192



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

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Rockingham County, New Hampshire

Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300

70 Commercial Street, Suite 300
Concord, NH 03301-5094

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Blue-winged Warbler *Vermivora pinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30

Bobolink Dolichonyx oryzivorus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler Cardellina canadensis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler Protonotaria citrea This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Ruddy Turnstone Arenaria interpres morinella This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere

Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence

at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

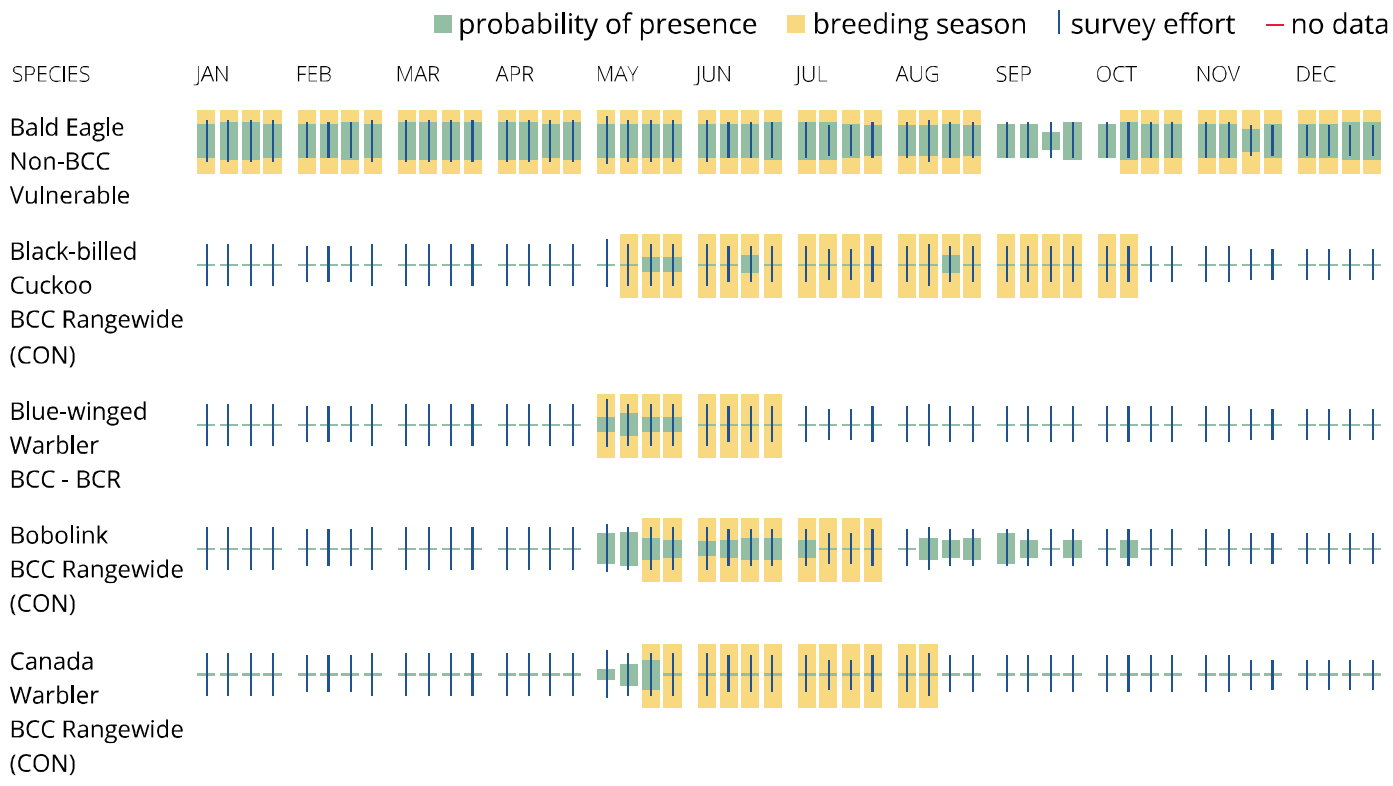
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

There are no known coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also

been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

2020 HIGHEST RANKED WILDLIFE HABITAT BY ECOLOGICAL CONDITION

Highest Ranked Habitat in New Hampshire

Highest Ranked Habitat in the Biological Region

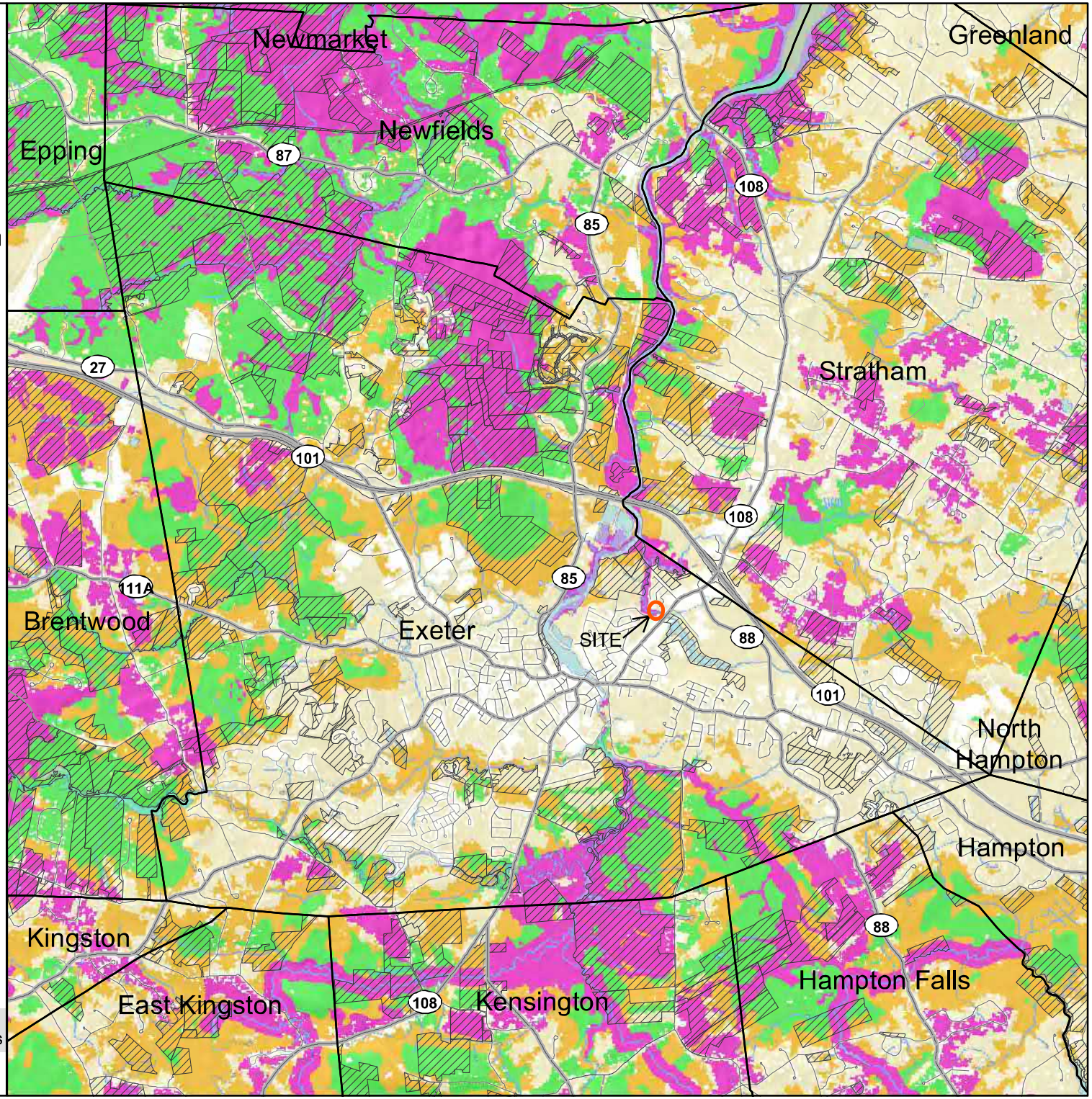
Biological region = TNC ecoregional subsection for terrestrial habitats or Aquatic Resource Mitigation region for wetlands and floodplain forest.

Supporting Landscapes

Conservation or public

Attachment 7

Webster Avenue
Sewer Pump Station
Exeter, NH



Base map data provided by NH GRANIT at UNH May 2020. Intended for planning use only.

NEW HAMPSHIRE Wildlife Action Plan

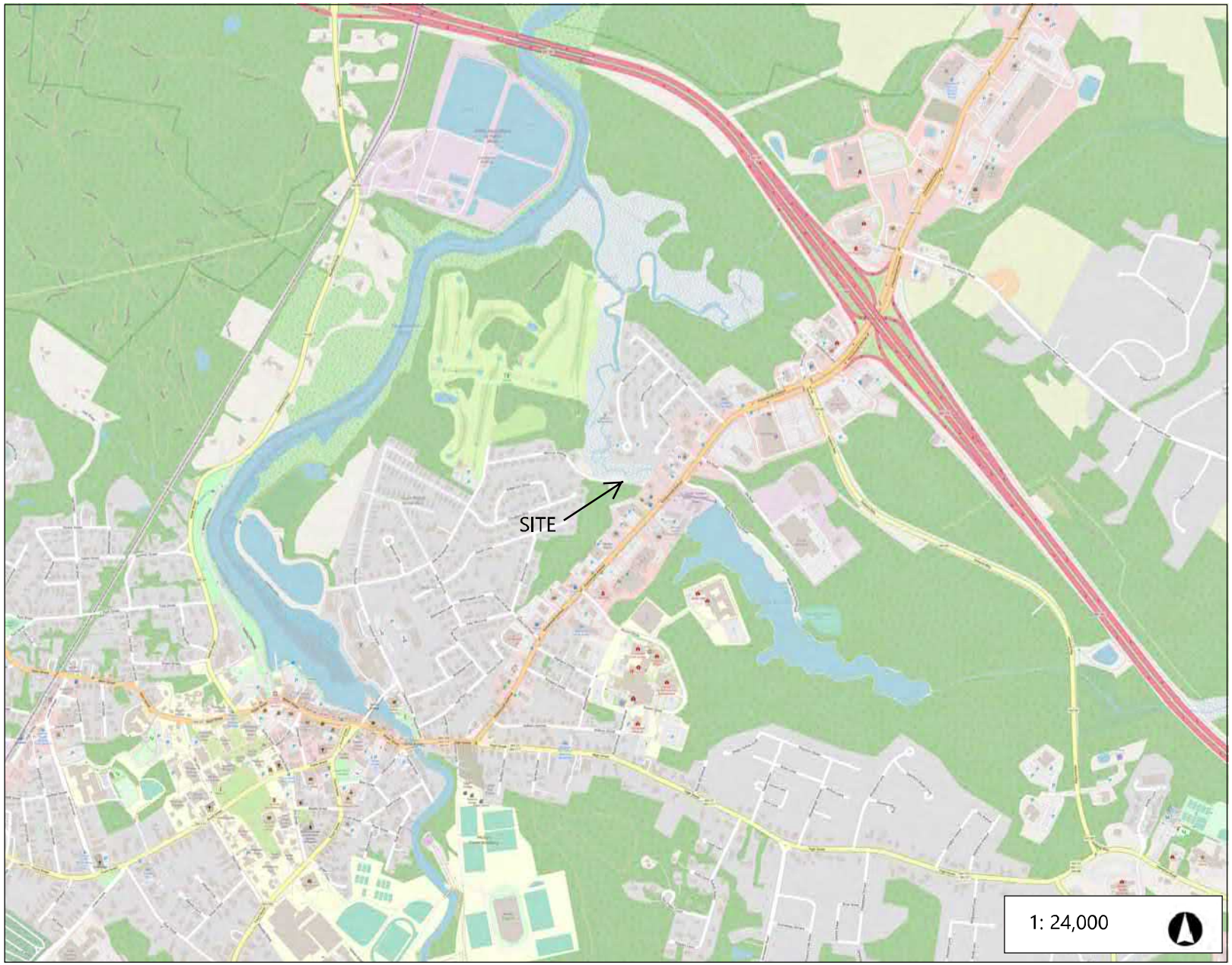
Sept. 2015, spatial data Apr. 2020

0 1.5 3 Kilometers

0 1 2 Miles

Attachment 8

Eelgrass and Shellfish Map



0.8 0 0.38 0.8 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

Legend

- Aquaculture Sites -
- 2015 Eelgrass 2017
- Oyster Restoration Sites

Note: none of these resources are shown anywhere near the project site

Notes

Webster Avenue
Sewer Pump Station
Exeter, NH

Attachment 9

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 = 42° 59' 17" N, Longitude = 71° 3' 48" W
Decimal Degrees: Latitude = 42.988, Longitude = -70.937

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

*** W A R N I N G ***

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

No Essential Fish Habitats (EFH) were identified at the report location.

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.

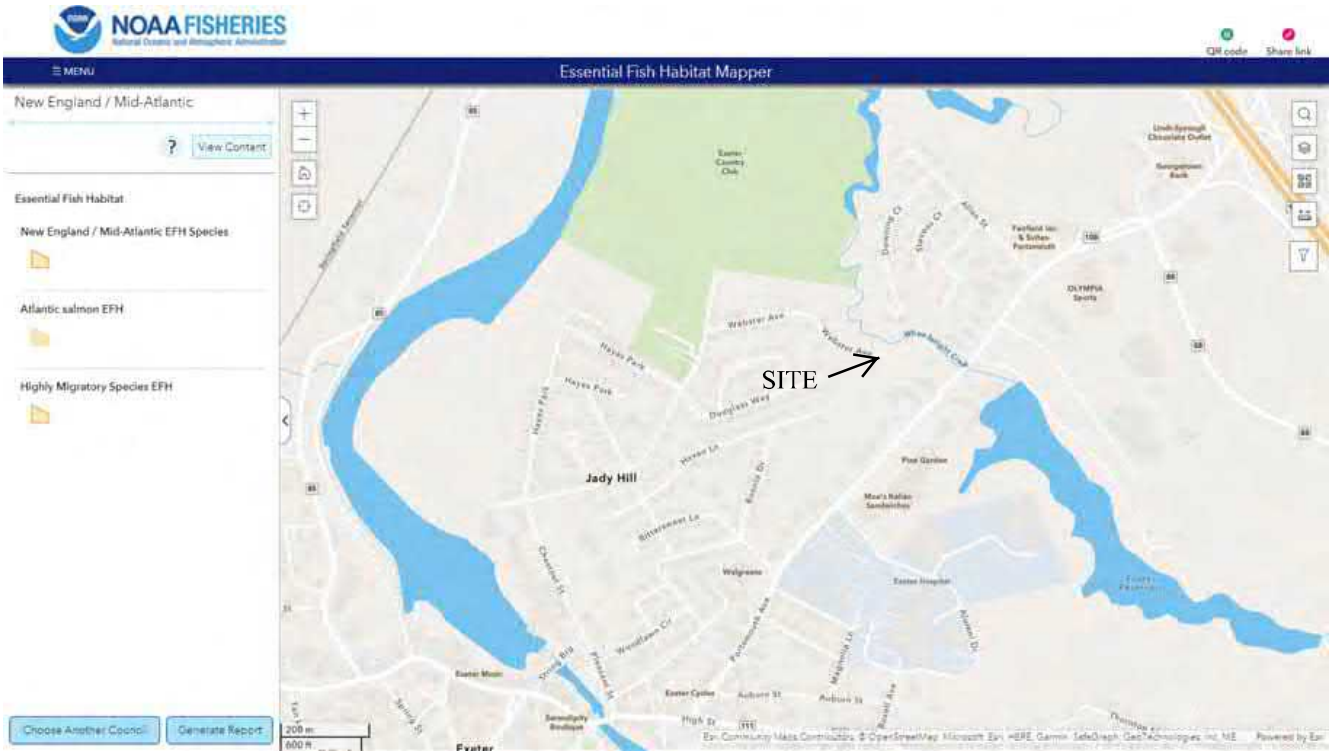
EFH Areas Protected from Fishing

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 -->**
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,

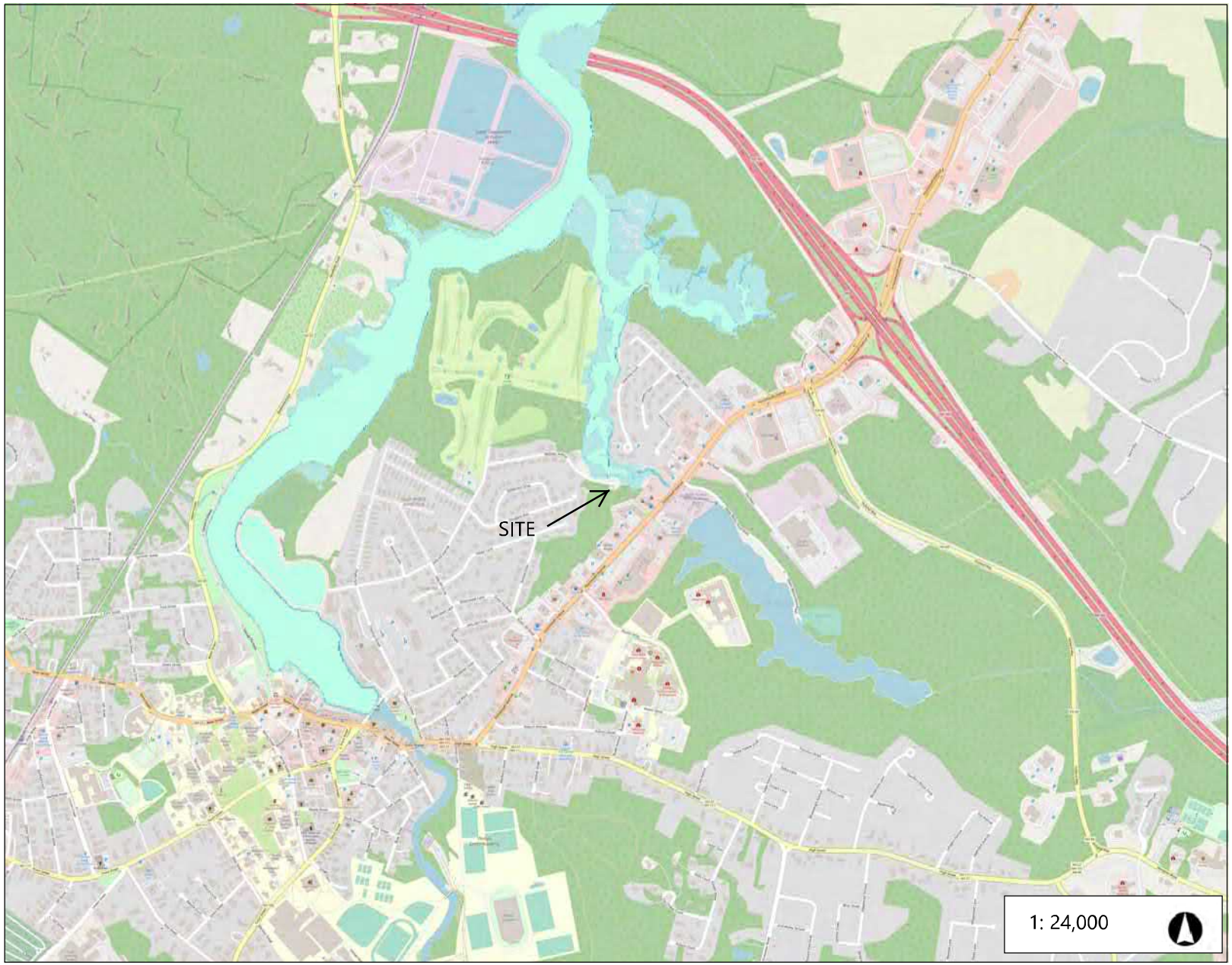
Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark



Attachment 10

Projected 2 Foot Sea Level Rise Map



Legend

2015 MHHW Baseline

MHHW + 2-ft SLR

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

0.8 0 0.38 0.8 Miles

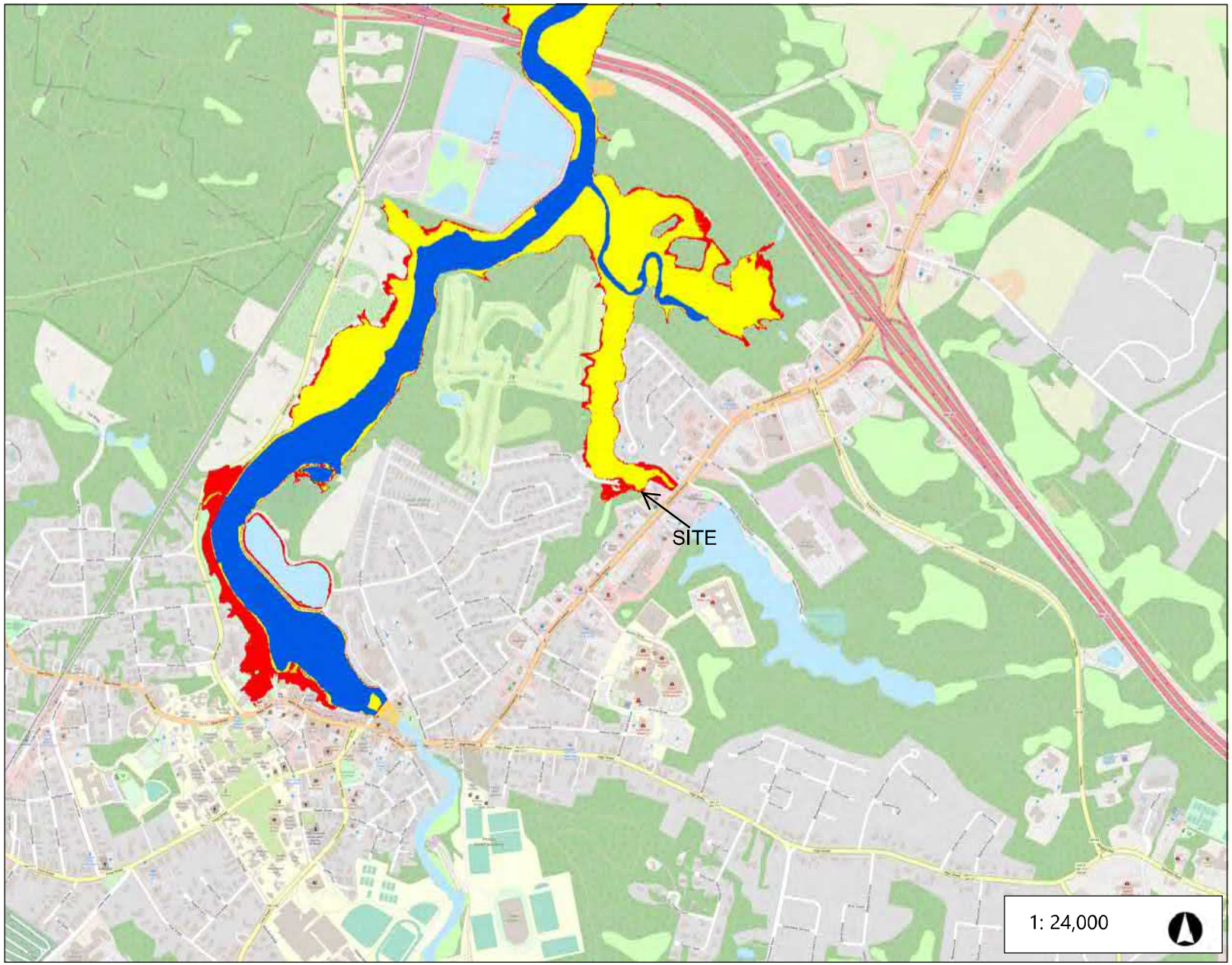
WGS_1984_Web_Mercator_Auxiliary_Sphere

Notes

Webster Avenue
Sewer Pump
Station
Exeter, NH

Attachment 11

Predicted Salt Marsh Migration (year 2050)



Legend

Predicted Marsh Migration 2050

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

Notes

Webster Avenue
Sewer Pump Station
Exeter, NH

0.8 0 0.38 0.8 Miles

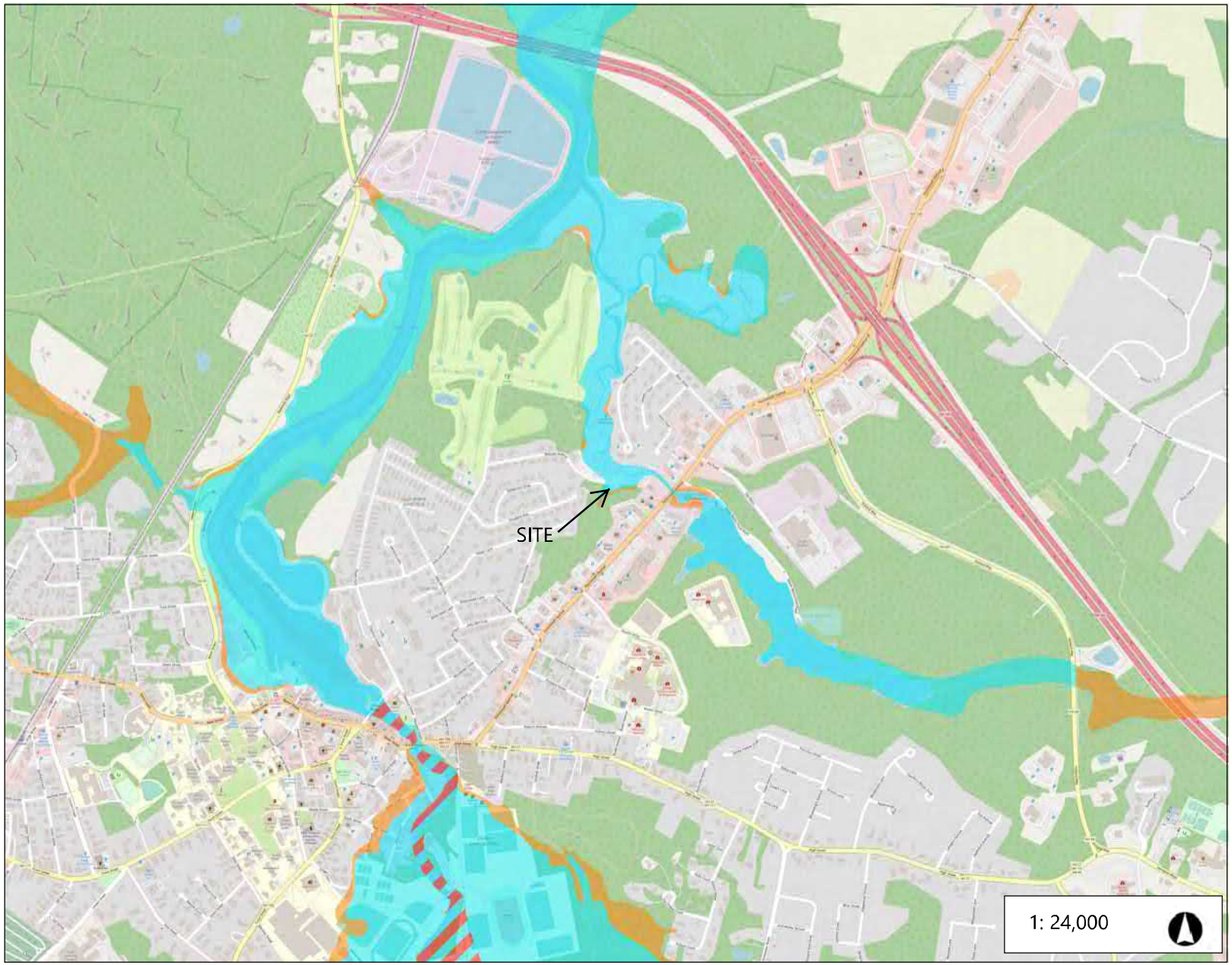
WGS_1984_Web_Mercator_Auxiliary_Sphere

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

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Attachment 12

FEMA Flood Map



Legend

2015 FEMA Floodplains

- 1 pct. Annual Chance Flood Hazarc
- Floodway
- 0.2 pct. Annual Chance Flood Haza
- Area of Undetermined Flood Hazar
- Area Protected by Levee

Notes

Webster Avenue
Sewer Pump Station
Exeter, NH

0.8 0 0.38 0.8 Miles

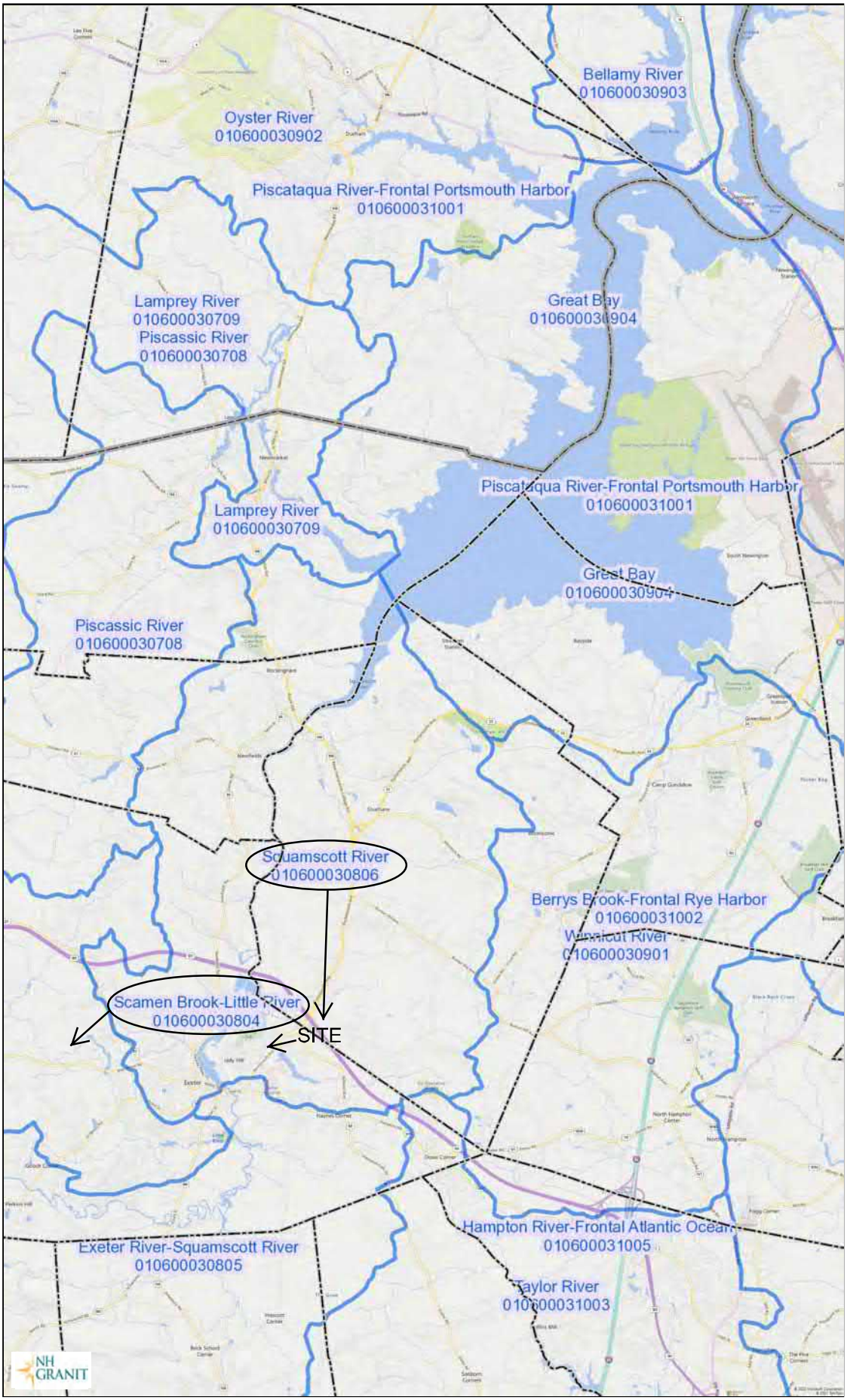
WGS_1984_Web_Mercator_Auxiliary_Sphere

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

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Attachment 13

Watershed HUC 12 Map



Legend

- State
- County
- City/Town
- Sub Watersheds - HUC 12

Map Scale
1: 100,000

Map Generated: 12/13/2022

Notes

Webster Avenue
Sewer Pump Station
Exeter, NH

Attachment 14

EU # 1 of Marsh System Squamscott River Wetland Complex

NEEDED FOR THIS EVALUATION:

- Base map
- *Coastal Wetland Plants of the Northeastern US*

Function 1 ECOLOGICAL INTEGRITY Part A

A Evaluation Questions	B Notes	C Evaluation Criteria	D Functional Index (FI)
Part A: Ecological Integrity of the Evaluation Unit			
Questions that may require field observation			
1A. Percent of the marsh plant community dominated by invasive plant species.	Narrowleaf cattail was not considered invasive. Common Reed and Purple Loosestrife are present.	a. < 5% dominated by invasive species b. 5% – 20% dominated c. > 20% dominated	1.0 0.5 0.1
2A. Number of tidal restrictions.	The culvert to be replaced represents a tidal restriction.	a. no tidal restrictions b. one tidal restriction c. more than one tidal restriction	1.0 0.5 0.1
3A. Type of tidal restriction.		a. no restriction b. flow through bridge appears adequate c. flow through bridge appears inadequate, or flow restricted by culvert	1.0 0.5 0.1
4A. Ditching on surface of the EU.		a. no ditching b. ditches present in linear pattern c. ditches present in grid pattern	1.0 0.5 0.1

AVERAGE FUNCTIONAL INDEX FOR Part A of FUNCTION 1 = Average of Column D 1.6/4=0.40

EU # 1 of Marsh System Squamscott River Complex

NEEDED FOR THIS EVALUATION:

- Base map
- Map wheel/measurer
- 100 foot tape measure
- Calculator

Function 1 ECOLOGICAL INTEGRITY Part B

A Evaluation Questions	B Notes	C Evaluation Criteria	D Functional Index (FI)
Part B: Ecological Integrity of the Zone of Influence			
Questions that may require field observation			
1B. Dominant land-use in the 500 foot Zone of Influence surrounding the EU.	Both b. and c. conditions exist. For this question 0.25 was assigned.	a. forested, fields, open water or similar open space (b.) agricultural or rural residential (c.) commercial, industrial, high density residential, or heavily used highways	1.0 0.5 0.25 0.1
2B. Ratio of the number of occupied buildings (including seasonal) within the EU **and/or** Zone of Influence to total area of EU.	500 ft radius = 11.5 acres 2.16 acres occupied 11.5/2.16=5.32 acres occupied 14 buildings/5.32 acres=2.44	a. < 0.1 bldg./acre b. from 0.1 – 0.5 bldg./acre c. > 0.5 bldg./acre	1.0 0.5 0.1
3B. Percent of EU/upland border which has a buffer of woodland or idle land 500 feet in width.		a. more than 70% b. from 30% – 70% c. less than 30%	1.0 0.5 0.1
4B. Square footage of roads, driveways, and parking lots within 150 feet of EU.	This refers to the area of Webster Avenue within 150 feet of the wetland	a. < 1500 sq. feet/acre b. from 1500 – 6000 sq. feet/acre c. > 6000 sq. feet/acre	1.0 0.5 0.1

AVERAGE FUNCTIONAL INDEX FOR Part B of FUNCTION 1 = Average of Column D = 1.85/4=0.46

WETLANDS FUNCTIONAL ASSESSMENT WORKSHEET

Water Division/Land Resource Management
Wetlands Bureau

Check the Status of your Application

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

APPLICANT LAST NAME, FIRST NAME, M.I.: Town of Exeter

As required by Env-Wt 311.03(b)(10), an application for a standard permit for minor and major projects must include a functional assessment of all wetlands on the project site as specified in Env-Wt 311.10. This worksheet will help you compile data for the functional assessment needed to meet federal (US Army Corps of Engineers (USACE); if applicable) and NHDES requirements. Additional requirements are needed for projects in tidal area; please refer to the Coastal Area Worksheet (NHDES-W-06-079) for more information.

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

SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)	
ADJACENT LAND USE: Residential and Commercial	
CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT? ☐ Yes ☒ No	
DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT (in feet): Immediately Adjacent	
SECTION 2 - DELINEATION (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: Adele F. Mattson (PWS 000832) and Marc E. Jacobs (CWS 090)	
DATE(S) OF SITE VISIT(S): 10 Nov and 10 Dec 2022	DELINEATION PER ENV-WT 406 COMPLETED? ☒ Yes ☐ No
CONFIRM THAT THE EVALUATION IS BASED ON: ☒ Office and ☒ Field examination.	
METHOD USED FOR FUNCTIONAL ASSESSMENT (check one and fill in blank if "other"): ☒ USACE Highway Methodology. ☒ Other scientifically supported method (enter name/ title): NH Method for Ecological Integrity	

SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
WETLAND ID: 1/Webster Avenue	LOCATION: (LAT/ LONG) N 42 59'16.65"/W 70 56'11.26"
WETLAND AREA: Not Applicable	DOMINANT WETLAND SYSTEMS PRESENT: Estuarine
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND? 2 (local to project site)	COWARDIN CLASS: E2EM1P
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? ☐ Yes ☒ No if not, where does the wetland lie in the drainage basin? Middle	IS THE WETLAND PART OF: ☒ A wildlife corridor or ☐ A habitat island? IS THE WETLAND HUMAN-MADE? ☐ Yes ☒ No
IS THE WETLAND IN A 100-YEAR FLOODPLAIN? ☒ Yes ☐ No	ARE VERNAL POOLS PRESENT? ☐ Yes ☒ No (If yes, complete the Vernal Pool Table)
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? ☒ Yes ☐ No	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/ DOWNGRADIENT? ☐ Yes ☒ No
PROPOSED WETLAND IMPACT TYPE: Culvert Replacement and temporary previously developed TBZ	PROPOSED WETLAND IMPACT AREA: To Be Determined

SECTION 4 - WETLANDS FUNCTIONS AND VALUES (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)

The following table can be used to compile data on wetlands functions and values. The reference numbers indicated in the "Functions/ Values" column refer to the following functions and values:

1. Ecological Integrity (from RSA 482-A:2, XI)
2. Educational Potential (from USACE Highway Methodology: Educational/Scientific Value)
3. Fish & Aquatic Life Habitat (from USACE Highway Methodology: Fish & Shellfish Habitat)
4. Flood Storage (from USACE Highway Methodology: Floodflow Alteration)
5. Groundwater Recharge (from USACE Highway Methodology: Groundwater Recharge/Discharge)
6. Noteworthiness (from USACE Highway Methodology: Threatened or Endangered Species Habitat)
7. Nutrient Trapping/Retention & Transformation (from USACE Highway Methodology: Nutrient Removal)
8. Production Export (Nutrient) (from USACE Highway Methodology)
9. Scenic Quality (from USACE Highway Methodology: Visual Quality/Aesthetics)
10. Sediment Trapping (from USACE Highway Methodology: Sediment /Toxicant Retention)
11. Shoreline Anchoring (from USACE Highway Methodology: Sediment/Shoreline Stabilization)
12. Uniqueness/Heritage (from USACE Highway Methodology)
13. Wetland-based Recreation (from USACE Highway Methodology: Recreation)
14. Wetland-dependent Wildlife Habitat (from USACE Highway Methodology: Wildlife Habitat)

First, determine if a wetland is suitable for a particular function and value ("Suitability" column) and indicate the rationale behind your determination ("Rationale" column). Please use the rationale reference numbers listed in Appendix A of USACE *The Highway Methodology Workbook Supplement*. Second, indicate which functions and values are principal ("Principal Function/value?" column). As described in *The Highway Methodology Workbook Supplement*, "functions and values can be principal if they are an important physical component of a wetland ecosystem (function only) and/or are considered of special value to society, from a local, regional, and/or national perspective".

"Important Notes" are to include characteristics the evaluator used to determine the principal function and value of the wetland.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	☒ Yes ☐ No	The score for Ecological Integrity is 0.40. The score for Ecological Integrity of the Zone of Influence is 0.46.	☒ Yes ☐ No	The Squamscott River tidal marshes are ecologically important to the region. The score for the Zone of Influence reflects this. The score for the EU is somewhat diminished due to development in the watershed.
2	☒ Yes ☐ No	1,5,8,9	☐ Yes ☒ No	The larger wetland complex is suitable for educational and scientific purposes but the project site is too limited for this to be a principal function
3	☒ Yes ☐ No	1,2,3,5	☒ Yes ☐ No	Salt marshes provide good habitat for fish and aquatic invertebrates making this a principal function
4	☒ Yes ☐ No	4,5,6,7,8,9,10,11,12,13,14,16,18	☒ Yes ☐ No	Upstream is the Exeter Reservior and downstream is an extensive tidal marsh, both of which can alter floodflow making this a principal function
5	☐ Yes ☒ No	5,7,15	☐ Yes ☒ No	This is a tidal area underlain with mucky peat, which is not conducive to providing groundwater recharge or discharge
6	☒ Yes ☐ No	1,2	☒ Yes ☐ No	Tidal marshes are home to many rare species and the NHB datacheck results confirmed a record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity
7	☒ Yes ☐ No	2,3,4,5,6,7,8,9,10,11,12,13,14	☒ Yes ☐ No	Salt marshes tend to sequester carbon and retain/uptake other nutrients as well making this a principal function
8	☒ Yes ☐ No	1,2,5,6,7,14	☒ Yes ☐ No	Export occurs with the tidal exchange of nutrients
9	☒ Yes ☐ No	2,6,7,8,9,10,11,12	☐ Yes ☒ No	The large wetland complex associated with the project site is aesthetically pleasing; however, the location and limited area of the project site limits this value
10	☒ Yes ☐ No	1,2,3,4,5,8,10,11,12,13,14,16	☒ Yes ☐ No	The salt marsh provides significant oppurtunity for the retention of toxicants from plant uptake and sediment trapping in the dense vegetation

11	☒ Yes ☐ No	3,4,7,9,15	☒ Yes ☐ No	Tidal channels and ditches slow the velocity of water preventing erosive forces while dense vegetation provides anchoring for sediments
12	☒ Yes ☐ No	2,5,7,8,9,13,16,17,19,22,24,27,28	☒ Yes ☐ No	Salt marshes are unique and valuable habitats and the larger wetland complex associated with the project site is locally and regionally significant
13	☒ Yes ☐ No	2,3,5,7,10,11	☐ Yes ☒ No	Although the larger wetland complex provides for fishing, hunting and boating the project site is not conducive to providing recreational activities
14	☒ Yes ☐ No	5,6,7,8,11,13,16,18,19,21	☒ Yes ☐ No	Although no wildlife observations were made at the project site the larger weltand complex provides significant wildlife habitat

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

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

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

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

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

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

VERNAL POOL ID NUMBER	DATE(S) OBSERVED	PRIMARY INDICATORS PRESENT (LIST)	SECONDARY INDICATORS PRESENT (LIST)	LENGTH OF HYDROPERIOD	IMPORTANT NOTES
1					
2					
3					

4					
5					

SECTION 6 - STREAM RESOURCES SUMMARY

DESCRIPTION OF STREAM:	STREAM TYPE (ROSGEN):
HAVE FISHERIES BEEN DOCUMENTED? ☐ Yes ☐ No	DOES THE STREAM SYSTEM APPEAR STABLE? ☐ Yes ☐ No

OTHER KEY ON-SITE FUNCTIONS OF NOTE: No impacts to Wheelwright Creek proposed-No stream resources assessed

The following table can be used to compile data on stream resources. "Important Notes" are to include characteristics the evaluator used to determine principal function and value of each stream. The functions and values reference number are defined in Section 4.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	☐ Yes ☐ No		☐ Yes ☐ No	
2	☐ Yes ☐ No		☐ Yes ☐ No	
3	☐ Yes ☐ No		☐ Yes ☐ No	
4	☐ Yes ☐ No		☐ Yes ☐ No	
5	☐ Yes ☐ No		☐ Yes ☐ No	
6	☐ Yes ☐ No		☐ Yes ☐ No	
7	☐ Yes ☐ No		☐ Yes ☐ No	
8	☐ Yes ☐ No		☐ Yes ☐ No	
9	☐ Yes ☐ No		☐ Yes ☐ No	
10	☐ Yes ☐ No		☐ Yes ☐ No	
11	☐ Yes ☐ No		☐ Yes ☐ No	

12	☐ Yes ☐ No		☐ Yes ☐ No	
13	☐ Yes ☐ No		☐ Yes ☐ No	
14	☐ Yes ☐ No		☐ Yes ☐ No	

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

☒ Wildlife and vegetation diversity/abundance list.

☒ Photograph of wetland.

☒ Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.

☒ For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04. Please refer to the Coastal Area Worksheet (NHDES-W-06-079) for more information.

Note: The Coastal Area Worksheet is being provided by others.

Appendix A

Wetland evaluation supporting documentation; Reproducible forms.

Below is an example list of considerations that was used for a New Hampshire highway project. Considerations are flexible, based on best professional judgment and interdisciplinary team consensus. This example provides a comprehensive base, however, and may only need slight modifications for use in other projects.

GROUNDWATER RECHARGE/DISCHARGE— This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

CONSIDERATIONS/QUALIFIERS

1. Public or private wells occur downstream of the wetland.
2. Potential exists for public or private wells downstream of the wetland.
3. Wetland is underlain by stratified drift.
4. Gravel or sandy soils present in or adjacent to the wetland.
5. Fragipan does not occur in the wetland.
6. Fragipan, impervious soils, or bedrock does occur in the wetland.
7. Wetland is associated with a perennial or intermittent watercourse.
8. Signs of groundwater recharge are present or piezometer data demonstrates recharge.
9. Wetland is associated with a watercourse but lacks a defined outlet or contains a constricted outlet.
10. Wetland contains only an outlet, no inlet.
11. Groundwater quality of stratified drift aquifer within or downstream of wetland meets drinking water standards.
12. Quality of water associated with the wetland is high.
13. Signs of groundwater discharge are present (e.g., springs).
14. Water temperature suggests it is a discharge site.
15. Wetland shows signs of variable water levels.
16. Piezometer data demonstrates discharge.
17. Other

FLOODFLOW ALTERATION (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.

CONSIDERATIONS/QUALIFIERS

1. Area of this wetland is large relative to its watershed.
2. Wetland occurs in the upper portions of its watershed.
3. Effective flood storage is small or non-existent upslope of or above the wetland.
4. Wetland watershed contains a high percent of impervious surfaces.
5. Wetland contains hydric soils which are able to absorb and detain water.
6. Wetland exists in a relatively flat area that has flood storage potential.
7. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level.
8. During flood events, this wetland can retain higher volumes of water than under normal or average rainfall conditions.
9. Wetland receives and retains overland or sheet flow runoff from surrounding uplands.
10. In the event of a large storm, this wetland may receive and detain excessive flood water from a nearby watercourse.
11. Valuable properties, structures, or resources are located in or near the floodplain downstream from the wetland.
12. The watershed has a history of economic loss due to flooding.
13. This wetland is associated with one or more watercourses.
14. This wetland watercourse is sinuous or diffuse.
15. This wetland outlet is constricted.
16. Channel flow velocity is affected by this wetland.
17. Land uses downstream are protected by this wetland.
18. This wetland contains a high density of vegetation.
19. Other

FISH AND SHELLFISH HABITAT (FRESHWATER) — This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

CONSIDERATIONS/QUALIFIERS

1. Forest land dominant in the watershed above this wetland.
2. Abundance of cover objects present.

STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE

3. Size of this wetland is able to support large fish/shellfish populations.
4. Wetland is part of a larger, contiguous watercourse.
5. Wetland has sufficient size and depth in open water areas so as not to freeze solid and retain some open water during winter.
6. Stream width (bank to bank) is more than 50 feet.
7. Quality of the watercourse associated with this wetland is able to support healthy fish/shellfish populations.
8. Streamside vegetation provides shade for the watercourse.
9. Spawning areas are present (submerged vegetation or gravel beds).
10. Food is available to fish/shellfish populations within this wetland.
11. Barrier(s) to anadromous fish (such as dams, including beaver dams, waterfalls, road crossing) are absent from the stream reach associated with this wetland.
12. Evidence of fish is present.
13. Wetland is stocked with fish.
14. The watercourse is persistent.
15. Man-made streams are absent.
16. Water velocities are not too excessive for fish usage.
17. Defined stream channel is present.
18. Other

Although the above example refers to freshwater wetlands, it can also be adapted for marine ecosystems. The following is an example provided by the National Marine Fisheries Service (NMFS) of an adaptation for the fish and shellfish function.

FISH AND SHELLFISH HABITAT (MARINE) — This function considers the effectiveness of wetlands, embayments, tidal flats, vegetated shallows, and other environments in supporting marine resources such as fish, shellfish, marine mammals, and sea turtles.

CONSIDERATIONS/QUALIFIERS

1. Special aquatic sites (tidal marsh, mud flats, eelgrass beds) are present.
2. Suitable spawning habitat is present at the site or in the area.
3. Commercially or recreationally important species are present or suitable habitat exists.
4. The wetland/waterway supports prey for higher trophic level marine organisms.
5. The waterway provides migratory habitat for anadromous fish.
6. Essential fish habitat, as defined by the 1996 amendments to the Magnuson-Stevens Fishery & Conservation Act, is present (consultation with NMFS may be necessary).
7. Other

SEDIMENT/TOXICANT/PATHOGEN RETENTION — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

CONSIDERATIONS/QUALIFIERS

1. Potential sources of excess sediment are in the watershed above the wetland.
2. Potential or known sources of toxicants are in the watershed above the wetland.
3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
4. Fine grained mineral or organic soils are present.
5. Long duration water retention time is present in this wetland.
6. Public or private water sources occur downstream.
7. The wetland edge is broad and intermittently aerobic.
8. The wetland is known to have existed for more than 50 years.
9. Drainage ditches have not been constructed in the wetland.

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

10. Wetland is associated with an intermittent or perennial stream or a lake.
11. Channelized flows have visible velocity decreases in the wetland.
12. Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
13. No indicators of erosive forces are present. No high water velocities are present.
14. Diffuse water flows are present in the wetland.
15. Wetland has a high degree of water and vegetation interspersion.
16. Dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation by dense vegetation is present.
17. Other

NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

CONSIDERATIONS/QUALIFIERS

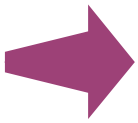
1. Wetland is large relative to the size of its watershed.
2. Deep water or open water habitat exists.
3. Overall potential for sediment trapping exists in the wetland.

4. Potential sources of excess nutrients are present in the watershed above the wetland.
5. Wetland saturated for most of the season. Ponded water is present in the wetland.
6. Deep organic/sediment deposits are present.
7. Slowly drained fine grained mineral or organic soils are present.
8. Dense vegetation is present.
9. Emergent vegetation and/or dense woody stems are dominant.
10. Opportunity for nutrient attenuation exists.
11. Vegetation diversity/abundance sufficient to utilize nutrients.

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

12. Waterflow through this wetland is diffuse.
13. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation.
14. Water moves slowly through this wetland.
15. Other

PRODUCTION EXPORT (Nutrient) — This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.



CONSIDERATIONS/QUALIFIERS

1. Wildlife food sources grow within this wetland.
2. Detritus development is present within this wetland
3. Economically or commercially used products found in this wetland.
4. Evidence of wildlife use found within this wetland.
5. Higher trophic level consumers are utilizing this wetland.
6. Fish or shellfish develop or occur in this wetland.
7. High vegetation density is present.
8. Wetland exhibits high degree of plant community structure/species diversity.
9. High aquatic vegetative diversity/abundance is present.
10. Nutrients exported in wetland watercourses (permanent outlet present).
11. "Flushing" of relatively large amounts of organic plant material occurs from this wetland.
12. Wetland contains flowering plants that are used by nectar-gathering insects.
13. Indications of export are present.
14. High production levels occurring, however, no visible signs of export (assumes export is attenuated).
15. Other

SEDIMENT/SHORELINE STABILIZATION — This function considers the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

CONSIDERATIONS/QUALIFIERS

1. Indications of erosion or siltation are present.
2. Topographical gradient is present in wetland.
3. Potential sediment sources are present up-slope.
4. Potential sediment sources are present upstream.
5. No distinct shoreline or bank is evident between the waterbody and the wetland or upland.
6. A distinct step between the open waterbody or stream and the adjacent land exists (i.e., sharp bank) with dense roots throughout.
7. Wide wetland (>10') borders watercourse, lake, or pond.
8. High flow velocities in the wetland.
9. The watershed is of sufficient size to produce channelized flow.
10. Open water fetch is present.
11. Boating activity is present.
12. Dense vegetation is bordering watercourse, lake, or pond.
13. High percentage of energy-absorbing emergents and/or shrubs border a watercourse, lake, or pond.
14. Vegetation is comprised of large trees and shrubs that withstand major flood events or erosive incidents and stabilize the shoreline on a large scale (feet).
15. Vegetation is comprised of a dense resilient herbaceous layer that stabilizes sediments and the shoreline on a small scale (inches) during minor flood events or potentially erosive events.
16. Other

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. Species lists of observed and potential animals should be included in the wetland assessment report.[1]

CONSIDERATIONS/QUALIFIERS

1. Wetland is not degraded by human activity.
2. Water quality of the watercourse, pond, or lake associated with this wetland meets or exceeds Class A or B standards.
3. Wetland is not fragmented by development.
4. Upland surrounding this wetland is undeveloped.
5. More than 40% of this wetland edge is bordered by upland wildlife habitat (e.g., brushland, woodland, active farmland, or idle land) at least 500 feet in width.
6. Wetland is contiguous with other wetland systems connected by a watercourse or lake.
7. Wildlife overland access to other wetlands is present.
8. Wildlife food sources are within this wetland or are nearby.
9. Wetland exhibits a high degree of interspersion of vegetation classes and/or open water.
10. Two or more islands or inclusions of upland within the wetland are present.
11. Dominant wetland class includes deep or shallow marsh or wooded swamp.
12. More than three acres of shallow permanent open water (less than 6.6 feet deep), including streams in or adjacent to wetland, are present.
13. Density of the wetland vegetation is high.
14. Wetland exhibits a high degree of plant species diversity.
15. Wetland exhibits a high degree of diversity in plant community structure (e.g., tree/shrub/vine/grasses/mosses)
16. Plant/animal indicator species are present. (List species for project)
17. Animal signs observed (tracks, scats, nesting areas, etc.)
18. Seasonal uses vary for wildlife and wetland appears to support varied population diversity/abundance during different seasons.
19. Wetland contains or has potential to contain a high population of insects.
20. Wetland contains or has potential to contain large amphibian populations.
21. Wetland has a high avian utilization or its potential.
22. Indications of less disturbance-tolerant species are present.
23. Signs of wildlife habitat enhancement are present (birdhouses, nesting boxes, food sources, etc.).
24. Other

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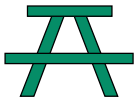
[1]In March 1995, a rapid wildlife habitat assessment method was completed by a University of Massachusetts research team with funding and oversight provided by the New England Transportation Consortium. The method is called WEThings (wetland habitat indicators for non-game species). It produces a list of potential wetland-dependent mammal, reptile, and amphibian species that may be present in the wetland. The output is based on observable habitat characteristics documented on the field data form. This method may be used to generate the wildlife species list recommended as backup information to the wetland evaluation form and to augment the considerations. Use of this method should first be coordinated with the Corps project manager. A computer program is also available to expedite this process.

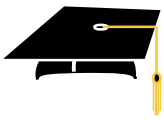
RECREATION (Consumptive and Non-Consumptive) — This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland. Non-consumptive opportunities do not consume or diminish these resources of the wetland.



CONSIDERATIONS/QUALIFIERS

1. Wetland is part of a recreation area, park, forest, or refuge.
2. Fishing is available within or from the wetland.
3. Hunting is permitted in the wetland.
4. Hiking occurs or has potential to occur within the wetland.
5. Wetland is a valuable wildlife habitat.
6. The watercourse, pond, or lake associated with the wetland is unpolluted.
7. High visual/aesthetic quality of this potential recreation site.
8. Access to water is available at this potential recreation site for boating, canoeing, or fishing.
9. The watercourse associated with this wetland is wide and deep enough to accommodate canoeing and/or non-powered boating.
10. Off-road public parking available at the potential recreation site.
11. Accessibility and travel ease is present at this site.
12. The wetland is within a short drive or safe walk from highly populated public and private areas.
13. Other

EDUCATIONAL/SCIENTIFIC VALUE — This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.



CONSIDERATIONS/QUALIFIERS

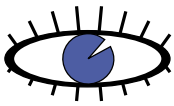
1. Wetland contains or is known to contain threatened, rare, or endangered species.
2. Little or no disturbance is occurring in this wetland.
3. Potential educational site contains a diversity of wetland classes which are accessible or potentially accessible.
4. Potential educational site is undisturbed and natural.
5. Wetland is considered to be a valuable wildlife habitat.
6. Wetland is located within a nature preserve or wildlife management area.
7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.).
8. Off-road parking at potential educational site suitable for school bus access in or near wetland.
9. Potential educational site is within safe walking distance or a short drive to schools.
10. Potential educational site is within safe walking distance to other plant communities.
11. Direct access to perennial stream at potential educational site is available.
12. Direct access to pond or lake at potential educational site is available.
13. No known safety hazards exist within the potential educational site.
14. Public access to the potential educational site is controlled.
15. Handicap accessibility is available.
16. Site is currently used for educational or scientific purposes.
17. Other

UNIQUENESS/HERITAGE — This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.

CONSIDERATIONS/QUALIFIERS

1. Upland surrounding wetland is primarily urban.
2. Upland surrounding wetland is developing rapidly.
3. More than 3 acres of shallow permanent open water (less than 6.6 feet deep), including streams, occur in wetlands.
4. Three or more wetland classes are present.
5. Deep and/or shallow marsh or wooded swamp dominate.
6. High degree of interspersion of vegetation and/or open water occur in this wetland.
7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland.
8. Potential educational site is within a short drive or a safe walk from schools.
9. Off-road parking at potential educational site is suitable for school buses.
10. No known safety hazards exist within this potential educational site.
11. Direct access to perennial stream or lake exists at potential educational site.
12. Two or more wetland classes are visible from primary viewing locations.
13. Low-growing wetlands (marshes, scrub-shrub, bogs, open water) are visible from primary viewing locations.
14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations.
15. Large area of wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons.
16. General appearance of the wetland visible from primary viewing locations is unpolluted and/or undisturbed.
17. Overall view of the wetland is available from the surrounding upland.
18. Quality of the water associated with the wetland is high.
19. Opportunities for wildlife observations are available.
20. Historical buildings are found within the wetland.
21. Presence of pond or pond site and remains of a dam occur within the wetland.
22. Wetland is within 50 yards of the nearest perennial watercourse.
23. Visible stone or earthen foundations, berms, dams, standing structures, or associated features occur within the wetland.
24. Wetland contains critical habitat for a state- or federally-listed threatened or endangered species.
25. Wetland is known to be a study site for scientific research.
26. Wetland is a natural landmark or recognized by the state natural heritage inventory authority as an exemplary natural community.
27. Wetland has local significance because it serves several functional values.
28. Wetland has local significance because it has biological, geological, or other features that are locally rare or unique.
29. Wetland is known to contain an important archaeological site.
30. Wetland is hydrologically connected to a state or federally designated scenic river.
31. Wetland is located in an area experiencing a high wetland loss rate.
32. Other

VISUAL QUALITY/AESTHETICS — This value considers the visual and aesthetic quality or usefulness of the wetland.



CONSIDERATIONS/QUALIFIERS

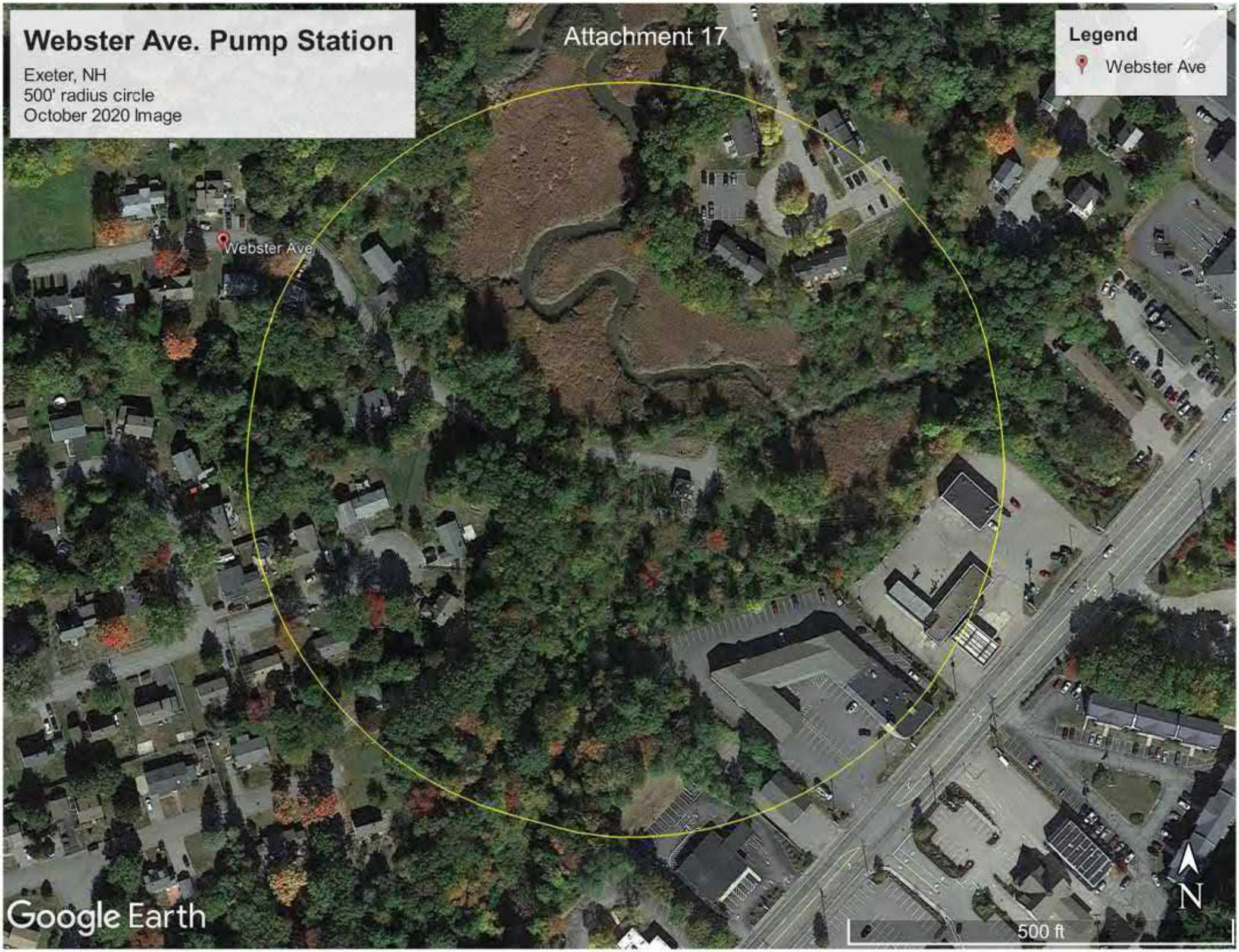
1. Multiple wetland classes are visible from primary viewing locations.
2. Emergent marsh and/or open water are visible from primary viewing locations.
3. A diversity of vegetative species is visible from primary viewing locations.
4. Wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons.
5. Land use surrounding the wetland is undeveloped as seen from primary viewing locations.
6. Visible surrounding land use form contrasts with wetland.
7. Wetland views absent of trash, debris, and signs of disturbance.
8. Wetland is considered to be a valuable wildlife habitat.
9. Wetland is easily accessed.
10. Low noise level at primary viewing locations.
11. Unpleasant odors absent at primary viewing locations.
12. Relatively unobstructed sight line exists through wetland.
13. Other

ENDANGERED SPECIES HABITAT — This value considers the suitability of the wetland to support threatened or endangered species.

ES

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened or endangered species.
2. Wetland contains critical habitat for a state or federally listed threatened or endangered species.


Webster Ave. Pump Station
Exeter, NH
500' radius circle
October 2020 Image
Attachment 17
Legend
Webster Ave
Webster Ave
Google Earth
N
500 ft

APPPENDIX

PHOTO LOG

Photo 1: Facing upstream (southerly) from culvert under Webster Avenue during a high tide.

Photo 2: Showing upstream (northerly) end of culvert under Webster Avenue during a high tide.

Photo 3: Taken facing northerly at the downstream side of the culvert under Webster Avenue. Note the residential buildings in the backgound.

Photo 4: Taken facing easterly showing the existing pump station. Note dig safe markings on roadway showing the existing culvert location and the businesses on Route 108 in the back ground.


E4
E1
D55
HOTL 3
G1
G5
HOTL 1- connects to D42
D38 - connects to D37
F11
F1
H1
H15
WEBSTER AVE
RIDGECREST DR
DOUGLASS WAY
DOUGLASS WAY
HAVEN LN
HAVEN LN
DOWNING
STEVENS CT
PORTSMOUTH AVE
DELINEATION SKETCH
Marc Jacobs, CWS
November 25, 2022
Not-to-Scale
Parcels
Parcel Wetland Points
Parcel Wetlands
NH Highways
Interstate
US Highway
State Highway
Town Boundary
Abutting Towns
The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.
0
320
640 ft
Printed on 07/26/2022 at 09:56 AM
Exeter MapsOnline

7

Authorizations

Authorizations 7

The proposed project area is on Webster Avenue in Exeter, New Hampshire. From STA 4+31 to STA 5+09, the proposed project requires temporary impacts to abutting properties at 19 Webster Avenue (Map 52 Lot 13) and at 28 Douglas Way (Map 52 Lot 41). Temporary impacts are required for trench installation of the proposed force main to maintain adequate separation with adjacent water main utilities located on Webster Ave. A Tax Map is included in Section 8, for reference. Drafts of the authorization letters the Town intends to execute to the property owners are included within Attachment 7. Authorizations will be obtained and submitted to NHDES prior to work occurring on private properties.

Abutter notification is not required for this project per Env-Wt 306.06(c)(4).

Authorizations are needed for the following properties:

Map-Lot	Location	Ownership	Ownership Address	Authorization Required for Impacts on or within 10-ft
052-013-0000	19 Webster Ave	Siecke Warren W	19 Webster Ave Exeter, NH 03833	Yes
052-041-0000	28 Douglas Way	Vyshenska Kateryna	28 Douglas Way Exeter, NH 03833	Yes

Warren W Siecke
19 Webster Avenue
Exeter, NH 03833

RE: NHDES Wetland/Shoreland Permit Applications – Pump Station and Force Main
Letter of Authorization

Property Owner:

The Town of Exeter is performing upgrades to the Webster Avenue Pump Station and Force Main. The project will involve temporary impacts on or within 10-feet of your property (Map 52 Lot 13) within the Protected Shoreland and Tidal Buffer Zone of Wheelwright Creek for construction of a sewer force main. A Shoreland PBN and Standard Dredge & Fill Application through New Hampshire Department of Environmental Services is required prior to construction.

By signing below, you acknowledge that you have been made aware of the project and the NHDES Wetland/Shoreland permit applications and are the legal owner of 19 Webster Avenue (Map 52 Lot 13). You authorize the City and its authorized contractors to complete work on your property within the Tidal Buffer Zone and Protected Shoreland Buffer in accordance with these permit applications.

Name of Property Owner: Warren W Siecke

Address of Property Owner: 19 Webster Avenue Exeter, NH 03833

Signature_____

Kateryna Vyshenska
28 Douglas Way
Exeter, NH 03833

RE: NHDES Wetland Permit Application – Pump Station and Force Main
Letter of Authorization

Property Owner:

The Town of Exeter is performing upgrades to the Webster Avenue Pump Station and Force Main. The project will involve temporary impacts on or within 10-feet of your property (Map 52 Lot 41) within the Tidal Buffer Zone of Wheelwright Creek for construction of a sewer force main. A Standard Dredge & Fill Application through New Hampshire Department of Environmental Services is required prior to construction.

By signing below, you acknowledge that you have been made aware of the project and the NHDES Wetland permit application and are the legal owner of 28 Douglas Way (Map 52 Lot 41). You authorize the City and its authorized contractors to complete work on or within 10-feet of your property within the Tidal Buffer Zone in accordance with the permit application.

Name of Property Owner: Kateryna Vyshenska

Address of Property Owner: 28 Douglas Way Exeter, NH 03833

Signature: _____

8

Tax Map

Project Location
Proposed Force Main

Golf Course Access
Webster Ave
Ridgecrest Dr
Douglass Way
Haven Ln
Bonnie Dr
Portsmouth Ave
Hayes Park
Jady Hill Ave

052-001
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052-009
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052-011
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065-122
065-125
065-126
065-127

064-104
064-105
064-078
064-079
064-080
064-081
064-082

N
0 75 150 300 Feet

Tax Map
Exeter, NH

PROJ NO:	DATE:
21244	9/14/2023

WRIGHT-PIERCE
Engineering a Better Environment

FIGURE: 3

JDM W:\GIS_Development\Projects\NH\Exeter\21244_WebsterAvePS\MXDs\Figures-21244.aprx - Figure3-TaxMap-11x17

9

Photographs

Photograph 1 – View of Existing Webster Avenue Pump Station and Standby Generator

Photograph 2 – View of Webster Avenue Pump Station

Photograph 3 – View of Webster Avenue Pump Station

Photograph 4 – View of Existing Force Main Alignment Along Douglass Way

Photograph 5 – View of Existing Force Main Alignment Along Jady Hill Avenue

Photograph 6 – View of Existing Force Main Alignment Along Jady Hill Access Area

Photograph 7 – View of Culvert Running Under Webster Avenue, NW of the Webster Avenue Pump Station

Photograph 8 – View of Culvert Running Under Webster Avenue, NW of the Webster Avenue Pump Station

Photograph 9 – View of Culvert Running Under Webster Avenue, NW of the Webster Avenue Pump Station

10

Project Location Maps

Project Location
Proposed Force Main

Parkman Corner
Parkman Brook
Squamscott River
Wheelwright Creek
Exeter County Club Path
NEWFIELDS RD
Gas Pipline Trail
Little Brook Trail
Green Loop
DOWNING CT
STEVENS CT
LEARY CT
ALLEN ST
HOLLAND WAY
STRATHAM
WEBSTER AVE
HAYES PARK
RIDGECREST DR
DOUGLASS WAY
HAVEN LN
JADY HILL AVE
Jady Hill
BONNIE DR
GTE RD
WATER WORKS POND RD
PORTSMOUTH AVE
Exeter Reservoir
JADY HILL CIR
CHESTNUT ST
HIGHLAND ST
PROSPECT ST
ALUMNI DR
Exeter Hospital Heliport
HALL PL
AUBURN AVE
AUBURN ST
HIGH ST
THORNTON
ROBIN LN
Powderhouse Point
SWASEY PKWY
WATER ST
PARK ST
GREEN ST
MAIN ST
SUMMER ST
OAK ST
ASH ST
TREMONT ST
CASS ST
DEWEY ST
SPRING ST
CENTER ST
TAN LN
BOW ST
CLIFFORD ST
Main Street Sch
Phillips Exeter Acad
Exeter Town Hall
OAK ST EXN
Norris Brook
85
108
101
111A
27

N
0 300 600 1,200 Feet

USGS Map
Exeter, NH

PROJ NO:	DATE:
21244	9/14/2023

WRIGHT-PIERCE
Engineering a Better Environment

FIGURE: 1

JDM W:\GIS_Development\Projects\NH\Exeter\21244_WebsterAvePS\MXDs\Figures-21244.aprx - Figure1-USGS-11x17

Aerial Map

Exeter, NH

PROJ NO:	DATE:
21244	9/14/2023

WRIGHT-PIERCE
Engineering a Better Environment

FIGURE: 2

JDM W:\GIS_Development\Projects\NH\Exeter\21244_WebsterAvePS\MXDs\Figures-21244.aprx - Figure2-Aerial-11x17

11

Proposed Construction Sequence

Construction Sequence

The proposed project is anticipated to begin construction in Spring 2024. A general sequence of construction activities is provided below. The final schedule will be determined by the Town and contractor upon receipt of permit approvals.

General Schedule:

1. Contractor mobilizes to project area (Spring 2024).
2. Install applicable erosion and sedimentation control practices.
3. Begin site demolition as shown on Demolition Plan (C-401).
4. Construct new force main.
5. Construct new pump station and associated mechanical/electrical appurtenances while maintaining wastewater pumping capabilities as shown on Site Modification Plan.
6. Replace existing culvert in-kind.
7. Demonstrate proper operation of the new pump station and force main and take existing pump station offline.
8. Abandon existing force main.
9. Construct paved drive and security fencing to provide permanent stabilized site access.
10. Restore disturbed areas with loam and seed.
11. Once the site is permanently stabilized, remove all temporary erosion control measures.

12

Deeds

Deeds

[illegible]

- [illegible]
- [illegible]
- [illegible]

Return to:
Granite Settlement Services
36 Industrial Way, Suite 3
Rochester, NH 03867

File #200710240-R

MAIL TO
19 Webster Ave
Exeter, NH 03833

BK 4822 PG 2780

041143

STATE OF NEW HAMPSHIRE
DEPARTMENT OF REVENUE ADMINISTRATION
REAL ESTATE TRANSFER TAX
5 THOUSAND 1 HUNDRED AND 30 DOLLARS
071707 288785 $5130.00
VOID IF ALTERED

2007 JUL 17 AM 9:38

ROCKINGHAM COUNTY
REGISTRY OF DEEDS

WARRANTY DEED

I, Rupert A. Richardson, Single of 19 Webster Avenue, Exeter, NH for consideration paid hereby grant to Warren W. Siecke and Caroline C. Siecke, Husband and Wife of 88 Grove Side Road, Portland, ME with **Warranty Covenants** as joint tenants with rights of survivorship the land together with the buildings and improvements thereon, in the City/Town of Exeter, County of Rockingham and State of New Hampshire bounded and described as follows:

SEE ATTACHED EXHIBIT A

Signed on this day of 7/13/2007

Witness

Rupert A. Richardson

Kim Jo Richardson

State of New Hampshire
County of Rockingham

On this, 7/13/2007 before me, the undersigned officer, personally appeared Rupert A. Richardson and known to me, or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained as his free act and deed.

Before me

Notary Public/Justice of the Peace
My Commission Expires: 2/15/08
SEAL

Return to:
Granite Settlement Services
36 Industrial Way, Suite 3
Rochester, NH 03867

File #200710240-R

BK 4822 PG 2781

Exhibit A

A certain tract or parcel of land, with the buildings thereon situate on Webster Avenue in Exeter, Rockingham County, State of New Hampshire, shown on a plan of land entitled, "Plat of Land for Bernier Corporation in Exeter, NH, Scale 1" = 20', April 1998", by Parker Survey Assoc., Inc., 13 Hampton Road, Exeter, N.H., recorded in the Rockingham County Registry of Deeds as Plan No. C-26180, to which Plan reference can be made for amore particular description.

Said lot contains 31,205 square feet or .716 acres, more or less, according to said Plan.

Meaning and intending to describe and convey the same premises conveyed to the Grantor herein by Warranty Deed from Heather S. Bernier, Trustee of the Heather Bernier Revocable Trust of 1999 dated December 29, 2000 and recorded in the Rockingham County Registry of Deeds in Book 3530, Page 2487.

E # 20072356 12/22/2020 08:06:43 AM
Book 6211 Page 1220 Page 1 of 2
Register of Deeds, Rockingham County
Cathy Ann Stacey

LCHIP	**ROA535095**	**25.00**
TRANSFER TAX	**RO102862**	**5,175.00**
RECORDING		**14.00**
SURCHARGE		**2.00**

Return to:
Kateryna Vyshenska
Adam Gilbert Jordan
28 Douglass Way
Exeter, NH 03833

$5175

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS: That Tristan Nowak and Katelyn Nowak, husband and wife, of 28 Douglass Way, Exeter, NH 03833, for consideration paid grant(s) to Kateryna Vyshenska, and Adam Gilbert Jordan, both single, of 244 Main Street, Apt 102, Epping, NH 03042, as joint tenants with rights of survivorship, with WARRANTY COVENANTS:

A certain parcel of land with the buildings thereon, situate in Exeter, County of Rockingham and State of New Hampshire on Douglass Way, so-called, and being Lot# 58 as shown on a plan of "Part of Country Club Estates" made by John W. Durgin, C.E. in September 1954 and recorded in the Rockingham County Registry of Deeds, and more particularly bounded and described as follows:

Beginning at the Northwesterly corner of Lot No. 59 on said plan on the Easterly side of a one hundred (100) foot circle at the Easterly end of Douglas Way and running Northerly and Northwesterly by the arc of said circle, with a radius of fifty (50) feet for a distance of sixty-nine (69) feet; thence running North twelve degrees forty-eight minutes East along Lot No. 57 on said Plan, one hundred fifty and eighty-six hundredths (150.86) feet; thence running North seventy degrees thirty-seven minutes East thirty-three (33) feet to the land of the Town of Exeter; thence running South fifty-three degrees three minutes East along said land of the Town of Exeter seventy-two (72) feet; thence running South nineteen degrees twenty-three minutes East one hundred eighty (180) feet to the Northeasterly corner of said Lot No. 59; thence running North eighty-eight degrees eight minutes West along said Lot No. 59 one hundred forty-three and thirteen hundredths (143.13) feet to the point of beginning.

Meaning and intending to describe and convey the same premises conveyed to Tristan Nowak and Katelyn Nowak by virtue of a Deed from Tristan Nowak and Katelyn Nowak and John Nowak dated July 31, 2018 and recorded in the Rockingham Registry of Deeds in Deed Book 5939 at Page 817.

RE: 2020-49033

We, the grantor(s) hereby release all rights of homestead in the above described premises.

Executed this December 18,2020.

Tristan Nowak

Katelyn Nowak

State of New Hampshire
County of Rockingham

Then personally appeared before me on this 18th day of December, 2020 the said Tristan Nowak and Katelyn Nowak and acknowledged the foregoing to be his/her/their voluntary act and deed.

Notary Public/Justice of the Peace
Commission expiration: January 8, 2025

MARK A. PERKINS
MY COMMISSION EXPIRES JAN. 8, 2025
NOTARY PUBLIC NEW HAMPSHIRE

13

NHB & NHFG Correspondence

NHB DataCheck Results Letter
NH Natural Heritage Bureau
Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

To: Lauren King, Wright-Pierce
230 Commerce Way Suite 302
Portsmouth, NH 03801
lauren.king@wright-pierce.com

From: NHB Review
NH Natural Heritage Bureau
Main Contact: Ashley Litwinenko - nhbreview@dncr.nh.gov

cc: NHFG Review

Date: 08/24/2023 (valid until 08/24/2024)
Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits: NHDES - Wetland Standard Dredge & Fill - Minor, OTHER - Environmental Review for a CWSRF Loan

NHB ID: NHB23-2431

Town: Exeter
Location: 21 Webster Avenue

Project Description: The proposed project will include demolition of the existing pump station, and construction of a new pump station (approx. 348 sq ft) and new force main (approx. 2,250 ft). Additionally, a 24-inch culvert will be replaced in-kind. There will be a new generator installed in a stand-alone enclosure.

Next Steps for Applicant:

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: No comments at this time.

NHFG Comments: Please refer to NHFG consultation requirements below.

NHB Consultation

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

NH Fish and Game Department Consultation

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 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.

NHB Database Records:
The following record(s) have been documented in the vicinity of the proposed project.
Please see the map and detailed information about the record(s) on the following pages.

Vertebrate species	State[1]	Federal	Notes
Northern Black Racer (*Coluber constrictor constrictor*)	T	--	Contact the NH Fish & Game Dept (see above).

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

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section above.

Disclaimer: NHB's database can only tell you of known occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.
However, many areas have never been surveyed, or have only been surveyed for certain species.
NHB recommends surveys to determine what species/natural communities are present onsite.

NHB23-2431


Northern Black Racer
Northern Black Racer
Stratham
Exeter
Legend
Site bounds
Plant
Animal
Community
System
towns
0 0.05 0.1 0.15 0.2 0.25
Miles

NHB DataCheck Results Letter
NH Natural Heritage Bureau
Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB23-2431 EOCODE: ARADB0701D*055*NH

New Hampshire Natural Heritage Bureau - Animal Record

Northern Black Racer (*Coluber constrictor constrictor*)

Legal Status		**Conservation Status**	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2012: Area 13078: 1 adult observed. 2009: Area 14214: 1 adult observed, sex unknown.
General Area: 2012: Area 13078: Residential yard. 2009: Area 14214: Edge of beaver pond which has most of its margin forested with mixed hardwood.
General Comments: --
Management Comments: --

Location

Survey Site Name: The Oaklands
Managed By:

County: Rockingham
Town(s): Exeter
Size: .9 acres Elevation:

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

Directions: 2012: Area 13078: 20 Newfields Road, Exeter. 2009: Area 14214: Edge of beaver pond facing North in Henderson/Swasey Town Forest, Exeter.

Dates documented

First reported: 2009-04-28 Last reported: 2012-06-23

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

Jacob Shactman

From: Douglas, Luke <Luke.M.Douglas@wildlife.nh.gov>
Sent: Tuesday, August 29, 2023 2:35 PM
To: Lauren King
Cc: FGC: NHFG review; Lewis, Eben; Brady, Jennifer
Subject: NHB23-2431 Webster Ave Pump Station Exeter
Attachments: racer flyer_2022.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Good afternoon Lauren,

New Hampshire Fish and Game has completed review of materials submitted for consultation for NHB23-2431 on 8/24/2023 (site plans dated 4/27/2022), prepared by Wright-Pierce. The project involves the demolition of an existing pump station, the construction of a new pump station and force main, and the replacement of a culvert at 21 Webster Ave in Exeter.

Permit applications associated with this project include:

- Wetlands Dredge & Fill (minor) – To be filed

Based on the NHB datacheck results letter and the information provided in the submission as well as in communications and materials provided during our consultation review, we request the following recommended permit conditions. THESE RECOMMENDED PERMIT CONDITIONS ARE APPLICABLE TO ALL STATE PERMITS LISTED ABOVE.

- **For consideration in the AoT permit review process, please incorporate recommendations along with associated materials as detailed, into the final sheet plans as written below (update highlighted text as applicable) and provide to NHDES for final review and copy NHFG.**
- **For all other permits, please include recommended permit conditions in final plan sheets plans as written below (update highlighted text as applicable) and provide to NHDES for final review and copy NHFG. Permit reviewers will adopt/include NHFG permit conditions in the permit if approved.**

New Hampshire Fish and Game Recommended Permit Conditions:

1. Northern black racer (state threatened) occur within the vicinity of the project area. All operators and personnel working on or entering the site shall be made aware of the potential presence of this species and shall be provided flyers that help to identify this species, along with NHFG contact information. See Plan Sheet xxxxxx ***Include attached flyers to plan sheet set.***
2. Rare species information (e.g. identification, observation and reporting of observations, when to contact NHFG immediately and NHFG contact information) shall be communicated during morning tailgate meetings prior to work commencement.
3. Observations of Northern black racers in the months of April-May and September-October may indicate the potential for a den site on or near the project site. Observations of this species during this timeframe shall be reported immediately to the New Hampshire Fish and Game Department Nongame and Endangered Wildlife Environmental Review Program. Please contact Melissa Winters (603-479-1129) or Brendan Clifford (603-944-0885). Observations of this species outside of this timeframe can follow general reporting guidance. Please include photograph with text if feasible.
4. All manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection,

check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches. See Plan Sheet xxxxxx

5. All observations of threatened or endangered species on the project site shall be reported immediately to the NHFG nongame and endangered wildlife environmental review program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov, with the email subject line containing the NHB DataCheck tool results letter assigned number, the project name, and the term Wildlife Species Observation.
6. Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHFG in digital format at the above email address for verification, as feasible.
7. In the event a threatened or endangered species is observed on the project site during the term of the permit, the species shall not be disturbed, handled, or harmed in any way prior to consultation with NHFG and implementation of corrective actions recommended by NHFG.
    a. Site operators shall be allowed to relocate wildlife encountered if discovered within the active work zone if in direct harm from project activities. Wildlife shall be relocated in close proximity to the capture location but outside of the work zone and in the direction the individual was heading. NHFG shall be contacted immediately if this action occurs.
8. The NHFG, including its employees and authorized agents, shall have access to the property during the term of the permit.

NHFG has completed our review of materials submitted for consultation under FIS 1004. No further coordination with NHFG is requested, and the final recommendations have been transmitted to the applicable permitting agency. Questions or concerns on NHFG recommendations must follow FIS 1004.12. Note that NHFG recommendations may be withdrawn pursuant to FIS 1004.13.

Luke Douglas
Wildlife Biologist
NH Fish and Game Department
Wildlife Division
11 Hazen Drive
Concord, NH 03301
(603) 271-0788

New Hampshire Fish and Game requirements for environmental review consultation can be found at: https://gencourt.state.nh.us/rules/state_agencies/fis1000.html. ALL requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail. **The NHB datacheck results letter number needs to be included in the email subject line to read as "NHB*xx-xxxx_Project Name*_FIS 1004 Consultation Submittal".**

The requirements for consultation (Fis 1004) shall not apply to the following: statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule. Review requests for these projects or other project types should be submitted to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail – email or mail subject line for these review requests should read **"NHBxx-xxxx_Project Name_ Env. Review Request".**

Please provide shapefiles/KMZ/KMLs of the project site (and relevant features if applicable) with your submittal. Review statements provided in the NHB Datacheck Results letter for additional guidance.

14

Conservation Commission Correspondence

Conservation Commission Correspondence 14

The Exeter Conservation Commission will be sent a copy of this application when it is submitted to the NHDES Wetlands Bureau for project review. Comments received from the Conservation Commission will be addressed in the project design as necessary and will be forwarded to NHDES Wetlands Bureau.

15

Avoidance and Minimization

AVOIDANCE AND MINIMIZATION CHECKLIST

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

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

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

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in Attachment A: Minor and Major Projects (NHDES-W-06-013).

The following definitions and abbreviations apply to this worksheet:

- "A/M BMPs" stands for Wetlands Best Management Practice Techniques for Avoidance and Minimization dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- "Practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

SECTION 1 - CONTACT/LOCATION INFORMATION	
APPLICANT LAST NAME, FIRST NAME, M.I.: Town of Exeter	
PROJECT STREET ADDRESS: Webster Avenue	PROJECT TOWN: Exeter
TAX MAP/LOT NUMBER: 52-12	

SECTION 2 - PRIMARY PURPOSE OF THE PROJECT		
Env-Wt 311.07(b)(1)	Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.	☐ Yes ☒ No

If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed:

The purpose of this project is to replace wastewater pump station infrastructure that is nearing the end of its useful life and increase capacity of the Webster Avenue Pump Station and Force Main to meet present and future needs of the Town.

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

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

16

Coastal Resources Worksheet

COASTAL RESOURCE WORKSHEET

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

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

APPLICANT LAST NAME, FIRST NAME, M.I.: **Town of Exeter**

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

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

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

The following information is required for projects in coastal areas.

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

The purpose of this project is to replace the existing Webster Avenue Pump Station and Force Main. Both are now reaching the end of their useful life and are undersized to meet the growing capacity requirements in the Town of Exeter.

The goal of this project is to increase the capacity of the Webster Avenue Pump Station and Force Main and to replace aging infrastructure with potential for failure.

Natural resource assets in the area include the Tidal Buffer Zone (TBZ), salt marsh, freshwater wetlands, and tidal wetlands. The impacts within the TBZ and Shoreland Protection Area are all previously developed. Impacts will primarily be temporary and restored to match existing conditions. Permanent impacts are proposed for the new pump station, generator, and grading.

For standard permit projects, provide:

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

☒ A vulnerability assessment in accordance with Env-Wt 603.05 (refer to Section 4).

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

The proposed pump station, force main, and culvert replacement were designed to minimize impacts to the natural resource assets to the maximum extent practicable. All temporary disturbances will be restored to match the existing conditions. Erosion and sediment control measures will be installed in accordance with the NH Stormwater Maunual Volume 3: Erosion & Sediment Controls During Construction. An Avoidance and Minimization Checklist and Coastal Functional Assessment is attached. The results were taken into consideration to minimize impacts of the proposed projects. Construction impacts will be minimized to the maxium extent practicable and in accordance with the NHDNR Best Management Practices Manual: Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire.

See additional detail in the Project Narrative included as Section 4.

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

A description of how the project will meet standard conditions and approval criteria is provided in the Project Narrative included as Section 4.

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 includes public sewer infrastructure that will be maintained by the Town of Exeter Department of Public Works.

☒ 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.

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

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

☒ Existing salt marsh and salt marsh migration pathways;

☒ Eelgrass beds;

☒ Documented shellfish sites;

☒ Projected sea-level rise; and

☒ 100-year floodplain.

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

☒ National Oceanic and Atmospheric Administration (NOAA) Tides & Currents; and

☒ NOAA Essential Fish Habitat Mapper.

☒ Verify or correct the information collected from the data screenings by conducting an on-site assessment of the subject property in accordance with Env-Wt 406 and Env-Wt 603.04.

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

Projects in coastal areas shall:

☒ Not impair the navigation, recreation, or commerce of the general public; and

☒ Minimize alterations in prevailing currents.

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

☒ Adverse impacts to beach or tidal flat sediment replenishment;

☒ Adverse impacts to the movement of sediments along a shore;

☒ Adverse impacts on a tidal wetland's ability to dissipate wave energy and storm surge; and

☒ Adverse impacts of project runoff on salinity levels in tidal environments.

For standard permit applications submitted for minor or major projects:

☒ Attach a CFA based on the data screening information and on-site evaluation required by Env-Wt 603.03. The CFA for tidal wetlands or tidal waters shall be:

- Performed by a qualified coastal professional; and
- Completed using one of the following methods:

  a. The US Army Corps of Engineers (USACE) Highway Methodology Workbook, dated 1993, together with the USACE New England District *Highway Methodology Workbook Supplement*, dated 1999; or

  b. An alternative scientifically-supported method with cited reference and the reasons for the alternative method substantiated.

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

☒ Use the results of the CFA to select the location of the proposed project having the least impact to tidal wetlands, tidal waters, or associated sand dunes;

☒ Design the proposed project to have the least impact to tidal wetlands, tidal waters, or associated sand dunes;

☒ Where impact to wetland and other coastal resource functions is unavoidable, limit the project impacts to the least valuable functions, avoiding and minimizing impact to the highest and most valuable functions; and

☒ Include on-site minimization measures and construction management practices to protect coastal resource areas.

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

☒ Minimize adverse impacts to finfish, shellfish, crustacean, and wildlife;

☒ Minimize disturbances to groundwater and surface water flow;

☒ Avoid impacts that could adversely affect fish habitat, wildlife habitat, or both; and

☒ Avoid impacts that might cause erosion to shoreline properties.

SECTION 4 - VULNERABILITY ASSESSMENT (Env-Wt 603.05)

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

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

The design life for the proposed pump station replacement is approximately 50 years.

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.

The proposed project will have a low tolerance to flood risk because it involves upgrading a pump station that is necessary to convey sewage to the WWTF. The pump station is critical to public function, loss of the pump station would result in impacts to the overall collection system's performance.

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.

The projected 2070 sea-level rise (SLR) at this location is approximately 3.5-feet, based on RCP 4.5, project timeframe, and tolerance for flood risk, per Table 3A in the New Hampshire Coastal Flood Risk Summary Part II: Guidance.

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

The HOTL is shown to be located at approximate El. 6' (NGVD29). The projected SLR raises the HOTL to El. 9.5'. Areas of the site subject to flooding from SLR include the paved access drive. Inudation maps are included as in Section 16.

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

The finished floor elevation of the pump station building will be 3-feet above the 100-year floodplain elevation and all equipment will be installed 3.5-feet above the 100-year floodplain. Flood maps derived from the WPPT are included in Section 16. The FEMA FIRMette map is included in Section 2. The 100-year floodplain is shown in the plans included in Section 3.

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

Aluminum hatch for meter vault will be water tight. Manholes located within the floodplain will be watertight. Top of concrete for wet wells and finish floor elevation for pump station building have been raised to elevation 11.0'. The pavement design life is approximately 20-years. The driveway elevation and manholes located outside of the floodplain can be adapted in the future to accommodate SLR once the pavement reaches the end of its useful design life.

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

☐ Pre-application meeting date held:

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

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

The plan view shall depict the following:

☒ The engineering scale used, which shall be no larger than one inch equals 50 feet;

☐ The location of tidal datum lines depicted as lines with the associated elevation noted, based on North American Vertical Datum of 1988 (NAVD 88), derived from https://tidesandcurrents.noaa.gov/datum_options.html, as described in Section 6.

☐ An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;

☐ The location of all special aquatic sites at or within 100 feet of the subject property;

☐ Existing bank contours;

☒ The name and license number, if applicable, of each individual responsible for the plan, including:

a. The agent for tidal docking structures who determined elevations represented on plans; and

b. The qualified coastal professional who completed the CFA report and located the identified resources on the plan;

☒ The location and dimensions of all existing and proposed structures and landscape features on the property;

☐ Tidal datum(s) with associated elevations noted, based on NAVD 88; and

☐ Location of all special aquatic sites within 100-feet of the property.

The elevation view shall depict the following:

☐ The nature and slope of the shoreline;

☐ The location and dimensions of all proposed structures, including permanent piers, pilings, float stop structures, ramps, floats, and dolphins; and

☐ Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured. Refer to Section 6 for more instructions regarding water depth supporting information.

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

- Overwater structures (Env-Wt 606).
- Dredging activities (Env-Wt 607).
- Tidal beach maintenance (Env-Wt 608).
- Tidal shoreline stabilization (Env-Wt 609).
- Protected tidal zone (Env-Wt 610).
- 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 three tide events, including at least one minus tide event, shall be located to document the range of the tide in the proposed location showing the following levels:

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

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

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

For tidal stream crossing projects, provide:

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

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

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

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

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

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

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

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

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

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

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

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

☒ The standard conditions in Env-Wt 307;

☒ The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;

☒ The approval criteria in Env-Wt 313.01;

☒ The evaluation criteria in Env-Wt 313.05;

☒ The project specific criteria in Env-Wt 600;

☒ The CFA required by Env-Wt 603.04; and

☒ The vulnerability assessment required by Env-Wt 603.05.

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

☒ Provide habitat values;

☒ Protect tidal environments from potential sources of pollution;

☒ Provide stability of the coastal shoreline; and

☒ Maintain existing buffers intact where the lot has disturbed area defined under RSA 483-B:4, IV.

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

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

☐ The standard conditions in Env-Wt 307;

☐ The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;

☐ The approval criteria in Env-Wt 313.01;

☐ The evaluation criteria in Env-Wt 313.05;

☐ The project specific criteria in Env-Wt 600;

☐ The CFA required by Env-Wt 603.04; and

☐ The vulnerability assessment required by Env-Wt 603.05.

Projects in tidal surface waters or tidal wetlands shall:

☐ Optimize the natural function of the tidal wetland, including protection or restoration of habitat, water quality, and self-sustaining stability to storm surge;

☐ Be designed with a preference for living shorelines over hardened stabilization practices; and

☐ Be limited to public infrastructure or restoration projects that are in the interest of the general public, including a road, a bridge, energy infrastructure, or a project that addresses predicted sea-level rise and coastal flood risk.

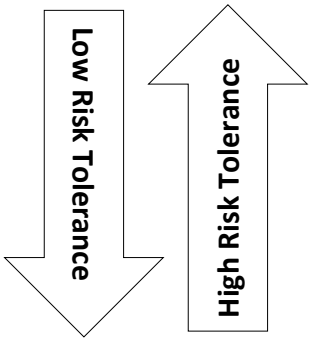
SECTION 10 – GUIDANCE

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

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

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

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



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

Webster Avenue Pump Station: Priority Resource Areas

Legend

- NH Parcels
- Additional Lines

SLAMM 2022 - 0.3-m SLF

- Developed
- Developed-Impervious
- Estuarine Beach
- Estuarine Open Water
- Inland Fresh Marsh
- Inland Open Water
- Inland Shore
- Irregularly-flooded Marsh
- Ocean Beach
- Open Ocean
- Regularly-flooded Marsh
- Riverine Tidal
- Rocky Intertidal
- Swamp
- Tidal Flat
- Tidal Fresh Marsh
- Tidal Swamp
- Transitional Salt Marsh

Map Scale

1: 3,247

Map Generated: 9/13/2023

Notes

Webster Avenue Pump Station

Legend

- NH Parcels
- Additional Lines
- City/Town
- Prime Wetlands
- Prime Wetlands with 100
- Peatland
- Flood Plain Wetlands Adj
- Marsh-Scrub / Shrub Wet
- Dunes
  - backdune
  - foredune
  - interdune
  - other

Map Scale
1: 3,247

Map Generated: 9/13/2023

Notes

Webster Avenue Pump Station

Legend

- NH Parcels
- Additional Lines
- City/Town
- Prime Wetlands
- Prime Wetlands with 100
- Tidal Wetland
  - Brackish Marsh
  - High Marsh Mix
  - High Marsh, J. gerardii
  - High Marsh, S.patens / D.spi
  - Low Marsh
  - Mudflat
  - Open Water
  - Panne
  - Phragmites australis
  - Pool
  - Recently Flooded Forest
  - Short form S. alterniflora
  - Terrestrial border
  - Wrack
- Flood Plain Wetlands Adj

Map Scale
1: 3,247

Map Generated: 9/13/2023

Notes

Webster Avenue Pump Station

Legend

- NH Parcels
- Additional Lines
- City/Town
- MHHW Baseline
- MHHW + 2-ft SLR
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +
- MHHW + 1% Flood + 2-ft
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +

Map Scale
1: 3,247

Map Generated: 9/13/2023

Notes

Webster Avenue Pump Station

Legend

- NH Parcels
- Additional Lines
- City/Town
- MHHW Baseline
- MHHW + 2-ft SLR
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +

Map Scale

1: 3,247

Map Generated: 9/13/2023

Notes

Webster Avenue Pump Station

Legend

- NH Parcels
- Additional Lines
- City/Town
- Eelgrass 2017
- Eelgrass 2016
- Eelgrass 2006
- Eelgrass 1996
- Eelgrass 1986
- Oyster Restoration Sites

Map Scale
1: 3,247

Map Generated: 9/14/2023

Notes

17

Attachment A – Minor and Major Projects

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

Water Division/Land Resources Management

Wetlands Bureau

Check the Status of your Application

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

APPLICANT'S NAME: **Town of Exeter** **TOWN NAME:** Exeter

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

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

PART I: AVOIDANCE AND MINIMIZATION

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

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

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

THE PROPOSED PROJECT HAS BEEN DESIGNED TO AVOID AND MINIMIZE IMPACTS TO JURISDICTIONAL RESOURCE AREAS TO THE MAXIMUM EXTENT PRACTICABLE. THE PROPOSED PUMP STATION AND FORCE MAIN DESIGN AVOIDS DIRECT WETLAND IMPACTS. IMPACTS ARE MINIMIZED WITHIN THE PREVIOUSLY DISTURBED TIDAL BUFFER ZONE. THE PROPOSED CULVERT REPLACEMENT IS IN-KIND.

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

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

The proposed proposed project avoids impacts to tidal and non-tidal marshes.

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 project will not impact hydrologic connections between adjacent wetland or stream systems.

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

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

Proposed impacts within the Tidal Buffer Zone have been mimized to the maximum extent practical. Impacts will be minimized through the use of best management practices during construction.

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 project will not permanently impact public commerce, navigation, or recreation. Temporary disruptions to travel may occur on Webster Ave and Jady Hill Ave during construction, however, vehicular access to private property will be maintained.

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 proposed project does not impact floodplain wetlands that provide flood storage.

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 proposed project does not impact natural riverine forested wetland systems and scrub-shrub-marsh complexes of high ecological integrity.

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

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

The proposed project avoids impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels. There are not proposed impacts to these resources.

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 proposed project culvert replacement associated with this project is in-kind and will not impact the ability of the channel to handle runoff waters.

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

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

The proposed project does not involve shoreline structures over surface waters.

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

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

The proposed project does not involve shoreline structures over surface waters.

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

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

The proposed project does not involve shoreline structures over surface waters.

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

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

The proposed project does not involve shoreline structures over surface waters.

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

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

The proposed project does not involve shoreline structures over surface waters.

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

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

The proposed project does not involve shoreline structures over surface waters.

PART II: FUNCTIONAL ASSESSMENT
REQUIREMENTS Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
FUNCTIONAL ASSESSMENT METHOD USED: See Coastal Functional Assessment, attached.
NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: MARC JACOBS
DATE OF ASSESSMENT: DECEMBER 20, 2022
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.

230 Commerce Way, Suite 302
Portsmouth, NH 03801
603.430.3728 | www.wright-pierce.com

Exeter Conservation Commission
October 10, 2023
Nowak Room
10 Front Street
7:00 PM
Draft Minutes

Call to Order

1. Introduction of Members Present (by Roll Call)

Present at tonight's meeting were by roll call, Chair Andrew Koff, Connor Madison, Kyle Welch, Keith Whitehouse, Alternate Don Clement, Alternate Michelle Crepeau, Alternate Bill Campbell (remotely) and Nancy Belanger, Select Board Representative

Staff Present: Kristen Murphy, Conservation and Sustainability Planner

Mr. Koff called the meeting to order at 7:00 PM, introduced the members and activated the alternates.

2. Public Comment

There was no one from the public present outside of agenda items.

Action Items

1. Letter of Support for NOAA Grant Application funding Pickpocket Dam Removal

Mr. Koff reported that Paul Vlasich presented the application to the River Committee. There are no matching funds with this grant due from the Town. Mr. Clement indicated that Mr. Mattera did a wonderful job advocating for the application and this $1 million option is a great opportunity to solve the problem without taxation and less expensive than the other two options. He noted that he understood the Select Board already voted in favor of it.

Mr. Koff noted the only reason to keep the dam is the recreational opportunity the flat water above provides but given the success of the impact already seen by the Great Dam removal he would be in favor of it.

Ms. Murphy noted that the letter would need to go to the consultant by Friday. Funding would be for next year, approximately 7/1/2024.

MOTION: Mr. Clement motioned to authorize the Chair to sign a letter in support of the Town applying to the NOAA Restoring Fish Passage through Barrier Removal grant application for purposes of removal of Pickpocket Dam and restoration of the Exeter River. M. Madison seconded the motion. A roll call

vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison voted aye, Mr. Whitehouse voted aye, Mr. Clement voted aye and Mr. Campbell voted aye. The motion passed 7-0-0.

Mr. Koff stated that he would send the letter.

2. By-Laws Annual Review

Ms. Murphy provided copies of the By-Laws to the Commission for review.

Mr. Clement questioned whether the time to respond to applications were still valid, as the state keeps changing them. Ms. Murphy noted the time for responding to Dredge and Fill applications was changed from 30 days to 45 days. Ms. Belanger recommended referencing the RSA. Mr. Madison questioned whether the state has updated the RSA as they are somewhat behind. Ms. Murphy recommended removing the 30 days and changing it to "time for review." She noted that if the Commission's next meeting was not in that time frame, they could ask for an additional 30 days if their meeting is beyond the deadline. Mr. Koff agreed with Ms. Murphy.

Mr. Koff noted a similar response timeline in Item 7 and did not believe it needed a time frame. Ms. Belanger recommended checking that and referencing the RSA. She recommended changing Selectmen to Select Board.

Mr. Madison asked about updating terms. Currently after a member serves two consecutive terms they can serve as an alternate for the next term. Ms. Belanger noted that Boards and Committees are having trouble finding volunteers right now and she will bring it up at the next Select Board meeting. Mr. Clement recommended leaving it as is until clarified.

MOTION: Mr. Madison motioned to approve the By-Laws as amended. Mr. Clement seconded the motion. A roll call vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison voted aye, Mr. Whitehouse voted aye, Mr. Clement voted aye and Mr. Campbell voted aye. The motion passed 7-0-0.

3. Funding Request in support of picking up 15 Liberty Elm trees - $380

Ms. Murphy reported that members of the Tree Committee made two trips, one to pick out the trees nd another to pick them up and she would like to reimburse them for their mileage.

Mr. Koff asked where the trees were planted and how big they were and Ms. Murphy indicated the trees were 1" caliper and about 6-8' high and that she knew two were planted on the north side of Swasey Parkway, two at the library and two at Park Street Common and some at Brickyard Park and will provide a list.

Mr. Clement asked how the other Liberty Elms that were planted years ago were doing and Ms. Murphy noted after 28-30 years only one was replaced that she knew of. Mr. Campbell noted some were planted at Gayle Park at Linden, Front and Pine Street.

MOTION: Mr. Koff motioned to approve the expenditure of $380 from the Conservation Land Administration budget line to reimburse Tree Committee volunteers for mileage to pick up and transport 15 donated trees. Mr. Cambell seconded the motion. A roll call vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison voted aye, Mr. Whitehouse voted aye, Mr. Clement voted aye and Mr. Campbell voted aye. The motion passed 7-0-0.

4. Funding Request in support of NHACC annual meeting registration - $180

Ms. Murphy noted that if members wanted to attend the NHACC annual meeting there was $180 left in the budget. Registration is $60 to register early and $75 for late, per member.

MOTION: Mr. Koff motioned to approve the expenditure of up to $180 from the Conservation Education and Training budget line for member registration for the NHACC Annual Meeting. Mr. Clement seconded the motion. A roll call vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison voted aye, Mr. Whitehouse voted aye, Mr. Clement voted aye and Mr. Campbell voted aye. The motion passed 7-0-0.

5. Upcoming Event Reminders

Ms. Murphy reminded these events were coming up:

- 10/11 All Boards Meeting, Exeter Library - 6:30 PM
- 10/18 Right to Know Training, Exeter Library - 6:30 PM
- 11/4 NHACC Annual Meeting - 2:30 PM

Mr. Clement noted the agenda for the training is on the Town website and a representative from NHMA will be presenting on the 91-A Right to Know training.

6. Committee Reports

a. Property Management

Ms. Murphy reported that she talked with Kathy Norton who is the daughter of John Raynes, who lives across the street from Raynes Farm and she let her know that she has seen some bird dog training going on and questioned, given the number of kennels, whether it was potentially a commercial operation, which is not allowed.

The Commission agreed that Ms. Murphy should look into it.

Ms. Murphy noted Ms. Norton had taken some old cedars down and had offered the lumber for sign posts if the Commission were interested.

b. Trails – Partial Trail Closure Notice

Ms. Murphy reported Eversource put up the trail closure signs in connection with the work they are doing which is now pushed out about three to six more weeks. Mr. Madison asked about parking on the street by the trailhead and Ms. Murphy did not recommend doing that. Mr. Clement agreed.

c. Outreach Events

Mr. Koff noted it was almost time to start planning the next Alewife Festival.

Ms. Murphy will bring dates to the next meeting for the February Full Moon Snowshoe walk at Raynes.

d. Other Committee Reports (River Study, Sustainability, Energy/CPAC, Tree, CC Roundtable)

Energy Committee – Electric Vehicle Day was cancelled due to rain.

Tree Committee – Ms. Murphy noted the Tree Committee was recognized for their accomplishments by the Select Board and offered to be their own Committee rather than a subcommittee, but they stated they would like to remain a subcommittee of the Conservation Commission. The Committee was asked what they need to be successful, and they sat down with Public Works and requested funding for equipment such as a truck body, chipper and water transport as well as $10,000 for a consultant. Jay Perkins and his crew would receive training on best management practices and insect identification and control. The first-year budget would be $80,000 and the next year would be less.

SAC – No October meeting

Ms. Murphy reported that DES will be doing a site walk of the Rugg property on November 3rd if a member of the Commission would like to go.

Ms. Crepeau asked about the grant applications and Mr. Koff reported that both applications have been submitted. Ms. Murphy noted boundary issues and title report are being reviewed and are still being worked on for one and may extend the timeline.

Ms. Murphy reported the Moose plate grant for Raynes Farm was successful. They will have two years to expend the funds so if not this year than it can be in next year's warrant article.

5. Approval of Minutes

- September 11, 2023 Site Walk – Rugg Property

MOTION: Mr. Koff motioned to approve the September 11, 2023 Site Walk Minutes. Mr. Madison seconded the motion. A roll call vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison voted aye, Mr. Whitehouse voted aye, Mr. Clement abstained and Mr. Campbell abstained. The motion passed 5-0-2.

- September 12, 2023 Site Walk – Rider Property

MOTION: Mr. Koff motioned to approve the September 12, 2023 Site Walk Minutes. Ms. Crepeau seconded the motion. A roll call vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison abstained, Mr. Whitehouse voted aye, Mr. Clement abstained and Mr. Campbell abstained. The motion passed 4-0-3.

- September 12, 2023 Meeting

Mr. Koff and Ms. Murphy recommended edits.

MOTION: Mr. Koff motioned to approve the September 12, 2023 Meeting Minutes, as amended. Mr. Clement seconded the motion. A roll call vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison voted aye, Mr. Whitehouse voted aye, Mr. Clement voted aye and Mr. Campbell abstained. The motion passed 6-0-1.

- September 25, 2023 Public Hearing

Mr. Koff recommended an edit to Line 51.

MOTION: Mr. Koff motioned to approve the September 12, 2023 Meeting Minutes, as amended. Mr. Madison seconded the motion. A roll call vote was taken: Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Madison abstained, Mr. Whitehouse voted aye, Mr. Clement voted aye and Mr. Campbell abstained. The motion passed 5-0-2.

6. Correspondence

7. Other Business

8. Next Meeting; Date Scheduled 11/14/23, Submission Deadline 11/3/23

9. Adjournment

MOTION: Mr. Koff moved to adjourn the meeting at 8:11 PM seconded by Mr. Madison. A roll call vote was taken, Ms. Crepeau voted aye, Mr. Welch voted aye, Mr. Koff voted aye, Mr. Campion voted aye, Mr. Whitehouse voted aye, Mr. Clement voted aye and Mr. Campbell voted aye. The motion passed 7-0-0.

Respectfully submitted,

Daniel Hoijer, Recording Secretary
Via Exeter TV
Zoom ID 830 0895 7614