GOVE ENVIRONMENTAL SERVICES, INC.
AGENT

NHDES WETLANDS BUREAU
MINOR IMPACT
DREDGE & FILL APPLICATION

Tier 1 Stream Crossing Replacement

Portsmouth Regional Hospital

Portsmouth, NH

September, 2024

Prepared By:

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GES# 2019175

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STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division / Land Resources Management

Check the Status of your Application

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

APPLICANT'S NAME: HCA Health Services of New Hampshire **TOWN NAME:** Portsmouth

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 (NHFG) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	( ) Yes (●) No
• Protected species or habitat? o If yes, species or habitat name(s): Blanding's Turtle (Emydoidea blanddingii); Marsh Wren (Cistothorus palustris); Sora (Porzana carolina) o NHB Project ID #: NHB24-2219	(●) 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): 195 acres	

SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))

Provide a description of the project and the purpose of the project, the need for the proposed impacts to jurisdictional areas, an outline of the scope of work to be performed, and whether impacts are temporary or permanent.

Portsmouth Regional Hospital is an existing acute hospital on a ±21-acre parcel at 333 Borthwick Ave, Portsmouth, NH 03801. Along the northern property boundary there is an existing Unitil natural gas enclosure with regulators and valves. This area is accessed through an existing gravel drive with (3) 24” culverts that cross over a man-made swale for maintenance and regular inspections.

The applicant is proposing to remove the existing three (3) 24" culverts and replace with one (1) 10' wide by 3' tall by 25' long box culvert. Temporary wetland impact proposed is 1,600 SF and permanent wetland impact proposed is 750 SF. Cofferdams and rerouting of the water through a dewatering system will be utilized during removal of existing culverts and installation of proposed box culvert. No additional wetland impacts are associated with the proposed culvert replacement.

SECTION 3 - PROJECT LOCATION

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

ADDRESS:	333 Borthwick Avenue
TOWN/CITY:	Portsmouth
TAX MAP/BLOCK/LOT/UNIT:	0240-0002-0001
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: ☑ N/A	
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places):	

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: HCA Health Services of New Hampshire		
MAILING ADDRESS: PO BOX 80610		
TOWN/CITY: Indianapolis	STATE: IN	ZIP CODE: 46580
EMAIL ADDRESS: Trip.DeMoss@hcahealthcare.com		
FAX:	PHONE:	

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.: Walden, Brenden, M		
COMPANY NAME: Gove Environmental Services		
MAILING ADDRESS: 8 Continental Drive, Building 2, Unit H		
TOWN/CITY: Exeter	STATE: NH	ZIP CODE: 03833
EMAIL ADDRESS: bwalden@gesinc.biz		
FAX:	PHONE: (207)710-7863	

ELECTRONIC COMMUNICATION: By initialing here BMW, 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):

Wetland impacts are less than 3,000 SF for this project as well as cumulatively. This meets criteria outlined in Env-Wt 524 for commercial development by enhancing hydrologic connectivity to maintain flows or improve flows on the subject property. The project meets the criteria listed for Replacement of Tier 1 Existing Legal Crossings Env-Wt 904.

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

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

	JURISDICTIONAL AREA	PERM. SF	PERM. LF	PERM. ATF	TEMP. SF	TEMP. LF	TEMP. ATF
Wetlands	Forested Wetland			☐			☐
	Scrub-shrub Wetland			☐			☐
	Emergent Wetland			☐			☐
	Wet Meadow			☐			☐
	Vernal Pool			☐			☐
	Designated Prime Wetland			☐			☐
	Duly-established 100-foot Prime Wetland Buffer			☐			☐
Surface	Intermittent / Ephemeral Stream			☐			☐
	Perennial Stream or River	750	75	☐	1,600		☐
	Lake / Pond			☐			☐
	Docking - Lake / Pond			☐			☐
	Docking - River			☐			☐
Banks	Bank - Intermittent Stream			☐			☐
	Bank - Perennial Stream / River			☐			☐
	Bank / Shoreline - Lake / Pond			☐			☐
Tidal	Tidal Waters			☐			☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ			☐			☐
	Docking - Tidal Water			☐			☐
	TOTAL						

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):	2350 SF	× $0.40 =	$ 940
Seasonal docking structure:	SF	× $2.00 =	$
Permanent docking structure:	SF	× $4.00 =	$
Projects proposing shoreline structures (including docks) add $400 =			$
Total =			$
The application fee for minor or major impact is the above calculated total or $400, whichever is greater =			*$*

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:	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials:	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
Initials:	The signer understands that: • 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.
Initials:	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311.04(d); Env-Wt 311.11)		
SIGNATURE (OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY:	DATE:

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”.

Keep this checklist for your reference; do not submit with your application.

APPLICATION CHECKLIST

Unless specified, all items below are required. Failure to provide the required items will delay a decision on your project and may result in denial of your application. Please reference statute RSA 482-A, Fill and Dredge in Wetlands, and the Wetland Rules Env-Wt 100-900.

- ☐ The completed, dated, signed, and certified application (Env-Wt 311.03(b)(1)).
- ☐ Correct fee as determined in RSA 482-A:3, I(b) or (c), subject to any cap established by RSA 482-A:3, X (Env-Wt 311.03(b)(2)). Make check or money order payable to "Treasurer – State of NH".
- ☐ The Required Planning actions required by Env-Wt 311.01(a)-(c) and Env-Wt 311.03(b)(3).
- ☐ US Army Corps of Engineers (ACE) "Appendix B, New Hampshire General Permits (GPs), Required Information and Corps Secondary Impacts Checklist" and its required attachments (Env-Wt 307.02). This includes the US Fish and Wildlife Service IPAC review and Section 106 Historic/Archaeological Resource review.
- ☐ Project plans described in Env-Wt 311.05 (Env-Wt 311.03(b)(4)).
- ☐ Maps, or electronic shape files and meta data, and other attachments specified in Env-Wt 311.06 (Env-Wt 311.03(b)(5)).
- ☐ Explanation of the methods, timing, and manner as to how the project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)).
- ☐ If applicable, the information regarding proposed compensatory mitigation specified in Env-Wt 311.08 and Chapter Env-Wt 800 - Permittee Responsible Mitigation Project Worksheet, unless not required under Env-Wt 313.04 (Env-Wt 311.03(b)(8); Env-Wt 311.08; Env-Wt 313.04).
- ☐ Any additional information specific to the **type of resource** as specified in Env-Wt 311.09 (Env-Wt 311.03(b)(9); Env-Wt 311.04(j)).
- ☐ Project specific information required by Env-Wt 500, Env-Wt 600, and Env-Wt 900 (Env-Wt 311.03(b)(11)).
- ☐ A list containing the name, mailing address and tax map/lot number of each abutter to the subject property (Env-Wt 311.03(b)(12)).
- ☐ Copies of certified postal receipts or other proof of receipt of the notices that are required by RSA 482-A:3, I(d) (Env-Wt 311.03(b)(13)).
- ☐ Project design considerations required by Env-Wt 313 (Env-Wt 311.04(j)).
- ☐ Town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter (Env-Wt 311.06(a)).
- ☐ Dated and labeled color photographs that:
  - (1) Clearly depict:
    - a. All jurisdictional areas, including but not limited to portions of wetland, shoreline, or surface water where impacts have or are proposed to occur.
    - b. All existing shoreline structures.
  - (2) Are mounted or printed no more than 2 per sheet on 8.5 x 11 inch sheets (Env-Wt 311.06(b)).
- ☐ A copy of the appropriate US Geological Survey map or updated data based on LiDAR at a scale of one inch equals 2,000 feet showing the location of the subject property and proposed project (Env-Wt 311.06(c)).
- ☐ A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work (Env-Wt 311.06(d)).

lrm@des.nh.gov or (603) 271-2147
29 Hazen Drive, PO Box 95, Concord, NH 03302-0095
des.nh.gov

- [x] For all projects in the protected tidal zone, a copy of the recorded deed with book and page numbers for the property (Env-Wt 311.06(e)).
- [x] If the applicant is not the owner in fee of the subject property, documentation of the applicant's legal interest in the subject property, provided that for utility projects in a utility corridor, such documentation may comprise a list that:
  - (1) Identifies the county registry of deeds and book and page numbers of all of the easements or other recorded instruments that provide the necessary legal interest; and
  - (2) Has been certified as complete and accurate by a knowledgeable representative of the applicant (Env-Wt 311.06(f)).
- [x] The NHB memo containing the NHB identification number and results and recommendations from NHB as well as documentation of any consultation requests made to NHFG, communications and information related to the consultation, with the consultation results and recommendations from NHFG. (Env-Wt 311.06(g)). See Wetlands Permitting: Protected Species and Habitat Fact Sheet.
- [x] A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h)).
- [ ] For projects in LAC jurisdiction, a statement of whether the applicant has received comments from the LAC and, if so, how the applicant has addressed the comments (Env-Wt 311.06(i)).
- [ ] If the applicant is also seeking to be covered by the state general permits, a statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments (Env-Wt 311.06(j)).
- [x] Avoidance and Minimization Written Narrative or the Avoidance and Minimization Checklist, or your own avoidance and minimization narrative (Env-Wt 311.07).
- [ ] For after-the-fact applications: information required by Env-Wt 311.12.
- [ ] Coastal Resource Worksheet for coastal projects as required under Env-Wt 600.
- [x] Prime Wetlands information required under Env-Wt 700. See WPPT for prime wetland mapping.
- [ ] For non-tidal shoreline structure projects, the length of shoreline frontage per Env-Wt 311.09(b)(1)

Required Attachments for Minor and Major Projects

- [x] Attachment A: Minor and Major Projects (Env-Wt 313.03).
- [x] Functional Assessment Worksheet or others means of documenting the results of actions required by Env-Wt 311.10 as part of an application preparation for a standard permit (Env-Wt 311.03(b)(3); Env-Wt 311.03(b)(10)). See Functional Assessments for Wetlands and Other Aquatic Resources Fact Sheet. For shoreline structures, see shoreline structures exemption in Env-Wt 311.03(b)(10)).

Optional Materials

- [x] Stream Crossing Worksheet which summarizes the requirements for stream crossings under Env-Wt 900.
- [ ] Request for concurrent processing of related shoreland / wetlands permit applications (Env-Wt 313.05).

AVOIDANCE AND MINIMIZATION WRITTEN NARRATIVE

Water Division/Land Resources Management

Wetlands Bureau

Check the Status of your Application

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

APPLICANT'S NAME: HCA Health Services of New Hampshire TOWN NAME: Portsmouth

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

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

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

No water access structures are proposed with this proejct.

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

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

No

SECTION 3 - AVAILABLE PROPERTY (Env-Wt 311.07(b)(2))*

For any project that proposes permanent impacts of more than one acre, or that proposes permanent impacts to a PRA, or both, are any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, that could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs?

**Except as provided in any project-specific criteria and except for NH Department of Transportation projects that qualify for a categorical exclusion under the National Environmental Policy Act.*

There are no proposed permanent impacts of more than one (1) acre or to a PRA for the proposed culvert replacement. Additonally, the functions and values of the Tier 1 stream will be preserved and maintained. Hydrologic connectivity will be maintained from north of the site.

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

Could alternative designs or techniques, such as different layouts, different construction sequencing, or alternative technologies be used to avoid impacts to jurisdictional areas or their functions and values as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization?

There are no other alternatives that would result in lesser impact to the jurisdictional area or their functions and values. The proposed culvert replacement has been sized to meet and exceed the tier 1 stream crossing requirements and will enhance hydrologic connectivity between the emergent wetland to the north and the prime wetland located south of subject property.

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

How does the project conform to Env-Wt 311.10(c)?

***Except for projects solely limited to construction or modification of non-tidal shoreline structures only need to complete relevant sections of Attachment A*.

The propject limited the wetland impacts to the Tier 1 stream, three 24 inch culverts with one single concert box culvert. The impacts associated with this proposal will not have any longterm effects to the function and values of the Tier 1 stream and is designed to maintain hydrologic connectivity and sized properly to meet or exceed the tier 1 stream crossing requirements.

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: **HCA Health Services of New Hampshire** **TOWN NAME:** Portsmouth

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

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

PART I: AVOIDANCE AND MINIMIZATION

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

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

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

THERE ARE NO OTHER ALTERNATIVES THAT WOULD RESULT IN LESSER IMPACT TO THE JURISDICTIONAL AREA OR THEIR FUNCTIONS AND VALUES. THE PROPOSED CULVERT REPLACEMENT HAS BEEN SIZED TO MEET TIER 1 STREAM CROSSING REQUIREMENTS AND WILL ENHANCE HYDROLOGIC CONNECTIVITY BETWEEN THE TWO EXISTING WETLANDS ON THE NORTH OF THE PROPERTY.

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 project does not have any direct impacts to marshes that support or provide nutrients for finfish, crustaceans, shellfishm and wildlife of signficiant value.

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 replacement of the existing crossing structures will improve the flows at the existing crossing location by increasing the crossing structure size and allow for better connectivity and allowance for aquatic passage.

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.

The proposed stream crossing replacement will utilize areas of previous disturbance and minimize the expansion of the crossing to the greatest extent practicable. No other impacts are proposed and the improved hydrologic connectivity will provide a long term net benefit to the resource area both up stream and down stream. The improved aquatic passage would provide a benefit to any species currently utilizing the aquatic resource area.

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 culvert replacement will be entirely on private property and will have no negative impacts that would elimineate, depreciate or obstruct public commerce, navigation or recreation with the completion of the project.

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.

There are no proposed impacts to any floodplain wetlands on the subject property.

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 impacts are only associated with a culvert replacement, a previously distrubed area.

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 has impacts to a Tier 1 stream and will not result in any observable negative impacts to water quality.

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 only proposed impacts are to the Tier 1 stream, needed for the culvert replacement. The proposed Tier 1 culvert replacement will improve flow and enhance hydrologic connectivity to other wetlands on and off the property.

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

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

No shoreline structures proposed.

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

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

No shoreline structures proposed.

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

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

No shoreline structures proposed.

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.

No shoreline structures proposed.

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

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

No shoreline structures proposed.

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

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

No shoreline structures proposed.

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: Army Corps of Engineers Highway Methodology
NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: BRENDEN WALDEN CWS #297
DATE OF ASSESSMENT: 9/5/2023
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.

WETLANDS PERMIT APPLICATION
STREAM CROSSING WORKSHEET
Water Division/Land Resources Management
Wetlands Bureau

RSA/Rule RSA 482-A/ Env-Wt-900

This worksheet can be used to accompany Wetlands Permit Applications when proposing stream crossings.

SECTION 1 - TIER CLASSIFICATIONS

Determine the contributing watershed size at USGS StreamStats.

Note: Plans for tier 2 and 3 crossings shall be designed and stamped by a professional engineer who is licensed under RSA 310-A to practice in New Hampshire.

Size of contributing watershed at the crossing location: 195 acres

☒ **Tier 1**: A tier 1 stream crossing is a crossing located on a watercourse where the contributing watershed size is less than or equal to 200 acres.

☐ **Tier 2**: A tier 2 stream crossing is a crossing located on a watercourse where the contributing watershed size is greater than 200 acres and less than 640 acres.

☐ **Tier 3**: A tier 3 stream crossing is a crossing that meets **any** of the following criteria:

- ☐ On a watercourse where the contributing watershed is more than 640 acres.
- ☐ Within a designated river corridor unless:
  - a. The crossing would be a tier 1 stream based on contributing watershed size, or
  - b. The structure does not create a direct surface water connection to the designated river as depicted on the national hydrography dataset as found on GRANIT.
- ☐ Within a 100-year floodplain (see Section 2 below).
- ☐ In a jurisdictional area having any protected species or habitat (NHB DataCheck).
- ☐ In a prime wetland or within a duly-established 100-foot buffer, unless a waiver has been granted pursuant to RSA 482-A:11, IV(b) and Env-Wt 706. Review the Wetlands Permit Planning Tool (WPPT) for town prime wetland and prime wetland buffer maps to determine if your project is within these areas.

☐ **Tier 4**: A tier 4 stream crossing is a crossing located on a tidal watercourse.

SECTION 2 - 100-YEAR FLOODPLAIN

Use the FEMA Map Service Center to determine if the crossing is located within a 100-year floodplain. Please answer the questions below:

☒ **No**: The proposed stream crossing *is not* within the FEMA 100-year floodplain.

☐ **Yes**: The proposed project *is* within the FEMA 100-year floodplain. Zone = _____

Elevation of the 100-year floodplain at the inlet: _____ feet (FEMA El. or Modeled El.)

SECTION 3 - CALCULATING PEAK DISCHARGE

Existing 100-year peak discharge (Q) calculated in cubic feet per second (CFS): 244.7 CFS	Calculation method: Hydrology Studio
Estimated bankfull discharge at the crossing location: _____ CFS	Calculation method: _____

⟶ ***Note: If tier 1, then skip to Section 10*** ⟵

SECTION 4 - PREDICTED CHANNEL GEOMETRY BASED ON REGIONAL HYDRAULIC CURVES *For **tier 2**, **tier 3** and **tier 4** crossings only.*	
Bankfull Width: feet	Mean Bankfull Depth: feet
Bankfull Cross Sectional Area: square feet (SF)	

SECTION 5 - CROSS SECTIONAL CHANNEL GEOMETRY: MEASUREMENTS OF THE EXISTING STREAM WITHIN A REFERENCE REACH *For **tier 2**, **tier 3** and **tier 4** crossings only.*
Describe the reference reach location:
Reference reach watershed size: acres

Parameter	**Cross Section 1** Describe bed form (*e.g. pool, riffle, glide*)	**Cross Section 2** Describe bed form (*e.g. pool, riffle, glide*)	**Cross Section 3** Describe bed form (*e.g. pool, riffle, glide*)	**Range**
Bankfull Width	feet	feet	feet	feet
Bankfull Cross Sectional Area	SF	SF	SF	SF
Mean Bankfull Depth	feet	feet	feet	feet
Width to Depth Ratio				
Max Bankfull Depth	feet	feet	feet	feet
Flood Prone Width	feet	feet	feet	feet
Entrenchment Ratio				

*Use **Figure 1** below to determine the measurements of the Reference Reach Attributes*

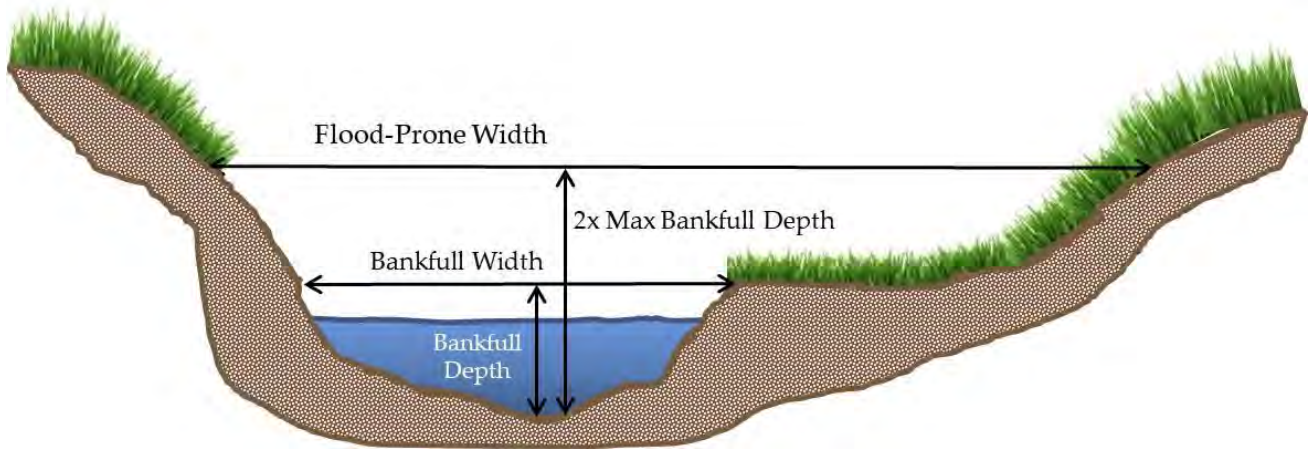


Figure 1: Determining the Reference Reach Attributes.

SECTION 6 - LONGITUDINAL PARAMETERS OF THE REFERENCE REACH AND CROSSING LOCATION *For **tier 2**, **tier 3** and **tier 4** crossings only.*
Average Channel Slope of the Reference Reach:
Average Channel Slope at the Crossing Location:

SECTION 7 - PLAN VIEW GEOMETRY Note: Sinuosity is measured a distance of at least 20 times bankfull width, or 2 meander belt widths. *For **tier 2**, **tier 3** and **tier 4** crossings only.*
Sinuosity of the Reference Reach:
Sinuosity of the Crossing Location:

SECTION 8 - SUBSTRATE CLASSIFICATION BASED ON FIELD OBSERVATIONS *For **tier 2, tier 3** and **tier 4** crossings only.*	
% of reach that is bedrock:	%
% of reach that is boulder:	%
% of reach that is cobble:	%
% of reach that is gravel:	%
% of reach that is sand:	%
% of reach that is silt:	%
SECTION 9 - STREAM TYPE OF REFERENCE REACH *For **tier 2, tier 3** and **tier 4** crossings only.*	
Stream Type of Reference Reach:	

*Refer to Rosgen Classification Chart (**Figure 2**) below:*

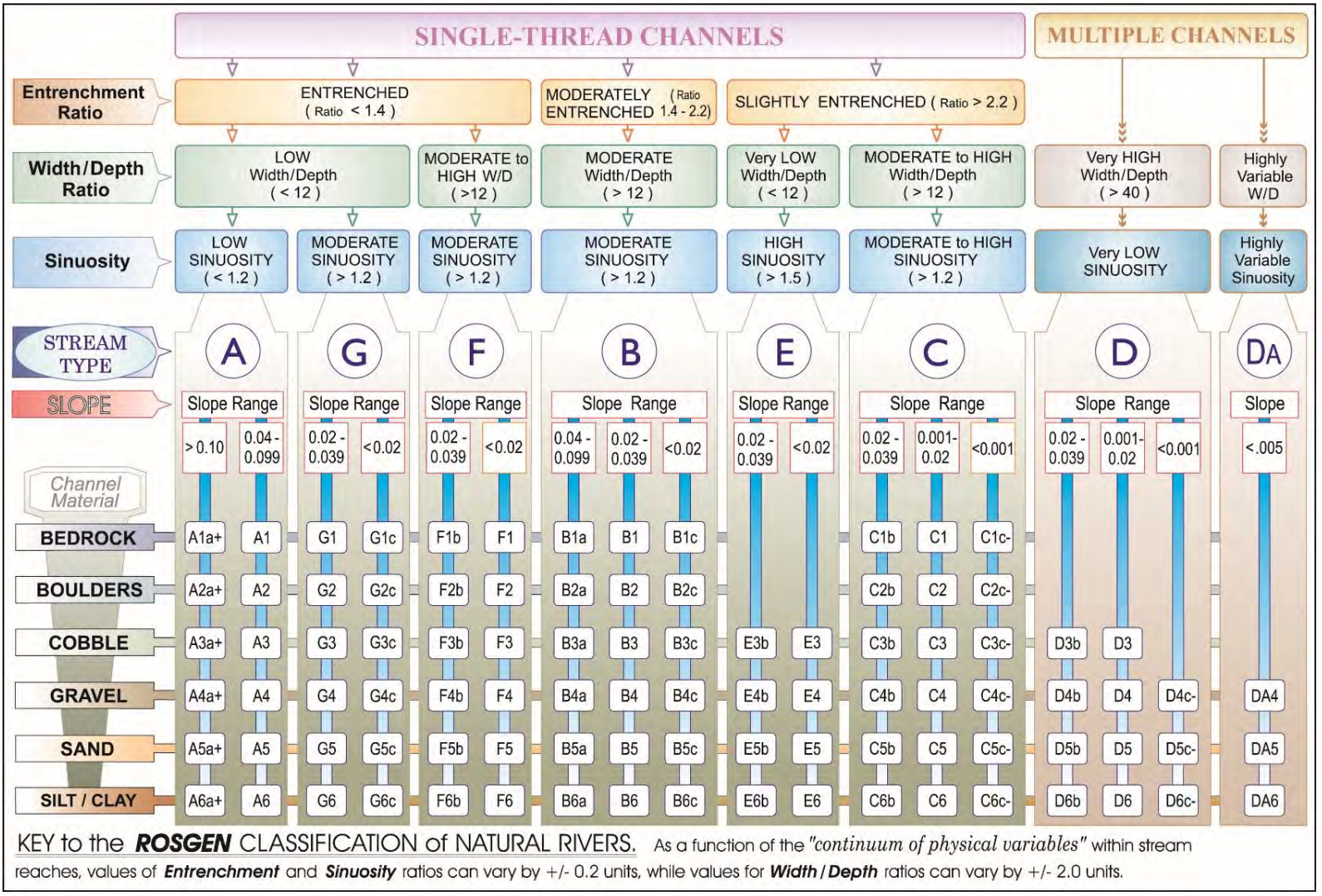


Figure 2: Reference from Applied River Morphology, Rosgen, 1996.

SECTION 10 - CROSSING STRUCTURE METRICS

Existing Conditions

Existing Structure Type:

- ☐ Bridge span
- ☐ Pipe arch
- ☐ Open-bottom culvert
- ☒ Closed-bottom culvert
- ☐ Closed-bottom culvert with stream simulation
- ☐ Other:

Existing Crossing Span: *(perpendicular to flow)* 10 feet	**Culvert Diameter:** 2 feet **Inlet Elevation:** El. 21.44 feet
Existing Crossing Length: *(parallel to flow)* 20 feet	**Outlet Elevation:** El. 21.34 feet **Culvert Slope:** 0.005

Proposed Conditions

Proposed Structure Type:	**Tier 1**	**Tier 2**	**Tier 3**	**Alternative Design**
Bridge Span	☐	☐	☐	☐
Pipe Arch	☐	☐		☐
Closed-bottom Culvert	☒	☐		☐
Open-bottom Culvert	☐	☐	☐	☐
Closed-bottom Culvert with stream simulation	☐	☐	☐	☐

Proposed Structure Span: 10 feet *(perpendicular to flow)*	**Culvert Diameter:** 3 feet **Inlet Elevation:** El. 19.7 feet
Proposed Structure Length: 25 feet *(parallel to flow)*	**Outlet Elevation:** El. 17.45 feet **Culvert Slope:** 0.09

Proposed Entrenchment Ratio:*

*For **Tier 2**, **Tier 3** and **Tier 4** Crossings Only. To accommodate the entrenchment ratio, floodplain drainage structures may be utilized.*

** Note: Proposed Entrenchment Ratio must meet the minimum ratio for each stream type listed in **Figure 3**, otherwise the applicant must address the Alternative Design criteria listed in Env-Wt 904.10.*

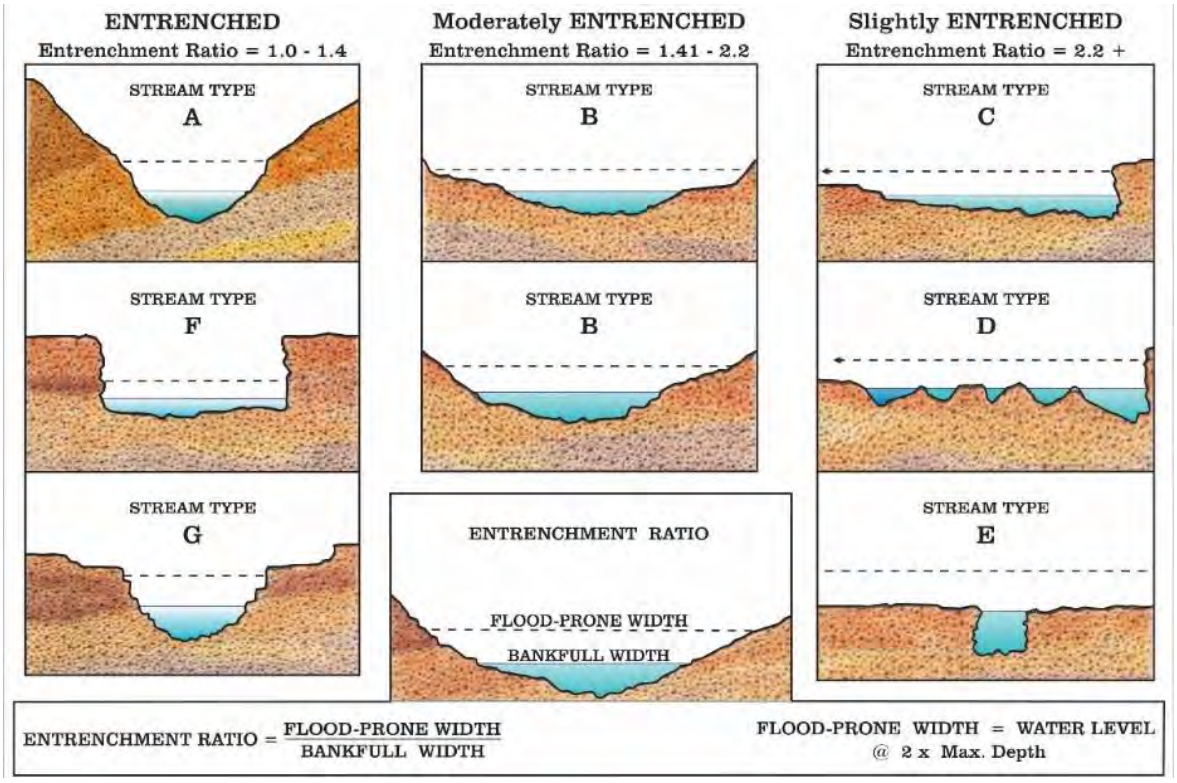


Figure 3: Reference from Applied River Morphology, Rosgen, 1996.

SECTION 11 - CROSSING STRUCTURE HYDRAULICS		
	Existing	**Proposed**
100 year flood stage elevation at inlet:		
Flow velocity at outlet in feet per second (FPS):		
Calculated 100 year peak discharge (Q) for the *proposed* structure in CFS:		
Calculated 50 year peak discharge (Q) for the *proposed* structure in CFS:		

SECTION 12 - CROSSING STRUCTURE OPENNESS RATIO

*For **tier 2**, **tier 3** and **tier 4** crossings only.*

Crossing Structure Openness Ratio* =

* Openness box culvert = (height x width)/length
  Openness round culvert = (3.14 x radius^2)/length

SECTION 13 - GENERAL DESIGN CONSIDERATIONS

Env-Wt 904.01 requires all stream crossings to be designed and constructed according to the following requirements. Check each box if the project meets these general design considerations.

All stream crossings shall be designed and constructed so as to:

- ☐ Not be a barrier to sediment transport.
- ☐ Prevent the restriction of high flows and maintain existing low flows.
- ☐ Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
- ☐ Not cause an increase in the frequency of flooding or overtopping of banks.
- ☐ Maintain or enhance geomorphic compatibility by:
  a. Minimizing the potential for inlet obstruction by sediment, wood, or debris, and
  b. Preserving the natural alignment of the stream channel.
- ☐ Preserve watercourse connectivity where it currently exists.
- ☐ Restore watercourse connectivity where:
  a. Connectivity previously was disrupted as a result of human activity(ies), and
  b. Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both.
- ☐ Not cause erosion, aggradation, or scouring upstream or downstream of the crossing.
- ☐ Not cause water quality degradation.

SECTION 14 - TIER-SPECIFIC DESIGN CRITERIA

Stream crossings must be designed in accordance with the tier specific design criteria listed in Part Env-Wt 904.

- ☐ The proposed project meets the tier specific design criteria listed in Part Env-Wt 904 and each requirement has been addressed in the plans and as part of the wetland application.

SECTION 15 - ALTERNATIVE DESIGN

NOTE: If the proposed crossing does not meet all of the general design considerations, the tier specific design criteria, or the minimum entrenchment ratio for each given stream type listed in **Figure 3**, then an alternative design plan and associated requirements must be addressed pursuant to Env-Wt 904.10.

- ☐ I have submitted an alternative design and addressed each requirement listed in Env-Wt 904.10.

Date: September 25, 2024

Subject: Functions and Values Analysis

Re: Minor Dredge and Fill Application
333 Borthwick Ave, Portsmouth

The subject property located on 333 Borthwick Ave, in Portsmouth, NH, identified by Tax map 240 Lot 2-1. The proposed project is for the replacement of an existing tier 1 stream crossing currently utilized as a utility access for a natural gas station on the north of the property. The project area was reviewed and field delineated by Brenden Walden, a NH CWS, in the fall of 2019 with additional flagging to encompass the project area done during February of 2024. During the wetland delineation of the property, two wetlands were identified within the scope of the project area. These wetlands area identified and discussed below as Wetland A & B. A wetland function and value assessment was conducted using the US Army Corps Highway Methodology for the three wetlands identified and will be discussed in more detail below.

The US Army Corps Highway Methodology considers 13 categories of function or value within a particular wetland area:

1. **Groundwater recharge/discharge:** This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where ground water can be discharged to the surface.
2. **Floodflow Alteration:** This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.
3. **Fish and Shellfish Habitat:** This function considers the effectiveness of seasonal or permanent water bodies associated with the wetland in question for fish and shell fish habitat.
4. **Water Quality—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.
5. **Water Quality—Nutrient Removal/Retention/Transformation:** This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers or estuaries.
6. **Production Export:** This function relates to the effectiveness of the wetland to produce food or usable products for human, or other living organisms.
7. **Sediment/Shoreline Stabilization:** This function relates to the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.
8. **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.
9. **Recreation:** This value considers the effectiveness of the wetland and associated watercourses to provide recreational opportunities such as 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, whereas non-consumptive opportunities do not.

10. **Educational/Scientific Value:** This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.
11. **Uniqueness/Heritage:** This value relates to the effectiveness of the wetland or its associated water bodies to produce certain special values. Special values may include such things as archeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geological features.
12. **Visual Quality/Aesthetics:** This value relates to the visual and aesthetic qualities of the wetland.
13. **Threatened or Endangered Species Habitat:** This value relates to the effectiveness of the wetland or associated water bodies to support threatened or endangered species

Functions are self-sustaining properties of wetlands, which exist in the absence of human involvement. Values refers to the benefits gained by human society from a given wetland or ecosystem and their inherit functions. Functions and values identified as "Principal" have been determined to be significant features of the wetland being evaluated. This does not necessarily indicate the wetland supports these functions or values at a significant level in comparison to other wetlands in the region or even near the site. A discussion of the evaluated areas and the associated functions and values is provided in the sections below.

Wetland A:

Wetland A is a man-made wetland system designed to direct stormwater around the hospital ground with hydrologic connections to adjacent wetlands through existing culverts. The wetland is dominantly vegetated with Phragmites, with some shrubs and trees existing along the boundary of the wetland. Areas of open water with unknown depth are present, and there is identified flow occurring near the norther outlet structure. Functions and values associated with this wetland identified with this wetland include, Groundwater Recharge/Discharge, Floodlfow Alteration, Sediment and Toxicant Retention, Nutrient Removal, Production Export, Sediment and Shorleline Stabilization, and Wildlife Habitat. These functions are attributed to the nature of the wetland's development, existing dense vegetation, association with a watercourse and hydrologic connectivity up and down stream. The proposed impacts to this wetland for the replacement and improvement of the existing culvert from three 24-inch HDPE culverts to one single 10 x 3 box culvert will have no observable impact to the identified functions and values. Additionally, this wetland will have increase connectivity and passage for aquatic organisms.

Wetland B:

Wetland B is the down stream more natural wetland system that extends off site. This wetland is composed of areas of emergent vegetation adjacent to the existing parking area with dense scrub shrub vegetation adjacent to the existing watercourse. Functions and values associated with this wetland identified with this wetland include, Groundwater Recharge/Discharge, Floodlfow Alteration, Sediment and Toxicant Retention, Nutrient Removal, Production Export, Sediment and Shorleline Stabilization, and Wildlife Habitat. These functions are attributed to the nature of the existing dense vegetation, association with a watercourse and hydrologic connectivity up and down stream. The proposed impacts to this wetland for the replacement and improvement of the existing culvert from three 24-inch HDPE culverts to one single 10 x 3 box culvert will have no observable impact to the identified functions and values. Additionally, this wetland will have increase connectivity and passage for aquatic organisms.

Overall, the applicant has limited all wetland impacts to the greatest extent practicable and designed the project to be the least impacting alternative. The replacement of an existing structure will provide an overall net benefit to the existing functions and values that exist within the two wetland systems.

This concludes the functions and values analysis for the Minor Dredge and Fill Application for 333 Borthwick Ave, Portsmouth. If you have any other questions or believe I can assist you and any other way please feel free to contact me either by email: bwalden@gesinc.biz or by phone: 207- 710-7863.

Sincerely

Brenden Walden

President & Wetland Scientist
Gove Environmental Services, Inc


B
A

Wetland Function-Value Evaluation Form

Total area of wetland unknown Human made? yes Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Commercial development and roadway Distance to nearest roadway or other development >50ft

Dominant wetland systems present R2UBFx Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? lower

How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. A

Latitude _____ Longitude _____

Prepared by: BMW Date 12/7/23

Wetland Impact:
Type N/a Area N/a

Evaluation based on:
Office x Field x

Corps manual wetland delineation completed? Y x N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1,2,4,6,7,9,15	y	wetland associated with a stream, has high density of vegetation, shows varying levels of water depth
Floodflow Alteration	y	3,4,5,6,7,8,9,10,11,12,13,15,16,18	y	Wetland associated with a watercourse hydrologically connected to upstream and down stream wetlands.
Fish and Shellfish Habitat	n	hydroperiod unknown	n	Level of permanent water depth is unknown
Sediment/Toxicant Retention	y	1,2,3,4,5,6	y	Slow moving water with high density of vegetation
Nutrient Removal	y	3,4,5,6,7,8,9,10,11	y	dense vegetation for nutrient acquisition
Production Export	Y	1,2,5,7,10,11,	y	associated with a watercourse with potential for flushing
Sediment/Shoreline Stabilization	Y	1,2,3,4,12,13,15	y	bank of water course is effectively stable from existing vegetation
Wildlife Habitat	Y	7,8,13,17,18,19,20,21	Y	man influenced wetland with associated water course and dense vegetation
Recreation	n	10,11	n	private property
Educational/Scientific Value	n	11,13,14	n	private property
Uniqueness/Heritage	n	1,10,11,17,	n	private property
Visual Quality/Aesthetics	n	6,9,12	n	private property
ES Endangered Species Habitat		See NHB		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland unknown Human made? yes Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Commercial development and roadway Distance to nearest roadway or other development >50ft

Dominant wetland systems present PSS1/EM1C Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? lower

How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. B

Latitude _____ Longitude _____

Prepared by: BMW Date 12/7/23

Wetland Impact:
Type Fill Area 200SF

Evaluation based on:
Office x Field x

Corps manual wetland delineation completed? Y x N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1,2,4,6,7,9,15	y	wetland associated with a stream, has high density of vegetation, shows varying levels of water depth
Floodflow Alteration	y	3,4,5,6,7,8,9,10,11,12,13,15,16,18	y	Wetland associated with a watercourse hydrologically connected to upstream and down stream wetlands.
Fish and Shellfish Habitat	n	hydroperiod unknown	n	Level of permanent water depth is unknown
Sediment/Toxicant Retention	y	1,2,3,4,5,6	y	Slow moving water with high density of vegetation
Nutrient Removal	y	3,4,5,6,7,8,9,10,11	y	dense vegetation for nutrient acquisition
Production Export	Y	1,2,5,7,10,11,	y	associated with a watercourse with potential for flushing
Sediment/Shoreline Stabilization	Y	1,2,3,4,12,13,15	y	bank of water course is effectively stable from existing vegetation
Wildlife Habitat	Y	7,8,13,17,18,19,20,21	Y	Large wetland with associated water course and dense vegetation
Recreation	n	10,11	n	private property
Educational/Scientific Value	n	11,13,14	n	private property
Uniqueness/Heritage	n	1,10,11,17,	n	private property
Visual Quality/Aesthetics	n	6,9,12	n	private property
ES Endangered Species Habitat		See NHB		
Other				

Notes:

* Refer to backup list of numbered considerations.

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?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	unknown	
2.7 What is the area of the proposed fill in wetlands?	750 SF	
2.8 What % of the overall project sire will be previously and proposed filled wetlands?	unknown	
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://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?		X
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		XX
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		
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.		
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?		

*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.

2.0 GENERAL INFORMATION

PREPARED BY (AGENT CONTACT): Brenden Walden

2.1 PROJECT NAME, PLANS, AND MAPS

PROJECT NAME: Portsmouth Regional Hospital Stream Crossing Replacement

SITE PLANS/MAPS: Existing Conditions Plan
Proposed Plan
8½"x11" USGS Quad Sheet Locus Map
8½"x11" Wildlife Action Plan
8½"x11" Aerial Imagery
11x17" Overview Plan
11x17" Wetland Impact Plan Detail
11x17" Project Site Tax Map

2.2 TECHNICAL STANDARDS

2.2.1 Gove Environmental Services, Inc. delineated the wetlands during the spring of 2019, utilizing the standards of the Corps of Engineers *Wetlands Delineation Manual*[1] and the NH DES Wetlands Bureau *Code of Administrative Rules*[2].

2.2.2 Wetland flags were surveyed by James Vera & Associates, Inc.

2.2.3 Wetlands were classified by GES utilizing the criteria of *Classification of Wetlands and Deepwater Habitats of the United States*[3].

2.2.4 Dominant hydric soil conditions within the wetlands were identified by GES utilizing the criteria of *Field Indicators for Identifying Hydric Soils in New England*[4].

2.2.5 Dominance of wetland vegetation was assessed by GES utilizing the *National List of Plant Species That Occur in Wetlands: Northeast (Region 1)*[5].

[1] Environmental Laboratory. 2012. "Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast Region." Version 2.0. Technical Report ERDC/EL TR-10-12.
[2] NH Code Admin. R. [Wt] Ch. 100-1000.
[3] Cowardin, L. M., 1979. Classification of Wetlands and Deepwater Habitats in the United States. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service.
[4] New England Hydric Soils Technical Committee, Version 4. June 2020. "Field Indicators for Identifying Hydric Soils in New England."
[5] Lichvar, R.W. & Kartesz, J.T. 2009. North American Digital Flora: National Wetland Plant List. 2.2.1.

2.3 SITE DESCRIPTION/WETLANDS OVERVIEW

The subject property is located on Tax Map 0240-0002-0001 and is a commercially developed property currently utilized by Portsmouth Regional Hospital. Additional site improvements associated with the hospital include parking stormwater and a helicopter landing pad. A wetland delineation was conducted in 2019 on a limited area associated with a prior wetland permit application for the development of an Oncology Wing for the hospital, NH DES Permit # 2024-00119. With the new proposed work associated with the stream crossing replacement the wetland delineation was expanded to the rear to encompass the all associated jurisdictional features within the proposed project area. This included expanding the man-made drainage feature identified in the functional assessment as wetland A. This is a drainage feature associated with the hospital and was originally designed to direct storm water with the construction of the hospital. Current vegetation in this area consists of some saplings along the wetland boundary with the interior of the wetland dominantly vegetated with phragmites and cattails. The wetland continues beyond the crossing to the north east and extends off property. This wetland is a more natural feature with several different wetland classes throughout, including, open water, emergent, scrubshrub and forested. A third wetland area will be included in the discussion within the functions and values analysis but the wetland is an isolated man-made detention basin that will have no impacts associated with the culvert replacement. Functions and values of each of these areas are to be discussed in more detail in the functional assessment below.

3.0 PROJECT OVERVIEW

The applicant's proposed project is for the replacement and improvement of an existing crossing structure. The crossing replacement will remove 3 existing 24-inch HDPE culverts in exchange for the installation of one 25L x 10W x 3H concrete box culvert. The impact location is needed to maintain access to a natural gas facility beyond the crossing. Additionally, the proposed crossing will improve existing hydrologic movement between the two wetland systems an area believed to be contributing to flooding occurring within the watershed. With the replacement of the crossing structure the applicant will also address immediate grading near the inlet and the outlet of the structure to ensure there are no obstructions or low points that could undercut the structure. Two coffer dams and a dewatering feature will be used during the construction to make sure there are no negative impacts to water quality as a result of the construction. The proposed replacement will have impacts to a tier 1 stream and will meet all requirements in chapter 900.

3.1 Env-Wt 900 STREAM CROSSING REQUIREMENTS

Env-Wt 903.04 Information Required for All Stream Crossing Standard Permit Applications. In addition to the information required by Env-Wt 311, the applicant shall submit the following for all stream crossing projects that require a standard permit:
(a) On the USGS map or updated data based on LiDAR required by Env-Wt 311.06, the following:
(1) The approximate boundaries of the contributing watershed;

See attached map showing the limits of contributing watershed.

(2) The size of the contributing watershed; and

195-acres

(3) Identification of the stream tier based on watershed size;

Tier 1.

(b) Plans showing the following:
(1) The scale, a north arrow, and at least 3 cross-sections outside of the construction disturbance area that are representative of the stream system away from the area of direct influence by the crossing;

Please see attached plan set.

(2) Clearing limits showing all proposed work areas;

There isn't any additional clearing required for this replacement. Limit of temporary disturbance are outlined by the erosion controls.

(3) For both the existing structure, if any, and the proposed structure, the following:
a. Location;

See existing and proposed design.

b. Type;

Existing: HDPE culvert.
Proposed: Concrete box culvert

c. Dimensions; and

Existing: Three 24-inch Culverts
Proposed: One 25ft L x 10ft W x 3ft H

d. Inlet and outlet invert elevations;

See attached detail sheet on C3-00.

(4) The extent of channel excavation and filling;

See attached limits of disturbance on C3-00.

(5) Road locations, including road edges, centerline, and boundaries of the right-of-way;

See attached EC plan.

(6) Proposed channel work including bank erosion control features, grade control, and channel linings; and

See attached proposed limits of disturbance on C3-00

(7) For the proposed structure, cross-sections showing the water surface elevation resulting from the applicable design storm, with bed material and backfill zones;

See attached drainage report.

(c) Existing crossing metrics, including:
(1) Existing riparian zone, including the extent and type of existing vegetation surrounding or in the stream bank; and

vegetation in the immediate project vicinity includes emergent wetland vegetation and sapplings along the boundary of the watercourse.

(2) Existing tailwater control, including its location and materials, and pool configuration;

N/A

(d) The dewatering system, as follows:
(1) Estimates of the maximum flow anticipated during construction, including any summer storm estimates;

See attached details provided on the dewatering system on sheet C3-01

(2) The hydraulic calculation for the bypass pipe or channel size, length, and gradient;

See detail on Sheet C3-01 and calculations in the drainage report.

(3) Location, height, and width of the diversion dam;

See details on sheet C3-01.

(4) Sump locations, including estimate of necessary flow and sump capacity;

See details on C3-01.

(5) Backwater prevention method; and

See details on C3-01.

(6) Sediment treatment plan with methods, release point, and extent;

See details on filter bag on sheet C3-01.

(e) Erosion and pollution controls, as follows:
(1) Any additional methods of controlling erosion;

Erosion control methods are outlined in the Erosion notes on C3-00.

(2) A soil stabilization plan, including but not limited to where to cover stockpiles and place straw bales; and

See attached stabilization methods outlined on C3-01.

(3) Pollution control methods for pumps, fuel stations, and equipment storage;

See attached plan notes that identify general construction notes.

(f) The number and location of footings, if any, and the following for each:
(1) Estimate of bearing capacity;

N/A

(2) Dimensions of each footing; and

N/A

(3) Footing depth;

N/A

(g) A narrative explaining why the cross-sections identified pursuant to (b)(7), above, are representative;

The cross sections of the crossing location are representative of the drainage structure and the general characteristics of the stream including slope and depth.

(h) The design features used to improve aquatic organism passage and the expected distance, in linear feet, of downstream and upstream improvement for aquatic organism passage or fish passage;

The proposed replacement of 3 existing HDPE culverts to a single box culvert will increase the hydrologic connectivity while allowing for better ease of aquatic passage in the area.

(i) The hydraulic capacity of the proposed crossing, in terms of flood frequency event, and of the existing crossing, if any; and

See attached drainage report showing the hydraulic capacity for the required storm events.

(j) The following channel information at the crossing and for the reference reach:
(1) The classification of the stream using the Rosgen classification system as described in Applied River Morphology by Dave Rosgen, 1996, available as noted in Appendix B, at the crossing and upstream and downstream of the crossing;

N/A Tier 1 Stream Crossing Replacement.

(2) Bankfull width;

N/A Tier 1 Stream Crossing Replacement.

(3) Bankfull depth;

N/A Tier 1 Stream Crossing Replacement.

(4) Entrenchment ratio;

N/A Tier 1 Stream Crossing Replacement.

(5) Sinuosity; and

N/A Tier 1 Stream Crossing Replacement.

(6) Flood-prone width.

N/A Tier 1 Stream Crossing Replacement.

Env-Wt 904.01 General Design Considerations.
(a) All stream crossings, whether over tidal or non-tidal waters, shall be designed and constructed so as to:
(1) Not be a barrier to sediment transport;

The proposed design will improve existing conditions at the crossing location.

(2) Not restrict high flows and maintain existing low flows;

The proposed replacement crossing structure will meet the flow requirement for a tier 1 stream crossing.

(3) Not obstruct or otherwise substantially disrupt the movement of aquatic organisms indigenous to the waterbody beyond the actual duration of construction;

The proposed crossing replacement structure will provide an improvement to the available area for organisms to cross.

(4) Not cause an increase in the frequency of flooding or overtopping of banks;

The proposed crossing will meet the storm requirements for a tier 1 stream crossing.

(5) Maintain or enhance geomorphic compatibility by:
a. Minimizing the potential for inlet obstruction by sediment, wood, or debris; and

The larger crossing size will reduce the potential for inlet obstruction by wood, sediment and debris at the crossing location.

b. Preserving the natural alignment of the stream channel;

There are no proposed changes to the alignment of the stream channel.

(6) Preserve watercourse connectivity where it currently exists;

The proposed replacement will improve connectivity at this crossing location.

(7) Restore watercourse connectivity where:
a. Connectivity previously was disrupted as a result of human activity(ies); and

The proposed project will look to improve connectivity with the new crossing design.

b. Restoration of connectivity will benefit aquatic organisms upstream or downstream of the crossing, or both;

The purpose of this crossing is to benefit both upstream and downstream flows

(8) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and

There should be no negative impacts to scouring upstream or down stream as a result of the replacement

(9) Not cause water quality degradation.

There should be no negative impacts to water quality with the proposed work using the proposed BMP's.

(b) For stream crossings over tidal waters, the stream crossing shall be designed to:
(1) Match the velocity, depth, cross-sectional area, and substrate of the natural stream; and

N/A

(2) Be of sufficient size to not restrict bi-directional tidal flow over the natural tide range above, below, and through the crossing.

N/A

Env-Wt 904.03 Tier 1 Stream Crossings.
(a) A tier 1 stream crossing shall be a crossing located on a watercourse where the contributing watershed is less than or equal to 200 acres.

195-acres

(b) Tier 1 stream crossings shall:
(1) Meet the general design considerations specified in Env-Wt 904.01;

The proposed design meets these requirements.

(2) Be sized so as to accommodate the greater of:
a. The 50-year design storm; or

The proposed design meets this requirement.

b. Applicable federal, state, or local requirements; and
(3) Be a span structure, pipe arch, open-bottom culvert, or closed-bottom culvert, with or without being embedded with stream simulation.

The proposed replacement structure is a designed box culvert.

(c) An applicant may propose a design that does not meet the criteria of (b)(1) or (b)(2)a., above, by submitting a request for approval of an alternate design as specified in Env-Wt 904.10. In accordance with Env-Wt 903.01(f)(1)a., a project that includes a request to approve an alternative design for a tier 1 stream crossing shall be a minor impact project.

N/A.

(d) An existing legal crossing that would be classified as tier 1 under (a), above, may be repaired or replaced in-kind as specified in Env-Wt 904.08 pursuant to:
(1) A routine roadway maintenance SPN as specified in Env-Wt 308.04 or registration as specified in Env-Wt 309.03; or

N/A

(2) If the crossing is part of a trail, a trail SPN as described in Env-Wt 308.04.

N/A

(e) Compensatory mitigation shall not be required for any tier 1 minimum impact project.

N/A

1985 USGS QUAD SHEET LOCUS MAP
Scale 1:24,000

USGS map

Legend

- State
- County
- City/Town

Map Scale

1: 24,000

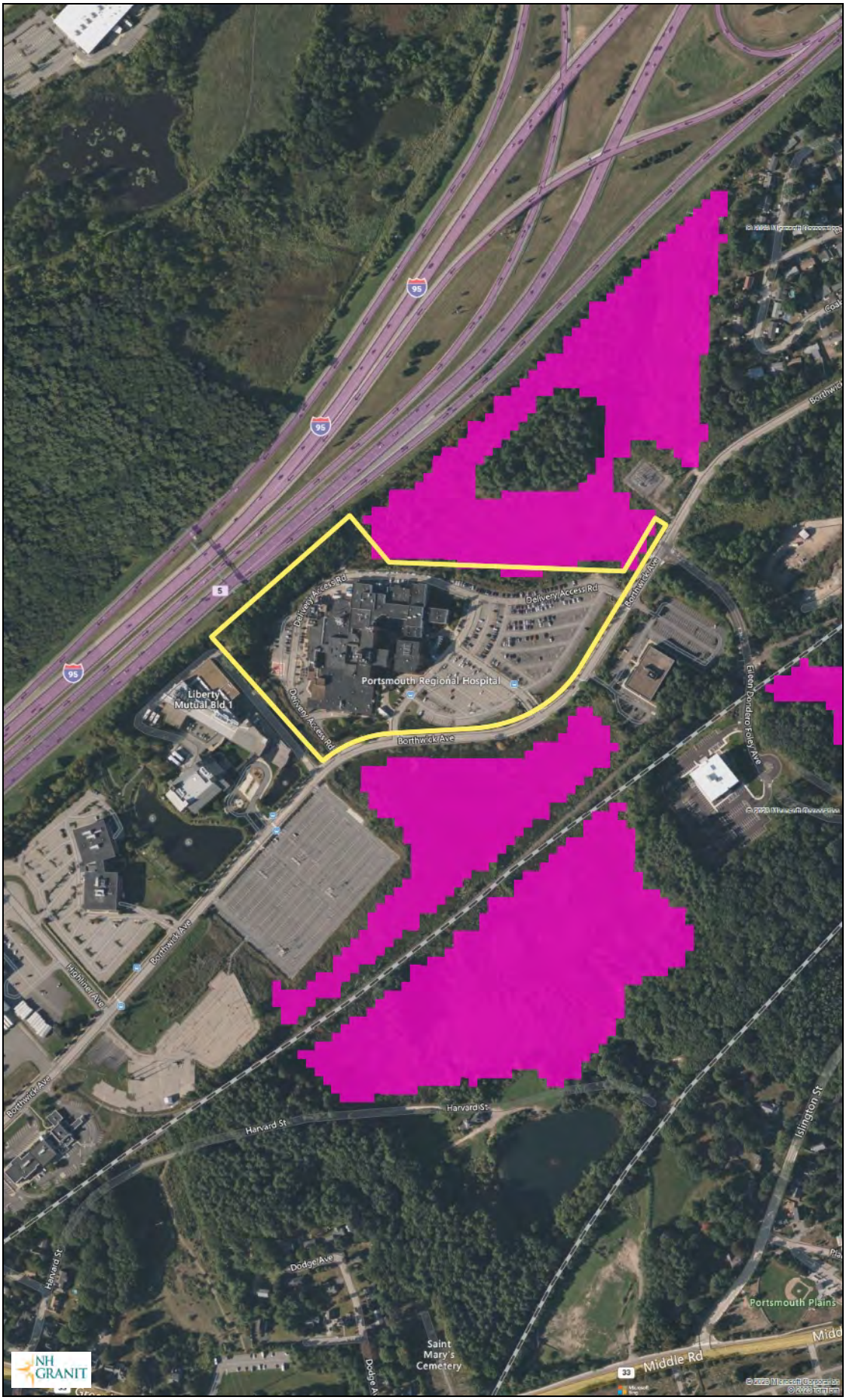
Map Generated: 9/5/2023

Notes

333 Borthwick Ave
Portsmouth, NH

Wildlife Action Plan
Scale 1:24,000

Highest ranked Habitat



Legend

- State
- County
- City/Town

WAP 2020: Highest Ranked Wildlife Habitat

- 1 Highest Ranked Habitat in NH
- 2 Highest Ranked Habitat in Regior
- 3 Supporting Landscape

Map Scale

1: 6,494

Map Generated: 9/5/2023

Notes

333 Borthwick Ave
Portsmouth, NH

Aerial Imagery

Aerial map

Legend

- State
- County
- City/Town

Map Scale

1: 6,494

Map Generated: 9/5/2023

Notes

333 Borthwick Ave
Portsmouth, NH

BOWMAN CONSULTING SUPPLEMENTAL PACKAGE

Bowman

Jul 08, 2024

New Hampshire Department of Environmental Services (NHDES)

Re: **Portsmouth Regional Hospital (PRH) – Culvert Replacement**
333 Borthwick Ave, Portsmouth, NH 03801

Portsmouth Regional Hospital is an existing acute hospital on a ±21-acre parcel at 333 Borthwick Ave, Portsmouth, NH 03801. Along the northern property boundary (adjacent to interstate 10) there is an existing *Unitil* natural gas enclosure with regulators and valves. There is an existing gravel drive with (3) 24" culverts that cross over a man made swale (now classified as wetland) that *Unitil* uses to service their equipment. The existing (3) 24" culverts were installed in 1988 based on design drawings by *Kimball Chase*.

On behalf of Portsmouth Regional Hospital and HCA Healthcare, at the request of the City of Portsmouth, Bowman is proposing to remove the existing (3) 24" culverts and replace with a 10' wide by 3' tall box culvert. All construction and materials shall be in compliance with the *New Hampshire Stream Crossing Guidelines,* latest edition. Temporary disturbance will be ±1,600 square feet and permanent disturbance will be ±750 square feet.

The contributing drainage area to the existing crossing is ±195-acres, based on USGS topographic delineation. A majority of the contributing drainage area is state prime wetland that flows from south of Borthwick Avenue through two (2) city owned and maintained 18" PVC pipes.

See **Appendix A** for the Overall Drainage Area Map. Contributing drainages area parameters:

- Area: ±195-acres
- Time of Concentration: 128.4 minutes
    - 100' sheet flow at 0.5% slope with 0.95 Manning's N Value. Two-year, 24 hr rainfall: 3.33"
    - 3,780' shallow concentrated flow at 0.5% slope (unpaved)
- Curve Number: 90 (very conservative estimate)

See **Appendix B** for Peak Stormwater Runoff outputs, based on Hydrology Studio 2024 v 3.0.0.32 with Portsmouth, NH IDF Data:

- 2-year storm event: 71.57 cubic ft/ second (cfs)
- 10-year storm event: 136.0 cubic ft/ second (cfs)

The replacement box culvert has been sized to meet and exceed the 10-year storm event. The 10' wide x 3' tall box culvert at 0.09% slope has a flow capacity of 164.93 cfs. See **Appendix C** for Studio Express 2023 v1.0.0.15 sizing model results.

If you have any questions, please feel free to reach me at mhamby@bowman.com.

Matthew Hamby, PE

Principal, Civil Engineer
Bowman Consulting

STATE OF NEW HAMPSHIRE
7/26/24
KAI
BURK
No. 16921
LICENSED
PROFESSIONAL ENGINEER

Kai Burk, PE
Chief Civil Engineer

Attachments:
Appendix A – Overall Drainage Basin Map
Appendix B – Peak Stormwater Runoff Results
Appendix C – Box Culvert Sizing Results
Appendix D – Construction Documents

POINT OF ANALYSIS
(3 EXISTING 24" CULVERTS)

EXISTING CULVERT
BENEATH BORTHWICK

DRAINAGE BASIN AREA: ±195 ACRES

Creek Area
Meadowbrook
Portsmouth Plains
PORTSMOUTH
Manor
Great Bay Community College
Paul Mitchell, the School
Saint Marys Cem
Calvary Cem
Temple Israel Cem
Sagamore Cr
Great Bog

OAK AVE
ASHLAND RD
THORNTON
BARTLETT ST
CABOT ST
STATE ST
MIDDLE ST
LINCOLN AVE
ALDRICH RD
THAXTER RD
WIBIRD ST
UNION ST
SPINNEY RD
ISLINGTON ST
ESSEX AVE
BORTHWICK AVE
COAKLEY RD
SHERBURNE RD
COLONIAL DR
GREENLAND RD
LAFAYETTE RD
JONES AVE
GREENLEAF AVE
MIRONA RD
PEVERLY HILL RD

95
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1

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STATE OF NEW HAMPSHIRE
7/28/24
BURK
No. 16924
LICENSED
PROFESSIONAL ENGINEER

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS

DATE	DESCRIPTION

DESIGN	DRAWN	CHKD
		XX

07/02/2024

APPENDIX A

OVERALL DRAINAGE AREA MAP

EXHIBIT-1

Basin Model

Hydrology Studio v 3.0.0.32

APPENDIX B

Project Name:

07-15-2024

Hydrograph by Return Period

Project Name:

07-15-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	NRCS Runoff	Pre Overall		71.57			136.0			244.7

Tc by TR55 Worksheet

Project Name:

Hydrology Studio v 3.0.0.32

07-15-2024

Overall

NRCS Runoff

Hyd. No. 1

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description	Overall			
Manning's n	0.950	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	3.33	2.28	2.28	
Land Slope (%)	.5			
Travel Time (min)	**73.22**	**0.00**	**0.00**	**73.22**
Shallow Concentrated Flow				
Flow Length (ft)	3780			
Watercourse Slope (%)	0.50	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	1.14			
Travel Time (min)	**55.22**	**0.00**	**0.00**	**55.22**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**128.44 min**

Channel Report

APPENDIX C

Project Name: New Project

Studio Express by Hydrology Studio v 1.0.0.15

07-15-2024

BOX CULVERT

Channel 1

RECTANGULAR

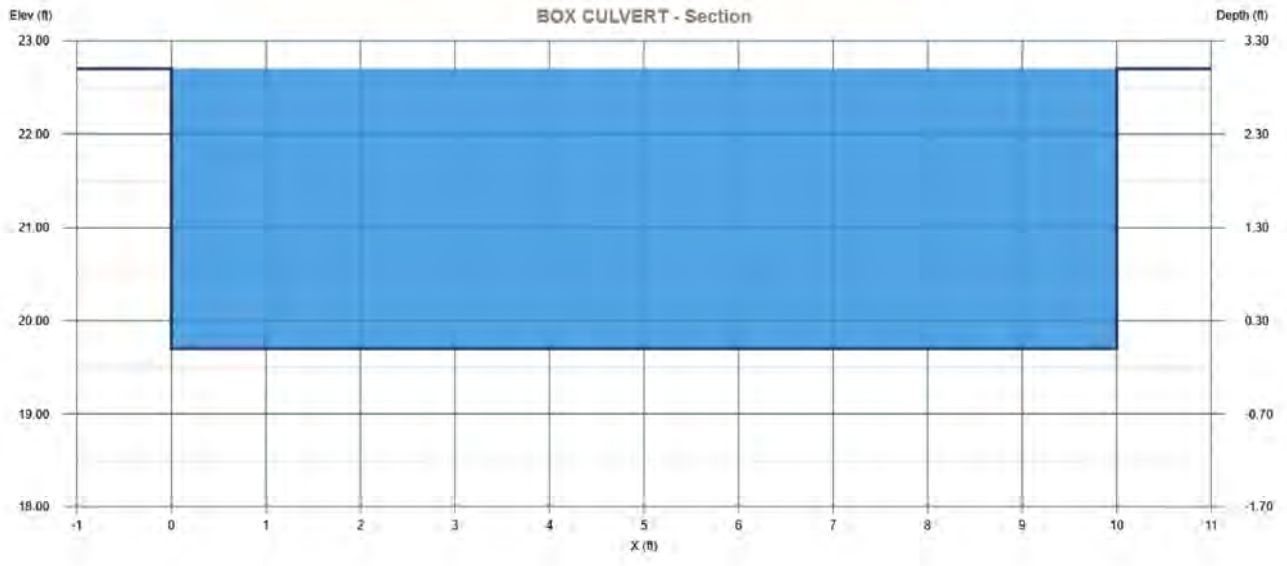
Bottom Width	= 10.00 ft
Total Depth	= 3.00 ft
Invert Elevation	= 19.70 ft
Channel Slope	= 0.100 %
Manning's n	= 0.013

DISCHARGE

Method	= Q vs Depth
Q Min	= 4.67 cfs
Q Max	= 164.93 cfs
Increments	= 10

CALCULATION SAMPLE

Flow	Depth	Area	Velocity	WP	n-value	Crit Depth	HGL	EGL	Max Shear	Top Width
(cfs)	(ft)	(sqft)	(ft/s)	(ft)		(ft)	(ft)	(ft)	(lb/sqft)	(ft)
164.93	3.00	30.00	5.50	16.00	0.013	2.04	22.70	23.17	0.19	10.00



GRADING AND DRAINAGE PLANS FOR

HCA PORTSMOUTH REGIONAL HOSPITAL

CULVERT REPLACEMENT - UTILITY ACCESS DRIVE

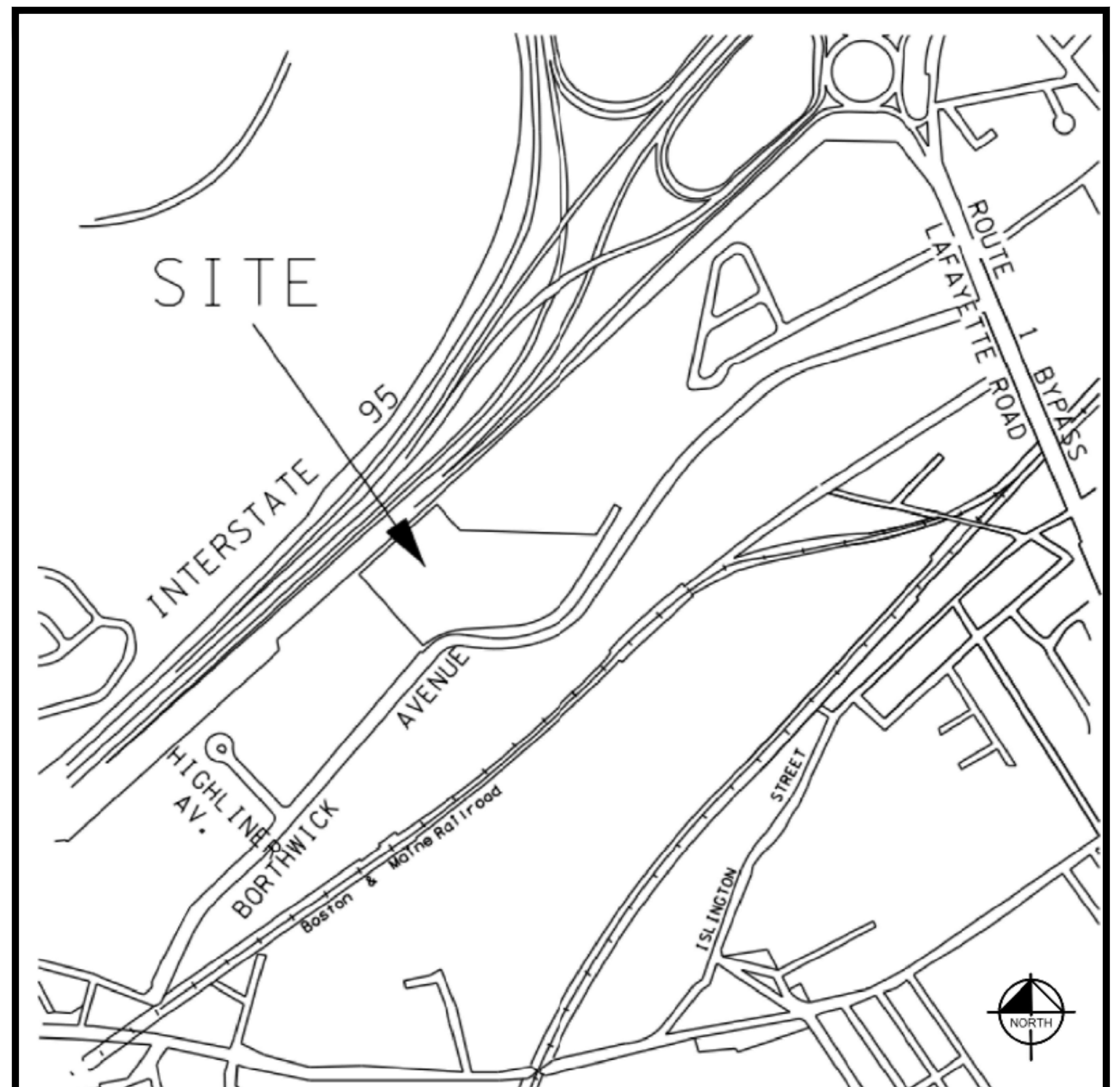
333 BORTHWICK AVE, PORTSMOUTH, NH 03801

SUBMITTAL SET: JUNE 4, 2024

SITE DATA TABLE	
OWNER OF RECORD	HCA HEALTH SERVICES OF NH INC D/B/A PRH 32902
SITE ADDRESS	333 BORTHWICK AVE, PORTSMOUTH, NH 03801
TAX MAP & LOT	TAX MAP 240, LOT 2-1
ZONING	OR - OFFICE RESEARCH
LAND USE	HOSPITAL
PROPERTY AREA	± 20.87 AC

PROJECT PURPOSE

AT THE REQUEST OF THE CITY OF PORTSMOUTH, NH - THIS PROJECT INTENDS TO RE-GRADE A HISTORIC MANMADE SWALE TO THE ORIGINAL 1988 DRAINAGE DESIGN BY *KIMBALL CHASE*, THAT ULTIMATELY CONVEYS PUBLIC STORMWATER RUNOFF FROM SOUTH OF BORTHWICK AVENUE TO NORTH OF INTERSTATE 95 IN PORTSMOUTH, NEW HAMPSHIRE. THE SUBJECT HISTORIC MANMADE SWALE HAS NOW BEEN MAPPED AS STATE WETLANDS. HCA HEALTH SERVICES OF NH INC D/B/A PRH (PROPERTY OWNER) PROPOSED TO REGRADE PORTIONS OF THE WETLAND THAT LIE ON THEIR PROPERTY ONLY. PROPOSED PROJECT SCOPE CONSISTS OF BY-PASS STORMWATER PUMPING, RE-GRADING, LOWERING STORMWATER CULVERTS, AND RE-STABILIZING WITH NEW ENGLAND WETLAND SEED MIX.



VICINITY MAP
NOT TO SCALE

CITY OF PORTSMOUTH
ROCKINGHAM COUNTY, NEW HAMPSHIRE

Sheet List Table	
Sheet Number	Sheet Title
C0-00	COVER SHEET
C0-01	GENERAL NOTES
C1-00	SITE SURVEY - BY OTHERS
C2-00	CULVERT REPLACEMENT- PLAN & PROFILE
C3-00	EROSION CONTROL PLAN
C3-01	EROSION CONTROL DETAILS

PROJECT DESIGN TEAM

CIVIL ENGINEER
BOWMAN CONSULTING
205 VAN BUREN STREET, STE 126
NASHVILLE, TN 37208
CONTACT: MATTHEW HAMBY
PHONE: 615-649-7622
EMAIL: MHAMBY@BOWMAN.COM

SURVEY
JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8
NEWINGTON, NH 03801
PHONE: (603) 436-3557
CONTACT: JIM VERRA, LLS

ENVIRONMENTAL
GOVE ENVIRONMENTAL SERVICES, INC
8 CONTINENTAL DR, UNIT H
EXTER, NH 03833
PHONE: (603) 778-0654
CONTACT: BRENDEN WALDEN

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STATE OF NEW HAMPSHIRE
7/26/24
KAI BURK
No. 16921
LICENSED
PROFESSIONAL ENGINEER

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

COVER SHEET

C0-00

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE NEW HAMPSHIRE STORMWATER MANUAL: VOLUME 2 (LATEST EDITION) AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK, AND, UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.
3. THE INFORMATION PROVIDED IN THESE PLANS IS TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY INVESTIGATION THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITION THAT WILL BE ENCOUNTERED AND UPON WHICH THEIR BIDS WILL BE BASED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE BOTH THE SURFACE AND SUBSURFACE CONDITIONS AND BASE HIS PRICING ACCORDINGLY. GEOTECHNICAL AND ENVIRONMENTAL REPORTS ARE AVAILABLE FOR REVIEW.
4. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. AN APPROXIMATE LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THE COVER SHEET OF THESE CONSTRUCTION PLANS. THIS LIST SERVES AS A GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR MAY WISH TO NOTIFY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
8. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
9. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER AND DESIGN ENGINEER OF RECORD DIRECTLY FROM THE TESTING AGENCY.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER A CERTIFIED RECORD SURVEY SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF NEW HAMPSHIRE DEPICTING THE ACTUAL FIELD LOCATION OF ALL CONSTRUCTED IMPROVEMENTS THAT ARE REQUIRED BY THE JURISDICTIONAL AGENCIES FOR THE CERTIFICATION PROCESS. ALL SURVEY COSTS WILL BE THE CONTRACTORS RESPONSIBILITY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF NEW HAMPSHIRE PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.
13. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VERIFYING ALL QUANTITIES, TAKE-OFF MEASUREMENTS, MATERIALS, ETC. DURING THE BID PROCESS, WHEN DISCREPANCIES OCCUR, THE PHYSICAL PLAN TAKES PRECEDENCE. THE ENGINEER, LANDSCAPE ARCHITECT, COUNTY, CITY OR PROJECT MANAGERS ARE NOT TO BE HELD RESPONSIBLE FOR DISCREPANCIES FROM THE SPECIFICATIONS OR PLANS.
14. THE CONTRACTOR SHALL LIMIT CONSTRUCTION OPERATIONS TO WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DAMAGES OUTSIDE THE LIMITS OF CONSTRUCTION.
15. CONTRACTOR IS ADVISED THAT THE U.S. ENVIRONMENTAL PROTECTION AGENCY REQUIRES THAT ALL OPERATORS FILE A NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NPDES GENERAL PERMIT PRIOR TO BEGINNING WORK. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN THE SAME. A COPY SHALL BE SENT TO THE ENGINEER OF RECORD, ARCHITECT OF RECORD AND THE OWNER.
16. PROTECTION OF UNDERGROUND PIPELINES MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF PROPOSED EXCAVATION." THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 2 WORKING DAYS AND A MAXIMUM OF 5 WORKING DAYS PRIOR TO EXCAVATION.
17. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE LOCAL ELECTRICAL PROVIDER ON ANY WORK IN THE VICINITY OF OVERHEAD OR UNDERGROUND POWER LINES.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL PLANS RELATED TO SITE WORK INCLUDING (BUT NOT LIMITED TO) LANDSCAPE, IRRIGATION, SITE LIGHTING, BUILDING FOUNDATION, PLUMBING, FIRE SPRINKLER, AND OTHER APPLICABLE PLANS FOR CONFLICTING INFORMATION AND ALERT OWNER'S REPRESENTATIVE OF ANY CONFLICT FOR RESOLUTION.
19. CONTRACTOR SHALL VERIFY LOCATION OF ALL IRRIGATION, STREET LIGHTING, AND ELECTRICAL CONDUIT THAT WILL BE IN CONFLICT WITH ANY PROPOSED CONSTRUCTION AND SHALL RESOLVE CONFLICT ACCORDINGLY. COST OF CONFLICT RESOLUTION SHALL BE INCLUDED IN THE BID.
20. ANY DEBRIS RESULTING FROM STRIPING AND DEMOLITION OPERATIONS SHALL BE REMOVED FROM THE SITE AT FREQUENT INTERVALS TO PREVENT THIS MATERIAL FROM ACCUMULATING ON SITE.
21. UPON REMOVAL OF TREES, SHRUBS OR ANY STUMP GRINDING, NO ROOT GREATER THAN THREE INCHES IN DIAMETER SHALL REMAIN WITHIN FIVE FEET OF AN UNDERGROUND STRUCTURE OR UTILITY LINE OR UNDER PAVED FOOTINGS OR PAVED AREAS.
22. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.
23. SAFE PEDESTRIAN TRAFFIC IS TO BE MAINTAINED AT ALL TIMES. POST SIGNAGE AS NEEDED TO AID IN PEDESTRIAN SAFETY.
24. PRIOR TO GRAND OPENING THE CONTRACTOR SHALL:

- SWEEP THE ENTIRE SITE
- ELIMINATE ALL DEBRIS IN THE LANDSCAPING AREAS
- PRESSURE CLEAN THE SITE ASPHALT
- PRESSURE CLEAN THE CURBS, SIDEWALKS, AND CONCRETE PADS

RECORD DRAWINGS

1. CONTRACTOR SHALL PROVIDE TO THE ENGINEER AND OWNER A MINIMUM OF 1 HARD COPIY OF A PAVING, GRADING AND DRAINAGE RECORD DRAWING AND A SEPARATE UTILITY RECORD DRAWING, AS WELL AS BOTH IN AUTOCAD 2018 OR LATER, BOTH PREPARED BY A NEW HAMPSHIRE REGISTERED SURVEYOR. THE RECORD DRAWINGS SHALL VERIFY ALL DESIGN INFORMATION INCLUDED ON THE DESIGN PLANS OF THE SAME NAME.

PAVING, GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL VEGETATION IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
2. ALL OPEN AREAS WITHIN THE PROJECT SITE SHALL BE SODDED UNLESS INDICATED OTHERWISE ON THE ENGINEERING AND LANDSCAPE PLANS.
3. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
4. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.
5. CONTRACTOR SHALL STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.
6. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
7. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.
8. ALL CUT OR FILL SLOPES SHALL BE 3 (HORIZONTAL) :1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.
9. THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO DOWNSTREAM WATER BODIES IS CAUSED DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES THE NEW HAMPSHIRE WATER QUALITY STANDARDS.
10. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE DREDGING PERMIT COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY NHDES REPRESENTATIVES.
11. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS.

DEMOLITION NOTES

1. ALL MATERIAL REMOVED FROM THIS SITE BY THE CONTRACTOR SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER.
2. REFER TO THE TOPOGRAPHIC SURVEY FOR ADDITIONAL DETAILS OF EXISTING STRUCTURES, ETC., LOCATED WITHIN THE PROJECT SITE. UNLESS OTHERWISE NOTED, ALL EXISTING BUILDINGS, STRUCTURES, SLABS, CONCRETE, ASPHALT, DEBRIS PILES, SIGNS, AND ALL APPURTENANCES ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR AND PROPERLY DISPOSED OF IN A LEGAL MANNER AS PART OF THIS CONTRACT. SOME ITEMS TO BE REMOVED MAY NOT BE DEPICTED ON THE TOPOGRAPHIC SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE FULL EXTENT OF ITEMS TO BE REMOVED. IF ANY ITEMS ARE IN QUESTION, THE CONTRACTOR SHALL CONTACT THE OWNER PRIOR TO REMOVAL OF SAID ITEMS.
3. THE CONTRACTOR SHALL REFER TO THE DEMOLITION PLAN FOR DEMOLITION/PRESERVATION OF EXISTING TREES. ALL TREES NOT SPECIFICALLY SHOWN TO BE PRESERVED OR RELOCATED SHALL BE REMOVED AS A PART OF THIS CONTRACT. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY DEMOLITION.
4. CONTRACTOR SHALL ADJUST GRADE OF ANY EXISTING UTILITIES OR DRAINAGE STRUCTURES TO REMAIN.

MAINTENANCE

1. ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
2. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION. INLET PROTECTION DEVICES SHALL BE CLEANED OUT AT REGULAR INTERVALS AS THEY BECOME FULL OF DEBRIS.
3. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER TO NHDES EROSION CONTROL SPECIFICATIONS.
4. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
5. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
6. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
7. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 55 CUBIC YARDS / ACRE.
8. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.
9. SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

TYPICAL ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY ENGINEER 72 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:

- PRE-CONSTRUCTION MEETING
- GRADING STARTING
- FINAL STABILIZATION
- ANY OTHER INSPECTION FOR WHICH A PERMITTING AGENCY REQUIRES THE ENGINEER TO BE PRESENT

3RD PARTY TEST REPORTS REQUIRED

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:

- DENSITY TEST REPORTS
- BACTERIOLOGICAL TESTS OF WATER SYSTEM
- PRESSURE TEST OF WATER/SEWER
- LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS
- ANY OTHER TESTING REQUIRED BY THE AGENCY

SURVEY DATA

1. ALL ELEVATIONS ON THE PLANS OR REFERENCED IN THE SPECIFICATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88)
2. THE CONTRACTOR SHALL PROTECT ALL PERMANENT REFERENCE MONUMENTS AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO SURVEY MARKERS DURING CONSTRUCTION. ANY SURVEY MARKERS DAMAGED DURING CONSTRUCTION WILL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
3. BENCHMARK LOCATION AND ELEVATION ARE AS REPRESENTED BY SURVEYOR AT THE TIME OF SURVEY. CONTRACTOR SHALL VERIFY ITS CORRECTNESS AT TIME OF CONSTRUCTION.

PRECONSTRUCTION RESPONSIBILITIES

1. UPON RECEIPT OF NOTICE OF AWARD, THE CONTRACTOR SHALL ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, ALL AFFECTED UTILITY OWNERS, THE OWNER, THE ENGINEER AND ITSELF.
2. THE CONTRACTOR SHALL CONTACT ONE CALL (811) AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING ANY EXCAVATION.
3. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, ELEVATION,AND MATERIAL OF ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION.
4. EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITIES SHOWN OR FOR ANY EXISTING UTILITIES NOT SHOWN.
5. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE PLANS; THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

CONSTRUCTION SAFETY

1. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE STRICTLY OBSERVED.

TRENCH SAFETY ACT

1. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLIANCE WITH ANY STATE OF NEW HAMPSHIRE TRENCH SAFETY ACTS.
2. WHERE EXCAVATIONS TO A DEPTH IN EXCESS OF FIVE FEET (5') ARE REQUIRED. THE CONTRACTOR SHALL INCLUDE THE FOLLOWING INFORMATION IN THE BID:
   A. A REFERENCE TO THE TRENCH SAFETY STANDARDS THAT WILL BE IN EFFECT DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT.
   B. WRITTEN ASSURANCES BY THE CONTRACTOR PERFORMING THE TRENCH EXACTION THAT SUCH CONTRACTOR WILL COMPLY WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
   C. A SEPARATE ITEM IDENTIFYING THE COST OF COMPLIANCE WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
3. WHEN A BID IS NOT SUBMITTED, THE CONTRACTOR SHALL SUBMIT THE INFORMATION LISTED IN ITEM "2" TO THE ENGINEER PRIOR TO STARTING WORK.

INTERRUPTION OF EXISTING UTILITIES

1. ANY CONSTRUCTION WORK THAT REQUIRES INTERRUPTION OF SERVICE TO ANY CUSTOMER SHALL BE DONE SO WITH A MINIMUM OF SEVENTY-TWO (72) HOUR NOTICE TO, AND WRITTEN APPROVAL BY THE APPROPRIATE UTILITY COMPANY AND PORTSMOUTH REGIONAL HOSPITAL. THE CONTRACTOR SHALL ARRANGE A MEETING WITH THE LOCAL JURISDICTIONAL AGENCIES AND OTHER GOVERNING AGENCIES, AND OTHER AFFECTED UTILITIES PRIOR TO SCHEDULING THE SHUTDOWN TO ASSESS THE SCOPE OF WORK. ALL SYSTEM SHUT DOWNS SHALL BE SCHEDULED BY THE CONTRACTOR AT SUCH TIME THAT SYSTEM DEMAND IS LOW. THIS GENERALLY REQUIRES NIGHT TIME WORK BY THE CONTRACTOR AND REQUIRES FULL TIME INSPECTION BY A REPRESENTATIVE OF THE UTILITY. ALL COST FOR OVERTIME WORK BY THE REPRESENTATIVE OF THE UTILITY SHALL BE BORNE BY THE CONTRACTOR. EACH CUSTOMER AFFECTED BY THE SHUT DOWN SHALL BE PROVIDED, MINIMUM, FORTY-EIGHT (48) HOURS WRITTEN NOTIFICATION BY THE CONTRACTOR.

MINIMUM REQUIRED AS-BUILT INFORMATION

1. ALL AS-BUILT INFORMATION SUBMITTED TO THE ENGINEER SHALL BE SUFFICIENTLY ACCURATE, CLEAR, AND LEGIBLE TO SATISFY THE ENGINEER THAT THE INFORMATION PROVIDES A TRUE REPRESENTATION OF THE IMPROVEMENTS CONSTRUCTED.
2. UTILITY CROSSING SEPARATION INFORMATION FOR THAT PROVIDED ON THE PLANS VERIFYING:
   A. SIZE AND MATERIAL OF CROSSING PIPES
   B. TOP ELEVATION OF BOTTOM PIPE
   C. BOTTOM ELEVATION OF TOP PIPE
   D. FINISH SURFACE ELEVATION OVER UTILITY CROSSING
3. STORM DRAINAGE:
   A. TOP ELEVATION OF EACH MANHOLE FRAME AND COVER / GRATE AS WELL ALL OTHER STRUCTURES (HEADWALLS, CONTROL STRUCTURES, ETC.)
   B. INVERT ELEVATION OF EACH LINE ENTERING AND LEAVING EACH STRUCTURE, INCLUDING UNDERDRAIN PIPES.
   C. INVERTS OF ALL MITERED END SECTIONS
   D. ACTUAL GRADE OF PIPE BETWEEN THE STRUCTURES
   E. INVERT ELEVATION AND TWO HORIZONTAL TIES FROM PERMANENT VISIBLE OBJECTS TO ALL STORM STUB-OUTS.
5. LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES.
6. REVISIONS TO ROUTING OF PIPING AND CONDUITS.
7. ACTUAL EQUIPMENT LOCATIONS.
8. CHANGES MADE BY CHANGE ORDER OR CONSTRUCTION CHANGE DIRECTIVE.
9. CHANGES MADE FOLLOWING ENGINEER'S WRITTEN ORDERS.
10. DETAILS NOT ON THE ORIGINAL CONTRACT DRAWINGS.
11. FIELD RECORDS FOR VARIABLE AND CONCEALED CONDITIONS.
12. ALL SLEEVES, FITTINGS, TEES, BENDS, VALVES, ETC. SHALL BE LOCATED BY STATION/OFFSET (OR METHOD APPROVED BY ENGINEER) AND ELEVATION OF TOP OF PIPE FOR ALL CONSTRUCTED SLEEVING. AS-BUILTS FOR ALL SLEEVING DEPICTING TOP OF PIPE AT 100-FOOT INTERVALS MUST BE PROVIDED.
13. RECORD DRAWINGS SHALL INDICATE AS-BUILT DATA FOR EVERY ELEVATION SHOWN ON THE PLANS.
14. IF A NEW BENCHMARK LOCATION IS ESTABLISHED, CONTRACTOR SHALL PROVIDE A BENCH LOOP CLOSURE TO THE CLOSEST EXISTING BENCHMARKS IN BOTH DIRECTIONS. ALL BENCHMARK DATA SHALL BE SUBMITTED BY A REGISTERED LAND SURVEYOR.
15. IDENTIFICATION OF ADDENDUM ITEMS ISSUED DURING BIDDING PERIOD.
16. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL AS-BUILT DATA FOR UTILITIES AND SLEEVING IS COLLECTED PRIOR TO PAVEMENT SECTION CONSTRUCTION. PRELIMINARY UTILITY AS-BUILTS MUST BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO PAVEMENT SECTION CONSTRUCTION.

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STATE OF NEW HAMPSHIRE – LICENSED PROFESSIONAL ENGINEER

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

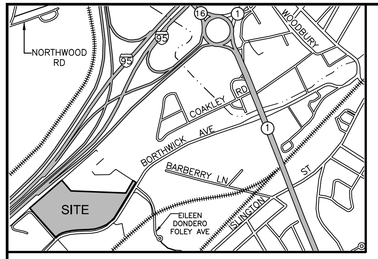
PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

GENERAL NOTES

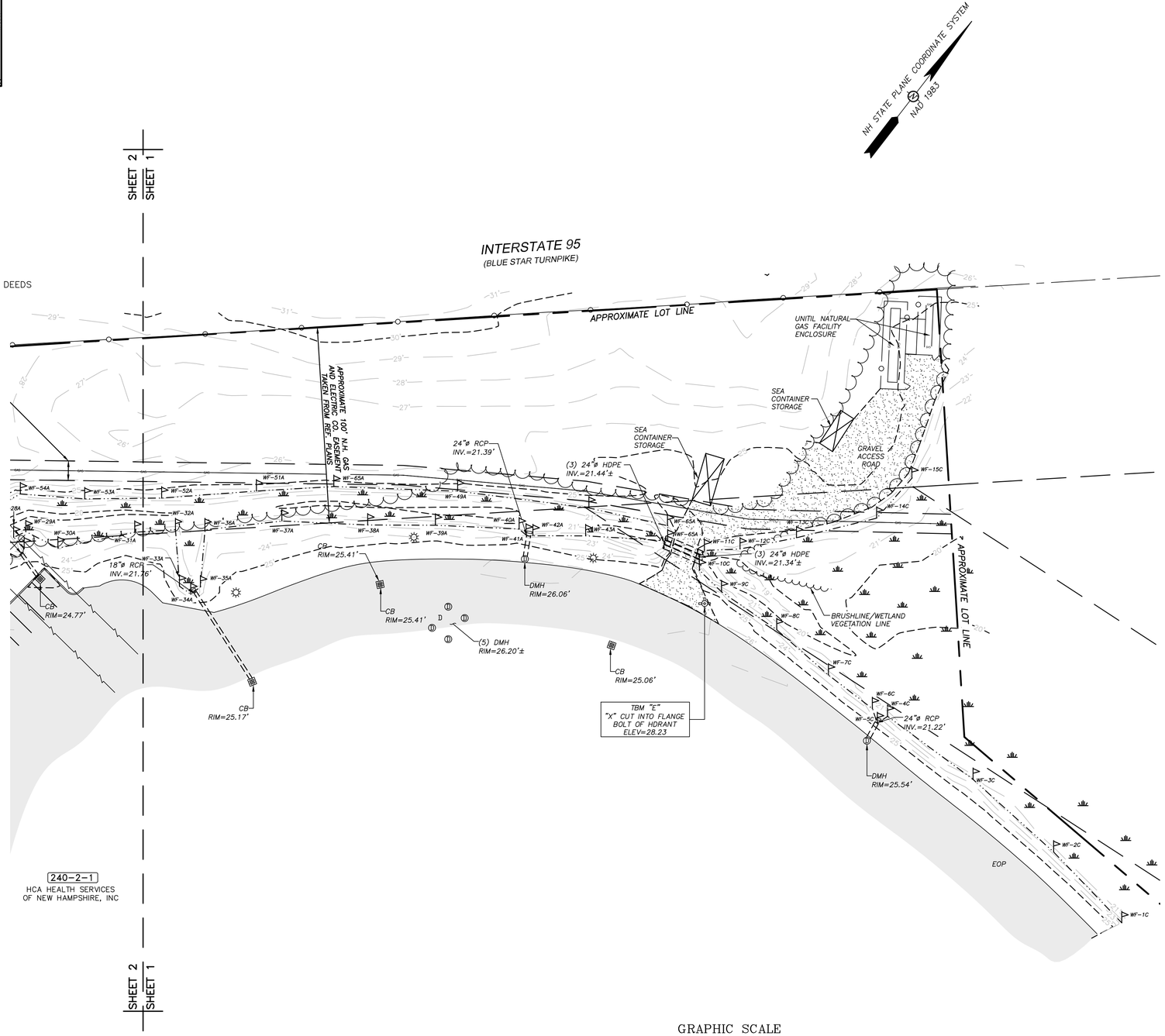
C0-01



LOCUS
(N.T.S.)

LEGEND:

- CHAIN LINK FENCE
- UTILITY POLE
- UTILITY POLE W/TRANSFORMER
- GUY
- LIGHT POLE
- OVERHEAD WIRES
- UGU ..... UNDERGROUND UTILITIES
- RCRD ..... ROCKINGHAM COUNTY REGISTRY OF DEEDS
- 240–02–01 ..... TAX SHEET / LOT NO.
- EOP ..... EDGE OF PAVEMENT
- LA ..... LANDSCAPED AREA
- VGC ..... VERTICAL FACED GRANITE CURB
- SGC ..... SLOPED FACED GRANITE CURB
- PSNH ..... PUBLIC SERVICE CO. OF NH
- HANDICAP PARKING SPACE
- CATCH BASIN (SQUARE)
- CATCH BASIN (ROUND)
- DRAIN MANHOLE
- SEWER MANHOLE
- SIGN
- DOUBLE POST SIGN
- ELECTRIC METER
- GAS VALVE
- W ..... WATER *LINE*
- S ..... SEWER *LINE*
- D ..... DRAIN LINE
- G ..... GAS LINE
- CONIFEROUS TREE
- DECIDUOUS TREE
- TREE LINE
- WATER GATE VALVE
- WATER SHUT OFF VALVE
- HYDRANT
- FIRE CONNECTION
- RIP RAP
- CEMENT CONCRETE PAD
- CONCRETE RETAINING WALL
- LANDSCAPE/LAWN AREA
- (15) ..... PARKING SPACE COUNT



GRAPHIC SCALE

30' 0 15' 30' 60' 90'

(IN FEET)
1 inch = 30' ft.

SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000)."

LICENSED LAND SURVEYOR ____ DATE ____

NOTES:

1. OWNER OF RECORD: HCA HEALTH SVC OF NH INC D/B/A PRH 32902
   C/O DUCHARME MCMILLEN & ASSOCIATES
   ADDRESS: PO BOX 80610, INDIANAPOLIS, IN 46280
   DEED REFERENCE: BK:2784 PG:1340
   TAX SHEET: 240–02–01

2. ZONED: OFFICE RESEARCH (OR)

MIN. LOT AREA: 3 ACRES	FRONT YARD SETBACK: 50'
FRONTAGE: 300'	SIDE YARD SETBACK: 75'
BUILDING COVERAGE: 30%	REAR YARD SETBACK: 50'
STRUCTURE HEIGHT: 60'	

3. THE INTENT OF THIS PLAN IS TO SHOW THE LIMITED AS–BUILT CONDITIONS OF THE BUILDING ADDITION AND RECONFIGURED DETENTION BASIN. THE BOUNDARY INFORMATION SHOWN IS APPROXIMATE AND TAKEN FROM THE REFERENCE PLANS AND DOES NOT CONSTITUTE AN UPDATED BOUNDARY SURVEY BY THIS OFFICE.

4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS OF RECORD, AND PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG–SAFE @ 1–888–DIG–SAFE.

5. HORIZONTAL DATUM: NAD 1983 ESTABLISHED BY SURVEY GRADE GPS OBSERVATION AND NGS "OPUS" SOLUTION. REFERENCE FRAME: NAD83 (2011)(EPOCH: 2010.0000), US SURVEY FOOT.
   VERTICAL DATUM: NAVD 1988. PRIMARY BENCHMARK: CITY OF PORTSMOUTH "ALBA"

6. THE PLAN IS BASED UPON A FIELD SURVEY COMPLETED IN JANUARY OF 2024 WITH TRIMBLE S5 ROBOTIC TOTAL STATION, CARLSON BRX7 RTK GPS UNITS, PANASONIC FZ–M1/TRIMBLE TSC7 DATA COLLECTORS.

7. THE PARCEL SHOWN HEREON LIES WITHIN ZONE X (AREA OF MINIMAL FLOOD HAZARD) AS IDENTIFIED ON FLOOD INSURANCE RATE MAP, ROCKOINGHAM COUNTY, NEW HAMPSHIRE, MAP NUMBER 33015C0260E, EFFECTIVE DATE MAY 17, 2005 BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

8. THE DELINEATION OF THE WETLANDS SHOWN HEREON WAS BY BRENDEN WALDEN NEW HAMPSHIRE CERTIFIED WETLAND SCIENTIST #297, GOVE ENVIRONMENTAL SERVICES, LLC., 8 CONTINENTAL DRIVE, UNIT H, EXETER, NH 03833.

9. CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE ESTABLISHMENT OF ANY GRADES OR ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOCIATES, INC.

REFERENCE PLANS:

1. *GAS LINE AS–BUILT EASEMENT AND CONSERVATION PLAN, PREPARED FOR HOSPITAL CORPROATION OF AMERICA, PORTSMOUTH, NH, DATED 10/31/85. RCRD PLAN #D–15830.*
2. *SCHILLER S/S–OCEAN ROAD S/S, 115 KV TRANSMISSION LINE #U181, MILE 4, PLAN–6775–A, DATED 7/10/2009, BY NORTHEAST UTILITIES, NOT RECORDED.*
3. *SUBDIVISION OF LAND, FRANETAL REALTY TRUST COMPAMY, OPTIONED TO LIBERTY MUTUAL INSURANCE COMPANY, PORTSMOUTH, NEW HAMPSHIRE, REVISED TO 2/19/71 RCRD PLAN #2190.*
4. *LIMITED EXISTING CONDITIONS PLAN – 333 BORTHWICK AVENUE, PORTSMOUTH, NEW HAMPSHIRE – ASSESSORS PARCEL #240–002–001 FOR HCA HEALTH SERVICES OF NEW HAMPSHIRE" ON NOVEMBER 19, 2019 BY THIS OFFICE. NOT RECORDED*
4. *LIMITED AS–BUILT PLAN – PORTSMOUTH REGIONAL HOSPITAL – HCA, 333 BORTHWICK AVENUE, PORTSMOUTH, NEW HAMPSHIRE, TAX MAP 240, LOT 2–1, PREPARED FOR: DPR CONSTRUCTION, LAND OF: HCA HEALTH SERVICES OF NH" ON FEBRUARY 29. 2024 BY THIS OFFICE. NOT RECORDED*

DIRECT ABBUTERS TO SUBJECT PARCEL:

240–01
LIBERTY MUTUAL INSURANCE
ATTN: JOANNE BRAGG
175 BERKLEY STREET
BOSTON, MA 02116
BK: 2057 PG: 0357

240–2–2
JACKSON GRAY CONDOS MASTER CARD
330 BORTHWICK AVE
PORTSMOUTH, NH 03801
BK: 2648 PG: 0901

234–7–3
CITY OF PORTSMOUTH
1 JUNKINS AVENUE
PORTSMOUTH, NH 03801
BK: 4211 PG: 1155

240–2–2001
CITY OF PORTSMOUTH DPW
PO BOX 628
PORTSMOUTH, NH 03802
BK: 2648 PG: 0901

240–2–1001
CITY OF PORTSMOUTH DPW
PO BOX 628
PORTSMOUTH, NH 03802
BK: 2648 PG: 0902

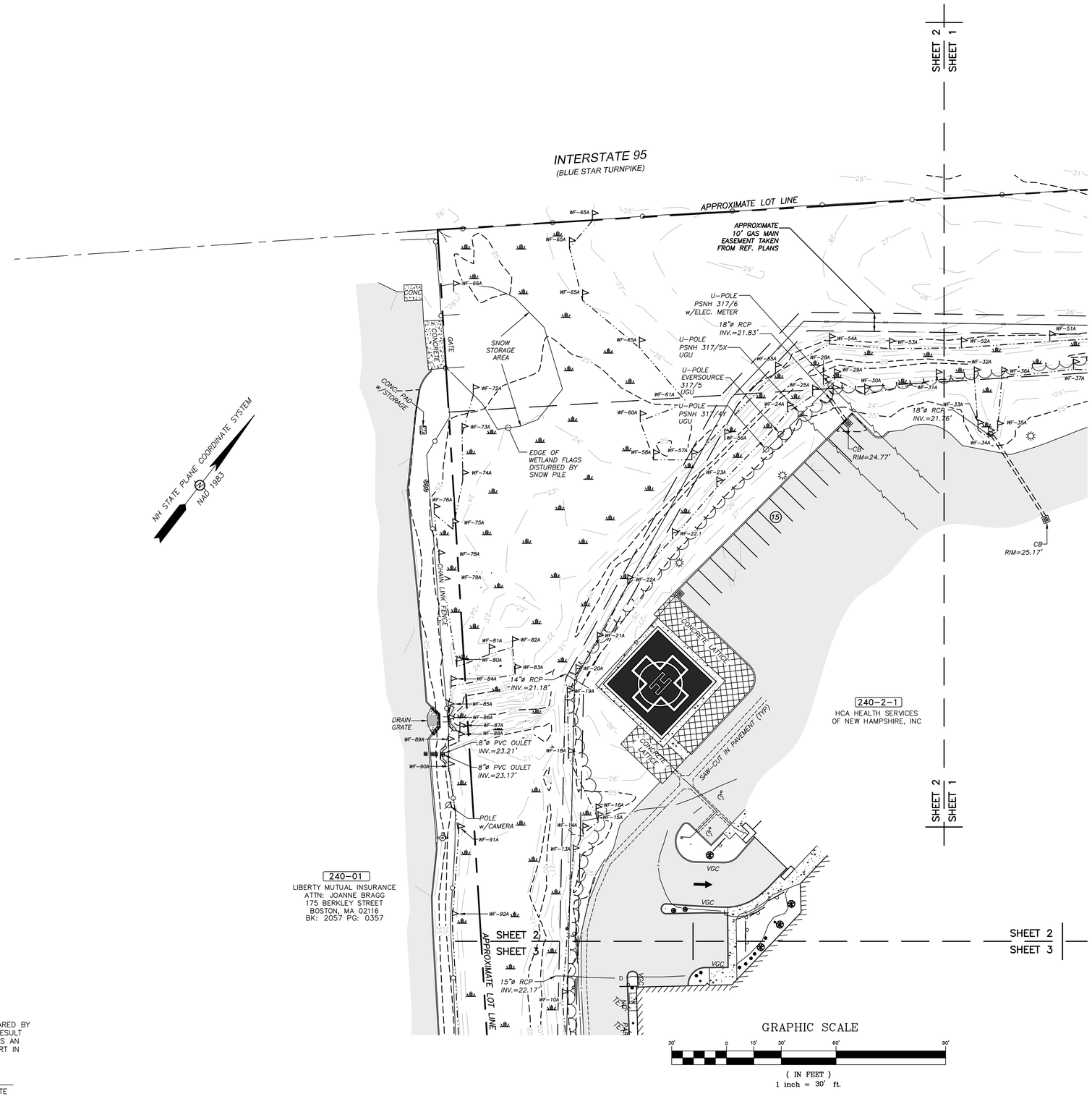
REV. NO.	DATE	DESCRIPTION	APPR'D

LIMITED EXISTING CONDITIONS PLAN
PORTSMOUTH REGIONAL HOSPITAL – HCA
333 BORTHWICK AVENUE
PORTSMOUTH, NEW HAMPSHIRE
TAX MAP 240 LOT 2–1
PREPARED FOR: BOWMAN
LAND OF: HCA HEALTH SERVICES OF NH

JVA JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8, NEWINGTON, N.H., 03801 – 603–436–3557 – ©2024

REL DRAWN BY
RMF PROJECT MGR

DATE:	02/29/2024
JOB NO:	24–2003
SCALE:	1" = 60'
DWG NAME:	24–2003.DWG
PLAN NO:	24–2003.DWG
SHEET:	1 OF 3



SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000)."

LICENSED LAND SURVEYOR _____ DATE _____

REV. NO.	DATE	DESCRIPTION	APPR'D

LIMITED EXISTING CONDITIONS PLAN
PORTSMOUTH REGIONAL HOSPITAL – HCA

333 BORTHWICK AVENUE

PORTSMOUTH, NEW HAMPSHIRE

TAX MAP 240 LOT 2-1

PREPARED FOR: BOWMAN

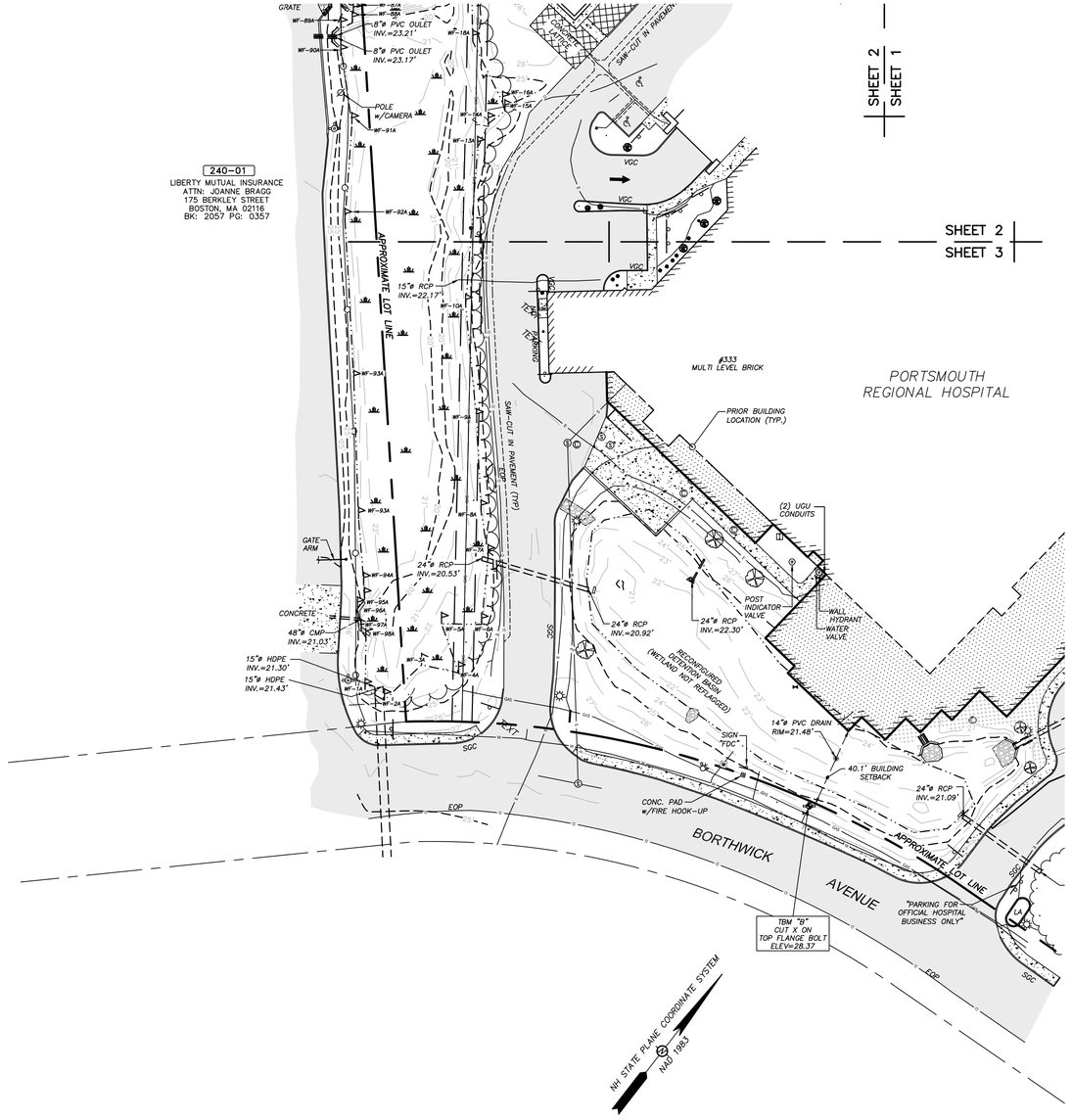
LAND OF: HCA HEALTH SERVICES OF NH

JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8, NEWINGTON, N.H., 03801 – 603-436-3557 – ©2024

REL DRAWN BY

RMF PROJECT MGR

DATE:	02/29/2024
JOB NO:	24-2003
SCALE:	1" = 60'
DWG NAME:	24-2003.DWG
PLAN NO:	24-2003.DWG
SHEET:	2 OF 3



SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000)."

LICENSED LAND SURVEYOR _____ DATE _____

GRAPHIC SCALE

30' 0 15' 30' 60' 90'

(IN FEET)
1 inch = 30' ft.

REV. NO.	DATE	DESCRIPTION	APPR'D

LIMITED EXISTING CONDITIONS PLAN
PORTSMOUTH REGIONAL HOSPITAL – HCA

333 BORTHWICK AVENUE

PORTSMOUTH, NEW HAMPSHIRE

TAX MAP 240 LOT 2-1

PREPARED FOR: BOWMAN

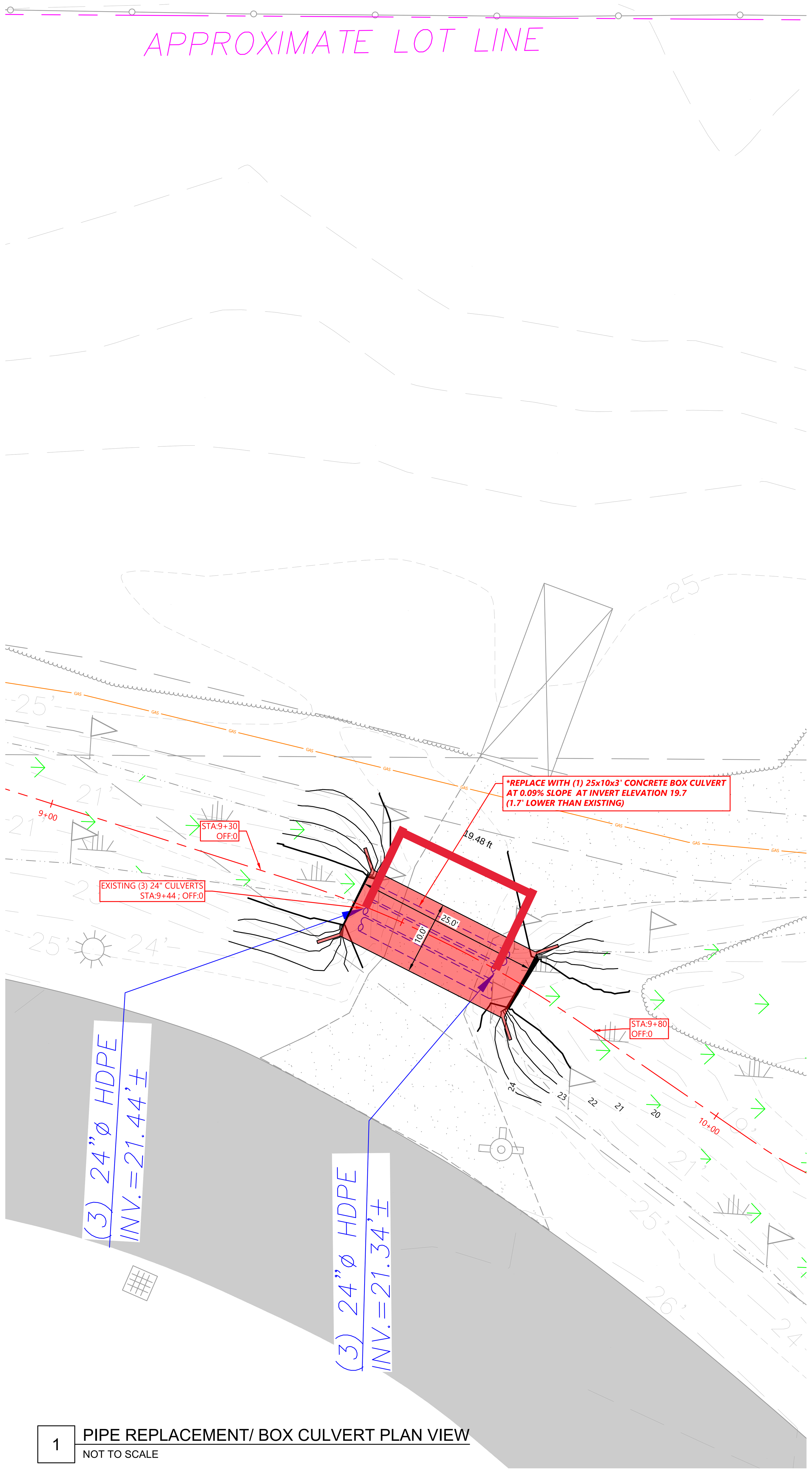
LAND OF: HCA HEALTH SERVICES OF NH

JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8, NEWINGTON, N.H., 03801 – 603-436-3557 – ©2024

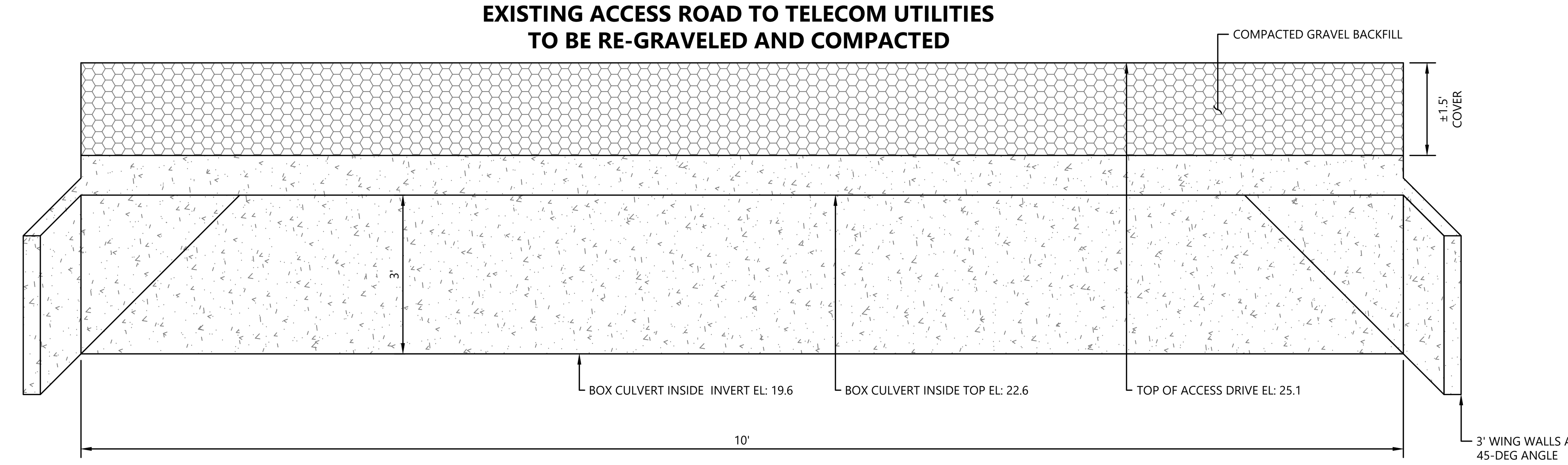
REL DRAWN BY

RMF PROJECT MGR

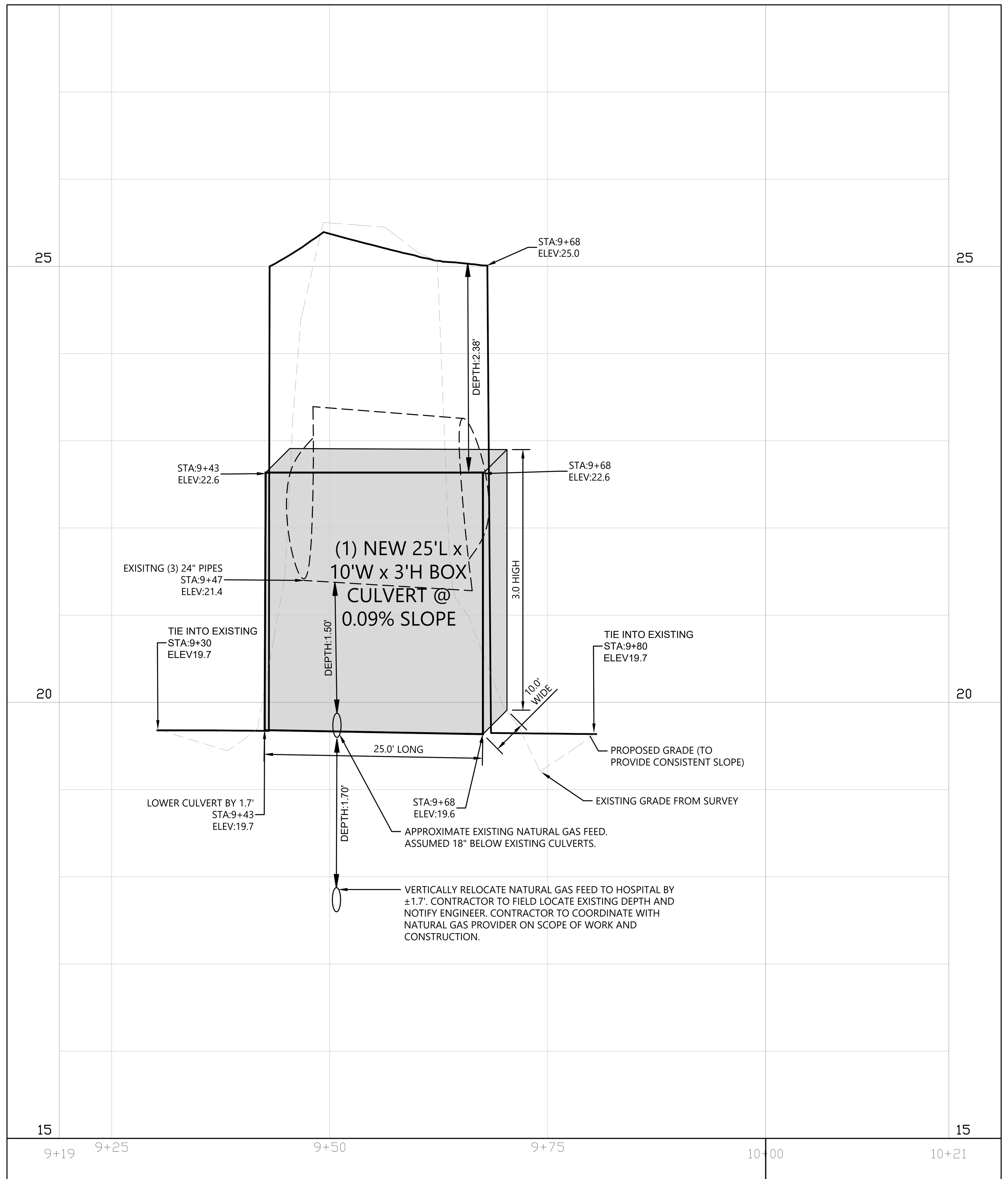
DATE:	02/29/2024
JOB NO:	24-2003
SCALE:	1" = 60'
DWG NAME:	24-2003.DWG
PLAN NO:	24-2003.DWG
SHEET:	3 OF 3



1 PIPE REPLACEMENT/ BOX CULVERT PLAN VIEW
NOT TO SCALE



2 BOX CULVERT SECTION VIEW
NOT TO SCALE



3 PIPE REPLACEMENT/ BOX CULVERT PROFILE
NOT TO SCALE

LEGEND

- EXISTING PROPERTY LINE
- EXISTING STAKED WETLAND
- EXISTING PAVEMENT
- GAS — EXISTING GAS MAIN
- 21 — EXISTING CONTOUR
- EXISTING STORM DRAIN
- 21 — PROPOSED CONTOUR
- PROPOSED CENTERLINE OF DREDGED DRAINAGE CHANNEL
- PROPOSED 25x7x3' BOX CULVERT

GRADING NOTES

1. CONTRACTOR RESPONSIBLE FOR VERIFYING LOCATION, SIZE, AND ELEVATIONS OF EXISTING UTILITIES AT CONNECTION POINTS PRIOR TO GRADING OR INSTALLATION OF ANY PROPOSED UTILITIES. CONTRACTOR TO IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE IFDISCREPANCIES ARE FOUND.
2. ADDITIONAL EROSION CONTROL DEVICES TO BE USED AS REQUIRED BY LOCAL INSPECTOR.
3. DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION. MULCH, TEMPORARY VEGETATION OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION UPON COMPLETION.
4. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING. IF UNABLE TO ACCOMPLISH, MULCH SHALL BE USED AS A TEMPORARY COVER. CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER (DOES NOT APPLY TO RETAINING WALLS), AND CUTS AND FILLS WITHIN BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS.
5. THE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A PUBLIC ROAD OR STREET.
6. EROSION AND SEDIMENT CONTROL DEVICES MUST BE DISPLAYED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR MUST CALL FOR AN INSPECTION TO OBTAIN A PERMIT TO GRADE. PLEASE CALL WITH ENOUGH LEAD-TIME FOR AN INSPECTION TO MEET YOUR SCHEDULE.
7. SEDIMENT/EROSION CONTROL DEVICES MUST BE INSPECTED ACCORDING TO LOCAL AND STATE REQUIREMENTS. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MAY BE NECESSARY AS THE PROJECT PROGRESSES.
8. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
9. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
10. CONTRACTOR SHALL REVIEW SITE GEOTECHNICAL REPORT BEFORE COMMENCING GRADING OPERATIONS.
11. SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED AS PART OF THIS CONTRACT.
12. INSTALL SOD, MATTING, OR RIPRAP IN SWALES AS INDICATED ON GRADING PLANS AND EROSION CONTROL PLANS
13. ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER WATER QUALITY MANAGEMENT FACILITIES SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S OR PROPERTY OWNER'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR CONTRACTOR.
14. UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER, DESIGNER, OR THEIR REPRESENTATIVES. BEFORE YOU DIG CALL ONE CALL--811
15. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES TO REMAIN.
16. HORIZONTAL DATUM IS BASED ON NAD 1983.
17. VERTICAL DATUM BASED ON NAVD88.

811 Know what's below. Call before you dig.

0 10 20 Feet
HORIZ. SCALE 1":10'
VERT. SCALE: 1"=1'

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Phone: (615) 649 - 7610 | www.bowman.com

STATE OF NEW HAMPSHIRE KAI BURK No. 16921 LICENSED PROFESSIONAL ENGINEER 7/26/24

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

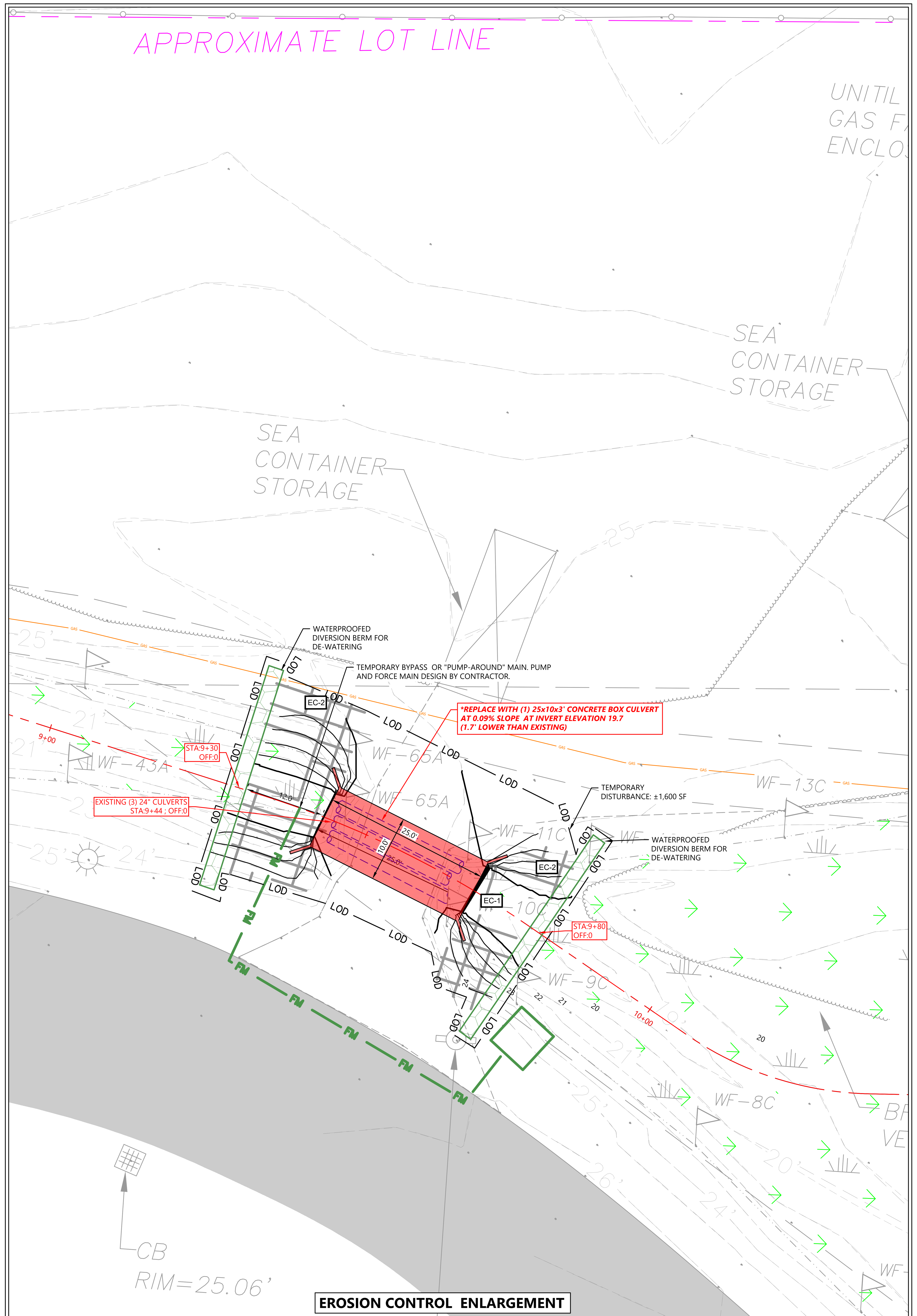
PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

CULVERT REPLACEMENT-PLAN & PROFILE

C2-00

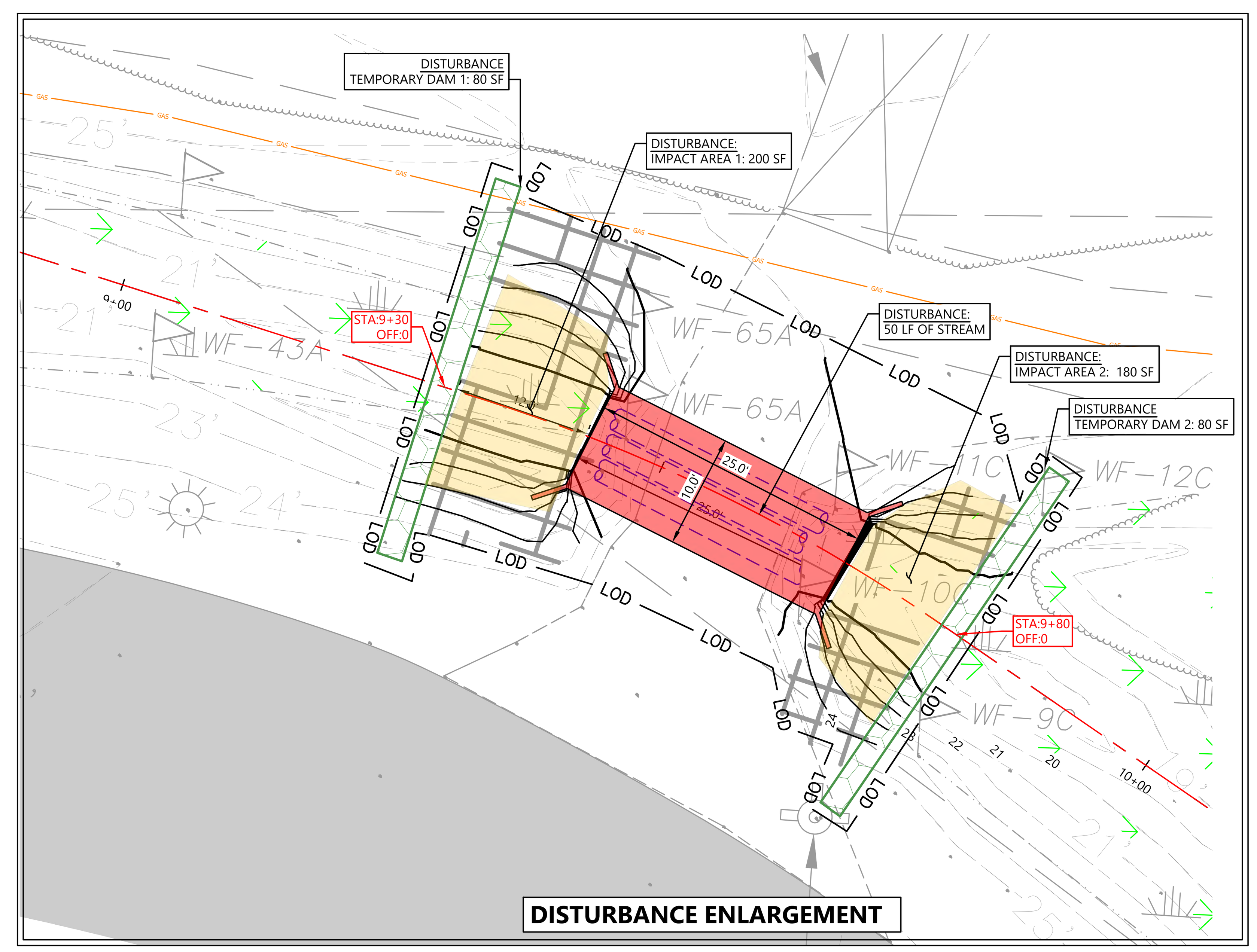


EROSION CONTROL ENLARGEMENT

Know what's below. Call before you dig.

EROSION CONTROL NOTES

1. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATION BEGINS AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
2. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON OR NEAR SITE: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; THE DATES WHEN STABILIZATION MEASURES ARE INITIATED; INSPECTION RECORDS AND RAINFALL RECORDS.
3. THE CONTRACTOR SHALL MAINTAIN A RAIN GAUGE AND DAILY RAINFALL RECORDS AT THE SITE OR USE A REFERENCE SITE FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 10 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
6. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS AND OTHER SEDIMENT CONTROLS AS NECESSARY AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50% OR AS DIRECTED BY OWNERS REPRESENTATIVE.
7. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES BEFORE ACCEPTANCE BY LOCAL GOVERNING AGENCY OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
8. THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION AND WATER POLLUTION CONTROL DEVICES ONLY AFTER A SOLID STAND OF GRASS HAS BEEN ESTABLISHED ON GRADED AREAS AND WHEN IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THEY ARE NO LONGER NEEDED.
9. DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF THE COMPLETION OF GRADING ACTIVITIES. SLOPES 3:1 OR STEEPER SHALL BE STABILIZED WITHIN 7 DAYS.
10. INSPECTIONS DESCRIBED IN PARAGRAPHS 2, 3 AND 4 BELOW, SHALL BE PERFORMED AT LEAST TWICE EVERY CALENDAR WEEK. INSPECTIONS SHALL BE PERFORMED AT LEAST 72 HOURS APART. WHERE SITES OR PORTION(S) OF CONSTRUCTION SITES HAVE BEEN TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (E.G., SITE COVERED WITH SNOW OR ICE) OR DUE TO EXTREME DROUGHT, SUCH INSPECTION ONLY HAS TO BE CONDUCTED ONCE PER MONTH UNTIL THAWING OR PRECIPITATION RESULTS IN RUNOFF OR CONSTRUCTION ACTIVITY RESUMES. INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS THAT HAVE BEEN FINALLY STABILIZED. WRITTEN NOTIFICATION OF THE INTENT TO CHANGE THE INSPECTION FREQUENCY AND THE JUSTIFICATION FOR SUCH REQUEST MUST BE SUBMITTED TO THE LOCAL ENVIRONMENTAL FIELD OFFICE, SHOULD NHDES DISCOVER THAT MONTHLY INSPECTIONS OF THE SITE ARE NOT APPROPRIATE DUE TO INSUFFICIENT STABILIZATION MEASURES OR OTHERWISE, TWICE WEEKLY INSPECTIONS SHALL RESUME. NHDES MAY INSPECT THE SITE TO CONFIRM OR DENY THE NOTIFICATION TO CONDUCT MONTHLY INSPECTIONS.
11. QUALIFIED PERSONNEL (PROVIDED BY THE PERMITTEE OR COOPERATIVELY BY MULTIPLE PERMITTEES) SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL.
12. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE SITE'S DRAINAGE SYSTEM. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.
13. OUTFALL POINTS (WHERE DISCHARGES LEAVE THE SITE AND/OR ENTER WATERS OF THE STATE) SHALL BE INSPECTED TO DETERMINE WHETHER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.
14. BASED ON THE RESULTS OF THE INSPECTION, ANY INADEQUATE CONTROL MEASURES OR CONTROL MEASURES IN DISREPAIR SHALL BE REPLACED OR MODIFIED, OR REPAIRED AS NECESSARY, BEFORE THE NEXT RAIN EVENT, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE NEED IS IDENTIFIED.
15. BASED ON THE RESULTS OF THE INSPECTION, THE SITE DESCRIPTION AND POLLUTION PREVENTION MEASURES IDENTIFIED IN THIS SWPPP SHALL BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THE SWPPP, BUT IN NO CASE LATER THAN 14 DAYS FOLLOWING THE INSPECTION.
16. ALL INSPECTIONS SHALL BE DOCUMENTED ON THE CONSTRUCTION STORMWATER INSPECTION CERTIFICATION FORM PROVIDED IN APPENDIX D OF THE SWPPP REPORT FOR ALL CONSTRUCTION SITES. INSPECTION DOCUMENTATION WILL BE
17. MAINTAINED ON SITE AND MADE AVAILABLE TO NHDES UPON REQUEST. INSPECTION REPORTS MUST BE SUBMITTED TO NHDES WITHIN 10 DAYS OF THE REQUEST. IF NHDES REQUESTS THE CONSTRUCTION STORMWATER INSPECTION CERTIFICATION FORM TO BE SUBMITTED, THE SUBMITTED FORM MUST CONTAIN THE PRINTED NAME AND SIGNATURE OF THE TRAINED CERTIFIED INSPECTOR AND THE PERSON WHO MEETS THE SIGNATORY REQUIREMENTS OF SECTION 7.7.2 OF THE NPDES GENERAL PERMIT.
18. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION DOCUMENTATION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES.
19. SUBSEQUENT OPERATOR(S) (PRIMARY PERMITTEES) WHO HAVE OBTAINED COVERAGE UNDER THE NPDES GENERAL PERMIT SHOULD CONDUCT TWICE WEEKLY INSPECTIONS, UNLESS THEIR PORTION(S) OF THE SITE HAS BEEN TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS OR DUE TO EXTREME DROUGHT AS STATED IN PARAGRAPH A) ABOVE. THE PRIMARY PERMITTEE (SUCH AS A DEVELOPER) IS NO LONGER REQUIRED TO CONDUCT INSPECTIONS OF PORTIONS OF THE SITE THAT ARE COVERED BY A SUBSEQUENT PRIMARY PERMITTEE (SUCH AS A HOME BUILDER).
20. THE SITE ASSESSMENT SHALL BE PERFORMED BY INDIVIDUALS WITH THE FOLLOWING QUALIFICATIONS:
    - A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
    - A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) OR
    - A PERSON THAT SUCCESSFULLY COMPLETED THE "LEVEL II DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE.
21. QUALITY ASSURANCE OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE DONE BY PERFORMING SITE ASSESSMENT AT A CONSTRUCTION SITE. THE SITE ASSESSMENT SHALL BE CONDUCTED AT EACH OUTFALL INVOLVING DRAINAGE TOTALING 10 OR MORE ACRES OR 5 OR MORE ACRES IF DRAINING TO AN IMPAIRED OR EXCEPTIONAL QUALITY WATERS, WITHIN A MONTH OF CONSTRUCTION COMMENCING AT EACH PORTION OF THE SITE THAT DRAINS THE QUALIFYING ACREAGE OF SUCH PORTION OF THE SITE.
22. AS A MINIMUM, SITE ASSESSMENT SHOULD BE PERFORMED TO VERIFY THE INSTALLATION, FUNCTIONALITY AND PERFORMANCE OF THE EPSC MEASURES DESCRIBED IN THE SWPPP REPORT. THE SITE ASSESSMENT SHOULD BE PERFORMED WITH THE INSPECTOR, AND SHOULD INCLUDE A REVIEW AND UPDATE (IF APPLICABLE) OF THE SWPPP REPORT. MODIFICATIONS OF PLANS AND SPECIFICATIONS FOR ANY BUILDING OR STRUCTURE, INCLUDING THE DESIGN OF SEDIMENT BASINS OR OTHER SEDIMENT CONTROLS INVOLVING STRUCTURAL, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER.
23. THE SITE ASSESSMENT FINDINGS SHALL BE DOCUMENTED AND THE DOCUMENTATION KEPT WITH THE SWPPP REPORT AT THE SITE. AT A MINIMUM, THE DOCUMENTATION SHALL INCLUDE INFORMATION INCLUDED IN THE INSPECTION FORM PROVIDED IN APPENDIX D OF THE SWPPP REPORT. THE DOCUMENTATION MUST CONTAIN THE PRINTED NAME AND SIGNATURE OF THE INDIVIDUAL PERFORMING THE SITE ASSESSMENT AND THE FOLLOWING CERTIFICATION:
24. "I CERTIFY UNDER PENALTY OF LAW THAT THIS REPORT AND ALL ATTACHMENTS ARE, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS." 5. THE SITE ASSESSMENT CAN TAKE THE PLACE OF ONE OF THE TWICE WEEKLY INSPECTIONS REQUIREMENT.
25. NHDES MAY REQUIRE ADDITIONAL SITE ASSESSMENT(S) TO BE PERFORMED IF SITE INSPECTION BY NHDES'S PERSONNEL REVEALS SITE CONDITIONS THAT HAVE POTENTIAL OF CAUSING POLLUTION TO THE WATERS OF THE STATE.
26. CONTRACTOR SHALL INSTALL A 4'X4' WEATHER PROOF SIGN (6' HEIGHT) AT THE MAIN CONSTRUCTION ENTRANCE. THE SIGN SHALL HAVE THE FOLLOWING INFORMATION:
    - A COPY OF THE NOTICE OF COVERAGE WITH THE NPDES PERMIT NUMBER (FURNISHED BY ENGINEER).
    - THE NAME AND TELEPHONE NUMBER OF A LOCAL CONTACT PERSON (FURNISHED BY CONSTRUCTION MANAGER).
    - DESCRIPTION OF PROJECT (FURNISHED BY CONSTRUCTION MANAGER)



DISTURBANCE ENLARGEMENT

LEGEND

(magenta dash-dot line)	EXISTING PROPERTY LINE
(green fill)	EXISTING STAKED WETLAND
(grey fill)	EXISTING PAVEMENT
— GAS —	EXISTING GAS MAIN
— 21 —	EXISTING CONTOUR
(blue dashed line)	EXISTING STORM DRAIN
— 21 —	PROPOSED CONTOUR
(red dashed line)	PROPOSED CENTERLINE OF DREDGED DRAINAGE CHANNEL
(red fill)	PROPOSED 25x7x3' BOX CULVERT

STORMWATER NOTES

FEMA NOTE

THIS LOT DOES NOT LIE IN AN AREA DESIGNATED AS A SPECIAL FLOOD HAZARD AREA ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 33015C0260F, DATED 01/29/2021.

CONSTRUCTION SCHEDULE

1. PRE-CONSTRUCTION MEETING
2. INSTALLATION OF EROSION CONTROL MEASURES
3. EROSION INSPECTION BY EPSC
4. ISSUANCE OF PERMIT
5. CONSTRUCTION

CONSTRUCTION SHALL BE COMPLETED WITHIN 12 MONTHS OF THE PERMIT BEING ISSUED. IF CONSTRUCTION IS NOT COMPLETE IN THAT AMOUNT OF TIME, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY FOR AN EXTENSION OF THE PERMIT.

NEW HAMPSHIRE DEPT. OF ENVIRONMENTAL SERVICES (NHDES) NOTICE OF COVERAGE

THIS PROJECT DOES **NOT** DISTURB MORE THAN 1 ACRE AND IS **NOT** REQUIRED TO APPLY FOR A NOTICE OF COVERAGE UNDER THE NEW HAMPSHIRE GENERAL CONSTRUCTION PERMIT FROM NHDES.

EROSION CONTROL LEGEND

EC-1	OUTLET PROTECTION TO BE INSTALLED AT ALL EXISTING OUTFALLS UPON COMPLETION OF GRADING AND BYPASS PUMPING OPERATION - SEE DETAIL ON C3-01
EC-2	EROSION CONTROL MATTING - CONTECH LANDLOCK S2 OR APPROVED EQUAL. CONTRACTOR TO INSTALL ON ALL SLOPES STEEPER THAN 3:1 OR STEEPER. SEE DETAIL ON C3-01. -WITH- PERMANENT STABILIZATION - CONSERVATION SEED MIX/ NEW ENGLAND WETMIX (BENEATH EROSION CONTROL MATTING). *PERMANENTLY STABILIZE ALL DISTURBED AREAS.*
— FM — EC-3	TEMPORARY BYPASS PUMP/ PUMP AROUND INFRASTRUCTURE. SEE DETAIL ON C3-01.
— LOD —	LIMITS OF DISTURBANCE: ±1,600 SF

0 10 20 Feet
SCALE 1":10'

Bowman
205 Van Buren Street, Suite 126, Nashville, TN 37208
Phone: (615) 649 - 7610 | www.bowman.com

STATE OF NEW HAMPSHIRE – KAI BURK – No. 16921 – LICENSED PROFESSIONAL ENGINEER – 7/26/24

PORTSMOUTH REGIONAL HOSPITAL HCA HEALTHCARE
PORTSMOUTH, NH

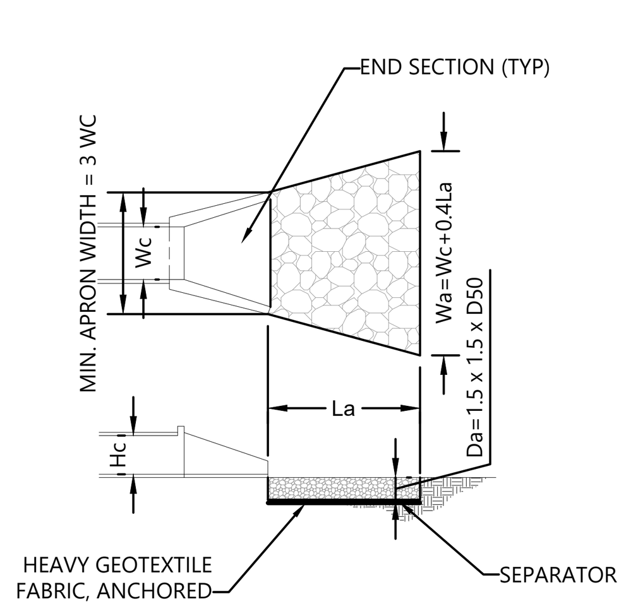
PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

EROSION CONTROL PLAN

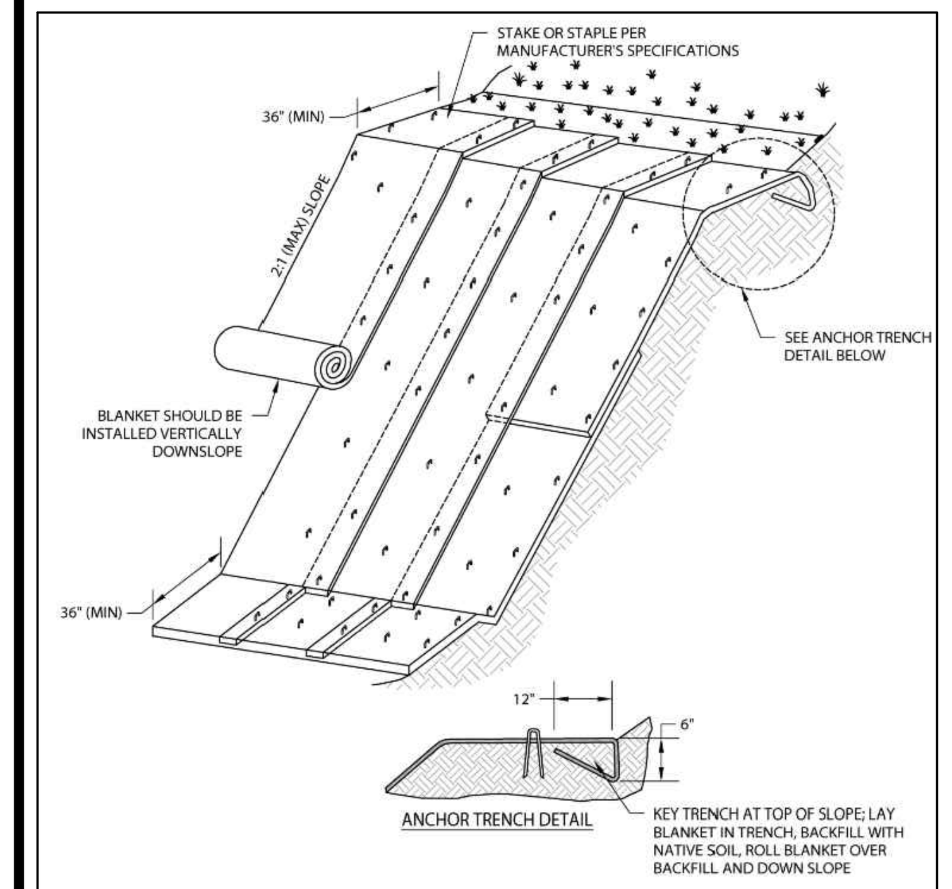
C3-00



L_A = LENGTH OF RIP-RAP APRON
W_A = WIDTH OF RIP-RAP APRON AT END
D_{50} = MEDIAN SIZE OF RIP-RAP
D_{MAX} = MAXIMUM SIZE OF RIP-RAP = 1.5 D_{50}
D_A = DEPTH OF RIP-RAP APRON = 1.5 D_{MAX}
SEPARATOR = GEOTEXTILE UNDERLAYMENT OR GRAVEL FILTER BLANKET

OUTFALL PIPE	LENGTH (La)	WIDTH (Wa)	d50
8-18"	8'	DIA+La/3	3"
24"	8'	DIA+La/3	3"
48"	20'	DIA+La/3	6"

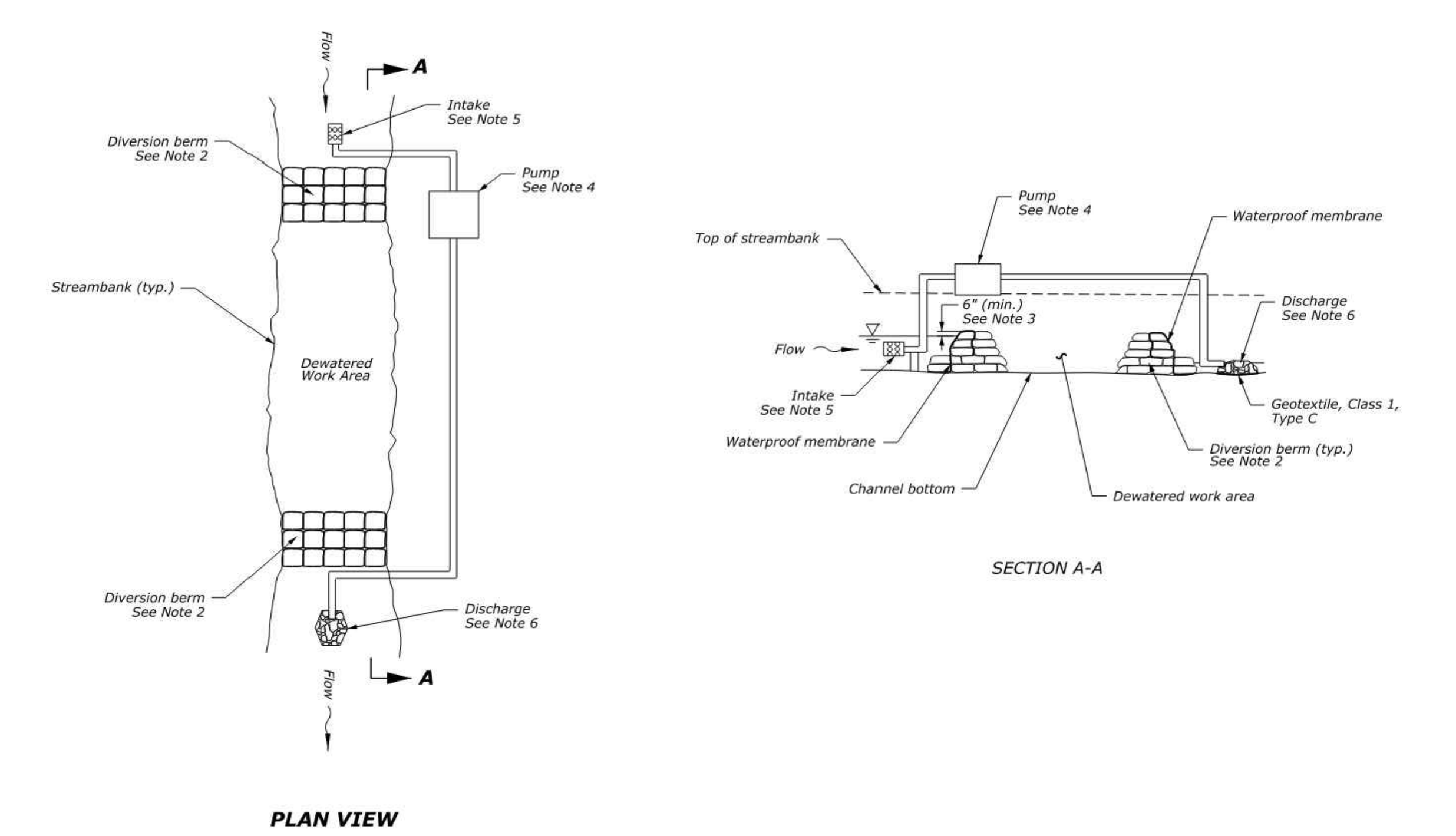
1 OUTLET PROTECTION
NOT TO SCALE



NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, VEGETATION, STICKS, AND DEBRIS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT. SCARIFY AND/OR TILL SLOPE SURFACE 12" DEEP BEFORE LAYING BLANKET.
2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE AS NEEDED TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH OR TWIST.
3. EROSION CONTROL BLANKETS SHOULD BE USED IN CONJUNCTION WITH REVEGETATION (CONTAINER OR PLUG PLANTING) TO SPECIFICATIONS OF REVEGETATION PLAN FOR PROJECT.
4. HAND WALK BLANKET DOWN SLOPE AS BLANKET IS STAKED OR STAPLED TO PREVENT STRETCHING.
5. DO NOT WALK ON BLANKET ONCE IN PLACE.
6. ALL ANCHORS SHALL BE INSTALLED PERPENDICULAR TO SLOPE.

2 EROSION CONTROL BLANKET
NOT TO SCALE

STATE	PROJECT	SHEET NUMBER



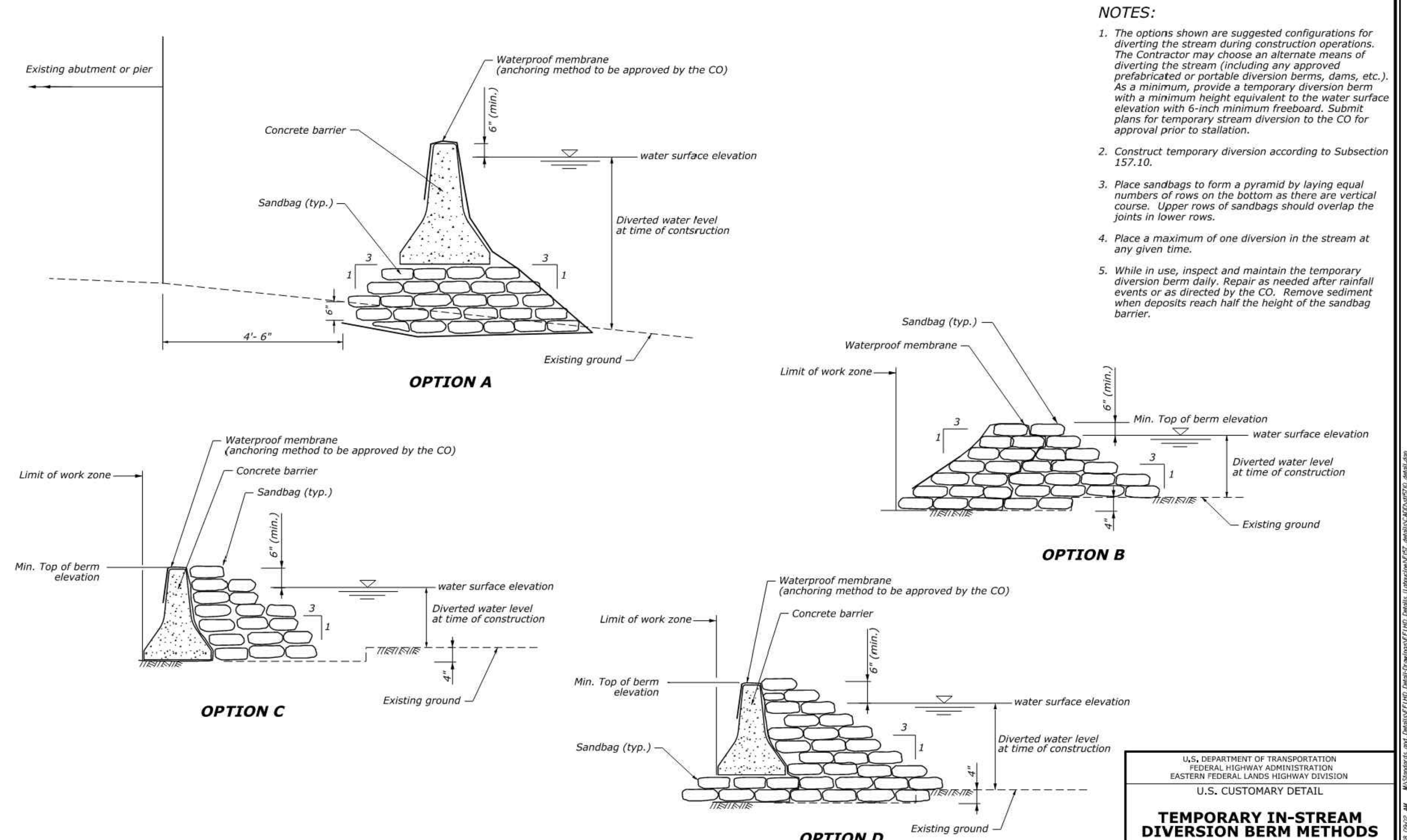
NOTES:
1. Construct temporary diversion according to Subsection 157.10. Obtain the CO's approval for use of alternate diversion methods.
2. Construct diversion berm according to Detail E157-08.
3. For diversions in place longer than one workday, ensure the height of the diversion berm is 1 foot higher than the 2-year storm.
4. Design dewatering system for expected flows. At a minimum, design the system for a 2-year, 24-hour event. Have spare pumps on site for replacement in the event of pump failure or higher than anticipated flow rates.
5. Suspend the inlet above the channel bottom to prevent sucking sediment into the hose. Place a mesh screen over the inlet to prevent injury to aquatic wildlife.
6. Stabilize the discharge point with native channel bottom stone, riprap, or sandbags to disperse energy and prevent erosion.
7. Direct water pumped from the work area into a filter bag (See Detail E157-10) or an approved sediment retention structure constructed at the downstream of the downstream diversion berm. Do not discharge the pumped water from the work area directly to the stream.
8. Remove dewatering system and restore the area to pre-diversion conditions within 5 days after dewatering is no longer needed.

ADAPTED FROM:
WEST VIRGINIA DEPARTMENT OF ENVIRONMENT PROTECTION
EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL,
FIGURE 3.21-12

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
U.S. CUSTOMARY DETAIL
TEMPORARY DIVERSION BERM BYPASS PUMPING
DETAIL APPROVED FOR USE
APPROVED: NOVEMBER 2020
DETAIL E157-09

STATE	PROJECT	SHEET NUMBER

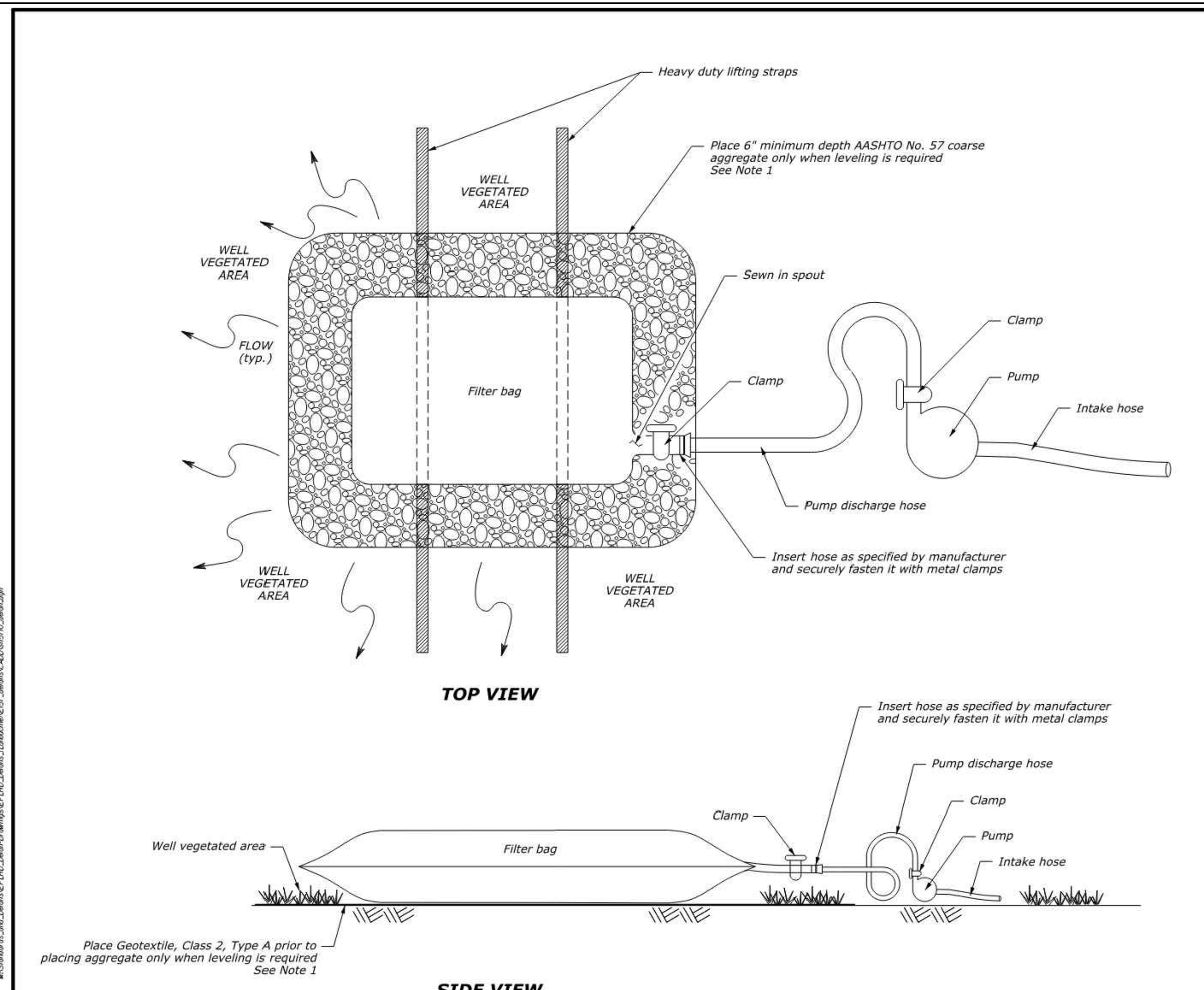


NOTES:
1. The options shown are suggested configurations for diverting the stream during construction operations. The Contractor may choose an alternate means of diverting the stream (including any approved prefabricated or portable diversion berms, dams, etc.). As a minimum, provide a temporary diversion berm with a minimum height equivalent to the water surface elevation with 6-inch minimum freeboard. Submit plans for temporary stream diversion to the CO for approval prior to stallation.
2. Construct temporary diversion according to Subsection 157.10.
3. Place sandbags to form a pyramid by laying equal numbers of rows on the bottom as there are vertical course. Upper rows of sandbags should overlap the joints in lower rows.
4. Place a maximum of one diversion in the stream at any given time.
5. While in use, inspect and maintain the temporary diversion berm daily. Repair as needed after rainfall events or as directed by the CO. Remove sediment when deposits reach half the height of the sandbag barrier.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
U.S. CUSTOMARY DETAIL
TEMPORARY IN-STREAM DIVERSION BERM METHODS
DETAIL APPROVED FOR USE
DETAIL E157-08

STATE	PROJECT	SHEET NUMBER



NOTES:
1. Locate filter bags in level areas (less than 5% grade) or as approved by the CO. When level areas are not available, place geotextile and coarse aggregate to level the filter bags.
2. Locate filter bags in areas accessible by equipment for maintenance and removal.
3. Insert a maximum of one hose in each filter bag at any given time.
4. Inspect filter bags daily. Replace filter bags when 50% of the sediment capacity has been reached or when there is a failure. Have spare filter bags on site for replacement.
5. Do not permit discharge from the filter bags to drain back into work or access areas of the project. Discharge onto stable and erosion resistant areas.
6. Do not cut or empty filter bags on site. Restore the area according to Subsection 157.15.

ADDITIONAL NOTES:
- GEOTEXTILE BAG MATERIAL BASED ON PARTICLE SIZE IN PUMPED WATER, I.E., FOR COARSE PARTICLES A WOVEN MATERIAL; FOR SILTS/CLAYS A NON-WOVEN MATERIAL.
- DO NOT OVER PRESSURIZE BAG OR USE BEYOND CAPACITY.
- LOCATE DISCHARGE SITE ON FLAT UPLAND AREAS AS FAR AWAY AS POSSIBLE FROM STREAMS, WETLANDS, OTHER RESOURCES, AND POINTS OF CONCENTRATED FLOW.
- DOWNGRADIENT FROM RECEIVING AREA MUST BE WELL VEGETATED OR OTHERWISE STABLE FROM EROSION, E.G., FOREST FLOOR OR COARSE GRAVEL/ STONE.
- DISCHARGE LOCATION SHALL MEET ALL REGULATORY SETBACKS FROM WETLANDS AND OTHER WATER COURSES.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
U.S. CUSTOMARY DETAIL
FILTER BAG
DETAIL APPROVED FOR USE
APPROVED: FEBRUARY 2012
DETAIL E157-10

3 TEMPORARY DEWATERING MEASURES
NOT TO SCALE

Bowman
205 Van Buren Street, Suite 126, Nashville, TN 37208
Phone: (615) 649 - 7610 | www.bowman.com

STATE OF NEW HAMPSHIRE
PROFESSIONAL ENGINEER
LICENSED

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS

DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

EROSION CONTROL DETAILS

C3-01

PREVIOUS PERMIT APPROVAL & PLAN

WETLANDS AND NON-SITE SPECIFIC PERMIT 2024-00119 PAGE 1 OF 2

PERMITTEE: **HCA HEALTH SERVICES OF NEW HAMPSHIRE**
PO BOX 80610
INDIANAPOLIS IN 46580

NOTE CONDITIONS

PROJECT LOCATION: **333 BORTHWICK AVE, PORTSMOUTH TAX MAP 240 LOT 2-1**
WATERBODY: **UNNAMED WETLAND**
APPROVAL DATE: **JUNE 06, 2024** **EXPIRATION DATE: JUNE 06, 2029**

Based upon review of permit application 2024-00119 in accordance with RSA 482-A and RSA 485-A:17, the New Hampshire Department of Environmental Services (NHDES) hereby issues this Wetlands and Non-Site Specific Permit. To validate this Permit, signatures of the Permittee and the Principal Contractor are required.

PERMIT DESCRIPTION: Retain 200 square feet (SF) of dredge and fill to man-made palustrine emergent wetland to construct a building expansion for an existing hospital. Restore 2,918 SF of temporary impact to palustrine emergent wetland and 961 SF within the 100-foot duly designated prime wetland buffer of Portsmouth 015 for construction access.

Waive Env-Wt 306.05(a)(1) and Env-Wt 311.10 requiring applicant to provide a wetland delineation and functional assessment for all wetlands on the property.

THIS PERMIT IS SUBJECT TO THE FOLLOWING PROJECT-SPECIFIC CONDITIONS:
1. All work shall be done in accordance with the approved plans dated December 7, 2023 by Kimley-Horn and Associates, Inc., and received by the NH Department of Environmental Services (NHDES) on January 17, 2024, in accordance with Env-Wt 307.16 and Env-Wt 524.05(b).
2. All work shall be conducted and maintained in such a way as to protect water quality as required by Rule Env-Wt 307.03(a) through (h).
3. All temporary and permanent filling activities shall meet all of the conditions listed in Rule Env-Wt 307.11(a) through (l).
4. Restoration of all temporary impacts shall meet all of the conditions listed in Rule Env-Wt 307.12(a) through (i).
5. In accordance with Env-Wt 307.12(i), 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 post-construction soil layering and vegetation schemes are as close as practicable to pre-construction conditions.
6. In accordance with Env-Wt 307.12(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.
7. In accordance with Env-Wt 307.18(c), a report that describes the monitoring conducted and date(s) of inspections, and includes photos showing the extent of jurisdictional impacts, areas of restoration, and progress of any plantings shall be submitted to the department.

THIS PERMIT IS SUBJECT TO THE FOLLOWING GENERAL CONDITIONS:

1. Pursuant to RSA 482-A:12, a copy of this permit shall be posted in a secure manner in a prominent place at the site of the approved project.
2. In accordance with Env-Wt 313.01(a)(5), and as required by RSA 482-A:11, II, work shall not infringe on the property rights or unreasonably affect the value or enjoyment of property of abutting owners.
3. In accordance with Env-Wt 314.01, a standard permit shall be signed by the permittee, and the principal contractor who will build or install the project prior to start of construction, and will not be valid until signed.
4. In accordance with Env-Wt 314.03(a), the permittee shall notify the department in writing at least one week prior to commencing any work under this permit.
5. In accordance with Env-Wt 314.08(a), the permittee shall file a completed notice of completion of work and certificate of compliance with the department within 10 working days of completing the work authorized by this permit.
6. In accordance with Env-Wt 314.06, transfer of this permit to a new owner shall require notification to, and approval of, the NHDES.
7. The permit holder shall ensure that work is done in a way that protects water quality per Env-Wt 307.03; protects fisheries and breeding areas per Env-Wt 307.04; protects against invasive species per Env-Wt 307.05; meets dredging activity conditions in Env-Wt 307.10; and meets filling activity conditions in Env-Wt 307.11.
8. This project has been screened for potential impact to known occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or only cursory surveys have been performed, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3.
9. In accordance with Env-Wt 307.06(a) through (c), no activity shall jeopardize the continued existence of a threatened or endangered species, a species proposed for listing as threatened or endangered, or a designated or proposed critical habitat under the Federal Endangered Species Act, 16 U.S.C. §1531 et seq.; State Endangered Species Conservation Act, RSA 212-A; or New Hampshire Native Plant Protection Act, RSA 217-A.
10. In accordance with Env-Wt 307.02, and in accordance with federal requirements, all work in areas under the jurisdiction of the U.S. Army Corps of Engineers (USACE) shall comply with all conditions of the applicable state general permit.

APPROVED:

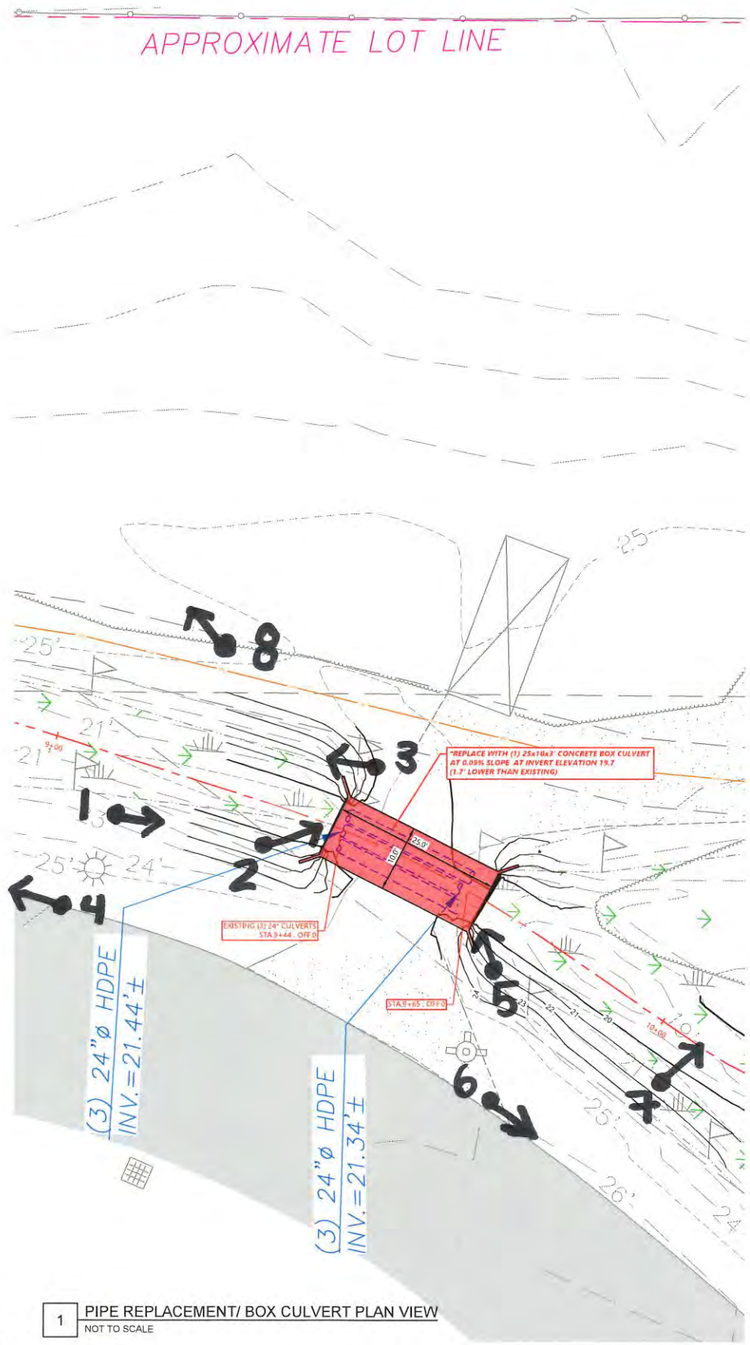
Eben M. Lewis
Southeast Region Supervisor, Wetlands Bureau
Land Resources Management, Water Division

THE SIGNATURES BELOW ARE REQUIRED TO VALIDATE THIS PERMIT (Env-Wt 314.01).

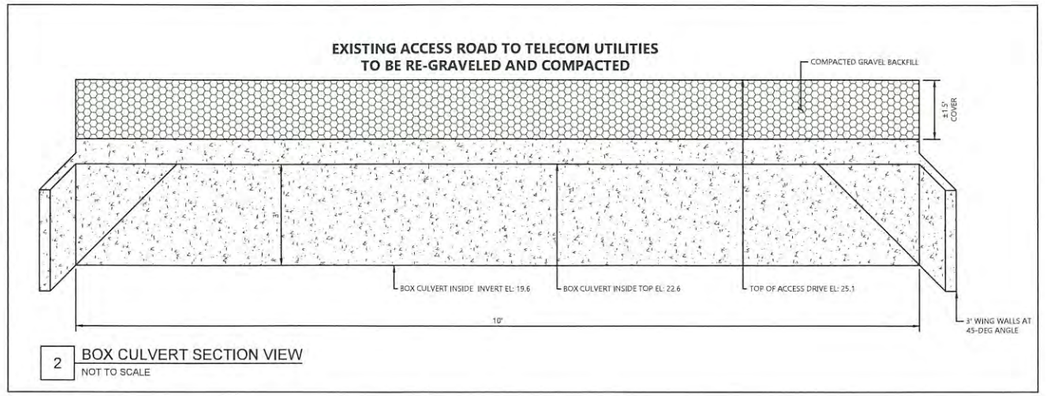
_____ _____

PERMITTEE SIGNATURE (required) PRINCIPAL CONTRACTOR SIGNATURE (required)

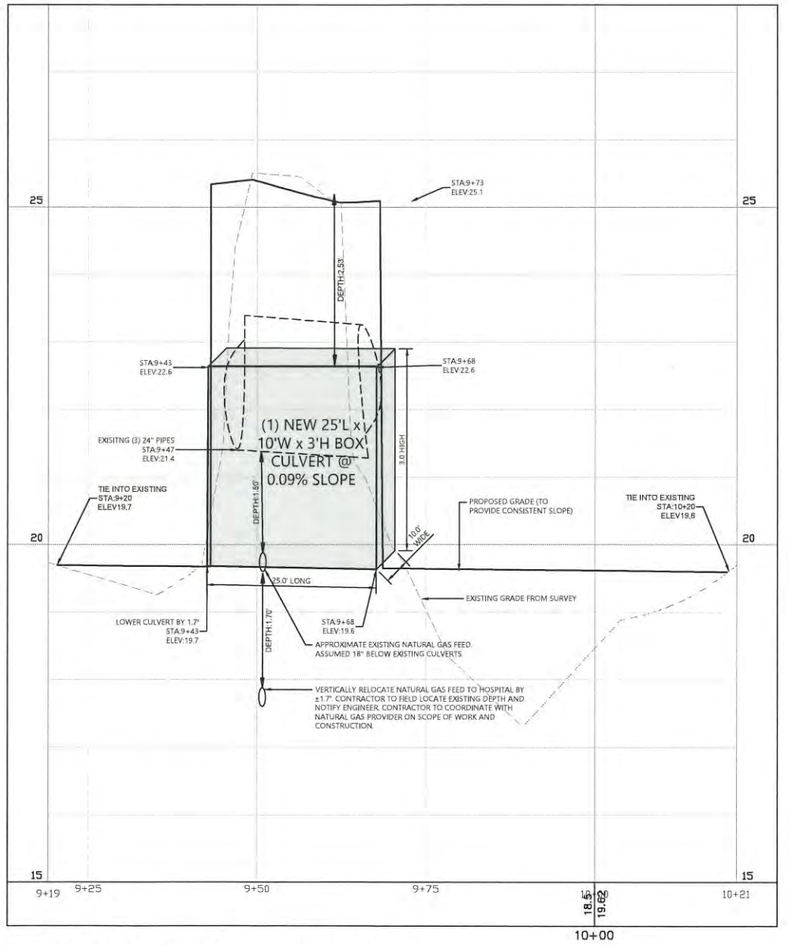
PHOTOLOG OF IMPACT AREAS



1 PIPE REPLACEMENT/ BOX CULVERT PLAN VIEW
NOT TO SCALE



2 BOX CULVERT SECTION VIEW
NOT TO SCALE



3 PIPE REPLACEMENT/ BOX CULVERT PROFILE
NOT TO SCALE

LEGEND

- EXISTING PROPERTY LINE
- EXISTING STAKED WETLAND
- EXISTING PAVEMENT
- GAS — EXISTING GAS MAIN
- 21 — EXISTING CONTOUR
- EXISTING STORM DRAIN
- 21 — PROPOSED CONTOUR
- PROPOSED CENTERLINE OF DREDGED DRAINAGE CHANNEL
- PROPOSED 25x7x3' BOX CULVERT

GRADING NOTES

1. CONTRACTOR RESPONSIBLE FOR VERIFYING LOCATION, SIZE, AND ELEVATIONS OF EXISTING UTILITIES AT CONNECTION POINTS PRIOR TO GRADING OR INSTALLATION OF ANY PROPOSED UTILITIES. CONTRACTOR TO IMMEDIATELY NOTIFY OWNERS REPRESENTATIVE IF DISCREPANCIES ARE FOUND.
2. ADDITIONAL EROSION CONTROL DEVICES TO BE USED AS REQUIRED BY LOCAL INSPECTOR.
3. DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION. MULCH, TEMPORARY SEEDINGS OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION UPON COMPLETION.
4. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING. IF UNABLE TO ACCOMPLISH, MULCH SHALL BE USED AS A TEMPORARY ECB IN CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER (DOES NOT APPLY TO ESTABLISHING WALLS) AND CUTS AND FILLS WITHIN BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS.
5. THE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A PUBLIC ROAD OR STREET.
6. EROSION AND SEDIMENT CONTROL DEVICES MUST BE DISPLAYED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR MUST CALL FOR AN INSPECTION TO OBTAIN A PERMIT TO GRADE. PLEASE CALL WITH ENOUGH LEAD TIME FOR AN INSPECTION TO MEET YOUR SCHEDULE.
7. SEDIMENT/EROSION CONTROL DEVICES MUST BE INSPECTED ACCORDING TO LOCAL AND STATE REQUIREMENTS. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MAY BE NECESSARY AS THE PROJECT PROGRESSES.
8. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
9. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
10. THE CONTRACTOR SHALL REVIEW SITE GEOTECHNICAL REPORT BEFORE COMMENCING GRADING OPERATIONS.
11. SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED AS PART OF THIS CONTRACT.
12. INSTALL SOD, MATTING, OR RIPRAP IN SWALES AS INDICATED ON GRADING PLANS AND EROSION CONTROL PLANS.
13. ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER WATER QUALITY MANAGEMENT FACILITIES SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S OR PROPERTY OWNER'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR CONTRACTOR.
14. UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER, DESIGNER, OR THEIR REPRESENTATIVES. BEFORE YOU DIG, CALL DIG SAFE—811
15. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES TO REMAIN
16. HORIZONTAL DATUM IS NAD83 (NSRS) 1983
17. VERTICAL DATUM BASED ON NAVD88.

0 10 20 Feet
HORIZ. SCALE 1":10'
VERT. SCALE: 1"=1'

Know what's below. Call before you dig.

Bowman

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

CULVERT REPLACEMENT- PLAN & PROFILE

C2-00

GOVE ENVIRONMENTAL SERVICES, INC.

333 Borthwick Ave, Portsmouth, NH
Photos taken 7/17/2024


Photo 1. Culvert entry looking east toward access road


Photo 2. Culvert entry from the west of access road

Photo 3. Tier 1 stream following west

Photo 4. Maintained grass area between stream and paved road with parking looking west

Photo 5. 3 culvert entry to the east of access road

Photo 6. Maintained grass and paved street with parking to tier one stream looking east

Photo 7. Outlet to scrub shrub/emergent wetland located east of tier one stream

Photo 8. Representative upland habitat located northwest of stream

FISH AND GAME COORDINATION PACKAGE

GOVE ENVIRONMENTAL SERVICES, INC.

July 12, 2024

NH Fish and Game Department
Attn. Wildlife Division, Nongame Program
11 Hazen Drive
Concord, N.H. 03301

Re: Request for NHFG Fis 1004 Consultation
NHB24-2219
Portsmouth regional hospital oncology expansion
333 Borwick Ave
Portsmouth, NH

Dear NHF&G Reviewer:

We are pleased to provide the following information and enclosed documents in support of a consultation under Fis1004 for a culvert replacement on the Portsmouth Regional Hospital property in Portsmouth, NH. Several figures depicting the location of the site and proposed work have been attached along with photographs of the site.

Fis 1004.03 Information Required for Consultation.

(a) In all cases where consultation is required, all information shall be provided to the department in electronic format at NHFGreview@wildlife.nh.gov , or in paper format at:

NH Fish and Game Department
Attn. Wildlife Division, Nongame Program
11 Hazen Drive
Concord, N.H. 03301

(b) In all communications, the NHB DataCheck tool results letter number shall be included in the email subject line and documents.

(c) The following information shall be provided to the department:

(1) A copy of the department of natural and cultural resources NHB DataCheck tool results letter, dated within one year of the date of the consultation request, and which includes the DataCheck tool results letter number;

NHB24-2219: Blandings Turtle, Marsh Wren, Sora

(2) The applicant's full name;

HCA Health Services of New Hampshire

(3) The applicant's mailing address;

PO box 80601, Indianapolis, IN, 46580

(4) The applicant's telephone number and email address to be used for the purpose of contact;

Trip DeMoss, Trip.DeMoss@hcahealthcare.com, 615-344-1604

(5) If the applicant is a corporation, firm, partnership, association, institution, or public or private agency, the name, mailing address, and email address of the person who will respond to requests for information on behalf of the applicant;

Brenden Walden Gove Environmental Services Inc.
bwalden@gesinc.biz
603-418-7260

(6) The name, mailing address, and email address of any person acting as an agent of the applicant, or any consultant who will submit information to the department on behalf of the applicant;

Brenden Walden Gove Environmental Services Inc.
bwalden@gesinc.biz
603-418-7260

(7) Description of the proposed action;

The proposed project is for a culvert replacement on the property that currently serves as an access to a gas utility station to the north of the property. The replacement of the three existing 24inch HDPE culverts to one single 25Lx10Wx3H box culvert will improve connectivity both for hydrology and aquatic organisms in the area.

(8) Description of the project parcel by reference to street address and town, and, if available, a geographical information system defined project boundary;

The project site is located at 333 Borthwick ave, Portsmouth NH and is comprised of one lot totaling 20.87 acres. (Assessor's Map 240 Lot 21).

(9) A listing of any state or federal permits which have been applied for, have been granted, or which will be necessary for the proposed action to proceed;

NH DES Wetlands Dredge and Fill Application (no file number yet)

(10) The current condition of the action area prior to any proposed modifications, including a description of known or discernible actions within the preceding 24 months that have altered the site, including but not limited to, timber harvests, significant impact from storms, removal of gravel or stone, or addition or removal of structures;

A recent Dredge and Fill permit was issued for after the fact work in an identified detention basin. No other alterations have occurred on site in the past 2 years.

(11) Any habitat features supporting or that could support threatened and endangered species that have been identified; and

Blanding's Turtle (*Emydoidea blandingii*)
Found in wetland habitats with permanent shallow water and emergent vegetation such as marshes, swamps, bogs, and ponds. Use vernal pools extensively in spring and while traveling through the landscape. May use slow rivers and streams as mechanisms for dispersal between wetlands. Extensive use of terrestrial habitats for nesting and travel among wetlands.

Marsh Wren (*Cistothorus palustris*)
Marsh Wrens occupy wetlands filled with cattails, sedges, bulrushes, and Phragmites as well as cordgrass-filled saltmarshes year-round. In the winter they also use brushy thickets near wetlands, tidal saltmarshes, and weedy agricultural canals.

Sora (*Porzana carolina*)
oras spend most of the year in freshwater and brackish wetlands with cattail, sedges, and rushes. During migration and winter, they also use wet pastures, ditches, impoundments, and flooded fields.

Areas suitable for all three species are present on the property however this is adjacent to a commercially developed area which may provide challenges to the species. Additionally, the culvert replacement will not have any long-term negative impacts to any of the identified species.

(12) A description of any conservation measures proposed by the applicant to avoid, minimize, or mitigate potential harm to threatened and endangered species and habitat determined to be critical, including but not limited to:

a. Design modifications to proposed actions to protect species from harm.

The applicant has proposed a larger culvert size instead of a direct replacement to the existing structures.

b. Modifications to proposed actions such as alteration of the timing of proposed actions to protect species from harm;

No alterations in timing have been proposed beyond construction occurring during low flow conditions.

c. Design crossing structures to maintain and enhance habitat quality and accommodate movement of species;

The overall design will enhance the opportunity of species movement from the current structure.

d. Education and training for construction personnel as to what construction activities have the potential to cause adverse impacts to species;

No education or training specific to this project is proposed.

e. Signage to identify specific locations where construction activities must avoid potential adverse impacts to species;

No signage is proposed at this time.

f. Continued research and monitoring of identified species;

No monitoring is proposed for this project.

g. Protection or restoration of wildlife corridors;

There are no specific protections or restoration activities with this project.

h. Maintenance, enhancement, or protection of habitat buffer areas; and

Beyond the crossing replacement there are no additional maintenance, enhancement or protections for other habitat areas.

i. Habitat protection, management, or restoration.

Beyond culvert replacement, there are no specific protections, management or restoration of jurisdictional areas on the property.

(d) An applicant seeking consultation to meet permit requirements under Env-Wt 311, Env-Wq 1406.06, or Env-Wq 1503.05, shall provide the following additional information to the department to initiate consultation:

(1) A topographic map identifying the action area at a scale of 1:24,000 or closer, and which shows property lines and the limits of proposed disturbance;

See attached USGS.

(2) An aerial photograph identifying the current condition of the action area at a scale of 1:24,000 or closer and which shows property lines and the limits of proposed disturbance;
See attached aerial imagery.

(3) Site photographs with dates and a photograph location plan, showing existing conditions, habitat features, and possible locations of identified threatened and endangered species, if known;

See attached impact photos.

(4) Project site plan sheets showing the area of proposed disturbance and location of any proposed new or modified structures;

See attached plans in the Bowman package.

(5) Any reports created to assess the site, including but not limited to wetland assessments, vernal pool surveys, or other site visit observations; and

There are no reports beyond the functions and values included in the dredge and fill application.

(6) Any other available information, from whatever source, that describe the potential impacts of the proposed action on listed species or habitat.

N/A

Fis 1004.04 Signatures and Certifications Required.

(a) Each document, or group of documents intended as a single submission, that is submitted to the department, including but not limited to applications, requests, and reports, shall:

(1) If submitted in paper format, be signed and dated by the applicant, owner or the agent of either, and show the typed or printed name and title, if applicable, of the individual who signed; or

(2) If submitted in electronic format, be electronically signed and dated by the applicant, owner or the agent of either, and show the name and title, if applicable, of the individual who signed.

(b) Each physical or electronic signature required by (a), above, shall constitute certification by the signer that:

(1) The information contained in or otherwise submitted with the document is true, complete, and not misleading to the best of the signer's knowledge and belief; and

(2) The signer understands that the submission of false, incomplete, or misleading information shall constitute grounds, pursuant to Fis 1004.13, for the department to:

a. Suspend consultation pending submission of true, complete, and not misleading information;

b. Terminate consultation;

c. Withdraw any recommendations made to the referring state agency under this part; or

d. Report the suspension, termination, or withdrawal of recommendations, and the full circumstances of the submission, to the referring state agency for action in the pending or completed request for a permit or other action.

*Signature:*_____ *Date:*_____

Name: Brenden Walden NH CWS# 297
Company: Gove Environmental Services, Inc.
Title: President

Appendices:

NHB
Aerial Photo
USGS Topo Map
WAP: Habitat Cover Map
WAP: Highest Ranked Wildlife Habitat
Map Wildlife Corridors Map
Wildlife Secondary Corridors Map
Prioritized Habitat Blocks
Conservation Parcels Map
Functions and Values Analysis
Photo Map
Photo Log
Plan Set Revision Date March 2024

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: Brenden Walden, Gove Environmental Services, Inc.
8 Continental Drive Bldg 2 Unit H
Exeter, NH 03833
info@gesinc.biz

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

cc: NHFG Review

Date: 07/26/2024 (valid until 07/26/2025)
Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits: NHDES - Standard Dredge & Fill - Minor, USACE - General Permit

NHB ID: NHB24-2219

Town: Portsmouth
Location: 333 Borthwick Avenue

Project Description: Culvert replacement on a tier one stream located in the rear of the property

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://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review. 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
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Marsh Wren (*Cistothorus palustris*)	--	--	Contact the NH Fish & Game Dept (see above).
Sora (*Porzana carolina*)	SC	--	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.

NHB24-2219


Portsmouth
Blanding's Turtle
Marsh Wren
Sora
Legend
Animal
Site bounds
towns
0
0.15
0.3
0.45
0.6
0.75
Miles

NHB24-2219 EOCODE: ARAAD04010*632*NH

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status		**Conservation Status**	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2011: Area 12906: 1 adult observed.
General Area: 2011: Area 12906: Marsh along railroad tracks.
General Comments: --
Management Comments: --

Location

Survey Site Name: Meadowbrook
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 1.9 acres Elevation:

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

Directions: 2011: Area 12906: Marsh adjacent to 333 Borthwick Avenue, behind Portsmouth Regional Hospital.

Dates documented

First reported: 2011-05-07 Last reported: 2011-05-07

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.

NHB24-2219 EOCODE: ABPBG10020*019*NH

New Hampshire Natural Heritage Bureau - Animal Record

Marsh Wren (*Cistothorus palustris*)

Legal Status	Conservation Status
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Not listed	State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2020: 8 observed between 5/2 and 8/17. 2019: 3 observed between 5/12 and 6/30. Includes marsh area on north side of railroad tracks. 2016: 2 observed between 5/8 and 7/23. 2013: 3 observed between 5/18 and 5/26. 2012: Species observed on 5/18 and 5/19. 2011: Species observed on 5/21. 2010: 1 observed between 5/17 and 5/22. 2009: 3 observed on 6/20. 2006: Species observed on 5/25. 1997: 2 observed on 6/22.
General Area: --
General Comments: 2020: Includes data from NH Auduon sites "Portsmouth City Park" and "Borthwick Ave. Marsh".
Management Comments: --

Location

Survey Site Name: Portsmouth Hospital Marsh
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 33.6 acres Elevation:

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

Directions: --

Dates documented

First reported: 1997-06-22 Last reported: 2020-08-17

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.

NHB24-2219 EOCODE: ABNME08020*010*NH

New Hampshire Natural Heritage Bureau - Animal Record

Sora (*Porzana carolina*)

Legal Status	**Conservation Status**
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Special Concern	State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2021: 2 observed between 5/12 and 6/4. 2020: 2 observed between 5/1 and 7/14. 2019: 1 observed 5/9 and 6/3. 2012: 1 observed between 5/18 and 5/26. 2011: 1 observed on 5/21. 2009: 2 observed between 5/3 and 5/24. 1997: 2 observed on 6/22. 1996: 1 observed on 5/15.
General Area: --
General Comments: --
Management Comments: --

Location

Survey Site Name: Portsmouth Hospital Marsh
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 33.6 acres Elevation:

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

Directions: --

Dates documented

First reported: 1996-05-15 Last reported: 2021-06-04

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.

Aerial

Legend

- State
- County
- City/Town

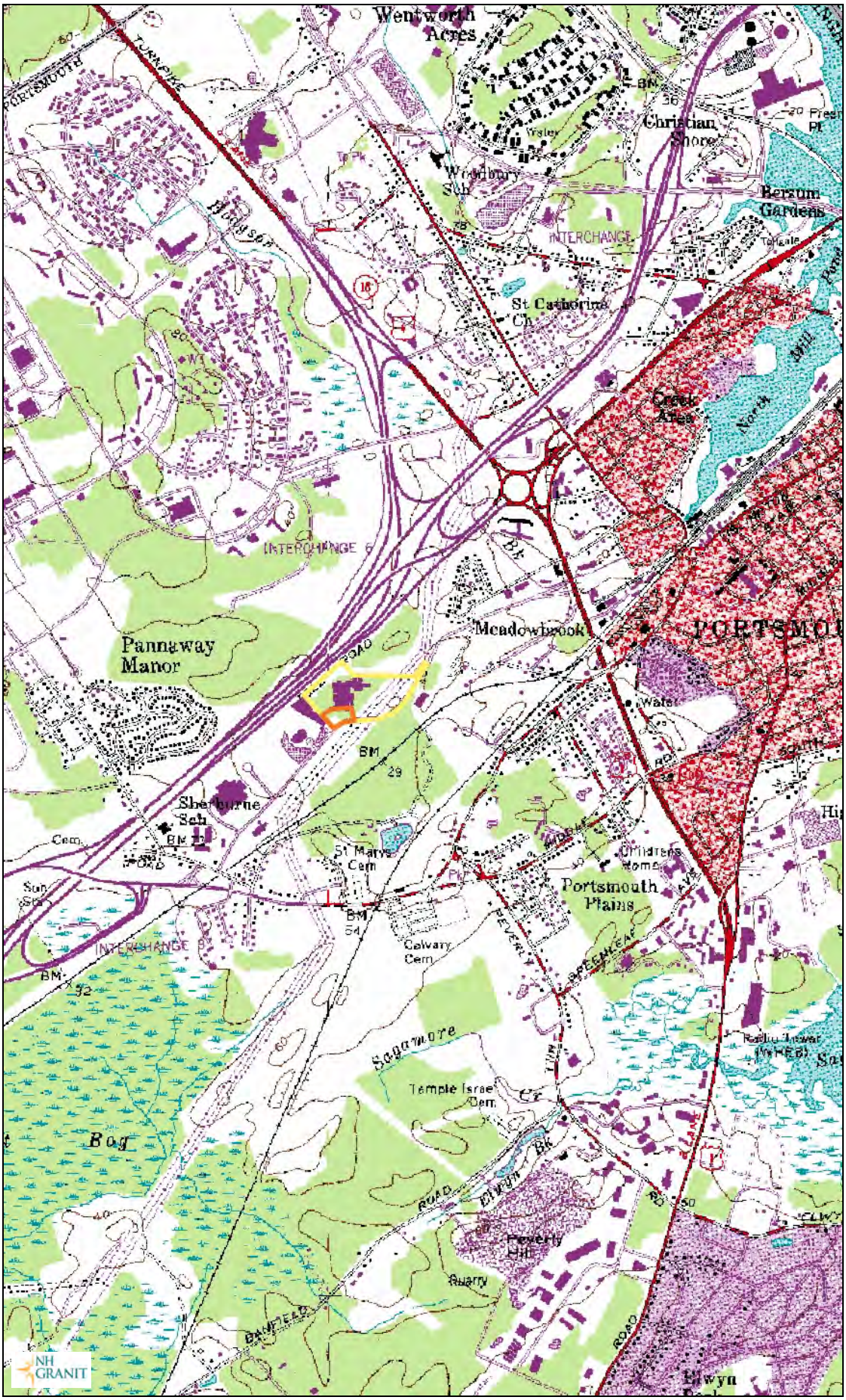
Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

USGS



Legend

- State
- County
- City/Town

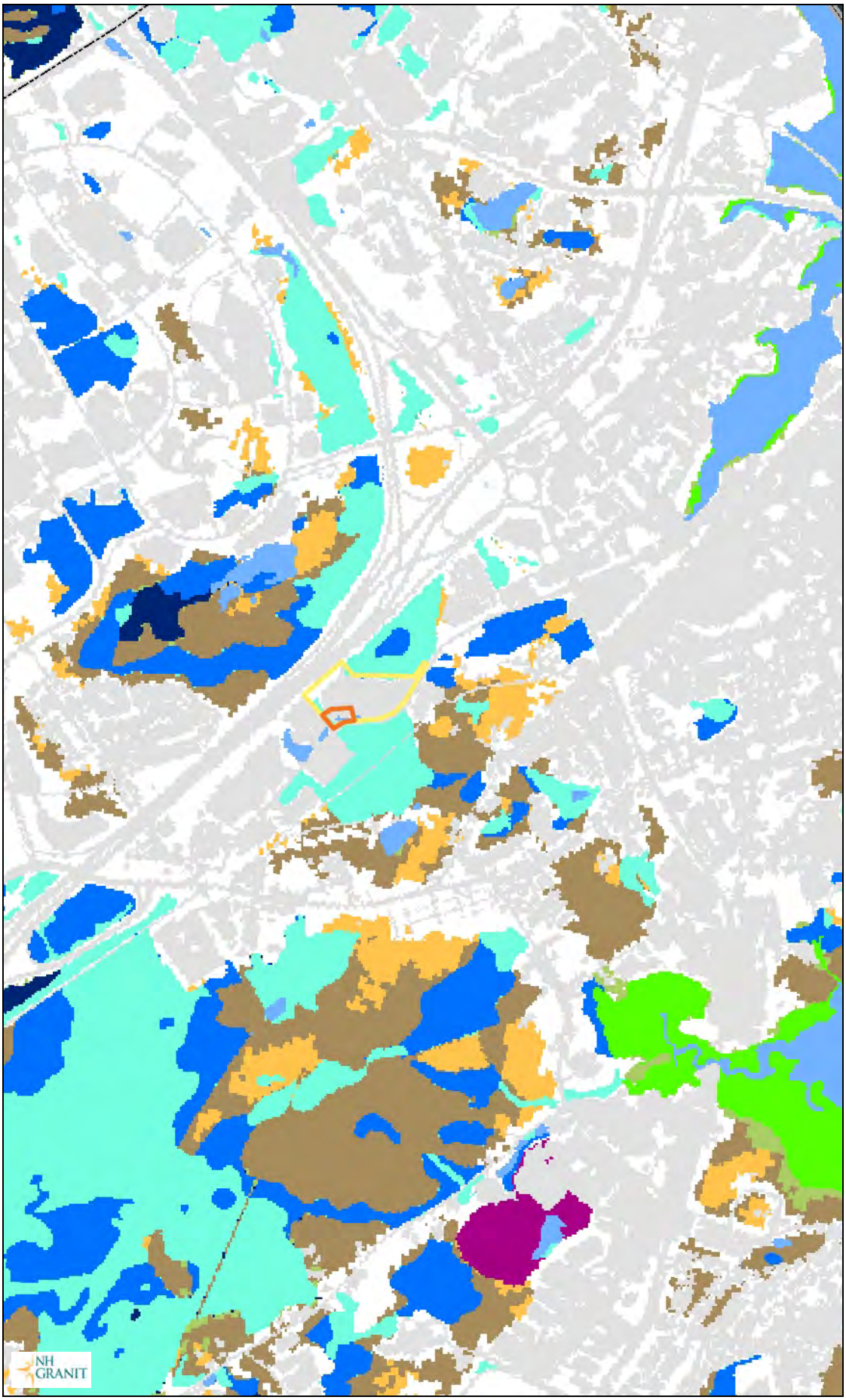
Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Habitat Cover



Legend

- State
- County
- City/Town

WAP 2020: Wildlife Habitat l Cover

- Alpine
- Appalachian oak-pine
- Cliff and Talus slope
- Coastal island and Rocky coast
- Developed Impervious
- Developed or Barren land
- Dune
- Floodplain forest
- Grassland
- Hemlock-hardwood-pine
- High-elevation spruce-fir
- Lowland spruce-fir
- Northern hardwood-conifer
- Northern swamp
- Open water
- Peatland
- Pine barren
- Rocky ridge
- Salt marsh
- Sand/Gravel
- Temperate swamp
- Marsh and shrub wetland

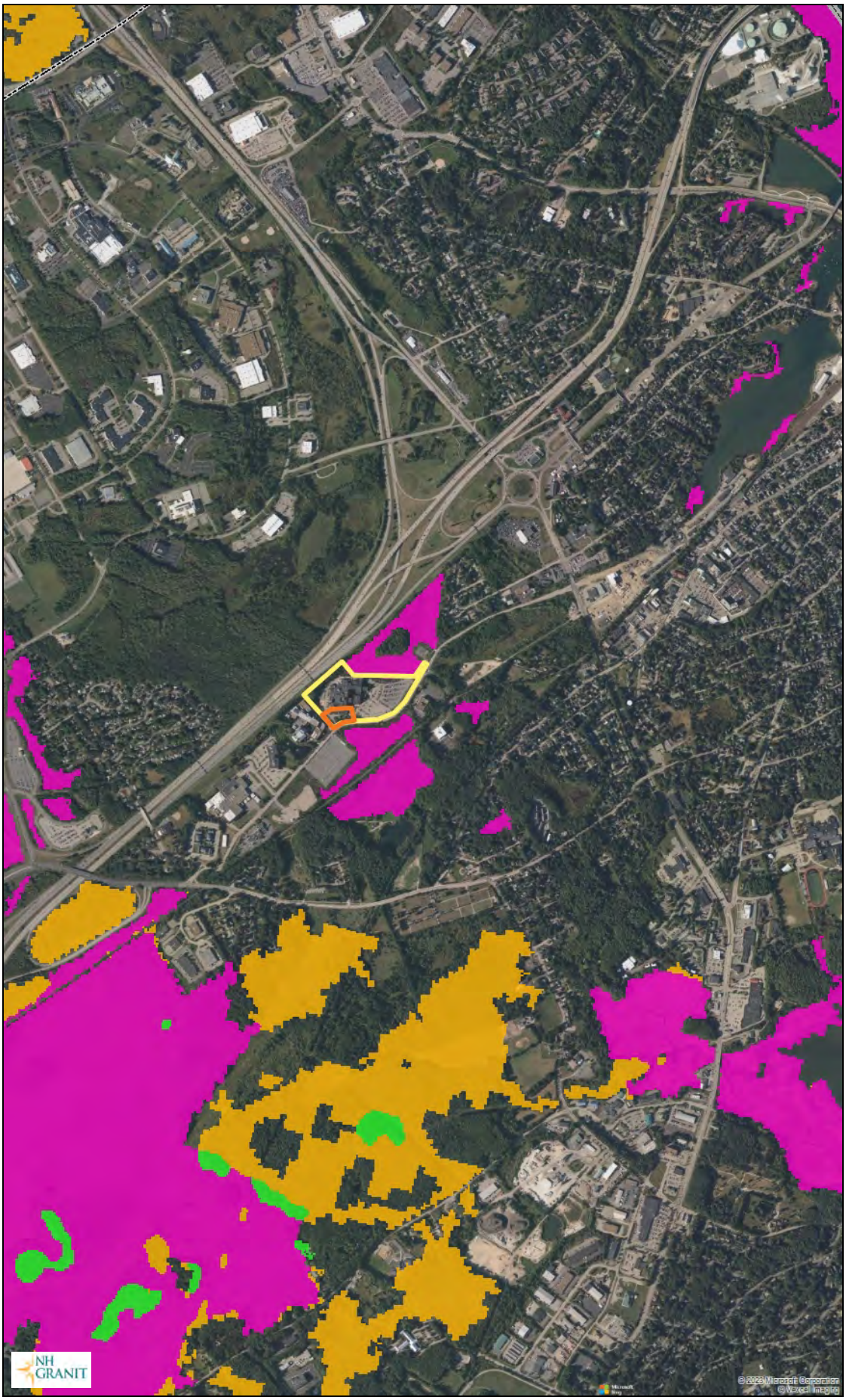
Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Highest Ranked Habitat



Legend

- State
- County
- City/Town

WAP 2020: Highest Ranked Wildlife Habitat

- 1 Highest Ranked Habitat in NH
- 2 Highest Ranked Habitat in Regior
- 3 Supporting Landscape

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Wildlife Corridors

Legend

- Wildlife Corridors
- State
- County
- City/Town

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Secondary Wildlife Corridors

Legend

- Wildlife Secondary Corridors
- State
- County
- City/Town

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Prioritized Habitat Blocks

Legend

- Prioritized Habitat Blocks
- State
- County
- City/Town

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Conservation Land

Legend

- State
- County
- City/Town
- Conservation and Public Lar

Map Scale

1: 24,000

Map Generated: 1/10/2024

Notes

Date: September 25, 2024

Subject: Functions and Values Analysis

Re: Minor Dredge and Fill Application
333 Borthwick Ave, Portsmouth

The subject property located on 333 Borthwick Ave, in Portsmouth, NH, identified by Tax map 240 Lot 2-1. The proposed project is for the replacement of an existing tier 1 stream crossing currently utilized as a utility access for a natural gas station on the north of the property. The project area was reviewed and field delineated by Brenden Walden, a NH CWS, in the fall of 2019 with additional flagging to encompass the project area done during February of 2024. During the wetland delineation of the property, two wetlands were identified within the scope of the project area. These wetlands area identified and discussed below as Wetland A & B. A wetland function and value assessment was conducted using the US Army Corps Highway Methodology for the three wetlands identified and will be discussed in more detail below.

The US Army Corps Highway Methodology considers 13 categories of function or value within a particular wetland area:

1. **Groundwater recharge/discharge:** This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where ground water can be discharged to the surface.
2. **Floodflow Alteration:** This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.
3. **Fish and Shellfish Habitat:** This function considers the effectiveness of seasonal or permanent water bodies associated with the wetland in question for fish and shell fish habitat.
4. **Water Quality—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.
5. **Water Quality—Nutrient Removal/Retention/Transformation:** This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers or estuaries.
6. **Production Export:** This function relates to the effectiveness of the wetland to produce food or usable products for human, or other living organisms.
7. **Sediment/Shoreline Stabilization:** This function relates to the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.
8. **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.
9. **Recreation:** This value considers the effectiveness of the wetland and associated watercourses to provide recreational opportunities such as 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, whereas non-consumptive opportunities do not.

10. **Educational/Scientific Value:** This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.
11. **Uniqueness/Heritage:** This value relates to the effectiveness of the wetland or its associated water bodies to produce certain special values. Special values may include such things as archeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geological features.
12. **Visual Quality/Aesthetics:** This value relates to the visual and aesthetic qualities of the wetland.
13. **Threatened or Endangered Species Habitat:** This value relates to the effectiveness of the wetland or associated water bodies to support threatened or endangered species

Functions are self-sustaining properties of wetlands, which exist in the absence of human involvement. Values refers to the benefits gained by human society from a given wetland or ecosystem and their inherit functions. Functions and values identified as "Principal" have been determined to be significant features of the wetland being evaluated. This does not necessarily indicate the wetland supports these functions or values at a significant level in comparison to other wetlands in the region or even near the site. A discussion of the evaluated areas and the associated functions and values is provided in the sections below.

Wetland A:

Wetland A is a man-made wetland system designed to direct stormwater around the hospital ground with hydrologic connections to adjacent wetlands through existing culverts. The wetland is dominantly vegetated with Phragmites, with some shrubs and trees existing along the boundary of the wetland. Areas of open water with unknown depth are present, and there is identified flow occurring near the norther outlet structure. Functions and values associated with this wetland identified with this wetland include, Groundwater Recharge/Discharge, Floodlfow Alteration, Sediment and Toxicant Retention, Nutrient Removal, Production Export, Sediment and Shorleline Stabilization, and Wildlife Habitat. These functions are attributed to the nature of the wetland's development, existing dense vegetation, association with a watercourse and hydrologic connectivity up and down stream. The proposed impacts to this wetland for the replacement and improvement of the existing culvert from three 24-inch HDPE culverts to one single 10 x 3 box culvert will have no observable impact to the identified functions and values. Additionally, this wetland will have increase connectivity and passage for aquatic organisms.

Wetland B:

Wetland B is the down stream more natural wetland system that extends off site. This wetland is composed of areas of emergent vegetation adjacent to the existing parking area with dense scrub shrub vegetation adjacent to the existing watercourse. Functions and values associated with this wetland identified with this wetland include, Groundwater Recharge/Discharge, Floodlfow Alteration, Sediment and Toxicant Retention, Nutrient Removal, Production Export, Sediment and Shorleline Stabilization, and Wildlife Habitat. These functions are attributed to the nature of the existing dense vegetation, association with a watercourse and hydrologic connectivity up and down stream. The proposed impacts to this wetland for the replacement and improvement of the existing culvert from three 24-inch HDPE culverts to one single 10 x 3 box culvert will have no observable impact to the identified functions and values. Additionally, this wetland will have increase connectivity and passage for aquatic organisms.

Overall, the applicant has limited all wetland impacts to the greatest extent practicable and designed the project to be the least impacting alternative. The replacement of an existing structure will provide an overall net benefit to the existing functions and values that exist within the two wetland systems.

This concludes the functions and values analysis for the Minor Dredge and Fill Application for 333 Borthwick Ave, Portsmouth. If you have any other questions or believe I can assist you and any other way please feel free to contact me either by email: bwalden@gesinc.biz or by phone: 207- 710-7863.

Sincerely

Brenden Walden

President & Wetland Scientist
Gove Environmental Services, Inc


B
A

Wetland Function-Value Evaluation Form

Total area of wetland unknown Human made? yes Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Commercial development and roadway Distance to nearest roadway or other development >50ft

Dominant wetland systems present R2UBFx Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? lower

How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. A

Latitude _____ Longitude _____

Prepared by: BMW Date 12/7/23

Wetland Impact:
Type N/a Area N/a

Evaluation based on:
Office x Field x

Corps manual wetland delineation completed? Y x N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1,2,4,6,7,9,15	y	wetland associated with a stream, has high density of vegetation, shows varying levels of water depth
Floodflow Alteration	y	3,4,5,6,7,8,9,10,11,12,13,15,16,18	y	Wetland associated with a watercourse hydrologically connected to upstream and down stream wetlands.
Fish and Shellfish Habitat	n	hydroperiod unknown	n	Level of permanent water depth is unknown
Sediment/Toxicant Retention	y	1,2,3,4,5,6	y	Slow moving water with high density of vegetation
Nutrient Removal	y	3,4,5,6,7,8,9,10,11	y	dense vegetation for nutrient acquisition
Production Export	Y	1,2,5,7,10,11,	y	associated with a watercourse with potential for flushing
Sediment/Shoreline Stabilization	Y	1,2,3,4,12,13,15	y	bank of water course is effectively stable from existing vegetation
Wildlife Habitat	Y	7,8,13,17,18,19,20,21	Y	man influenced wetland with associated water course and dense vegetation
Recreation	n	10,11	n	private property
Educational/Scientific Value	n	11,13,14	n	private property
Uniqueness/Heritage	n	1,10,11,17,	n	private property
Visual Quality/Aesthetics	n	6,9,12	n	private property
ES Endangered Species Habitat		See NHB		
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland unknown Human made? yes Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Commercial development and roadway Distance to nearest roadway or other development >50ft

Dominant wetland systems present PSS1/EM1C Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? lower

How many tributaries contribute to the wetland? unknown Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. B

Latitude _____ Longitude _____

Prepared by: BMW Date 12/7/23

Wetland Impact:
Type Fill Area 200SF

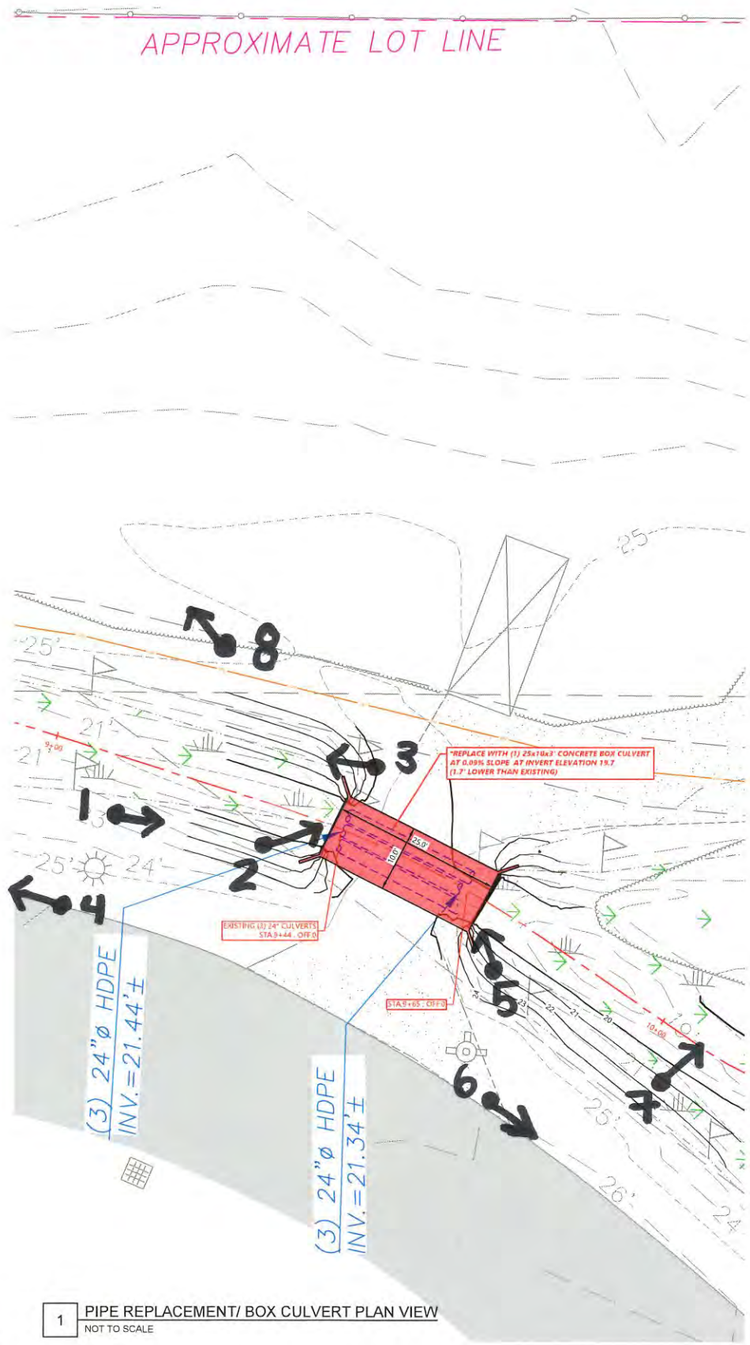
Evaluation based on:
Office x Field x

Corps manual wetland delineation completed? Y x N _____

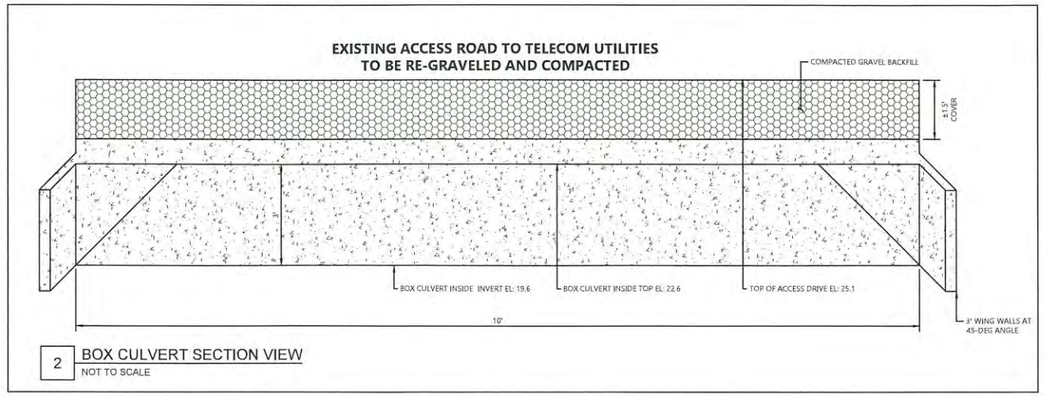
Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	y	1,2,4,6,7,9,15	y	wetland associated with a stream, has high density of vegetation, shows varying levels of water depth
Floodflow Alteration	y	3,4,5,6,7,8,9,10,11,12,13,15,16,18	y	Wetland associated with a watercourse hydrologically connected to upstream and down stream wetlands.
Fish and Shellfish Habitat	n	hydroperiod unknown	n	Level of permanent water depth is unknown
Sediment/Toxicant Retention	y	1,2,3,4,5,6	y	Slow moving water with high density of vegetation
Nutrient Removal	y	3,4,5,6,7,8,9,10,11	y	dense vegetation for nutrient acquisition
Production Export	Y	1,2,5,7,10,11,	y	associated with a watercourse with potential for flushing
Sediment/Shoreline Stabilization	Y	1,2,3,4,12,13,15	y	bank of water course is effectively stable from existing vegetation
Wildlife Habitat	Y	7,8,13,17,18,19,20,21	Y	Large wetland with associated water course and dense vegetation
Recreation	n	10,11	n	private property
Educational/Scientific Value	n	11,13,14	n	private property
Uniqueness/Heritage	n	1,10,11,17,	n	private property
Visual Quality/Aesthetics	n	6,9,12	n	private property
ES Endangered Species Habitat		See NHB		
Other				

Notes:

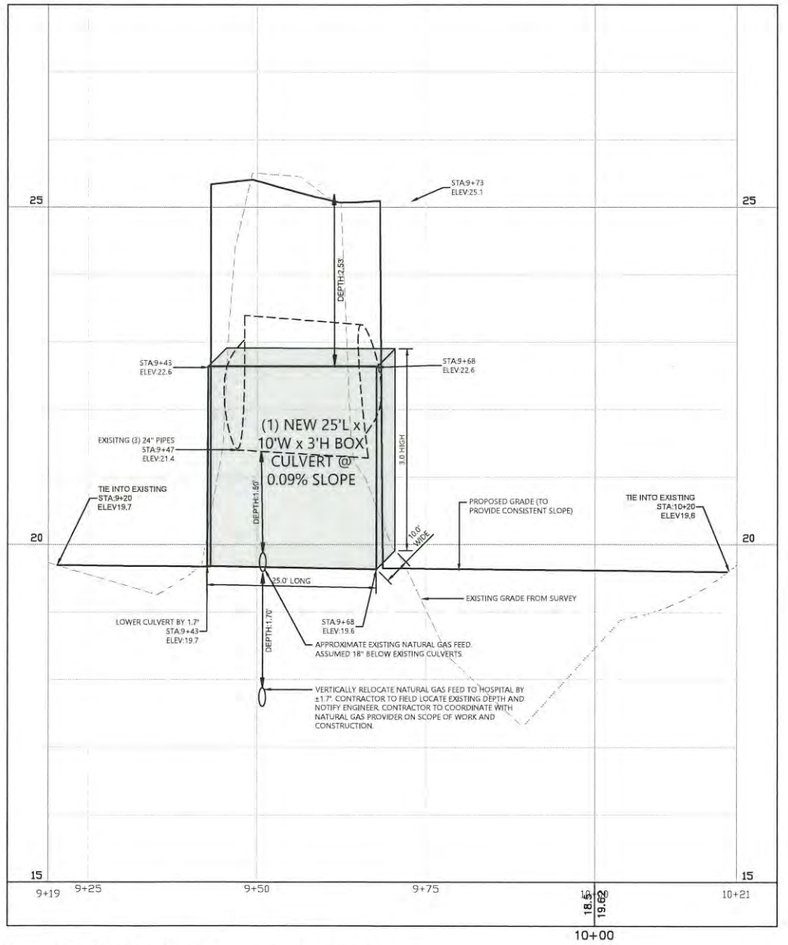
* Refer to backup list of numbered considerations.



1 PIPE REPLACEMENT/ BOX CULVERT PLAN VIEW
NOT TO SCALE



2 BOX CULVERT SECTION VIEW
NOT TO SCALE



3 PIPE REPLACEMENT/ BOX CULVERT PROFILE
NOT TO SCALE

LEGEND

- EXISTING PROPERTY LINE
- EXISTING STAKED WETLAND
- EXISTING PAVEMENT
- GAS — EXISTING GAS MAIN
- 21 — EXISTING CONTOUR
- EXISTING STORM DRAIN
- 21 — PROPOSED CONTOUR
- PROPOSED CENTERLINE OF DREDGED DRAINAGE CHANNEL
- PROPOSED 25x7x3' BOX CULVERT

GRADING NOTES

1. CONTRACTOR RESPONSIBLE FOR VERIFYING LOCATION, SIZE, AND ELEVATIONS OF EXISTING UTILITIES AT CONNECTION POINTS PRIOR TO GRADING OR INSTALLATION OF ANY PROPOSED UTILITIES. CONTRACTOR TO IMMEDIATELY NOTIFY OWNERS REPRESENTATIVE IF DISCREPANCIES ARE FOUND.
2. ADDITIONAL EROSION CONTROL DEVICES TO BE USED AS REQUIRED BY LOCAL INSPECTOR.
3. DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION. MULCH, TEMPORARY SEEDINGS OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION UPON COMPLETION.
4. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING. IF UNABLE TO ACCOMPLISH, MULCH SHALL BE USED AS A TEMPORARY ECB IN CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER (DOES NOT APPLY TO ESTABLISHING WALLS) AND CUTS AND FILLS WITHIN BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS.
5. THE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A PUBLIC ROAD OR STREET.
6. EROSION AND SEDIMENT CONTROL DEVICES MUST BE DISPLAYED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR MUST CALL FOR AN INSPECTION TO OBTAIN A PERMIT TO GRADE. PLEASE CALL WITH ENOUGH LEAD TIME FOR AN INSPECTION TO MEET YOUR SCHEDULE.
7. SEDIMENT/EROSION CONTROL DEVICES MUST BE INSPECTED ACCORDING TO LOCAL AND STATE REQUIREMENTS. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MAY BE NECESSARY AS THE PROJECT PROGRESSES.
8. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
9. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
10. THE CONTRACTOR SHALL REVIEW SITE GEOTECHNICAL REPORT BEFORE COMMENCING GRADING OPERATIONS.
11. SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED AS PART OF THIS CONTRACT.
12. INSTALL SOD, MATTING, OR RIPRAP IN SWALES AS INDICATED ON GRADING PLANS AND EROSION CONTROL PLANS.
13. ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER WATER QUALITY MANAGEMENT FACILITIES SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S OR PROPERTY OWNER'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR CONTRACTOR.
14. UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER, DESIGNER, OR THEIR REPRESENTATIVES. BEFORE YOU DIG, CALL DIG SAFE—811
15. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES TO REMAIN
16. HORIZONTAL DATUM IS NAD83 (NSRS) 1983
17. VERTICAL DATUM BASED ON NAVD88.

0 10 20 Feet
HORIZ. SCALE 1":10'
VERT. SCALE: 1"=1'

Know what's below. Call before you dig.

Bowman

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

CULVERT REPLACEMENT- PLAN & PROFILE

C2-00

GOVE ENVIRONMENTAL SERVICES, INC.

333 Borthwick Ave, Portsmouth, NH
Photos taken 7/17/2024


Photo 1. Culvert entry looking east toward access road


Photo 2. Culvert entry from the west of access road

Photo 3. Tier 1 stream following west

Photo 4. Maintained grass area between stream and paved road with parking looking west

Photo 5. 3 culvert entry to the east of access road

Photo 6. Maintained grass and paved street with parking to tier one stream looking east

Photo 7. Outlet to scrub shrub/emergent wetland located east of tier one stream

Photo 8. Representative upland habitat located northwest of stream

GRADING AND DRAINAGE PLANS FOR

HCA PORTSMOUTH REGIONAL HOSPITAL

CULVERT REPLACEMENT - UTILITY ACCESS DRIVE

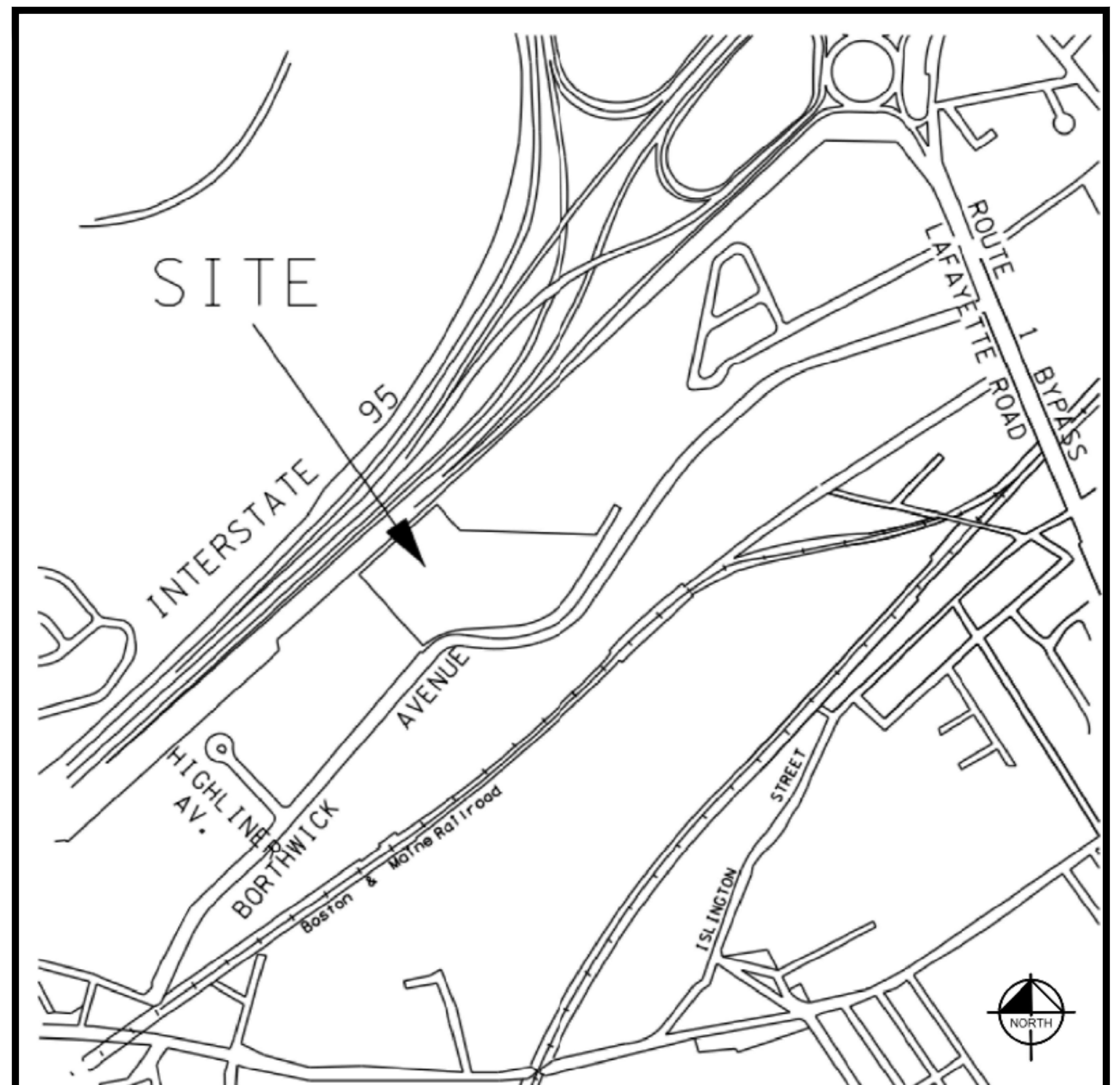
333 BORTHWICK AVE, PORTSMOUTH, NH 03801

SUBMITTAL SET: JUNE 4, 2024

SITE DATA TABLE	
OWNER OF RECORD	HCA HEALTH SERVICES OF NH INC D/B/A PRH 32902
SITE ADDRESS	333 BORTHWICK AVE, PORTSMOUTH, NH 03801
TAX MAP & LOT	TAX MAP 240, LOT 2-1
ZONING	OR - OFFICE RESEARCH
LAND USE	HOSPITAL
PROPERTY AREA	± 20.87 AC

PROJECT PURPOSE

AT THE REQUEST OF THE CITY OF PORTSMOUTH, NH - THIS PROJECT INTENDS TO RE-GRADE A HISTORIC MANMADE SWALE TO THE ORIGINAL 1988 DRAINAGE DESIGN BY *KIMBALL CHASE*, THAT ULTIMATELY CONVEYS PUBLIC STORMWATER RUNOFF FROM SOUTH OF BORTHWICK AVENUE TO NORTH OF INTERSTATE 95 IN PORTSMOUTH, NEW HAMPSHIRE. THE SUBJECT HISTORIC MANMADE SWALE HAS NOW BEEN MAPPED AS STATE WETLANDS. HCA HEALTH SERVICES OF NH INC D/B/A PRH (PROPERTY OWNER) PROPOSED TO REGRADE PORTIONS OF THE WETLAND THAT LIE ON THEIR PROPERTY ONLY. PROPOSED PROJECT SCOPE CONSISTS OF BY-PASS STORMWATER PUMPING, RE-GRADING, LOWERING STORMWATER CULVERTS, AND RE-STABILIZING WITH NEW ENGLAND WETLAND SEED MIX.



VICINITY MAP
NOT TO SCALE

CITY OF PORTSMOUTH
ROCKINGHAM COUNTY, NEW HAMPSHIRE

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PROJECT DESIGN TEAM

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ENVIRONMENTAL
GOVE ENVIRONMENTAL SERVICES, INC
8 CONTINENTAL DR, UNIT H
EXTER, NH 03833
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CONTACT: BRENDEN WALDEN

Know what's **below.**
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STATE OF NEW HAMPSHIRE
KAI BURK
No. 16921
LICENSED
PROFESSIONAL ENGINEER

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

COVER SHEET

C0-00

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE NEW HAMPSHIRE STORMWATER MANUAL: VOLUME 2 (LATEST EDITION) AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK, AND, UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.
3. THE INFORMATION PROVIDED IN THESE PLANS IS TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY INVESTIGATION THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITION THAT WILL BE ENCOUNTERED AND UPON WHICH THEIR BIDS WILL BE BASED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE BOTH THE SURFACE AND SUBSURFACE CONDITIONS AND BASE HIS PRICING ACCORDINGLY. GEOTECHNICAL AND ENVIRONMENTAL REPORTS ARE AVAILABLE FOR REVIEW.
4. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. AN APPROXIMATE LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THE COVER SHEET OF THESE CONSTRUCTION PLANS. THIS LIST SERVES AS A GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR MAY WISH TO NOTIFY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
8. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
9. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER AND DESIGN ENGINEER OF RECORD DIRECTLY FROM THE TESTING AGENCY.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER A CERTIFIED RECORD SURVEY SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF NEW HAMPSHIRE DEPICTING THE ACTUAL FIELD LOCATION OF ALL CONSTRUCTED IMPROVEMENTS THAT ARE REQUIRED BY THE JURISDICTIONAL AGENCIES FOR THE CERTIFICATION PROCESS. ALL SURVEY COSTS WILL BE THE CONTRACTORS RESPONSIBILITY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF NEW HAMPSHIRE PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.
13. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VERIFYING ALL QUANTITIES, TAKE-OFF MEASUREMENTS, MATERIALS, ETC. DURING THE BID PROCESS, WHEN DISCREPANCIES OCCUR, THE PHYSICAL PLAN TAKES PRECEDENCE. THE ENGINEER, LANDSCAPE ARCHITECT, COUNTY, CITY OR PROJECT MANAGERS ARE NOT TO BE HELD RESPONSIBLE FOR DISCREPANCIES FROM THE SPECIFICATIONS OR PLANS.
14. THE CONTRACTOR SHALL LIMIT CONSTRUCTION OPERATIONS TO WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DAMAGES OUTSIDE THE LIMITS OF CONSTRUCTION.
15. CONTRACTOR IS ADVISED THAT THE U.S. ENVIRONMENTAL PROTECTION AGENCY REQUIRES THAT ALL OPERATORS FILE A NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NPDES GENERAL PERMIT PRIOR TO BEGINNING WORK. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN THE SAME. A COPY SHALL BE SENT TO THE ENGINEER OF RECORD, ARCHITECT OF RECORD AND THE OWNER.
16. PROTECTION OF UNDERGROUND PIPELINES MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF PROPOSED EXCAVATION." THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 2 WORKING DAYS AND A MAXIMUM OF 5 WORKING DAYS PRIOR TO EXCAVATION.
17. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE LOCAL ELECTRICAL PROVIDER ON ANY WORK IN THE VICINITY OF OVERHEAD OR UNDERGROUND POWER LINES.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL PLANS RELATED TO SITE WORK INCLUDING (BUT NOT LIMITED TO) LANDSCAPE, IRRIGATION, SITE LIGHTING, BUILDING FOUNDATION, PLUMBING, FIRE SPRINKLER, AND OTHER APPLICABLE PLANS FOR CONFLICTING INFORMATION AND ALERT OWNER'S REPRESENTATIVE OF ANY CONFLICT FOR RESOLUTION.
19. CONTRACTOR SHALL VERIFY LOCATION OF ALL IRRIGATION, STREET LIGHTING, AND ELECTRICAL CONDUIT THAT WILL BE IN CONFLICT WITH ANY PROPOSED CONSTRUCTION AND SHALL RESOLVE CONFLICT ACCORDINGLY. COST OF CONFLICT RESOLUTION SHALL BE INCLUDED IN THE BID.
20. ANY DEBRIS RESULTING FROM STRIPING AND DEMOLITION OPERATIONS SHALL BE REMOVED FROM THE SITE AT FREQUENT INTERVALS TO PREVENT THIS MATERIAL FROM ACCUMULATING ON SITE.
21. UPON REMOVAL OF TREES, SHRUBS OR ANY STUMP GRINDING, NO ROOT GREATER THAN THREE INCHES IN DIAMETER SHALL REMAIN WITHIN FIVE FEET OF AN UNDERGROUND STRUCTURE OR UTILITY LINE OR UNDER PAVED FOOTINGS OR PAVED AREAS.
22. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.
23. SAFE PEDESTRIAN TRAFFIC IS TO BE MAINTAINED AT ALL TIMES. POST SIGNAGE AS NEEDED TO AID IN PEDESTRIAN SAFETY.
24. PRIOR TO GRAND OPENING THE CONTRACTOR SHALL:
   - SWEEP THE ENTIRE SITE
   - ELIMINATE ALL DEBRIS IN THE LANDSCAPING AREAS
   - PRESSURE CLEAN THE SITE ASPHALT
   - PRESSURE CLEAN THE CURBS, SIDEWALKS, AND CONCRETE PADS

RECORD DRAWINGS

1. CONTRACTOR SHALL PROVIDE TO THE ENGINEER AND OWNER A MINIMUM OF 1 HARD COPIY OF A PAVING, GRADING AND DRAINAGE RECORD DRAWING AND A SEPARATE UTILITY RECORD DRAWING, AS WELL AS BOTH IN AUTOCAD 2018 OR LATER, BOTH PREPARED BY A NEW HAMPSHIRE REGISTERED SURVEYOR. THE RECORD DRAWINGS SHALL VERIFY ALL DESIGN INFORMATION INCLUDED ON THE DESIGN PLANS OF THE SAME NAME.

PAVING, GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL VEGETATION IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
2. ALL OPEN AREAS WITHIN THE PROJECT SITE SHALL BE SODDED UNLESS INDICATED OTHERWISE ON THE ENGINEERING AND LANDSCAPE PLANS.
3. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
4. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.
5. CONTRACTOR SHALL STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.
6. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
7. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.
8. ALL CUT OR FILL SLOPES SHALL BE 3 (HORIZONTAL) :1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.
9. THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO DOWNSTREAM WATER BODIES IS CAUSED DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES THE NEW HAMPSHIRE WATER QUALITY STANDARDS.
10. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE DREDGING PERMIT COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY NHDES REPRESENTATIVES.
11. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS.

DEMOLITION NOTES

1. ALL MATERIAL REMOVED FROM THIS SITE BY THE CONTRACTOR SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER.
2. REFER TO THE TOPOGRAPHIC SURVEY FOR ADDITIONAL DETAILS OF EXISTING STRUCTURES, ETC., LOCATED WITHIN THE PROJECT SITE. UNLESS OTHERWISE NOTED, ALL EXISTING BUILDINGS, STRUCTURES, SLABS, CONCRETE, ASPHALT, DEBRIS PILES, SIGNS, AND ALL APPURTENANCES ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR AND PROPERLY DISPOSED OF IN A LEGAL MANNER AS PART OF THIS CONTRACT. SOME ITEMS TO BE REMOVED MAY NOT BE DEPICTED ON THE TOPOGRAPHIC SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE FULL EXTENT OF ITEMS TO BE REMOVED. IF ANY ITEMS ARE IN QUESTION, THE CONTRACTOR SHALL CONTACT THE OWNER PRIOR TO REMOVAL OF SAID ITEMS.
3. THE CONTRACTOR SHALL REFER TO THE DEMOLITION PLAN FOR DEMOLITION/PRESERVATION OF EXISTING TREES. ALL TREES NOT SPECIFICALLY SHOWN TO BE PRESERVED OR RELOCATED SHALL BE REMOVED AS A PART OF THIS CONTRACT. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY DEMOLITION.
4. CONTRACTOR SHALL ADJUST GRADE OF ANY EXISTING UTILITIES OR DRAINAGE STRUCTURES TO REMAIN.

MAINTENANCE

1. ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
2. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION. INLET PROTECTION DEVICES SHALL BE CLEANED OUT AT REGULAR INTERVALS AS THEY BECOME FULL OF DEBRIS.
3. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER TO NHDES EROSION CONTROL SPECIFICATIONS.
4. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
5. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
6. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
7. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 55 CUBIC YARDS / ACRE.
8. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.
9. SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

TYPICAL ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY ENGINEER 72 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:
- PRE-CONSTRUCTION MEETING
- GRADING STARTING
- FINAL STABILIZATION
- ANY OTHER INSPECTION FOR WHICH A PERMITTING AGENCY REQUIRES THE ENGINEER TO BE PRESENT

3RD PARTY TEST REPORTS REQUIRED

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:
- DENSITY TEST REPORTS
- BACTERIOLOGICAL TESTS OF WATER SYSTEM
- PRESSURE TEST OF WATER/SEWER
- LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS
- ANY OTHER TESTING REQUIRED BY THE AGENCY

SURVEY DATA

1. ALL ELEVATIONS ON THE PLANS OR REFERENCED IN THE SPECIFICATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88)
2. THE CONTRACTOR SHALL PROTECT ALL PERMANENT REFERENCE MONUMENTS AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO SURVEY MARKERS DURING CONSTRUCTION. ANY SURVEY MARKERS DAMAGED DURING CONSTRUCTION WILL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
3. BENCHMARK LOCATION AND ELEVATION ARE AS REPRESENTED BY SURVEYOR AT THE TIME OF SURVEY. CONTRACTOR SHALL VERIFY ITS CORRECTNESS AT TIME OF CONSTRUCTION.

PRECONSTRUCTION RESPONSIBILITIES

1. UPON RECEIPT OF NOTICE OF AWARD, THE CONTRACTOR SHALL ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, ALL AFFECTED UTILITY OWNERS, THE OWNER, THE ENGINEER AND ITSELF.
2. THE CONTRACTOR SHALL CONTACT ONE CALL (811) AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING ANY EXCAVATION.
3. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, ELEVATION,AND MATERIAL OF ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION.
4. EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITIES SHOWN OR FOR ANY EXISTING UTILITIES NOT SHOWN.
5. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE PLANS; THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

CONSTRUCTION SAFETY

1. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE STRICTLY OBSERVED.

TRENCH SAFETY ACT

1. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLIANCE WITH ANY STATE OF NEW HAMPSHIRE TRENCH SAFETY ACTS.
2. WHERE EXCAVATIONS TO A DEPTH IN EXCESS OF FIVE FEET (5') ARE REQUIRED. THE CONTRACTOR SHALL INCLUDE THE FOLLOWING INFORMATION IN THE BID:
   A. A REFERENCE TO THE TRENCH SAFETY STANDARDS THAT WILL BE IN EFFECT DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT.
   B. WRITTEN ASSURANCES BY THE CONTRACTOR PERFORMING THE TRENCH EXACTION THAT SUCH CONTRACTOR WILL COMPLY WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
   C. A SEPARATE ITEM IDENTIFYING THE COST OF COMPLIANCE WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
3. WHEN A BID IS NOT SUBMITTED, THE CONTRACTOR SHALL SUBMIT THE INFORMATION LISTED IN ITEM "2" TO THE ENGINEER PRIOR TO STARTING WORK.

INTERRUPTION OF EXISTING UTILITIES

1. ANY CONSTRUCTION WORK THAT REQUIRES INTERRUPTION OF SERVICE TO ANY CUSTOMER SHALL BE DONE SO WITH A MINIMUM OF SEVENTY-TWO (72) HOUR NOTICE TO, AND WRITTEN APPROVAL BY THE APPROPRIATE UTILITY COMPANY AND PORTSMOUTH REGIONAL HOSPITAL. THE CONTRACTOR SHALL ARRANGE A MEETING WITH THE LOCAL JURISDICTIONAL AGENCIES AND OTHER GOVERNING AGENCIES, AND OTHER AFFECTED UTILITIES PRIOR TO SCHEDULING THE SHUTDOWN TO ASSESS THE SCOPE OF WORK. ALL SYSTEM SHUT DOWNS SHALL BE SCHEDULED BY THE CONTRACTOR AT SUCH TIME THAT SYSTEM DEMAND IS LOW. THIS GENERALLY REQUIRES NIGHT TIME WORK BY THE CONTRACTOR AND REQUIRES FULL TIME INSPECTION BY A REPRESENTATIVE OF THE UTILITY. ALL COST FOR OVERTIME WORK BY THE REPRESENTATIVE OF THE UTILITY SHALL BE BORNE BY THE CONTRACTOR. EACH CUSTOMER AFFECTED BY THE SHUT DOWN SHALL BE PROVIDED, MINIMUM, FORTY-EIGHT (48) HOURS WRITTEN NOTIFICATION BY THE CONTRACTOR.

MINIMUM REQUIRED AS-BUILT INFORMATION

1. ALL AS-BUILT INFORMATION SUBMITTED TO THE ENGINEER SHALL BE SUFFICIENTLY ACCURATE, CLEAR, AND LEGIBLE TO SATISFY THE ENGINEER THAT THE INFORMATION PROVIDES A TRUE REPRESENTATION OF THE IMPROVEMENTS CONSTRUCTED.
2. UTILITY CROSSING SEPARATION INFORMATION FOR THAT PROVIDED ON THE PLANS VERIFYING:
   A. SIZE AND MATERIAL OF CROSSING PIPES
   B. TOP ELEVATION OF BOTTOM PIPE
   C. BOTTOM ELEVATION OF TOP PIPE
   D. FINISH SURFACE ELEVATION OVER UTILITY CROSSING
3. STORM DRAINAGE:
   A. TOP ELEVATION OF EACH MANHOLE FRAME AND COVER / GRATE AS WELL ALL OTHER STRUCTURES (HEADWALLS, CONTROL STRUCTURES, ETC.)
   B. INVERT ELEVATION OF EACH LINE ENTERING AND LEAVING EACH STRUCTURE, INCLUDING UNDERDRAIN PIPES.
   C. INVERTS OF ALL MITERED END SECTIONS
   D. ACTUAL GRADE OF PIPE BETWEEN THE STRUCTURES
   E. INVERT ELEVATION AND TWO HORIZONTAL TIES FROM PERMANENT VISIBLE OBJECTS TO ALL STORM STUB-OUTS.
5. LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES.
6. REVISIONS TO ROUTING OF PIPING AND CONDUITS.
7. ACTUAL EQUIPMENT LOCATIONS.
8. CHANGES MADE BY CHANGE ORDER OR CONSTRUCTION CHANGE DIRECTIVE.
9. CHANGES MADE FOLLOWING ENGINEER'S WRITTEN ORDERS.
10. DETAILS NOT ON THE ORIGINAL CONTRACT DRAWINGS.
11. FIELD RECORDS FOR VARIABLE AND CONCEALED CONDITIONS.
12. ALL SLEEVES, FITTINGS, TEES, BENDS, VALVES, ETC. SHALL BE LOCATED BY STATION/OFFSET (OR METHOD APPROVED BY ENGINEER) AND ELEVATION OF TOP OF PIPE FOR ALL CONSTRUCTED SLEEVING. AS-BUILTS FOR ALL SLEEVING DEPICTING TOP OF PIPE AT 100-FOOT INTERVALS MUST BE PROVIDED.
13. RECORD DRAWINGS SHALL INDICATE AS-BUILT DATA FOR EVERY ELEVATION SHOWN ON THE PLANS.
14. IF A NEW BENCHMARK LOCATION IS ESTABLISHED, CONTRACTOR SHALL PROVIDE A BENCH LOOP CLOSURE TO THE CLOSEST EXISTING BENCHMARKS IN BOTH DIRECTIONS. ALL BENCHMARK DATA SHALL BE SUBMITTED BY A REGISTERED LAND SURVEYOR.
15. IDENTIFICATION OF ADDENDUM ITEMS ISSUED DURING BIDDING PERIOD.
16. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL AS-BUILT DATA FOR UTILITIES AND SLEEVING IS COLLECTED PRIOR TO PAVEMENT SECTION CONSTRUCTION. PRELIMINARY UTILITY AS-BUILTS MUST BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO PAVEMENT SECTION CONSTRUCTION.

811
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STATE OF NEW HAMPSHIRE
KAI BURK
LICENSED PROFESSIONAL ENGINEER

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

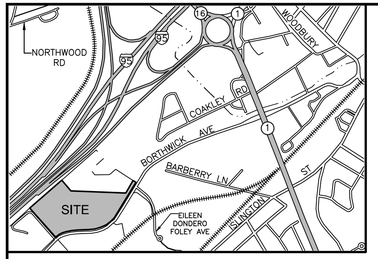
PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

GENERAL NOTES

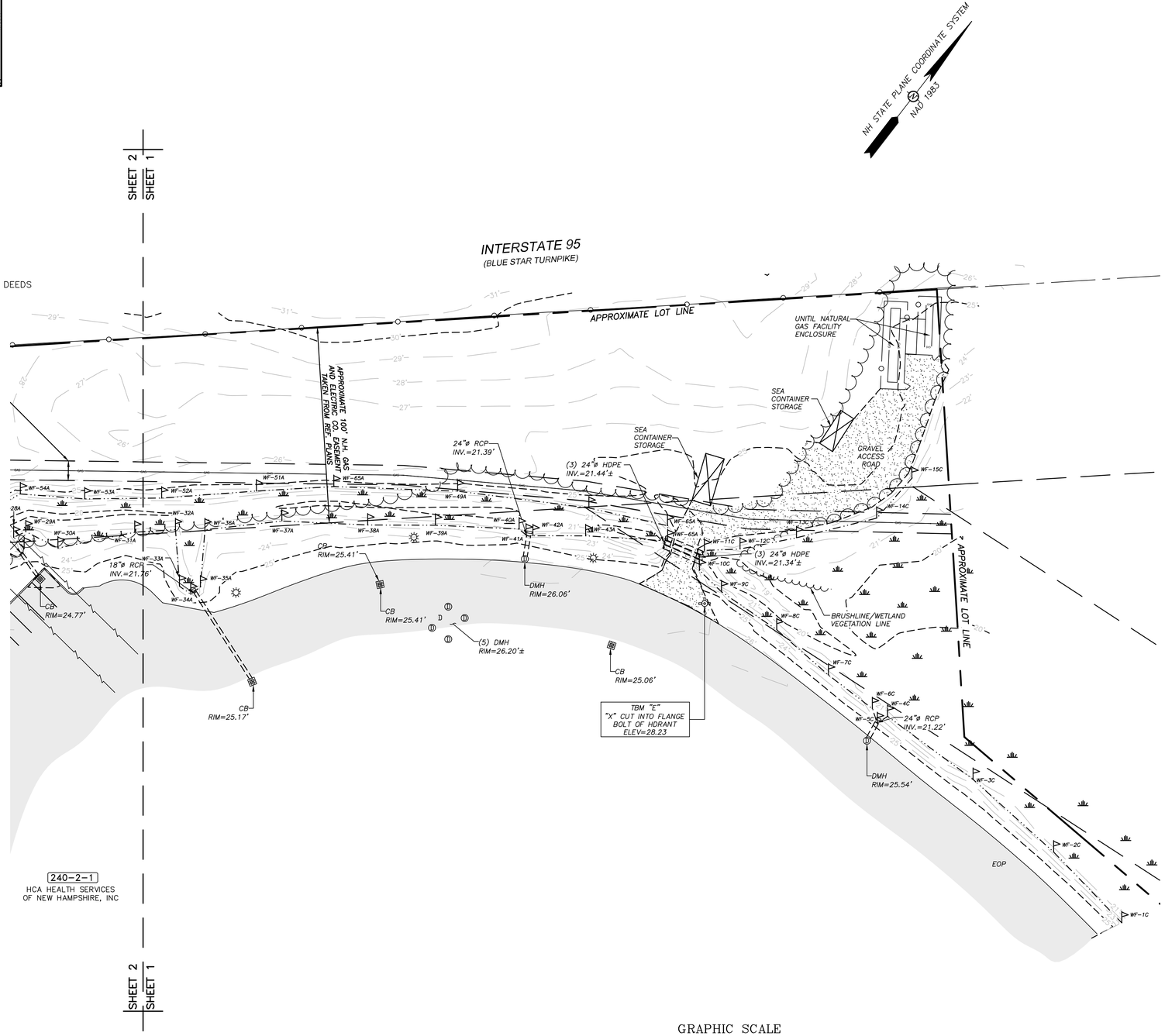
C0-01



LOCUS
(N.T.S.)

LEGEND:

- CHAIN LINK FENCE
- UTILITY POLE
- UTILITY POLE W/TRANSFORMER
- GUY
- LIGHT POLE
- OVERHEAD WIRES
- UGU ..... UNDERGROUND UTILITIES
- RCRD ..... ROCKINGHAM COUNTY REGISTRY OF DEEDS
- 240–02–01 ..... TAX SHEET / LOT NO.
- EOP ..... EDGE OF PAVEMENT
- LA ..... LANDSCAPED AREA
- VGC ..... VERTICAL FACED GRANITE CURB
- SGC ..... SLOPED FACED GRANITE CURB
- PSNH ..... PUBLIC SERVICE CO. OF NH
- HANDICAP PARKING SPACE
- CATCH BASIN (SQUARE)
- CATCH BASIN (ROUND)
- DRAIN MANHOLE
- SEWER MANHOLE
- SIGN
- DOUBLE POST SIGN
- ELECTRIC METER
- GAS VALVE
- W ..... WATER *LINE*
- S ..... SEWER *LINE*
- D ..... DRAIN LINE
- G ..... GAS LINE
- CONIFEROUS TREE
- DECIDUOUS TREE
- TREE LINE
- WATER GATE VALVE
- WATER SHUT OFF VALVE
- HYDRANT
- FIRE CONNECTION
- RIP RAP
- CEMENT CONCRETE PAD
- CONCRETE RETAINING WALL
- LANDSCAPE/LAWN AREA
- (15) ..... PARKING SPACE COUNT



GRAPHIC SCALE

30' 0 15' 30' 60' 90'

(IN FEET)
1 inch = 30' ft.

SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000)."

LICENSED LAND SURVEYOR ____ DATE ____

NOTES:

1. OWNER OF RECORD: HCA HEALTH SVC OF NH INC D/B/A PRH 32902
   C/O DUCHARME MCMILLEN & ASSOCIATES
   ADDRESS: PO BOX 80610, INDIANAPOLIS, IN 46280
   DEED REFERENCE: BK:2784 PG:1340
   TAX SHEET: 240–02–01

2. ZONED: OFFICE RESEARCH (OR)

MIN. LOT AREA: 3 ACRES	FRONT YARD SETBACK: 50'
FRONTAGE: 300'	SIDE YARD SETBACK: 75'
BUILDING COVERAGE: 30%	REAR YARD SETBACK: 50'
STRUCTURE HEIGHT: 60'	

3. THE INTENT OF THIS PLAN IS TO SHOW THE LIMITED AS–BUILT CONDITIONS OF THE BUILDING ADDITION AND RECONFIGURED DETENTION BASIN. THE BOUNDARY INFORMATION SHOWN IS APPROXIMATE AND TAKEN FROM THE REFERENCE PLANS AND DOES NOT CONSTITUTE AN UPDATED BOUNDARY SURVEY BY THIS OFFICE.

4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS OF RECORD, AND PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG–SAFE @ 1–888–DIG–SAFE.

5. HORIZONTAL DATUM: NAD 1983 ESTABLISHED BY SURVEY GRADE GPS OBSERVATION AND NGS "OPUS" SOLUTION. REFERENCE FRAME: NAD83 (2011)(EPOCH: 2010.0000), US SURVEY FOOT.
   VERTICAL DATUM: NAVD 1988. PRIMARY BENCHMARK: CITY OF PORTSMOUTH "ALBA"

6. THE PLAN IS BASED UPON A FIELD SURVEY COMPLETED IN JANUARY OF 2024 WITH TRIMBLE S5 ROBOTIC TOTAL STATION, CARLSON BRX7 RTK GPS UNITS, PANASONIC FZ–M1/TRIMBLE TSC7 DATA COLLECTORS.

7. THE PARCEL SHOWN HEREON LIES WITHIN ZONE X (AREA OF MINIMAL FLOOD HAZARD) AS IDENTIFIED ON FLOOD INSURANCE RATE MAP, ROCKOINGHAM COUNTY, NEW HAMPSHIRE, MAP NUMBER 33015C0260E, EFFECTIVE DATE MAY 17, 2005 BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

8. THE DELINEATION OF THE WETLANDS SHOWN HEREON WAS BY BRENDEN WALDEN NEW HAMPSHIRE CERTIFIED WETLAND SCIENTIST #297, GOVE ENVIRONMENTAL SERVICES, LLC., 8 CONTINENTAL DRIVE, UNIT H, EXETER, NH 03833.

9. CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE ESTABLISHMENT OF ANY GRADES OR ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOCIATES, INC.

REFERENCE PLANS:

1. *GAS LINE AS–BUILT EASEMENT AND CONSERVATION PLAN, PREPARED FOR HOSPITAL CORPROATION OF AMERICA, PORTSMOUTH, NH, DATED 10/31/85. RCRD PLAN #D–15830.*
2. *SCHILLER S/S–OCEAN ROAD S/S, 115 KV TRANSMISSION LINE #U181, MILE 4, PLAN–6775–A, DATED 7/10/2009, BY NORTHEAST UTILITIES, NOT RECORDED.*
3. *SUBDIVISION OF LAND, FRANETAL REALTY TRUST COMPAMY, OPTIONED TO LIBERTY MUTUAL INSURANCE COMPANY, PORTSMOUTH, NEW HAMPSHIRE, REVISED TO 2/19/71 RCRD PLAN #2190.*
4. *LIMITED EXISTING CONDITIONS PLAN – 333 BORTHWICK AVENUE, PORTSMOUTH, NEW HAMPSHIRE – ASSESSORS PARCEL #240–002–001 FOR HCA HEALTH SERVICES OF NEW HAMPSHIRE" ON NOVEMBER 19, 2019 BY THIS OFFICE. NOT RECORDED*
4. *LIMITED AS–BUILT PLAN – PORTSMOUTH REGIONAL HOSPITAL – HCA, 333 BORTHWICK AVENUE, PORTSMOUTH, NEW HAMPSHIRE, TAX MAP 240, LOT 2–1, PREPARED FOR: DPR CONSTRUCTION, LAND OF: HCA HEALTH SERVICES OF NH" ON FEBRUARY 29. 2024 BY THIS OFFICE. NOT RECORDED*

DIRECT ABBUTERS TO SUBJECT PARCEL:

240–01
LIBERTY MUTUAL INSURANCE
ATTN: JOANNE BRAGG
175 BERKLEY STREET
BOSTON, MA 02116
BK: 2057 PG: 0357

240–2–2
JACKSON GRAY CONDOS MASTER CARD
330 BORTHWICK AVE
PORTSMOUTH, NH 03801
BK: 2648 PG: 0901

234–7–3
CITY OF PORTSMOUTH
1 JUNKINS AVENUE
PORTSMOUTH, NH 03801
BK: 4211 PG: 1155

240–2–2001
CITY OF PORTSMOUTH DPW
PO BOX 628
PORTSMOUTH, NH 03802
BK: 2648 PG: 0901

240–2–1001
CITY OF PORTSMOUTH DPW
PO BOX 628
PORTSMOUTH, NH 03802
BK: 2648 PG: 0902

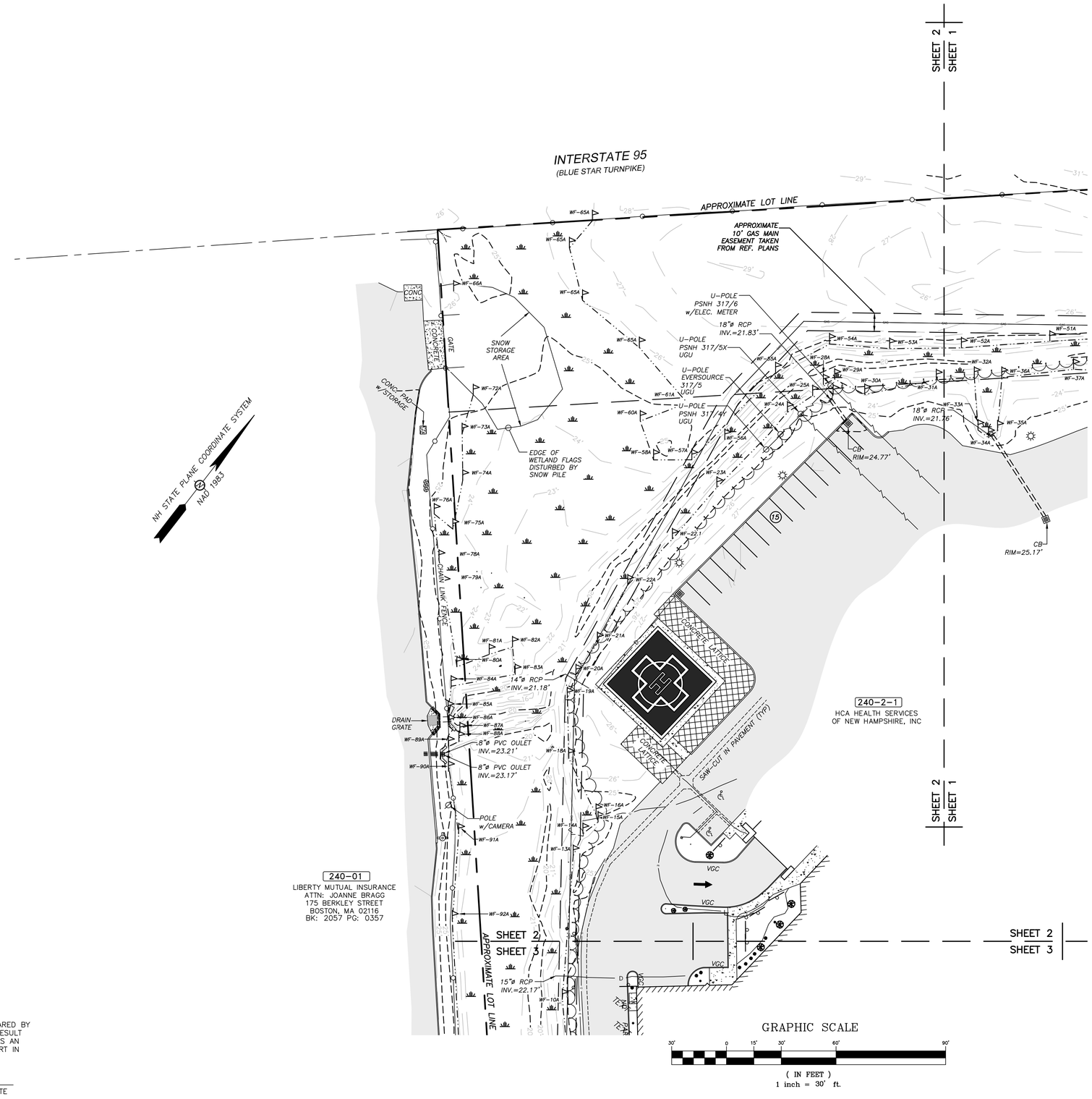
REV. NO.	DATE	DESCRIPTION	APPR'D

LIMITED EXISTING CONDITIONS PLAN
PORTSMOUTH REGIONAL HOSPITAL – HCA
333 BORTHWICK AVENUE
PORTSMOUTH, NEW HAMPSHIRE
TAX MAP 240 LOT 2–1
PREPARED FOR: BOWMAN
LAND OF: HCA HEALTH SERVICES OF NH

JVA JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8, NEWINGTON, N.H., 03801 – 603–436–3557 – ©2024

REL DRAWN BY
RMF PROJECT MGR

DATE:	02/29/2024
JOB NO:	24–2003
SCALE:	1" = 60'
DWG NAME:	24–2003.DWG
PLAN NO:	24–2003.DWG
SHEET:	1 OF 3



SURVEYOR'S CERTIFICATION

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LICENSED LAND SURVEYOR _____ DATE _____

REV. NO.	DATE	DESCRIPTION	APPR'D

LIMITED EXISTING CONDITIONS PLAN
PORTSMOUTH REGIONAL HOSPITAL – HCA

333 BORTHWICK AVENUE

PORTSMOUTH, NEW HAMPSHIRE

TAX MAP 240 LOT 2-1

PREPARED FOR: BOWMAN

LAND OF: HCA HEALTH SERVICES OF NH

JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8, NEWINGTON, N.H., 03801 – 603-436-3557 – ©2024

REL DRAWN BY

RMF PROJECT MGR

DATE:	02/29/2024
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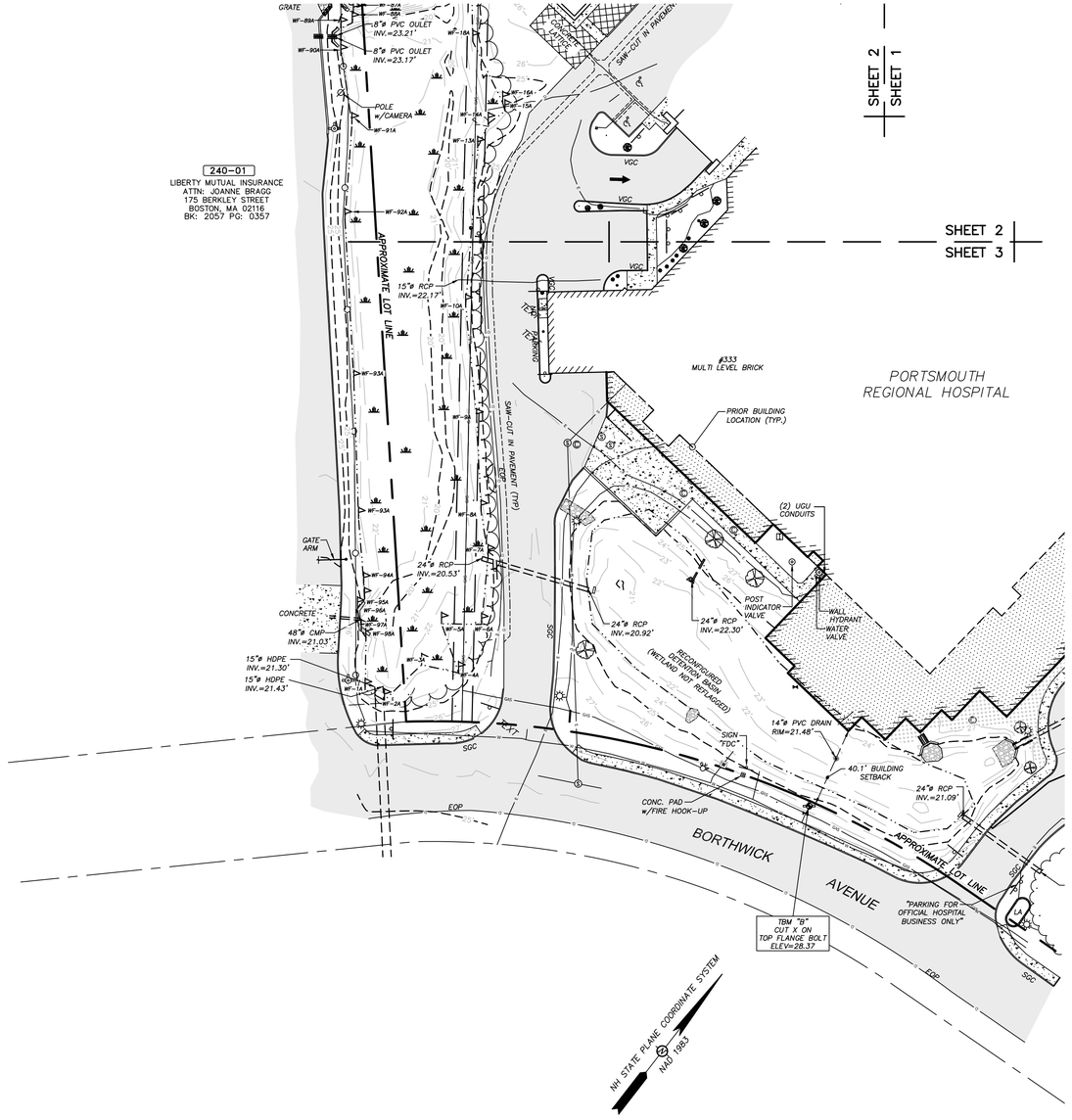
SCALE:	1" = 60'
DWG NAME:	24-2003.DWG
PLAN NO:	24-2003.DWG
SHEET:	2 OF 3



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GRAPHIC SCALE

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(IN FEET)
1 inch = 30' ft.

REV. NO.	DATE	DESCRIPTION	APPR'D

LIMITED EXISTING CONDITIONS PLAN
PORTSMOUTH REGIONAL HOSPITAL – HCA

333 BORTHWICK AVENUE

PORTSMOUTH, NEW HAMPSHIRE

TAX MAP 240 LOT 2-1

PREPARED FOR: BOWMAN

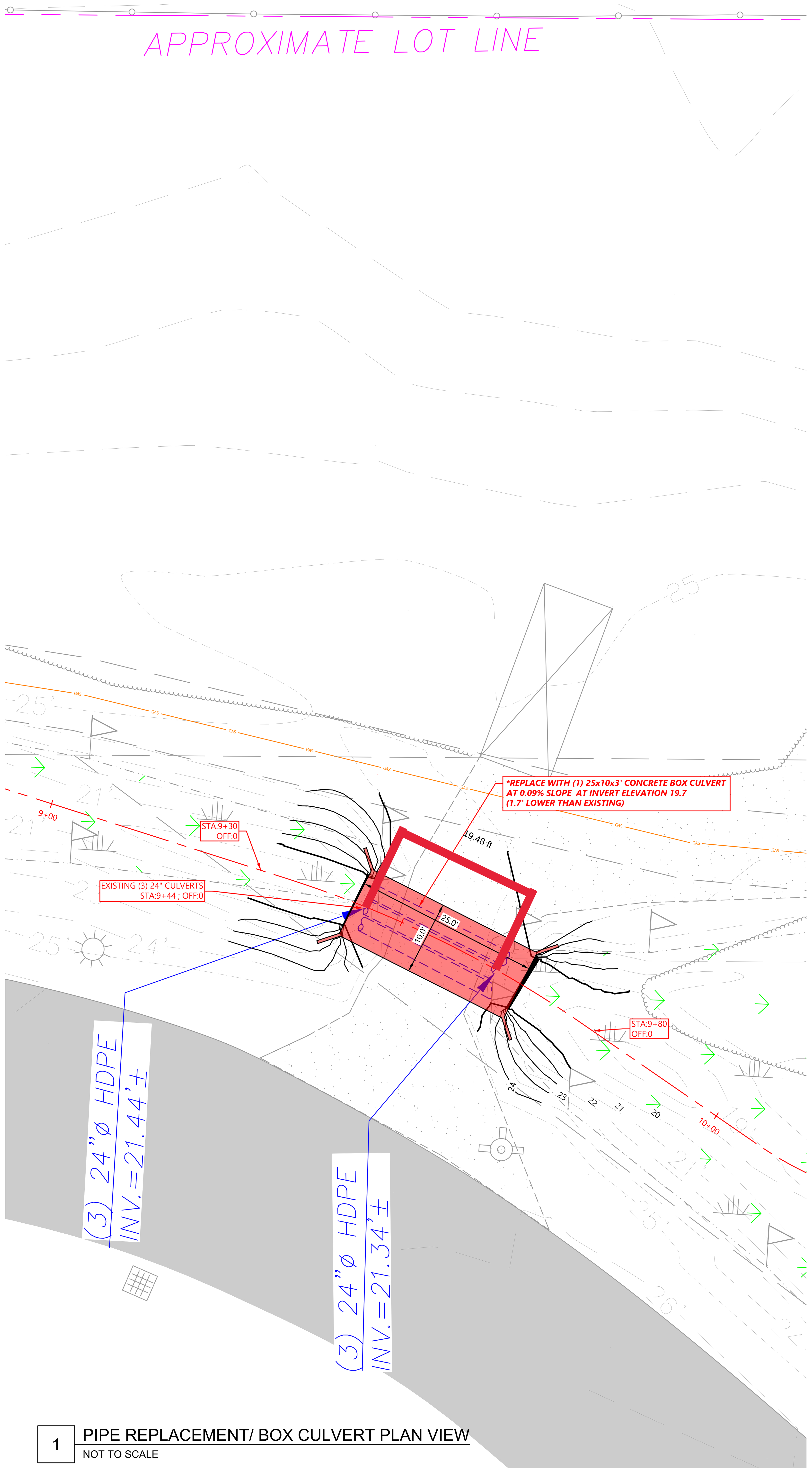
LAND OF: HCA HEALTH SERVICES OF NH

JAMES VERRA & ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8, NEWINGTON, N.H., 03801 – 603-436-3557 – ©2024

REL DRAWN BY

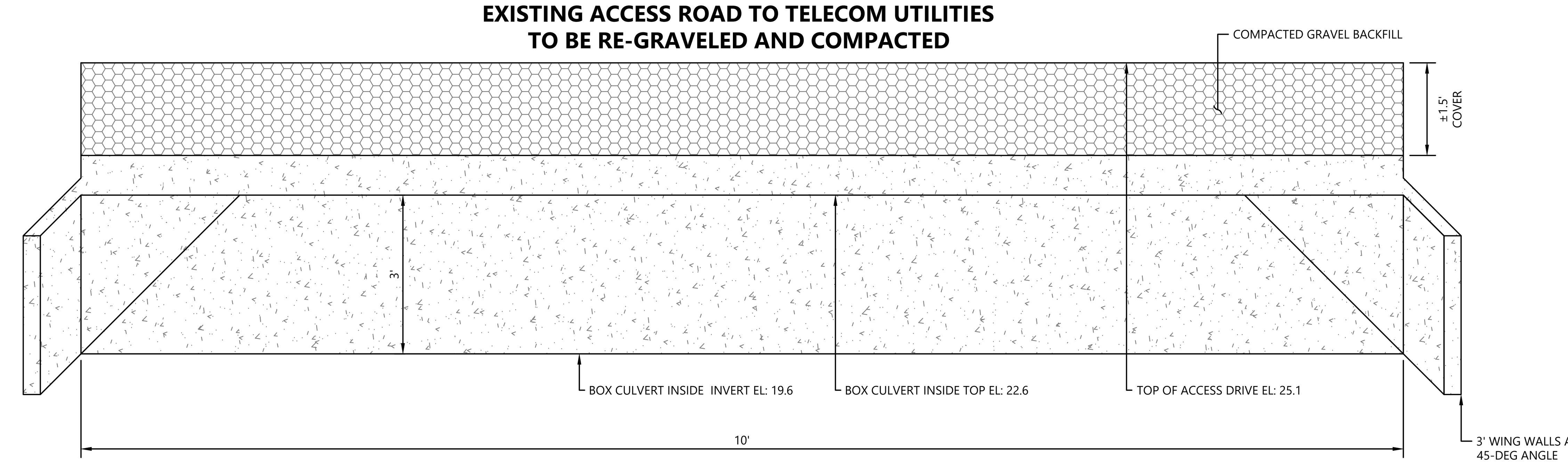
RMF PROJECT MGR

DATE:	02/29/2024
JOB NO:	24-2003
SCALE:	1" = 60'
DWG NAME:	24-2003.DWG
PLAN NO:	24-2003.DWG
SHEET:	3 OF 3

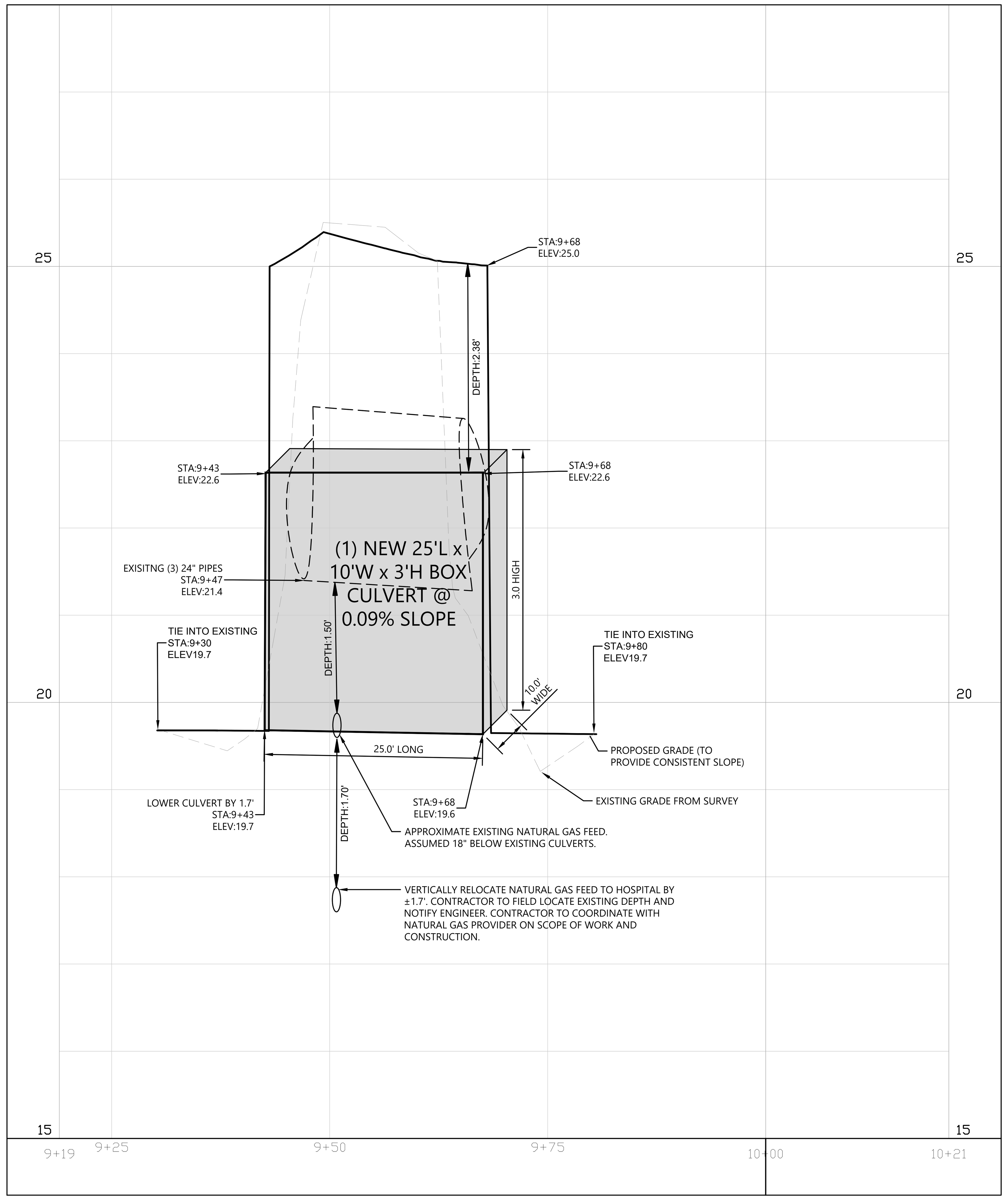


1 PIPE REPLACEMENT/ BOX CULVERT PLAN VIEW
NOT TO SCALE

811 Know what's below. Call before you dig.



2 BOX CULVERT SECTION VIEW
NOT TO SCALE



3 PIPE REPLACEMENT/ BOX CULVERT PROFILE
NOT TO SCALE

LEGEND

- EXISTING PROPERTY LINE
- EXISTING STAKED WETLAND
- EXISTING PAVEMENT
- GAS — EXISTING GAS MAIN
- 21 — EXISTING CONTOUR
- EXISTING STORM DRAIN
- 21 — PROPOSED CONTOUR
- PROPOSED CENTERLINE OF DREDGED DRAINAGE CHANNEL
- PROPOSED 25x7x3' BOX CULVERT

GRADING NOTES

1. CONTRACTOR RESPONSIBLE FOR VERIFYING LOCATION, SIZE, AND ELEVATIONS OF EXISTING UTILITIES AT CONNECTION POINTS PRIOR TO GRADING OR INSTALLATION OF ANY PROPOSED UTILITIES. CONTRACTOR TO IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE IFDISCREPANCIES ARE FOUND.
2. ADDITIONAL EROSION CONTROL DEVICES TO BE USED AS REQUIRED BY LOCAL INSPECTOR.
3. DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION. MULCH, TEMPORARY VEGETATION OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION UPON COMPLETION.
4. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING. IF UNABLE TO ACCOMPLISH, MULCH SHALL BE USED AS A TEMPORARY COVER. CONCENTRATED FLOW AREAS AND ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER (DOES NOT APPLY TO RETAINING WALLS), AND CUTS AND FILLS WITHIN BUFFERS, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS.
5. THE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A PUBLIC ROAD OR STREET.
6. EROSION AND SEDIMENT CONTROL DEVICES MUST BE DISPLAYED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR MUST CALL FOR AN INSPECTION TO OBTAIN A PERMIT TO GRADE. PLEASE CALL WITH ENOUGH LEAD-TIME FOR AN INSPECTION TO MEET YOUR SCHEDULE.
7. SEDIMENT/EROSION CONTROL DEVICES MUST BE INSPECTED ACCORDING TO LOCAL AND STATE REQUIREMENTS. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MAY BE NECESSARY AS THE PROJECT PROGRESSES.
8. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
9. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
10. CONTRACTOR SHALL REVIEW SITE GEOTECHNICAL REPORT BEFORE COMMENCING GRADING OPERATIONS.
11. SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED AS PART OF THIS CONTRACT.
12. INSTALL SOD, MATTING, OR RIPRAP IN SWALES AS INDICATED ON GRADING PLANS AND EROSION CONTROL PLANS
13. ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER WATER QUALITY MANAGEMENT FACILITIES SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S OR PROPERTY OWNER'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR CONTRACTOR.
14. UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER, DESIGNER, OR THEIR REPRESENTATIVES. BEFORE YOU DIG CALL ONE CALL--811
15. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES TO REMAIN.
16. HORIZONTAL DATUM IS BASED ON NAD 1983.
17. VERTICAL DATUM BASED ON NAVD88.

0 10 20 Feet
HORIZ. SCALE 1":10'
VERT. SCALE: 1"=1'

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Phone: (615) 649 - 7610 | www.bowman.com

STATE OF NEW HAMPSHIRE PROFESSIONAL ENGINEER — KAI BURK — LICENSED — 7/26/24

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS

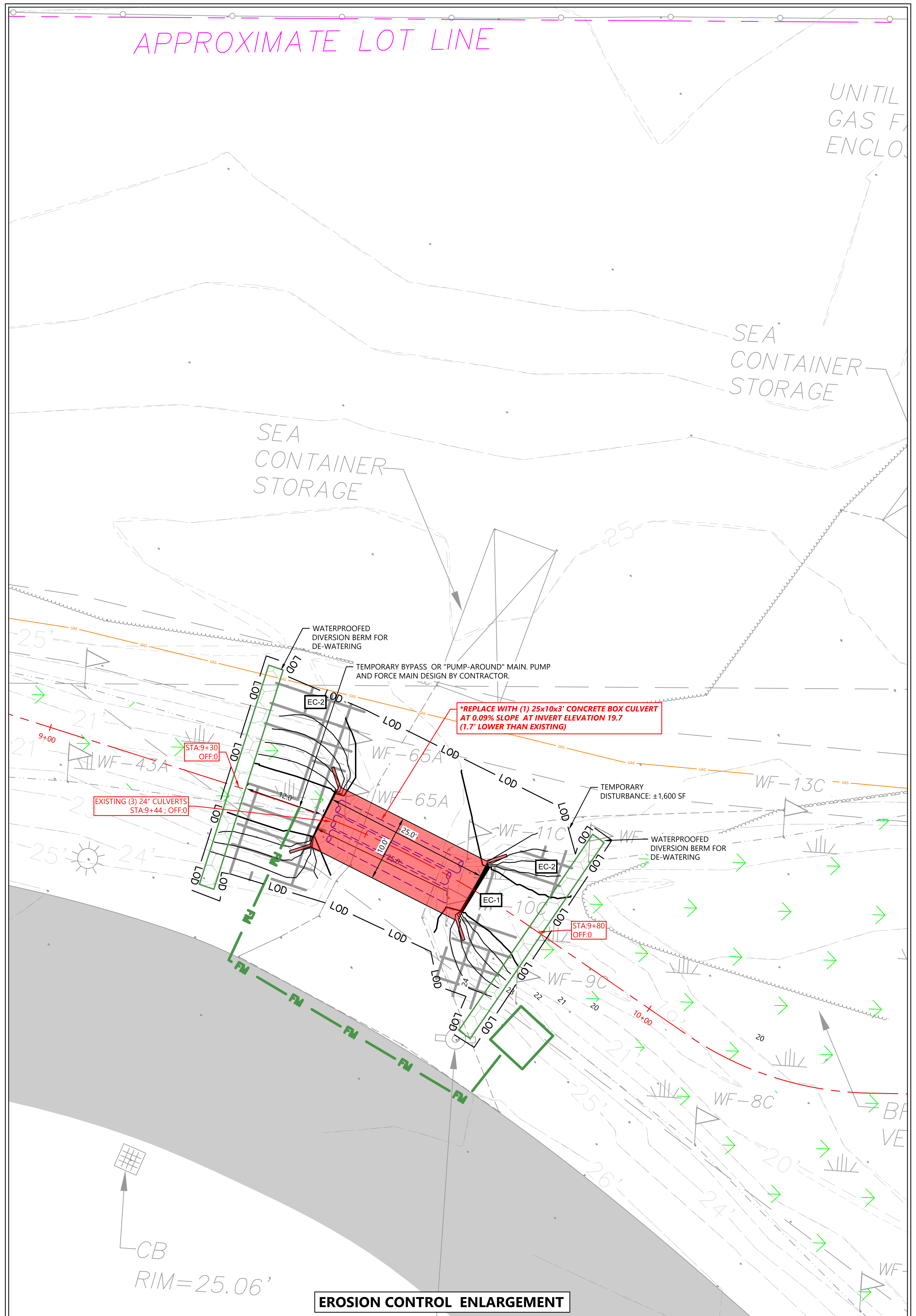
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

CULVERT REPLACEMENT- PLAN & PROFILE

C2-00



EROSION CONTROL ENLARGEMENT

Know what's **below.** **Call** before you dig.

EROSION CONTROL NOTES

1. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATION BEGINS AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
2. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON OR NEAR SITE: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; THE DATES WHEN STABILIZATION MEASURES ARE INITIATED; INSPECTION RECORDS AND RAINFALL RECORDS.
3. THE CONTRACTOR SHALL MAINTAIN A RAIN GAUGE AND DAILY RAINFALL RECORDS AT THE SITE OR USE A REFERENCE SITE FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 10 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
6. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS AND OTHER SEDIMENT CONTROLS AS NECESSARY AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50% OR AS DIRECTED BY OWNERS REPRESENTATIVE.
7. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES BEFORE ACCEPTANCE BY LOCAL GOVERNING AGENCY OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
8. THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION AND WATER POLLUTION CONTROL DEVICES ONLY AFTER A SOLID STAND OF GRASS HAS BEEN ESTABLISHED ON GRADED AREAS AND WHEN IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THEY ARE NO LONGER NEEDED.
9. DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF THE COMPLETION OF GRADING ACTIVITIES. SLOPES 3:1 OR STEEPER SHALL BE STABILIZED WITHIN 7 DAYS.
10. INSPECTIONS DESCRIBED IN PARAGRAPHS 2, 3 AND 4 BELOW, SHALL BE PERFORMED AT LEAST TWICE EVERY CALENDAR WEEK. INSPECTIONS SHALL BE PERFORMED AT LEAST 72 HOURS APART. WHERE SITES OR PORTION(S) OF CONSTRUCTION SITES HAVE BEEN TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (E.G., SITE COVERED WITH SNOW OR ICE) OR DUE TO EXTREME DROUGHT, SUCH INSPECTION ONLY HAS TO BE CONDUCTED ONCE PER MONTH UNTIL THAWING OR PRECIPITATION RESULTS IN RUNOFF OR CONSTRUCTION ACTIVITY RESUMES. INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS THAT HAVE BEEN FINALLY STABILIZED. WRITTEN NOTIFICATION OF THE INTENT TO CHANGE THE INSPECTION FREQUENCY AND THE JUSTIFICATION FOR SUCH REQUEST MUST BE SUBMITTED TO THE LOCAL ENVIRONMENTAL FIELD OFFICE, SHOULD NHDES DISCOVER THAT MONTHLY INSPECTIONS OF THE SITE ARE NOT APPROPRIATE DUE TO INSUFFICIENT STABILIZATION MEASURES OR OTHERWISE, TWICE WEEKLY INSPECTIONS SHALL RESUME. NHDES MAY INSPECT THE SITE TO CONFIRM OR DENY THE NOTIFICATION TO CONDUCT MONTHLY INSPECTIONS.
11. QUALIFIED PERSONNEL (PROVIDED BY THE PERMITTEE OR COOPERATIVELY BY MULTIPLE PERMITTEES) SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL.
12. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE SITE'S DRAINAGE SYSTEM. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.
13. OUTFALL POINTS (WHERE DISCHARGES LEAVE THE SITE AND/OR ENTER WATERS OF THE STATE) SHALL BE INSPECTED TO DETERMINE WHETHER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.
14. BASED ON THE RESULTS OF THE INSPECTION, ANY INADEQUATE CONTROL MEASURES OR CONTROL MEASURES IN DISREPAIR SHALL BE REPLACED OR MODIFIED, OR REPAIRED AS NECESSARY, BEFORE THE NEXT RAIN EVENT, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE NEED IS IDENTIFIED.
15. BASED ON THE RESULTS OF THE INSPECTION, THE SITE DESCRIPTION AND POLLUTION PREVENTION MEASURES IDENTIFIED IN THIS SWPPP SHALL BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THE SWPPP, BUT IN NO CASE LATER THAN 14 DAYS FOLLOWING THE INSPECTION.
16. ALL INSPECTIONS SHALL BE DOCUMENTED ON THE CONSTRUCTION STORMWATER INSPECTION CERTIFICATION FORM PROVIDED IN APPENDIX D OF THE SWPPP REPORT FOR ALL CONSTRUCTION SITES. INSPECTION DOCUMENTATION WILL BE
17. MAINTAINED ON SITE AND MADE AVAILABLE TO NHDES UPON REQUEST. INSPECTION REPORTS MUST BE SUBMITTED TO NHDES WITHIN 10 DAYS OF THE REQUEST. IF NHDES REQUESTS THE CONSTRUCTION STORMWATER INSPECTION CERTIFICATION FORM TO BE SUBMITTED, THE SUBMITTED FORM MUST CONTAIN THE PRINTED NAME AND SIGNATURE OF THE TRAINED CERTIFIED INSPECTOR AND THE PERSON WHO MEETS THE SIGNATORY REQUIREMENTS OF SECTION 7.7.2 OF THE NPDES GENERAL PERMIT.
18. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION DOCUMENTATION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES.
19. SUBSEQUENT OPERATOR(S) (PRIMARY PERMITTEES) WHO HAVE OBTAINED COVERAGE UNDER THE NPDES GENERAL PERMIT SHOULD CONDUCT TWICE WEEKLY INSPECTIONS, UNLESS THEIR PORTION(S) OF THE SITE HAS BEEN TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS OR DUE TO EXTREME DROUGHT AS STATED IN PARAGRAPH A) ABOVE. THE PRIMARY PERMITTEE (SUCH AS A DEVELOPER) IS NO LONGER REQUIRED TO CONDUCT INSPECTIONS OF PORTIONS OF THE SITE THAT ARE COVERED BY A SUBSEQUENT PRIMARY PERMITTEE (SUCH AS A HOME BUILDER).
20. THE SITE ASSESSMENT SHALL BE PERFORMED BY INDIVIDUALS WITH THE FOLLOWING QUALIFICATIONS:
   - A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
   - A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) OR
   - A PERSON THAT SUCCESSFULLY COMPLETED THE "LEVEL II DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE.
21. QUALITY ASSURANCE OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE DONE BY PERFORMING SITE ASSESSMENT AT A CONSTRUCTION SITE. THE SITE ASSESSMENT SHALL BE CONDUCTED AT EACH OUTFALL INVOLVING DRAINAGE TOTALING 10 OR MORE ACRES OR 5 OR MORE ACRES IF DRAINING TO AN IMPAIRED OR EXCEPTIONAL QUALITY WATERS, WITHIN A MONTH OF CONSTRUCTION COMMENCING AT EACH PORTION OF THE SITE THAT DRAINS THE QUALIFYING ACREAGE OF SUCH PORTION OF THE SITE.
22. AS A MINIMUM, SITE ASSESSMENT SHOULD BE PERFORMED TO VERIFY THE INSTALLATION, FUNCTIONALITY AND PERFORMANCE OF THE EPSC MEASURES DESCRIBED IN THE SWPPP REPORT. THE SITE ASSESSMENT SHOULD BE PERFORMED WITH THE INSPECTOR, AND SHOULD INCLUDE A REVIEW AND UPDATE (IF APPLICABLE) OF THE SWPPP REPORT. MODIFICATIONS OF PLANS AND SPECIFICATIONS FOR ANY BUILDING OR STRUCTURE, INCLUDING THE DESIGN OF SEDIMENT BASINS OR OTHER SEDIMENT CONTROLS INVOLVING STRUCTURAL, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER.
23. THE SITE ASSESSMENT FINDINGS SHALL BE DOCUMENTED AND THE DOCUMENTATION KEPT WITH THE SWPPP REPORT AT THE SITE. AT A MINIMUM, THE DOCUMENTATION SHALL INCLUDE INFORMATION INCLUDED IN THE INSPECTION FORM PROVIDED IN APPENDIX D OF THE SWPPP REPORT. THE DOCUMENTATION MUST CONTAIN THE PRINTED NAME AND SIGNATURE OF THE INDIVIDUAL PERFORMING THE SITE ASSESSMENT AND THE FOLLOWING CERTIFICATION:
24. "I CERTIFY UNDER PENALTY OF LAW THAT THIS REPORT AND ALL ATTACHMENTS ARE, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS." 5. THE SITE ASSESSMENT CAN TAKE THE PLACE OF ONE OF THE TWICE WEEKLY INSPECTIONS REQUIREMENT.
25. NHDES MAY REQUIRE ADDITIONAL SITE ASSESSMENT(S) TO BE PERFORMED IF SITE INSPECTION BY NHDES'S PERSONNEL REVEALS SITE CONDITIONS THAT HAVE POTENTIAL OF CAUSING POLLUTION TO THE WATERS OF THE STATE.
26. CONTRACTOR SHALL INSTALL A 4'X4' WEATHER PROOF SIGN (6' HEIGHT) AT THE MAIN CONSTRUCTION ENTRANCE. THE SIGN SHALL HAVE THE FOLLOWING INFORMATION:
   - A COPY OF THE NOTICE OF COVERAGE WITH THE NPDES PERMIT NUMBER (FURNISHED BY ENGINEER).
   - THE NAME AND TELEPHONE NUMBER OF A LOCAL CONTACT PERSON (FURNISHED BY CONSTRUCTION MANAGER).
   - DESCRIPTION OF PROJECT (FURNISHED BY CONSTRUCTION MANAGER)

LEGEND

— - —	EXISTING PROPERTY LINE
(green fill)	EXISTING STAKED WETLAND
(grey fill)	EXISTING PAVEMENT
— GAS —	EXISTING GAS MAIN
— 21 —	EXISTING CONTOUR
- - - - -	EXISTING STORM DRAIN
— 21 —	PROPOSED CONTOUR
— - —	PROPOSED CENTERLINE OF DREDGED DRAINAGE CHANNEL
(red fill)	PROPOSED 25x7x3' BOX CULVERT

STORMWATER NOTES

FEMA NOTE

THIS LOT DOES NOT LIE IN AN AREA DESIGNATED AS A SPECIAL FLOOD HAZARD AREA ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 33015C0260F, DATED 01/29/2021.

CONSTRUCTION SCHEDULE

1. PRE-CONSTRUCTION MEETING
2. INSTALLATION OF EROSION CONTROL MEASURES
3. EROSION INSPECTION BY EPSC
4. ISSUANCE OF PERMIT
5. CONSTRUCTION

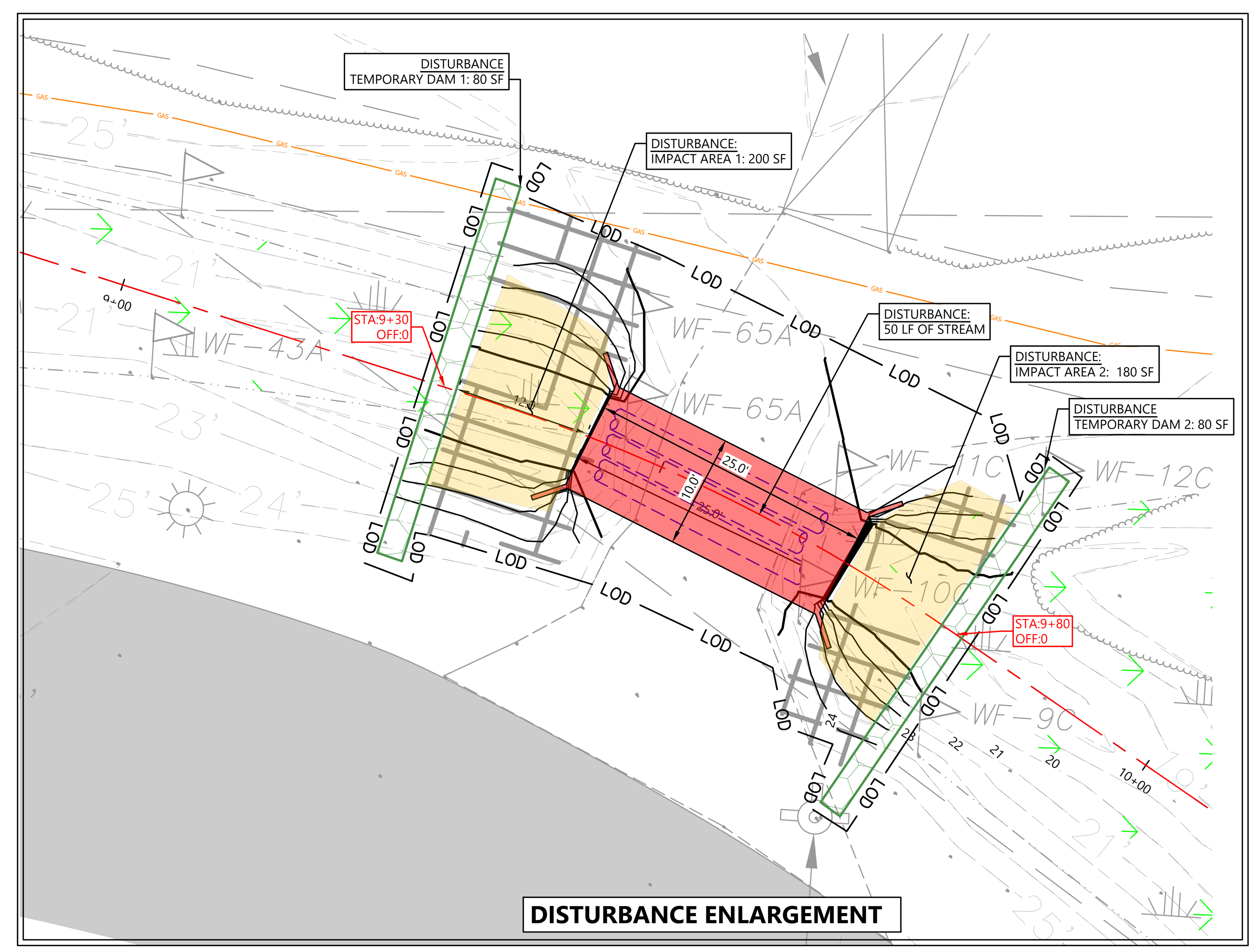
CONSTRUCTION SHALL BE COMPLETED WITHIN 12 MONTHS OF THE PERMIT BEING ISSUED. IF CONSTRUCTION IS NOT COMPLETE IN THAT AMOUNT OF TIME, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY FOR AN EXTENSION OF THE PERMIT.

NEW HAMPSHIRE DEPT. OF ENVIRONMENTAL SERVICES (NHDES) NOTICE OF COVERAGE

THIS PROJECT DOES **NOT** DISTURB MORE THAN 1 ACRE AND IS **NOT** REQUIRED TO APPLY FOR A NOTICE OF COVERAGE UNDER THE NEW HAMPSHIRE GENERAL CONSTRUCTION PERMIT FROM NHDES.

EROSION CONTROL LEGEND

EC-1	OUTLET PROTECTION TO BE INSTALLED AT ALL EXISTING OUTFALLS UPON COMPLETION OF GRADING AND BYPASS PUMPING OPERATION - SEE DETAIL ON C3-01
EC-2	EROSION CONTROL MATTING - CONTECH LANDLOCK S2 OR APPROVED EQUAL. CONTRACTOR TO INSTALL ON ALL SLOPES STEEPER THAN 3:1 OR STEEPER. SEE DETAIL ON C3-01. -WITH- PERMANENT STABILIZATION - CONSERVATION SEED MIX/ NEW ENGLAND WETMIX (BENEATH EROSION CONTROL MATTING). *PERMANENTLY STABILIZE ALL DISTURBED AREAS.*
— FM — EC-3	TEMPORARY BYPASS PUMP/ PUMP AROUND INFRASTRUCTURE. SEE DETAIL ON C3-01.
— LOD —	LIMITS OF DISTURBANCE: ±1,600 SF



DISTURBANCE ENLARGEMENT

0 10 20 Feet
SCALE 1":10'

Bowman
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Phone: (615) 649 - 7610 | www.bowman.com

STATE OF NEW HAMPSHIRE - KAI BURK No. 16921 LICENSED PROFESSIONAL ENGINEER - 7/26/24

PORTSMOUTH REGIONAL HOSPITAL HCA HEALTHCARE
PORTSMOUTH, NH

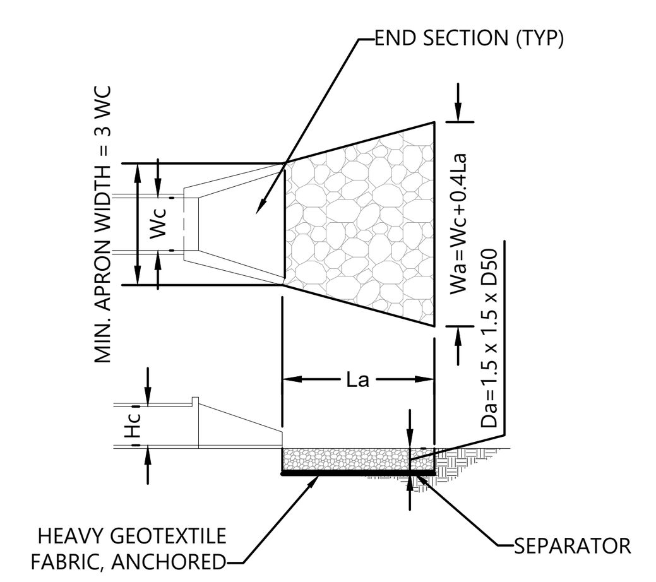
PLAN STATUS	
DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

EROSION CONTROL PLAN

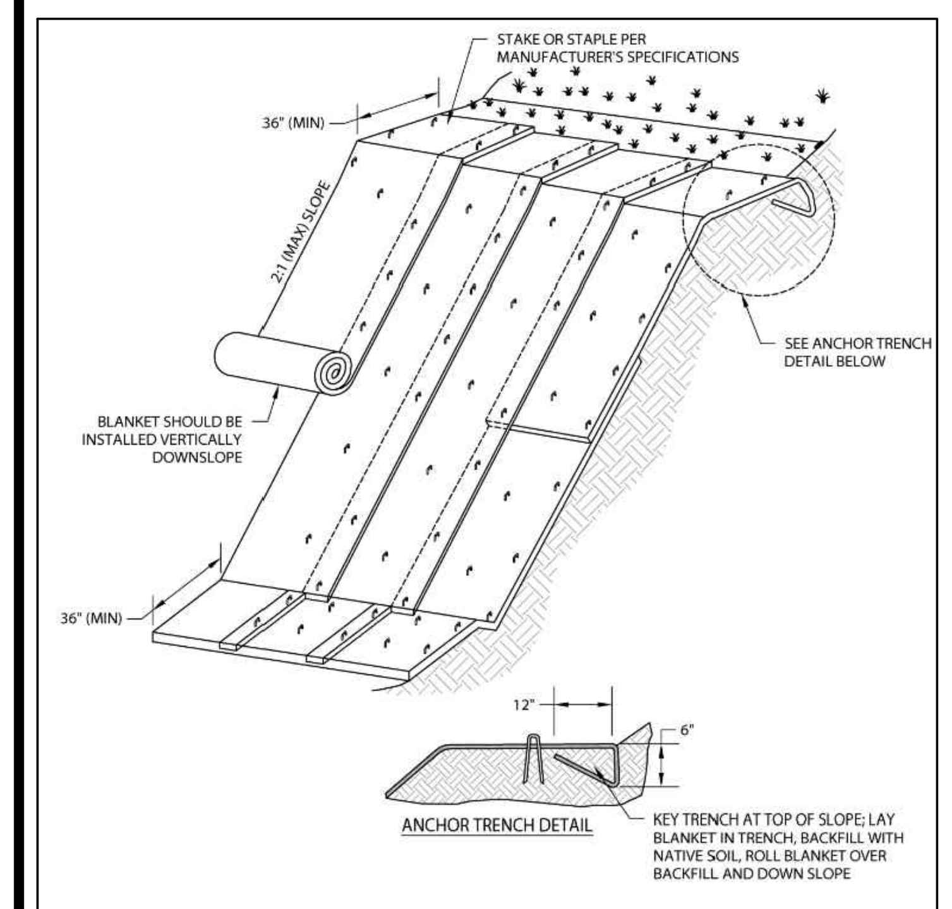
C3-00



L_A = LENGTH OF RIP-RAP APRON
W_A = WIDTH OF RIP-RAP APRON AT END
D_{50} = MEDIAN SIZE OF RIP-RAP
D_{MAX} = MAXIMUM SIZE OF RIP-RAP = 1.5 D_{50}
D_A = DEPTH OF RIP-RAP APRON = 1.5 D_{MAX}
SEPARATOR = GEOTEXTILE UNDERLAYMENT OR GRAVEL FILTER BLANKET

OUTFALL PIPE	LENGTH (La)	WIDTH (Wa)	d50
8-18"	8'	DIA+La/3	3"
24"	8'	DIA+La/3	3"
48"	20'	DIA+La/3	6"

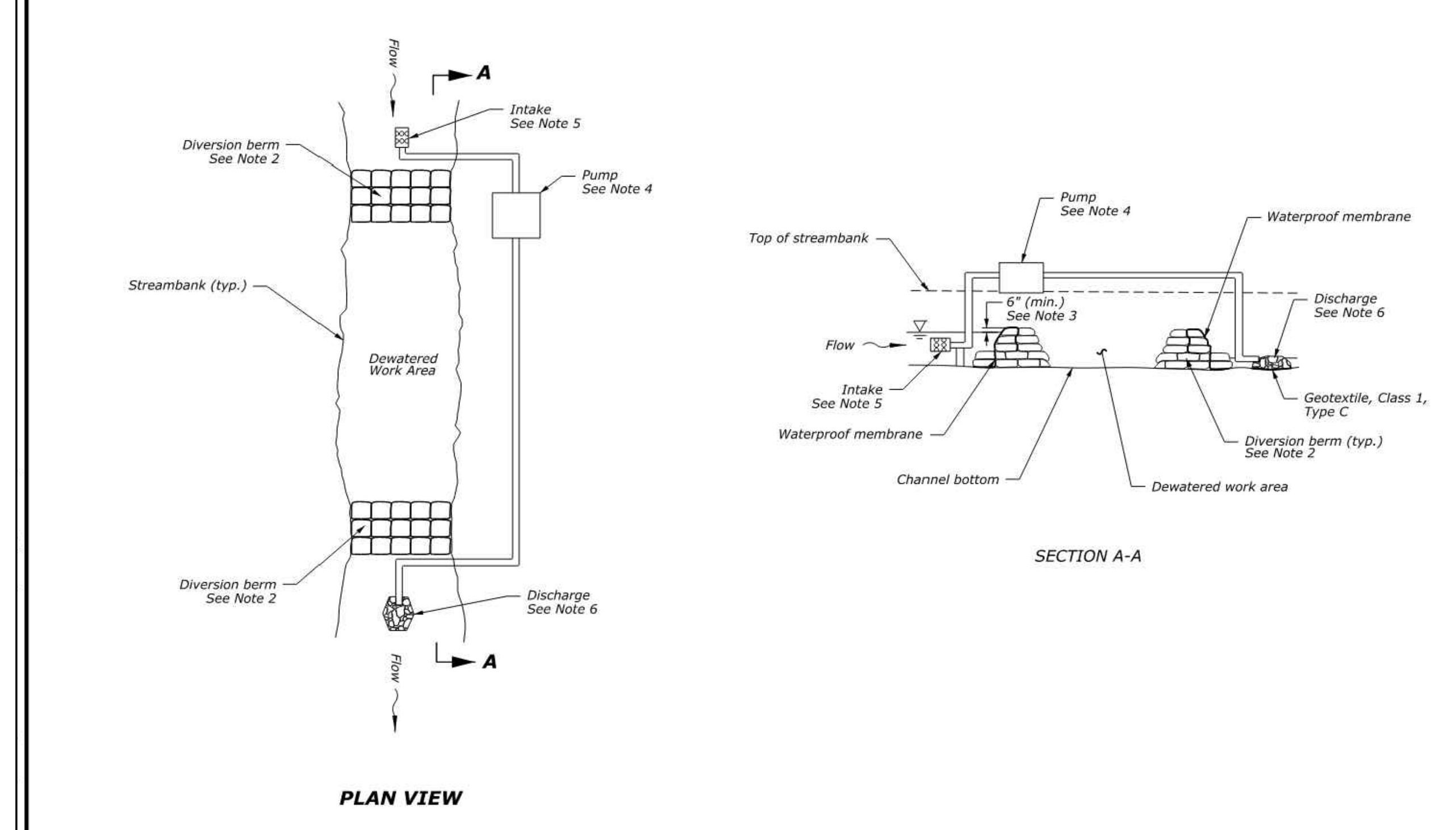
1 OUTLET PROTECTION
NOT TO SCALE



NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, VEGETATION, STICKS, AND DEBRIS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT. SCARIFY AND/OR TILL SLOPE SURFACE 12" DEEP BEFORE LAYING BLANKET.
2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE AS NEEDED TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH OR TWIST.
3. EROSION CONTROL BLANKETS SHOULD BE USED IN CONJUNCTION WITH REVEGETATION (CONTAINER OR PLUG PLANTING) TO SPECIFICATIONS OF REVEGETATION PLAN FOR PROJECT.
4. HAND WALK BLANKET DOWN SLOPE AS BLANKET IS STAKED OR STAPLED TO PREVENT STRETCHING.
5. DO NOT WALK ON BLANKET ONCE IN PLACE.
6. ALL ANCHORS SHALL BE INSTALLED PERPENDICULAR TO SLOPE.

2 EROSION CONTROL BLANKET
NOT TO SCALE

STATE	PROJECT	SHEET NUMBER



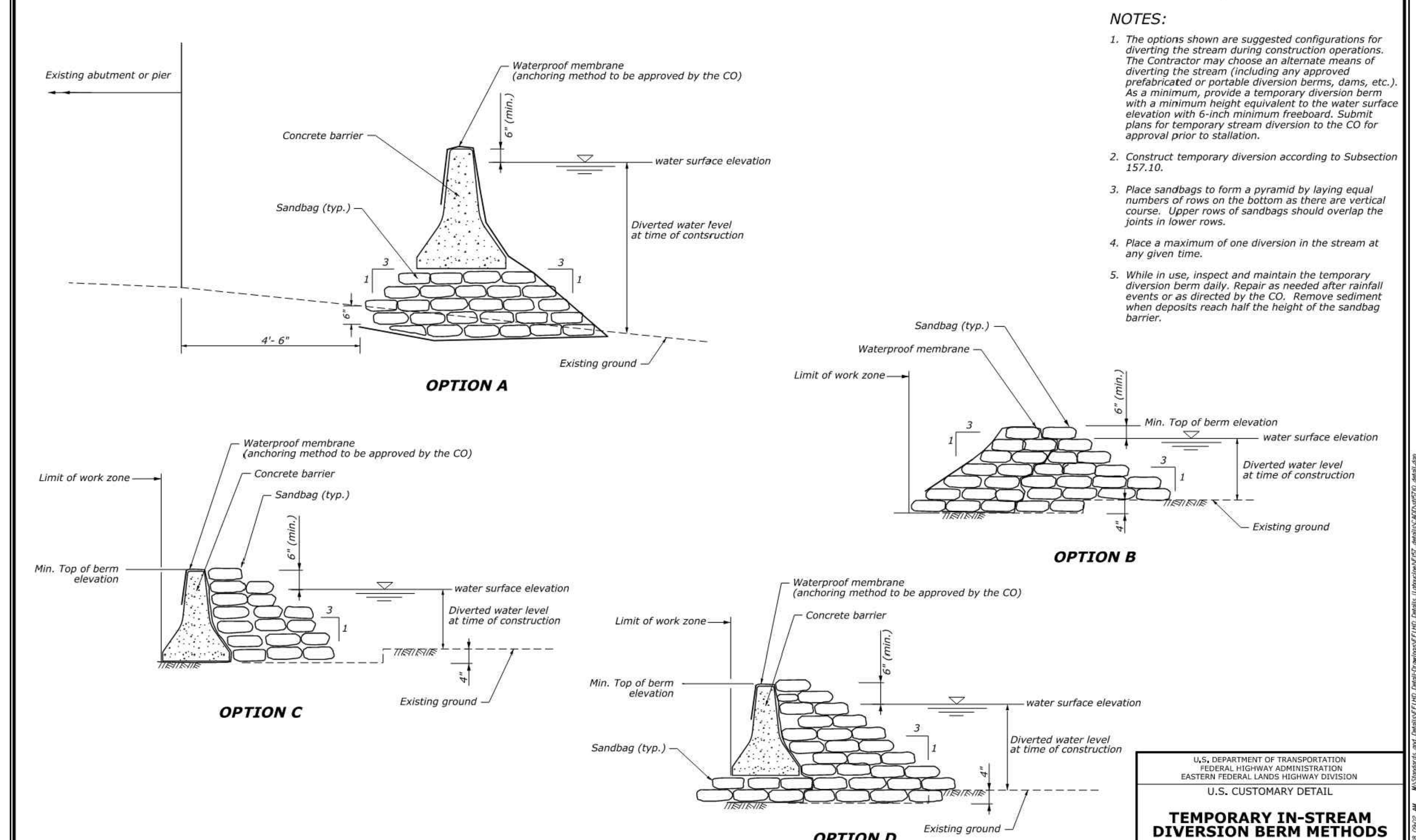
NOTES:
1. Construct temporary diversion according to Subsection 157.10. Obtain the CO's approval for use of alternate diversion methods.
2. Construct diversion berm according to Detail E157-08.
3. For diversions in place longer than one workday, ensure the height of the diversion berm is 1 foot higher than the 2-year storm.
4. Design dewatering system for expected flows. At a minimum, design the system for a 2-year, 24-hour event. Have spare pumps on site for replacement in the event of pump failure or higher than anticipated flow rates.
5. Suspend the inlet above the channel bottom to prevent sucking sediment into the hose. Place a mesh screen over the inlet to prevent injury to aquatic wildlife.
6. Stabilize the discharge point with native channel bottom stone, riprap, or sandbags to disperse energy and prevent erosion.
7. Direct water pumped from the work area into a filter bag (See Detail E157-10) or an approved sediment retention structure constructed at the downstream of the downstream diversion berm. Do not discharge the pumped water from the work area directly to the stream.
8. Remove dewatering system and restore the area to pre-diversion conditions within 5 days after dewatering is no longer needed.

ADAPTED FROM:
WEST VIRGINIA DEPARTMENT OF ENVIRONMENT PROTECTION
EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL,
FIGURE 3.21-12

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
U.S. CUSTOMARY DETAIL
TEMPORARY DIVERSION BERM BYPASS PUMPING
DETAIL APPROVED FOR USE
APPROVED: NOVEMBER 2020
DETAIL E157-09

STATE	PROJECT	SHEET NUMBER



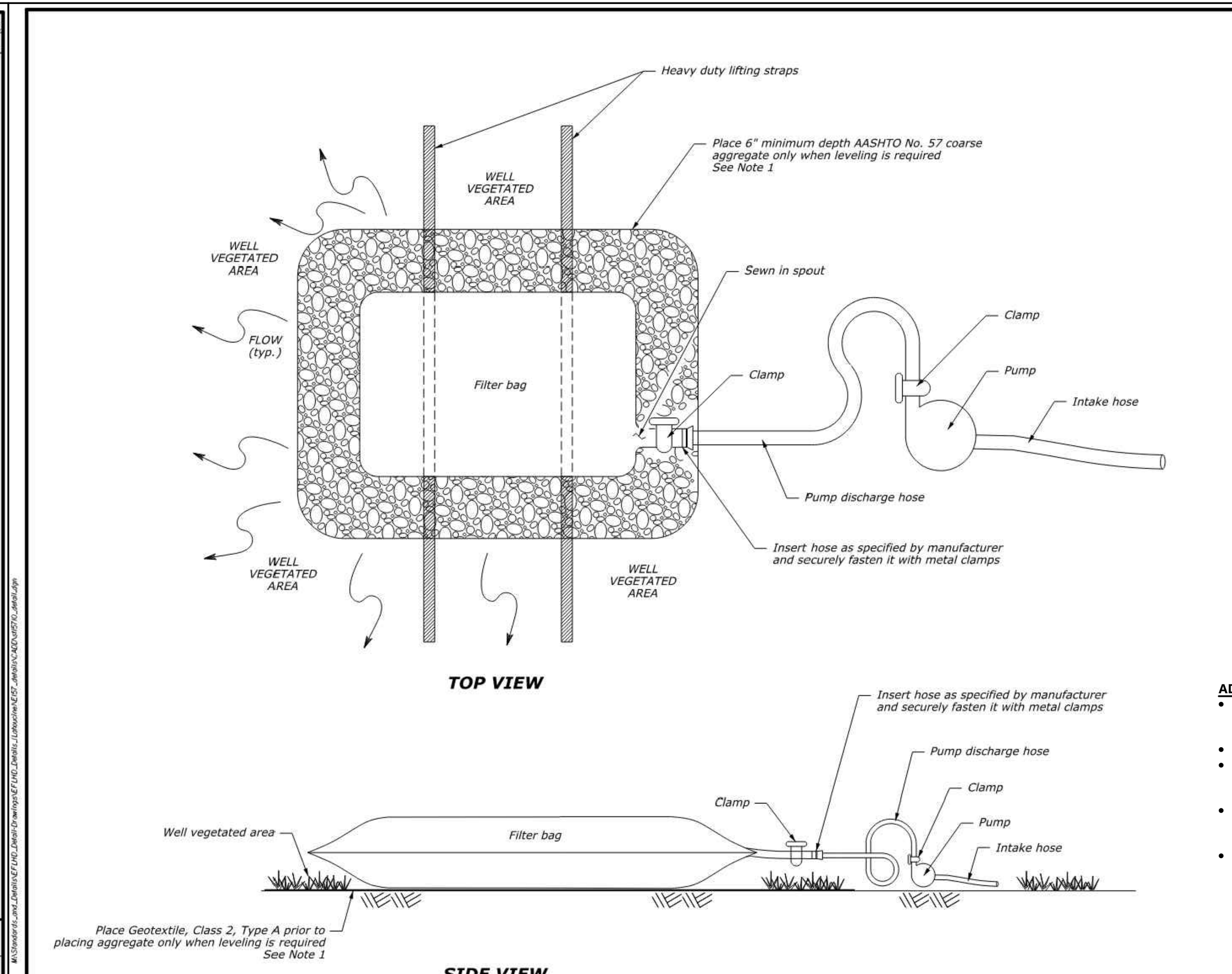
NOTES:
1. The options shown are suggested configurations for diverting the stream during construction operations. The Contractor may choose an alternate means of diverting the stream (including any approved prefabricated or portable diversion berms, dams, etc.). As a minimum, provide a temporary diversion berm with a minimum height equivalent to the water surface elevation with 6-inch minimum freeboard. Submit plans for temporary stream diversion to the CO for approval prior to stallation.
2. Construct temporary diversion according to Subsection 157.10.
3. Place sandbags to form a pyramid by laying equal numbers of rows on the bottom as there are vertical course. Upper rows of sandbags should overlap the joints in lower rows.
4. Place a maximum of one diversion in the stream at any given time.
5. While in use, inspect and maintain the temporary diversion berm daily. Repair as needed after rainfall events or as directed by the CO. Remove sediment when deposits reach half the height of the sandbag barrier.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
U.S. CUSTOMARY DETAIL
TEMPORARY IN-STREAM DIVERSION BERM METHODS
DETAIL APPROVED FOR USE
DETAIL E157-08

3 TEMPORARY DEWATERING MEASURES
NOT TO SCALE

STATE	PROJECT	SHEET NUMBER



NOTES:
1. Locate filter bags in level areas (less than 5% grade) or as approved by the CO. When level areas are not available, place geotextile and coarse aggregate to level the filter bags.
2. Locate filter bags in areas accessible by equipment for maintenance and removal.
3. Insert a maximum of one hose in each filter bag at any given time.
4. Inspect filter bags daily. Replace filter bags when 50% of the sediment capacity has been reached or when there is a failure. Have spare filter bags on site for replacement.
5. Do not permit discharge from the filter bags to drain back into work or access areas of the project. Discharge onto stable and erosion resistant areas.
6. Do not cut or empty filter bags on site. Restore the area according to Subsection 157.15.

ADDITIONAL NOTES:
- GEOTEXTILE BAG MATERIAL BASED ON PARTICLE SIZE IN PUMPED WATER, I.E., FOR COARSE PARTICLES A WOVEN MATERIAL; FOR SILTS/CLAYS A NON-WOVEN MATERIAL.
- DO NOT OVER PRESSURIZE BAG OR USE BEYOND CAPACITY.
- LOCATE DISCHARGE SITE ON FLAT UPLAND AREAS AS FAR AWAY AS POSSIBLE FROM STREAMS, WETLANDS, OTHER RESOURCES, AND POINTS OF CONCENTRATED FLOW.
- DOWNGRADIENT FROM RECEIVING AREA MUST BE WELL VEGETATED OR OTHERWISE STABLE FROM EROSION, E.G., FOREST FLOOR OR COARSE GRAVEL/ STONE.
- DISCHARGE LOCATION SHALL MEET ALL REGULATORY SETBACKS FROM WETLANDS AND OTHER WATER COURSES.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
U.S. CUSTOMARY DETAIL
FILTER BAG
DETAIL APPROVED FOR USE
DETAIL E157-10

Know what's **below.**
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STATE OF NEW HAMPSHIRE
KAI BURK
No. 16921
LICENSED PROFESSIONAL ENGINEER

PORTSMOUTH REGIONAL HOSPITAL
HCA HEALTHCARE
PORTSMOUTH, NH

PLAN STATUS

DATE	DESCRIPTION

DESIGN	DRAWN	CHKD

MARCH 2024

EROSION CONTROL DETAILS

C3-01

Appendix I
New Hampshire Natural Heritage Bureau Inquiry

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: Brenden Walden, Gove Environmental Services, Inc.
8 Continental Drive Bldg 2 Unit H
Exeter, NH 03833
info@gesinc.biz

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

cc: NHFG Review

Date: 07/26/2024 (valid until 07/26/2025)
Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits: NHDES - Standard Dredge & Fill - Minor, USACE - General Permit

NHB ID: NHB24-2219

Town: Portsmouth
Location: 333 Borthwick Avenue

Project Description: Culvert replacement on a tier one stream located in the rear of the property

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://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review. 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
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Marsh Wren (*Cistothorus palustris*)	--	--	Contact the NH Fish & Game Dept (see above).
Sora (*Porzana carolina*)	SC	--	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.

NHB24-2219


Portsmouth
Blanding's Turtle
Marsh Wren
Sora
Legend
Animal
Site bounds
towns
0
0.15
0.3
0.45
0.6
0.75
Miles

NHB24-2219 EOCODE: ARAAD04010*632*NH

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status		**Conservation Status**	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2011: Area 12906: 1 adult observed.
General Area: 2011: Area 12906: Marsh along railroad tracks.
General Comments: --
Management Comments: --

Location

Survey Site Name: Meadowbrook
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 1.9 acres Elevation:

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

Directions: 2011: Area 12906: Marsh adjacent to 333 Borthwick Avenue, behind Portsmouth Regional Hospital.

Dates documented

First reported: 2011-05-07 Last reported: 2011-05-07

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.

NHB24-2219 EOCODE: ABPBG10020*019*NH

New Hampshire Natural Heritage Bureau - Animal Record

Marsh Wren (*Cistothorus palustris*)

Legal Status	Conservation Status
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Not listed	State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2020: 8 observed between 5/2 and 8/17. 2019: 3 observed between 5/12 and 6/30. Includes marsh area on north side of railroad tracks. 2016: 2 observed between 5/8 and 7/23. 2013: 3 observed between 5/18 and 5/26. 2012: Species observed on 5/18 and 5/19. 2011: Species observed on 5/21. 2010: 1 observed between 5/17 and 5/22. 2009: 3 observed on 6/20. 2006: Species observed on 5/25. 1997: 2 observed on 6/22.
General Area: --
General Comments: 2020: Includes data from NH Auduon sites "Portsmouth City Park" and "Borthwick Ave. Marsh".
Management Comments: --

Location

Survey Site Name: Portsmouth Hospital Marsh
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 33.6 acres Elevation:

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

Directions: --

Dates documented

First reported: 1997-06-22 Last reported: 2020-08-17

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.

NHB24-2219 EOCODE: ABNME08020*010*NH

New Hampshire Natural Heritage Bureau - Animal Record

Sora (*Porzana carolina*)

Legal Status	**Conservation Status**
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Special Concern	State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2021: 2 observed between 5/12 and 6/4. 2020: 2 observed between 5/1 and 7/14. 2019: 1 observed 5/9 and 6/3. 2012: 1 observed between 5/18 and 5/26. 2011: 1 observed on 5/21. 2009: 2 observed between 5/3 and 5/24. 1997: 2 observed on 6/22. 1996: 1 observed on 5/15.
General Area: --
General Comments: --
Management Comments: --

Location

Survey Site Name: Portsmouth Hospital Marsh
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 33.6 acres Elevation:

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

Directions: --

Dates documented

First reported: 1996-05-15 Last reported: 2021-06-04

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.

Appendix II
New Hampshire Department of Historic Resources Inquiry

Appendix III
Tax Map, List of Abutters, Abutter Notification Letter, and Certified Mail Receipts

Subject Property

Tax Map 240 Lot 2-1
HCA Health Services of New Hampshire
PO Box 80610,
Indianapolis, IN 46280

Abutters:

Tax Map 240 Lot 1
Liberty Mutual Insurance Company
Attn: Joanne Bragg
175 Berkeley St
Boston, MA 02116

Tax Map 240 Lot 2-1001
City of Portsmouth DPW
PO Box 628
Portsmouth, NH 03802

Tax Map 234 Lot 7-3
City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03802

August, 2024

«Name»
«Street»
«TownStateZip»

Re: Portsmouth Regional Hospital Culvert Replacement
Subject: NH Department of Environmental Services Wetlands Bureau
Minor Impact Dredge & Fill Application

Dear Abutter:

The purpose of this letter is to inform you HCA HEALTH SVC of Portsmouth, NH is applying to the NH Department of Environmental Services Wetlands Bureau, which requires this notice for a dredge and fill permit to impact areas under its jurisdiction. The applicant is proposing a project that will have 750 SF of direct wetland impact and 1,600 SF of temporary impact. The wetland impact is associated with a proposed culvert replacement on the property. The project is proposed on Tax map 0240-0002-0001 on 333 Borthwick Ave, Portsmouth, NH.

A copy of the application, including plans, will be made available for your review at the town offices and at the NH Department of Environmental Services Wetlands Bureau, 29 Hazen Drive in Concord.

If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,

Brenden Walden
GES, Inc.