

ADDENDUM NO. 2
TO
BIDDING AND CONTRACT
REQUIREMENTS AND SPECIFICATIONS
FOR THE
LINDEN STREET OVER EXETER RIVER
BRIDGE No. 081/046
BRIDGE REPAIR
EXETER, NH
WP PROJECT NO. 20837D

1/23/2024



PREPARED BY:
WRIGHT-PIERCE
230 COMMERCE WAY, SUITE 302
PORTSMOUTH, NH 03801
603.430.3728 | WWW.WRIGHT-PIERCE.COM

**LINDEN STREET OVER EXETER RIVER
BRIDGE No. 081/046
BRIDGE REPAIR**

EXETER, NH

ADDENDUM NO. 2

WP PROJECT NO. 20837D

As a point of clarification, it should be understood that the Contract Documents govern all aspects of the project. Discussions held during the Pre-Bid Conference or over phone or email are informal and informational only. All official changes to the Contract Documents are made only by addenda. The following changes and additional information are hereby made a part of the Contract Documents:

A pre-bid conference was held on 1/16/2024 at 10:00 AM. A copy of the pre-bid conference sign-in sheet is attached. General Bidders shall acknowledge receipt of this **Addendum No. 2** on page 00410-4 of the bid form.

SPECIFICATIONS

No modifications as of this addendum.

DRAWINGS

No modifications as of this addendum.

QUESTIONS AND ANSWERS

Questions from Contractors received during the bidding period:

Q: Is concrete facing as shown in the bid alternate non-structural?

A: Yes.

Q: Are existing plans available?

A: No.

Q: Are insurance requirements listed in the NHDOT Standard Specifications for Road and Bridge Construction acceptable in lieu of insurance requirements as listed in the Contract Documents?

A: Yes. Remove section 00800 6.03 of the Contract Documents and replace with the insurance requirements as listed in Section 107.11 of the 2016 NHDOT Standard Specifications, as Amended by Errata, Special Provisions and Special Attentions.

Q: Confirm right of entry at adjacent gravel parking lot.

A: The Town has coordinated access to the adjacent gravel parking lot for construction staging. A coordination meeting will be required among the Town, the property owner, and the successful contractor prior to start of construction.

Q: Can permit applications be provided?

A: Yes, the Wetland permit application and Shoreland Permit are provided as an attachment to this addendum.

Q: What additional qualifications are required if a contractor is already prequalified by NHDOT for Bridge Construction?

A: Refer to Article 3 – Qualifications of Bidders in Section 00200 of the Contract Documents. Bidders are not required to provide Section 00450 if they are prequalified by NHDOT for Bridge Construction.

Q: What is the engineer's estimate for the project?

A: The Owner anticipates that the Project's total bid price will be approximately \$650,000.

Q: Can the geotechnical report be provided to aid us in pricing the soil anchors?

A: The geotechnical design report will not be provided. The soil data and soil anchor design criteria are shown within the Contract Documents.

Q: Based on the plans and specs, the job requires a double corrosion protected one piece soil anchors. In order to install these anchors, a bench that is +/- 15' wide must be built on the outside of the wingwalls. Are we allowed to build this temporary bench given the permits that have been procured for the project?

A: The plans and specifications are not intended to limit contractors to installing double corrosion protected one piece soil anchors. The contractor shall work within the right-of-way and permit limits as shown in the contract documents unless other permits / right-of-way access are obtained. Permit and right-of-way access revisions required based on the contractor's means and methods shall be obtained by the contractor at no additional cost to the owner.

Q: Is there a wage scale associated with this project?

A: No

Q: Special Provision Section 505 - Soil Anchors subsection 2.5.3 requires epoxy coated or encapsulated anchor bars and several parts of subsection 3.9.8 reference only epoxy coated or encapsulated bar anchors. Are galvanized anchor bars allowed, consistent with subsections 2.2.1 and 2.5.6 and the notes on drawing C-1?

A: Yes, galvanized anchor bars are allowed.

Q: Special Provision Section 505 - Soil Anchors subsection 3.9.2 requires the Contractor to select the equipment and methods suitable for the ground conditions. Would the use of hollow-bar soil nails be acceptable?

A: Yes, the use of hollow-bar soil nails are acceptable.

Q: Special Provision Section 505 - Soil Anchors subsection 3.11.1.1 allows anchors that have passed the verification and proof testing requirements to be incorporated into the final work. However, subsection 3.11.3 calls for verification testing on sacrificial anchors. Can verification test anchors be incorporated into the final work, or are they sacrificial only?

A: Yes, verification test anchors can be incorporated into the final work if they meet testing requirements.

END OF ADDENDUM NO. 2

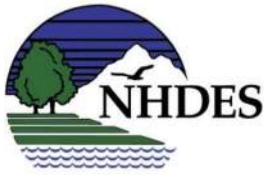
Attachments Follow:

- Pre-Bid Conference Sign-in Sheet
- NHDES Shoreland Permit by Notification (PBN)
- NHDES Wetland Permit by Notification (PBN) Application

LINDEN STREET OVER EXETER RIVER (081/046) BRIDGE REPAIR – TOWN OF EXETER, NH
 PRE-BID CONFERENCE SIGN-IN-SHEET
 BIDS DUE DATE/ TIME: 1/29/2023, AT: 2:00 PM

Name	Organization Name	Phone Number	Email
Mike Ferreri	Eurois Corporation	603-527-3545	mferreri@metroasset.net
Zach Dill	R.M. Piper Inc.	603-481-0009	zach.dill@rmpiper.com
PRAKHAR SAXENA	New England Infrastructure, Inc.	978-293-3535	psaxena@neinfrastructure.com
Kevin Dos Santos	Bay State Shotcrete	603-966-0901	KevinDosSantos@gmail.com
Taylor Souto	Bay State Shotcrete	978-606-8668	Taylor.Souto@baystateshotcrete.com
Jay Perkins	Town of Exeter DPW	603-773-6163	JPerkins@exeternh.gov
JASON GALLANT	Wright-Pierce	603-686-0586	Jason.gallant@wright-pierce.com

Please print legibly



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

January 10, 2024

TOWN OF EXETER-PUBLIC WORKS DEPT
13 NEWFIELDS RD
EXETER NH 03833

Re: Accepted Shoreland Permit by Notification (RSA 483-B)
NHDES File Number: 2024-00061
Subject Property: Linden Street, Exeter, Tax Map #ROW, Lot #ROW

Dear Applicant:

On January 09, 2024, the New Hampshire Department of Environmental Services (NHDES) Shoreland Program received the above-referenced Shoreland Permit by Notification (SPBN). In accordance with RSA 483-B:5-b, I and Env-Wq 1406.19, on January 10, 2024, the NHDES accepted the SPBN. The enclosed SPBN form is your permit. Any individual conducting work under this permit is advised to post a copy of the enclosed SPBN form on site in a prominent location, visible to inspecting personnel, at all times during construction.

Only the impacts shown on the submitted plans and accepted by NHDES as part of the SPBN are authorized under RSA 483-B. Any and all impacts not shown on the accepted plans or permitted through another SPBN or Shoreland Permit Application will render this SPBN invalid and will be in violation of RSA 483-B.

Please note that this SPBN cannot be amended. Prior to any change to the size or location of the proposed impacts, please contact me at Matthew.P.Faidell@des.nh.gov or 603-271-0872 to determine the appropriate method to obtain any additional approval under RSA 483-B:5-b as may be required. Please do not hesitate to contact me as noted above if you have additional questions.

Sincerely,

Matthew Faidell
Shoreland/Shoreline Specialist, Shoreland Program
Wetlands Bureau, Land Resources Management
Water Division

Enclosure

cc: Gallant, Jason (Wright-Pierce)

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095
NHDES Main Line: (603) 271-3503 • Subsurface Fax: (603) 271-6683 • Wetlands Fax: (603) 271-6588
TDD Access: Relay NH 1 (800) 735-2964

Project Description (continued)

Project Description

The proposed bridge repair is located at the crossing of Linden Street over the Exeter River in Exeter, New Hampshire. The bridge is owned by the Town and consists of a transverse timber deck with glued laminated timber stringers with a span of 58'-0" supported on reinforced concrete pile cap and driven H-piles. The abutments and wingwalls consist of timber faced mechanically stabilized earth walls. The timber facing for the abutments and wingwalls were observed to be separating and bulged in multiple areas. Settling was observed on the roadway approaches due to the apparent movement of the walls below.

A portion of the proposed work is located within the 250-ft Protected Shoreland of the Exeter River. This work includes replacing the existing guardrail to meet current design standards, replacing the existing pavement (approximately 50-ft on the southern approach and 100-ft on the northern approach), constructing a riprap drainage swale (5-ft long), and repairs to the substructure. Substructure repairs consist of removing the top 5-ft of wingwalls and completely removing the timber facing backwall at each abutment. The removed portion will be rebuilt with reinforced concrete. The remainder of the timber faced wall, which varies in height up to 7-ft is proposed to be reinforced with a soil nail and waler system designed to supplement the load carrying capacity of the timber wall system. A reinforced concrete facing is proposed to encapsulate the soil nail and waler system and timber facing to reduce future maintenance.

The proposed impacts associated with this work include 6,260 sq. ft. of temporary impacts and 120 sq. ft. of permanent impacts within the Protected Shoreland Area, as shown in Shoreland Impact Figure, attached. Draft project plans are included, attached, for reference. Temporary impacts are proposed for installation/maintenance of erosion controls, construction access, guardrail replacement, and repaving of the bridge approach. Permanent impacts are proposed to complete the bridge repair along the wingwalls (1-ft width of concrete facing) and construction of a riprap drainage swale. A Wetland PBN will be submitted to NHDES for proposed impacts within jurisdictional wetland areas.

All disturbance areas will be located within the ROW. Temporary disturbance areas will be restored to match the existing groundcover. The contractor will be required to manage erosion and sediment control in accordance with the NH Stormwater Manual: Volume 3 Erosion and Sediment Controls During Construction.



SHORELAND PERMIT BY NOTIFICATION (PBN) NOTIFICATION FORM



Water Division/Land Resources Management
Shoreland Program
Check the Status of your PBN

RSA/Rule: RSA 483-B/Env-Wq 1400

	Administrative Use Only	<input checked="" type="checkbox"/> PBN Accepted, Expires: 1/10/2024	
		<input type="checkbox"/> PBN Rejected	Reviewer's Initials: MF
		File No.: 2024-00061	Admin's Initials:
		Check No.: 63245	Amount: 400

This form requests authorization to excavate, fill, or construct new structures within the protected shoreland, which is 250 feet landward of the reference line of public waters, as regulated under RSA 483-B. Refer to the cover sheet to determine your eligibility to use this form in lieu of the standard Shoreland Permit Application. **Please note:** Notification packages missing required components will be rejected and the fee will not be returned.

SECTION 1 - PROPERTY OWNER (RSA 483-B:5-b; Env-Wq 1406.17)			
LAST NAME, FIRST NAME, M.I.: Town of Exeter			
MAILING ADDRESS: 13 Newfields Road	TOWN/ CITY: Exeter	STATE: NH	ZIP CODE: 03833
PHONE: 603-773-6157 ext 163	EMAIL: jperkins@exeternh.gov		
SECTION 2 - PROJECT LOCATION (RSA 483-B:5-b; Env-Wq 1406.17)			
ADDRESS: Linden Street	TOWN/ CITY: Exeter	STATE: NH	ZIP CODE: 03833
WATERBODY NAME: Exeter River	TAX MAP/ LOT: ROW		
SECTION 3 - CONTRACTOR OR AGENT (Env-Wq 1406.17)			
LAST NAME, FIRST NAME, M.I.: Gallant, Jason (Wright-Pierce)			
MAILING ADDRESS: 230 Commerce Way Suite #302	TOWN/ CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
PHONE: (603) 570-7166	EMAIL: jason.gallant@wright-pierce.com		
SECTION 4 - PROJECT DESCRIPTION (Env-Wq 1406.17)			
Provide a brief description of the proposed project including square footage of impacts and dimensions of new structures.			
<p>The proposed bridge repair is located at the crossing of Linden Street over the Exeter River in Exeter, NH. A portion of the proposed work is located within the 250-ft Protected Shoreland of the Exeter River. Work includes replacing existing guardrail, approach pavement and repairs to the substructure/superstructure of the bridge. 6,260 sf of temporary and 120 sf of permanent impacts are proposed.</p>			
TOTAL SQUARE FEET OF IMPACT: 6,380 TOTAL SQUARE FEET OF NET CHANGE IN <u>IMPERVIOUS</u> AREA: +120			

Total impact area is determined by the sum of all areas disturbed by excavation, fill, and construction. Examples include, but are not limited to: constructing new driveways, constructing new structures, removing or replacing structure foundations, grading, and installing a new septic system or well.

SECTION 5 - PBN CRITERIA (RSA 483-B:5-b; Env-Wq 1406.05)

Check one of the following project type criteria.

- 1. This project impacts less than 1,500 square feet in total, with a net increase in impervious area, if any, of no more than 900 square feet. *PBN Impact Limit: 1,500 square feet/ Fee: \$400.*
- 2. This project is proposed for the purpose of stormwater management improvements, erosion control, or environmental restoration or enhancement. *PBN Impact Limit: None/ Fee: \$200.*
- 3. The project is for the maintenance, repair, and improvement of public utilities, public roads, and public access facilities. *PBN Impact Limit: None/ Fee: \$400.*
- 4. The project consists of geotechnical borings, test wells, drinking water wells or is a site remediation project and meets the requirements of Env-Wq 1406.05. *PBN Impact Limit: None / Fee: \$400.*

SECTION 6 - FEE (RSA 483-B:5-b; Env-Wq 1406.16)

Consult Section 5 to determine fee. Make checks and money orders payable to "Treasurer - State of NH". Undated checks **cannot** be accepted. TOTAL FEE: \$400

SECTION 7 - PHOTOS (RSA 483-B:5-b; Env-Wq 1406.16)

Dated photographs of each area proposed to be impacted are required for all projects.

SECTION 8 - PLAN REQUIREMENTS (RSA 483-B:5-b; Env-Wq 1406.16)

Check YES or NO to **all** statements, and review the applicable plan requirements. If your plans do not include the information that is required, your notification will be rejected.

<input checked="" type="checkbox"/> YES	Required for all projects: A clear and detailed plan of work depicting, at a minimum, all impact areas, the <u>reference line</u> , and property lines. Plans that are not to scale must show all relevant dimensions and distances from the reference line and dimensions.	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	This project proposes an increase in <u>impervious</u> (i.e. non-permeable) area. Plans must include the dimensions and locations of all existing and proposed impervious surfaces on the lot that are within 250 feet of the reference line. Decks are typically considered impervious.	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	< 20%	This project proposes an increase in impervious area, and the total post-construction impervious area on the lot within 250 feet of the reference line will not exceed 20%.
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	20 – 30%	This project proposes an increase in impervious area such that the total impervious area of the lot within 250 feet of the reference line will be greater than 20% but less than 30%. Plans must include a <u>stormwater management system</u> that will infiltrate increased stormwater runoff from development per <u>RSA 483-B:9, V(g)(2)</u> and in accordance with <u>Env-Wq 1500</u> .
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	> 30%	This project proposes an increase in impervious area such that the total impervious area on the lot within 250 feet of the reference line will be greater than 30%. Plans must include a <u>stormwater management system</u> designed and certified by a professional engineer to account for all new development, and plans must demonstrate how the vegetation point score is met per <u>RSA 483-B:9, V(g)(1,3)</u> .
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	This project proposes impacts within 50 feet of the reference line. Plans and photos must show each area of the <u>waterfront buffer</u> that will be impacted, including groundcover, and calculate the tree and sapling point scores in accordance with the <u>Vegetation Management Fact Sheet</u> .	

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

NHDES Shoreland Program, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	This project proposes impacts between 50 and 150 feet of the reference line. Plans must depict the 25% area of the woodland buffer to be designated and maintained as natural woodland. See the Vegetation Management Fact Sheet .
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	This project proposes to install or expand an accessory structure , such as a patio or shed, within 50 feet of the reference line. All plans <i>must</i> demonstrate that the height, size, and setback limitations for accessory structures will be met. These limitations are described within the Accessory Structure Fact Sheet . The shoreland frontage on this lot is: linear feet. <input type="checkbox"/> N/A – There is no direct frontage on this lot.
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	This project proposes a pervious (i.e. permeable) surface technology. Plans must include the location and type of the surface and a cross-section depicting the construction method, materials, and specifications as to how this surface will be maintained as a pervious technology. The notification must also include a maintenance plan describing how the surfaces will be maintained pervious.

SECTION 9 - CONDITIONS (Env-Wq 1406.20; RSA 483-B:9, V, (d))

Initial each of the required conditions below.

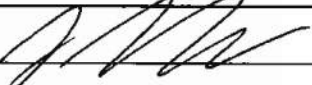
- JP 1. Erosion and siltation control measures shall: be installed prior to the start of work; be maintained throughout the project; and remain in place until all disturbed surfaces are stabilized.
- JP 2. Erosion and siltation controls shall be appropriate to the size and nature of the project and to the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to wetlands or surface waters.
- JP 3. No person undertaking any activity in the protected shoreland shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards established in Env-Ws 1700 or successor rules in Env-Wq 1700.
- JP 4. Any fill used shall be clean sand, gravel, rock, or other suitable material.
- JP 5. For any project where mechanized equipment will be used, orange construction fence shall: be installed prior to the start of work at the limits of the temporary impact area as shown on the plans approved as part of a permit or accepted as part of the permit by notification; be maintained throughout the project; and remain in place until all mechanized equipment has been removed from the site.

SECTION 10 - CERTIFICATIONS (Env-Wq 1406.18)

Initial each of the required certifications below.

- JP 1. The property owner shall sign the notification form below.
- JP 2. The signature(s) shall constitute certification that: the information provided is true, complete, and not misleading to the knowledge and belief of the signer; the signer understands that any permit by notification obtained based on false, incomplete, or misleading information is not valid; the project as proposed complies with the [minimum standards](#) established in RSA 483-B:9, V and will be constructed in strict accordance with the proposal; the signer accepts the responsibility for understanding and maintaining compliance with RSA 483-B and these rules; the signer understands that an accepted shoreland permit by notification shall not exempt the work proposed from other state, local, or federal approvals; the signer understands that incomplete notifications shall be rejected and the notification fee shall not be returned; and the signer is subject to the applicable penalties in RSA 641, *Falsification In Official Matters*.
- JP 3. The signature of the property owner certifies that the property owner has authorized the agent to act on the property owner's behalf for purposes of the notification. (Not Applicable)


SECTION 11 - REQUIRED SIGNATURE (RSA 483-B:5-b; Env-Wq 1406.18)

SIGNATURE (OWNER): 	PRINT NAME LEGIBLY: Jay Perkins	DATE: 12-20-23
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shoreland@des.nh.gov or (603) 271-2147

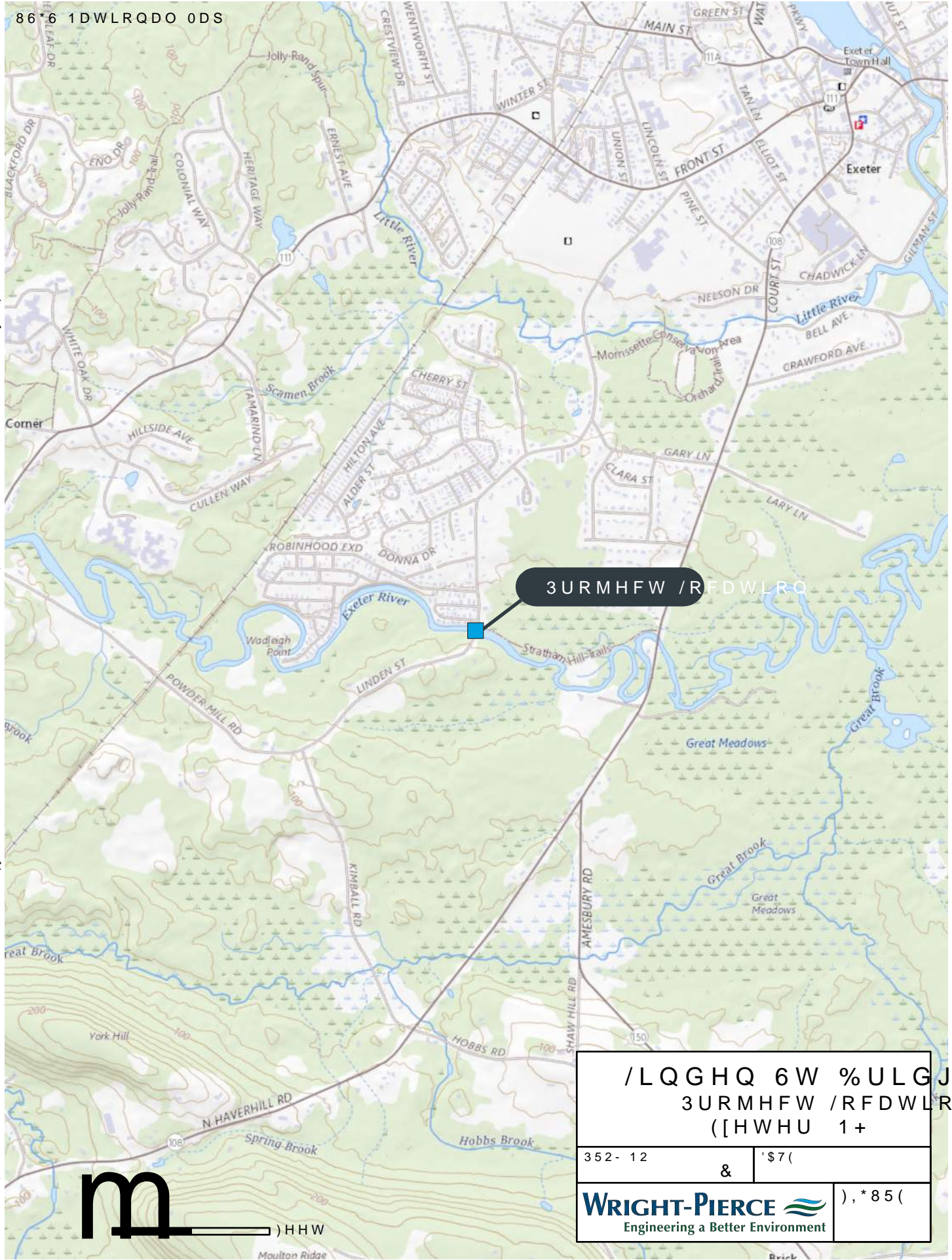
NHDES Shoreland Program, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

SIGNATURE (AGENT, IF APPLICABLE): 	PRINT NAME LEGIBLY: JASON L. GALLANT	DATE: 12/18/23

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Linden Street Bridge Repair – Exeter, NH Photo Log



Photograph 1 – View of Linden Street Bridge over Exeter River (Facing Southwest)



Photograph 2 – View of Linden Street Bridge Deck and Approach (Facing North)



Photograph 3 – View of Linden Street Bridge Deck and Approach (Facing South)



Photograph 4 – View of Linden Street Bridge Approach (Facing North)

TOWN OF EXETER, NEW HAMPSHIRE

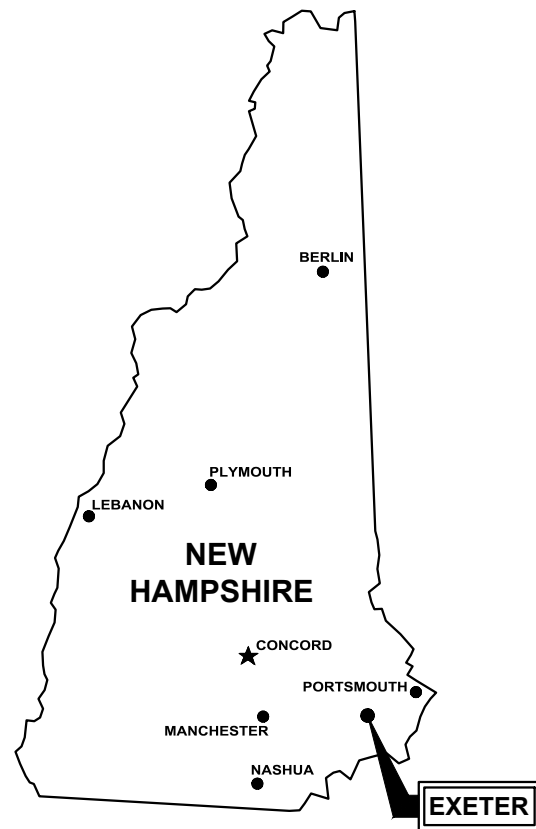
CONTRACT DRAWINGS FOR

LINDEN STREET OVER EXETER RIVER

(081/046)

BRIDGE REPAIR

DECEMBER 2023



DRAWING INDEX

GENERAL

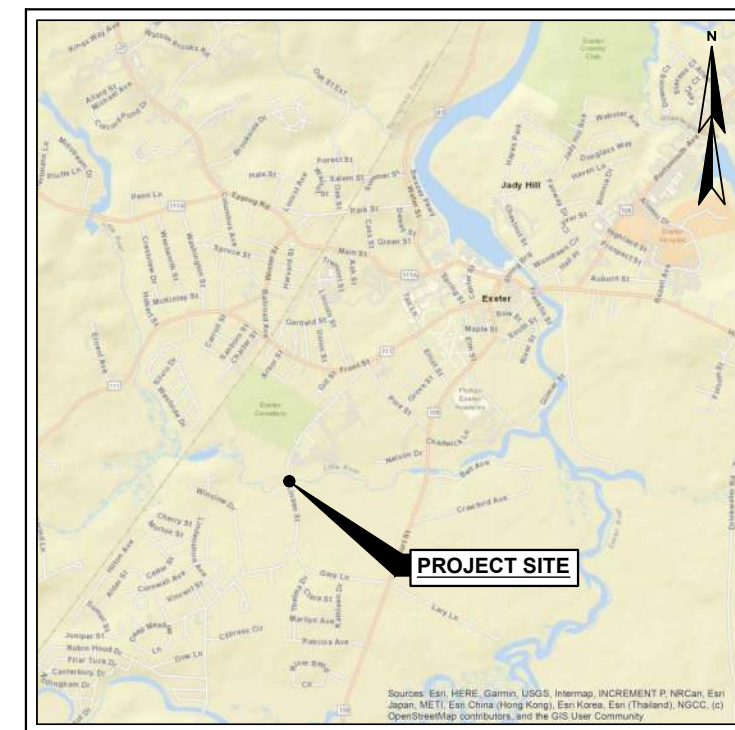
--- COVER SHEET

CIVIL

- C-1 GENERAL NOTES, LEGEND, ABBREVIATIONS AND QUANTITIES
- C-2 BRIDGE PLAN AND ELEVATION
- C-3 TYPICAL SECTIONS
- C-4 ABUTMENT A PLAN AND ELEVATION
- C-5 ABUTMENT B PLAN AND ELEVATION
- C-6 TYPICAL SUBSTRUCTURE SECTIONS-I
- C-7 TYPICAL SUBSTRUCTURE SECTIONS-II
- C-8 RAIL AND CURB LAYOUT
- C-9 RAIL DETAILS I
- C-10 RAIL DETAILS II
- C-11 RAIL DETAILS III
- C-12 DETOUR PLAN

PERMITTING

- E-1 EROSION CONTROL AND IMPACT PLAN



LOCATION PLAN
SCALE: NTS

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GENERAL NOTES

- 1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS OF WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS, INCLUDING REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). REFER TO SPECIFICATION SECTION 01320 FOR ADDITIONAL REQUIREMENTS.
4. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.
5. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.
6. ALL EXISTING STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING STORM DRAIN LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. WHERE UTILITY POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE THIS EFFORT WITH THE APPROPRIATE UTILITY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR THIS EFFORT OR TEMPORARY SUPPORT OF UTILITIES.
8. DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS AND STATIONING SHALL PREVAIL. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTling ALL EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED BY THEIR OPERATIONS AT NO EXPENSE TO THE OWNER. THIS WORK IS TO BE PERFORMED BY A LAND SURVEYOR LICENSED IN THE STATE OF NEW HAMPSHIRE.
10. THE CONTRACTOR SHALL REMOVE AND REPLACE OR REPAIR EXISTING ITEMS TO REMAIN THAT ARE DAMAGED BY THEIR CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE OWNER, AND AT NO ADDITIONAL COST TO THE OWNER.
11. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED BY THE CONTRACTOR IMMEDIATELY TO THE NHFG NONGAME ENDANGERED WILDLIFE PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER (NHB23-3038), THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION.

EXISTING SITE CONDITIONS

- 1. EXISTING CONDITION INFORMATION TAKEN FROM THE "EXISTING CONDITIONS SURVEY, LINDEN STREET BRIDGE OVER THE EXETER RIVER" PREPARED BY GM2 ASSOCIATES, INC. DATED AUGUST 23, 2023.
2. HORIZONTAL DATUM, BASED ON THE NH STATE PLANE COORDINATE SYSTEM, NAD83(2011).
3. ELEVATIONS SHOWN HEREIN, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. NO BOUNDARY SURVEY OR RESEARCH WAS COMPLETED AS PART OF THE EXISTING CONDITIONS SURVEY. THE PUBLIC AND PRIVATE BOUNDARIES ARE SHOWN AS APPROXIMATE SOLELY BASED ON PUBLICLY AVAILABLE GIS AND TAX MAP INFORMATION.
5. UNDERGROUND UTILITIES AND FACILITIES SHOWN ARE APPROXIMATE AND NOT NECESSARILY COMPLETE. THE CONTRACTOR SHALL NOTIFY DIGSAFE (CALL 811) PRIOR TO ANY EXCAVATION ON SITE IN ACCORDANCE WITH NH RSA 374.
6. ALL DIMENSIONS AND DETAILS SHOWN FOR THE EXISTING STRUCTURE ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL THEY HAVE MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN ACCEPTED BY THE ENGINEER.
7. THERE ARE NO KNOWN HAZARDOUS ENVIRONMENTAL CONDITIONS WITHIN THE AREA OF WORK. REFER TO SPECIFICATION SECTION 00800-SC-5.06. IF THE PRESENCE OF HAZARDOUS ENVIRONMENTAL CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY. ALL ACTIVITIES, HANDLING AND DISPOSAL OF HAZARDOUS ENVIRONMENTAL CONDITIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.

EROSION CONTROL

- 1. THE CONTRACTOR IS RESPONSIBLE FOR THE PREVENTION OF EROSION OF THE EXISTING STORMWATER SYSTEM FOR THE DURATION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND SUBMITTING A TEMPORARY EROSION CONTROL PLAN FOR REVIEW AND ACCEPTANCE BY THE OWNER AND ENGINEER. THE EROSION CONTROL PLAN SHALL BE FULLY IMPLEMENTED AND ACCEPTED BY THE OWNER AND ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
2. THE EROSION CONTROL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3", LATEST EDITION AND PER THE APPLICABLE WETLANDS PERMIT. ALL EROSION CONTROL EFFORT SHALL BE SUBSIDIARY TO ITEM 699.

DEMOLITION

- 1. THE CONTRACTOR SHALL SUBMIT, FOR DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02 OF THE NHDOT STANDARD SPECIFICATIONS, A DETAILED OUTLINE OR PLAN OF THE PROPOSED METHOD FOR PARTIAL REMOVAL OF THE EXISTING BRIDGE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK. PARTIAL BRIDGE REMOVAL SUBMITTALS SHALL BE DESIGNED AND SEALED BY A PROFESSIONS ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
2. ITEM 502, REMOVAL OF EXISTING BRIDGE STRUCTURE, SHALL INCLUDE THE REMOVAL OF THE EXISTING TIMBER BACKWALL, TOP OF THE WINGWALLS TO THE LIMITS SHOWN ON THE PLANS, EXISTING TIMBER BRIDGE RAIL, AND EXISTING BRIDGE PAVEMENT AND MEMBRANE. PORTIONS OF THE BRIDGE TO REMAIN SHALL BE PROTECTED. ANY DAMAGE TO THE EXISTING BRIDGE TO REMAIN CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

STRUCTURAL DESIGN CRITERIA

- 1. DESIGN LOADING: AASHTO HL-93.
2. DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD).
3. SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION AS AMENDED. NHDOT 2016 STANDARD SPECIFICATIONS AS AMENDED.
4. FOUNDATION DATA: EXISTING: HP8x36 PILES WITH REINFORCED CONCRETE PILE CAP, TIMBER FACED MSE BREASTWALL, BACKWALL, AND WINGWALLS
PROPOSED: REINFORCED CONCRETE BACKWALL AND WINGWALLS. GROUTED SOIL ANCHORS AND CONCRETE-FACED TIMBER MSE WALLS
5. REINFORCEMENT: AASHTO M 31 (ASTM A 615) GRADE 60, EPOXY COATED PER ASTM D3963.
LAG SCREWS: HOT-DIP GALVANIZED, AISI 1006 - 1022, 60,000 PSI MINIMUM TENSILE STRENGTH
FIBER REINFORCEMENT PER NHDOT CURRENT "QUALIFIED PRODUCTS LIST", DOSAGE RATE = 7 LB/CY
SPliced BARS SHALL HAVE THE FOLLOWING MINIMUM SPLICE LENGTHS REGARDLESS OF LOCATION (UNLESS OTHERWISE INDICATED ON THE DRAWINGS)
#4 = 1'-8" #5 = 2'-0" #6 = 2'-5" #7 = 3'-6" #8 = 4'-0"
6. STRUCTURAL STEEL: AASHTO M270, GRADE 50 (ASTM A709, GRADE 50)
7. CONCRETE: WINGWALL, BACKWALL, AND APPROACH SLAB = 4,000 PSI, NHDOT CLASS AA
GROUT: PER NHDOT CURRENT "QUALIFIED PRODUCTS LIST"
8. SEISMIC DESIGN CRITERIA: SEISMIC SITE CLASS = C (AASHTO 3.10.3.1)
SEISMIC ZONE = 1 (AASHTO 3.10.6)
0.2 SECOND SPECTRAL RESPONSE ACCELERATION, Ss = 0.19g (AASHTO FIGURE 3.10.2.1-2)
0.1 SECTION SPECTRAL RESPONSE ACCELERATION, S1 = 0.45g (AASHTO 3.10.2.1-3)
LIQUEFACTION POTENTIAL = NOT SUSCEPTIBLE
9. MAINTENANCE OF TRAFFIC: ROAD CLOSURE AND DETOUR.

SOIL ANCHOR DESIGN CRITERIA

- 1. UNIT WEIGHT OF BACKFILL: 125 PCF
2. INTERNAL SOIL FRICTION ANGLE: 32 DEGREES
3. EARTH PRESSURE COEFFICIENT: 0.31
4. LIVE LOAD SURCHARGE: 290 PSF
5. CONSTRUCTION SURCHARGE: 250 PSF
6. HEIGHT OF WALL: AS SHOWN ON PLANS (VIF)
7. SOIL ANCHOR SPACING: CONTRACTOR DESIGNED
8. MINIMUM HOLE DIAMETER: 3 INCH
9. ANCHOR SIZE: No. 6 THREADED BAR MIN., EPOXY COATED OR HOT-DIP GALVANIZED
10. STEEL YIELD STRENGTH: 50 KSI, HOT-DIP GALVANIZED
11. GROUT COMPRESSIVE STRENGTH: 5 KSI
12. MINIMUM BONDED LENGTH: 10 FT
13. ACTIVE ZONE FAILURE PLANE: AS SHOWN ON PLANS
14. PROPOSED REBUILT REINFORCED CONCRETE WINGWALL AND BACKWALL DESIGNED TO ACT INDEPENDENTLY FROM TIMBER FACED MSE WALL TO REMAIN. SOIL ANCHOR DESIGNER TO ACCOUNT FOR ADDITIONAL SURCHARGE FROM THE HEIGHT OF SOIL FROM THE TOP OF THE TIMBER FACED MSE WALL TO REMAIN TO THE TOP OF THE ROADWAY.

ESTIMATED QUANTITIES - BASE BID table with columns: ITEM NO., ITEM DESCRIPTION, QTY, UNIT. Includes items like Removal of Guardrail, Common Excavation, Granular Backfill, etc.

ESTIMATED QUANTITIES - BID ALTERNATE 1 table with columns: ITEM NO., ITEM DESCRIPTION, QTY, UNIT. Includes items like Concrete Facing, Mobilization.

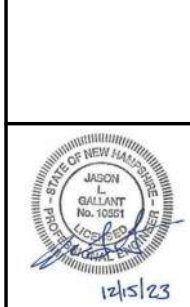
CIVIL ABBREVIATIONS

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

LEGEND section showing EXISTING and PROPOSED symbols for PROPERTY/ROW LINE, SETBACK LINE, EASEMENT LINE, CENTERLINE, EDGE OF PAVEMENT, CURBING, EDGE OF GRAVEL, EDGE OF CONCRETE, CONTOUR, BUILDING, STONEWALL, TRELIN, CHAIN LINK FENCE, STOCKADE FENCE, BARB WIRE FENCE, RETAINING WALL, GUARDRAIL, SEWER, SEWER FORCE MAIN, GAS, WATER, STORM DRAIN, UNDERDRAIN, CULVERT, UNDERGROUND ELECTRIC, OVERHEAD ELECTRIC, UNDERGROUND TELEPHONE, UNDERGROUND CABLE TV, IRON PIPE/REBAR, DRILLHOLE, MONUMENT, SURVEY CONTROL POINT, SPOT ELEVATION, SEWER MANHOLE, OUTSIDE DIAMETER, DRAINAGE MANHOLE, CATCH BASIN, ELECTRIC MANHOLE, TELEPHONE MANHOLE, SHUTOFF VALVE, WATER SERVICE SHUTOFF, YARD HYDRANT, HYDRANT, GAS SERVICE SHUTOFF, GAS GATE VALVE, UTILITY POLE, UTILITY POLE W/ GUY, UTILITY POLE W/ LIGHT, LIGHT POLE, BOLLARD, FLAGPOLE, CONIFEROUS TREE, DECIDUOUS TREE, SHRUB, WETLAND FLAG, EDGE OF WATER, STREAM, EDGE OF WETLANDS, FLOODPLAIN, WETLANDS, DRAINAGE FLOW, DRAINAGE SWALE, PAVEMENT MARKINGS, SIGN, MAILBOX, TEMPORARY BENCH MARK, TEST PIT, TEST BORING, TEST PROBE, MONITORING WELL, LIMIT OF WORK, SILT FENCE, RIPRAP, RAILROAD, MATCHLINE, ROCK OUTCROP, DEMOLITION.

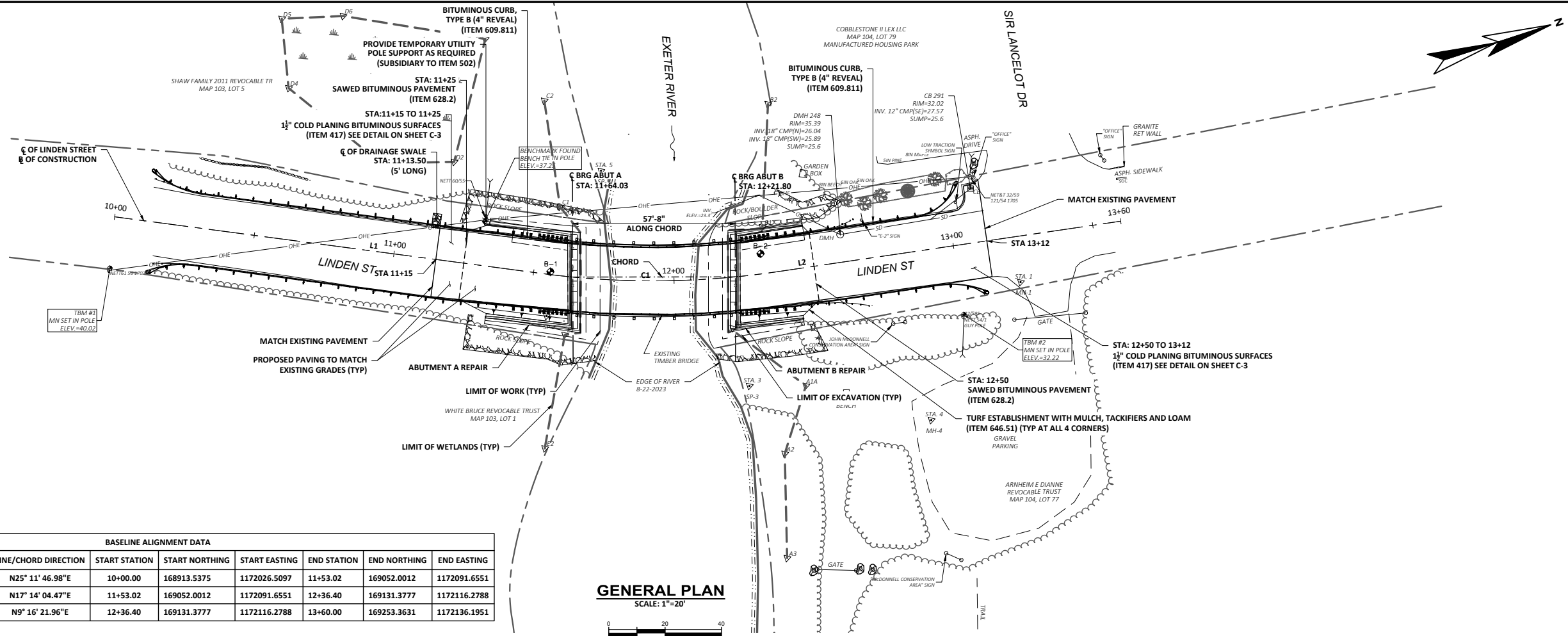
REVISIONS table with columns: NO, DATE, REVISIONS.

PROJECT NO: 208370
DESIGNED: W.NIHN
CAD COORD: M.LAPIERRE
CAD: M.LAPIERRE
CHECKED: W.NIHN
DATE: DECEMBER 2023
APPROVED: J.GALLANT
DATE: DECEMBER 2023
SUBMISSION: CONTRACT DOCUMENTS

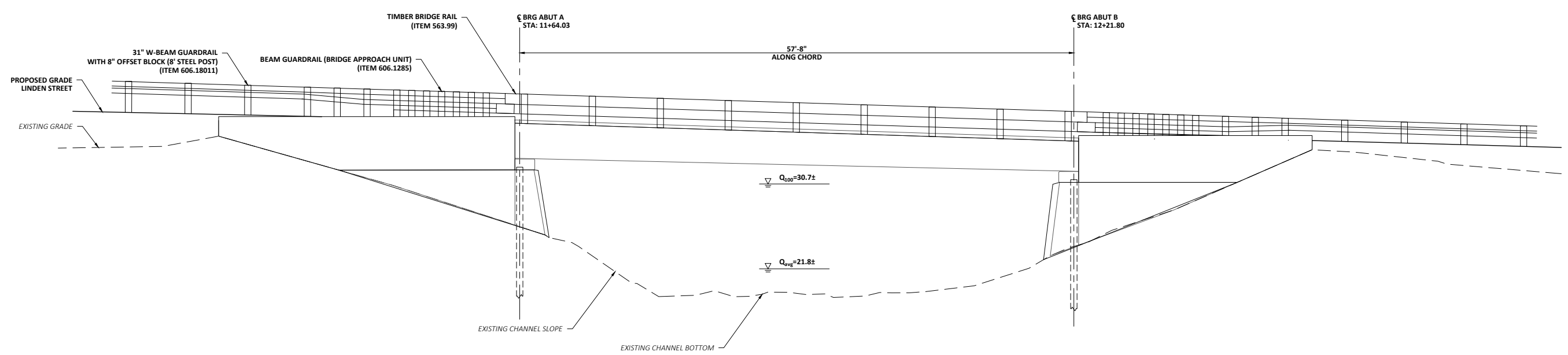


WRIGHT-PIERCE logo and contact information: 603.430.3728 | www.wright-pierce.com. Address: 230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801.

TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
(081/046)
BRIDGE REPAIR
GENERAL NOTES, LEGEND, ABBREVIATIONS AND QUANTITIES



BASELINE ALIGNMENT DATA										
NUMBER	LENGTH	RADIUS	DELTA	LINE/CHORD DIRECTION	START STATION	START NORTHING	START EASTING	END STATION	END NORTHING	END EASTING
L1	153.02			N25° 11' 46.98"E	10+00.00	168913.5375	1172026.5097	11+53.02	169052.0012	1172091.6551
C1	83.38	300.00	15°55'25"	N17° 14' 04.47"E	11+53.02	169052.0012	1172091.6551	12+36.40	169131.3777	1172116.2788
L2	123.60			N9° 16' 21.96"E	12+36.40	169131.3777	1172116.2788	13+60.00	169253.3631	1172136.1951



NO	REVISIONS	APPD	DATE

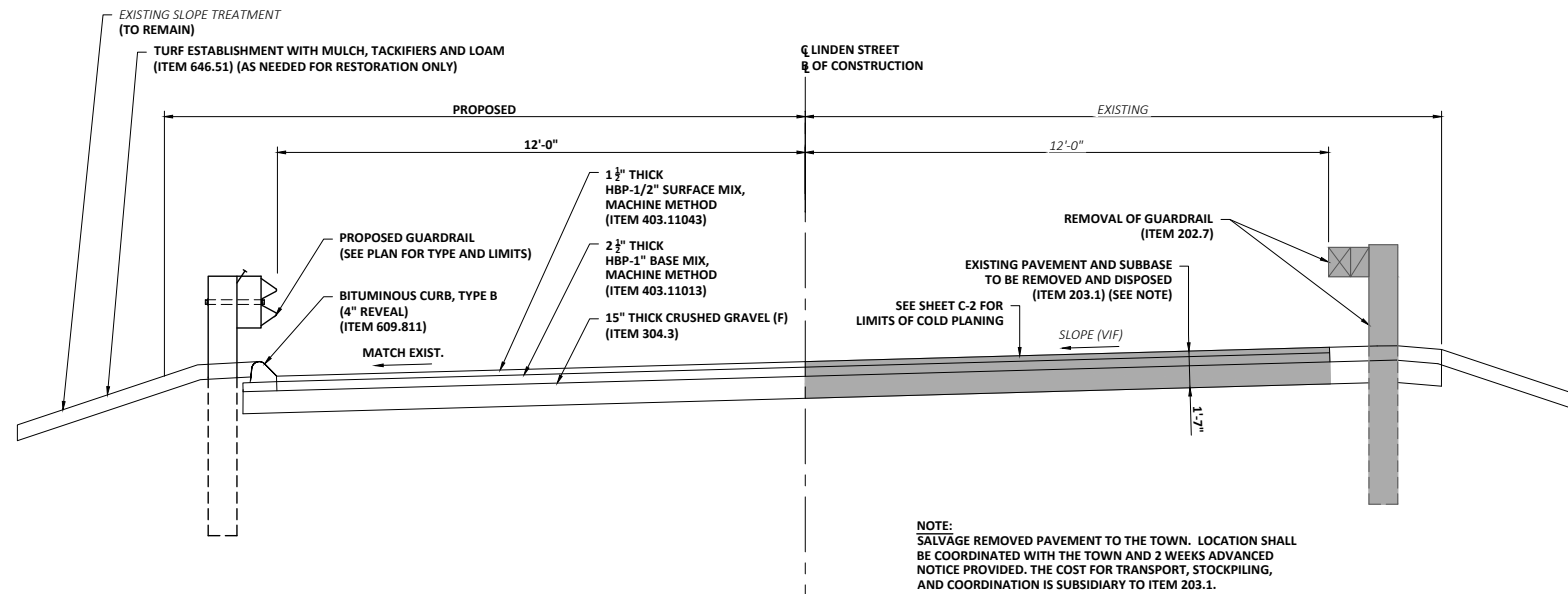
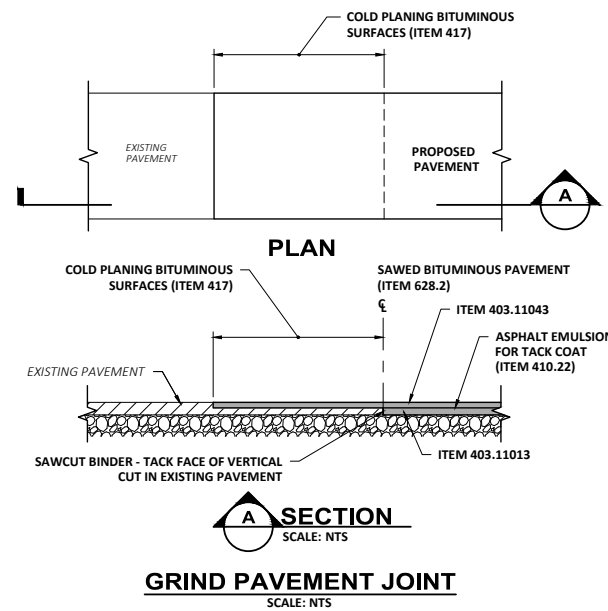
PROJECT NO:	20837D
DESIGNED:	W.NUHN
CAD COORD:	M.LAPIERRE
CAD:	M.LAPIERRE
CHECKED:	W.NUHN
DATE:	DECEMBER 2023
APPROVED:	J.GALLANT
DATE:	DECEMBER 2023
SUBMISSION:	CONTRACT DOCUMENTS



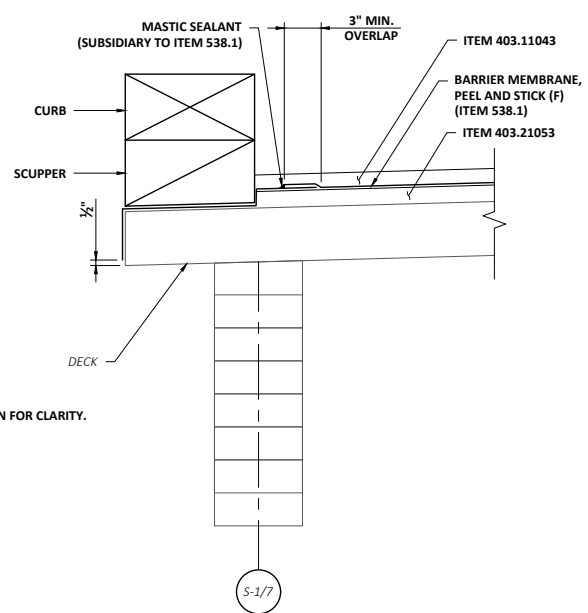
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230 COMMERCIAL WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
(081/046)
BRIDGE REPAIR
BRIDGE PLAN AND ELEVATION

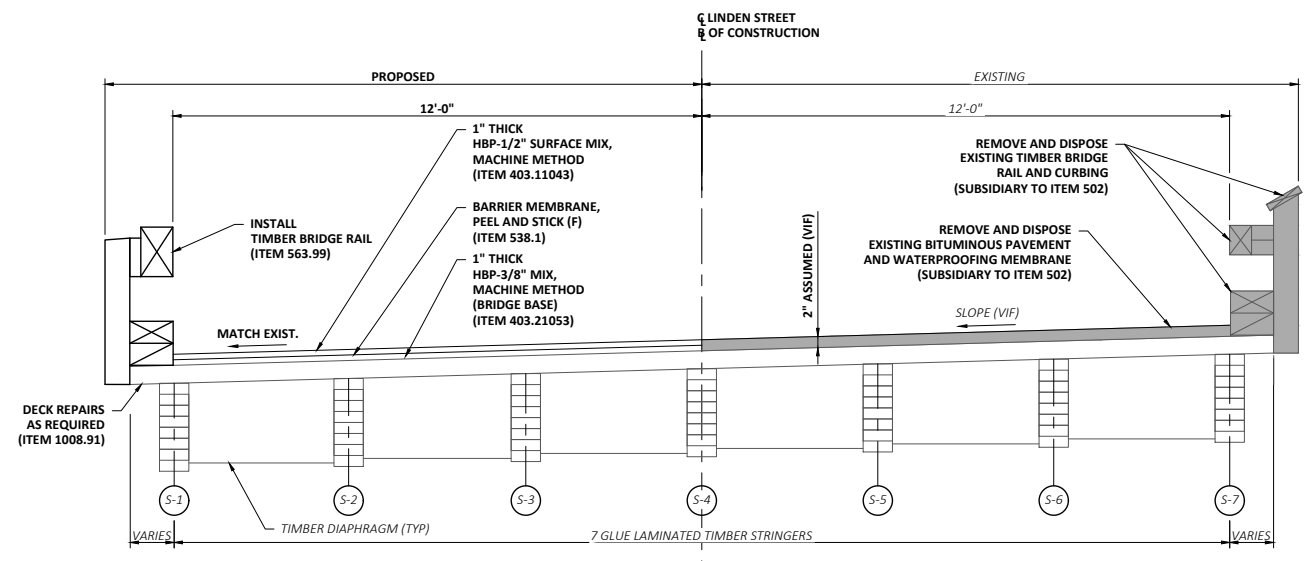
DRAWING
C-2



NOTE:
SALVAGE REMOVED PAVEMENT TO THE TOWN. LOCATION SHALL BE COORDINATED WITH THE TOWN AND 2 WEEKS ADVANCED NOTICE PROVIDED. THE COST FOR TRANSPORT, STOCKPILING, AND COORDINATION IS SUBSIDIARY TO ITEM 203.1.



NOTE:
POSTS NOT SHOWN FOR CLARITY.



REVISIONS		APPD	DATE
NO	DESCRIPTION		

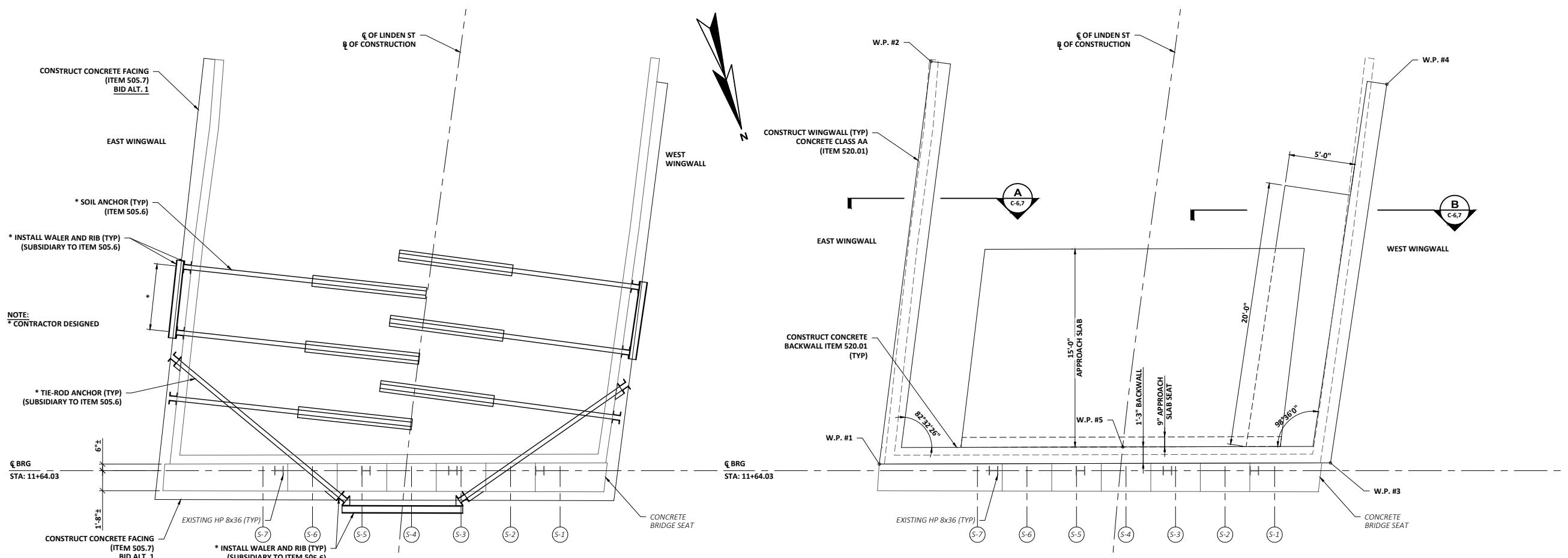
PROJECT NO:	20837D
DESIGNED:	W.AHORN
CAD COORD:	M.LAPIERRE
CAD:	M.LAPIERRE
CHECKED:	W.AHORN
DATE:	DECEMBER 2023
APPROVED:	J.GALLANT
DATE:	DECEMBER 2023
SUBMISSION:	CONTRACT DOCUMENTS

<p>12/15/23</p>	

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<p>230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801</p>	

<p>TOWN OF EXETER, NEW HAMPSHIRE LINDEN STREET OVER EXETER RIVER (081/046) BRIDGE REPAIR</p>	<p>TYPICAL SECTIONS</p>
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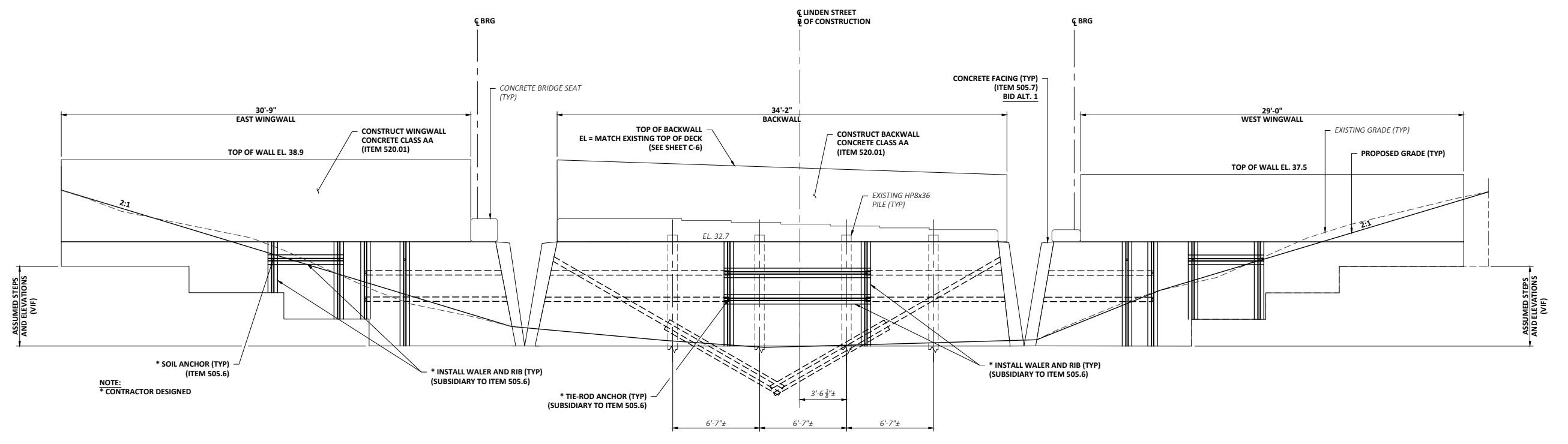
<p>DRAWING</p>	<p>C-3</p>
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ABUTMENT A PLAN: SOIL ANCHORS
SCALE: 1/4"=1'-0"

ABUTMENT A PLAN: MASONRY
SCALE: 1/4"=1'-0"

CONSTRUCTION WORKING POINTS				
W.P. #	STATION	OFFSET	NORTHING	EASTING
1	11+65.26	18.22 R	169056.0974	1172113.4221
2	11+35.25	18.19 R	169028.1736	1172100.5449
3	11+61.76	15.77 L	169066.2566	1172080.7996
4	11+32.30	16.25 L	169040.1689	1172068.1335
5	11+62.22	0.00	169060.3868	1172095.4425



ABUTMENT A - DEVELOPED ELEVATION
SCALE: 1/4"=1'-0"

NO	REVISIONS	APPD	DATE

PROJECT NO: 20837D
 DESIGNED: W.NUHN
 CAD COORD: M.LAPIERRE
 CAD: M.LAPIERRE
 CHECKED: W.NUHN
 DATE: DECEMBER 2023
 APPROVED: J.GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS

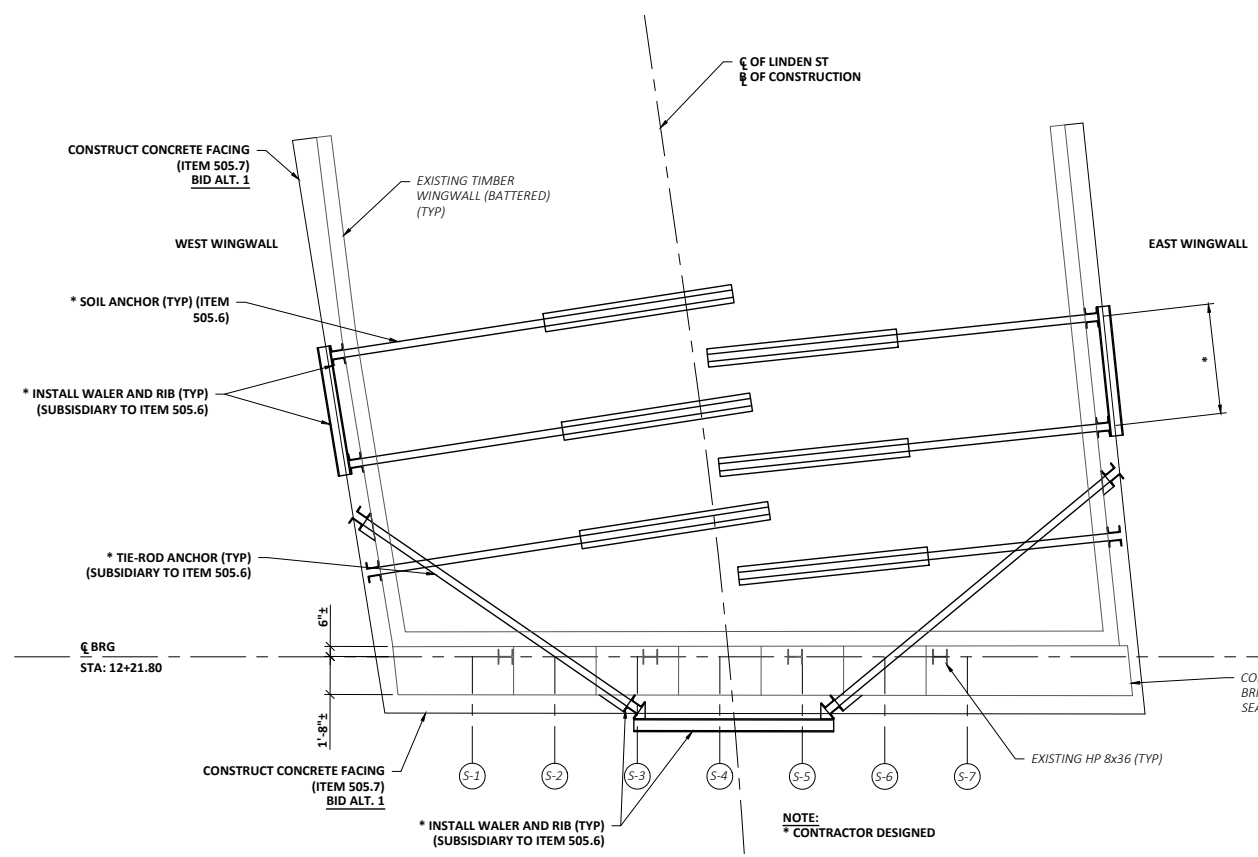


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TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 ABUTMENT A PLAN AND ELEVATION

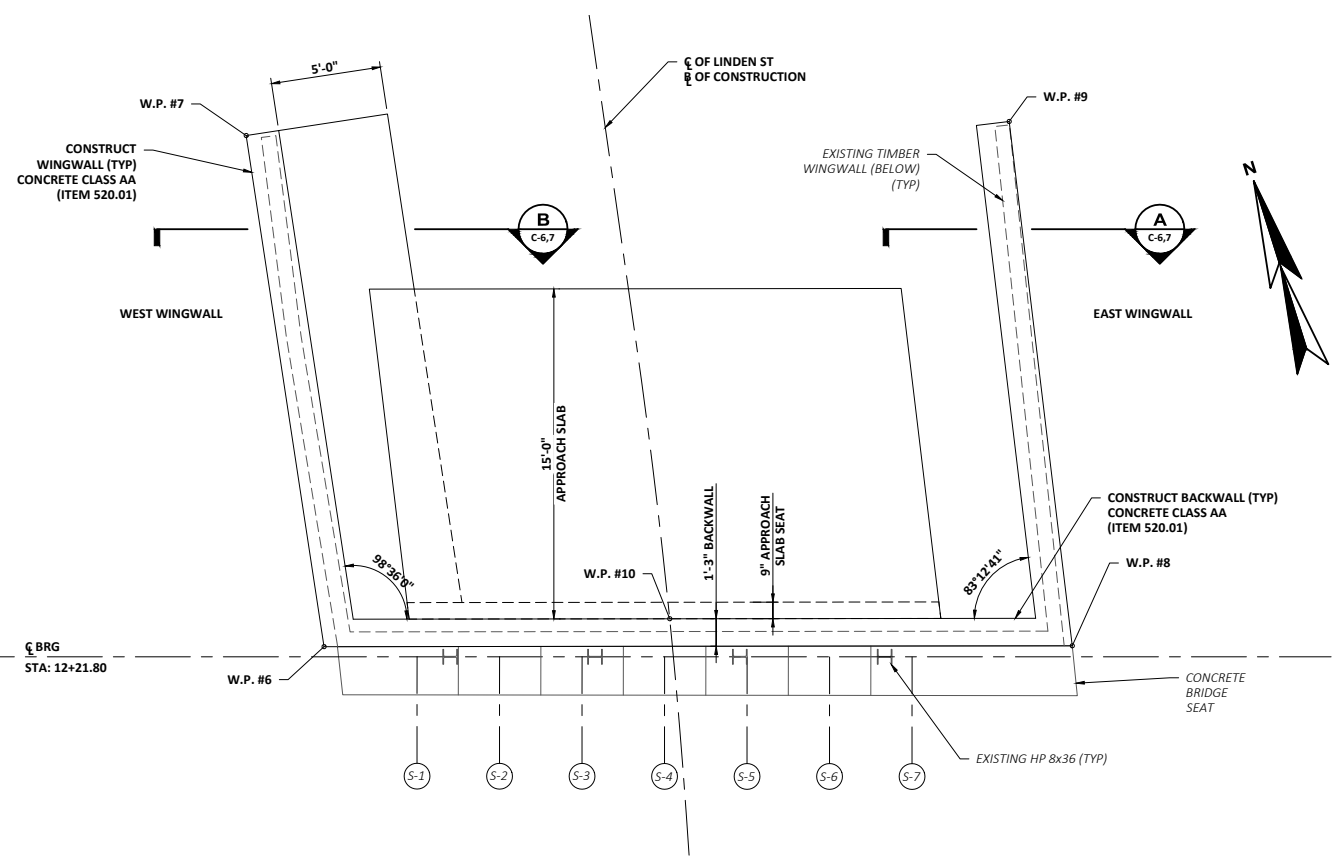
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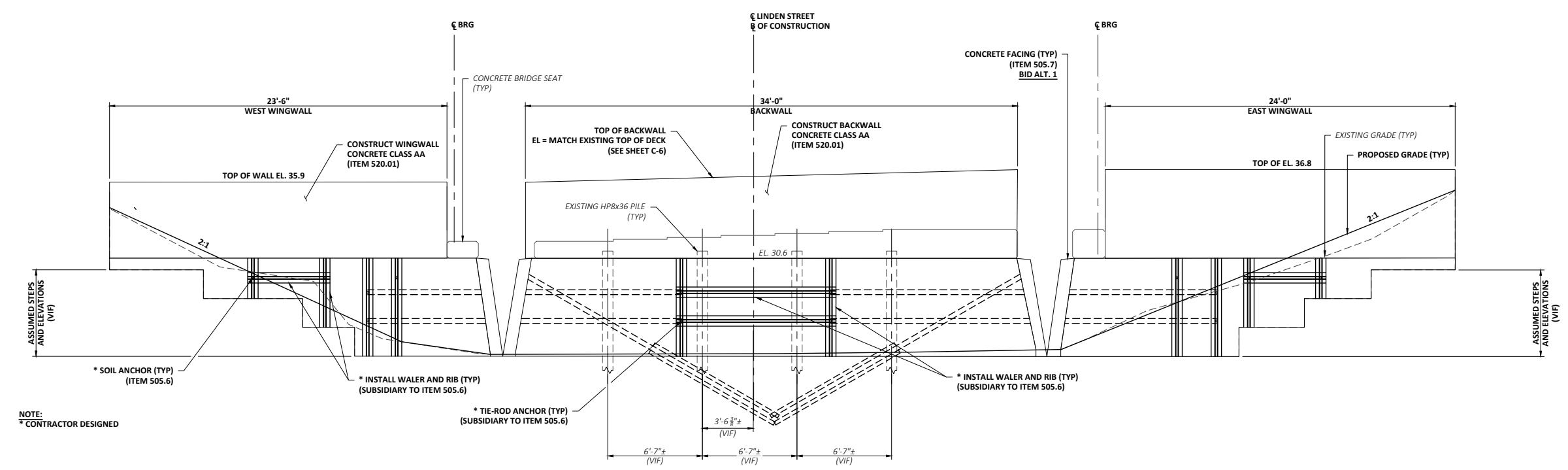


ABUTMENT B PLAN: SOIL ANCHORS
SCALE: 1/4"=1'-0"

CONSTRUCTION WORKING POINTS				
W.P. #	STATION	OFFSET	NORTHING	EASTING
6	12+23.85	15.76 L	169122.2255	1172098.5657
7	12+48.01	16.21 L	169145.4506	1172102.1500
8	12+20.66	18.10 R	169112.0708	1172131.0227
9	12+43.71	18.21 R	169135.6629	1172135.4272
10	12+23.53	0.00	169118.7271	1172113.9338



ABUTMENT B PLAN: MASONRY
SCALE: 1/4"=1'-0"



ABUTMENT B - DEVELOPED ELEVATION
SCALE: 1/4"=1'-0"

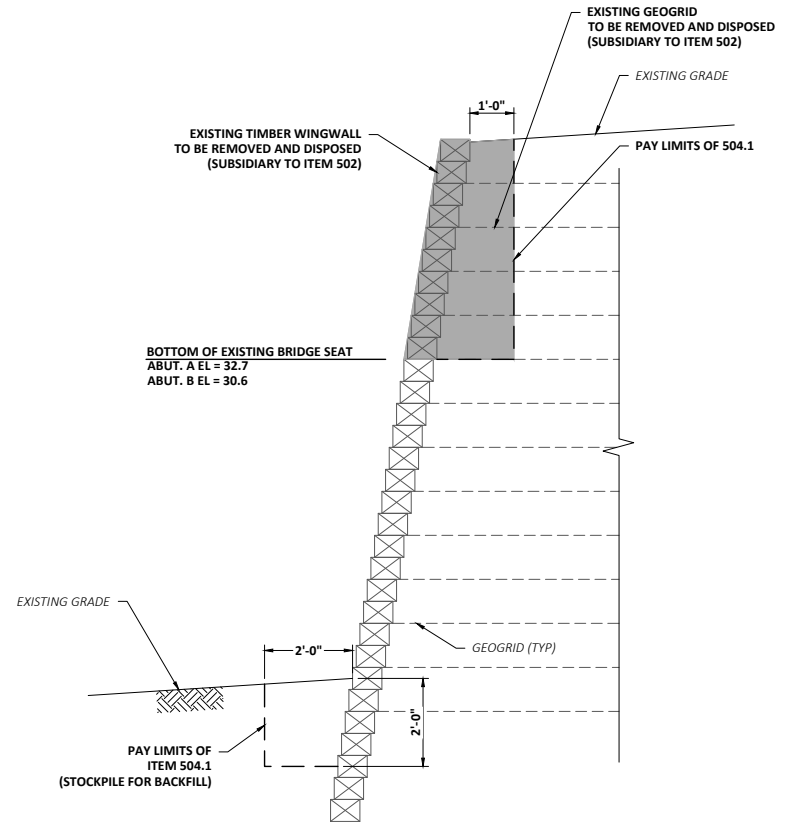
NO	REVISIONS	DATE

PROJECT NO: 20837D
 DESIGNED: W.NUHN
 CAD COORD: M.LAPIERRE
 CAD: W.NUHN
 CHECKED: W.NUHN
 DATE: DECEMBER 2023
 APPROVED: J.GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS

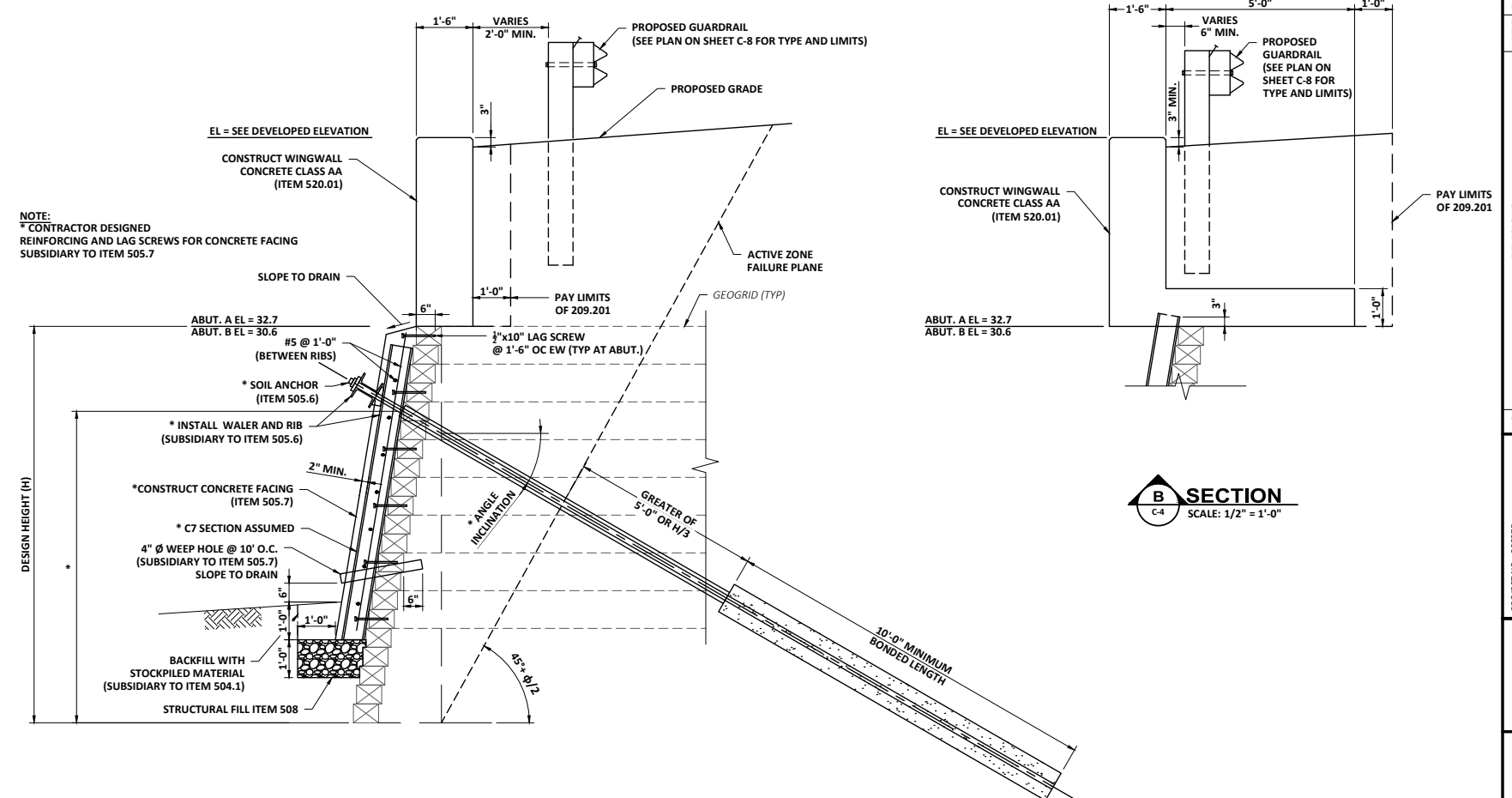


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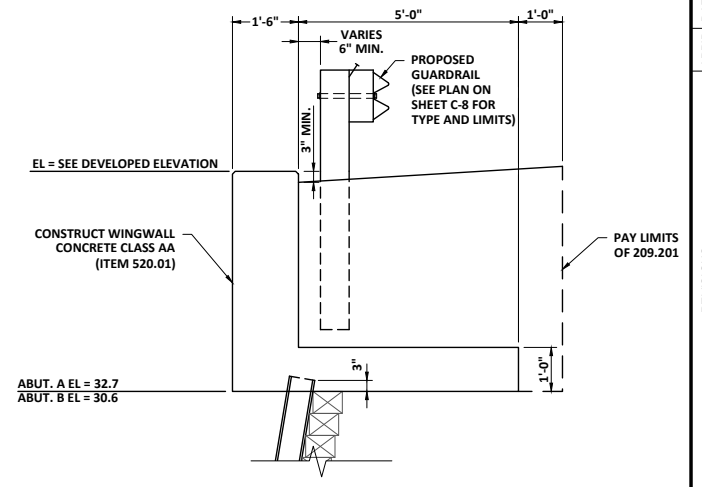
TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 ABUTMENT B PLAN AND ELEVATION



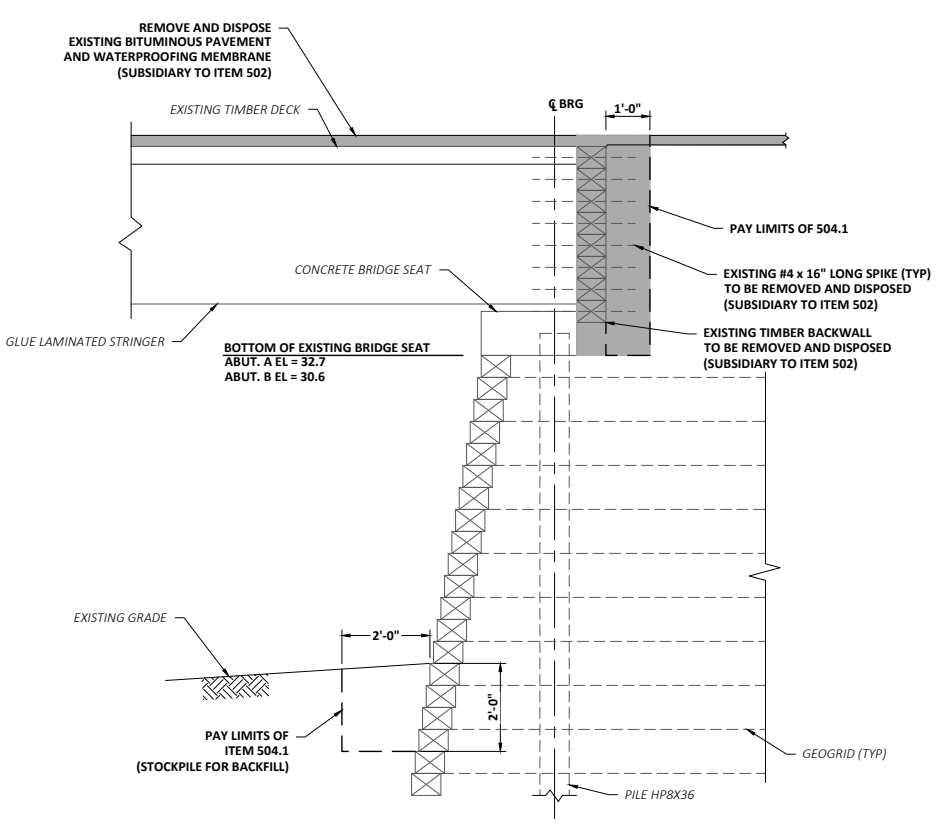
TYPICAL WINGWALL DEMOLITION SECTION
SCALE: 1/2"=1'-0"



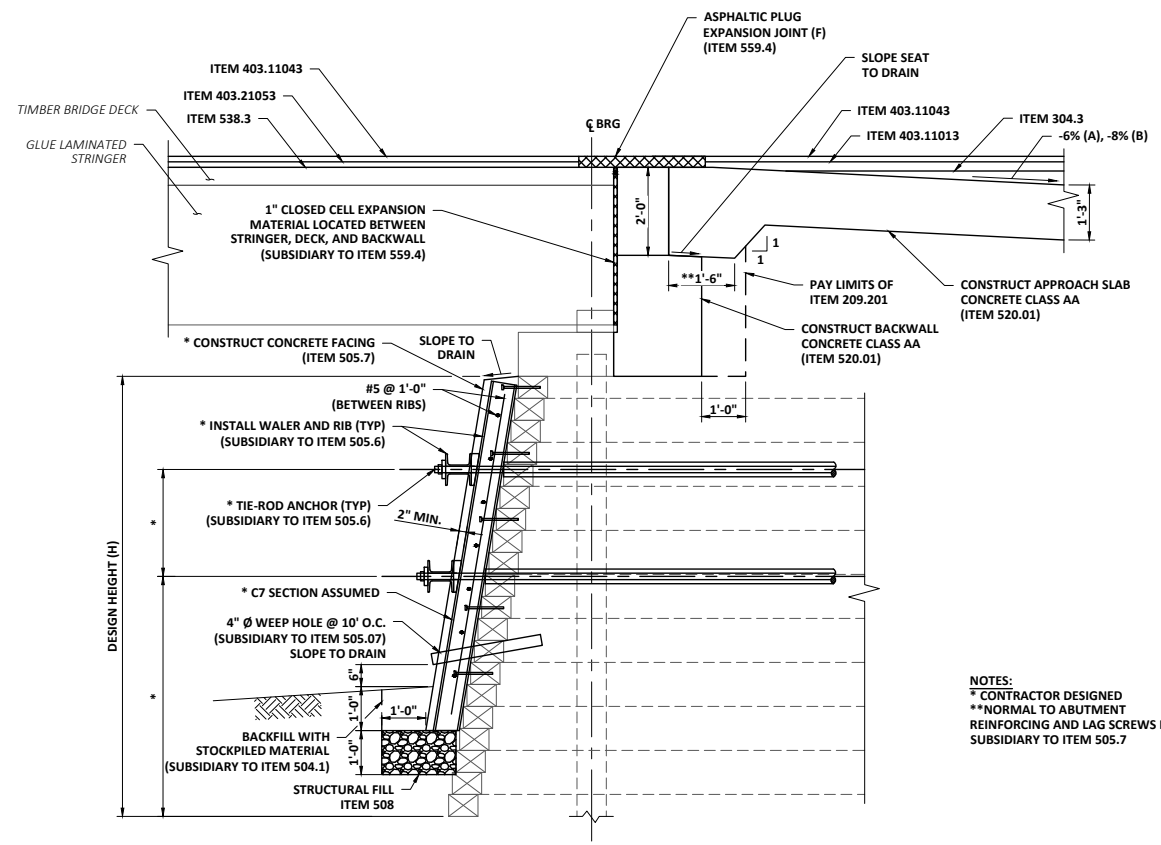
A SECTION
SCALE: 1/2"=1'-0"



B SECTION
SCALE: 1/2"=1'-0"



TYPICAL ABUTMENT DEMOLITION SECTION
SCALE: 1/2"=1'-0"



TYPICAL ABUTMENT REPAIR SECTION
SCALE: 1/2"=1'-0"

NOTES:
* CONTRACTOR DESIGNED REINFORCING AND LAG SCREWS FOR CONCRETE FACING SUBSIDIARY TO ITEM 505.7
** NORMAL TO ABUTMENT

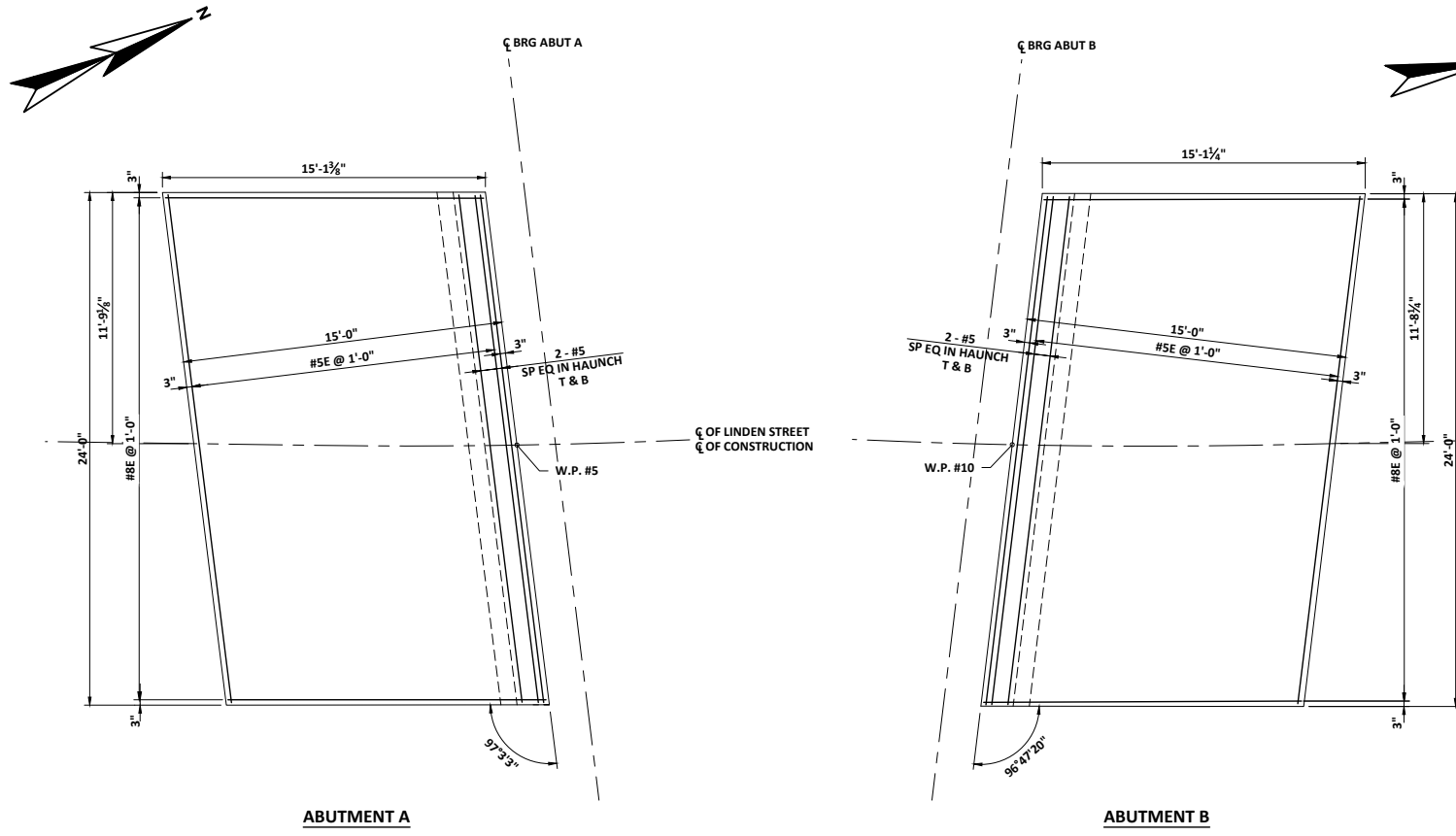
NO	REVISIONS	DATE

PROJECT NO: 20837D	DESIGNED: W. NUJN	CAD CODE: M. LAPIERRE	CAD: W. NUJN	CHECKED: W. NUJN	DATE: DECEMBER 2023	APPROVED: J. GALLANT	DATE: DECEMBER 2023	SUBMISSION: CONTRACT DOCUMENTS
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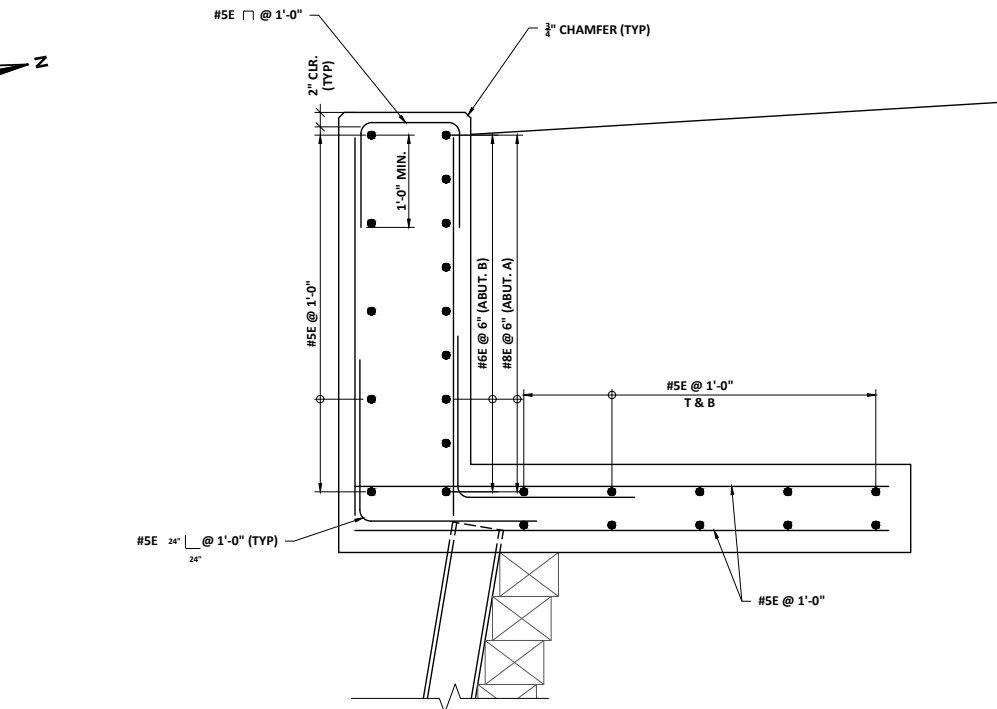


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TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
(081/046)
BRIDGE REPAIR
TYPICAL SUBSTRUCTURE SECTIONS-I

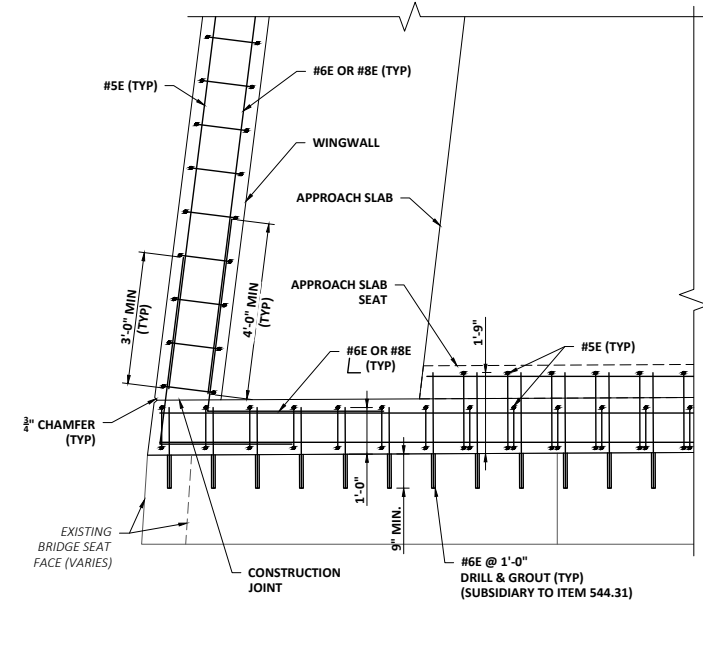


APPROACH SLAB PLAN
SCALE: 1/4"=1'-0"

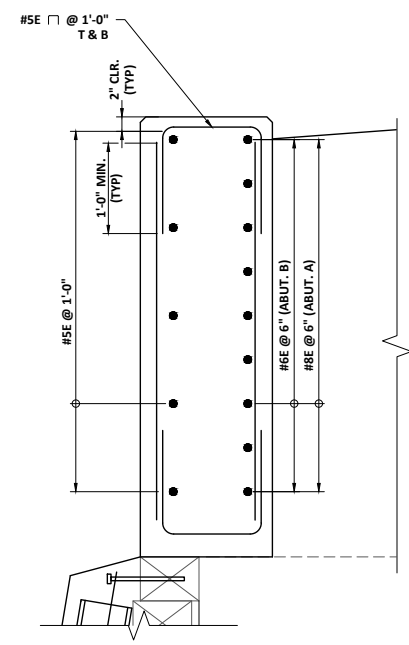


B SECTION
SCALE: 1"=1'-0"

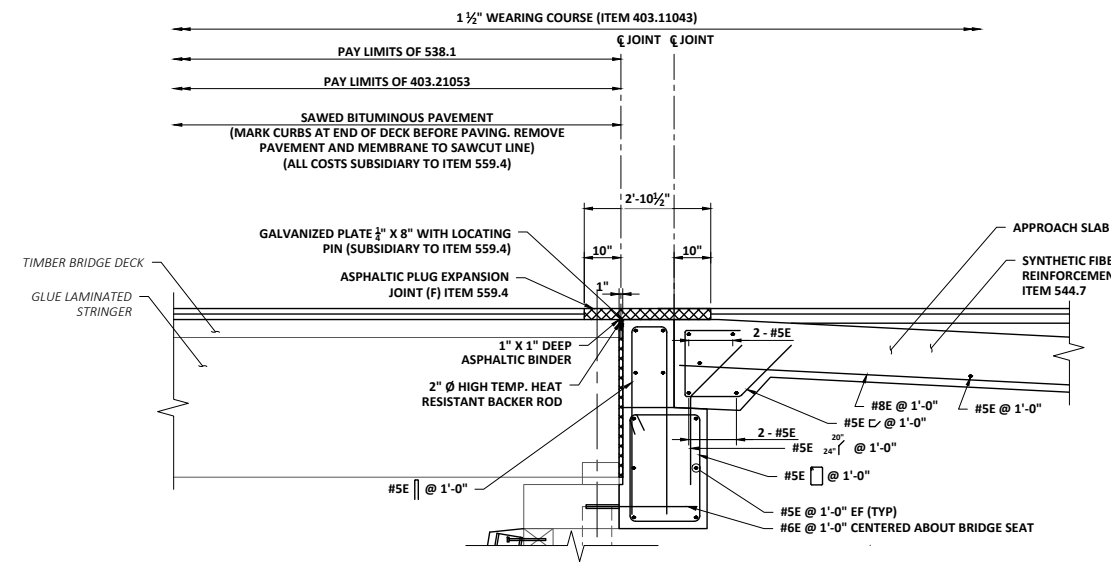
TYPICAL FACING CORNER BAR DETAIL (BID ALT. 1)
SCALE: NTS



TYPICAL WINGWALL TO BACKWALL DETAIL
SCALE: 1/2"=1'-0"



A SECTION
SCALE: 1"=1'-0"



TYPICAL ABUTMENT REINFORCING SECTION
SCALE: 1/2"=1'-0"

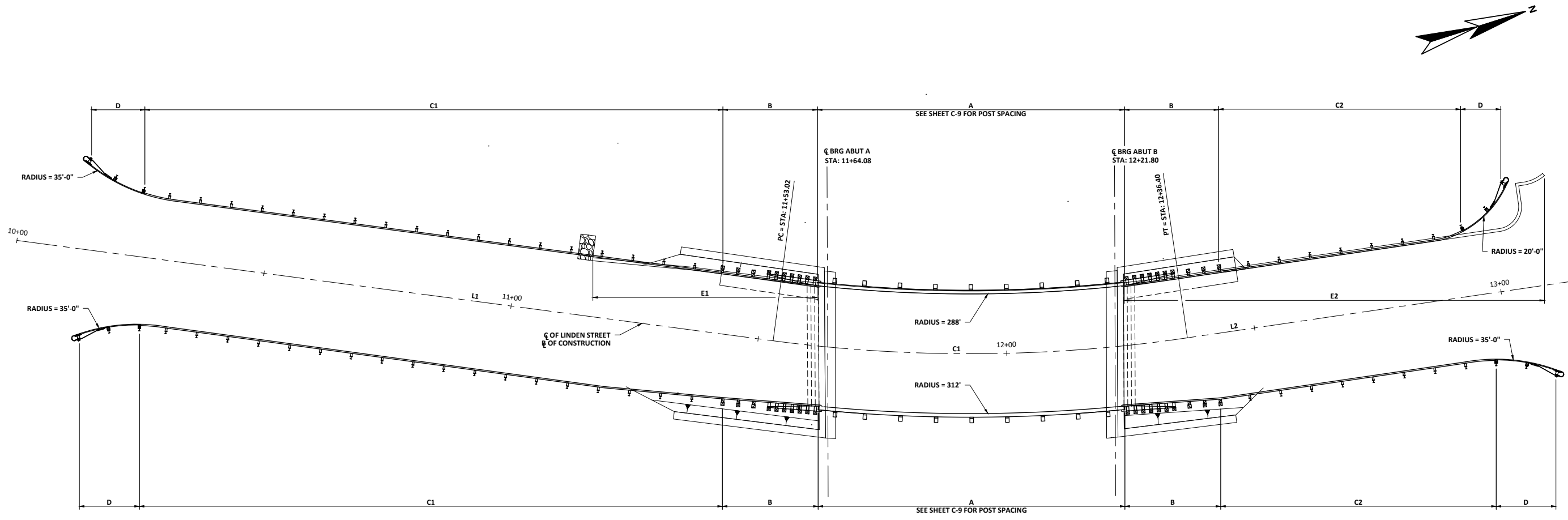
NO	REVISIONS	APPD	DATE

PROJECT NO: 20837D
 DESIGNED: W. NUHN
 CAD COORD: M. LAPIERRE
 CAD: M. LAPIERRE
 CHECKED: W. NUHN
 DATE: DECEMBER 2023
 APPROVED: J. GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS



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

TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 TYPICAL SUBSTRUCTURE SECTIONS-I

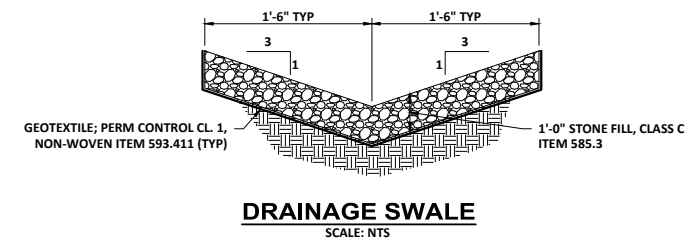


RAIL AND CURB LAYOUT PLAN
SCALE: 1"=10'

RAIL AND CURB LAYOUT NOTES

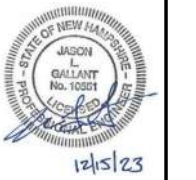
- A. 563.99 TIMBER BRIDGE RAIL (TL-4)
SEE SHEET C-9 FOR DETAILS
ITEM TOTAL = 118 LF
- B. ITEM 606.1285, BEAM GUARDRAIL (BRIDGE APPROACH UNIT)
SEE SHEETS C-10 & C-11 FOR DETAILS
ITEM TOTAL = 4 UNITS
- C. ITEM 606.18011, 31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (8' STEEL POST)
C1 = 118'-9"
C2 = 56'-3"
ITEM TOTAL = 350 LF

TRANSITION THE HEIGHT OF THE 31" GUARDRAIL OVER A MINIMUM OF 50 FEET TO CONNECT TO THE PROPOSED BRIDGE APPROACH UNIT PER NHDOT SECTION 606 - GUARDRAIL SPECIAL ATTENTION DATED 6/11/2020. TRANSITION IS SUBSIDIARY TO THIS ITEM.
(REFERENCE NHDOT STANDARD NO. GR-1 FOR DETAILS)
- D. ITEM 606.127, BEAM GUARDRAIL (TERMINAL UNIT TYPE G-2) (STEEL POST)
(REFERENCE NHDOT STANDARD NO. GR-10 FOR DETAILS)
1 UNIT = 12'-6"
ITEM TOTAL = 4 UNITS
- E. ITEM 609.811 BITUMINOUS CURB, TYPE B (4" REVEAL)
E1 = 45 LF
E2 = 95 LF
ITEM TOTAL = 140 LF



NO.	REVISIONS	APPD.	DATE

PROJECT NO: 20837D	DESIGNED: W.NUNN	CAD COORD: M.LAPIERRE	CAD: W.NUNN	CHECKED: W.NUNN	DATE: DECEMBER 2023	APPROVED: J.GALLANT	DATE: DECEMBER 2023	SUBMISSION: CONTRACT DOCUMENTS
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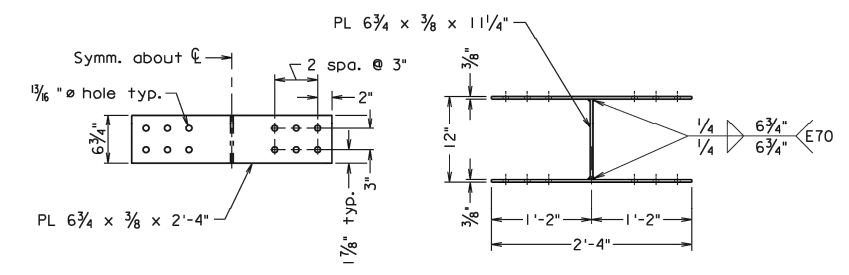
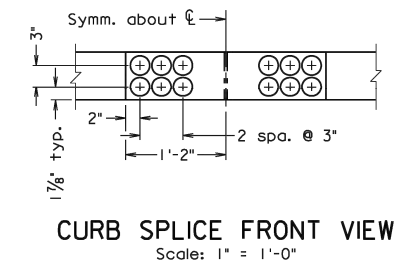
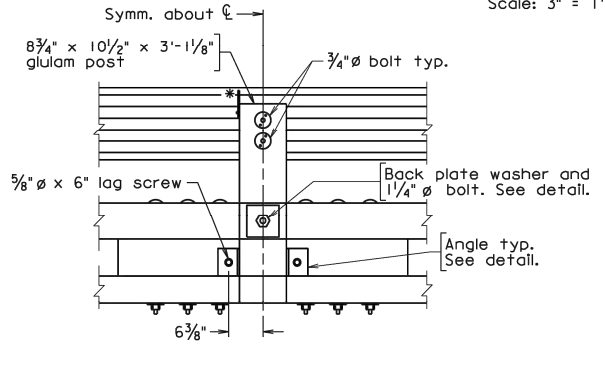
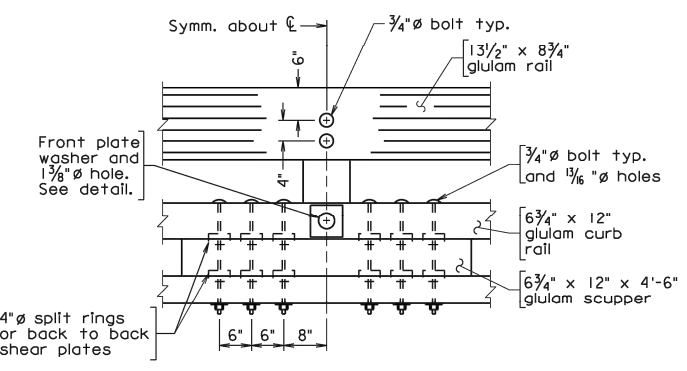
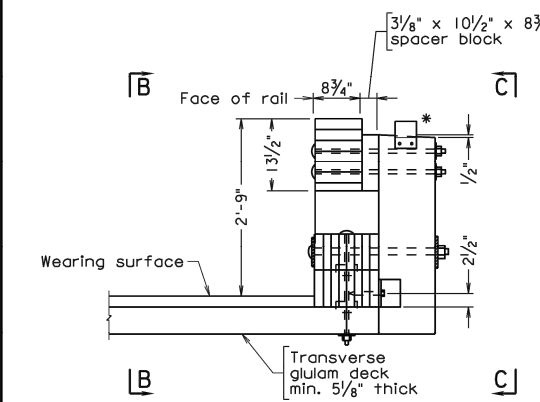
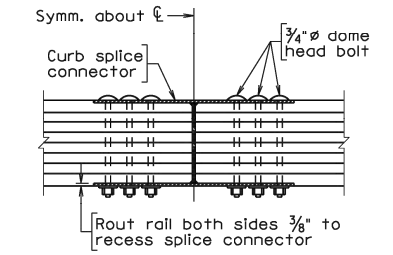
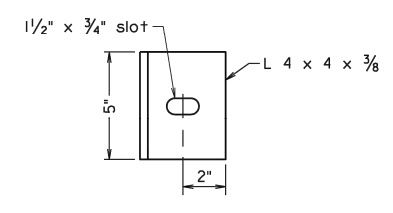
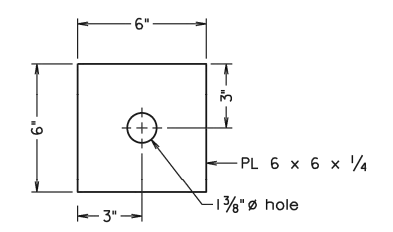
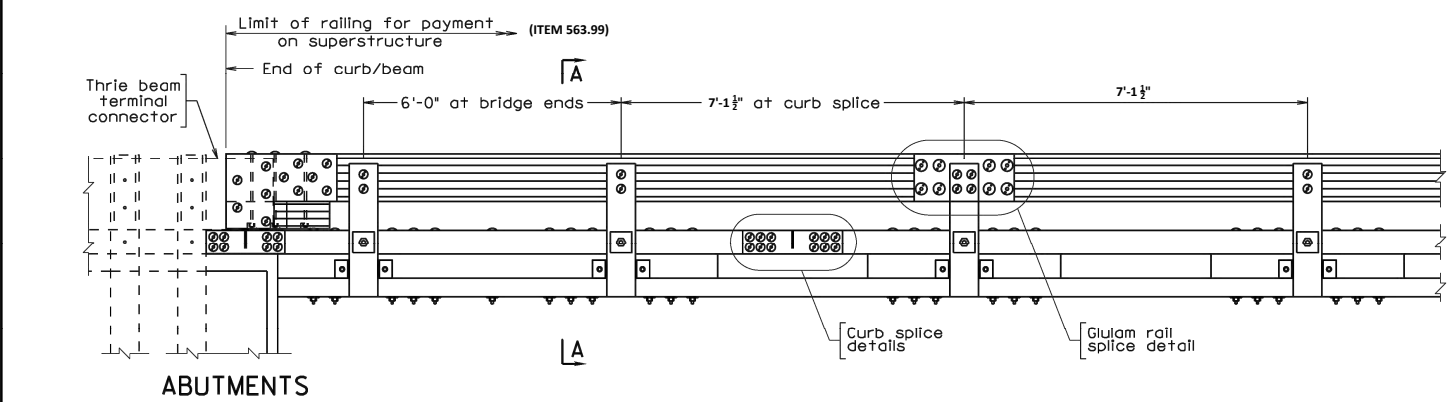
WRIGHT-PIERCE
603.430.3728 | www.wright-pierce.com
230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE LINDEN STREET OVER EXETER RIVER (081/046) BRIDGE REPAIR	RAIL AND CURB LAYOUT
DRAWING	C-8

STATE	FEDERAL AID	STATE	SHEET
VA.	PROJECT	PROJECT	NO.

Notes:

For notes, rail connections and miscellaneous details, see sheet C-10.
For details of terminal transition, see sheet C-11.



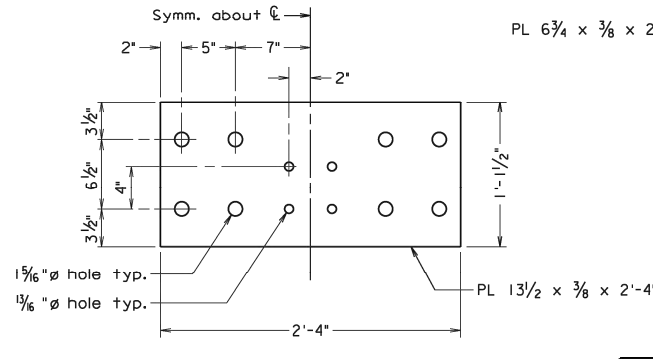
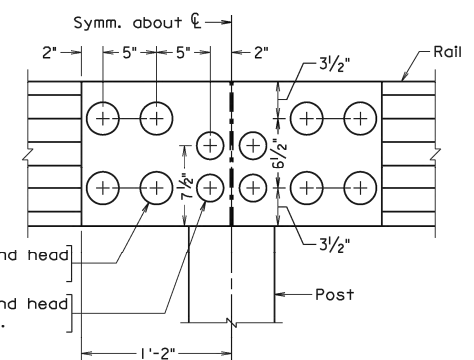
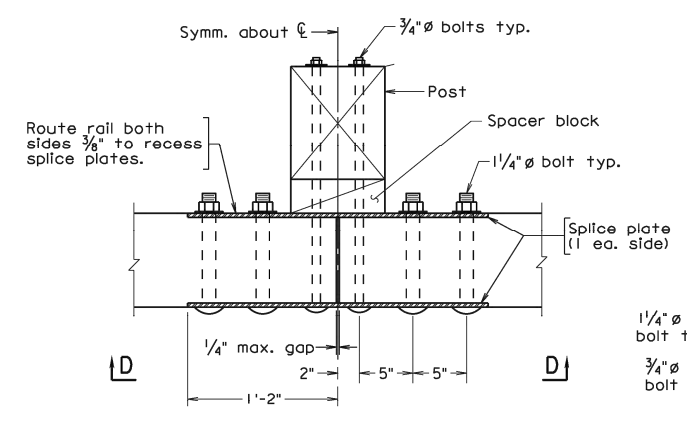
- NOTES:**
- ALL WORK DEPICTED ON THIS PLAN IS SUBSIDIARY TO ITEM 563.99, UNLESS OTHERWISE NOTED.
 - MODIFY VERTICAL POST LENGTH DIMENSION AS REQUIRED TO MEET DECK AND PAVEMENT THICKNESS.
 - 2'-9" DIMENSION FROM PAVEMENT TO TOP OF RAIL SHALL NOT BE MODIFIED.
 - THE DIMENSIONS OF THE CURB AND SCUPPER BLOCKS SHALL NOT BE MODIFIED.

SECTION A-A

VIEW B-B

VIEW C-C

CURB SPLICE DETAILS



STEEL SPLICE PLATE

GLULAM RAIL SPLICE

VIEW D-D

Scaled and Signed by:
Prasad L. Nallapareeni
Lic. No. 033003
On the date of
May 18, 2016

A copy of the original sealed and signed standard drawing is on file in the Central Office.

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

NOTE:
THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD HIGHWAY/BRIDGE PLANS DO NOT INCLUDE A TIMBER BRIDGE RAIL SYSTEM. THIS BRIDGE RAILING SYSTEM IS RATED FOR TEST LEVEL 4 SAFETY PERFORMANCE CRITERIA IN ACCORDANCE WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH BOARD (NCRP) REPORT 350: RECOMMENDED PROCEDURES FOR THE SAFETY AND PERFORMANCE EVALUATION OF HIGHWAY FEATURES. REFER TO TRANSPORTATION RESEARCH RECORD 1696, PAPER No. 580110 FOR PROPOSED RAILING PERFORMANCE CRITERIA.

NOT TO SCALE
Scale: 3/4" = 1'-0" unless otherwise noted.

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COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
SBD01d RAILING			
No.	Description	Date	Sheet No.
Revisions		Designed: S&B, DIV Date: _____ Drawn: S&B, DIV Checked: S&B, DIV	Plan No. BRSBD-1

APPD	DATE								
REVISIONS									
NO	DATE	BY	REVISION						
1									
<p>PROJECT NO: 20837D DESIGNED: W.NUNN CAD COORD: M.LAPIERRE CAD: W.NUNN CHECKED: W.NUNN DATE: DECEMBER 2023 APPROVED: J.GALLANT DATE: DECEMBER 2023 SUBMISSION: CONTRACT DOCUMENTS</p>									
<p>WRIGHT-PIERCE 603.430.3728 www.wright-pierce.com 230 COMMERCIAL WAY, SUITE 302, PORTSMOUTH, NH 03801</p>									
<p>TOWN OF EXETER, NEW HAMPSHIRE LINDEN STREET OVER EXETER RIVER BRIDGE REPAIR (081/046)</p>					<p>RAIL DETAILS I</p>				
<p>DRAWING C-9</p>									

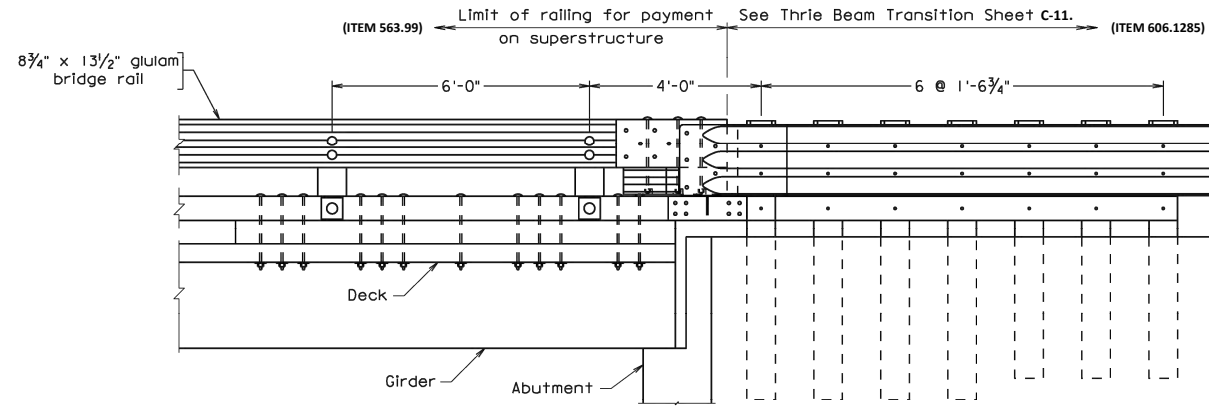
Sealed and Signed by:
Junyi Meng
Lic. No. 033572
On the date of
October 31, 2019

A copy of the original
sealed and signed
drawing is on file in the
Central Office.

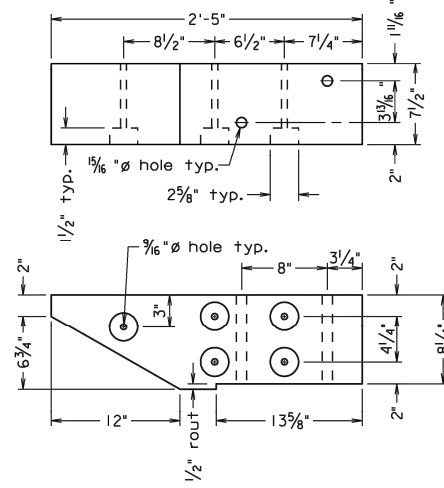
VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

NOTE:

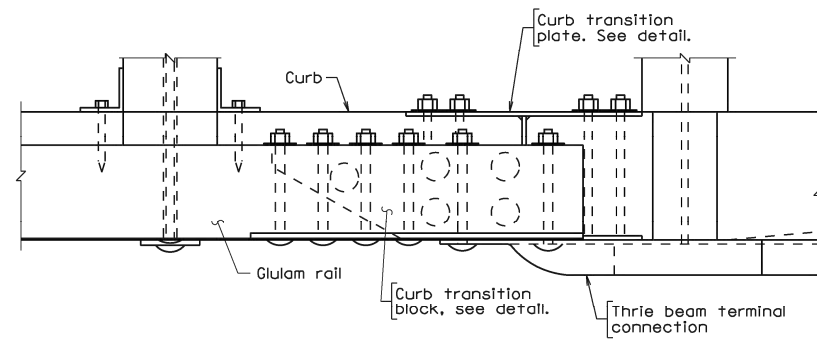
THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD HIGHWAY/BRIDGE PLANS DO NOT INCLUDE A TIMBER BRIDGE RAIL SYSTEM. THIS TRANSITION RAILING SYSTEM IS RATED FOR TEST LEVEL 4 SAFETY PERFORMANCE CRITERIA IN ACCORDANCE WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH BOARD (NCRP) REPORT 350: RECOMMENDED PROCEDURES FOR THE SAFETY AND PERFORMANCE EVALUATION OF HIGHWAY FEATURES. REFER TO TRANSPORTATION RESEARCH RECORD 1696, PAPER No. 580110 FOR PROPOSED RAILING PERFORMANCE CRITERIA.



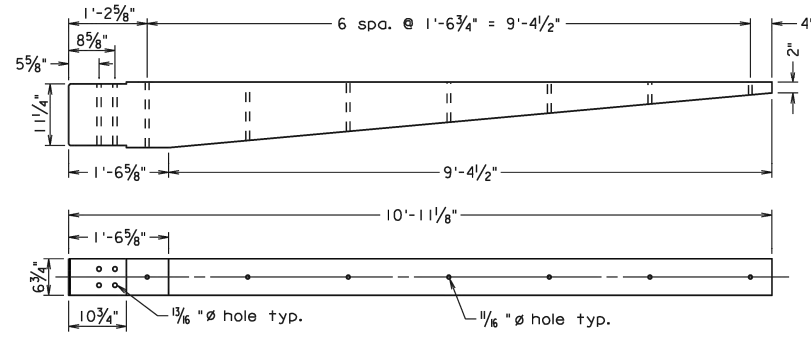
TRANSITION ELEVATION
Scale: 1/2" = 1'-0"



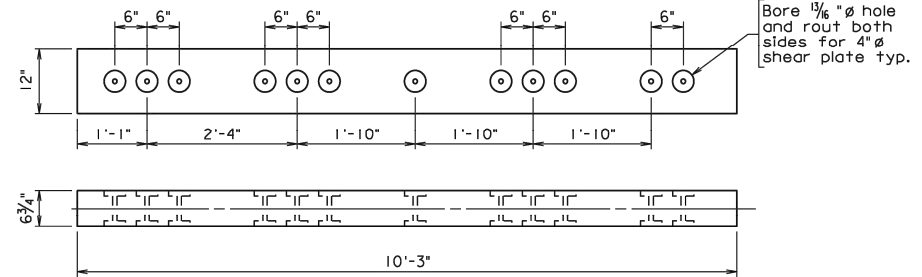
CURB TRANSITION BLOCK DETAIL



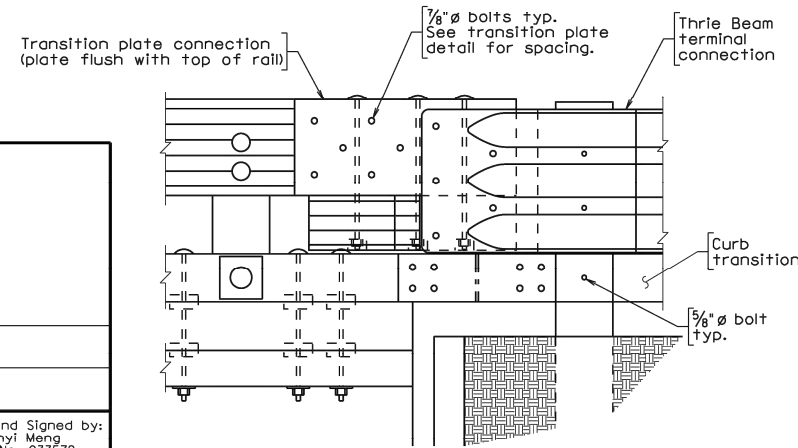
PLAN VIEW OF TRANSITION JOINT



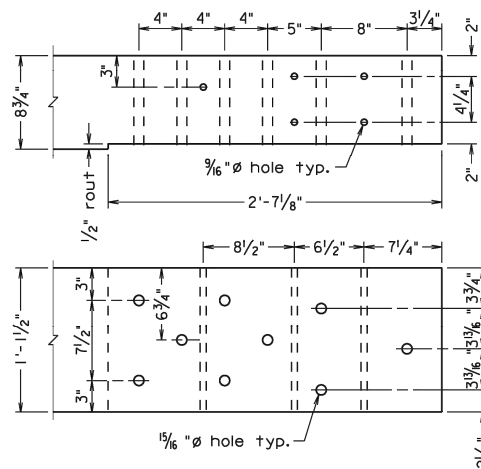
CURB TRANSITION DETAIL
Scale: 3/4" = 1'-0"



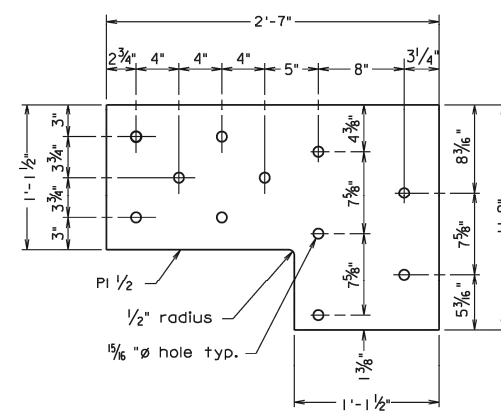
TRANSITION SCUPPER BLOCK
Scale: 3/4" = 1'-0"



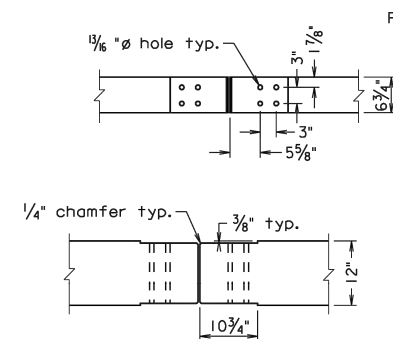
ELEVATION OF TRANSITION JOINT
Scale: 1" = 1'-0"



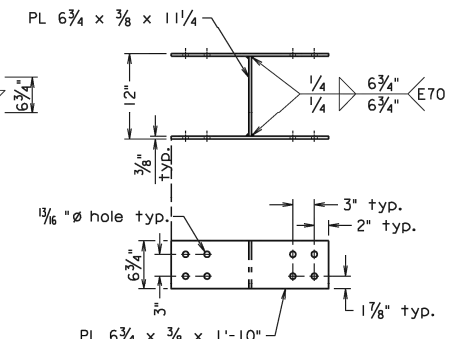
RAIL END DETAIL



TRANSITION PLATE DETAIL



CURB TRANSITION BORING DETAIL
Scale: 3/4" = 1'-0"



CURB TRANSITION SPLICE DETAILS
Scale: 1" = 1'-0"

STATE	ROUTE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
VA.					

Notes:

Plan dimensions shown are measured in the respective horizontal and vertical planes.

The Contractor shall determine all dimensions and details necessary for installation.

All timber shall conform to the requirements of AASHTO M168, Dense Select Structural Southern Pine, and preservative treated in accordance with the Specifications.

The glulam rail shall be fabricated with West Coast Douglas Fir and treated with pentachlorophenol in heavy oil to a minimum net retention of 0.6 pcf as specified in AWWA Standard C14.

All structural steel shall be ASTM A709 Grade 50 and shall be hot dipped galvanized.

Round head bolts shall be ASTM A449. All other bolts shall be ASTM F3125 Grade A325. Nuts shall be ASTM A563 Grade DH or ASTM A194 Grade 2H. Washers shall be ASTM F436. All steel shall be hot dip galvanized.

All holes for bolts shall be 1/8" larger in diameter than bolt diameter unless otherwise noted on plans.

All high-strength bars shall be ASTM A722 and shall be galvanized.

Curb splices should be located adjacent to rail splices.

Barrier delineator size, color, and spacing shall be in accordance with the Specifications.

APPD	DATE

PROJECT NO:	208370
DESIGNED:	W.NUNN
CAD COORD:	M.LAPIERRE
CAD:	M.LAPIERRE
CHECKED:	W.NUNN
DATE:	DECEMBER 2023
APPROVED:	J.GALLANT
DATE:	DECEMBER 2023
SUBMISSION:	CONTRACT DOCUMENTS



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TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR

RAIL DETAILS II

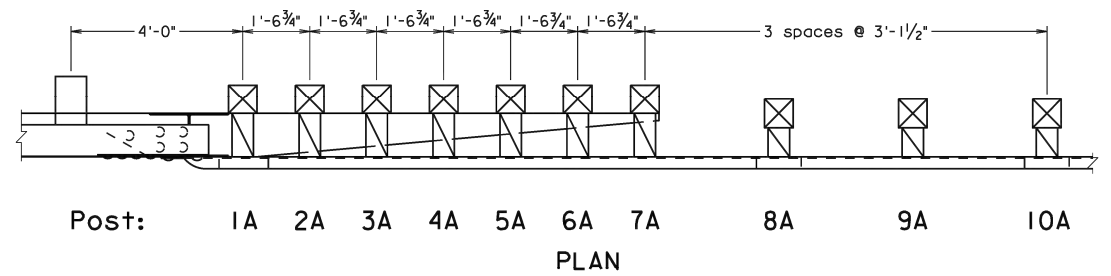
COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION					
STRUCTURE AND BRIDGE DIVISION					
SBD01d RAILING Transition DETAILS					
No.	Description	Date	Designed: S&B Div	Date	Plan No.
			Drawn: S&B Div		BRSBD-2
			Checked: S&B Div		
Revisions					

Scale: 1/2" = 1'-0" unless otherwise noted.

LAST SAVED BY: WESTLEY.NUNN 11/29/2023 11:03 AM

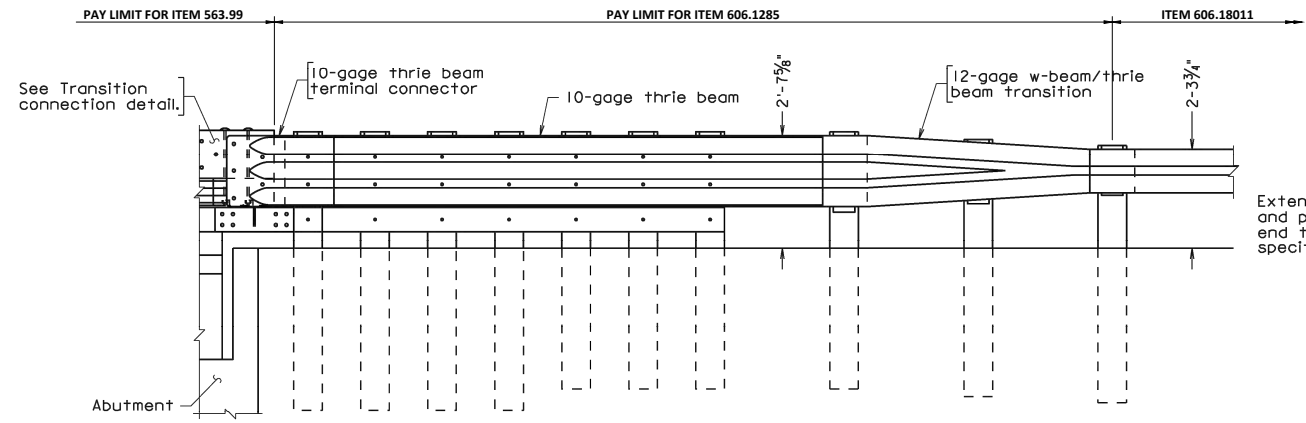
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STATE	FEDERAL AID	STATE	SHEET
VA.	PROJECT	ROUTE PROJECT	NO.

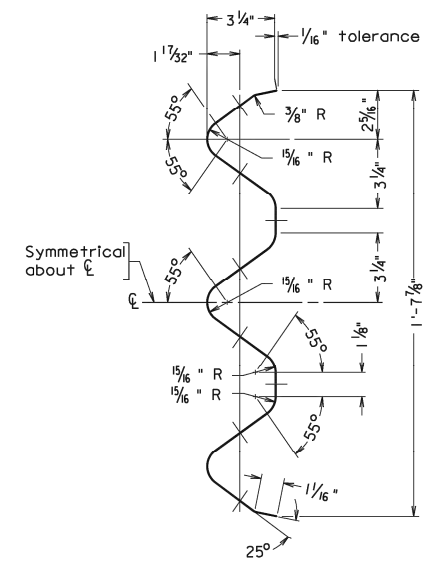


Post: 1A 2A 3A 4A 5A 6A 7A 8A 9A 10A

PLAN



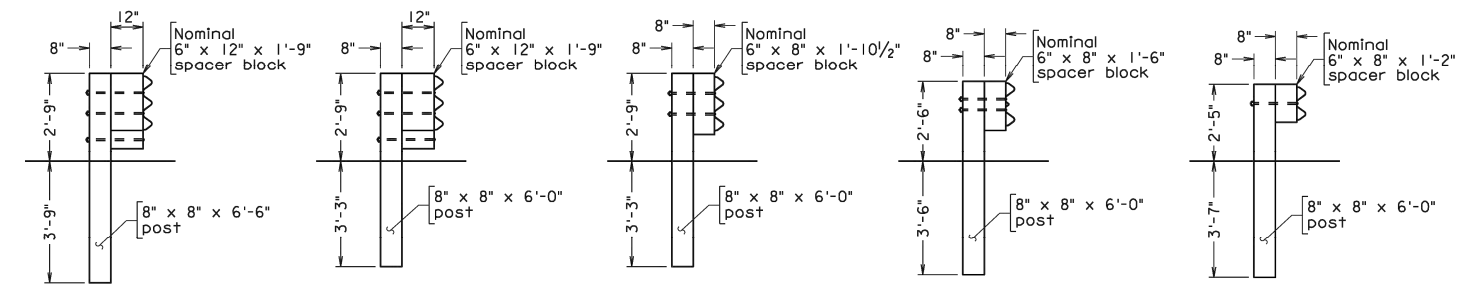
ELEVATION



SECTION THRU RAIL AT SPLICE
Scale: 3" = 1'-0"

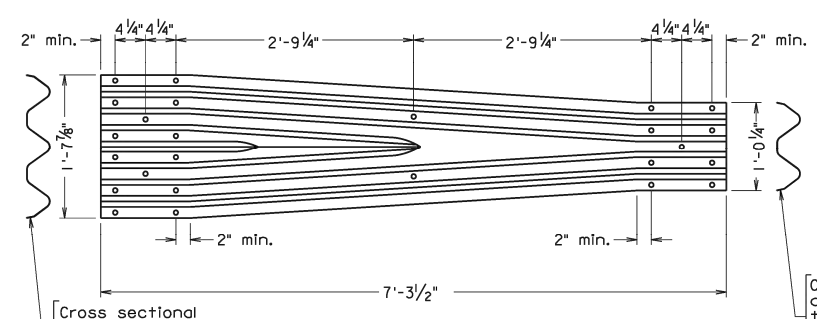
Notes:

Guardrail components shall be in accordance with VDOT Road and Bridge Standards.
 Posts 1A, 2A, 3A, 4A, 5A, 6A, and 7A require an additional hole to attach lower curb transition. Guardrail bolts 5/8" diameter long and recessed nuts shall be used for attachments, length as required.
 The Lower Curb Transition located on posts 1A through 7A shall be secured with 5/8" carriage bolts, length as required.
 Thrie Beam Terminal Connector shall be 10 gage steel. Thrie Beam and Transition Beam shall be 12 gage steel.
 Refer to VDOT Road and Bridge Standards, Section 500, for all details not shown. When railing cannot be terminated as per the VDOT Road and Bridge Standards, contact the Location and Design Special Design Section to obtain recommendations.

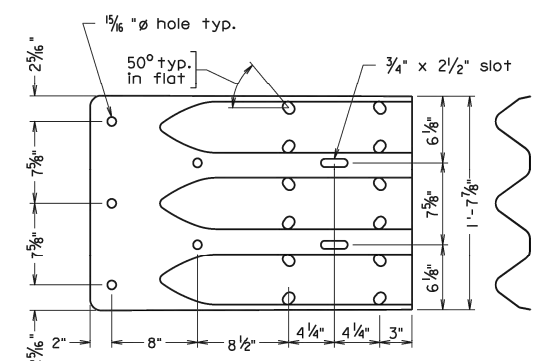


Post: 1A-4A 5A-7A 8A 9A 10A

TRANSITION POST
Scale: 3/8" = 1'-0"



TRANSITION BEAM
Scale: 1" = 1'-0"



TERMINAL CONNECTOR
Scale: 1 1/2" = 1'-0"

NOT TO SCALE
Scale: 1/2" = 1'-0" unless otherwise noted.

NOTE:
ALL WORK DEPICTED ON THIS PLAN IS SUBSIDIARY TO ITEM 606.1285, UNLESS OTHERWISE NOTED.

Sealed and Signed by:
Julius F. J. Volgyi Jr.
Lic. No. 010487
On the date of
August 30, 2013

A copy of the original sealed and signed standard drawing is on file in the Central Office.

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
SBDO1d RAILING THRIE BEAM TRANSITION DETAILS			
No.	Description	Date	Sheet No.
	Revisions	Designed: S&B, R.V. Checked: S&B, R.V.	BRSBD-3

APPD	DATE				
REVISIONS					
NO					
PROJECT NO:	20837D	DESIGNED:	W.NUNN	CAD COORD:	M.LAPIERRE
CAD:	W.NUNN	CHECKED:	W.NUNN	DATE:	DECEMBER 2023
APPROVED:	J.GALLANT	DATE:	DECEMBER 2023	SUBMISSION:	CONTRACT DOCUMENTS

12/15/23

603.430.3728 | www.wright-pierce.com
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TOWN OF EXETER, NEW HAMPSHIRE LINDEN STREET OVER EXETER RIVER BRIDGE REPAIR (081/046)	RAIL DETAILS III
--	------------------

DRAWING C-11

NOTE:
THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD HIGHWAY/BRIDGE PLANS DO NOT INCLUDE A TIMBER BRIDGE RAIL SYSTEM. THIS TRANSITION RAILING SYSTEM IS RATED FOR TEST LEVEL 4 SAFETY PERFORMANCE CRITERIA IN ACCORDANCE WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH BOARD (NCRP) REPORT 350: RECOMMENDED PROCEDURES FOR THE SAFETY AND PERFORMANCE EVALUATION OF HIGHWAY FEATURES. REFER TO TRANSPORTATION RESEARCH RECORD 1696, PAPER No. 580110 FOR PROPOSED RAILING PERFORMANCE CRITERIA.

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TEMPORARY TRAFFIC CONTROL

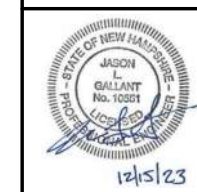
1. THE PROJECT IS INTENDED TO BE COMPLETED UNDER ROAD CLOSURE AND DETOUR. THE DETOUR PLAN SHOWN IS CONCEPTUAL AND SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A DETOUR PLAN DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION (MUTCD) BY A NH LICENSED PROFESSIONAL ENGINEER FOR REVIEW AND ACCEPTANCE BY THE TOWN AND ENGINEER. NO WORK SHALL COMMENCE WITHOUT WRITTEN ACCEPTANCE OF THE PLAN, INSTALLATION OF THE REQUIRED TRAFFIC CONTROL MEASURES AND ACCEPTANCE BY THE TOWN/ENGINEER.
3. ACCESS TO ABUTTERS SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE ALL STREET CLOSINGS AND/OR DETOURS WITH THE TOWN OF EXETER POLICE (603.772.1212), FIRE (603.773.6131) DEPARTMENTS, AND ABUTTERS A MINIMUM OF 48 HOURS IN ADVANCE.
4. EXISTING SIGNS IMPACTED/DAMAGED BY THIS PROJECT AND NOT SCHEDULED FOR REPLACEMENT SHALL BE REPLACED IN ACCORDANCE WITH MUTCD AT THE CONTRACTOR'S EXPENSE.
5. PAVEMENT MARKINGS DAMAGED DURING CONSTRUCTION OR OBTUSCURED AS PART OF THE TRAFFIC CONTROL PLAN WILL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER IN ACCORDANCE WITH MUTCD.
6. ALL WORK REQUIRED FOR IMPLEMENTING THE DETOUR SHALL BE MEASURED FOR PAYMENT UNDER ITEM 619.1, MAINTENANCE OF TRAFFIC. ITEMS SUBSIDIARY TO THIS ITEM INCLUDE BUT ARE NOT LIMITED TO TEMPORARY TRAFFIC SIGNALS, PORTABLE CHANGEABLE MESSAGE SIGNS, ENGINEERED DETOUR PLANS, POLICE DETAILS, PORTABLE CONCRETE BARRIERS, ITEMS AS LISTED IN THE NHDOT STANDARD SPECIFICATIONS, AND ALL OTHER INCIDENTALS REQUIRED TO FINISH THE WORK. REFER TO SPECIFICATION SECTION 01050 AND 01570 FOR MORE DETAIL.
7. ALL OTHER TEMPORARY TRAFFIC CONTROL PLANS USED SHALL BE IN ACCORDANCE WITH NHDOT STANDARD PLANS FOR WORK ZONE TRAFFIC CONTROL.



DETOUR PLAN
SCALE: 1"=500'

NO	REVISIONS	APPD	DATE

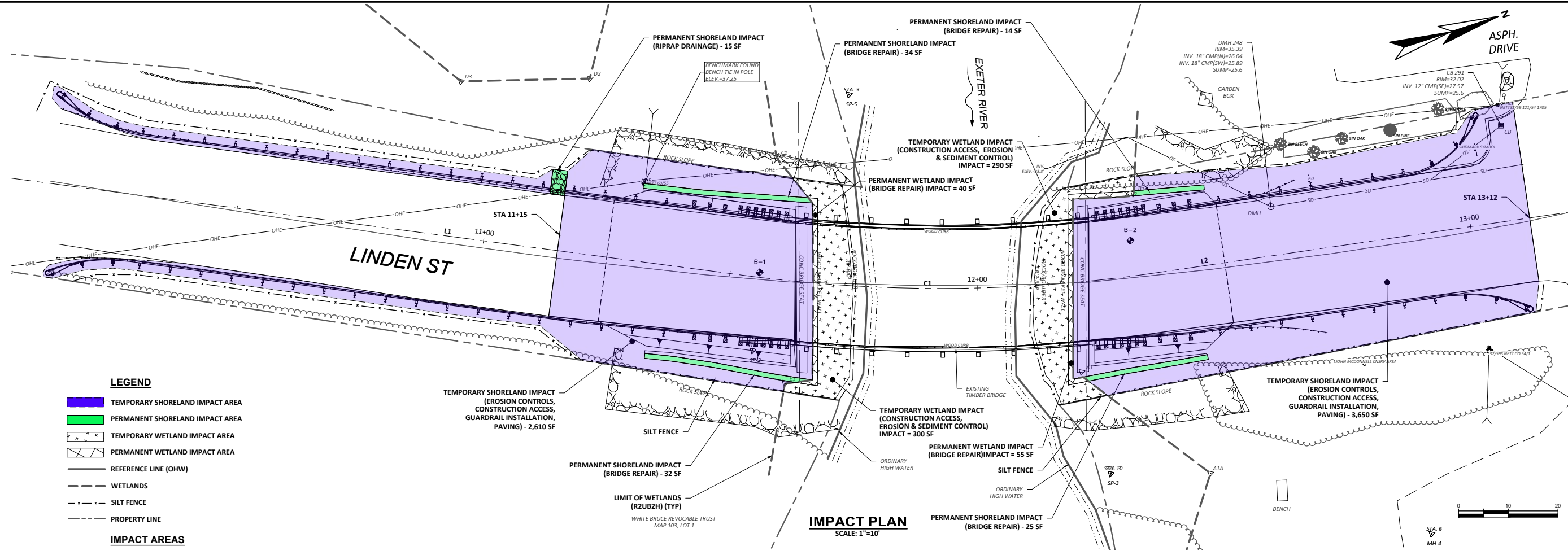
PROJECT NO: 20837D
 DESIGNED: WJUN11
 CAD COORD: M.LAPIERRE
 CAD: M.LAPIERRE
 CHECKED: WJUN11
 DATE: DECEMBER 2023
 APPROVED: J.GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS



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

TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 DETOUR PLAN

DRAWING
C-12



LEGEND

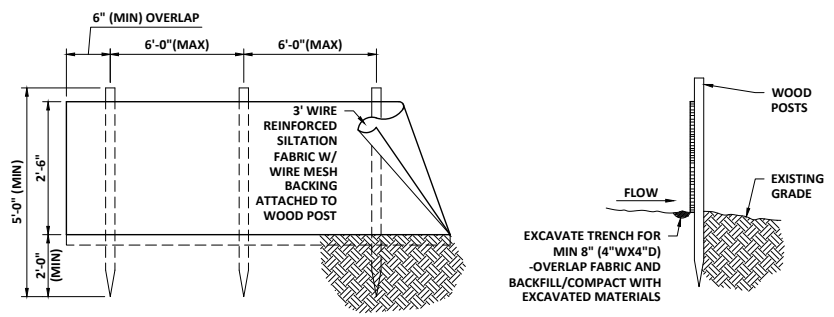
- TEMPORARY SHORELAND IMPACT AREA
- PERMANENT SHORELAND IMPACT AREA
- TEMPORARY WETLAND IMPACT AREA
- PERMANENT WETLAND IMPACT AREA
- REFERENCE LINE (OHW)
- WETLANDS
- SILT FENCE
- PROPERTY LINE

IMPACT AREAS

- PROPOSED TEMPORARY WETLAND IMPACT AREA = 590 SQ FT
- PROPOSED PERMANENT WETLAND IMPACT AREA = 95 SQ FT
- PROPOSED TEMPORARY SHORELAND IMPACT AREA = 6,260 SQ FT
- PROPOSED PERMANENT SHORELAND IMPACT AREA = 120 SQ FT

- GENERAL NOTES**
- PURPOSE OF PLAN: TO DEPICT THE PROPOSED REPAIR OF THE LINDEN STREET BRIDGE OVER THE EXETER RIVER, IN EXETER, NH, AND THE PROPOSED WETLANDS IMPACTS ANTICIPATED DURING REPAIR.
 - EXISTING CONDITION INFORMATION TAKEN FROM THE "EXISTING CONDITIONS SURVEY, LINDEN STREET BRIDGE OVER THE EXETER RIVER" PREPARED BY GM2 ASSOCIATES, INC. DATED AUGUST 23, 2023.
 - THE WETLAND BOUNDARIES WERE DELINEATED BY CHRISTOPHER ALBERT, CERTIFIED WETLAND SCIENTIST, OF CSA ENVIRONMENTAL CONSULTANTS, LLC OF NOTTINGHAM, NH.
 - THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL TEMPORARY EROSION CONTROL PRIOR TO IMPLEMENTING THE WORK. IN ACCORDANCE WITH NHDOT SPECIFICATIONS AND NHDES PERMIT REQUIREMENTS, ALL METHODS TO BE INSPECTED DAILY AND MAINTAINED THROUGHOUT CONSTRUCTION UNTIL THE BRIDGE IS REPAIRS AND ALL CONSTRUCTION AND EMBANKMENTS HAVE BEEN STABILIZED.
 - THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING REGULAR FLOW WITHIN THE RIVER AT ALL TIMES AND PERFORM THE WORK DURING LOW FLOW PERIODS.

- EROSION CONTROL**
- SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLAN AND AS DIRECTED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 - EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED, REPLACED, AND AUGMENTED AS NECESSARY TO PREVENT SEDIMENTATION BEYOND PROJECT LIMITS THROUGHOUT THE PROJECT DURATION.
 - EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND REPAIRED AFTER EACH RAIN EVENT.
 - TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL REMAIN UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED AND APPROVED BY THE ENGINEER.

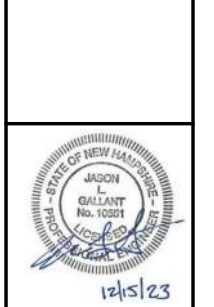


- NOTES:**
- MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHALL BE 100 FEET
 - MAXIMUM SLOPE ABOVE FENCE SHALL BE 2H TO 1V

SILT FENCE INSTALLATION DETAIL
SCALE: "NTS"

NO	REVISIONS	DATE

PROJECT NO: 20837D	DESIGNED: W. NUNN	CAD COORD: M. LAPIERRE	CHECKED: W. NUNN	DATE: DECEMBER 2023



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230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
(081/046)
BRIDGE REPAIR
EROSION CONTROL AND IMPACT PLAN

December 18, 2023

Eben Lewis
Wetlands Bureau, Land Resources Management
Water Division, NHDES
29 Haxen Drive; PO Box 95
Concord, NH 03302-0095

**SUBJECT: NHDES Wetlands Permit by Notification
Linden Street Bridge Repair
Town of Exeter, NH**

Dear Eben,

On behalf of the Town of Exeter, please find enclosed Wetlands Permit by Notification form and required attachments related to proposed impacts necessary to repair the Tier 3 stream crossing of the Exeter River at Linden Street. The project is located within the right-of-way adjacent to the Exeter River in Exeter, NH. Construction is anticipated to begin in Spring 2024. There is no record of flooding at this crossing. The crossing was modeled as part of a Letter of Map Revision (LOMR) to FEMA in 2018 to reflect lower flood elevations as result of the removal of the Great Dam on the Exeter River. The peak 100-year flood elevation at the crossing is reported to be El. 30.7 (NAVD88). The low chord of the bridge is set at El. 32 (NAVD88), providing 1.3-ft of freeboard.

The proposed repair will:

- a) Meet the general criteria specified in Env-Wt 904.01,
- b) Maintain the hydraulic capacity of the stream crossing,
- c) Maintain the capacity of the crossing to accommodate aquatic organism passage,
- d) Maintain the connectivity of the stream reaches, and
- e) Will not cause or contribute to the increase in frequency of flooding or overtopping of the banks

Please feel free to contact me if you have any questions or need any additional information during your review.

Sincerely,

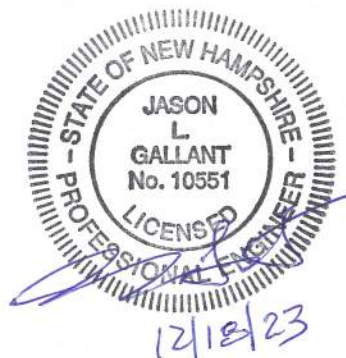
WRIGHT-PIERCE



Jason Gallant, PE

Senior Project Manager

Jason.gallant@wright-pierce.com





WETLANDS PERMIT BY NOTIFICATION (PBN)

Water Division / Land Resources Management

[Check the Status of your Notification](#)



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

APPLICANT NAME: Exeter Public Works Dept.

ADDRESS: 13 Newfields Rd

OWNER NAME: Town of Exeter

TOWN/CITY: Exeter

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

NHDES will review your application for compliance with applicable provisions of:

- Env-Wt 307 (Conditions Applicable to All Activities in Jurisdictional Areas).
- Env-Wt 500 (Project-Specific Requirements).
- Env-Wt 600 (Coastal Lands and Tidal Waters / Wetlands).
- Env-Wt 900 (Stream Crossings, Culverts).

NHDES will also review your application for compliance with applicable best management practices described in:

- Env-Wt 306.02(a)(2) (Activities Eligible for a Lower Scrutiny Approval).
- Env-Wt 309.07 (Permit-by-Notification Application Requirements).

Please note that review may include NHDES staff inspecting your proposed project site, as described in RSA 482-A:6, II.

SECTION 1 – GENERAL CRITERIA (Env-Wt 306.02, Env-Wt 309.01)	
Does your proposed project involve work in any jurisdictional area that started before you obtained applicable approvals? Does it involve any work under an "After-the-Fact" permit? For more information on applicable jurisdictional areas, see Section 3 below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is your proposed project located in a Priority Resource Area (PRA), other than a documented occurrence of Protected Species and Habitat? For more information on these topics, see our Priority Resource Area fact sheet or our Protected Species or Habitat fact sheet .	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If you answered "Yes" to one or both questions above, you are ineligible for a Wetlands Permit-by-Notification (PBN). Please file a Standard Dredge and Fill Wetlands Permit Application .	

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SECTION 2 – PROJECT-SPECIFIC CRITERIA (Env-Wt 309.06)

You can only use a PBN for the project types listed below. Please check the best applicable box(es) for your proposed project and refer to our [project-specific checklists](#). If your proposed project type is not listed below, or if it does not meet the project-specific checklist criteria, it is not eligible for a PBN. It may still be eligible for an [Expedited Minimum Impact Wetlands Permit](#) or a [Standard Dredge and Fill Wetlands Permit](#).

Docking, Beach, and Bank Stabilization Projects:

- [Sand replenishment of an existing legal beach](#)
- † [Repair or replacement of an existing legal boat launch](#)
- † [Installation of a new canopy](#)
- † [Construction, installation, or modification of docking structures](#)
- [Repair or replacement of an existing legal docking structure](#)
- [Maintenance of an existing legal tidal docking structure](#)
- [Repair or replacement of an existing legal retaining wall](#)

Stream Crossing Projects:

- [Repair of an existing legal tier 1 stream crossing](#)
- ‡ [Repair of an existing legal tier 2 stream crossing](#)
- ‡ [Repair of an existing legal tier 3 stream crossing](#)
- [Replacement of an existing legal tier 1 stream crossing](#)
- † [Installation of a temporary tier 1 stream crossing](#)
- † ‡ [Installation of a temporary tier 2 stream crossing](#)

Utility Projects:

- † [Installation of residential utilities to a single-family home](#)
- † [Utility activities](#)

Other Projects:

- [Repair or replacement of an existing legal deck or patio](#)
- † [Exotic aquatic weed control activities not exceeding one acre](#)
- † [Agricultural activities](#)
- † [Temporary coffer dams](#)
- † A new, single lot, residential driveway
- † [Dry hydrant installation or maintenance](#)
- † [Forestry activities](#)
- † Pond maintenance
- † Residential, commercial, or industrial maintenance

NHDES will review PBN applications within 10 calendar days (Env-Wt 309.08(a)) with two exceptions:

† † You are strongly encouraged to include a signed written waiver of intervention from your conservation commission. If you do not, assigned staff will review your PBN application within 25 days.

‡ You are strongly encouraged to include a signed written waiver of intervention from your river management advisory committee, if applicable. If you do not, assigned staff will review your PBN application within 25 days.

For more information on “Lower Scrutiny Approvals” see Env-Wt 309

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SECTION 3 – PROJECT DESCRIPTION AND IMPACT AREA (Env-Wt 309.07(c))

In one or two paragraphs, describe your proposed project. Include detailed dimensions and timing of impacts to any areas listed below. Add any other information necessary to specify your proposed actions.

The proposed bridge repair is located at the crossing of Linden Street over the Exeter River in Exeter, New Hampshire. The bridge is owned by the Town and consists of a transverse timber deck with glued laminated timber stringers with a span of 58'-0" supported on reinforced concrete pile cap and driven H-piles. The abutments and wingwalls consist of timber faced mechanically stabilized earth walls. The timber facing for the abutments and wingwalls were observed to be separating and bulged in multiple areas. Settling was observed on the roadway approaches due to the apparent movement of the walls below.

The proposed wetland impacts are associated with substructure repairs of the existing timber facing to arrest further separation and bulging. There are no proposed direct impacts to the surface water, as work will be done during low flow conditions. Repairs consist of removing the top 5-ft of wingwalls and completely removing the timber faced backwall at each abutment. The removed portion will be rebuilt with reinforced concrete. The remainder of the timber faced wall, which varies in heights to 7-ft is proposed to be reinforced with a soil nail and waler system designed to supplement the load carrying capacity of the existing timber wall system. A reinforced concrete facing is proposed to encapsulate the soil nail and waler system and timber facing to reduce future maintenance. A total of 590 sq. ft. of temporary wetland impacts are proposed for construction access and installation/maintenance of erosion controls. An additional 95 sq. ft. of permanent wetland impacts are proposed to for the superstructure repair. All proposed impacts are located within the Towns right-of-way. Impacts within the Protected Shoreland Buffer will be permitted separately.

Complete the table below. Indicate square feet (SF) and/or linear feet (LF) of impacts, as applicable. "Temporary" impacts are those you will restore to pre-construction conditions after you complete the project. For new seasonal dock projects, enter your proposed square footage as "permanent."

Jurisdictional Area	Permanent (SF/LF)	Temporary (SF/LF)	Jurisdictional Area	Permanent (SF/LF)	Temporary (SF/LF)
Lake			Forested Wetland		
Pond			Wet Meadow		
Perennial River/ Stream	95 / 76	590 / 90	Emergent Wetland		
Intermittent/ Ephemeral Stream			Developed Upland in Tidal Buffer Zone		
Tidal Water			Other		

SECTION 4 – PROJECT LOCATION (Env-Wt 309.07)

ADDRESS: Linden Street

TOWN/CITY: Exeter

TAX MAP/LOT NUMBER: ROW

NAME OF WATERBODY, WETLAND, OR OTHER JURISDICTIONAL AREA: Exeter River

LATITUDE/LONGITUDE (in decimal degrees to five decimal places): 42.96171, -70.96497

FOR PROJECTS LOCATED ON WATERBODIES ONLY: LINEAR DISTANCE OF THE PROJECT FROM ABUTTING PROPERTY BOUNDARIES:

SECTION 5 – APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 309.07(a))

If the applicant is a trust or company, enter the name of the trust or company as the applicant's name.

NAME: Town of Exeter Public Works

MAILING ADDRESS: 13 Newfields Road

TOWN/CITY: Exeter

STATE: NH

ZIP CODE: 03833


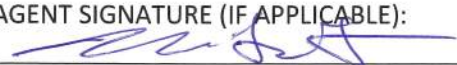
DAYTIME PHONE: 603-773-6157 ext 163

EMAIL ADDRESS: jperkins@exeternh.gov

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

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SECTION 6 – PROPERTY OWNER INFORMATION (Env-Wt 309.07(a))		
<input checked="" type="checkbox"/> OWNER AND APPLICANT ARE THE SAME? IF YES, SKIP TO SECTION 7.		
NAME:		
MAILING ADDRESS:		
TOWN/CITY:	STATE:	ZIP CODE:
DAYTIME PHONE:	EMAIL ADDRESS:	
SECTION 7 – AGENT INFORMATION (IF APPLICABLE) (Env-Wt 309.07(a))		
NAME: Jason Gallant, PE (Wright-Pierce)		
MAILING ADDRESS: 230 Commerce Way Suite 302		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
DAYTIME PHONE: (603) 570-7166	EMAIL ADDRESS: jason.gallant@wright-pierce.com	
SECTION 8 – REQUIRED CERTIFICATIONS (Env-Wt 309.07(d))		
The applicant must initial the box below and sign the application to certify that:		
Initials: JP JLG	<ul style="list-style-type: none"> I will conduct my project in a manner that will meet the applicable conditions and limits of Env-Wt 307 and all applicable “minimum impact” project rules. Any structure I am proposing to repair within jurisdictional areas is a legally existing structure. My proposal results in the “least adverse impact” to jurisdictional areas. (Env-Wt 313.03, Avoidance and Minimization). I am aware of the limits of this PBN and understand and will comply with all its conditions. 	
The owner, applicant (if different from owner) and agent must initial each box below and sign to certify:		
Initials: JP JLG	<ul style="list-style-type: none"> To the best of our knowledge and belief, we have provided all required notifications. To the best of our knowledge and belief, the information submitted on or with this application is true, complete, and not misleading. In signing, we understand that the submission of false, incomplete, or misleading information constitutes grounds for NHDES to: <ol style="list-style-type: none"> Deny the application. Revoke any approval that is granted based on the information. Refer a certified wetland scientist, licensed surveyor, or licensed professional engineer to the Office of Professional Licensure and Certification. For more information, see RSA 310-A:1. 	
SECTION 9 – REQUIRED SIGNATURE (Env-Wt 309.07(d))		
Each signature below certifies that you are aware of this application and do not object to its filing.		
OWNER SIGNATURE: 	PRINT NAME LEGIBLY: Jay Perkins	DATE: 12-20-23
APPLICANT SIGNATURE (IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
AGENT SIGNATURE (IF APPLICABLE): 	PRINT NAME LEGIBLY: Jason Gallant	DATE: 12/18/23

Section 10 – TOWN / CITY CLERK (RSA 482-A:3, I; Env-Wt 309.07(f))

I certify that the applicant has filed four copies, including all attachments, with the town/city named below.

N/A Town is not incorporated.

TOWN/CITY CLERK SIGNATURE:	PRINT NAME LEGIBLY:
----------------------------	---------------------

TOWN/CITY:	DATE:
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SECTION 11 – CONSERVATION COMMISSION SIGNATURE (Env-Wt 306.02(c); Env-Wt 309.07(h); Env-Wt 309.08(a))

The signature below is for projects with “+” in Section 2. If you include this signed written waiver, assigned staff will review complete PBN applications within 10 days. Otherwise, assigned staff will review it within 25 days.

The signature below certifies that the municipal Conservation Commission or, if there is no conservation commission, the local governing body, has reviewed this application and waives its right to intervene, as described in RSA 482-A:11.

AUTHORIZED COMMISSION SIGNATURE:	PRINT NAME LEGIBLY:	DATE:
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SECTION 12 – LOCAL RIVER MANAGEMENT ADVISORY COMMITTEE (LAC) SIGNATURE (Env-Wt 306.02(d); Env-Wt 309.07(i); Env-Wt 309.08(a))

The signature below is for projects with “+” in Section 2. LAC jurisdiction for these projects applies to activities located in or within 250 feet of a designated river where the activity will occur on a “Tier 2” or “Tier 3” stream that has a direct surface water connection to the designated river. Please use the “[Designated River Corridor Mapper](#)” to determine if your proposed project is within a designated river [corridor](#). If you include this signed written waiver, assigned staff will review complete PBN application within 10 days. Otherwise, assigned staff will review it within 25 days.

The signature below certifies that the LAC waives its right to intervene, as described in RSA 482-A:11.

(N/A This project is *not* within a Designated River Corridor and/or is *not* within LAC jurisdiction)

AUTHORIZED LAC REPRESENTATIVE SIGNATURE:	PRINT NAME LEGIBLY:	DATE:
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DIRECTIONS FOR TOWN/CITY CLERK (as described in 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. The applicant can submit the application form and attachments to NHDES by mail or by hand.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following:
 - a. Local Conservation Commission
 - b. Local governing body (Board of Selectmen or Town/City Council)
 - c. Local Planning Board.
4. Retain one copy of the application form and one complete set of attachments and make them available for public review.

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

ATTACHMENTS - YOU MUST INCLUDE THE FOLLOWING ATTACHMENTS WITH YOUR APPLICATION:

Required Plans for All Projects (Env-Wt 309.07, PBN Application Requirements):

- An accurate drawing with dimensions clearly shown to document existing site conditions and to show the location of the property.
- An accurate drawing and cross-section to show the impact of the proposed activity on jurisdictional areas, including the following:
 - An overview of the property and proposed impact areas in relation to property lines.
 - The scale, if any, used on the plan.
 - If the drawing is not to scale, the dimensions of all existing and proposed structures and all other relevant features necessary to clearly define the project.
 - A labeled north-pointing arrow to show orientation.
 - A legend that includes all symbols, line types, and shading used on the plan.
 - The location of jurisdictional areas delineated in accordance with Env-Wt 400 (Delineation and Classification of Jurisdictional Areas; Classification of Projects).
 - Proposed sequence of construction (including pre-construction through post-construction activities) and the relative timing and progression of all work.
 - The location and type of siltation and turbidity controls indicated graphically and labeled or annotated as necessary.
 - For any project using a temporary coffer dam, and for any repair of a "tier 3" stream crossing (as classified and described in the [Designated River Corridor Mapper](#)), the date, signature, and seal of the licensed professional engineer who prepared or had responsibility for the plan(s).
 - The plan date, latest revision date, and preparer's name.

Wetland Delineation:

- Wetland boundaries** must be delineated by a Certified Wetland Scientist (CWS), except for the following projects:
 - Shoreline structure projects, such as docking structures at the shoreline of and extending over open water where there are no vegetated wetlands.
 - Exotic aquatic weed control activities not exceeding one acre.
 - Agriculture projects impacting less than three acres of wet meadow, if the application and plan are prepared by the Natural Resources Conservation Services (NRCS) or a certified wetland scientist.
 - [Request technical assistance](#) if needed for questions on Env-Wt 309.07 or Env-Wt 406.

Additional Attachments Required for All Projects:

- Application fee:** Check or money order for \$400 payable to "Treasurer – State of NH" (as described in RSA 482-A:3, I(c) (Excavating and Dredging Permit; Certain Exemptions)).
- US Geological Survey map:** A copy of the appropriate US Geological Survey map with the property and project located (as described in Env-Wt 309.07(b)(3)).
- Natural Heritage Bureau (NHB) DataCheck review:**

Complete a DataCheck review through the [NHB DataCheck Tool](#). Resolve any related questions with NHB or New Hampshire Fish and Game Department (NHFG), as instructed.

 - NHB DataCheck identification number, results and, if any, correspondence with NHB and NHFG.
 - Do your NHB DataCheck results indicate that your proposed project is in or near a documented occurrence of a protected species or habitat? If so, provide written recommendations from NHB or NHFG, or both, for actions to be taken to protect the species or habitat. Sign below to commit to implement recommendations regarding the protected species or habitat (Env-Wt 407.02(c), Impact Classification Adjustments):

"I commit to implement NHB or NHFG recommendations, or both, as applicable, for protected species or habitat."

Signature:

Date:



12-20-23

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Tax Map: A legible copy of the town tax map showing the location of the proposed project in relation to abutters (Env-Wt 309.07(b)(2)).

Dated Photographs: Original or digital photos, clearly showing existing conditions of the area to be impacted, mounted no more than two per sheet, on 8.5 inches by 11 inches paper and captioned (Env-Wt 309.07(b)(5)).

Required Attachments, If Applicable:

For the maintenance of existing legal tidal docking structures only: the data screening required by Env-Wt 603.03 (see also: Env-Wt 306.05(a)(3) and Env-Wt 309.07(b)(6)).

For stream crossing projects only: The size of the watershed (Env-Wt 306.05(a)(5)).

For new docking structures only: Permission for work within 20 feet of abutting properties (as described in RSA 482-A:3, XIII). If jurisdictional impacts for boat docking facilities occur within 20 feet of an abutting property line or imaginary extension thereof over surface water, you must include signed permission letter(s) from the affected abutters. A notarized, written agreement with any abutter(s) when the proposed seasonal pier or wharf is located within 20 feet of the property line or imaginary extension thereof over surface waters.

For agricultural activities only: County conservation district or certified wetland scientist signature (as described in Env-Wt 309.07(g)).

By signing below, the county conservation district or certified wetland scientist certifies compliance with all conditions of that rule (as described in Env-Wt 522.06(a)(2)).

Authorized County Conservation District or Certified Wetlands Scientist Signature:

Printed Name:

Date:

For work within 10 feet of abutting properties: Written consent from the affected abutter to extend work closer than 10 feet to their properties (Env-Wt 307.13(d), subject to exemptions described in Env-Wt 307.13(e)).

Additional project-specific information: Please refer to the [Project-Specific Checklists for Wetlands PBNs](#).



**REPAIR OF AN EXISTING LEGAL TIER 3
STREAM CROSSING
PERMIT-BY-NOTIFICATION CHECKLIST**
Water Division/Land Resources Management
Wetlands Bureau



[Check the Status of your Notification](#)

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

This checklist summarizes the criteria and requirements for a Permit-by-Notification (PBN) for repair of a legally existing tier 3 stream crossing that complies with Env-Wt 903.01(e)(3). In addition to the project-specific criteria and requirements listed on this checklist, all PBNs must meet the criteria and requirements listed on the [PBN form \(NHDES-W-06-027\)](#) and perform the required planning for all projects as described in Env-Wt 306.05.

SECTION 1 - EXEMPTION FROM Env-Wt 903 AND Env-Wt 904 (Env-Wt 901.03)

The following activities and crossings are exempt from Env-Wt 903 and Env-Wt 904, provided they are conducted in accordance with all applicable conditions:

- (a) Minimum impact routine roadway maintenance activities conducted in accordance with Env-Wt 308.04 or Env-Wt 309.03.
- (b) Minimum impact projects to allow vehicular access to a piece of property for forest management activities, conducted in accordance with Env-Wt 520.
- (c) Minimum impact agricultural activities conducted in accordance with Env-Wt 522.
- (d) Minimum impact trail activities conducted in accordance with Env-Wt 517.
- (e) Temporary crossings, so long as the area in which the crossing was placed is restored to pre-installation conditions when the crossing is removed.

If your project meets one of these exemptions, it does not qualify for this PBN. Instead, please seek a [Routine Roadway Maintenance Registration](#) or a [Statutory Permit-By-Notification](#), as applicable.

SECTION 2 - TIER 3 STREAM CROSSING IDENTIFICATION (Env-Wt 904.05)

Your project must be for the repair of an existing, legal tier 3 stream crossing and thus, the crossing must meet the criteria for a tier 3 stream crossing. A tier 3 stream crossing shall be a crossing:

- Not located on a tidal watercourse, and:
 - Located on a watercourse where the contributing watershed is 640 acres or greater.
 - Located within a designated river corridor, unless:
 - The crossing would be a tier 1 stream based on contributing watershed size, or
 - 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.
 - Located within a 100-year flood plain.
 - Located in a jurisdictional area having any protected species or habitat. Or
 - Located in a prime wetlands 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.

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SECTION 3 - MINIMUM IMPACT PROJECT CRITERIA (Env-Wt 309.06(a)(20); Env-Wt 903.01(e))

To qualify for this PBN, the project must meet the following criteria:

- Only one stream crossing is included in the project.
- The repair is limited to existing legal crossings where the tier classification is based only on the size of the contributing watershed.
- The crossing is not part of a larger crossing that meets the criteria for a major project specified in Env-Wt 400, regardless of the tier classification of the stream crossing that is part of the project.
- The project does not need one or more waivers.
- The project is not a for a temporary tier 3 stream crossing.
- A professional engineer certifies, and provides supporting analyses, to show the following:
 - The existing crossing does not have a history of causing or contributing to flooding that damages the crossing or other human infrastructure or protected species habitat, and
 - The proposed stream crossing will:
 - a) Meet the general criteria specified in Env-Wt 904.01,
 - b) Maintain or enhance the hydraulic capacity of the stream crossing,
 - c) Maintain or enhance the capacity of the crossing to accommodate aquatic organism passage,
 - d) Maintain or enhance the connectivity of the stream reaches upstream or downstream of the crossing, and
 - e) Not cause or contribute to the increase in the frequency of flooding or overtopping of the banks upstream or downstream of the crossing.

Please note that “repair” as applied to a stream crossing means work on an existing legal structure to allow the structure to remain in place where the necessary work does not include the installation of new structural components (Env-Wt 902.24). It is different from “rehabilitation” (Env-Wt 902.23) and “replacement” (Env-Wt 902.26).

SECTION 4 - CONDITIONS APPLICABLE TO ALL STREAM CROSSING WORK (Env-Wt 904.02)

- All stream crossing work are subject to all applicable conditions in Env-Wt 307.
- In stream work must be done only during low flow conditions.
- Work on stream crossings that requires any work in areas that are subject to flowing water must maintain normal flows and prevent water quality degradation during the work by using best management practices, such as temporary by-pass pipes, culverts, or cofferdams.

SECTION 5 - GENERAL DESIGN CONSIDERATIONS (Env-Wt 904.01)

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

- Not be a barrier to sediment transport.
- Not restrict high flows and maintain existing low flows.
- Not obstruct or otherwise substantially disrupt the movement of aquatic organisms indigenous to the water body 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:
 - Minimizing the potential for inlet obstruction by sediment, wood, or debris, and

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- Preserving the natural alignment of the stream channel.
- Preserve watercourse connectivity where it currently exists.
- Restore watercourse connectivity where:
 - Connectivity previously was disrupted as a result of human activity(ies), and
 - Restoration of connectivity will benefit aquatic organisms 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.

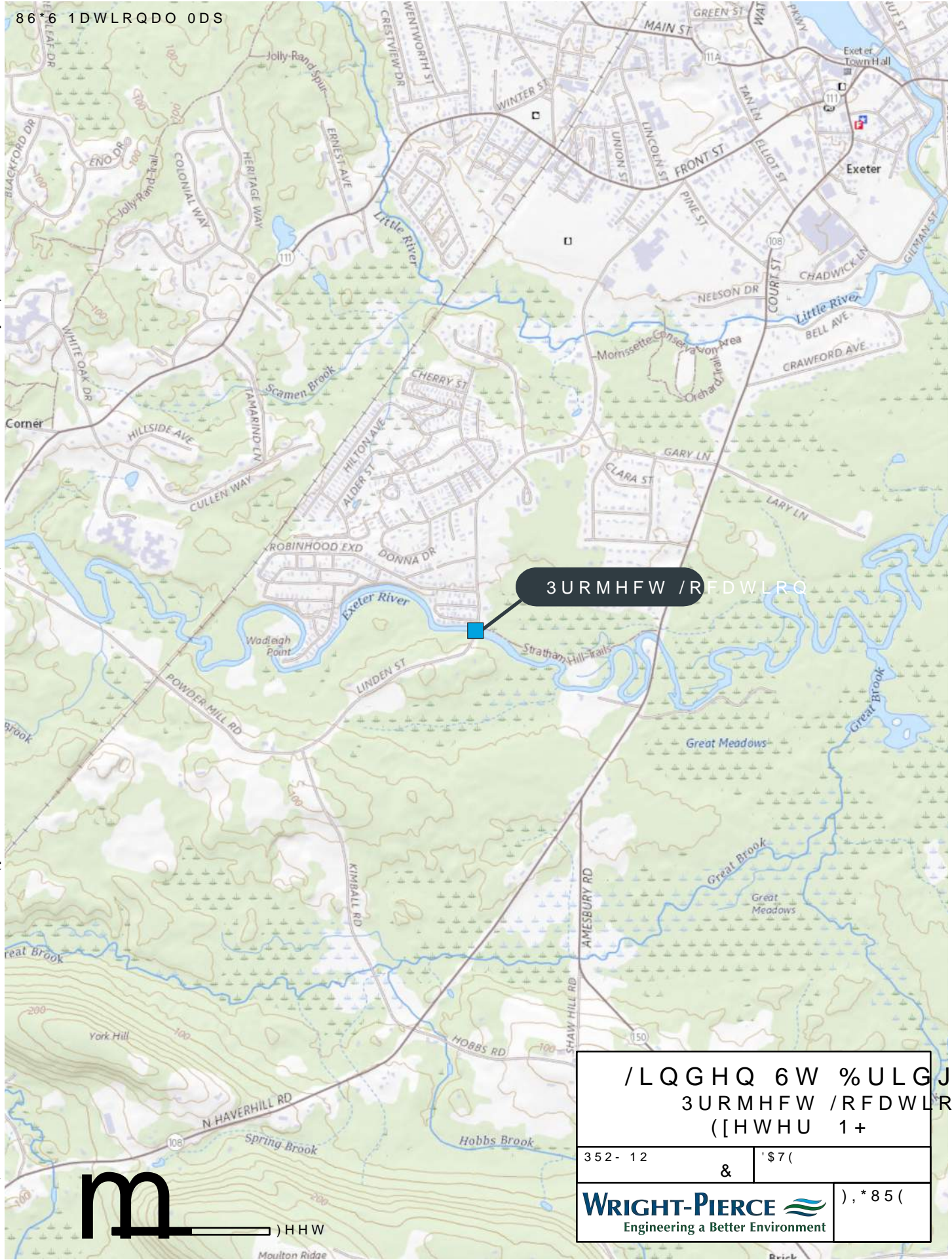
SECTION 6 - INFORMATION REQUIRED FOR A STREAM CROSSING (Env-Wt 903.03; Env-Wt 904.04(e))

In addition to the information required on the [PBN form \(NHDES-W-06-027\)](#), please provide:

- A US Geological Survey map or updated elevation data based on LiDAR on which the following are clearly delineated or otherwise noted:
 - The approximate boundaries of the contributing watershed,
 - The size of the contributing watershed, and
 - Identification of the stream tier based on watershed size.
- Plans that show the following:
 - The scale of the plan and a north arrow,
 - The extent of disturbance,
 - Road locations, including road edges, centerline, and boundaries of the right-of-way,
 - Proposed channel work including bank erosion control features, grade control, and channel linings, and
 - All dimensions of the proposed structure and of the existing structure, if any, including inlet and outlet invert elevations.
- The hydraulic capacity of the proposed crossing, in terms of flood frequency event, and of the existing crossing, if any.
- The type of crossing, such as a culvert or span, that is proposed and that exists, if any.
- The following information about the dewatering system proposed to be used:
 - Estimated maximum flow anticipated during construction,
 - The location, height, and width of the diversion dam,
 - The location and capacity of each sump, and
 - Backwater prevention method.
- The following information about erosion and pollution controls:
 - The sediment treatment plan, including methods, release point(s), and extent,
 - Any additional methods proposed to control erosion, and
 - All methods of preventing and controlling releases from pumps, fuel stations, and equipment storage.

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Engineering a Better Environment

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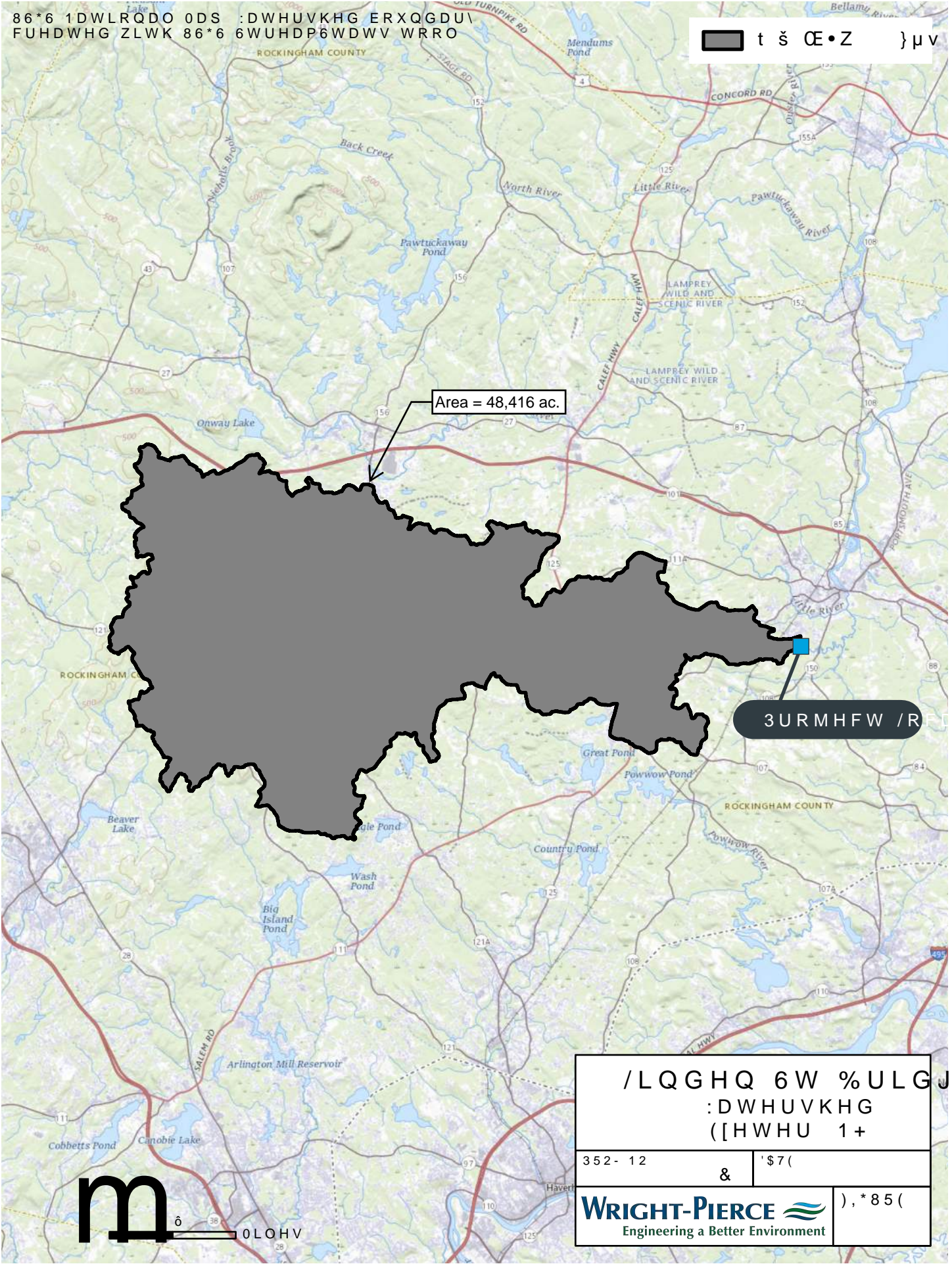
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Area = 48,416 ac.

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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: Jacob Shactman, Wright-Pierce
230 Commerce Way Suite 302
Portsmouth, NH 03801
jacob.shactman@wright-pierce.com

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

cc: NHFG Review

Date: 10/24/2023 (valid until 10/24/2024)

Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game

Permits: NHDES - Wetland Permit by Notification (PBN)

NHB ID: NHB23-3038

Town: Exeter
Location: Linden Street

Project Description: The proposed bridge rehabilitation is located at the crossing of Linden Street and the Exeter River. The project includes replacing the existing guardrail, pavement (in-kind), curbing, and improvements to the bridge superstructure to prevent further separation and bulging along the timber facing abutment and wing walls. Approximately 725 sq. ft of temporary impacts (construction access/excavation) and 75 sq. ft. of permanent impacts (10" thick concrete face along walls) are proposed within the top of bank. No impacts are proposed below ordinary high water. Bidding is anticipated by the end of this year with construction starting spring 2023.

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.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

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 DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

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
Bridle Shiner (<i>Notropis bifrenatus</i>)	T	--	Contact the NH Fish & Game Dept (see above).

¹Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list.

An asterisk (*) indicates that the most recent report for that occurrence was 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.

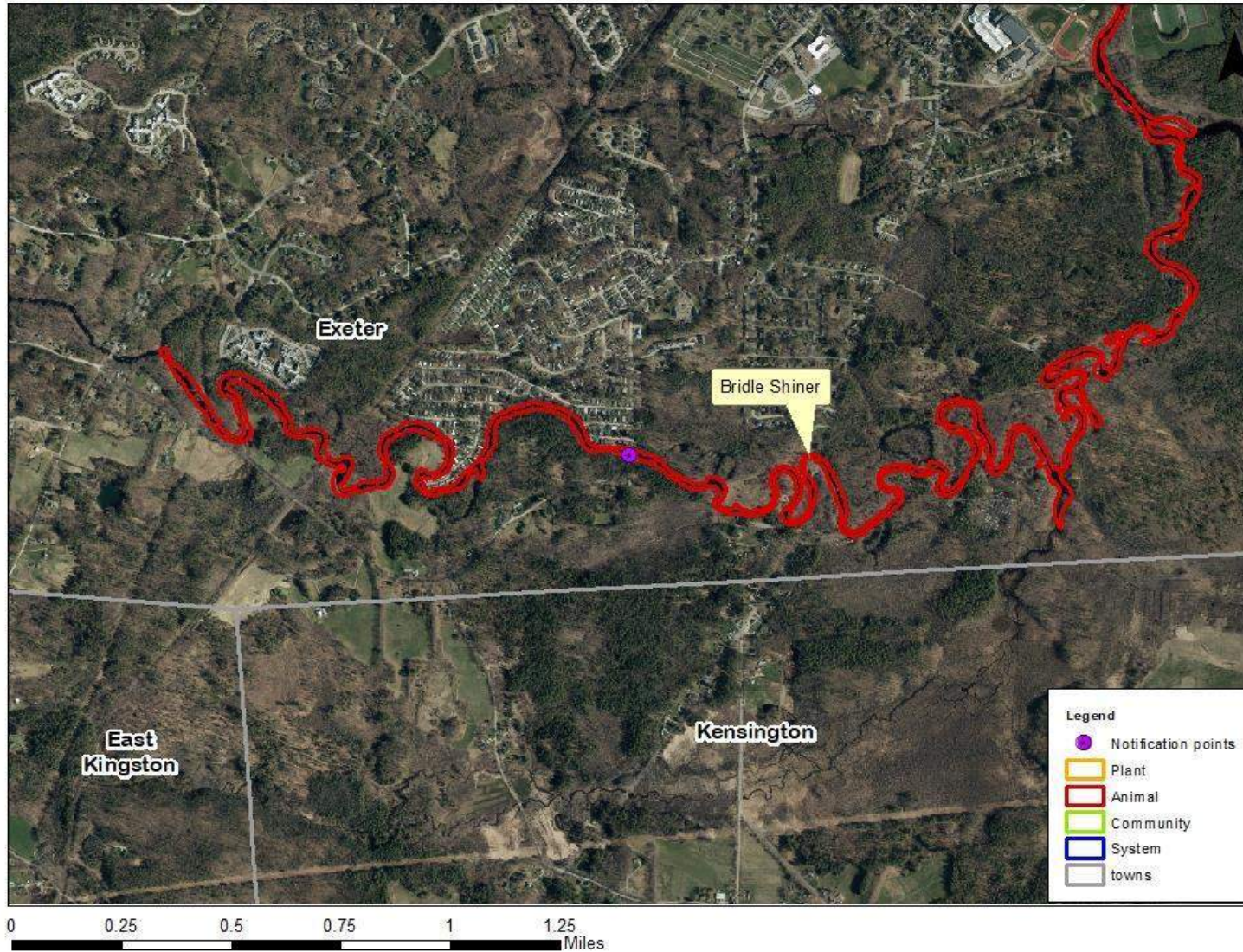


NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB23-3038



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB23-3038

EOCODE:

AFCJB28180*052*NH

New Hampshire Natural Heritage Bureau - Animal Record

Bridle Shiner (*Notropis bifrenatus*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Rare or uncommon
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Good quality, condition and landscape context ('B' on a scale of A-D).
Comments on Rank: --

Detailed Description: 2021: Species found in suitable habitat throughout entire reach. Good long term viability due to dam removal.

General Area: 2021: Downstream of Route 111 bridge to baseball fields near town center. Dam removal has improved habitat.

General Comments: --

Management: --

Comments:

Location

Survey Site Name: Exeter River, between Route 111 and Exeter town center

Managed By:

County: Rockingham

Town(s): Exeter

Size: 61.0 acres

Elevation:

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

Directions: 2021: Exeter River, between Route 111 and Exeter town center

Dates documented

First reported: 2021-07-21

Last reported: 2021-07-21

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

Jacob Shactman

From: Newton, Kevin <Kevin.M.Newton@wildlife.nh.gov>
Sent: Thursday, December 7, 2023 12:03 PM
To: Jacob Shactman
Cc: FGC: NHFG review; Lewis, Eben
Subject: RE: NHB23-3038 FIS 1004 Consultation Request

Jake,

Thanks for reaching out. I coordinated with John Magee, Fisheries Programs Supervisor, and impacts to Bridle Shiner from the proposed work are not expected. If methodology or design changes, please reach out to NHFG for further coordination to determine if additional conservation measures are required.

Please make sure all manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection, check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches.

All observations of threatened or endangered species on the project site shall be reported immediately to the NHFG nongame and endangered wildlife environmental review program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov, with the email subject line containing the NHB DataCheck tool results letter assigned number, the project name, and the term Wildlife Species Observation.

Thanks,

Kevin

From: Jacob Shactman <jacob.shactman@wright-pierce.com>
Sent: Wednesday, December 6, 2023 10:27 AM
To: FGC: NHFG review <NHFGreview@wildlife.nh.gov>
Subject: FW: NHB23-3038 FIS 1004 Consultation Request

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

Good morning,

Could you please provide a schedule update for this review? The Town is looking to submit a Wetland PBN application which has been prepared, following coordination with NHFG.

Thanks,
Jake

From: Jacob Shactman
Sent: Thursday, November 9, 2023 3:34 PM
To: FGC: NHFG review <NHFGreview@wildlife.nh.gov>; Snyder, Kimberly <Kimberly.C.Snyder@wildlife.nh.gov>

Construction Sequence

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

General Schedule:

1. Contractor mobilizes to project area (Spring 2024).
2. Install erosion and sedimentation controls.
3. Prepare staging area.
4. Commence substructure bridge repairs including soil nail and waler system and concrete facing.
5. Replace existing timber guard rail.
6. Repair or replace damaged or deteriorated deck boards as necessary and construct new bridge joints to tie into the proposed approach pavement and substructure components.
7. Replace existing pavement in kind.
8. Restore temporary impact areas to match existing conditions.
9. Once the site is permanently stabilized, remove all temporary erosion control measures.

Linden Street Bridge Repair – Exeter, NH Photo Log



Photograph 1 – View of Linden Street Bridge South Abutment over Exeter River (Facing Southwest)



Photograph 2 – View of Linden Street Bridge North Abutment over Exeter River (Facing North)



Photograph 3 – View of Linden Street Bridge Deck and Approach (Facing South)



Photograph 4 – View of Linden Street Bridge Deck and Approach (Facing North)



November 5, 2023

NH Fish and Game
11 Hazen Drive
Concord, NH 03002

Ref. Wetlands Permit Application
NHB ID : NHB23-3038
Linden Street Bridge No. 081/046
Over the Exeter River
Exeter, NH

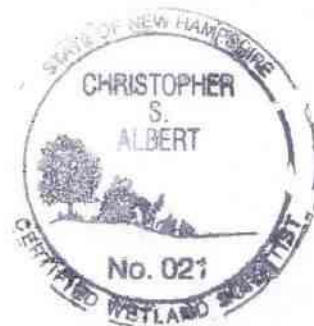
Dear Sir or Madame,

On behalf of the Town of Exeter, CSA Environmental Consultants, LLC, is submitting this wetland evaluation for the Wetland System along the Exeter River over the Linden Street Bridge. On August 23, 2023, the jurisdictional wetlands and normal high water were delineated by me. The project proposes rehabilitation of the bridge abutments above the ordinary high-water elevation. An NHB file search documented the presence of the Bridle Shiner (*Notropis bifrenatus*) downstream of the bridge, which is a State Threatened species. The bridle shiners prefer dense stands of aquatic plants to live and to feed on zooplankton and aquatic invertebrates. The wetland system is classified as a Riverine, lower perennial, unconsolidated bottom, sand, permanently flooded (R2UB2H). The soils are mapped as open water per NRCS. This section of the river contains fast moving water not indicative to spawning with no dense tree cover. The NH aquatic restoration mapper did not show any species of concern per the NHFG Aquatic Wildlife Action Plan Fishery Layer around the project area. The Sades ID number is 6,502 and the bridge has full Aquatic Organism Passage. The proposed project will have no adverse effects to the bridle shiner or any other aquatic species.

Very truly yours,

Christopher Albert

Christopher Albert,
CWS #21



TOWN OF EXETER, NEW HAMPSHIRE

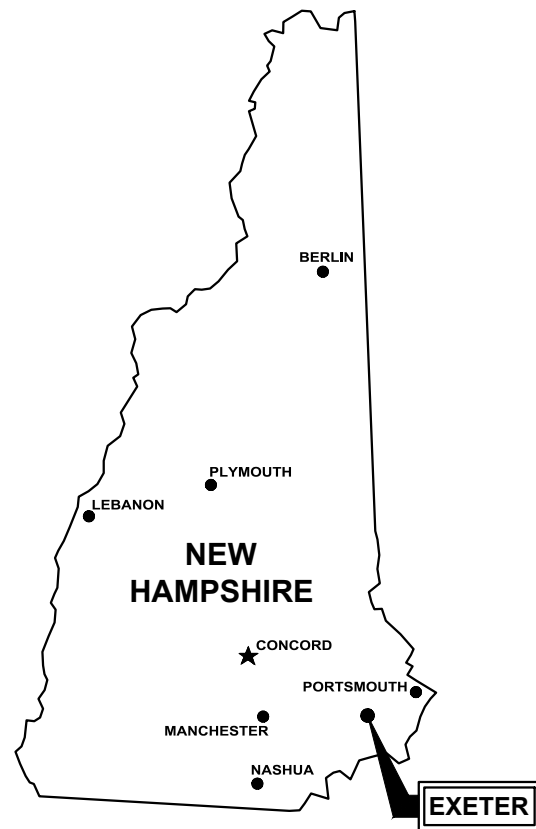
CONTRACT DRAWINGS FOR

LINDEN STREET OVER EXETER RIVER

(081/046)

BRIDGE REPAIR

DECEMBER 2023



DRAWING INDEX

GENERAL

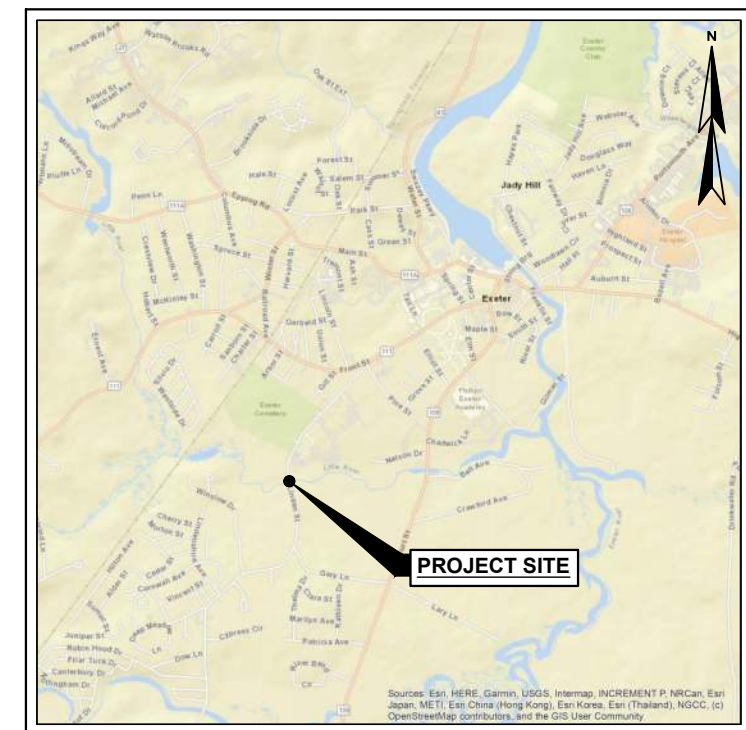
--- COVER SHEET

CIVIL

- C-1 GENERAL NOTES, LEGEND, ABBREVIATIONS AND QUANTITIES
- C-2 BRIDGE PLAN AND ELEVATION
- C-3 TYPICAL SECTIONS
- C-4 ABUTMENT A PLAN AND ELEVATION
- C-5 ABUTMENT B PLAN AND ELEVATION
- C-6 TYPICAL SUBSTRUCTURE SECTIONS-I
- C-7 TYPICAL SUBSTRUCTURE SECTIONS-II
- C-8 RAIL AND CURB LAYOUT
- C-9 RAIL DETAILS I
- C-10 RAIL DETAILS II
- C-11 RAIL DETAILS III
- C-12 DETOUR PLAN

PERMITTING

- E-1 EROSION CONTROL AND IMPACT PLAN



LOCATION PLAN
SCALE: NTS

WRIGHT-PIERCE 
Engineering a Better Environment

603.430.3728 | www.wright-pierce.com

GENERAL NOTES

- 1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS OF WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS, INCLUDING REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). REFER TO SPECIFICATION SECTION 01320 FOR ADDITIONAL REQUIREMENTS.
4. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.
5. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.
6. ALL EXISTING STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING STORM DRAIN LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. WHERE UTILITY POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE THIS EFFORT WITH THE APPROPRIATE UTILITY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR THIS EFFORT OR TEMPORARY SUPPORT OF UTILITIES.
8. DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS AND STATIONING SHALL PREVAIL. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTling ALL EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED BY THEIR OPERATIONS AT NO EXPENSE TO THE OWNER. THIS WORK IS TO BE PERFORMED BY A LAND SURVEYOR LICENSED IN THE STATE OF NEW HAMPSHIRE.
10. THE CONTRACTOR SHALL REMOVE AND REPLACE OR REPAIR EXISTING ITEMS TO REMAIN THAT ARE DAMAGED BY THEIR CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE OWNER, AND AT NO ADDITIONAL COST TO THE OWNER.
11. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED BY THE CONTRACTOR IMMEDIATELY TO THE NHFG NONGAME ENDANGERED WILDLIFE PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER (NHB23-3038), THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION.

EXISTING SITE CONDITIONS

- 1. EXISTING CONDITION INFORMATION TAKEN FROM THE "EXISTING CONDITIONS SURVEY, LINDEN STREET BRIDGE OVER THE EXETER RIVER" PREPARED BY GM2 ASSOCIATES, INC. DATED AUGUST 23, 2023.
2. HORIZONTAL DATUM, BASED ON THE NH STATE PLANE COORDINATE SYSTEM, NAD83(2011).
3. ELEVATIONS SHOWN HEREIN, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. NO BOUNDARY SURVEY OR RESEARCH WAS COMPLETED AS PART OF THE EXISTING CONDITIONS SURVEY. THE PUBLIC AND PRIVATE BOUNDARIES ARE SHOWN AS APPROXIMATE SOLELY BASED ON PUBLICLY AVAILABLE GIS AND TAX MAP INFORMATION.
5. UNDERGROUND UTILITIES AND FACILITIES SHOWN ARE APPROXIMATE AND NOT NECESSARILY COMPLETE. THE CONTRACTOR SHALL NOTIFY DIGSAFE (CALL 811) PRIOR TO ANY EXCAVATION ON SITE IN ACCORDANCE WITH NH RSA 374.
6. ALL DIMENSIONS AND DETAILS SHOWN FOR THE EXISTING STRUCTURE ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL THEY HAVE MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN ACCEPTED BY THE ENGINEER.
7. THERE ARE NO KNOWN HAZARDOUS ENVIRONMENTAL CONDITIONS WITHIN THE AREA OF WORK. REFER TO SPECIFICATION SECTION 00800-SC-5.06. IF THE PRESENCE OF HAZARDOUS ENVIRONMENTAL CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY. ALL ACTIVITIES, HANDLING AND DISPOSAL OF HAZARDOUS ENVIRONMENTAL CONDITIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.

EROSION CONTROL

- 1. THE CONTRACTOR IS RESPONSIBLE FOR THE PREVENTION OF EROSION OF THE EXISTING STORMWATER SYSTEM FOR THE DURATION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND SUBMITTING A TEMPORARY EROSION CONTROL PLAN FOR REVIEW AND ACCEPTANCE BY THE OWNER AND ENGINEER. THE EROSION CONTROL PLAN SHALL BE FULLY IMPLEMENTED AND ACCEPTED BY THE OWNER AND ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
2. THE EROSION CONTROL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3", LATEST EDITION AND PER THE APPLICABLE WETLANDS PERMIT. ALL EROSION CONTROL EFFORT SHALL BE SUBSIDIARY TO ITEM 699.

DEMOLITION

- 1. THE CONTRACTOR SHALL SUBMIT, FOR DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02 OF THE NHDOT STANDARD SPECIFICATIONS, A DETAILED OUTLINE OR PLAN OF THE PROPOSED METHOD FOR PARTIAL REMOVAL OF THE EXISTING BRIDGE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK. PARTIAL BRIDGE REMOVAL SUBMITTALS SHALL BE DESIGNED AND SEALED BY A PROFESSIONS ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
2. ITEM 502, REMOVAL OF EXISTING BRIDGE STRUCTURE, SHALL INCLUDE THE REMOVAL OF THE EXISTING TIMBER BACKWALL, TOP OF THE WINGWALLS TO THE LIMITS SHOWN ON THE PLANS, EXISTING TIMBER BRIDGE RAIL, AND EXISTING BRIDGE PAVEMENT AND MEMBRANE. PORTIONS OF THE BRIDGE TO REMAIN SHALL BE PROTECTED. ANY DAMAGE TO THE EXISTING BRIDGE TO REMAIN CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

STRUCTURAL DESIGN CRITERIA

- 1. DESIGN LOADING: AASHTO HL-93.
2. DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD).
3. SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION AS AMENDED. NHDOT 2016 STANDARD SPECIFICATIONS AS AMENDED.
4. FOUNDATION DATA: EXISTING: HP8x36 PILES WITH REINFORCED CONCRETE PILE CAP, TIMBER FACED MSE BREASTWALL, BACKWALL, AND WINGWALLS
PROPOSED: REINFORCED CONCRETE BACKWALL AND WINGWALLS. GROUTED SOIL ANCHORS AND CONCRETE-FACED TIMBER MSE WALLS
5. REINFORCEMENT: AASHTO M 31 (ASTM A 615) GRADE 60, EPOXY COATED PER ASTM D3963.
LAG SCREWS: HOT-DIP GALVANIZED, AISI 1006 - 1022, 60,000 PSI MINIMUM TENSILE STRENGTH
FIBER REINFORCEMENT PER NHDOT CURRENT "QUALIFIED PRODUCTS LIST", DOSAGE RATE = 7 LB/CY
SPliced BARS SHALL HAVE THE FOLLOWING MINIMUM SPLICE LENGTHS REGARDLESS OF LOCATION (UNLESS OTHERWISE INDICATED ON THE DRAWINGS)
#4 = 1'-8" #5 = 2'-0" #6 = 2'-5" #7 = 3'-6" #8 = 4'-0"
6. STRUCTURAL STEEL: AASHTO M270, GRADE 50 (ASTM A709, GRADE 50)
7. CONCRETE: WINGWALL, BACKWALL, AND APPROACH SLAB = 4,000 PSI, NHDOT CLASS AA
GROUT: PER NHDOT CURRENT "QUALIFIED PRODUCTS LIST"
8. SEISMIC DESIGN CRITERIA: SEISMIC SITE CLASS = C (AASHTO 3.10.3.1)
SEISMIC ZONE = 1 (AASHTO 3.10.6)
0.2 SECOND SPECTRAL RESPONSE ACCELERATION, Ss = 0.19g (AASHTO FIGURE 3.10.2.1-2)
0.1 SECTION SPECTRAL RESPONSE ACCELERATION, S1 = 0.45g (AASHTO 3.10.2.1-3)
LIQUEFACTION POTENTIAL = NOT SUSCEPTIBLE
9. MAINTENANCE OF TRAFFIC: ROAD CLOSURE AND DETOUR.

SOIL ANCHOR DESIGN CRITERIA

- 1. UNIT WEIGHT OF BACKFILL: 125 PCF
2. INTERNAL SOIL FRICTION ANGLE: 32 DEGREES
3. EARTH PRESSURE COEFFICIENT: 0.31
4. LIVE LOAD SURCHARGE: 290 PSF
5. CONSTRUCTION SURCHARGE: 250 PSF
6. HEIGHT OF WALL: AS SHOWN ON PLANS (VIF)
7. SOIL ANCHOR SPACING: CONTRACTOR DESIGNED
8. MINIMUM HOLE DIAMETER: 3 INCH
9. ANCHOR SIZE: No. 6 THREADED BAR MIN., EPOXY COATED OR HOT-DIP GALVANIZED
10. STEEL YIELD STRENGTH: 50 KSI, HOT-DIP GALVANIZED
11. GROUT COMPRESSIVE STRENGTH: 5 KSI
12. MINIMUM BONDED LENGTH: 10 FT
13. ACTIVE ZONE FAILURE PLANE: AS SHOWN ON PLANS
14. PROPOSED REBUILT REINFORCED CONCRETE WINGWALL AND BACKWALL DESIGNED TO ACT INDEPENDENTLY FROM TIMBER FACED MSE WALL TO REMAIN. SOIL ANCHOR DESIGNER TO ACCOUNT FOR ADDITIONAL SURCHARGE FROM THE HEIGHT OF SOIL FROM THE TOP OF THE TIMBER FACED MSE WALL TO REMAIN TO THE TOP OF THE ROADWAY.

Table with 4 columns: ITEM NO., ITEM DESCRIPTION, QTY, UNIT. Contains two sections: ESTIMATED QUANTITIES - BASE BID and ESTIMATED QUANTITIES - BID ALTERNATE 1.

CIVIL ABBREVIATIONS

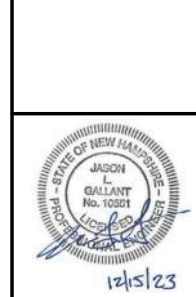
- & Ø, DIA AND DIAMETER
, NO NUMBER
AC ASBESTOS CEMENT
APP'D APPROVED
BRG BEARING
BR BRICK
BLDG BUILDING
CB CATCH BASIN
CEN CENTER
CFS CUBIC FEET PER SECOND
CI CAST IRON
CIPP CURED-IN-PLACE-PIPE
CL CENTERLINE
CMP CORRUGATED METAL PIPE
CO CLEANOUT
CONC CONCRETE
COR CORNER
CY CUBIC YARD
DEMO DEMOLITION
DMH DRAIN MANHOLE
DI DUCTILE IRON
DR DRAIN
DWG DRAWING
EL ELEVATION
EMH ELECTRIC MANHOLE
FM FORCE MAIN
FT FEET
G GAS
HDPE HIGH DENSITY POLYETHYLENE
HYD HYDRANT
IN INCH
INF INFLEUNT
INV INVERT
LB POUNDS
LF LINEAR FOOT
MAX MAXIMUM
MH MANHOLE
MIN MINIMUM
MW MONITORING WELL
N NORTH
NGVD NATIONAL GEODETIC VERTICAL DATUM
NHDOT NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
N/A NOT AVAILABLE/APPLICABLE
NTS NOT TO SCALE
OD OUTSIDE DIAMETER
OUT OUTFALL
PC PERFORATED CLAY
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PS PRIMARY SLUDGE
PT POINT OF TANGENCY
PVC POLYVINYL CHLORIDE
RCP REINFORCED CONCRETE PIPE
RD ROOF DRAIN
REQ'D REQUIRED
S SLOPE, SEWER
SD STORM DRAIN
SF SQUARE FEET
SMH SANITARY SEWER MANHOLE
SQ SQUARE
STA STATION
T, XFMR TRANSFORMER
T & B TOP & BOTTOM
TBM TEMPORARY BENCH MARK
THK THICKNESS
TOS TOP OF STRUCTURE
TYP TYPICAL
UD UNDERDRAIN
UG UNDERGROUND
UGE UNDERGROUND ELECTRIC
VC VITRIFIED CLAY
VF VERIFY IN FIELD
VW VERTICAL FOOT
W WITH
W POTABLE WATER

LEGEND

Legend table with columns: EXISTING, PROPOSED. Lists symbols for PROPERTY/ROW LINE, SETBACK LINE, EASEMENT LINE, CENTERLINE, EDGE OF PAVEMENT, CURBING, EDGE OF GRAVEL, EDGE OF CONCRETE, CONTOUR, BUILDING, STONEWALL, TRELIN, CHAIN LINK FENCE, STOCKADE FENCE, BARB WIRE FENCE, RETAINING WALL, GUARDRAIL, SEWER, SEWER FORCE MAIN, GAS, WATER, STORM DRAIN, UNDERDRAIN, CULVERT, UNDERGROUND ELECTRIC, OVERHEAD ELECTRIC, UNDERGROUND TELEPHONE, UNDERGROUND CABLE TV, IRON PIPE/REBAR, DRILLHOLE, MONUMENT, SURVEY CONTROL POINT, SPOT ELEVATION, SEWER MANHOLE, OUTSIDE DIAMETER, DRAINAGE MANHOLE, CATCH BASIN, ELECTRIC MANHOLE, TELEPHONE MANHOLE, SHUTOFF VALVE, WATER SERVICE SHUTOFF, YARD HYDRANT, HYDRANT, GAS SERVICE SHUTOFF, GAS GATE VALVE, UTILITY POLE, UTILITY POLE W/ GUY, UTILITY POLE W/ LIGHT, LIGHT POLE, BOLLARD, FLAGPOLE, CONIFEROUS TREE, DECIDUOUS TREE, SHRUB, WETLAND FLAG, EDGE OF WATER, STREAM, EDGE OF WETLANDS, FLOODPLAIN, WETLANDS, DRAINAGE FLOW, DRAINAGE SWALE, PAVEMENT MARKINGS, SIGN, MAILBOX, TEMPORARY BENCH MARK, TEST PIT, TEST BORING, TEST PROBE, MONITORING WELL, LIMIT OF WORK, SILT FENCE, RIPRAP, RAILROAD, MATCHLINE, ROCK OUTCROP, DEMOLITION.

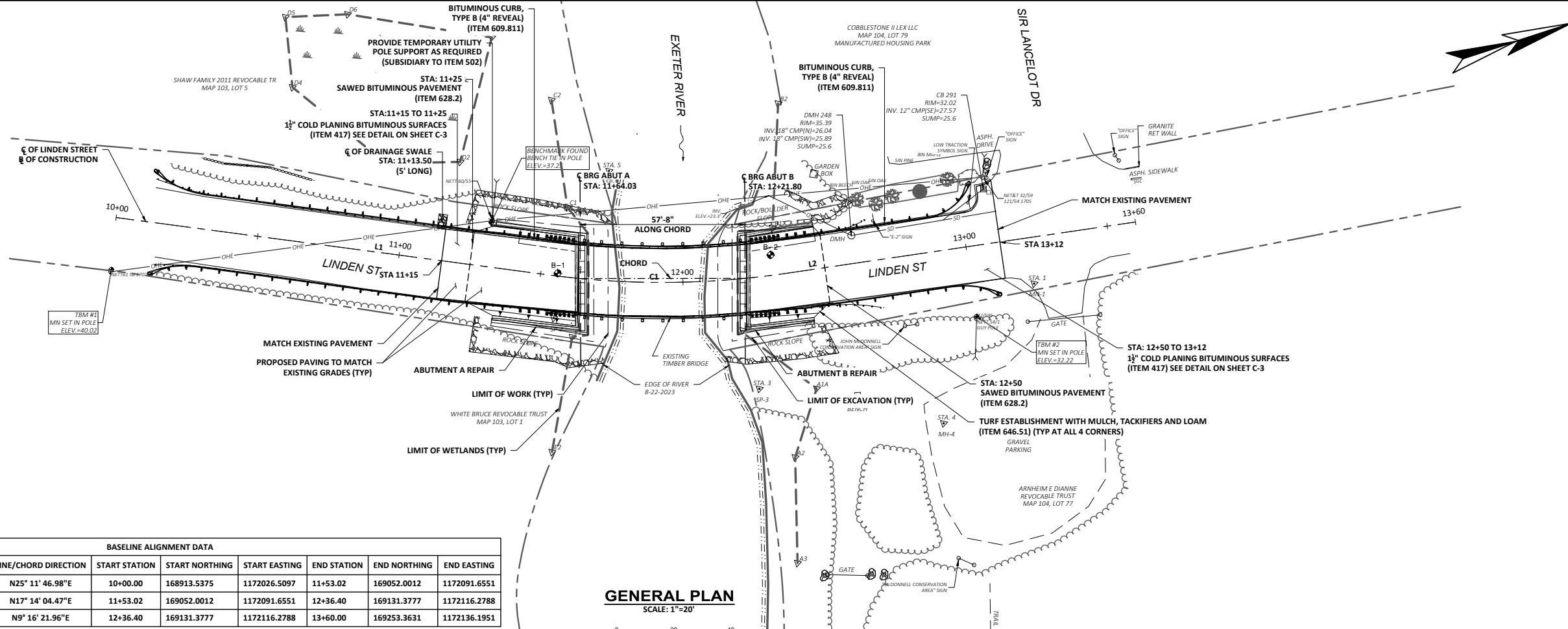
Table with columns: NO, APPD, DATE. Includes a REVISIONS section with columns: NO, DATE, DESCRIPTION.

PROJECT NO: 208370
DESIGNED: W.NUHN
CAD COORD: M.LAPIERRE
CAD: M.LAPIERRE
CHECKED: W.NUHN
DATE: DECEMBER 2023
APPROVED: J.GALLANT
DATE: DECEMBER 2023
SUBMISSION: CONTRACT DOCUMENTS

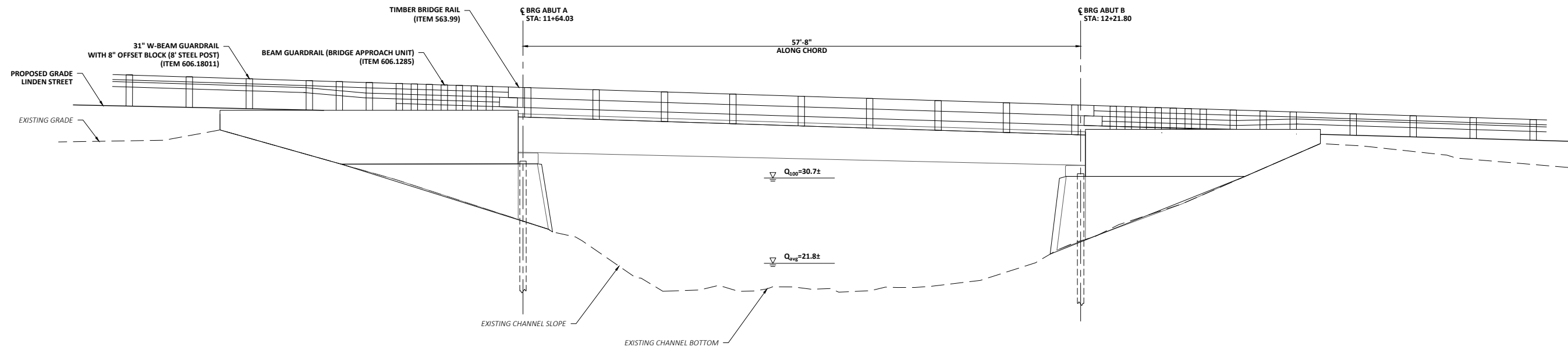


WRIGHT-PIERCE logo and contact information: 603.430.3728 | www.wright-pierce.com. Address: 230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801.

TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
(081/046)
BRIDGE REPAIR
GENERAL NOTES, LEGEND, ABBREVIATIONS AND QUANTITIES



BASELINE ALIGNMENT DATA										
NUMBER	LENGTH	RADIUS	DELTA	LINE/CHORD DIRECTION	START STATION	START NORTHING	START EASTING	END STATION	END NORTHING	END EASTING
L1	153.02			N25° 11' 46.98"E	10+00.00	168913.5375	1172026.5097	11+53.02	169052.0012	1172091.6551
C1	83.38	300.00	15°55'25"	N17° 14' 04.47"E	11+53.02	169052.0012	1172091.6551	12+36.40	169131.3777	1172116.2788
L2	123.60			N9° 16' 21.96"E	12+36.40	169131.3777	1172116.2788	13+60.00	169253.3631	1172136.1951



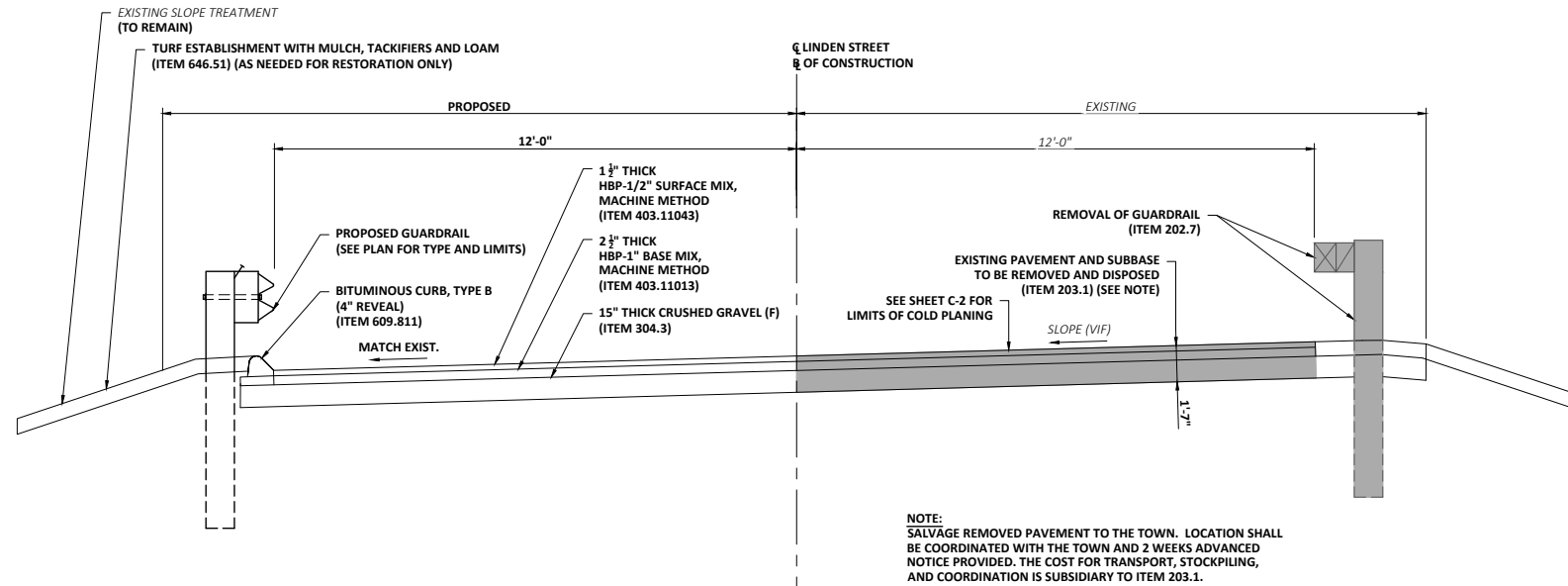
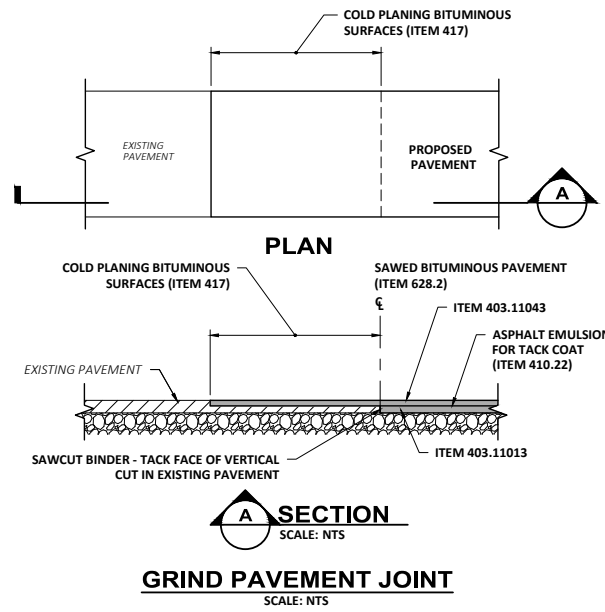
NO	REVISIONS	APPD	DATE

PROJECT NO:	20837D
DESIGNED:	W.NUHN
CAD COORD:	M.LAPIERRE
CAD:	M.LAPIERRE
CHECKED:	W.NUHN
DATE:	DECEMBER 2023
APPROVED:	J.GALLANT
DATE:	DECEMBER 2023
SUBMISSION:	CONTRACT DOCUMENTS

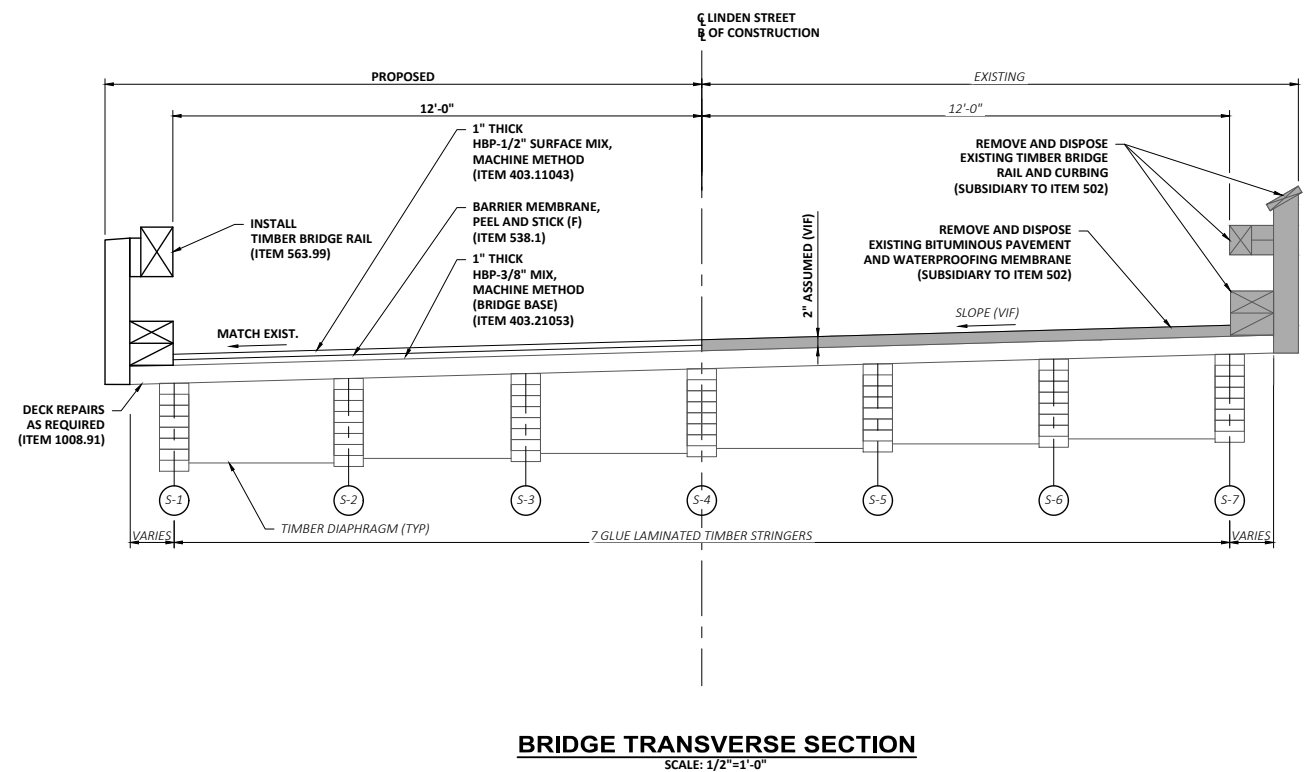
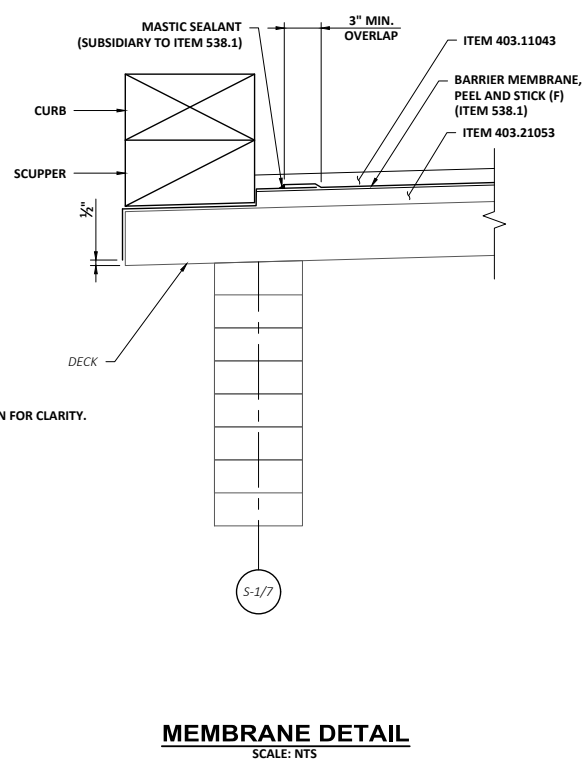


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TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
(081/046)
BRIDGE REPAIR
BRIDGE PLAN AND ELEVATION



NOTE:
SALVAGE REMOVED PAVEMENT TO THE TOWN. LOCATION SHALL BE COORDINATED WITH THE TOWN AND 2 WEEKS ADVANCED NOTICE PROVIDED. THE COST FOR TRANSPORT, STOCKPILING, AND COORDINATION IS SUBSIDIARY TO ITEM 203.1.



NO	REVISIONS	APPD	DATE

PROJECT NO: 20837D
 DESIGNED: W.AHORN
 CAD: M.LAPIERRE
 CHECKED: W.AHORN
 DATE: DECEMBER 2023
 APPROVED: J.GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS

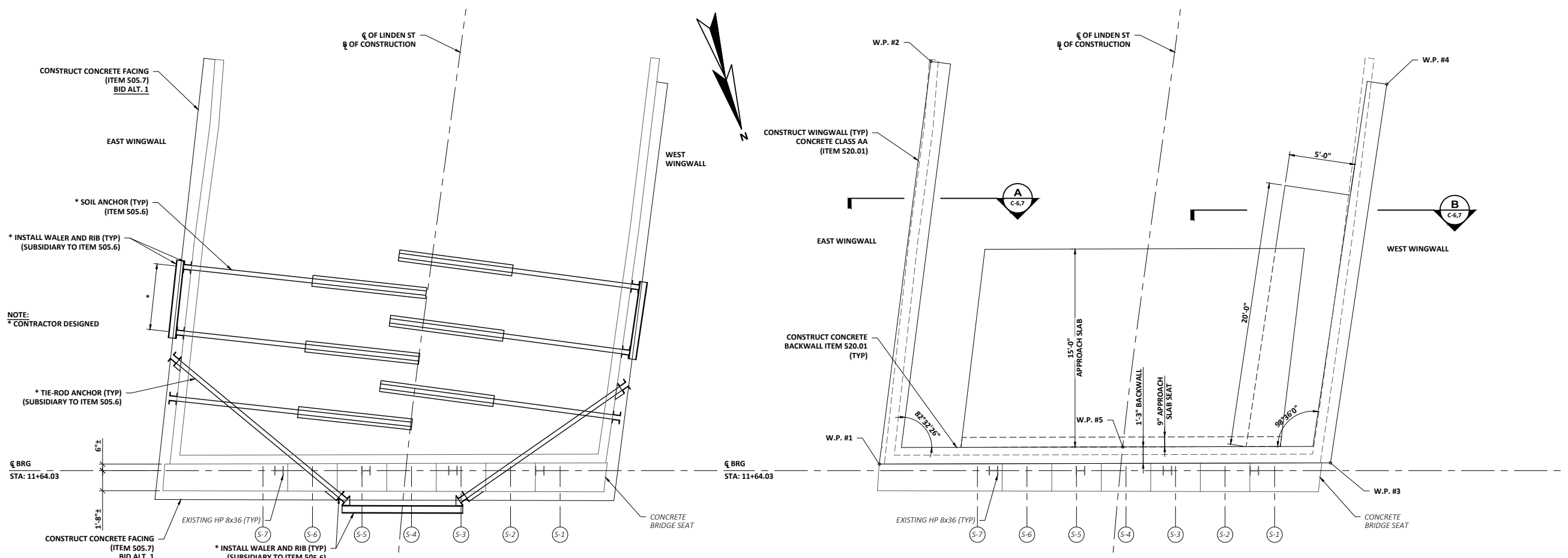


WRIGHT-PIERCE
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TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 TYPICAL SECTIONS

LAST SAVED BY: WESTLEY.NUHN 12/15/2023 7:35 AM

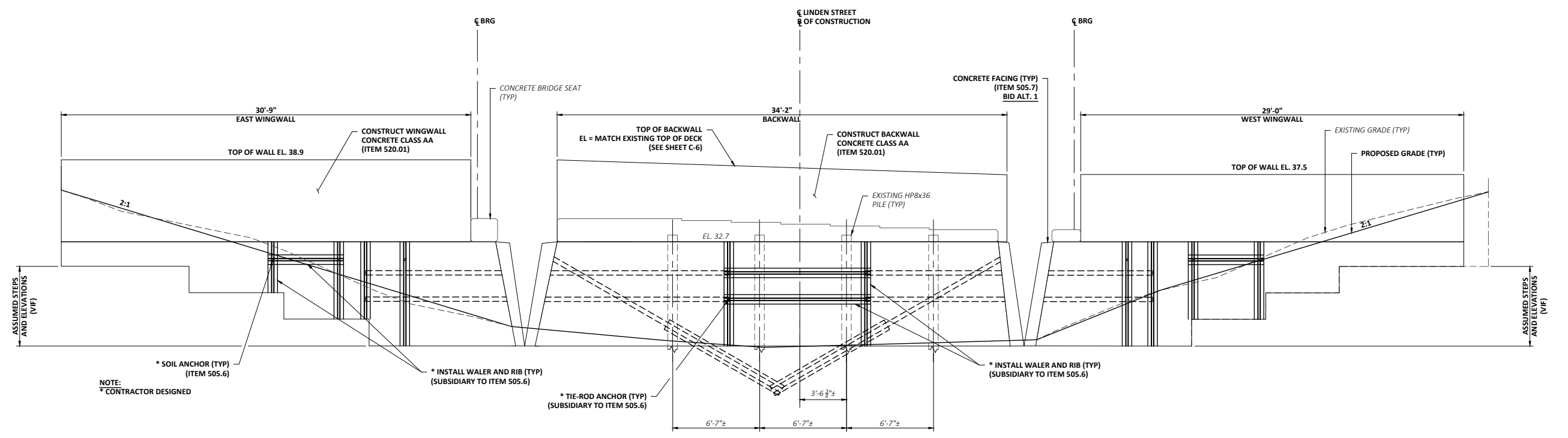
J:\ENGINEERING\20837-LINDEN STREET BRIDGE\DRAWINGS\CT\20837-AS-ABUTMENT PLAN ELEV.DWG | 20837-AS-Abutment-Plan-Elev-A-South | 12/15/2023 7:37:15 AM | WESTLEY.NUHN



ABUTMENT A PLAN: SOIL ANCHORS
SCALE: 1/4"=1'-0"

ABUTMENT A PLAN: MASONRY
SCALE: 1/4"=1'-0"

CONSTRUCTION WORKING POINTS				
W.P. #	STATION	OFFSET	NORTHING	EASTING
1	11+65.26	18.22 R	169056.0974	1172113.4221
2	11+35.25	18.19 R	169028.1736	1172100.5449
3	11+61.76	15.77 L	169066.2566	1172080.7996
4	11+32.30	16.25 L	169040.1689	1172068.1335
5	11+62.22	0.00	169060.3868	1172095.4425



ABUTMENT A - DEVELOPED ELEVATION
SCALE: 1/4"=1'-0"

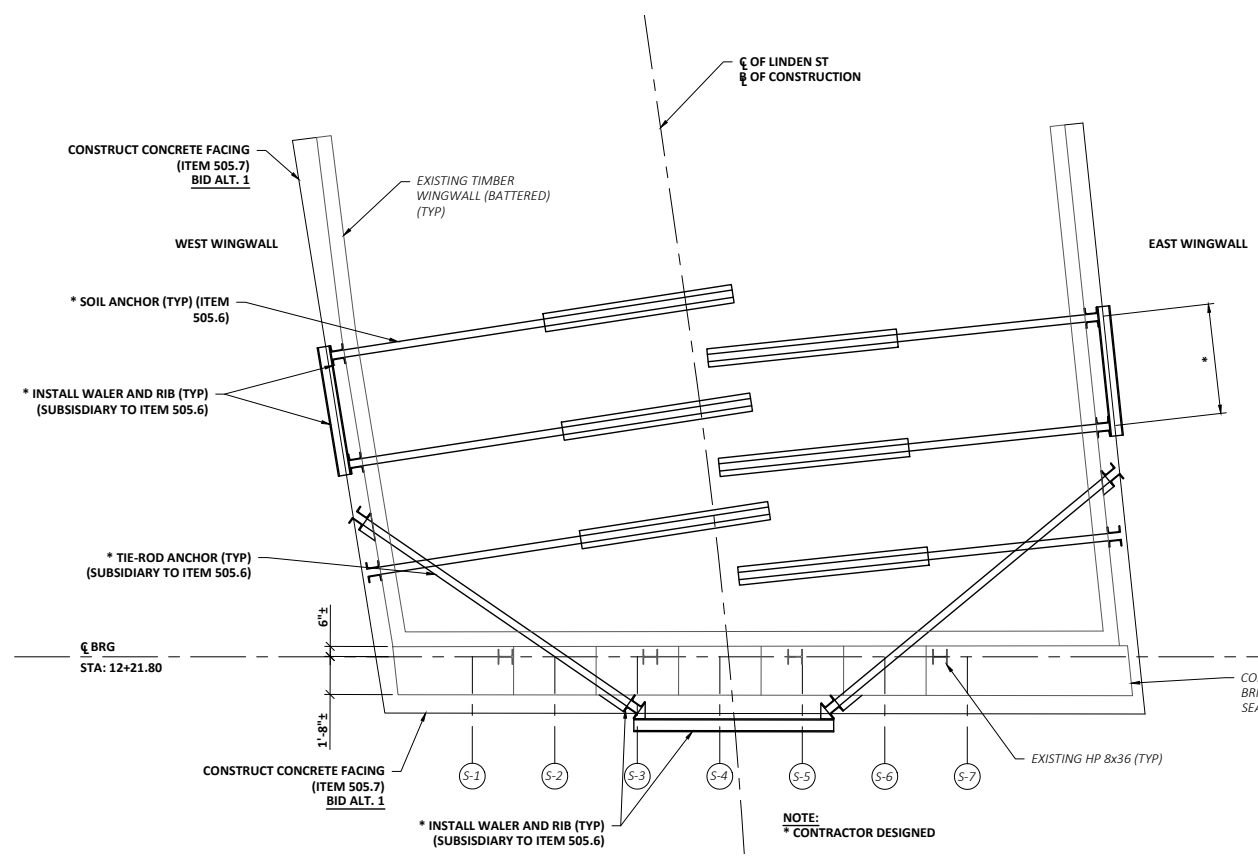
NO	REVISIONS	APPD	DATE

PROJECT NO: 20837D
 DESIGNED: W.NUHN
 CAD COORD: M.LAPIERRE
 CAD: M.LAPIERRE
 CHECKED: W.NUHN
 DATE: DECEMBER 2023
 APPROVED: J.GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS



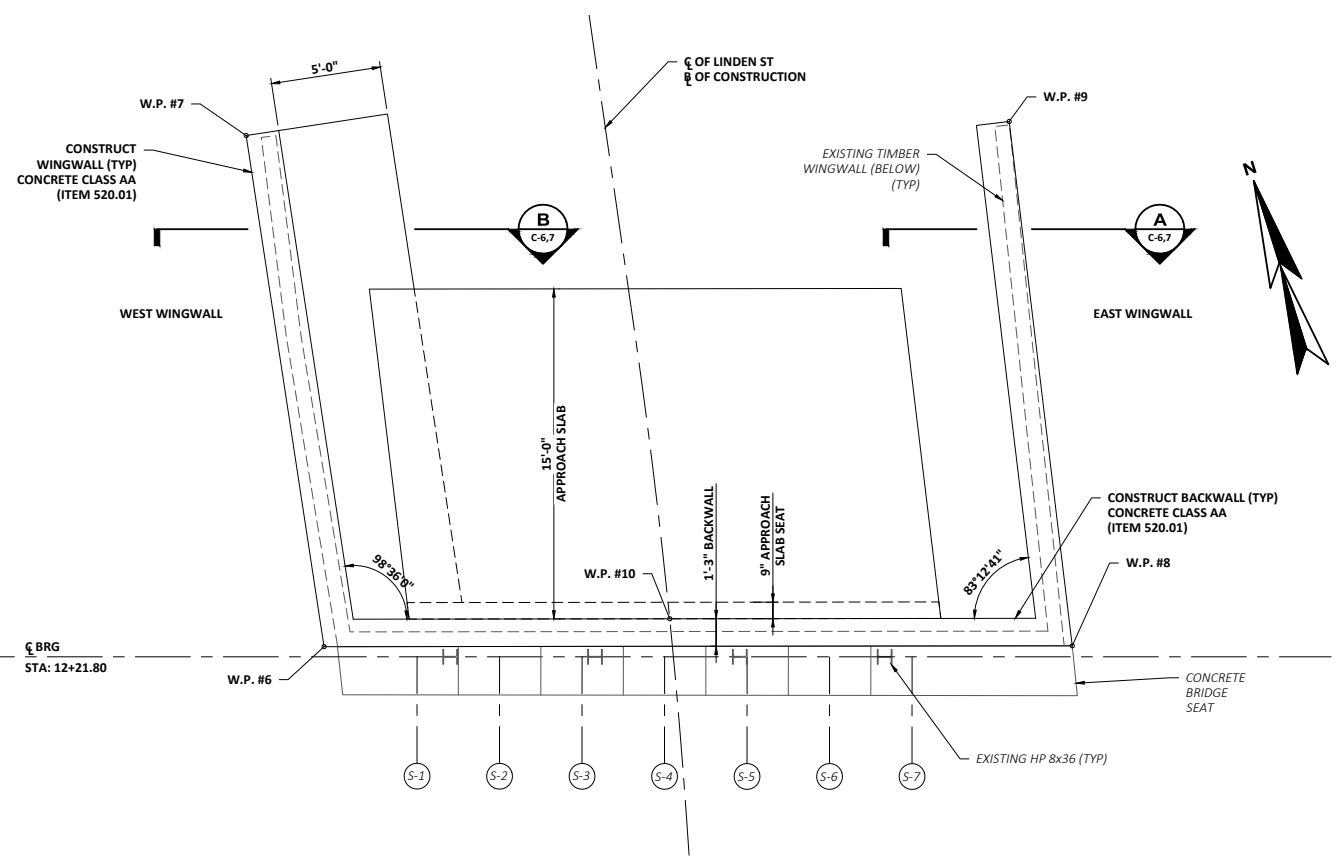
WRIGHT-PIERCE
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TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 ABUTMENT A PLAN AND ELEVATION

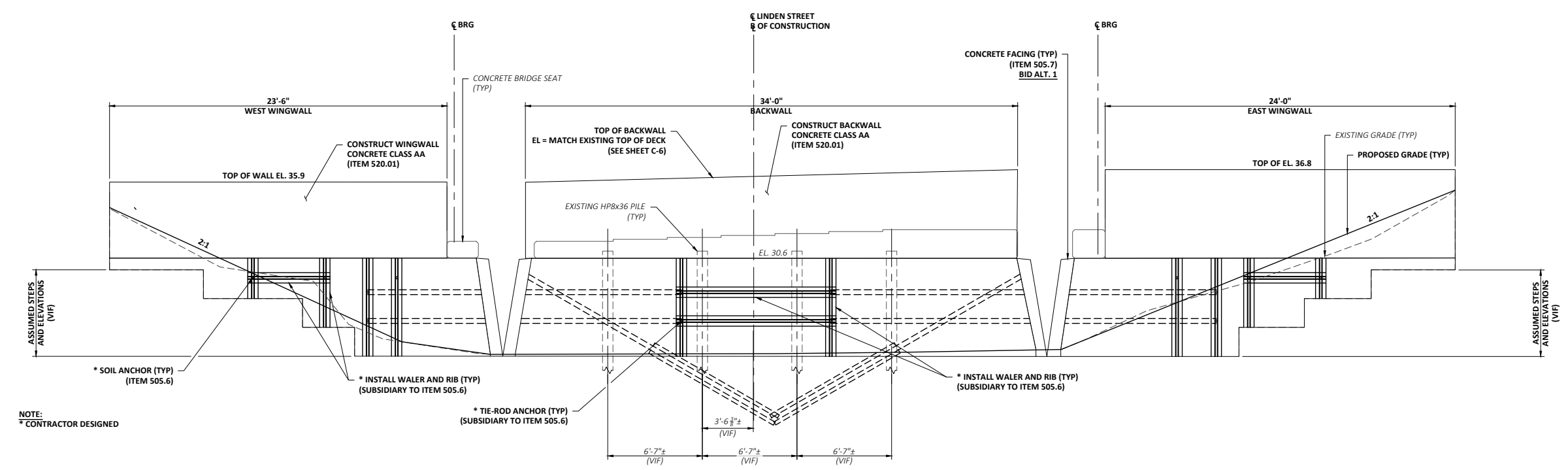


ABUTMENT B PLAN: SOIL ANCHORS
SCALE: 1/4"=1'-0"

CONSTRUCTION WORKING POINTS				
W.P. #	STATION	OFFSET	NORTHING	EASTING
6	12+23.85	15.76 L	169122.2255	1172098.5657
7	12+48.01	16.21 L	169145.4506	1172102.1500
8	12+20.66	18.10 R	169112.0708	1172131.0227
9	12+43.71	18.21 R	169135.6629	1172135.4272
10	12+23.53	0.00	169118.7271	1172113.9338



ABUTMENT B PLAN: MASONRY
SCALE: 1/4"=1'-0"



ABUTMENT B - DEVELOPED ELEVATION
SCALE: 1/4"=1'-0"

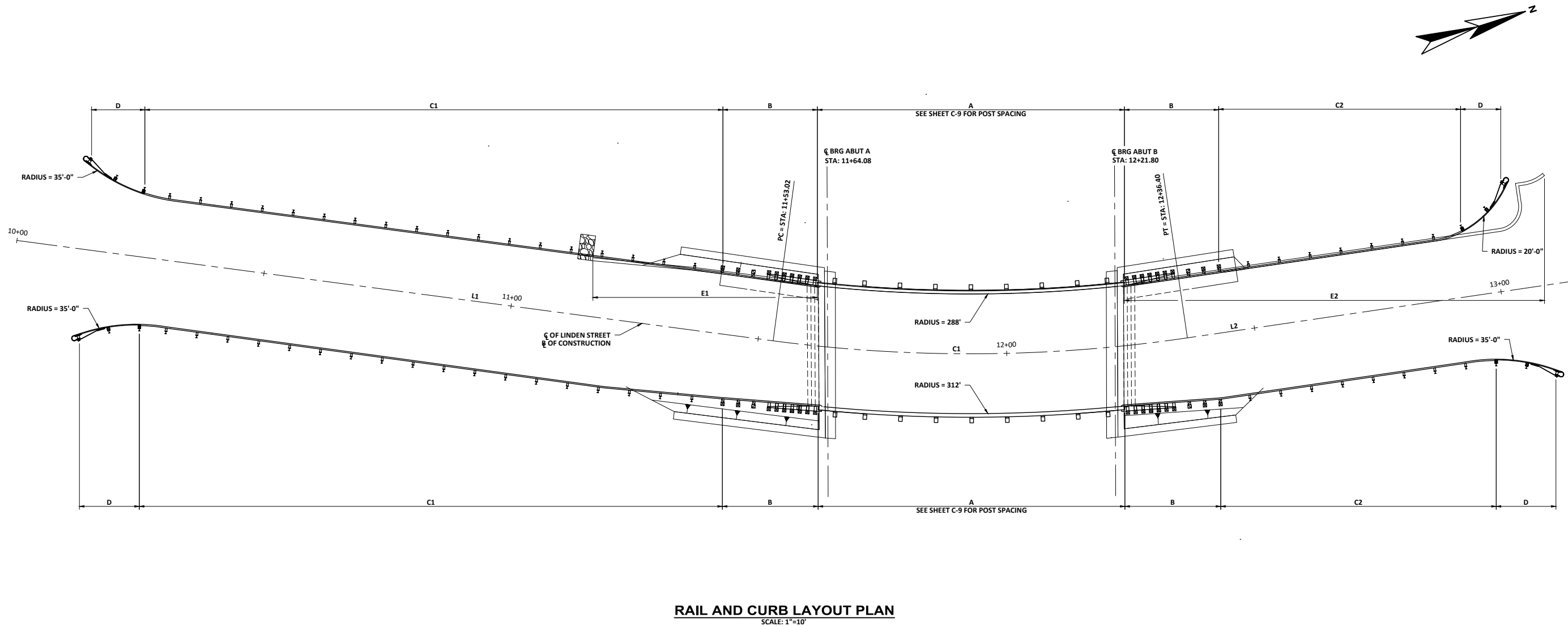
NO	REVISIONS	DATE

PROJECT NO: 20837D
 DESIGNED: W.NUHN
 CAD COORD: M.LAPIERRE
 CAD: W.NUHN
 CHECKED: W.NUHN
 DATE: DECEMBER 2023
 APPROVED: J.GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS



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TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 ABUTMENT B PLAN AND ELEVATION

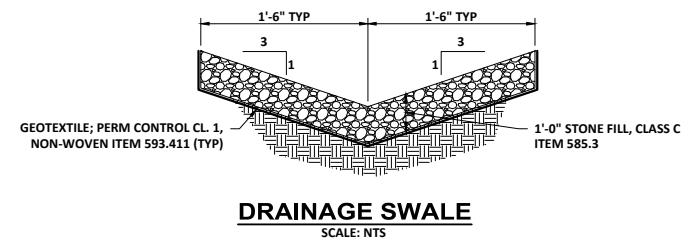


RAIL AND CURB LAYOUT PLAN
SCALE: 1"=10'

RAIL AND CURB LAYOUT NOTES

- A. 563.99 TIMBER BRIDGE RAIL (TL-4)
SEE SHEET C-9 FOR DETAILS
ITEM TOTAL = 118 LF
- B. ITEM 606.1285, BEAM GUARDRAIL (BRIDGE APPROACH UNIT)
SEE SHEETS C-10 & C-11 FOR DETAILS
ITEM TOTAL = 4 UNITS
- C. ITEM 606.18011, 31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (8' STEEL POST)
C1 = 118'-9"
C2 = 56'-3"
ITEM TOTAL = 350 LF

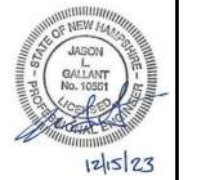
TRANSITION THE HEIGHT OF THE 31" GUARDRAIL OVER A MINIMUM OF 50 FEET TO CONNECT TO THE PROPOSED BRIDGE APPROACH UNIT PER NHDOT SECTION 606 - GUARDRAIL SPECIAL ATTENTION DATED 6/11/2020. TRANSITION IS SUBSIDIARY TO THIS ITEM.
(REFERENCE NHDOT STANDARD NO. GR-1 FOR DETAILS)
- D. ITEM 606.127, BEAM GUARDRAIL (TERMINAL UNIT TYPE G-2) (STEEL POST)
(REFERENCE NHDOT STANDARD NO. GR-10 FOR DETAILS)
1 UNIT = 12'-6"
ITEM TOTAL = 4 UNITS
- E. ITEM 609.811 BITUMINOUS CURB, TYPE B (4" REVEAL)
E1 = 45 LF
E2 = 95 LF
ITEM TOTAL = 140 LF



DRAINAGE SWALE
SCALE: NTS

NO	REVISIONS	APPD	DATE

PROJECT NO: 20837D	DESIGNED: W.NUNN	CAD COORD: M.LAPIERRE	CAD: W.NUNN	CHECKED: W.NUNN	DATE: DECEMBER 2023	APPROVED: J.GALLANT	DATE: DECEMBER 2023	SUBMISSION: CONTRACT DOCUMENTS
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TOWN OF EXETER, NEW HAMPSHIRE LINDEN STREET OVER EXETER RIVER (081/046) BRIDGE REPAIR	RAIL AND CURB LAYOUT
DRAWING	C-8

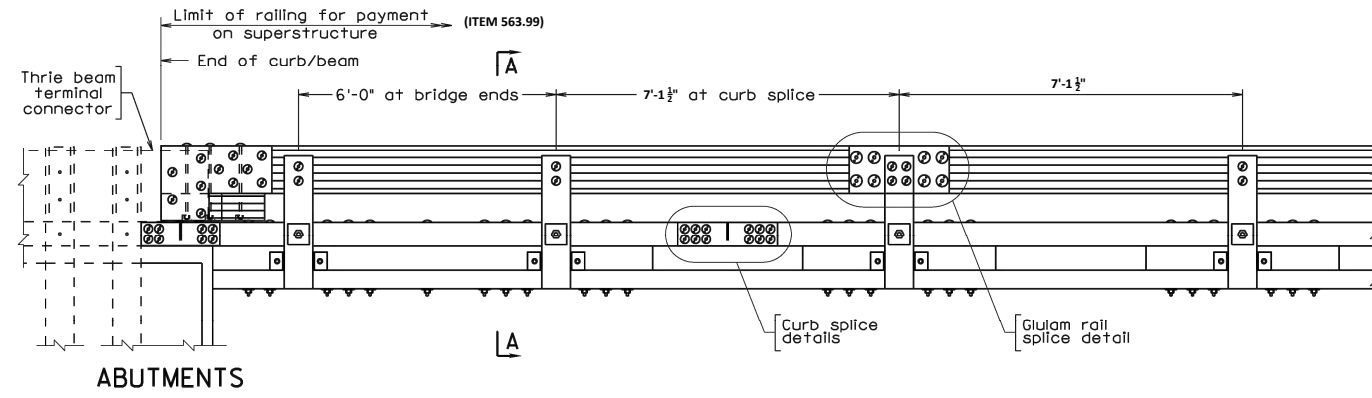
Sealed and Signed by:
Prasad L. Nallapaneni
Lic. No. 033003
On the date of
May 18, 2016

A copy of the original
sealed and signed
standard drawing
is on file in the
Central Office.

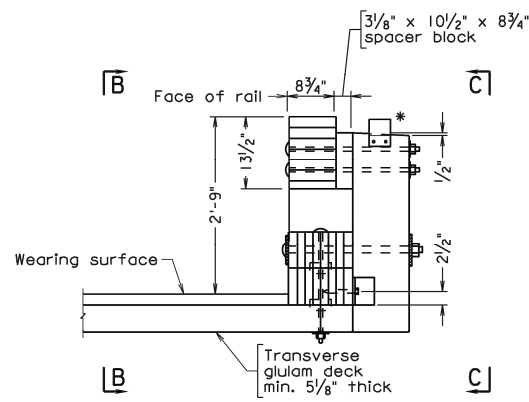
VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

NOTE:

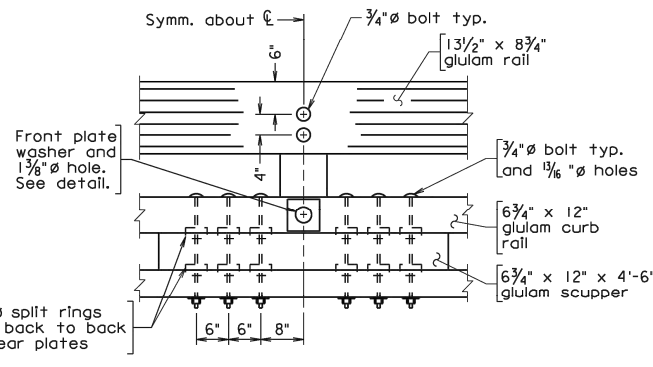
THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD HIGHWAY/BRIDGE PLANS DO NOT INCLUDE A TIMBER BRIDGE RAIL SYSTEM. THIS BRIDGE RAILING SYSTEM IS RATED FOR TEST LEVEL 4 SAFETY PERFORMANCE CRITERIA IN ACCORDANCE WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH BOARD (NCRP) REPORT 350: RECOMMENDED PROCEDURES FOR THE SAFETY AND PERFORMANCE EVALUATION OF HIGHWAY FEATURES. REFER TO TRANSPORTATION RESEARCH RECORD 1696, PAPER No. 580110 FOR PROPOSED RAILING PERFORMANCE CRITERIA.



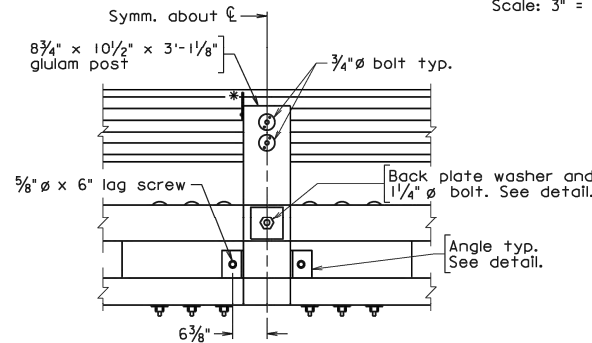
ELEVATION
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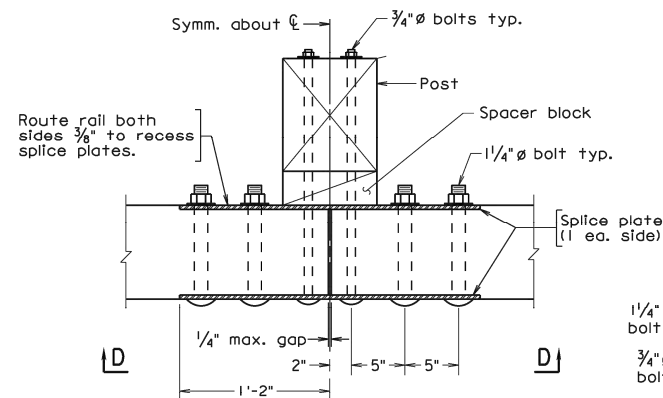
SECTION A-A



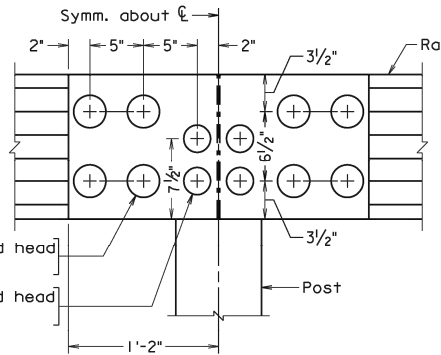
VIEW B-B



VIEW C-C



GLULAM RAIL SPLICE
Scale: 1/2" = 1'-0"



VIEW D-D
Scale: 1/2" = 1'-0"

NOT TO SCALE

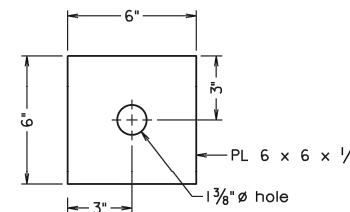
Scale: 3/4" = 1'-0" unless otherwise noted.

© 2016, Commonwealth of Virginia

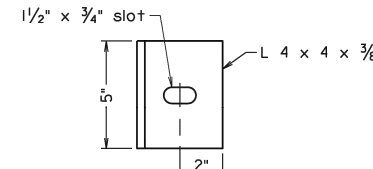
STATE	FEDERAL AID	STATE	SHEET
VA.	PROJECT	PROJECT	NO.

Notes:

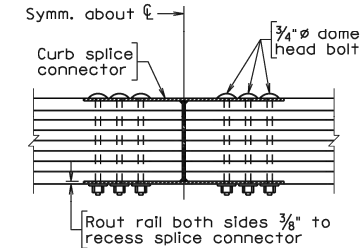
For notes, rail connections and miscellaneous details, see sheet C-10.
For details of terminal transition, see sheet C-11.



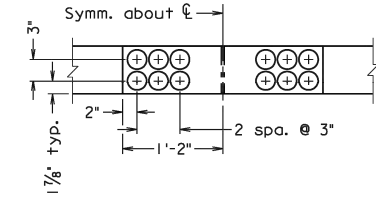
FRONT AND BACK PLATE WASHERS
Scale: 3" = 1'-0"



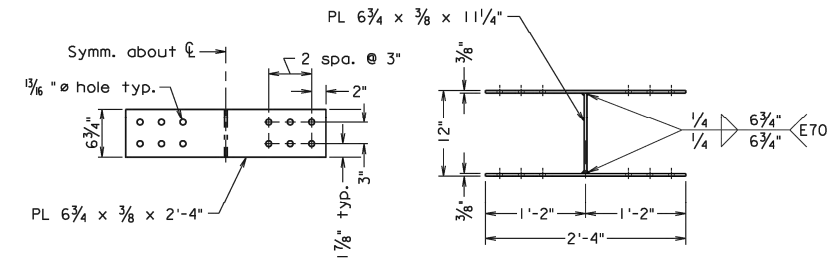
ANGLE DETAIL
Scale: 3" = 1'-0"



CURB SPLICE PLAN VIEW
Scale: 1" = 1'-0"



CURB SPLICE FRONT VIEW
Scale: 1" = 1'-0"



CURB SPLICE DETAILS
Scale: 1" = 1'-0"

NOTES:

- ALL WORK DEPICTED ON THIS PLAN IS SUBSIDIARY TO ITEM 563.99, UNLESS OTHERWISE NOTED.
- MODIFY VERTICAL POST LENGTH DIMENSION AS REQUIRED TO MEET DECK AND PAVEMENT THICKNESS.
- 2'-9" DIMENSION FROM PAVEMENT TO TOP OF RAIL SHALL NOT BE MODIFIED.
- THE DIMENSIONS OF THE CURB AND SCUPPER BLOCKS SHALL NOT BE MODIFIED.

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
SBD01d RAILING			
No.	Description	Date	Sheet No.
	Revisions		BRSBD-1
Designed: S&B, DIV		Date	Plan No.
Drawn: S&B, DIV			
Checked: S&B, DIV			

APPD DATE

REVISIONS

PROJECT NO: 208370
DESIGNED: W.NUNN
CAD COORD: M.LAPIERRE
CAD: W.NUNN
CHECKED: W.NUNN
DATE: DECEMBER 2023
APPROVED: J.GALLANT
DATE: DECEMBER 2023
SUBMISSION: CONTRACT DOCUMENTS

12/15/23

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

TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
(081/046)
BRIDGE REPAIR

RAIL DETAILS I

DRAWING
C-9

LAST SAVED BY: WESTLEY.NHUN 11/29/2023 11:03 AM

J:\ENGINEERING\2018\BRIDGE\DRAWINGS\CV\2018\BRIDGE\DETAILS\DWG | 2018-C5-RAILDETAIL II | 12/18/2023 7:58:41 AM | WESTLEY.NHUN

10-31-2019

BRSBD-2

brsbd-2.dgn

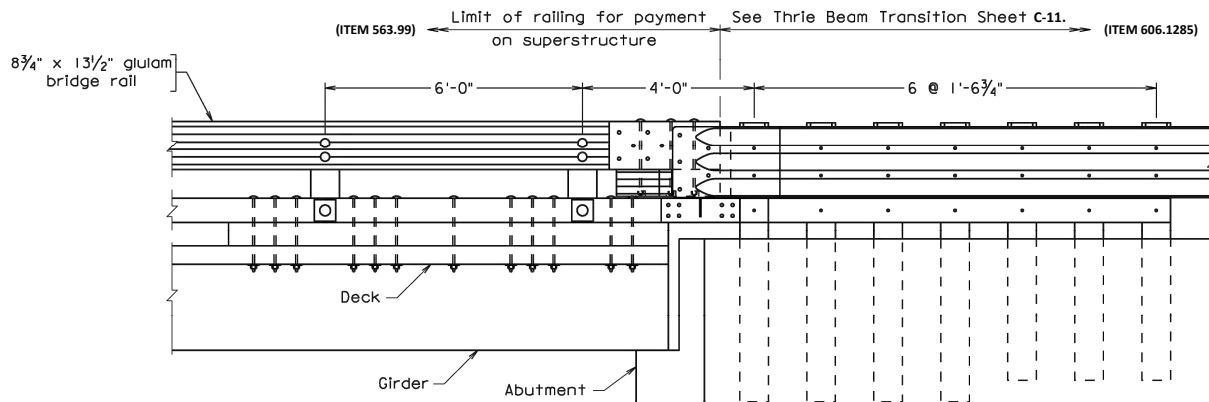
Sealed and Signed by:
Junyi Meng
Lic. No. 033572
On the date of
October 31, 2019

A copy of the original
sealed and signed
drawing is on file in the
Central Office.

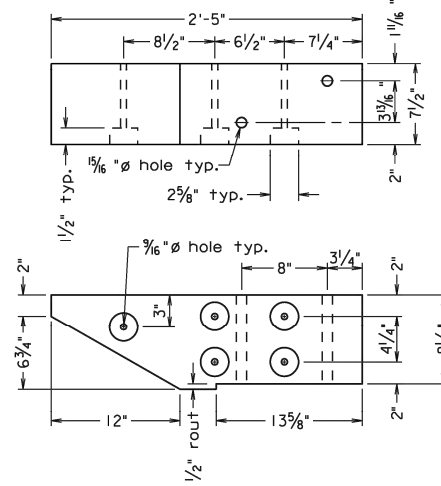
VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

NOTE:

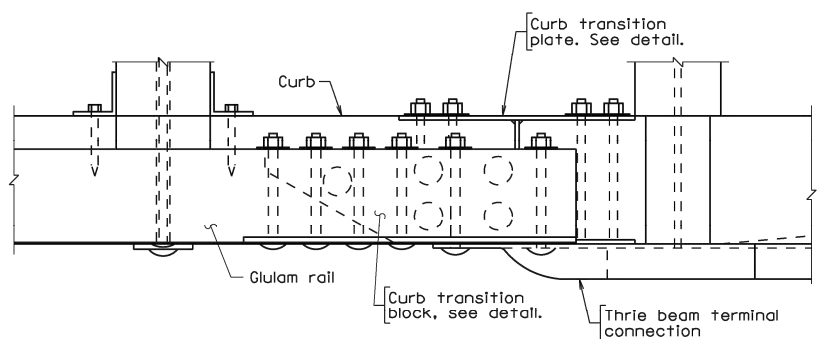
THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD HIGHWAY/BRIDGE PLANS DO NOT INCLUDE A TIMBER BRIDGE RAIL SYSTEM. THIS TRANSITION RAILING SYSTEM IS RATED FOR TEST LEVEL 4 SAFETY PERFORMANCE CRITERIA IN ACCORDANCE WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH BOARD (NCRP) REPORT 350: RECOMMENDED PROCEDURES FOR THE SAFETY AND PERFORMANCE EVALUATION OF HIGHWAY FEATURES. REFER TO TRANSPORTATION RESEARCH RECORD 1696, PAPER No. 580110 FOR PROPOSED RAILING PERFORMANCE CRITERIA.



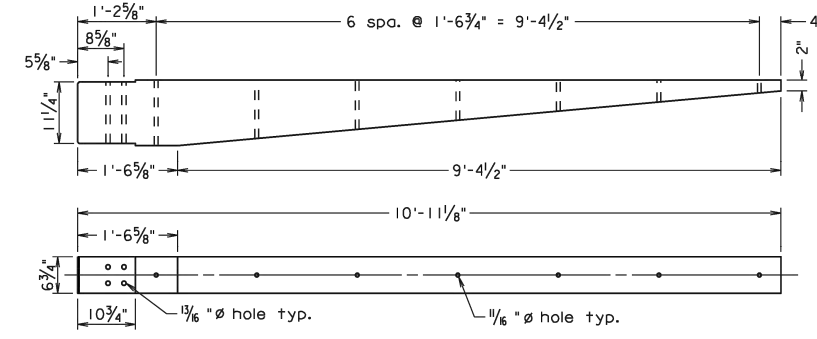
TRANSITION ELEVATION
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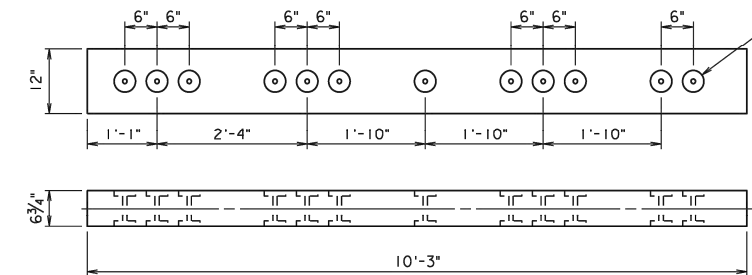
CURB TRANSITION BLOCK DETAIL



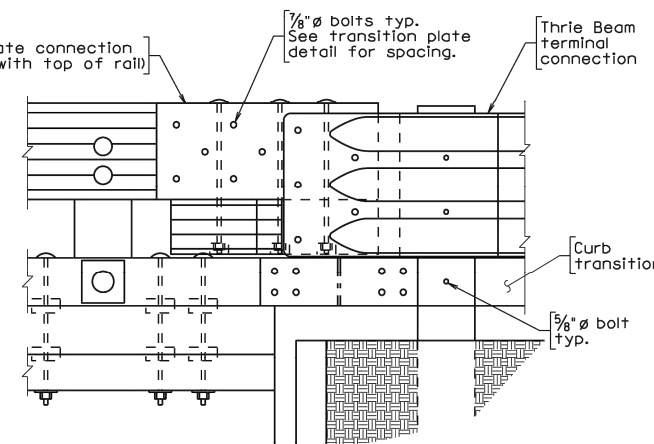
PLAN VIEW OF TRANSITION JOINT



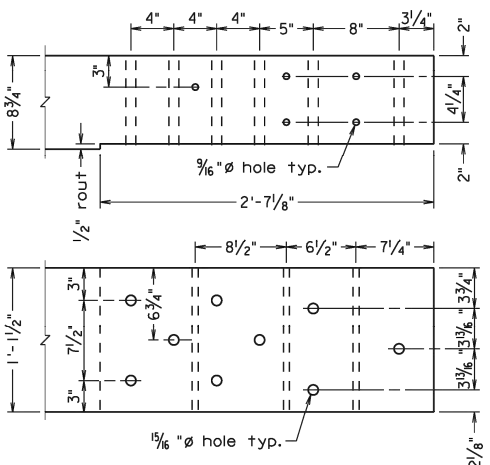
CURB TRANSITION DETAIL
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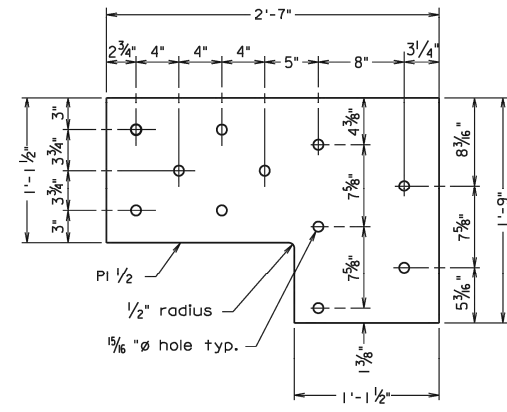
TRANSITION SCUPPER BLOCK
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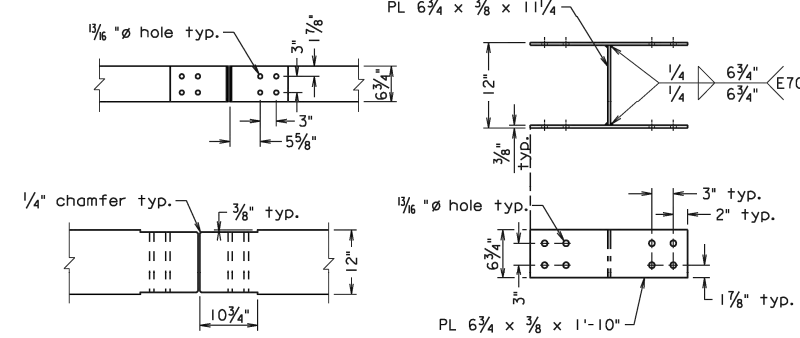
ELEVATION OF TRANSITION JOINT
Scale: 1" = 1'-0"



RAIL END DETAIL



TRANSITION PLATE DETAIL



CURB TRANSITION BORING DETAIL
Scale: 3/4" = 1'-0"

CURB TRANSITION SPLICE DETAILS
Scale: 1" = 1'-0"

STATE	ROUTE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
VA.					

Notes:

Plan dimensions shown are measured in the respective horizontal and vertical planes.
The Contractor shall determine all dimensions and details necessary for installation.
All timber shall conform to the requirements of AASHTO M168, Dense Select Structural Southern Pine, and preservative treated in accordance with the Specifications.
The glulam rail shall be fabricated with West Coast Douglas Fir and treated with pentachlorophenol in heavy oil to a minimum net retention of 0.6 pcf as specified in AWP Standard C14.
All structural steel shall be ASTM A709 Grade 50 and shall be hot dipped galvanized.
Round head bolts shall be ASTM A449. All other bolts shall be ASTM F3125 Grade A325. Nuts shall be ASTM A563 Grade DH or ASTM A194 Grade 2H. Washers shall be ASTM F436. All steel shall be hot dip galvanized.
All holes for bolts shall be 1/8" larger in diameter than bolt diameter unless otherwise noted on plans.
All high-strength bars shall be ASTM A722 and shall be galvanized.
Curb splices should be located adjacent to rail splices.
Barrier delineator size, color, and spacing shall be in accordance with the Specifications.

APPD	DATE

PROJECT NO. 208370	DESIGNED BY: W.NHUN	CAD COORD: M.LAPIERRE	CHECKED BY: W.NHUN	DATE: DECEMBER 2023
			APPROVED BY: J.GALLANT	DATE: DECEMBER 2023
				SUBMISSION: CONTRACT DOCUMENTS



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

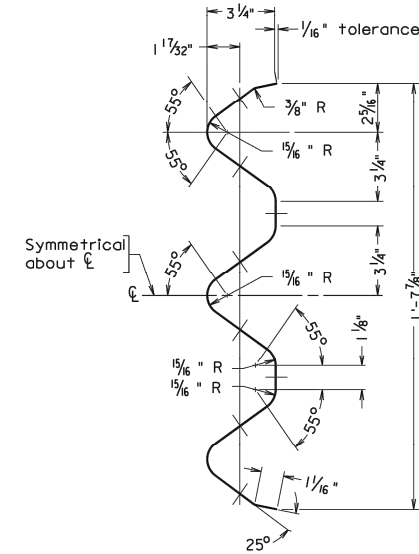
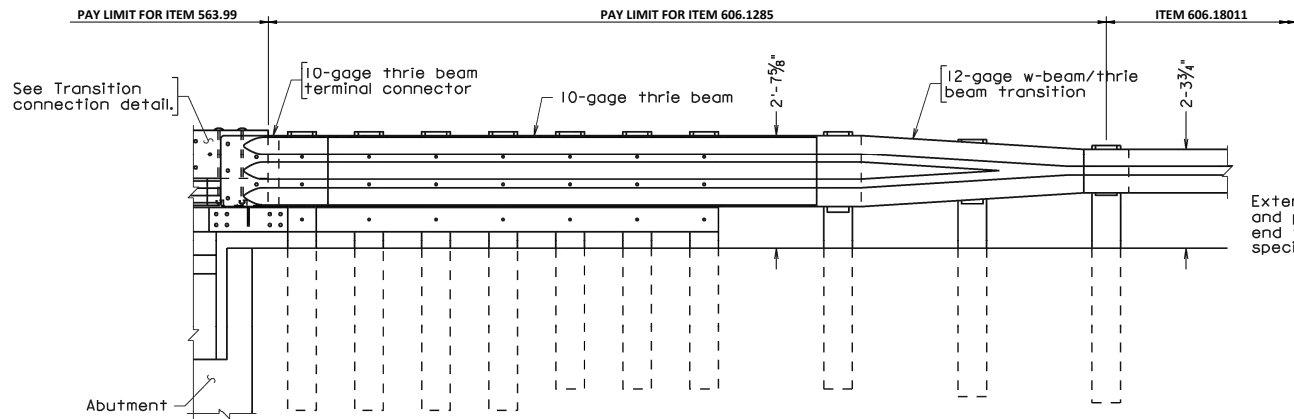
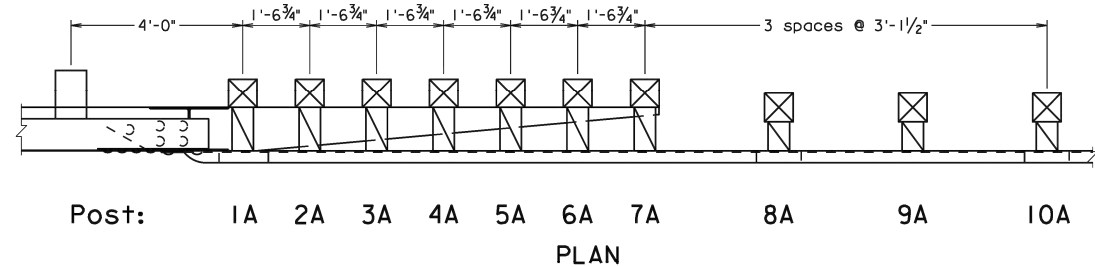
TOWN OF EXETER, NEW HAMPSHIRE
LINDEN STREET OVER EXETER RIVER
BRIDGE REPAIR
(081/046)
RAIL DETAILS II

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION STRUCTURE AND BRIDGE DIVISION					
SBDO1d RAILING Transition DETAILS					
No.	Description	Date	Designed: S&B Div	Date	Plan No.
			Drawn: S&B Div		BRSBD-2
			Checked: S&B Div		Sheet No.

Scale: 1/2" = 1'-0" unless otherwise noted.

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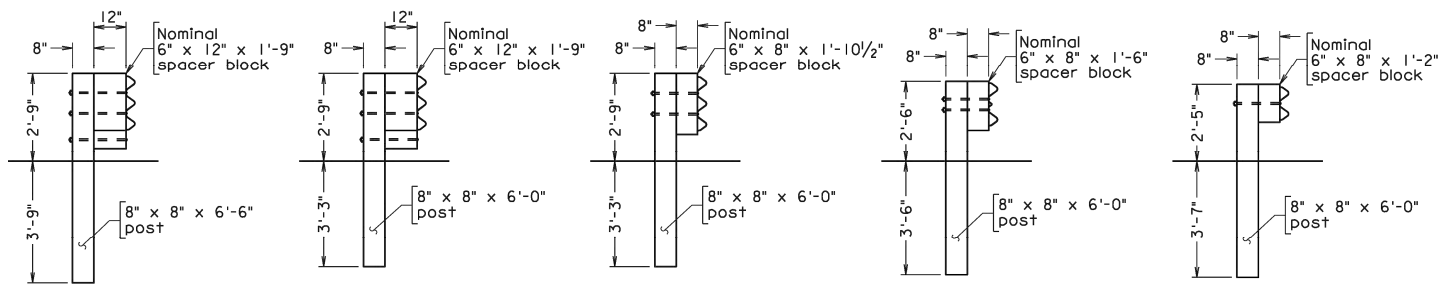
STATE	FEDERAL AID	STATE	SHEET
VA.	PROJECT	ROUTE	NO.



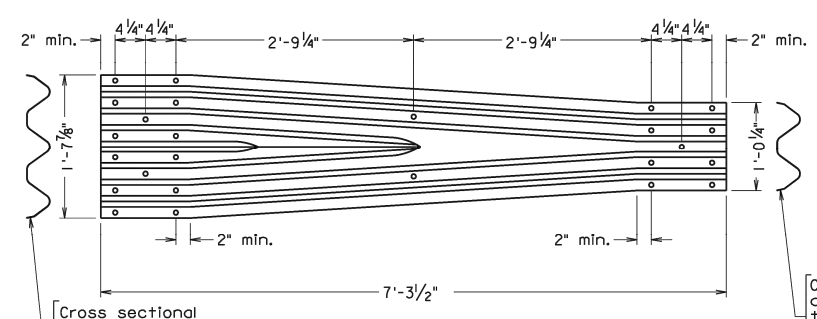
SECTION THRU RAIL AT SPLICE
Scale: 3" = 1'-0"

Notes:
 Guardrail components shall be in accordance with VDOT Road and Bridge Standards.
 Posts 1A, 2A, 3A, 4A, 5A, 6A, and 7A require an additional hole to attach lower curb transition. Guardrail bolts 5/8" diameter long and recessed nuts shall be used for attachments, length as required.
 The Lower Curb Transition located on posts 1A through 7A shall be secured with 5/8" carriage bolts, length as required.
 Thrie Beam Terminal Connector shall be 10 gage steel. Thrie Beam and Transition Beam shall be 12 gage steel.
 Refer to VDOT Road and Bridge Standards, Section 500, for all details not shown. When railing cannot be terminated as per the VDOT Road and Bridge Standards, contact the Location and Design Special Design Section to obtain recommendations.

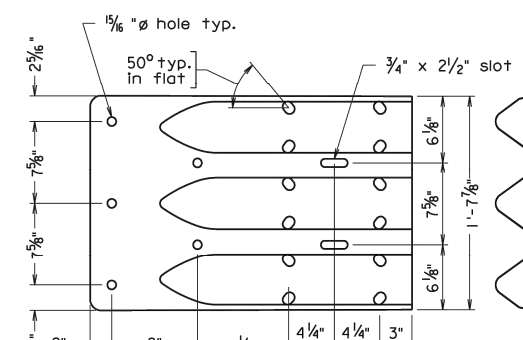
Extend approach guardrail and provide crashworthy end terminal to meet site specific requirements.



TRANSITION POST
Scale: 3/8" = 1'-0"



TRANSITION BEAM
Scale: 1" = 1'-0"



TERMINAL CONNECTOR
Scale: 1 1/2" = 1'-0"

NOT TO SCALE
Scale: 1/2" = 1'-0" unless otherwise noted.

NOTE:
ALL WORK DEPICTED ON THIS PLAN IS SUBSIDIARY TO ITEM 606.1285, UNLESS OTHERWISE NOTED.

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION			
STRUCTURE AND BRIDGE DIVISION			
SBDO Id RAILING THRIE BEAM TRANSITION DETAILS			
No.	Description	Date	Sheet No.
	Revisions		BRSBD-3

Sealed and Signed by:
Julius F. J. Volgyi Jr.
Lic. No. 010487
On the date of
August 30, 2013

A copy of the original sealed and signed standard drawing is on file in the Central Office.

VDOT S&B DIVISION
RICHMOND, VA
STRUCTURAL ENGINEER

NOTE:
THE NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD HIGHWAY/BRIDGE PLANS DO NOT INCLUDE A TIMBER BRIDGE RAIL SYSTEM. THIS TRANSITION RAILING SYSTEM IS RATED FOR TEST LEVEL 4 SAFETY PERFORMANCE CRITERIA IN ACCORDANCE WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH BOARD (NCRP) REPORT 350: RECOMMENDED PROCEDURES FOR THE SAFETY AND PERFORMANCE EVALUATION OF HIGHWAY FEATURES. REFER TO TRANSPORTATION RESEARCH RECORD 1696, PAPER No. 580110 FOR PROPOSED RAILING PERFORMANCE CRITERIA.

APPD	DATE		
REVISIONS			
NO			
PROJECT NO:	20837D		
DESIGNED:	W.NUNN		
CAD COORD:	M.LAPIERRE		
CAD:	W.NUNN		
CHECKED:	W.NUNN		
DATE:	DECEMBER 2023		
APPROVED:	J.GALLANT		
DATE:	DECEMBER 2023		
SUBMISSION:	CONTRACT DOCUMENTS		

12/15/23

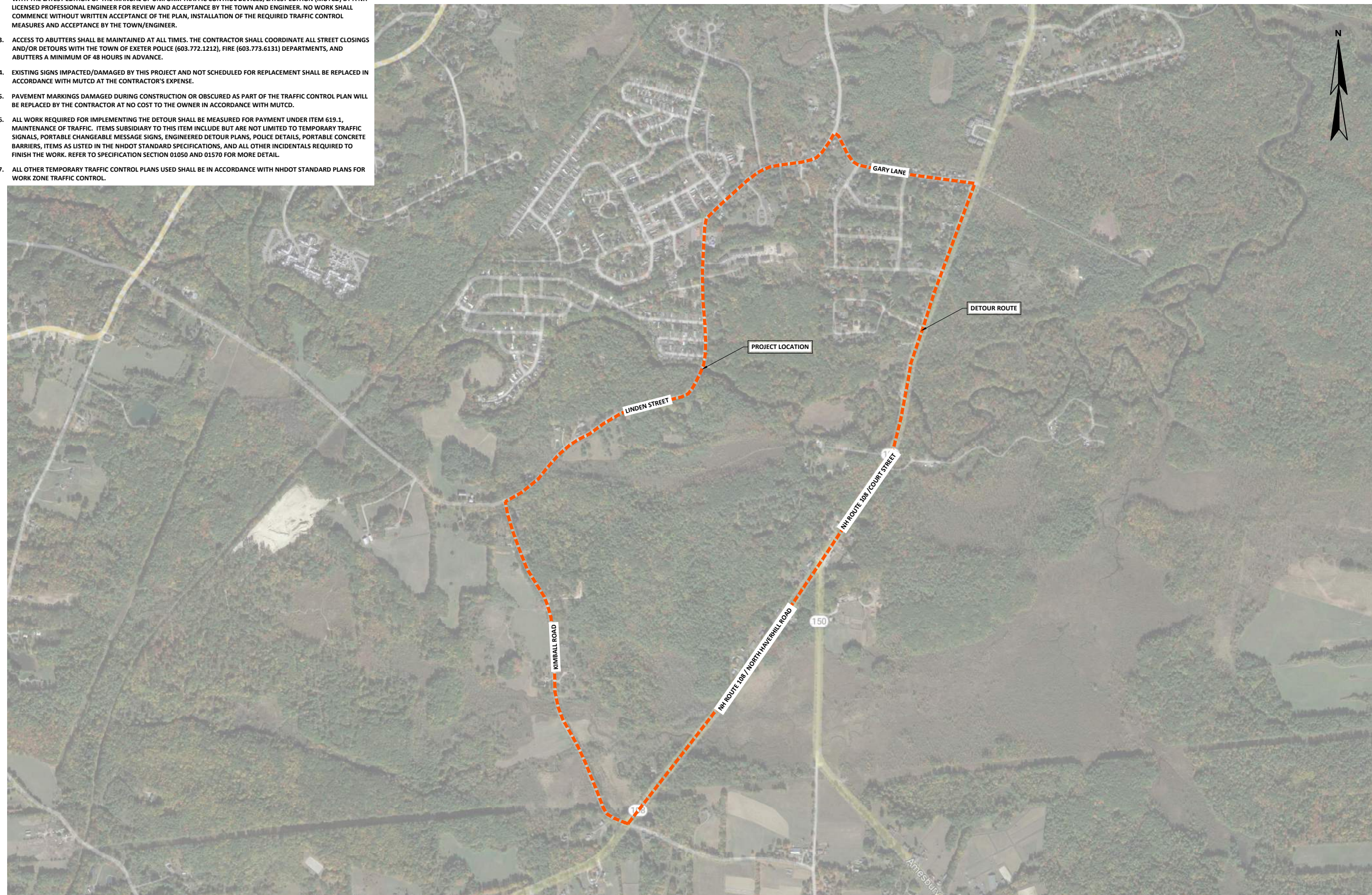
WRIGHT-PIERCE
603.430.3728 | www.wright-pierce.com
230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

TOWN OF EXETER, NEW HAMPSHIRE LINDEN STREET OVER EXETER RIVER BRIDGE REPAIR (081/046)	RAIL DETAILS III
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DRAWING
C-11

TEMPORARY TRAFFIC CONTROL

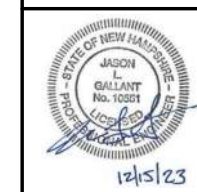
1. THE PROJECT IS INTENDED TO BE COMPLETED UNDER ROAD CLOSURE AND DETOUR. THE DETOUR PLAN SHOWN IS CONCEPTUAL AND SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A DETOUR PLAN DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION (MUTCD) BY A NH LICENSED PROFESSIONAL ENGINEER FOR REVIEW AND ACCEPTANCE BY THE TOWN AND ENGINEER. NO WORK SHALL COMMENCE WITHOUT WRITTEN ACCEPTANCE OF THE PLAN, INSTALLATION OF THE REQUIRED TRAFFIC CONTROL MEASURES AND ACCEPTANCE BY THE TOWN/ENGINEER.
3. ACCESS TO ABUTTERS SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE ALL STREET CLOSINGS AND/OR DETOURS WITH THE TOWN OF EXETER POLICE (603.772.1212), FIRE (603.773.6131) DEPARTMENTS, AND ABUTTERS A MINIMUM OF 48 HOURS IN ADVANCE.
4. EXISTING SIGNS IMPACTED/DAMAGED BY THIS PROJECT AND NOT SCHEDULED FOR REPLACEMENT SHALL BE REPLACED IN ACCORDANCE WITH MUTCD AT THE CONTRACTOR'S EXPENSE.
5. PAVEMENT MARKINGS DAMAGED DURING CONSTRUCTION OR OBTUSCURED AS PART OF THE TRAFFIC CONTROL PLAN WILL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER IN ACCORDANCE WITH MUTCD.
6. ALL WORK REQUIRED FOR IMPLEMENTING THE DETOUR SHALL BE MEASURED FOR PAYMENT UNDER ITEM 619.1, MAINTENANCE OF TRAFFIC. ITEMS SUBSIDIARY TO THIS ITEM INCLUDE BUT ARE NOT LIMITED TO TEMPORARY TRAFFIC SIGNALS, PORTABLE CHANGEABLE MESSAGE SIGNS, ENGINEERED DETOUR PLANS, POLICE DETAILS, PORTABLE CONCRETE BARRIERS, ITEMS AS LISTED IN THE NHDOT STANDARD SPECIFICATIONS, AND ALL OTHER INCIDENTALS REQUIRED TO FINISH THE WORK. REFER TO SPECIFICATION SECTION 01050 AND 01570 FOR MORE DETAIL.
7. ALL OTHER TEMPORARY TRAFFIC CONTROL PLANS USED SHALL BE IN ACCORDANCE WITH NHDOT STANDARD PLANS FOR WORK ZONE TRAFFIC CONTROL.



DETOUR PLAN
SCALE: 1"=500'

NO	REVISIONS	APPD	DATE

PROJECT NO: 202370
 DESIGNED: WJUNJUN
 CAD COORD: M.LAPIERRE
 CAD: M.LAPIERRE
 CHECKED: WJUNJUN
 DATE: DECEMBER 2023
 APPROVED: J.GALLANT
 DATE: DECEMBER 2023
 SUBMISSION: CONTRACT DOCUMENTS



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

TOWN OF EXETER, NEW HAMPSHIRE
 LINDEN STREET OVER EXETER RIVER
 (081/046)
 BRIDGE REPAIR
 DETOUR PLAN
 DRAWING
C-12

The Exeter-Squamscott River LAC was provided notification and a copy of the Linden Street Bridge Repair Wetland PBN application via certified mail (12/21/23).

9589 0710 5270 1399 7882 93

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<input type="checkbox"/> Return Receipt (electronic)	\$ _____
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<input type="checkbox"/> Adult Signature Required	\$ _____
<input type="checkbox"/> Adult Signature Restricted Delivery	\$ _____

Postage
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Total Postage and Fees
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Sent To *William Meserve c/o Theresa Walker*
 Street and Apt. No., or PO Box No. *156 Water Street, Rockingham Planning Comm*
 City, State, ZIP+4® *Exeter NH 03833*

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions



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 (800)275-8777

12/21/2023 09:34 AM

Product	Qty	Unit Price	Price
Priority Mail®	1		\$9.80
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Weight: 1 lb 0.70 oz			
Expected Delivery Date			
Set 12/23/2023			
Insurance			\$0.00
Up to \$100.00 included			
Certified Mail®			\$4.35
Tracking #:			
9589 0710 5270 1399 7882 93			
Total			\$14.15

Grand Total: \$14.15

Credit Card Rent \$14.15
 Card Name: VISA
 Account #: XXXXXXXXXXXX4400
 Approval #: 003056
 Transaction #: 277
 AID: A0000000001010 Contactless
 AL: VISA CREDIT

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