

# STATE OF NEW HAMPSHIRE INTER-DEPARTMENT COMMUNICATION

**DATE:** July 6, 2022

**FROM:** Joshua Brown  
Wetlands Program Analyst

**AT (OFFICE):** Department of  
Transportation

**SUBJECT** Dredge & Fill Application  
Francestown, 42837

**Bureau of  
Environment**

**TO** Karl Benedict, Public Works Permitting Officer  
New Hampshire Wetlands Bureau  
29 Hazen Drive, P.O. Box 95  
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT Bureau of Bridge Maintenance for the subject major impact project. Bridge maintenance to bridge 139/102 which carries NH 136 over Whiting Brook in the town of Francestown, NH. Work will include repointing existing stone abutments, resetting of the existing stone wing walls and possible installation of a toe wall within the crossing.

This project was reviewed at the Natural Resource Agency Coordination Meeting on April 20, 2022. A copy of the minutes has been included with this application package. A copy of this application and plans can be accessed on the Departments website via the following link: <http://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm>.

NHDOT anticipates and request that this project be reviewed and permitted by the Army Corp of Engineers through the State Programmatic General Permit process. A copy of the application has been sent to the Army Corp of Engineers.

Mitigation was determined to not be required as the proposed work was determined to be self-mitigating.

The lead people to contact for this project are Tim Boodey, Bureau of Bridge Maintenance (271-3668 or Timothy.Boodey@dot.nh.gov) or Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment (271-3226 or Andrew.O'Sullivan@dot.nh.gov).

A payment voucher has been processed for this application (Voucher #687648) in the amount of \$583.20.

If and when this application meets with the approval of the Bureau, please send the permit directly to Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment.

JRB;  
cc:  
BOE Original  
Town of Francestown (4 copies via certified mail)  
David Trubey, NH Division of Historic Resources (Cultural Review Within)  
John Magee, NH Fish & Game (via electronic notification)  
Maria Tur, US Fish & Wildlife (via electronic notification)  
Beth Alafat & Jeanie Brochi, US Environmental Protection Agency (via electronic notification)  
Michael Hicks & Rick Kristoff, US Army Corp of Engineers (via electronic notification)  
Kevin Nyhan, BOE (via electronic notification)



**STANDARD DREDGE AND FILL  
WETLANDS PERMIT APPLICATION**  
Water Division/Land Resources Management  
Wetlands Bureau  
[Check the Status of your Application](#)



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

**APPLICANT'S NAME:** NH Department of Transportation **TOWN NAME:** Francestown

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

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

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

[irm@des.nh.gov](mailto:irm@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

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

For dredging projects, is the subject property contaminated? • If yes, list contaminant: [REDACTED]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
For stream crossing projects, provide watershed size (see <a href="#">WPPT</a> or Stream Stats): 2,341 ac	
<b>SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))</b>	
Provide a <b>brief</b> description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.	
Bridge maintenance to bridge 139/102 which carries NH 136 over Whiting Brook. Work will include repointing existing stone abutments, resetting of the existing stone wing walls and possible installation of a toe wall within the crossing.	
Permanent impacts are for installation of toe wall (if determined necessary). Temporary impacts for access to work area and installation of erosion control measures.	
<b>SECTION 3 - PROJECT LOCATION</b>	
Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.	
ADDRESS: NH 136 over Whiting Brook	
TOWN/CITY: Francestown	
TAX MAP/BLOCK/LOT/UNIT: DOT ROW	
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Whiting Brook <input type="checkbox"/> N/A	
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): 42.98946° North -71.77802° West	

<b>SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))</b>		
If the applicant is a trust or a company, then complete with the trust or company information.		
NAME: NH Department of Transportation, Tim Boodey		
MAILING ADDRESS: 7 Hazen Drive		
TOWN/CITY: Concord	STATE: NH	ZIP CODE: 03302
EMAIL ADDRESS: timothy.m.boodey@dot.nh.gov		
FAX: [REDACTED]	PHONE: 271-3667	
ELECTRONIC COMMUNICATION: By initialing here: TMB, I hereby authorize NHDES to communicate all matters relative to this application electronically.		
<b>SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))</b>		
<input checked="" type="checkbox"/> N/A		
LAST NAME, FIRST NAME, M.I.: [REDACTED]		
COMPANY NAME: [REDACTED]		
MAILING ADDRESS: [REDACTED]		
TOWN/CITY: [REDACTED]	STATE: [REDACTED]	ZIP CODE: [REDACTED]
EMAIL ADDRESS: [REDACTED]		
FAX: [REDACTED]	PHONE: [REDACTED]	
ELECTRONIC COMMUNICATION: By initialing here [REDACTED], I hereby authorize NHDES to communicate all matters relative to this application electronically.		
<b>SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))</b>		
If the owner is a trust or a company, then complete with the trust or company information.		
<input type="checkbox"/> Same as applicant		
NAME: NH Department of Transportation, Andrew O'Sullivan		
MAILING ADDRESS: 7 Hazen Drive; PO Box 483		
TOWN/CITY: Concord	STATE: NH	ZIP CODE: 03302
EMAIL ADDRESS: andrew.m.osullivan@dot.nh.gov		
FAX: 271-7199	PHONE: 271-3226	
ELECTRONIC COMMUNICATION: By initialing here AMO, I hereby authorize NHDES to communicate all matters relative to this application electronically.		



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

Describe how the resource-specific criteria have been met for each chapter listed above (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters):

Env-Wt 400: Wetlands delineated by Sarah Large (NH DOT) on 10/25/2019 in accordance with Env-Wt 406. Temporary and permanent impacts to Riverine, Lower Perennial, Unconsolidated Bottom, Cobble Gravel (R2UB1).

Env-Wt 500: Maintenance of public highway under Env-Wt 527

Env-Wt 600: Project is not located in a coastal zone

Env-Wt 700: No prime wetlands are within the project area

Env-Wt 900: Work under 904.09 for repair/rehabilitation to existing Tier 3 structure, see PE cert within document

**SECTION 8 - AVOIDANCE AND MINIMIZATION**

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

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

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

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

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

Mitigation Pre-Application Meeting Date: Month: 4 Day: 20 Year: 2022

N/A - Mitigation is not required

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

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

N/A – Compensatory mitigation is not required

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

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

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

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

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

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

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Scrub-shrub Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Emergent Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Wet Meadow			<input type="checkbox"/>			<input type="checkbox"/>
	Vernal Pool			<input type="checkbox"/>			<input type="checkbox"/>
	Designated Prime Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Duly-established 100-foot Prime Wetland Buffer			<input type="checkbox"/>			<input type="checkbox"/>
Surface Water	Intermittent / Ephemeral Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Perennial Stream or River	51	36	<input type="checkbox"/>	1083	75	<input type="checkbox"/>
	Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - River			<input type="checkbox"/>			<input type="checkbox"/>
Banks	Bank - Intermittent Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Bank - Perennial Stream / River			<input type="checkbox"/>	324	55	<input type="checkbox"/>
	Bank / Shoreline - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
Tidal	Tidal Waters			<input type="checkbox"/>			<input type="checkbox"/>
	Tidal Marsh			<input type="checkbox"/>			<input type="checkbox"/>
	Sand Dune			<input type="checkbox"/>			<input type="checkbox"/>
	Undeveloped Tidal Buffer Zone (TBZ)			<input type="checkbox"/>			<input type="checkbox"/>
	Previously-developed TBZ			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - Tidal Water			<input type="checkbox"/>			<input type="checkbox"/>
<b>TOTAL</b>		<b>51</b>	<b>36</b>		<b>1407</b>	<b>130</b>	

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

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

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

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

Permanent and temporary (non-docking): 1458 SF × \$0.40 = \$ 583.2

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

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

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

Total = \$

**The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = \$ 583.2**

**SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)**

Indicate the project classification.

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

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

Initial each box below to certify:

Initials: <i>TMB</i> _____ _____	To the best of the signer's knowledge and belief, all required notifications have been provided.
---	--

Initials: <i>TMB</i> _____ _____	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
---	--

Initials: <i>TMB</i> _____ _____	The signer understands that: <ul style="list-style-type: none"> <li>• The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:                         <ol style="list-style-type: none"> <li>1. Deny the application.</li> <li>2. Revoke any approval that is granted based on the information.</li> <li>3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1.</li> </ol> </li> <li>• The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.</li> <li>• The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.</li> </ul>
---	--

Initials: <i>TMB</i> _____ _____	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.
---	---

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

SIGNATURE (OWNER): <i>Timothy Boadey</i>	PRINT NAME LEGIBLY: <i>Timothy Boadey</i>	DATE: <i>7/5/2022</i>
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER): _____	PRINT NAME LEGIBLY: _____	DATE: _____
SIGNATURE (AGENT, IF APPLICABLE): _____	PRINT NAME LEGIBLY: _____	DATE: _____

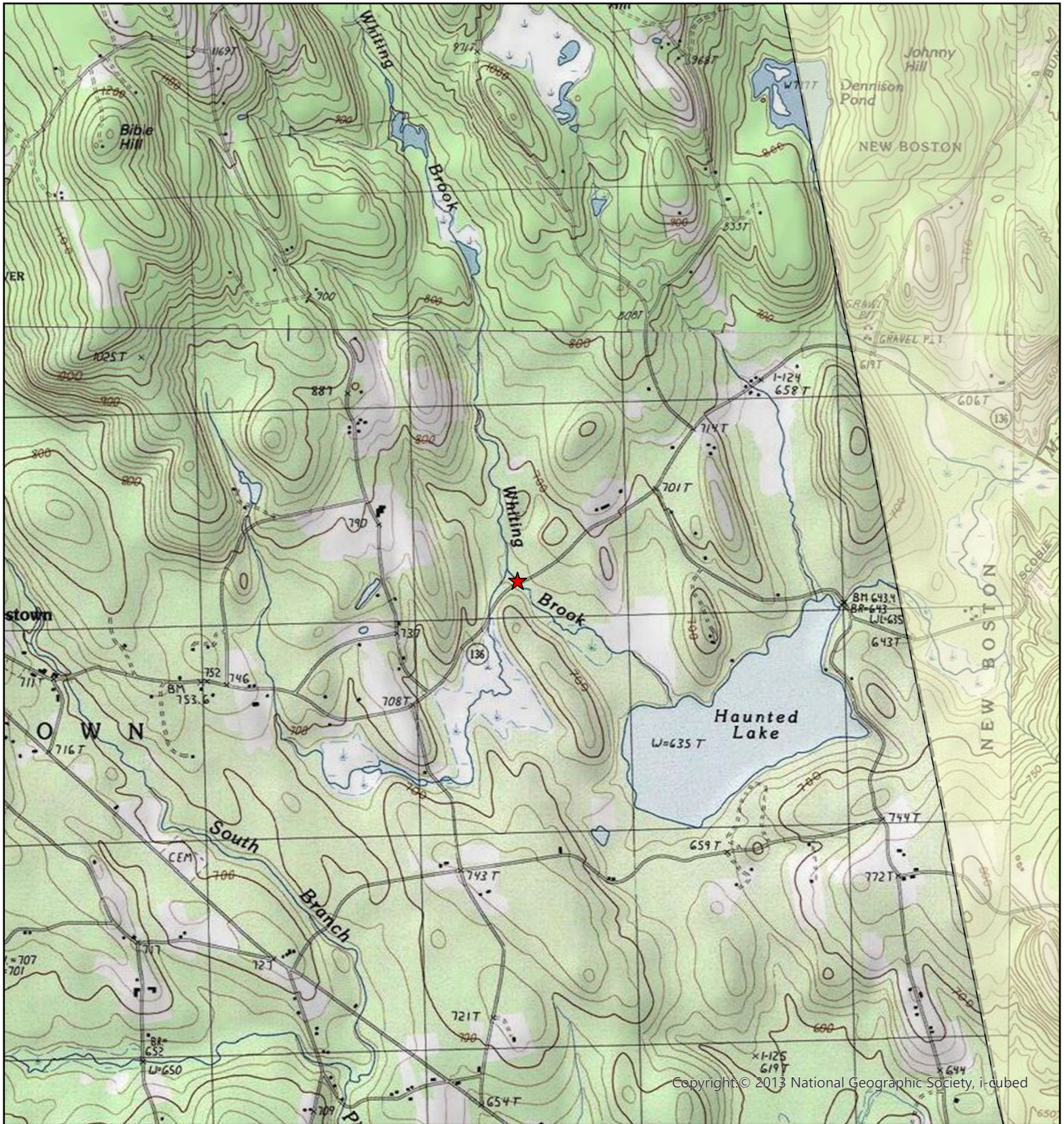
**SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))**

As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

TOWN/CITY CLERK SIGNATURE: _____	PRINT NAME LEGIBLY: <i>Exempt, State Agency per RSA 482-A:31(a)(1)</i>
TOWN/CITY: _____	DATE: _____



# Francestown, Project #42837



Copyright © 2013 National Geographic Society, i-cubed

0 0.25 0.5 1 Miles

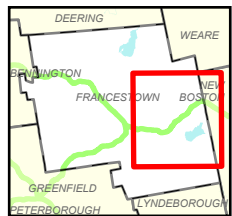
1:24,000

**Legend**

- ★ Project Location

Map depicting location of bridge 139/102 which carries NH-136 over Whiting Brook

Map created by Arin Mills on 1/25/2022







STANDARD DREDGE AND FILL  
WETLANDS PERMIT APPLICATION  
ATTACHMENT A: MINOR AND MAJOR PROJECTS  
Water Division/Land Resources Management  
Wetlands Bureau



[Check the Status of your Application](#)

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

**APPLICANT'S NAME:** NH Department of Transportation **TOWN NAME:** Francestown

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

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

**PART I: AVOIDANCE AND MINIMIZATION**

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

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

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

**NO WORK:** NO WORK ALTERNATIVE WOULD LEAD TO CONTINUED DETERIORATION OVER TIME, AND POTENTIALLY MAKING THE BRIDGE UNSAFE FOR THE TRAVELING PUBLIC. THE PROPOSED WORK IS MAINTENANCE TO KEEP THE EXISTING STRUCTURE IN SERVICE.

**REPLACEMENT OF CROSSING:** IT WAS DETERMINED THE EXISTING STRUCTURE COULD BE REPAIRED TO EXTEND THE USE AND LIFE CYCLE OF THE EXISTING CROSSING, AND THAT REPLACEMENT WAS NOT NECESSARY. THIS ALTERNATIVE WOULD BE BOTH MORE COSTLY AND LIKELY IMPACT THE SURROUNDING RESOURCES TO A GREATER EXTENT.

**REPAIR (PREFERRED):** IT WAS DETERMINED THE EXISTING CROSSING COULD BE REPAIRED BY ADDRESSING DEFICIENCIES. REPAIR TO THE EXISTING SUBSTRUCTURE AND INSTALLATION OF TOE WALL WILL KEEP THE BRIDGE IN SERVICE. WORK WILL HAVE BOTH TEMPORARY AND PERMANENT IMPACTS TO THE STREAM AND BANK.

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

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

No impacts to marshes proposed

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

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

THE EXISING BRIDGE PROVIDES HYDRAULIC CONNECTION BETWEEN THE UPSTREAM CHANNEL OF WHITING BROOK TO TO THE DOWNSTREAM CHANNEL. THE PROPOSED REPAIR WILL NOT ALTER THE HYDRAULIC CONNNECTION OF THE RIVERINE SYSTEM, AND WHITING BROOK WILL CONTINUE TO FLOW AS IT DOES TODAY. THE TOE WALLS WILL BE INSTALLED AT GRADE WITH THE EXISTING STREAMBED ELEVATION.

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

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

THE PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH ENV-WT 400, 500 AND 900. IMPACTS TO WETLAND RESOURCES HAVE BEEN MINIMIZED TO THE EXTENT PRACTICABLE. IMPACTS TO THE LOWER PERENNIAL RIVERINE SYSTEM ARE LIMITED TO AREAS NEEDED FOR ACCESS TO MAKE THE REPAIR AND INSTALLATION OF TOE WALL. NO EXEMPLARY NATURAL COMMUNITIES, VERNAL POOLS, PROTECTED SPECIES AND HABITAT, DOCUMENTED FISHERIES AND HABITAT AND REPRODUCTION AREAS FOR SPECIES OF CONCERN ARE KNOWN TO OCCUR IN THE PROJECT AREA.

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

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

TRAFFIC WILL CONTINUE TO FLOW AS USUAL ON NH 136 WHILE THE WORK IS COMPLETED, WITH ONLY MINOR TRAFFIC DELAYS DURING CONSTRUCTION DUE TO CONSTRUCTION EQUIPMENT ADJACENT TO THE ROADWAY. WHITING BROOK IS NOT DETERMINED TO BE A NAVIGABLE WATER BY THE US COAST GUARD, AND NO BRIDGE PERMIT IS REQUIRED TO COMPLETE THE WORK. NO OTHER PUBLIC RECREATION FACILITIES ARE KNOWN TO OCCUR AT THE PROJECT LOCATION, AND THEREFORE WILL NOT NEGATIVELY IMPACT THE PUBLIC'S USE OF WHITING BROOK

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

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

NO IMPACTS TO FLOODPLAIN WETLANDS ARE PROPOSED.

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

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

NO IMPACTS TO RIVERINE FORESTED WETLAND SYSTEMS OR SCRUB-SHRUB MARSH COMPLEXES OF HIGH ECOLOGICAL INTEGRITY ARE PROPOSED.



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

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

THE PROJECT WILL HAVE NO EFFECT ON WETLANDS THAT WOULD BE DETRIMENTAL TO ADJACENT DRINKING WATER SUPPLY OR GROUNDWATER AQUIFER LEVELS.

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

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

THE PROJECT, AS PROPOSED, LIMITS IMPACTS TO THE STREAM CHANNEL TO THE GREATEST EXTENT PRACTICABLE TO MAINTAIN THE EXISTING USE OF THE STRUCTURE. PROPOSED WORK IS TEMPORARY FOR ACCESS AND INSTALLATION OF EROSION CONTROL MEASURES. PERMANENT IMPACTS FOR INSTALLATION OF TOE WALLS TO ADDRESS SCOUR AND UNDERMINING OF THE STRUCTURE. THE STREAM CHANNEL WILL CONTINUE TO HANDLE RUNOFF AS IT DOES TODAY FROM THE SURROUNDING LANDSCAPE

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

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

N/A

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

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

N/A

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

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

N/A

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

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

N/A

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

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

N/A

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

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

N/A

<b>PART II: FUNCTIONAL ASSESSMENT</b>	
<b>REQUIREMENTS</b>	Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
<b>FUNCTIONAL ASSESSMENT METHOD USED:</b>	NH STREAM CROSSING GUIDELINES
<b>NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT:</b>	JOSH BROWN AND MATT URBAN
<b>DATE OF ASSESSMENT:</b>	5/31/2022
Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:	<input checked="" type="checkbox"/>
For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable:	<input type="checkbox"/>
Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.	



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



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

**APPLICANT'S NAME:** NH Department of Transportation      **TOWN NAME:** Francestown

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

<p><b>SECTION 1 - WATER ACCESS STRUCTURES (Env-Wt 311.07(b)(1))</b></p> <p>Is the primary purpose of the proposed project to construct a water access structure?</p> <p>No</p>
<p><b>SECTION 2 - BUILDABLE LOT (Env-Wt 311.07(b)(1))</b></p> <p>Does the proposed project require access through wetlands to reach a buildable lot or portion thereof?</p> <p>No</p>
<p><b>SECTION 3 - AVAILABLE PROPERTY (Env-Wt 311.07(b)(2))*</b></p> <p>For any project that proposes permanent impacts of more than one acre, or that proposes permanent impacts to a PRA, or both, are any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, that could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs?</p> <p><i>*Except as provided in any project-specific criteria and except for NH Department of Transportation projects that qualify for a categorical exclusion under the National Environmental Policy Act.</i></p> <p>N/A, no proposed impacts &gt; 1 acre or to a PRA</p>

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

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

Impacts to jurisdictional areas cannot be avoided as the proposed project is to repair existing infrastructure to maintain safety for the traveling public. Temporary impacts are for access and installation of erosion control measures during construction. Permanent impacts for installation of toe wall (if necessary) to address scour and undermining of the structure.

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

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

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

A stream crossing assessment was completed using the NH Stream Crossing Guidelines and results are included in the application. On site erosion control measures will be used throughout construction to protect both surrounding wetlands and stream during construction. Measures include erosion control barriers (perimeter control), sandbag cofferdam and sumps pumped to a detention basin.

**BUREAU OF ENVIRONMENT  
CONFERENCE REPORT**

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting

**DATE OF CONFERENCE:** April 20, 2022

**LOCATION OF CONFERENCE:** Virtual meeting held via Zoom

**ATTENDED BY:**

**NHDOT**

Andrew O’Sullivan  
Matt Urban  
Jon Evans  
Joshua Brown  
Mark Hemmerlein  
Meli Dube  
Kirk Mudgett  
Chris Carucci  
Kerry Ryan  
Tim Boodey  
Joseph Jorgens  
Arin Mills  
Carol Niewola  
Richard Dymant

**ACOE**

Richard Kristoff

**EPA**

Absent

**NHDES**

Karl Benedict  
Lori Sommer  
Maryann Tilton  
Christian Williams  
Eben Lewis  
Kevin Lucey

**NHB**

Amy Lamb

**NH Fish & Game**

John Magee

**Federal Highway**

Absent

**The Nature Conservancy**

Pete Steckler

**Consultants/ Public  
Participants**

Brenda Bhatti  
Carl Gross  
Pamela Hunt  
Gregg Cohen  
Bill Straub  
Nick Messina

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:** *(minutes on subsequent pages)*

**Table of Contents:**

Finalize Meeting Minutes.....	2
Rye, 43002 (X-A005(008)):.....	2
Stratham, 43001 (Non-Fed):.....	3
Bedford, 43138 (X-A005(049)):.....	4
Colebrook, 43899 (Non-Fed):.....	8
Francetown, 42837 (Non-Fed):.....	10
Lebanon Municipal Airport, 3-33-0010-065-2021:.....	11



minutes would be used in the application and the construction sequence. K. Benedict stated may also want to include time frames in the species coordination section of the application.

Amy Lamb, NH Natural Heritage Bureau-no concerns

Rick Kristoff, ACOE-no comments

Pete Steckler, TNC stated the location has a great wildlife shelf there already and glad some of it will remain.

**Francestown, 42837 (Non-Fed):**

**Project: Francestown #42837**

**Presenters: Tim Boodey, Arin Mills**

**Date: April 20, 2022**

The Francestown Bridge Maintenance project #42837 is to repair bridge 139/102 which carries NH 136 over Whiting Brook. Arin showed a map depicting Whiting Brook which flows approx. 2.5 miles from a mainly undeveloped land to crossing. The Brook further flows from the crossing 0.6 miles to Haunting Lake, and this is the only road crossing of the stream. The bridge was constructed in 1946, and the superstructure has been replaced while the substructure is original stone abutment and wings of unknown age. The surrounding landscape is rural and residential, photos were shown of the structure as well as Whiting Brook.

Tim described the project work to include repointing of existing stone abutments, resetting of the existing stone wing walls and possible installation of a toe wall. Tim further explained once the cofferdams are in place for sub-structure work the abutments will be evaluated for the need of toe wall placement for structure protection. If toe walls are determined necessary they will be installed at grade with the existing streambed elevation as to not reduce the hydraulic capacity of the structure. Tim showed draft impact plans and impact table which includes 51 SF/36 LF of permanent impact for toe wall construction, and 1257 SF of temporary impact for access and installation of erosion control measures. Tim described the basic construction sequence to include installation of perimeter control, sediment basin and sandbag cofferdam along one abutment. The stone abutments will be repointed, wing walls reset and installation of toe wall (if necessary). Work will then switch to opposing abutment. The sandbag cofferdam will be removed, and the access and staging areas will be revegetated as needed.

Tim stated there is no history of overtopping at the structure, and the current structure passes the 50-year storm event. He will look at the hydraulics modeling a bit closer ahead of application submission, which will be included. The proposed work will not alter the ability of the structure to convey the flow of Whiting Brook.

Arin provided an overview of the environmental resources identified in and surrounding the site to include: stream at crossing is a 2nd order stream (no SWQPA), Tier 3 crossing (2,341 ac), no designated river and no previous permits identified. The ARM Mapper determined full geomorphic compatibility and reduced aquatic organism passage- although it is not clear what is reducing AOP in the existing structure as this is a natural bottom structure. Whiting Brook is a predicted warmwater stream with no species of concern, NHB22-0378 had no recorded occurrences, no PRA predicted and no FEMA floodplain. USFWS species list identified potential Northern long-eared bat and was determined to be consistent with the 4(d) rule.

Section 106 is concluded with no concerns as it qualifies under the Appendix B of the Programmatic Agreement with no recoded properties in EMMIT.

Karl B asked to include a cross section for the toe wall to justify the project qualifies under Env-Wt 904.09 and maintain hydraulic capacity post construction. Karl asked if the crossing can accommodate an 100-year storm and Tim said likely not but he would look at the hydraulics more closely ahead of submission. Karl stated warmwater so no time-of-year restrictions anticipated. Andy O asked if the project could qualify for a PBN and Karl said they could discuss offline.

Lorie S asked if the toe wall would go into the channel and Tim said yes. Lorie questioned if there was an opportunity for enhanced AOP without reducing hydraulic capacity. Tim stated AOP would be maintained with a sub-grade toe wall.

John M said he does not anticipate the sub grade toe walls to negatively impact AOP at this location.

No comments from Amy L, Pete S or Rick K.

#### **Lebanon Municipal Airport, 3-33-0010-065-2021:**

**D&K PRESENTATION MEETING MINUTES**  
**Lebanon Municipal Airport**  
**NEPA EA – Runway Safety Improvements**  
**11:05 Scheduled; Actual ~11:50-12:20 w/Q/A thru ~12:45\***

11:50-12:20\* Karl Benedict from NHDES opened up the presentation on behalf of the NHDOT agency review team. Brenda Bhatti, Sr. Environmental Planner, presented the Powerpoint slideshow on behalf of DuBois & King. Other attendees affiliated with the project present for the program were Carl Gross, Airport Manager, and Gregg Cohen from Stantec.

Brenda provided an overview of the project and updates from the previous presentation to NRAC on December 15, 2021. She described that D&K's role is to develop the NEPA Environmental Assessment (EA). The timeline began in June 2021, and they are targeting June 18, 2022, as the final date for the EA completion. Brenda presented 15 slides that provided a high-level overview of the proposed airport runway safety improvements to Runway 18-36 and the Taxiway A extension. She also mentioned that there had been at least five NRAC meetings between 2008-2011 as part of earlier efforts that included extending Taxiway A (a project that has been in the works since at least 1994 and has yet to be completed due in part to more recent ILS/localizer placement concerns by the FAA). An updated project area graphic identified the wetlands that had been re-delineated within the project area. Areas that were previously delineated in earlier efforts (circa <2012) but not currently proposed for improvements had not been more recently re-delineated (*e.g.*, immediately east of Runway 18-36). Natural resource concerns that include rare species and wetlands impacts were identified and information regarding the efforts to avoid creating additional



Copyright © 2013 National Geographic Society, i-cubed J U D S

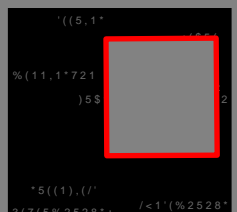
/HJHQG

★ 3URMHFW /RFDWLRQ

▨ :DWHUVKHG

0DS GHSLFWLQJ ORFDWLRQ RYHU 1+ RYHU :KLWLQJ %-URRN

0DS FUHDWHG RQ SULQ 0LOC



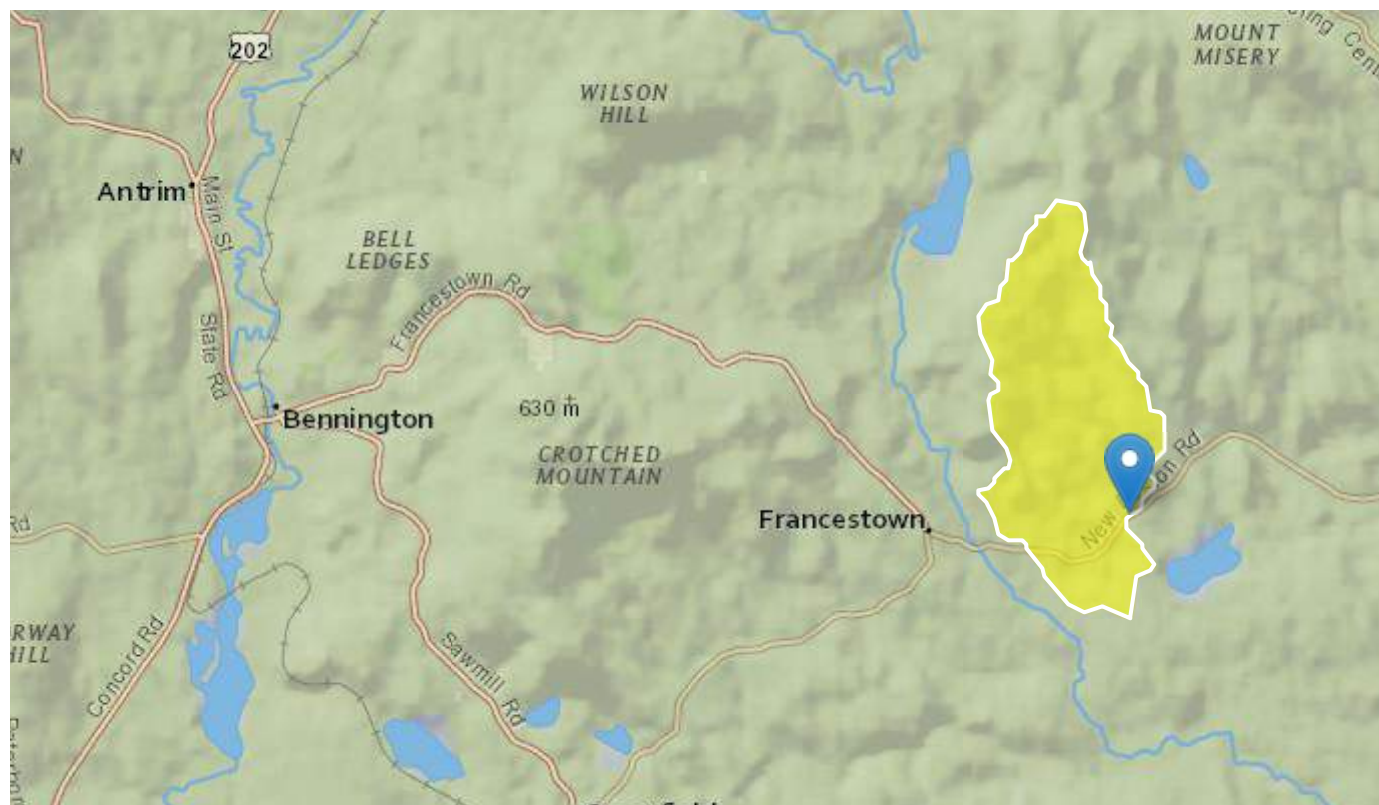
# StreamStats Report

Region ID: NH

Workspace ID: NH20220412171144937000

Clicked Point (Latitude, Longitude): 42.98949, -71.77799

Time: 2022-04-12 13:12:14 -0400



## Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
APRAVPRE	Mean April Precipitation	4.106	inches
BSLDEM30M	Mean basin slope computed from 30 m DEM	10.92	percent
CONIF	Percentage of land surface covered by coniferous forest	22.7193	percent
CSL10_85	Change in elevation divided by length between points 10 and 85 percent of distance along main channel to basin divide - main channel method not known	129	feet per mi
DRNAREA	Area that drains to a point on a stream	3.66	square miles

Parameter Code	Parameter Description	Value	Unit
ELEVMAX	Maximum basin elevation	1301.286	feet
MIXFOR	Percentage of land area covered by mixed deciduous and coniferous forest	27.6836	percent
PREBC0103	Mean annual precipitation of basin centroid for January 1 to March 15 winter period	8.46	inches
PREG_03_05	Mean precipitation at gaging station location for March 16 to May 31 spring period	9.2	inches
PREG_06_10	Mean precipitation at gaging station location for June to October summer period	17.9	inches
TEMP	Mean Annual Temperature	44.756	degrees F
TEMP_06_10	Basinwide average temperature for June to October summer period	60.656	degrees F
WETLAND	Percentage of Wetlands	3.1692	percent

### Peak-Flow Statistics Parameters [Peak Flow Statewide SIR2008 5206]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3.66	square miles	0.7	1290
APRAVPRE	Mean April Precipitation	4.106	inches	2.79	6.23
WETLAND	Percent Wetlands	3.1692	percent	0	21.8
CSL10_85	Stream Slope 10 and 85 Method	129	feet per mi	5.43	543

### Peak-Flow Statistics Flow Report [Peak Flow Statewide SIR2008 5206]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	ASEp	Equiv. Yrs.
50-percent AEP flood	170	ft <sup>3</sup> /s	105	276	30.1	3.2
20-percent AEP flood	289	ft <sup>3</sup> /s	176	475	31.1	4.7
10-percent AEP flood	391	ft <sup>3</sup> /s	233	655	32.3	6.2

<b>Statistic</b>	<b>Value</b>	<b>Unit</b>	<b>PII</b>	<b>Plu</b>	<b>ASEp</b>	<b>Equiv. Yrs.</b>
4-percent AEP flood	530	ft <sup>3</sup> /s	306	918	34.3	8
2-percent AEP flood	644	ft <sup>3</sup> /s	361	1150	36.4	9
1-percent AEP flood	783	ft <sup>3</sup> /s	424	1440	38.6	9.8
0.2-percent AEP flood	1120	ft <sup>3</sup> /s	560	2240	44.1	11

*Peak-Flow Statistics Citations*

[Olson, S.A.,2009, Estimation of flood discharges at selected recurrence intervals for streams in New Hampshire: U.S.Geological Survey Scientific Investigations Report 2008-5206, 57 p.](#)

### Low-Flow Statistics Parameters [Low Flow Statewide]

<b>Parameter Code</b>	<b>Parameter Name</b>	<b>Value</b>	<b>Units</b>	<b>Min Limit</b>	<b>Max Limit</b>
DRNAREA	Drainage Area	3.66	square miles	3.26	689
TEMP	Mean Annual Temperature	44.756	degrees F	36	48.7
PREG_06_10	Jun to Oct Gage Precipitation	17.9	inches	16.5	23.1

### Low-Flow Statistics Flow Report [Low Flow Statewide]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

<b>Statistic</b>	<b>Value</b>	<b>Unit</b>	<b>PII</b>	<b>Plu</b>	<b>SE</b>	<b>ASEp</b>
7 Day 2 Year Low Flow	0.181	ft <sup>3</sup> /s	0.0654	0.382	55.7	55.7
7 Day 10 Year Low Flow	0.0603	ft <sup>3</sup> /s	0.0142	0.157	79.4	79.4

*Low-Flow Statistics Citations*

[Flynn, R.H. and Tasker, G.D.,2002, Development of Regression Equations to Estimate Flow Durations and Low-Flow-Frequency Statistics in New Hampshire Streams: U.S.Geological Survey Scientific Investigations Report 02-4298, 66 p.](#)

### Flow-Duration Statistics Parameters [Low Flow Statewide]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3.66	square miles	3.26	689
PREG_06_10	Jun to Oct Gage Precipitation	17.9	inches	16.5	23.1
TEMP	Mean Annual Temperature	44.756	degrees F	36	48.7

### Flow-Duration Statistics Flow Report [Low Flow Statewide]

PIl: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	Plu	SE	ASEp
60 Percent Duration	1.87	ft <sup>3</sup> /s	1.36	2.5	18	18
70 Percent Duration	1.22	ft <sup>3</sup> /s	0.849	1.69	20.6	20.6
80 Percent Duration	0.676	ft <sup>3</sup> /s	0.411	1.04	28	28
90 Percent Duration	0.324	ft <sup>3</sup> /s	0.166	0.568	37.5	37.5
95 Percent Duration	0.192	ft <sup>3</sup> /s	0.0872	0.364	44.1	44.1
98 Percent Duration	0.115	ft <sup>3</sup> /s	0.0435	0.244	54.3	54.3

#### Flow-Duration Statistics Citations

[Flynn, R.H. and Tasker, G.D.,2002, Development of Regression Equations to Estimate Flow Durations and Low-Flow-Frequency Statistics in New Hampshire Streams: U.S.Geological Survey Scientific Investigations Report 02-4298, 66 p.](#)

### Seasonal Flow Statistics Parameters [Low Flow Statewide]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3.66	square miles	3.26	689
CONIF	Percent Coniferous Forest	22.7193	percent	3.07	56.2
PREBC0103	Jan to Mar Basin Centroid Precip	8.46	inches	5.79	15.1
BSLDEM30M	Mean Basin Slope from 30m DEM	10.92	percent	3.19	38.1
MIXFOR	Percent Mixed Forest	27.6836	percent	6.21	46.1

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
PREG_03_05	Mar to May Gage Precipitation	9.2	inches	6.83	11.5
TEMP	Mean Annual Temperature	44.756	degrees F	36	48.7
TEMP_06_10	Jun to Oct Mean Basinwide Temp	60.656	degrees F	52.9	64.4
PREG_06_10	Jun to Oct Gage Precipitation	17.9	inches	16.5	23.1
ELEVMAX	Maximum Basin Elevation	1301.286	feet	260	6290

### Seasonal Flow Statistics Flow Report [Low Flow Statewide]

PIl: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	Plu	SE	ASEp
Jan to Mar15 60 Percent Flow	2.49	ft <sup>3</sup> /s	1.72	3.48	21.2	21.2
Jan to Mar15 70 Percent Flow	2.1	ft <sup>3</sup> /s	1.46	2.91	20.7	20.7
Jan to Mar15 80 Percent Flow	1.8	ft <sup>3</sup> /s	1.31	2.41	18.2	18.2
Jan to Mar15 90 Percent Flow	1.36	ft <sup>3</sup> /s	0.969	1.85	19.3	19.3
Jan to Mar15 95 Percent Flow	1.08	ft <sup>3</sup> /s	0.749	1.5	20.7	20.7
Jan to Mar15 98 Percent Flow	0.877	ft <sup>3</sup> /s	0.541	1.33	27.1	27.1
Jan to Mar15 7 Day 2 Year Low Flow	1.79	ft <sup>3</sup> /s	1.32	2.36	17.2	17.2
Jan to Mar15 7 Day 10 Year Low Flow	0.996	ft <sup>3</sup> /s	0.674	1.41	21.5	21.5
Mar16 to May 60 Percent Flow	7.89	ft <sup>3</sup> /s	6.37	9.65	12.2	12.2
Mar16 to May 70 Percent Flow	6.21	ft <sup>3</sup> /s	5.09	7.48	11.4	11.4
Mar16 to May 80 Percent Flow	4.72	ft <sup>3</sup> /s	3.81	5.78	12.4	12.4
Mar16 to May 90 Percent Flow	3.34	ft <sup>3</sup> /s	2.63	4.17	13.7	13.7
Mar16 to May 95 Percent Flow	2.47	ft <sup>3</sup> /s	1.91	3.14	14.8	14.8
Mar16 to May 98 Percent Flow	1.76	ft <sup>3</sup> /s	1.28	2.35	18.1	18.1
Mar16 to May 7 Day 2 Year Low Flow	2.44	ft <sup>3</sup> /s	1.88	3.1	14.5	14.5
Mar16 to May 7 Day 10 Year Low Flow	1.33	ft <sup>3</sup> /s	0.99	1.74	16.2	16.2
Jun to Oct 60 Percent Flow	0.495	ft <sup>3</sup> /s	0.258	0.86	36.7	36.7
Jun to Oct 70 Percent Flow	0.356	ft <sup>3</sup> /s	0.175	0.643	39.9	39.9
Jun to Oct 80 Percent Flow	0.273	ft <sup>3</sup> /s	0.124	0.521	44.5	44.5
Jun to Oct 90 Percent Flow	0.168	ft <sup>3</sup> /s	0.0681	0.344	50.7	50.7



Statistic	Value	Unit	PII	Plu	SE	ASEp
Jun to Oct 95 Percent Flow	0.113	ft <sup>3</sup> /s	0.041	0.247	57	57
Jun to Oct 98 Percent Flow	0.0925	ft <sup>3</sup> /s	0.031	0.213	61.1	61.1
Jun to Oct 7 Day 2 Year Low Flow	0.192	ft <sup>3</sup> /s	0.0688	0.409	55.6	55.6
Jun to Oct 7 Day 10 Year Low Flow	0.0654	ft <sup>3</sup> /s	0.0157	0.169	78.5	78.5
Nov to Dec 60 Percent Flow	3.24	ft <sup>3</sup> /s	2.15	4.67	23.3	23.3
Nov to Dec 70 Percent Flow	2.43	ft <sup>3</sup> /s	1.54	3.63	25.9	25.9
Nov to Dec 80 Percent Flow	1.79	ft <sup>3</sup> /s	1.09	2.74	27.8	27.8
Nov to Dec 90 Percent Flow	1.13	ft <sup>3</sup> /s	0.644	1.82	31.6	31.6
Nov to Dec 95 Percent Flow	0.73	ft <sup>3</sup> /s	0.368	1.28	38.3	38.3
Nov to Dec 98 Percent Flow	0.448	ft <sup>3</sup> /s	0.18	0.904	50.6	50.6
Oct to Nov 7 Day 2 Year Low Flow	1.77	ft <sup>3</sup> /s	1.16	2.57	23.3	23.3
Oct to Nov 7 Day 10 Year Low Flow	0.691	ft <sup>3</sup> /s	0.351	1.2	36.6	36.6

*Seasonal Flow Statistics Citations*

[Flynn, R.H. and Tasker, G.D.,2002, Development of Regression Equations to Estimate Flow Durations and Low-Flow-Frequency Statistics in New Hampshire Streams: U.S.Geological Survey Scientific Investigations Report 02-4298, 66 p.](#)

Bankfull Statistics Parameters [Appalachian Highlands D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3.66	square miles	0.07722	940.1535

Bankfull Statistics Parameters [New England P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3.66	square miles	3.799224	138.999861

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3.66	square miles	0.07722	59927.7393

Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]

<b>Statistic</b>	<b>Value</b>	<b>Unit</b>
Bieger_D_channel_width	26	ft
Bieger_D_channel_depth	1.63	ft
Bieger_D_channel_cross_sectional_area	43	ft <sup>2</sup>

### Bankfull Statistics Disclaimers [New England P Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

### Bankfull Statistics Flow Report [New England P Bieger 2015]

<b>Statistic</b>	<b>Value</b>	<b>Unit</b>
Bieger_P_channel_width	36.3	ft
Bieger_P_channel_depth	1.83	ft
Bieger_P_channel_cross_sectional_area	67.1	ft <sup>2</sup>

### Bankfull Statistics Flow Report [USA Bieger 2015]

<b>Statistic</b>	<b>Value</b>	<b>Unit</b>
Bieger_USA_channel_width	19.6	ft
Bieger_USA_channel_depth	1.59	ft
Bieger_USA_channel_cross_sectional_area	34.4	ft <sup>2</sup>

### Bankfull Statistics Flow Report [Area-Averaged]

<b>Statistic</b>	<b>Value</b>	<b>Unit</b>
Bieger_D_channel_width	26	ft
Bieger_D_channel_depth	1.63	ft
Bieger_D_channel_cross_sectional_area	43	ft <sup>2</sup>
Bieger_P_channel_width	36.3	ft
Bieger_P_channel_depth	1.83	ft
Bieger_P_channel_cross_sectional_area	67.1	ft <sup>2</sup>
Bieger_USA_channel_width	19.6	ft
Bieger_USA_channel_depth	1.59	ft
Bieger_USA_channel_cross_sectional_area	34.4	ft <sup>2</sup>

*Bankfull Statistics Citations*

**Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G., 2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p.**

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.8.1

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.2

New Hampshire Department of Transportation  
Bureau of Environment  
Stream Crossing Summary Report

Project: Francestown, 42837

Date of Assessment: 5/31/2022

Names of who completed the assessment: Josh Brown, Matt Urban, & Arin Mills

Stream Information:

Stream Name: Whiting Brook

Watershed Area: 2,342 acres

Stream Tier: Tier 3

Wetland Classification: R2UB12

Reference Reach:

Average Bankfull Width: 17'

Average Floodprone Width: 44.7'

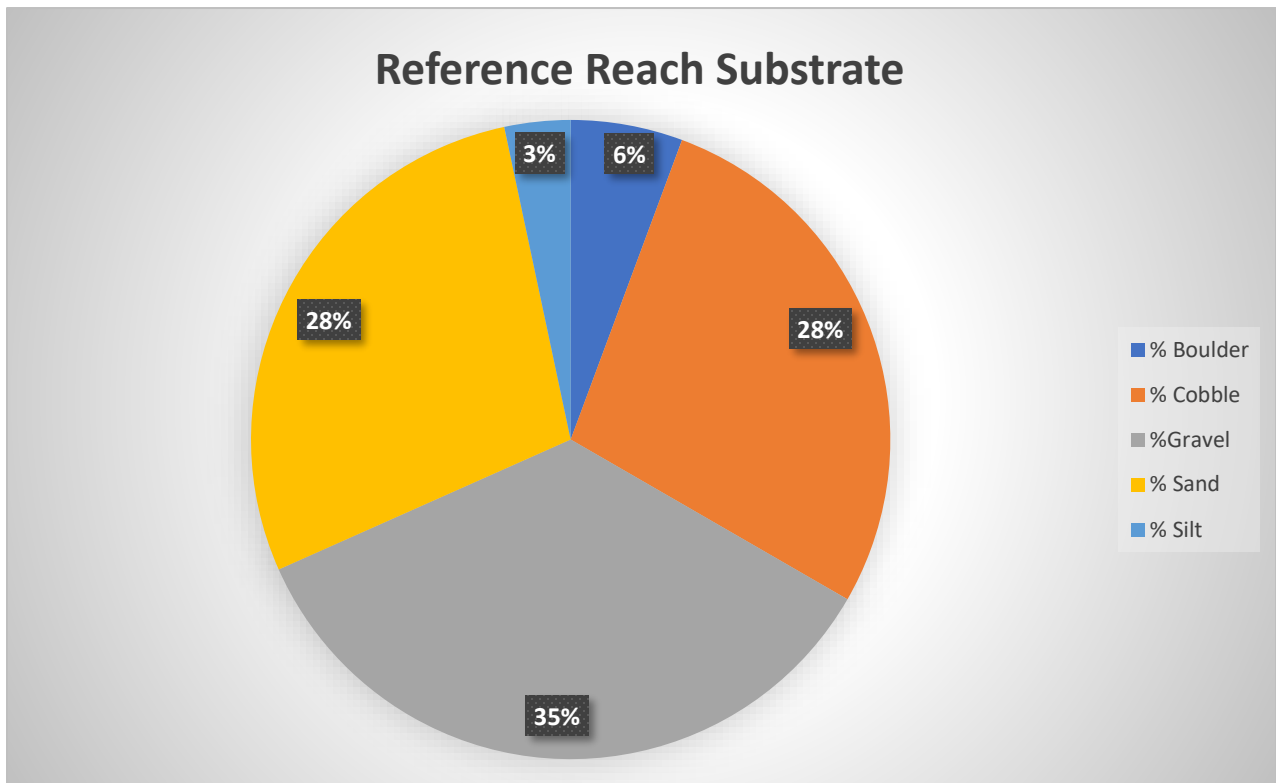
Average Depth: 1.2'

Average Slope: 3%

Entrenchment Ratio: 2.59

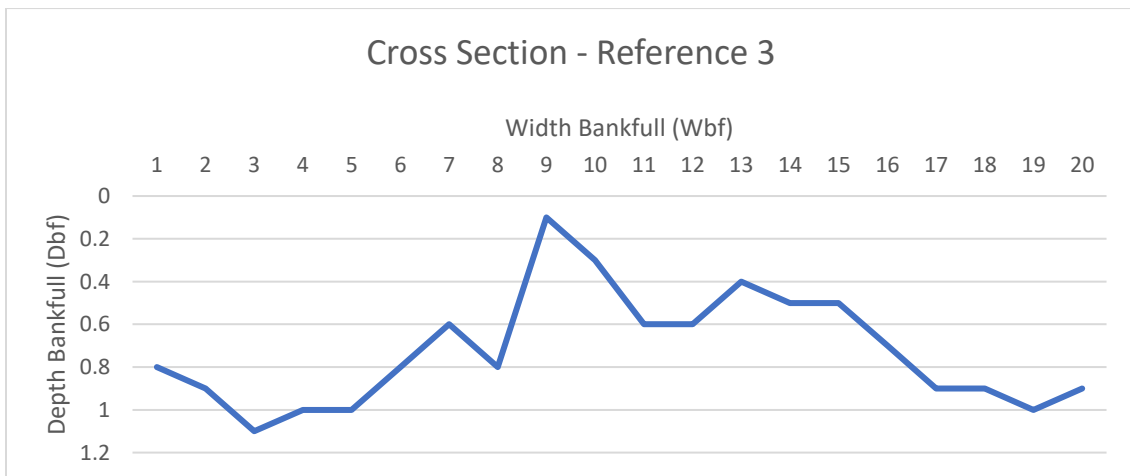
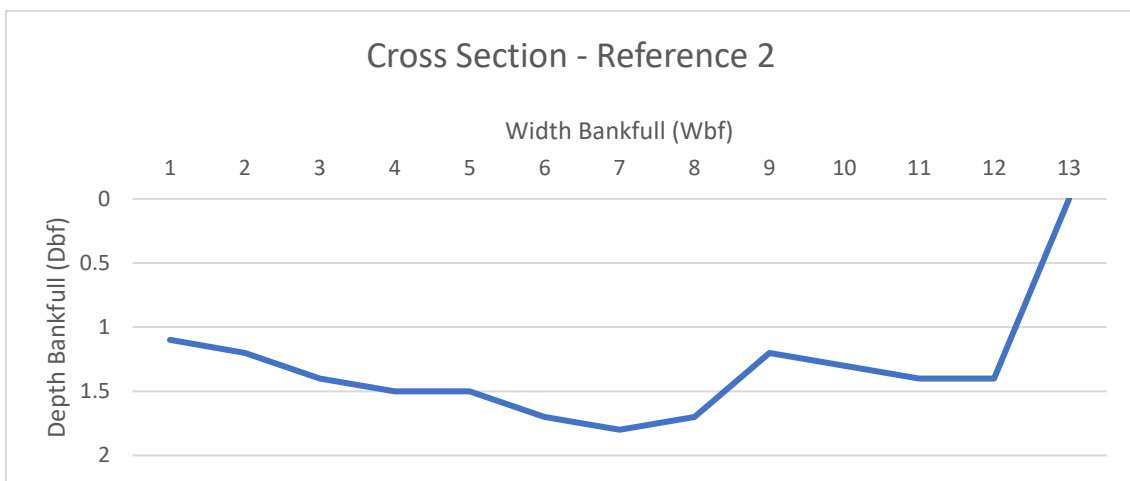
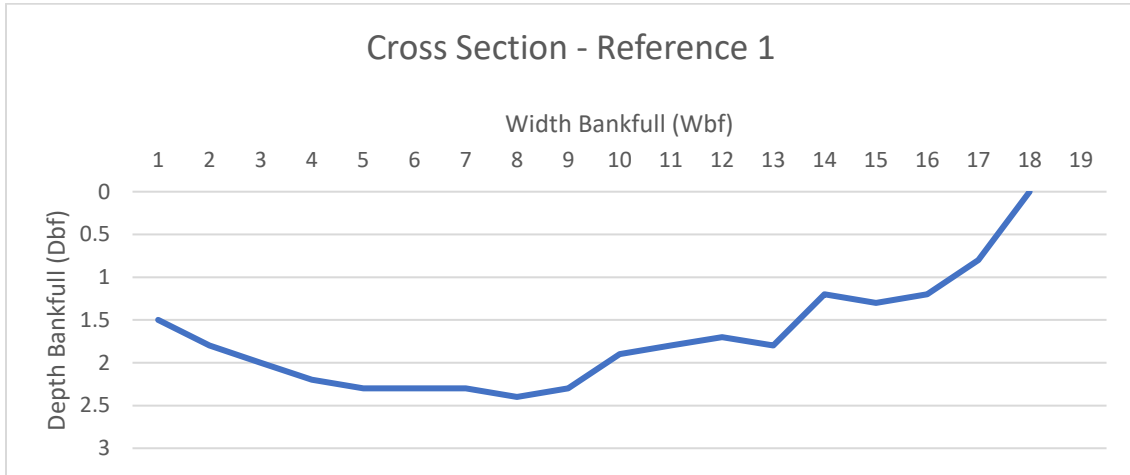
Rosgen Classification: Type C

Channel Material (Average Reference Reach):



New Hampshire Department of Transportation  
Bureau of Environment  
Stream Crossing Summary Report

Cross Sections:





New Hampshire Department of Transportation  
Bureau of Environment  
Stream Crossing Summary Report

Photos:



Photo 1: Outlet looking upstream



Photo 2: Outlet looking downstream



**New Hampshire Department of Transportation  
Bureau of Environment  
Stream Crossing Summary Report**



**Photo 3: Inlet looking downstream**



**Photo 4: Inlet looking upstream**



**New Hampshire Department of Transportation  
Bureau of Environment  
Stream Crossing Summary Report**



**Photo 5: Reference Reach One**



**Photo 6: Reference Reach Two**



**New Hampshire Department of Transportation  
Bureau of Environment  
Stream Crossing Summary Report**



**Photo 7: Reference Reach Three**



## WETLANDS PERMIT APPLICATION STREAM CROSSING WORKSHEET

Land Resources Management  
Wetlands Bureau



RSA 482-A/ Env-Wt-900

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

### 1. Tier Classifications

Determine the contributing watershed size at [USGS StreamStats](#)

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

Size of contributing watershed at the crossing location: **2,342 acres**

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

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

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

- On a watercourse where the contributing watershed is more than 640 acres
- Within a [Designated River Corridor](#)
- On a watercourse that is listed on the [surface water assessment 305\(b\) report](#)
- Within a [100-year floodplain](#) (see *section 2* below)
- In a jurisdictional area having any protected species or habitat ([NHB DataCheck](#))
- In or within 100 feet of a [Prime Wetland](#)

### 2. 100-year Floodplain

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

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

**Yes:** The proposed project *is* within the FEMA 100-year floodplain. Zone = \_\_\_\_\_  
 Elevation of the 100-year floodplain at the inlet: \_\_\_\_\_ feet (FEMA El. or Modeled El.)

### 3. Calculating Peak Discharge

Existing 100-year peak discharge (Q) calculated in cubic feet per second (CFS): <b>783 CFS</b>	Calculation method: <b>StreamStats</b>
--	--

Estimated Bankfull discharge at the crossing location: <b>375 CFS</b>	Calculation method: <b>HY-8</b>
---	---------------------------------

➡ **Note: If Tier 1 then skip to Section 10** ⬅

### 4. Predicted Channel Geometry based on [Regional Hydraulic Curves](#)

*For Tier 2 and Tier 3 Crossings Only*

Bankfull Width: <b>23.5 feet</b>	Mean Bankfull Depth: <b>1.8 feet</b>
----------------------------------	--------------------------------------

Bankfull Cross Sectional Area: **42.7 square feet**

[lrn@des.nh.gov](mailto:lrn@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

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

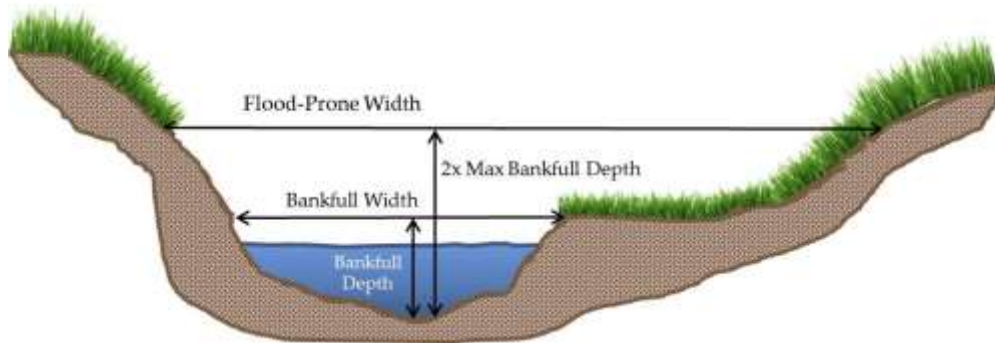
**5. Cross Sectional Channel Geometry:**  
**Measurements of the Existing Stream within a Reference Reach**  
*For Tier 2 and Tier 3 Crossings Only*

Describe the reference reach location: **Upstream, forested**

Reference reach watershed size: **2,342 acres**

<u>Parameter</u>	<u>Cross Section 1</u> Describe bed form Riffle, run <i>(e.g. pool, riffle, glide)</i>	<u>Cross Section 2</u> Describe bed form Riffle, run, step <i>(e.g. pool, riffle, glide)</i>	<u>Cross Section 3</u> Describe bed form Riffle, run, step <i>(e.g. pool, riffle, glide)</i>	<u>Range</u>
<a href="#">Bankfull Width</a>	18 feet	13 feet	20 feet	13 - 20 feet
<a href="#">Bankfull Cross Sectional Area</a>	30.8 SF	17.2 SF	14.4 SF	14.4 - 30.8 SF
<a href="#">Mean Bankfull Depth</a>	1.7 feet	1.3 feet	0.7 feet	0.7 - 1.7 feet
<a href="#">Width to Depth Ratio</a>	10.5	9.8	27.8	9.8 - 27.8
<a href="#">Max Bankfull Depth</a>	2.4 feet	1.8 feet	1.1 feet	1.1 - 2.4 feet
<a href="#">Flood Prone Width</a>	42 feet	31 feet	61 feet	31 - 61 feet
<a href="#">Entrenchment Ratio</a>	2.33	2.38	3.05	2.33 - 3.05

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



**Figure 1:** Determining the Reference Reach Attributes

**6. Longitudinal Parameters of the Reference Reach and Crossing Location**

*For Tier 2 and Tier 3 Crossings Only*

Average Channel Slope of the Reference Reach: **3%**

Average Channel Slope at the Crossing Location: **1%**

**7. Plan View Geometry**

*For Tier 2 and Tier 3 Crossings Only*

Sinuosity of the Reference Reach: **1.1**

Sinuosity of the Crossing Location: **0.6**

*Note: Sinuosity is measured a distance of at least 20 times bankfull width, or 2 meander belt widths*

[lrn@des.nh.gov](mailto:lrn@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

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



## 8. Substrate Classification based on Field Observations

*For Tier 2 and Tier 3 Crossings Only*

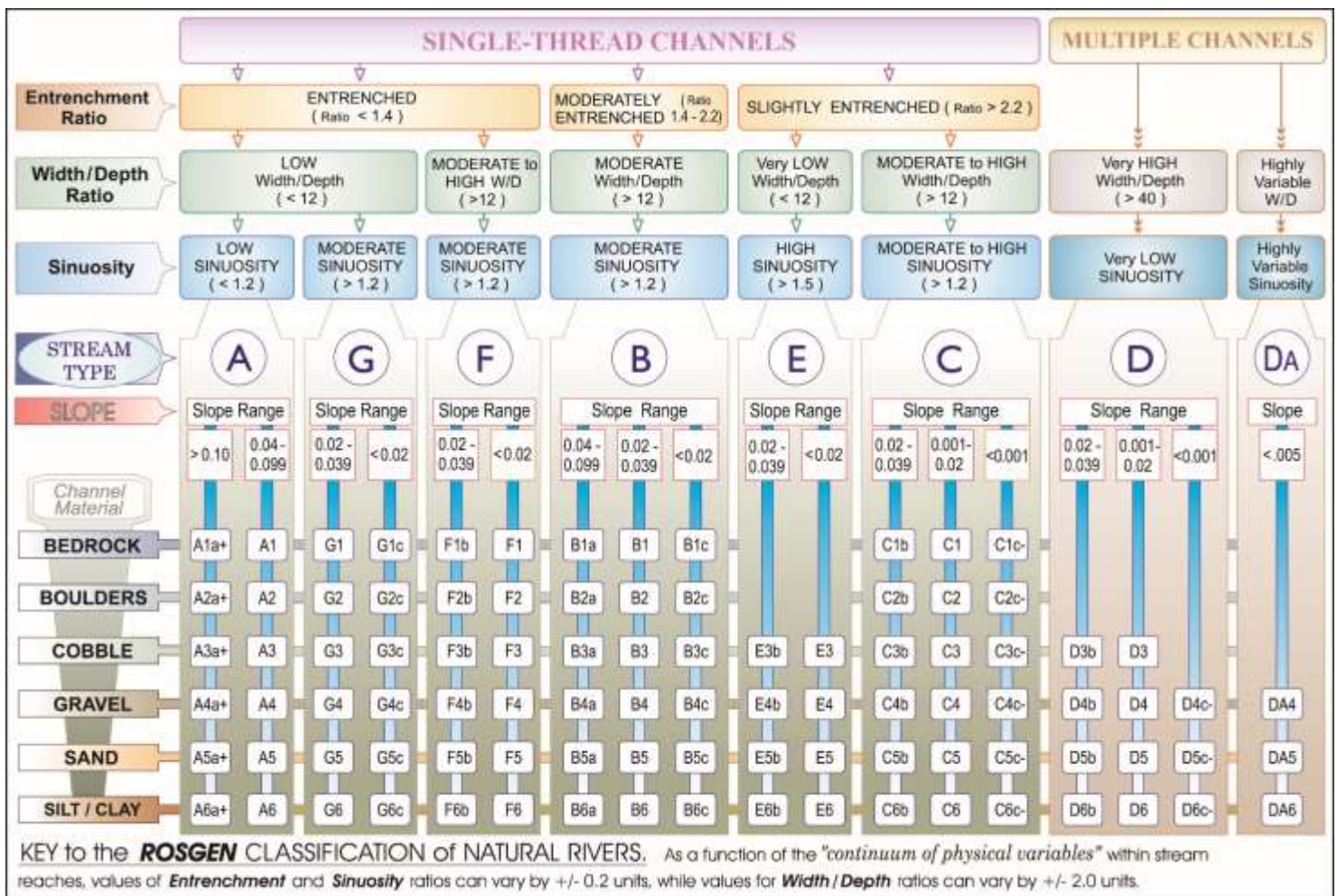
% of reach that is <i>bedrock</i>	0 %
% of reach that is <i>boulder</i>	6 %
% of reach that is <i>cobble</i>	28 %
% of reach that is <i>gravel</i>	35 %
% of reach that is <i>sand</i>	28 %
% of reach that is <i>silt</i>	3 %

## 9. Stream Type of Reference Reach

*For Tier 2 and Tier 3 Crossings Only*

Stream Type of Reference Reach:	Type C
---------------------------------	--------

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



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

## 10. Crossing Structure Metrics

[lrn@des.nh.gov](mailto:lrn@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

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

Existing Conditions

<b>Existing Structure Type:</b>	<input checked="" type="checkbox"/> Bridge Span <input type="checkbox"/> Pipe Arch <input type="checkbox"/> Open-bottom Culvert <input type="checkbox"/> Closed-bottom Culvert <input type="checkbox"/> Closed-bottom Culvert with stream simulation <input type="checkbox"/> Other: _____	
<b>Existing Crossing Span</b> <i>(perpendicular to flow)</i>	9 feet	<b>Culvert Diameter</b> N/A feet <b>Inlet Elevation</b> 652
<b>Existing Crossing Length</b> <i>(parallel to flow)</i>	32.5 feet	<b>Outlet Elevation</b> 651.5 <b>Culvert Slope</b> 2%

Proposed Conditions

<b>Proposed Structure Type:</b>	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Alternative Design</b>
Bridge Span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipe Arch	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Closed-bottom Culvert	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Open-bottom Culvert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closed-bottom Culvert with stream simulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Proposed structure Span</b> <i>(perpendicular to flow)</i>	_____ feet		<b>Culvert Diameter</b> _____ feet <b>Inlet Elevation</b> _____	
<b>Proposed Structure Length</b> <i>(parallel to flow)</i>	_____ feet		<b>Outlet Elevation</b> _____ <b>Culvert Slope</b> _____	
<b>Proposed Entrenchment Ratio*</b> <i>For Tier 2 and Tier 3 Crossings Only</i>	_____		<i>Note: To accommodate the entrenchment ratio, floodplain drainage structures may be utilized</i>	

\* Note: Proposed Entrenchment Ratio must meet the minimum ratio for each stream type listed in **Figure 3**, otherwise the applicant must address the Alternative Design criteria listed in Env-Wt 904.09

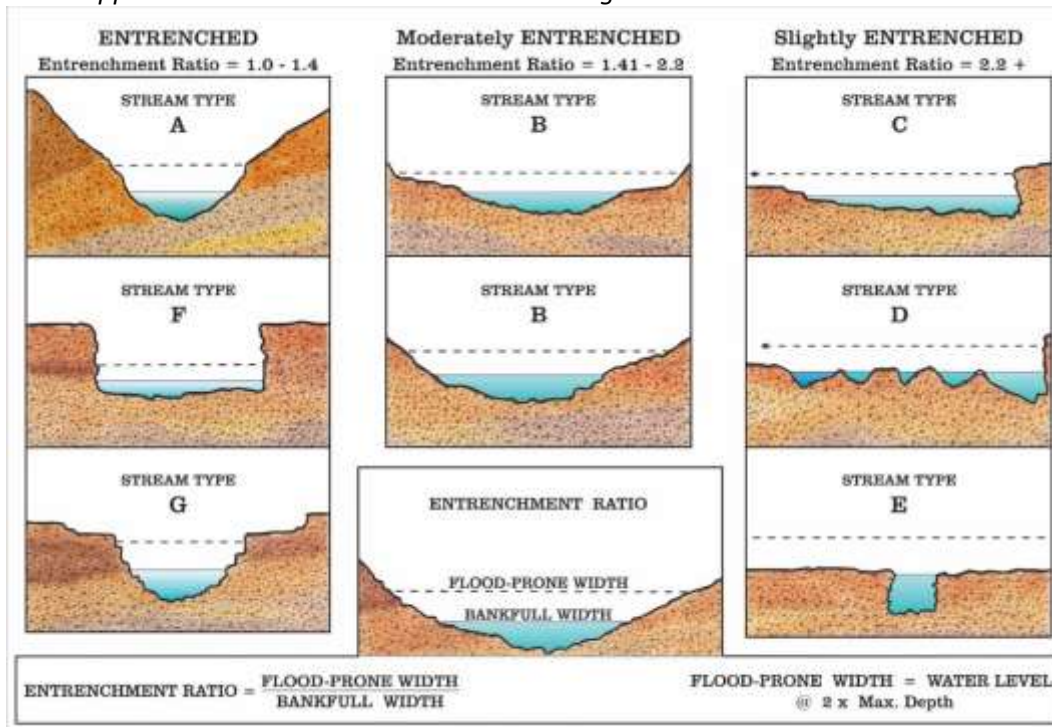


Figure 3. Reference from Applied River Morphology, Rosgen, 1996

[lrn@des.nh.gov](mailto:lrn@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

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

11. Crossing Structure Hydraulics		
	Existing	Proposed
100 year flood stage elevation at inlet	783	783
Flow velocity at outlet in feet per second (FPS)	16.31	16.31
Calculated 100 year peak discharge (Q) for the <u>proposed</u> structure in CFS		783
Calculated 50 year peak discharge (Q) for the <u>proposed</u> structure in CFS		644

**12. Crossing Structure Openness Ratio**  
*For Tier 2 and Tier 3 Crossings Only*

**Crossing Structure Openness Ratio = 1.88**  
*Openness box culvert = (height x width)/length*  
*Openness round culvert = (3.14 x radius<sup>2</sup>)/length*

**13. General Design Considerations**

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

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

- Not be a barrier to sediment transport.
- Prevent the restriction of high flows and maintain existing low flows.
- Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
- Not cause an increase in the frequency of flooding or overtopping of banks.
- Preserve watercourse connectivity where it currently exists.
- Restore watercourse connectivity where:
  - (1) Connectivity previously was disrupted as a result of human activity(ies); and
  - (2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both.
- Not cause erosion, aggradation, or scouring upstream or downstream of the crossing.
- Not cause water quality degradation.

**14. Tier Specific Design Criteria**

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

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

**15. Alternative Design**

**NOTE:** If the proposed crossing does not meet all of the general design considerations, the Tier specific design criteria, or the minimum entrenchment ratio for each given stream type listed in **Figure 3**, then an alternative design plan and associated requirements must be addressed pursuant to Env-Wt 904.09.

I have submitted an alternative design and addressed each requirement listed in Env-Wt 904.09

**NH Department of Transportation**  
**Bureau of Bridge Maintenance**  
**Project: Francestown 139/102, #42837**  
**NH 136 over Whiting Brook**

**P.E. Certification in Accordance with Env-Wt 904.**

*Stream Crossing Rules for Standard Application Tier 3.*  
*repair/preservation/rehabilitation project*

**Crossing's Drainage Area: 3.66 square miles**

**Existing Conditions:** The crossing at this location is a 10' clear span bridge constructed in 1946 on existing stone abutments. Other routine maintenance work has occurred to the structure since that time without any change in the footprint or structure. There is not a history or evidence of flooding or overtopping at this crossing. The existing stone abutments have voids present and missing mortar. There is minor settlement and cracked stones present. The stones that make up the wings are slumping and have voids.

**Project Description:** The proposed project will add chinking stones and repoint the existing stone abutments. The area directly adjacent to the abutment face will be excavated to determine if additional pointing or a concrete toe wall is needed. If concrete work or a toe wall is required, it will be installed below the existing streambed elevation and covered with existing stream bed material. The existing stone wings will be restacked within the existing footprints. Excavation work will be conducted behind sandbag cofferdams. Other work will be behind erosion control/sediment barriers.

**Proposed Conditions:** The current and proposed conditions will be the same. There is no history of flooding at this location. For this project we modeled the existing and the proposed conditions using flow data from StreamStats and in FHWA HY-8. The crossing will continue to pass the 100 year storm event. The proposed toe wall, if needed, and work on the existing wings will not change the hydraulic opening.

*\*Included with this form is supporting analysis by way of photos and plans*

Env-Wt 904.01 General Design Considerations  
Applicable to All Stream Crossings

- (a) All stream crossings, whether over tidal or non-tidal waters, shall be designed and constructed so as to:
- 1) Not be a barrier to sediment transport;
  - 2) Not restrict high flows and maintain existing low flows;
  - 3) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;
  - 4) Not cause an increase in the frequency of flooding or overtopping of banks;
  - 5) Maintain or enhance geomorphic compatibility by:
    - a. Minimizing the potential for inlet obstruction by sediment, wood, or debris; and
    - b. Preserving the natural alignment of the stream channel;
  - 6) Preserve watercourse connectivity where it currently exists;
  - 7) Restore watercourse connectivity where:
    - a. Connectivity previously was disrupted as a result of human activity(ies); and
    - b. Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;



- 8) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and
- 9) Not cause water quality degradation.

(b) For stream crossing over tidal waters, the stream crossing shall be designed to:

- 1) Match the velocity, depth, cross-sectional area, and substrate of the natural stream; and
- 2) Be of sufficient size to not restrict bi-directional tidal flow over the natural tide range above, below, and through the crossing.

Env-Wt 904.09(a)- The repair, rehabilitation, or replacement of tier 3 stream crossings shall be limited to existing legal crossings where the tier classification is based only on the size of the contributing watershed.

Env-Wt 904.09(b)- Rehabilitation of a culvert or other closed-bottom stream crossing structure pursuant to this section may be accomplished by concrete repair, slip lining, cured-in place lining, or concrete invert lining, or any combination thereof, except that slip lining shall not occur more than once.  
(Not applicable to repair)

Env-Wt 904.09(c) A project shall qualify under this section only if a professional engineer certifies, and provides supporting analyses to show, that:

- (1) 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;
- (2) The proposed stream crossing will:
  - a. Meet the general criteria specified in Env-Wt 904.01;  
(see page 2 of this form for 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.

Env-Wt 904.09(d) Repair, rehabilitation, or replacement of a tier 4 stream crossing shall comply with Env-Wt 904.07(d). (if non-tidal, N/A)

**I hereby certify that the above referenced project meets the criteria of Env-Wt 904.09(c).**

Name: Timothy Boodey, P.E. Date: 7/5/2022



# New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

---

**To:** Arin Mills  
John O. Morton Building  
7 Hazen Drive  
Concord, NH 03302-0483

**From:** NH Natural Heritage Bureau

**Date:** 2/2/2022 (This letter is valid through 2/2/2023)

**Re:** Review by NH Natural Heritage Bureau of request dated 2/2/2022

**Permit Types:** Wetland Standard Dredge & Fill - Major  
General Permit

**NHB ID:** NHB22-0378

**Applicant:** Arin Mills

**Location:** Francestown  
Tax Map: DOT ROW, Tax Lot: DOT ROW  
Address: NH 136 over Whiting Brook

**Proj. Description:** Bridge maintenance activities to bridge 139/102 which carries NH-136 over Whiting Brook. Work will include installation of toe walls, rip rap and sub structure maintenance.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

New Hampshire Natural Heritage Bureau  
NHB DataCheck Results Letter

---

**MAP OF PROJECT BOUNDARIES FOR: NHB22-0378**





# United States Department of the Interior



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

In Reply Refer To:  
Project Code: 2022-0012742  
Project Name: Frankestown, #42837

June 02, 2022

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

To Whom It May Concern:

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

## **About Official Species Lists**

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

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

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

## **Endangered Species Act Project Review**

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

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

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

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

**Northern Long-eared Bat Update** - Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

#### *Additional Info About Section 7 of the Act*

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

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

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

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

---

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

### **Migratory Birds**

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

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

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

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

Attachment(s): Official Species List

Attachment(s):

- Official Species List
-

## **Official Species List**

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

This species list is provided by:

### **New England Ecological Services Field Office**

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

---



## Project Summary

Project Code: 2022-0012742

Event Code: None

Project Name: Francestown, #42837

Project Type: Bridge - Maintenance

Project Description: Bridge maintenance activities to bridge 139/102 which carries NH-136 over Whiting Brook. Work will include repointing of existing stone abutments, resetting existing stone wing walls and toe wall installation.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.989429900000005,-71.77794026640805,14z>



Counties: Hillsborough County, New Hampshire

---

## Endangered Species Act Species

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

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

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

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

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

### Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

### Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

### Critical habitats

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

---

## **IPaC User Contact Information**

Agency: New Hampshire Department of Transportation

Name: Arin Mills

Address: 7 Hazen Drive

City: Concord

State: NH

Zip: 03302

Email: arin.j.mills@dot.nh.gov

Phone: 6032710187

---



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104  
<http://www.fws.gov/newengland>

In Reply Refer To:  
Project code: 2022-0012742  
Project Name: Frankestown, #42837

February 25, 2022

Subject: Consistency letter for the 'Frankestown, #42837' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Arin Mills:

The U.S. Fish and Wildlife Service (Service) received on February 25, 2022 your effects determination for the 'Frankestown, #42837' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause “take”<sup>[1]</sup> of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

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

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

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

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

- Monarch Butterfly *Danaus plexippus* Candidate

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

---

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

---



## Action Description

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

### 1. Name

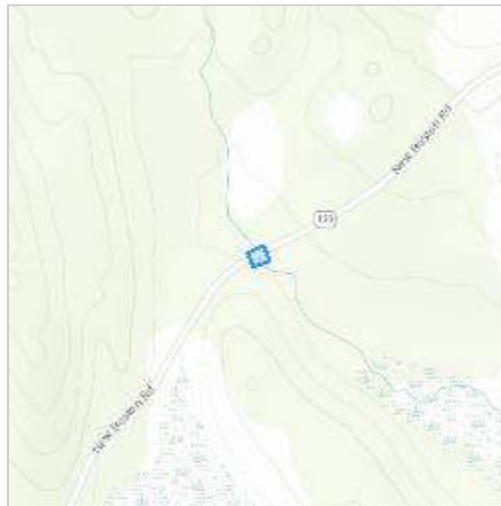
Francestown, #42837

### 2. Description

The following description was provided for the project 'Francestown, #42837':

Bridge maintenance activities to bridge 139/102 which carries NH-136 over Whiting Brook. Work will include installation of toe walls rip rap and sub structure maintenance.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.989429900000005,-71.77794026640805,14z>



## Determination Key Result

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

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

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

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

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

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

---

## Determination Key Result

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

## Qualification Interview

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

*No*

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

*No*

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

**Automatically answered**

*No*

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

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

*Yes*

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

*No*

6. Will the action involve Tree Removal?

*Yes*

7. Will the action only remove hazardous trees for the protection of human life or property?

*No*

8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

*No*

---

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

*No*

---

## Project Questionnaire

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

1. Estimated total acres of forest conversion:

.1

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

.1

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

.1

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

4. Estimated total acres of timber harvest

0

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

0

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

0

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

7. Estimated total acres of prescribed fire

0

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

0

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

0

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

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

0

---

## **IPaC User Contact Information**

Name: Arin Mills  
Address: 7 Hazen Drive  
City: Concord  
State: NH  
Zip: 03302  
Email: arin.j.mills@dot.nh.gov  
Phone: 6032710187

---

**Section 106 Programmatic Agreement – Cultural Resources Review Effect Finding**

**Appendix B Certification – Activities with Minimal Potential to Cause Effects**

**Date Reviewed:** 2/3/2022  
(Desktop or Field Review Date)

This Project uses only State funding; however project activities listed below comply with the PA.

**Project Name:** Francestown

**State Number:** 42837

**FHWA Number:** [Click here to enter text.](#)

**Environmental Contact:**

**Email Address:** Arin Mills

**DOT**

**Project Manager:** Steve Johnson

**Project Description:** State bridge maintenance project to repair bridge 139/102 which carries NH 136 (New Boston Rd) over Whiting Brook. Proposed work includes installation of toe wall and rip rap as well as maintenance to the sub structure.

Please select the applicable activity/activities:

Highway and Roadway Improvements	
<input type="checkbox"/>	1. Modernization and general highway maintenance <b>that may require additional highway right-of-way or easement</b> , including: Choose an item. Choose an item.
<input type="checkbox"/>	2. Installation of rumble strips or rumble stripes
<input type="checkbox"/>	3. Installation or replacement of pole-mounted signs
<input type="checkbox"/>	4. Guardrail replacement, provided any extension does not connect to a bridge older than 50 years old (unless it does already), and there is no change in access associated with the extension
Bridge and Culvert Improvements	
<input type="checkbox"/>	5. Culvert replacement (excluding stone box culverts), when the culvert is less than 60" in diameter and excavation for replacement is limited to previously disturbed areas
<input checked="" type="checkbox"/>	6. Bridge deck preservation and replacement, as long as no character defining features are impacted
<input checked="" type="checkbox"/>	7. Non-historic bridge and culvert maintenance, renovation, or total replacement, <b>that may require minor additional right-of-way or easement</b> , including: a. replacement or maintenance of non-historic bridges Choose an item.
<input type="checkbox"/>	8. Historic bridge maintenance activities within the limits of existing right-of-way, including: Choose an item. Choose an item.
<input checked="" type="checkbox"/>	9. Stream and/or slope stabilization and restoration activities (including removal of debris or sediment obstructing the natural waterway, or any non-invasive action to restore natural conditions)
Bicycle and Pedestrian Improvements	
<input type="checkbox"/>	10. Construction of pedestrian walkways, sidewalks, sidewalk tip-downs, small passenger shelters, and alterations to facilities or vehicles in order to make them accessible for elderly and handicapped persons
<input type="checkbox"/>	11. Installation of bicycle racks
<input type="checkbox"/>	12. Recreational trail construction
<input type="checkbox"/>	13. Recreational trail maintenance when done on existing alignment
<input type="checkbox"/>	14. Construction of bicycle lanes and shared use paths and facilities within the existing right-of-way
Railroad Improvements	
<input type="checkbox"/>	15. Modernization, maintenance, and safety improvements of railroad facilities within the existing railroad or highway right-of-way, <b>provided no historic railroad features are impacted</b> , including, but not limited to: Choose an item.



**Section 106 Programmatic Agreement – Cultural Resources Review Effect Finding**

**Appendix B Certification – Activities with Minimal Potential to Cause Effects**

	Choose an item.
<input type="checkbox"/>	16. In-kind replacement of modern railroad features (i.e. those features that are less than 50 years old)
<input type="checkbox"/>	17. Modernization/modification of railroad/roadway crossings provided that all work is undertaken within the limits of the roadway structure (edge of roadway fill to edge of roadway fill) and no associated character defining features are impacted
<b>Other Improvements</b>	
<input type="checkbox"/>	18. Installation of Intelligent Transportation Systems
<input type="checkbox"/>	19. Acquisition or renewal of scenic, conservation, habitat, or other land preservation easements where no construction will occur
<input type="checkbox"/>	20. Rehabilitation or replacement of existing storm drains.
<input type="checkbox"/>	21. Maintenance of stormwater treatment features and related infrastructure

Please describe how this project is applicable under Appendix B of the Programmatic Agreement.


Appendix B activities with minimal potential to cause effect. 1946 concrete slab bridge complies with Post-1945 program Comment, and is not eligible for the National Register.

*Please submit this Certification Form along with the Transportation RPR, including photographs, USGS maps, design plans and as-built plans, if available, for review. Note: The RPR can be waived for in-house projects, please consult Cultural Resources Program Staff.*

Coordination Efforts:

Has an RPR been submitted to NHDOT for this project?	No	NHDHR R&C # assigned?	<a href="#">Click here to enter text.</a>
Please identify public outreach effort contacts; method of outreach and date:	<u>This is a bridge maintenance project, and on February 3, 2022 initial contact letters were sent to the town, various commissions, selectmen, planning commission, etc.</u>		

Finding: (To be filled out by NHDOT Cultural Resources Staff )

<input checked="" type="checkbox"/>	<b>No Potential to Cause Effects</b>	<input type="checkbox"/>	<b>No Historic Properties Affected</b>
This finding serves as the Section 106 Memorandum of Effect. No further coordination is necessary.			
<input type="checkbox"/>	<b>This project does not comply with Appendix B. Review will continue under Stipulation VII of the Programmatic Agreement. Please contact NHDOT Cultural Resources Staff to determine next steps.</b>		
NHDOT comments:		2/3/2022	
			
_____ NHDOT Cultural Resources Staff		_____ Date	

Coordination of the Section 106 process should begin as early as possible in the planning phase of the project (undertaking) so as not to cause a delay.

Project sponsors should not predetermine a Section 106 finding under the assumption a project is limited to the activities listed in Appendix B until this form is signed by the NHDOT Bureau of Environment Cultural Resources Program staff.

## Section 106 Programmatic Agreement – Cultural Resources Review Effect Finding

### **Appendix B Certification – Activities with Minimal Potential to Cause Effects**

Every project shall be coordinated with, and reviewed by the NHDOT-BOE Cultural Resources Program in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the New Hampshire State Historic Preservation Office, the Army Corps of Engineers, New England District, the Advisory Council on Historic Preservation, and the New Hampshire Department of Transportation Regarding the Federal Aid Highway Program in New Hampshire*. In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.

NHDOT and the State Historic Preservation Office may use provisions of the Programmatic Agreement to address the applicable requirements of NH RSA 227-C:9 in the location, identification, evaluation and management of historic resources, for projects funded by State funds.

If any portion of the project is not entirely limited to any one or a combination of the activities specified in Appendix B (with, or without the inclusion of any activities listed in Appendix A), please continue discussions with NHDOT Cultural Resources staff.

**This No Potential to Cause Effect or No Historic Properties Affected project determination is your Section 106 finding, as defined in the Programmatic Agreement.**

Should project plans change, please inform the NHDOT Cultural Resources staff in accordance with Stipulation VII of the Programmatic Agreement.

### NHDOT BOE Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the proposed project for potential impacts to historic properties.

Proposed Project: (in mats file under Bridge Maintenance 40825)

State bridge maintenance project to repair bridge 139/102 which carries NH 136 (New Boston Rd) over Whiting Brook. Proposed work includes installation of toe wall and rip rap as well as maintenance to the sub structure.

#### Fracestown, Project #42837



**Legend**  
 ★ Project Location

Map depicting location of bridge 139/102 which carries NH-136 over Whiting Brook  
 Map created by Ann Mills on 1/25/2022

0 0.25 0.5 Miles  
 1:24,000  
**New Hampshire**  
**DOT**  
 Department of Transportation



Fracestown, Project #42837



**Legend**

- ★ Project Location
- State Routes
- Stream Centerlines
- Perennial Stream
- Intermittent Stream

Map depicting location of bridge 139/102 which carries NH-136 over Whiting Brook  
Map created by Arin Mills on 1/25/2022

**New Hampshire DOT**  
Department of Transportation

Scale: 1:3,000 Feet

1953 USGS Topographic Quadrangle



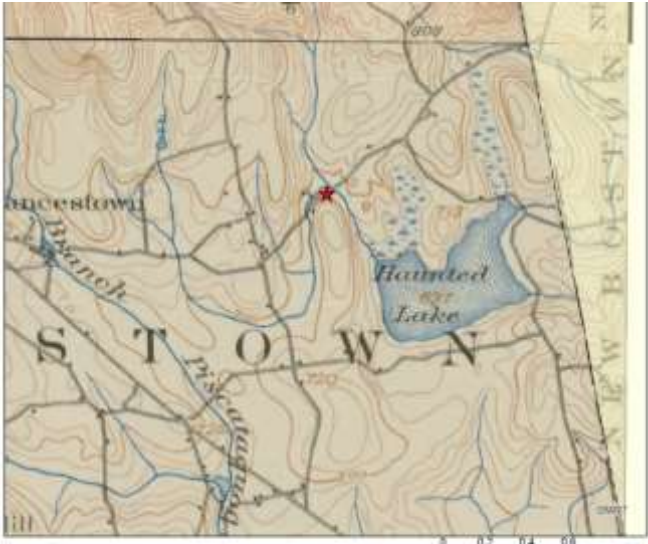
★ Project Location

Map depicting location of bridge 139/102 which carries NH-136 over Whiting Brook  
Map created by Arin Mills on 2/2/2022

**New Hampshire DOT**

Scale: 1:24,000 Miles

1900 USGS



★ Project Location

Map depicting location of bridge 139/102 which carries NH-136 over Whiting Brook  
Map created by Arin Mills on 2/2/2022

**New Hampshire DOT**  
Department of Transportation

Scale: 1:24,000 Miles



2016 photo



HBI photos



**Above Ground Review**

Concrete slab bridge (139/102) constructed in 1946; Railings have been replaced but the integrity of design remains to 1946. The abutments may predate this superstructure.

The HBI (2/3/2022) also notes the bridge:

**Applies to Post 1945 Program Comment, and is not eligible for the National Register of Historic Places**

EMMIT review was conducted on 2/3/2022. There are no individually inventoried properties or historic districts within or adjacent to the project area.

**No Potential to Cause Effect/No Concerns**

Concerns:

**Below Ground Review**

Recorded Archaeological site:  Yes  No

Nearest Recorded Archaeological Site Name & Number: 27-HB-0091 Indian Rock site, New Boston  
 Pre-Contact  Post-Contact

Distance from Project Area: 20,690 ft east of the project area

**No Potential to Cause Effect/No Concerns**

Based in the proposed activities and setting of the concrete slab bridge, archaeological potential is low.

Concerns:

Reviewed by:

2/3/2022



NHDOT Cultural Resources Staff

Date:

**HBI****Francestown : 139/102**

Bridge ID	139/102
Structure Number	008601390010200
SRI	S0000136__
Town	Francestown
Year Built (Historic)	1946
Bridge Type (Historic)	Concrete Slab
Bridge Type	CS
Bridge Type Description	Concrete Slab



Superstructure Material, Main Span	Reinforced Concrete
Secondary Span Type	
# of Main Spans	1
# of Approach Spans	0
Physical Description	
Moved?	No
Post-1945 Exempt Bridge Type	Yes
Interstate Exempt	No
Currently NR Listed or Eligible	No
Date and Source of Eligibility Decision	
NHDHR Inventory #	
Setting	Rural Highway
Is Known Potential Historic District	No
Historic District Name	
Historic District Status	
Historic District Comment	
Engineer/Builder	New Hampshire State Highway Department
Source of Date/Engineer/Builder	Card
Comparative Evaluation	
Integrity	Yes
Summary Statement of Integrity	Railings have been replaced but the integrity of design remains to 1946. The abutments may predate this superstructure.
Historically Significant	No
Summary Statement of Significance	
Period of Significance	
Boundary Discussion	
Individual Eligibility Evaluation	Post 1945 Program Comment
Updated NBI Historic Status	5-Bridge is not eligible for the National Register of Historic Places
NR Criteria	
Current Photographs Needed	No
NHDOT Concurrence	
NHDHR Concurrence	
FHWA Concurrence	
Agency Review Comments	
Field Comments	

## Attachments:

- [D090-079.jpg](#)
- [D090-078.jpg](#)



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

**New Hampshire General Permits (GPs)  
Appendix B - Corps Secondary Impacts Checklist  
(for inland wetland/waterway fill projects in New Hampshire)**

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to “work” include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See <a href="http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm">http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm</a> to determine if there is an impaired water in the vicinity of your work area.*	<b>X</b>	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	<b>X</b>	
2.2 Are there proposed impacts to SAS, special wetlands. Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> . The book <a href="#">Natural Community Systems of New Hampshire</a> also contains specific information about the natural communities found in NH.		<b>X</b>
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	<b>X</b>	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		<b>X</b>
2.5 The overall project site is more than 40 acres?		<b>X</b>
2.6 What is the area of the previously filled wetlands?		
2.7 What is the area of the proposed fill in wetlands?		
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?		
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> USFWS IPAC website: <a href="https://ecos.fws.gov/ipac/location/index">https://ecos.fws.gov/ipac/location/index</a>		<b>X</b>

3.2 Would work occur in any area identified as either “Highest Ranked Habitat in N.H.” or “Highest Ranked Habitat in Ecological Region”? (These areas are colored magenta and green, respectively, on NH Fish and Game’s map, “2010 Highest Ranked Wildlife Habitat by Ecological Condition.”) Map information can be found at: <ul style="list-style-type: none"> <li>• PDF: <a href="http://www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm">www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm</a>.</li> <li>• Data Mapper: <a href="http://www.granit.unh.edu">www.granit.unh.edu</a>.</li> <li>• GIS: <a href="http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html">www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</a>.</li> </ul>		<b>X</b>
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		<b>X</b>
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		<b>X</b>
3.5 Are stream crossings designed in accordance with the GC 21?	<b>X</b>	
<b>4. Flooding/Floodplain Values</b>	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		<b>X</b>
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		
<b>5. Historic/Archaeological Resources</b>		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form ( <a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a> ) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document**	<b>X</b>	

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

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

**1.1: Whiting Brook impaired for pH. Haunted Lake impaired for Chlorophyll-a, Non-Native Aquatic Plants, Total Phosphorus, pH.**

**2.2: NHB22-0378- no species present. NLEB 4(d) Consistency letter.**

**5: Complies with Post-1945 program comment and not eligible for National Historic Register**





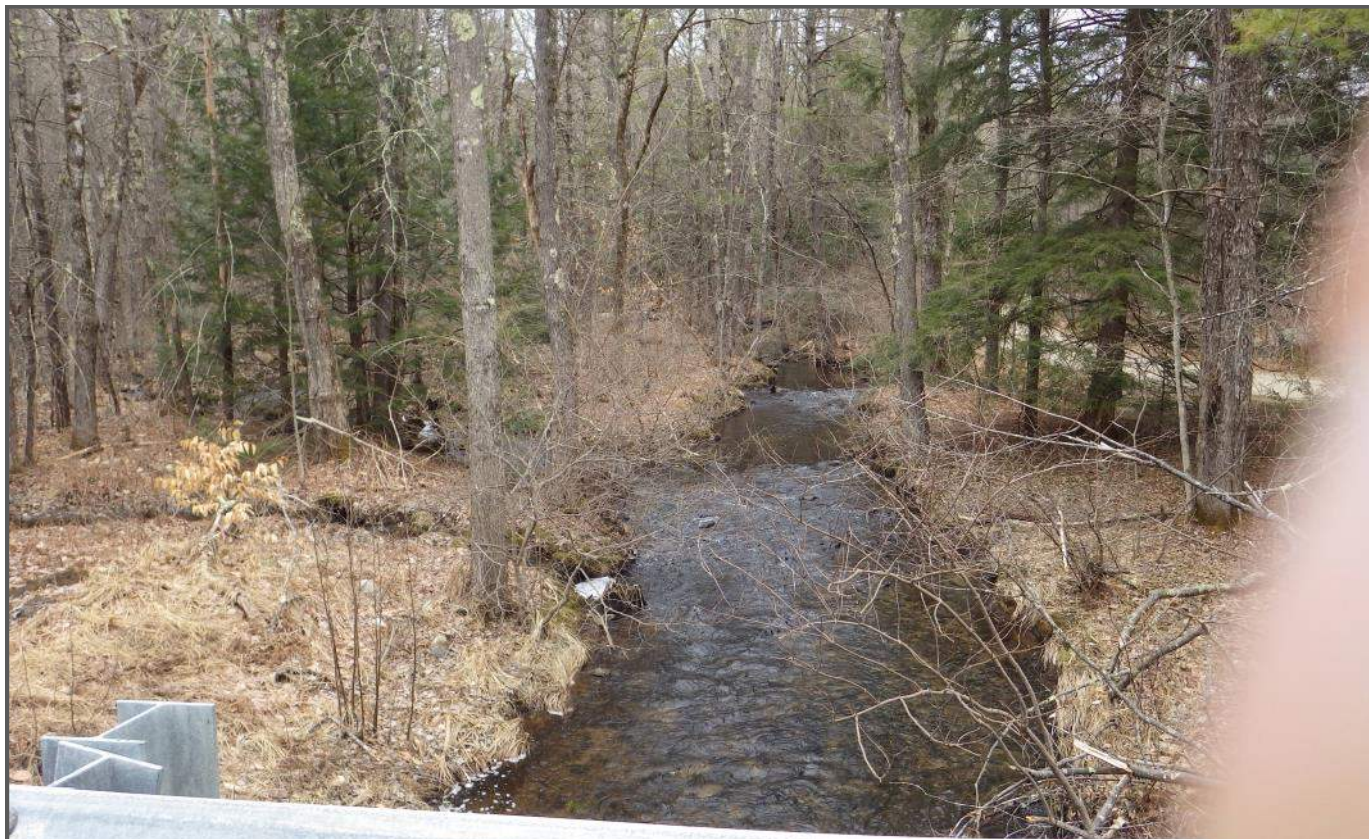
**Photo 1:** Looking Northeast Down NH 136



**Photo 2:** Looking Southwest Down NH 136



## FRANCESTOWN, Project #42837



**Photo 3:** Looking Northwest (Upstream) From NH 136



**Photo 4:** Looking Southeast (Downstream) at Inlet



**FRANCESTOWN, Project #42837**



**Photo 7:** Looking Southeast (Downstream) From NH 136



**Photo 8:** Looking Northwest (Upstream) at Outlet



## **CONSTRUCTION SEQUENCE**

Work is anticipated to take approximately 6 months to complete and is currently proposed to be done during winter 2022. Work will include repointing the existing stone abutments, resetting the existing stone wingwalls where needed, and installing a concrete toe wall along both abutments.

1. Perimeter controls will be put in place prior to earth disturbing activities.
2. A sediment basin will be placed at the appropriate location noted on the erosion control plan.
3. A sandbag cofferdam will be put in place along one of the abutments
4. The existing stone abutment encompassed by the sandbag cofferdam will be repointed.
5. A concrete toe wall will be installed along the entire length of the abutment, the toe wall will be installed beneath the existing stream bed to protect the base of the existing stone abutments from future scour.
6. Any errant stones within the adjoining wingwalls will be reset.
7. The sandbag cofferdam will be swapped to encompass the opposing abutment.
8. Steps 4 through 6 will be repeated for the opposing side of the structure.
9. Upon completion of stream work, the sandbag cofferdams will be removed.
10. Erosion control barrier will remain in place until slopes are stabilized by vegetation

### Notes:

- A. See the included Erosion Control Plans for additional details and the location of temporary erosion control measures.
- B. The Project will utilize BMP's from the Best Management Practices manual during all phases of construction.
- C. Dewatering System Details per Env-WT 903.03

The following information about the dewatering system proposed to be used:

- (1) Estimated maximum flow anticipated during construction;

**During the proposed time of construction, we anticipate a maximum flow of 100 CFS based on the inlet conditions. The two-year storm event is calculated as 170 CFS.**

- (2) The location, height, and width of the diversion dam;

**Sandbag cofferdams will be located as shown on the plans during the invert removal, toe wall repair and rip rap repair work. We anticipate a maximum height of 3.5' and maximum width of 4'. This anticipated height of cofferdam and available width will pass the two-year storm event.**

- (3) The location and capacity of each sump; and

**Potential sumps will be located just inside the work area. They will be large enough to accommodate up to a 3" pump per sump discharging into the detention basin.**

- (4) Backwater prevention method;

New Hampshire Department of Transportation  
Bureau of Bridge Maintenance

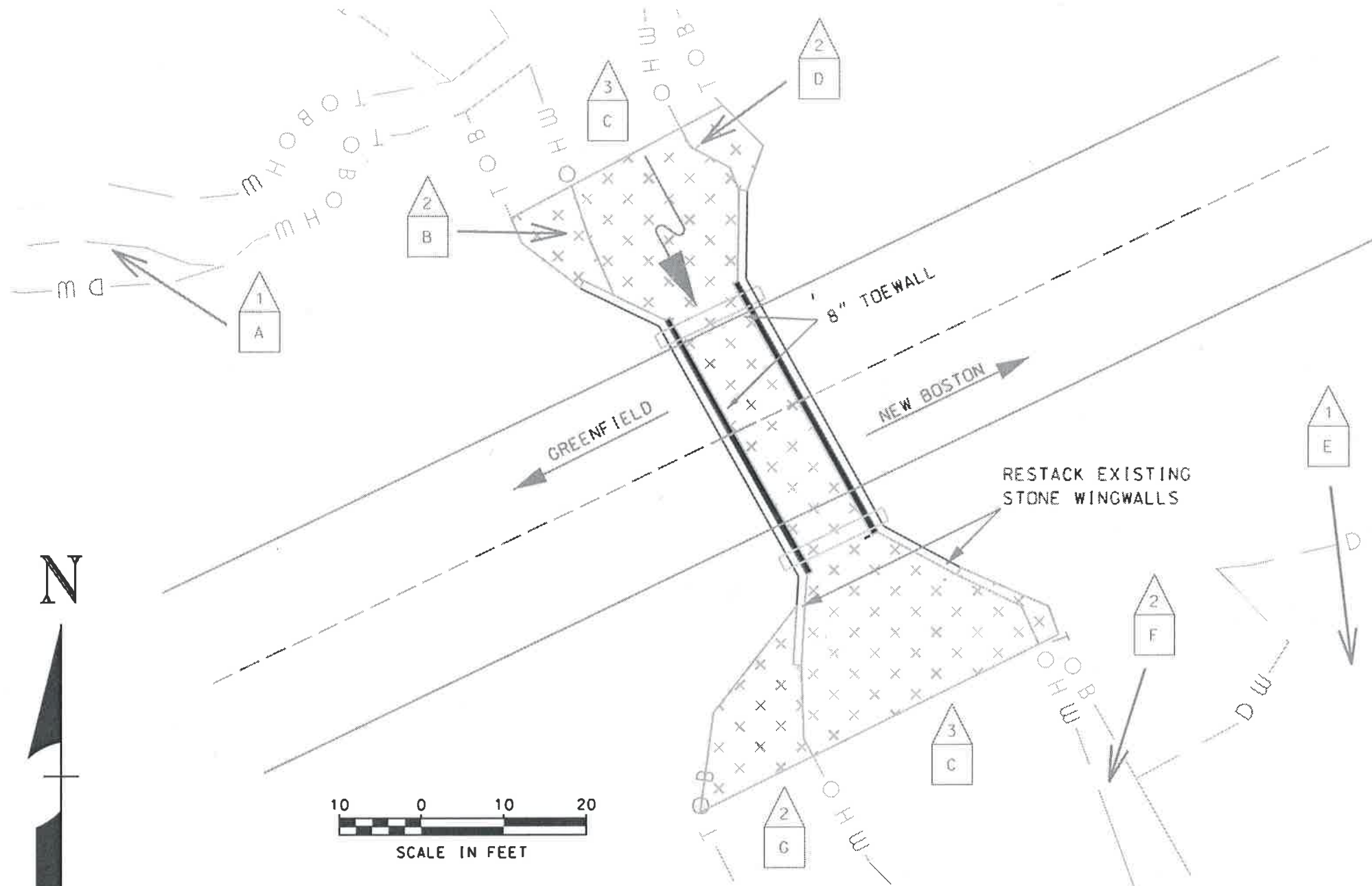
Project # 42837, Bridge # 139/102  
Francestown, NH Rte.136 over Whiting Brook

**Sandbag cofferdams will surround the work area to prevent any backwatering.**

LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
TEMPORARY IMPACTS	

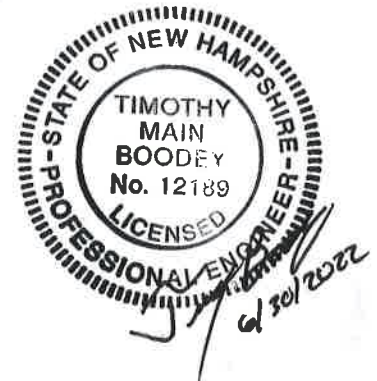
- WETLAND DESIGNATION NUMBER
- WETLAND IMPACT LOCATION



RIPRAP GRADATION  
 D15 < 21"  
 D50 < 27.5"  
 D100 < 37"  
 NOMINAL DIAMETER 24"

WETLAND CLASSIFICATION CODES	
PFO1E	PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED/SATURATED
BANK	BANK
R2UB1	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE-GRAVEL

- NOTE:
- 1) WETLANDS DELINEATED BY SARAH LARGE ON 10/25/2019 WETLANDS WERE DELINEATED IN ACCORDANCE WITH ENV-WT 406
  - 2) ALL WORK WILL BE DONE WITHIN STATE ROW

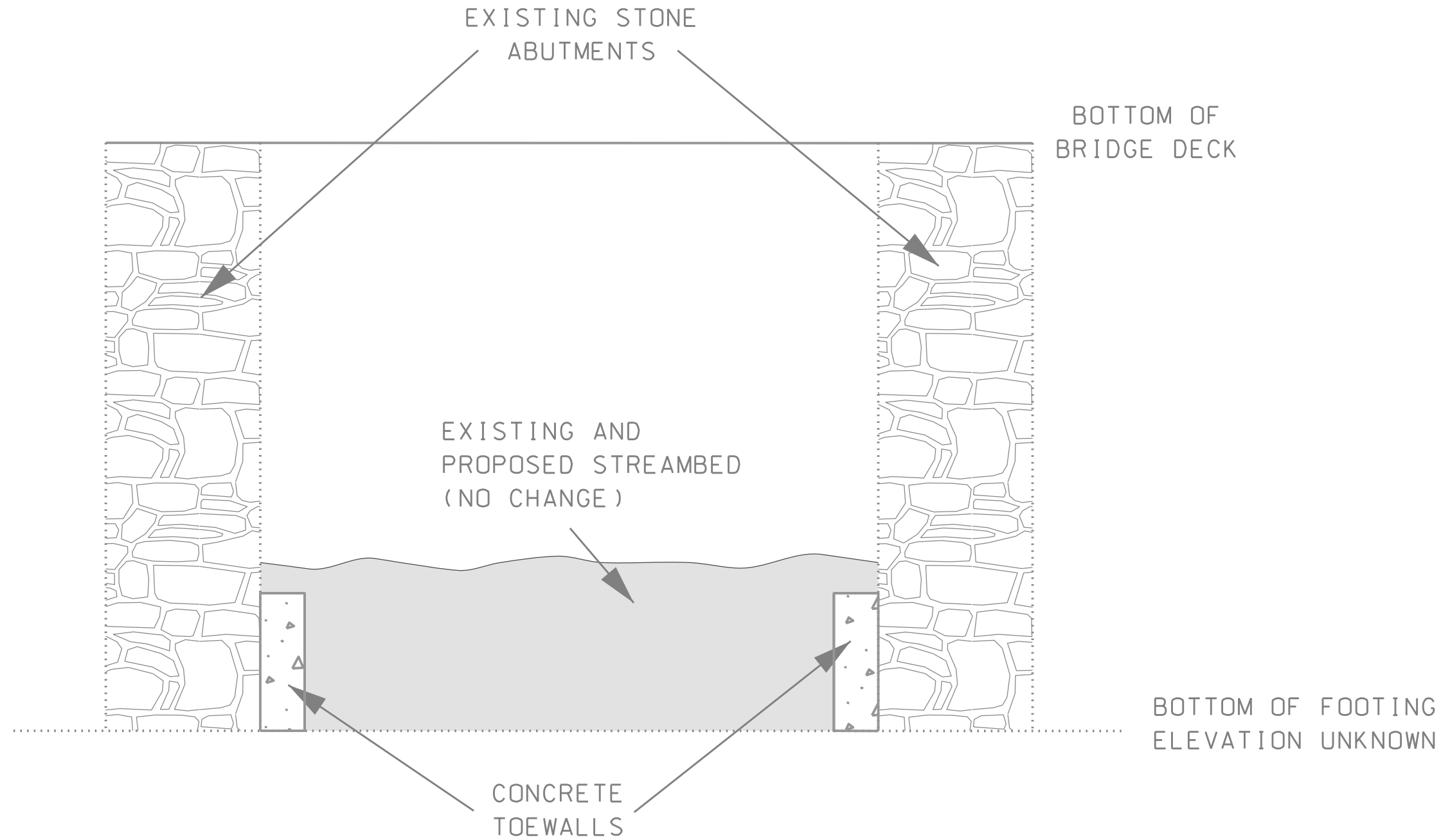


WETLAND IMPACTS  
 SCALE: 1/16"=1'



STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	FRANCISTOWN	BRIDGE NO.	139-100	STATE PROJECT	42537				
LOCATION NH136 OVER WHITING BROOK									
WETLAND IMPACTS									
REVISIONS AFTER APPROVAL		BY	DATE	CHECKED	BY	DATE	BRIDGE SHEET		
		DESIGNED		CHECKED			1 OF 8		
		DRAWN	JPJ 4/22	CHECKED			FILE NUMBER		
		QUANTITIES	JPJ 4/22	CHECKED			FRANCISTOWN		
		ISSUE DATE					139102		
		REV. DATE					TOTAL SHEETS		
SHEET SCALE		FISCAL YEAR		CRW	SHEET NO.	TOTAL SHEETS			
AS NOTED		2023		14	1	8			





PROPOSED CHANNEL CROSS SECTION

1/2" = 1'

**NOTE:**

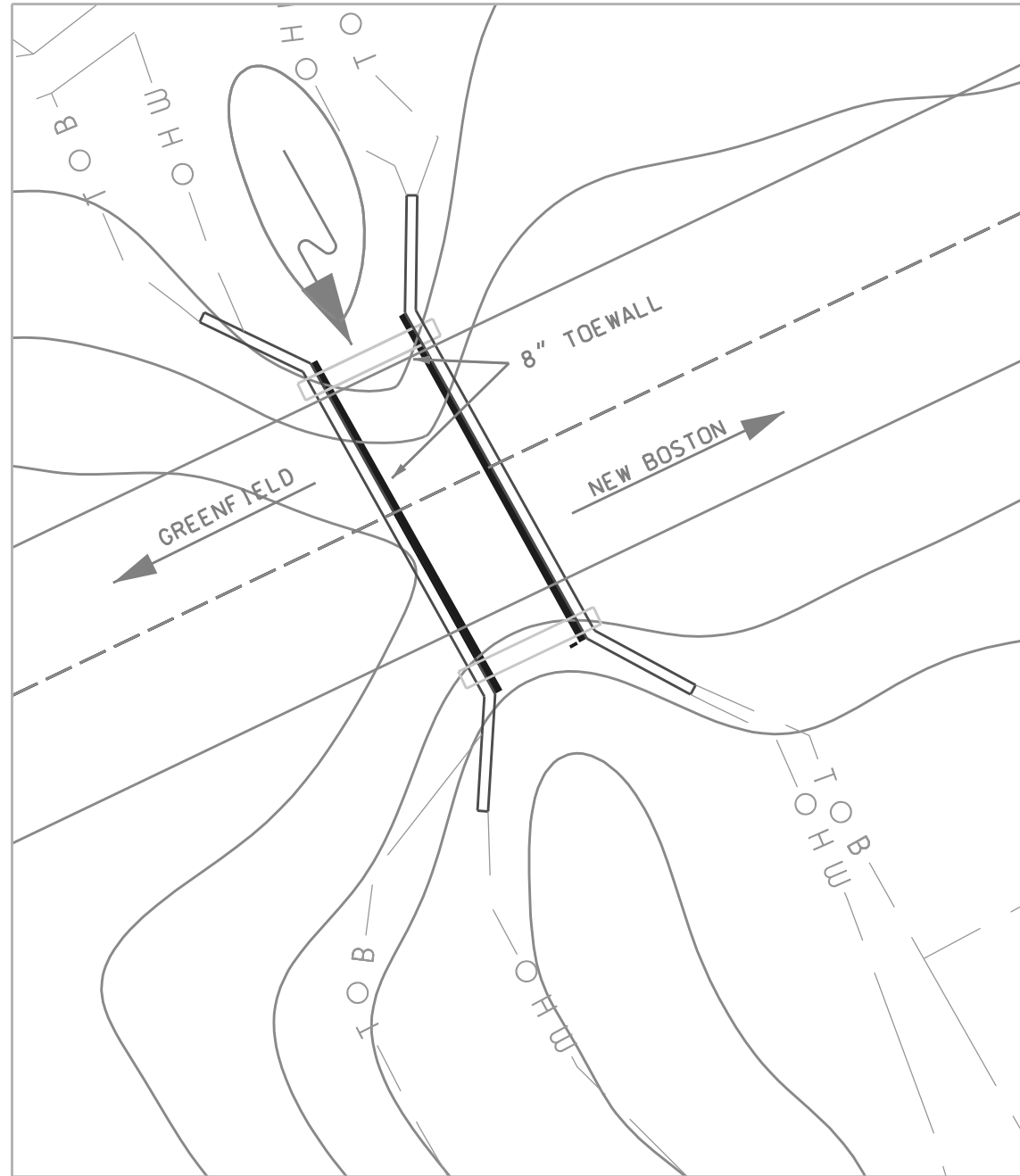
- 1) PROPOSED TOE WALLS WILL BE COVERED BY EXISTING STREAMBED MATERIAL

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	FRANCETOWN	BRIDGE NO.	139-102	STATE PROJECT	42837				
LOCATION NH136 OVER WHITING BROOK									
PROPOSED CHANNEL CROSS SECTIONS									
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	BY	DATE	BRIDGE SHEET	1 OF X	
	DESIGNED			CHECKED			FILE NUMBER	FRANCETOWN	
	DRAWN	JPJ	4/22	CHECKED			139/102		
	QUANTITIES	JPJ	4/22	CHECKED			TOTAL SHEETS	X	
SHEET SCALE		ISSUE DATE		FISCAL YEAR	2023	CREW	14	SHEET NO.	1
AS NOTED		REV. DATE							

SHEET SCALE  
AS NOTED

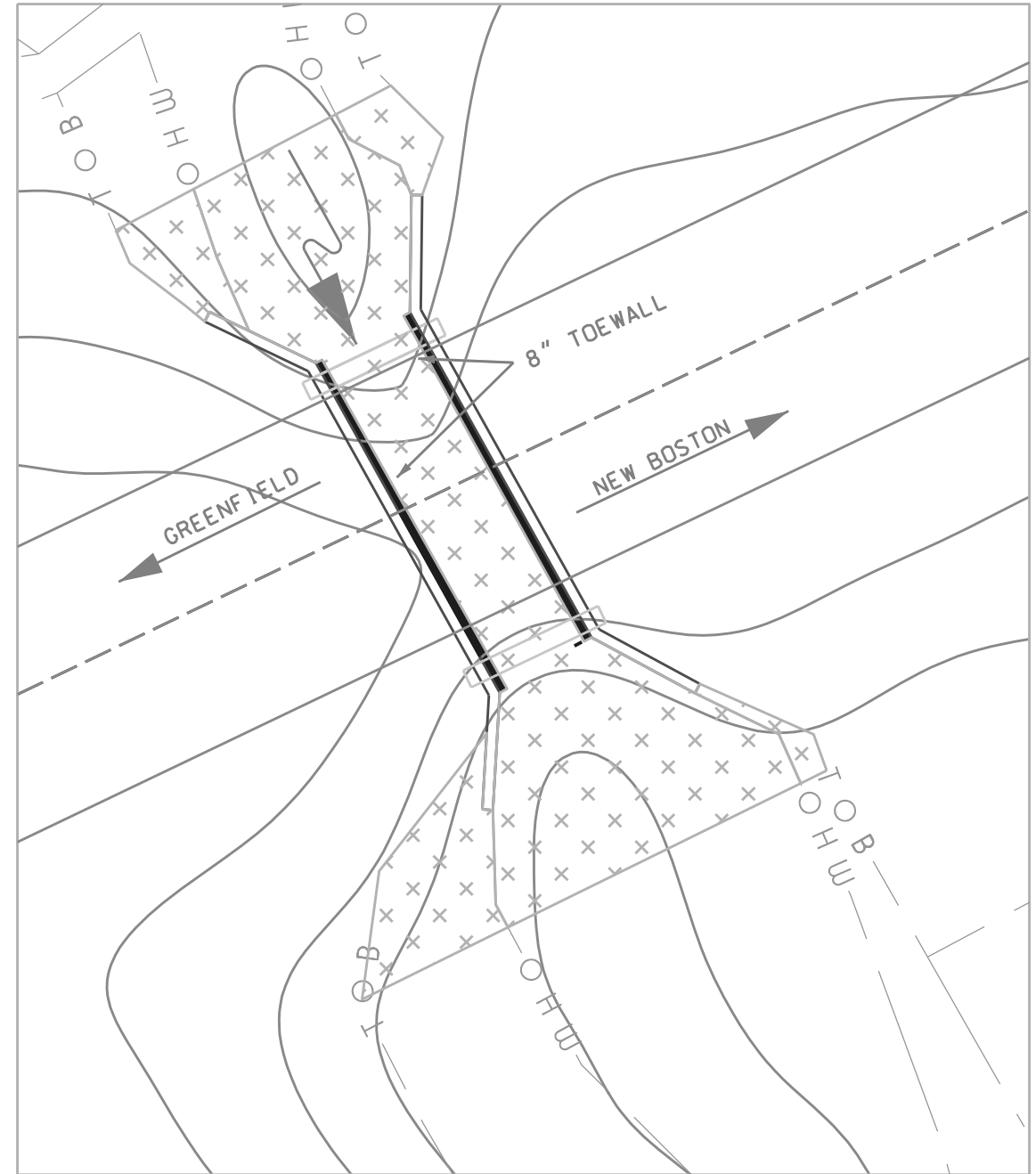






PRE CONSTRUCTION CONTOURS

SCALE: 1/16"=1'



POST CONSTRUCTION CONTOURS

SCALE: 1/16"=1'

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	FRANCESTOWN	BRIDGE NO.	139-102	STATE PROJECT	42837				
LOCATION NH136 OVER WHITING BROOK									
<b>2 FT CONTOURS</b>									
REVISIONS AFTER PROPOSAL		DESIGNED	BY	DATE	CHECKED	BY	DATE	BRIDGE SHEET	
		DRAWN	JPJ	4/22	CHECKED			X OF X	
		QUANTITIES	JPJ	4/22	CHECKED			FILE NUMBER	
		ISSUE DATE						FRANCESTOWN	
		REV. DATE						139/102	
SHEET SCALE	AS NOTED	ISSUE DATE		FISCAL YEAR	2023	CREW	14	SHEET NO.	X
		REV. DATE						TOTAL SHEETS	X

## **Fracestown, Project #42837**

June 1, 2022

A letter from the NH Department of Transportation was sent to the Town of Fracestown, to include the Conservation Commission, on February 3, 2022. The Conservation Commission responded via a letter on April 6, 2022 (attached). No additional coordination was warranted based on design and comments received.

Arin Mills  
Bureau of Environment  
NHDOT

*Fracestown Conservation Commission*  
*PO Box 5*  
*Fracestown NH, 03043*

April 6, 2022

Arin Mills  
Senior Environmental Manager  
NH Dept. of Transportation  
Bureau of Environment  
Arin.j.mills@dot.nh.gov

Re: Fracestown Bridge Maintenance Project, #42837

Dear Mr. Mills,

The Fracestown Conservation Commission received a copy of your letter sent to the Selectmen regarding the above referenced project. This letter is in response to your questions included in that letter.

- 1) The Town has a Top 10 Priority List for mitigation efforts. I am attaching a copy of that list.
- 2) There are no existing or proposed community or regional plans that we are aware of that might have a bearing on this project.
- 3) There are significant natural resources in the vicinity of this proposed project: The entire Whiting Brook corridor is identified on NH Fish & Games Wildlife Action Plan maps as highest ranked habitat in the state; and a significant wetland complex downstream of the project is included within that corridor. Additionally, the area immediately downstream of the project is identified in the Town's Conservation Plan as a conservation focus area.
- 4) Near the upstream side of this culvert is an area that includes a portion of an old road, old foundations, stone culverts and stone walls, though as far as we know this area has not been identified in any official way as an area of historic significance.
- 5) There is conservation land a little ways downstream of the project, the area is under conservation easement held by the Town of Fracestown, this area includes the wetland complex mentioned above in #3.
- 6) The significant water resources in this area include: Whiting Brook itself, as the major tributary to Scoby Pond (aka Haunted Lake); the project area is over a low transmissivity aquifer.
- 7) Major water quality concerns: Scoby Pond (aka Haunted Lake) is identified as an impaired water body; as Whiting Brook is the major tributary to this pond, storm water management is of concern.
- 8) We are not aware of any existing or potential hazardous materials in the area.
- 9) We do not have any environmental concerns not previously mentioned.
- 10) We are not sure about any potential significant effects upon the surrounding area.

*Fracestown Conservation Commission*  
*PO Box 5*  
*Fracestown NH, 03043*

11) We are not sure what invasive species are in the exact area of the project, but do know that Japanese knotweed and glossy buckthorn are prevalent in the general area.

Thank you for providing us the opportunity to provide input. We look forward to finding out more about the specifics of the project in the future.

Sincerely,

Betsy Hardwick, Chair  
Fracestown Conservation Commission

May 6, 2019  
Fracestown Conservation Commission  
Fracestown NH

**Priority List for NH DES/ARM Projects**

- 1) Protect watersheds and stream corridors/enhance buffers – see page 27 of the 2013 Conservation Plan
- 2) Protect parcels within floodplains and/or that contain wetlands, vernal pools
- 3) Culvert replacement to improve Aquatic Organism Passage and reduce flood risk ( see culvert assessment report/2012 Piscataquog Stream Crossing Report, Southern NH Planning Commission)
- 4) Improve storm water management to maintain water quality/ mitigate potential flood risk
- 5) Improve/protect buffers along all water bodies
- 6) Protect open fields and farmland throughout town, with focus to improve wetland and stream buffers
- 7) Protect parcels within large blocks of undeveloped woodlands, forested hills and ridges (especially within large unfragmented areas identified on page 28-29 of the 2013 Conservation Plan)
- 8) Protect parcels overlaying stratified drift aquifers and bedrock aquifers serving both public and private wells
- 9) Protect parcels adjacent to existing conservation lands and/or in Tier 1 WAP map locations.
- 10) Manage/respond to invasive species threats