STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

DATE: July 15, 2022

FROM: Joshua Brown
Wetlands Program Analyst

AT (OFFICE): Department of Transportation
Bureau of Environment

SUBJECT Dredge & Fill Application
Colebrook, 43899

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. The project is located along Diamond Pond Road in the Town of Colebrook, NH. The proposed work includes installation of a toe wall at the southern abutment and the addition of riprap at the southern abutment to protect against continued scour for the protection of existing infrastructure. Work also includes dredging accumulated material so that hydraulic capacity can be maintained after the riprap is installed.

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 for the protection of existing infrastructure.

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 #688778) in the amount of $400.00.

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 Colebrook (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)
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)

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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: NHDOT **TOWN NAME:** Colebrook

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

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

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2)) Please use the Wetland Permit Planning Tool (WPPT), the Natural Heritage Bureau (NHB) DataCheck Tool, the Aquatic Restoration Mapper, or other sources to assist in identifying key features such as: priority resource areas (PRAs), protected species or habitats, coastal areas, designated rivers, or designated prime wetlands.	
Has the required planning been completed?	☒ Yes ☐ No
Does the property contain a PRA? If yes, provide the following information:	☒ Yes ☐ No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	☐ Yes ☒ No
• Protected species or habitat? o If yes, species or habitat name(s): o NHB Project ID #: NHB22-1144	☐ Yes ☒ No
• Bog?	☐ Yes ☒ No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	☒ Yes ☐ No
• Designated prime wetland or duly-established 100-foot buffer?	☐ Yes ☒ No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	☐ Yes ☒ No
Is the property within a Designated River corridor? If yes, provide the following information: • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year:	☐ Yes ☒ No

For dredging projects, is the subject property contaminated? • If yes, list contaminant:	☐ Yes ☐ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	☐ Yes ☒ No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): 979 acres	

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

Provide a **brief** description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.

The proposed project is a State funded bridge maintenance project located at Br. No. 184/085 which carries Diamond Pond Road over an unnamed perennial stream in Colebrook. The existing structure is a single span 8' high x 15' wide x 23' long concrete slab bridge supported on concrete abutments with wingwalls. The southern abutment is undermined due to the flow being naturally directed to that side. The proposed work inlcudes toe wall installation at the south abutment to address scour, rip rap installation in front of the south abutment for infrastructure protection, and repositioning of built up material within the channel. The repositioning of built up material within the channel, depicted as permanent impacts on the plans, will include: moving some of the material that meets gradiation on top of the proposed rip rap at the south abutment and; removing some of the material and placing it outside of jurusdictional areas. Repositioning some of the material from the channel to the south abutment will move the thalweg of the stream towards the middle of the stream and away from the southern abutment. Removing some of the materail and placing it outside the jurisdictional area will allow for the existing hydraulics will be maintianed. Minor tree cutting will also be included. All proposed work will remain within the State right-of-way. There will be no impacts to the house located at the northwest quadrant of the bridge.

Permanent impacts (325 SF) are for toe wall, rip rap installation, and moving/removing stream bed material. Temporary impacts (493 SF) are for access, installation of sandbag cofferdams, installation of clean water bypass, and BMP's.

SECTION 3 - PROJECT LOCATION

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

ADDRESS: Diamond Pond Road	
TOWN/CITY: Colebrook	
TAX MAP/BLOCK/LOT/UNIT: NH DOT ROW	
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: unnamed perennial stream ☐ N/A	
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places):	44.887075° North -71.359807° West

SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a)) If the applicant is a trust or a company, then complete with the trust or company information.		
NAME: NH Department of Transportation		
MAILING ADDRESS: PO Box 483		
TOWN/CITY: Concord	STATE: NH	ZIP CODE: 03303
EMAIL ADDRESS: timothy.m.boodey@dot.nh.gov		
FAX:	PHONE: 603-271-3667	
ELECTRONIC COMMUNICATION: By initialing here: TMB, I hereby authorize NHDES to communicate all matters relative to this application electronically.		
SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c)) ☒ N/A		
LAST NAME, FIRST NAME, M.I.:		
COMPANY NAME:		
MAILING ADDRESS:		
TOWN/CITY:	STATE:	ZIP CODE:
EMAIL ADDRESS:		
FAX:	PHONE:	
ELECTRONIC COMMUNICATION: By initialing here , I hereby authorize NHDES to communicate all matters relative to this application electronically.		
SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b)) If the owner is a trust or a company, then complete with the trust or company information. ☒ Same as applicant		
NAME:		
MAILING ADDRESS:		
TOWN/CITY:	STATE:	ZIP CODE:
EMAIL ADDRESS:		
FAX:	PHONE:	
ELECTRONIC COMMUNICATION: By initialing here , I hereby authorize NHDES to communicate all matters relative to this application electronically.		

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

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

Env-Wt 400: The wetlands were delineated by Deidra Benjamin, NHDOT Env. Coor./CWS, and Josh Brown, NHDOT Wetlands Program Specialist, on March 28, 2021. The project is classified as major based on the impacts and resources present.

Env-Wt 500: The project meets the requirements of public highway projects.

Env-Wt 600: N/A, no tidal wetlands in the project area

Env-Wt 700: N/A, no prime wetlands in the project area

Env-Wt 900: This bridge maintenance project includes repair to a Tier 3 crossing to extend the life of the bridge. The project adheres to the criteria set forth in 904.01 General Desing Criteria; 904.02 Conditions Applicable to All Stream Crossing Work; 904.05 Tier 3 Stream Crossing; 904.07 Design Criteria for Tier 2, Tier 3, and Tier 4 Crossings; and 904.09 (c) (1) the existing structure does not have a history of causing or contributing to flooding that damages the crossing or other human infrastructure or protected species habitat; and (2) the proposed crossing will (a) meet the general cirteria specified in Env-Wt 904.01; (b) maintain or enhance hydraulic capacity of the stream crossing; (c) maintain or enhance the capacity of the crossing to accommodate aquatic organism passage; (d) maintian or enhance the connectivitiy 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.

Unavoidable permanent and temporary impacts to jurisdicational wetlands have been minimized to the maximum extent practicable.

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: 04 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/rivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

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

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

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland			☐			☐
	Scrub-shrub Wetland			☐			☐
	Emergent Wetland			☐			☐
	Wet Meadow			☐			☐
	Vernal Pool			☐			☐
	Designated Prime Wetland			☐			☐
	Duly-established 100-foot Prime Wetland Buffer			☐			☐
Surface Water	Intermittent / Ephemeral Stream			☐			☐
	Perennial Stream or River	325	44	☐	404	52	☐
	Lake / Pond			☐			☐
	Docking - Lake / Pond			☐			☐
	Docking - River			☐			☐
Banks	Bank - Intermittent Stream			☐			☐
	Bank - Perennial Stream / River			☐	89	23	☐
	Bank / Shoreline - Lake / Pond			☐			☐
Tidal	Tidal Waters			☐			☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ			☐			☐
	Docking - Tidal Water			☐			☐
TOTAL		325	44		493	75	

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):	818 SF	× $0.40 =	$ 327.0
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 =			$ 400.0

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)
Indicate the project classification.

☐ Minimum Impact Project	☐ Minor Project	☒ Major Project

SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)

Initial each box below to certify:

Initials: TMB	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: TMB	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: TMB	The signer understands that: • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1. • The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641. • The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.
Initials: TMB	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)

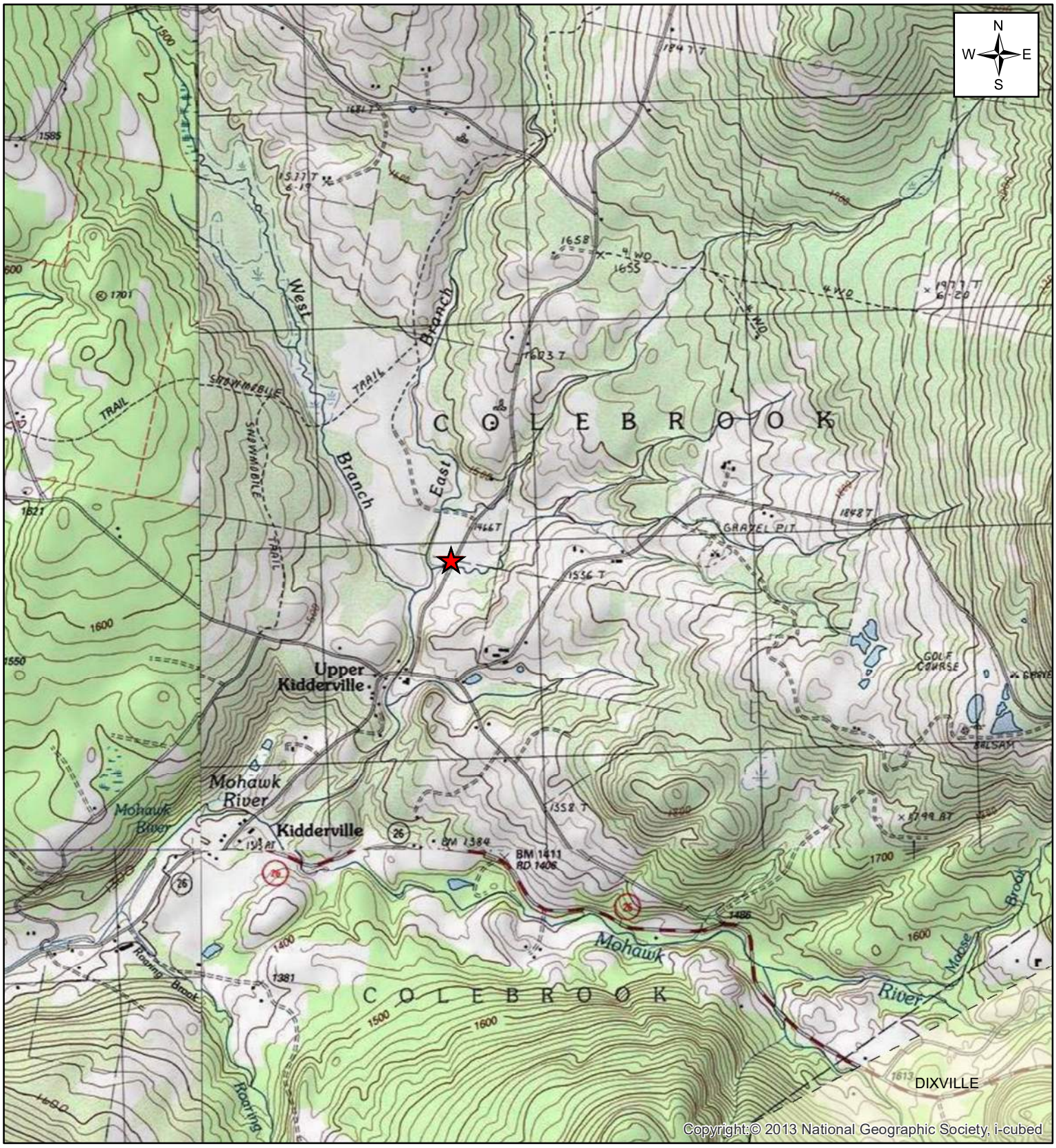
SIGNATURE (OWNER): Timothy Boodey	PRINT NAME LEGIBLY: Timothy Boodey	DATE: 7/14/22
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY:	DATE:

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

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

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

Colebrook, 43899



Legend

★ Project_Location

Map depicting bridge184/085 on Diamond Pond Rd over East Branch Mohawk River

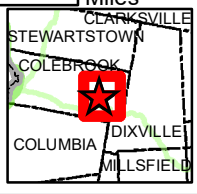
Map created by: K. Ryan on 3/23/22

Source: S:\Environment\PROJECTS\Colebrook\43899

0 0.25 0.5 0.75 Miles

1:24,000

New Hampshire DOT Department of Transportation



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:** Colebrook

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

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

PART I: AVOIDANCE AND MINIMIZATION

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

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

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

There is no practicable alternative that would meet the purpose of the project and have less of an adverse impact on the area and environments under the Department's jurusdiction.
To do nothing would increase the risk of further undermining of the southern abutment and deterioration of the structure, create a risk of failure, and create a safety concern to the travelling public. To do nothing would not meet the project need to repair the deteriorating structure.
A full bridge replacement with a compliant sized structure would result in an increase of impacts to wetland resources for removal of the existing structure and replacement with a new structure.
The preferred alternative is to repair the concrete of the existing abutment in conjunction with the installation of a toe wall, installation of rip rap at the south abutment in order to prevent future damage to the bridge and provide erosion protection, and repositioning of built up channel material in order to move the thalweg to the center of the structure.
The selected alternative avoids and minimizes impacts to wetland resources to the maximum extent practicable while maintaining the intergrity and safety of the bridge.

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.

There are no palustrine marshes delineated within the project area.

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 existing bridge provides hydrologic connection between the upstream and downstream channels of this unnnamed stream. There is no existing perch at the inlet or outlet. The proposed project will not result in a change in hydraulic connection or flood storage capacity. The existing structure passes the 100-year strom event and the proposed work will not alter the ability of the structure to pass the 100-year storm event. As per the hydraulics report included with this application, the installation of a toe wall and rip rap at the south abutment will not alter the hydraulic connection of the riverine syestem and the channel profile will remain reatively unchanged. The addition of rip rap at the crossing will be offset by the removal of some of the existing material and therefore, the open area between the bridge deck and the stream bed will remain unchanged, hence maintaining hydraulic capacity. The exisiting shelf of material along the north abutment will remain for utilization as a wildlife shelf. Simulated stream bed material, based on refernce reach data, will be placed over the rip rap to be installed. There will be no change to the alignment of the structure. During construction, a cofferdam will be placed around the south abutment to separate the work area. The stream will be allowed to flow through a by-pass pipe, which will be installed temporarily outside of the cofferdam under the bridge, during construction. Post construction, the stream will continue to flow as it does today.

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, Env-Wt 500, and Env-Wt 900. Impacts to wetland resources have been minimized to the maximum extent practicable; jurisdictional impacts have been limited to those needed to improve the integrity of the structure, maintain hydraulics and aquatic organism passage, and access work areas.

A review of the Natural Heritage Bureau Database, NHB22-1144, showed no recorded occurences for sensitive species or exemplary natural communities near the project area.

An Official Species List was obtained from the USFWS using the information for Planning and Consultation tool and the northern long eared bat (threatened species), Canada lynx (threatened species), and monarch butterfly (candidate species) were identifed on the list. The project was reviewed using the USFWS 4(d) Rule and it was determined the proposed action is not likely to result in unauthorized take of the northern long-eared bat. The project activities comply with the USFWS Section 7 procedure and it was determined the would have no effect on the Canada lynx. The candidate status of the monarch butterfly does not provide protection under the Endangered Species Act, and no further coordiantion with the USFWS is necessary for the monarch butterfly.

This unnamed stream is a predicted cold water stream. The proposed project will utilize sandbag cofferdams placed around the south abutment during construction and water will be allowed to flow through a by-pass pipe installed under the remaining bridge area, outside the cofferdam. In addition, the project will adhere to a time of year restriction which avoids work from September 15th to October 31st, as per NHFG during the April 2022 Natural Resource Agency Meeting.

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 on Diamond Pond Road during construction, allowing public travel. In addition, the project area is rural, is not located on a major trucking route, and therefore it is not anticipated commerce will be impacted by the proposed project. The site is not a suitable recreation area and therefore the level of impact to recreation will be minimal to none.

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

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

The project area is located within a FEMA 100-year floodplain. The proposed action is a maintenance project and does not have a significant adverse impact on floodplain values or create a significant risk to human life or property.

The palustrine forested wetlands adjacent to the crossing at the inlet provide flood flow attenuation. Impacts to these areas are not proposed as a part of this project and therefore the project will not impact flood flow attenuation.

The proposed design matches the existing flow conditions to the maximum extent practicable.

There is no history of flooding at this crossing. The existing structure passes the 100-year storm event with free board and the proposed work does not change the ability of the structure to pass the 100-year storm event.

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.

Palustrine forested wetlands are near the stream at the inlet side of the structure. Impacts to these areas are not proposed as a part of this project.

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

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

The proposed project is not anticipated to impact wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels. A review of the DES OneStop Database did not identify public water supplies in the project area and identified the nearest water supply greater than one mile from the project area. The Database identified the project in an aquifer transmissivity area. The project will utilize best management practices throughout the project in order to protect surrounding resources and maintain water quality.

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

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

Impacts to this unnamed stream have been minimized and avoided where possible. Some distubance of the stream channel will be necessary for the installation of the toe wall, to the banks and channel for the installation of rip rap, and to the channel to reposition stream bed material.

Construction will utilize a cofferdam placed around the south abutment allowing the stream to flow under the remaining area of the bridge through a bypass pipe.

A temporary sedimentation basin will be installed to capture sediment laden water, pumped from inside the cofferdam, and allow for any seidments to settle before the water is released.

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.

This project does not include any shoreline structures.

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

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

The project does not include any shoreline structures.

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.

All work will be within the existing State right-of-way and will not impact the abutting landowners use of their property.

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

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

The US Coast Guard determined there are no concerns with repairs to a bridge that do not alter the clearence, type of structure, or any integral part of the substructure or superstructure or navigation conditions.

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.

This project does not propose shoreline structures.

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

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

The project does not propose shoreline structures.

PART II: FUNCTIONAL ASSESSMENT
REQUIREMENTS Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
FUNCTIONAL ASSESSMENT METHOD USED: Per RSA 310A:79-Exemption III, Deidra Benjamin, NHDOT Environmental Coordinator/CWS, and Josh Brown, NHDOT Wetlands Specialist, performed the wetland identification and delineation on April 1, 2022 utilizing ACOE Highway Methodology.
NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT:
DATE OF ASSESSMENT:
Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: ☐
For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable: ☐ Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

AVOIDANCE AND MINIMIZATION WRITTEN NARRATIVE

Water Division/Land Resources Management

Wetlands Bureau

Check the Status of your Application

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

APPLICANT'S NAME: NHDOT **TOWN NAME:** Colebrook

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

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

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

No, this is a bridge maintenance project to repair and protect existing infrastructure.

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

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

No, this is a bridge maintenance project that includes the installation of a toe wall, rip rap, and abutment concrete repairs.

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

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

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

The project does not propose permanent impacts greater than one acre or permanent impacts to a PRA.

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 cannot be completely avoided to jurisdictional areas as the purpose of the project is to maintain and protect an existing bridge which carries Diamond Pond Road over an unnamed perennial stream. The project includes impacts that will improve the condition of an existing, defincient structure in order to prevent future failures at the crossing.

There is no practicable alternative design or technique that would avoid impacts to jurisdictional areas. A full bridge replacement would result in an increase of impacts to jurisdictional wetland areas compared to the proposed maintenance project. To do nothing to the deteriorated structure leaves the structure vulnerable to failure.

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.*

Per RSA 310A:79-Exemption III, Deidra Benjamin, NHDOT Environmental Coordinatore/CWS, and Josh Brown, NHDOT Wetlands Speciealist, performed the wetland identificiation and delineation on 3/28/22 according to the Army Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0, January 2012, US Army Corps of Engineers.

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 Dyment

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:

NHDOT Engineer, and there is no separate payment for clearing, so the Contractor has an incentive to avoid unnecessary tree removal.

Colebrook, 43899 (Non-Fed):

Kerry Ryan, NHDOT Environmental Manager, gave an overview of the location of the proposed state funded bridge maintenance project, bridge 184/085, which carries Diamond Pond Road over an unnamed perennial stream in Colebrook. The existing structure is a 15' wide x 8' high reinforced concrete slab bridge supported on concrete abutments with wingwalls. The surrounding area is rural/undeveloped and is a Tier 3 crossing. Photos were shown of the project area and the existing crossing.

Tim Boodey, NHDOT Bridge Maintenance Senior Engineer, described the proposed project which will include protecting the existing southern abutment from scour by installing a concrete toe wall along the southern abutment, installing rip rap in front of the proposed concrete toe wall, repositioning some of the existing built-up material from within the channel and placing it on top of the proposed rip rap, and removing some of the channel material in order to move the thalweg of the stream towards the middle of the stream and away from the south abutment.

T. Boodey described the preliminary wetland impact plans, wetland impact table, longitudinal profile, channel cross sections, and construction sequence which include perimeter controls, cofferdams, sediment basin, clean water bypass pipe, and revegetation of access and staging areas. There is no history of flooding at the crossing and hydraulic analysis determined the existing structure passes the 100-year storm event with some free board under the deck and the proposed project will not appreciably change the hydraulic opening or the ability of the structure to pass the 100-year storm event.

K. Ryan described the area as rural with no conservation land in the area, remaining within the State right-of-way, not within a designated river buffer, a tier 3 crossing, no previous permits identified, a PRA upstream and downstream which is not proposed to be impacted, is a predicted coldwater fishery, no species present as per NH Natural Heritage Bureau, not essential fish habitat, not anticipated to impact northern long-eared bat or Canada lynx, has no potential to cause effects to cultural resources as per the Section 106 Programmatic Agreement, and is within the FEMA 100-year floodplain.

Karl Benedict, NHDES, asked what was quantified for impact totals and the wetland impact summary slide was reshown. T. Boodey stated all of the aggregated material being moved will not be able to be reused in the project and what is used will match the gradation of the stream. K. Benedict stated if material is being relocated and there is a change to the grade, it is a permanent impact and agrees with the reuse of the material that matches the gradation of the stream. A. O'Sullivan asked if we should show abutment to abutment as permanent. T. Boodey clarified the impact plan which shows permanent impacts along the south abutment and temporary impacts along the north abutment and that all the material along the north abutment will not be moved but will be used for a temporary sandbag cofferdam and bypass pipe. T. Boodey referenced the impact table identifying the permanent and temporary channel impacts

and stated the entire channel is not being dredged. A. O'Sullivan clarified the work is not going from abutment to abutment. K. Benedict summarized the hatched section would be not be changing in grade and will be used for a placement of a cofferdam.

K. Benedict asked how the reference reach geomorphic conditions compare to this proposed project through the crossing and how that compares to 904.09 which says maintain or enhance hydraulic capacity, AOP, and geomorphic compatibility and recognized the proposed project will pass the 100-year storm. A. O'Sullivan stated this is rehabilitation which is the toe wall, rip rap and asked if we should remove more material. K. Benedict stated no and what is needed is the certification the project maintains hydraulic capacity. T. Boodey stated just installation of a toe wall and rip rap alone would reduce hydraulic capacity but material will also be removed as a part of the project and asked if existing and proposed cross sections were included in the application, would that help in determining if hydraulic capacity is maintained. K. Benedict said yes, the balance needs to be shown.

L. Sommer stated it wasn't clear if light repositioning by hand was going to maintain AOP. A. O'Sullivan stated the project will move the thalweg away from the south abutment and AOP will be maintained. L. Sommer stated she is concerned because Tim will not be doing the work. T. Boodey stated the project will be constructed by his bridge maintenance crews and will not be handed off to a contractor. L. Sommer stated the channel and bank impacts may require mitigation and she would like to see the final plan addressing Karl's issues to make that final determination. A. O'Sullivan stated having a cross section with the thalweg with a discussion on the material that is going in should be included in the application. K. Benedict and L. Sommer agreed.

John Magee, NHFG, said it all seemed good to him and asked what time of year the work will take place. T. Boodey stated fall, September to October, and will take approximately 4-5 weeks to complete.

J. Magee asked if the work could be completed before October 1st because in this area brook trout typically start to spawn Oct 1st and they move around a lot before that. T. Boodey asked if there will be a restriction or a permit condition relative to time of year. J. Magee recommends doing work before 10/1 and referred to DES regarding wetland requirements. K. Benedict said DES rules indicate the same time frame based on the species present.

J. Magee asked if the project would pump around or use sandbag barrier. T. Boodey stated sandbag cofferdams and bypass pipe will be used which is the best way to move the stream through the work area, due to the small size work area.

T. Boodey asked what is the other side of 10/1, towards winter. J. Magee said after Nov 1st.. A. O'Sullivan reiterated that for this project, the TOY restriction is September 15th to October 31st and construction is recommend on one side of that window or the other to which J. Magee agreed.

K. Benedict stated to summarize the TOY recommendations in the application which will eliminate the need for a waiver since the rules have been addressed. A. O'Sullivan said the

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.

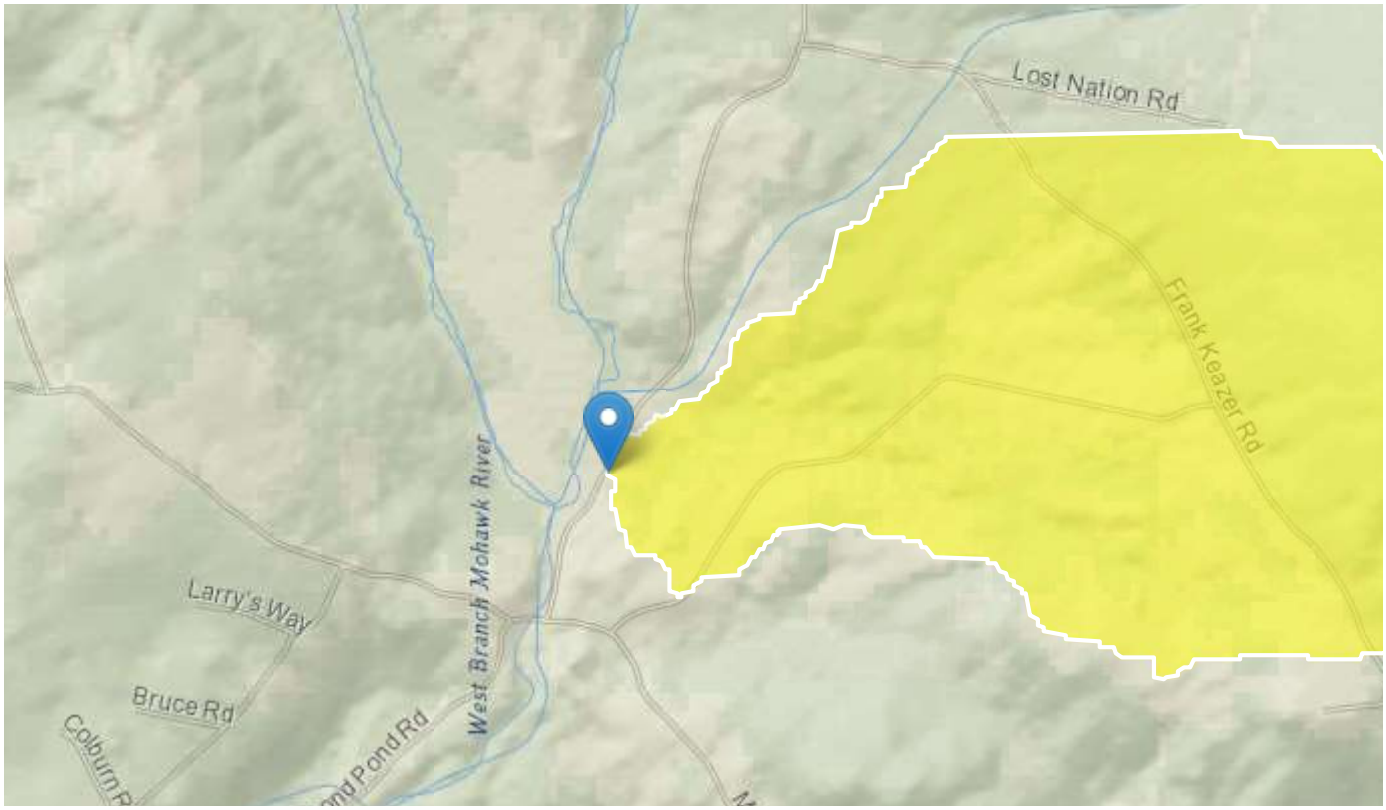
Tim described the project work to include repointing of existing stone abutments, resetting of the existing stone wing walls and possible installation of a toe wall. Tim further explained once the cofferdams are in place for sub-structure work the abutments will be evaluated for the need of toe wall 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.

StreamStats Report

Region ID: NH
Workspace ID: NH20220408185133751000
Clicked Point (Latitude, Longitude): 44.88706, -71.35968
Time: 2022-04-08 14:51:56 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
APRAVPRE	Mean April Precipitation	3.07	inches
BSLDEM30M	Mean basin slope computed from 30 m DEM	13.218	percent
CONIF	Percentaqe of land surface covered by coniferous forest	14.3939	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	411	feet per mi
DRNAREA	Area that drains to a point on a stream	1.53	square miles

Parameter Code	Parameter Description	Value	Unit
ELEVMAX	Maximum basin elevation	2679.325	feet
MINTEMP_W	Mean winter minimum air temperature over basin surface area	3.999	degrees F
MIXFOR	Percentage of land area covered by mixed deciduous and coniferous forest	26.6763	percent
PREBC0103	Mean annual precipitation of basin centroid for January 1 to March 15 winter period	7.2	inches
PREBC_1112	Mean annual precipitation of basin centroid for November 1 to December 31 period	8.15	inches
PRECIPCENT	Mean Annual Precip at Basin Centroid	46.3	inches
PRECIPOUT	Mean annual precip at the stream outlet (based on annual PRISM precip data in inches from 1971-2000)	44.2	inches
PREG_03_05	Mean precipitation at gaging station location for March 16 to May 31 spring period	8.4	inches
PREG_06_10	Mean precipitation at gaging station location for June to October summer period	21.4	inches
SNOFALL	Mean Annual Snowfall	102.259	inches
TEMP	Mean Annual Temperature	37.523	degrees F
TEMP_06_10	Basinwide average temperature for June to October summer period	54.716	degrees F
WETLAND	Percentage of Wetlands	0.1143	percent

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.53	square miles	0.7	1290
APRAVPRE	Mean April Precipitation	3.07	inches	2.79	6.23
WETLAND	Percent Wetlands	0.1143	percent	0	21.8
CSL10_85	Stream Slope 10 and 85 Method	411	feet per mi	5.43	543

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

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

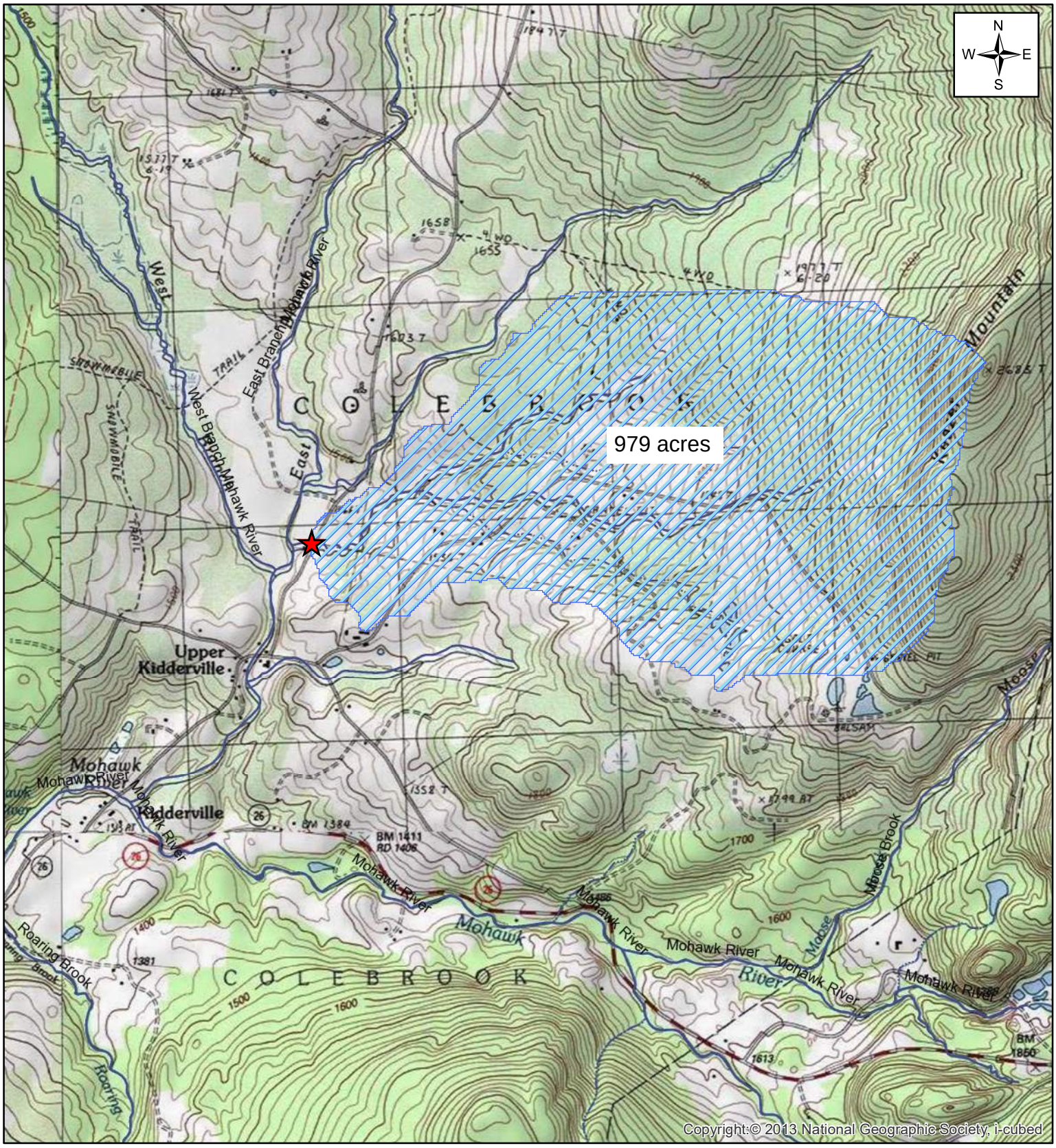
Statistic	Value	Unit	PII	PIu	ASEp	Equiv. Yrs.
50-percent AEP flood	71.7	ft^3/s	43.5	118	30.1	3.2
20-percent AEP flood	118	ft^3/s	70.4	198	31.1	4.7
10-percent AEP flood	158	ft^3/s	92.3	271	32.3	6.2
4-percent AEP flood	212	ft^3/s	119	377	34.3	8
2-percent AEP flood	257	ft^3/s	140	471	36.4	9
1-percent AEP flood	311	ft^3/s	164	591	38.6	9.8
0.2-percent AEP flood	441	ft^3/s	213	915	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.

Application Version: 4.8.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Colebrook, 43899



0 0.25 0.5 0.75 Miles

1:24,000

Map depicting bridge184/085 on Diamond Pond Road over East Branch Mohawk River

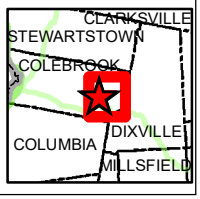
Map created by: K. Ryan on 3/23/22

Source: S:\Environment\PROJECTS\Colebrook\43899

Legend

- Project_Location
- globalwatershed

New Hampshire DOT Department of Transportation



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:	**979** 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 = **A**

☒ Elevation of the 100-year floodplain at the inlet: **1441** feet (FEMA El. or Modeled El.)

3. Calculating Peak Discharge

Existing 100-year peak discharge (Q) calculated in cubic feet per second (CFS): **311** CFS	Calculation method: **StreamStats**
Estimated Bankfull discharge at the crossing location: **145** CFS	Calculation method: **HY-8**

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: **15.3** feet	Mean Bankfull Depth: **1.4** feet
Bankfull Cross Sectional Area: **22.1** square feet	

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

Reference reach watershed size: 979 acres

Parameter	Cross Section 1 Describe bed form **Run, bend, riffle** (*e.g. pool, riffle, glide*)	Cross Section 2 Describe bed form **Run, bend, riffle** (*e.g. pool, riffle, glide*)	Cross Section 3 Describe bed form **Run, bend, pool** (*e.g. pool, riffle, glide*)	Range
Bankfull Width	**14 feet**	**11 feet**	**10 feet**	**10-14 feet**
Bankfull Cross Sectional Area	**10.5 SF**	**11.2 SF**	**9.8 SF**	**9.8-11.2 SF**
Mean Bankfull Depth	**0.75 feet**	**1.02 feet**	**0.98 feet**	**0.75-1.02 feet**
Width to Depth Ratio	**18.7**	**10.8**	**10.2**	**10.2-18.7**
Max Bankfull Depth	**1.1 feet**	**1.3 feet**	**1.4 feet**	**1.1-1.4 feet**
Flood Prone Width	**18 feet**	**15.7 feet**	**200+ feet**	**15.7-200+ feet**
Entrenchment Ratio	**1.28**	**1.43**	**20**	**1.28-20**

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

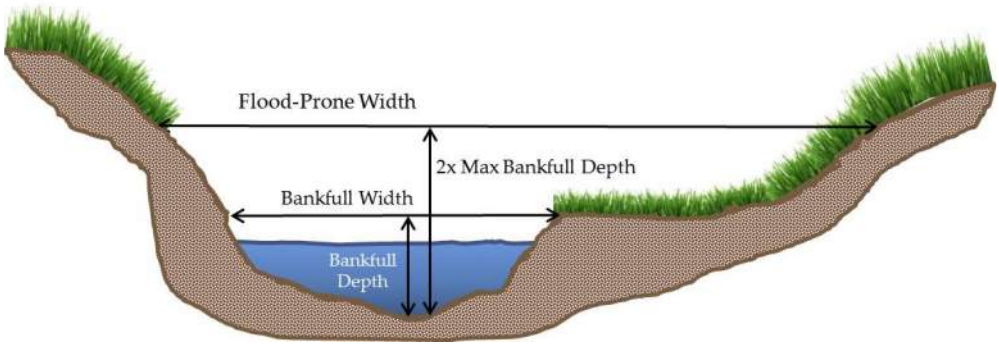


Figure 1: Determining the Reference Reach Attributes

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: **1%**

Average Channel Slope at the Crossing Location: **2%**

7. Plan View Geometry

*For **Tier 2** and **Tier 3** Crossings Only*

Sinuosity of the Reference Reach: **1.98**

Sinuosity of the Crossing Location: **0.5**

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

8. Substrate Classification based on Field Observations *For **Tier 2** and **Tier 3** Crossings Only*	
% of reach that is *bedrock*	**0** %
% of reach that is *boulder*	**0** %
% of reach that is *cobble*	**56.7** %
% of reach that is *gravel*	**13.3** %
% of reach that is *sand*	**30** %
% of reach that is *silt*	**0** %

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*

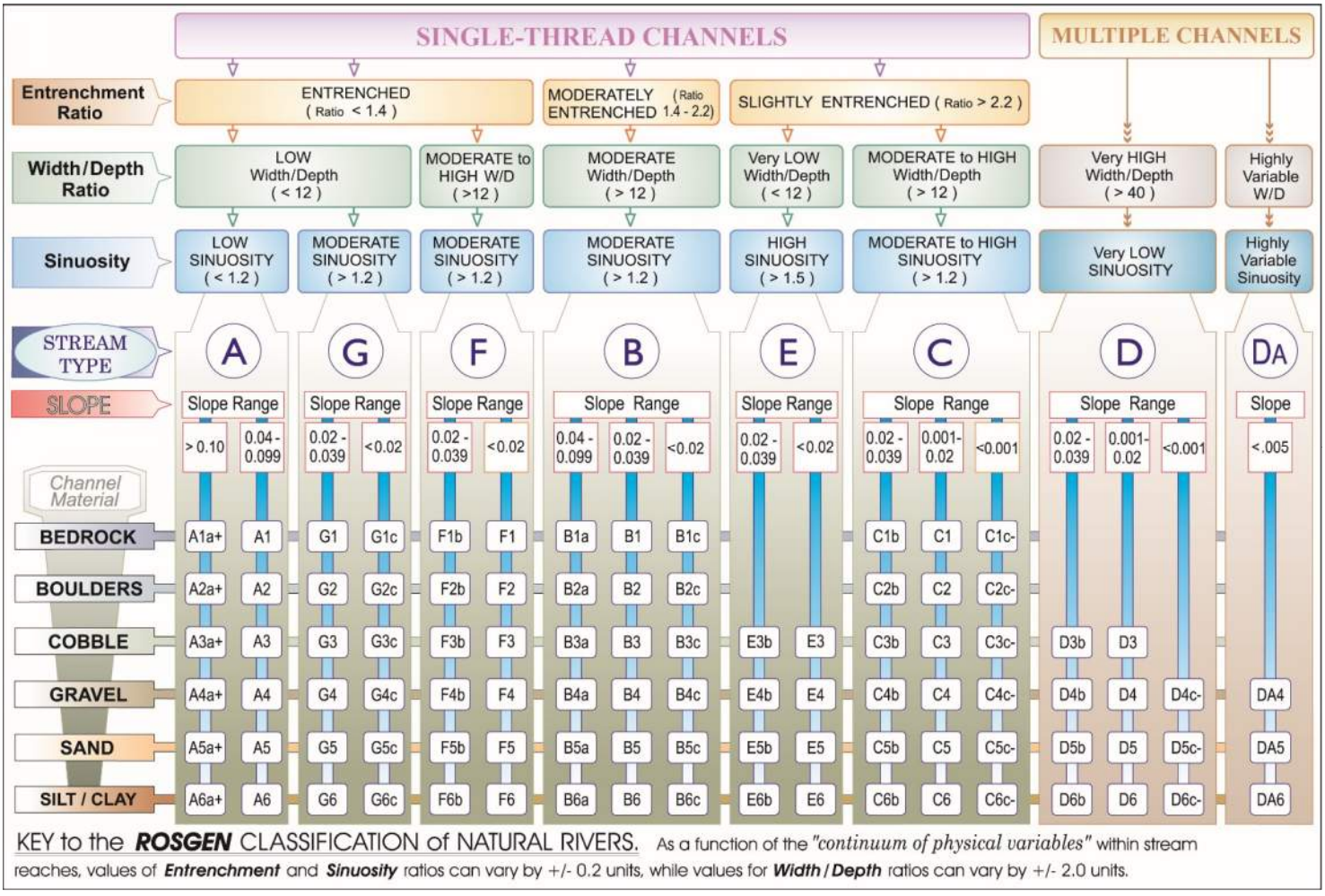


Figure 2. Reference from Applied River Morphology, Rosgen, 1996

10. Crossing Structure Metrics

Existing Conditions

Existing Structure Type:	☒ Bridge Span ☐ Pipe Arch ☒ Open-bottom Culvert ☐ Closed-bottom Culvert ☐ Closed-bottom Culvert with stream simulation ☐ Other: _____	
Existing Crossing Span *(perpendicular to flow)*	**13** feet	**Culvert Diameter 13** feet **Inlet Elevation 1441**
Existing Crossing Length *(parallel to flow)*	**32** feet	**Outlet Elevation 1440** **Culvert Slope 2%**

Proposed Conditions

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

Proposed structure Span *(perpendicular to flow)*	**Same** feet	**Culvert Diameter N/A** feet **Inlet Elevation 1440**
Proposed Structure Length *(parallel to flow)*	**Same** feet	**Outlet Elevation 1439** **Culvert Slope 2%**
Proposed Entrenchment Ratio* **Same** *For **Tier 2** and **Tier 3** Crossings Only*		*Note: To accommodate the entrenchment ratio, floodplain drainage structures may be utilized*

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

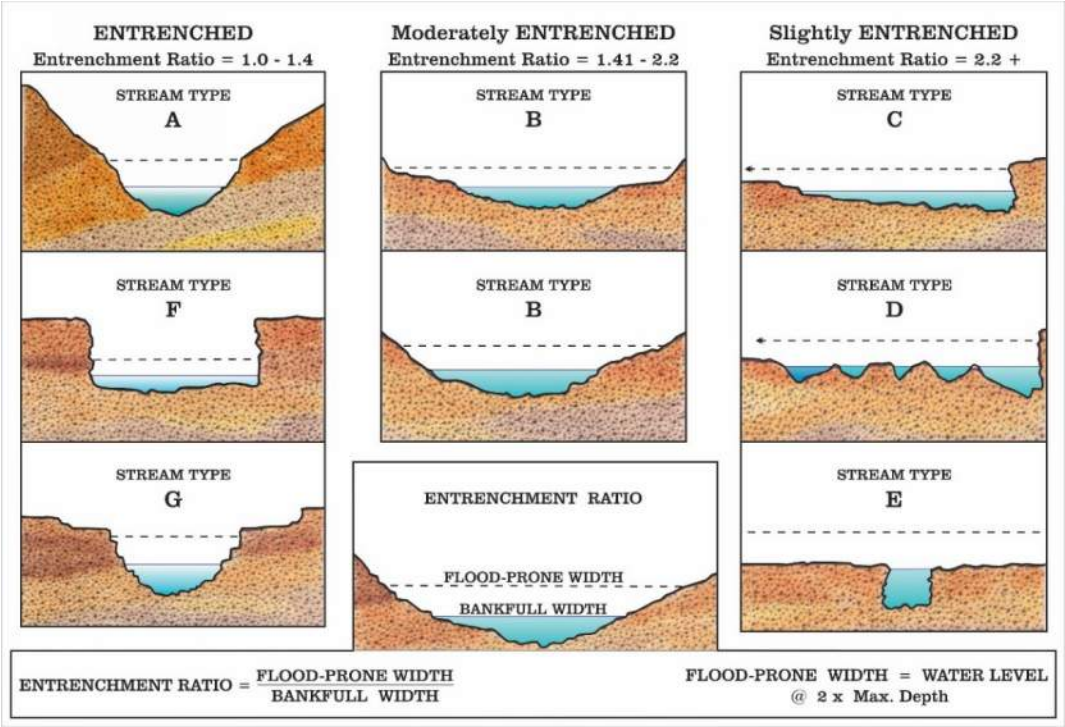


Figure 3. Reference from Applied River Morphology, Rosgen, 1996

11. Crossing Structure Hydraulics

	Existing	Proposed
100 year flood stage elevation at inlet	**1444.5**	**1444.5**
Flow velocity at outlet in feet per second (FPS)	**13.5**	**13.5**
Calculated 100 year peak discharge (Q) for the proposed structure in CFS		**311**
Calculated 50 year peak discharge (Q) for the proposed structure in CFS		**257**

12. Crossing Structure Openness Ratio

*For **Tier 2** and **Tier 3** Crossings Only*

Crossing Structure Openness Ratio = **5.22**

Openness box culvert = (height x width)/length

Openness round culvert = (3.14 x radius^2)/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

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

Project: Colebrook, 43899
Date of Assessment: 3/28/2022
Names of who completed the assessment: Kerry Ryan, Deidra Benjamin, & Josh Brown

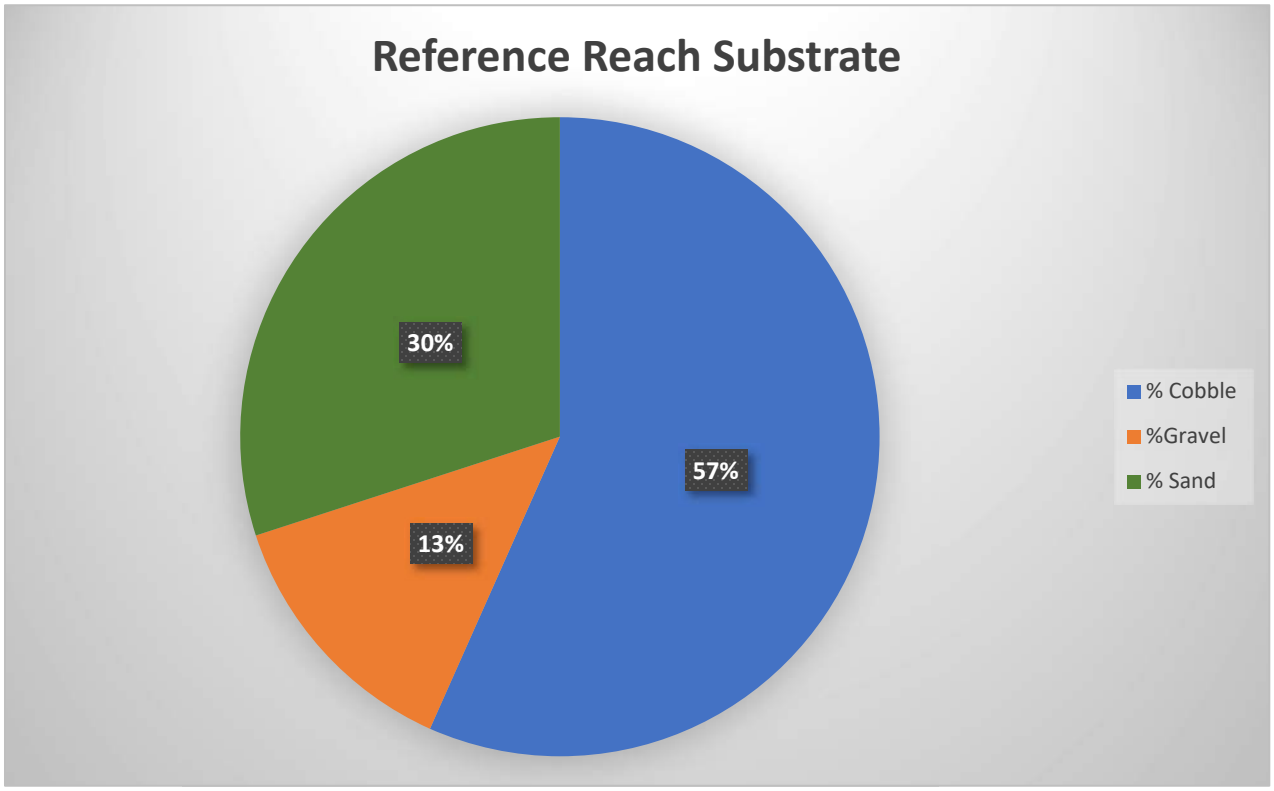
Stream Information:

Stream Name: Mohawk River
Watershed Area: 979
Stream Tier: Tier 3
Wetland Classification: R2UB12

Reference Reach:

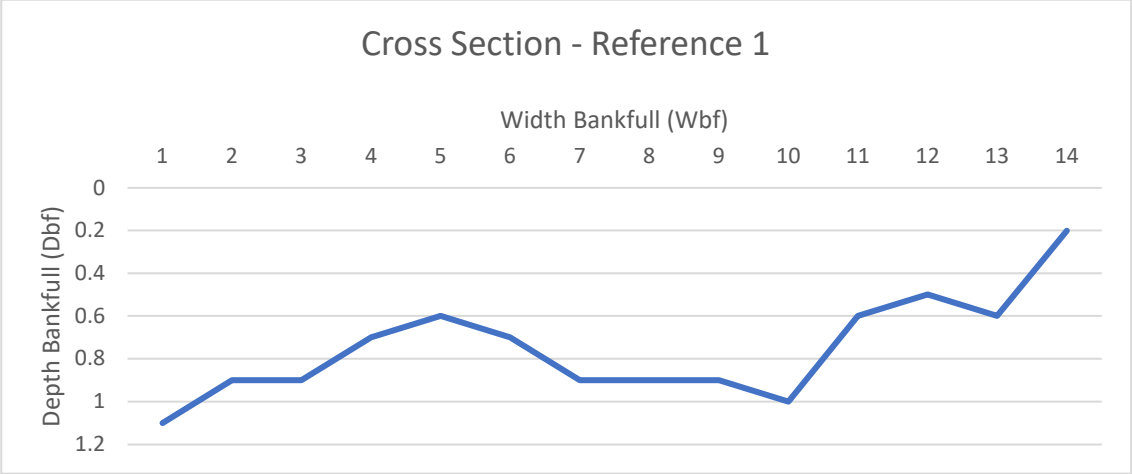
Average Bankfull Width: 11.7'
Average Floodprone Width: 77.9'
Average Depth: 0.9'
Average Slope: 1%
Entrenchment Ratio: 7.57
Rosgen Classification: Type C

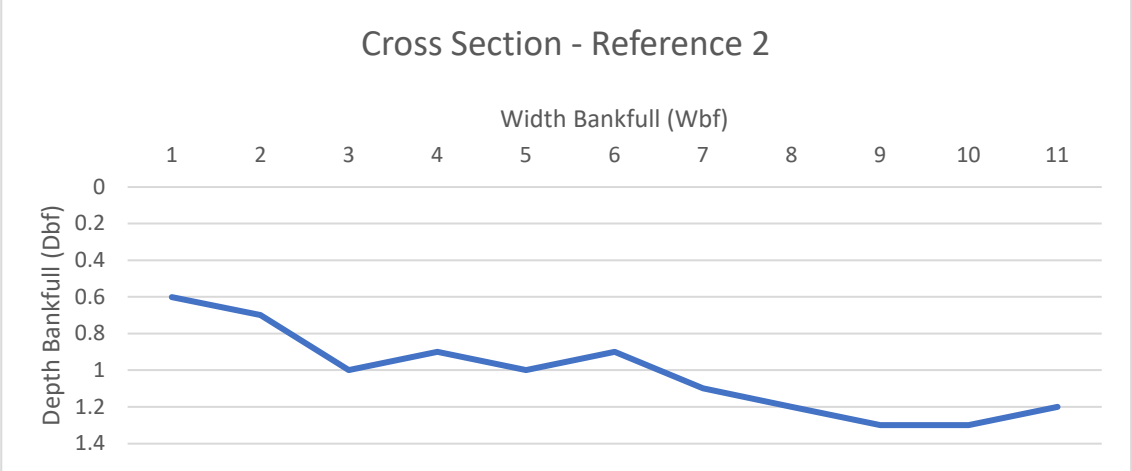
Channel Material (Average Reference Reach):

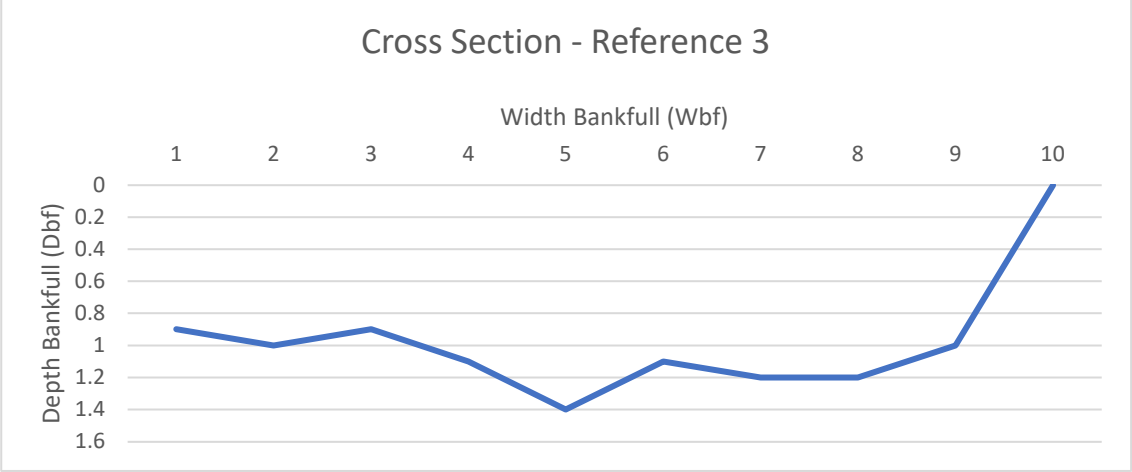


New Hampshire Department of Transportation
Bureau of Environment
Stream Crossing Summary Report

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

Photo 3: Inlet looking downstream

Photo 4: Inlet looking upstream

Photo 5: Reference Reach One

Photo 6: Reference Reach Two

Photo 7: Reference Reach Three

NH Department of Transportation

Bureau of Bridge Maintenance
Project: Colebrook 184/085, #43899
Diamond Pond Road over E. Branch Mohawk River

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: 1.53 square miles
Existing Conditions: The crossing at this location is a 15' clear span bridge constructed in 1933. In 1989 new wings were constructed and the abutments and deck widened. Other routine maintenance work has occurred to the structure. There is a large quantity of accumulated granular material along the north abutment (almost forming a wildlife like shelf) that forces the stream flow to the south abutment. The material extends through the entire structure. This is due to the upstream river course. There is evidence of scour, but not to the footing level, at the south abutment as well as scaling/erosion of the concrete. See the cross sections and pictures elsewhere in this document. There is not a history or evidence of flooding or overtopping at this crossing.

Project Description: The proposed project will add a concrete cut off wall and rip rap at the south abutment to arrest the scouring of material that is occurring. The thalweg of the stream will be moved north, towards the accumulated material, way from the south abutment. Material removed from the stream bed will be placed on top of the rip rap at the south abutment until it is covered when the remaining material will be removed from the project site outside of jurisdictional areas. During this work a plastic bypass pipe will be installed between sandbag cofferdams to provide a clean water bypass through the work area.

Proposed Conditions: The current and proposed conditions will be very similar. The existing condition was modeled using flow data from StreamStats and in FHWA HY-8. Using a conservative approach to the existing condition, the crossing will pass the 100-year storm event. This included matching the open area between the stream bed and deck based on the existing cross sections. The proposed condition keeps the shelf of material along the north abutment, as preferred at the NRA meeting, but shifts the stream thalweg north. This shift is to allow the installation of the concrete toe wall and covered rip rap. The proposed cross sections show this change. The cross-sectional area was kept the same under the bridge to keep the same hydraulic opening available. During construction we will lay out lines and elevations on the bottom of the deck as a reference for the crew moving the material. With the same hydraulic opening and the shift of only a couple feet the crossing will continue to pass the existing flows including the 100-year event.
A 30" diameter bypass will be used on this project for the clean water bypass. This will pass the two year storm.

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).

Timothy Boodey 6/30/2022
Name: Date:

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: Kerry Ryan
7 Hazen Drive
Concord, NH 03301

From: NH Natural Heritage Bureau

Date: 3/25/2022 (This letter is valid through 3/25/2023)

Re: Review by NH Natural Heritage Bureau of request dated 3/25/2022

Permit Type: Wetland Standard Dredge & Fill - Major

NHB ID: NHB22-1144

Applicant: Kerry Ryan

Location: Colebrook
Tax Map: NA, Tax Lot: NA
Address: Diamond Pond Road

Proj. Description: The subject project is a State funded bridge maintenance project located at Br. No. 184/085 which carries Diamond Pond Road over East Branch Mohawk River in Colebrook. The southern abutment is undermined due to the flow being directed to that side. The proposed work includes toe wall installation at south abutment to address scour, concrete repairs to north abutment, and rip rap installation for infrastructure protection. It is anticipated this work will take place winter 2022.

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.

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

MAP OF PROJECT BOUNDARIES FOR: NHB22-1144

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

DNCR/NHB
172 Pembroke Rd.
Concord NH 03301

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: 2022-0024050
Project Name: Colebrook 43899

March 25, 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/newengland/endangeredspecies/project-review/index.html

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.

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:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

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/birds/policies-and-regulations.php

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: 2022-0024050
Event Code: None
Project Name: Colebrook 43899
Project Type: Bridge - Maintenance
Project Description: The subject project is a State funded bridge maintenance project located at Br. No. 184/085 which carries Diamond Pond Road over East Branch Mohawk River in Colebrook. The southern abutment is undermined due to the flow being directed to that side. The proposed work includes toe wall installation at south abutment to address scour, concrete repairs to north abutment, and rip rap installation for infrastructure protection. It is anticipated this work will take place winter 2022.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.88700485,-71.35982744021739,14z

Counties: Coos County, New Hampshire

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

NAME	STATUS
Canada Lynx *Lynx canadensis* Population: Wherever Found in Contiguous U.S. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

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

Critical habitats

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

IPaC User Contact Information

Agency: New Hampshire Department of Transportation
Name: Kerry Ryan
Address: 7 Hazen Drive
City: Concord
State: NH
Zip: 03301
Email kerry.ryan@dot.nh.gov
Phone: 6032713717

Lead Agency Contact Information

Lead Agency: Army Corps of Engineers

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: 2022-0024050
Project Name: Colebrook 43899

April 18, 2022

Subject: Consistency letter for the 'Colebrook 43899' 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 Kerry Ryan:

The U.S. Fish and Wildlife Service (Service) received on April 18, 2022 your effects determination for the 'Colebrook 43899' (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"[1] 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:

- Canada Lynx *Lynx canadensis* Threatened

- 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.

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[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

Colebrook 43899

2. Description

The following description was provided for the project 'Colebrook 43899':

> The subject project is a State funded bridge maintenance project located at Br. No. 184/085 which carries Diamond Pond Road over East Branch Mohawk River in Colebrook. The southern abutment is undermined due to the flow being directed to that side. The proposed work includes toe wall installation at south abutment to address scour, concrete repairs to north abutment, and rip rap installation for infrastructure protection. It is anticipated this work will take place winter 2022.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.88701155,-71.35982369324495,14z

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.

   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:

0.1

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

0.1

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

0.1

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

Agency: New Hampshire Department of Transportation
Name: Kerry Ryan
Address: 7 Hazen Drive
City: Concord
State: NH
Zip: 03301
Email kerry.ryan@dot.nh.gov
Phone: 6032713717

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENT

NOTE TO FILE

Date: April 18, 2022

From: Kerry Ryan
Environmental Manager
Bureau of Environment

Project: Colebrook
43899

RE: Canada Lynx Project Evaluation

The subject project is a State funded bridge maintenance project located at Br. No. 184/085 which carries Diamond Pond Road over an unnamed tributary to the East Branch Mohawk River in Colebrook. The southern abutment is undermined due to the flow being directed to that side. The proposed work includes toe wall installation at the south abutment to address scour, rip rap installation in front of the south abutment for infrastructure protection, and concrete repairs to the north abutment. All proposed work is within the State right-of-way. A Standard Dredge and Fill wetland permit from the NH Department of Environmental Services will be obtained prior to the commencement of work.

A species list was obtained from the US Fish & Wildlife Service (Project Code 2022-0024050) using the online Information for Planning and Consultation (IPaC) project review website. Canada lynx (*Lynx canadesis*), Northern long-eared bat (*Myotis septentrionalis*), and candidate species monarch butterfly (*Danaus plexippus*), were identified on the Official Species List of threatened and endangered species that may occur in the project location or may be affected by the proposed project.

A review of species information for the Canada lynx on the USFWS website, including the species Fact Sheet, found habitat for the species includes landscapes with high snowshoe hare densities, associated with boreal spruce-fir forest. Based on a field review no suitable habitat occurs within the project area for the species or its primary food source. The project area is primarily a disturbed roadway shoulder. It is determined the project will have no effect on the Canada lynx. No further coordination with the USFWS is required.

In addition, the project adheres to the Programmatic Biological Opinion on Final 4(d) Rule for Northern Long-Eared Bat and Activities Excepted from Take Prohibitions. It was determined the project is not likely to result in unauthorized take of the northern long-eared bat. The Northern long-eared bat flyer shall be shared with all personnel working on the project.
The candidate status of the monarch butterfly does not provide protection under the Endangered Species Act, and no further coordination with the USFWS is anticipated for the monarch butterfly.

Section 106 Programmatic Agreement – Cultural Resources Review Effect Finding

Appendix B Certification – Activities with Minimal Potential to Cause Effects

Date Reviewed: 4/18/2022
(Desktop or Field Review Date)

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

Project Name: Colebrook

State Number: 43899 **FHWA Number:** NA

Environmental Contact: Kerry Ryan **DOT**
Email Address: Kerry.a.ryan@dot.nh.gov **Project Manager:** Tim Boodey

Project Description: The proposed project is a State funded bridge maintenance project located at Br. No. 184/085 which carries Diamond Pond Road over East Branch Mohawk River in Colebrook. The southern abutment is undermined due to flow being directed to that side. The proposed work includes toe wall installation at the south abutment to address scour, rip rap installation in front of the south abutment for infrastructure protection, and concrete repairs to the north abutment. It is anticipated this work will take place winter 2022. All proposed work is within the State right-of-way. The existing bridge is a 1933 concrete slab bridge.

Please select the applicable activity/activities:

Highway and Roadway Improvements	
☐	1. Modernization and general highway maintenance **that may require additional highway right-of-way or easement**, including: Choose an item. Choose an item.
☐	2. Installation of rumble strips or rumble stripes
☐	3. Installation or replacement of pole-mounted signs
☐	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	
☐	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
☐	6. Bridge deck preservation and replacement, as long as no character defining features are impacted
☒	7. Non-historic bridge and culvert maintenance, renovation, or total replacement, **that may require minor additional right-of-way or easement**, including: a. replacement or maintenance of non-historic bridges Choose an item.
☐	8. Historic bridge maintenance activities within the limits of existing right-of-way, including: Choose an item. Choose an item.
☐	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	
☐	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
☐	11. Installation of bicycle racks
☐	12. Recreational trail construction
☐	13. Recreational trail maintenance when done on existing alignment
☐	14. Construction of bicycle lanes and shared use paths and facilities within the existing right-of-way

Section 106 Programmatic Agreement – Cultural Resources Review Effect Finding

Appendix B Certification – Activities with Minimal Potential to Cause Effects

Railroad Improvements	
☐	15. Modernization, maintenance, and safety improvements of railroad facilities within the existing railroad or highway right-of-way, **provided no historic railroad features are impacted,** including, but not limited to: Choose an item. Choose an item.
☐	16. In-kind replacement of modern railroad features (i.e. those features that are less than 50 years old)
☐	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
Other Improvements	
☐	18. Installation of Intelligent Transportation Systems
☐	19. Acquisition or renewal of scenic, conservation, habitat, or other land preservation easements where no construction will occur
☐	20. Rehabilitation or replacement of existing storm drains.
☐	21. Maintenance of stormwater treatment features and related infrastructure

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

The proposed project activities conform to undertakings in Appendix B (minimal potential to cause effects to historical resources (7) Non-historic bridge and culvert maintenance, renovation, or total replacement, that may require minor additional right-of-way or easement, including (a) replacement or maintenance of non-historic bridges. Through coordination with the Cultural Resources Program and Division of Historical Resources during the Historic Bridge Inventory review where the bridge was determined not eligible for the National Register of Historic Places due to a lack of integrity, SHPO concurred with the finding. Therefore it was determined that the proposed project has minimal potential to impact historical resources. Neither the Cultural Resources Program Manager nor the Cultural Resources Program Specialist detected any cultural resources that, based on the project scope, would likely to be impacted by the project.

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?	NA
Please identify public outreach effort contacts; method of outreach and date:	Initial Contact Letters were sent to the conservation committee chair, fire chief, historical society chair, planning committee chair, police chief, and chairman of selectmen in Colebrook on 4/5/22. The Department of Natural & Cultural Resources-Land & Water Conservation Fund Program, Land & Community Investment Program, and Conservation Land Stewardship Program were contacted on 3/25/22.		

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

☒	**No Potential to Cause Effects**	☐	**No Historic Properties Affected**
This finding serves as the Section 106 Memorandum of Effect. No further coordination is necessary.			
☐	**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.**		
	NHDOT comments:		

NHDOT Cultural Resources Staff	4/18/2022 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.

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.

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

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		x
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		x
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		x
3.5 Are stream crossings designed in accordance with the GC 21?		
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	x	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		x
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document**		x***

*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.

***Project complies with Section 106 Programmatic Agreement, Appendix B Certification

CONSTRUCTION SEQUENCE

Work is anticipated to take approximately 6 months to complete and is currently proposed to be done during winter 2022. Work on the bridge will include placing a concrete toe wall along the southern abutment, installing rip rap in front of the proposed toe wall, and repositioning the stream bed material.

1. Put in place perimeter controls prior to earth disturbing activities.
2. A sediment basin will be placed at the location indicated on the erosion control plan
3. Install sandbag cofferdams upstream and downstream of the crossing, along with a clean water bypass pipe spanning between the two cofferdams. Water collecting between the cofferdams will be pumped into the sediment basin before being introduced back into the stream.
4. Install a concrete toe wall along the southern abutment, the toe wall will start below the existing stream bed material and will be pinned into the existing southern abutment.
5. Install appropriately sized rip rap in front of the proposed concrete toe wall.
6. Reposition the existing stream bed material under the crossing to move the thalweg of the stream closer to the center of the structure. Some of this material will be placed on top of the proposed rip rap.
7. Upon the completion of stream work, the sandbag cofferdams and bypass pipe will be removed.
8. Erosion control barrier will remain in place until slopes are stabilized by vegetation
9. Access areas will be revegetated as needed.

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 50 CFS based on the inlet conditions. The two-year storm event is calculated as 71 CFS.

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

Sandbag cofferdams will be located as show on the plans during the invert removal, toe wall repair and rip rap repair work. We anticipate a maximum height of 2.5' and minimum width of 2'. This anticipated height of cofferdam and available width will pass the 2-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 to the detention basins.

(4) Backwater prevention method:

Sandbag cofferdams will completely surround the work area to prevent backwater from entering the work area.

Colebrook 43899
04/01/22

Diamond Pond Road looking south

Diamond Pond Road looking north

Colebrook 43899
04/01/22

Looking upstream from Diamond Pond Road

Looking downstream from Diamond Pond Road

Colebrook 43899
04/01/22

Inlet side looking downstream

Inlet side looking upstream

Colebrook 43899
04/01/22

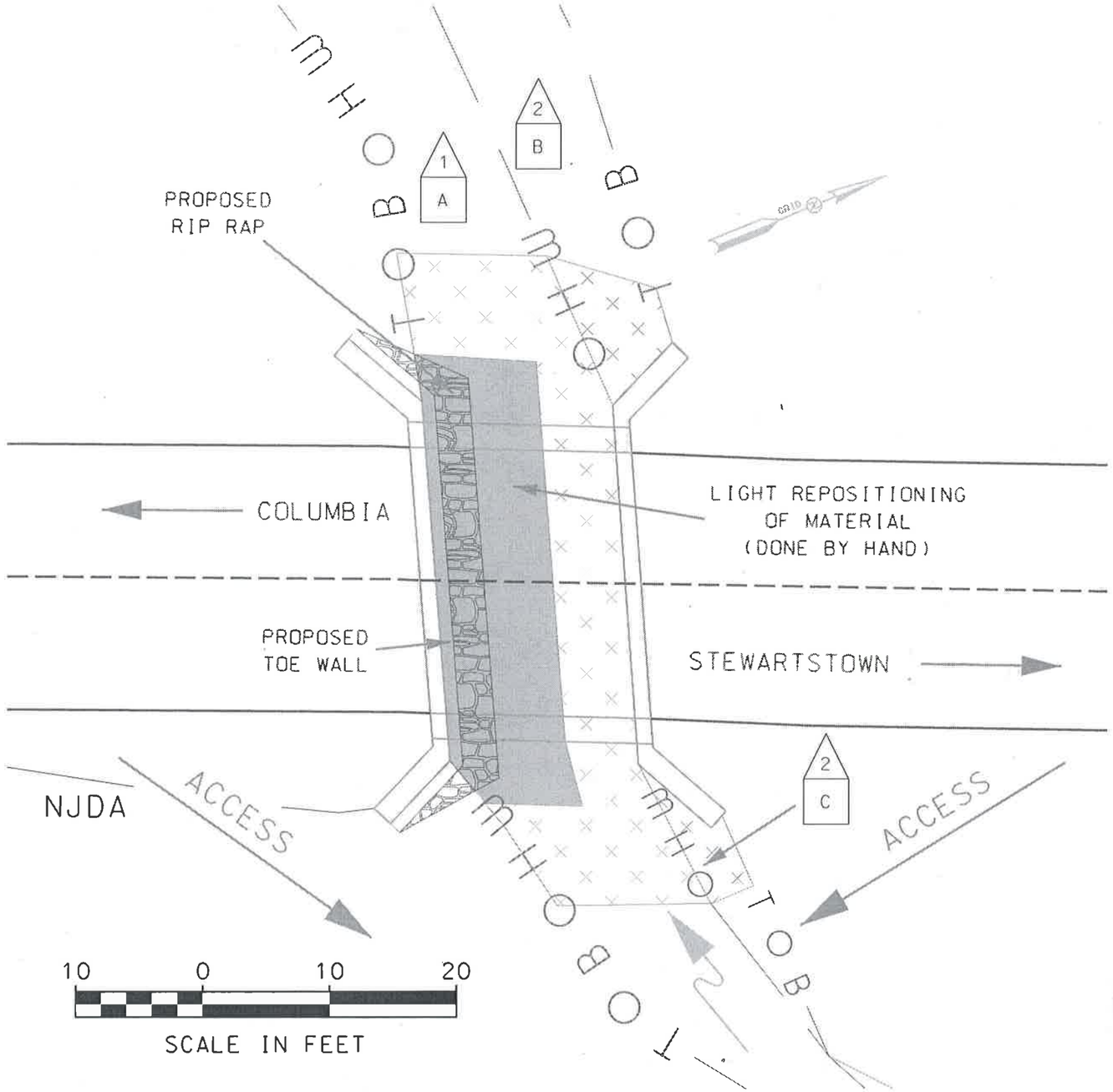
Outlet side looking upstream

Outlet side looking downstream

Colebrook 43899
04/01/22

Through structure downstream looking upstream

House at NW corner



WETLAND IMPACTS

SCALE: 1"=10'

WETLAND CLASSIFICATION CODES	
R2UB1	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE-GRAVEL
BANK	BANK

LEGEND

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

△ # WETLAND DESIGNATION NUMBER

□ # WETLAND IMPACT LOCATION

RIPRAP GRADATION
D15 < 10.5"
D50 < 14.0"
D100 < 24.0"
NOMINAL DIAMETER 12"

NOTE:
1) WETLANDS DELINEATED BY DEIDRA BENJAMIN AND JOSH BROWN 3/28/22
WETLANDS WERE DELINEATED IN ACCORDANCE WITH ENV-WT 406
2) ALL WORK WILL BE DONE WITHIN STATE ROW

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - TIMOTHY MAIN BOODEY No. 12189 LICENSED
6/29/2022

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN COLEBROOK BRIDGE NO: 184/085 STATE PROJECT 43899
LOCATION DIAMOND POND ROAD OVER E BRANCH MOHAWK RIVER

WETLAND IMPACTS

BRIDGE SHEET 1 OF 6

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED			CHECKED	
	DRAWN	JPJ	4/2022	CHECKED	
	QUANTITIES	JPJ	4/2022	CHECKED	
	ISSUE DATE		FISCAL YEAR	CREW	SHEET NO.
	REV. DATE			1	1

PIN NUMBER

SHEET SCALE: AS NOTED

TOTAL SHEETS 6

COLEBROOK 184-085

WETLAND IMPACT SUMMARY

WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA IMPACTS					
			PERMANENT				TEMPORARY	
			N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)			
			SF	LF	SF	LF	SF	LF
1	R2UB12	A			325	44	404	52
2	BANK	B					58	12
2	BANK	C					31	11
	TOTAL		0	0	325	44	493	75

PERMANENT IMPACTS:	325	SF
TEMPORARY IMPACTS:	493	SF
TOTAL IMPACTS:	818	SF

WETLANDS IMPACT TABLE

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN COLEBROOK BRIDGE NO. 184/085 STATE PROJECT 43899

LOCATION DIAMOND POND ROAD OVER E BRANCH MOHAWK RIVER

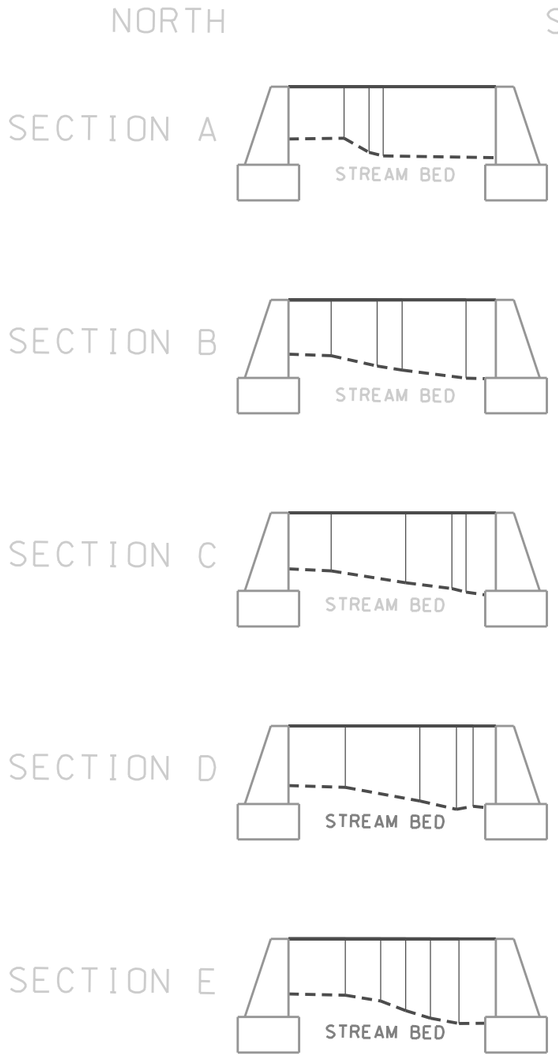
WETLAND IMPACT TABLE

BRIDGE SHEET 2 OF 6

FILE NUMBER

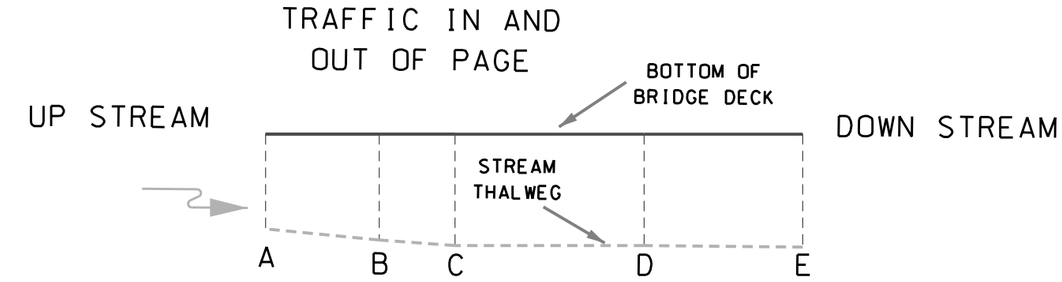
REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
			DESIGNED		CHECKED	
			DRAWN JPJ	4/2022	CHECKED	
			QUANTITIES JPJ	4/2022	CHECKED	
			ISSUE DATE		FISCAL YEAR	CREW 1	SHEET NO. 2	TOTAL SHEETS 6
			REV. DATE					

SHEET SCALE
AS NOTED



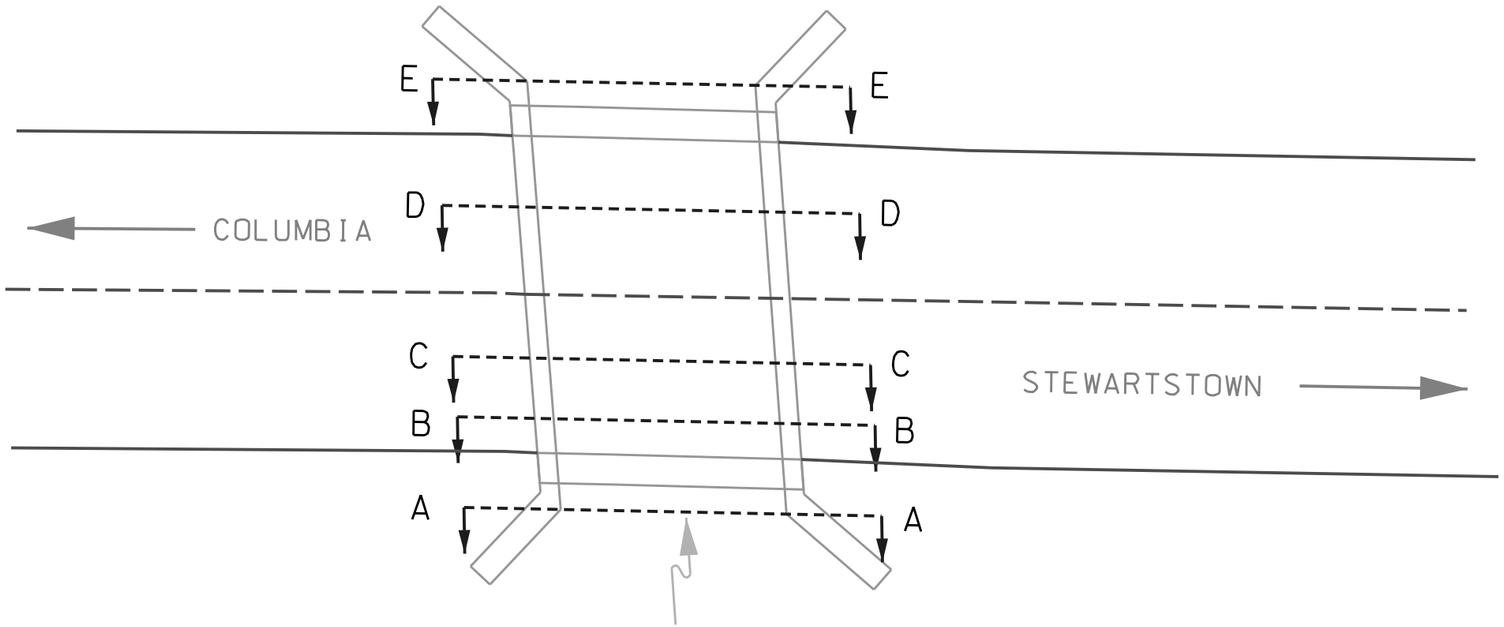
EXISTING CHANNEL CROSS SECTIONS

SCALE: 3/8"=1'



EXISTING LONGITUDINAL PROFILE

SCALE: 1/8"=1'



SECTIONS LEGEND

SCALE: 1"=10'

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN COLEBROOK BRIDGE NO. 184/085 STATE PROJECT 43899

LOCATION DIAMOND POND ROAD OVER E BRANCH MOHAWK RIVER

EXISTING CHANNEL LONG. PROFILE AND X SECTIONS

BRIDGE SHEET 4 OF 6

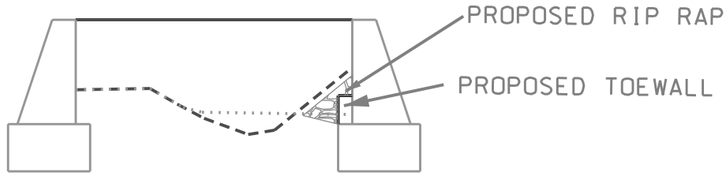
FILE NUMBER

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
			DESIGNED		CHECKED	
			DRAWN	JPJ	4/2022	CHECKED	
			QUANTITIES	JPJ	4/2022	CHECKED	

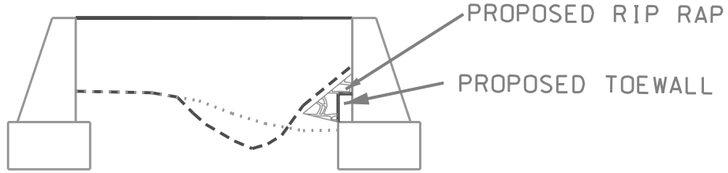
SHEET SCALE	ISSUE DATE	FISCAL YEAR	CREW	SHEET NO.	TOTAL SHEETS
AS NOTED	REV. DATE		1	4	6

NORTH SOUTH

SECTION A



SECTION E

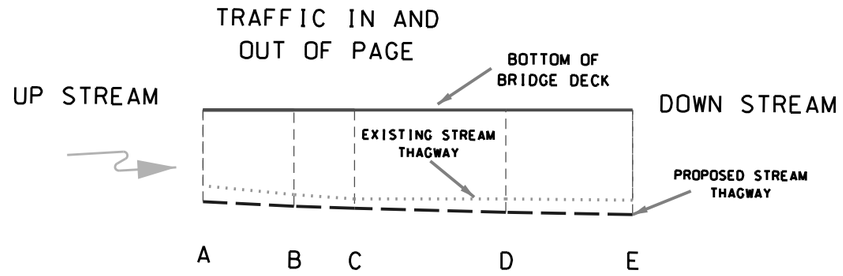


------ PROPOSED STREAM BED

..... EXISTING STREAM BED

PROPOSED CHANNEL CROSS SECTIONS

SCALE: 1/8"=1'



PROPOSED LONGITUDINAL PROFILE

SCALE: 1"=10'

NOTE:
1) SIMULATED STREAM BED MATERIAL PLACED ON TOP OF RIP RAP

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN COLEBROOK BRIDGE NO. 184/085 STATE PROJECT 43899

LOCATION DIAMOND POND ROAD OVER E BRANCH MOHAWK RIVER

PROPOSED CHANNEL X SECTION AND LONG. PROF.

BRIDGE SHEET 5 OF 6

FILE NUMBER

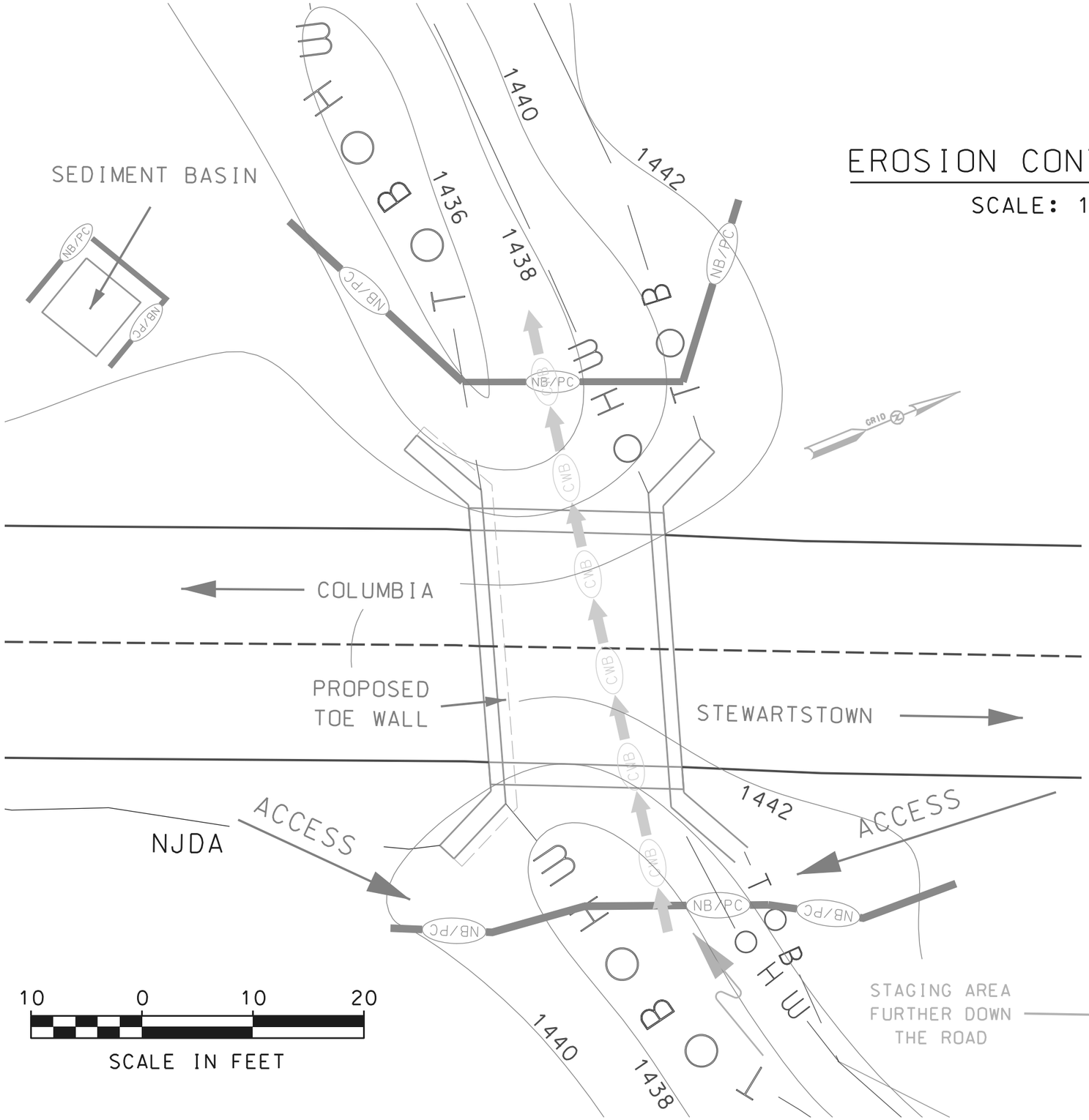
REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
		DESIGNED			CHECKED	
		DRAWN	JPJ	4/2022	CHECKED	
		QUANTITIES	JPJ	4/2022	CHECKED	
		ISSUE DATE		FISCAL YEAR	CREW	SHEET NO.
		REV. DATE			1	5

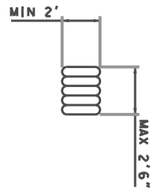
SHEET SCALE AS NOTED

TOTAL SHEETS 6

EROSION CONTROL PLAN

SCALE: 1" = 10'





COFFERDAM DETAILS

NOT TO SCALE

EROSION CONTROL PLAN LEGEND

PC — PERIMETER CONTROL
- SILT FENCE
- EROSION CONTROL MIX BERM
- EROSION CONTROL MIX SOX
- TURBIDITY CURTAIN
- SHEET PILE
- COFFER DAM

NB/PC — NATURAL BUFFER/PERIMETER CONTROL
- SILT FENCE
- EROSION CONTROL MIX BERM
- EROSION CONTROL MIX SOX
- TURBIDITY CURTAIN
- SHEET PILE
- COFFER DAM

CP — CHANNEL PROTECTION
- STONE CHECK DAMS
- STRAW WATTLES
- CHANNEL MATTING
- CLASS D EROSION STONE
- CLASS C STONE

CWB — CLEAN WATER BYPASS
- PUMP THROUGH PIPE
- DRAIN THROUGH PIPE OR CHANNEL

NOTES:
1) WORK WILL TAKE PLACE DURING LOW FLOW CONDITIONS. ANTICIPATED MAXIMUM FLOW DURING CONSTRUCTION IS 50 CFS
2) SANDBAG COFFERDAMS WILL BE CONSTRUCTED ACCORDING TO TYPICAL DETAIL. WE ANTICIPATE A MAXIMUM HEIGHT OF 2.5 FEET AND A WIDTH OF 2'
3) SUMPS WILL BE LOCATED JUST INSIDE THE WORK AREA AND BE LARGE ENOUGH TO ACCOMMODATE A 3 INCH PUMP DISCHARGING INTO A DEWATERING BASIN
4) DOUBLE BMPS WILL BE USED FOR PERIMETER CONTROLS
5) STAGING AREA (SPACE FOR SUPPLY SHACKS) WILL BE LOCATED FURTHER DOWN THE ROAD. THEREFORE NOT SHOWN ON THIS PLAN

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN COLEBROOK BRIDGE NO. 184/085 STATE PROJECT 43899

LOCATION DIAMOND POND ROAD OVER E BRANCH MOHAWK RIVER

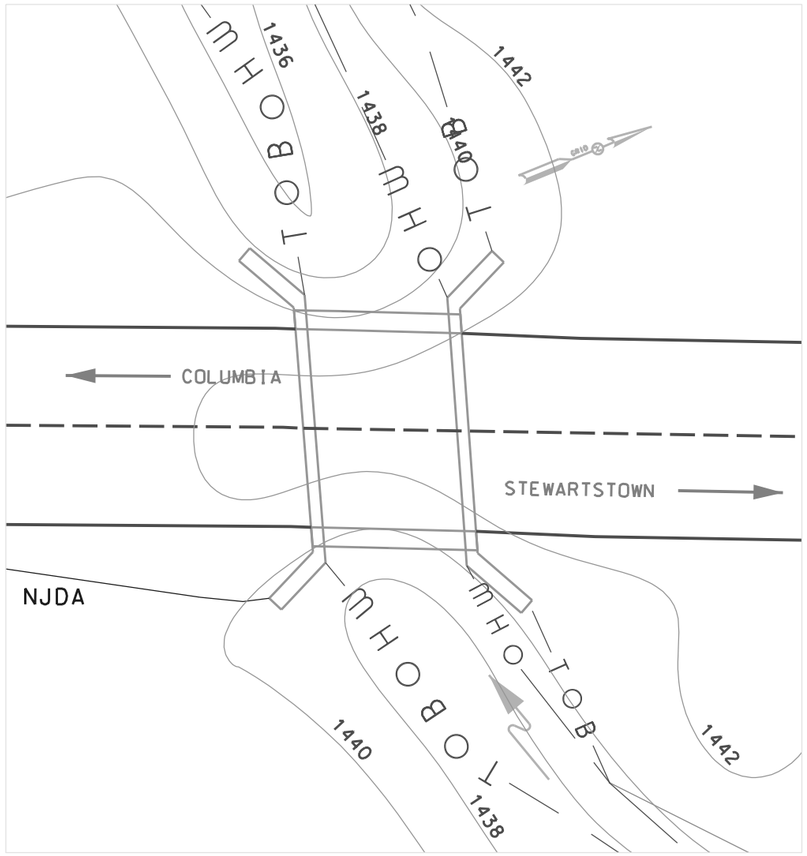
EROSION CONTROL PLAN

BRIDGE SHEET 6 OF 6

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
			DESIGNED		CHECKED	
			DRAWN	JPJ	4/2022	CHECKED	
			QUANTITIES	JPJ	4/2022	CHECKED	

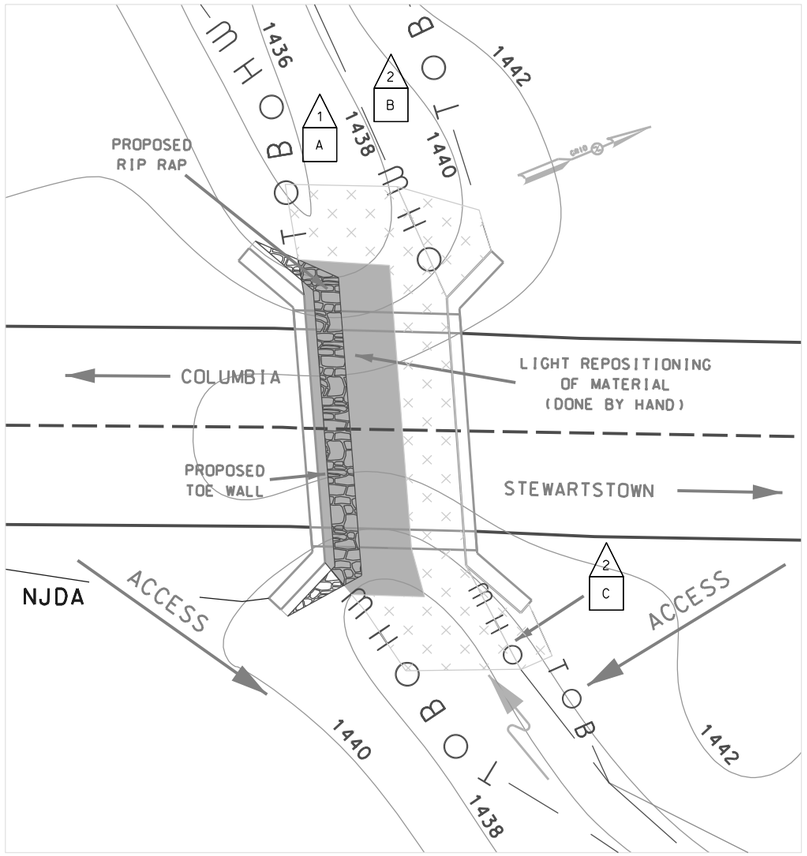
FILE NUMBER

SHEET SCALE	ISSUE DATE	FISCAL YEAR	CREW	SHEET NO.	TOTAL SHEETS
AS NOTED	REV. DATE		1	6	6



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 COLEBROOK BRIDGE NO. 184/085 STATE PROJECT 43899

LOCATION DIAMOND POND ROAD OVER E BRANCH MOHAWK RIVER

2 FT CONTOURS

BRIDGE SHEET 3 OF 6

FILE NUMBER

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
			DESIGNED			CHECKED	
			DRAWN	JPJ	4/2022	CHECKED	
			QUANTITIES	JPJ	4/2022	CHECKED	

SHEET SCALE	ISSUE DATE		FISCAL YEAR	CREW	SHEET NO.	TOTAL SHEETS
AS NOTED	REV. DATE			1	3	6

National Flood Hazard Layer FIRMette

FEMA

71°21'54"W 44°53'25"N

71°21'16"W 44°52'59"N

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

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

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

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

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

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

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

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

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

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/25/2022 at 9:41 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

Parcel Mosaic Viewer

New Hampshire Department of
BUSINESS AND
ECONOMIC AFFAIRS

MEMORANDUM

TO: Kerry Ryan, Environmental Manager, NHDOT Bureau of Environment
FROM: Katie Nelson, Principal Planner, Office of Planning and Development
State National Flood Insurance Program Assistant Coordinator
DATE: April 7, 2022
SUBJECT: NHDOT Project: Colebrook 43899

I am writing in reference to your April 7, 2022 email regarding the above-referenced project's impact on floodplain areas. I have reviewed the contents of your email, which include a project description, FIRMette of the project location, and a topographic map of the project area.

It appears that portions of the project area are in a special flood hazard area (SFHA) designated as Zone A on the Flood Insurance Rate Map (FIRM).

Since the State of New Hampshire is a participant of the National Flood Insurance Program (NFIP), any development occurring in a special flood hazard area should meet at least the minimum NFIP requirements contained in 44 CFR and the requirements in the flood provisions of the State Building Code. Development is defined under the NFIP as "any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

For development proposed in Zone A, best judgment should be used in determining if further study is necessary. If the proposed project will not present a new obstruction to flood flows or alter drainage, then additional coordination is likely not necessary.

If you need further assistance, please contact me at 603-271-1755 or at kathryn.o.nelson@livefree.nh.gov.

100 North Main Street, Suite 100
Concord, New Hampshire 03301
603.271.2341
visitnh.gov nheconomy.com choosenh.com

Bridge Repairs and Bridge Construction

Bridge Owners are not required to consult the Coast Guard regarding the following:

1. Repairs to a bridge that do not alter the clearances, type of structure, or any integral part of the substructure or superstructures or navigation conditions, but which consist only in the replacement of worn or obsolete parts.

   If there is doubt as to whether this provision applies, the bridge owner should consult with the Coast Guard. 33 CFR 115.40. Repairs which permanently alter the horizontal or vertical clearance of the bridge do not qualify for this provision. Note: the Coast Guard should be notified 90 days in advance if the work will inhibit the navigation of vessels through the bridge.

2. Bridges to be constructed across reaches of waterways not actually navigated other than by logs, log rafts, rowboats, canoes and small motorboats in accordance with 33 CFR 115.70(a).

   Bridge owners with doubt whether this provision applies should contact the First Coast Guard District Bridge Program. The term "small motorboats" means rowboats, canoes and other similar craft with outboard motors. It does not include sailing or cabin cruiser craft. 33 CFR 115.70. Note: the Coast Guard should be notified 90 days in advance if the work will inhibit the navigation of vessels through the bridge.

If neither of the above provisions apply the bridge owner should consult with the Coast Guard before planning the work. Bridge owners should provide the information addressed in the attached document. The process of obtaining a Coast Guard Bridge will take in excess of 6-9 months.

For bridge projects funded in whole or in part by the Federal Highways Administration, the FHWA will consult with the Coast Guard regarding whether a permit is required. The Coast Guard should always be consulted prior to work on a bridge, other than repairs pursuant to 33 CFR 115.40 (see above), if the Coast Guard, Army Corps of Engineers, or the previous Department of War has issued a permit for the bridge.

Drawbridges

When a drawbridge unexpectedly becomes inoperable, or should be immediately rendered inoperable because of the mechanical failure or structural defect, the owner must notify the Coast Guard of the closure without delay and give the reasons for the emergency closure and an estimated time when the bridge will be returned to operating conditions. Repair work must be performed with all due speed to return the drawbridge to operations as soon as possible.

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