

STATE OF NEW HAMPSHIRE INTER-DEPARTMENT COMMUNICATION

DATE: June 23, 2020

FROM: Andrew O'Sullivan
Wetlands Program Manager

AT (OFFICE): Department of
Transportation

SUBJECT: Dredge & Fill Application
Columbia-Colebrook 42313

Bureau of
Environment

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

Forwarded herewith is the application package prepared by NH DOT Bureau of Bridge Design for the subject Major impact project. This project is classified as Major per Env-Wt 903.01(g)(3)(b), Rehabilitation of a Tier 3 Stream Crossing. This project involves bridge preservation (Project #42313) for bridge (#108/167) on Route 3 over Simms Stream in Columbia, NH. Structural repairs are required to maintain safe passage as the existing channel protection is sloughing into the channel, opening a void within the spill-through abutments.

This project was reviewed at the Natural Resource Agency Coordination Meeting on 12/18/2019. 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>

Mitigation is not required for this project.

The lead people to contact for this project are David Scott, Bureau of Bridge Design (271-2731 or david.scott@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 # 613936) in the amount of \$2,388.80.

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.

AMO:amo
Enclosures

cc:
BOE Original
Town of Allenstown (4 copies via certified mail)
Town of Pembroke (4 copies via certified mail)
David Trubey, NH Division of Historic Resources (Cultural Review Within)
Bureau of Construction
Carol Henderson, NH Fish & Game (via electronic notification)
Maria Tur, US Fish & Wildlife (via electronic notification)
Beth Alafat, US Environmental Protection Agency (via electronic notification)
Michael Hicks, 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: David Scott - NHDOT

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

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

SECTION 1 - CONCURRENT PROCESSING OF RELATED SHORELAND/WETLANDS PERMIT APPLICATIONS (Env-Wt 313.05)

If the applicant is not requesting concurrent processing, please proceed to Section 2.

Is the proposed project eligible for the optional concurrent processing of related shoreland/wetlands permit applications (Env-Wt 313.05(d))? If the project is not eligible, proceed to Section 2 (the files will not be processed concurrently). Yes No

By signing this form and initialing this section, the applicant is requesting concurrent processing of related shoreland/wetlands permit applications and understands that concurrently filing the applications with a request to process the applications together constitutes:

- A waiver by the applicant of the shorter time frame, if application processing timelines are different for each permit program under the 2 statutes and their implementing rules; and Initials:
- An agreement by the applicant that any request for additional information by the department under either or both statutes shall affect the review timeframe of both applications being processed together. Initials:

SECTION 2 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05)

Please use the Wetland Permit Planning Tool (WPPT) or any other database or source to assist in identifying key features such as: priority resource areas (PRA), protected species or habitat, coastal area, or designated river, or designated prime wetlands.

Step 1: A certified wetland scientist must delineate and classify all wetlands and identify the predominant resource functions of each wetland, unless the exceptions listed in Env-Wt 306.05(a)(1) are met (Env-Wt 306.05(a)(1)).

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

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Step 2: Determine whether the subject property is or contains a PRA by answering the following questions (Env-Wt 306.05(a)(2)):

1. Does the property contain any documented occurrences of protected species or habitat for such species? Please use the Natural Heritage Bureau (NHB) DataCheck Tool to make this determination. Yes No
2. Is the property a bog? Please use the WPPT "Peatland" layer (under the PRA module) for general location of bogs or any other database or source. Yes No
3. Is the property a floodplain wetland contiguous to a tier 3 or higher watercourse? Please use the WPPT "Floodplain Wetlands Adjacent to Tier 3 Streams" layer (under PRA module) or any other database or source. Yes No
4. Is the property a designated prime wetland or a duly-established 100-foot buffer? Please use the WPPT "Prime Wetlands" layers (under PRA module) or any other database or source. Yes No
5. Is the property a sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone? Please use the WPPT "Coastal" layers module and PRA module or any other database or source. Yes No

Step 3: For projects that are subject to Env-Wt 600, please attach the Coastal Functional Assessment (Env-Wt 603.04) and Vulnerability Assessment (Env-Wt 603.05) and conduct the data screening required by Env-Wt 603.03.

Step 4: Determine whether the following apply to the subject property (Env-Wt 306.05(a)(4); RSA 482-A:3, I(d)(2)):

1. Is the property within a Local River Management Advisory Committee (LAC) jurisdiction? Yes No
 If yes, please provide the following information:
 - The project is within ¼ mile of:
 - A copy of the application was sent to the LAC on Month: Day: Year: . N/A (Env-Wt 311.01(e))
2. Is the property within or contains any areas that are subject to time of year restrictions under Env-Wt 307? Yes No

Step 5: For stream crossing projects: what is the size of the watershed (Env-Wt 306.05(a)(5))? N/A 21,292.8 acres

Step 6: For dredge projects: is the subject property contaminated (Env-Wt 306.05(a)(6))? N/A Yes No

Step 7: Does the project have the potential to impact any of the following (Env-Wt 306.05(a)(7)):

N/A

1. Impaired waters? Yes No
2. Class A waters? Yes No
3. Outstanding resource waters? Yes No

SECTION 3 - 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" in the space provided below.

This bridge preservation project (Project #42313) is for bridge (#108/167), Route 3 over Simms Stream in Columbia, NH. Structural repairs are required to maintain safe passage as the existing channel protection (riprap) is sloughing into the channel, opening a void within the spill-through abutments. Three alternatives were considered: do nothing, preserve, or replace. Do nothing does not meet the purpose and need, and replacement exceeds the need, therefore preservation is preferred alternative. The scope of work consists of traffic control, "peel and patch" of the bridge deck, sealing substructure, and reconstructing the channel protection. Keying the channel protection to keep it in place, requires disturbing the banks and channel bed under the bridge; riprap will be removed, existing channel materials will

be excavated and stockpiled, and then reinstalled at essentially the same elevation and slope as the existing riverbed, on of top of the stabilized channel.

SECTION 4 - PROJECT LOCATION

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

ADDRESS: NH Route 3 over Simms Stream

TOWN/CITY: Columbia

TAX MAP/BLOCK/LOT/UNIT: NHDOT ROW

UNITED STATES GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Simms Stream

N/A

LATITUDE (D.ddddd): 44.874479° North (Optional)

LONGITUDE (D.ddddd): -71.517445° West (Optional)

SECTION 5 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))

If the applicant is a trust or a company, then the name of the trust or company should be written as the applicant's name.

NAME: David Scott - NHDOT

MAILING ADDRESS: 7 Hazen Drive

TOWN/CITY: Concord

STATE: NH

ZIP CODE: 03302

EMAIL ADDRESS: Ronald.Crickard@dot.nh.gov

FAX: [REDACTED]

PHONE: 603-271-3226

ELECTRONIC COMMUNICATION: By initialing here: RC, I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 6 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))

N/A

LAST NAME, FIRST NAME, M.I.: Chris Fournier, PE, SECB

COMPANY NAME: HEB Engineers, Inc.

MAILING ADDRESS: 2605 White Mountain Hwy/PO Box 440

TOWN/CITY: North Conway

STATE: NH

ZIP CODE: 03860

EMAIL ADDRESS:
cfournier@hebenengineers.com

FAX: [REDACTED]

PHONE: 603-356-6936

ELECTRONIC COMMUNICATION: By initialing here CF, I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 7 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))

If the owner is a trust or a company, then the name of the trust or company should be written as the owner's name.

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<input checked="" type="checkbox"/> Same as applicant			
NAME: [REDACTED]			
MAILING ADDRESS: [REDACTED]			
TOWN/CITY: [REDACTED]		STATE: [REDACTED]	ZIP CODE: [REDACTED]
EMAIL ADDRESS: [REDACTED]		FAX: [REDACTED]	PHONE: [REDACTED]
ELECTRONIC COMMUNICATION: By initialing here [REDACTED], I hereby authorize NHDES to communicate all matters relative to this application electronically.			
SECTION 8 - 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 (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters).			
Env-Wt 400: Project area was reviewed by William McCloy of Normandeau Associates, Inc. (NHCWS #268) for wetlands, vernal pools and streams. No palustrine wetlands were identified within the project area, and no vernal pools were observed. The only wetland present was a perennial riverine stream, Simms Stream. OHW and TOB were delineated, flagged and GPS surveyed during a site visit in May, 2019. Based on proposed impact areas, this will be classified as a Major project. No Priority Resource Areas (PRA) are located within the Project Area based on field visit and review of WPPT.			
Env-Wt 500: This project will fall under the purview of Env-Wt 900; See below and attached.			
Env-Wt 600: Coastal Lands and Tidal Waters/Wetlands - Not applicable as this is an inland, freshwater area in Coos County.			
Env-Wt 700: Prime Wetlands - Not applicable as there are no Prime Wetlands within or adjacent to the project area			
Env-Wt 900: Stream Crossings - This preservation project, which includes reconstructing destabilized channel protections under the bridge. This is a Tier 3 crossing, based on the size of the contributing watershed. It is assumed that this project will fall under Env-Wt 904.09 Repair, Rehabilitation, or Replacement of Tier 3 and Tier 4 Existing Legal Crossings; project engineers working on the project have certified that the project meets Env-Wt 904.09(c)			
SECTION 9 - AVOIDANCE AND MINIMIZATION			
Impacts within wetland jurisdiction must be avoided to the maximum extent practicable (Env-Wt 313.03(a)). If all impacts cannot be avoided, a functional assessment is required for minor and major projects (Env-Wt 311.03(b)(10)). Any project with unavoidable jurisdictional impacts must then be minimized as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization . Please refer to the application checklist to ensure that you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable).			
SECTION 10 - 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.			

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Mitigation Pre-Application Meeting Date: Month: Day: Year:

N/A - Mitigation is not required

SECTION 11 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c).

Have you submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent impacts that will remain after avoidance and minimization demonstration?

Yes No

N/A - Mitigation is not required

SECTION 12 - 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 required permitting).

For intermittent streams, the linear footage of impact is measured along the thread of the channel.

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

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

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

JURISDICTIONAL AREA	PERMANENT SF / LF		TEMPORARY SF / LF	
Forested Wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Scrub-shrub Wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Emergent Wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Wet Meadow		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Intermittent Stream		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Perennial Stream or River	4569 / 244	<input type="checkbox"/> ATF	1403 / 68	<input type="checkbox"/> ATF
Lake / Pond		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Bank - Intermittent Stream		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Bank - Perennial Stream / River		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Bank/shoreline - Lake / Pond		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Tidal Waters		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Tidal Marsh		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Sand Dune		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Designated Prime Wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Duly-established 100-foot Prime Wetland Buffer		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Previously-developed TBZ		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - Lake / Pond		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - River		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - Tidal Water		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Vernal Pool		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
TOTAL	4569 / 244		1403 / 68	

SECTION 13 - APPLICATION FEE (RSA 482-A:3, I)

MINIMUM IMPACT FEE: Flat fee of \$400

<input type="checkbox"/> 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)		
<input checked="" type="checkbox"/> MINOR OR MAJOR IMPACT FEE: Calculate using the table below:		
Permanent and temporary (non-docking):	5972 SF × \$0.40 = \$ 2388.80	
Seasonal docking structure:	0 SF × \$2.00 = \$ 0	
Permanent docking structure:	0 SF × \$4.00 = \$ 0	
Projects proposing shoreline structures (including docks) add \$400 = \$ 0		
Total = \$ 2388.80		
The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = \$ 2388.80		
SECTION 14 - PROJECT CLASSIFICATION (Env-Wt 306.05) Indicate the project classification.		
<input type="checkbox"/> Minimum Impact Project	<input type="checkbox"/> Minor Project	<input checked="" type="checkbox"/> Major Project
SECTION 15 - ALL APPLICABLE CONDITIONS IN Env-Wt 307 HAVE BEEN MET (Env-Wt 311.04(j); Env-Wt 313.01(a)(2)).		
Check all conditions applicable to your project below. Please ensure that your plan design and access, construction sequence, and timing appropriately meet applicable conditions below:		
<input checked="" type="checkbox"/> Env-Wt 307.02 US Army Corps of Engineers (USACE) Conditions	<input checked="" type="checkbox"/> Env-Wt 307.11 Filling Activity Conditions	
<input checked="" type="checkbox"/> Env-Wt 307.03 Protection of Water Quality Required	<input checked="" type="checkbox"/> Env-Wt 307.12 Restoring Temporary Impacts: Site Stabilization	
<input checked="" type="checkbox"/> Env-Wt 307.04 Protection of Fisheries and Breeding Areas Required	<input checked="" type="checkbox"/> Env-Wt 307.13 Property Line Setbacks	
<input checked="" type="checkbox"/> Env-Wt 307.05 Protection Against Invasive Species Required	<input checked="" type="checkbox"/> Env-Wt 307.14 Rock Removal	
<input checked="" type="checkbox"/> Env-Wt 307.06 Protection of Rare, Threatened or Endangered Species and Critical Habitat	<input checked="" type="checkbox"/> Env-Wt 307.15 Use of Heavy Equipment in Wetlands	
<input checked="" type="checkbox"/> Env-Wt 307.07 Consistency Required with Shoreland Water Quality Protection Act	<input checked="" type="checkbox"/> Env-Wt 307.16 Adherence to Approved Plans Required	
<input type="checkbox"/> Env-Wt 307.08 Protection of Designated Prime Wetlands and Duly-Established 100-Foot Buffers	<input type="checkbox"/> Env-Wt 307.17 Unpermitted Activities	
<input type="checkbox"/> Env-Wt 307.09 Shoreline Structures	<input type="checkbox"/> Env-Wt 307.18 Reports	
<input checked="" type="checkbox"/> Env-Wt 307.10 Dredging Activity Conditions		

Provide an explanation as to methods, timing, and manner as to how your project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)):








The project will meet the standard permit conditions required in Env-WT 307. With respect to Env-Wt 307.13 Property Line Setbacks, the majority of the work will be confined to the existing right-of-way; however minor impacts to abutting properties will be required to accommodate the project and consent from the landowners will be obtained along with temporary construction easements as applicable. To key the channel protection and keep it in place, the banks and entire channel bed under the bridge will be disturbed; riprap will be removed, existing channel materials will be excavated and stockpiled, and then reinstalled at the same elevation and slope as the existing riverbed, on top of the stabilized channel. Prior to removing and stockpile the existing riverbed material, the existing configuration of materials will be noted, and replacement will mimic that to the extent practicable. A phased "half and half" approach will be used to maintain flows within the channel, via water diversion, throughout the construction period; it is not anticipated that base flows within Simms Stream will need to be pumped. Because the impacted areas will be restored to pre-construction conditions and geometries using native and new materials; and per coordination and discussion at the NHDOT Monthly Natural Resource Agency Coordination Meeting (December 18, 2019) mitigation will not be required and has not been proposed.

SECTION 16 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)

Initial each box below to certify:

Initials: <i>CRF</i>	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: <i>CRF</i>	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
Initials: <i>CRF</i>	<p>The signer understands that:</p> <ul style="list-style-type: none"> • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: <ol style="list-style-type: none"> 1. Deny the application. 2. Revoke any approval that is granted based on the information. And 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 trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.
Initials: <i>CRF</i>	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 17 - REQUIRED SIGNATURE (Env-Wt 311.04(d); Env-Wt 311.11)

SIGNATURE (OWNER): 	PRINT NAME LEGIBLY: 	DATE: 
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER): 	PRINT NAME LEGIBLY: 	DATE: 
SIGNATURE (AGENT, IF APPLICABLE): 	PRINT NAME LEGIBLY: Christopher R. Fournier, PE	DATE: 06/18/20

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

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SECTION 18 - 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: Agencies of State of NH Exempt per RSA 482-A:3I(a)(1)
TOWN/CITY: See Note Above	DATE: See Note Above

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3, I(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board. And
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

Submit the single, original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page.

APPLICATION CHECKLIST

(Items identified with an asterisk (*) are required only for Minor and Major Projects)

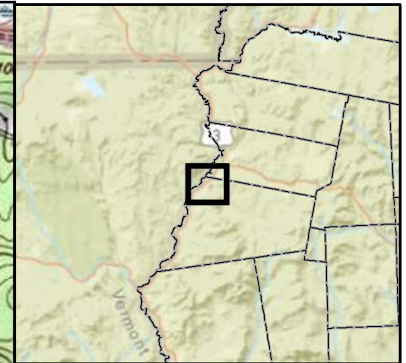
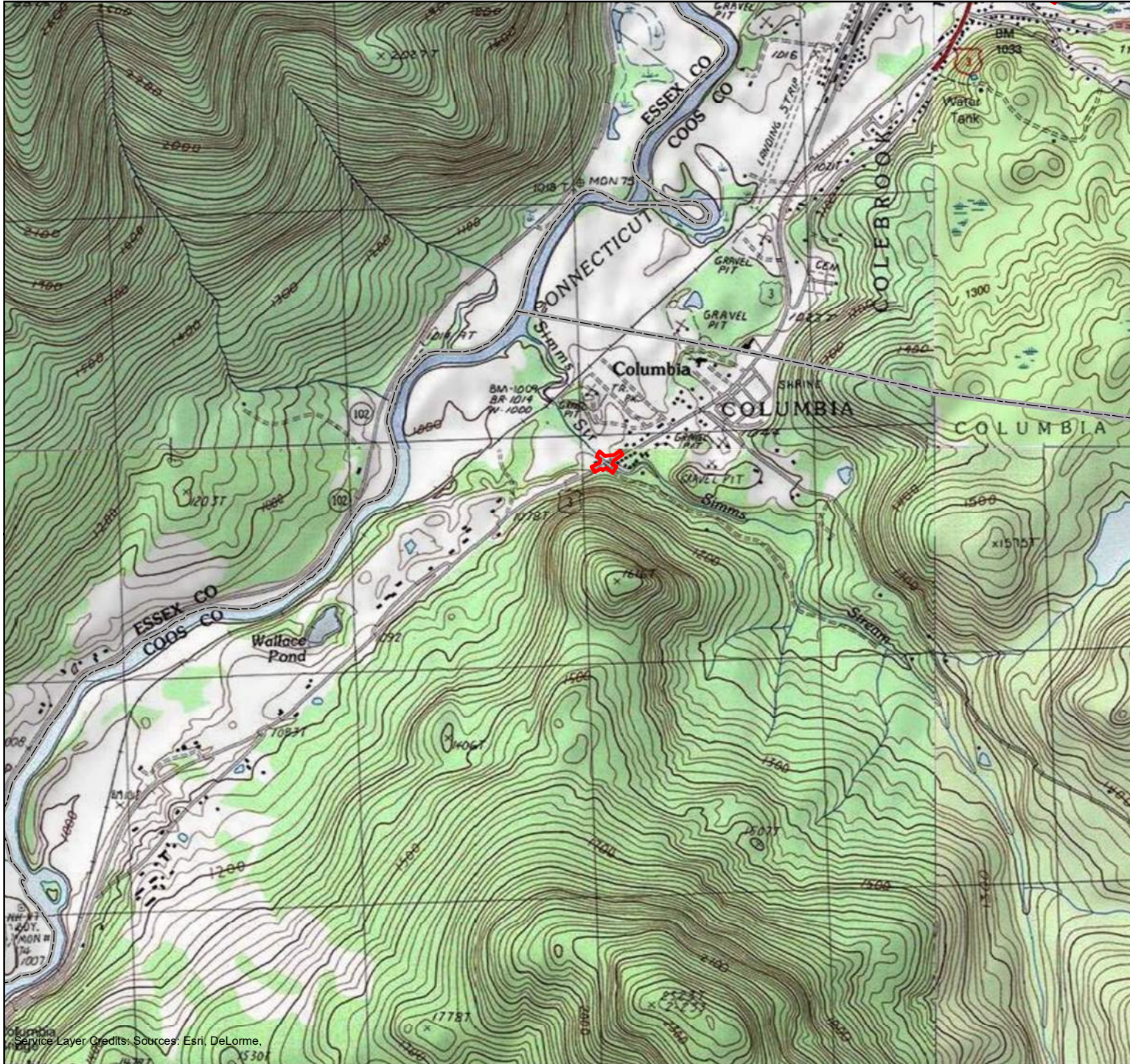
- The completed, dated, signed and certified application (Env-Wt 311.03(b)(1)).
- Correct fee as determined in RSA 482-A:3, I(b) or (c), subject to any cap established by RSA 482-A:3, X (Env-Wt 311.03(b)(2)).
- USACE "Appendix B, New Hampshire General Permits (GPs), Required Information and Corps Secondary Impacts Checklist" and its required attachments (Env-Wt 307.02).
- The results of actions required by Env-Wt 311.01 as part of an application preparation for a standard permit (Env-Wt 311.03(b)(3)).
- Project plans described in Env-Wt 311.05 (Env-Wt 311.03(b)(4)).
- Maps, or electronic shape files and meta data, and other attachments specified in Env-Wt 311.06 (Env-Wt 311.03(b)(5)).
- Explanation as to methods, timing, and manner as to how the project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)).
- If applicable, the information regarding proposed compensatory mitigation specified in Env-Wt 311.08 and Chapter Env-Wt 800 – Mitigation Worksheet, unless not required under Env-Wt 313.04 (Env-Wt 311.03(b)(8); Env-Wt 311.08; Env-Wt 313.04).
- Any additional information specific to the type of resource as specified in Env-Wt 311.09 (Env-Wt 311.03(b)(9); Env-Wt 311.04(j)).
- Project specific information required by Env-Wt 500, Env-Wt 600, and Env-Wt 900 (Env-Wt 311.03(b)(11)).
- A list containing the name, mailing address and tax map/lot number of each abutter to the subject property (Env-Wt 311.03(b)(12)).
- Copies of certified postal receipts or other proof of receipt of the notices that are required by RSA 482-A:3, I(d) (Env-Wt 311.03(b)(13)).

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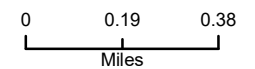
www.des.nh.gov

- Project design considerations required by Env-Wt 313 (Env-Wt 311.04(j)).
 - Town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter (Env-Wt 311.06(a)).
 - Dated and labeled color photographs that:
 - (1) Clearly depict:
 - a. All jurisdictional areas, including but not limited to portions of wetland, shoreline, or surface water where impacts have or are proposed to occur. And
 - b. All existing shoreline structures. And
 - (2) Are mounted or printed no more than 2 per sheet on 8.5 x 11 inch sheets (Env-Wt 311.06(b)).
 - A copy of the appropriate USGS map or updated data based on LiDAR at a scale of one inch equals 24,000 feet showing the location of the subject property and proposed project (Env-Wt 311.06(c)).
 - A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work (Env-Wt 311.06(d)).
 - For all coastal projects, include a copy of the recorded deed with book and page numbers for the property (Env-Wt 311.06(e)).
-
- If the applicant is not the owner in fee of the subject property, documentation of the applicant's legal interest in the subject property, provided that for utility projects in a utility corridor, such documentation may comprise a list that:
 - (1) Identifies the county registry of deeds and book and page numbers of all of the easements or other recorded instruments that provide the necessary legal interest. And
 - (2) Has been certified as complete and accurate by a knowledgeable representative of the applicant (Env-Wt 311.06(f)).
 - The NHB memo containing the NHB identification number and results and recommendations from NHB as well as any written follow-up communications such as additional memos or email communications with either NHB or New Hampshire Fish and Game Department (NHF&G) (Env-Wt 311.06(g)).
 - A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h)).
 - For projects in LAC jurisdiction, a statement of whether the applicant has received comments from the LAC and, if so, how the applicant has addressed the comments (Env-Wt 311.06(i)).
 - If the applicant is also seeking to be covered by the state general permits, a statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments (Env-Wt 311.06(j)).
 - For after-the-fact applications: information required by Env-Wt 311.12 (Env-Wt 311.12).
 - [Coastal Resource Worksheet](#) for coastal projects as required under Env-Wt 600.
 - Prime Wetlands information required under Env-Wt 700.
 - [Stream Crossing Worksheet](#) required by Env-Wt 900.
 - [Avoidance and Minimization Written Narrative](#), [Avoidance and Minimization Checklist](#), or your own avoidance and minimization narrative (Env-Wt 311.07).
 - * [Attachment A: Minor and Major Projects](#) (Env-Wt 311.10).
 - * [Functional Assessment](#) (Env-Wt 311.10).



**USGS Overview Map
Columbia Bridge Project
#42313
Columbia, NH
1:24,000 Scale**
Date: 4/10/2020

-  Project Area
-  Town Border



1 in equals 0.38 miles

1:24,000





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 LAST NAME, FIRST NAME, M.I.: David Scott - NHDOT

Attachment A can be used to satisfy some of the additional requirements for minor and major projects regarding avoidance and minimization, as well as functional assessment.

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.

THREE ALTERNATIVES WERE CONSIDERED TO ADDRESS THE DEFICIENCIES IDENTIFIED WITH THE BRIDGE: NO ACTION, PRESERVE THE BRIDGE, AND REPLACE THE BRIDGE. THE NO ACTION ALTERNATIVE WOULD NOT MEET THE PROJECT'S PURPOSE AND NEED WHICH IS THE ADDRESS THE DEFICIENCIES ASSOCIATED WITH THE BRIDGE DECK AND STRUCTURE AND CHANNEL PROTECTION; THIS WOULD RESULT IN WORSENING CONDITIONS AT THE BRIDGE AND A SHORTER LIFE SPAN AND FUTURE HAZARDS TO TRAFFIC. REPLACEMENT OF THE BRIDGE IS NOT PRACTICABLE AND WOULD GREATLY EXCEED THE PROJECT'S PURPOSE AND NEED. REPLACEMENT OF THE BRIDGE WOULD BE DRAMATICALLY MORE EXPENSIVE THAN BRIDGE PRESERVATION, WOULD RESULT IN SUBSTANTIAL DISRUPTION TO TRAFFIC AND COMMERCE DURING CONSTRUCTION AND IS UNNECESSARY GIVEN THE OVERALL CONDITION OF THE BRIDGE. THE REPLACEMENT ALTERNATIVE WOULD ALSO RESULT IN MORE IMPACTS TO THE STREAM IF RECONSTRUCTION OF THE ABUTMENTS AND OTHER COMPONENTS OF THE BRIDGE WERE REQUIRED. THE PREFERRED ALTERNATIVE, PRESERVATION OF THE BRIDGE, WILL ACHIEVE THE PROJECT'S PURPOSE AND NEED WHILE MINIMIZING IMPACTS TO NATURAL RESOURCES, MINIMIZING COSTS AND DISRUPTION TO USERS OF THE ROADWAY.

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

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

www.des.nh.gov

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, crustacea, shellfish and wildlife of significant value.

THERE ARE NO TIDAL OR FRESHWATER MARSHES WITHIN THE PROJECT AREA AND NO IMPACTS ARE PROPOSED.

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

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

THE PROJECT WILL NOT RESULT IN A CHANGE TO THE EXISTING BRIDGE CROSSING DIMENSIONS IN TERMS OF HYDRAULIC CONNECTIVITY, FLOOD PASSAGE AND AQUATIC ORGANISM PASSAGE. THE ALIGNMENT OF THE CROSSING WILL NOT BE CHANGED NOR WITH THE BRIDGE STRUCTURE. TEMPORARY DIVERSIONS TO ALLOW FOR THE CHANNEL PROTECTION WORK TO PROCEED ALONG THE BANKS UNDER THE BRIDGE WILL BE REQUIRED; HOWEVER THESE DIVERSIONS WILL BE STAGGERED TO MINIMIZE THE AREA OF THE STREAM CHANNEL THAT WOULD BE IMPACTED. TIMING RESTRICTIONS TO PROTECT COLD WATER FISHERIES WILL ALSO BE FOLLOWED TO REDUCE IMPACTS TO POTENTIALLY AFFECTED FISH SPECIES.

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

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

THE PROPOSED BRIDGE PRESERVATION INVOLVES RECONSTRUCTING THE DESTABILIZED CHANNEL PROTECTIONS LOCATED UNDER THE BRIDGE AND ALONG BOTH BANKS; ALL OTHER ASPECTS OF THE PROJECT WILL BE RESTRICTED TO THE EXISTING BRIDGE STRUCTURE AND IMMEDIATE APPROACHES AND WILL NOT IMPACT JURISDICTIONAL AREAS. IMPACTS TO THE CHANNEL OF THE STREAM HAVE BEEN MINIMIZED AS MUCH AS PRACTICABLE; HOWEVER DUE TO THE NATURE OF THE WORK IT WOULD BE IMPOSSIBLE TO COMPLETELY AVOID TEMPORARILY DISRUPTING THE CHANNEL WHILE RECONSTRUCTING THE CRITICAL CHANNEL PROTECTION MATERIALS. NO EXEMPLARY NATURAL COMMUNITIES, RARE, THREATENED OR ENDANGERED PLANTS, VERNAL POOLS WILL BE IMPACTED AS NONE ARE PRESENT WITHIN THE PROJECT AREA. COORDINATION WITH NHF&G INDICATES THAT NORTHERN HARRIER AND ROUND WHITEFISH ARE KNOWN TO HAVE OCCURRED IN THE AREA OF THE PROJECT; HOWEVER IF FIELDS, WET MEADOWS AND SHRUBBY HABITATS ARE AVOIDED FOR CONSTRUCTION STAGING THERE SHOULD NOT BE ANY IMPACTS. IMPACTS TO ROUND WHITEFISH ARE NOT ANTICIPATED AS LONG AS EFFORTS AND BMPS ARE FOLLOWED TO PREVENT CHEMICAL CONTAMINANTS FROM ENTERING THE SURFACE OR GROUNDWATERS ADJACENT TO THE PROJECT AREA. FISH SURVEYS BY NHF&G IN THE AREA OF THE PROJECT DID NOT INCLUDE THE WHITEFISH; HOWEVER BROWN, BROOK AND RAINBOW TROUT ARE PRESENT. THEREFORE A WINDOW FOR INSTREAM WORK OF JULY - SEPTEMBER SHOULD BE APPLIED TO REDUCE IMPACTS TO THESE TROUT SPECIES AND THEIR SUPPORTING SPAWNING HABITAT.

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.

SIMMS STREAM IS NOT A NAVIGABLE WATER AND THE PROJECT WILL STAGE WORK IN AND ALONG THE CHANNEL TO ALLOW FOR CONTINUOUS FLOWS UNDER THE BRIDGE AT ALL TIMES. TRAFFIC CONTROLS WILL BE IMPLEMENTED FOR WORK ASSOCIATED WITH THE BRIDGE DECK SO THAT TRAFFIC, PUBLIC COMMERCE AND ASSOCIATED USES OF THE ROADWAY WILL NOT BE SUBSTANTIALLY DISRUPTED. NO ELIMINATION, DEPRECIATION OR OBSTRUCTION OF PUBLIC COMMERCE, NAVIGATION OR RECREATION ARE ANTICIPATED.

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

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

NO FLOODPLAIN WETLANDS, NOR ANY MAPPED FLOODPLAIN AREAS OR FLOODWAYS ARE LOCATED WITHIN THE PROJECT AREA; THEREFORE NO IMPACTS TO THESE RESOURCES OR CHANGES TO FLOOD ELEVATIONS OR PASSAGE ARE ANTICIPATED.

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

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

NO RIVERINE FORESTED OR SCRUB-SHRUB-MARSH COMPLEXES ARE PRESENT WITHIN THE PROJECT AREA; THEREFORE NO IMPACTS TO THESE RESOURCES ARE ANTICIPATED.

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.

CONTROLS AND BMPS WILL BE IMPLEMENTED TO CONTROL CONSTRUCTION PHASE EROSION AND SEDIMENTATION AND PREVENT DISCHARGE INTO SIMMS STREAM. THESE MEASURES WILL BE INSPECTED AND MAINTAINED BY PROJECT CONTRACTORS THROUGHOUT CONSTRUCTION OF THE PROJECT AND WILL REMAIN IMPLEMENTED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED. BMPS RELATED TO REFUELING AND MAINTAINING HEAVY EQUIPMENT WILL ALSO BE IMPLEMENTED AND SPILL CONTAINMENT AND MITIGATION PLANS AND MATERIALS WILL BE ON-SITE TO ADDRESS ANY DISCHARGE OF FUEL, FLUIDS OR OTHER GREASES OR POTENTIALLY HAZARDOUS MATERIALS INTO THE GROUND, SURFACE WATERS OR GROUNDWATER.

GROUNDWATER WILL NOT BE EXTRACTED NOR WILL ANY DISCHARGE VIA INJECTION BE ASSOCIATED WITH THE PROJECT. ALL FUELING AND MAINTENANCE WILL BE CARRIED OUT IN UPLAND AREAS AWAY FROM SIMMS STREAM. THEREFORE NO IMPACTS TO DRINKING WATER SUPPLIES OR GROUNDWATER AQUIFERS ARE ANTICIPATED.

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 SIMMS STREAM HAVE BEEN MINIMIZED AND AVOIDED WHERE POSSIBLE, HOWEVER GIVEN THE NATURE OF THE PROJECT WHICH INCLUDES RECONSTRUCTING THE DESTABILIZED CHANNEL PROTECTION MATERIALS WILL REQUIRE SOME DISTURBANCE TO THE EXISTING BED AND BANKS WHERE THE CHANNEL PROTECTIONS ARE SUBSTANDARD. CONSTRUCTION WILL BE PHASED TO MINIMIZE THE AREA OF CHANNEL BEING IMPACTED AND FLOWS WILL BE DIVERTED AROUND THE WORK AREA ALLOWING FOR CONTINUOUS FLOW THROUGH THE CROSSING AND UNDER THE BRIDGE. ALL DISTURBED AREAS WILL BE RESTORED AND STABILIZED TO PRE-CONSTRUCTION CONDITIONS. CROSSING DIMENSIONS AND CROSS SECTIONS WILL NOT BE CHANGED AS A RESULT OF THE PROJECT AND NO CHANGES TO FLOOD PASSAGE, HYDRAULIC PASSAGE OR AQUATIC ORGANISM PASSAGE ARE ANTICIPATED.

PART II: FUNCTIONAL ASSESSMENT
<p>REQUIREMENTS</p> <p>Ensure that project meets requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).</p>
<p>FUNCTIONAL ASSESSMENT METHOD USED:</p> <p>USACE Highway Methodology Workbook, dated 1993, together with the USACE New England District Highway Method Workbook Supplement, dated 1999</p> <p>See Wetland Functional Assessment Worksheet, Attached</p>
<p>NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: WILLIAM MCCLOY, NHCWS #268</p>
<p>DATE OF ASSESSMENT: 4/8/20 AND 5/14/19</p>
<p>Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: <input checked="" type="checkbox"/></p>
<p>For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable: <input checked="" type="checkbox"/></p> <p>Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.</p>



**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 LAST NAME, FIRST NAME, M.I.: David Scott - NHDOT

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 this 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 PRESERVATION PROJECT INCLUDING THE RECONSTRUCTION OF DESTABILIZED CHANNEL PROTECTION UNDER THE BRIDGE

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 PRESERVATION PROJECT INCLUDING THE RECONSTRUCTION OF DESTABILIZED CHANNEL PROTECTION UNDER THE BRIDGE

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?

NO, NOT APPLICABLE; THIS PROJECT DOES NOT PROPOSE PERMANENT IMPACTS OF MORE THAN ONE ACRE OR ANY 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 on the subject property or on other property that is reasonably available to the applicant as described in the *Wetlands Best Management Practice Techniques for Avoidance and Minimization*?

NO, IMPACTS CANNOT BE COMPLETELY AVOIDED DUE TO THE NATURE OF THE PORTION OF THE PROJECT THAT INCLUDES RECONSTRUCTING DESTABILIZED CHANNEL PROTECTION WHICH REQUIRES IN-STREAM AND BANK WORK TO RE-ESTABLISH THE CHANNEL PROTECTION BLOCKS AND RIP-RAP SO IT WILL NOT SLUMP IN THE FUTURE OR BECOME DESTABILIZED.

THREE ALTERNATIVES WERE CONSIDERED TO ADDRESS THE DEFICIENCIES IDENTIFIED WITH THE BRIDGE: NO ACTION, PRESERVE THE BRIDGE, AND REPLACE THE BRIDGE. THE NO ACTION ALTERNATIVE WOULD NOT MEET THE PROJECT'S PURPOSE AND NEED WHICH IS THE ADDRESS THE DEFICIENCIES ASSOCIATED WITH THE BRIDGE DECK AND STRUCTURE AND CHANNEL PROTECTION; THIS WOULD RESULT IN WORSENING CONDITIONS AT THE BRIDGE AND A SHORTER LIFE SPAN AND FUTURE HAZARDS TO TRAFFIC. REPLACEMENT OF THE BRIDGE IS NOT PRACTICABLE AND WOULD GREATLY EXCEED THE PROJECT'S PURPOSE AND NEED. REPLACEMENT OF THE BRIDGE WOULD BE DRAMATICALLY MORE EXPENSIVE THAN BRIDGE PRESERVATION, WOULD RESULT IN SUBSTANTIAL DISRUPTION TO TRAFFIC AND COMMERCE DURING CONSTRUCTION AND IS UNNECESSARY GIVEN THE OVERALL CONDITION OF THE BRIDGE. THE REPLACEMENT ALTERNATIVE WOULD ALSO RESULT IN MORE IMPACTS TO THE STREAM IF RECONSTRUCTION OF THE ABUTMENTS AND OTHER COMPONENTS OF THE BRIDGE WERE REQUIRED. THE PREFERRED ALTERNATIVE, PRESERVATION OF THE BRIDGE, WILL ACHIEVE THE PROJECT'S PURPOSE AND NEED WHILE MINIMIZING IMPACTS TO NATURAL RESOURCES, MINIMIZING COSTS AND DISRUPTION TO USERS OF THE ROADWAY

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)? Please note that for a minimum impact project, the applicant may replace this explanation with a certification signed by a certified wetland scientist that the project is located and designed to minimize impacts to wetlands functions and values.

THE PRINCIPAL FUNCTIONS AND VALUES ASSOCIATED WITH THE RIVERINE WETLAND, SIMMS STREAM, ARE FISH HABITAT AND SHORELINE ANCHORING. THE BRIDGE CANNOT PRACTICABLY BE LOCATED IN A DIFFERENT LOCATION ALONG THE STREAM WITHOUT RECONSTRUCTING A MAJOR NH ROUTE WHICH CROSSES THE STREAM AT THE BRIDGE BEING PRESERVED. UNAVOIDABLE IMPACTS HAVE BEEN MINIMIZED WHERE PRACTICABLE AND CONSTRUCTION METHODS WILL BE EMPLOYED TO ALLOW FOR CONTINUOUS FLOW UNDER THE BRIDGE AT ALL TIMES WITH CONSTRUCTION ALTERNATING FROM ONE SIDE OF THE CHANNEL TO THE OTHER. BMPS TO PREVENT EROSION AND SEDIMENTATION WILL BE EMPLOYED AND BMPS TO PREVENT FUEL AND OTHER TOXIC SUBSTANCES FROM ENTERING THE GROUND AND STREAM WILL ALSO BE EMPLOYED. SEASONAL RESTRICTIONS FOR IN-STREAM WORK, LIMITED TO JULY THROUGH SEPTEMBER PER INPUT FROM NHF&G TO PROTECT TROUT SPAWNING AND OTHER HABITAT WILL LIMIT POTENTIAL IMPACTS TO THESE SPECIES. THESE MEASURES WILL PROTECT THE AQUATIC RESOURCE FUNCTIONS ASSOCIATED WITH SIMMS STREAM. SEE PERMIT ATTACHMENT A AND FUNCTIONAL ASSESSMENT WORKSHEET FOR ADDITIONAL DETAILS.

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: December 18, 2019

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Matt Urban
Sarah Large
Ron Crickard
Andrew O’Sullivan
Marc Laurin
Joseph Adams
Meli Dube
Tim Mallette
Michael Licciardi
Jennifer Reczek

ACOE

Mike Hicks

EPA

Mark Kern
Jeannie Brochi
Beth Alafat

US Coast Guard

*Jeffrey Stieb

US Fish & Wildlife Services

Susi von Oettingen

NHDES

Lori Sommer
Karl Benedict
Eben Lewis

NH Fish & Game

Carol Henderson
Brendan Clifford

NH NHB

Amy Lamb

**Consultants/Public
Participants**

Pete Walker
Lindsey Matras
John Byatt
Kristen Hayden
Chris Fournier
Sarah Barnum
John Stockton
Dan Hageman
Stephanie Dyer-Carroll

*Attendee called in for Seabrook-Hampton, #15904

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

Meeting Minutes.....	2
Keene-Swanzey, #40100 (X-A004(345)).....	2
Springfield, #20509 (X-A002(078)).....	4
Columbia-Colebrook, #42313 (X-A004(814)).....	5
Seabrook-Hampton, #15904 (X-A001(026)).....	7

(When viewing these minutes online, click on a project to zoom to the minutes for that project.)

Note: Projects other than Columbia-Colebrook #42313 have been removed

was performed including velocities which would be used to size the riprap needed to protect the structure. J. Byatt also noted that the proposed velocities would be lower due to the significantly increased size of the hydraulic opening. K. Benedict indicated that a discussion on existing and proposed velocities at the crossing and the corresponding implications for aquatic organism passage associated with the 20' box culvert would be required as part of the Alternative Design form in the wetland application package. General discussion as to whether the project should be reviewed at another Natural Resource Agency Meeting to verify the hydraulic analysis and velocities occurred, however, K. Benedict suggested that this information could be reviewed via email for pre-approval prior to submission of the full wetland application instead and all in attendance were in agreement. This submission will include a draft of the Alternative Design form, including discussion of hydraulics and velocities from the TS&L study, and minutes from meetings with the Town. The intention of this additional coordination is to seek feedback from DES Wetlands Bureau to allow as complete a Standard Dredge and Fill application package as possible in order to meet project timelines.

Lori Sommer, NHDES Wetlands Bureau, inquired if alternative methods for a terrestrial wildlife crossing had been evaluated since banks could not be constructed inside the 20' culvert alternative, such as replacing either of the existing culverts to the east or west of the crossing with a 4' diameter culvert. Kristin Hayden indicated that a 4' diameter culvert would not fit well as the surrounding area is fairly flat and does not have substantial cover to accommodate an increase in pipe diameter.

L. Sommer asked if the Department intends to pay into the ARM fund to mitigate for wetland and stream impacts. M. Dube confirmed that mitigation for the linear feet of impact to the stream would be required but that the square feet of impact to delineated wetlands is under the 10,000 square foot threshold and would not require mitigation. A preliminary calculation of the ARM fee indicates that mitigation for stream could be approximately \$41,000. M. Urban suggested that because simulated stream bed material will be installed for the length of disturbance in the channel at the inlet and outlet that this could be considered self-mitigating and that only the lengths of impacts along each bank should be calculated for the ARM payment. There was general agreement, and this will be confirmed with final numbers via email prior to application submission.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Columbia-Colebrook, #42313 (X-A004(814))

Chris Fournier (HEB Engineers) and Sarah Barnum (Normandeau Associates) presented the bridge project consisting of bridge preservation at two locations, Columbia Bridge #108/167, US Route 3 over Simms Stream and Colebrook Bridge #051/098, NH Route 26 over the Mohawk River. The project was previously present at the June 18, 2019 meeting. Since that meeting, the survey, delineation, H&H assessment were completed and impact areas determined.

C. Fournier began by providing an overview of the Columbia location, reiterating the purpose and need to address deterioration and stabilize the bridge structures.

Columbia Location

C. Fournier presented photographs of the existing conditions, specifically identifying the failure of the existing channel protection (riprap), which is sloughing into the channel and opening a void within the spill-through abutments.

Three alternatives were reviewed: do nothing, preserve, or replace. Do nothing does not meet the purpose and need, and replacement exceeds the need, therefore preservation is the preferred option.

C. Fournier review the proposed scope of work including traffic control, “peel and patch” of the bridge deck, sealing substructure, and reconstructing the channel protection. Detail was provided regarding the necessary channel work. To key the channel protection and keep it in place, the banks and entire channel bed under the bridge will be disturbed; riprap will be removed, existing channel materials will be excavated and stockpiled, and then reinstalled at essentially the same elevation and slope as the existing riverbed, on top of the stabilized channel. Prior to removing and stockpile the existing riverbed material, the existing configuration of materials will be noted, and replacement will mimic that to the extent practicable. A phased “half and half” approach will be used to maintain flows, via water diversion, throughout the construction period. Because the impacted areas will be reconstructed to resemble the existing conditions, no mitigation is proposed. Due to the reconstruction of the channel, a standard NHDES Wetlands Permit Application (NHDES-W-06-012) will be required for this portion of the project.

S. Barnum briefly reviewed the environmental findings. Wetland delineation revealed no wetland resources except for the stream itself and associated banks. The NH NHB data check revealed no rare species or communities within the project footprint, and a survey of the bridge itself revealed no suitable features for roosting by Northern Long Eared Bats (NLEBs). In the vicinity, there are records of Northern Harrier (NOHA) and Round Whitefish from adjacent fields and the confluence of Simms stream and the Connecticut River, respectively. Following BMPs recommended by NHFG will prevent impacts due to construction from occurring to these nearby species.

S. Barnum also noted the existing topography adjacent to and under the bridge provides a suitable pathway for medium- and smaller-sized wildlife to use the bridge for passage under the roadway.

Colebrook Location

C. Fournier presented photographs of the existing conditions, specifically identifying the channel characteristics and deterioration of the center construction joint.

C. Fournier reviewed three alternatives: do nothing, preserve, or replace. Do nothing does not meet the purpose and need, and replacement exceeds the need, therefore preservation is the preferred option.

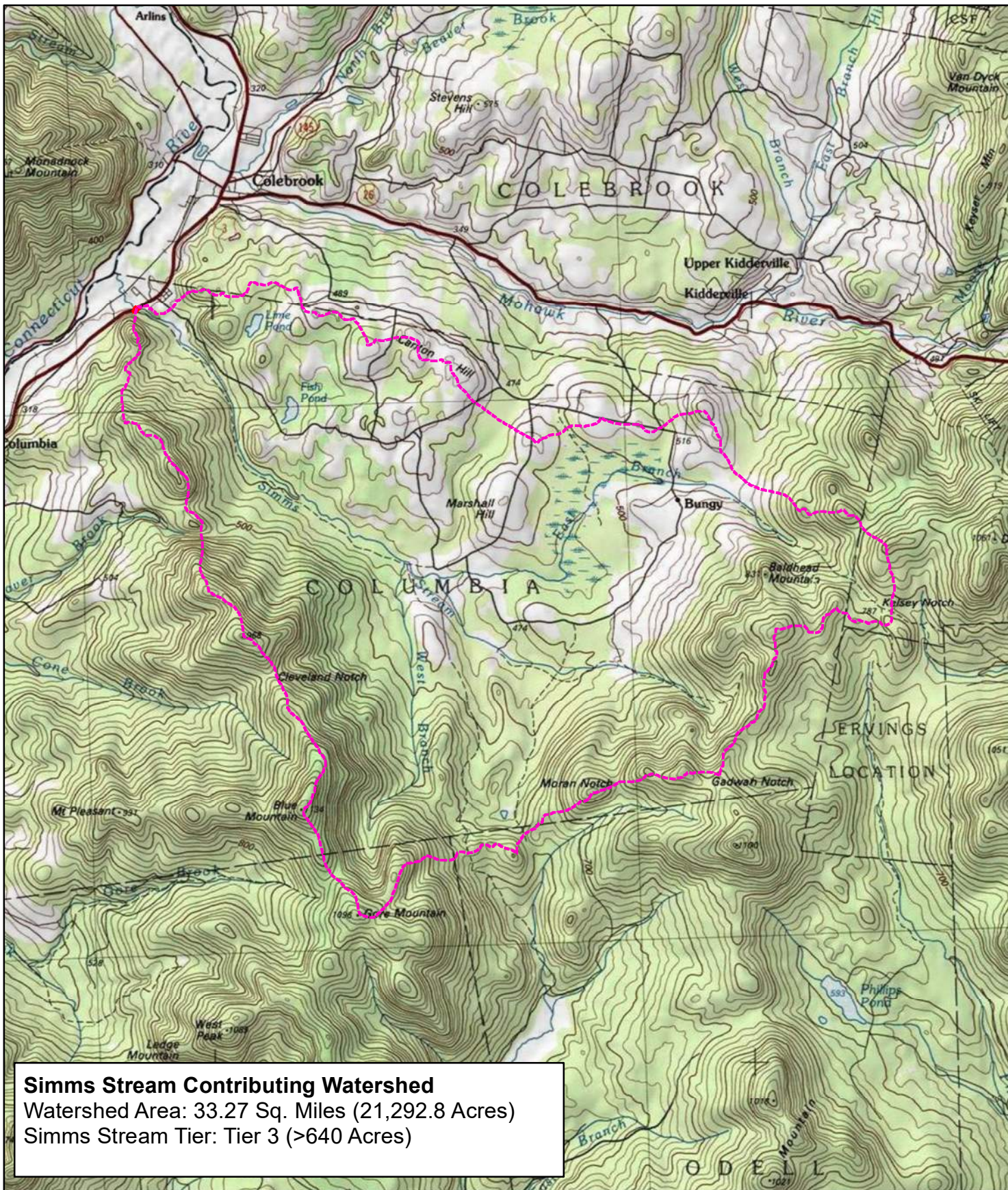
C. Fournier then described the proposed scope of work including traffic control, “peel and patch” of the bridge deck, sealing substructure, and fully reconstructing the construction joint. This requires under-bridge scaffolding. Access will be from the north due to the configuration of the ROW to the south. Minimal, temporary impacts to the channel and banks will occur due to the access and placing the needed scaffolding in the stream bed, and no mitigation is proposed. It was proposed that the project would be submitted through the new Permit by Notification for Tier 3 bridge repairs (Env-Wt 904.09), as was recommended by NHDES during the June 2019 meeting.

Karl Benedict stated that a Routine Roadway Routine Roadway Maintenance Activities Notification (RR-9) was also applicable to this portion of the project.

S. Barnum briefly reviewed the environment findings. Wetland delineation revealed no wetland resources except for the stream itself and associated banks. The NH NHB data check revealed no rare species or communities within the project footprint, and a survey of the bridge itself revealed no suitable features for roosting by NLEBs. In the vicinity, there is a Round Whitefish record from the area below the confluence of the Mohawk River and the Connecticut River. Following BMPs recommended by NHFG will prevent impacts due to construction from occurring to this nearby species.



The overall project schedule was presented, with intended submission of necessary NHDES applications in February and a Final Environmental Document in March.

This project has been previously discussed at the 6/19/2019 Monthly Natural Resource Agency Coordination Meeting.



Simms Stream Contributing Watershed
 Watershed Area: 33.27 Sq. Miles (21,292.8 Acres)
 Simms Stream Tier: Tier 3 (>640 Acres)

N

 Simms Stream Contributing Watershed
 Project Area

0 0.75 1.5 3 Miles



Date:
2/25/2020

**Columbia Bridge Project
 Contributing Watershed Map**

25 Nashua Road Bedford, NH 03110
 Prepared For: SAB Project: 24289.000 Prepared By: JO
 Path: J:\Projects\ColumbiaColebrook_Bridges\USGS_Drainage_Columbia.mxd



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:	21,292.8 acres
<input type="checkbox"/> Tier 1: A <i>tier 1</i> stream crossing is a crossing located on a watercourse where the contributing watershed size is less than or equal to 200 acres	
<input type="checkbox"/> Tier 2: A <i>tier 2</i> stream crossing is a crossing located on a watercourse where the contributing watershed size is greater than 200 acres and less than 640 acres	
<input checked="" type="checkbox"/> Tier 3: A <i>tier 3</i> stream crossing is a crossing that meets <u>any</u> of the following criteria: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> On a watercourse where the contributing watershed is more than 640 acres <input type="checkbox"/> Within a Designated River Corridor <input type="checkbox"/> On a watercourse that is listed on the surface water assessment 305(b) report <input type="checkbox"/> Within a 100-year floodplain (see <i>section 2</i> below) <input type="checkbox"/> In a jurisdictional area having any protected species or habitat (NHB DataCheck) <input type="checkbox"/> 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:

<input checked="" type="checkbox"/> No: The proposed stream crossing <i>is not</i> within the FEMA 100-year floodplain.
<input type="checkbox"/> Yes: The proposed project <i>is</i> within the FEMA 100-year floodplain. Zone = _____ <input type="checkbox"/> Elevation of the 100-year floodplain at the inlet: _____ feet (FEMA El. or Modeled El.)

3. Calculating Peak Discharge

Existing 100-year peak discharge (Q) calculated in cubic feet per second (CFS): 2,630 CFS	Calculation method: USGS StreamStats
Estimated Bankfull discharge at the crossing location: 804 CFS	Calculation method: StreamStats 2-year

➡ **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: 70 feet	Mean Bankfull Depth: 2.3 feet
Bankfull Cross Sectional Area: 220 square feet	

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

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

www.des.nh.gov

**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: _____

Reference reach watershed size: _____ acres

<u>Parameter</u>	<u>Cross Section 1</u> Describe bed form riffle <i>(e.g. pool, riffle, glide)</i>	<u>Cross Section 2</u> Describe bed form riffle <i>(e.g. pool, riffle, glide)</i>	<u>Cross Section 3</u> Describe bed form pool <i>(e.g. pool, riffle, glide)</i>	<u>Range</u>
Bankfull Width	52.06 feet	36.62 feet	40.64 feet	11.42 feet
Bankfull Cross Sectional Area	90.86 SF	72.44 SF	103.83 SF	31.39 SF
Mean Bankfull Depth	1.75 feet	1.98 feet	2.55 feet	0.8 feet
Width to Depth Ratio	29.75	18.49	15.94	13.81
Max Bankfull Depth	2.61 feet	2.88 feet	3.27 feet	0.66 feet
Flood Prone Width	117.99 feet	123.83 feet	156.47 feet	38.48 feet
Entrenchment Ratio	2.27	3.38	3.85	1.58

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

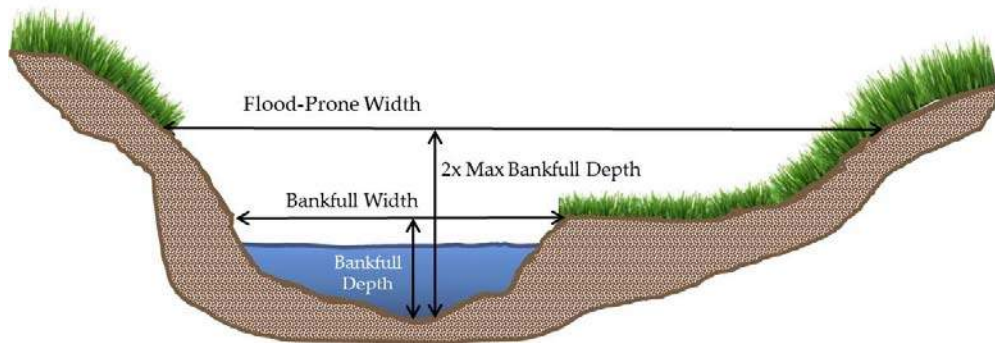


Figure 1: Determining the Reference Reach Attributes

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: 1.43%

Average Channel Slope at the Crossing Location: 1.33%

7. Plan View Geometry

For Tier 2 and Tier 3 Crossings Only

Sinuosity of the Reference Reach: 1.20

Sinuosity of the Crossing Location: 1.10

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

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

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

www.des.nh.gov

8. Substrate Classification based on Field Observations

For Tier 2 and Tier 3 Crossings Only

% of reach that is <i>bedrock</i>	___0___ %
% of reach that is <i>boulder</i>	___25___ %
% of reach that is <i>cobble</i>	___50___ %
% of reach that is <i>gravel</i>	___20___ %
% of reach that is <i>sand</i>	___5___ %
% of reach that is <i>silt</i>	___0___ %

9. Stream Type of Reference Reach

For Tier 2 and Tier 3 Crossings Only

Stream Type of Reference Reach:	C3
---------------------------------	----

Refer to Rosgen Classification Chart (Figure 2) below

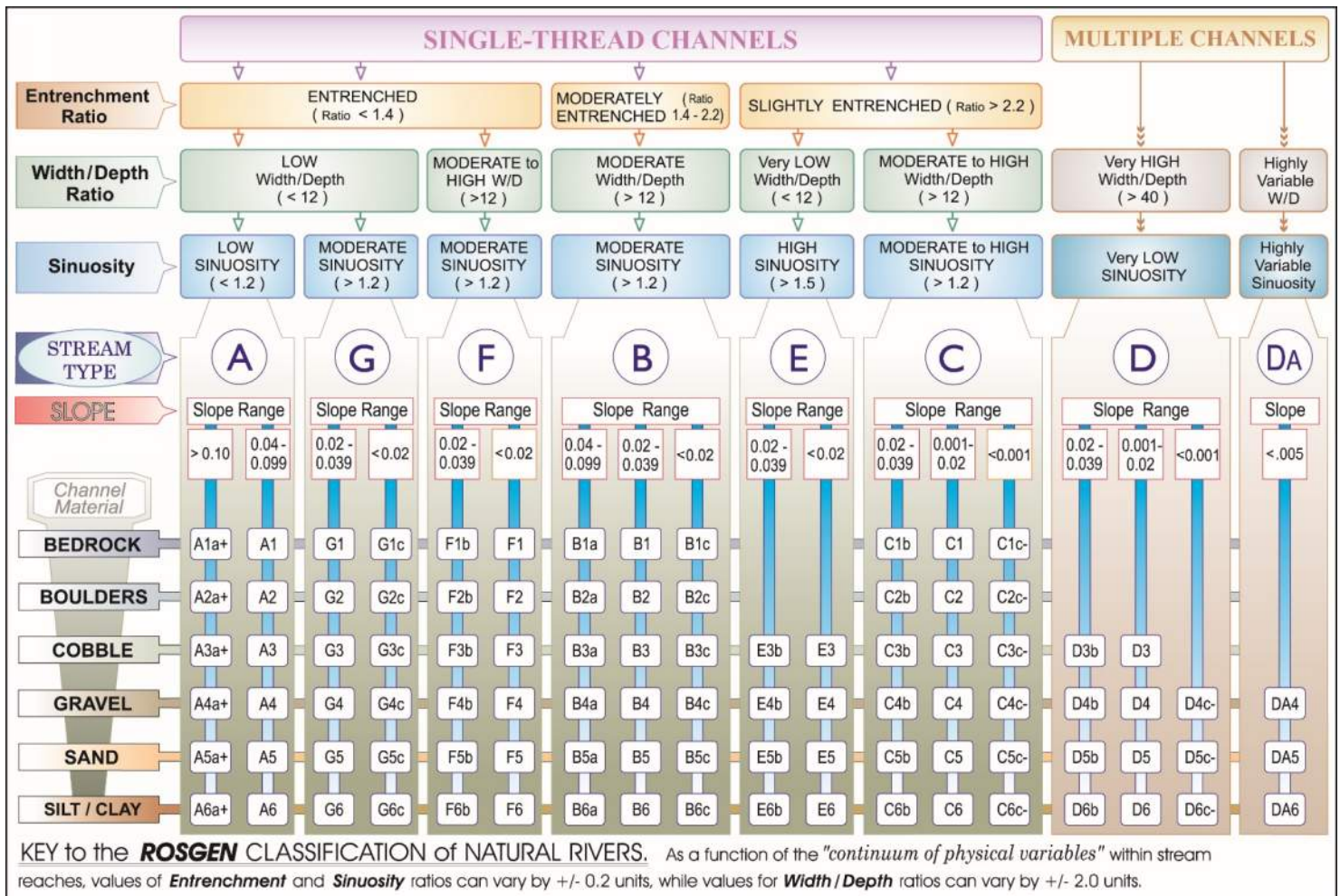


Figure 2. Reference from Applied River Morphology, Rosgen, 1996

10. Crossing Structure Metrics

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

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

www.des.nh.gov

Existing Conditions

Existing Structure Type:	<input checked="" type="checkbox"/> Bridge Span <input type="checkbox"/> Pipe Arch <input type="checkbox"/> Open-bottom Culvert <input type="checkbox"/> Closed-bottom Culvert <input type="checkbox"/> Closed-bottom Culvert with stream simulation <input type="checkbox"/> Other: _____	
Existing Crossing Span <i>(perpendicular to flow)</i>	64 feet	Culvert Diameter _____ feet Inlet Elevation _____
Existing Crossing Length <i>(parallel to flow)</i>	44.7 feet	Outlet Elevation _____ Culvert Slope _____

Proposed Conditions

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

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

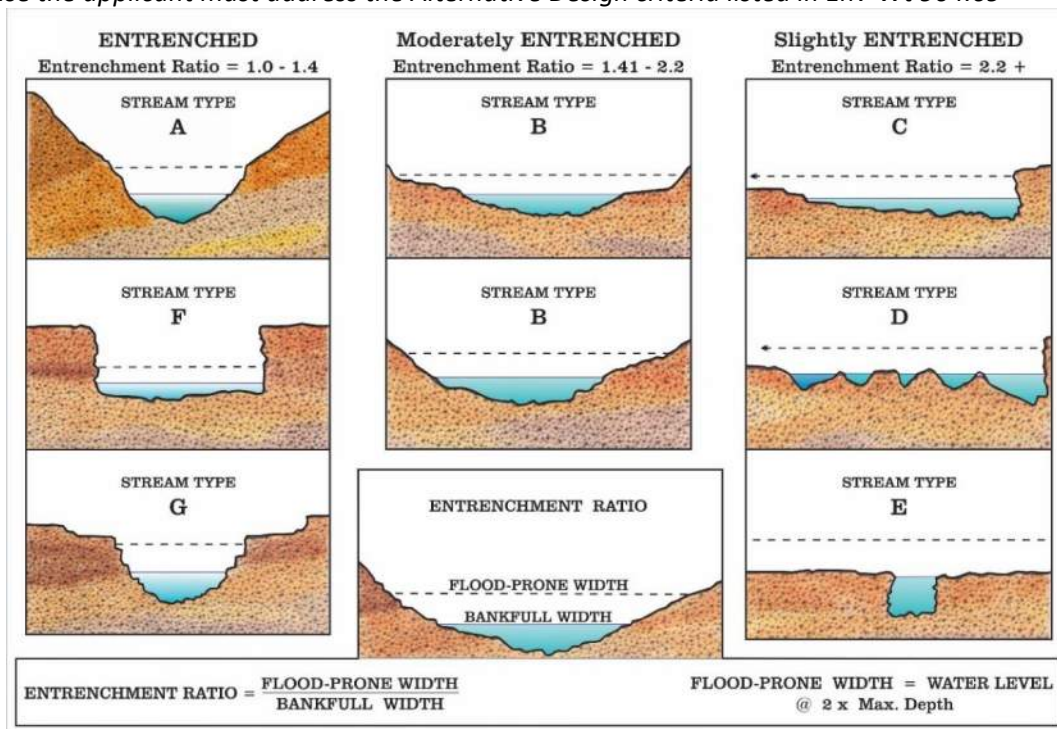


Figure 3. Reference from Applied River Morphology, Rosgen, 1996

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

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

www.des.nh.gov

11. Crossing Structure Hydraulics		
	Existing	Proposed
100 year flood stage elevation at inlet	1,013.95	N/A
Flow velocity at outlet in feet per second (FPS)	9.91	N/A
Calculated 100 year peak discharge (Q) for the <u>proposed</u> structure in CFS		N/A
Calculated 50 year peak discharge (Q) for the <u>proposed</u> structure in CFS		N/A

12. Crossing Structure Openness Ratio
<i>For Tier 2 and Tier 3 Crossings Only</i>
<p>Crossing Structure Openness Ratio = 19.1</p> <p><i>Openness box culvert = (height x width)/length</i></p> <p><i>Openness round culvert = (3.14 x radius²)/length</i></p>

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.
<i>All stream crossings shall be designed and constructed so as to:</i>
<input checked="" type="checkbox"/> Not be a barrier to sediment transport.
<input checked="" type="checkbox"/> Prevent the restriction of high flows and maintain existing low flows.
<input checked="" type="checkbox"/> Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
<input checked="" type="checkbox"/> Not cause an increase in the frequency of flooding or overtopping of banks.
<input checked="" type="checkbox"/> Preserve watercourse connectivity where it currently exists.
<input checked="" type="checkbox"/> Restore watercourse connectivity where: <ol style="list-style-type: none"> (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.
<input checked="" type="checkbox"/> Not cause erosion, aggradation, or scouring upstream or downstream of the crossing.
<input checked="" type="checkbox"/> 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.
<input checked="" type="checkbox"/> 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
<p>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.</p> <p><input type="checkbox"/> I have submitted an alternative design and addressed each requirement listed in Env-Wt 904.09</p>

CONFIDENTIAL – NH Dept. of Environmental Services review

Memo



NH NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

To: Jamie O'Brien, Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110

From: Amy Lamb, NH Natural Heritage Bureau

Date: 5/24/2019 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau

NHB File ID: NHB19-1545

Town: Colebrook, Columbia

Location: Multiple

Description: This is a NHDOT bridge preservation project (Project number 42313) for two bridges in northern New Hampshire. The first bridge (108/167) carries Route 3 over Simms Stream in Columbia, and the second (051/098) carries Route 26 over the Mohawk River in Colebrook. Both bridges are in need of structural repairs to maintain safe passage. The exact timing of the planned construction has not been determined, but will take place after all project-required permits are in place, which is expected to be in 2019. The project involves traffic controls, concrete deck repairs and installation of galvanic anodes and new barrier membranes.

cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: Please contact the NH Fish & Game Department to address wildlife concerns.

Vertebrate species

	State ¹	Federal	Notes
Northern Harrier (<i>Circus hudsonius</i>)	E	--	Contact the NH Fish & Game Dept (see below).
Round Whitefish (<i>Prosopium cylindraceum</i>)	T	--	Contact the NH Fish & Game Dept (see below).

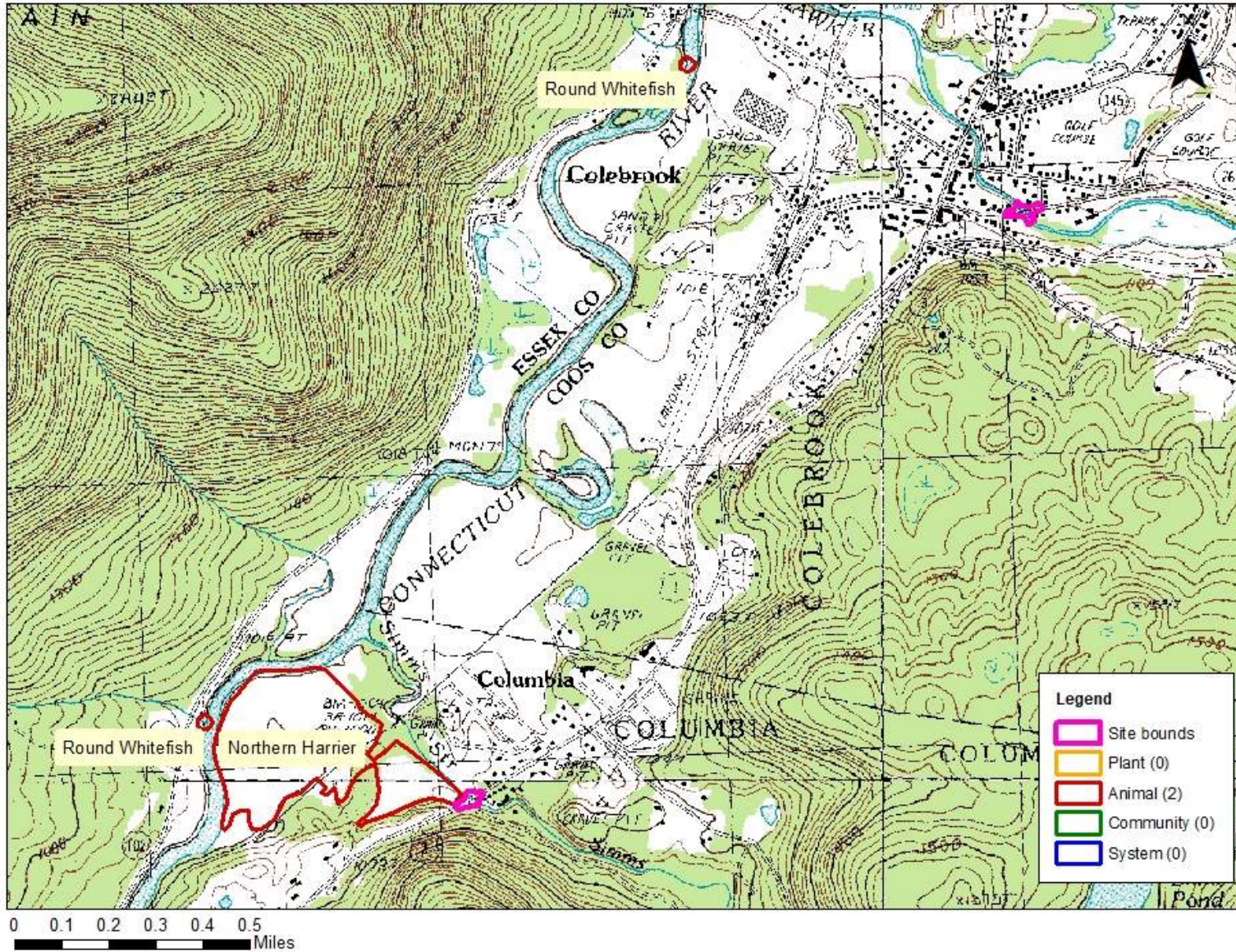
¹Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20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

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

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.

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB19-1545



New Hampshire Natural Heritage Bureau - Animal Record

Northern Harrier (*Circus hudsonius*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

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

Detailed Description: 2018: Panorama Golf Course: 1 individual observed between 5/7 and 8/10.
2016: Panorama Golf Course: 1 adult observed between 5/10 and 7/7.
2014: Area 299M: 2 juveniles. Area 4394: 1 adult. Area 8252: 1 adult.
2012: 464 Creampoke Road: pair, nest with young.
2010: Area 8254: adult female.
2007: Area 4394: 1 adult and 4 young.
2006: Area 4394: adult female observed on 7/30, 3 young a week later, and then 1 young on 8/11.
2005: Area 299M: adult female. Area 4394: pair with courtship display and apparent nesting attempt. Area 8260: adult male.
2002: Area 8260: adult female.
2000: Area 8260: adult male. Area 4401: 1 (probably young) observed.
1999: Area 299M: 2 birds.
1998: Area 4388: adult, 2 young. Area 4389: 2 adults. Area 4424: adult, 3 young. Area 8260: pair. Area 4401: adult male.
1997: Area 8253: adult female. Area 4393: pair, 3 young. Area 4394: pair. Area 4395: adult male. Area 299M: pair. Area 8259: adult male. Area 4397: 1 young (may be non-local). Area 4400: pair. Area 4398: birds present. Area 4401: adult male.
1996: Area 4388: adult female, young. Area 4394: adult. Area 8259: adult male. Area 4399: adult male. Area 4401: adult female.
1995: Area 4388: pair, 2 young. Area 4389: adult female, 1 young. Area 8253: pair. Area 8245: adult female. Area 4393: adult female. Area 8252: adult male.
1994: Area 4388: pair. Area 4389: 1 young. Area 8253: adult female. Area 8245: adult female. Area 8252: adult male, 1 young. Area 299M: adult male. Area 8261: young. Area 4400: adult female. Area 4401: adult male.
1993: Area 8255: pair. Area 4395: 1 young. Area 8252: adult male. Area 8259: young female. Area 8260: adult male. Area 4397: 2 young. Area 4400: adult male. Area 4398: adult female.
1992: Area 4388: pair, 2 young. Area 4389: 1 young. Area 8253: adult male. Area 8245: adult male, 2 young. Area 8255: adult male. Area 4394: 2 young. Area 4395: Birds present. Area 4397: pair. Area 4400: adult female. Area 4398: adult male.
1991: Area 4388: pair. Area 8255: adult. Area 4394: 6 birds. Area 8252: adult female. Area 4397: birds present. Area 4398: birds present.
1990: Area 4388: adult. Area 8253: adult female, young. Area 4390: adult female. Area 8255: adult female, 1 young. Area 4393: young. Area 299M: adult female, 2 young. Area 4399: adult male. Area 8262: 1 young.
1989: Area 8253: pair, young. Area 8245: adult female. Area 8252: adult female. Area 8260: pair, young. Area 4399: adult male. Area 4401: birds present.
1988: Area 4388: pair. Area 8253: young. Area 4394: breeding. Area 8252: young. Area 8259: young. Area 4399: pair. Area 4400: pair, 3 young. Area 4398: adult female, 1 young.
1987: Area 4388: adult female. Area 8245: adult male. Area 4394: adult male, young. Area 8256: young. Area 8252: pair. Area 8259: young. Area 4399: 1 young. Area 4398: 1 young.
1986: Area 4388: pair. Area 8252: 2 young. Area 8260: 2 young. Area 4400: 2 young. Area 4398: adult female. 1986: Area 8262: birds present.
1985: Area 4388: pair. Area 8255: 1 young. Area 4393: pair. Area 4394: pair, young. Area 8252: 4 young. Area 8259: 3 young. Area 8260: 3 young. Area 4399: pair. Area 4400: pair. Area 4398: 2 young.
1984: Area 4388: young. Area 4389: pair. Area 4390: adult male. Area 8245: 3 young. Area 8255: pair. Area 4393: pair. Area 4394: young. Area 8252: 4 young. Area 8259: 3 young. Area 8260: 1 young. Area 4399: pair. Area 4400: young. Area 4398: 2 young. Area 4401: young.
1983: Area 4388: 2 young. Area 4390: pair, young. Area 8255: pair. Area 4393: 2 young. Area 8252: 3 young. Area 8260: pair. Area 4400: 1 young. Area 4398: 3 young.
1982: Area 4388: pair. Area 4390: pair. Area 8255: pair. Area 8252: pair. Area 299M: adult female. Area 8260: pair. Area 4400: 3 young. Area 4398: pair.
1981: Area 8254: 1 young. Area 8259: young. Area 4400: pair. Area 4398: 1

young.

General Area:

General Comments: Area 4398: Also known as Gaeb site.

Management

Comments:

Location

Survey Site Name: Hall Stream Valley

Managed By:

County: Coos

Town(s): Colebrook

Size: 5361.2 acres

Elevation:

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

Directions: Area 4388: Near Wheeler School in Hall Stream valley. Area 4389: Indian Stream valley agricultural land within 1 mile of Connecticut River confluence. Area 4424: Southwest of Murphy Dam (Lake Francis), at north side of Ben Young Hill. Area 8245: East of Clarksville Pond, north of Clarksville Pond Road. Area 8254: North of Back Pond, just west of Day Brook. Area 4394: On west side of Mt. Mudget, including area at east end of Creampoke Road. Area 4400: In vicinity of Union School. Area 4401: Connecticut River grasslands below intersection of Route 3 and Fish Pond Road.

Dates documented

First reported: 1981

Last reported: 2018-08-10

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

New Hampshire Natural Heritage Bureau - Animal Record

Round Whitefish (*Prosopium cylindraceum*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2014: Area 15: 3 caught electrofishing.
2013: Area 9: 6 caught electrofishing. Area 10: 8 caught electrofishing. Area 11: 1 caught electrofishing. Area 12: 8 caught electrofishing. Area 13: 4 caught electrofishing. Area 14: 2 caught electrofishing.
2011: Area 5: 12 caught electrofishing. Area 6: 6 caught electrofishing. Area 7: 4 caught electrofishing. Area 8: 1 caught electrofishing.
2009: Area 3: 6 caught with seine net. Area 4: 2 caught electrofishing.
2008: Area 1: 44 caught electrofishing. Area 2: 5 caught electrofishing.
2006: Columbia Bridge: 1 adult caught by angler.

General Area: 2013: Area 9: Riffle/Run area with an average depth of 3.5 feet and sand/gravel substrate. Round whitefish were found on both edges of river mostly associated with structure (rootwads, rocks, vegetation). Area 10: Deeper section that is more narrow (average depth ~6 feet) changing to shallow gravel/sand. Round whitefish weren't really tight to larger structure (fallen trees), but were scattered along the river edges. Area 11: Depth ranged between 1 and 5 feet. Substrate in this section was more fine mud silt with much less gravel. Some parts of the riverbank were armored with rocks to protect a cornfield. There were fallen trees. Area 12: Most whitefish were captured in smaller rocks/cobble substrate just upstream from the boat launch. Area 13: Wide, straight, sandy homogenous stretch with little structure. Area 14: Deeper channel on the Vermont side. Most fish were found in wood structure near shore. Wide channel with silt and rocks pondweed and grasses in shallows.
2011: Area 5: As far upstream as electrofishing boat could travel before reaching depths too shallow to continue.
2009: Area 3: Cobble-gravel substrate.
2006: Columbia Bridge: Freshwater river.

General Comments: 2006: Photos forwarded by Jud Kratzer, Fisheries Biologist, Vermont Fish and Wildlife Department, 802-751-0486.

Management
Comments:

Location

Survey Site Name: Columbia Bridge, Connecticut River
Managed By:

County: Coos
Town(s): Stewartstown
Size: 7.7 acres Elevation:

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

Directions: 2008-2014: Multiple locations in the Connecticut River between Hall Stream and Mohawk River.
2006: Connecticut River at Columbia Bridge [Ca. 8.5 miles south of the junction of Rte. 3 and Fish Pond Road in Columbia].

Dates documented

First reported: 2006-10-03 Last reported: 2014-07-17

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

From: [Tuttle, Kim](#)
To: [Jamie OBrien](#)
Subject: NHB19-1545 Colebrook, Columbia bridge repairs
Date: Wednesday, June 5, 2019 1:40:08 PM

Jamie,

As long as equipment is not staged in fields, wet meadows or shrubby habitats for the repairs to the bridge (108/167) that carries Route 3 over Simms Stream in Columbia, we do not expect impacts to the state endangered northern harrier. Also, we do not expect impacts to the state threatened round whitefish as a result of the repairs to the Columbia or Colebrook bridge (051/098) that carries Route 26 over the Mohawk River as long as all efforts are taken to prevent chemical contaminants from entering the ground or surface waters.

In order to avoid impacts to waterfowl, shoreland birds, and other wildlife species, please avoid the use of welded plastic or 'biodegradable plastic' netting or thread in erosion control matting, if needed. There are numerous documented cases of birds and other wildlife being trapped and killed in erosion control matting with synthetic netting and thread. The use of erosion control berm, white Filtrexx Degradable Woven Silt Sock, or several 'wildlife friendly' options such as woven organic material (e.g. coco or jute matting such as North American Green SC150BN or equivalent) are readily available.

Regards,

Kim Tuttle
Wildlife Biologist
NH Fish and Game
11 Hazen Drive
Concord, NH 03301
603-271-6544

From: Jamie OBrien [mailto:jobrien@normandeau.com]
Sent: Wednesday, June 5, 2019 1:06 PM
To: Tuttle, Kim
Subject: RE: NHB review: NHB19-1545

ATTENTION: This email has originated from outside of the organization. Do not open attachments or click on links unless you recognize the sender and know the content is safe.

Hi Kim,

Normandeau is assisting HEB Engineers and the New Hampshire Department of Transportation with permitting and documentation for the rehabilitation of two bridges in northern NH, one carrying Route 3 over Simms Stream in Columbia, and one carrying Route 26 over the Mohawk River in Colebrook. The project work will include installing traffic controls, concrete deck repairs, and installation of galvanic anodes and new barrier membranes.

According to the NHB report, Northern harrier and round whitefish are documented in the project vicinity. Please let us know if you have specific recommendations or concerns for the proposed work so we can plan the timing and approach appropriately. The project plans and NHB report are attached for your reference, and if you have any questions or need further detail do not hesitate to let me know.

Thank you for your time,
Jamie

Ms. JAMIE O'BRIEN, *Biologist*
Normandeau Associates, Inc.
25 Nashua Road, Bedford, NH 03110
[603-472-5191](tel:603-472-5191) (main), [603-637-1180](tel:603-637-1180) (direct)
jobrien@normandeau.com www.normandeau.com

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From: Lamb, Amy <Amy.Lamb@dncr.nh.gov>
Sent: Friday, May 24, 2019 2:38 PM
To: Jamie OBrien <jobrien@normandeau.com>
Cc: Tuttle, Kim <Kim.Tuttle@wildlife.nh.gov>
Subject: NHB review: NHB19-1545

Attached, please find the review we have completed. If your review memo includes potential impacts to plants or natural communities please contact me for further information. If your project had potential impacts to wildlife, please contact NH Fish and Game at the phone number listed on the review.

Best,
Amy

Amy Lamb

Ecological Information Specialist

NH Natural Heritage Bureau

DNCR - Forests & Lands

172 Pembroke Rd

Concord, NH 03301

603-271-2834

Please consider the environment before printing this e-mail.

William McCloy

From: Magee, John <john.magee@wildlife.nh.gov>
Sent: Thursday, January 23, 2020 12:02 PM
To: William McCloy; Timmins, Dianne
Cc: Sarah Barnum; Henderson, Carol
Subject: RE: NHDOT Columbia Bridge Project #42313 - Route 3 over Simms Stream

Hi Bill. We have done several fish surveys in Simms Stream very close to that site and some more upstream in the watershed. At that site, there are brown trout, brook trout, rainbow trout, longnose sucker, slimy scuplin, longnose dace, burbot and blacknose dace there. Brook and brown trout spawn in late September – late October and their eggs stay buried in coarse sediment till the spring. Our typical recommendation to minimize impacts to brook (and brown) trout spawning and eggs is to do no instream work between Oct 1 and May 1. I'm not sure if we have typical recommendations for rainbow trout, but they spawn in early spring, probably April/May in that area, and their eggs are in coarse sediment at least through most of June. Doing no instream work in April - June would reduce impacts to them. That would leave a window of July-Sept for instream work.

We don't have a lot of streams with both brook and rainbow trout, and fewer that have brook, brown and rainbow trout, so this situation is uncommon at least.

Thank you,

John

John Magee, M.S., Certified Fisheries Professional
Past President, Northeastern Division of the American Fisheries Society
Fisheries Habitat Research and Management Programs Coordinator
New Hampshire Fish and Game Department
11 Hazen Drive, Concord, NH 03301
Phone 603-271-2744
Fax 603-271-5829

Did you know? New Hampshire Fish and Game protects, conserves and manages more than 500 species of wildlife, including 63 mammals, 18 reptiles, 22 amphibians, 313 birds and 122 kinds of fish as well as thousands of invertebrates!

From: William McCloy <wmccloy@normandeau.com>
Sent: Wednesday, January 22, 2020 10:53 AM
To: Magee, John <john.magee@wildlife.nh.gov>; Timmins, Dianne <Dianne.Timmins@wildlife.nh.gov>
Cc: Sarah Barnum <sbarnum@normandeau.com>
Subject: NHDOT Columbia Bridge Project #42313 - Route 3 over Simms Stream

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

John and Dianne –

We are working with our engineering partners and NHDOT on a bridge preservation project in Columbia where Route 3 crosses Simms Stream. The scope of the preservation project is to replace, in-kind and re-set the granite blocks under the bridge because they are slumping; therefore they will need to be working in the channel to reset/rebuild the bank

protection and the channel will be repaired using the same native material and restored to the pre-construction grade at all locations.

Due to the in-water work requirements – I wanted to coordinate with you to be sure we understood any applicable time of year restrictions. We have reviewed the NH Aquatic Restoration Mapper and it appears that this is a cold-water fishery; but wanted your input on the specifics.



Please let me know if you have any questions or need more information.

Thanks for your help!

BILL McCLOY
NORMANDEAU ASSOCIATES, INC.
802-861-7038 (direct) 802-855-1246 (cell)

From: Sarah Barnum <sbarnum@normandeau.com>
Sent: Tuesday, January 21, 2020 11:25 PM
To: KARL.BENEDICT@DES.NH.GOV
Cc: William McCloy <wmccloy@normandeau.com>
Subject: Columbia Bridge Project

Karl,

Here are the materials you asked for regarding this project, to support our discussion. This project has been discussed at two NHDOT NR Agency meetings, June 19 and December 18, 2019.

Sarah

SARAH A. BARNUM, Ph.D.
Senior Wildlife Scientist
Normandeau Associates, Inc.

25 Nashua Road, Bedford, NH 03110
603-637-1157 (direct) 207-215-1538 (cell)
sbarnum@normandeau.com



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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:

April 21, 2020

Consultation Code: 05E1NE00-2019-SLI-2396

Event Code: 05E1NE00-2020-E-06695

Project Name: Columbia Colebrook 42313 - Columbia Location

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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 feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. 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. This verification can be completed formally or informally as desired. 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 through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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. Under sections 7(a)(1) and 7(a)(2) 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 and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, 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 Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. 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>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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

Consultation Code: 05E1NE00-2019-SLI-2396

Event Code: 05E1NE00-2020-E-06695

Project Name: Columbia Colebrook 42313 - Columbia Location

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: The proposed action is preservation of the Route 3 Bridge #108/167 over Simms Stream in Columbia, NH. The proposed action includes traffic controls, concrete deck repairs, and reconfiguration of failed channel protection measures. Construction is anticipated in 2020.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/44.874500517165345N71.51749136890793W>



Counties: Coos, NH

Endangered Species Act Species

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

NAME	STATUS
Canada Lynx <i>Lynx canadensis</i> Population: Wherever Found in Contiguous U.S. There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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



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>

IPaC Record Locator: 626-17497790

July 22, 2019

Subject: Consistency letter for the 'Columbia Colebrook 42313 - Colebrook Location' project (no current TAILS record) under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **Columbia Colebrook 42313 - Colebrook Location** (Proposed Action) may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*). Consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required.

This "may affect - not likely to adversely affect" determination becomes effective when the lead Federal action agency or designated non-federal representative uses it to ask the Service to rely on the PBO to satisfy the agency's consultation requirements for this project.

Please provide this consistency letter to the lead Federal action agency or its designated non-federal representative with a request for its review, and as the agency deems appropriate, to submit for concurrence verification through the IPaC system. The lead Federal action agency or designated non-federal representative should log into IPaC using their agency email account and click "Search by record locator". They will need to enter the record locator **626-17497790**.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency for the Proposed Action accordingly.

The following species may occur in your project area and **are not** covered by this determination:

- Canada Lynx, *Lynx canadensis* (Threatened)
-

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

Columbia Colebrook 42313 - Colebrook Location

Description

The proposed action is preservation of the Route 26 Bridge #051/098 over the Mohawk River in Colebrook, NH. The proposed action includes traffic controls and concrete deck repairs. Construction is anticipated in 2020.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat. Therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

No

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

No

8. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

No

9. Does the project include maintenance of the surrounding landscape at existing facilities (e.g., rest areas, stormwater detention basins)?

No

10. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

11. Does the project include slash pile burning?

No

12. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

Yes

13. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

14. Has a bridge assessment^[1] been conducted **within** the last 24 months^[2] to determine if the bridge is being used by bats?

[1] See [User Guide Appendix D](#) for bridge/structure assessment guidance

[2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

Yes

SUBMITTED DOCUMENTS

- *Columbia Rt3 Bridge Assessment Form 5-14-2019_Rev1.pdf* <https://ecos.fws.gov/ipac/project/PGGXTWTFEVEJBN4HNRDQHLW6E4/projectDocuments/17546535>

15. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)^[1]?

[1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

No

16. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

17. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

18. Will the project involve the use of **temporary** lighting *during* the active season?

Yes

19. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

20. Will the project install new or replace existing **permanent** lighting?

No

21. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

22. Will the project raise the road profile **above the tree canopy**?

No

23. Is the location of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the project action area not within suitable Indiana bat and/or NLEB summer habitat and is outside of 0.5 miles of a hibernaculum.

24. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

25. **General AMM 1**

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

26. Lighting AMM 1

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

Yes

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

No

3. Please describe the proposed bridge work:

The proposed action is preservation of the Route 3 Bridge #108/167 over Simms Stream in Columbia. The proposed action includes traffic controls, concrete deck repairs, and reconfiguration of failed channel protection measures.

4. Please state the timing of all proposed bridge work:

2020

5. Please enter the date of the bridge assessment:

May 14, 2019

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on March 16, 2018. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

Section 106 Programmatic Agreement – Cultural Resources Review Effect Finding

Appendix B Certification – Activities with Minimal Potential to Cause Effects

Date Reviewed: 5/29/2019
(Desktop or Field Review Date)

Project Name: Columbia-Colebrook

State Number: 42313

FHWA Number: X-A004(814)

Environmental Contact: Ron Crickard

DOT

Email Address: Ronald.Crickard@dot.nh.gov

Project Manager: David Scott

Project Description: This is a NHDOT bridge preservation project for two bridges in northern New Hampshire. The first bridge is Columbia 108/167, and carries Route 3 over Simms Stream. The second is Colebrook 051/098, and carries Route 26 over the Mohawk River. Both bridges are proposed to receive repairs to the concrete deck, with the Columbia bridge also proposed to receive reconfiguration of failed channel protection measures.

Please select the applicable activity/activities:

Highway and Roadway Improvements	
<input type="checkbox"/>	1. Modernization and general highway maintenance <u>that may require additional highway right-of-way or easement</u> , including: a. sidewalk reconstruction Choose an item.
<input type="checkbox"/>	2. Installation of rumble strips or rumble stripes
<input type="checkbox"/>	3. Installation or replacement of pole-mounted signs
<input type="checkbox"/>	4. Guardrail replacement
<input type="checkbox"/>	5. Rehabilitation or replacement of existing storm drains
Bridge and Culvert Improvements	
<input type="checkbox"/>	6. Bridge approach rail replacement, provided any extension does not connect to a bridge older than 50 years old (unless it already does), and there is no change in access associated
<input type="checkbox"/>	7. Culvert replacement (excluding stone box culverts), when the culvert is less than 60" in diameter and excavation for replacement is limited to previously disturbed areas
<input checked="" type="checkbox"/>	8. Bridge deck preservation and replacement, as long as no character defining features are impacted
<input type="checkbox"/>	9. Non-historic bridge and culvert maintenance, renovation, or total replacement, <u>that may require minor additional right-of-way or easement</u> , including: a. replacement or maintenance of non-historic bridges Choose an item.
<input type="checkbox"/>	10. Historic bridge maintenance activities within the limits of existing right-of-way, including: Choose an item. Choose an item.
<input checked="" type="checkbox"/>	11. Stream and/or slope stabilization and restoration activities (including removal of debris or sediment obstructing the natural waterway, or any non-invasive action to restore natural conditions)
Bicycle and Pedestrian Improvements	
<input type="checkbox"/>	12. Construction of pedestrian walkways, sidewalks, sidewalk tip-downs, small passenger shelters, and alterations to facilities or vehicles in order to make them accessible for elderly and handicapped persons
<input type="checkbox"/>	13. Installation of bicycle racks
<input type="checkbox"/>	14. Recreational trail construction
<input type="checkbox"/>	15. Recreational trail maintenance when done on existing alignment
<input type="checkbox"/>	16. Construction of bicycle lanes and shared use paths and facilities within the existing right-of-way
Railroad Improvements	

Section 106 Programmatic Agreement – Cultural Resources Review Effect Finding

Appendix B Certification – Activities with Minimal Potential to Cause Effects

<input type="checkbox"/>	17. 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.
<input type="checkbox"/>	18. In-kind replacement of modern railroad features (i.e. those features that are less than 50 years old)
<input type="checkbox"/>	19. 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	
<input type="checkbox"/>	20. Installation of Intelligent Transportation Systems
<input type="checkbox"/>	21. Acquisition or renewal of scenic, conservation, habitat, or other land preservation easements where no construction will occur

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

The project footprint will remain the same. Construction and staging will occur in existing ROW. As such, project activities should have no direct impact to known historical resources.

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?	Yes	NHDHR R&C # assigned?	Click here to enter text.
Please identify public outreach effort contacts; method of outreach and date:	Letters were sent (5/8/2019) to the Planning Board, Historical Society, Conservation Commission, and Board of Selectmen.		

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

<input checked="" type="checkbox"/>	No Potential to Cause Effects	<input type="checkbox"/>	No Historic Properties Affected
This finding serves as the Section 106 Memorandum of Effect. No further coordination is necessary.			
<p>NHDOT comments: Bridge 108/107 is exempt from S106 review under the Post-45 Program Comment. Bridge 051/098 was built in 1973, and is not yet 50 yrs old.</p> <p><u>Jill Edlles</u> NHDOT Cultural Resources Staff</p> <p><u>7/16/2019</u> Date</p>			

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.

Please refer to the *NHDOT Guidance on Using the Program Comment for Common Post-1945 Concrete and Steel Bridges*, located on the NHDOT Bureau of Environment Website, for information on using this form:

<http://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/cultural.htm>

Information on specific bridges can be found on the NHDOT Bureau of Bridge Design **Bridge Summary** Spreadsheet:

<http://www.nh.gov/dot/org/projectdevelopment/bridgedesign/documents.htm>.

(Additional photographs may be attached here if needed).





**US Army Corps
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Appendix B

Regional General Permits (GPs) Required Information and Corps Secondary Impacts Checklist

In order for the Corps of Engineers to properly evaluate your application, applicants must submit the following information along with the New Hampshire DES Wetlands Bureau application or permit notification forms. Some projects may require more information. For a more comprehensive checklist, go to www.nae.usace.army.mil/regulatory, “Forms/Publications” and then “Application and Plan Guideline Checklist.” Check with the Corps at (978) 318-8832 for project-specific requirements. For your convenience, this Appendix B is also attached to the State of New Hampshire DES Wetlands Bureau application and Permit by Notification forms.

All Projects:

- Corps application form ([ENG Form 4345](#)) as appropriate.
- Photographs of wetland/waterway to be impacted.
- Purpose of the project.
- Legible, reproducible black and white (no color) plans no larger than 11”x17” with bar scale. Provide locus map and plan views of the entire property.
- Typical cross-section views of all wetland and waterway fill areas and wetland replication areas.
- In navigable waters, show mean low water (MLW) and mean high water (MHW) elevations. Show the high tide line (HTL) elevations when fill is involved. In other waters, show ordinary high water (OHW) elevation.
- On each plan, show the following for the project:
- Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. Don’t use local datum. In coastal waters this may be mean higher high water (MHHW), mean high water (MHW), mean low water (MLW), mean lower low water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983-2001.
- Horizontal state plane coordinates in U.S. survey feet based on the Traverse Mercator Grid system for the State of New Hampshire (Zone 2800) NAD 83.
- Show project limits with existing and proposed conditions.
- Limits of any Federal Navigation Project in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the Federal Navigation Project;
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the ordinary high water in inland waters and below the high tide line in coastal waters.
- Delineation of all waterways and wetlands on the project site,;
- Use Federal delineation methods and include Corps wetland delineation data sheets. See GC 2 and www.nero.noaa.gov/hcd for eelgrass survey guidance.
- GP 3, Moorings, contains eelgrass survey requirements for the placement of moorings.
- For activities involving discharges of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact the Corps for guidance.



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**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.

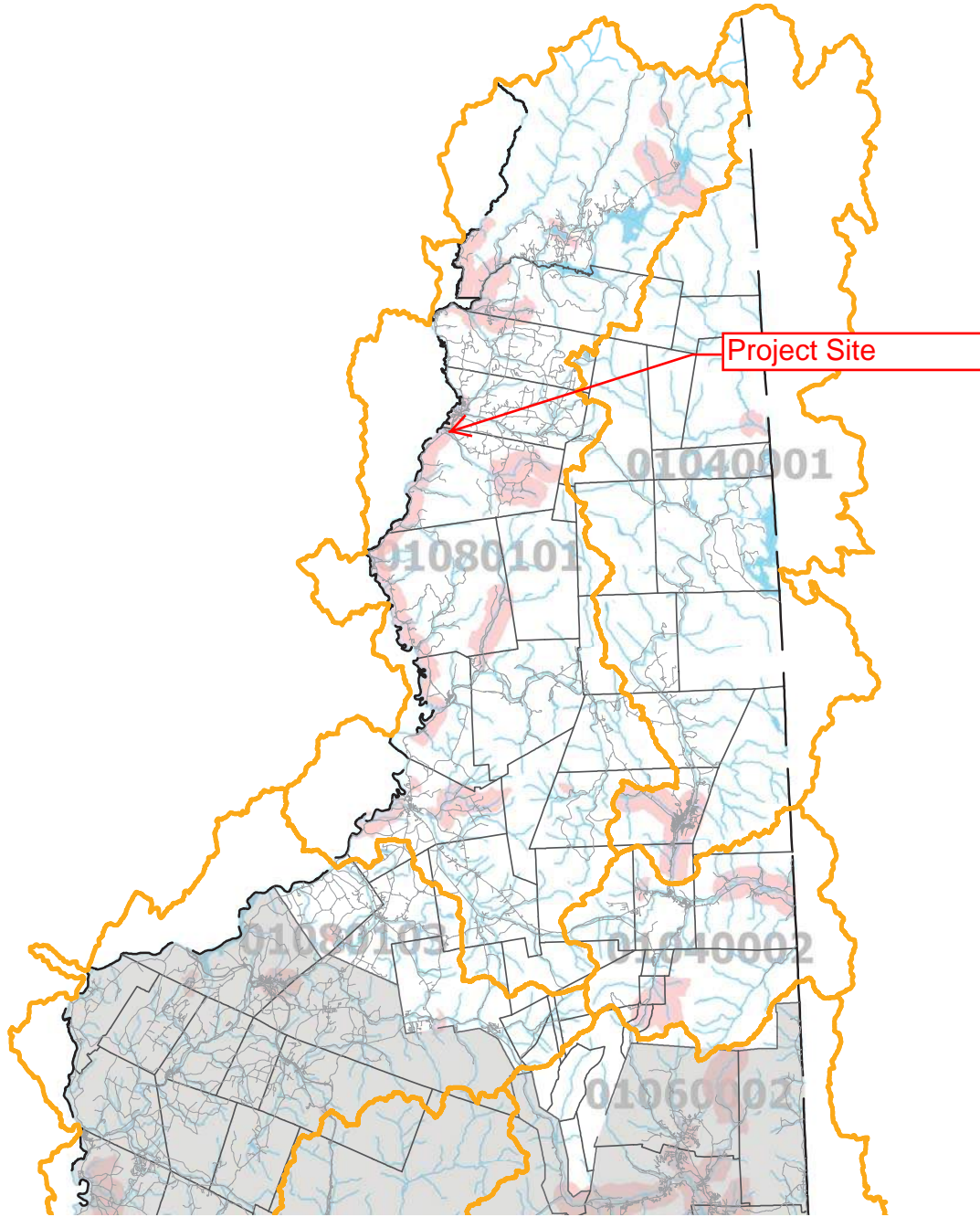
1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 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?	4569 SF	
2.7 What is the area of the proposed fill in wetlands?	4569 SF	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	24.4%	
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: <ul style="list-style-type: none"> • 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?	X	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	N/A	
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the 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.

Coos County: Impaired Waters Vicinity* for which No Additional Loading Criteria Applies



*Vicinity based upon a 1 mile buffer of Assessment Units impaired in the 2006 SWQA for one or more of the following;

- Invertebrates,
- Cadmium,
- Chlorophyll *a*,
- Copper,
- Cyanobacteria,
- Dissolved Oxygen (% Sat or mg/L),
- Enterococcus,
- *E. coli*,
- Algal Growth,
- Fecal Coliform,
- Lead,
- Total Phosphorus,
- Sedimentation & Siltation,
- Zinc.

	Major Divides (HUC8)
	Roads(NHDOT)
	State Boundary
	County Boundary
	Town Boundary
	2006 Assessment Unit ID Lines (1:100k NHD)
	2006 Assessment Unit ID Polygons(1:100k NHD)
	One Mile Buffer on No Additional Loading AUIDs

This map is intended solely as a screening tool to assist you in identifying areas within 1 mile upstream in the watershed of an impaired waterbody. This map is not intended to show analytical results regarding pollutant loading or any other information related to sections 305(b) or 401 of the Clean Water Act or any other State or federal laws.

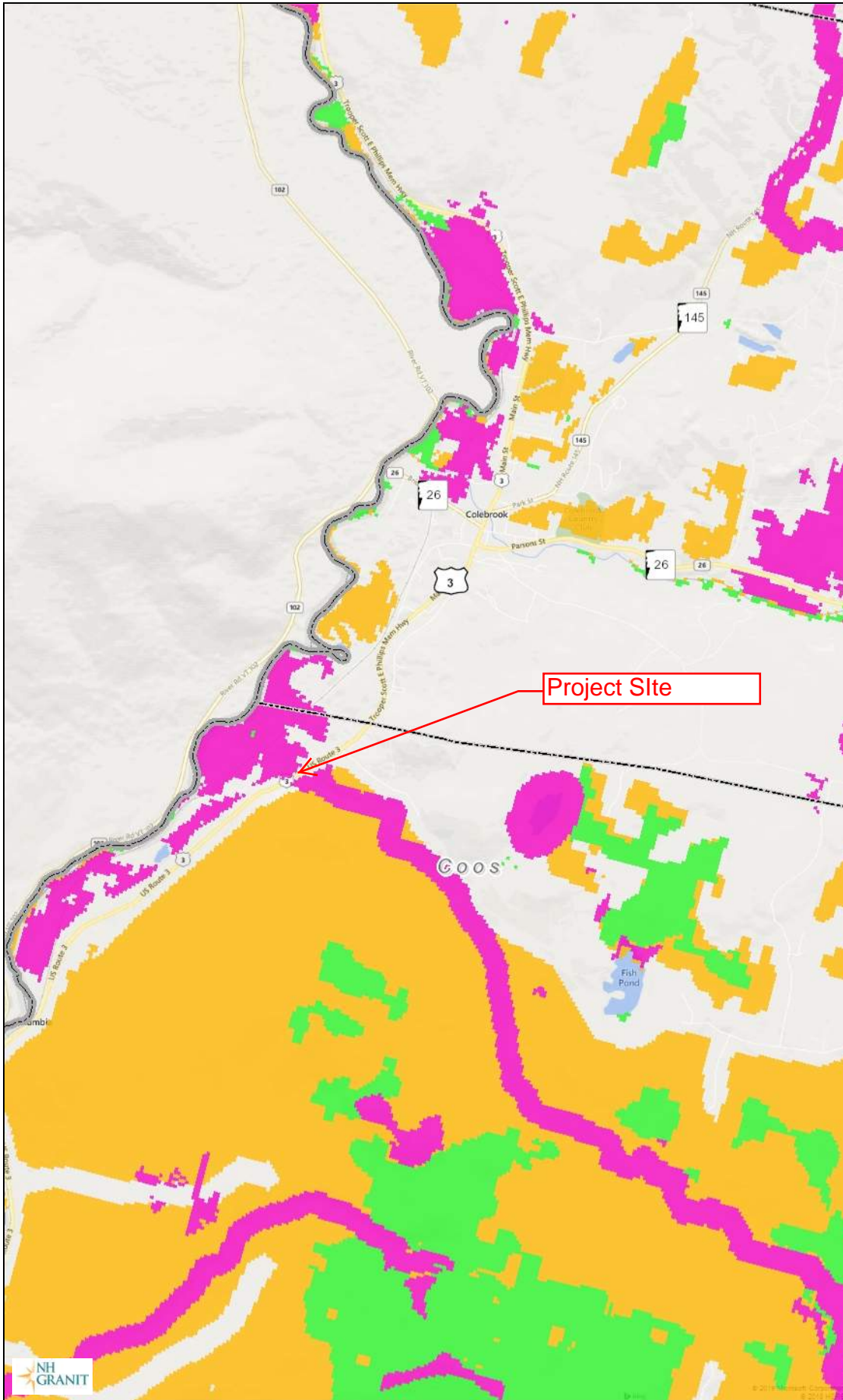
The coverages presented in this program are under constant revision as new sites or facilities are added. They may not contain all of the potential or existing sites or facilities. The Department is not responsible for the use or interpretation of this information, nor for any inaccuracies.

For more information on the 2006 Surface Water Quality Assessments see:

<http://des.nh.gov/wmb/swqa/>



WAP Map by NH GRANIT



Legend

- State
- County
- City/Town
- WAP 2015: Highest Ranked Wildlife Habitat
 - Not Top Ranked
 - Highest Ranked Habitat in NH
 - Highest Ranked Habitat in Region
 - Supporting Landscape

Map Scale

1: 51,953

© NH GRANIT, www.granit.unh.edu

Map Generated: 6/3/2019



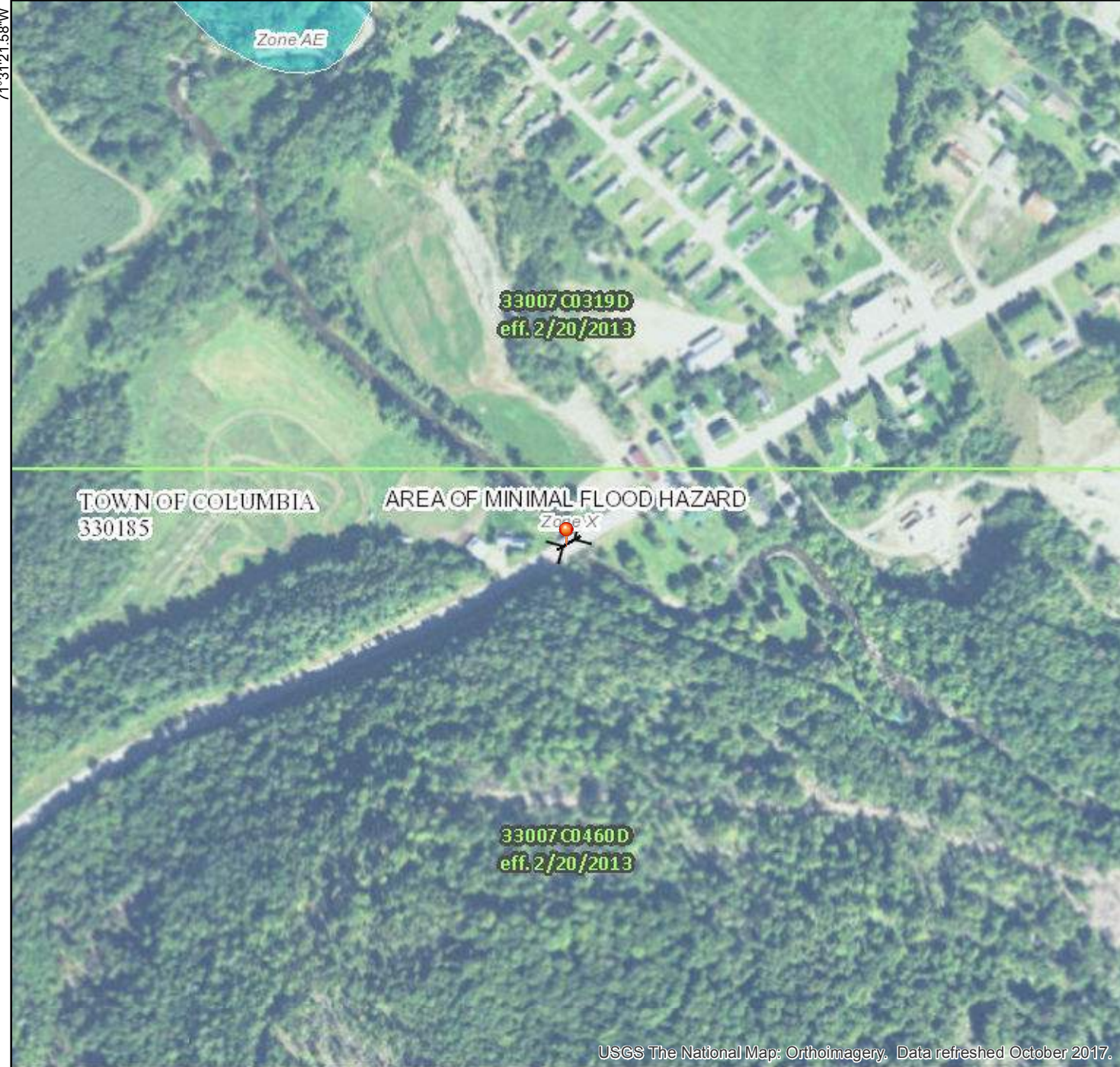
Notes



National Flood Hazard Layer FIRMette



44°52'41.17"N



71°31'21.58"W

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

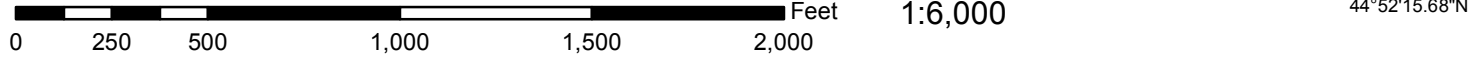
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

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 6/3/2019 at 7:34:03 PM 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.

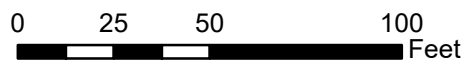
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory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



71°30'44.13"W



- Ordinary High Water Mark (OHWM)
- Top of Bank (TOB)
- Study Area
- ▲ Utility Pole
- Invasive Species
- Road (NHDOT)
- ⊕ Culvert Inlet/Outlet



**Columbia Bridge
Photo Location Map**

Columbia, NH

Date:
6/13/2019

25 Nashua Road Bedford, NH 03110
Prepared For: SAB Project: 24289.000 Prepared By: JO



Photo 1. View NW along Route 3



Photo 2. View SE along Route 3



Photo 3. View of NE abutment from upstream side



Photo 4. View of NE abutment from downstream side



Photo 5. View of SW abutment from upstream side



Photo 6. View of SW abutment from under bridge



Photo 7. Simms Stream upstream of bridge



Photo 8. View of Simms Stream upstream of bridge



Photo 9. View of Simms Stream from bridge looking upstream



Photo 80. View of Simms Stream looking downstream from bridge



Photo 91. View upstream towards right-bank descending below bridge



Photo 102. View of left-bank descending just below bridge from bridge



Photo 13. View of SW corner of bridge



Photo 14. View of private driveway south of bridge



Photo 15. View of SE corner of bridge



Photo 16. View of NE corner of bridge



Photo 17. Underside of bridge



Photo 17. Bird nest under bridge

A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work

The general work sequence will include the following:

1. Project work limits will be surveyed and demarcated
2. Erosion controls will be installed, and work areas constructed as required
3. Traffic controls will be enacted to accommodate one-lane of alternating traffic (phased)
4. Removal of existing bridge pavement and barrier membrane, perform partial and full depth concrete deck repairs, install galvanic anodes, install new bridge pavement and barrier membrane
5. Conduct limited roadway approach pavement removal and replacement as necessary to facilitate repairs
6. Repave swales behind each wingwall, seal substructure construction joints and seal exposed concrete surfaces
7. Install bank access areas and diversions, reconstruct destabilized channel protection on alternating sides, restore impacted areas of channel, stabilized and restore impacted areas, seed and mulch.
8. Project cleanup, demobilization
9. Removal of erosion controls following satisfactory stabilization of site

A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments

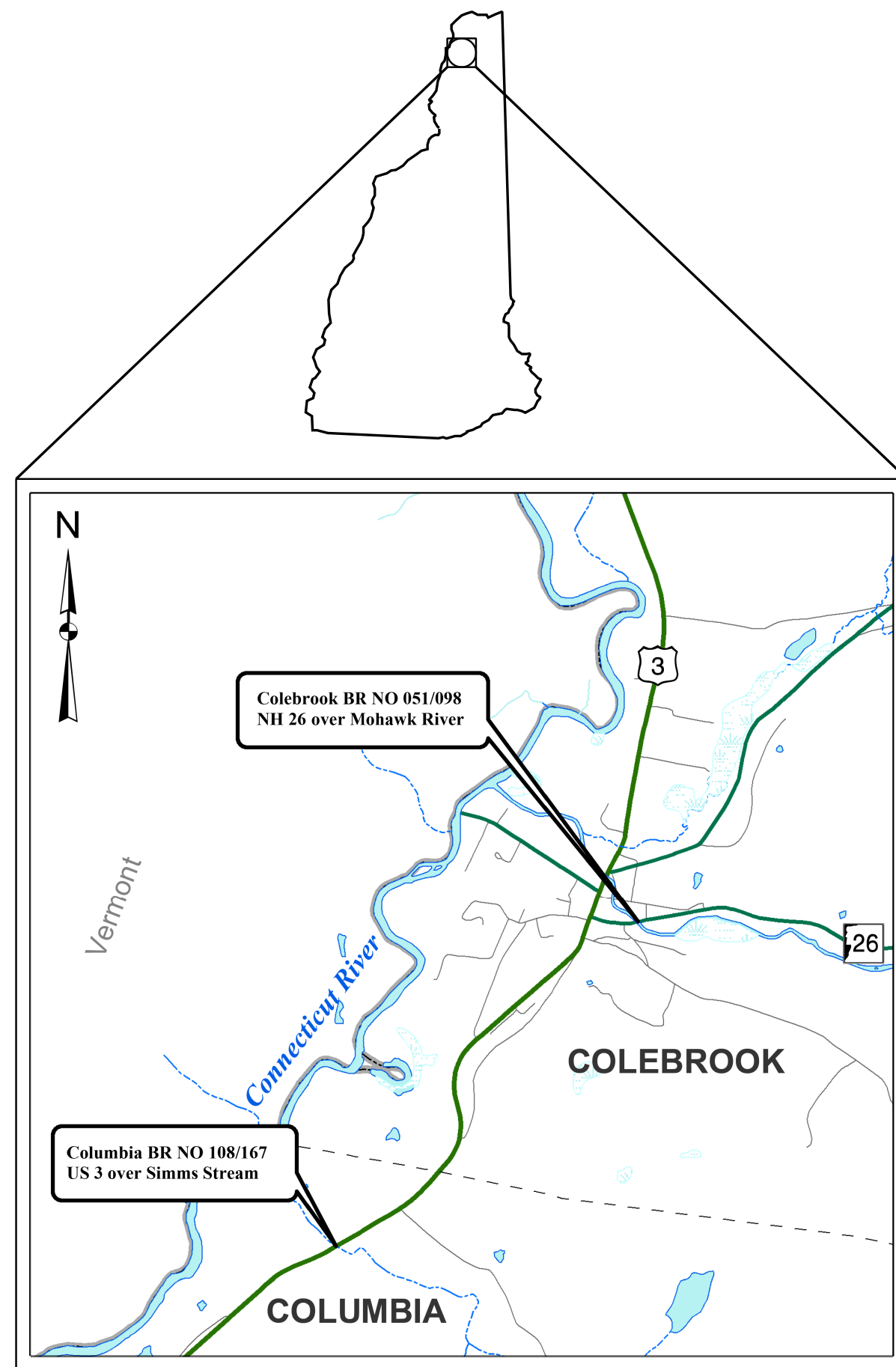
No comments were received from a Conservation Commission regarding this project.

A statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments

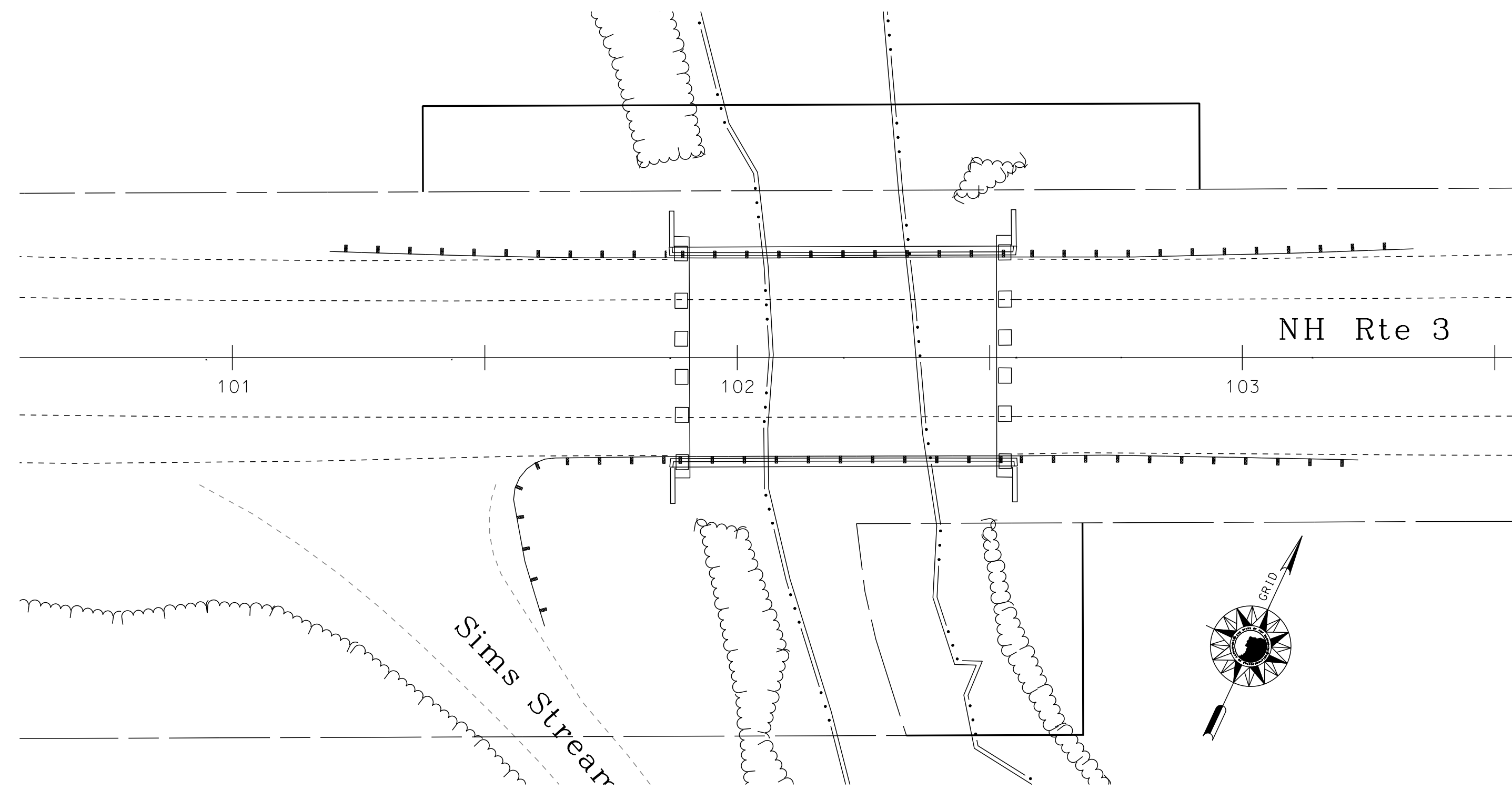
All comments received during pre-application coordination have been applied to the project and discussed throughout the permit application and supporting materials.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

DESIGN DATA		
	BR. #108/167	BR. #051/098
AVERAGE DAILY TRAFFIC 2017	3,700	3,800
AVERAGE DAILY TRAFFIC 2039	5,500	5,600
PERCENT OF TRUCKS	7%	4%
DESIGN SPEED	50 MPH	30 MPH
LENGTH OF PROJECT	400 FT	400 FT



X-A004 (814)
N.H. PROJECT NO. 42313
US ROUTE 3 OVER SIMMS STREAM



TOWNS OF COLUMBIA & COLEBROOK
COUNTY OF COOS

SCALE: 1" = 40'

NHDOT THE STATE OF
NEW HAMPSHIRE
DEPARTMENT OF
TRANSPORTATION

RECOMMENDED FOR APPROVAL:

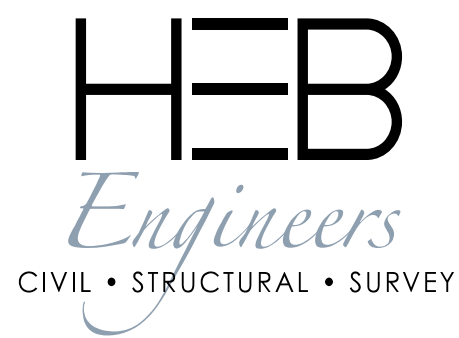
DIRECTOR OF PROJECT DEVELOPMENT DATE

APPROVED:

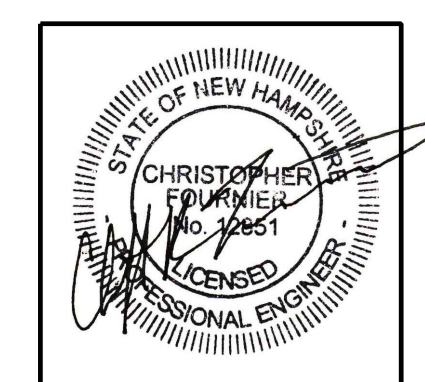
ASSISTANT COMMISSIONER AND CHIEF ENGINEER DATE

DRAWING NAME	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
42313Title	X-A004 (814)	42313	1	7

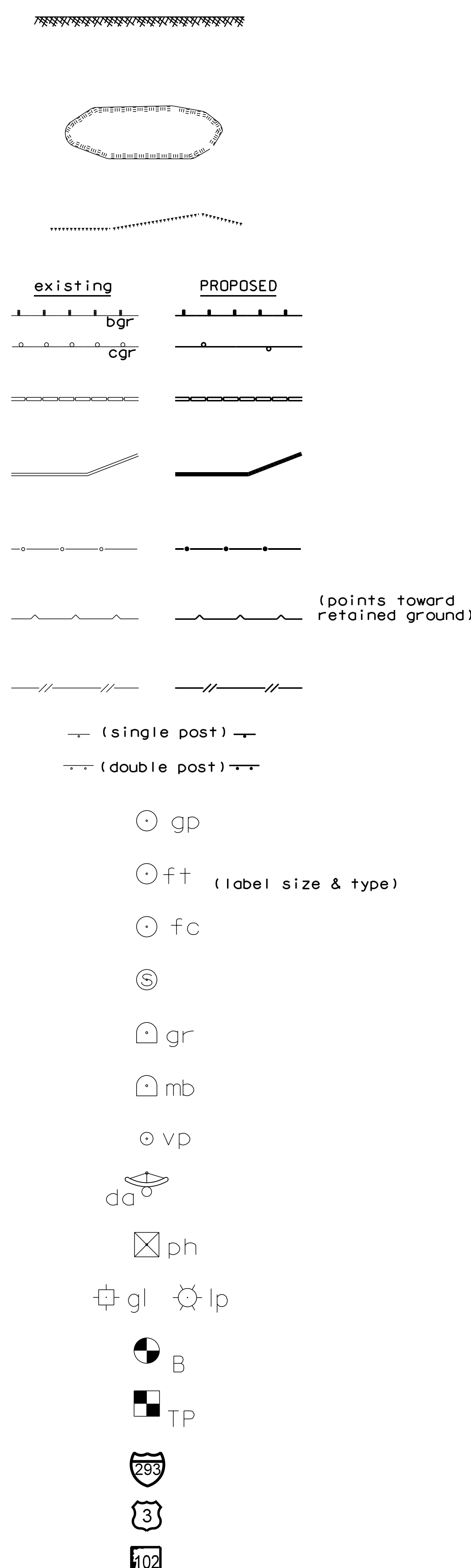
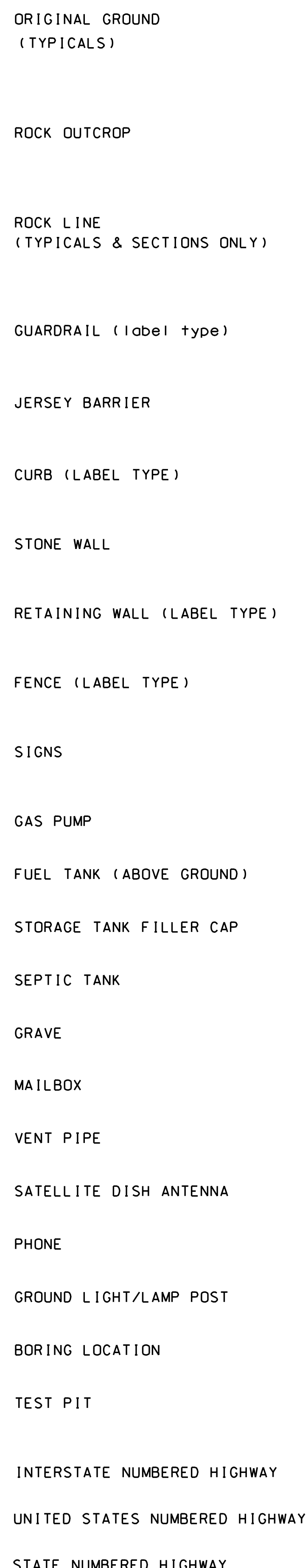
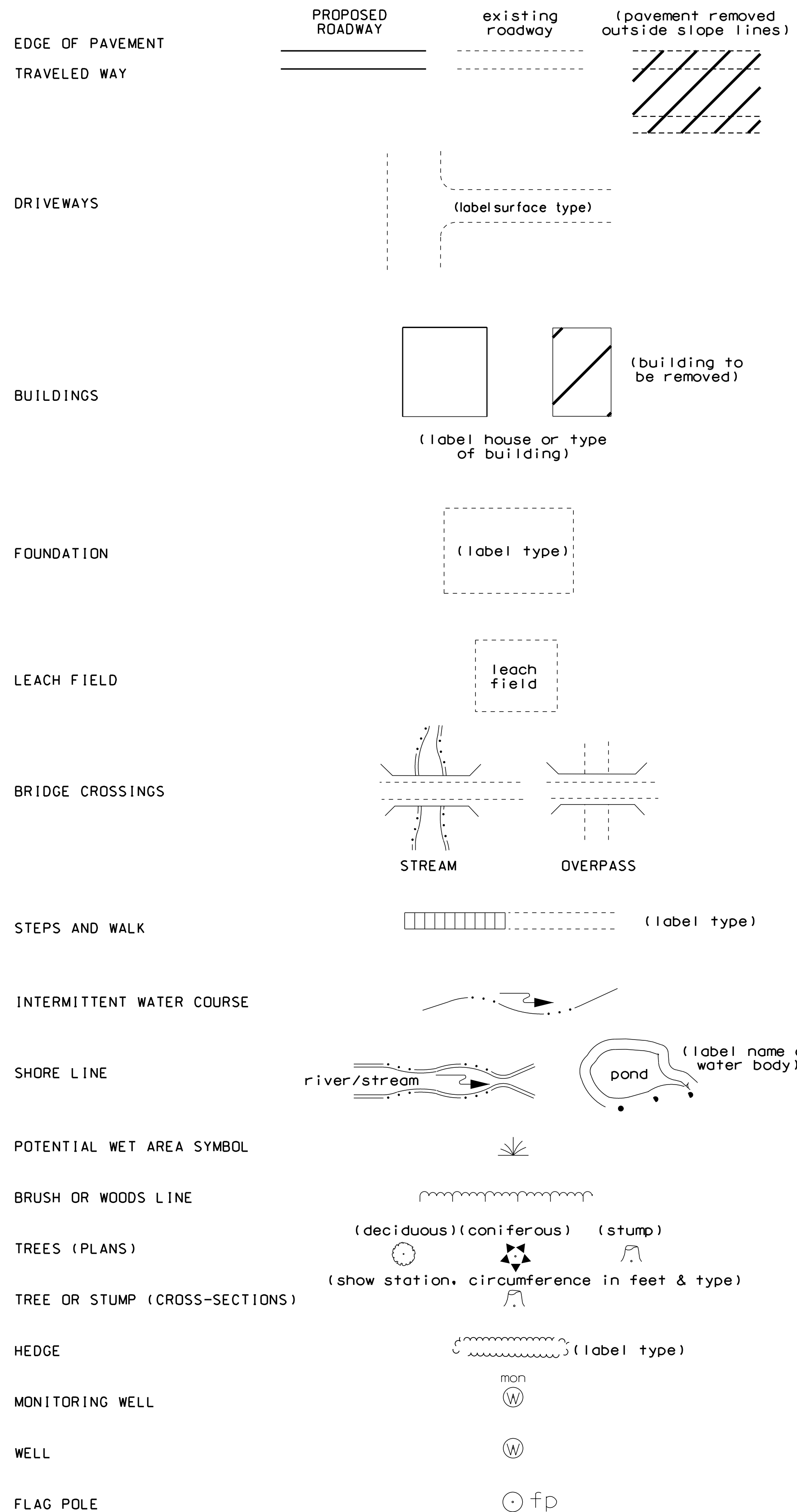
DRAWN BY: EYS DATE: 6/18/2020
CHECKED BY: CRF DATE: 6/18/2020



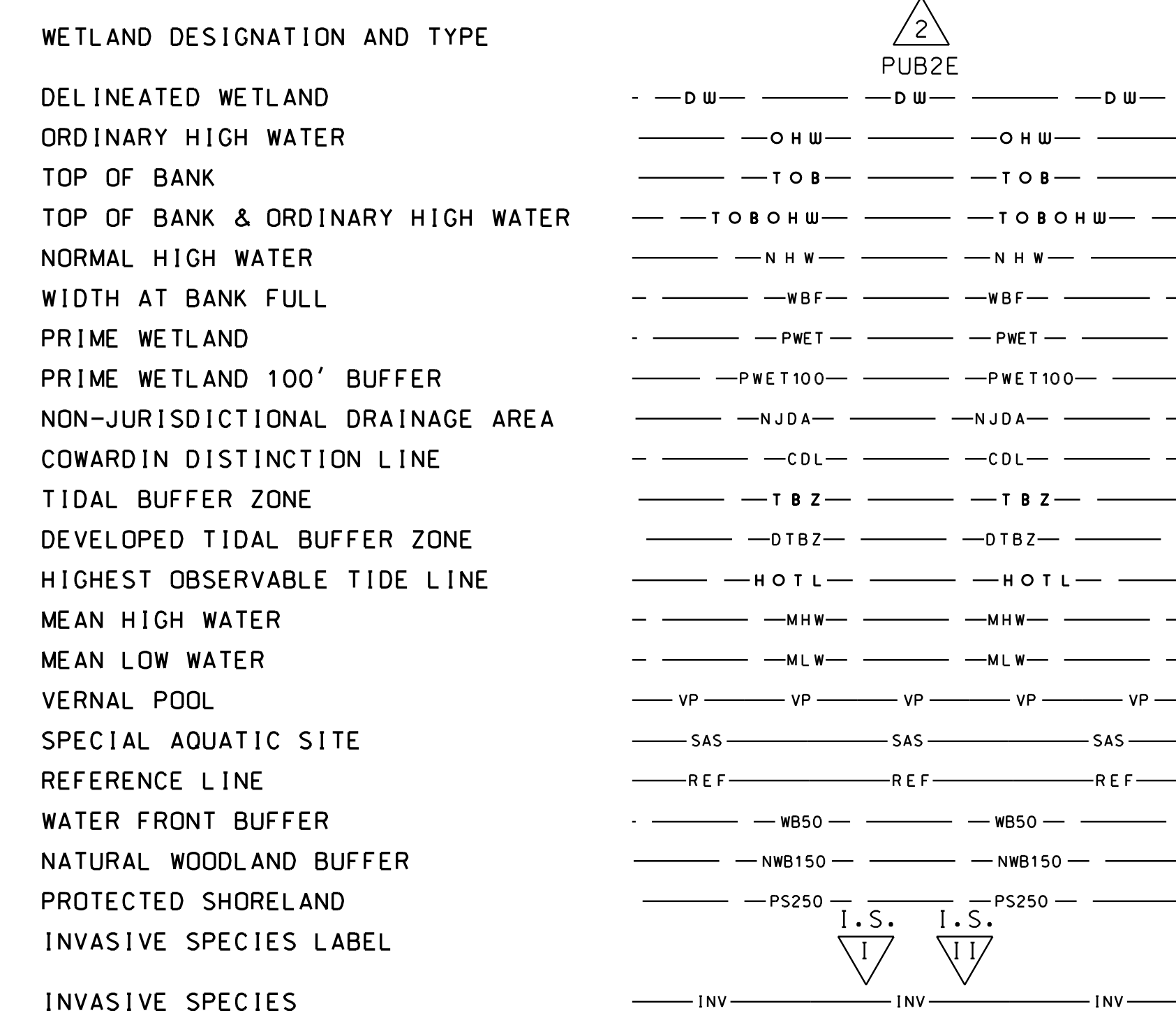
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Post Office Box 440
2605 White Mountain Hwy.
North Conway, NH 03860
www.hebengineers.com
Office (603) 356-6936
Fax (603) 356-7715



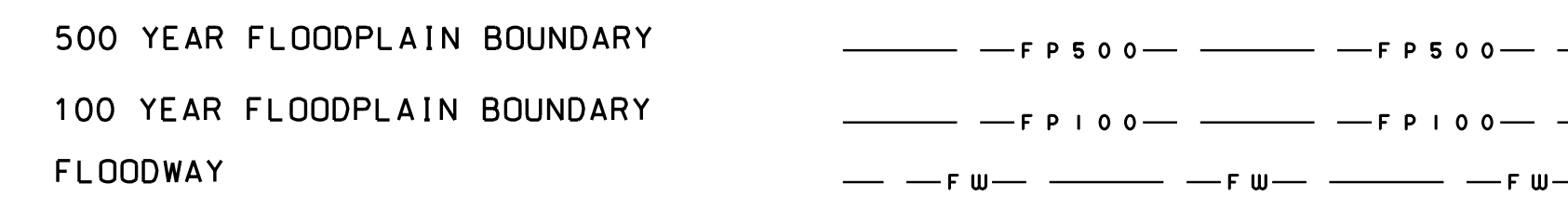
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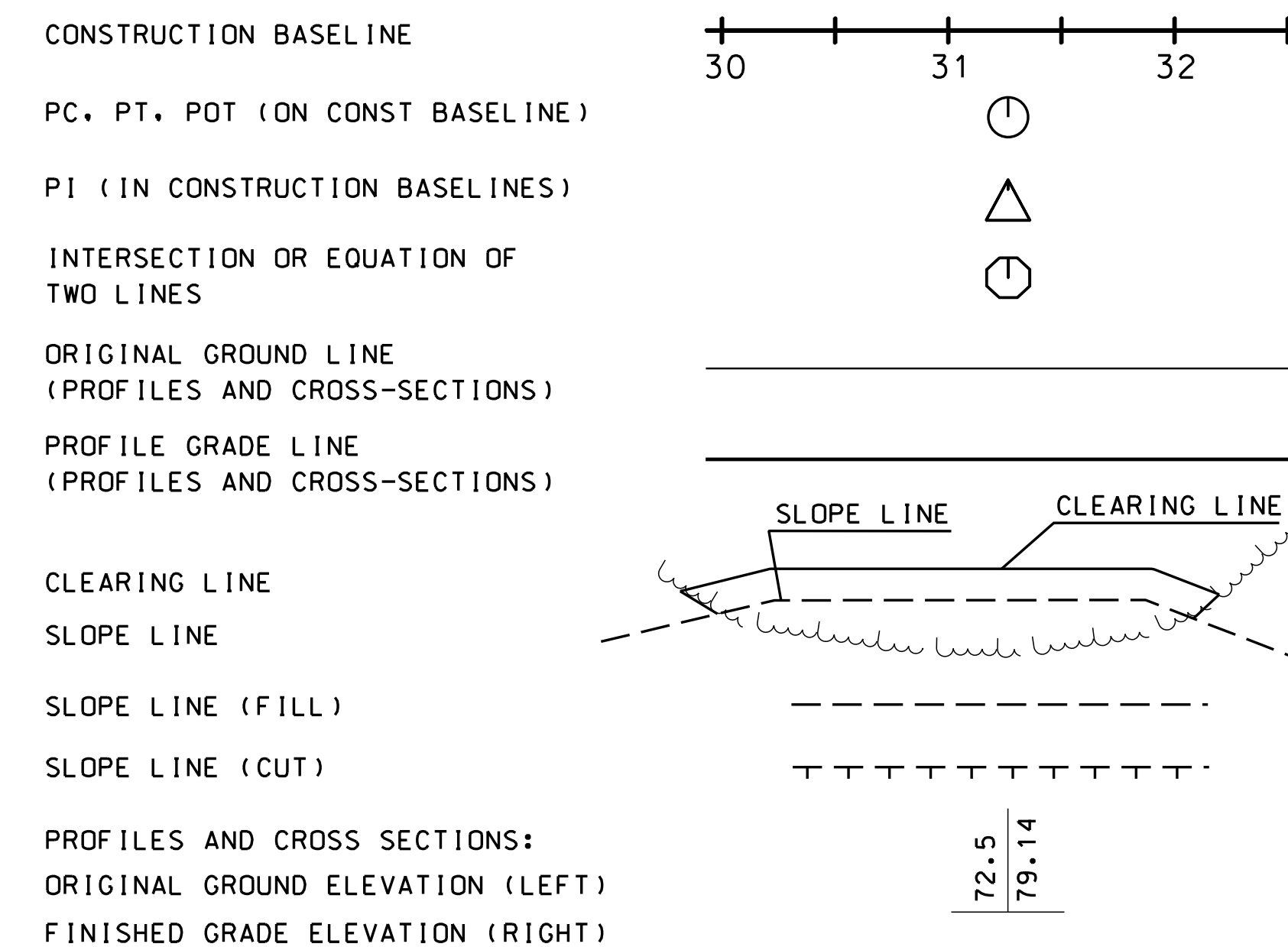
SHORELAND - WETLAND



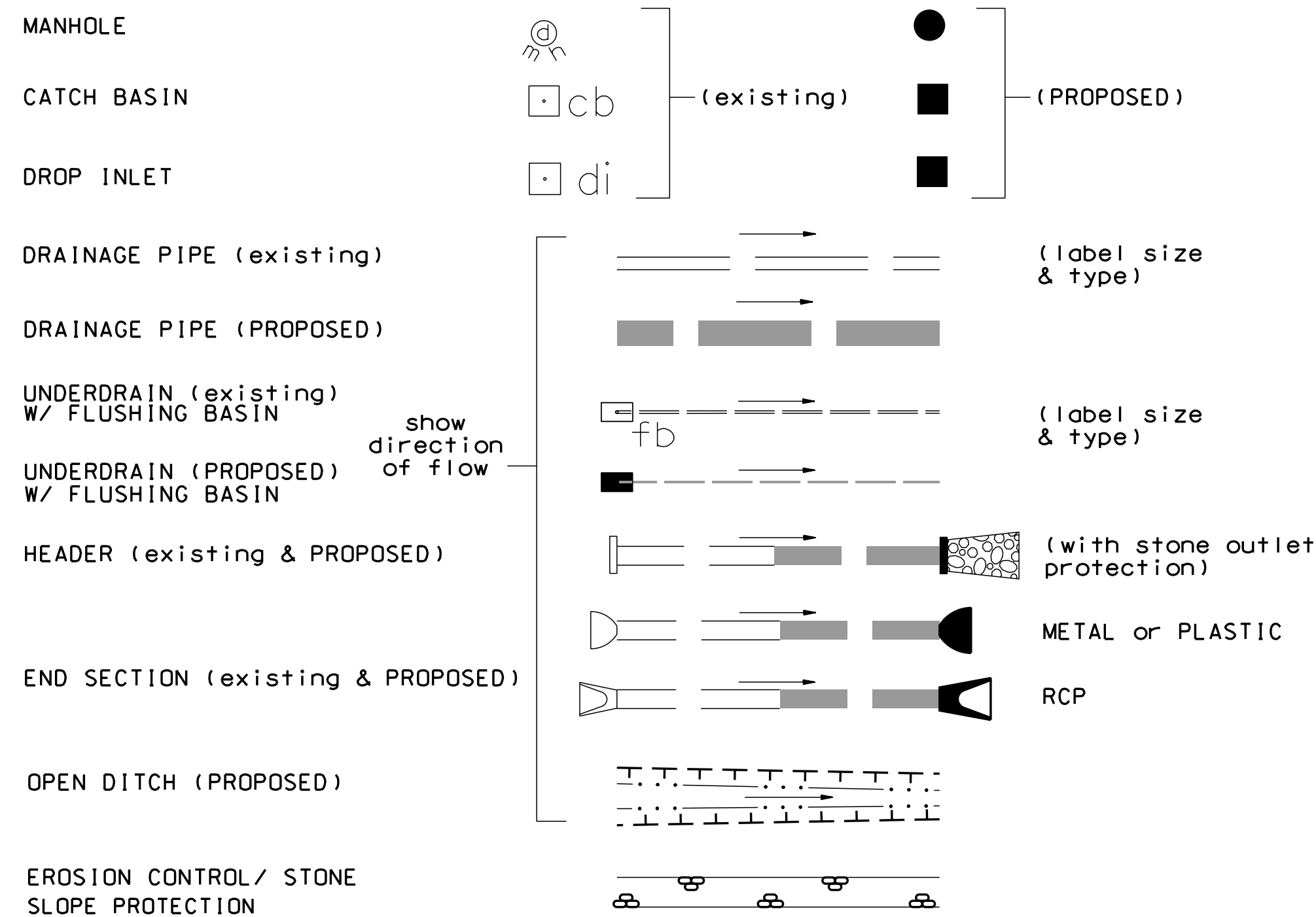
FLOODPLAIN / FLOODWAY



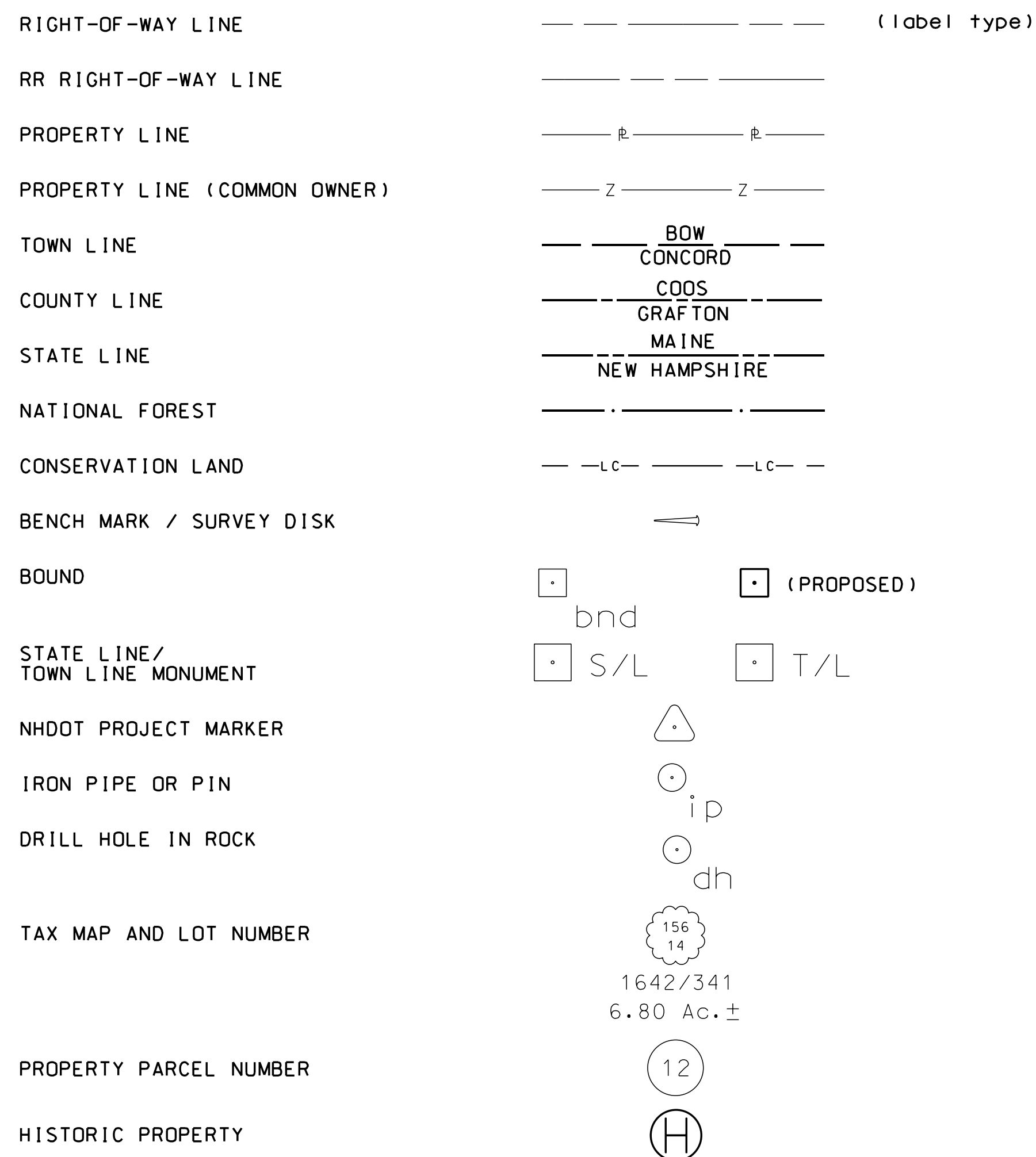
ENGINEERING



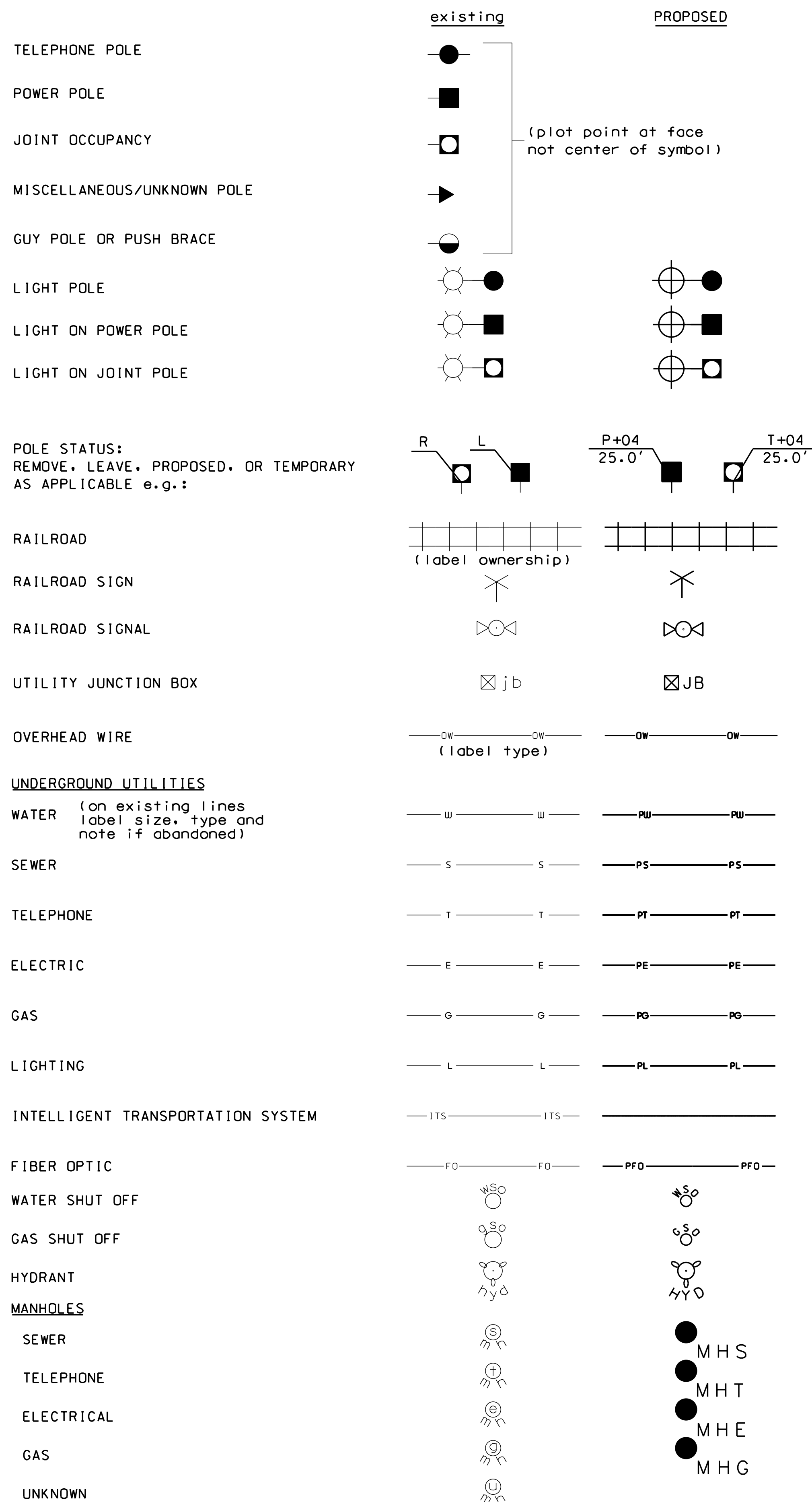
DRAINAGE



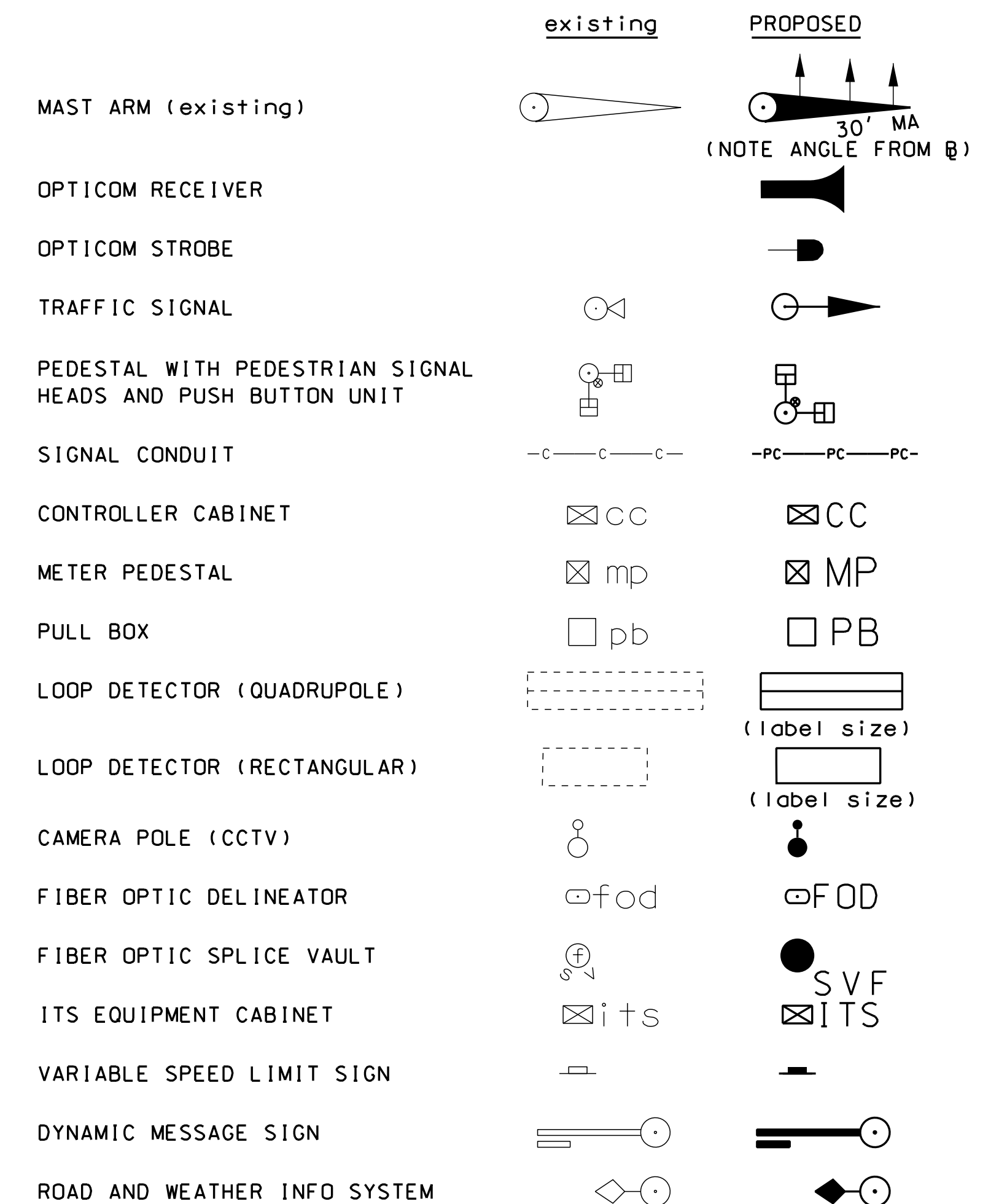
BOUNDARIES / RIGHT-OF-WAY



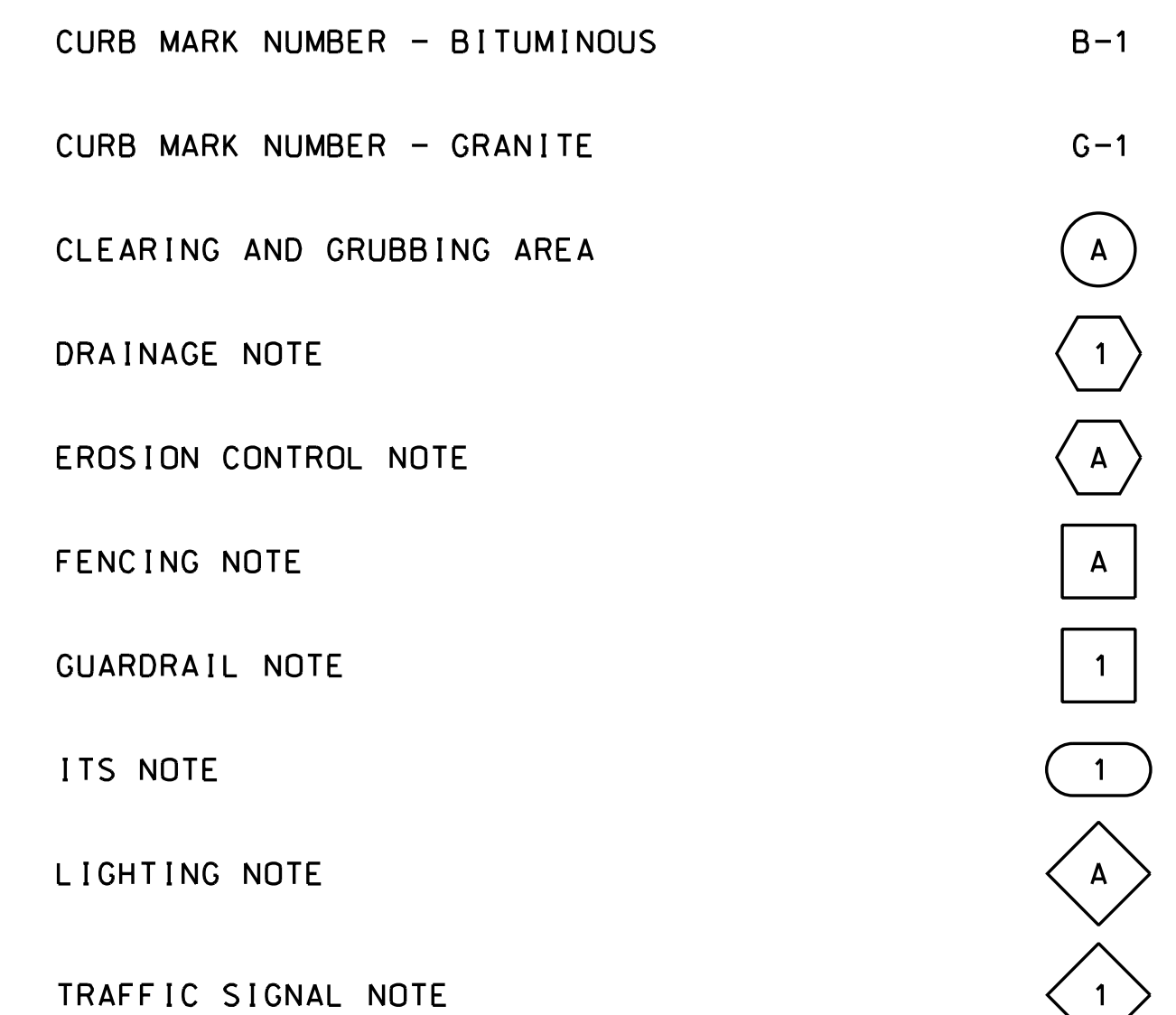
UTILITIES



TRAFFIC SIGNALS / ITS



CONSTRUCTION NOTES



SHEET 2 OF 2

STATE OF NEW HAMPSHIRE
Colebrook-Columbia

DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

STANDARD SYMBOLS

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
11/26/2019	42313Symbol1_2	42313	3	7

SDR PROCESSED	IN/DOIT	DATE	NUMBER	DATE	STATION	DESCRIPTION
	EVS	6/18/2020				
	CRF	6/18/2020				
	DETAILS					

WETLAND CLASSIFICATION CODES		
R2UB1	1	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE-GRAVEL SYSTEM

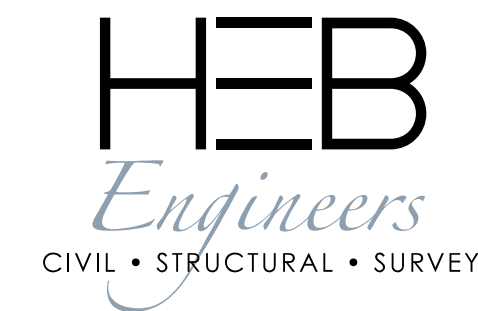
WETLAND IMPACT SUMMARY COLUMBIA											
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA IMPACTS						LINEAR STREAM IMPACTS FOR MITIGATION		
			PERMANENT				TEMPORARY		PERMANENT		
			N.H.W.B. (NON-WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)				BANK LEFT	BANK RIGHT	CHANNEL
			SF	LF	SF	LF	SF	LF	LF	LF	LF
1	R2UB1	A			4,569	244	1,403	68			
TOTAL			0 SF	0 LF	4,569 SF	244 LF	1,403 SF	68 LF	0 LF	0 LF	0 LF

PERMANENT IMPACTS: 4,569 SF
TEMPORARY IMPACTS: 1,403 SF
TOTAL IMPACTS: 5,972 SF

LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING	SYMBOL	DESCRIPTION
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)		#	WETLAND DESIGNATION NUMBER
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)		#	WETLAND IMPACT LOCATION
TEMPORARY IMPACTS		#	WETLAND MITIGATION AREA
			MITIGATION

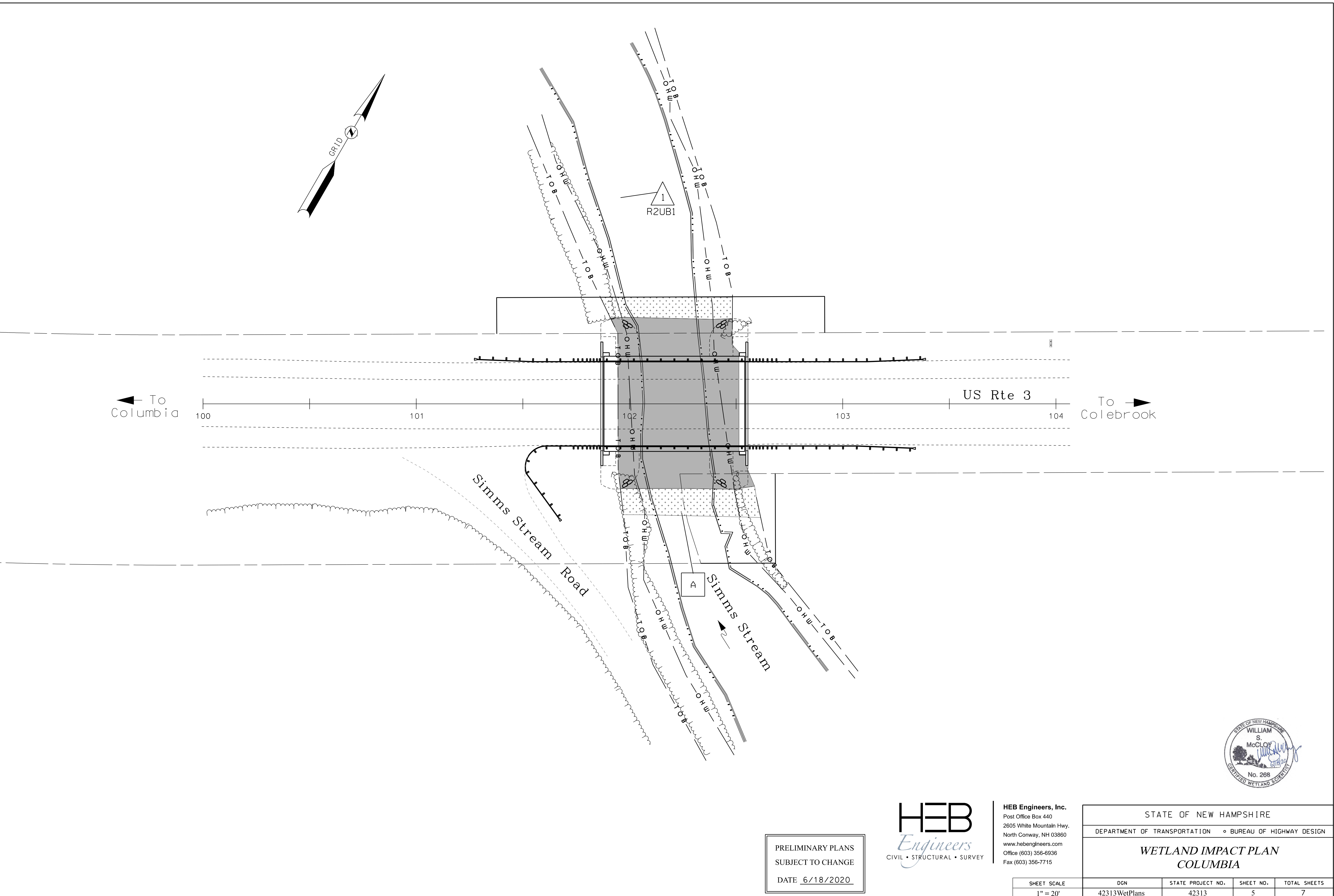
PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE 6/18/2020



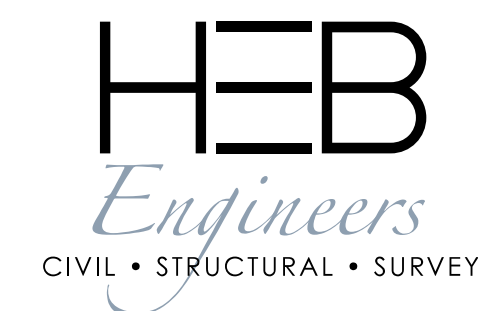
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Fax (603) 356-7715

STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN				
WETLAND IMPACT SUMMARY				
SHEET SCALE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
N/A	42313WetPlans	42313	4	7

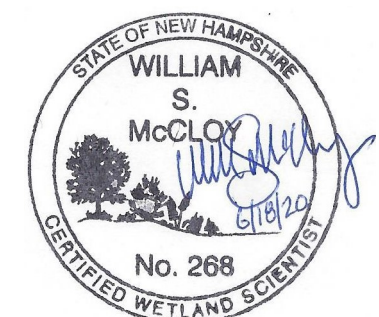
SDR PROCESSED	NHDDT	DATE	
NEW DESIGN	EVS	DATE	6/18/2020
SHEET CHECKED	CRF	DATE	6/18/2020
AS BUILT DETAILS		DATE	



PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE 6/18/2020



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STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN				
WETLAND IMPACT PLAN COLUMBIA				
SHEET SCALE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
1" = 20'	42313WetPlans	42313	5	7

REVISIONS AFTER PROPOSAL	STATION	DESCRIPTION

EROSION CONTROL STRATEGIES

1. ENVIRONMENTAL COMMITMENTS:

- 1.1. THESE GUIDELINES DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH ANY CONTRACT PROVISIONS, OR APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
 - 1.2. THIS PROJECT WILL BE SUBJECT TO THE US EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER CONSTRUCTION GENERAL PERMIT AS ADMINISTERED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THIS PROJECT IS SUBJECT TO REQUIREMENTS IN THE MOST RECENT CONSTRUCTION GENERAL PERMIT (CGP).
 - 1.3. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE NHDES WETLAND PERMIT, THE US ARMY CORPS OF ENGINEERS PERMIT, WATER QUALITY CERTIFICATION AND THE SPECIAL ATTENTION ITEMS INCLUDED IN THE CONTRACT DOCUMENTS.
 - 1.4. ALL STORM WATER, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION (DECEMBER 2008) (BMP MANUAL) AVAILABLE FROM THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (NHDES).
 - 1.5. THE CONTRACTOR SHALL COMPLY WITH RSA 485-A:17, AND ALL, PUBLISHED NHDES ALTERATION OF TERRAIN ENV-WO 1500 REQUIREMENTS ([HTTP://DES.NH.GOV/ORGANIZATION/COMMISSIONER/LEGAL/RULES/INDEX.HTM](http://des.nh.gov/organization/commissioner/legal/rules/index.htm))
 - 1.6. THE CONTRACTOR IS DIRECTED TO REVIEW AND COMPLY WITH SECTION 107.1 OF THE CONTRACT AS IT REFERS TO SPILLAGE, AND ALSO WITH REGARDS TO EROSION, POLLUTION, AND TURBIDITY PRECAUTIONS.
- 2. STANDARD EROSION CONTROL SEQUENCING APPLICABLE TO ALL CONSTRUCTION PROJECTS:**
- 2.1. PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES. PERIMETER CONTROLS AND STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AS SHOWN IN THE BMP MANUAL AND AS DIRECTED BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARER.
 - 2.2. EROSION, SEDIMENTATION CONTROL MEASURES AND INFILTRATION BASINS SHALL BE CLEANED, REPLACED AND AUGMENTED AS NECESSARY TO PREVENT SEDIMENTATION BEYOND PROJECT LIMITS THROUGHOUT THE PROJECT DURATION.
 - 2.3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT AND SECTION 645 OF THE NHDOT SPECIFICATIONS FOR ROAD AND BRIDGES CONSTRUCTION.
 - 2.4. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - (A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - (B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - (C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED;
 - (D) TEMPORARY SLOPE STABILIZATION CONFORMING TO TABLE 1 HAS BEEN PROPERLY INSTALLED
 - 2.5. ALL STOCKPILES SHALL BE CONTAINED WITH A PERIMETER CONTROL. IF THE STOCKPILE IS TO REMAIN UNDISTURBED FOR MORE THAN 14 DAYS, MULCHING WILL BE REQUIRED.
 - 2.6. A WATER TRUCK SHALL BE AVAILABLE TO CONTROL EXCESSIVE DUST AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR.
 - 2.7. TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL REMAIN UNTIL THE AREA HAS BEEN PERMANENTLY STABILIZED.
 - 2.8. CONSTRUCTION PERFORMED ANY TIME BETWEEN NOVEMBER 30th AND MAY 1st OF ANY YEAR SHALL BE CONSIDERED WINTER CONSTRUCTION AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS.
 - (A) ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15th, OR WHICH ARE DISTURBED AFTER OCTOBER 15th, SHALL BE STABILIZED IN ACCORDANCE WITH TABLE 1.
 - (B) ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15th, OR WHICH ARE DISTURBED AFTER OCTOBER 15th, SHALL BE STABILIZED TEMPORARILY WITH STONE OR IN ACCORDANCE WITH TABLE 1.
 - (C) AFTER NOVEMBER 30th INCOMPLETE ROAD SURFACES, WHERE WORK HAS STOPPED FOR THE SEASON, SHALL BE PROTECTED IN ACCORDANCE WITH TABLE 1.
 - (D) WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE PROJECT IS WITHOUT STABILIZATION AT ONE TIME, UNLESS A WINTER CONSTRUCTION PLAN HAS BEEN APPROVED BY NHDOT THAT MEETS THE REQUIREMENTS OF ENV-WO 1505.02 AND ENV-WO 1505.05.
 - (E) A SWPPP AMENDMENT SHALL BE SUBMITTED TO THE DEPARTMENT, FOR APPROVAL, ADDRESSING COLD WEATHER STABILIZATION (ENV-WO 1505.05) AND INCLUDING THE REQUIREMENTS OF NO LESS THAN 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK SCHEDULED AFTER NOVEMBER 30th.

GENERAL CONSTRUCTION PLANNING AND SELECTION OF STRATEGIES TO CONTROL EROSION AND SEDIMENT ON HIGHWAY CONSTRUCTION PROJECTS

3. PLAN ACTIVITIES TO ACCOUNT FOR SENSITIVE SITE CONDITIONS:
 - 3.1. CLEARLY FLAG AREAS TO BE PROTECTED IN THE FIELD AND PROVIDE CONSTRUCTION BARRIERS TO PREVENT TRAFFICKING OUTSIDE OF WORK AREAS.
 - 3.2. CONSTRUCTION SHALL BE SEQUENCED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
 - 3.3. PROTECT AND MAXIMIZE EXISTING NATIVE VEGETATION AND NATURAL FOREST BUFFERS BETWEEN CONSTRUCTION ACTIVITY AND SENSITIVE AREAS.
 - 3.4. WHEN WORK IS PERFORMED IN AND NEAR WATER COURSES, STREAM FLOW DIVERSION METHODS SHALL BE IMPLEMENTED PRIOR TO ANY EXCAVATION OR FILLING.
 - 3.5. WHEN WORK IS PERFORMED WITHIN 50 FEET OF SURFACE WATERS (WETLAND, OPEN WATER OR FLOWING WATER), PERIMETER CONTROL SHALL BE ENHANCED CONSISTENT WITH SECTION 2.1.2.1. OF THE 2012 NPDES CONSTRUCTION GENERAL PERMIT.
4. MINIMIZE THE AMOUNT OF EXPOSED SOIL:
 - 4.1. CONSTRUCTION SHALL BE SEQUENCED TO LIMIT THE DURATION AND AREA OF EXPOSED SOILS. MINIMIZE THE AREA OF EXPOSED SOIL AT ANY ONE TIME. PHASING SHALL BE USED TO REDUCE THE AMOUNT AND DURATION OF SOIL EXPOSED TO THE ELEMENTS AND VEHICLE TRACKING.
 - 4.2. UTILIZE TEMPORARY MULCHING OR PROVIDE ALTERNATE TEMPORARY STABILIZATION ON EXPOSED SOILS IN ACCORDANCE WITH TABLE 1.
 - 4.3. THE MAXIMUM AMOUNT OF DISTURBED EARTH SHALL NOT EXCEED A TOTAL OF 5 ACRES FROM MAY 1st THROUGH NOVEMBER 30th, OR EXCEED ONE ACRE DURING WINTER MONTHS, UNLESS THE CONTRACTOR DEMONSTRATES TO THE DEPARTMENT THAT THE ADDITIONAL AREA OF DISTURBANCE IS NECESSARY TO MEET THE CONTRACTORS CRITICAL PATH METHOD SCHEDULE (CPM), AND THE CONTRACTOR HAS ADEQUATE RESOURCES AVAILABLE TO ENSURE THAT ENVIRONMENTAL COMMITMENTS WILL BE MET.
5. CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT:
 - 5.1. DIVERT OFF SITE RUNOFF OR CLEAN WATER AWAY FROM THE CONSTRUCTION ACTIVITY TO REDUCE THE VOLUME THAT NEEDS TO BE TREATED ON SITE.
 - 5.2. DIVERT STORM RUNOFF FROM UPSLOPE DRAINAGE AREAS AWAY FROM DISTURBED AREAS, SLOPES, AND AROUND ACTIVE WORK AREAS AND TO A STABILIZED OUTLET LOCATION.
 - 5.3. CONSTRUCT IMPERMEABLE BARRIERS AS NECESSARY TO COLLECT OR DIVERT CONCENTRATED FLOWS FROM WORK OR DISTURBED AREAS.
 - 5.4. STABILIZE, TO APPROPRIATE ANTICIPATED VELOCITIES, CONVEYANCE CHANNELS OR PUMPING SYSTEMS NEEDED TO CONVEY CONSTRUCTION STORMWATER TO BASINS AND DISCHARGE LOCATIONS PRIOR TO USE.
 - 5.5. DIVERT OFF-SITE WATER THROUGH THE PROJECT IN AN APPROPRIATE MANNER SO NOT TO DISTURB THE UPSTREAM OR DOWNSTREAM SOILS, VEGETATION OR HYDROLOGY BEYOND THE PERMITTED AREA.
6. PROTECT SLOPES:
 - 6.1. INTERCEPT AND DIVERT STORM RUNOFF FROM UPSLOPE DRAINAGE AREAS AWAY FROM UNPROTECTED AND NEWLY ESTABLISHED AREAS AND SLOPES TO A STABILIZED OUTLET OR CONVEYANCE.
 - 6.2. CONSIDER HOW GROUNDWATER SEEPAGE ON CUT SLOPES MAY IMPACT SLOPE STABILITY AND INCORPORATE APPROPRIATE MEASURES TO MINIMIZE EROSION.
 - 6.3. CONVEY STORMWATER DOWN THE SLOPE IN A STABILIZED CHANNEL OR SLOPE DRAIN.
 - 6.4. THE OUTER FACE OF THE FILL SLOPE SHOULD BE IN A LOOSE RUFFLED CONDITION PRIOR TO TURF ESTABLISHMENT. TOPSOIL OR HUMUS LAYERS SHALL BE TRACKED UP AND DOWN THE SLOPE, DISKED, HARROWED, DRAGGED WITH A CHAIN OR MAT, MACHINE-RAKED, OR HAND-WORKED TO PRODUCE A RUFFLED SURFACE.
7. ESTABLISH STABILIZED CONSTRUCTION EXITS:
 - 7.1. INSTALL AND MAINTAIN CONSTRUCTION EXITS, ANYWHERE TRAFFIC LEAVES A CONSTRUCTION SITE ONTO A PUBLIC RIGHT-OF-WAY.
 - 7.2. SWEEP ALL CONSTRUCTION RELATED DEBRIS AND SOIL FROM THE ADJACENT PAVED ROADWAYS AS NECESSARY.
8. PROTECT STORM DRAIN INLETS:
 - 8.1. DIVERT SEDIMENT LADEN WATER AWAY FROM INLET STRUCTURES TO THE EXTENT POSSIBLE.
 - 8.2. INSTALL SEDIMENT BARRIERS AND SEDIMENT TRAPS AT INLETS TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
 - 8.3. CLEAN CATCH BASINS, DRAINAGE PIPES, AND CULVERTS IF SIGNIFICANT SEDIMENT IS DEPOSITED.
 - 8.4. DROP INLET SEDIMENT BARRIERS SHOULD NEVER BE USED AS THE PRIMARY MEANS OF SEDIMENT CONTROL AND SHOULD ONLY BE USED TO PROVIDE AN ADDITIONAL LEVEL OF PROTECTION TO STRUCTURES AND DOWN-GRADIENT SENSITIVE RECEPTORS.
9. SOIL STABILIZATION:
 - 9.1. WITHIN THREE DAYS OF THE LAST ACTIVITY IN AN AREA, ALL EXPOSED SOIL AREAS, WHERE CONSTRUCTION ACTIVITIES ARE COMPLETE, SHALL BE STABILIZED.
 - 9.2. IN ALL AREAS, TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED IN ACCORDANCE WITH THE STABILIZATION REQUIREMENTS (SECTION 2.2) OF THE 2012 CGP. (SEE TABLE 1 FOR GUIDANCE ON THE SELECTION OF TEMPORARY SOIL STABILIZATION MEASURES.)
 - 9.3. EROSION CONTROL SEED MIX SHALL BE SOWN IN ALL INACTIVE CONSTRUCTION AREAS THAT WILL NOT BE PERMANENTLY SEEDED WITHIN TWO WEEKS OF DISTURBANCE AND PRIOR TO SEPTEMBER 15, OF ANY GIVEN YEAR. IN ORDER TO ACHIEVE VEGETATIVE STABILIZATION PRIOR TO THE END OF THE GROWING SEASON.
 - 9.4. SOIL TACKIFIERS MAY BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND REAPPLIED AS NECESSARY TO MINIMIZE SOIL AND MULCH LOSS UNTIL PERMANENT VEGETATION IS ESTABLISHED.
10. RETAIN SEDIMENT ON-SITE AND CONTROL DEWATERING PRACTICES:
 - 10.1. TEMPORARY SEDIMENT BASINS (CGP-SECTION 2.1.3.2) OR SEDIMENT TRAPS (ENV-WO 1506.10) SHALL BE SIZED TO RETAIN, ON SITE, THE VOLUME OF A 2-YEAR 24-HOUR STORM EVENT FOR ANY AREA OF DISTURBANCE OR 3,600 CUBIC FEET OF STORMWATER RUNOFF PER ACRE OF DISTURBANCE, WHICHEVER IS GREATER. TEMPORARY SEDIMENT BASINS USED TO TREAT STORMWATER RUNOFF FROM AREAS GREATER THAN 5-ACRES OF DISTURBANCE SHALL BE SIZED TO ALSO CONTROL STORMWATER RUNOFF FROM A 10-YEAR 24 HOUR STORM EVENT. ON-SITE RETENTION OF THE 10-YEAR 24-HOUR EVENT IS NOT REQUIRED.
 - 10.2. CONSTRUCT AND STABILIZE DEWATERING INFILTRATION BASINS PRIOR TO ANY EXCAVATION THAT MAY REQUIRE DEWATERING.
 - 10.3. TEMPORARY SEDIMENT BASINS OR TRAPS SHALL BE PLACED AND STABILIZED AT LOCATIONS WHERE CONCENTRATED FLOW (CHANNELS AND PIPES) DISCHARGE TO THE SURROUNDING ENVIRONMENT FROM AREAS OF UNSTABILIZED EARTH DISTURBING ACTIVITIES.

11. ADDITIONAL EROSION AND SEDIMENT CONTROL GENERAL PRACTICES:

- 11.1. USE TEMPORARY MULCHING, PERMANENT MULCHING, TEMPORARY VEGETATIVE COVER, AND PERMANENT VEGETATIVE COVER TO REDUCE THE NEED FOR DUST CONTROL. USE MECHANICAL SWEEPERS ON PAVED SURFACES WHERE NECESSARY TO PREVENT DUST BUILDUP. APPLY WATER, OR OTHER DUST INHIBITING AGENTS OR TACKIFIERS, AS APPROVED BY THE NHDES.
- 11.2. ALL STOCKPILES SHALL BE CONTAINED WITH TEMPORARY PERIMETER CONTROLS. INACTIVE SOIL STOCKPILES SHOULD BE PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY EROSION CONTROL SEED MIX AND MULCH, SOIL BINDER) OR COVERED WITH ANCHORED TARPS.
- 11.3. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED IN ACCORDANCE WITH SECTION 645 OF NHDOT SPECIFICATIONS. WEEKLY AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.25 IN. OF RAIN PER 24-HOUR PERIOD. EROSION AND SEDIMENT CONTROL MEASURES WILL ALSO BE INSPECTED IN ACCORDANCE WITH THE GUIDANCE MEMO FROM THE NHDES CONTAINED WITHIN THE CONTRACT PROPOSAL AND THE EPA CONSTRUCTION GENERAL PERMIT.
- 11.4. THE CONTRACTOR SHOULD UTILIZE STORM DRAIN INLET PROTECTION TO PREVENT SEDIMENT FROM ENTERING A STORM DRAINAGE SYSTEM PRIOR TO THE PERMANENT STABILIZATION OF THE CONTRIBUTING DISTURBED AREA.
- 11.5. PERMANENT STABILIZATION MEASURES WILL BE CONSTRUCTED AND MAINTAINED IN LOCATIONS AS SHOWN ON THE CONSTRUCTION PLANS TO STABILIZE AREAS. VEGETATIVE STABILIZATION SHALL NOT BE CONSIDERED PERMANENTLY STABILIZED UNTIL VEGETATIVE GROWTH COVERS AT LEAST 85% OF THE DISTURBED AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL FOR ONE YEAR AFTER PROJECT COMPLETION.
- 11.6. CATCH BASINS: CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT ENTER ANY EXISTING CATCH BASINS DURING CONSTRUCTION. THE CONTRACTOR SHALL PLACE TEMPORARY STONE INLET PROTECTION OVER INLETS IN AREAS OF SOIL DISTURBANCE THAT ARE SUBJECT TO SEDIMENT CONTAMINATION.
- 11.7. TEMPORARY AND PERMANENT DITCHES SHALL BE CONSTRUCTED, STABILIZED AND MAINTAINED IN A MANNER THAT WILL MINIMIZE SCOUR. TEMPORARY AND PERMANENT DITCHES SHALL BE DIRECTED TO DRAIN TO SEDIMENT BASINS OR STORM WATER COLLECTION AREAS.
- 11.8. WINTER EXCAVATION AND EARTHWORK ACTIVITIES NEED TO BE LIMITED IN EXTENT AND DURATION, TO MINIMIZE POTENTIAL EROSION AND SEDIMENTATION IMPACTS. THE AREA OF EXPOSED SOIL SHALL BE LIMITED TO ONE ACRE, OR THAT WHICH CAN BE STABILIZED AT THE END OF EACH DAY UNLESS A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, IS REVIEWED AND APPROVED BY THE DEPARTMENT.
- 11.9. CHANNEL PROTECTION MEASURES SHALL BE SUPPLEMENTED WITH PERIMETER CONTROL MEASURES WHEN THE DITCH LINES OCCUR AT THE BOTTOM OF LONG FILL SLOPES. THE PERIMETER CONTROLS SHALL BE INSTALLED ON THE FILL SLOPE TO MINIMIZE THE POTENTIAL FOR FILL SLOPE SEDIMENT DEPOSITS IN THE DITCH LINE.

BEST MANAGEMENT PRACTICES (BMP) BASED ON AMOUNT OF OPEN CONSTRUCTION AREA

12. STRATEGIES SPECIFIC TO OPEN AREAS LESS THAN 5 ACRES:
 - 12.1. THE CONTRACTOR SHALL COMPLY WITH RSA 485:A:17 AND ENV-WO 1500; ALTERATION OF TERRAIN FOR CONSTRUCTION AND USE ALL CONVENTIONAL BMP STRATEGIES.
 - 12.2. SLOPES STEEPER THAN 3:1 WILL RECEIVE TURF ESTABLISHMENT WITH MATTING.
 - 12.3. SLOPES 3:1 OR FLATTER WILL RECEIVE TURF ESTABLISHMENT ALONE.
 - 12.4. AREAS WHERE HAUL ROADS ARE CONSTRUCTED AND STORMWATER CANNOT BE TREATED THE DEPARTMENT WILL CONSIDER INFILTRATION.
 - 12.5. FOR HAUL ROADS ADJACENT TO SENSITIVE ENVIRONMENTAL AREAS OR STEEPER THAN 5%, THE DEPARTMENT WILL CONSIDER USING EROSION STONE, CRUSHED GRAVEL, OR CRUSHED STONE BASE TO HELP MINIMIZE EROSION ISSUES.
 - 12.6. ALL AREAS THAT CAN BE STABILIZED SHALL BE STABILIZED PRIOR TO OPENING UP NEW TERRITORY.
 - 12.7. DETENTION BASINS SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE A 2 YEAR STORM EVENT.
13. STRATEGIES SPECIFIC TO OPEN AREAS BETWEEN 5 AND 10 ACRES:
 - 13.1. THE CONTRACTOR SHALL COMPLY WITH RSA 485:A:17 AND ENV-WO 1500 ALTERATION OF TERRAIN AND SHALL USE CONVENTIONAL BMP STRATEGIES AND ALL TREATMENT OPTIONS USED FOR UNDER 5 ACRES WILL BE UTILIZED.
 - 13.2. DETENTION BASINS WILL BE CONSTRUCTED TO ACCOMMODATE THE 2-YEAR 24-HOUR STORM EVENT AND CONTROL A 10-YEAR 24-HOUR STORM EVENT.
 - 13.3. SLOPES STEEPER THAN A 3:1 WILL RECEIVE TURF ESTABLISHMENT WITH MATTING OR OTHER TEMPORARY SOIL STABILIZATION MEASURES DETAILED IN TABLE 1. THE CONTRACTOR MAY ALSO CONSIDER A SOIL BINDER IN ACCORDANCE WITH THE NHDES APPROVALS OR REGULATIONS. OTHER ALTERNATIVE MEASURES, SUCH AS BONDED FIBER MATRIXES (BFMS) OR FLEXIBLE GROWTH MEDIUMS (FGMS) MAY BE UTILIZED, IF MEETING THE NHDES APPROVALS AND REGULATIONS.
 - 13.4. SLOPES 3:1 OR FLATTER WILL RECEIVE TURF ESTABLISHMENT OR OTHER TEMPORARY SOIL STABILIZATION MEASURES DETAILED IN TABLE 1. THE CONTRACTOR MAY ALSO CONSIDER A SOIL BINDER IN ACCORDANCE WITH THE NHDES APPROVALS OR REGULATIONS.
14. STRATEGIES SPECIFIC TO OPEN AREAS OVER 10 ACRES:
 - 14.1. THE CONTRACTOR SHALL COMPLY WITH RSA 485:A:17 AND ENV-WO 1500 ALTERATION OF TERRAIN AND SHALL USE CONVENTIONAL BMP STRATEGIES AND ALL TREATMENT OPTIONS USED FOR UNDER 5 ACRES AND BETWEEN 5 AND 10 ACRES WILL BE UTILIZED.
 - 14.2. THE DEPARTMENT ANTICIPATES THAT SOIL BINDERS WILL BE NEEDED ON ALL SLOPES STEEPER THAN 3:1, IN ORDER TO MINIMIZE EROSION AND REDUCE THE AMOUNT OF SEDIMENT IN THE STORMWATER TREATMENT BASINS.
 - 14.3. THE CONTRACTOR WILL BE REQUIRED TO HAVE AN APPROVED DESIGN IN ACCORDANCE WITH ENV-WO 1506.12 FOR AN ACTIVE FLOCCULANT TREATMENT SYSTEM TO TREAT AND RELEASE WATER CAPTURED IN STORM WATER BASINS. THE CONTRACTOR SHALL ALSO RETAIN THE SERVICES OF AN ENVIRONMENTAL CONSULTANT WHO HAS DEMONSTRATED EXPERIENCE IN THE DESIGN OF FLOCCULANT TREATMENT SYSTEMS. THE CONSULTANT WILL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION AND MONITORING OF THE SYSTEM.

**TABLE 1
GUIDANCE ON SELECTING TEMPORARY SOIL STABILIZATION MEASURES**

APPLICATION AREAS	DRY MULCH METHODS				HYDRAULICALLY APPLIED MULCHES ²				ROLLED EROSION CONTROL BLANKETS ³			
	HMT	WC	SG	CB	HM	SMM	BFM	FRM	SNSB	DNSB	DNCSB	DNCB
SLOPES ¹												
STEEPER THAN 2:1	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES
2:1 SLOPE	YES	YES	YES	YES	NO	NO	YES	YES	NO	YES	YES	YES
3:1 SLOPE	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO
4:1 SLOPE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
WINTER STABILIZATION	4T/AC	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES
CHANNELS												
LOW FLOW CHANNELS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
HIGH FLOW CHANNELS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

ABBREV.	STABILIZATION MEASURE	ABBREV.	STABILIZATION MEASURE	ABBREV.	STABILIZATION MEASURE
HMT	HAY MULCH & TACK	HM	HYDRAULIC MULCH	SNSB	SINGLE NET STRAW BLANKET
WC	WOOD CHIPS	SMM	STABILIZED MULCH MATRIX	DNSB	DOUBLE NET STRAW BLANKET
SG	STUMP GRINDINGS	BFM	BONDED FIBER MATRIX	DNCSB	2 NET STRAW-COCONUT BLANKET
CB	COMPOST BLANKET	FRM	FIBER REINFORCED MEDIUM	DNCB	2 NET COCONUT BLANKET

- NOTES:**
1. ALL SLOPE STABILIZATION OPTIONS ASSUME A SLOPE LENGTH ≤ 10 TIMES THE HORIZONTAL DISTANCE COMPONENT OF THE SLOPE, IN FEET.
 2. PRODUCTS CONTAINING POLYACRYLAMIDE (PAM) SHALL NOT BE APPLIED DIRECTLY TO OR WITHIN 100 FEET OF ANY SURFACE WATER WITHOUT PRIOR WRITTEN APPROVAL FROM THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES.
 3. ALL EROSION CONTROL BLANKETS SHALL BE MADE WITH WILDLIFE FRIENDLY BIODEGRADABLE NETTING.

STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN				
WETLAND IMPACT PLANS				
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
12-21-2015	erosstrat	24579	6	7

REVISIONS AFTER PROPOSAL

STATION

STATION

DATE

NUMBER

DATE 6/18/2020

DATE 6/18/2020

DESCRIPTION

STATION

STATION

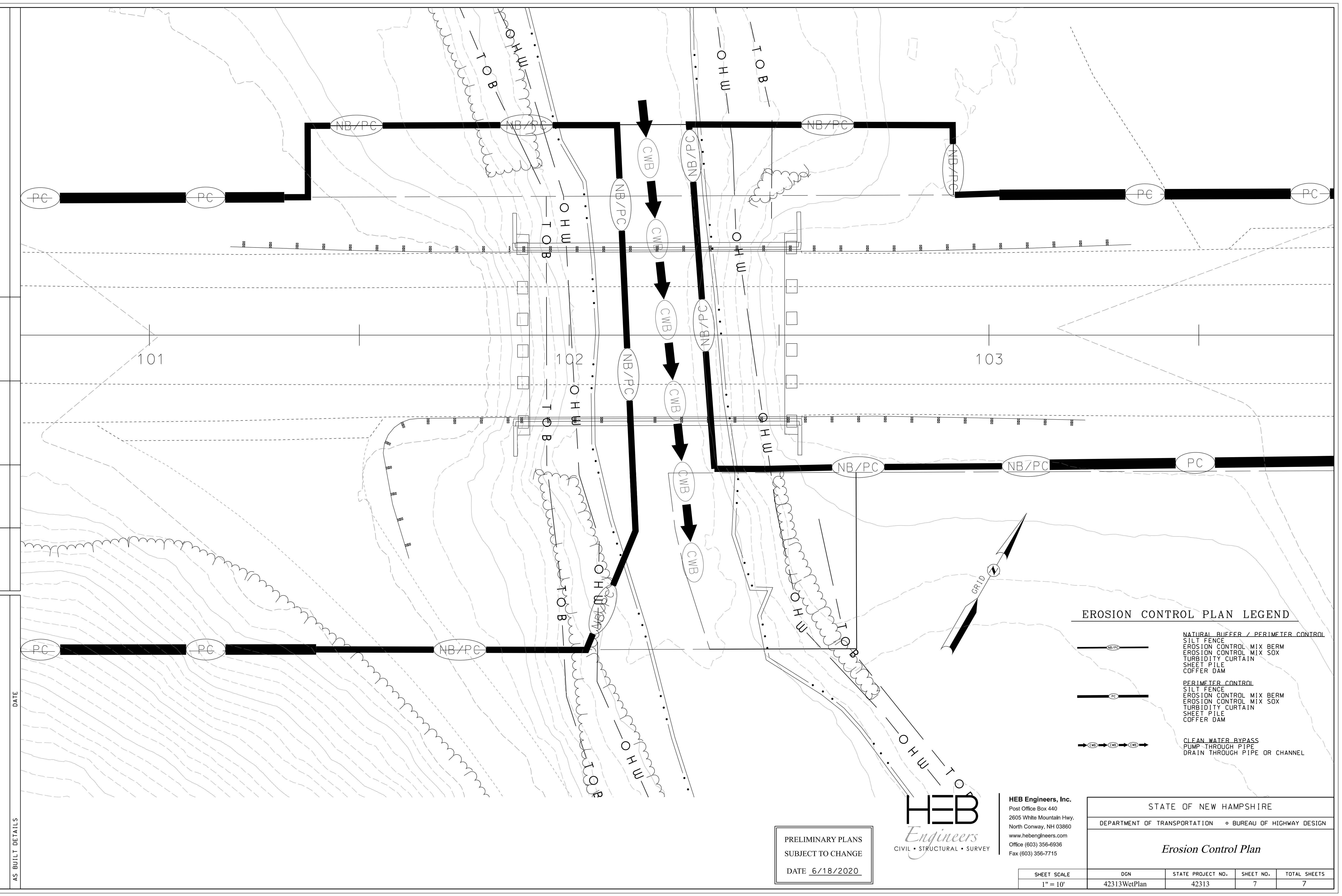
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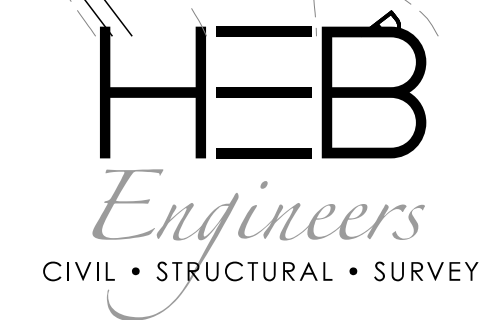
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EROSION CONTROL PLAN LEGEND

- NATURAL BUFFER / PERIMETER CONTROL
- SILT FENCE
- EROSION CONTROL MIX BERM
- EROSION CONTROL MIX SOX
- TURBIDITY CURTAIN
- SHEET PILE
- COFFER DAM
- PERIMETER CONTROL
- SILT FENCE
- EROSION CONTROL MIX BERM
- EROSION CONTROL MIX SOX
- TURBIDITY CURTAIN
- SHEET PILE
- COFFER DAM
- CLEAN WATER BYPASS
- PUMP THROUGH PIPE
- DRAIN THROUGH PIPE OR CHANNEL

PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE 6/18/2020



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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

Erosion Control Plan

SHEET SCALE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
1" = 10'	42313WetPlan	42313	7	7