



# WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau  
Land Resources Management

Check the status of your application: [www.des.nh.gov/onestop](http://www.des.nh.gov/onestop)



RSA/Rule: [RSA 482-A/ Env-Wt 100-900](#)

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No: Check No.: Amount: Initials:
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**1. REVIEW TIME:** Indicate your Review Time below. To determine review time, refer to [Guidance Document A](#) for instructions.

Standard Review (Minimum, Minor or Major Impact)       Expedited Review (Minimum Impact only)

**2. MITIGATION REQUIREMENT:**  
If mitigation is required a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if Mitigation is Required, please refer to the [Determine if Mitigation is Required Frequently Asked Question](#).

Mitigation Pre-Application Meeting Date: Month: \_\_\_ Day: \_\_\_ Year: \_\_\_\_  
 N/A - Mitigation is not required

**3. PROJECT LOCATION:**  
Separate wetland permit applications must be submitted for each municipality that wetland impacts occur within.

ADDRESS: **NH Route 28**      TOWN/CITY: **Wolfboro**

TAX MAP:      BLOCK:      LOT:      UNIT:

USGS TOPO MAP WATERBODY NAME: **Harvey Brook**       NA      STREAM WATERSHED SIZE: **1.23 Sq Mi**       NA

LOCATION COORDINATES (if known): **43.6048189, -71.189204**       Latitude/Longitude     

**4. PROJECT DESCRIPTION:**  
Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

**Remove and replace in kind southeast (outlet) wing walls of existing box culvert carrying Harvey Brook under NH Route 28.**

**5. SHORELINE FRONTAGE:**

NA This does not have shoreline frontage.      SHORELINE FRONTAGE:

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

**6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:**  
Please indicate if any of the following permit applications are required and, if required, the status of the application.  
To determine if other Land Resources Management Permits are required, refer to the [Land Resources Management Web Page](#).

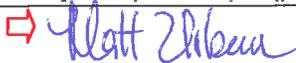
Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Individual Sewerage Disposal per RSA 485-A:2	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Subdivision Approval Per RSA 485-A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Shoreland Permit Per RSA 483-B	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED

**7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:**  
See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID:    NHB **16** \_\_\_ - **0717** \_\_\_

b.  [Designated River](#) the project is in ¼ miles of: \_\_\_\_\_; and  
 date a copy of the application was sent to the [Local River Management Advisory Committee](#): Month: \_\_\_ Day: \_\_\_ Year: \_\_\_\_

N/A

<b>8. APPLICANT INFORMATION (Desired permit holder)</b>			
LAST NAME, FIRST NAME, M.I.: <b>Rollins, William</b>			
TRUST / COMPANY NAME: <b>NHDOT District 3</b>		MAILING ADDRESS: <b>2 Sawmill Road</b>	
TOWN/CITY: <b>Gilford</b>		STATE: <b>NH</b>	ZIP CODE: <b>03249</b>
EMAIL or FAX: <b>wrollins@dot.state.nh.us</b>		PHONE: <b>603-524-6667</b>	
ELECTRONIC COMMUNICATION: By initialing here: <u>WR</u> , I hereby authorize NHDES to communicate all matters relative to this application electronically			
<b>9. PROPERTY OWNER INFORMATION (If different than applicant)</b>			
LAST NAME, FIRST NAME, M.I.:			
TRUST / COMPANY NAME:		MAILING ADDRESS:	
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL or FAX:		PHONE:	
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically			
<b>10. AUTHORIZED AGENT INFORMATION</b>			
LAST NAME, FIRST NAME, M.I.: <b>Hayes, Chad</b>		COMPANY NAME: <b>NHDOT District 3</b>	
MAILING ADDRESS: <b>2 Sawmill Road</b>			
TOWN/CITY: <b>Gilford</b>		STATE: <b>NH</b>	ZIP CODE: <b>03249</b>
EMAIL or FAX: <b>chayes@dot.state.nh.us</b>		PHONE: <b>603-524-6667</b>	
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically			
<b>11. PROPERTY OWNER SIGNATURE:</b>			
See the Instructions & Required Attachments document for clarification of the below statements			
By signing the application, I am certifying that:			
<ol style="list-style-type: none"> <li>I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.</li> <li>I have reviewed and submitted information &amp; attachments outlined in the Instructions and Required Attachment document.</li> <li>All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.</li> <li>I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.</li> <li>I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.</li> <li>Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.</li> <li>I have submitted a Request for Project Review (RPR) Form (<a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a>) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.</li> <li>I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.</li> <li>I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.</li> <li>I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.</li> <li>I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.</li> <li>The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not</li> </ol>			
 For William Rollins Property Owner Signature		<b>MATT URBAN</b> Print name legibly	<b>12/07/2016</b> Date

## MUNICIPAL SIGNATURES

### 12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name legibly	Date
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#### **DIRECTIONS FOR CONSERVATION COMMISSION**

1. Expedited review **ONLY** requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

### 13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), 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.

	Print name legibly	Town/City	Date
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#### **DIRECTIONS FOR TOWN/CITY CLERK:**

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will **NOT** receive the expedited review time.
2. **IMMEDIATELY** sign the original application form and four copies in the signature space provided above;
3. 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.
4. **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
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

#### **DIRECTIONS FOR APPLICANT:**

1. 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.

**14. IMPACT AREA:**

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

**Permanent:** impacts that will remain after the project is complete.

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

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	TEMPORARY Sq. Ft. / Lin. Ft.
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 / River	/ <input type="checkbox"/> ATF	20 / 10 <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	150 Lt & 150 Rt / 22 Lt & 18 Rt <input type="checkbox"/> ATF
Bank - Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Tidal water	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Salt marsh	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Sand dune	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
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 upland in 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
<b>TOTAL</b>	/	320 / 50

**15. APPLICATION FEE:** See the Instructions & Required Attachments document for further instruction

Minimum Impact Fee: Flat fee of \$ 200

Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) 320 sq. ft. X \$0.20 = \$ 64

Temporary (seasonal) docking structure: \_\_\_\_\_ sq. ft. X \$1.00 = \$

Permanent docking structure: \_\_\_\_\_ sq. ft. X \$2.00 = \$

Projects proposing shoreline structures (including docks) add \$200 = \$

Total = \$

The Application Fee is the above calculated Total or \$200, whichever is greater = \$ 200

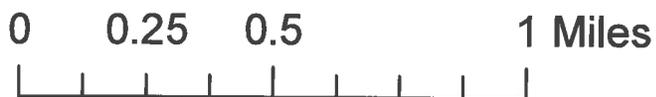
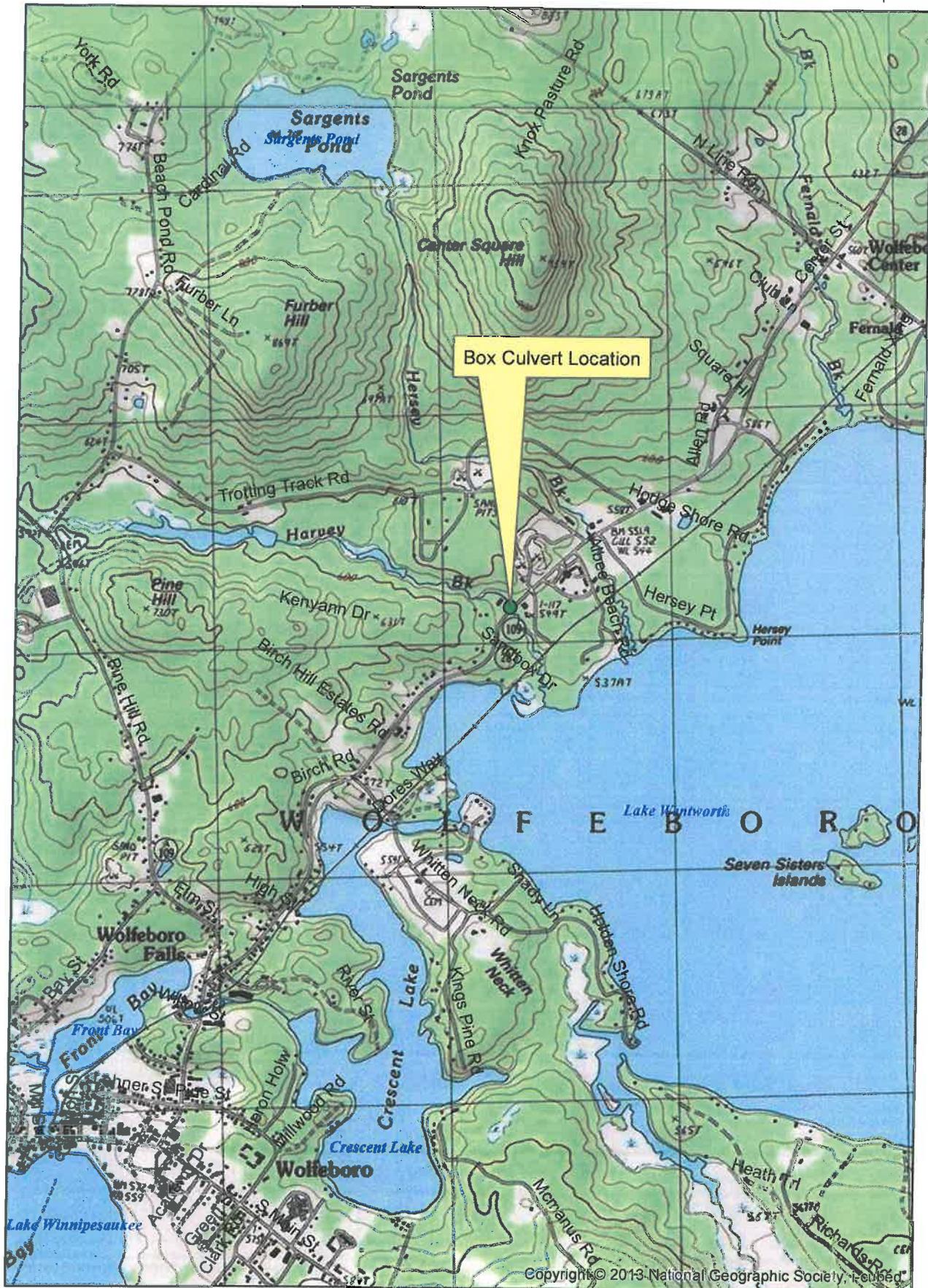
[shoreland@des.nh.gov](mailto:shoreland@des.nh.gov) or (603) 271-2147

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

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

1832H-2

Rt. 28 over Harvey Brook, Box Culvert



1:24,000

# WETLANDS PERMIT APPLICATION – ATTACHMENT A MINOR AND MAJOR - 20 QUESTIONS

Water Division/ Wetlands Bureau/ Land Resources Management  
Check the Status of your application: [www.des.nh.gov/onestop](http://www.des.nh.gov/onestop)



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

**Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:**

1. The need for the proposed impact.

The existing wing walls on the outlet side of this box culvert are deteriorated. The proposed project will remove the existing wing walls and replace them to maintain the integrity of the structure and support the fill material leading up the structure.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

Removal and replacement of the wings walls will occur adjacent to the wetland. This is the least amount of impact possible to wetlands that will allow for the repair of wing walls. Another option considered for this project was to extend the outlet end of the box culvert four feet and rebuild the wing walls. Extending the box culvert would have resulted in greater wetlands impacts. After this project was discussed at the Natural Resource Agency Meeting, it was decided the chosen alternative would result in the least amount of wetland impacts.

3. The type and classification of the wetlands involved.

**R2UB12 - Riverine, lower perennial, unconsolidated bottom, cobble-gravel, sand**

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

**Harvey Brook outlets into Wentworth Lake approximately 1500' to the east of the project area.**

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

**The project does not include impacts to prime wetlands, designated rivers, sand dunes or tidal buffer zones.**

6. The surface area of the wetlands that will be impacted.

**The proposed project will involve 320 s.f. of temporary impact for the purpose of installing concrete forms for the new wing walls**

7. The impact on plants, fish and wildlife including, but not limited to:
- a. Rare, special concern species;
  - b. State and federally listed threatened and endangered species;
  - c. Species at the extremities of their ranges;
  - d. Migratory fish and wildlife;
  - e. Exemplary natural communities identified by the DRED-NHB; and
  - f. Vernal pools.

- a. An NHHB review was requested and the review resulted in a negative result
- b. No species of concerned were indicated in the NHHB review. In addition, an Official Species list was requested and obtained from the USFWS using the IPaC (Information for Planning and Conservation) tool. The Northern long-eared bat and small whorled pogonia were species listed. The project was submitted to the ACOE via the 4(d) Consultation Form resulting in No Affect determination. A plant survey was performed for the small whorled pogonia with a negative result.
- c. No species were indicated at the extremities of their ranges in the NHHB/IPaC review
- d. No migratory fish or wildlife were indicated in the NHHB/IPaC review
- e. No exemplary natural communities were identified in the NHHB review
- f. No vernal pools were delineated during field inspection

8. The impact of the proposed project on public commerce, navigation and recreation.

**The project will be performed outside of the travel way of NH Route 28 with no impact to traffic flow. The work will provide uninterrupted public use, commerce, navigation and recreation.**

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

**There will be no impact to the aesthetic interest of the general public in this area as there will be no visible changes to the roadway or surrounding appurtenances.**

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

**The proposed project is intended to repair existing infrastructure and will not interfere or obstruct public rights of passage.**

11. The impact upon abutting owners pursuant to RSA 482-A.11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

**The proposed project involves only temporary impacts for concrete forms which will not have an impact on upstream or downstream abutters. All work to be done within the NHDOT Highway Right-of-Way.**

12. The benefit of a project to the health, safety, and well being of the general public.

**The project will benefit the public by reestablishing the integrity of a structure that is necessary to carry NH Route 28's traffic volume of 6600 vehicles per day over Harvey Brook.**

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

**There will be no fill and no alteration to the drainage structures or flow pattern as a result of the proposed project. This project has been reviewed by the Department's Water Quality Program Manager and is not expected to have any negative impact on water quality.**

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

**Due to the limited scope of work which will involve only temporary impacts, there is no potential to cause erosion, flooding or sedimentation.**

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

**The project is not located in a stream which has currents or wave energy strong enough to cause any damage or hazard, nor will the project cause this to occur.**

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

**Given the kind of work performed by NHDOT maintenance operations, it is unlikely that any abutters would propose similar impacts. However, should similar impacts be proposed in the area, the temporary impacts associated with the installation of concrete forms will not permanently alter or damage the stream.**

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

**Since the proposed impacts are temporary in nature there will be no affect on the value or function of the wetland or surrounding resources.**

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

**There are no sites as described above in the project area.**

19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

**There are no sites as described above in the project area.**

20. The degree to which a project redirects water from one watershed to another.

**The proposed project will not redirect water from one watershed to another.**

Additional comments

# BUREAU OF ENVIRONMENT CONFERENCE REPORT

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting  
**DATE OF CONFERENCE:** September 21, 2016  
**LOCATION OF CONFERENCE:** John O. Morton Building  
**ATTENDED BY:**

**NHDOT**

Matt Urban  
Sarah Large  
Ron Crickard  
Ralph Sanders  
Mark Hemmerlin  
Bill Rollins  
Dave Rodrigue  
Kevin Nyhan  
Tony Weatherbee

**Army Corps of Engineers**

Michael Hicks

**EPA**

Mark Kern

**FHWA**

Jamie Sikora  
Mark Hasselmann

**NHDES**

Gino Infascelli  
Lori Sommer

**NH Fish & Game**

Carol Henderson

**NHB/DRED**

**Consultants/Public**

**Participants**

Jim Fougere  
Richard Lundborn  
Donna Benton

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:**

*(minutes on subsequent pages)*

Finalization of August 17 <sup>th</sup> 2016 Meeting Minutes.....	2
Hampton #40927 Route 1A Drainage Maintenance (Non-Federal).....	2
Eaton #1832H-1 and Freedom #1832H.....	3
Mitigation Banking.....	5
Wolfeboro #1832H-2 & Concord 41122 059/127, non-federal, .....	7
Brookline 41161 091/076, non-federal.....	8
Weare 41165 137/043, non-federal .....	8

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

**NOTES ON CONFERENCE:****Finalization of August 17<sup>th</sup> 2016 Meeting Minutes**

The finalization of August's meeting minutes were postponed for one week in order for final comments to come in.

**Hampton #40927 Route 1A Drainage Maintenance (Non-Federal)**

Ralph Sanders (NHDOT District 6) provided an overview of the project. The District has an existing permit to construct a new culvert from Route 1A to the marsh. It took five years to get the abutting landowner to approve the project but they did get an extension. They are looking to work on that project this fall. There are three additional 24" culverts in the area that outlet to the marsh. It has been difficult to find these outlets, since they were installed years ago, possibly in the 1930's and are now buried. They are looking to permit work on these culverts.

Lori Sommer asked what the drainage does now. R. Sanders noted that it is basically flowing overland, flooding and creating some problems.

Jim Fougere (Smart Associates) distributed an aerial photo of the area with wetlands delineated and phragmites identified. J. Fougere noted that to define the outlet locations, they would have to do excavations to find and inspect the culverts and deal with the burial of the outlets. That work would occur in the tidal buffer zone. Once the culvert ends were established, DOT standard headwalls would be included, a 10'X10' area prepared, fabric laid down and Class C rock installed to allow future maintenance of the outlet area.

Work in the marsh is assumed to include the outlet structure with construction impacts of approximately 15'X15' or 225 sq. ft. Permanent marsh impacts are expected to be 10'X10', any temporary impacts will be restored. Impacts to the tidal buffer zone would be restored to current conditions. Presumably, mitigation would be required so we would look at phragmites control working with DOT and DES to determine a workable solution.

Mike Hicks noted that ideally all this could be maintenance work, if there is no new fill or new footprint. Any new fill will require an Individual Permit. Matt Urban noted that Rich Roache was part of the previous permit and avoided an individual permit. M. Hicks asked if the work will be in the salt marsh and it definitely is new work, so it sounds like an Individual permit.

L. Sommer noted that it would be a Major project for NHDES. R. Sanders asked to confirm that the 10x10 rock fill area would be fill.

Geno Infascelli noted that the area includes prime wetland and 100' buffer for the town. That may not have been true when the previous permit was issued. That would require coordination with the Town of Hampton. Also he thought that for the existing permit at Little Jack's they found one outlet near the small building south of Little Jack's. He would check the older file and check for photos of the culvert.

Should discuss with Ruth Lad the idea of portion of credit for a project, and if being proactive would allow for more credits.

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

### **Wolfeboro #1832H-2**

Bill Rollins gave an overview of the project. The concrete box structure dates back to the 1930's when Route 28 was re-aligned. There is substantial damage to the outlet side wing walls, which are located very close to the white line of the road. They are proposing to extend the outlet pipe by 4 ft and would like to get some guardrail in for added safety. They have no proposed work within the box. Possibly replacing the header. Matt Urban stated that the extension of the culvert would trigger mitigation. Lori Sommer agreed.

M. Urban gave a run down of the environmental components. The stream is Tier 3. B. Rollins stated that no tree clearing was needed. Gino Infascelli stated that he suggests moving the road. G. Infascelli stated that there looks to be about 30 feet from the edge of road to the inlet, so they could slide the road over and soften the curb even more. B. Rollins responded that if we propose to repair just the wing walls without extending the pipe and not adding guardrails is that okay? G. Infascelli answered yes. G. Infascelli also added that worst case scenario; you could shift it only 20ft? B. Rollins responded that moving the road at all brings the project to a whole different level so he would prefer to just fix the wing walls without extension. L. Sommer asked where the wing walls were so bad. B. Rollins responded because of salt application. The road could be a bit super-elevated so the salt run off concentrates there. M. Urban added that by only doing the repairs to the wing walls we would avoid mitigation. L. Sommer agreed. G. Infascelli stated that the last alternative would be to remove some of the inlet and do extension on the other side. B. Rollins stated that if we shuffle the road that we would need to assess the structure of the box. Carol Henderson ask if both sides' wing walls needed repair. B. Rollins stated no, only the outlet side.

B. Rollins asked if they agreed upon no longer doing the extension, just doing the repairs to the current outlet side wing walls, and add some guardrail. The group agreed.

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

### **Concord 059/127, non-federal, 41122**

Tony Weatherbee presented the project. The existing structure is a concrete slab bridge. The bridge has a span of 15'-10" and a length of 82'-0". The abutments are moderately spalled, cracked and undermined. The headwall is also cracked and spalled. Proposed work consists of the following: place sandbag cofferdams, repair undermined locations with a concrete toewall, repair substructure cracks in place, rebuild headwalls, and place riprap.

Gino Infascelli asked how the riprap will be installed. Tony said that machinery will be used which will require some tree cutting for access. The structure will be dewatered half at a time with sandbag cofferdams. The time of year that this project could be completed is flexible.

Mike Hicks asked if there were any evidence of bats around the structure. Tony said that he did not see any signs of bats when he was at the structure. Mark Hemmerlein said that he didn't think bats would like the colder environment by the bridge. Tony said that the 4d forms will be sent when the application is submitted. The project will clear less than 0.1 acres of trees.

Carol Henderson said to make sure that tree clearing is done at the time that is allowed for bats.

Matt Urban asked if there were any mitigation concerns and everyone agreed that no mitigation was required

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

**Brookline 091/076, non-federal, 41164**

Tony Weatherbee provided an overview of the project. The existing structure is a concrete frame bridge. The bridge has a span of 20'-0" and a width of 41'-9" (the clear span is 14'-0"). The soffit has cracks and is delaminating. It has moderate spalls, exposed rebar on the northern edge, delaminating on the southern edge and minor leaking in areas. Proposed work consists of the following: place sandbag cofferdams, temporary scaffolding and repair the deck.

Matt Urban noted that the channel is filled with material. Tony Weatherbee noted that in the year 2000 the channel was clear and that Bridge Maintenance could indeed dredge out the stream, but, it wasn't currently in the project scope. Matt thought that the material extends around 30'-0" downstream. Gino Infascelli noted that it was unusual that the sediment was built up at the structure outlet and not at the structure inlet.

There was some confusion about the stream name. In the NHDOT Bridge database the bridge was listed as crossing Store Brook. The USGS layer labels the brook as Village Brook. Moving forward, the stream will be referred to as Village Brook.

Carol Henderson asked if the temporary impacts were for scaffolding and Tony said yes. Gino Infascelli said that he thought that the sediment didn't need to be removed. Tony said that over time the sediment will continue to build up and in a high water event it could trap debris and back up water. This would create a more expensive and dangerous emergency situation in the future. Since the meeting took place, Bridge Maintenance has decided to remove a portion of the debris.

Lori Sommer said that this project is self-mitigating and that mitigation is not required.

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

**Weare 137/043, non-federal, 41165**

Tony Weatherbee provided an overview of the project. The existing structure is a twin multi-plate pipe arch. Each pipe arch opening is 5'-6". Proposed work consists of the following: place sandbag

## StreamStats Version 3.0

## Flow Statistics Ungaged Site Report

Date: Thurs Mar 10, 2016 2:16:07 PM GMT-5

Study Area: New Hampshire

NAD 1983 Latitude: 43.6054 (43 36 19)

NAD 1983 Longitude: -71.1888 (-71 11 20)

Drainage Area: 1.23 mi<sup>2</sup>1.23 sq. miles = 787.2 acres  
1.23  
= 3

Peak Flows Region Grid Basin Characteristics			
100% Peak Flow Statewide SIR2008 5206 (1.23 mi <sup>2</sup> )			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	1.23	0.7	1290
Mean April Precipitation (inches)	3.907	2.79	6.23
Percent Wetlands (dimensionless)	3.5094	0	21.8
Stream Slope 10 and 85 Method (feet per mi)	98.8	5.43	543

LowFlows Region Grid Basin Characteristics			
100% Low Flow Statewide (1.23 mi <sup>2</sup> )			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	1.23 (below min value 3.26)	3.26	689
Mean Basin Slope from 30m DEM (percent)	8.777	3.19	38.1
Maximum Basin Elevation (feet)	940.645	260	6290
Percent Coniferous Forest (percent)	23.0178	3.07	56.2
Jan to Mar Basin Centroid Precip (inches)	6.93	5.79	15.1
Mean Annual Temperature (degrees F)	70.186 (above max value 48.7)	36	48.7
Jun to Oct Mean Basinwide Temp (degrees F)	61.142	52.9	64.4
Jun to Oct Gage Precipitation (inches)	17.2	16.5	23.1
Percent Mixed Forest (percent)	22.4738	6.21	46.1
Mar to May Gage Precipitation (inches)	8.4	6.83	11.5

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Groundwater Recharge Region Grid Basin Characteristics			
100% Groundwater Recharge Statewide 2004 5019 (1.23 mi <sup>2</sup> )			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	1.23 (below min value 3.26)	3.26	689
Mean Annual Precip at Gage (inches)	40.0	35.83	53.11

Jun to Oct Gage Precipitation (inches)	17.2	16.46	23.11
Mar to May Gage Precipitation (inches)	8.4	6.83	11.54
Mean Annual Precip at Basin Centroid (inches)	39.8	37.44	75.91
Mean Annual Temperature (degrees F)	70.186 (above max value 48.69)	36.05	48.69
Mean Winter Min Temperature (degrees F)	14.713	0.8	19.88
Percent Coniferous Forest (percent)	23.0178	3.07	56.18
Percent Mixed Forest (percent)	22.4738	6.21	46.13
Nov to Dec Basin Centroid Precip (inches)	7.36	6.57	15.2
Mean Annual Snowfall (inches)	69.965	54.46	219.07

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Peak Flows Region Grid Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PK2	51.5	ft3/s	30	3.2	31.5	84.3
PK5	89.4	ft3/s	31	4.7	53.8	149
PK10	122	ft3/s	32	6.2	72.2	208
PK25	169	ft3/s	34	8	96.3	297
PK50	208	ft3/s	36	9	115	377
PK100	256	ft3/s	39	9.8	137	480
PK500	377	ft3/s	44	11	185	768

<http://pubs.usgs.gov/of/2008/5206/> (<http://pubs.usgs.gov/sir/2008/5206/>)  
 Olson, S.A., 2009, Estimation of flood discharges at selected recurrence intervals for streams in New Hampshire: U.S. Geological Survey Scientific Investigations Report 2008-5206, 57 p.

LowFlows Region Grid Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
D60WIN	0.64	dim				
D70WIN	0.53	dim				
D80WIN	0.47	ft3/s				
D90WIN	0.35	dim				
D95WIN	0.28	dim				
D98WIN	0.23	dim				
M7D2Y WIN	0.47	ft3/s				
M7D10Y WIN	0.25	ft3/s				
D60SPR	2.44	dim				
D70SPR	1.93	dim				
D80SPR	1.51	dim				
D90SPR	1.09	dim				
D95SPR	0.83	dim				

D98SPR	0.6	dim				
M7D2Y SPR	0.72	ft3/s				
M7D10Y SPR	0.38	ft3/s				
D60SUM	0.11	dim				
D70SUM	0.0792	dim				
D80SUM	0.06	dim				
D90SUM	0.0354	dim				
D95SUM	0.0224	dim				
D98SUM	0.0193	dim				
M7D2Y SUM	0.0412	ft3/s				
M7D10Y SUM	0.0114	ft3/s				
D60FALL	1.06	dim				
D70FALL	0.77	dim				
D80FALL	0.55	dim				
D90FALL	0.33	dim				
D95FALL	0.2	dim				
D98FALL	0.11	dim				
M7D2Y FAL	0.55	ft3/s				
M7D10Y FAL	0.19	ft3/s				
D60	0.52	ft3/s				
D70	0.19	ft3/s				
D80	0.0507	ft3/s				
D90	0.00937	ft3/s				
D95	0.00282	ft3/s				
D98	0.0009869999	ft3/s				
M7D2Y	0.00302	ft3/s				
M7D10Y	0.000353	ft3/s				

<http://pubs.water.usgs.gov/wri02-4298> (<http://pubs.water.usgs.gov/wri02-4298>)

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

Groundwater Recharge Region Grid Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
RCHRG WIN	4.44	in				
RCHRG SPR	6.92	in				
RCHRG SUM	-2.95	in				
RCHRG FAL	2.93	in				

RCHRG ANN	17.5	in					
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[http://pubs.usgs.gov/sir/2004/5019/StreamStatsDB\\_2014-11-21\\_Copy\\_Copy.mdb#](http://pubs.usgs.gov/sir/2004/5019/StreamStatsDB_2014-11-21_Copy_Copy.mdb#)  
[http://pubs.usgs.gov/sir/2004/5019/StreamStatsDB\\_2014-11-21\\_Copy\\_Copy.mdb#](http://pubs.usgs.gov/sir/2004/5019/StreamStatsDB_2014-11-21_Copy_Copy.mdb#)  
Flynn, R.H. and Tasker, G.D., 2004. Generalized Estimates from Streamflow Data of Annual and Seasonal Ground-Water-Recharge Rates for Drainage Basins in New Hampshire. U.S. Geological Survey Scientific Investigations Report 2004-5019, 67 p.

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U.S. Department of the Interior | U.S. Geological Survey  
URL: [http://streamstatsags.cr.usgs.gov/v3\\_beta/FTreport.htm](http://streamstatsags.cr.usgs.gov/v3_beta/FTreport.htm)  
Page Contact Information: [StreamStats Help](#)  
Page Last Modified: 11/24/2015 14:32:58 (Web)

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NH Department of Transportation

Bureau of HIGHWAY MAINTENANCE, DISTRICT 3

Project, # 1832H-2, WOLFEBORO

Env-Wt 904.09 Alternative Design

TECHNICAL REPORT

**Env-Wt 904.09(a) - If the applicant believes that installing the structure specified in the applicable rule is not practicable, the applicant may propose an alternative design in accordance with this section.**

Please explain why the structure specified in the applicable rule is not practicable (Env-Wt 101.69 defines practicable as *available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes.*)

The structure in the rule would be 57 ft in width. While it greatly exceeds the current 8 ft the intent of the proposed work is to maintain the wing walls on the existing structure and not replace the structure. In considering available funding and the project purpose the specified structure is not practicable.

**The proposed alternative meets the specific design criteria for Tier 2 and Tier 3 crossings to the maximum extent practicable, as specified below.**

**Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings** – New Tier 2 stream crossings, replacement Tier 2 crossings that do not meet the requirements of Env-Wt 904.07, and new and replacement Tier 3 crossings shall be designed and constructed:

(a) In accordance with the NH Stream Crossing Guidelines.

A new structure is not feasible. Repair of the outlet wing walls meets the NH Stream Crossing Guidelines to the maximum extent practicable.

(b) With bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing.

The proposed project will not make any changes to the bed forms, streambed, water depths or velocities in Harvey Brook. Its intent is only to replace the decaying concrete wing walls.

(c) To provide a vegetated bank on both sides of the watercourse to allow for wildlife passage.

The available vegetated bank on both sides of the watercourse will remain unaffected by this project.

(d) To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the functioning of the natural floodplain.

The proposed project will make no changes to the existing alignment or gradient of the stream channel.

(e) To accommodate the 100-year frequency flood, to ensure that (1) there is no increase in flood stages on abutting properties; and (2) flow and sediment transport characteristics will not be affected in a manner which could adversely affect channel stability.

There is no history of flooding at this location. The proposed project will not change the size of the structure. There will be no change in flood stages on abutting properties or flow and sediment transport characteristics.

(f) To simulate a natural stream channel.

The proposed project will not change the existing channel. There will be no permanent impact to the channel.

(g) So as not to alter sediment transport competence.

The proposed project will not change the existing channel characteristics. The impacts are only temporary. There will be no change to any existing sediment transport competence.

**Env-Wt 904.09(c)(3) – The alternative design must meet the general design criteria specified in Env-Wt 904.01:**

Env-Wt 904.01

(a) Not be a barrier to sediment transport;

The proposed project will not create any permanent impacts and will therefore not create any barrier to sediment transport.

(b) Prevent the restriction of high flows and maintain existing low flows;

The proposed project will not cause any changes to existing flows as there are no permanent impacts.

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

The proposed project will not create any permanent impacts and therefore will not disrupt the movement of aquatic life.

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

There is no history of flooding at this location. The proposed project does not include any permanent impacts and will not create any change in the frequency of flooding.

(e) Preserve watercourse connectivity where it currently exists;

The proposed project will have no impact on watercourse connectivity.

(f) Restore watercourse connectivity where: (1) Connectivity previously was disrupted as a result of human activity(ies); and (2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

There is no disruption in watercourse connectivity on this project. There will be no change in connectivity after the work is complete.

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

The proposed project will not create any permanent impacts and will not cause erosion, aggradation or scouring upstream or downstream of the crossing.

(h) Not cause water quality degradation.

The proposed project will not cause any degradation of water quality.

**\*\*\*Note: An alternative design for Tier 1 stream crossings must meet the general design criteria (Env-Wt 904.01) only to the *maximum extent practicable*.**



## New Hampshire Natural Heritage Bureau

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**To:** Kerry Ryan  
7 Hazen Drive  
Concord, NH 03301

**Date:** 3/11/2016

**From:** NH Natural Heritage Bureau

**Re:** Review by NH Natural Heritage Bureau of request dated 3/11/2016  
NHB File ID: NHB16-0717

**Applicant:** Kerry Ryan

**Location:** Tax Map(s)/Lot(s):  
Wolfboro

**Project Description:** Route 28 repair box culvert over Harvey Brook. Repair upstream wing walls, extend box 4 feet down stream and construct new downstream wing walls.

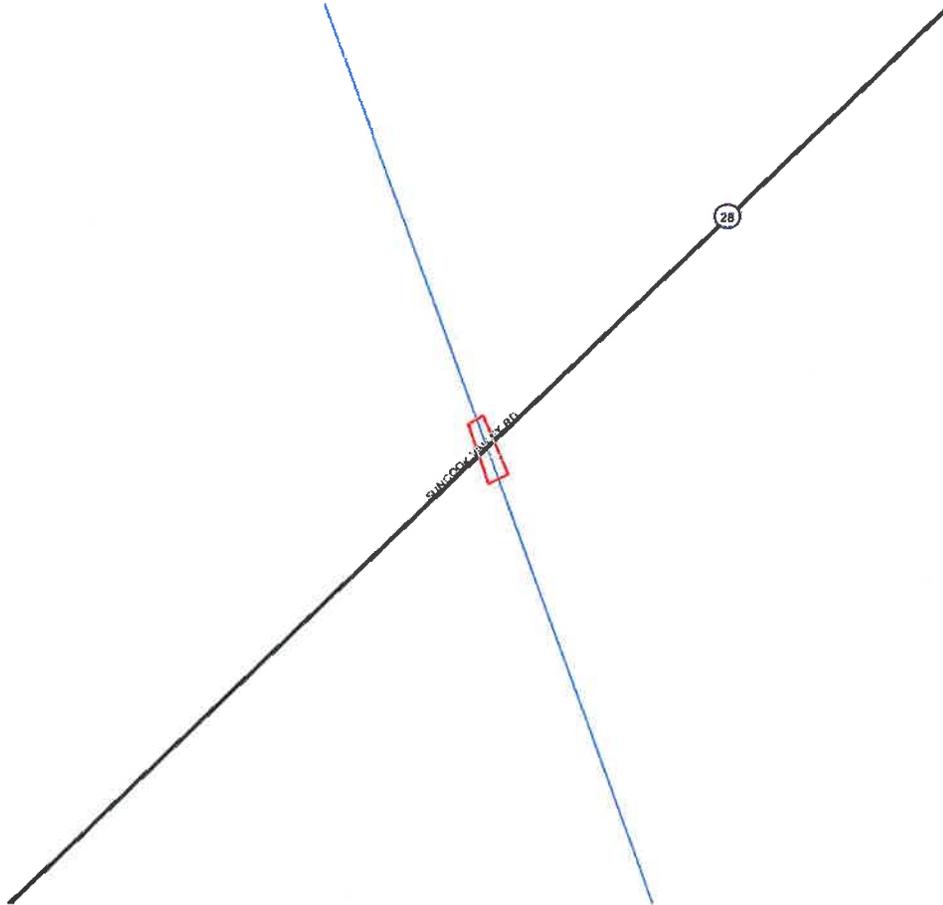
The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded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

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

This report is valid through 3/10/2017.



MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB16-0717





## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 COMMERCIAL STREET, SUITE 300  
CONCORD, NH 03301  
PHONE: (603)223-2541 FAX: (603)223-0104  
URL: [www.fws.gov/newengland](http://www.fws.gov/newengland)

Consultation Code: 05E1NE00-2016-SLI-1068

March 09, 2016

Event Code: 05E1NE00-2016-E-01481

Project Name: Wolfboro 1832H-2

Subject: 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](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



United States Department of Interior  
Fish and Wildlife Service

Project name: Wolfboro 1832H-2

## Official Species List

**Provided by:**

New England Ecological Services Field Office

70 COMMERCIAL STREET, SUITE 300

CONCORD, NH 03301

(603) 223-2541

<http://www.fws.gov/newengland>

**Consultation Code:** 05E1NE00-2016-SLI-1068

**Event Code:** 05E1NE00-2016-E-01481

**Project Type:** TRANSPORTATION

**Project Name:** Wolfboro 1832H-2

**Project Description:** NH Rt. 28 over Harvey Brook in Wolfboro, repair box culvert, extend four feet downs stream and construct new wing walls.

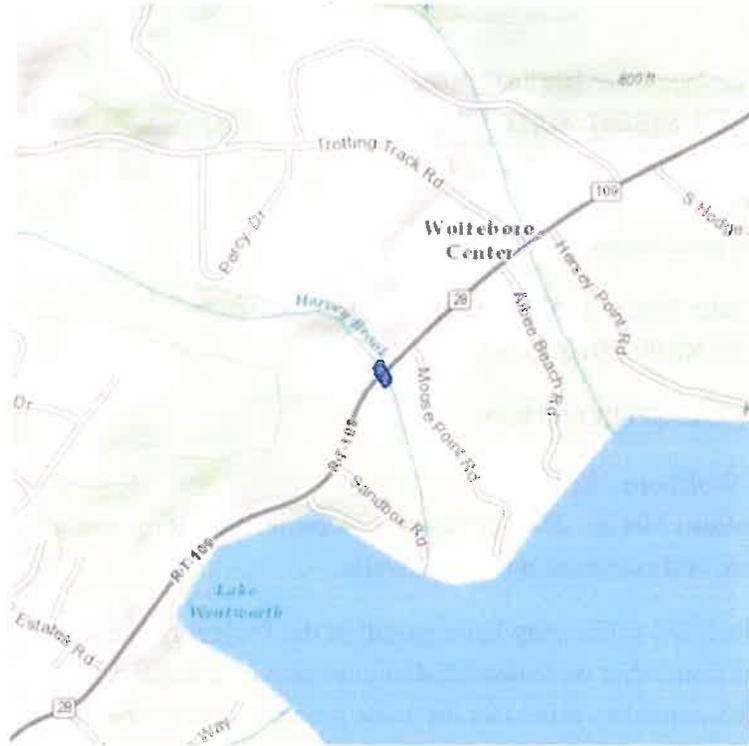
**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior  
Fish and Wildlife Service

Project name: Wolfboro 1832H-2

### Project Location Map:



**Project Coordinates:** MULTIPOLYGON (((-71.18865147017303 43.60546139489266, -71.18861952144356 43.60536137748999, -71.1886489180536 43.60528735620053, -71.1887144844666 43.605242141629176, -71.18879412081652 43.6052409738344, -71.18902191735444 43.60547458240259, -71.18904900686312 43.605601049955155, -71.18898359519517 43.60568318104456, -71.18887926671094 43.60569500346085, -71.18865147017303 43.60546139489266)))

**Project Counties:** Carroll, NH



United States Department of Interior  
Fish and Wildlife Service

Project name: Wolfboro 1832H-2

## Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your 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. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Flowering Plants	Status	Has Critical Habitat	Condition(s)
Small Whorled pogonia ( <i>Isotria medeoloides</i> )	Threatened		
<b>Mammals</b>			
Northern long-eared Bat ( <i>Myotis septentrionalis</i> )	Threatened		



United States Department of Interior  
Fish and Wildlife Service

Project name: Wolfboro 1832H-2

## **Critical habitats that lie within your project area**

There are no critical habitats within your project area.

## Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

IPaC Official Species List Consultation Code: 05E1NE00-2016-SLI-1068

<b>Information to Determine 4(d) Rule Compliance:</b>	<b>YES</b>	<b>NO</b>
1. Does the project occur wholly outside of the WNS Zone <sup>1</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency <sup>2</sup> to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question #1 or yes to question #2 and no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

**Agency and Applicant<sup>3</sup>** (Name, Email, Phone No.): NHDOT, Kerry Ryan, [kryan@dot.state.nh.us](mailto:kryan@dot.state.nh.us), 603-271-3717

**Project Name:** Wolfboro 1832H-2

**Project Location** (include coordinates if known): NH Route 28, over Harvey Brook, 43.605435, -71.188926

**Basic Project Description** (provide narrative below or attach additional information): This project involves repairing the existing box culvert carrying Harvey Brook under NH Route 28. The intent is to remove the deteriorated outlet wing walls, extend the outlet end of the box approximately four feet and

<sup>1</sup> <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

<sup>2</sup> See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

<sup>3</sup> If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

then construct eight to ten foot long wing walls in order to move the box away from the travel way and allow room to install guardrail.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion <sup>4</sup> ? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of forest conversion		
If known, estimated acres <sup>5</sup> of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31 <sup>6</sup>		
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: Kerry Ryan

Date Submitted: 8/18/16

<sup>4</sup> Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

<sup>5</sup> If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

<sup>6</sup> If the activity includes tree clearing in June and July, also include those acreage in April to October.

STATE OF NEW HAMPSHIRE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF ENVIRONMENT

NOTE TO FILE

Date: August 19, 2016

From: Kerry Ryan   
Environmental Analyst  
Bureau of Environment

Project: Wolfeboro  
1832H-2

**RE: Rare Species**

The subject project will repair a deteriorated box culvert carrying NH Route 28 over Harvey Brook, approximately 1400' south of Trotting Track Road in Wolfeboro. The existing outlet wing walls are deteriorated and sections of concrete are missing. Work will involve removal and replacement of the outlet wing walls and extension of the outlet end of the box approximately four feet. The outlet wing walls will be eight to ten feet long in order to have the box away from the travel way and allow room to install guardrail.

An Official Species List was requested and obtained from the US Fish and Wildlife Service (Consultation Code 05E1NE00-2016-SLI-1068) using the online Information for Planning and Conservation (IPaC) tool. The 'Official Species List' included small whorled pogonia (*Isotria medeoloides*), a federally listed threatened plant species.

On August 4, 2016 a plant survey was performed by Wetlands Program Manager Matt Urban and Environmental Analyst Kerry Ryan. The survey did not indicate the presence of the small whorled pogonia (*Isotria medeoloides*). Therefore, no further coordination with the USFWS is necessary.



Victoria F. Sheehan  
Commissioner

THE STATE OF NEW HAMPSHIRE  
DEPARTMENT OF TRANSPORTATION  
RECEIVED  
BUREAU OF ENVIRONMENT  
OCT 18 2016  
NH DEPARTMENT OF  
TRANSPORTATION



William Cass, P.E.  
Assistant Commissioner

WOLFEBORO  
1832H-2  
RPR 7998

**No Adverse Effect Memo**

Pursuant to the Request for Project Review response by the New Hampshire Division of Historical Resources (NHDHR) on September 29, 2016, and for the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), and the US Army Corps of Engineers' *Appendix C*; the NHDHR and the US Army Corps of Engineers have coordinated the identification and evaluation of cultural resources with plans to repair the Harvey Brook culvert wing walls on the outlet (east) side of NH Route 28 in Wolfeboro, New Hampshire.

Based on a review pursuant to 36 CFR 800.4 we agree that the stone box culvert at this location may be eligible for the National Register of Historic Places. The stone box portion of the culvert is located on the inlet (west) side, and was extended circa 1934 with the concrete box located on the outlet side.

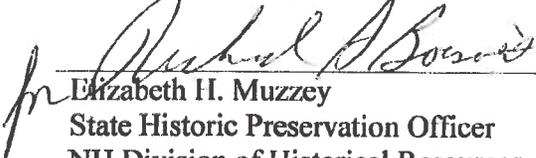
The project will include installation of temporary silt fences to deter erosion, removal of the existing concrete wing walls, extending the culvert approximately 4' and installing new wing walls, and placement of loam and seed as a permanent erosion control.

Applying the criteria of effect at 36 CFR 800.5, we mutually agreed that the above work will not impact the stone box culvert, and that all work associated with the concrete culvert will adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.

  
\_\_\_\_\_  
Jill Edelmann Date  
Cultural Resources Manager

Concurred with by the NH State Historic Preservation Officer:

  
\_\_\_\_\_  
Elizabeth H. Muzzey Date  
State Historic Preservation Officer  
NH Division of Historical Resources

c.c. William Rollins, NHDOT Kerry Ryan, NHDOT  
Chris St. Louis, NHDHR Mike Hicks, ACOE  
s:\environment\projects\wolfeboro\1832-h-2\cultural\noadverseeffect 10.10.16.docx

**U.S. Army Corps of Engineers  
New Hampshire Programmatic General Permit (PGP)  
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 PGP, GC 5 regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

<b>1. Impaired Waters</b>	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See <a href="http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm">http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm</a> to determine if there is an impaired water in the vicinity of your work area.*	x	
<b>2. Wetlands</b>	Yes	No
2.1 Are there streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	x	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, <a href="http://www.nhnaturalheritage.org">www.nhnaturalheritage.org</a> , specifically the book <a href="#">Natural Community Systems of New Hampshire</a> .		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 size of the existing impervious surface area?	N/A	
2.7 What is the size of the proposed impervious surface area?	N/A	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	N/A	
<b>3. Wildlife</b>	Yes	No
3.1 Has the NHB 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 a NHB determination.)		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"> <li>• PDF: <a href="http://www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm">www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm</a>.</li> <li>• Data Mapper: <a href="http://www.granit.unh.edu">www.granit.unh.edu</a>.</li> <li>• GIS: <a href="http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html">www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</a>.</li> </ul>		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 PGP, 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		
If a minor or major impact project, has a copy of the Request for Project Review (RPR) Form ( <a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a> ) been sent to the NH Division of Historical Resources as required on Page 5 of the PGP?	x	

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

Wolfeboro: NH Route 28 Over Harvey Brook



Site Looking North



Site Looking South

Wolfeboro: NH Route 28 Over Harvey Brook



Inlet



Upstream From Inlet

Wolfeboro: NH Route 28 Over Harvey Brook



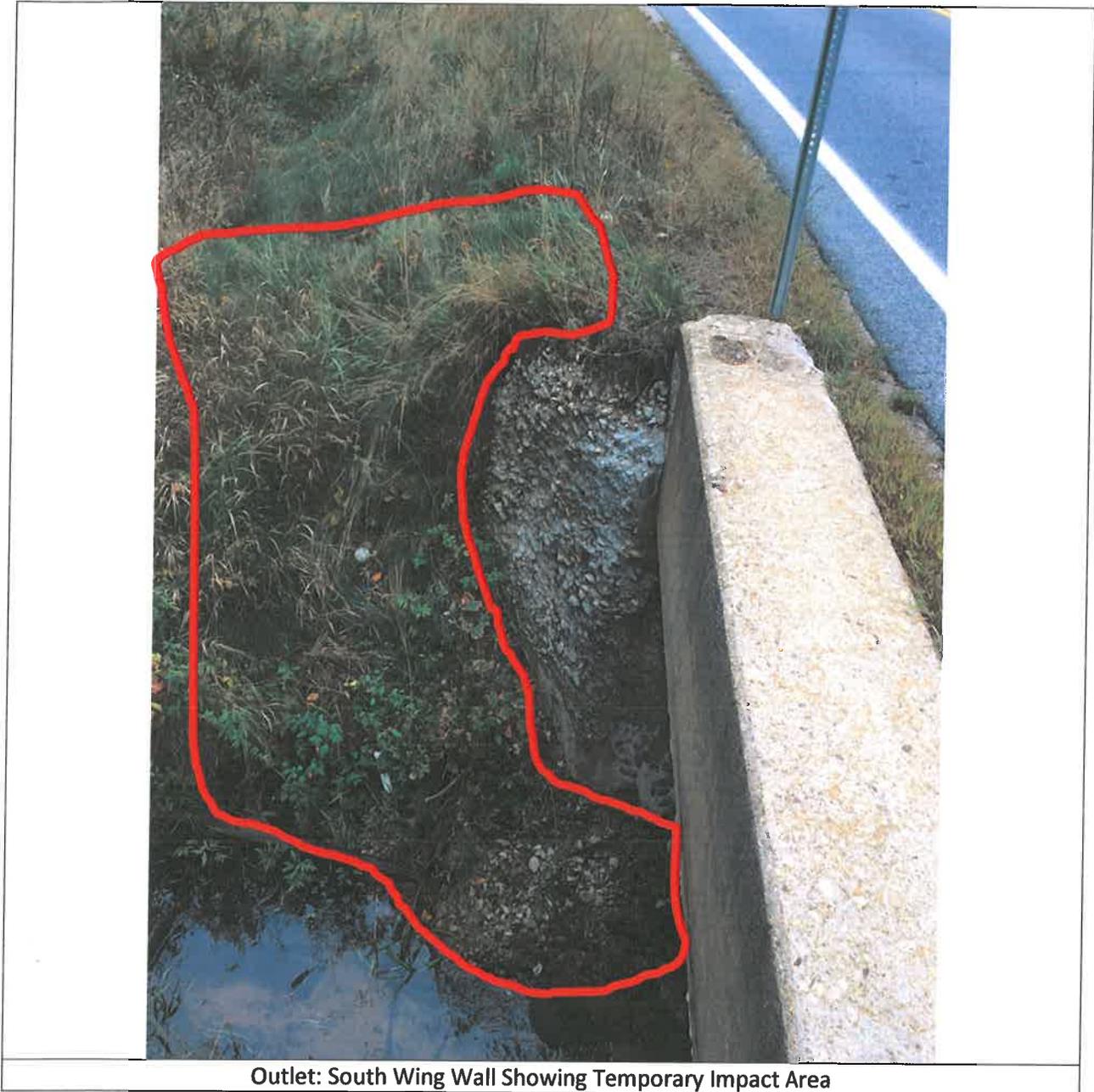
Outlet



Downstream From Outlet



Outlet: North Wing Showing Temporary Impact Area



Outlet: South Wing Wall Showing Temporary Impact Area

### Construction Sequence

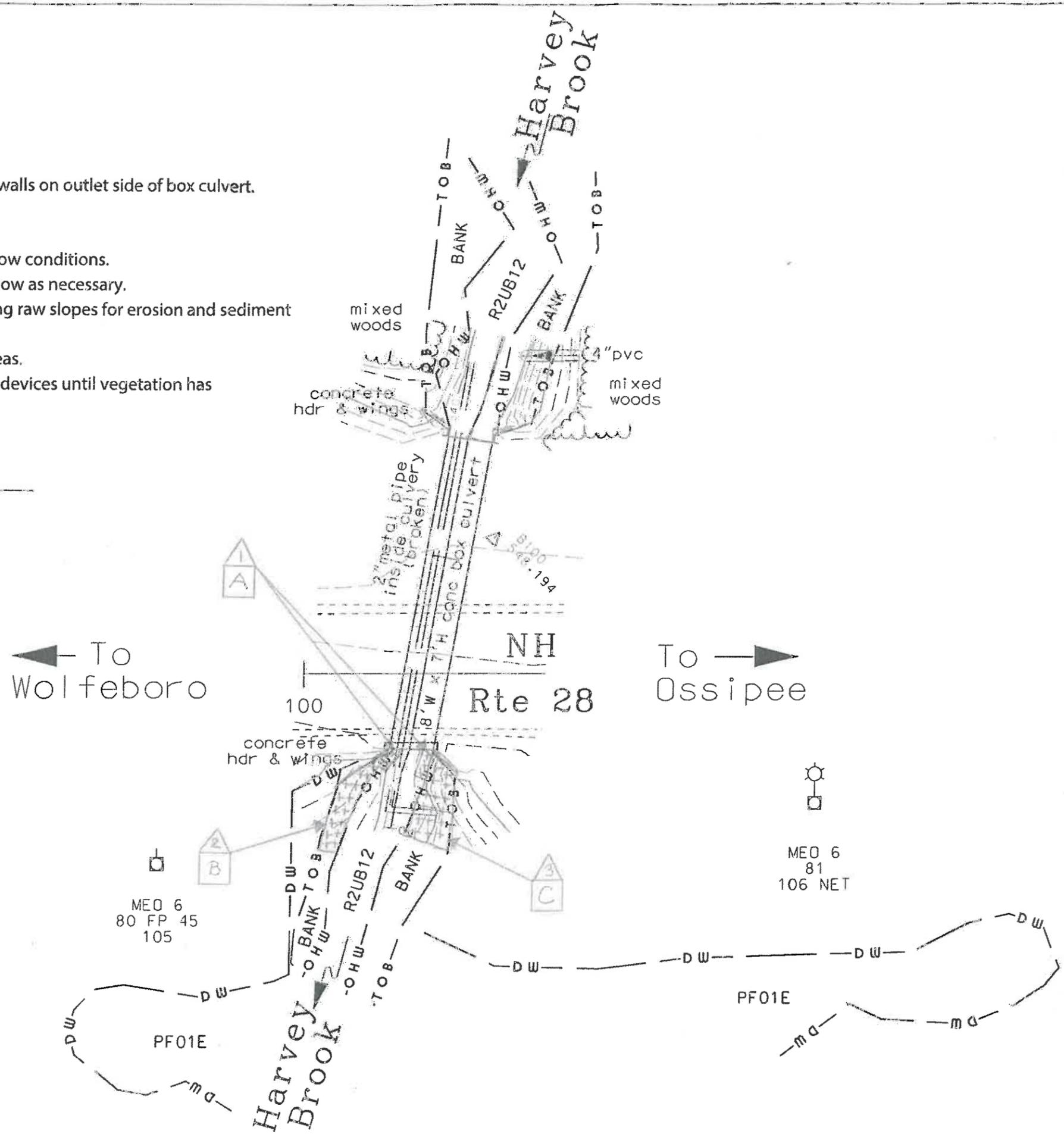
1. Install temporary erosion control (silt fence)
2. Install sand bags as necessary to control flow.
3. Remove existing wing walls.
4. Excavate and place forms for new wing walls.
5. Pour concrete for new wing walls.
6. Remove forms and backfill new wing walls.
7. Install permanent erosion control (loam and seed).
8. Remove temporary erosion control after permanent erosion control is established.

Standard Dredge & Fill  
 M311-14, Wolfeboro  
 9/30/16  
 By C.Hayes

Project Description:  
 Remove and Replace existing wing walls on outlet side of box culvert.

Erosion Control Plan:  
 Work to be completed during low flow conditions.  
 Sand bags shall be used to control flow as necessary.  
 Silt fence (BMP#8) shall be used along raw slopes for erosion and sediment control.  
 Loam, seed and mulch disturbed areas.  
 Maintain temporary erosion control devices until vegetation has reestablished.

Wetland Delineation:  
 Performed by MATT URBAN  
 on 07-19-16



SCALE IN FEET

**WOLFEBORO**  
**1832H**  
 PLAN PREPARATION RECORD PLAN  
 MK SDP FILES PROCESSED BY: SEL  
 HS DATA ANNOTATED BY: JNG  
 FIELD INSPECTED BY: SEL/JNG  
 PLAN SHEET COMPLETION DATE: 3-29-16  
 SURVEY COMPLETION DATE: 3-31-16  
 SURVEY BOOK NUMBERS: 12900

+ N. H. D. G. T. +  
 SCALE IN FEET

# LEGEND

TYPE OF WETLAND IMPACT	PERMANENT IMPACT
N.H.V.B. (NON-WETLAND)	
N.H.V.B. & A.C.O.E. (WETLAND)	

N.H.V.B. - NEW HAMPSHIRE WETLANDS BOARD  
 A.C.O.E. - ARMY CORP. OF ENGINEERS



WETLAND DESIGNATION NUMBER



WETLAND IMPACT LOCATION



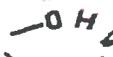
WETLAND MITIGATION AREA



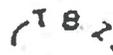
TEMPORARY IMPACTS



MITIGATION

 ORDINARY HIGH WATER

 TOP OF BANK

 TIDAL BUFFER ZONE

 TOP OF BANK &  
ORDINARY HIGH WATER

SHOWN SMALLER THAN ACTUAL SIZE

WETLAND DESIGNATION	USFWS WETLAND CLASSIFICATION	LOCATION	AREA (S.F.)		
			N.H.V.B. (NON-WETLAND)	N.H.V.B. & A.C.O.E. (WETLAND)	TEMPORARY IMPACTS
1	R2UB12	A			20
2	BANK LEFT	B			150
3	BANK RIGHT	C			150
		D			
		E			
		F			
		G			
		H			
		I			

PERMANENT IMPACTS: S.F.  
 TEMPORARY IMPACTS: 320 S.F.

TOTAL IMPACTS: 320 S.F.

# STANDARD SPECIFICATIONS FOR SILT FENCE PERIMETER BARRIER

## Definition

A temporary barrier of geotextile fabric (filter fabric) installed across a slope used to intercept sediment-laden runoff from small drainage areas of disturbed soil.

## Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used.

## Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope lengths contributing runoff to a silt fence are:

Slope Steepness	Maximum Slope Length m (ft.)
2:1	15 (50)
3:1	23 (75)
4:1	38 (125)
5:1	53 (175)
Flatter than 5:1	61 (200)

2. Maximum drainage area for overland flow to a silt fence shall not exceed 0.2 ha (1/2 acre) per 30 m (100 LF) of fence.
3. Erosion would occur in the form of sheet erosion.
4. There is no concentration of water flowing to the barrier.

## Design Criteria

Design computations are not required. All silt fences shall be placed as close to the work

area as possible, and the area below the fence must be undisturbed or stabilized. Do not construct silt fences in wetlands or across streams.

A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements:

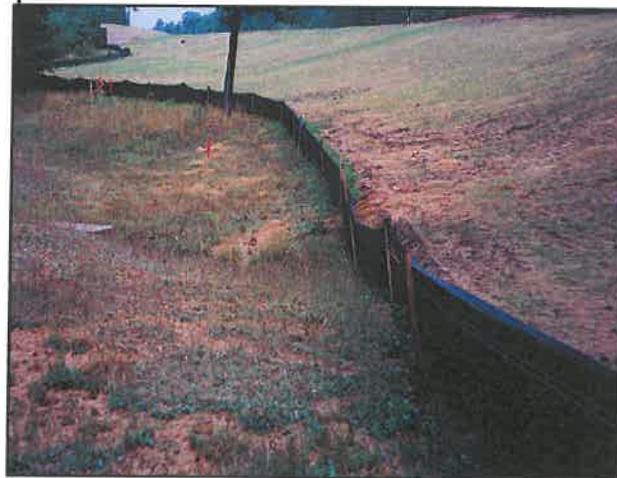
1. The type, size, and spacing of fence posts.
2. The size of woven wire support fences.
3. The type of filter fabric used.
4. The method of anchoring the filter fabric.
5. The method of fastening the filter fabric to the fencing support.

## Materials

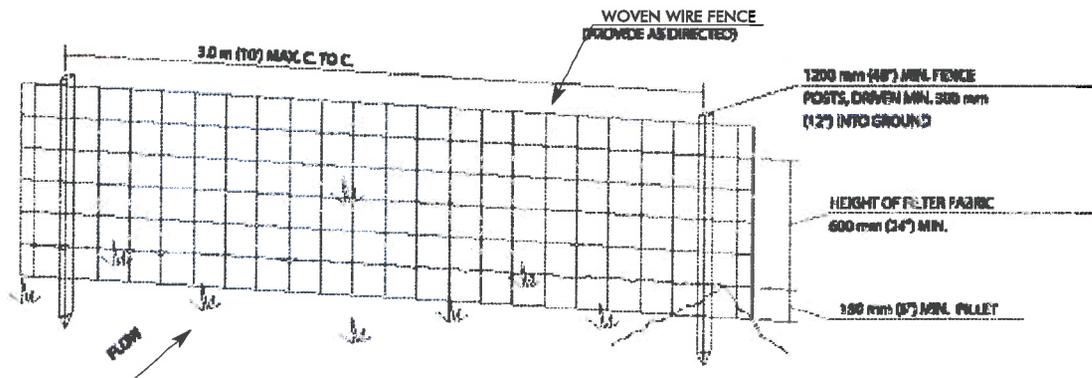
Reference the NH Standard Specifications for Road and Bridge Construction (See the SPECIAL PROVISION for the Amendment to Section 645: Erosion Control : Silt Fences)

## Maintenance

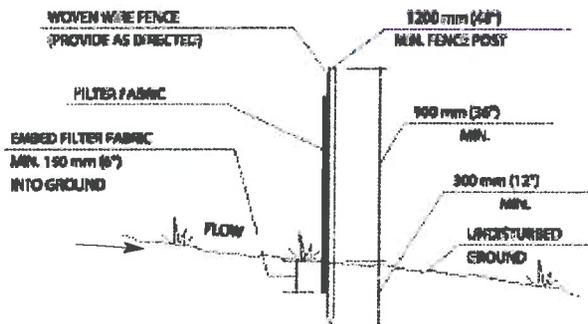
Inspect during and after runoff event(s). Perform maintenance as needed or directed and remove material when "bulges" develop in the silt fence.



# SILT FENCE PERIMETER BARRIER DETAILS



**PERSPECTIVE VIEW**



**ANCHORING DETAIL**

## CONSTRUCTION REQUIREMENTS

1. Securely fasten filter fabric and woven wire fence (if provided) to fence posts with wire ties, staples, or other approved methods.
2. Securely fasten filter fabric to the woven wire fence with ties spaced every 600mm (24 in.) at the top, midsection and bottom.
3. When two sections of filter fabric adjoin each other, overlap the sections by 150mm (6 in.), fold, and staple at a post. Securely splice woven wire fence at a post.
4. Place silt fence 1500 mm (5 ft.) beyond the toe of slope or on the contour. At the end of silt fence runs, flare uphill.
5. Provide woven wire fence and/or closer fence post spacing in areas where high runoff volumes are anticipated, or in low spots where sediment will be collected.
6. Remove silt fence, as directed, when no longer needed. Before the silt fence is removed, stabilize with vegetation any sediment which is permitted to remain in place.