

# BUREAU OF ENVIRONMENT CONFERENCE REPORT

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting  
**DATE OF CONFERENCE:** March 21, 2012  
**LOCATION OF CONFERENCE:** John O. Morton Building  
**ATTENDED BY:**

**NHDOT**

Kevin Nyhan  
Christine Perron  
Marc Laurin  
Mike Dugas  
Steve Liakos  
Kirk Mudgett  
Charlie Blackman  
Carol Niewola  
Jon Hebert

**Federal Highway  
Administration**

Jamie Sikora

**Army Corps of Engineers**

Rich Roach  
Marcus Madison (Intern)

**NHDES**

Lori Sommer  
Sandra Mattfeldt  
Bill Thomas

**NH Fish & Game**

Carol Henderson

**NH Natural Heritage  
Bureau**

Melissa Coppola

**NH Office of Energy and  
Planning**

Jennifer Gilbert

**Dubois & King**

Bob Durfee

**Bear Creek Environmental  
Team**

Shelley Gustafson

**Unitil Service Corp**

Tom Murphy

**Process Pipeline Services**

Mark Wood

**BL Companies**

John Whitcomb

**Stantec**

Gregg Cohen  
Leigh Bartlett

*(When viewing these minutes online, click on an attendee to send an e-mail)*

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:**

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

**NOTES ON CONFERENCE:****Finalization of February Meeting Minutes**

The February meeting minutes were finalized.

**Wentworth, 14516 (non-federal)**

This project involves the replacement of the bridge that carries Evans Road over South Branch Baker River in Wentworth, NH. DuBois & King Project Manager Bob Durfee presented the initial project review, including alternatives and proposed wetland impacts.

The bridge replacement project is in the NHDOT Municipal Bridge Aid Program, with the Study Phase nearly completed. The schedule is to award a construction contract in fall of 2012 (September to December).

The existing bridge is a one-lane (12' wide) 41' span between bearings and 37' clear span between abutments. Records indicate it was built in 1937. The superstructure consists of a bare timber deck on steel stringers. The east abutment is concrete and the west abutment is dry stone masonry. The bridge is on the NHDOT "Red List" and posted for 6 ton weight limit due to structural deficiencies. The road is dead ended on the west side, providing access to three homes.

Residents on Evans Road have indicated that no flooding and overtopping of the bridge occurs. Some overtopping of the river banks and floodplain to the west of the bridge has deposited ice chunks in the road during spring floods. The low point in the road elevation to the west is at the Q100 elevation.

The proposed bridge structure will be a new one lane, 16' wide bridge with precast/prestressed concrete deck panels and 2-bar steel rails. The east concrete abutment will be repaired/reused. The west stone abutment will be replaced with a new cast in place concrete abutment and wingwalls. The proposed bridge opening will match the existing opening of 37' between abutments. Estimated construction cost is \$555,000.

No changes to the existing road profile are proposed. The elevation of the road through the bridge will be maintained with new bridge construction. The low point in the road to the west will be maintained for flood relief.

A temporary bridge will be erected upstream during construction to maintain traffic through Evans road.

A hydraulic and hydrologic investigation has been performed. Results indicate the current bridge and the proposed replacement bridge, can pass the Q50 flood event with 2.1 feet of freeboard, and can pass the Q100 flood event with 1.2 feet of freeboard.

Repairs to the east abutment, replacement of the west abutment, and construction and removal of the temporary bridge will all have impact to wetlands. A standard dredge and fill permit will be required by NHDES.

A bridge design that would satisfy the NHDES Stream Crossing Rules (Env-Wt 900) was studied. The bridge is considered a Tier 3 stream crossing. A 68' long clear span bridge would be required to span the full bank width. Estimated construction cost is \$836,000. The longer bridge adds significant cost to the project (\$281,000).

Approval of an alternative design (Env Wt 904.09) for a 37' clear span bridge will be requested as part of the NHDES permit application. Dubois & King believes that it is "not practicable" to meet the NHDES Stream Crossing requirements due to the significant cost increase of a longer bridge, and because the existing bridge span passes the Q100 flood event with sufficient freeboard. There were no objections to pursue an alternative design.

Rich Roach asked about the accuracy of the Q100 elevation and the full bank width calculation. B. Durfee answered that a NHDES flood control dam is upstream of the bridge and is capable of controlling the Q100.

Lori Sommer requested that the crossing rules be addressed during design. B. Durfee stated that the alternative design would satisfy as many of the rules as practicable for the 38' span bridge.

L. Sommer asked if the temporary bridge construction would have wetland impacts. B. Durfee answered yes, and impacts would be addressed in the NHDES Dredge and Fill permit application.

Melissa Coppola asked if an NHB review has been performed. B. Durfee said no, stating that this will be done during the design phase. M. Coppola urged that the NHB review be done early to identify any potential concerns. B. Durfee committed to having an NHB review completed as the first task during preliminary design.

Carol Henderson stated that the Baker River is a brook trout fishery. The use of cofferdams or other waterway impacts during construction should be avoided during spawning season.

R. Roach stated that the project would be covered under the NH SPGP as long as the State issues the Dredge & Fill permit.

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

### **Granite State Gas Transmission (associated with Newington-Dover, 11238)**

A summary of the project was presented by John Whitcomb, Project Manager for BL Companies. The project consists of the installation of a 10 inch high pressure gas transmission line via Horizontal Directional Drilling (HDD) to the east of the new Little Bay Bridge. The original presentations were referenced and noted as a refresher. This presentation was made to address small additional construction items added at each terminus point of the directional drill. The schedule of the remainder of the gas line is not consistent with the milestone of getting the existing line off of the bridge. The new HDD line will need to be connected to the existing line and put into service before the other relocations and road realignment is completed. This will require connection to the existing gas transmission line near the existing bridge abutments.

The Dover connection is located on the other side of the highway and will require a "jack and bore pipe installation" to install the transmission line connection between the HDD pit and the existing line. The work on this side does not require work within the 100 wetland setback, but does fall within the shoreland 250 foot review area. The addition of the jack and bore will disturb a manmade drainage swale during construction, but will restore it to the original state upon completion. It was also noted that the highway realignment that will take place in the near future will likely remove this drainage swale. No adverse effects are anticipated from this work.

The Newington side connection is designed as a simple trench excavation of about 60 feet as the gas transmission line is located on the HDD side of the high on this end. This work will require additional excavation within the 100 foot review area, but all areas planned for excavation are already disturbed and

either paved or part of the highway grading and drainage. This work is also located within the shoreland limits of 250 feet. No adverse effects are anticipated from this work.

It was noted in the original presentation that a "PIG" launch structure might be planned for this area when the relocation was designed. The current plans have revised the launch area outside of this area. It is not likely that the PIG launch area will be located here.

The work, as currently designed, will not disturb over 1 acre of land and thus will not require a NPDES permit. If changes in design between permitting and construction are necessary and additional area will be disturbed the applicant understands that a NPDES permit may be required.

The applicant was asked about schedule. The current anticipation is to start construction in late 2012 with completion within the winter of 2013 using a construction schedule of 4 months.

In terms of disturbance the applicant noted that the main disturbance will consist of the excavated drill pits that will be required on each landing and connection at each end to the existing pipe line. The need for utility easements will be researched as the utilities are not located within highway right of way. They are located solely on State property. The applicant is coordinating these items with the State's Attorney General.

*This project was previously reviewed on the following dates: [8/17/2011](#)*

### **Maidstone, VT, STP 0271(20)**

Shelley Gustafson, consultant for the Vermont Agency of Transportation (VTrans), gave an overview of the project. The project consists of the stabilization of an active slide along the west bank of the Connecticut River, which is threatening the stability of VT Route 102 in Maidstone, VT. The slide has gotten worse in recent years due to tree removal along the embankment. Currently, it is eroded within 20 feet of the road. Because a component of the project involves placing riprap below the low water elevation of the river (i.e., the VT/NH boundary line), a portion of this project also takes place in Northumberland, NH.

Resources in the vicinity of the project area include a Vermont-designated Class Two wetland to the north of the slide and a small tributary to the Connecticut River to the south. The wetland consists of an oxbow plus adjacent floodplain forested areas. The project area would be accessed via an existing woods road that reaches the site along the toe of the Route 102 embankment from the north. Wetland impacts resulting from the temporary upgrade to this road are approximately 0.41 acre. These impacts would occur within the drier-end floodplain forest, while a protective distance from the inundated oxbow would be maintained through the duration of the project.

The slide would be stabilized using 36 to 48 inch stone at the base and 24 inch stone higher along the embankment. The slope would be 1.5:1. Due to the steepness, re-vegetation along the slope is not considered a viable stabilization method. Impacts below ordinary high water (OHW) are roughly 0.25 acre, although VTrans is currently looking into extending the project area upstream along the toe of the embankment adjacent to the wetland, and downstream to the tributary based on comments received from Barry Cahoon of the VT River Management Program. This extension would result in additional impacts, although it is estimated that total impacts (wetlands and river) would remain below 1 acre.

Various agencies and stakeholders have been brought into the process to review and provide initial comments on the project including the Army Corps of Engineers, the State of VT Wetlands Section, VT River Management Program, VT Natural Heritage Information Project, NH Department of Environmental Services, the Connecticut River Joint Commissions, and adjacent landowners. Known permits that will

need to be acquired include the VT General Permit and NH Programmatic General Permit (Army Corps), the State of VT Wetland Permit, and the NH Standard Dredge and Fill Permit.

Jamie Sikora asked whether different stabilization techniques had been considered as a component of the project design. Others attending the meeting agreed that the process for ruling out other stabilization methods will be important to demonstrate. Rich Roach suggested incorporation of plantings along a terrace at the base of the slope such that rock and plants would be intermixed within the flood prone area along the river's bank.

S. Gustafson noted that the NH Natural Heritage Bureau had been consulted to determine whether there were species of concern within the project area. Based on an initial phone conversation she had with their office, rare mussels are a potential concern. Earlier during the project planning phase, VTrans had consulted with Mark Ferguson from the VT Natural Heritage Information Project regarding rare mussels and Mr. Ferguson had indicated that they are not located within the segment of river under consideration. Any reports and/or survey information supporting this decision will need to be sent to the NH Fish and Game Department for their review.

Carol Henderson asked if a geomorphic assessment had been done to determine potential downstream effects of the project. Bill Thomas agreed that the NH DES will require information regarding the effects on downstream NH banks and property, including roadways. S. Gustafson stated that their team has been coordinating with river scientists in both VT and NH to look at this question more closely. It was also suggested that additional coordination with Mike Johnson of NOAA regarding Essential Fish Habitat may be prudent.

R. Roach would like more information on any analysis that may have been done to consider the alternative of moving the road in response to the slide. For example, was a cost-benefit analysis done to determine the feasibility of purchasing the properties across the road from the slide and subsequently relocating the roadway vs. keeping the road where it is and stabilizing the slide with riprap? B. Thomas noted that a systematic alternatives analysis will be required by NH DES for their permitting process beginning with ruling out the alternative of adjusting the road location, and continuing with the evaluation of various alternatives of the slide stabilization process itself including bioengineering techniques.

The topic of property ownership was also discussed. S. Gustafson noted that she received a copy of the 1936 U.S. Supreme Court decision on the VT/NH state boundary from NH DES, and that within the vicinity of the project area, the low water line had been determined to be at 841 feet above sea level. By comparison, the OHW mark along the slide is at elevation 842.5 feet above sea level. Riprap will be placed below 841 feet, so it has been assumed that below this point, the impacts would occur within NH. Both B. Thomas and R. Roach stressed the importance of having reasonable proof of ownership within the project area, and that sign-offs from NH DOT and abutters will be necessary.

Lori Sommer asked if mitigation would be presented as a component of this project. S. Gustafson noted that the VT agencies have indicated that this would not be required. B. Thomas noted that for the Standard Dredge and Fill Permit, mitigation would not be required due to an exemption for infrastructure protection.

Kevin Nyhan suggested that once the plans have been revised, and once the project is further into the permitting process with NH DES including preparation of the alternatives analysis, that it may be useful to present again at a future NH DOT Natural Resource Agency Coordination Meeting.

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

**Carroll, 21431, X-A002(196)**

Jon Hebert provided an overview of the project. The project consists of the reconstruction and expansion of the existing Mount Washington Hotel Scenic Overlook on the north side of US Route 302, as well as the construction of a new scenic overlook on the south side of US Route 302 opposite the existing overlook. The project is funded through the Scenic Byways Program.

The existing overlook was constructed in 1985 and will be upgraded to make it larger and to provide safer access. The new overlook will be cut into the hillside on the south side of US Route 302 between the roadway and the Mountain Division RR (used by the Conway Scenic Railroad). The Ammonoosuc River is located on the north side of the existing overlook. The new overlook will require retaining walls and stone riprap on slopes of 1.5:1 to minimize impacts to the railroad corridor.

There are three existing drainage pipes in the project area. A 42" cmp is located at the western end of the proposed overlook. This pipe carries clean water from the mountainside and does not collect any roadway runoff. This pipe will not be changed as part of the project. A 30" cmp is located just to the east of the project area and collects some roadway runoff but will not be changed as part of the project. A 15" rcp is located near the middle of the proposed overlook and carries water from catch basins and a wide ditch line. Drainage from the new overlook will be contained and directed into a detention or retention basin for treatment before it enters the existing 15" pipe. The new overlook will be paved. Porous pavement was considered as a means to reduce runoff, but was rejected because it lacks the durability needed for the large number of buses expected. Gravel was also considered as a surfacing material, but was also rejected because it would require increased maintenance. Runoff from the existing overlook will continue to drain as sheet flow. A gravel infiltration trench along the rear of the overlook could be considered to provide some treatment.

A wetland delineation has not yet been completed but some wetland impacts are expected.

Rich Roach commented that having two overlooks could be confusing to the public and suggested a better option may be to remove the existing overlook and construct the new overlook as proposed, which would also move the overlook out of the floodplain. J. Hebert said that the proposed design is expected to improve traffic flow and safety. Mike Dugas added that there is definitely demand for two overlooks.

R. Roach indicated that the project should qualify for coverage under the NH PGP as long as the state has no concerns with permitting, and he did not see any need for the project to be presented at a future meeting. He added that the project should be sensitive to views from the Mount Washington Hotel.

Carol Henderson asked if there were any Natural Heritage Bureau records, and Melissa Coppola stated that there were no records in the project area.

J. Hebert stated that the project is scheduled to advertise in the fall of 2012. Subsequent to the meeting, it was realized that the advertising date is actually expected to be March 2013.

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

**Keene Dillant-Hopkins Airport**

Leigh Bartlett opened the discussion with a brief introduction of the safety projects proposed at Keene Dillant-Hopkins Airport. The projects include upgrades to an airport hazard beacon, the installation of new navigational aids called precision approach path indicators (PAPIs) serving Runway 2-20, and the removal

of recently identified vegetative obstructions to Runway 20 approach surfaces. The purpose of the meeting was to discuss potential impacts associated with the obstruction removal efforts. L. Bartlett indicated a site assessment had been conducted and the necessary clearing would be conducted in upland locations on airport property. Stantec does not believe a wetlands permit is required as no work will be proposed within adjacent wetlands. L. Bartlett added that selective trees may be removed from the perimeter of wetlands but stated that this can be done without disturbing wetland soils.

A question was asked whether or not all the trees in the area would be cut. Gregg Cohen stated that due to the uniformity of the vegetation, which consists almost entirely of mature white pines of similar height with very limited understory, and that FAA/NHDOT will provide funding to remove obstructions from a given area only once, all trees would in fact be removed. The question of whether or not the project would also include stump grubbing and grading was also asked. L. Bartlett indicated that the issue was still undetermined. The point was made that coordination with SHPO will be required if soil disturbances resulting from grubbing & grading occur. Rich Roach and Lori Sommer both indicated that not stumping is the more desirable alternative. R. Roach also suggested consideration of planting upland shrubbery within cleared areas.

G. Cohen added that the Airport Director had indicated that local students study the project area as there may be a vernal pool present. G. Cohen stated he did not observe a vernal pool or potential pool during his assessment but did encounter a small spruce swamp receiving stormwater discharge from an adjacent apartment complex. Melissa Coppola commented that the swamp was actually a bog and requested consideration that a vegetated buffer be left around the wetlands. G. Cohen added that penetrations to protected airspace must be removed for safety purposes but tree penetrations adjacent to the wetlands could possibly be topped.

Stantec was also asked if an NHB review had been conducted. G. Cohen replied that the NHB had not yet been consulted but consultation with the Bureau would occur soon.

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

### **Wentworth-Rumney, 16221, X-A001(194)**

Kirk Mudgett provided an overview of the project. The project is located on NH Routes 25 & 118 beginning just west of East Side Road in Wentworth and continuing east 4 miles to 2,500 feet east of NH Route 118 in Rumney. Work will include reclaiming the pavement, guardrail replacement, replacement of underdrain and catch basins, and minor drainage repairs. The pavement reclaim will result in a 7.5" rise in pavement height. Due to this increased pavement height, some impacts to the bank of the Baker River may be necessary where the river is close to the road. However, it is expected that impacts can be substantially reduced by reducing the shoulder width in these areas to allow for more space for slope and guardrail.

Proposed repairs at six pipes will result in wetland impacts. Four drainage pipes that outlet on the bank of the Baker River will be replaced. A drainage pipe that currently carries runoff to the outlet of a 42" culvert will be removed, and a drainage pipe at the outlet of the Hall Brook culvert will be replaced. There will be small areas of temporary impact at each of these locations, as well as some permanent impact for the placement of stone. Dredge & Fill and Shoreland applications will be submitted within the next month.

Lori Sommer asked if stream crossing rules would need to be addressed. Christine Perron replied that stream crossing rules will not apply to the project since the pipes carry runoff only and the project is not replacing any culverts that carry streams.

Rich Roach stated that the project would qualify for coverage under the NH PGP as long as work does not encroach on the river.

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