

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: July 16, 2014

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Christine Perron

Ron Crickard

Jim Kirouac

Chris Carucci

Doug Holmes

Joe Adams

**Federal Highway
Administration**

Jamie Sikora

Army Corps of Engineers

Michael Hicks

EPA

Mark Kern

NHDES

Gino Infascelli

Lori Sommer

NH Fish & Game

Carol Henderson

Normandeau Associates

Ian Broadwater

Jameson Paine

FST, Inc

Deb Duhamel

John Stockton

Dave McNamara

Bedford, X-A001(160), 16156

David McNamara of FST presented an overview of the project. The existing Bowman Brook Culvert is on the NHDOT's red list, and was recently downgraded to critical. The culvert is a 90" corrugated metal pipe that runs under NH Route 114 as well as the Old Bedford Road bridge, which crosses over NH Route 114. Two alternatives were presented, a relocated 23' wide three sided box culvert, sized to meet current stream crossing guidelines, as well as a sliplining option. This option would also shorten the existing culvert to approximately 100 feet in length. Grading and new retaining walls would be necessary to shorten the culvert. This option would slightly increase flood elevations upstream; however, an overflow pipe could be added to maintain these elevations.

Carol Henderson asked if, instead of sliplining, a new, larger box culvert could be placed in the same location as the existing pipe. D. McNamara explained that had been considered, however it was felt that there was too much risk. The existing pipe is set into ledge now, and a new culvert would require additional ledge removal. The ledge would be removed below the footings for the Old Bedford Road bridge piers, and within 2' of them horizontally. In addition, all the work would need to take place under the Old Bedford Road Bridge, which has 16' of clearance. There would be risk to the structural integrity of the existing bridge, as well as to cost and traffic impacts. The angle of the culvert wouldn't allow traffic to be maintained. It would need to be detoured, and due to the construction constraints, it would be very difficult to predict a detour length. The detour would be over local roads and through residential neighborhoods. It is not considered something that would be feasible for an extended period.

C. Henderson asked about the longevity of sliplining. D. McNamara stated they have a life span of approximately 75 years.

Lori Summer asked about upstream conditions. D. McNamara responded that there are 3 similarly sized culverts within about a mile upstream, including one other under NH Route 114.

L. Summer asked how an increase in the floodplain would be handled. D. McNamara said an overflow pipe would be proposed. Based on preliminary sizing, the pipe is expected to be in the range of 36" diameter.

Mike Hicks asked how much smaller the culvert would be after sliplining, and if the culvert would need to be sliplined again in 50 years or so. D. McNamara replied that sliplining would reduce the pipe size by approximately 10%. John Stockton from FST noted that would be within the expected life span of the bridge over NH Route 114. The culvert would likely be addressed with a reconstruction of the bridge, when the culvert and bridge could be designed and built together.

Mark Kern asked about costs. Conceptual estimates have the sliplining option at just over \$1 million while the new 23' wide culvert relocation would be in the \$3 to 4 million dollar range.

Gino Infascelli asked to see photos. Photos of the upstream culverts were provided and Ian Broadwater from Normandeau provided a description of the wetland types within the project area.

C. Henderson asked if there were potential concerns with woody debris blocking a sliplined culvert. I. Broadwater agreed with this concern and that the culvert should be larger. The corrugations within the existing culvert are filled with cobbles, indicating interruption in sediment transport. There is also a 3-4" perch at the culvert outlet. C. Henderson recommended that the perch be addressed in a sliplining option. It was agreed that this could be addressed.

L. Sommer asked if there was any opportunity for floodplain restoration. I. Broadwater felt there may be some opportunity upstream, but there does not appear to be much flood damage within the area.

D. McNamara discussed the schedule. The project is a priority, and the intent is to move right into the development of a NEPA document. There are also Right of Way questions being worked out that may impact the alternative selection.

Mark Kern asked C. Henderson if the area was important for fisheries. She didn't know. M. Kern noted that the larger culvert was a better option in general for natural resources, but it may not be a practical choice, particularly if there are several other problems in the vicinity. He wasn't sure that the larger culvert would be worth the cost. G. Infascelli noted that the upstream culverts are known problems in the vicinity of the project.

Mike Hicks commented that the 90 degree turn required for a new relocated culvert could present long term maintenance concerns.

Jamie Sikora suggested that other stream crossings in the vicinity of the project could be evaluated in order to support a preferred alternative.

L. Sommer requested that opportunities for enhancements within the watershed be explored.

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