

**BUREAU OF ENVIRONMENT
CONFERENCE REPORT**

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: August 17, 2022

LOCATION OF CONFERENCE: Virtual meeting held via Zoom

ATTENDED BY:

NHDOT

Matt Urban
Andrew O’Sullivan
Jon Evans
Joshua Brown
Mark Hemmerlein
Dan Prehemo

ACOE

Mike Hicks

EPA

Jean Brochi

NHDES

Karl Benedict
Lori Sommer

NHB

Jessica Bouchard

NH Fish & Game

John Magee
Mike Dionne

Federal Highway

Absent

The Nature Conservancy

Absent

**Consultants/ Public
Participants**

Mark Neuroth
Robert H. Durfee, P.E.
Christine Perron
Mike Long
Megan Ooms

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

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Finalize Meeting Minutes

Finalized and approved the July 20, 2022 meeting minutes.

Orford, 41151:

Mark Neuroth (DuBois & King, Inc.) provided an overview of the Archertown Road Bridge over Jacobs Brook in Orford, NH (NHDOT Project #41151, NHDOT Bridge #080/120). Built in 1930, the existing bridge is a paved single lane bridge with a clear span of 46-feet and a curb-to-curb width of 16-feet 4-inches. The bridge was added to the Municipal Red List in 2015 due to several major structural deficiencies and is currently restricted to the lowest allowable weight limit of 3-tons. The bridge consists of a concrete deck on six steel stringers. The existing clear span of 46-feet is adequate to pass the 50-year storm event with 4.6-feet of freeboard and the 100-year storm event with 3.7-feet of freeboard. The existing clear span does not meet the New Hampshire Department of Environmental Services Stream Crossing Bankfull Width Guideline. M. Neuroth presented photos of the existing site conditions.

The recommended replacement alternative is a 48-foot long, 24-foot wide (rail-to-rail) steel stringer with concrete deck. The alternative has been approved by NHDOT and the Town of Orford, NH Selectboard. The proposed alternative would maintain the existing alignments, with new cast-in-place concrete abutments bearing on ledge at the same location as the existing abutments. The estimated construction cost is \$913,000, which is \$289,000 less than the estimated construction cost of a 77-foot steel stringer with concrete deck which meets the Stream Crossing Guidelines. The 77-foot long structure would not significantly improve the hydraulic parameters at the bridge crossing, which are constrained by bedrock ledge and steep slopes. All permanent work would be within the existing right-of-way, with temporary construction easements on abutter's property.

The recommended alternative meets all General Design Criteria (Env-Wt 904.01 and 904.05) for a Tier 3 Stream Crossing with the exception of two criteria. The recommended alternative does not meet the 1.2 times bankfull width plus 2-foot Stream Crossing Guidelines. A Design Exception for the stream crossing (Env-Wt 904.01) will be sought for the bankfull width rule. The alternative also exhibits elevated velocities within the bridge crossing comparable to natural channel velocities upstream and downstream. Due to the heavy presence of bedrock along this span of Jacobs Brook, it is not anticipated that the velocities through the stream crossing will significantly disrupt stream hydraulics and continuity.

A wetlands survey was completed on June 29, 2022. No vegetated wetlands or hydric soils were observed within 100-feet of the bridge. The NH Natural Heritage Bureau database (NHB file number 22-2636) indicated no rare species of concern are known from the project area. No rare species or rare natural communities were observed during the course of the wetlands investigation field work. The site is located within the FEMA floodplain. Temporary impact will occur below ordinary high water elevations.

A request for project review (RPR), including a detailed historical site investigation was submitted to NH DHR. NH DHR considers the historic mill foundation area southeast of the bridge to exhibit high archaeological sensitivity. The mill area shall be flagged off and avoided

to protect the ruins during construction. A Phase 1A/1B Archaeological Study, prepared by Monadnock Archaeological Consulting, LLC, was submitted to NH DHR. Upon review of the 1A/1B Archaeological Study, no further study is recommended by NH DHR.

M. Neuroth presented the current status and schedule of the proposed project. The project is currently in the engineering design and permitting phase. Advertising and bidding is proposed to occur January

Nashua-Merrimack-Bedford, 13761E (Non-Fed):

Christine Perron introduced the project, which proposes widening and associated improvements along the F.E. Everett Turnpike. The overall 13761 project includes widening three segments of the existing 2-lane portions of the F.E. Everett Turnpike in Nashua, Merrimack, and Bedford, totaling 8.1 miles. The overall project consists of adding an additional travel lane in both the northbound and southbound directions to provide congestion relief and improved safety, as well as the rehabilitation or replacement of five bridges. There are currently 5 construction contracts planned to complete the project, with the possibility of additional contracts if there is a need to split the larger Contract C. As was previously discussed at this meeting, each contract will have a separate permit application, but impacts will be considered cumulatively. Contract D was the first to receive a permit and is now under construction. Today's meeting will discuss Contract E, which is scheduled to advertise in February 2023. The permit application will be submitted to NHDES in October 2022.

Contract E, located in Merrimack between Exits 12 and 13, is the northernmost end of the middle segment of the 13761 project. The E contract is 0.9 miles in length, beginning approximately 0.2 miles north of the Bedford Road overpass (Station 1160+00), and continuing north. Work in Contract E will consist of widening to add a northbound and southbound travel lane, widening for traffic control, construction of a noise wall, addressing the Dumpling Brook culvert, and drainage improvements.

The wetland delineation was completed by McFarland Johnson in 2016-2017 and wetland boundaries were confirmed in 2021-2022. Contract E includes small areas of palustrine wetlands and one stream (Dumpling Brook). There are no Priority Resource Areas and the project is outside the Merrimack River designated river corridor. The Dumpling Brook Wildlife Management Area is adjacent to the project area and the project will require either an easement or acquisition to accommodate the proposed stormwater treatment pond. Coordination with NH Fish & Game has been initiated.

Jurisdictional impacts are still being finalized as avoidance and minimization measures are refined. At this time, wetland impacts are expected to be approximately 15,000 sq ft, with four wetlands impacted. Impacts are higher than anticipated in preliminary design due to changes in slope work necessary for traffic control and guardrail.

Dumpling Brook is the only stream crossing in Contract E and is a Tier 2 crossing based on watershed size. The existing pipe is 36" diameter and about 450' in length. Bankfull width is approximately 25 feet. The original intent was to leave the existing pipe in place, extending it 50' to accommodate the widening and realigning the outlet for a total impact of 170 linear feet. The realigned channel would be riprap covered with natural streambed material. MJ is still in the

process of evaluating if the pipe has sufficient capacity based on the current StreamStats flow rate. If it's determined that the pipe is hydraulically undersized, the entire pipe will be replaced with a slightly larger diameter (42 or 48") and the new pipe would be 600' in length and skewed to eliminate the need for realigning the channel.

The proposed wetland and stream impacts will require mitigation. Based on the preliminary impacts of 15,000 sq ft of wetland and 170 linear feet of stream, the in-lieu fee would be \$139,800. No mitigation input has been received and NHDOT's preference is to pay the in-lieu fee. The D contract (13761D), Permit 2021-02109, resulted in 10,785 sq ft of wetland impact that was mitigated via an in-lieu fee (\$61,052).

There are no existing surface water impairments in the vicinity of the project. Within the limits of Contract E, total existing impervious surface area is 9.25 acres. The project will add approximately 3.8 acres of pavement. A proposed wet pond will treat runoff from approximately 9.4 acres of pavement, which equates to approximately 2.5 times the area of additional pavement.

The federally listed northern long-eared bat has the potential to occur in the project area. The project was anticipated to be covered under the 4(d) Rule; however, informal consultation with the USFWS has been initiated in anticipation of the relisting of northern long-eared bat to endangered by the end of this year. An acoustic presence/absence survey was completed in July 2022 and results have not yet been analyzed.

State listed species that occur in or near the project area consist of bird-foot violet, New England cottontail, and wood turtle. McFarland Johnson completed a survey for bird-foot violet in 2021 and 2022. One population was identified in Contract E. Impacts to this population cannot be avoided and coordination with the Natural Heritage Bureau has been initiated.

Karl Benedict noted that avoidance and minimization measures should be described in the application package, along with the coordination carried out with the Natural Heritage Bureau and NH Fish & Game.

Lori Sommer asked if the impact to the Wildlife Management Area would require an amendment to the conservation deed. C. Perron noted that coordination is just getting underway and information on how the property is protected is still unknown. L. Sommer cautioned that impacts would likely require working with the Department of Justice and the process takes time to get through.

John Magee commented that he would follow up at Fish & Game regarding the Wildlife Management Area. He also noted that wild brook trout do occur in Dumpling Brook. The stream is a groundwater fed, cold water stream. Ideally, aquatic organism passage could be accommodated through the stream crossing. He acknowledged that the length of the pipe makes that challenging, although a slope of 1% or less would pass fish despite the length. Mike Long commented that there is 15 feet of cover over the pipe and that, if replaced, trench construction would likely be carried out. The culvert was considered to be in fair condition in 2014; however, NHDOT Turnpikes has asked the project team to take another look at the pipe to assess its current condition. The slope of the pipe is 1% or less.

Mike Hicks asked if there would be any floodplain impacts. C. Perron replied that there are no mapped floodplains within the project area.

Jean Brochi had no comments or questions.

Jessica Bouchard noted that she needed to finish her review of the plant survey summary that was provided by MJ and schedule a meeting to discuss next steps. She expected that the best solution would be to transplant the impacted population.