

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: April 21, 2021

LOCATION OF CONFERENCE: Virtual meeting held via Zoom

ATTENDED BY:

NHDOT

Sarah Large
Andrew O’Sullivan
Matt Urban
Ron Crickard
Mark Hemmerlein
Arin Mills
Tim Boodey
Rebecca Martin
Meli Dube
David Scott
Kirk Mudgett
Bill Saffian
Chelsea Noyes
Ron Kleiner
Marc Laurin
Jennifer Reczek
Margarete Baldwin
Cassandra Burns
Wendy Johnson
Curtis Morrill

Dan Prehemo
Michael Mozer

ACOE

Mike Hicks

EPA

Jeanie Brochi

NHDES

Lori Sommer
Karl Benedict
Liz Pelonzi

NHB

Amy Lamb
Jessica Bouchard

NH Fish & Game

Carol Henderson

**Consultants/ Public
Participants**

Roch LaRochelle
Susan Bemis
Dan Hageman
Josh Weiss
Christine Perron
Stephen Hoffmann
Samuel White
Anna Giraldi
Samuel Cheney
Christian Rainey
Jennifer Riordan
Jenn Mercer
Meg Gordon
Pete Walker
Benjamin Martin
Bob Landry
Pete Walker

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NOTES ON CONFERENCE:**Finalize Meeting Minutes**

Finalized and approved the March 17, 2021 meeting minutes.

Alton, #43075

Arin Mills, NHDOT Senior Environmental Manager, presented the location of the project as bridge 076/277 which carries NH 11A over West Alton Brook in Alton. This is a state funded and state executed project. West Alton Brook flows about 1.5 miles from Gilford to the site, and continues approximately 2 miles from the site where it enters Lake Winnepesaukee at Small Cove in Alton. It flows under NH 11 before entering the lake and is a Tier 3 stream as delineated by streamstats. The bridge was constructed in 1936, with widening over the abutment in 1980's which did not impact the footprint of the original structure. The surrounding landscape is rural/residential with no conservation lands identified adjacent to the project. Photos were shown of the existing conditions of the structure, to include the inlet/outlet and upstream/downstream of the site.

Tim Boodey, NHDOT Bridge Maintenance Senior Engineer, described the project to include replacement of the reinforced concrete deck and curb as well as repair in kind the abutment walls. Work to the substructure will include removal of the existing partial concrete invert along the east abutment, repair in kind the toe wall at the east abutment and repair in kind the footing of the west abutment. Existing rip rap at the wings will be re-stacked and rip rap will be carried through the structure along the stream channel, past the footings, and tie in with the rip rap at the wings along the east abutment. Repair of the toe wall will be in kind and underpinning will address the current undermining of the structure. Photos were shown of the existing conditions within and surrounding the wings of the structure, to include the existing footer, toe wall, partial concrete invert and rip rap. No rip rap will be carried through and along the west abutment within the structure. Tim stated much of the work will be done by hand, with the possible use of a small excavator to move material.

Tim further showed some preliminary impact plans where the work will occur in the stream. He noted no rip rap is anticipated within the structure along the west abutment as no undermining was observed. Work is anticipated to begin in fall of 2021 and last approximately 6 months. He described the basic construction sequence to include installation of sand bag cofferdam and bypass pipe, partial removal of bridge deck, installation of rip rap along abutment and wings and replacement of bridge deck and rail. Half the structure will be worked at a time, allowing water to flow through the bypass pipe while work is underway. Tim mentioned the bypass pipe will be sized for anticipated flows and avoid spring run-off and snow melt. Water will be removed in the work area by pumps to a sediment basin upland of the wetland resources. Staging area will be controlled and delineated throughout work. The site has no evidence or history of flooding. Tim mentioned the existing concrete invert likely contributes to and exasperates the downstream scour hole. No change to the hydraulic opening and will not significantly changed once the work is complete. Rip rap installation will match existing stream bottom and material will be added to cover embedded material.

Arin further described the results of her environmental review to include West Alton Brook as a 2nd order stream with no Shoreland jurisdiction, no designated river, a Tier 3 crossing (1,052 acre drainage area) as determined by StreamStats, no previous permits identified, no FEMA floodplains and no Priority Resource Areas. A Prime wetland was identified about 1/4 mile upstream in Gilford, and not within the project area. West Alton Brook is a predicted warm water stream by NH Fish & Game, with fish survey data resulting in Eastern brook trout downstream of the crossing. No species identified in the Natural Heritage Bureau search (NHB20-2206), no Essential Fish Habitat and no impacts to federally listed Northern long eared bat

or Small whorled pogonia anticipated. Arin showed a map of the NHF&G fish data, documenting Blacknose dace, Eastern Brook trout and landlocked salmon in the 2010 survey.

Karl B asked about the area of cumulative temporary and permanent impacts to channel and bank, and that they be shown on the final impact plan. He also asked that the existing/proposed contours as well as identify the location of existing rip rap be shown on the plans with the application. The by-pass pipe needs to be sized for a 2-year storm event. He further requested evaluation of re-use of the existing streambed material to be used where practicable in the stream simulation. Tim responded that no change to contours is anticipated, he will size the bypass pipe appropriately for the duration of work and will look to re-use streambed material to augment new material where feasible.

Sarah L asked to verify that the project would fall under the Env-Wt 904.09 rules for repair, rehabilitation, and replacement of an existing Tier 3 structure, and Karl agreed. Lorie S agreed the project, as described, is within existing areas that have been impacted before and no mitigation is anticipated. Agrees with Karl that if you can highlight those areas on the plan; showing where the partial invert is and the replacement in kind of the toe wall and footings. Carol H said the trout was likely the result of stocking, and requested work begin in early fall to accommodate fish passage. Carol further requested the use of flat stones within the structure where possible to accommodate wildlife passage. Sarah clarified that the natural flow of water into the structure will likely allow the west side to remain dry and accommodate wildlife passage during low flow. Amy L stated no results of data review and no concerns. Mike H asked the total area of fill and Tim estimated it to be around 200 s.f. Mike said this would likely be a self-verification and no reporting necessary. Arin clarified the cultural review is complete with no concerns and documentation will be included with the permit application. Jeanie B second providing the impact areas and has no additional comments.

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

Lebanon, #29612 (X-A004(200))

Susan Bemis, an Environmental Planner from FHI Studio, introduced the Lebanon I-89 Exit 18/New Hampshire Route 120 project (29612) and the other project team members presenting and answering questions: Dan Hageman, a Senior Environmental Scientist from FHI Studio, and Roch Larochelle, project manager from HDR. She explained the project is in the initial stages and that the purpose of today's meeting is to introduce the project and hear the group's thoughts and insights on environmental or permitting issues that we need to consider moving forward through the project process.

NH Route 120 is a north-south connector between Lebanon and Hanover. It serves as a gateway to both communities. It links to local and regional trips for all travel modes as well as to significant educational and medical facilities in Lebanon and Hanover. There are operational deficiencies at interchange, speed and safety concerns along the NH Route 120 corridor and Exit 18 interchange, and limited multimodal facilities along and across corridor. The primary objectives of the project are to improve safety and mobility for all users along NH Route 120 corridor; reduce traffic congestion during weekday commuter peak periods; improve operations and safety at the Exit 18 / I-89 interchange where there is queuing on the off-ramps; minimize project impacts on natural and cultural environmental resources; and support economic needs of the community. The project is currently in the preliminary alternatives screening process and alternatives haven't been determined yet. Once developed, they may have impacts outside the developed roadway footprint.

Dan Hageman reviewed the key resources and fieldwork completed so far. The team has done initial fieldwork to look at the wetland areas and habitat. The team has not conducted a formal wetland

delineation yet. That will occur once alternatives have been developed. The team also completed the field measurements to support stream crossing assessments for several crossings.

There are some large wetland areas near the interchange on the western portion of the project. They are primarily emergent type wetlands and scrub shrub. As you move north through the corridor, most of the wetlands are scrub shrub and emergent, but there are also some forested wetlands as well. The team started with NWI mapping and City of Lebanon data and revised it based on field observations. There are a lot of wetlands interspersed with roadway and development throughout the project area.

The floodplain areas in the project area are associated with the Mascoma River, which also has a floodway. There is some associated floodplain habitat. There are Priority Resource Areas (PRA) within the Project Area associated with the floodplain wetlands of the Mascoma River, which is a Tier 3 watercourse.

The New Hampshire Fish and Game Wildlife Action Plan mapping shows there is ranked habitat (highest ranked habitat in region) along the Mascoma River in the southeastern portion of the Project Area. The area was observed in the field and it looks like some kind of floodplain rehabilitation or clean-up has occurred. There are interspersed lawn areas and forested areas. It does provide habitat but is not the highest quality habitat. There is also some Wildlife Action Plan mapped supporting landscape area within the Project Area and a large, forested area to the northwest of the Project Area. There has been fragmentation of the habitat within the Project Area due to the roadway and commercial and industrial development along the roadway. Generally, the undeveloped areas are either wetlands or steep slopes. There is a small conifer forest at the very northwest of the Project Area. The City of Lebanon completed a wildlife corridor study that the team reviewed. There are no wildlife corridors identified within the Project Area, but the closest is approximately 0.7 miles north along NH Route 120.

There are eight stream crossings within the Project Area. Four of the crossings are associated with I-89. They were recently reconstructed, so no field measurements were taken at those locations. The team conducted field evaluations and visual inspections of four stream crossings within the Project Area: two Tier 1 crossings and two Tier 3 crossings.

The City of Lebanon GIS data identifies mapped unofficial conservation lands south of I-89 and a privately owned parcel that is deed restricted permanent conservation land just south of Etna Road.

Agency coordination for the project that has occurred to-date includes the NHB DataCheck, which identified two state-listed plant species outside of the Project Area: crested sedge and the Appalachian barren-strawberry as well as one vertebrate species, the wood turtle. The Lebanon Conservation Commission sent comments on the project and they have a representative on the PAC. They requested the project protect wildlife habitat and corridors and existing wetlands. The USFWS IPaC system identified the Northern Long-eared Bat, but no critical habitat within the Project Area. The migratory birds included the Bald Eagle, Bobolink, and Prairie Warbler. The team is also coordinating with the NH Division of Historical Resources and submitted a Request for Project Review Form and have a planned site walk in April.

Project next steps include data collection, reviewing previous corridor studies, finalizing the project Purpose and Need Statement, analyzing public comments, and development of the initial alternatives screening for the project. The second PAC meeting will be next Thursday, followed by additional alternatives development. The team plans to attend a second NRACM in the summer to discuss alternatives development. Additional field work planned for after alternatives are identified will include: wetland delineation, invasive species review, and a visual bat survey.

Karl Benedict, NHDES, commented that the project team should show the limit of the 100-year floodplain on the plan drawings to compare the mapped limits with the wetlands delineation and ground-truth Priority Resource Areas and use them for avoidance and mitigation.

Andy O'Sullivan asked if there would be any work on the four I-89 culverts that weren't assessed. Roch LaRoche responded that the team is in the early stages of alternatives development and will go to the PAC at the end of April to begin defining concepts. It is still early to determine whether there will be any impacts until there are concepts defined. Andy O'Sullivan responded that if work on the I-89 culverts is planned, stream crossing field data will need to be collected, as in 903.04. Karl Benedict replied that some information is required for all stream types in the 900s. Some data collection is required for all stream crossings (903.04). For the Tier 3 crossings, reference 903.05.

Lori Sommer, NHDES, asked when the team will know what level of NEPA documentation is needed. Susan Bemis replied that will be confirmed after initial alternatives are developed. Lori Sommer asked about the project purpose and if NH Route 120 will remain a limited access roadway or whether more driveway access points would be added. Roch LaRoche explained the draft purpose and need statement will be discussed at the PAC in April. NH Route 120 is a controlled access facility that could have more curb cuts in the future due to additional development, but the project team can't predict this, since that is a function of specific development proposals, and not this project. He also noted that the team will meet with the PAC next week to look at a range of alternatives. Lori Sommer noted that she would like to see the project purpose. She also explained that Route 120 is already wide and that additional curb cuts are concerning. There are sensitive resources in the area. Roch LaRoche noted that the Lebanon 29612 project is not proposing adding curb cuts; however, additional development at the local level could occur.

Lori Sommer asked if the Lebanon Conservation Commission is represented on the PAC. Susan Bemis noted that they are represented on the PAC, have attended, and the Commission provided a comment letter. Sarah Large stated that the team should remember that permanent impacts to floodplain wetlands and PRA impacts require mitigation and the team could engage with the Conservation Commission on potential mitigation. Carol Henderson, NHF&G, stated that she supports the Conservation Commission comments on protecting wildlife habitat and corridors and wetlands. She also stated that the team might consider a turtle survey for the impact area. There is a lot of scrub shrub in the area and conservation lands.

Amy Lamb, NHNHBB, noted there are records of crested sedge and Appalachian barren-strawberry documented outside of the Project Area. There are also some documented populations of Appalachian barren-strawberry within the greater Lebanon-Hanover area in floodplain areas along the Mascoma River as well as along roadway embankments, therefore there could be habitat within the Project Area. The strawberry flowers in mid-May and has bright yellow flowers. She suggested the team look for this plant during early season fieldwork. She also requested the team look for crested sedge when delineating wetlands, which would be more identifiable in July. **Note: On May 5, 2021, a follow-up meeting was held to provide additional clarification on potential habitat at the proposed project site, suggested survey areas, and survey timeframes.

Mike Hicks, USACE, asked when the road was originally constructed. Susan Bemis replied that I-89 was constructed around 1967. Mike Hicks asked if the team has an estimate of new impacts to waters of the US (streams / wetlands). Sarah Large responded that the project is still in the early stages, so there aren't estimates yet. Mike Hicks noted that the GP2 Repair + Maintenance permit may be able to be used if impacts are less than three acres. If more, an individual permit would be needed. He also asked the team to keep an eye out for vernal pools during field work. He also noted that floodplain mitigation will probably need to be 1:1 if the project puts fill in the floodplain and the team should look for areas for mitigation.

Jeanie Brochie, USEPA, asked that larger highway projects be given more time on the agenda in the future and noted that it would be helpful to see some general ideas of the analysis and potential impacts of alternatives. Sarah Large replied that those type of discussions will occur as the project progresses and more information is available.

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

Orford, #41390 (X-A004(620))

Stephen Hoffmann introduced the Orford 41390 project involving the replacement of the NH Route 25A Bridge over Baker Pond Brook (Bridge No. 219/112) in Orford, New Hampshire. The project area is located between Upper Baker Pond and Lower Baker Pond, and approximately 1,500 feet east of the 40366 project involving the replacement of the NH Route 25A bridge over Brackett Brook. The project is in the preliminary design phase and the majority of the resource identification has been completed and an alternative analysis has evaluated potential replacement structures. The project is currently scheduled to advertise in February 2025.

The overall goals of the meeting were to introduce the proposed project to the resource agencies, provide an overview of existing resources, present the preliminary alternative analysis and bridge span, and to obtain input and guidance from the resource agencies on the next steps for the project.

Bridge 219/112

Bridge 219/112 consists of a 24' single span (22' clear span) concrete slab structure and was originally constructed in 1929. A roadway/bridge rehabilitation and widening project in 1980 modified the existing bridge. The deck, superstructure, and substructure are all in poor condition (4 out of 9) and the bridge was added to the state Red List in 2016.

The purpose of the project is to address the deterioration of the existing bridge, improve the hydraulic clearance and the geomorphic compatibility of the bridge. The project is needed because the existing bridge is in poor condition and is included on the state Red List; the existing structure is overtopped during flood events; and the existing structure does not accommodate the bankfull width. The bridge is located within a low-lying area between Upper and Lower Baker Pond, within the 100-year floodplain of Baker Pond Brook. The roadway and the bridge are currently overtopped during higher flows. The proposed project will raise the bridge profile out of the 100-year floodplain to minimize risk to the integrity of the structure but will not address flooding issues along segments of NH Route 25A east and west of the bridge.

Baker Pond Brook

Baker Pond Brook is a perennial stream with a 14.8 square mile watershed at the location of Bridge 219/112, making this a Tier 3 stream crossing. A stream assessment was completed in November 2020 and the average bankfull width of the reference reach was determined to be 23.5'. There are expansive floodplain wetlands located adjacent to the bridge and roadway within the project area. A wetland delineation is scheduled to be completed in Spring 2021. Based on the results of the stream assessment and the Rosgen Stream Classification System the channel is a Type C channel. Additional resources in the vicinity of the proposed project include wetlands, including Priority Resource Areas (PRAs) consisting of Floodplain Wetlands Adjacent to Tier 3 or Higher Watercourse, FEMA mapped 100-year floodplain (Zone A), Outstanding Resource Water watershed, conservation and public lands including the White Mountain National Forest and the Appalachian Trail (AT), and the project is located within the range of the federally threatened northern long-eared bat. The AT crosses NH Route 25A and Baker Pond Brook via Bridge

219/112 and there is an unimproved parking/access area located immediately west of the bridge along the shoulder of the road. Continued passage for hikers throughout the duration of the project will have to be considered and coordination with FHWA, the National Park Service, Appalachian Trail Conservancy, and the Forest Service will be conducted.

Design constraints include roadway profile adjustments, ROW impacts, adjacent wetland areas, and the trail access/parking area.

Alternatives

Three preliminary span alternatives were evaluated for the replacement bridge structure based on varying degrees of geomorphic compatibility. Alternatives are:

- 1.) **400' Span:** Fully compliant with NH Stream Crossing Rules
 $[23.5'(\text{Wbf}) \times 17 (\text{Entrenchment Ratio}) = 399.5']$
 - Not feasible at this location due to the size, impacts and cost.
 - Alternative was not considered further.

- 2.) **54' Span:** Alternative design using Rosgen stream channel type entrenchment ratio.
 $[23.5' (\text{Wbf}) \times 2.3 (\text{Rosgen Type C Channel Entrenchment Ratio}) = 54.1']$
 - Span accommodates bankfull width and meets hydraulic requirements.
 - Provides a wildlife shelf on both sides.
 - Larger span increases the roadway profile adjustment which results in increased impacts to wetlands, ROW, and trail parking facilities.

- 3.) **30' Span:** Alternative design based on bankfull width
 $[1.2 \times 23.5' (\text{Wbf}) + 2' = 30']$
 - Accommodates bankfull width and meets hydraulic requirements.
 - Not able to accommodate terrestrial wildlife passage.
 - Minimizes impacts to adjacent resources.

Based on considerations of the three span alternatives listed above, a 40' bridge span with a 36'-5" clear span was identified as the preliminary preferred alternative. The 40' bridge span would be an alternative design. However, the span would provide a 66% increase over the existing clear span, accommodate bankfull width, and provide 3' wide terrestrial wildlife shelves in front of both abutments. The proposed 40' structure also ties in well to the existing grading of the stream banks and surrounding area and balances impacts to adjacent wetland areas and ROW.

Discussion / Agency Comments:

Karl Benedict confirmed that the proposed 40' span would likely be considered an alternative design, but that the bridge structure might be considered self-mitigating based on improvements to wildlife passage and geomorphic compatibility. However, compensatory mitigation may still be required for the impacts to PRAs. Mr. Benedict also asked if a Shoreland Permit would be required. Mr. Hoffmann confirmed that the stream is 3rd order stream and therefore, is not subject to the SWQPA. Lori Sommer confirmed that the project would have to closely consider PRA impacts to determine mitigation requirements.

Mr. Hoffmann asked for clarification on the limits of PRA. Mr. Benedict explained that the limits of Floodplain Wetlands Adjacent to Tier 3 or Higher Watercourses PRAs are limited to the extent of the FEMA mapped floodplain. Melilotus Dube asked whether impacts to a PRA triggered mitigation for the

entire project or only PRA impacts. Mr. Benedict confirmed that impacts would only be required for the PRA impacts. Bill Saffian pointed out that floodplain elevations are not available in the project area and asked how we determine the limits of the floodplain without elevations. Mr. Benedict explained that the limits of FEMA mapped floodplain defined the boundary of the PRA and recognized the limitations of FEMA maps but that this approach was acceptable for the purpose of identifying the limits of PRAs. Sarah Large added that the best available data on floodplain limits should be used, such as FEMA floodplain elevations where available. Mr. Benedict requested that FEMA floodplain boundaries be overlaid onto wetland impact plans showing the delineated wetland boundaries.

Carol Henderson was pleased to see the wildlife accommodations and suggested that the flattened area along the abutments did not have to be concrete but could use stone or other material along the wildlife shelves to facilitate wildlife passage. Ms. Henderson also asked whether the proposed structure would raise the bridge structure to allow passage of recreational boaters (i.e., canoes and kayaks). Sam White confirmed that the new bridge would raise the profile approximately 4'-5'. Mr. Saffian mentioned that the steel girders on the proposed bridge structure might reduce the clearance. Christine Perron noted that she grew up in the area and to her knowledge this area is not a canoeing and kayaking spot due to the dense vegetation downstream.

There were no comments from the NHB who had to leave the meeting early. Ms. Henderson confirmed that there were no NHB records identified in the vicinity of the proposed project.

Mike Hicks said to be sure to coordinate with the Coast Guard and Section 106 historic resources.

Jean Brochi stated that she would be interested to learn what the wetland impacts would be and the results of public involvement at the next resource agency meeting.

Mr. Benedict asked about the increase in roadway profile as it relates to impacts to nearby wetlands and PRAs. Mr. Hoffmann explained that this was taken into consideration and is part of what drove the decision to select the 40' span over a larger alternative. The increase in roadway profile is required to get the bridge structure out of the 100-year floodplain. The 40' span seems to provide a good compromise between accommodating the profile rise, minimizing impacts to adjacent resources, and tying in well to the existing grading of the site.

Chelsea Noyes asked if there were any specific concerns or guidance regarding the AT. Ms. Perron noted that we are aware that the agencies present do not have jurisdiction over this resource and confirmed that follow up coordination would be completed with the respective agencies. Mr. Benedict added that from a NHDES perspective, addressing ownership and abutter permission would be the only requirement for wetland permitting.

Sarah Large added that it would be helpful to discuss the trail access issues, water diversion, and dewatering when the project is presented at the next resource agency meeting.

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

Richmond, #29055 (Whipple Hill Road over Roaring Brook)

Anna Giraldi, Quantum Construction Consultants, LLC, (QCC) presented the project via teleconference, which proposes to replace the Whipple Hill Road bridge over Roaring Brook. The existing bridge is a 41-foot three-span, steel girder and metal decking bridge with concrete abutments. The purpose of this project

is to correct structural and hydraulic deficiencies of the existing bridge crossing and provide safe, year-round, vehicular passage on Whipple Hill Road over Roaring Brook. This project is being funded through the State-Bridge-Aid (SBA) program, and construction is authorized for fiscal year 2022. Anna explained that the bridge has been rated in poor condition and is structurally deficient with a sufficiency rating of 43.8%. The bridge is currently on the NHDOT Municipal Redlist and is in need of replacement. Multiple bridge spans were analyzed for the replacement structure; however, the proposed span was chosen because it meets the New Hampshire Department of Environmental Services (NHDES) Stream Crossing Rules and has the least impacts to the surrounding environment. Anna shared locus & tax maps to provide an overview of the project location, and shared site photographs depicting existing conditions. While viewing the site photographs, it was noted that the existing low point of the roadway occurs on the bridge crossing, however the proposed profile moves the low point away from the bridge. Roaring Brook contains a lot of boulders and ledge close to the surface, therefore the proposed substructure will be cantilevered bridge abutments founded on ledge, estimated to be located within 2-3 feet of the lowest point of the stream channel. The existing 39-foot hydraulic span will be increased to a 49-foot hydraulic span for the proposed bridge.

Anna explained that QCC has coordinated with the Natural Heritage Bureau (NHB) and U.S. Fish & Wildlife Service (USFWS) relative to the potential presence of endangered and/or exemplary wildlife species on site. The NHB report noted that while rare wildlife/natural communities were present in the project vicinity, they will not be impacted by the proposed project. USFWS noted that the Northern Long-Eared Bat may be present in the project vicinity, however the project will cause no adverse impacts to the species and has issued a letter of consistency.

Sarah Large (NHDOT Bureau of Environment) asked Anna if a hydraulics analysis has been performed for the proposed project, as Roaring Brook is a Tier 3 stream crossing. Anna explained that hydraulics analyses have been performed for both existing and proposed hydraulic conditions. Anna shared a PDF of the NHDES Stream Crossing Worksheet that was completed by the project's Certified Wetland Scientist (CWS) and QCC which identifies that the average bank full width in the vicinity of the crossing is 33 feet. The stream has a B3c Rosgen classification, which means the stream channel is moderately entrenched with an entrenchment ratio of 1.4. Anna showed that the proposed design reduces the Q_{100} elevation from 670.0 to 669.8, and reduces Q_{100} peak velocities from 7.4 FPS to 5.3 FPS.

Concluding the presentation, Anna shared the project plans, beginning with a review of the proposed bridge profile. The proposed bridge passes the Q_{50} with approximately 1.3 feet of freeboard and clears the Q_{100} . Anna showed how the proposed plans denote no impacts to the stream channel, except for the removal of the existing piers. A combination of riprap and soft vegetative protection will be utilized for bank stabilization, as shown on the project plans.

Karl Benedict (NHDES) explained that if QCC was proposing to replace areas of old riprap with new riprap, then those areas could be called out on the plans, and the project would most likely not trigger mitigation. Anna replied that there is no existing riprap, all riprap shown on the plans is new and is only located on the banks, and not within the brook. Sarah added that the riprap shown will be a point of discussion later on in the meeting, and that she would circle back around to Karl and Lori Sommers (NHDES) for further questions relative to mitigation.

Other items reviewed on the project plans included the temporary onsite detour road/bridge and the wetlands impact plan, including all permanent and temporary impacts associated with the proposed project. Sarah asked if the proposed temporary bridge would be constructed within a delineated wetland. The proposed temporary bridge spans a designated wetland area, but all impacts to the wetland will be

temporary in nature. Anna explained geotextile will be placed underneath the temporary roadway within the delineated wetland for avoidance & minimization.

Karl Benedict stated that after a brief review of the project plans, it appeared that the proposed bridge span meets the NHDES Stream Crossing Rules. Any modifications to the stream banks must be done in accordance with the Env-Wt. 514 Wetland Administrative Rules. Karl requested that QCC check specific grades along the streambank to ensure aquatic organism passage and bioengineering requirements are met. Anna explained that Armormax or a similar high performance turf matting material will be used as erosion control above the 2-year flood to minimize the hardscape of riprap. Riprap will be used underneath the bridge, as no vegetation will grow there and streambed material will be intermingled in the riprap. Due to the site being located within an area marked as high priority habitat by New Hampshire Fish & Game (NHF&G), Karl stated that he'd like QCC to elaborate more on the proposed wildlife shelf within the stream channel. Anna explained that QCC is proposing a 2-foot-wide shelf consisting of Class III riprap overlain with 1-foot of natural streambed material and intermingled into the riprap. Karl replied that the streambed material needs to be specified, and that temporary stream diversion needs to be considered. He then asked to see the wetland impact plan again, stating that QCC should note the total LF of permanent and temporary streambank impacts in addition to the areas displayed on the plan in SF. Anna shared the permanent and temporary impacts table which summarizes wetlands impacts in terms of length (LF) and area (SF).

Carol Henderson (NH Fish & Game) asked if a superstructure alternative has been determined. Anna explained that the project is currently in the engineering study phase, and several different alternatives are still being analyzed. QCC is currently awaiting cost estimates for several of the superstructure alternatives, and will make a decision once final project costs for each alternative have been determined. Carol replied that she is concerned some of the superstructure alternatives won't provide enough clearance under the bridge girders to accommodate the wildlife shelf. Anna replied that all superstructure alternatives considered will pass the Q_{50} with at least one foot of freeboard, and also pass the Q_{100} as required by the NHDOT which means the proposed low chord is more than four to five feet above the proposed wildlife shelf.

Carol Henderson would like to have a continuing discussion meeting during a later project phase to review the wildlife shelf for compliance.

Lori Sommer (NHDES) reiterated that the proposed bridge meets the NHDES Stream Crossing Rules. Lori said that she needs to see planting along the streambanks following stabilization. Post-construction photographs of the wildlife shelf will need to be taken to ensure compliance and provide evidence the shelf is in acceptable condition.

Jessica Bouchard (formerly the NHDES Regional Permit Reviewer for southwestern NH) has taken a new position, so a new NHDES Reviewer will be assigned to the project. Lori also noted that she'd like to review the project with the other Natural Resource Agency members at a later date.

Michael Hicks of the Army Corp. of Engineers (ACOE) had no comments relative to the project presentation.

Jeanie Brochi of the Environmental Protection Agency (EPA) had no comments relative to the project presentation.

Ron Kleiner (NHDOT) is the NHDOT project manager for the Whipple Hill Road Bridge Replacement project and did not pose any questions or comments.

A continuing discussion for the Whipple Hill Road over Roaring Brook project will be scheduled during the preliminary design phase of the project.

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

Richmond, #29056 (Tully Brook Road over Tully Brook)

Anna Giraldi, Quantum Construction Consultants, LLC, (QCC) presented the project via teleconference, which proposes to replace the Tully Brook Road bridge over Tully Brook. The existing bridge was constructed in 1990 and is a 56-foot corrugated metal pipe arch, measuring 13'-10" wide by 8'-7" tall. The purpose of this project is to correct structural and hydraulic deficiencies of the existing bridge crossing and provide safe, year-round, vehicular passage on Tully Brook Road over Tully Brook. This project is being funded through the State-Bridge-Aid (SBA) program, and construction is authorized for fiscal year 2023. Anna explained that the bridge has been rated in poor condition and is structurally deficient with a sufficiency rating of 60%. The bridge is currently on the NHDOT Municipal Redlist and is in need of replacement.

The Tully Brook Road over Tully Brook crossing currently experiences high water velocities that have caused scour damage to the stream. Multiple bridge spans were analyzed for the replacement structure; however, the proposed span was chosen because it meets the New Hampshire Department of Environmental Services (NHDES) Stream Crossing Rules and has the least impacts to the surrounding environment. Anna shared locus & tax maps to provide an overview of the project location, and also shared site photographs depicting existing conditions, including the structural deficiencies of the culvert and scour occurring in the stream. She pointed out that Tully Brook Road is a dead-end road, and the bridge crossing needs to be maintained to provide access. Due to the presence of large boulders within Tully Brook, integral abutments on piles are not feasible as a substructure alternative.

Anna explained that QCC has coordinated with the Natural Heritage Bureau (NHB) and U.S. Fish & Wildlife Service (USFWS) relative to the potential presence of endangered and/or exemplary species on site. The NHB report noted that while rare wildlife/natural communities were present in the project vicinity, they will not be impacted by the proposed project. USFWS noted that the Northern Long-Eared Bat may be present in the project vicinity, however the project will cause no adverse impacts to the species and USFWS issued a letter of consistency.

Anna explained that hydraulics analyses have been performed for both existing and proposed hydraulic conditions. She then proceeded to share a PDF of the NHDES Stream Crossing Worksheet that was completed by the project's Certified Wetland Scientist (CWS) and QCC which identifies that the average bankfull width in the vicinity of the crossing is 28 feet.

The Rosgen Classification for Tully Brook is B4, which means it is moderately entrenched with an entrenchment ratio of 1.4. Anna showed that the proposed design reduces the Q_{100} elevation from 1039.8 to 1037.8, and reduces Q_{100} peak velocities from 14.8 FPS to 8.2 FPS. A new hydraulic span of 39 feet is being proposed, and the bridge's total span is 46 feet along the skew.

Sarah Large (NHDOT) inquired if the hydraulic analysis results demonstrate that the bridge passes the Q_{100} . Anna explained that the proposed bridge passes the Q_{50} with approximately two feet of freeboard which is more than the required one foot by the NHDOT, and also passes the Q_{100} with approximately one foot of freeboard.

Anna reviewed the proposed bridge profile, explaining how there will be some slight changes to the existing roadway alignment for drainage. Anna discussed the proposed wildlife shelf in the stream

channel, which will consist of Class III riprap, overlaid with one foot of natural streambed material. It was noted that the corrugated metal arch culvert is not within a delineated wetland. Vegetative stabilization will be utilized in areas above the 2-year flood to provide a soft stabilization approach.

The proposed temporary on-site detour road/bridge was reviewed. The proposed temporary bridge spans a designated wetland area, but all impacts to the wetland will be temporary in nature. Anna explained geotextile will be placed underneath the temporary roadway within the delineated wetland as an avoidance & minimization feature. Karl Benedict (NHDES) made a comment that a method for water diversion needs to be established for both the bridge and detour road stream crossings.

Anna reviewed the proposed temporary and permanent wetlands impacts associated with the project. **Karl Benedict** stated that after a brief review of the project plans, the proposed bridge span meets the NHDES Stream Crossing Rules. He said a construction sequence needs to be developed for both the bridge work and the detour road. Appropriate erosion & sediment control with avoidance & minimization measures needs to be in place prior to the start of construction. Tully Brook is designated on the US Fish & Wildlife Service (USFWS) wildlife action plan as highest-ranked habitat, therefore aquatic organism passage is an important design consideration. Anna reiterated that the roadway profile shows a 2-foot wide wildlife shelf for aquatic organism passage. Karl stated that the proposed detour road needs to avoid crossing the existing wetland area to the greatest extent possible. Similar avoidance & minimization features required for Tully Brook Road will be required for the detour road. Env-Wt 904.09 needs to be consulted and addressed as part of the NHDES Standard Dredge & Fill application.

Sarah Large requested input from Lori Sommers (NHDES) relative to compensatory mitigation that may be required for the project. Lori stated she does not believe mitigation will be required for this project, so long as native vegetation is planted along the streambanks following stabilization. She reiterated that the proposed bridge must meet the NHDES Stream Crossing Rules. NHDES would like to see a post-construction report containing photographs of the wildlife shelf following completion of construction.

Carol Henderson (NH Fish & Game) appreciated that the project proposes replacement of an existing pipe arch culvert with a new bridge. She also commended the design for including a wildlife shelf within the stream channel to allow for organism passage.

Michael Hicks of the Army Corp. of Engineers (ACOE) had no comments relative to the project presentation.

Jeanie Brochi of the Environmental Protection Agency (EPA) had no comments relative to the project presentation.

Ron Kleiner (NHDOT) is the NHDOT project manager for the Tully Brook Road Bridge Replacement project, and did not pose any questions or comments relative to the project.

Sarah Large asked if the existing Tully Brook Road over Tully Brook structure was open bottom, to which Anna replied that it isn't. Sarah said that NHDOT supports the idea of replacing a culvert with a new bridge, and they look forward to seeing how the project develops as things move forward.

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

Henniker-Hopkinton #440633 (X-A004(443))

Jenn Riordan (GM2) gave an overview of the project, which involves improvements at the US Route 202/NH Route 9 and NH Route 127 and Old Concord Road intersection. The project is located on the border between the towns of Henniker and Hopkinton. The Contoocook River is located to the east. No work on the US Route 202/NH Route 9 bridge over the Contoocook is proposed. The project area is mostly forested, with mowed areas within the NHDOT right-of-way. Dunkin Donuts is located at the intersection. Keyser Pond is to the southwest. Keyser Pond Campground is located off Old Concord Road between the pond and the intersection.

The purpose of the project is to improve operation and safety at the intersection. A Public Information Meeting was held on March 25, 2021. Development of alternatives and project design is ongoing. A public hearing is not anticipated. Final design is scheduled for 2023-2024 with construction scheduled for 2025.

Several alternatives are currently being evaluated, including the No Build alternative, installation of a traffic signal, construction of a roundabout, or grade separation options. The traffic signal installation alternative would have the least amount of environmental impact of the build alternatives. The grade separation alternative would have the largest footprint and the most environmental impact. It would likely require property acquisitions and would also have the highest cost.

Environmental resources were then discussed. The Contoocook River, located east of the project limits, is a NH Designated River. No impacts to the river or banks are anticipated. The Local River Advisory Committee was contacted and they provided feedback and recommendations for the project.

Several wetlands and a small stream are located in the project area. A small vernal pool is located north of the intersection, adjacent to NH Route 127. Two stream crossings are located within the project limits:

- Unnamed stream under US Route 202/NH Route 9 – Tier 2
- Unnamed stream under Old Concord Road – Tier 2

Based on watershed size (320 acres according to the NHDES Wetlands Permit Planning Tool), these are Tier 2 crossings. The Old Concord Road crossing is within ¼ mile of the Contoocook River, which would elevate it to a Tier 3 crossing, but since it is not shown on the national hydrography dataset on GRANIT, then it is assumed to be Tier 2.

This stream appears to be perennial but is very small. It was dry during fall 2020 but this was during drought conditions. The segment of the stream located between US Route 202/NH Route 9 and Old Concord Road (near Dunkin Donuts) is lower in value since it is regularly mowed and surrounded by development. The segments of the stream to the north and south are more natural and higher quality.

Federally-listed species that may occur within the project area include Northern long-eared bat. State-listed species include Northern black racer and wood turtle. NH Fish and Game was contacted and they provided several recommendations for the project:

- Use wildlife friendly erosion control matting
- Avoid placing catch basins with sumps in grass areas
- Open drainage is recommended
- Continue coordination during project design

There are no impaired waters within one mile of the project. Alteration of Terrain requirements will need to be met and stormwater treatment BMP locations will need to be identified. A Zone A floodplain is located approximately 500 feet east of the intersection.

Conservation land surrounds much of the project area. The Contoocook State Forest is located on three sides of the intersection. DNCR recently transferred ownership to the Town of Hopkinton. The ACOE Hopkinton-Everett Flood Control Reservoir is located further to the east, along the Contoocook River. GM2 reached out to the ACOE and no concerns were raised at this point. The map in the presentation shows the ACOE conservation land crossing over US Route 202/NH Route 9. This conservation land is not located within NHDOT's right-of-way and it appears that the map should have depicted it further east along the Contoocook River, under the US Route 202/NH Route 9 bridge.

A Phase IA archaeological survey was completed last fall and several archaeologically sensitive areas were identified. A Phase IB survey is currently being completed. No historic resource inventories are anticipated to be necessary. The former Boston and Maine Railroad crosses under the US Route 202/NH Route 9 bridge over the Contoocook River, but no impacts are anticipated. The railroad bed is no longer active and is currently used as a snowmobile trail. Keyser Pond Campground is more than 50 years old and may require further coordination with DHR if impacted.

The meeting was then opened for questions and comments.

Jennifer Reczek (NHDOT):

- NHDOT is most focused on the two moderate impact alternatives (signal installation and roundabout). The grade separation alternative is being reviewed conceptually but is not anticipated to be carried forward.

Karl Benedict (DES):

- Will all work be within the NHDOT right-of-way? Jennifer Reczek responded that the work will probably be within the right-of-way since it is very wide near the intersection.
- Recommended providing the impacts associated with the various alternatives at a later Natural Resource meeting or with the wetland permit application. Providing a matrix with the various resource impacts for each alternative was discussed.

Lori Sommer (DES):

- Recommended using the ACOE vernal pool characterization form.
- Impacts and mitigation may need to be discussed at a future meeting.

Sarah Large (BOE):

- Avoid and minimize impacts to vernal pool.
- The project doesn't appear to include any Priority Resource Areas (PRAs). Any impact to PRAs would require mitigation.
- The stream crossing Tier classifications were discussed further. Streams within a Designated River corridor are classified as Tier 3; however, Jenn Riordan mentioned a section of the Wetland Rules that exempts streams not shown on the national hydrography dataset found on GRANIT. Jenn said that she would provide the specific Env-Wt reference to Sarah and Karl. Karl stated that he will also review the rules to determine the stream's classification.

Carol Henderson (Fish and Game):

- Same concerns as others involving the vernal pool. No additional comments.

Amy Lamb, Jessica Bouchard (NHNHB)

- No comments.

Mike Hicks (ACOE)

- No comments.

Marc Laurin (BOE)

- No comments.

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

Derry-Londonderry, #13065A (IM-0931(201))

The following is a summary of the discussions that occurred during the Derry-Londonderry 13065, IM-0931(201), I-93 Exit 4A Alternative Technical Concepts (ATCs) Evaluations Natural Resource Agency Coordination Meeting.

The intent of the meeting was to continue consultation and present two of the I-93 Exit 4A ATCs, including potential design modifications related to modifying the layout of Exit 4A to a Diverging Diamond Interchange (DDI), and to shifting the rail trail crossing to a location adjacent to Shields Brook, combined with Shields Brook bridge, rather than providing a connector tunnel under Folsom Road as identified in the 2020 Final Environmental Impact Statement (FEIS).

VHB provided a status update and explained that the project approach is now design bid build. The project will be designed and constructed in three phases, contracts 13065A, B & C. The project will include a review of the DDI ATC and the rail trail crossing at Shields Brook ATC to determine if one, both or no options will be incorporated into 13065A and 13065B final designs respectively. The 13065A project is planned to be advertised on March 29, 2022 and the 13065B project is planned to be advertised on October 31, 2023.

VHB provided an overview of the three contract segments; the contract segments are preliminary and may change as part of final design to increase construction efficiency. VHB also provided a general discussion of the DDI ATC and rail trail ATC. VHB and the Department are currently considering whether to revise the design of these two project elements. Possible resource impacts and regulatory reviews are a critical consideration that will help to determine whether either design change moves forward.

Diverging Diamond Interchange Concept at Exit 4A

The DDI is a new concept in New Hampshire but is used throughout the United States. The layout assessed in the 2020 FEIS was a traditional diamond interchange. The DDI would reconfigure the interchange and result in several benefits to the project design. To analyze and compare changes between impacts of the traditional diamond interchange and the DDI ATC, the project team will overlay the two limits of disturbance to ensure that there would not be a substantial change in impacts. VHB will complete a review of the DDI to assess any implications of stormwater design. No change in impacts as a result of the DDI are anticipated to Wetland 14 (Trolley Car Lane stream).

Rail Trail Under Shields Brook Concept

The FEIS layout included a box culvert/tunnel to carry the rail trail under Folsom Road. The Rail Trail and Shields Brook ATC considers a realignment to avoid constructing a box culvert/tunnel, which would provide benefits to the project. The roadway would follow the existing vertical geometry more closely, the roadway footprint would be smaller, construction costs would be lower, and the Town's lifecycle maintenance costs would be lower. The Rail Trail and Shields Brook ATC would have the same start and end points as the previous box culvert/tunnel design, which should help to minimize the overall impact on the Manchester and Lawrence Railroad (M&LRR) corridor. There would be no new footprint expansion, but the water quality treatment basin would need to be reconfigured. This design would provide enhanced user experience – no tunnel, natural lighting, more open, meandering trail with resting areas (i.e., benches), and adjacent to Shields Brook. The Rail Trail and Shields Brook ATC would likely not change wetland impacts relative to the approved permitting plans. The Rail Trail and Shields Brook ATC takes advantage of the increased bridge span.

Sarah Large (NHDOT) paused the presentation and opened the floor to questions from Michael Hicks (USACE), who had to leave the meeting early.

Michael Hicks (USACE) advised the project team to keep the impact parameters of the current permit to avoid a new public notice. M. Hicks questioned whether the impacts would increase or remain the same. Pete Walker (VHB) explained that VHB anticipates that the impacts would remain the same. This will need to be verified. The project team is looking to reduce impacts where possible. The key issue is how the modification would affect the NHDES stream crossing rules.

M. Hicks asked if the ATC would affect mitigation. P. Walker responded that the team does not anticipate the need to revise the mitigation plan; the project team would try to keep the ATC within the FEIS footprint.

M. Hicks also asked about coordination status with FHWA, USACE, and NHDHR. Did NHDHR have concerns? P. Walker responded that the project team attended a Cultural Resources Agency Meeting on April 8, 2021. The team is working on ways to address the concerns discussed at that meeting, which related to the proposed shift of the Rail Trail and Shields Brook ATC alignment further away from the M&L RR corridor. M. Hicks noted that Section 106 would be critical and advised that the team not stray too far in design from what was included in the Record of Decision [and Memorandum of Agreement]. FHWA should be included in this coordination.

P. Walker responded that the intent of this effort is to identify red flags, or agency concerns, to make an informed “go, or no-go” decision for the Rail Trail and Shields Brook ATC in May 2021 – sooner for the DDI ATC. If advanced, the Rail Trail and Shields Brook ATC would become part of Contract B, with an advertisement date anticipated in October 2023. If the ATCs are advanced, the project team would conduct more detailed verification that impacts have not changed. VHB has not recalculated impacts or reverified changes.

M. Hicks did not have any safety concerns and expects no issues with safety criteria. P. Walker and B. Martin confirmed that the recreational path would comply with the applicable AASHTO standards and that the design would provide enhanced user experience – no tunnel, natural lighting, more open, meandering trail with resting areas (i.e., benches), and adjacent to Shields Brook.

S. Large asked the team to continue with the presentation.

VHB continued the presentation on Shields Brook. A thorough stream geomorphic assessment was done during NEPA and permitting. Shields Brook was determined to be a Rosgen C4 channel, with a bankfull width of 23.5 ft and an entrenchment ratio of 3.1. The stream is currently conveyed through a 6-ft corrugated metal pipe. The project proposes to replace this undersized crossing with a new 52-ft bridge (clear span).

The ATC proposes to take advantage of this additional crossing width; by expanding the proposed 2-foot wide shelf included in the Type, Span and Location (TS&L) Study to a 10-foot wide shelf (potentially wider), to accommodate the proposed Rail Trail. The shelf will likely be above the 100-year flood elevation. A key item to note is that even with the shelf expansion, the design team believes that the bridge would still accommodate a 23.5-foot bank full width, and a minimum entrenchment ratio of 2.2. The design includes the necessary space to accommodate a 10-foot wide shelf; no adjustments to the bridge span would be needed. The presentation included the proposed span in plan view (52 feet without skew); in the presentation, the red line showed the edge of the Rail Trail. The plan view demonstrates that the ATC would retain the 52 foot clear span and could maintain the 23.5 foot bank full width. VHB will review bed, bank and wetland impacts, and attempt to stay within the limits previously permitted. P. Walker asked if the Rail Trail and Shields Brook ATC is determined to fall short of any NHDES stream rules, would NHDES consider alternative design to allow it to move forward?

S. Large led a role call format to accept comments.

No comments from Wendy Johnson (NHDOT), Dan Prehemo (NHDOT), or Marc Laurin (NHDOT).

Karl Benedict (NHDES) commented that the presentation was well prepared and that the team addressed many of his questions. K. Benedict requested confirmation of the impact changes and explained that the ROD is referenced in the current permit as a finding. Regarding bank stabilization, the Rail Trail and Shields Brook ATC appears to meet the stream crossing rules, but that NHDES would consider reviewing an alternative design report if needed. K. Benedict asked about the timing of the three contracts [13065A, B & C] and confirmed the duration of the existing permit. He stated that with an extension it would be 10 years total by law from when the permit approval was issued. K. Benedict also asked about how the Rail Trail and Shields Brook ATC would address floodplain storage.

Lori Sommer (NHDES) asked if there is any floodplain associated with Shields Brook. P. Walker confirmed that there is. L. Sommer noted her question was because of the impacts therefore being in a Priority Resource Area (PRA) and asked if this was considered. P. Walker responded that the crossing was accounted for in the mitigation analysis of the permit application. The proposed widened bench would still accommodate, and exceed the requirements for passing the brook's 100-year flood.

L. Sommer asked what issues are of concern. P. Walker answered that the Rail Trail and Shields Brook ATC would not change the span width relative to what was depicted in the TS&L, but that the stream crossing rules do not provide clear guidance of channel cross section requirements. Clarification of this with NHDES would be needed.

S. Large reiterated that the project team is asking if they would be able to move forward with using the existing permit.

L. Sommer suggested that a permit amendment may be needed to show the change in plans. Andy O'Sullivan (NHDOT) responded that an amendment may not be needed – as long as the impact footprint does not change.

P. Walker restated that the TS&L produced the approved plan set that was included in the permit.

A. O'Sullivan shared that he would like to discuss everything further with K. Benedict.

K. Benedict added that the hydraulics are likely to change and the permit narrative referenced an approved plan. If the plan changes, then an amendment will be needed. L. Sommer stated that the contractor would also need to reference new plans.

S. Large asked what the next steps permitting wise would be. It is good to know the team is attempting to keep the impacts the same but have proposed design improvements.

K. Benedict advised the project team to review the permit approval letter and run through the conditions and check the findings. NHDOT should confirm if the conditions are still met under the Rail Trail and Shields Brook ATC. It sounds like an amendment is needed but there may not be a new fee.

K. Benedict offered to meet with the project team to discuss any additional questions.

A. O'Sullivan asked about the project being permitted under old rules. Can the design be moved forward under the new rules or would an amendment continue under the old rules?

S. Large suggested the attendees convene on this topic outside of this coordination meeting to figure out over the next couple of weeks. P. Walker stated that VHB will review the approval and identify affected areas. He suggested setting up a project specific meeting in a few weeks.

Carol Henderson (NHF&G) commented on the Rail Trail and Shields Brook ATC proposing a round-about path instead of a straight line and how that may influence findings pertaining to threatened and endangered (T&E) species and the NHB report. C. Henderson requested that the project team coordinate with Kim Tuttle (NHF&G) and Amy Lamb (NHB) for input.

A. Lamb added that recent surveys were conducted for Nuttall's reed grass (*Calamagrostis coarctata*) and the surveyors did not locate the grass in the surveyed areas. She agreed that it seems like there would be no increase in wetland impacts, but if the team confirms there would be, NHB will want to review the additional proposed wetland impact areas for the potential to support the species. The large scale project area was reviewed in larger scoping phase. NHB did not have any other concerns at this time.

S. Large asked if the area of the Rail Trail and Shields Brook ATC path was considered previously in T&E plant species analyses? P. Walker responded that there is a very small area to the east of the stormwater basin that was not included in original project footprint, but may have been surveyed. The area of Rail Trail realignment is similar to the FEIS Base Technical Concept (BTC). The project team will overlay the ATC footprint against the BTC; any change is expected to be very small, and likely to be presently within a developed/residential property.

C. Henderson asked about the property affected by the Rail Trail ATC loop (off of Ferland Drive). P. Walker shared that the property is mostly residential lawn with some vegetation along the brook. Ben Martin (VHB) added that the Rail Trail ATC loop as shown is a preliminary layout and may be reconfigured.

Jean Brochi (USEPA) recommended consideration of previous comments and concerns that agencies had. J. Brochi requested more time to evaluate and talk with others before making an informed comment.

P. Walker stated that if either ATCs are advanced, then the team will proceed with a written reevaluation of the EIS in coordination with FHWA.

S. Large noted the NEPA reevaluation would be useful to circulate to the agencies.

W. Johnson clarified that the DDI and Rail Trail ATCs have not been approved and that the project team is looking for red flags or dealbreakers to make an informed “go” or “no-go” decision. NHDOT will come back after the impacts are determined.

This project has been previously discussed at the 5/28/1997, 3/17/1999, 6/16/1999, 10/20/1999, 11/17/1999, 8/16/2000, 9/20/2000, 7/18/2001, 8/17/2005, 3/15/2006, 5/16/2007, 1/20/2016, 2/17/2016, 10/19/2016, 4/18/2018, 6/20/2018 Monthly Natural Resource Agency Coordination Meetings.