BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: April 16, 2014
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Christine Perron
Ron Crickard
Matt Urban
Don Lyford
Mike Dugas
Steve Liakos
Kirk Mudgett
Jim Kirouac
Cheryl Rasmussen
Kathy Corliss
John Kallfelz
Fred Butler
Michael Pouliot
Cassandra Burns
Tony King
Shelley Winters
C.R. Willeke
Tony Weatherbee

Federal Highway Administration
Jamie Sikora

Army Corps of Engineers
Rich Roach
Michael Hicks

EPA
Mark Kern

NHDES
Gino Infascelli
Lori Sommer

NH Fish & Game
Carol Henderson

NH Natural Heritage Bureau
Melissa Coppola

Hoyle, Tanner & Associates
Kimberly Peace
Matt Low

McFarland Johnson
Vicki Chase

URS Corporation
Carl Chamberlin
Russ Wilder
Ken Kinney

HDR, Inc.
John Weston
Ron O'Blenis

AECOM
Jay Doyle

Vermont Agency of Transportation
Scott Bascom

Dubois & King
Bob Durfee
Peter Bero

Underwood Engineers
Ben Dreyer

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

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

NOTES ON CONFERENCE:

Finalization of March Meeting Minutes

The March 19, 2014 meeting minutes were finalized.

Whitefield-Lancaster, X-A003(024), 25068

Kathy Corliss provided an overview of the project. This is a Federal Resurfacing Program project located on US Route 3 starting 300' north of the Prospect Street intersection in Whitefield, continuing north approximately 7.4 miles, and ending 75' south of the Mary Elizabeth Lane intersection in Lancaster. The primary purpose of the project is to overlay the existing roadway width to preserve and extend the life of the existing pavement. Average daily traffic is estimated at 5,000 vehicles per day with 8.4% trucks. Through most of the project area, the existing roadway consists of 12' travel lanes with 4' average shoulders (though shoulders may vary between 2'-10'). There are existing northbound and southbound climbing lanes on either side of Weeks State Park with two 11' travel lanes and a 2' shoulder. The posted speed limit is 50 mph with the exception of 30 mph zones at each end of the project. The project would involve placing a full width leveling course to fill wheel path ruts and overlaying with a 1 ½" wearing course. A total of 1 mile of travel way is anticipated to require inlay in spot locations due to more advanced pavement damage. Additional proposed work consists of four culvert replacements and one outlet modification; a slight widening of entry/exit turn radii at the scenic overlook opposite Weeks State Park entrance; and replacement of three northbound and eight southbound guardrail runs. In addition, at the request of the Town and DOT Maintenance District, the northbound shoulder at Regional Drive is proposed to be widened from 4' to 10' at the entrance to White Mountain Regional School. This would permit through traffic to navigate around stopped left turning vehicles and reduce shoulder drop off damage in the area. Slope and drainage easements are anticipated to accomplish both the shoulder widening and other drainage work.

The proposed drainage work was described in more detail as follows:

Culvert 1: Existing 18" reinforced concrete pipe (RCP) with failed joints, propose replacement with 24" RCP with headwalls; watershed area is 64 acres, making this a Tier 1 stream crossing; culvert carries an unnamed perennial stream.

Culvert 2: Existing 18" RCP with beaver damming issues, propose replacement with 30" RCP with headwalls and beaver deterrent device at inlet (such as a Beaver Deceiver trapezoidal fence); watershed area is 83 acres, making this a Tier 1 stream crossing; culvert carries an unnamed perennial stream; proposed shoulder widening at this location would result in a narrow strip of wetland impacts along the roadside.

Culvert 3: Existing 15" corrugated steel pipe, propose replacement with 15" plastic pipe & headwall; this culvert is located between two wetlands and does not carry a stream.

Culvert 4: Existing 30" corrugated metal pipe with rotted out invert, propose replacement with shorter 30" RCP with headwalls; the inlet of the culvert carries runoff from roadside ditches and an intermittent stream has developed at the culvert's outlet; watershed area is 38 acres, making this a Tier 1 stream crossing.

Culvert 5: Proposed addition of outlet headwall at existing 15" plastic pipe to eliminate embankment sloughing, considering adding stone apron to reduce outlet perch; the culvert carries an intermittent stream; watershed area is 38 acres, making this a Tier 1 stream crossing.

The preliminary estimate of wetland impacts is 6,700 square feet (4,600 sq ft permanent and 2,100 sq ft temporary), with approximately 56 linear impact to stream channels. Christine Perron noted that the culvert work could be permitted as Notification of Routine Roadway Maintenance Activities. However, since the impacts from the shoulder widening would not qualify under the notification process, the Department will be submitting a single Dredge & Fill permit application for all wetland impacts. The permit application will be submitted in mid-May. The project currently has a tentative advertising date of November 9, 2014, with estimated completion in the Fall of 2015.

C. Perron described the locations of three exemplary natural communities and associated rare plants that are located along the project area as documented by the NH Natural Heritage Bureau. The only work proposed in the vicinity of these communities would be limited to the roadway footprint; no clearing or drainage work is proposed that would impact the natural communities. The apron at the road into Weeks State Park will be repaved, which is the only proposed work in the immediate vicinity of rare plants. Melissa Coppola noted that the rare plants along the Weeks State Park drive do not extend down to US Route 3, so would not be impacted by paving operations at the end of the drive. She had no concerns regarding any of the three natural communities.

Lori Sommer commented that the stream at Culvert 1 appeared to be an intermittent stream not a perennial. C. Perron said that she would review this.

Gino Infascelli suggested adding stone at the outlet of Culvert 5 and sloping it to eliminate or reduce the perch. Carol Henderson concurred with this approach.

G. Infascelli indicated that the impacts as proposed would not require mitigation.

There were no concerns with the work as proposed.

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

Walpole, X-A003(745), 28434

Kirk Mudgett provided an overview of the project. This is a Federal Culvert Replacement/Rehabilitation & Drainage Repairs project located on NH Route 12. The primary purpose of the project is to address three culverts that are in poor condition: a 78" multiplate pipe located 400 feet north of NH Route 123; a 108" multiplate pipe located a half mile north of NH Route 123, and a 48" corrugated metal pipe located just south of River Road.

The 78" multiplate pipe was installed in the early 1960s, at which time it was connected to an existing concrete arch culvert located under the railroad line. The metal pipe and concrete arch are connected by a concrete "sleeve" under roadway fill. The entire structure is under approximately 47' of fill. The pipe is 111 feet long, and the concrete arch is 5' tall x 6.5' wide x 144 feet long. The 78" pipe is in poor condition, with substantial rusting and voids in the invert. A sinkhole developed over the pipe along the roadway shoulder just prior to 2009 and then again in late 2013, this time causing the town's sewer line to break. The town is now temporarily pumping around the culvert and has asked the Department to expedite the project so that the temporary sewer line will not be in place through another winter.

The project proposes to construct a concrete invert in the 78" pipe. No work on the concrete railroad arch culvert is proposed. Construction access will be from the inlet side, and the need for a temporary construction easement is anticipated due the proximity of the right-of-way line to the culvert inlet. This alternative largely avoids impacts to traffic, and eliminates the need for deep excavation. This alternative

is expected to cost approximately $120,000. The pipe carries Mad Brook, a perennial stream with a watershed area of 1,056 acres, making this a Tier 3 stream crossing. A perched condition at the inlet will be avoided by installing stone at the inlet and grading it to match into the culvert invert. The design alternative recommended by the NH Stream Crossing Guidelines would be a 19-foot open bottom box, which would cost approximately $1.5 million, and would require excavation through 47 feet of roadway fill. This alternative would also impact historic resources. For these reasons, the Department's preferred alternative is the concrete invert lining, which would be considered an Alternative Design under the NHDES Stream Crossing Rules and meets the general design criteria.

Carol Henderson asked if the project would result in a perched outlet. K. Mudgett indicated that the inlet perch resulting from the concrete invert would be removed with the addition of stone. Christine Perron noted that there would be no work at the outlet of the structure, since it was located on the other side of the railroad corridor and the railroad structure was not part of this project. C. Henderson indicated that John Magee expressed concerns about fish passage at this location. Whatever elevation perch forms at the connection of the pipe to the concrete box will be tapered gradually with concrete.

The 108" multiplate pipe was also installed in the early 1960s. The pipe is approximately 17 feet deep, and outlets 15 feet from a 12' x 15' stone arch culvert under the railroad. Between the end of the metal pipe and the face of the stone arch, concrete blocks line the stream channel. The pipe is in poor condition, with substantial rusting and voids in the invert. The town's sewer line is located over this pipe as well. Sinkholes have developed on both sides of this pipe at the inlet outside of the roadway.

The project proposes to install a concrete invert in the 108" metal pipe. There will be no work on the concrete blocks between the pipe and the arch, nor is any work proposed on the stone arch culvert itself. Construction access will be from both sides of the metal pipe, over roadway fill and previously disturbed land. All work will be within existing State right-of-way. The pipe carries an unnamed perennial stream with a watershed area of 958 acres, making this a Tier 3 stream crossing. A perched condition at the inlet will be avoided by installing stone and grading it to match into the culvert invert. A perch condition will be avoided at the outlet by tapering concrete from the paving. The tapered ends of the pipe will be cut off to place a headwall to pave up to. The concrete wall at the outlet channel will be extended to meet the headwall. The design alternative recommended by the NH Stream Crossing Guidelines would be a 18-foot open bottom box, which would cost approximately $1.4 million, and would require excavation through 17 feet of roadway fill. This alternative would also impact historic resources since the smaller railroad arch culvert would need to be replaced. Another alternative considered was the replacement of the 108" pipe with a structure of the same size as the railroad arch, which would avoid the need to replace the railroad structure. This alternative would cost approximately $900,000. For these reasons, the Department's preferred alternative is the concrete invert lining, which would be considered an Alternative Design under the NHDES Stream Crossing Rules and meets the general design criteria.

There were no comments or questions regarding the 108" pipe.

The 48" corrugated metal pipe is located under 24 feet of roadway fill and has a length of 142 feet. The joints of the pipe have separated, causing the pipe to start caving in. Prior to 2009, a sink hole was opening up due to voids in the invert. On April 3rd of this year, a large area of the roadway shoulder sloughed away due to the failing pipe. This is an urgent situation concerning the safety of the traveling public. The pipe is on a 12% slope and outlets approximately 10 feet from another 48" culvert that carries the stream under River Road, a town road. The pipe carries an intermittent stream. The watershed area is 262 acres, but the pipe is located within the corridor of a NH Designated River (Connecticut River), making this a Tier 3 stream crossing. Due to the steep slope, it seems unlikely that fish passage is currently occurring at this location. Additionally, the outlet of the River Road structure immediately downstream is perched approximately 4 feet. *Subsequent to the meeting, the Coffman fish passage model was utilized to assess the*

NH Route 12 pipe and the River Road pipe. According to the model, both the 12% slope and the 4-foot outlet drop are considered impassable to all fish species.

The Department has looked at three design alternatives. Replacement of the pipe is required since the caving of the pipe precludes sliplining the existing pipe. The first alternative is a shorter 48" smooth plastic pipe at a 7% slope, outletting into the top of a drop structure (similar to a catch basin), with another pipe coming out of the bottom of the drop structure to carry the stream to the existing outlet location. This alternative would cost approximately $220,000 and would have a life span of approximately 100 years or more. The second alternative would involve replacing the pipe with a new polymer coated corrugated metal pipe of the same length and at the same 12% slope as the existing pipe. This alternative would cost approximately $200,000 and would have a life span of approximately 35-50 years. The third alternative considered was the alternative recommended by the NH Stream Crossing Guidelines, which would be a 10-foot open bottom box. This alternative would cost approximately $800,000, plus the cost of replacing the town's culvert under River Road to match the size of the box. The Department's preferred alternative is the first structure, which incorporates the drop structure, since this would have the longest life span and provide the most stable structure, an important benefit given the instability of the roadway slopes in this area. John Kallfelz indicated that slope instability is a common problem along this section of roadway.

Rich Roach commented that a flat-bottomed structure would be preferable, even if it was on the same slope. Regardless, R. Roach stated that the culvert replacement would be authorized under the NH Programmatic General Permit for whichever design NHDES would permit. Mark Kern commented that it would make sense to better understand the fisheries on this stream since that should help determine how important it would be to accommodate fish passage. *Subsequent to the meeting, Christine Perron continued to coordinate with NH Fish & Game and learned that, as an intermittent stream, fish passage is not a high a priority as it would be if this was a perennial stream. Fish & Game did indicate that the 48" polymer-coated corrugated metal pipe was their preferred alternative.*

Given the urgency of the project, C. Perron stated that she would keep NHDES and NH Fish & Game informed as further information was developed on the 48" culvert, but the project would not be discussed again at a future meeting.

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

Portsmouth, X-A003(455), 20222A

Chris Carucci provided an overview of the project. The project is a proposed expansion and reconfiguration of parking at the existing Portsmouth Transportation Center. The facility is owned by NHDOT and operated by C&J Bus Lines. Project funding is from the Congestion Mitigation and Air Quality (CMAQ) Program, as an addition to the project that created bus service from Portsmouth to the Manchester Airport. There are two lots at the site, approximately 5 acres each. The main lot, which includes the bus terminal, has 510 spaces, and was constructed in 1999/2000. The auxiliary lot, which includes a maintenance building and bus shelter, has 485 spaces and was constructed in 2001. Between the two lots, there are a total of 995 spaces. Both lots are at or over capacity nearly every day. The Smith Well, a municipal water supply, is located approximately 400' to the east of the main parking lot, and all infrastructure is located just outside the 400' sanitary well radius. The airport and runway are located to the northwest of the site.

The proposed expansion is approximately 10,000 square feet, which would create 30 spaces. Reconfiguration of the auxiliary lot, including removal of the grassed islands and restriping the lot, would

result in a gain of 143 spaces, and approximately 7,000 square feet of new impervious area due to removing existing islands. The project also proposes a 38 space expansion of the main lot along the Smith Well Radius by pushing the sidewalk back a few feet and creating parallel parking. Overall, total additional spaces would be 211, with approximately 24,000 square feet of new impervious area. This conversion to impervious area is expected to produce an additional 2 to 3 cfs during peak runoff in a 50 year storm event over the 85 cfs of existing runoff.

There are no delineated wetlands within the project area. The only permit that will be needed is the Construction General Permit, due to the total disturbed area being over one acre.

The project area is within the Pickering Brook Watershed, which is impaired for chlorides and as well as E. coli, dissolved oxygen, and metals.

The existing drainage and stormwater management system includes curb and closed drainage leading to treatment swales and then to two stormwater ponds. The auxiliary lot also has a Vortech treatment unit upstream of the treatment swale, and the pond has an impermeable liner. The existing systems seem to be functioning, with no complaints of flooding. The Vortech unit is scheduled to be cleaned this season. The Department is in the process of evaluating the hydraulics and treatment functions using the new Cornell rainfall data and current AOT design parameters. Depending on results, some modifications to increase treatment efficiency may be proposed. However, there are constraints related to the proximity to the runway due to requirements to avoid standing water, permanent pools, or landscaping that draws birds, as well constraints related to the proximity of the Smith Well since infiltration measures are not recommended.

The Department will be meeting with representatives from the City of Portsmouth and the DES Drinking Water and Groundwater Bureau to discuss issues specific to the Smith Well. Recent well tests indicated rising chloride levels from 2004 to 2011, with the maximum value of 140 mg/l in January 2011. This is about half of the allowable concentration for drinking water. The latest result was 99 mg/l in July 2013. The operator has stopped storing salt at the facility, and the plow crews are now Green Snow Pro certified. The hope is that these measures will lead to a decrease in chloride in the well.

Rich Roach asked if the proposed parallel parking would create a safety concern with pedestrians crossing traffic to get to the bus terminal. C. Carucci noted that the Department is working with the Operator regarding circulation of traffic and pedestrians.

Mark Kern asked if the existing islands in the auxiliary lot were designed for infiltration or for aesthetics. C. Carucci answered that the islands were installed for aesthetic purposes.

Given the Department's intent to continue coordination regarding water quality, as well as the fact that no wetland permits would be needed, no one in attendance expressed concern with the project as proposed.

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

Henniker, X-A003(046), 15718

The purpose of this meeting was to provide a project update and review of actions taken since the last Natural Resource Agency Coordination Meeting on August 21, 2013. Matt Low provided a brief review. The Western Avenue Bridge was closed in 2008 due to its advanced deterioration. An alternatives analysis was completed, including rehabilitation, replacement in the bridge's current location, replacement

in an alternate location and replacement of the Patterson Hill Road Bridge. A replacement structure with a two-span truss has been deemed the most appropriate and least impacting for the project.

The project is continuing in the Preliminary Design/NEPA phase. A Draft Environmental Study/Section 4(f) document has been submitted to NHDOT for review in fulfillment of the requirements for a Request for Categorical Exclusion.

Kimberly Peace provided an update on environmental impacts that were developed to this point for the Draft NEPA document, including wetland and stream impacts. Wetland impacts will include approximately 6,845 sq ft of permanent and 11,166 sq ft of temporary impacts. However, temporary impacts present a "worst-case" scenario at this time as they include all of the potential area for the temporary work trestle required to remove the historic truss. These impacts will decrease upon completion of the design of this structure.

There was a brief discussion of the floodplain impacts. At this time it is anticipated that there will be no net amount of fill placed in the floodway. The central pier will shift slightly to the west, and will have the same approximate square footage. The western abutment will shift approximately 20 feet to the west, out of the riverbed and above the Ordinary High Water (OHW) mark. The eastern abutment, while shifting slightly to the east and out of the streambed, will remain below OHW. The new structure will have in increased hydraulic opening due to the larger span length, which will reduce the potential for upstream flooding.

Per comments from Carol Henderson at the last meeting, Mike Johnson of NOAA Fisheries Service, Habitat Conservation Division was contacted to determine if an Essential Fish Habitat (EFH) assessment would be required. He requested an EFH Assessment be completed for the project. Hoyle, Tanner completed the assessment, and M. Johnson reviewed it on March 13, 2014, stating: "the proposed project would have minimal adverse effect on EFH for Atlantic salmon. In addition, the project area will have minimal effects on other NOAA-trust resources. Therefore, we have no EFH conservation recommendations to provide for this action pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Act."

No other natural resource impacts are anticipated for this project.

M. Low also gave an update regarding Cultural Resources. Several Cultural Resource Coordination meetings have taken place. The Bridge is a Pratt Truss, eligible for listing on the National Register of Historic Places, and the West Henniker Village Historic District is also eligible for listing on the National Register. An historic mill site located on the western bank has been identified and will not be impacted by the project. Project mitigation will be recorded in a Memorandum of Agreement signed by NHDHR, FHWA, the Town of Henniker and NHDOT.

This project was previously reviewed on the following dates: 8/21/2013.

Bow-Concord, non-federal, 13742

Vicki Chase presented the project. This project involves improvements to the Interstate 93 corridor between the Interstate 89 interchange and Exit 15. This is a continuation of the corridor study that was completed in 2008. The "Summary Classification Report Bow-Concord Interstate 93 Transportation Planning Study" provided a number of transportation solutions and included a much broader area that extended east to Route 106. This phase of the project focuses on the I-93 corridor between I-89 to north of Exit 15, and includes short segments of 393 and I-89. It includes seven interchanges (five on I-93, one on I-89, and one on I-393). Currently, traffic modeling is underway which will drive the design of alternatives. Alternatives will be developed in 2014. A portion of the project corridor is NH State

Turnpike (southern end of the corridor to Exit 14). The project will involve an Environmental Assessment for NEPA clearance. Currently, data collection and resource ID are ongoing.

An Advisory Committee to guide the development of alternatives will meet regularly. Don Lyford is assembling the Advisory Committee. There will also be public informational meetings and a public hearing to present the draft EA. Design is expected to be completed in 2014 and the project is scheduled to conclude at the end of 2015.

Jamie Sikora noted that federal approvals would be needed for work at the interchanges, and the project may also have federal funding in the future.

Mark Kern and Lori Sommer asked if a written schedule of meetings could be provided. D. Lyford agreed to provide this, and also noted that the meeting schedule and other information would be on the project website.

This project was previously reviewed on the following dates: 7/17/2002, 8/21/2002, 12/14/2005, 11/15/2006.

NH Capitol Corridor

Russ Wilder and Carl Chamberlin provided an overview of the project. The project will include a study of potential rail and bus transit investments in the NH Capitol Corridor, which connects the major population centers of New Hampshire to metropolitan Boston, and the development of a service development plan and related documents for intercity passenger rail between Boston, MA and Concord, NH. This study will be taking a multimodal, systems-wide approach in the development of the alternatives that will be considered. The NH Capitol Corridor extends 73 miles between Boston and Concord. Rail facilities within the corridor include existing Massachusetts Bay Transportation Authority (MBTA) commuter rail service between Boston and Lowell, MA and Pan Am Railways, Inc. freight service between Lowell, MA and Concord, NH. In addition to the existing rail infrastructure, highway corridors that are under consideration for commuter service investment include the US Route 3/Everett Turnpike corridor and the I-93 corridor in Massachusetts and New Hampshire. Both of these highway corridors are served by commuter and intercity bus service.

The purpose of the presentation was to serve as a part of the scoping process for this project and will assist NHDOT in providing adequate environmental documentation (Tier I EA) for the Federal Railroad Administration and the Federal Transit Administration. This project will result in an EA that in the future may be followed by a Project NEPA Environmental Impact Statement (EIS), EA, or Categorical Exclusion (CE) (depending on the details of the project, and the significance of the environmental impact).

Rich Roach asked if the intercity rail would be commuter style, and if the rail would impact bus service. R. Wilder replied that the FRA project would be modeled after Downeaster service, not commuter rail. The study is taking a multi-modal approach, with trains and bus service co-existing in the corridor.

R. Roach asked about parking at Spring Street. R. Wilder commented that this potential station location is considered a TOD (Transportation Oriented Development) site and would utilize local parking.

R. Roach and Lori Sommer asked if there would be an airport shuttle at the Airport Station at Ray Wieczorek Drive. C. Chamberlin replied that it is envisioned that the airport would provide this service.

R. Roach and L. Sommer noted that when the airport access road bridge over the Merrimack River was permitted, the issue of nearby American Bald Eagle habitat was a concern. Comments were also made

about considering previous mitigation required in this area, residual property ownership (NHDOT properties) and location of parking.

L. Sommer asked if bridge over the Nashua River would be used. The response was that it would be.

R. Roach mentioned traffic congestion associated with access to the Spit Brook station site. He also asked if locating this station closer to the Sagamore Bridge to Hudson had been considered, thus accessing riders from the east side of the river in Hudson. There was discussion of the former old Hampshire Chemical (WR Grace Site), which is not seen to be a problem. Drainage modifications as shown are not seen to be a problem either.

There was general discussion of the Pheasant Lane Mall Station Site. Exit 36 would have independent utility and parking would be at the mall.

R. Roach asked what the effect on adjacent towns from commuting to the proposed stations would be.

R. Wilder commented that the effect would be captured in the ridership studies. The catchment areas would predict approximately where ridership would come from.

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

Northern New England Intercity Rail Initiative

Ron O'Blenis presented a PowerPoint overview of the Northern New England Intercity Rail Initiative (NNEIRI). He highlighted the segment of the corridor that is located within New Hampshire, and mentioned that the existing Claremont Amtrak station is the station location being considered for additional intercity rail passenger service as part of NNEIRI.

Someone asked if new alignments or stations are being considered in New Hampshire. R. O'Blenis answered that project will be utilizing the existing railroad corridor where it is located within New Hampshire, and the existing Claremont station. There are no new railroad alignments or stations being considered in New Hampshire.

Someone asked if there was any potential for Native American impacts along the study corridor. R. O'Blenis stated that no impacts are anticipated.

Someone asked if the project would require maintenance or storage facilities in New Hampshire. R. O'Blenis replied that project is not anticipated to need any new maintenance or layover facilities in New Hampshire. New or extended railroad passing sidings may be needed in some areas of the corridor, and their location and length will be determined as part of the study. Such sidings, where needed, will be located within existing railroad right-of-way where feasible.

It was suggested that, for historic and other resources in the corridor, the project team should submit a records search request. R. O'Blenis replied that the project team will consider this and other means of data collection as the evaluation moves forward.

There was a question about funding, and whether New Hampshire would be expected to fund any parts of this project. R. O'Blenis stated that this would depend in large part on whether Claremont is a station stop for the new service that is recommended as a result of the study.

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

Bow, non-federal, 24223

This project involves the replacement of the bridge that carries Page Road over the Bela Brook in Bow, NH (Bridge No. 165/164). DuBois & King, Inc. Project Manager Robert Durfee presented the initial project review, including alternatives and any wetland impacts.

The bridge replacement project is in the NHDOT Municipal Bridge Aid Program, with the Study Phase nearly completed. The schedule is to recommend to the Town proceeding with Preliminary Design/Final Design and permitting this summer/fall, but not advertise the project until May 2023.

The existing bridge is a two-lane (30'-2" wide rail to rail), 12'-0" long (span) metal plate arch culvert with a metal bottom resting on the river bed. NHDOT records indicate the bridge was built in 1950. The bridge is on the "Municipal Redlist" and is in poor condition overall with structural deficiencies to the metal plates and bolts.

No changes to the existing road profile are proposed. The elevation of the road through the bridge will be maintained with the new bridge construction.

A hydraulic and hydrologic investigation has been performed. Results indicate the current bridge opening (12'-0") is inadequate to pass the NHDOT required Q50 flood event with over 1.0 foot (minimum) of freeboard. The river width between banks at normal flow is approximately 25' - 36', a bridge span of 32' was investigated and proposed. A 32' span would satisfy the NHDOT hydraulic requirements. Construction cost estimate is $588,000 for the 32' span.

A bridge design that would satisfy the NHDES Stream Crossing Rules (Env-Wt 900) was studied. Bank full width was determined to be 44'. A 55' long clear span bridge would be required to span the 1.2 x bankfull width plus 2'. Construction cost estimate is $722,500 for the 55' span.

The proposed structure (32' span) meets all of the general design criteria (Env-Wt 904.01) for Tier 3 stream crossings and meets all of the specific design criteria (Env-Wt 904.05) for Tier 3 stream crossings except for the 1.2 x bankfull width plus 2' requirement.

The proposed bridge structure will be a new two lane (30' wide), 32' long (span) bridge consisting of a precast concrete arch on concrete footings.

The existing bridge will be closed during construction with a traffic detour provided at all times.

A wetlands survey was performed by a certified wetland scientist. Wetlands were discovered beyond the limits of the Bela Brook near the project site, but not within the limits of disturbance for constructing the project.

A search of the NH Natural Heritage database was conducted for threatened or endangered species. The database has records in the vicinity of the project. Further investigations will occur during preliminary design phase.

A "Request for Project Review" was submitted to the NH Division of Historical Resources (NHDHR). The NHDHR recommends an individual inventory form. DuBois & King, Inc. is negotiating the context of this form.

Replacement of the bridge will have impact to Bela Brook. A standard dredge and fill permit will be required by NHDES.

Approval of an alternative design (Env Wt 904.09) for a 32' clear span bridge will be requested as part of the NHDES permit application. DuBois & King, Inc. believes that it is "not practicable" to meet the NHDES Stream Crossing requirements due to the significant cost increase of a longer 55' bridge span.

Melissa Coppola stated that the NH Natural Heritage Bureau file number that was included in the agenda seems incorrect. She recommended doing a review again soon.

Lori Sommer stated that it seems like a long time out before this project is advertised. Steve Liakos stated that this project may move up if the gas tax passes. Steve has concerns regarding the existing condition of this bridge, which is currently rated as a "3". He feels that it may only last a few more years. He also stated that the Town may choose to continue with design after study. With the design complete the Town may opt to pay for the bridge without state funds.

Christine Perron asked a question on behalf of fish and game in regards to rebuilding the streambed. Fish & Game asked how the streambed would be restored to a natural river bottom. R. Durfee replied that the new bridge would have a natural stream bottom with no riprap, and a critter crossing above ordinary high water.

Those in attendance expressed their agreement that the proposed 32' span was acceptable as an "Alternative Design" per the stream crossing rules NHDES Administrative rule Env-Wt 904.09.

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

Bow, non-federal, 24224

This project involves the replacement of the bridge that carries River Road over the Bow Bog Brook in Bow, NH (Bridge No. 184/127). DuBois & King, Inc. Project Manager Robert Durfee presented the initial project review, including alternatives and wetland impacts.

The bridge replacement project is in the NHDOT Municipal Bridge Aid Program, with the Study Phase nearly completed. The schedule is to recommend to the Town proceeding with Preliminary Design/Final Design and permitting this summer/fall, but not advertise the project until May 2023. NHDOT currently is proposing to advertise this project in May 2024.

The existing bridge is a two-lane (25'-0" wide rail to rail), 15'-8" long (span) metal plate arch culvert with a metal bottom resting on the river bed. NHDOT records indicate the bridge was built in 1950 with flood repair/rehabilitation to the outlet headwall and wingwalls in 2006. The bridge is in poor condition overall with structural deficiencies to the metal plates and bolts.

No changes to the existing road profile are proposed. The elevation of the road through the bridge will be maintained with the new bridge construction.

A hydraulic and hydrologic investigation has been performed. Results indicate the current bridge opening (15'-8") is inadequate to pass the NHDOT required Q50 flood event with over 1.0 foot (minimum) of freeboard. The river width between banks at normal flow is approximately 22'; a minimum bridge span of 28' was investigated and proposed. A 28' span will satisfy the NHDOT hydraulic requirements. Construction cost estimate is $633,000 for the 28' span.

A bridge design that would satisfy the NHDES Stream Crossing Rules (Env-Wt 900) was studied. Bankfull width was determined to be 35'. A 44' long clear span bridge would be required to span the 1.2 x bankfull width plus 2'. Construction cost estimate is $755,000 for the 44' span.

The proposed structure (28' span) meets all of the general design criteria (Env-Wt 904.01) for Tier 3 stream crossings and meets all of the specific design criteria (Env-Wt 904.05) for Tier 3 stream crossings except for the 1.2 x bankfull width plus 2' requirement.

The proposed bridge structure would be a new two lane (30' wide), 28' long (span) bridge consisting of a 3-sided precast concrete rigid frame on concrete footings.

The existing bridge will be closed during construction with a traffic detour provided at all times.

A wetlands survey was performed by a certified wetland scientist. Wetlands were discovered beyond the limits of the Bow Bog Brook near the project site, but not within the limits of disturbance for constructing the project.

A search of the NH Natural Heritage database was conducted for threatened or endangered species. The database has records in the vicinity of the project. Further investigations will occur during preliminary design phase.

A "Request for Project Review" was submitted to NH Division of Historical Resources (NHDHR). The NHDHR has no concerns with cultural resources.

Replacement of the bridge will have impacts to Bow Bog Brook. A standard dredge and fill permit will be required by NHDES.

Approval of an alternative design (Env Wt 904.09) for a 28' clear span bridge will be requested as part of the NHDES permit application. DuBois & King, Inc. believes that it is "not practicable" to meet the NHDES Stream Crossing requirements due to the significant cost increase of a longer 44' bridge span.

Rich Roach stated that we need to start hearing if these structures pass the 100-year storm. Steve Liakos stated that the NHDOT policy is to pass the 50-year storm for local roads but NHDOT is currently looking at this policy and changing to the 100-year storm is being considered. R. Roach stated that federal agencies require passing the 100-year storm. R. Durfee stated that both Bow projects pass the 100-year storm yet with no remaining freeboard.

Lori Sommer asked if the rigid frame has a critter crossing. Robert Durfee responded that a crossing would be provided by benching the stone riprap.

Melissa Coppola stated that the Natural Heritage Bureau file number that was listed in the agenda seems incorrect. She recommended doing a review again soon.

Matt Urban asked if there was any mitigation proposed. L. Sommer responded that mitigation was not needed because it is a replacement of an existing structure on a similar footprint. Gino Infascelli indicated that he had no concerns since the structure would be staying within the existing footprint.

Michael Hicks asked about the failure concerns with this type of existing structure. Steve Liakos responded that the bottom of these types of structures tends to fail first by moving upward, and he has concerns regarding the existing condition of this bridge, which is rated as a "6".

Those in attendance expressed their agreement that the proposed 28' span was acceptable as an "Alternative Design" per the stream crossing rules NHDES Administrative rule Env-Wt 904.09.

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

Wolfeboro, non-federal, 23779

Ben Dreyer provided an overview of the project. The Middleton Road Reconstruction project is part of the NHDOT State Aid Reconstruction Program. The proposed work includes road reconstruction (8,300 linear feet) and replacing cross culverts for drainage. Engineering completed to date includes the Preliminary Design Phase Report. The Final Design phase began the end of March 2014. The scheduled bid date is 7/1/14 with construction anticipated to be completed this year (2014).

The existing road base and pavement structure are experiencing varying levels of failure including severe heaving, rutting, cracking and other deterioration. The roadway drainage culverts are at the end of their useful life and no longer function as intended. Culvert conditions include corrugated metal pipes that are crushed, rotted, etc. and concrete pipes that have holes, scour and other defects. The purpose of the project is to restore drainage systems and the roadway condition.

A Routine Roadway Maintenance Notification for culvert replacements was submitted last week. Gino Infascelli noted that the notification was recently approved.

No one in attendance voiced concerns with the project as proposed.

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

Freedom, non-federal, 24002

Tony Weatherbee provided an overview of the project. The project involves the rehabilitation of Bridge 205/041, which carries NH Route 25 over Loon Pond Outlet. The structure is a concrete slab bridge with a 22'-0" span that is 31'-0" wide. The Department proposes to replace the concrete deck in kind. The deck will be widened 4'-0" to the downstream side. This will take place over the existing abutments and wingwalls. Riprap will be placed in front of the structure. The road slopes and existing approach rail will be widened to create a wider roadway.

Rich Roach asked why it was necessary to widen the roadway. T. Weatherbee stated that it was necessary to widen the approaches to the bridge to match in to the widened bridge.

R. Roach commented that the project could be authorized under the State Programmatic General Permit.

Gino Infascelli said that the delineation of Ordinary High Water appears to be in the wrong location. T. Weatherbee said it was delineated by a consultant and G. Infascelli said he would visit the site for verification of the delineation.

G. Infascelli asked what the rail-to-rail width of the bridge is currently, and that he understood the bridge widening to be necessary to better accommodate vehicles passing snow plows. Subsequent to the meeting, it was confirmed that this width is 28'-0".

G. Infascelli asked if the slope widening was necessary with guardrail in place. T. Weatherbee stated that the slope work would still be necessary. Without survey, it was difficult to know exactly how much slope would be required, but that wetland impacts would be minimized.

T. Weatherbee asked if mitigation would be required and Lori Sommer said it would not be required.

G. Infascelli asked what tier the stream crossing is and T. Weatherbee answered that it is a Tier 3 stream crossing.

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

Warren, non-federal, 23420

Tony Weatherbee provided a brief overview of the project. The project involves the replacement of Bridge 102/092, which carries NH Route 25C over Black Brook. The Department proposes to replace the existing 10'-8" x 6'-11" metal pipe with a 12'x 8' concrete box with 1'-0" of embedment. The structure is a Tier 3 crossing based on watershed size. At the January meeting, it was requested that the Department consider other structures that incorporated either an internal dry ledge or a separate overflow pipe that could be used for animal passage. The Department is now asking to instead make an in-lieu fee payment, and verification of this payment was requested.

Lori Sommer asked if other designs were considered. T. Weatherbee said that other designs had been taken into consideration, but it was thought that a payment into the ARM Fund would be a more beneficial alternative due to the cost of installing a larger structure.

Mark Kern commented that the new box is not much bigger than the existing pipe. Gino Infascelli noted that it is only a foot larger, although it would be a concrete box rather than a pipe, which provides a small benefit.

L. Sommer commented that mitigation may be needed for the bank impact on the inlet side but she had no way to calculate an in-lieu fee for an entire structure as the Department proposed.

G. Infascelli expressed concern that the cost estimate for the replacement structure was too high, compared to other projects he has reviewed.

T. Weatherbee said that the structure was sized based on the flow obtained from NH StreamStats. Christine Perron asked if any other sizes were considered and T. Weatherbee said that this was the size that was proposed based on hydraulic studies.

G. Infascelli said that there is a lot of wildlife in this area and a larger opening should be considered. Rich Roach suggested installing a 14' box, rather than a 12' box, and putting in a 2' shelf, for example, to

accommodate animal passage. G. Infascelli said that a 16' box with a 4' wide by 2' high shelf was suggested in January. C. Perron asked if Bridge Maintenance considered the shelf option and T. Weatherbee said yes but it would be more costly than paying mitigation.

C. Perron asked if the design as proposed could be permitted and G. Infascelli said that the Department could submit the application to find out. L. Sommer said she would like to see the alternatives in the application. She indicated that she was not in agreement with the Department's proposal to pay an in-lieu fee.

This project was previously reviewed on the following dates: 01/15/2014.