BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: January 16, 2013
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Christine Perron
Randy Talon
Pete Stamnas
Mike Dugas
Steve Liakos
Kirk Mudgett
Michelle Marshall
Michael Pouliot
Carol Niewola
Jason Tremblay
Charles Blackman
Bryanne Campbell

Army Corps of Engineers
Rich Roach

NHDES
Gino Infascelli
Lori Sommer
Ted Diers

NH Fish & Game
Carol Henderson

NH Natural Heritage Bureau
Melissa Coppola

Jacobs Engineering
John Gorham
Jason Homiak

City of Concord
Martha Drukker

Town of Hudson
Patrick Colburn

CLD Engineers
John Byatt

Normandeau Associates
Jameson Paine

Hoyle, Tanner & Associates
Matt Low

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

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NOTES ON CONFERENCE:

Finalization of December Meeting Minutes

The December 19, 2012 meeting minutes were finalized.

Concord Municipal Airport, SBG-04-06-2011

John Gorham provided an introduction to the project team and showed the location of the approximate 3,500' long proposed Taxiway B alignment south of Runway 12-30 on the projected map image provided by NHDOT. He noted the airport operates under the Conservation Management Agreement to protect the Karner Blue Butterfly.

Jason Homiak provided an update on the project. He stated that the purpose of the meeting was to seek the agencies support for a revised taxiway alignment (Alternative B1b). Alternative B1b provides for perpendicular intersections with Runways 12-30 and 17-35. The Taxiway B project had been previously reviewed at the Natural Resource Agency Coordination Meeting in January 2010 at the start of the airport's Environmental Assessment (EA) project and again in February 2011 to show the airport's EA preferred alternatives. In September 2012, the FAA updated their design criteria, which required a change to the Taxiway B preferred alternative. Alternative B3c was the preferred alternative from the airport's Environmental Assessment. Previous FAA design criteria are dated from 1989. The new design criteria required the right angle intersection of the taxiway and runway. The right angle criteria therefore changed the project to Alternative B1b. The new design criteria also require shallower site grading, thereby increasing the project total disturbance area. The taxiway to the Army Guard's apron would also be moved to the east to meet the new design criteria. The hold apron on the east end of the project is reduced in size in Alternative B1b compared to the previous preferred Alternative B3c because of the new FAA criteria.

The new alignment (Alternative B1b) misses a large lupine patch on the west end of the alignment adjacent to Runway 17-35, thereby reducing disturbance to the lupine plants. A chart was shown comparing the Alternatives B3c EA, B3c Updated, and B1b Updated with the following categories: acres of Conservation Zone Disturbance, acres of Primary (lupine) Habitat Impacted, acres of Secondary Habitat Impacted, percentage of Lupine Habitat Impacted, percentage of Secondary Habitat Impacted, number of Lupine Plants, Karner Blue Butterfly eggs, acres of new pavement area in the Conservation Zone, and acres of new mowing area. J. Homiak noted that the EA was based on planning-level aerial contours, which were not as accurate as the topographic information the other 2 alternatives (Alternatives B3c Update and B1b Update) are based on. Impacts associated with the EA's preferred alternative, B3c EA, were only a best estimate. Alternative B3c Update was based on the more accurate topographic data but was based on a 30% design stage. The proposed Alternative B1b Update impact values are approximately equal to the EA impacts shown in Alternative B3c EA. The B3c Update has a ½-acre impact to the lupine disturbance whereas the proposed Alternative B1b Update has a ¼-acre lupine impact. The proposed Alternative B1b Update grading shown is based on a 60% design stage and therefore the values in the table will continue to be refined.

J. Homiak stated that the taxiway project crosses an existing ravine. Jacobs' environmental consultant, The Smart Associates Environmental Consultants, Inc., had determined the ravine to be non-jurisdictional wetland. Jason stated that The Smart Associates' determination would be attached to the Alteration of Terrain Permit application.

Rich Roach said that the Corps concurs as there are no impacts to jurisdictional wetlands. Melissa Coppola and Carol Henderson both said the Alternative B1b was acceptable provided the mitigation efforts such as transplanting as agreed to in the EA document were implemented. M. Coppola noted that she had previously provided her concurrence in an email to John Gorham. C. Henderson noted that she has spoken

with Heidi Holman with NHF&G and that Heidi was aware of, and concurred with, the proposed Alternative B1b. J. Gorham noted that USF&W was not at the meeting and that he would coordinate with Tony Tur of USF&W after the meeting.

Lori Summer asked Gino Infascelli who determined that the ravine was not a stream. G. Infascelli stated that Jenn Riordan of The Smart Associates had determined that the ravine is ephemeral, which is non-jurisdictional.

Martha Drukker stated the City has a long-term plan to offset these impacts by mitigation, whether that is conversion of development zone to conservation zone or by transplanting plant species the Karner Blue Butterfly uses. M. Drukker noted the project includes approximately $200,000 in funds for the NHF&G to conduct mitigation support activities. A conservation zone will be created on Grant and Greeley Streets to protect the butterfly habitat. This area is near the existing habitat that NHF&G has on the Army Guard's property west of Greeley Street.

This project was previously reviewed on the following dates: 1/20/2010, 2/16/2011.

Ossipee, X-A000(490), 14749

Michelle Marshall provided an overview of the project. The purpose of this project is to replace three red listed bridges along NH Routes 16/25. The bridges carry NH 16/25 over the Lovell River, the Bearcamp River, and the Bearcamp flood relief area. The roadway will also be resurfaced beginning at the Lovell River Bridge and extending north 3.2 miles to the Chocorua River Bridge in West Ossipee. The roadway through the project area consists of two 12-foot travel lanes and 4-foot shoulders. In 2017 and 2037, projected daily traffic will be 11,000 and 14,000 vehicles per day, respectively. The posted speed limit is 45 mph.

The existing bridges were summarized as follows:

Lovell River (Bridge No. 152/268)
Single span I-beam concrete bridge
Constructed in 1950
58' long; 31' wide curb-to-curb
Deck is in poor condition

Bearcamp River (Bridge No. 137/297)
5 span I-beam concrete bridge
Constructed in 1955
392' long; 28' wide curb-to-curb
Deck and superstructure are in poor condition

Bearcamp River Relief (Bridge No. 137/299)
4 span I-beam concrete bridge
Constructed in 1955
168' long; 28' wide curb-to-curb
Deck is in poor condition

In order to maintain two lanes of traffic during construction of the bridges, temporary diversions will be required at the Lovell River Bridge and at the Bearcamp River/Relief bridges. The Lovell River detour will be located to the west of the existing bridge in order to avoid impacting the golf course located along the east side of the roadway. The location of the Bearcamp River detour has not yet been determined. On the

west side of the existing roadway, there are a larger number of properties, with houses that are closer to the road. On the east side of the existing roadway, there are utility lines and large areas of wetlands. Also, shifting the roadway and bridges permanently to the west or east to avoid the need for temporary bridges is under consideration.

This project is in the Preliminary Design Phase with an anticipated public hearing in the summer of 2013. This project is scheduled to start construction in February 2017, but may be moved earlier due to the priority of improving red list bridges. It is expected this project will take two to three construction seasons to build.

Mike Dugas commented that the project would also be taking into account the need for drainage rehabilitation along the entire 3.2 mile project area. Drainage structures in this area are approximately 60 years old. The need for repairs and replacements will be assessed as the project moves forward.

Melissa Coppola commented that a kettle hole bog is located within the project area. Christine Perron noted that the Natural Heritage Bureau review had reported a number of exemplary natural communities in the project area, and the kettle hole bog was the only community adjacent to the roadway. The bog is not located within the areas of the proposed detours. As soon as drainage structures are identified for repair or replacement, she would contact M. Coppola to schedule a field review to assess potential concerns.

Carol Henderson asked for clarification on the need to replace these bridges when the substructure and superstructure were not in poor condition. Jason Tremblay responded that the bridges would continue to deteriorate and replacement was recommended in order to avoid a potential down posting. The new bridges would have a 75 to 100 year design life. M. Dugas added that minimizing impacts to traffic was also taken into consideration in the decision to replace the bridges.

C. Perron noted that a stream assessment was completed at the Lovell River bridge. The bankfull width was 45’, making the recommended span 56’. The existing span is 58’. The Bearcamp River was too deep to complete a stream assessment. The regional hydraulic geometry curve estimates a bankfull width of 145’, making the recommended span 176’. The existing span is 392’. J. Tremblay commented that the replacement bridges would not be smaller than the existing spans.

Gino Infascelli stated that his preference for the location of the Bearcamp River detour was on the west side of the roadway given the existing trail and limited wetlands.

Carol Henderson noted that coldwater fisheries are located in the project area, and Fish & Game would have recommendations regarding construction timing as the project proceeds.

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

Hudson, non-federal, 16175

John Byatt presented an overview of the project. The existing structure under Pelham Road is an undersized culvert that carries Second Brook. The culvert is a 54-inch concrete pipe at the downstream end and narrows to a 48-inch corrugated metal pipe at the upstream end. During the May 2006 Mother's Day storm, the road was over topped and the downstream retaining wall through which the culvert extends was damaged. The culvert and embankment qualify as a high hazard dam and a dam repair was developed and a wetland permit was received for this work. However, the dam repair still did not meet current DES Dam Bureau standards and the project was not constructed. A dam meeting DES standards would require a taller dam and would adversely impact properties upstream. The Town also looked at the impacts downstream if the dam was removed and replaced with a bridge. After evaluating the upstream and downstream impacts, the Town decided to replace the culvert with a bridge that could pass the 50-year and 100-year floods. The proposed bridge would most likely be a 16-foot span by 8-foot rise precast concrete arch. The Town is considering a box culvert if more cost effective; however, due to the amount of ledge removal needed, this type of structure may not be practical or more cost effective. Roadway improvements would consist of raising the grade over the bridge to improve site distance and constructing the horizontally curved road on a superelevation. A drainage culvert and pipe would be removed. The proposed bridge would have less wetland impacts than the original dam repair proposal. The Natural Heritage Bureau report noted no rare or endangered species.

Rich Roach asked if the bridge was in a 100-year floodplain and J. Byatt replied that it was. R. Roach said the people downstream would likely have concerns about the flooding effects and this should be discussed in a public meeting. He noted that per Executive Order 1988 consideration needed to be given to the 100-year floodplain and the issue needed to be addressed in the wetland permit before ACOE can issue a permit. J. Byatt said the Town has coordinated with FEMA and the State Floodplain Management Coordinator about preparing a LOMR for the project, as the Town understands the effect on the floodplain. J. Byatt mentioned that FEMA flows are substantially less than those used to size the bridge, and through coordination with FEMA, it was decided the LOMR would use FEMA values but the higher flows would be noted and FEMA could pursue reviewing their flow values if they wished.

Carol Henderson asked about the effects downstream. J. Byatt said that during certain storm events without the dam there is a 6 inch rise in the flooding at Route 3A, which is downstream of the Pelham Road crossing.

Gino Infascelli asked if a dry shelf during low flow conditions could be constructed inside the structure. J. Byatt replied that they could look into it.

C. Henderson asked what the proposed stream bed substrate was. J. Byatt said they were proposing a rounded stone on top of riprap; however, where they encountered ledge, the ledge would comprise the substrate.

C. Henderson asked about the timing of the project. J. Byatt replied the Town would like to construct the project this summer. C. Henderson asked if they could return to the coordination meeting if substantial design changes or changes in impacts occurred after the public meeting.

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

Unity, non-federal, 22977

John Byatt presented an overview of the project. Twin 5.5 foot diameter corrugated metal pipes carry Spring Brook under Old Cheshire Road. Due to their poor condition, the pipes need replacement as soon as possible. There are also flooding issues at the site. The road does not overtop, but repairs are frequently needed to the structure. The replacement bridge is expected to be a 24-foot span precast concrete arch or box culvert. Although the precast arch would more closely meet environmental requirements, the Town is evaluating the savings associated with a culvert. Roadway improvements include raising the road approximately two feet to achieve a 25 mph design speed. The road surface would remain gravel. The bridge would be closed for construction and traffic detoured across private property. No rare or endangered species were noted in the Natural Heritage Bureau report and wetland impacts would be approximately 1100 sf.

Melissa Coppola asked if there is an existing road that would be used across the private property for the detour. J. Byatt said he thought there might be an existing woods road and he did not know if there are any wetland impacts associated with using this road. Gino Infascelli mentioned that it looked like the detour would still cross the stream. J. Byatt said he would need to check with the Town to see if there was a bridge present that would be used. It was asked that the detour be included in the Natural Heritage Bureau review.

Carol Henderson asked if a shelf could be added to the structure for animal passage. J. Byatt said he could look into a low flow channel to achieve this. C. Henderson asked what the substrate would consist of and if it would mimic a natural bottom. J. Byatt said they were proposing rounded stone on top of riprap.

C. Henderson asked that the project be brought back for review if there were any substantial changes to the design or impacts.

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

Littleton, A001(043), 15931

Kirk Mudgett provided an overview of the project. This is a “4R” (resurfacing, restoration, rehabilitation, and reconstruction) project scheduled to advertise April 16, 2013. The project is located on I-93, beginning just north of exit 42 (mile marker 125.0) and proceeding north 6.1 miles to just south of the Vermont border (mile marker 131.6).

Work will include pavement work; bridge work (partial depth deck repair at Exit 44 NB over NH 135 & 18 and minor repairs at three other bridges); replacement of interchange signing at Exits 35 to 39 and 43 to 44; and replacement of all guardrail (approximately 19,000 linear feet). In addition, tree clearing is proposed at eleven existing ledge cuts, along the face and 10 feet from the top. Total clearing will be approximately 5 acres. There will also be selective hand and machine scaling at the ledge cuts to remove loose slabs and protrusions. Drainage work will involve closed drainage structures, slope pipes, and culverts. Approximately half the existing closed drainage and slope pipes, or approximately 55 outlet points, need to be replaced due to age and degradation.

Stream crossings that will be addressed by this project are as follows:

72" CMP Sta 396+00 NB & SB, – Tier 2 DA ~321 acres L = 368’
Q50 = 250 cfs; existing outlet velocity ~ 19 ft/s;
Invert is in poor condition and needs to be treated;

A 60” aluminized steel liner will be installed, which has approximately the same outlet velocity. A stone apron (30’ x 20’) will be constructed at both ends of the culvert.
Subsequent to the meeting, additional hydraulic analysis resulted in changing the proposed aluminized steel liner to a paved concrete invert.

48” CMP Sta 352+00 SB, – Tier 1 DA ~ 115 acres L = 96’
Q50 = 35 cfs; existing outlet velocity ~ 5.4 fps;
Pipe is in poor condition, with voids in invert.
Pipe will be replaced with a 48” reinforced concrete pipe, with an outlet velocity of ~ 9 fps. A stone apron will be constructed at the inlet (30’ x 12’) and outlet (12’ x 12’).

60” CMP Sta 14+00 SB On Ramp - Tier 1 DA ~ 144 acres L = 112’
Q50 = 82 cfs; existing outlet velocity ~ 6 fps
Pipe is in poor condition, with voids in invert.
This pipe is under a lot of fill and cannot be replaced without closing the ramp.
The pipe will be sliplined with smooth plastic (56” diameter), resulting in an outlet velocity of ~ 7.7 fps (Q50=95 cfs). A stone apron (25’ x 12’) will be constructed at the inlet and outlet.

2- 48” CMP Sta 320+00 NB & SB - Tier 1 DA ~102 acres L = 123 & 107’
Q50 = 100 cfs; existing outlet velocity ~ 14 fps
Inverts are pitting.
These pipes will be sliplined with corrugated aluminum to maintain outlet velocities.
A stone apron will be constructed at the outlet (30’ x 12’) and inlet (15’ x 10’) of the SB pipe. At the NB pipe, a stone apron at the inlet (30’ x 12’) and outlet (20’ x 12’) is proposed.
Subsequent to the meeting, it was determined that these pipes are located not on streams but in palustrine emergent/forested wetlands.

2- 48” CMP Sta 312+00 NB & SB - Tier 1 DA ~ 116 acres L = 136 & 107’
Q50 = 98 cfs; existing outlet velocities are low.
Pipes are rusty, pitted
These pipes will be sliplined with smooth plastic (42” diameter). To allow enough space for equipment to accomplish the sliplining, approximately 20 ft back from inlet must be excavated. Stone aprons will be required at inlets and outlets, and the Mortar Rubble Masonry headers of the NB pipe will need to be repointed.

66” CMP Sta 269+00 NB & SB - Tier 2 DA ~ 346 acres L =319’
Q50 = 155 cfs; existing velocity 7 fps
Voids in pipe.
This pipe will be sliplined with 60” smooth plastic, and the outlet headwall requires repair. Temporary impacts will be needed for water diversion as this pipe connects two beaver ponds.

30” CMP Sta 137+50 NB - Tier 1 DA ~ 80 acres L = 135’
Pipe has rusted invert, pitting.
This pipe will be sliplined with smooth plastic. Some excavation will be needed at the inlet to allow space for equipment to accomplish the sliplining. The outlet header also needs to be repointed.
Subsequent to the meeting, additional hydraulic analysis resulted in changing the proposed smooth plastic liner to a corrugated aluminized liner.

Work on large drainage pipes that are not located on streams (12 locations) will consist of replacing culverts, sliplining, repairing/replacing headers, and adding stone aprons or stone channel lining as needed.

Estimated wetland impacts consist of approximately 14,600 sq. ft. of permanent impacts and 17,400 sq. ft. of temporary impact. Total channel and bank impacts will be approximately 1,600 linear feet.

Rich Roach and Carol Henderson asked if any of the pipes located on streams were perched. K. Mudgett replied that he did not remember seeing any that were perched.

C. Henderson commented that the Department should consider a beaver pipe at the beaver pond location if beaver activity was a problem with the existing pipe. This suggestion would be considered.

Christine Perron noted that wetland impacts exceed the mitigation threshold and asked if mitigation could be waived given that the impacts are the result of numerous, small impact areas necessary for maintenance of existing structures. K. Mudgett added that most of the permanent wetland impacts were the result of the replacement of stone at inlets and outlets for scour protection. Gino Infascelli and Lori Sommer agreed that no mitigation would be required.

C. Henderson asked if the vegetation cleared from the ledge cuts would be primarily brush. K. Mudgett responded that it was largely brush. C. Perron noted that she has been coordinating with Kim Tuttle at Fish & Game regarding the potential presence of bald eagle in the vicinity of the river and reservoir.

C. Henderson asked the Department to try to roughen the bottom of the sliplined pipes if possible, and to address any existing perched outlets that would result from sliplining and could be improved.

Melissa Coppola asked if the cedar swamp, an exemplary natural community in the project area, was within any of the proposed clearing areas. C. Perron stated that the swamp was not in any area to be cleared, and that no trees would be cut in the cedar swamp.

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

Hampton Falls-Hampton, non-federal, 13408B

Peter Stamnas provided an introduction and explained that the purpose of the meeting was to provide an update on the current status of the project.

Matt Low provided a project overview and history of the project. The project was presented at the monthly Natural Resource Agency Coordination Meetings nine times during the development of the project's feasibility study between 2007 and 2009. The current project is the replacement of both bridges that carry I-95 NB and SB (4 lanes in each direction) over the Taylor River. In addition, the team is reviewing options for a deteriorating dam (that contains a fish ladder), which controls flows at the bridge crossing and creates a freshwater pond. Downstream from the site are tidal wetlands and salt marsh.

When the existing I-95 bridges were constructed, the Taylor River channel was moved north to its current location. The original concept for the proposed project was to design new bridges at the original river location, south of the current bridges. However, an intensive geotechnical boring program identified extremely poor soils at the former channel location, which would lead to the potential for substantial road settling after construction. It was determined that the existing bridge crossing location is the best spot for new bridges to be constructed due to having more suitable soils.

Jamie Paine provided an update on environmental work that has occurred recently. Data collection is ongoing. Wetlands delineations and invasive species identification have occurred within fresh and tidal

portions of the Taylor River and along a one mile length of I-95, to account for traffic control efforts that will be needed during construction.

A vibracoring program that included 35 locations, and subsequent lab work, was completed 1,000 feet behind the dam to help identify sediment depths, grain size, and potential contaminants within the sediments.

In order to address known dissolved oxygen issues behind the dam, Normandeau staff will be on site in early summer to complete a water sampling program. Coordination will also occur with National Marine Fisheries Service staff and NH Natural Heritage Bureau to identify any concerns with sensitive animals and plants.

M. Low explained that sediment transport from behind the dam to downstream locations has been identified as a concern. The team is working on defining a scope of services to model alternatives. Coordination will occur with NHDES and NHDOT to refine the scope. P. Stamnas stated that additional sediment testing will likely be needed downstream.

Rich Roach stated that the feasibility study did not identify a purpose and need regarding the dam. Relative to the Clean Water Act, the team should expect a lot of resistance on the dam aspect of the project regarding maintaining an ornamental pond and the Town of Hampton's concerns with sediment migration impacts to shellfish. Restoring the tidal estuary is more in line with the Clean Water Act, so there may be issues with permitting a dam. It is important to go to a hearing with a clear design that includes a dam removal alternative. P. Stamnas commented that there are pros and cons to both dam alternatives. The NHDOT is advancing bridge design to accommodate either dam replacement or removal.

Ted Diers commented that NHDES would need to see new sediment data and would then be able to discuss risk assessment. He added that he didn't think the feasibility study adequately assessed restoration. P. Stamnas stated that the additional studies being undertaken would help to provide a realistic assessment of existing conditions. The NHDOT is planning to get to a public hearing this summer. The team would come back to the Natural Resource Agency Coordination Meeting once more information is available.

It was confirmed with R. Roach that the ACOE is the lead federal agency. The NHDOT envisions two public hearings. Gino Infascelli stated that it makes sense to have an initial hearing with the NHDOT only to discuss dam vs. no dam and then a joint regulatory hearing once formal agency applications have been filed.

R. Roach commented that he would have to confer with others, but he did not feel that the project could be authorized under the State Programmatic General Permit if it proceeds with a dam replacement. However, if the dam removal option is pursued, the project may then qualify under the State Programmatic General Permit.

This project was previously reviewed on the following dates: 12/19/2007, 1/16/2008, 2/20/2008, 3/19/2008, 8/19/2009, 10/29/2009, 12/10/2009.