BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting
DATE OF CONFERENCES: September 9, 2010
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Bob Davis
Jill Edelmann
Bob Hudson
Tom Jameson
Marc Laurin
Nancy Mayville
Joyce McKay

Federal Highway Administration
Jamie Sikora

NHDHR
Edna Feighner
Jim Garvin
Peter Michaud
Linda Wilson

Town of Carroll
Harold Garneau

Historic Documentation Co.
Rich Casella

Hoyle Tanner
Sean James
Jason Lodge

Town of Hudson
Bernie Manor
Gary Webster

Town of Northumberland
Jim Tierney

NSPCB
Timothy Andrews
David Wright

Warren Street Architects
Jonathan Halle

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

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

Carroll (no project number) 1
Seabrook and Hampton, 15813 2
Hudson, X-A000(348), 14408 2
Statewide X-A001(123), 16080 3
Bath, 14439C 4
Newport, STP-TE-X-00S(417), 13500 6

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

September 9, 2010

Carroll (no project number)
Participants: Harold Garneau, Town of Carroll; Jim Tierney, Town of Northumberland; Jason Lodge, Hoyle Tanner; Nancy Mayville

The following items were discussed:

- The Old Town Farm Road Bridge is still currently stored in the Town of Carroll awaiting an adaptive reuse project opportunity per the MOA, which was prepared in 2008. J McKay indicated that the MOA was never executed by the Army Corps Of Engineers.

- The Town of Northumberland is proposing to take ownership and responsibility from the Town of Carroll for the Old Town Road Bridge and the commitments bound to it from the 2008 MOA. The Town of Northumberland is proposing to reuse the Old Town Road

Bridge in an adaptive reuse project for the installation of a bridge on Brooklyn Street over Roaring Brook, which is a Municipally Managed Bridge Aid Project. The town is prepared to take the risk that use of the bridge may not be possible. If the Town of Northumberland cannot use the bridge, it will seek another use for the bridge.

- Jim Tierney inquired about the requirements of the easement that would be placed on the bridge. J. McKay indicated that she would send him a copy of an applicable easement written for the Pingree Truss Bridge in Salisbury.

- J McKay indicated that the MOA would have to be revised and resubmitted for signatures with the appropriate language regarding the transfer of ownership and responsibility from the Town of Carroll to the Town of Northumberland. J Lodge will make the revisions to the 2008 MOA and submit to J McKay for DHR's review and comment.

- N Mayville indicated that the Old Town Road Bridge would require significant retrofitting in order to be eligible for the Brooklyn Street Bridge project. The current load rating is 3 tons and the required loading is 15 tons. N Mayville requested that further meetings/discussions be scheduled to determine if the adaptive reuse of the Old Town Road Bridge is feasible for the Brooklyn Street Bridge project.

It was noted that the MOA did not need to be signed before the bridge's relocation.

Seabrook and Hampton, 15813
Participants: Joyce McKay, NHDOT

J. McKay explained that the Town of Hampton requested the NHDOT remove the Drakeside Rd. Bridge along the Eastern Railroad from its abutments. Based on an agreement with NHDHR, this removal was completed. For it, the NHDOT completed an inventory form, documented the bridge with large format photographs, and transferred ownership of the I-beams to DRED for use in trail crossings. The Town of Hampton has now requested that the NHDOT remove the stone abutments so that flooding will not occur at this location on Drakeside Road and so that the corridor can be widened under the former bridge. The Town of Seabrook has requested that the NHDOT remove the bridge and the abutments of the Walton Rd. Bridge that goes under the Eastern Railroad. NHDOT has completed an inventory form for this bridge as well. Both bridges are individually eligible.

Linda Wilson requested that the towns present a more detailed project purpose and identify some alternatives to the bridge removal. She also requested RPR forms for the projects involving these bridges.

Hudson, X-A000(348), 14408
Participants: Jonathan Halle, Warren Street Architects; Gary Webster (gwebster@hudsonnh.gov) and Bernie Manor, Town of Hudson; Peter Michaud, DHR; Bob Hudson and Nancy Mayville, DOT

The Town of Hudson and Warren Street Architects met with the cultural resources committee to discuss the proposed rehabilitation of the depot. There was a discussion of turning the proposed station 90 degrees to face board walk and not Kimball Hill Rd. Town representatives agreed to contact the Benson's Park committee on the proposed use of train station, and if a turn is warranted. Peter Michaud from NHDHR agreed that aligning the depot to the boardwalk would be a more historically correct positioning of the structure, but a plan should be presented to the NHDHR for approval.

The project has to be in compliance with the town's easement with DHR. The foundation will be poured concrete with a full cellar. Since the visible side of the foundation will be obscured by the platform, concrete may be an acceptable material for the foundation. However, P. Michaud did have concern with the exposed concrete where the foundation drops off for access to the cellar. P. Michaud indicated that he needed to look at the HSR and seek a balance. There are new rules concerning lead paint on the station, which depend on the use of the building. Since the depot is not a daycare or dwelling, the presence of lead paint should not keep the town from rehabilitating the clapboards. They should not need to be replaced. The roof can be replaced with 3-tab asphalt shingles and not slate, however the shingle design should be approved by NHDHR prior to installation. G. Webster noted that there is also a need to fix the outside chimney before the roof is installed. Under the easement, P. Michaud indicated that the existing windows be rehabilitated, and to only add new windows where necessary in keeping with the Secretary of the Interior's Standards. In historic pictures in the HSR, the wood platform is only on 2 sides of the station, and steps up for the loading platform. Thus, the platform may not have originally covered three sides, at least at the same level. The Town will need to conduct all necessary phases of archaeological testing where utilities will be installed (water and sewer). The Phase IB would complete testing at 8-meter intervals and would be performed by a 36CFR61-qualified archaeologist approved by NHDHR. Peter Michaud asked that once the proposed location of the depot is determined that more consultation between the design team and the NHDHR be done. He noted that he would generally need 30 days to comment on plans submitted for his review.

The Town and architect decided that more information was needed before the next meeting on materials being used. Due to the possibility of the retention of original historic details under the modern overlay of materials as part of the building's conversion as a dwelling, there was also a discussion on hiring a 36CFR61-qualified architectural historian to inspect the interior of building to identify what is behind the paneling and check the ceilings so the rehabilitation can match what was there originally.

As of today's meeting, the Town had not hired their consultant yet, so it is proving difficult to ask for estimates for the work without being paid. The town has paid him to come to this meeting due to the importance of the meeting. The Town is hoping to have the architect under contract by November. G. Webster asked about any grants that could help with finishing the station in the future. P. Michaud informed him of the LCHIP Grant and the Moose Plate Grant.

Statewide X-A001(123), 16080
Participants: Marc Laurin and Bob Davis, NHDOT

Bob Davis discussed the Department's five-year cable guardrail replacement program that will replace cable guardrails with W-Beam guardrails and remove "F"-Units throughout the State as funding becomes available. The priority of the areas to be selected is based on traffic volumes and

accident rates. This year a 6.8-mile section along NH 119 through the Towns of Winchester, Richmond, Fitzwilliam and Rindge will be addressed. The project will remove the old guardrail, level off the shoulders to accommodate the steel posts for the new guardrails. In the area adjacent to Roaring Brook, 9-foot long posts will be installed to avoid impacts to the bank.

Joyce McKay stated that she investigated the project area, as well as two other segments, one in Charlestown along NH 12 and another along US 4 in Lebanon, Enfield and Canaan, and found that there are no historic properties that would be impacted by the replacement of the guardrails. One stone culvert will need to be spanned by the guardrail posts. A No Historic Properties Affected memo was signed that encompasses these three areas, but the NH 12 and US 4 projects will most likely be scheduled for 2011 advertisement.

A general discussion on the review of the future guardrail replacement projects ensued. Jamie Sikora stated that as the 2008 DOT/DHR/FHWA Memorandum of Understanding (MOU) is being reviewed, and suggested that these projects could be added as part of any new MOU. Edna Feighner stated that in general replacement of guardrails is not of archaeological concern. Linda Wilson did not have concerns with guardrails on high fills, and thought that the replacement guardrails would be less intrusive that the existing large wood posts. There should not be an issue unless the new guardrail is extended along a significant historic resource. She suggested using aerial photos, if available, to identify areas that needed closer evaluation.

Bath, 14439C
Participants: Sean James, HTA (sjames@hoyletanner.com); Rich Casella, Historic Documentation Company; Jim Garvin, DHR; David Wright and Timothy Andrews, NSPCB; Nancy Mayville, NHDOT

This project has previously been discussed at the 9/11/2008, 10/9/2008, 4/2/2009, 4/8/2010 and 8/5/2010 Cultural Resource Committee meetings.

A draft Historic Structures Report (HSR) was prepared by Historic Documentation Company, Inc (HDC) and Hoyle, Tanner & Associates, Inc (Hoyle, Tanner) and was submitted to the New Hampshire Division of Historical Resources (NHDHR). Review comments were received from NHDHR and the National Society for the Preservation of Covered Bridges (NSPCB) and responded to by Hoyle, Tanner and Historic Documentation Company, Inc. (HDC) prior to this meeting.

Rich Casella stated that he would more clearly state the available alternatives to each component of the bridge when there are adverse effects.

J. Sikora noted that he read the HSR and review comments and wasn't sure that all the effects were adverse or that alternatives weren't reviewed. There was some discussion as to which parts of the project constituted an adverse effect. J. Garvin felt that replacement of historic fabric constituted an adverse effect. According to the *Secretary of the Interior's Standards*, as much original material as possible should remain. He noted the high significance of the Bath Covered Bridge.

T. Andrews discussed the availability of old growth spruce and noted that it is available in Maine and he has used it on past covered bridge projects. S. James noted that it is available, however there can be issues with getting the material graded and in the sizes needed for the project in a reasonable amount of time and in a cost-effective manner. It was agreed that cost shouldn't be the only consideration in determining a replacement material; however it does need to be considered.

T. Andrews also noted that sistering of deteriorated components was allowable because it left the original piece in place. However, S. James was concerned about the added dead load and preferred splicing for that reason.

D. Wright brought examples of wood with checking and stress cracks. S. James noted that no members in the bridge were being replaced due to checking or wane and that the HSR would be amended to make this clearer.

D. Wright had the following comments on the project and the HSR, which were discussed.

- A copy of a photograph, estimated to have been taken in the 1940's, was distributed. It showed an elliptical portal. He asked that consideration be given to recreating this feature.
- He noted that the HSR was one of the better reports he had read and was pleased that the actual density of wood was used versus the AASHTO value of 50 pounds per cubic foot.
- He noted that in 1987 the south siding was replaced in its entirety and the north siding was partially replaced. He visited the bridge several times during the rehabilitation and may have photos of the construction.
- He disagreed that splices are not as long-lived as a fully replaced piece. There was some discussion on this point with counterpoints made that splices may not be as long-lived when they contain steel components exposed to salts.
- He thought that the addition of lateral bracing underneath the bridge was reasonable.
- He noted that the National Park Service is performing some full scale testing of load distribution in covered bridge floors, however the results will not be completed in time to be incorporated into this project.
- He noted that there was sand build up on lower portions of the truss and recommended that the interior siding be removed as part of the rehabilitation. S. James responded that he agreed with the comment; however the Town has a strong concern with safety in the bridge. In the past when only a single layer of siding was in place, numerous boards were removed at the pier to gain access.
- The use of shiplap versus tongue and groove siding was recommended. The heart-side should face out so that there is less curling.

Other issues were discussed.

- The restoration of the bridge's camber, if possible, was discussed. S. James noted that there was a 9" sag. Hoyle, Tanner typically does not address this issue until final design. There was concern expressed about jacking up the bridge. There are already many crushed trunnels and elongated holes.
- S. James noted that there was no intent to shorten any of the sleeper beams.
- S. James noted that much of the lower later bracing was barely attached. He did not believe that any original members remained.

T. Andrews noted that the NSPCB was generally not in favor of glulam use in covered bridges. S. James noted that several options were studied for the floor framing and glulam was the option that had the least overall weight and smallest environmental impact. The lighter weight is important to reduce loads on the trusses and concerns had been raised previously by the Town on the environmental impact of cutting over 180 large trees for floor beams for the bridge.

T. Andrews stated that adding a bolt at the intersection of the upper lateral bracing diagonal members was undesirable. S. James noted that it was being recommended to cut down on the unbraced length of the members to increase their capacity of wind loading. The addition of the bolt is minimally invasive.

There was some discussion as to the next steps in the review process. The following was agreed upon:

- J. Sikora will review the process for a Programmatic net benefit project.
- Hoyle, Tanner will prepare a draft effects memo and distribute for review.
- Hoyle, Tanner will revise the preliminary plans and distribute to the NSPCB, Bath Historical Society and NHDHR for review and comment. NHDOT has previously approved the earlier version of the plans.
- The project will be discussed at a Cultural Resource Committee meeting in October. The exact date is to be determined.

J. Garvin noted that the adverse effect memo would require a MOA. The Historic Structures Report would serve as part of the mitigation. Additionally, the stipulations should include review of the contract documents by DHR and a periodic review of the project during final design and construction to deal with problems as they arise.

Newport, STP-TE-X-00S(417), 13500
Participants: Nancy Mayville and Tom Jameson. NHDOT; Jim Garvin, DHR; David Wright and Timothy Andrews, NSPCB

Present for this discussion were Jamie Sikora of the Federal Highway Administration; Nancy Mayville, Thomas Jameson, Joyce McKay and Jillian Edelmann of NHDOT; and Linda Ray Wilson, Edna Feighner and James Garvin of NHDHR. Also present as observers were David W. Wright and Timothy Andrews of the National Society for the Preservation of Covered Bridges.

The purpose of this discussion was to sum up and decide on appropriate next steps in response to the evolution of this project. The project has changed from its initial definition as a fire protection program with very limited structural intervention to a project that has involved major structural repairs to three lower truss corners of Wright's Covered Railroad Bridge and to the top truss chord and lattice ends on the downstream (south) side, with the possibility of almost total replacement of this chord and many additional lattice ends.

The original memorandum of effect, dated May 7, 2009, defined the project as "fire protection and structural repairs to Pier and Wright's covered bridges, to include sprinklers, 'Protectowire,' 'Nochar,' siding repairs, roof patching and truss repairs." The project as proposed was found to have "No Adverse Effect" based on a written commitment that "repairs to the bridge will be made

'in-kind' in accordance with the 'Secretary of the Interior-Standards for Rehabilitation.'" Initial project drawings, dated December 2008, showed no structural repairs to Wright's Bridge. Later drawings, beginning in August 2009, showed increasing quantities of repair to the south truss, culminating in a proposal by the engineer of record, Dubois & King, to replace essentially 100% of the southern top chord and many additional lattice ends. The purpose of this cultural resources meeting was to discuss the effects of these changes and the next steps in defining the project design and administration.

Reporting on a field inspection at the bridge on September 7, Mr. Jameson, Ms. Mayville, and Mr. Garvin explained the current status of the project and distributed photographs of completed work and existing conditions, taken on September 7. There are now barely enough funds and materials available to complete repairs to the bridge as contemplated in the latest contract drawings, dated December 2009, with additional repairs authorized by a change order to reflect the discovery in April 2010 of additional deterioration.

The engineer of record, however, has offered an opinion that the bridge will be structurally unsafe if repairs do not proceed to full replacement of the downstream top chord and associated lattice ends. This work is estimated to cost an additional $135,000, plus engineering fees, bringing the total added cost to some $155,000. While Transportation Enhancement (TE) funds would be available to reimburse 80% of this added cost, no one has yet positively identified sources of the required 20% match, amounting to some $23,000 beyond a match balance that is currently available. Identification of this cash match is urgent because of 1) the possibility that the bridge will be declared unsafe if the additional work is not completed, 2) the contractor's immediate need to order lumber for the additional work, and 3) the need to demobilize and clear the bridge for snowmobile traffic by mid-December 2010.

Discussion followed on means of securing a second opinion on the structural capacity of the bridge, including the possibility that NHDOT engineers might offer an evaluation. Mr. Andrews noted that the Historic American Engineering Record (HAER) had conducted hydraulic loading and deflection tests on Contoocook Covered Bridge, using a method that might be used at Wright's Bridge. He offered to contact Rachel Sangree of Johns Hopkins University, a member of the field load testing team at Contoocook Bridge. James Garvin reported that HAER had carried out a study of Wright's Bridge, and offered to try to learn whether any structural analysis was done as part of that study.

Discussion also centered on the degree to which this project had changed from its definition under the signed Memorandum of Effect of May 2009, quoted above. FHWA stated (and there was consensus) that the original Section 106 review has closed and does not need to be reopened, but FHWA will continue to communicate and cooperate with all of the stakeholders to develop a workable resolution. FHWA will treat the National Society for the Preservation of Covered Bridges as if it were a formally designated consulting party.

Jim Garvin will check to determine whether the Historic American Engineering Record (HAER) carried out a structural analysis of the bridge when HAER recorded the bridge in 2002. Joyce McKay will locate and share the original "no adverse effects" memo for the project as it was approved and funded.

****Memos/MOA's**: Statewide 16080; Ossipee 15535; Lee-Durham 14461

Submitted by: Joyce McKay, Cultural Resources Manager
Jill Edelmann, Cultural Resources Assistant

http://www.nh.gov/dot/org/projectdevelopment/environment/units/technicalservices/crmeetings.htm