# BUREAU OF ENVIRONMENT
## CONFERENCE REPORT

**SUBJECT:** Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting
**DATE OF CONFERENCES:** May 10, 2012
**LOCATION OF CONFERENCE**: John O. Morton Building
**ATTENDED BY:**

**NHDOT**
John Butler
Bryanne Campbell
Jill Edelmann
Bob Hudson
Wendy Johnson
Bob Landry
Steve Liakos
Brian Lombard
Don Lyford
Kirk Mudgett
Kevin Nyhan
Christine Perron
Alex Vogt
Trent Zanes

**Federal Highway Administration**
Jamie Sikora

**NHDHR**
Laura Black
Peter Michaud
Beth Muzzey

**Albacore Park**
Ken Herrick
Paul McEachern

**Historic Documentation Co.**
Rich Casella

**Hoyle Tanner**
Bill Davidson
Sean James
Jason Lodge
Matt Low

**Town of Allenstown**
Paul Apple
Ron Pelissier

**Town of Peterborough**
Rodney Bartlett

**City of Portsmouth**
Cindy Hayden*

**Town of Winchester**
Margaret Sharra

**participant via conference call*
*(When viewing these minutes online, click on an attendee to send an e-mail)*

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*May 10, 2012*

**Peterborough, 14935 (no federal number)**
**Participants: Jason Lodge and Matt Low, Hoyle Tanner; Rodney Bartlett, Town of Peterborough; Steve Liakos, NHDOT**

J. Lodge provided an overview of the project which includes the rehabilitation or replacement of NHDOT Bridge No. 057/108 carrying Union Street over Nubanusit Brook. The project is a municipally managed, state funded bridge project.

The bridge was constructed in 1937 and is a cast-in-place concrete rigid frame bridge with stone facing and stone parapets. It is adjacent to the Union Street dam.

Complete replacement and rehabilitation of the bridge were evaluated. Concrete core testing of the leg concrete indicates that the concrete strength is very high (6,000 to 9,000 psi) and does not show signs of alkali-silica reactivity (ASR) or high levels of chloride ion intrusion. The top slab/deck shows signs of deterioration due to the failed membrane and intrusion of salt-laden water.

The rehabilitation option, which is preferred, would include complete replacement of the top slab and parapets and mapping and resetting of the stones. The width and other geometry would remain essentially the unchanged. The rigid frame structure would be replaced in-kind, and the bridge would remain a rigid frame functionally.

Construction would occur in phases to be able to maintain one lane of alternating traffic by use of signals. The phasing would eliminate the sidewalk during construction necessitating a temporary pedestrian bridge which could be located upstream or downstream.

Discussion ensued about the surrounding known and potentially National Register-eligible properties and the project's effect on them. The rehabilitation of the bridge is unlikely to have adverse effect on these surrounding properties as the bridge will look the same/similar to existing, but the temporary pedestrian bridge may have impacts that need to be explored.

Edna Feighner, NHDHR archaeologist was not present at the meeting but commented ahead of time that disturbance outside of the existing shoulders would require archaeological investigation.

L. Black wondered if this project would be within a West Peterborough Historic District. The National Register-eligible Union Manufacturing Co. Mill property is in the project Area of Potential Effect. M. Low pointed out that the project is just beyond the limits of the Downtown Peterborough Historic District delineated as part of the Peterborough (NHDOT Project No. 14933) Main Street Bridge project.

L. Black stated that more information is required about the details of the pedestrian bridge construction and the identification of resources for the determination of whether the temporary pedestrian bridge would have adverse effects on the contributing factors of the adjacent properties. The Union Manufacturing Co. Mill inventory form should provide information regarding its National Register boundary and contributing/non-contributing elements. Manager's housing in the southwest quadrant may be identified within that form

L. Black stated that Hoyle, Tanner should copy the inventory forms available and review them to help with project development. Action items to be prepared for subsequent meetings include:

- Individual Inventory Form on the bridge.

- Archaeological Phase 1A at all areas where disturbance might occur outside the existing shoulders.
- Review the four (4) quadrants to determine eligibility status and contributing features that might be affected as a result of the bridge project and temporary pedestrian bridge installation.
- Provide NHDHR with engineering plans for the pedestrian bridge.

**Henniker, 15718 (no federal number)**
**Participants: Jason Lodge and Matt Low, Hoyle Tanner; Steve Liakos, NHDOT**

M. Low explained that this was the second presentation of this project to the Cultural Resources Committee. The initial meeting was in April 2010.

M. Low explained the purpose of the project was to investigate rehabilitation or replacement of the Western Avenue Bridge over the Contoocook River, NHDOT Bridge No. 095/100 in Henniker.

In April 2010, Hoyle, Tanner illustrated to the committee the extremely poor condition of the existing High Pratt Truss bridge. Since that time alternatives have been developed for evaluation including:

- Rehabilitation.
- Replacement of the Western Avenue Bridge with a four-span steel and concrete structure or a two-span prefabricated truss structure.
- Replacement of the Patterson Hill Road truss bridge with a single or two-span steel and concrete structure.

Hoyle, Tanner provided a handout which explained the alternatives and illustrated conceptual plans.

L. Black mentioned that the results of the April 2010 meeting indicated the following research was necessary:

- Phase 1A Archaeological Investigation – this was done by IAC in 2010 and submitted to NHDHR with concurrence by E. Feighner.
- A Project Area Form – a “supplemental” area form was prepared in 2010 to supplement a 2002 Project Area Form.

M. Low indicated that the preferred alternative at this point is replacement of the Western Avenue Bridge with a new truss bridge. L. Black stated that this alternative seemed to be reasonable; removing the truss from this location would alter the setting of the surrounding area. The project is located within the West Henniker Village Historic District.

The next steps are an upcoming public meeting and Phase 1B archaeological research. M. Low stated that after the upcoming public informational meeting, the phase 1B could be completed and the Engineering Study completed. Engineering plans with slope impacts should be provided for review.

L. Black requested a report be submitted to DOT/NHDHR documenting why rehabilitation was no longer viable so that the replacement option could be justified.

It was also noted that federal funds are expected in the near future.

**Winchester, X-A001(100), 16034**
**Participants: Bill Davidson and Sean James, Hoyle Tanner; Rich Casella, Historic Documentation Company; Margaret Sharra, Town of Winchester; Bob Hudson, NHDOT**

The project was presented by Bill Davidson and Sean James from Hoyle, Tanner & Associates, Inc. and Rich Casella from Historic Documentation Company, Inc. B. Davidson provided an overview of the project which proposes to install/replace sidewalks from Warwick Road (RT 78) down Main Street (RT 10 & 119) over Mirey Brook and ending at the intersection of Main Street and Elm Street. S. James discussed the two options being studied for crossing Mirey Brook. These options include a new, stand alone, single-span pedestrian bridge located just upstream of NHDOT Bridge No 120/077 over Mirey Brook or an added sidewalk on the existing bridge. The stand-alone bridge would be located in a previously disturbed area between the roadway bridge and an underground sewer line upstream of the bridge. The added sidewalk would be located on the vehicular bridge and would require replacement of the upstream bridge railing. The bridge is a 1941 steel stringer bridge which had been redecked, widened, and reinforced with beams in 1987. Construction of the project is proposed for 2013 and only a small portion is located outside the right-of-way.

R. Casella discussed a scoping study dated May 2012 that he prepared for the project. The report includes a discussion of four National Register Listed or Eligible properties in the project area, a Town designated historic district and three properties over 50 year of age. He noted that a defined local historic district was approved by the Town in 1997 and there is also a “Winchester Village Historic District” that was determined potentially National Register Eligible by the NHDHR on 12/23/2004. The two areas overlap, however the 2004 potentially eligible district boundaries have not been formally defined. R. Casella noted that the proposed project does not pose any direct physical impacts to historic buildings or contributing features to the district.

J. Sikora asked if special consideration was being made to the sidewalk material type. B. Davidson noted that the project will be presented to the Historic District Commission to get their formal input on the project and material type.

It was agreed by all parties that NHDHR would review the scoping report submitted today and would respond with their thoughts on the project to all parties.

**Portsmouth, STP-X-5379(025), 13455**
**Participants: John Butler, Jill Edelmann, Wendy Johnson, Bob Landry, Kevin Nyhan, Alex Vogt, NHDOT; Jamie Sikora, FHWA; Laura Black, Peter Michaud, Elizabeth Muzzey, NHDHR; Ken Herrick, Paul McEachern, Albacore Park; Cindy Hayden, City of Portsmouth (via telephone)**

This was the initial meeting discussing creating a permanent Albacore Connector Road between the US Route 1 Bypass and Market Street. The road was formed and kept in place to do various NHDOT projects, including work on the bridges over the Piscataqua River that required temporary use of the road in order to move goods and people across the river. The Connector Road was viewed as a permanent feature in the Connections Study, and deemed the road necessary for projected future traffic patterns.

John Butler reviewed the preliminary design plans to make the Connector Road a permanent city road. Two initial designs were shown to the group. Both designs removed the sidewalk on the east side of the bridge, and extended the sidewalk from Market Street to the Albacore Park entrance. The designs differed slightly in the placement of the conceptual ROW lines and the connection location to the US Route 1 Bypass. J. Butler noted that the temporary jersey barriers would be removed and permanent barriers would be set in place. The pending replacement of the Sarah Mildred Long Bridge should not have am impact on the Connector Road.

K. Herrick noted that Albacore Park Trustees had requested that the ROW lines be held to the edge of pavement for the potential future development of the park. Paul McEachern added that plans had previously been drafted up per the current set-back lines, and would provide a copy of that information to the Department for use in their development. It was also pointed out to the Department that the 2004 appraisal for the land did not include the bridge, and it valued the land the Department would be taking as house lots.

The Division of Historical Resources recently reviewed the Individual Inventory form that was completed for Albacore Park, and requested more information from the consultant. [This effort was being completed under the Sarah Mildred Long project, NHDOT #15731.] FHWA and the state DOTs are waiting to see what additional information was requested, and proceed from there. Jamie Sikora initially agreed with the consultant's findings that the park was not eligible, and that the permanence of the Connector Road would need to address only the impacts/effects to the Albacore submarine. If the Park is determined not eligible, there would be no 4(f) use of the Park according to J. Sikora. Discussion occurred regarding why the park was being evaluated for eligibility – contributing to resource v. integrity of setting, feeling, and association – a topic previously raised by the NHDHR.

K. Herrick added that since the road was established there have been flooding issues in the basin, and the Park has had two studies done on water and erosion issues. Elizabeth Muzzey agreed that these issues needed to addressed, especially when dealing with a National Historic Landmark (determined an NHL in 1986).

K. Herrick also noted that there was incorrect information sent to NHDHR on their Request for Project Review that the Department filled out. He will provide corrections to the inaccuracies, and K. Nyhan will resubmit.

Action items were discussed to move forward with the project:

- Document a Purpose & Need statement – Bob Landry will develop and distribute a purpose and need statement to the group.

- Review Determination of Eligibility (DOE) sheet – once the DOE sheet is received by FHWA, NHDOT and MaineDOT, the requested additional information from NHDHR will be assessed, and if deemed reasonable will require the consultant to address any questions raised.
- Consulting Parties will be identified and invited to participate – Currently Albacore Park and the City of Portsmouth have requested to be consulting parties to the project. The Department will look to invite the Navy, any Maritime Associations in the area, Veterans groups, Portsmouth Historic Society and/or other interested historical societies. A formal list will be reviewed with NHDHR.
- Review of Alternatives – under Section 106 a thorough review of alternatives, including those on different alignments need to be considered.
- Review of any physical impacts to the Albacore submarine and its basin. E. Muzzey specifically called out the flood issue, and any issues with vibration. K. Herrick agreed that the basin flooding needs to be addressed, however the boat was made to withstand large explosions at close range (depth charges), and is currently sitting next to a major roadway (Route 1 Bypass); any vibrations from the increase of traffic on the Connector Road would not be noticed.
- Jamie Sikora will inform the Advisory Council on Historic Preservation of the project immediately, and will also inform the National Park Service of potential adverse impacts to the NHL.
- E. Muzzey suggested that the project be looked at under Section 106 and Section 110. It was also strongly suggested that the project be looked at under Section 4(f)'s constructive use agreement.
- The Department and Albacore Park Trustee will continue discussions of the temporary easement which ends on October 31, 2012. The Park has requested the Department supply them with information at least 60 in advance in order to properly review.

**Barnstead, X-A001(174), 14121E**
**Participants: Don Lyford, Kevin Nyhan, Trent Zanes, NHDOT**

Trent Zanes discussed this project, which involves safety improvements at the intersection of NH Route 28 with Peacham Road and White Oak Road. Deficiencies include confusing turning movements at the intersection, which lead to traffic accidents with turning traffic. Improvements would limit conflict points by connecting Lake Shore Drive and Yield Road just south of the White Oak Road intersection with NH Route 28. Access to these local roads would be via White Oak Road rather than NH Route 28 . Platforms would be added at the intersection, which would also be raised slightly, to improve intersection sight distance. These improvements would concentrate all turning movements at the intersection with Peacham Road and White Oak Road.

Three parcels were identified as potentially historic as part of the Project Area Form completed for the NH Route 28 corridor project. The Department's consultant recommended that one of these would be eligible for the National Register. After DOE, it was determined that two are eligible (Parcels 15 and 19). Kevin Nyhan asked how this happens when an historian recommends a parcel be eligible or not, and it is changed by NHDHR. Laura Black explained how the DOE process works.

T. Zanes indicated that at Parcel 15, NH Route 28 would be pushed away from the property. Some slope work would go up to the existing retaining wall in front of the parcel, but the edge of pavement would be approximately 12' further away. Other impacts include disturbing a stonewall, right of way purchase, tree clearing to maintain sight distance and cutting into the slope on the side of the parcel along NH Route 28.

At Parcel 19 (former White Oak School) the intersection approach would be lowered at Peacham Road, and the approach at White Oak Road would be raised. A retaining wall would be constructed along the northerly side of this parcel as slope impacts would have directed drainage at the house. There would be additional green space since NH Route 28 would be 25-30' further away from the house. A stonewall would likely be impacted on the west side of the roadway as well to address proper drainage. Avoiding this property would have required shifting the intersection north, which would have impacted and likely required property acquisitions along the east side of NH Route 28 and along Ripple Road.

L. Black asked that she be provided up to 30 days to review the information and impacts before an effect determination could be made. A detailed plan of the impacted areas was provided to NHDHR after the meeting.

**Barrington, X-A001(173), 16178**
**Participants: John Butler and Christine Perron, NHDOT**

The purpose of the meeting was to discuss stone wall impacts. Christine Perron provided an overview of the stone walls in the project area. Phase One (Project Rating System) of the screening process has been completed as specified in the NH Stone Wall Reconstruction Policy. The project has a Phase One score of 78, which exceeds the cutoff of 70, meaning that all disturbed stone walls within the project area should be considered for reconstruction.

Approximately 60% of the project area is lined with stone walls. The only wall that will be impacted is a 200' long section along the south side of US Route 202/NH Route 9. This side of the roadway is lined with three segments of wall; the wall that will be impacted is the middle section. All three segments are in poor condition, with numerous gaps and a number of sections consisting of only a single line of rocks. In general, the rubble type construction walls on this side of the road are not clearly visible while driving, especially during the summer months when dense vegetation screens the walls. Walls in other areas of the project are generally in better condition. It would be feasible to reconstruct the wall that will be impacted; however, given the wall's poor condition, the Department was seeking feedback on the necessity of reconstruction.

John Butler discussed impacts in more detail. The wall in question will be impacted by the extension of a culvert and relocation of a ditch line to allow for the slight widening of 202/9 for the creation of a bypass shoulder. There will also be a sight line easement in this area in order to clear trees to improve visibility at the intersection. If the 200' segment of wall is reconstructed, there are three options. First, the wall could be reconstructed close to its current location but it would no longer be at the woods line. Second, the wall could be reconstructed at the new woods line, but it would no longer be in line with the remaining walls on this side of the roadway. Third, the stones from the impacted portions of the wall could be added to non-impacted portions.

Jamie Sikora asked if the walls contribute to the eligibility of the property. C. Perron explained that the entire area at and around the intersection was once part of the Hale farm. The report completed by the Preservation Company discussed how the area south of US Route 202/NH Route 9 no longer conveys its associations with the Hale farm since it has been subdivided and developed. Laura Black reiterated DHR's concern that this report was not researched by an archaeologist.

J. Sikora said that he could see this project being a no adverse effect.

L. Black explained that Edna Feighner would need to review the stone wall information and provide input on how to move forward. C. Perron said that the public hearing is tentatively scheduled for July.

**Barrington, X-A001(181), 16201**
**Participants: John Butler and Christine Perron, NHDOT**

The project proposes to install traffic signals and turn lanes at the intersection of NH Route 125, Tolend Road, and Green Hill Road. The purpose of this second meeting was to provide an update on additional environmental analyses and public coordination, specifically in regards to the potentially historic house owned by Mr. Brulotte. Christine Perron first described the project setting. Traffic signals are currently located approximately 2 miles south and 1 mile north on NH Route 125. The project area is zoned by the town as "Regional Commercial", including the south side of Tolend Road. Of the 6 buildings adjacent to the project, 5 are commercial. The former alignment of NH Route 125 went behind the Brulotte house until the late 1970s. The existing ROW is established with a chain link fence, with some small trees located between the fence and the Brulotte house. The front of the Brulotte house faces Tolend Road and overlooks a commercial property.

C. Perron then described the additional environmental analyses that have been completed. An air quality analysis shows that overall efficiency and congestion of this intersection will improve as a result of the proposed project. As a result it could be concluded that this project will not negatively impact air quality and may result in a slight improvement in air quality. The noise analysis determined that the current noise level at the Brulotte property is 60.3 dB. Over the next 20 years, as a result of the proposed project and expected increases in traffic, noise levels at the Brulotte house are expected to increase by 2.2 dB, a change that is not perceptible to a person with average hearing. No receptors within the project area have been identified as being impacted by highway traffic noise as defined by FHWA.

As agreed upon at the previous meeting, an abutter notification letter was sent to Mr. Brulotte prior to the Public Informational Meeting and included additional language regarding notifying the Department about concerns with historic resources. Mr. Brulotte called Bill Oldenburg at the NHDOT prior to the Public Informational Meeting to express support for the project. The Public Informational Meeting was held on March 1, 2012. Mr. Brulotte attended and voiced no concerns. A representative of the Historical Society also attended the meeting and expressed support for the project following the meeting. The Planning Board, Land Use Office,

Conservation Commission, Historical Society and Strafford Regional Planning Commission all contributed to the response to the Bureau of Environment's initial contact letter mailed on July 1, 2011. This letter specifically asks if there are any concerns with historic resources. The response to the letter indicated that there were no concerns with historic resources.

For the reasons discussed, the Department believes that the area of potential affect is contained within the project limits, which are within the existing right-of-way.

Jamie Sikora stated that based on the information provided, he believed the project would have no impact on any resources and could have "no adverse effect".

Laura Black said that she understood why this conclusion could be reached and agreed that the information provided was useful to have. However, it was DHR's position that projects need to go through all steps of the 106 process, including determination of an Area of Potential Effect and eligibility of properties. She stated that, for this project, the Department would need to thoroughly document why the chosen effect finding was made.

**Allenstown, X-A000(783), 15550**
**Participants: Paul Apple, Allenstown Town Administrator (PApple@allenstown.org); Ron Pelissier, Allenstown road agent**

Paul Apple, Allenstown Town Administrator and Ron Pelissier, Town Road Agent were present to discuss what the next steps were as far as cultural resources for the Safe Routes to School project that was originally presented on 8/13/2009. Laura Black reviewed the minutes from the 2009 meeting and asked for updates regarding any impacts to landscape features and the requested Phase IA archaeological sensitivity assessment. J. Edelmann responded that the Phase IA report was completed and accepted by NHDHR on 4/28/2010. L. Black stated that a Request for Project Review form was requested in the DHR project file, and has not been submitted to date.

P. Apple agreed to complete the RPR form and will address the question raised earlier regarding landscape features in the form. As the project stands now, all work will be contained to within the existing right-of-way, with the exception of one spot on the corner of Ferry and Main. Photographs were shown of the area, where the town will be acquiring a small triangular piece of property to be able to make the sidewalk turn the corner without protruding into the street. L. Black expressed no concern with this acquisition.

It was agreed that the Town will completed the RPR and provide pictures of the area, along with design plans, and a narrative describing any impacts, or lack of impacts, to the landscape features in the area, i.e. stone/brick walls, granite posts, fences, etc.

A completed RPR was submitted to NHDOT on 5/11/2012, and forwarded along to NHDHR for review and comment.

**Wentworth-Rumney, X-A001(194), 16221**
**Participants: Bryanne Campbell, Kirk Mudgett and Christine Perron, NHDOT**

Christine Perron provided an overview of the National Register eligible historic district in the Village of Wentworth (Wentworth Village Historic District). The project proposes to reconfigure the East Side Road intersection from its existing skewed alignment to a "T" alignment. This intersection is located at the southern edge of the district, across the river and down the hill from the village center. The intersection was created with the construction of Route 25 in 1937, resulting in a bypass around the village.

East Side Road is currently located immediately adjacent to the Wentworth Town Hall, a contributing element of the historic district and individually eligible for the National Register. The town hall was constructed in 1898. It originally had horse stables where the current parking area is located; these were removed in 1940. The Individual Inventory Form for the town hall does not discuss the intersection or the roadway, so the landscape does not appear to be a character-defining feature.

The proposed project would move East Side Road and its intersection with Route 25 further away from the town hall, creating more green space between the road and the building and additional parking space at the town hall. Kirk Mudgett explained design details of the intersection realignment. The realigned portion of East Side Road will be at a lower elevation than the existing town hall parking lot. The area will be re-graded to reestablish a parking area. The current parking area is really just a pull-off area. With East Side Road lower and further away, a more formalized drive and parking lot configuration is possible. The parking area will remain unpaved and unlighted as it is now.

C. Perron stated that an archaeological survey will be completed as requested in the area of the former grain store where East Side Road will be moved.

Laura Black asked if the area around the Town Hall could be considered a sub-village. C. Perron responded that the district area form did not discuss the area around the town hall in that way. Jill Edelmann added that the Town Hall was located outside the village center because the land was donated for that use.

L. Black said that from the standpoint of the historic district, the project would have no adverse effect. She felt the proposed intersection realignment would have a minimal impact on the historic district since there had already been major changes in the roadway with the construction of Route 25. The East Side Road intersection is a secondary intersection to the district. The intersection is located at the edge of the district and is not a focal point of the district. In regard to the Town Hall, the changes to this property show that the parking area has evolved over time but has retained its connection to transportation (parking) use. The changes proposed by the subject project are low key given that the parking area will remain unpaved and unlighted.

L. Black stated that the next step would be to complete the archaeological survey. She also asked for a memo that explained work proposed along the remaining length of the project.

**Walpole, 66017R**
**Participants: Brian Lombard and Christine Perron, NHDOT**

Brian Lombard provided an update on the effort to repair the damaged stone arch culvert on Houghton Brook. Now that the repairs to the top of the arch have been completed and fill has been placed back over the arch, Rail & Transit has assessed the remaining work at the site that will be done this summer. Two new areas outside the arch at the inlet end require work, and there is new information impacting the proposed toe wall on the inside of the arch that was previously approved.

The first new work is the need to extend the concrete toe wall from the inside of the arch on the south side to cover the base of the inlet wing wall on the southeast side. Water is infiltrating under the wing wall and getting behind the south wall of the arch that could cause additional wall problems in the future. The reinforced concrete toe wall at the inlet wing wall will be approximately 24” high by 12” wide and will cover half of the first course of exposed block.

The second area of new work is on the brook embankment upstream of the southeast inlet wing wall. During the high water in 2010 at the time of the arch collapse, several small trees on the upstream slope were washed out exposing the slope to erosion. During a wind storm in early 2011, two other large trees were uprooted in the same area exposing even more slope to additional erosion. The trees have been removed and the overturned root balls will be removed shortly. We propose to add 12”-24” rock to the lower portion of the slope and smaller rock to the upper portion of the slope to stabilize it and protect it from further erosion.

While inspecting inside the arch once water levels went down and additional material had washed out of the arch, remnants of the old foundation for the toe wall on the north side of the arch were found. The top portion of the old concrete toe wall was washed out because there was no resteel connecting the foundation and top slab. Rail & Transit originally planned to install a 12” wide toe wall on the north side, but now it will be necessary to connect to the old foundation wall resulting in a 24” wide toe wall. This wider reinforced concrete toe wall will match the width of the remaining sections of toe wall and replace what existed before. Dowels will be grouted into the old concrete foundation and arch walls to secure the new concrete toe walls. It was also determined that it would be necessary to extend the 12” wide toe wall on the south wall all the way to the inlet.

Laura Black agreed that these additional repairs made sense. The existing Adverse Effect Memo will be revised to include the additional repairs.

**Walpole, stone arch culvert at MP 106.5 (no project numbers)**
**Participants: Brian Lombard and Christine Perron, NHDOT**

Repairs to stone arch culverts in Walpole and Westmoreland in recent years resulted in a request from DHR to review all stone arch culverts on the Cheshire Branch Railroad. Brian Lombard from Rail & Transit and Amy Lamb from the Bureau of Environment have started inspecting these culverts. A double arch culvert on Great Brook at Mile Post 106.65 was inspected on February 28, 2012 and damage was found at the outlet end of both arches, especially on the north arch. Brian Lombard provided an overview on the needed repairs.

The granite block slab floor has washed out for 28 feet on the outlet end of the arch. The remnants of the old concrete toe walls have also been eroded by the water flow exposing open joints under the bottom layer of arch blocks. Several blocks in the arch walls have moved. The granite blocks at the outlet end have many open joints and there has been some movement in several of the blocks. There are long bolts exposed indicating that there was something at the outlet end (blocks, concrete, timbers, etc.), but they are now gone.

New concrete toe walls and a new 12" thick floor slab in the north arch are proposed. Rail & Transit also proposes to construct a new concrete cap on the blocks at the outlet to replace whatever was there originally. This will ensure that the outlet blocks do not move causing potential damage to the arch. Dowels will be drilled and grouted into the granite blocks on the toe walls and outlet cap. Mats of reinforcing steel will also be placed in the concrete at these two locations.

Blocks on the northwest wing that have partially fallen off the wing will be reset. All the trees over the arch will be cut since their roots can cause damage to, and in some cases the ultimate failure of, the arches.

Laura Black asked that the amount of concrete on the floor be reduced as much as possible. However, she added that she would rather see what's remaining to stay intact and if a concrete floor is needed to accomplish this, then that would be acceptable. However, B. Lombard will brainstorm a bit more to see if there's any way to cut down on the amount of concrete being introduced to the resource and will revise the scope of work to include brainstorming ideas. The work as proposed would likely result in no adverse effect and no further coordination would be needed beyond the above. It was also noted that it was reassuring that these culverts are being inspected to catch things before they become major problems.

B. Lombard noted that Rail & Transit requested $300,000 in the capital budget for stone arch repairs. It is not known at this time if this request will be approved.

****Memos/MOA's**: **Pelham, 99409Z (no federal number) – No Adverse Effect**
**Barnstead, X-A000(180), 16200 – No Historic Properties Affected**
**Stratford, 21386 (no federal number) – No Historic Properties Affected**

Submitted by: Jill Edelmann, Cultural Resources