BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting
DATE OF CONFERENCES: May 10, 2018
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Joe Adams
Phil Brogan
Sheila Charles
Ron Crickard
Meli Dube
Jill Edelmann
Tom Jameson
Joshua Lafond
Marc Laurin
Brian Lombard
Rebecca Martin
Stephanie Micucci

NHDHR
Laura Black
David Trubey

FHWA
Jamie Sikora

Bethlehem Heritage
Clare Brown
Sandy Leleme

GPI
John Watters

H & H
Kim Smith

MJ
Christine Perron

Normandeau
Vicki Chase

VHB
Greg Bakos
Nicole Benjamin-Ma

Town of Manchester DPW
Bruce Thomas

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

Westmoreland 41624 (non-federal project)
Participants: Meli Dube, Brian Lombard, NHDOT

Continued consultation to discuss Phase 2 of the stabilization efforts at the historic stone arch culvert carrying White Bridge Brook under the Cheshire Branch Rail Road and to establish the next steps for Section 106 compliance. Phase 1 of this project (NHDOT #66017S, RPR#145) was determined to have an Adverse Effect in 2011, and a survey of all similar stone arch culverts in the area was completed for mitigation in 2012. The proposed work in Phase 2 will install a concrete pad and walls extending from the existing end of the arch to the remaining wing wall remnants with the intent of preserving the historic features and preventing further erosion of the stream during flood events. This project was previously discussed at Cultural Resource Agency Meetings on January 7, 2010, February 11, 2010 and March 11, 2010.

Meli Dube, NHDOT Bureau of Environment, introduced the project. The proposed work will stabilize the stone arch culvert carrying White Bridge Brook under the Cheshire RR corridor in

Westmoreland north of NH Route 12. M. Dube explained that this location has been discussed and worked on several times since 2003 when a large portion of the stone arch collapsed, including wetland permitting and Section 106 coordination. An "Adverse Effect" determination was made in 2011 for the impacts to the stone arch associated with removing debris from the brook and stabilizing the banks, which was identified as Phase 1 of the necessary work with an understanding that Phase 2 would be planned and executed in the future. The current proposal is intended to complete Phase 2 of the work.

Brian Lombard, NHDOT Bureau of Rail and Transit, provided a history of the deterioration and corresponding repair work that has occurred since the original 2003 collapse, including:

- 2003: large storm event caused collapse of 20 ft section of arch outlet and washout, permit was issued to remove debris from stream and stabilize banks
- 2007: additional collapse, debris cleaned out under 2003 permit
- 2008: concrete invert installed to prevent continued collapse of stone side support walls
- 2009: debris and tree roots from above outlet continue to fall in to stream and destabilize stone arch
- 2010: Cultural Resource Agency Meetings in January, February and March. A two phase approach is agreed upon, Phase 1 will remove trees and pull slope above outlet back to prevent further erosion. Phase 2 to come later. Phase 1 construction efforts begin
- 2011: Continued collapse, clean up authorized under revised 2008 wetlands permit. Phase 1 construction efforts are completed. Proposed toe wall repair is not completed due to danger associated with entering collapsing culvert. An Adverse Effect Memo is issued for the work up to this point, including the alteration of the slope.
- 2012: Inspections of all stone arch culverts (7 culverts and 2 bridges) on the Cheshire Branch Rail Road are completed by B. Lombard and Amy Lamb, formally of NHDOT Bureau of Environment, as mitigation for the Adverse Effect finding for Phase 1, efforts not completed due to lack of funding.
- 2013: Heavy storms cause more collapse and washout behind wing sweeps, DES emergency permit is issued to clean up and stabilize

In the current condition, the stone arch is approximately 42' shorter than the original length, the two original wing sweeps still mark the original outlet of the culvert but are partially collapsed, the current outlet is partially collapsed and is experiencing undermining, the side slope and stream channel have been heavily armored with stone, the RR embankment has been pulled back away from the current outlet location and all trees have been cleared in the culvert outlet area, and the RR trail has been lowered, narrowed and shifted to the north slightly.

B. Lombard described the proposed work for Phase 2, which is intended to provide more permanent stabilization. The project has a total budget of $400,000.00 through the Capital Fund, so the Bureau of Rail and Transit is partnering with the NHDOT Bureau of Bridge Maintenance for assistance with design and construction of Phase 2. The proposed work will install a 2'thick x 15' wide x 45' long concrete slab extending from the existing slab (proposed will be buried to meet current slab elevation) to the wing sweeps downstream with a 16" thick x 8' high x 45' long concrete walls on either side connecting to and supporting both the remaining stone arch and wing sweep remnants. The work will also pour and additional 8" thick x33' wide x 14' long concrete slab apron to fill the area between the wing sweep remnants to ensure that the stone base is preserved from additional erosion. Fabric and riprap will be installed around the headwall and

along the new walls to prevent erosion during overtopping flood events. Finally, the RR embankment slope will be flattened slightly and the elevation of the RR corridor will be lowered in this area. The intent of this approach is to preserve the remaining stone arch, the remaining wing sweeps and prevent continued erosion of the stream.

Laura Black, NH Division of Historical Resources, asked if other alternatives were explored, especially reconstructing the stone arch or installing a closed concrete culvert. B. Lombard explained that it would be very difficult to reconstruct the arch as it was due to the loss of some of the collapsed stone and the specificity with which each stone must be placed due to hand cutting for placement during original construction. Installation of a closed structure is cost prohibitive given the limited funding, as is full replacement. Complete removal without constructing a new crossing was considered, however, this is cost prohibitive as well and would result in a loss of the resource and discontinuation of the rail line. Another alternative to stabilize just the outlet by reconstructing the headwall and installing a smaller pad to prevent undermining was also explored but is not ideal as it would require removal of the wing sweeps to prevent backwatering which causes undermining and erosion at the outlet. The proposed alternative will change the aesthetics of the current condition, which is already highly disturbed, but is the most cost effective, can be constructed quickly and will preserve the remaining stone arch and wing sweep features.

L. Black and Jamie Sikora, Federal Highway Administration, suggested seeking funds through other agencies such as Department of Natural and Cultural Resources. B. Lombard explained that previous requests for funding through their conservation programs have been denied.
David Trubey, NH Division of Historical Resources, inquired about recreational use at the site. B. Lombard explained that it may be used occasionally by locals, particularly for snowmobiling, but does not see heavy recreational usage.

L. Black indicated that the project should remain under the existing RPR number (145) but that the changes warrant an amendment of the Adverse Effect memo, submittal of a Memorandum of Agreement and additional mitigation for the adverse effect caused by Phase 2. L. Black suggested that the survey and reporting efforts initiated in Phase 1 could be completed and a management plan created as mitigation. L. Black requested follow-up information including a written summary of the considered alternatives with a detailed comparison of impacts relative to cost and benefit, as well as a visual comparison of the original RR layout and the proposed changes to elevation and location.

Jackson 27709, X-A003(593), RPR 7832
Participants: Vicki Chase, Normandeau; John Watters, GPI; Joe Adams, Phil Brogan, Marc Laurin, NHDOT

Continued consultation on the rehabilitation of the bridge carrying NH Route 16 over the Ellis River (144/056) that has been determined eligible for listing on the National Register. Consultation for the rehabilitation of the bridge carrying Route 16 over the Ellis River.

John Watters introduced the project. NHDOT proposes to rehabilitate the bridge carrying NH Route 16 (Bridge 144/056) over the Ellis River in Jackson, NH. The existing bridge, built in 1938, features a 140 foot long concrete frame, two spans with a stone pier, and stone facing on the exterior surfaces and rail. The project will involve localized shallow concrete repairs of the bridge

deck, repairs to the bridge parapets, repaving of the approaches, replacement of the approach guardrail, and removal of the deck drains on the bridge. Currently, the bridge has 4-foot wide sidewalks on both the east and west sides of the bridge.

The goal of the project is to remove the bridge from the NHDOT Red List. Other goals are to improve driver, pedestrian, and cyclist safety, improve water quality in the river by removing the open scuppers that drain directly into the river and pre-treat the water before it flows back into the river, improve the existing guardrails, and to make minor roadway profile improvements. The roadway is currently 24' wide curb-to-curb on the bridge, with a posted speed limit of 40 mph. Trucks must cross the yellow line when they cross the bridge, and drivers must fan out over the yellow line when passing cyclists on the road. The proposal is to remove the existing sidewalk on the west side of the bridge and replace it with a 1-foot brush curb, which will provide a 3-foot shoulder on the west side, a 2-foot shoulder on the east side, and one 5-foot wide sidewalk on the east side.

The parapets on the bridge are constructed of concrete with a stone veneer. The mortar on the parapets will be repointed, the parapet caps will be secured, and the efflorescence on the fascia will be cleaned. Mortar used for repointing will be selected to match existing mortar, and all relevant current Secretary of the Interior Best Practices for cleaning and mortaring historic stone structures will be followed.

Laura Black said that the Eligibility form for the National Register of Historic Places needs to be revised to modify the boundary of the historic resource to include the pedestrian culvert for the golf course. In addition, Photos 11-13 were missing from the submittal. The bridge has been found Eligible, but those materials need to be added to the file.

[Following the meeting Jill Edelmann said that she had the requested material and had needed to consult with FHWA about some of the details, and will follow up with NHDHR].

Laura Black said that the Eligibility form did not demonstrate that the sidewalk that is proposed to be removed is not character defining. John Watters responded that the western sidewalk does not connect to sidewalks on either the north or south sides, and that the decision to add the western sidewalk may have been in hopes of constructing sidewalks at a future date.

Jill Edelmann said that she felt that removing the sidewalk would have No Effect under Section 106 of the Historic Preservation Act as it was not impeding anything, and could be reconstructed if needed. Laura Black concurred and said that the Effect Determination should have a solid argument for why the sidewalk removal was needed.

Orford, 40366, X-A004(371), RPR 9070
Participants: Christine Perron (MJ); Kim Smith (Hardesty & Hanover); Meli Dube, Ron Kleiner, Joe Adams, NHDOT

Initial review of a project that will address Bridge 217/112, which carries NH Route 25A over Brackett Brook. The preferred alternative will be reviewed to determine effects and the need for further consultation.

Christine Perron provided a summary of the Area of Potential Effect. The project will address Bridge 217/112 that carries NH Route 25A over Brackett Brook. The bridge is a 2-span concrete slab bridge constructed in 1929 and widened in 1979. An inventory form has been completed and the bridge was determined not eligible for the National Register. Camp Merriwood, established in 1949, is located along the north side of the project. Two houses located on the west side of Upper Baker Pond Road are owned by the camp. These were constructed in the mid to late 1800s. The primary camp property is on the east side of Upper Baker Pond Road. The area adjacent to the project is used for recreation. A horse stable, constructed in 1990, is adjacent to Brackett Brook just north of the bridge. A cabin, constructed in 1949, is located on the east side of Upper Baker Pond Road just north of the project area.

A Phase IA Sensitivity Assessment was completed and indicated that, although some areas were scoured and disturbed, much of the APE retains archaeological potential. A Phase IB survey was completed for potential impact areas that overlapped with the undisturbed areas. The Phase IB found that the area is widely disturbed and no further testing in necessary.

Kim Smith provided a summary of the recommended design alternative. Following an alternatives analysis, a longer, 57' span is recommended. Construction methods have also been reviewed. The construction of a temporary detour bridge would result in substantial wetland and property impacts and was not carried forward as a viable alternative. The use of phased construction (one lane of alternating traffic) was considered using two roadway widths: 12' and 14'. A 14-foot roadway width would require a permanent alignment shift to the north. Accelerated Bridge Construction, which would require closing the roadway for a short period of time, reduces costs and impacts.

The recommended alternative at this time is a 57' span using Accelerated Bridge Construction (ABC), which would allow for shorter construction duration and reduced impacts. However, the road closure still requires input from the town, as well as approval from the NHDOT Commissioner's Office. This alternative would maintain the existing horizontal roadway alignment and would raise the profile of the roadway approximately 1 foot. The profile raise would require slope impacts outside the existing right-of-way, resulting in approximately 1,600 square feet of property impact, primarily along the north side of NH Route 25A. Impacts would consist of the construction of wider slopes. The slopes would be vegetated following construction. It has not yet been determined if these impacts would require acquisition or easements.

C. Perron noted that a Public Informational Meeting would be scheduled in Orford in the near future.

Laura Black asked about any potential construction impacts at Camp Merriwood. C. Perron and K. Smith commented that the camp would remain fully accessible during construction via its second driveway located east of the project. None of the camp's functions would be restricted during construction. If any staging activities take place on the camp's property, the area would be limited to a vacant location just north of the horse stable, and would only be possible with permission from the landowner. It was noted that if the road closure is approved, all staging activities would likely take place within the footprint of the roadway. The duration of construction is expected to be one construction season.

Jamie Sikora noted that the Section 4(f) finding would likely be *de minimis* if the Section 106 effect determination is No Adverse Effect.

L. Black commented that she did not see any need for additional survey at Camp Merriwood as long as the project remains as described. She did suggest that coordination with the landowner would be necessary, and any measures to minimize impacts to the Camp's operations must be communicated through construction. Any changes to the proposed design may require additional consultation with DHR.

Bethlehem 26763, X-A004(296)
Participants: Clare Brown, Sandy Laleme, Bethlehem Heritage Commission; Josh Lafond, Rebecca Martin, Stephanie Micucci, NHDOT

Continued consultation to share the design which has been reduced to slip lining the culvert that is a contributing element of the historic district, and discuss the net benefit programmatic evaluation for the historic district/4f resource.

The proposed project addresses the culvert under Main Street (US Route 302) between Maple Street (NH Route 142) and Congress Road in Bethlehem. The project had been reviewed previously and the Design team was returning to update the agencies and consulting party on a modification to the design. The stream through the structure is a tributary to Barrett Brook. Josh Lafond explained that there is a lot of impervious surface in the project area. NH Route 302 through this area has 12 foot lanes and 4 foot shoulders. Near the culvert the paved shoulders are wider, approximately 10 feet wide. He described that the culvert goes under a local business parking lot.

J. Lafond explained that the culvert has been dubbed the 'Franken-culvert' because it is made up of several different materials. J. Lafond explained that the original culvert is stone masonry (from the early 1900s), the inlet addition is concrete, and the outlet addition is a steel arch pipe. J. Lafond described that the outlet is near the Bethlehem Visitor Center and Heritage Society building and the outlet is near the Maya Papaya and White Mountain Transmission shops.

J. Lafond described the poor condition of the structure including the currently perched condition of the outlet. The current project design proposes to eliminate the perch. There have been multiple failures (sink holes) over the last few years. J. Lafond showed photos of the winter collapse of a catch basin, a sink hole, and the failing upstream concrete retaining walls at the culvert inlet. J. Lafond also showed a photo of the wooden bridge that was donated to the town that is near the Bethlehem Visitor Center. Under the previous scope the wooden foot bridge would have needed to be permanently relocated. J. Lafond showed pictures from inside the culvert. The DOT District had informed the design team that this culvert requires a lot of maintenance. At the outlet, the pipe is steel and has corroded and separated. In April of 2018 another sink hole developed over a trunk line, which DOT District forces repaired. J. Lafond explained that the trunk lines are old and are made of clay. The project proposes to include repairs of the trunk lines where they attach to the culvert.

J. Lafond described the alternatives that have been considered. All alternatives include a pavement overlay because a recent paving project skipped this section. J. Lafond explained that the design team had been pursuing replacement of the culvert with a 12' by 8' concrete box with baffles. This design would have included storm water treatment and full box reconstruction of US Route 302 in

the project area to address drainage issues. The design included sheet piles on the outlet side near the Antique/Transmission Shop (White Mountain). Borings were needed to check constructability due to debris in the area. Also, due to the use of the property, it was determined to be prudent to check for contamination. The results of sampling found that both groundwater and soil exceeded standards. There is petroleum and mercury contamination at the site. Soil and groundwater removed from the site would likely need to be taken away as solid waste or potentially the groundwater from dewatering could be treated. Either way, the cost of the project would increase significantly. Also, there is liability if the project activities were to cause the contamination to be mobilized. Therefore, the scope was changed to minimize impacts in the contaminated area. The Design team will be returning to explain the scope and design changes to the Town of Bethlehem. The team is planning to leave the existing culvert in place. J. Lafond explained that the team had explored using a sprayed on geopolymer lining. The geopolymer spray on liner was determined to have unknown performance history and standards in New Hampshire. Therefore, a slip line with segmented aluminum is the preferred alternative. The group discussed that the slip line will be structurally sound, meaning it will be able to hold the weight of the road above, without depending on the existing structure. J. Lafond explained that the entire length of the culvert will be slip lined and some type of grout will be used between the existing structure and the slip line. Laura Black inquired if the slip line will be reversible and J. Lafond explained that it is not. Once the work is complete the culvert will be permanently modified.

The group discussed the lifespan of the slip line. Stephanie Micucci said that the design team will inquire with the supplier and will share the information about lifespan with the group. Sandy Wooline from the Bethlehem Heritage Society inquired about the impacts to the trunk lines. J. Lafond explained that the slip line supplier has not provided specifics about the trunk line connections to date, but that likely there will be holes in the slip line to connect the trunk lines and sections of trunk lines closest to the pipe (around 20 feet) will be replaced. The group discussed that under the new modified design Bethlehem sewer and water will not need to move their infrastructure. J. Lafond also commented that the new design will be primarily constructed from the culvert inlet with some minor digging for the trunk lines. Therefore, the project should not be a major disruption during the tourist season.

The proposed impacts at the outlet, where the contamination was found, would be minimal. The team will create a pool or pad at the outlet to reduce the perch. The actual size and shape of the liner will be dependent upon what is available and recommended by the suppliers. J. Lafond showed the different shapes of the aluminum slip line segments that might be used. The underpass shape may be used and the aluminum segments will likely be 2 feet or 4 feet. The first 40 linear feet of the culvert may need to be circular in shape.

The group discussed the concrete retaining walls at the inlet. The walls would be replaced with updated and more stable walls. J. Lafond commented that the walls will be replaced ‘in-kind’. He said that the wooden footbridge will be moved during the construction and replaced in the current location after the walls are finished. The group discussed that the contamination appears to be concentrated on the outlet side of the pipe. There are not concerns about replacing the retaining walls on the inlet side.

The group discussed that NH Department of Environmental Services is aware that contamination was found and has sent a letter to the owner of the White Mountain Transmission property instructing them to complete site investigation and provide the report to DES within 120 days. It

may be some time before a plan is in place and years before the contamination is cleaned up. Due to the deteriorating condition of the current structure, the team does not feel that it would be prudent to delay the project further to wait for the contamination to be fully assessed and addressed. The consulting parties, agencies, and design team members at the meeting agreed that a repair is needed to stabilize the pipe sooner rather than later.

The group discussed that a public hearing is not intended for the project. Therefore, if the Bureau of Right of Way cannot come to an agreement with the property owners for the easements needed to build and maintain the project, the project will not be constructed. The team is hopeful that, since the culvert passes under parking lots of the adjacent businesses, that the property owners will be in favor of the DOT addressing the failing culvert.

Laura Black commented that an adverse effect finding continues to seem appropriate because the treatment is not reversible. The group discussed that while the project is anticipated to have an adverse effect on the culvert, a contributing element to the historic district, the rehabilitation will also serve a benefit to the historic district by providing stability in this area. The group discussed that the historic district is a 4(f) resource. The project was determined by the group to serve a net benefit because the culvert is not being removed and the historic district will be more secure after the project is complete. Also, the culvert is a very small portion of the large Bethlehem Historic District. This work would not be anticipated to majorly alter the characteristics that qualify the Bethlehem Historic District for the National Register of Historic Places. J. Lafond explained that the goal is to advertise the project in the fall of 2018 with construction in summer of 2019. L. Black agreed that the net benefit 4(f) programmatic evaluation seems appropriate. Jamie Sikora explained that the Memorandum of Agreement (MOA) is the agreement between FHWA & SHPO on measures to minimize harm and the MOA will need to be updated to reflect the change. L. Black commented that the affect memo. will need to be revised and that narrative about the net benefit can be included in the 4(f) section of the memorandum.

The group discussed responsibility for maintenance of the structure once the project is complete. J. Lafond explained that the current maintenance responsibility is only for the middle portion of the culvert that is within the existing ROW. The plan is to obtain easements for the outlet section and inlet section of the structure (outside the existing ROW) to allow for future maintenance by the DOT. Clare Brown explained that the Bethlehem Heritage Society has no major concerns with the construction impacts proposed near the Visitor's Center. The contract could specify that the nearby gardens (within 20 feet or so of the culvert and retaining walls) be re-established because they would be impacted during construction to install the retaining walls.

The group discussed the mitigation for the effect on the culvert. Jill Edelmann has been coordinating with the Bethlehem Heritage Society. An outdoor educational sign near the culvert location is intended. L. Black explained that the State Historic Preservation Officer, Beth Muzzey, suggested that instead of just concentrating on the water movement through the transportation infrastructure, it might be beneficial to provide some history of the Village's development and the importance of the infrastructure and movement of water. L. Black commented that the Bethlehem Heritage Society will be allowed 30 days to review the draft sign. C. Brown explained that 30 days is sufficient. J. Edelmann commented that coordination with the Bethlehem Heritage Society and the DOT District will continue to coordinate where the sign will be located.

Manchester 29811, X-A004(311)
Participants: Gregory L. Bakos, Nicole Benjamin-Ma, VHB; Bruce Thomas, Manchester Public Works; Ron Crickard, Tom Jameson, NHDOT

The intent of the meeting was to continue Section 106 consultation for the South Manchester Rail Trail Project focusing on the two National Register-eligible resources along the proposed route, a stone box culvert over an unnamed stream/stormwater, and the Cohas Brook Trestle Bridge. When the Project was last discussed at the June 8, 2017 meeting, investigations into the condition of each resource, and potential design solutions for known concerns, were just beginning and the group's input was sought on best approaches.

G. Bakos presented the results of the conditions analyses and proposed design treatments:

- Cohas Brook Trestle Bridge
    - The bridge is in mostly good condition, including girders which suffered exterior charring in a fire several years ago – the superstructure and trestle bents can be rehabilitated by repairing or replacing rotted timbers/sections in-kind.
    - The north abutment is the major issue. It consists of a pier above a stone block abutment, and is failing due to scour and soil instability (the latter is supported by the results of borings). The abutment is bulging, and the pier no longer supports the trestle because of soil subsidence – there is no longer contact between the parts.
        - To repair and keep the north abutment materials would require ~$1 million of work, which exceeds the funding for the Project and still leaves the bridge at risk of failure. The proposed treatment is to remove existing failed supports and establish a riprap slope.
        - Wood members would be reinstalled or replaced in kind, and the diagonals reused in the structure when possible.
        - The stream would be restored to its pre-scour line.
    - Several railing options are being evaluated for safety, durability, ease of maintenance and compatibility with the setting and structure, generally consisting of wood posts spanned by wire mesh fencing.
- Stone box culvert
    - Investigations show likely failure at the bottom of the culvert, causing washout; the inlet could not be directly accessed through the debris, while the outlet is in good shape
    - A laser range finder and high intensity light were used to find out how far into culvert the failure begins – a little more than halfway, toward the failed inlet end only.
    - Replacing the culvert would be subject to stream rules, requiring an expensive 16-foot diameter structure. The preferred approach is replacement of the inlet end.
        - A dip would be added to the profile to reduce the footprint of work and costs.
        - The inlet end would be replaced with a concrete box, while the granite blocks would be reused as fascia stones on the inlet end, so it reads from the exterior as a stone face, similar to the outlet end. The slope would cover the concrete box, and the interior concrete would only be visible to someone standing at the inlet opening.

Discussion

- L. Black asked whether the culvert washout was discovered via an annual maintenance plan, or because it had gotten to a substantial level. B. Thomas noted the City was aware of the issue for a while, and were monitoring it, but the issue is worsening. L. Black suggested a potential mitigation measure that establishes an annual plan to review similar resources in the city and hopefully catch issues early. This may also reduce costs for intensive rehabilitation work when the condition reaches a critical level. B. Thomas stated the City would be checking this culvert frequently to monitor its status and the behavior of immediate vegetation. There are no other known similar resources along the former railroad line, that are known to be at risk.
- Regarding the Cohas Brook Trestle Bridge, L. Black noted the north abutment and pier have been stable on these soils for ~100 years, and questioned what factors have changed that caused the failure of the abutment. T. Jameson and J. Sikora noted that the railroad corridor has not been in use for several decades, and therefore the trestle and surrounding land haven't seen the loads they would have normally carried in the early part of the 20th century. The lack of train traffic likely prevented failure before now.
- L. Black and D. Trubey asked the Project team to consider:
    - Whether a concrete footer is necessary for the new substructure components, or if masonry can be reused.
    - The riprap slopework for the new abutment extends quite far horizontally on the plans; the Project team should confirm whether the full extent is necessary.
    - What would happen to the granite blocks making up the current abutment; G. Bakos reported that the current design proposes to reuse the blocks on the trail where it meets public roadways, supplementing bollards that prevent vehicular access to the trail. D. Trubey suggested salvaging blocks that are not reused.
- J. Sikora, L. Black, and B. Thomas discussed the railing examples, and J. Sikora and L. Black clarified that the wood top rails and posts should be minimized, since wood is a solid material and the railing should be as unobtrusive as possible.
- L. Black and J. Sikora agreed that the proposed Project would result in adverse effects to both the stone box culvert and the Cohas Brook Trestle Bridge. The Project team should document the alternatives that were evaluated, and provide the information to DHR.
- L. Black suggested speaking to the Stone Trust about the possibility/costs of having their craftspeople restore the stone box culvert, as part of the alternatives analysis. She noted that some municipalities are choosing to rebuild such infrastructure using existing materials, but not consistently. If the work or cost of work resulting from the inquiry is infeasible for the Project, the proposed treatment is an acceptable option, but the input of the Stone Trust (or one of its representative businesses) should be documented in the alternatives analysis.
- Looking forward to mitigation measures, L. Black noted the trail is a built-in opportunity for education. N. Benjamin-Ma will investigate what interpretation is already employed along the trail to ensure that suggested mitigation is cohesive with/expands current themes.

Submitted by: Sheila Charles and Jill Edelmann, Cultural Resources

New Hampshire Department of Transportation
Cultural Resources Agency Coordination Meeting

Date May 10, 2018

Please initial next to your name. Guests: Please use reverse side to sign in.

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Please fill in all of the requested information. May 10, 2018

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