Lebanon
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Final Environmental Study/ Programmatic Section 4(f) Evaluation

March 2012

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Part I: Environmental Study

Description of Project

This project involves the replacement of the bridge that carries US Route 4 over the Mascoma River in Lebanon, NH. This project begins 850 feet north of the US Route 4/Eastman Hill Road intersection and proceeds north (eastbound) roughly 0. 6 miles to a point approximately 1,200 feet west of the US Route 4/Payne Road intersection (*Exhibit A*). This project also includes reconfiguring the US Route 4/NH Route 4A/Mill Road intersection as well as pavement rehabilitation and updates to existing drainage structures. Improvements to this section of roadway and structure will require property acquisition as well as several permanent drainage and slope easements to be obtained prior to construction.

In accordance with the National Environmental Policy Act of 1969 (42 USC 4332(2)(c)) as implemented in 23 CFR 771.117(d)(3) this environmental study addresses the construction of the aforementioned project and has been prepared using a systematic, interdisciplinary approach to assess the engineering considerations and environmental effects of this Categorical Exclusion project.

Existing Conditions/ Project Purpose and Need

The intent of this project is to replace the bridge that carries US Route 4 (State Bridge No. 188/126) over the Mascoma River and the Northern Railroad Rail Trail, improve the US Route 4/NH Route 4A/Mill Road intersection and update the existing roadway through pavement rehabilitation and drainage updates.

The existing bridge is 462 feet long with 12-foot wide paved travel lanes and 2-foot wide metal grate shoulders. This six span bridge is constructed of a riveted steel plate girder and floor beam superstructure with a cast in place concrete deck. Vertical clearance over the rail trail and river is roughly 29 feet and 40 feet respectively (*Exhibit Q*).

The bridge has a Federal Highway Administration (FHWA) Sufficiency Rating (FSR) of 34.7 out of 100. The bridge is listed as “Structurally Deficient,” indicating that due to its deteriorated condition, the bridge no longer meets current standards for load carrying capacity and structural integrity. Noted structural deficiencies on the structure include heavy rust, section loss and pack rust on the steel girders, floor beams and shoulder grates as well as cracking and spalling of the reinforced concrete piles, abutments and wings. As a result of the above noted deficiencies, the bridge is on the State Red List, warranting more frequent inspections. The need for this project is indicated by the increased deterioration of this structure. The structural concerns and design deficiencies associated with the existing structure present a safety concern to vehicles, pedestrians and bicycles traveling on US Route 4 as well as those traveling below on the rail trail.

The US Route 4/NH Route 4A/Mill Road intersection adjacent to the south side of the bridge requires reconstruction due to a shift in the highway alignment leading up to the new bridge location.

Currently vehicles coming from NH Route 4A have a particularly difficult time making a left turn onto US Route 4 westbound due to the high traffic volumes at the intersection, the steep roadway profile on US Route 4, sight line obstructions caused by the existing bridge rail and the skewed angel of the NH Route 4A approach. In the last 10 years, 47 accidents have been reported at this intersection, none of which were fatal. An analysis of the turning movements and the number of vehicles passing through the intersection indicates that this intersection meets the warrants for an intersection control device such as a traffic signal or roundabout. As a result of the revised highway alignment to the new bridge and the apparent safety concerns this intersection will be reconstructed in association with this project.

Project Proposal

Due to the apparent safety and structural deficiencies of the US Route 4 Mascoma River Bridge, the main intent of this project is to replace this structure. The new bridge will be a 435-foot, three span, steel beam girder bridge with a cast in place concrete deck. The length has been reduced from 462 feet to 435 feet to allow for the construction of a smaller three span structure, eliminating the need for any piers within the river. The bridge will be constructed with 12-foot travel lanes, 4-foot shoulders and 5-foot sidewalks in each direction. The proposed bridge will be placed approximately 50 feet to the east of the existing structure. Once the new bridge has been constructed traffic will be moved onto the new structure and the existing bridge will be removed.

Due to its proximity, the US Route 4/NH Route 4A/Mill Road intersection adjacent to the south side of the bridge will be reconstructed in order to accommodate the new roadway alignment and to address the safety and sightline concerns associated with this intersection. Through the Public Hearing process, the City of Lebanon preferred not to upgrade the intersection to a single lane roundabout, which was proposed at the public hearing on December 8, 2008 to address the capacity issues. Even without the construction of the roundabout, the improved geometry of the intersection and the addition of a formalized right turn lane on the US Route 4 eastbound approach will improve the safety of the intersection and slightly improve the capacity of the intersection. The US Route 4 approaches to the bridge and intersection will be reconstructed with 12-foot travel lanes and 4-foot shoulders. Updates to the existing drainage system and guardrail will also be included as a part of this project. The proposed right-of-way and the proposed centerline alignments of US Route 4 and NH Route 4A for the proposed unsignalized intersection are based on a single lane roundabout design. If in the future the intersection is selected for capacity improvements, this project will lend itself to a future roundabout installation without requiring additional property impacts.

Alternatives Considered

“No-Build”

The “No-Build” alternative is not considered feasible and prudent, as it does not address the deficiencies and safety concerns associated with the existing bridge and intersection. Selection of this alternative would require continued use of the structure as it continues to deteriorate until it can no

longer support normal traffic patterns and must be taken out of service. If the bridge were taken out of service traffic traveling on US Route 4 would have to be rerouted into Payne Road and NH Route 4A (a detour of approximately 0.7 miles). Payne Road is a narrow local road with several weight-limited bridges and as such is not considered a feasible alternative route. It should also be noted that even if the bridge were taken out of service, further deterioration would require its removal in order to prevent it from collapsing into the Mascoma River and Northern Rail Trail below. The impacts associated with the proposed action are not of a magnitude to warrant the selection of this alternative. As such, this alternative was not selected.

Rehabilitation of the Existing Bridge

The selection of a rehabilitation option would not address the majority of the conditions that make the bridge deficient and would not address many of the safety concerns of the existing structure and intersection. Since a good portion of the existing superstructure and deck would have to be replaced, it is anticipated that this alternative would be at least as costly as the proposed alternative. Furthermore, rehabilitation of the bridge would likely require the installation of a temporary bridge in order to maintain traffic during construction. Installation of a temporary bridge would require similar impacts to those anticipated under the Proposed Action. As such, this alternative was not selected.

On-Alignment Location

This alternative involves removing the existing structure and replacing the new structure in approximately the same location. Selection of this alternative would require traffic on US Route 4 to be temporarily detoured onto nearby local roads or onto a temporary bridge constructed adjacent to the existing structure. The only feasible detour route would require the use of a local road (Payne Road) and NH Route 4A for a distance of approximately 0.7 miles. Payne Road is narrow with steep grades and several weight-restricted bridges, which would make truck traffic through the area difficult or impossible. The use of a temporary bypass structure would require the construction of a temporary bridge in approximately the same location as the proposed action. This would cost considerably more and would require environmental impacts greater than or equal to those associated with the proposed alternative. As such this alternative was not chosen.

Western Location

This alternative involves constructing a new bridge to the west of the existing bridge. Once the new structure is constructed the old bridge would be removed. The topography of the western side of the existing structure is much steeper than the eastern side and as a result would require substantial property impacts and large amounts of fill to be brought in to shift the roadway to the new location. Additionally, one of the properties to the west of the existing bridge (parcel 18) is municipally owned and contains a conservation easement and an archaeological site. Selection of this alternative would likely require impacts not only to the property but the archaeological site as well. Given the

substantially larger costs and high property and environmental impacts, this alternative was not chosen.

Eastern or Western Bypass

This alternative involves constructing a new US Route 4 bridge and bypass road on a new location either east or west of the existing road. Once the new structure is constructed the old bridge would be removed. These bypasses would avoid the area of the existing roadway and bridge. Both an east or west alignment would require constructing a new roadway along steep hillsides and could result in numerous additional impacts to the Mascoma River. This alternative would also have far greater impacts to potentially historic properties, archaeological sites, undeveloped forestlands, wetlands and other natural resources. Moreover, these alternatives would substantially increase project costs and the additional property and right-of-way impacts would likely raise serious public concerns. As such, this alternative was not chosen.

New Bridge Construction Without Removal of the Existing Structure

This alternative involves the construction of a new bridge to the east or west of the existing structure. Once the new bridge is completed, the existing structure would then be closed to traffic, but would remain standing. Unless substantial repairs and constant maintenance of the existing structure were conducted, it would continue to deteriorate to the point where it would still need to be removed in order to prevent collapse. The deteriorating structural integrity and the potential for collapse would present a substantial safety concern for the public using the Northern Rail Trail beneath the structure.

This alternative would also not provide the additional environmental benefits to removing the existing piers within and along the river. The repair and long term maintenance costs associated with this alternative would likely be more costly than the proposed alternative and would require impacts similar to the project proposal. As such, this alternative was not selected.

Coordination and Public Participation

Letters were sent to various Federal, State and local agencies and groups, as well as the general public, requesting input on this project on the following dates:

Agency / Organization	Contact	Date Sent	Date Received
City of Lebanon			
Pedestrian & Bicyclist Committee	Anna Adachi-Mejia	2/13/2007	3/19/2007
Chief of Police	M. James Alexander	2/13/2007	-
Fire Chief	Steve Allen	2/13/2007	3/7/2007
Chair, Conservation Commission	Nicole Cormen	2/13/2007	3/23/2007
Heritage Commission	Doug Gross	2/13/2007	3/19/2007
Mayor	Patrick T. Hayes	2/13/2007	-
Recreation and Parks Dept. Director	Cindy Heath	2/13/2007	-
City Historian	Vacant	2/13/2007	-

City Engineer	Robert Kline	2/13/2007	-
Director of Public Works	Michael Lavalla	2/13/2007	3/29/2007
City Manager	Gregg Mandsager	2/13/2007	-
Chair, Planning Board	Kenneth Morley	2/13/2007	3/19/2007
City Planner	Ken Niemczyk	2/13/2007	-
Upper Valley Lake Sunapee RPC	Tara E. Bamford	2/13/2007	-
US Fish and Wildlife Service	Bill Neidermyer	2/13/2007	2/23/2007
NH DRED, LWCF	Shari Colby	2/13/2007	2/21/2007
NH Natural Heritage Bureau	Melissa Coppola	2/12/2007	2/12/2007
NH Office of Energy and Planning	Jennifer Gilbert	2/13/2007	2/26/2007
NH Office of Energy & Planning (CLS)	Steve Walker	2/13/2007	2/15/2007
NH DOT – HR (Environmental Justice)	David Chandler	2/13/2007	3/13/2007

Meetings have periodically been held throughout the development of this project, with various Federal, State and local agencies, as well as with the general public. Project review meetings were held on the following dates:

Date	Topic
March 8, 2007	Cultural Resource Agency Meeting
March 21, 2007	Natural Resource Agency Meeting
April 5, 2007	Cultural Resource Agency Meeting
September 27, 2007	Public Officials/ Public Informational Meeting
December 13, 2007	Cultural Resource Agency Meeting
November 19, 2008	Natural Resource Agency Meeting
December 8, 2008	Public Hearing
January 13, 2011	Cultural Resource Agency Meeting

Minutes to the Monthly Natural Resource Agency Coordination Meetings can be found at the following website:
http://www.nh.gov/dot/org/projectdevelopment/environment/units/projectdevelopment/nracrmeetings.htm

Minutes to the Monthly Cultural Resource Agency Coordination Meetings can be found at the following website:
http://www.nh.gov/dot/org/projectdevelopment/environment/units/technicalservices/crmeetings.htm

A Public Hearing was held on December 8, 2008. During the hearing and within the ten day comment period following, multiple individuals provided comments regarding the project. These comments and the Department's responses can be found in the attached Report of the Commissioner (*Exhibit P*). As a result of the public hearing comments, changes have been made to the project which were not reflected in the Draft Environmental Study / Programmatic Section 4(f) Evaluation (December 2008). These changes have been reflected in this Final Environmental Study / Programmatic Section 4(f) Evaluation (February 2011).

Evaluation of Environmental Effects

The effects of the project relative to the following social, economic, natural and cultural resources/issues have been reviewed. Resources/issues, which are not discussed in the body of the report, were investigated, however no impacts were evident. As such, these resources/issues are omitted from this environmental documentation. The resources and issues deemed applicable for this project are indicated in **bold**/underlined type.

Resources/Issues

Social/ Economic		Natural	Cultural
Safety	Farmlands	Water Quality	Historical
Transportation Patterns	**Community Services**	NPDES, Stormwater Mgt.	Archaeological
Air Quality	Energy Needs	Wetlands	Stonewalls
Noise	Utilities	Surface Water	Aesthetics
Displacements	Environmental Justice	Groundwater	
Contaminated Properties		Floodplains	
Neighborhoods		Wildlife	
Business Impacts		Fisheries	
Land Acquisition		Endangered Species	
Land Use		Natural Communities	
Tax Base		Wild & Scenic Rivers	
Recreation		Stream Rechannelization	
Public Lands		NH Designated Rivers	
Construction Impacts		Forest Lands	
		Costal Zone	

Discussions of the effects on resources/issues in bold follow.

Safety/Transportation Patterns/Community Services

This project involves the replacement of the US Route 4 Bridge over the Mascoma River and the Northern Railroad Rail Trail, improving the US Route 4/NH Route 4A/Mill Road intersection and updating the existing roadway through pavement rehabilitation and drainage upgrades.

US Route 4 through the project area is the main connection between the City of Lebanon, NH and points to the east and southeast including Canaan, Enfield, Springfield, Grafton and Wilmot. It also serves as an alternative route to Interstate 89 between Lebanon and Concord, NH. US Route 4 through the project area is functionally classified as a Rural Minor Arterial route. The Average Annual Daily Traffic (AADT) on this section of roadway in 2010 is projected to be 17,000 vehicles per day (vpd), with 4% trucks, and is expected to increase to 29,000 vpd by the year 2030. NH Route 4A in the project area is functionally classified as a Major Collector route. The AADT of NH Route 4A is projected to be 4,200 vpd in 2010 and is expected to increase to 6,600 vpd by the year 2030.

The current speed limits of US Route 4 and NH Route 4A within the project limits are posted at 40 mph and 30 mph respectively.

Both US Route 4 and NH Route 4A are important connections for such community services as school busses, emergency response vehicles and public officials in both the City of Lebanon and the Town of Enfield. Upon completion of the project, traffic patterns are expected to be similar to those which exist today. It is anticipated that through traffic will be maintained throughout construction. It is not expected that the local services of either municipality will be negatively impacted during the construction of this project.

Air Quality

The proposed project is located within an area of the State that is in attainment with respect to the National Ambient Air Quality Standards (NAAQS) for ozone and all other criteria pollutants (CO, NOx, VOCs, and PM10). The proposed work is not considered a “Regionally Significant Project” as defined in the final Transportation Conformity rules (40 CFR 93.101) or in those rules adopted by the New Hampshire Department of Environmental Services in accordance with the interagency consultation provisions required by 40 CFR 93.105. When completed, the project is not expected to result in significant air quality impacts or contribute to violations of the NAAQS. Consequently, this project is exempt from the conformity requirements of the Clean Air Act Amendments of 1990.

Though exempt from the requirements of the Clean Air Act, the National Environmental Policy Act also requires consideration of the project's impact on air quality. The proposed improvements include geometric and sightline improvements at the US Route 4/ NH Route 4A intersection. The reconstructed intersection is intended not only to improve the safety of the intersection, but to slightly improve traffic flow for vehicles waiting to turn into and out of NH Route 4A. This type of project is classified as “neutral” in the final transportation conformity rules. Under these rules, which address non-attainment areas, the USDOT and the EPA have agreed that neutral projects will not impact regional emissions. According to these same rules, however, the effects of "neutral" projects on localized CO concentrations must be considered to determine if a hot spot analysis is required prior to making a project level conformity determination. It would, therefore, be appropriate to conduct the same level of analysis for a similar project in an attainment area, in order to satisfy the requirements of the National Environmental Policy Act.

The project is located in a rural area, which lacks frequent pedestrian activity. The closest receptor to the subject intersection is located approximately 550’ away. At this distance, CO concentrations are typically well below the NAAQS, even at very congested intersections. It is anticipated that under these specific project conditions computer modeling would predict low CO concentrations throughout the project area. Computer analyses of other projects with substantially higher traffic volumes, flowing under more restrictive conditions, have consistently yielded maximum CO concentrations well below the one-hour NAAQS of 35 ppm and the eight-hour criteria of 9 ppm. As these projects were found not to have a detrimental impact on air quality, and for the reasons stated above, it can be concluded that this project will also not have an adverse impact on air quality.

Noise

The NH Department of Transportation's *Policy and Procedural Guidelines for the Assessment and Abatement of Highway Traffic Noise for Type I Highway Projects* (Noise Policy) provides guidelines for assessing noise impacts and determining the need, feasibility, and reasonableness of noise abatement measures for proposed Type I highway construction and improvement projects. Noise impacts associated with the proposed project were examined in accordance with the guidelines set forth in the Departments Noise Policy.

There are relatively few residences (receptors) located in proximity to the project area. The two closest receptors to the project are Parcel 20 (northwest of the bridge) and Parcel 11 (southeast of the US Route 4/NH Route 4A intersection). The existing peak hour traffic noise levels on Parcel 20 and Parcel 11 are approximately 62 decibels and 57 decibels, respectively. Construction of this project will not result in a noticeable change in noise levels at any location. As a result of the expected increases in traffic over the next several decades, noise levels on parcel 20 and parcel 11 are expected to increase by 2 to 3 decibels by the year 2030.

The above noted noise levels are not expected to be equal to or approach (within 1 decibel) the FHWA Noise Abatement Criteria of 67 decibels. Construction activities will temporarily increase noise due to the use of heavy equipment, however these noise levels are expected to return to normal after the project has been completed. For the reasons stated above, this project is not expected to adversely effect noise levels at any of the adjacent receptors.

Contaminated Properties

An in-house database search of the New Hampshire Department of Environmental Services (NHDES) One-Stop Environmental Site Information Guide did not indicate the presence of any remediation sites in close proximity to the project area (*Exhibit F*). A field review conducted on January 9, 2007 indicated the potential presence of lead based paint on the existing bridge. Any materials containing lead should be properly disposed of in accordance with State and Federal regulations (*Environmental Commitment 1*).

Land Acquisition/Easements/Tax Base

There are thirty-five (35) properties located within the project area of which eighteen (18) will be impacted by this project. Construction of the proposed highway improvements will require the permanent acquisition of approximately 187,700 ft^2 (4.31 acres) outside the existing right-of-way. In addition to the proposed acquisitions, the project will also require approximately 71,600 ft^2 (1.64 acres) of permanent easements and 36,200 ft^2 (0.83 acres) of temporary easements outside the limits of the existing right-of-way. This project will not require the removal of any residential or commercial structures. The above noted permanent acquisitions are mainly associated with the construction of the unsignalized intersection and the relocation of the new bridge to the east of the existing structure. The remaining temporary and permanent easements are mainly associated with slope

reconfiguration/stabilization, drainage improvements and temporary construction needs and therefore are not expected to adversely affect their associated properties. The Department will obtain the necessary property acquisitions, easements and rights of entry prior to the commencement of construction (*Environmental Commitment 2*).

The total estimated land area in the City of Lebanon is approximately 25,792 acres. Total permanent impacts are approximately 5.95 acres, 0.02 % of the total land area in this city. As such, it is not anticipated that this project will cause a change in land use in the project area, nor is it expected to have a substantial effect on the tax base of the City of Lebanon.

Property Impacts Table

Parcel #	Parcel Name	Permanent Acquisition (SqFt)	Permanent Easements (SqFt)	Temporary Easements (SqFt)	Easement Type
6	KMAD REALTY TRUST	6,000			ROW
7	KMAD REALTY TRUST		6,000		DRAINAGE
8	KMAD REALTY TRUST	5,500	8,000		ROW, SLOPE
9	KMAD REALTY TRUST	6,000	14,500		ROW, SLOPE & DRAINAGE
10	KMAD REALTY TRUST	13,000	9,000		ROW, SLOPE & DRAINAGE
11	GAVELL	34,000	300		ROW, SLOPE
12	CITY OF LEBANON			1,000	CONSTRUCTION
14	WALKER	35,000	1,700		ROW, SLOPE
15	DEANNA REVOCABLE TRUST	5,000			ROW
16	MACDONALD	4,400	4,600	8,000	ROW, SLOPE, CONSTRUCTION
17	STATE OF NH	24,200	9,000	15,000	ROW, SLOPE, DRAINAGE, CONSTRUCTION
18	CITY OF LEBANON	5,800			ROW
19	BAGLEY	17,500	16,500	7,500	ROW, SLOPE, PATH, DRAINAGE, CONST
20	CHARBOND			3,700	DRIVE MATCH
20-1	WHITE	14,000			ROW
21	BAGLEY	15,000	2,000		ROW, SLOPE
21-1	BAGLEY	2,300			ROW
24	DUBE			1,000	DRIVE MATCH
	SQUARE FOOT TOTALS	**187,700**	**71,600**	**36,200**	

	Permanent Acquisition	Permanent Easements	Temporary Easements
ACRE TOTALS	**4.31**	**1.64**	**0.83**

Land Use/ Public Lands/ Recreation

The subject sections of US Route 4 and NH Route 4A have been identified by local officials and the Upper Valley Lake Sunapee Regional Planning Commission as an important bicycle route for local residents and visitors. The NH Department of Transportation's Bicycle and Pedestrian Section has also listed this section of roadway as a Statewide Bicycle Route. The existing bridge is narrow and does not have adequate shoulders for safe bicycle and pedestrian travel. In order to increase bicycle and pedestrian safety, the new bridge will be constructed with 12-foot travel lanes, 4-foot shoulders and 5-foot sidewalks in each direction. As a result of these improvements this project is expected to have a positive effect on bicycle and pedestrian recreation throughout the region.

The Northern Rail Trail runs adjacent to the Mascoma River beneath both the existing and proposed structures. This 23-mile trail runs between Lebanon and Grafton, NH on the remnants of the Northern Railroad. The Northern Rail Trail is owned by the NH Department of Transportation, is operated by the NH Department of Resources and Economic Development and trail development and improvements are conducted by the Friends of the Northern Rail Trail. The NH Department of Transportation's Bicycle and Pedestrian Section has also designated the Northern Rail Trail as a Statewide Bicycle Route.

The southern piers of both the existing and proposed bridge structures are located between the Rail Trail and the Mascoma River. Given the steep topography of the site, it is expected that construction equipment will need to access the site via and operate on the Rail Trail. The existing drainage structures crossing beneath the Rail Trail will also need to be adjusted to accommodate for the new roadway design. For these reasons, the project will require temporary impacts to the Northern Rail Trail. Whenever possible the trail will remain open to the public, however for safety and logistical reasons it will need to be periodically closed. These impacts and the need for temporary trail closures were reviewed by the above noted parties and the City of Lebanon who did not express any concerns with the proposed temporary impacts to the Northern Rail Trail. It was requested by the City and The Friends of the Northern Rail Trail that the closures be kept to a minimum and that the public be notified of the extended periods of closure (*Environmental Commitment 3*). As no permanent impacts to the Northern Rail Trail have been proposed, the project is not expected to have an effect on the recreational functions and values of the trail.

The Mill Road Municipal Trail is located to the southwest of the existing bridge. The Trail is a remnant of the 4th NH Turnpike and therefore is still owned by the NH Department of Transportation, but is operated and maintained by the City of Lebanon. Access to the Trail is via Mill Road which intersects with US Route 4 to the south of the existing bridge. The first several thousand feet of Mill Road provides access and minimal parking for both the Northern Rail Trail and the Mill Road Municipal Trail. Reconstruction of the existing intersection is intended to improve access into and out

of Mill Road and as a result it is expected that upon completion of the project the recreational value of the Mill Road facility will be improved.

Construction of the project may require construction equipment to utilize Mill Road and cross a small portion of parcel 12 to access the Northern Rail Trail. Although not in conservation, parcel 12 is owned by the City of Lebanon. The temporary impacts to both Mill Road and parcel 12 have been reviewed with the City of Lebanon and they are in agreement with the proposal.

One conservation property has been identified within the project area. This property (parcel 18) is owned by the City of Lebanon and the easement is held by the Upper Valley Land Trust (UVLT). The entire property is approximately 5.25 acres in size and is located to the northwest of the exiting bridge structure. This property is split into two pieces by the existing right-of-way, leaving a small, detached piece of parcel 18 (approximately 5,797 s.f.) on the eastern side of the existing bridge. This portion of the property is located directly beneath the proposed bridge and entirely within the Mascoma River. Although there will be little to no physical impacts to this portion of the property, it is located directly beneath the proposed bridge which will require the Department to obtain property rights prior to beginning construction. These impacts were reviewed with the City of Lebanon and the UVLT who indicated that the proposed impacts were relatively minor, particularly given the disjoined nature of the subject portion of the property. Both organizations agreed that mitigation for the proposed impacts would not be necessary and that the impacts necessary for construction of the project should be purchased in fee (*Environmental Commitment 4*). A small, un-maintained access road to the northeast of the existing bridge wraps around beneath the existing bridge to provide undesignated access to the site. The northern abutment of the proposed bridge is located approximately where the subject access road is situated. At the request of the City and the local property owners, the woods road will be reconstructed in order to maintain access to the conservation property upon completion of the project (*Environmental Commitment 5*).

Section 4(f) of the US Department of Transportation (US DOT) Act of 1966 (amended by 49 U.S.C. Section 303) provides protection for historic resources, wildlife refuges and publicly owned parks and recreational areas that are open to the public and are considered substantial recreational facilities. 23 CFR 774.13(f)(3) provides an exemption from the requirement for Section 4(f) approval for "Trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way". The NH Division of the Federal Highway Administration has reviewed this exemption and they are in agreement with its applicability to the Northern Rail Trail. Consultation with the NH Division of the Federal Highway Administration has also indicated that the above noted conservation property is not considered a substantial recreational facility. For the above noted reasons no recreational 4(f) resources have been identified within the project area. (See the Wildlife and Cultural Resources sections for additional information.)

The Conservation Land Stewardship (CLS) Program is responsible for monitoring and protecting the conservation values of conservation easement lands in which the State of New Hampshire has invested. The proposed action has been reviewed by the Office of Energy & Planning, CLS Program Coordinator and it was determined that there are no CLS parcels, local or state-held, in close proximity to the project area *(Exhibit H)*.

Section 6(f) is an article of the Federal Land and Water Conservation Fund (LWCF) Act of 1964, which provides financial assistance for the acquisition and development of public lands to create parks and open spaces; protect wilderness, wetlands and refuges; preserve wildlife habitat; and enhance recreational opportunities. Any land acquired or improved with these funds is subject to a body of federal regulations under the purview of the US Department of the Interior (USDOI). Pursuant to these regulations, any land subject to Section 6(f) cannot be "converted" to another use for purposes inconsistent with the Act without the approval of the USDOI and without being replaced with other land that is of equal use and value to the land proposed for conversion. Based upon a review of their LWCF files, the NH Department of Resources and Economic Development (DRED) has advised that there are no Section 6(f) parcels in the project area *(Exhibit I)*.

Utilities

The proposed project requires the relocation of aerial utility lines and power poles. Disruption to service, if any, will be kept to an absolute minimum. The following utility companies have been identified within the project area:

SERVICE	LOCATION
National Grid (Electric)	Aerial & Underground
FairPoint (Telephone)	Aerial & Underground
Comcast (Cable TV)	Aerial
Lebanon Public Works Department (Sewer)	Underground
AT&T (Fiber Optic Communications Cable)	Underground

Environmental Justice

Executive Order 12898, enacted in 1994, requires that an Environmental Justice evaluation be conducted for all transportation projects that are undertaken, funded or approved by the Federal Highway Administration to avoid, minimize, or mitigate disproportionately high and adverse human health, environmental, social and economic effects on minority populations and low income populations. The Environmental Justice review for the impacted area did not indicate the presence of any of the above noted populations of concern (*Exhibit N*). As such, this project complies with Executive Order 12898.

Wetlands

Work associated with this project involves dredge and fill activities within the jurisdiction of the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the Army Corps of Engineers (ACOE). Impacts consist of 14,260 ft^2 (0.33 acres) of permanent impacts to wetlands. The proposed project will incur impacts to the following wetland types as classified by the United States Fish and Wildlife Service:

1. PEM1E: Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated
2. PFO1E: Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
3. R4SB2: Riverine, Intermittent, Streambed, Rubble

The project was reviewed by the ACOE, NHDES, NH Fish and Game (NHF&G), US Fish and Wildlife Service (USF&WS), US Environmental Protection Agency (EPA), NH Office of Energy and Planning (NHOEP), and the Federal Highway Administration (FHWA) at the March 21, 2007 and November 19, 2007 Natural Resource Agency coordination meetings. None of the above listed agencies objected to the proposed project. It is anticipated that the project will qualify for a State Programmatic General Permit administered by the ACOE. A Wetlands and Non-Site Specific Permit will be obtained prior to construction within any areas under the jurisdiction of the NHDES Wetlands Bureau and the ACOE (*Environmental Commitment 6*). It is anticipated that mitigation for the proposed wetland impacts may be required. Should wetland mitigation be required, the Department will coordinate with the necessary resource agencies to determine the type(s) and quantity of mitigation that will be necessary (*Environmental Commitment 7*).

Surface Waters/ Water Quality

The project is located within and adjacent to the Mascoma River. Although impacts to the Mascoma River will be minimal, the entire length of the project is located within ¼ mile of the river. The Department has been coordinating this effort with NHDES and NHF&G to ensure that the project not only meets transportation needs, but also is sensitive to this aquatic ecosystem.

The Clean Water Act (CWA) of 1972 (33 U.S.C. 1251) regulates the discharge of pollutants into the waters of the United States and sets quality standards for surface waters. In accordance with the CWA, the surface waters of New Hampshire have been classified by the state legislature (RSA 485-A:8) as either Class A or Class B. Class A waters are considered to be of the highest quality and considered optimal for use as water supplies after adequate treatment. The Mascoma River within the project area has been designated a Class A Water. In addition to the Class A designation, one of the main drinking water supply intakes for the City of Lebanon is located in the Mascoma River approximately 1 mile downstream from the project location. For these reasons the Department will appropriately treat all roadway runoff prior to discharge into the Mascoma River (*Environmental Commitment 8*).

In accordance with section 303(d) of the CWA, the State of NH Department of Environmental Services (NHDES) has designated the subject section of the Mascoma River (NHRIV801060106-02) as an impaired water for mercury levels. As roadway runoff does not generally contain mercury levels beyond those contained within normal precipitation in the State, the proposed project is not expected to further impair the subject section of the Mascoma River.

To minimize the potential for erosion and sedimentation increases in the Mascoma River and other downstream wetland systems during construction, the contractor responsible for the work will be required, as a contract provision, to prepare a Stormwater Pollution Prevention Plan detailing the

pollution prevention measures which will be employed prior to the commencement of construction activities (*Environmental Commitments 9*).

Wildlife/ Endangered Species/ Fisheries/ Natural Communities

The proposed action has been reviewed by the USF&WS and the NH Natural Heritage Bureau (NHNHB) for the presence of federal or state, listed or proposed, threatened or endangered species, or other species of special or exemplary status. In a letter dated February 23, 2007, the USF&WS responded that based on currently available information, no species or habitats under the jurisdiction of the USF&WS were identified within the project area (*Exhibit K*). In a letter dated February 9, 2011, the NHNHB responded that there were no known occurrences of any rare species or exemplary natural communities in proximity to the project area (E*xhibit J*).

The Magnuson-Stevens Fishery Conservation and Management Act requires the federal government to identify Essential Fish Habitat (EFH) and make conservation recommendations to agencies whose actions could affect it. The project is located along the Mascoma River. The Mascoma River is an EFH for Atlantic Salmon (*Salmo salar*). The proposed project was reviewed with the NH Wetlands Bureau (NHWB), the USF&WS, NHF&G and the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) at the March 21, 2007 Natural Resource Agency Coordination Meeting and no concerns were expressed regarding this EFH habitat.

In accordance with the NH Invasive Species Act (ISA), (HB 1258-FN) the The NH Department of Agriculture, Markets and Food (DAMF), Division of Plant Industry is responsible for the evaluation, publication and development of rules on invasive plant species. The purpose of this oversight is to protect the health of native species, the environment, commercial agriculture, forest crop production and human health. DAMF rules, specifically AGR 3800, state that "no person shall knowingly collect, transport, sell distribute, propagate or transplant any living or viable portion of any listed prohibited invasive plant species including all of their cultivars, varieties and specified hybrids." Pursuant to this rule, the project area was reviewed for invasive species during the initial phases of design. Several occurrences of Japanese Knotweed, Purple Loostrife, Buckthorn and Honeysuckle were found within the project area. If these plants will be impacted during construction they shall be handled and disposed of in accordance with the NHDOT's Best Management Practices for Roadside Invasive Plants manual (*Environmental Commitment 10*). Fill materials brought onsite or transported within the site will be free of invasive species or treated in accordance with the above noted BMP manual to prevent the spread of such species (*Environmental Commitment 11*).

Floodplains/ Floodways

A review of the National Flood Insurance Rate Map (FIRM) for the Town of Lebanon, NH (Community Number 330061) indicates that the project is partially located within the area of the 100-year flood with base flood elevations determined (Zone AE) (*Exhibit L*). This project is intended to replace the existing bridge, reconstruct the US Route 4/ NH Route 4A intersection and update the existing drainage and pavement within the project area. The length of the proposed bridge has been

reduced from 462 feet to 435 feet to allow for the construction of a smaller three span structure, eliminating the need for an additional pier within the river. As the existing bridge piers will be removed and no additional fill will be added within the floodplain or floodway, it is expected that upon completion, flood storage and water conveyance through the project area will be similar to or better than the conditions that existed prior to construction.

The Department has coordinated with the New Hampshire Office of Energy and Planning (NHOEP) and the City of Lebanon, NH (*Exhibit M*). The Lebanon Fire Chief and Director of Public Works were notified of the proposed project on March 7, 2007 and did not object to the proposed project.

Historical/ Archaeological

The Department has conducted architectural history and archaeological surveys and consulted with the State Historic Preservation Officer (SHPO), the NH Division of Historical Resources (NHDHR) and the Federal Highway Administration (FHWA) to locate and identify National Register of Historic Places listed, or eligible, properties or districts within the immediate area of the proposed project. The proposed project has been reviewed by the SHPO and FHWA based on the Section 106 review process set forth by the National Historic Preservation Act of 1966, as amended, and the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800). The proposed design was presented at Monthly Cultural Resource Agency Coordination Meetings held on March 8, 2007, April 5, 2007 and December 13, 2007.

Section 106 regulations offer owners of historic properties directly affected by the project or agencies that possess a direct interest in the historical resources, an opportunity to request Consulting Party status. Consulting Parties become more involved in the project through meetings and commentary and provide advisory input throughout the design process. Although Consulting Party status was solicited by the Department, no such requests were received. The Advisory Council on Historic Preservation (ACHP) declined to become a consulting party to the section 106 process (*Exhibit D*).

Following completion of a review of the architectural and historical resources present in the area, it was determined that the US Route 4 Bridge over the Mascoma River (Br. No. 188/126) and the Northern Railroad are eligible for the National Register of Historic Places. Information on these properties is on file at the NH Department of Transportation's Bureau of Environment as well as the New Hampshire Division of Historical Resources in Concord, New Hampshire.

The Mascoma River Bridge was constructed in 1930 using a series of metal plates riveted together to form girders. The deck of the bridge is placed directly on the girders forming what is known as a Deck Plate Girder Highway Bridge. Only two other Deck Plate Girder bridges were constructed in New Hampshire, one in Littleton carrying NH Route 18 over the Connecticut River and the other is in Gorham carrying NH Route 16 over the Peabody River. The unique design of the US Route 4 Bridge is the reason this structure has been determined eligible for the National Register of Historic Places.

The Northern Railroad, constructed in 1851, was the fifth railroad constructed in New Hampshire and was the first to link central portions of the state with the Connecticut River Valley and connect Boston Massachusetts with Montreal Quebec. The railroad operated until the late 1970's and was officially abandoned in the early 1990's. The line was then acquired by the State of New Hampshire in 1994 and was eventually developed into a recreational trail (Northern Rail Trail) in 2001 (see the Land Use/ Public Lands/ Recreation section for additional information). Given the importance of the Northern Railroad to the history of the State and the unique design of the bridges, depots, culverts and other structures located along the corridor, the Northern Railroad corridor has been determined eligible for the National Register of Historic Places.

The proposed project involves removing the US Route 4 Bridge over the Mascoma River and minor impacts to the Northern Rail Trail. As both of these resources have been determined eligible for the National Register of Historic Places, the impacts of this project on these resources were reviewed by NHDHR, the SHPO, NHDOT and FHWA in accordance with Section 106. At the April 12, 2007 Cultural Resource Agency Coordination Meeting it was determined that the replacement of the US Route 4 Bridge will have an adverse effect on this eligible structure (*Exhibit C)*. The impacts to the bridge will be mitigated through a state level Historic American Engineering Record (HAER) document. The document will include large format photographs, plans if available, and a descriptive and contextual narrative (*Environmental Commitment 12*). It was also determined at the April 12 meeting that as impacts to the remnants of the Northern Railroad will be minimal, the project will have no adverse effect to the Northern Railroad (*Exhibit C)*. Pursuant to the provisions of Section 106 of the National Historic Preservation Act (36 CFR 800), an MOA addressing the proposed action and subsequent mitigation was developed (*Exhibit E*). .

Pursuant to 23 USC 144 the existing bridge will be marketed for sale and relocation, with preservation covenants, prior to disposal. Federal-Aid Highway Funds will be made available for the relocation of the bridge up to the estimated cost of demolition (*Environmental Commitment 16*). For traffic control purposes, the existing bridge will need to remain in place until the new bridge has been constructed and traffic diverted onto the new structure.

Section 4(f) of the US Department of Transportation (US DOT) Act of 1966 (amended by 49 U.S.C. Section 303) provides additional protection for historic resources, wildlife refuges and publicly owned parks and recreational areas that are open to the public and are considered substantial recreational facilities. (See the Wildlife and Public Lands sections for additional information.) The US Route 4 Bridge is considered a historic resource under Section 4(f). A Programmatic Section 4(f) Evaluation has been prepared to demonstrate that there are no prudent and/or feasible alternatives to the replacement of the US Route 4 Bridge. (See the Programmatic Section 4(f) Evaluation section for additional information.)

Although the Northern Railroad/ Northern Rail Trail is considered a historic resource, 23 CFR 774.13(f)(3) provides an exemption from Section 4(f) requirements for "trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way, so long as the continuity of the trail, path, bikeway, or sidewalk is maintained." Consultation with FHWA has confirmed the applicability of this exemption and therefore no further Section 4(f) evaluation of the impacts to the Northern Railroad/ Northern Rail Trail are necessary.

In addition to architectural and historical resources, the project area was reviewed for archaeological resources as well. The topography of the area and proximity of the project to the Mascoma River indicated a high potential for Native American Archaeological deposits within the project area. In order to determine if any archaeological deposits are located within the project area, a Phase 1A Archaeological Sensitivity Assessment and a Phase 1B Intensive Archaeological Investigation were conducted. These investigations included background research and visual inspections of the project area and shovel test pits in areas of particular concern. This investigation resulted in the identification of one area of archaeological sensitivity just outside the project area. This site is known as the Lebanon Slate Mill and is located on Parcel 18, to the southwest/ downstream from the project area. As this portion of Parcel 18 is located outside the project area, no further archaeological investigation is necessary. This area of sensitivity will be identified to the contractor and no impacts to this area will be allowed in association with this project (*Environmental Commitment 13*).

Aesthetics

The project is located in a relatively rural area in proximity to the Mascoma River, the Northern Rail Trail, the Mill Road Municipal Trail and the parcel 18 conservation property (see the Surface Waters/ Water Quality and the Land Use/ Public Lands/ Recreation sections for additional information). Local property owners, officials and organizations have indicated that these resources and the natural feeling of the area are of particular importance. As such, the proposed project has been designed with these features in mind. Although the construction of the new bridge, removal of the existing structure and intersection reconstruction will visually alter the area, these changes are not expected to negatively affect the aesthetically pleasing nature of the above noted resources. Furthermore, coordination with the public, local officials and organizations did not indicate the presence of any aesthetic concerns associated with the proposed project. As such, this project is not expected to negatively impact the aesthetic value of the area.

Construction Impacts

Construction of this project is anticipated to cause temporary increases in noise and dust levels within the project area. All standard measures will be employed to ensure such increases are minimized to the extent practicable and limited to the construction period (*Environmental Commitment 14*).

The construction of this project will temporarily disrupt traffic patterns. Access to all occupied residences will be maintained throughout construction. Through traffic will be maintained whenever possible or short-term temporary detours with appropriate signage will be implemented during construction (*Environmental Commitment 15*).

To minimize the potential for erosion and sedimentation increases in the Mascoma River and other downstream wetland systems during construction, the contractor responsible for the work will be required, as a contract provision, to prepare a Stormwater Pollution Prevention Plan detailing the

pollution prevention measures which will be employed prior to the commencement of construction activities (*Environmental Commitment 9*).

Summary of Environmental Commitments

The following environmental commitments have been made for this project.

1. Any materials containing lead will be properly disposed of in accordance with State and Federal regulations. (**Construction**)

2. The Department will obtain the necessary property acquisitions, easements and rights-of-entry prior to the commencement of construction. (**Design & Right-of-Way**)

3. Closures of the Northern Rail Trail will be kept to a minimum and the public will be adequately notified in advance of extended periods of closure. (**Design & Construction**)

4. Compensation for impacts to the conservation property (Parcel 18) will be in agreement with the City of Lebanon and the Upper Valley Land Trust. (**Design, Right-of-Way & Environment**)

5. The small woods road to the northeast of the existing bridge will be reconstructed in order to maintain access to the City owned conservation property (Parcel 18) upon completion of the project. (**Design**)

6. A Wetlands and Non-Site Specific Permit will be obtained prior to construction within any areas under the jurisdiction of the NHDES Wetlands Bureau and the ACOE. (**Construction & Environment**)

7. Should wetland mitigation be required, the Department will coordinate with the necessary resource agencies to determine the type(s) and quantity of mitigation that will be necessary. (**Design & Environment**)

8. The Department will appropriately treat all roadway runoff prior to discharge into the Mascoma River. (**Design & Environment**)

9. Prior to the commencement of work, the contractor shall submit a Stormwater Pollution Prevention Plan specific to this project. The plan shall be approved by the Department and implemented and monitored as noted. (**Construction & Environment**)

10. Several occurrences of Japanese Knotweed, Purple Loostrife, Buckthorn and Honeysuckle were found within the project area. If these plants will be impacted during construction they shall be handled and disposed of in accordance with the NHDOT's Best Management Practices for Roadside Invasive Plants manual. (**Design, Construction & Environment**)

11. Fill materials brought onsite or transported within the site will be free of invasive species or treated in accordance with the above noted BMP manual to prevent the spread of such species. (**Design, Construction & Environment**)

12. The removal of the US Route 4 Bridge will be mitigated through a state level Historic American Engineering Record document. The document will include large format photographs, plans if available, and a descriptive and contextual narrative. This documentation will be completed prior to the removal of the existing structure. (**Environment**)

13. The area of archaeological sensitivity on Parcel 18 will be identified to the contractor prior to the commencement of construction and no impacts to this area will be allowed in association with this project. (**Construction & Environment**)

14. Precautions shall be employed to minimize noise and dust levels during the construction period, primarily for the abutting receptors located adjacent to the project area. (**Construction**)

15. Through traffic will be maintained whenever possible or short-term temporary detours with appropriate signage will be implemented during construction. Access to all occupied properties shall be maintained throughout construction. (**Design & Construction**)

16. The existing bridge will be marketed for sale and relocation, with preservation covenants, prior to disposal. Federal-Aid Highway Funds will be made available for the relocation of the bridge up to the estimated cost of demolition. (**Design, Construction & Environment**)

Part II: Programmatic Section 4(f) Evaluation

Introduction

Section 4(f) of the US Department of Transportation (US DOT) Act of 1966 (amended by 49 U.S.C. Section 303) provides additional protection for historic resources, wildlife refuges and publicly owned parks and recreational areas that are open to the public and are considered substantial recreational facilities. (See the Wildlife, Public Lands and Historical sections for additional information.) The US Route 4 Bridge is considered a historic resource under Section 4(f). This Programmatic Section 4(f) Evaluation has been prepared to demonstrate that there are no prudent and/or feasible alternatives to the replacement of the US Route 4 Bridge. The evaluation also outlines coordination that has occurred and the measures proposed to minimize harm to that resource.

The Programmatic Section 4(f) being used for this project is for Federal Highway Administration (FHWA) projects that necessitate the use of historic bridges. The approval for its use is subsequent to design studies that have determined that there are no feasible and prudent alternatives to the use of certain historic bridge structures to be replaced or rehabilitated with federal funds and that the project includes all possible planning to minimize harm resulting from such use.

Pursuant to Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. 303(c), and Section 18(a) of the Federal-Aid Highway Act of 1968, 23 U.S.C. 138 (as amended by the Federal-Aid Highway Act of 1983), the U.S. Secretary of Transportation may approve a program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, State, or local significance (as determined by Federal, State, or local officials having jurisdiction over the park, area, refuge or site) only if:

1. There is no prudent and feasible alternative to using that land, and

2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife or waterfowl refuge, or historic site resulting from the use.

Coordination was established with local and state officials, and it was determined that there would be no publicly owned public parks, recreation areas, wildlife or waterfowl refuges impacted by the proposed project.

The Department has coordinated with the NH Division of Historical Resources (NHDHR), FHWA, local organizations, local officials and the public to locate and identify National Register of Historic Places listed or eligible properties within the area and has determined how they would be affected by the proposed project. The project was reviewed with NHDHR, FHWA and NHDOT at regularly scheduled Cultural Resource Agency Coordination Meetings on March 8, 2007, April 5, 2007 and December 13, 2007.

Existing Conditions/ Proposed Action

The intent of this project is to replace the US Route 4 Bridge (State Bridge No. 188/126) over the Mascoma River and the Northern Railroad Rail Trail, improve the US Route 4/NH Route 4A/Mill Road intersection and update the existing roadway through pavement rehabilitation and drainage updates. Upon construction of the new bridge, the existing bridge will be removed in its entirety. For more information see the Existing Conditions/Need and Proposed Action sections in Part I: Environmental Study of this document.

Description of 4(f) Resources

The existing US Route 4 Mascoma River Bridge is 462 feet long with 12-foot wide paved travel lanes and 2-foot wide metal grate shoulders (*Exhibit Q*). The bridge was constructed in 1930 using a series of metal plates riveted together to form girders. The deck of the bridge is placed directly on the girders forming what is known as a Deck Plate Girder Highway Bridge. Only two other Deck Plate Girder bridges were constructed in New Hampshire, one in Littleton carrying NH Route 18 over the Connecticut River and another in Gorham carrying NH Route 16 over the Peabody River. Given the unique design of the US Route 4 Bridge, this structure has been determined individually eligible for the National Register of Historic Places.

Impacts to Section 4(f) Properties

The proposed project involves removing the US Route 4 Mascoma River Bridge. As the bridge is individually eligible for the National Register of Historic Places it is considered a Section 4(f) resource and therefore is subject to the provisions set forth in Section 4(f). At the December 13, 2007 Cultural Resource Agency Coordination Meeting, it was confirmed by FHWA that as the project involves the removal of an historic bridge with Federal funds, the project would be eligible for a Programmatic 4(f) Evaluation.

Alternatives That Avoid and/or Minimize Impacts to Section 4(f)Resources

"No-Build"

The "No-Build" alternative is not considered feasible and prudent, as it does not address the structural deficiencies and safety concerns associated with the existing bridge. The FSR of this red listed bridge is 34.7 out of 100. Selection of this alternative would require continued use of the bridge as it continues to deteriorate until it can no longer support normal traffic patterns and must be taken out of service. The impacts associated with the proposed action are not of a magnitude to warrant the selection of this alternative and as a result, the no-build alternative was not considered reasonable or prudent.

Rehabilitation of the Existing Bridge

The selection of a rehabilitation option would not address the majority of the conditions that make the bridge deficient and would not address many of the safety concerns of the existing structure and intersection. Since a good portion of the existing superstructure and deck would have to be replaced, it is anticipated that traffic could not be maintained on the bridge during construction and as a result, either a detour or a temporary bypass structure would need to be installed. It is anticipated that this alternative would be at least as costly as the proposed alternative and would require impacts similar to those anticipated with the Proposed Action. As such, this alternative was not selected.

New Bridge Construction Without Removal of the Existing Structure

This alternative involves the construction of a new bridge to the east or west of the existing structure. Once the new bridge is completed, the existing structure would then be closed to traffic, but would remain standing. Unless substantial repairs were then made to the existing structure, it would continue to deteriorate to the point where it would still need to be removed in order to prevent collapse. Deteriorating structural integrity and the potential for collapse also present a substantial safety concern for the public using the Northern Rail Trail beneath the structure.

This alternative would also not provide the additional environmental benefits to removing the existing piers within and along the river. This would result in additional environmental impacts, which would likely raise concern among the local, State and Federal natural resource agencies.

It is anticipated that this alternative would be more costly than the proposed alternative and would require impacts similar to or greater than the Proposed Action. As such, this alternative was not selected.

Measures to Minimize Harm/ Mitigation

Recordation of the Bridge

The impacts to the Mascoma River Bridge will be mitigated through the preparation of a state level Historic American Engineering Record (HAER) document. The document will include large format photographs, plans if available, and a descriptive and contextual narrative. NHDOT shall ensure that all documentation is completed and accepted by NHDHR and FHWA prior to any disturbance of the structure and that copies of this documentation are made available to NHDHR.

Coordination and Public Participation

Coordination meetings have been held among NHDHR, FHWA, NHDOT, Lebanon City Officials and concerned citizens to discuss alternatives and measures to minimize harm to the Section 4(f) resources. The measures that were considered feasible and prudent were evaluated and

incorporated into the design of the project. An Adverse Effect memo was prepared which addresses unavoidable impacts to the historic properties and appropriate mitigation *(See Exhibit C).* Pursuant to the provisions of Section 106 of the National Historic Preservation Act (36 CFR 800), a MOA addressing the proposed action and subsequent mitigation will be developed.

Meetings were held periodically with various Federal, State and local agencies, as well as with the general public throughout the development of this project. Project review meetings were held on the following dates:

Date	Topic
March 8, 2007	Cultural Resource Agency Meeting
March 21, 2007	Natural Resource Agency Meeting
April 5, 2007	Cultural Resource Agency Meeting
September 27, 2007	Public Officials/ Public Informational Meeting
December 13, 2007	Cultural Resource Agency Meeting
November 19, 2008	Natural Resource Agency Meeting
December 8, 2008	Public Hearing
January 13, 2011	Cultural Resource Agency Meeting

Letters were sent to various Federal, State and local agencies, as well as the general public, requesting input on this project on the following dates:

Agency / Organization	Contact	Date Sent	Date Received
City of Lebanon			
Pedestrian & Bicyclist Committee	Anna Adachi-Mejia	2/13/2007	3/19/2007
Chief of Police	M. James Alexander	2/13/2007	-
Fire Chief	Steve Allen	2/13/2007	3/7/2007
Chair, Conservation Commission	Nicole Cormen	2/13/2007	3/23/2007
Heritage Commission	Doug Gross	2/13/2007	3/19/2007
Mayor	Patrick T. Hayes	2/13/2007	-
Recreation and Parks Dept. Director	Cindy Heath	2/13/2007	-
City Historian	Vacant	2/13/2007	-
City Engineer	Robert Kline	2/13/2007	-
Director of Public Works	Michael Lavalla	2/13/2007	3/29/2007
City Manager	Gregg Mandsager	2/13/2007	-
Chair, Planning Board	Kenneth Morley	2/13/2007	3/19/2007
City Planner	Ken Niemczyk	2/13/2007	-
Upper Valley Lake Sunapee RPC	Tara E. Bamford	2/13/2007	-
US Fish and Wildlife Service	Bill Neidermyer	2/13/2007	2/23/2007
NH DRED, LWCF	Shari Colby	2/13/2007	2/21/2007
NH Natural Heritage Bureau	Melissa Coppola	2/12/2007	2/12/2007
NH Office of Energy and Planning	Jennifer Gilbert	2/13/2007	2/26/2007
NH Office of Energy & Planning (CLS)	Steve Walker	2/13/2007	2/15/2007
NH DOT – HR (Environmental Justice)	David Chandler	2/13/2007	3/13/2007

Programmatic Applicability

This project meets the criteria for Programmatic Section 4(f) Evaluations for Federal Aid highway projects that necessitate:

1. The use of historic bridges
   - The bridge will be replaced with Federal funds.
   - The project will require the use of a historic bridge structure, which is eligible for listing on the National Register of Historic Places.
   - The bridge is not a National Historic Landmark.
   - The FHWA Division Administrator has determined that the facts match those set forth in the sections of this document labeled Alternatives, Findings, and Mitigation.
   - Agreement between the SHPO and FHWA has been reached through the section 106 review process.
   - Fully adequate records of the bridge will be made in accordance with the Historic American Engineering Record (HAER) standards.

Based on the above considerations there are no feasible and prudent alternatives to the use of this historic bridge and the proposed action includes all planning to minimize harm to the 4(f) resources resulting from such use.

Summary Statement

For the reasons demonstrated in this Section 4(f) Evaluation, there are no prudent and/or feasible alternatives to the removal of the US Route 4 Mascoma River Bridge. This evaluation has demonstrated that "there are unique problems or unusual factors involved in the use of alternatives that avoid this structure or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes" (23 CFR 771.135 (a) (2)). The Proposed Action includes all possible planning to minimize harm to Section 4(f) properties resulting from such use.

All parties involved have agreed with the proposed measures to minimize harm to the cultural resources. A Memorandum of Agreement (MOA) between FHWA, NHDHR and NHDOT addressing the proposed action and subsequent mitigation has been developed and included in this document (*Exhibit E*).

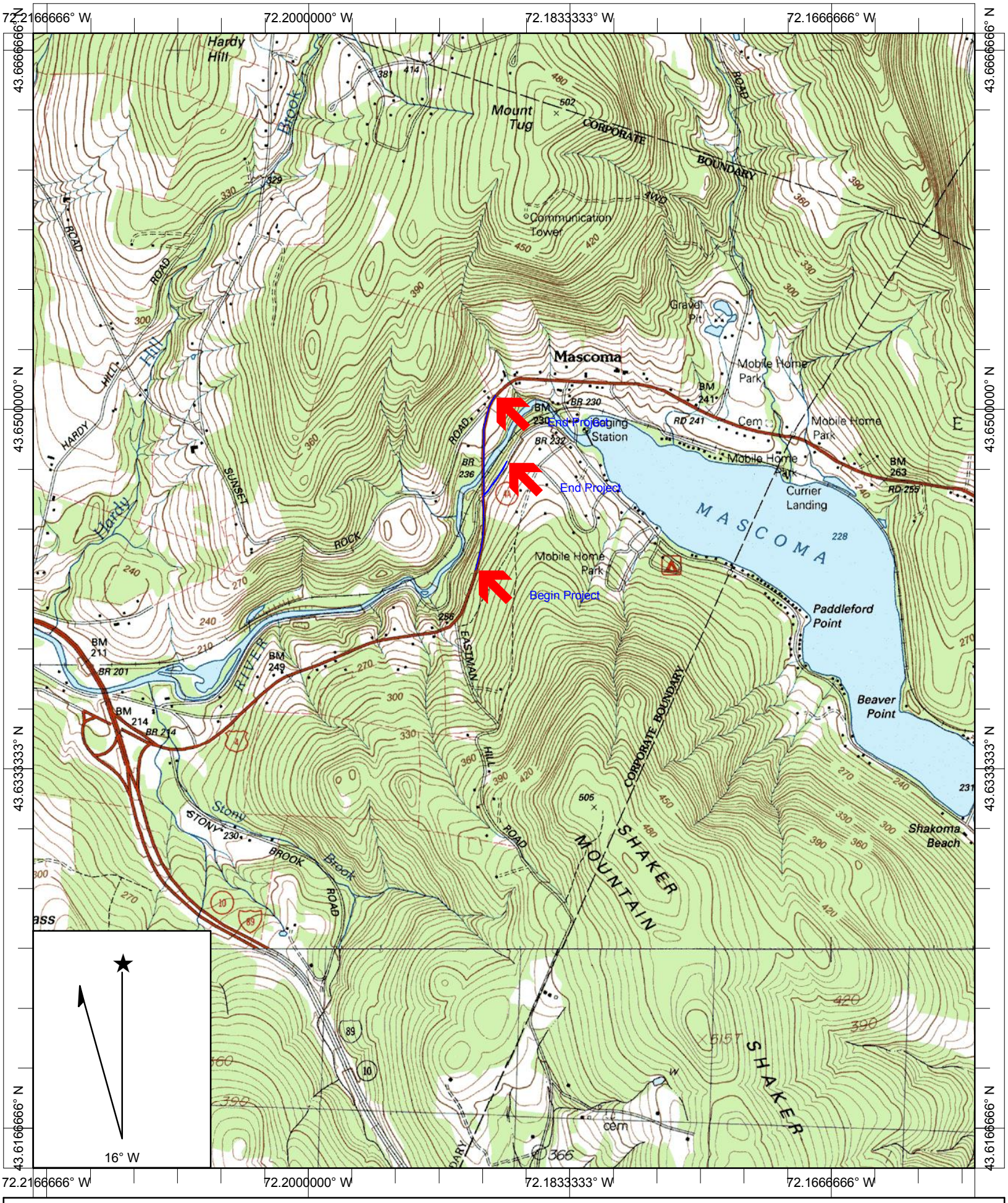
Prepared by: _____ _____
Jonathan A. Evans Date
Senior Environmental Manager

Lebanon, X-A000(141), 13951

Exhibits

Exhibit A

Project Location Map



Name: ENFIELD
Date: 1/25/2007
Scale: 1 inch equals 2000 feet

Location: 043.6411423° N 072.1875883° W
Caption: Lebanon, 13951, X-A000(141)

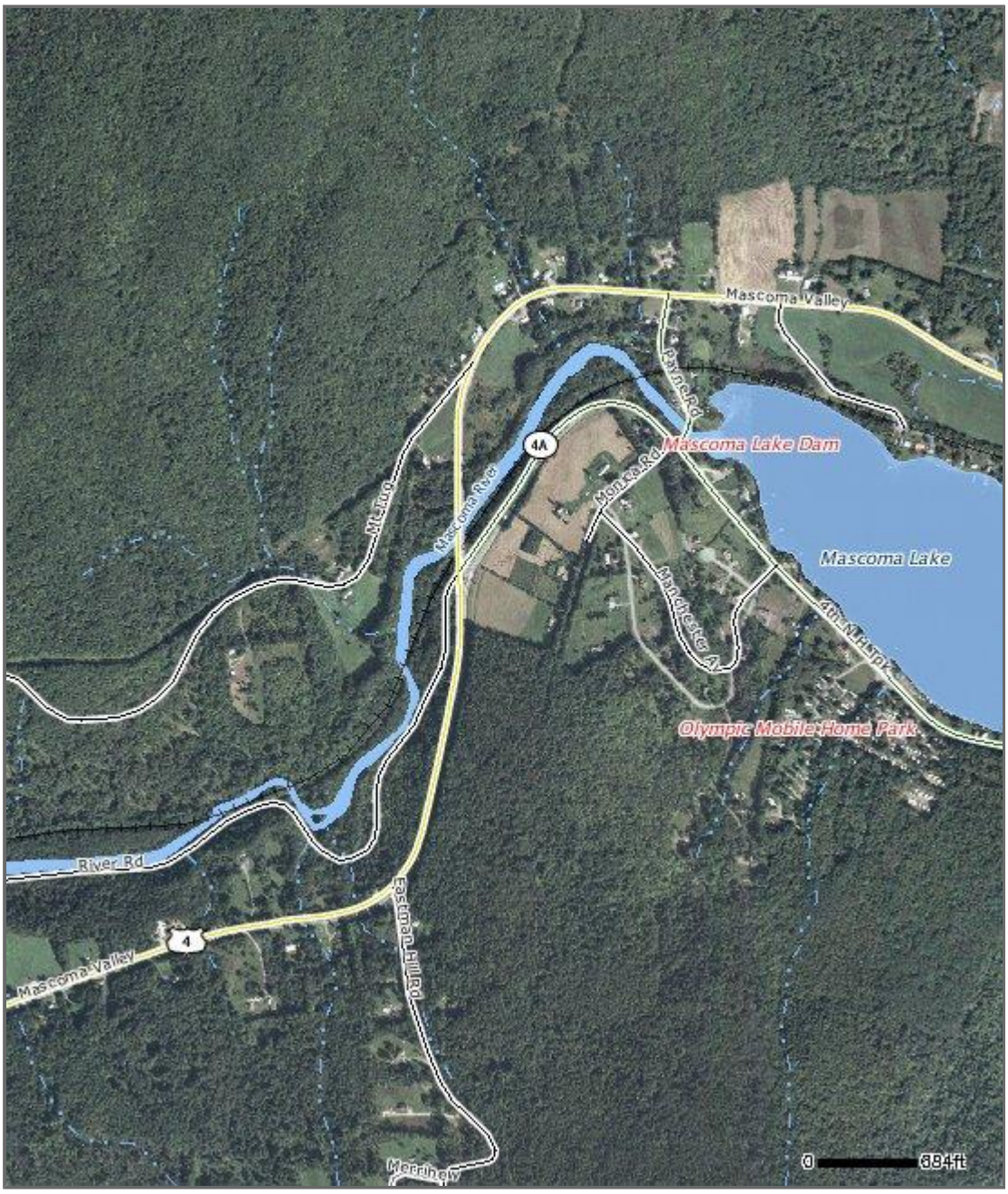
Copyright (C) 2002, Maptech, Inc.

Exhibit B

Aerial Photograph of Project Area

NH GRANIT DATA MAPPER

Base Map: Lebanon, 13951, X-A000(141)



Location Map

Map Produced:
January 25, 2007

GRANIT Complex Systems Research Center

University of New Hampshire

NH GRANIT DATA MAPPER

Base Map: Lebanon, 13951, X-A000(141)

Legend

Roads

- Class I: primary system
- Class II: secondary system
- Class III: state recreational
- Class IV: within compacts
- Class V: municipal
- Class VI: unmaintained municipal

Points of Interest

- Cell Towers

Utility Lines

- Pipeline
- Powerline

Railroads

Streams

- Perennial Stream
- Intermittent Stream
- Canal/Ditch

Lakes

- Lake/Pond
- Reservoir

Rivers

- River
- Canal/Ditch

Data Sources

All data are maintained and/or distributed by NH GRANIT. See www.granit.sr.unh.edu for detailed documentation on individual data layers.

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center, under contract to the NH Office of Energy and Planning, and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. OEP, CSRC, and the cooperating agencies make no claim as to the validity or reliability or to any implied uses of these data.

Exhibit C

Adverse Effect Memorandum

New Hampshire DOT
Department of Transportation

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

CHARLES P. O'LEARY, JR.
COMMISSIONER

JEFF BRILLHART, P.E.
ASSISTANT COMMISSIONER

Lebanon
X-A000(141)
13951

Adverse Effect Memo

Pursuant to meetings and discussions on March 8, 2007 and April 5, 2007, and for the purpose of compliance with regulations of the National Historic Preservation Act, as amended, and the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the NH Division of Historical Resources and the NH Division of the Federal Highway Administration have coordinated the identification and evaluation of historic and archaeological properties with plans to replace the bridge that carries US Route 4 over the Mascoma River (Br. No. 188/126) and the remnants of the Northern Railroad, near the intersection of NH Route 4A in Lebanon, NH.

Based on a review pursuant to 36 CFR 800.4 of the architectural and/or historical significance of resources in the project area, we agree that the US Route 4 Bridge over the Mascoma River (Br. No. 188/126) and the Northern Railroad are eligible for the National Register of Historic Places. The US Route 4 Bridge over the Mascoma River is eligible under Criteria C and the Northern Railroad is eligible under Criterion A and C. Information on these properties is on file at the New Hampshire Division of Historical Resources in Concord, New Hampshire.

Applying the criteria of effect at 36 CFR 800.5, we have determined that the replacement of the US Route 4 Bridge over the Mascoma River will have an adverse effect on this eligible structure. The impacts to the bridge will be mitigated through a state level Historic American Engineering Record document. The document will include large format photographs, plans if available, and a descriptive and contextual narrative. The project will have no adverse effect to the Northern Railroad.

NHDOT will complete all necessary phases of archaeology.

In accordance with the Advisory Council's regulations, consultation will continue, as appropriate, as this project proceeds.

Linda Ray Wilson
Linda Wilson, Deputy
State Historic Preservation Officer

for Kathleen O. Laffey, Administrator
Federal Highway Administration

Concurred with by the New Hampshire Department of Transportation:

Date: April 12, 2007 By: Joyce McKay
Joyce McKay, Cultural Resources Manager

c.c. Bill O'Donnell, FHWA
Linda Wilson, NHDHR
Alex Vogt, NHDOT
Jon Evans, NHDOT

S:\PROJECTS\DESIGN\13951\Cultural\memo.doc

Exhibit D

Advisory Council on Historic Preservation Correspondence

Preserving America's Heritage

February 2, 2011

Mr. Jamison Sikora
Environmental-ROW Program Manager
Federal Highway Administration
New Hampshire Division
19 Chenell Drive, Suite One
Concord, NH 03301

Ref: *Proposed Replacement of U.S. Route 4 Bridge over the Mascoma River*
Lebanon, New Hampshire

Dear Mr. Sikora:

On January 28, 2011, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the New Hampshire State Historic Preservation Office (SHPO), and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA, and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Ms. Najah Duvall-Gabriel at 202-606-8585 or at ngabriel@achp.gov.

Sincerely,

LaShavio Johnson

LaShavio Johnson
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone:202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

Exhibit E

Memorandum of Agreement

Memorandum of Agreement
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
PURSUANT TO 36 CFR PART 800.6(a)

WHEREAS, the New Hampshire Division of the Federal Highway Administration (NHFHWA) has determined that the replacement of the historic US Route 4 Bridge (188/126) over the Mascoma River near the intersection of US Route 4 and NH Route 4A in the Town of Lebanon, New Hampshire, will have an adverse effect on the six-span, deck plate girder, which is eligible for the National Register of Historic Places. The NHFHWA has consulted with the New Hampshire State Historic Preservation Officer (NHSHPO) pursuant to regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the New Hampshire Department of Transportation (NHDOT) has participated in the consultation, has solicited public comment through the public meetings and the consulting party procedures with NHFHWA as stated in 36 CFR 800 (2), and is invited to participate in this Memorandum of Agreement (MOA); and

WHEREAS, the NHFHWA has agreed that the NHDOT shall participate to find ways to mitigate the effects of final design changes involving archaeological sites that may be found eligible for the National Register of Historic Places under its standard phased investigations; and

WHEREAS, in accordance with 36 CFR 800, the NHFHWA acknowledges and accepts the advice and conditions outlined in the Advisory Council on Historic Preservation's "Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites," and other mitigation procedures published in the Federal Register on May 18, 1999; and

WHEREAS, under the MOA, NHDOT agrees that the recovery of significant information from affected significant archaeological sites will be done in accordance with published guidance; and

WHEREAS, to the best of our knowledge and belief, no human remains, associated or unassociated funerary objects, or sacred objects of cultural patrimony as defined in the Native American Graves Protection Act (25 U.S.C. 3001), are expected to be encountered in the archaeological work;

NOW, THEREFORE, the NHFHWA, NHSHPO, and the NHDOT agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

Stipulations

I. Documentation of the US Route 4 Bridge (188/126)

Prior to removal of the bridge, the NHDOT completed the New Hampshire Historic Property Documentation Form for the Bridge. The specified work was based on Historic

American Engineering Record (HAER) standards. This documentation was completed using the services of a 36 CFR 61-qualified architectural historian. It included the cover sheet, the narrative with detailed description of the bridge, historical narrative, bibliography, location map, archival copy of original drawings, photographic index, photographic key, archival large format negatives, and contact prints. The historical narrative included a historical background of the crossing; a narrative of the design and construction process of the bridge and its designer, fabricator, and construction firm; a discussion of the bridge type, and a concluding discussion of the significance of the bridge. This document has been accepted by the NHSHPO and was distributed to the NHSHPO, NHFHWA, NHDOT, and the Lebanon Historical Society.

II. Marketing of the Bridge

The bridge will be marketed as required by 23 USC 144. The bridge will be advertised once with covenants in a local and regional newspaper, leaving one month for response. Federal-Aid Highway Funds will be made available for the relocation of the bridge up to the estimated cost of demolition.

III. The Northern Railroad

The highway bridge spans over the Northern Railroad. The connectivity of the railroad line will not be impacted. The project will leave the Northern Railroad in its current condition after the completion of construction.

IV. Archaeological Investigations

A. If changes during final design cross archaeologically sensitive property, then all necessary phases of archaeological investigations will be completed.

B. If human remains and grave-associated artifacts are discovered while carrying out the activities pursuant to this MOA, the NHFHWA, and NHDOT will immediately notify the appropriate authorities, as prescribed by New Hampshire statutes to determine an appropriate course of action in accordance with the Advisory Council on Historic Preservation's (Council's) Revised "Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects," adopted by the Council on February 23, 2007 at its quarterly business meeting in Washington, D.C.

The NHFHWA shall also ensure that the following terms and conditions are implemented:

I. Dispute Resolution

Should the NHSHPO object within 30 days to any plans or specifications provided for review or action proposed pursuant to this agreement, the NHFHWA shall consult with the objecting party to resolve the objection. If the NHFHWA determines that the objection cannot be resolved, they shall request further comments of the Council pursuant to 36 CFR Part 800.6(b). Any Council comment provided in response to such a request will be taken into account by the NHFHWA in accordance with 36 CFR Part 800.6(c)(2) with reference only to

the subject of the dispute; NHFHWA's responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.

II. Termination of Agreement

If any signatory determines that the terms of the MOA cannot be executed, the signatories shall consult to seek amendment of the agreement. If the agreement is not amended, any signatory may terminate the agreement. If the terms of this agreement have not been implemented by June 1, 2013, this agreement shall be considered null and void. In such event, NHFHWA shall notify the parties to this agreement, and if it chooses to continue with the undertaking, shall reinitiate review of the undertaking in accordance with 36 CFR 800.

III. Amendment

Any party to this agreement may propose to the NHFHWA that the agreement be amended, whereupon the agency will consult with the other parties to this agreement to consider the amendment. Section 36 CFR 800.6 (c)(1) shall govern the execution of this amendment.

Execution of this MOA by the NHFHWA, NHDOT, and the NHSHPO and its subsequent acceptance by the Council, and implementation of its terms are evidence that NHFHWA has afforded the Council an opportunity to comment on this project, and that NHFHWA has taken into account the effects of the undertaking on historic properties.

Patrick A. Bar — Date: 1-27-11
Acting Division Administrator, NHFHWA

William Cass — Date: 11/03/11
William Cass, Project Development Administrator, NHDOT

Linda Ray Wilson, DSHPO, for — Date: 1/11/11
Elizabeth H. Muzzey, New Hampshire State Historic Preservation Officer

Exhibit F

Initial Site Assessment (ISA)

Initial Site Assessment (ISA) Checklist

Project Name: Lebanon
Federal Number: X-A000(141)
State Number: 13951

Date: 10/31/2008
Reviewer: J. Evans

1. **Project Features:**

New R/W Yes **Excavation** Yes **Relocate Utilities** Yes

2. **Review of Existing Information (Check Sources used)**

DES Files ☒
Local Officials ☒
Fire Department ☒
Land Owners/Interviews ☒
Sanborn Insurance Maps ☐
Aerial Photos (List Dates) ☐
Chain of Title (R/W) ☐
Other

Does the review of existing information indicate the presence or potential presence of hazardous materials? (If yes, identify, locate and explain.)
No. A review of the NH DES OneStop database did not indicate the presence or potential presence of hazardous materials.

3. **Field Review of Project Area (attach photos, if taken).**

Setting (Undeveloped/Rural/Urban) Rural**.**

Land Uses (Industrial, Commercial, Residential, Agricultural, Forested):

Current Predominant Land Uses	Forested/Residential
Previous Predominant Land Uses	Forested/Residential
Associated Land Uses	Forested/Residential
Adjacent Land Uses	Forested/Residential

Storage Structures (Observed or Suspected)

Underground Tanks	☐	**Drums**	☐
Surface Tanks	☐	**Basins**	☐
Transformers	☐	**Landfills**	☐
Sumps	☐	**Others**	_____
Ponds	☐		

Contamination

Surface Staining	☐	**Vegetation Damage**	☐
Oil Sheen	☐	**Dead Fauna**	☐
Odors	☐	**Other**	☐
		None	☒

Potential Asbestos Containing Materials*

Buildings	☐	**Serpentine**	☐
Sprayed-On Fireproofing	☐	**Pipe Wrap**	☐
Acoustical Plaster	☐	**Friable Tape**	☐
Fill Material	☐	**None**	☒

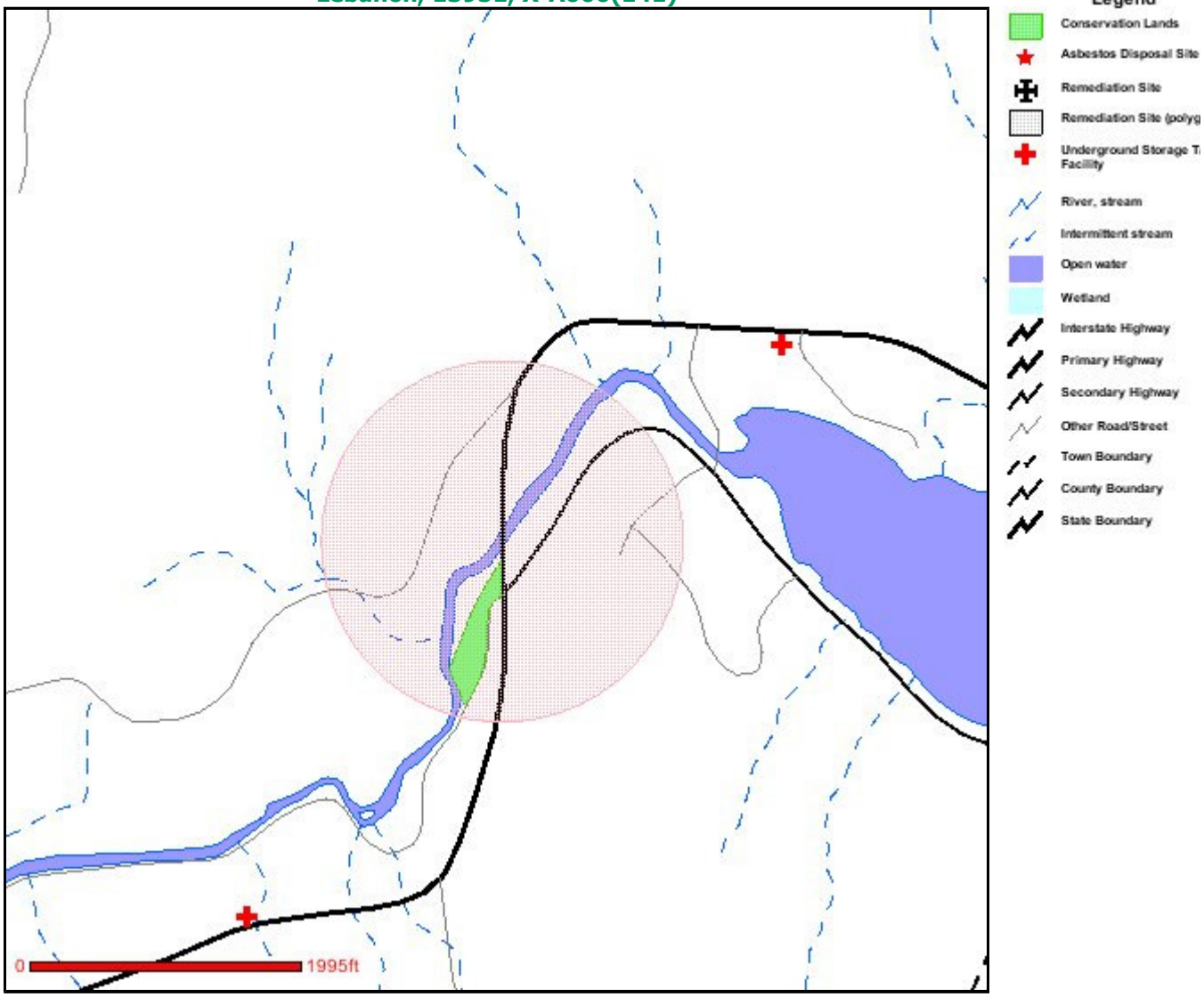
Does the field review indicate the presence or potential presence of hazardous materials? (If yes, identify, locate, and explain.)
Yes. A field review conducted on January 9, 2007 indicated the potential presence of lead based paint on the existing bridge. Any materials containing lead should be properly disposed of in accordance with State and Federal Regulations.

*** The Bureau of Right-of-Way should be notified when buildings possibly containing asbestos are to be taken or moved.**

New Hampshire Department of Environmental Services

OneStop Program GIS

Lebanon, 13951, X-A000(141)



Map Scale = 1 : 18061 (1" = 1505 feet or 0.3 miles)

The information contained in the OneStop Program GIS is the best available according to the procedures and standards of each of the contributing programs and of the GIS. The different programs are regularly maintaining the information in their databases. As a result, the GIS may not always provide access to all existing information, and it may occasionally contain unintentional inaccuracies. The Department can not be responsible for the misuse or misinterpretation of the information presented by this system.

Map prepared 10/31/2008 8:22:38 AM

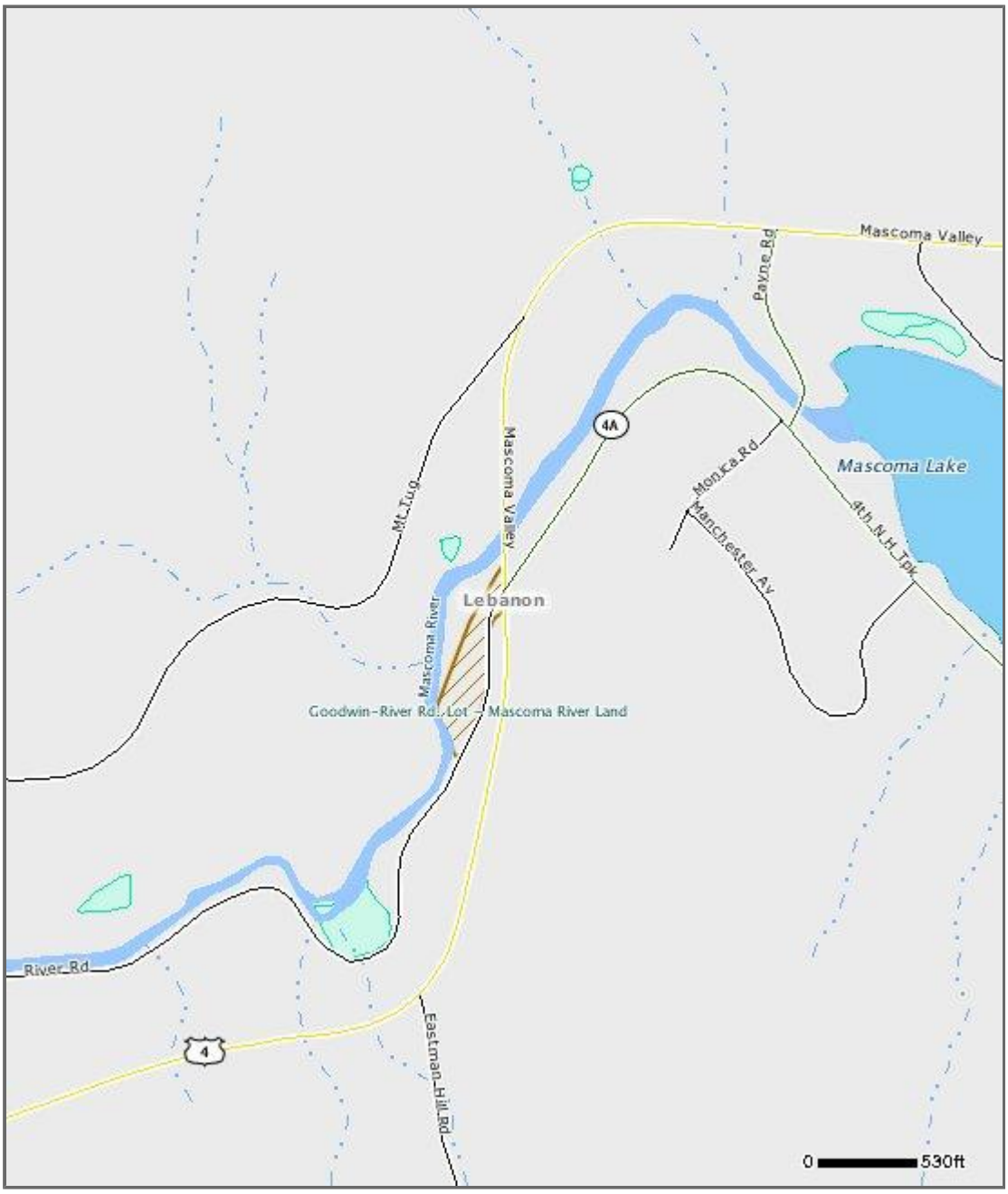
Developed
cooperation
NH GRAN

Exhibit G

Land Conservation Map

NH GRANIT DATA MAPPER

Land Conservation: Lebanon, 13951, X-A000(141)



Location Map

Map Produced:
February 14, 2007

GRANIT Complex Systems Research Center

UNIVERSITY of NEW HAMPSHIRE

NH GRANIT DATA MAPPER

Land Conservation: Lebanon, 13951, X-A000(141)

Legend

Roads
- Class I: primary system
- Class II: secondary system
- Class III: state recreational
- Class IV: within compacts
- Class V: municipal
- Class VI: unmaintained municipal

Political Boundaries
- State
- County
- Town

Streams
- Perennial Stream
- Intermittent Stream
- Canal/Ditch

Lakes
- Lake/Pond
- Reservoir

Rivers
- River
- Canal/Ditch

Wetlands
- Estuarine
- Lacustrine
- Marine
- Palustrine
- Riverine

CL: Agency Type
- 1 Municipal Agency
- 2 Federal Agency
- 3 State Agency
- 4 Other Public
- 5 Private Organization

Data Sources

All data are maintained and/or distributed by NH GRANIT. See www.granit.sr.unh.edu for detailed documentation on individual data layers.

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center, under contract to the NH Office of Energy and Planning, and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. OEP, CSRC, and the cooperating agencies make no claim as to the validity or reliability or to any implied uses of these data.

Exhibit H

Conservation Land Stewardship (CLS) Program
Correspondence

Jonathan Evans

From: Walker, Steve [Steve.Walker@nh.gov]
Sent: Thursday, February 15, 2007 11:38 AM
To: Jonathan Evans
Subject: Lebanon 13951

There are no LCIP interests in the project area. There appears to be some conservation land of the City's along River Road but that has nothing to do with us. Cheers

Exhibit I

Land and Water Conservation Fund (LWCF) Memorandum

CHH CHH JAE

State of New Hampshire
INTER-DEPARTMENT COMMUNICATION

To: Jonathan A. Evans
Environmental Manager
NH Dept. of Transportation

From: Shari Colby, Program Specialist SC
Dept. of Resources and Economic Development
Division of Parks and Recreation

Date: February 21, 2007

Subject: Lebanon, 13951, X-A000(141)

This communication is in response to your memo dated February 13, 2007 regarding the replacement of the US Route 4 Bridge over the Mascoma River in Enfield NH. I have attached a list of all 6(f) properties that are located in the town of Lebanon along with a brief description.

Upon review of the information provided in your memo, I find no significant impacts to the recreational value of the 6(f) property. Unless changes to the proposed project occur, no further approval is required from this office.

Feel free to contact me at 271-3556 or at scolby@dred.state.nh.us , should you have any questions.

Lebanon 6(f) Properties

33-00073 (Storrs Hill Ski Area) – Improvements to Storrs Hill Ski Area including new 1500' ski tow, clearing 4 acres of ski trails, slope lighting, and expansion of parking lot. Upper slope area on permanent easement from Townsend.

33-00204 (West Side Recreation Area) – Development of a hard-surfaced area for skating with tennis and basketball in summer, shelter, storage building, and fencing, at Crawford and Aldrich Avenues.

33-00277 (Lebanon Community Gardens) – Acquisition of 5 acres on U.S. Rt. 4 on Fellows Hill; access road, parking lot, drainage, fencing, play equipment, picnic tables, and landscaping.

33-00428 (Farnum Hill Reserve) - The acquisition of 820+ acres (via SPNHF), by partial donation, on Farnum Hill off Poverty Lane.

33-00514 (Lebanon Civic Memorial Field) – Improvements to Civic Memorial Field by a storage/toilet/concession building, on Crawford Street in West Lebanon.

33-00568 (Connecticut Riverfront) – Acquisition of 15.4+ acres (Cole; LCIP) on the Connecticut River. Access is from East Wilder Rd.

33-00630 (Riverside Community Park) – Development of a community park with a skateboard park, pavilion to be flooded in the winter for ice skating, accessible playground, horseshoes, access to the Mascoma River for fishing and picnicking, volleyball and bocce area, parking, and a trail connection.

Exhibit J

NH Natural Heritage Bureau (NHNHB) Memorandum

New Hampshire Natural Heritage Bureau

To: Jonathan Evans
NH Department of Transportation
7 Hazen Drive
PO Box 483
Concord, NH 03302-0483

Date: 2/9/2011

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 2/9/2011

NHB File ID: NHB11-0300

Applicant: NH Department of Transportation

Description: Mascoma River Bridge, adjacent to the US Route 4 & NH Route 4A intersection
Lebanon

Project Categories:
Roads, Driveways, Bridges: Bridge
Roads, Driveways, Bridges: Guardrail installation
Roads, Driveways, Bridges: Road construction

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

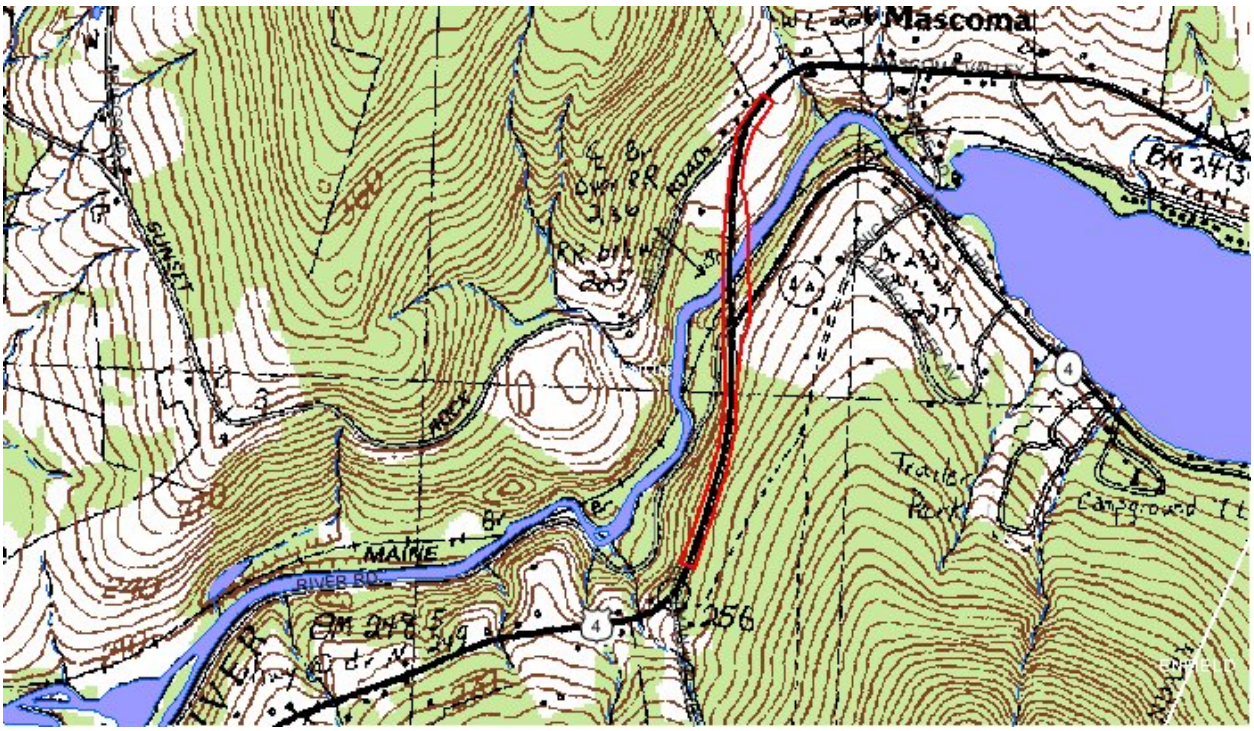
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present

This review is valid through 2/9/2012.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

MAP OF PROJECT BOUNDARIES FOR: NHB ID# NHB11-0300



Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

Exhibit K

United States Fish and Wildlife Service Memorandum

JAE — DJE — CHH
cc: RCC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

February 23, 2007

Reference:	Project	Location
	Road rehabilitation	Lebanon-Enfield, NH, 13185B, 13185D, X-A000(527)
	Road rehabilitation	Epping-Exeter, NH, 14799
	Road rehabilitation	Ossipee, NH, 14434
	Road improvements	North Hampton, NH, 13501, STP-TE-X000S(418)
	Road rehabilitation	Cambridge, NH, 14805
	Bridge replacement	Lebanon, NH, 13951, X-A000(141)

Jonathan Evans, Darrel Elliott
NH Dept. of Transportation
P.O. Box 483
Concord, NH 03302-0483

Dear Messrs. Evans and Elliott:

This responds to your recent correspondence requesting information on the presence of federally-listed and/or proposed endangered or threatened species in relation to the proposed activity(ies) referenced above.

Based on information currently available to us, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes our review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your coordination. Please contact us at 603-223-2541 if we can be of further assistance.

Sincerely yours,

RECEIVED
BUREAU OF ENVIRONMENT
FEB 26 2007
NH DEPARTMENT OF TRANSPORTATION

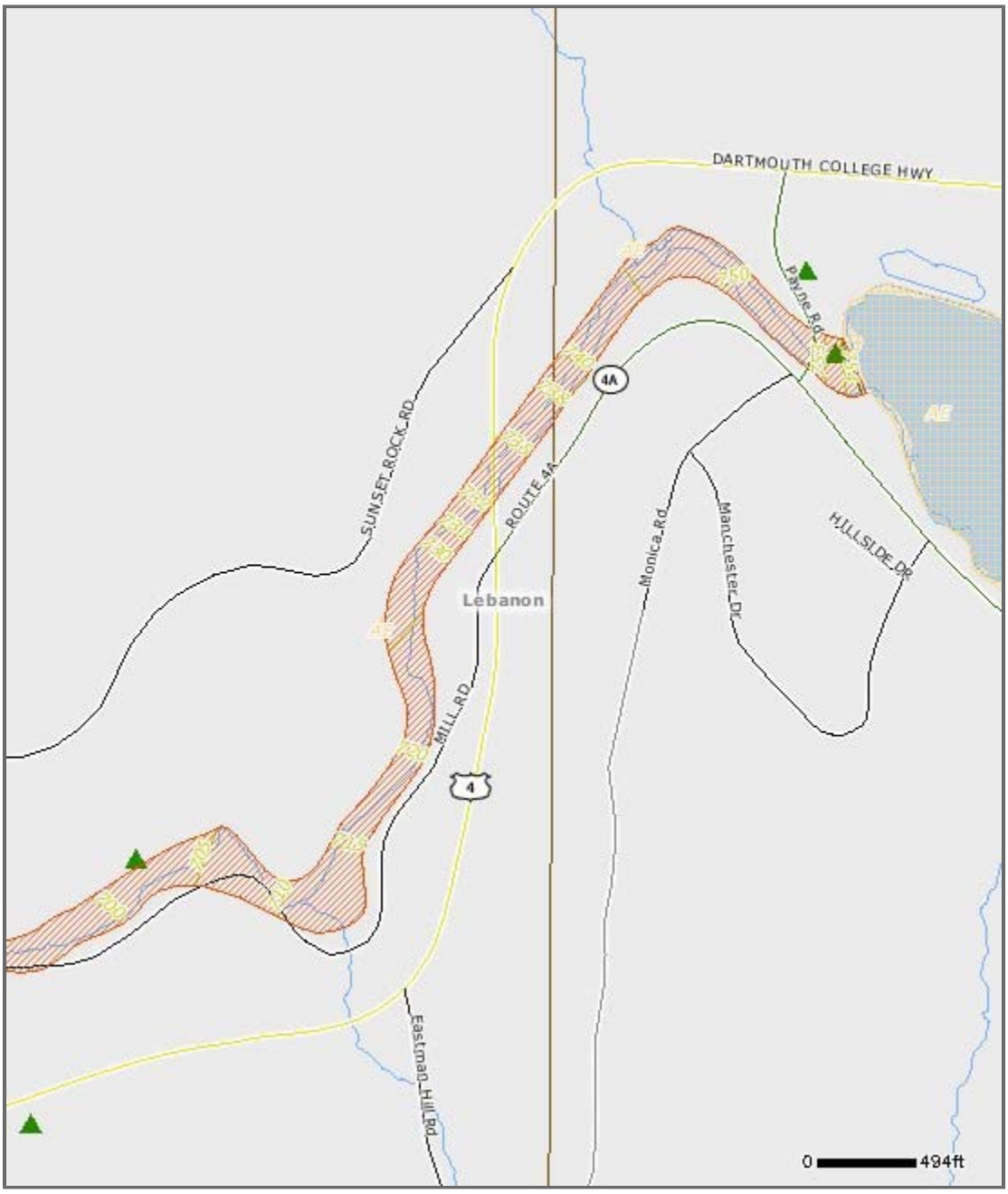
Anthony P. Tur
Endangered Species Specialist
New England Field Office

Exhibit L

Flood Insurance Rate Maps (FIRM)

NH GRANIT DATA MAPPER

Floodplains (DFIRMs): Lebanon, X-A000(141), 13951



Location Map

Map Produced:
February 09, 2011

GRANIT Complex Systems Research Center

UNIVERSITY of NEW HAMPSHIRE

NH GRANIT DATA MAPPER

Floodplains (DFIRMs): Lebanon, X-A000(141), 13951

Legend

Effective Floodways

Floodway areas in zone AE

Effective 100 year SFHA

Zone AE, AO, A

Zone VE

Effective 500 year SFHA

Zone X: 0.2% annual chance flood hazard

Preliminary Floodways

Floodway areas in zone AE

Preliminary 100 year SFHA

Zone AE, AO, A

Preliminary 500 year SFHA

Zone X: 0.2% annual chance flood hazard

DFIRM Benchmarks

DFIRM Base Flood Elevations

DFIRM Cross Sections

DFIRM Other Boundaries

DFIRM General Structures

Roads

Class I: primary system

Class II: secondary system

Class III: state recreational

Class IV: within compacts

Class V: municipal

Class VI: unmaintained municipal

Class VII: federal highway

Political Boundaries

State

County

Town

DFIRM Panels

Effective

Preliminary

DFIRM Streams

Lakes

Lake/Pond

Reservoir

Data Sources

All data are maintained and/or distributed by NH GRANIT. See www.granit.unh.edu for detailed documentation on individual data layers.

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center, under contract to the NH Office of Energy and Planning, and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. OEP, CSRC, and the cooperating agencies make no claim as to the validity or reliability or to any implied uses of these data.

Exhibit M

NH Office of Energy and Planning Memorandum

CHH CHH JAE ✓

JOHN H. LYNCH
GOVERNOR

STATE OF NEW HAMPSHIRE
OFFICE OF ENERGY AND PLANNING
57 Regional Drive, Suite 3
Concord, NH 03301-8519
Telephone: (603) 271-2155
Fax: (603) 271-2615

OEP
www.nh.gov/oep

MEMORANDUM

TO: Jonathan Evans
DOT Bureau of Environment

FROM: Jennifer Gilbert, Assistant State Coordinator
National Flood Insurance Program

DATE February 26, 2007

SUBJECT: Lebanon, 13951, X-A000(141)

I am writing in reference to your letter dated February 13, 2007 regarding the above-referenced project.

I have reviewed and attached the Flood Insurance Rate Map for the proposed project. It appears that when the proposed project crosses over the Mascoma River it goes through Zone AE and its associated floodway.

The City of Lebanon, is a participating community of the National Flood Insurance Program (NFIP). Therefore, if any development takes place within the special flood hazard area, the city should be contacted to assure that the proposed project meets the NFIP requirements contained in the city's floodplain ordinance. Development is defined under NFIP as "any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

Another applicable NFIP regulation contained in a community's floodplain ordinance is language regarding development in a designated regulatory floodway. This language states:

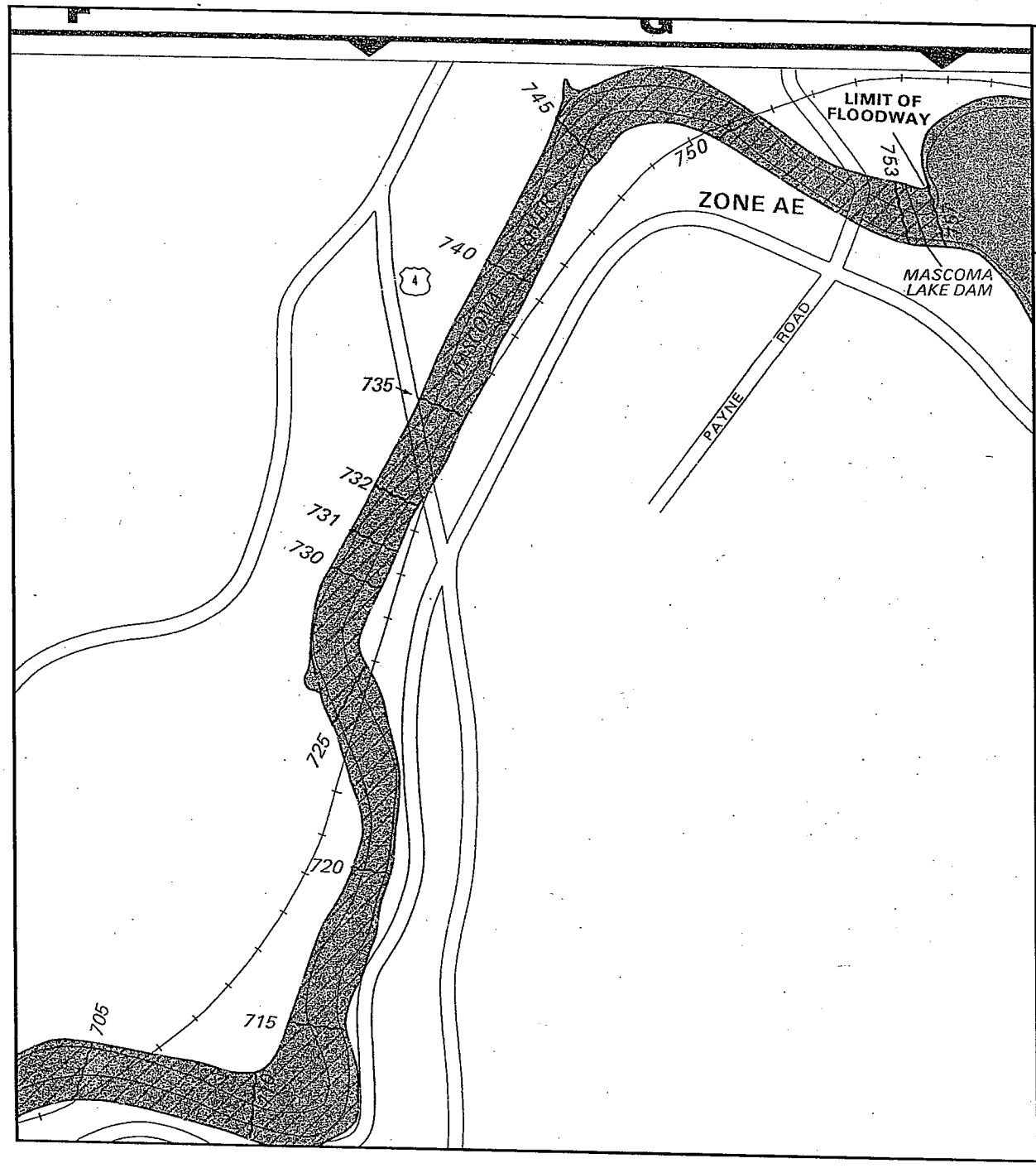
> Along watercourses with a designated Regulatory Floodway no encroachments, including fill new construction, substantial improvements, and other development are allowed within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels within the community during the base flood discharge.

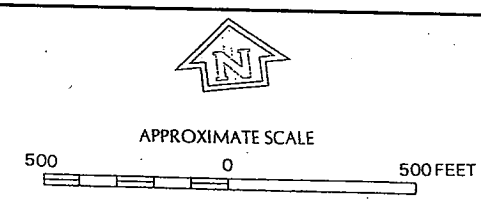
OEP is not authorized by the Federal Emergency Management Agency (FEMA) to make final determinations on the impacts of floodplain development. The NH Department of Transportation (DOT) should use its best judgment in determining if further study is

necessary. If DOT feels that the proposed construction will have a negligible effect on flooding dynamics then additional coordination with FEMA is likely not necessary.

If you need further assistance, please contact me at 271-2155 or jennifer.gilbert@nh.gov.

Thank you.



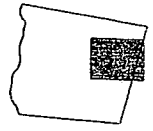


NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
LEBANON,
NEW HAMPSHIRE
GRAFTON COUNTY

PANEL 6 OF 9
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER
330061 0006 B

MAP REVISED:
AUGUST 15, 1990

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Exhibit N

Environmental Justice Memorandum

CHH CHH
JAE ✓

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION

DATE: March 13, 2007

FROM: David Chandler, Chief of Labor Compliance

TO: Jonathan Evans, Environmental Manager

RE: Environmental Justice Population Analysis, Project: Lebanon, 13951, X-A000(141)

The attached analysis and recommendations are provided pursuant to Title VI of the Civil Rights Act of 1964 and Executive Orders 12898 & 13166. The intent of these statutes is to ensure fair and full participation and the equal receipt of benefits under Federally-assisted programs. Your efforts to accommodate and encourage participation by traditionally underserved groups, where significant, will ensure program access and minimize the potential for disproportionate project impacts on protected groups.

The table entitled "EJ Population Analysis" shows the presence of protected groups that might be impacted by the project. Personnel responsible for project planning/design and the coordination of public meetings/hearings should use this analysis to guide their outreach efforts under Title VI and in support of developing a context sensitive solution. Based on the availability of information and where appropriate, we have included specific outreach recommendations to facilitate public comment from underrepresented groups.

If you have questions regarding this analysis, please contact me @ 271-2467.

Encls: EJ Population Analysis

cc: Peter Crouch, Bureau of Traffic
Alex Vogt, Bureau of Highway Design

EJ Population Analysis for Project: Lebanon, 13951, X-A000(141)

STUDY AREA	AVG% Elderly Population	AVG % Minority Population	AVG % Low-income Population	AVG% Disabled Population		AVG% LEP
				Sensory	Physical	
Impacted Area (US Census Tract #9618, Block Group 1 and Census Tract #9617, Block Group 2)	14%	7%	7%	5%	5%	0%
Surrounding Area	14%	6%	4.2%	3.1%	6	.1%

REMARKS:
* The population percentage identified is meaningfully greater than the surrounding area and constitutes an EJ population. Characteristics of this particular study area indicate that targeted outreach efforts to solicit public participation should be taken.

LEP Definition: Where there is a population of people who speak English as a second language less than well ("not well" or "not at all" as indicated by the U.S. Census data). When a particular LEP language group constitutes 5% of the impacted population, the Department is required to translate public information meeting notices and carry out other appropriate outreach measures in appropriate languages. If such a requirements exists, the Title VI Coordinator will confer with the Project Manager to facilitate this effort.

Impacted Area: The impacted area was defined by the population within Census Tract 9618, Block Group 1 and Census Tract 9617, Block Group 2.

Surrounding Area: All Block Groups immediately adjacent to the impacted area.

Special Considerations: Special consideration should be given to any project features that affect pedestrian accessibility. This project constitutes new construction in accordance with Title II of the Americans with Disabilities Act. As such, minimum ADAAG accessibility requirements apply, unless deemed technically infeasible. For more information go to: http://www.access-board.gov/prowac/status.htm

Outreach Recommendations: N/A

Exhibit O

Meeting Minutes

NHDOT Monthly SHPO Meeting Minutes

2/9/2011 1:22:07 PM

Name: Lebanon

State Number: 13951

Federal Number: X-A000(141)

Date: 3/8/2007

Note: Participants: Nadine Peterson and Jim Garvin.

It was agreed that the US Route 4 Bridge over the Mascoma River (188/126) would be treated as eligible for the National Register and a state-level HAER document will be completed. Additionally, the project area will need to be reviewed for archaeological sensitivity.

Name: Lebanon

State Number: 13951

Federal Number: X-A000(141)

Date: 4/5/2007

Note: Participants: Charles Hood, Jon Evans, John Kallfelz, Jason Tremblay, David Scott and Alex Vogt.

J. Evans provided an overview of the project area and the natural and cultural resources, which have been identified in the area. The proposed project consists of replacing the bridge that carries US Route 4 over the Mascoma River (Br. No. 188/126), near its intersection with NH Route 4A in Lebanon, NH. The current bridge contains 6 spans, one of which is located within the channel of the river. Running parallel to the river is the corridor of the Northern Railroad, which has been converted into a recreational trail. The southwestern quadrant of the existing bridge contains a conservation property owned by the City of Lebanon.

J. Kallfelz provided a description of the current design which involves replacing the existing 6 span bridge with a 450 foot, 3 span structure located just to the east of the existing structure. The intersection of US Route 4 and NH Route 4A will be redesigned to include a roundabout. A roundabout was chosen to accommodate future increases in traffic volumes on both US Route 4 and NH Route 4A. This will also eliminate the need for additional lanes and a wider bridge to accommodate left hand turns onto NH Route 4A.

J. Kallfelz and A. Vogt indicated that the existing bridge is in poor condition and the entire structure including the piers would be removed upon completion of the new bridge.

E. Feighner indicated that several years ago she and Bob Goodby performed an archaeological investigation on the southern bank of the Mascoma River just downstream from the bridge and found the remains of the Lebanon Mill. J. Evans noted that most of the work would be occurring on the upstream side of the existing bridge since this is the location for the proposed structure. A. Vogt added that construction access to the southern bank of the river would likely be obtained by traveling down Mill Road to the southwest of the bridge and along the recreational trail adjacent to the Mill site noted by E. Feighner. This would likely require minimal stabilization of the existing roadway and recreational trail, but is not expected to disturb the Mill site.

E. Feighner requested that a Phase 1A archaeological survey be conducted along the length of the area affected by the roadway alignment shift and construction of the new bridge.

N. Peterson and J. Garvin indicated that they had discussed this project on several previous occasions and had agreed that removal of the bridge would be mitigated by the preparation of a state level HAER document.

E. Feighner requested and received a USGS Topographic map and pictures of the area for the file.

Name: Lebanon

State Number: 13951

Federal Number: X-A000(141)

Date: 12/13/2007

Note: Lebanon, X-A000(141), 13951. Participants: Jon Evans.

J. Evans stated that the project was previously discussed on April 5, 2007 and an Adverse Effect Memo was signed on April 12, 2007 for impacts to the bridge. This project involves the replacement of the US Route 4 Bridge over the Mascoma River in Enfield, NH. The limits of work for this project extend along US Route 4 approximately 1,200 feet west and 1,800 feet east of the NH Route 4A intersection. Work will extend along NH Route 4A for a distance of approximately 700 feet. This project will also include the installation of a modern roundabout at the intersection of US Route 4 and NH Route 4A. The need for this project is indicated by structural deficiencies throughout the length of the entire structure. These deficiencies have necessitated that this bridge be placed on the State Red List, indicating enough inadequate structural conditions to warrant more frequent inspections.

J. McKay indicated that the archaeological investigation had been completed, and no archaeological sites were located.

J. Evans indicated that there would likely be impacts to parcels 9, 10, 11, 14, 15, 19, 20 & 21. The structures on these parcels were reviewed by J. McKay and NHDHR, and none of them were determined to be potentially eligible for the National Register. J. Evans also indicated that the existing and proposed structures pass over the remnants of the Northern Railroad Corridor, which is now a recreational trail. It was noted that the southern pier of the proposed bridge would be placed between the river and the trail similar to the existing bridge. There will also be temporary impacts to the corridor during construction, however the trail will remain open to the general public. These impacts were reviewed at the April 5, 2007 meeting, and it was agreed that the project would not have an adverse effect on the Northern Railroad. B. O'Donnell noted that since the adverse effect is on the bridge only and not the Northern Railroad Corridor the project would qualify for a Programmatic 4(f).

J. Evans also noted that there is a town owned recreational trail known as the Mill Road Municipal Trail on the southwestern side of the existing bridge (parcel 12). Temporary impacts to this trail are expected to allow access to the underside of the bridge. Some permanent impacts to this property may be necessary to stabilize the slope between Mill Road and US Route 4. B. O'Donnell indicated that these would be considered 4(f) impacts unless the Department could get a statement from the town indicating that this trail is not a significant recreational resource. He further clarified that if the town felt that this was a significant recreational resource, and they confirmed that the project would not have an adverse effect on the activities, features, and attributes of the trail, then the Department could obtain a De Minimis 4(f) finding for impacts to the recreational trail.

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting
DATE OF CONFERENCES: January 13, 2011
LOCATION OF CONFERENCE: John O. Morton Building

Lebanon, X-A000(141), 13951
Participants: Jon Evans, and Alex Vogt, NHDOT

Jon Evans began by giving a brief recap of the project. This project involves the replacement of the US Route 4 Bridge over the Mascoma River and Northern Rail Trail in Lebanon, NH. The project also includes the reconstruction of the US Route 4/NH Route and 4A intersection just to the south of the bridge. This intersection was originally designed as a roundabout. However as a result of comments received during the public hearing, the Department has revised the design to include an updated "T" style intersection.

The existing US Route 4 bridge is a Deck Plate Girder Bridge constructed in 1930. A new bridge is proposed to be constructed on the upstream (east) side of the existing bridge. The Department has prepared a Draft Environmental Study/ Programmatic 4(f) Evaluation and is in the process of preparing the final documentation for the effort.

To mitigate for the removal of this historic structure, the Department has prepared and submitted a NH Historic Property Documentation Form. The Department also plans to market the structure for sale prior to removal. J. Evans and Alex Vogt noted that for traffic control purposes, the existing bridge would need to remain in service until the new bridge has been constructed. This will require the structure to be marketed for sale under the condition that it cannot be obtained until the new bridge has been constructed. He additionally noted that the railroad corridor will be returned to its current configuration after construction.

J. Evans also noted that the Department is aware that there is a known archaeological site located between the rail-trail and the Mascoma River to the west of the project area. This archaeological site is well outside the existing project area. He noted, however, that the Department is working on the final drainage plans at this time. It is not anticipated that the drainage design will impact the archaeological site. If changes during the final design could potentially impact this or any other potential archaeological site, the Department will review such potential impacts with NHDHR.

Linda Wilson signed the Memorandum of Agreement detailing the project mitigation.

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: March 21, 2007
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Bill Hauser
Charlie Hood
Kevin Nyhan
Randy Talon
Ron Crickard
Cathy Goodmen
Joe Patusky
Carol Niewola
Alex Vogt
Jon Evans
Dave Scott
Andy Hall
Bob Davis
Christine Perron
Bob Aubrey
Jim Bowles
Marc Laurin
Chris Waszczuk
Mike Dugas
Pete Parenteau
Meredith Germain
John Kallfelz

Federal Highway Administration
Bill O'Donnell

Army Corps of Engineers
Rich Roach

DES Wetlands Bureau
Lori Sommer
Gino Infascelli

NH Fish and Game
Mike Dionne

US Fish and Wildlife Service
Bill Neidermyer

EPA
Mark Kern

DRED – NHB
Melissa Coppola

National Marine Fisheries Service
Mike Johnson

LCHIP
Rachel Rouillard

DES Coastal Program
Ted Diers

The Nature Conservancy
Duane Hyde

FST Inc.
Peter Howe
Kevin Gagne

Louis Berger Group
Craig Wood
Jeff Cicerello
Paul Kirby

SEA Consultants
Wade Brown

Lebanon Airport
Jay Fitzgerald

Pathways Engineering
Michael McCrory

VHB Consultants
Peter Walker

Lebanon, X-A000(141), 13951

Jon Evans provided an overview of the project area and the natural resources, which have been identified in the area. The proposed project consists of replacing the bridge that carries US Route 4 over the Mascoma River (Br. No. 188/126), near the intersection of NH Route 4A in Lebanon, NH. The current bridge has 6 spans, one of which has a pier located within the channel of the river. Running parallel to the river are the remnants of the Northern Railroad, which has been converted into a recreational trail. The southwestern quadrant of the existing bridge contains a conservation property owned by the City of Lebanon. Several wetland areas have been identified in both the northwestern and southeastern quadrants of the existing structure.

John Kallfelz provided a description of the current design which involves replacing the existing 6 span bridge with a 450 foot, 3 span structure located just to the east of the existing structure. The intersection of US Route 4 and NH Route 4A will be redesigned to include a roundabout. A roundabout was chosen to accommodate for future increases in traffic volumes on both US Route 4 and NH Route 4A. This will also eliminate the need for additional lanes and a wider bridge to accommodate a traffic signal.

Gino Infascelli, NHDES, noted that if the roundabout is installed it would require trucks to slow down before climbing the hill to the south of the bridge. He felt that trucks would have a hard time climbing the grade after nearly a complete stop and asked if a truck-climbing lane would be examined to help alleviate this issue. J. Kallfelz indicated that this option would be further examined.

Alex Vogt noted that once the new bridge is constructed the old bridge would be removed.

Mike Johnson, NMFS, asked if the same type of pier would be used in the channel of the river. J. Kallfelz responded that since the number of piers would be reduced, the new structure will span the entire river and a pier within the channel would not be necessary.

Rich Roach, ACOE, tentatively confirmed SPGP assuming that the project was reviewed at a later date when the wetlands have been delineated and the extent of the proposed impacts have been determined.

Mike Johnson, NMFS, asked what would happen to the old pier within the channel of the river. A. Vogt and J. Kallfelz responded that this pier would be removed along with the rest of the structure. J. Evans added that although removal of the old bridge is expected, it still needs to be reviewed with the NHDHR to determine the historic importance of the structure.

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: November 19, 2008
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Bob Landry
C. R. Willeke
Chris Carucci
Christine Perron
Dave Smith
Jason Tremblay
Jon Evans
Kevin Nyhan
Marc Laurin
Matt Urban
Mike Hazlett
Mike Pouliot
Wayne Clifford

Federal Highway Administration
Jamie Sikora

NHDES
Arlene Allen
Gino Infascelli
Lori Sommer

NH Fish and Game
Carol Henderson

NH Office of Energy and Planning
Jennifer Gilbert

NH Natural Heritage Bureau
Melissa Coppola

US Fish and Wildlife Service
Vernon Lang

Army Corps of Engineers
Rich Roach

Gale Assoc.
Armand Dufresne
Colleen Lynch

BEC Inc.
Dan Nitzsche

Nashua Airport Auth.
Royce Rankin

Lebanon, X-A000(141), 13951

Jon Evans provided an overview of the project area. The proposed project consists of replacing the bridge that carries US Route 4 over the Mascoma River (Br. No. 188/126), near the intersection of NH Route 4A in Lebanon, NH. The current bridge has 6 spans, and 5 piers, one of which has a pier located within the channel of the river. The new bridge will be a 435-foot, three span, steel beam girder bridge. The length has been reduced from 462 feet to 435 feet to allow for the construction of a smaller, three span structure, eliminating the need for an additional pier within the river. The bridge will be constructed with 12-foot travel lanes, 4-foot shoulders and 5-foot sidewalks on both the northbound and southbound sides. The proposed bridge will be placed approximately 50 feet to the east of the existing structure. Once the new bridge has been constructed, traffic will be moved onto the new structure and the existing bridge will be removed.

J. Evans noted that a Public Hearing for the project will be held on December 8, 2008. It is expected that this project will have approximately 14,260 s.f. (0.33 acres) of permanent wetland impacts. As these impacts are in excess of 10,000 s.f. it is anticipated that mitigation will be necessary. Should mitigation for all 14,260 s.f. be required, it would require an in-lieu fee payment of approximately $42,400. J. Evans noted that although mitigation could also be in the form of preservation or creation, the Public Hearing is only a few weeks away and any additional property impacts would have to be shown at the hearing. For this reason, should mitigation be necessary, the Department's preference would be to pursue an in-lieu fee payment once the final impacts have been determined.

J. Evans also noted that of the above-noted 14,260 s.f. of impacts, approximately 2,880 s.f. are to wetland ditches. It is anticipated that as these ditches will be reconstructed as part of the project. J. Evans indicated that in past DOT projects, impacts to ditches that would be recreated did not require mitigation as their functions and values would not be lost. Lori Sommer and Gino Infascelli confirmed that impacts to such wetlands would not require mitigation. This leaves approximately 11,380 s.f. of permanent impacts which would require mitigation. This amounts to an in-lieu fee payment of approximately $33,766. Kevin Nyhan asked if discussing the need for mitigation at the Public Hearing would satisfy the requirements of Env-Wt Part 800. L. Sommer indicated it would.

J. Evans reiterated that these impacts are still preliminary and would likely change once the project proceeds to the final design phase after the Public Hearing. He also indicated that the final wetland impacts would be reviewed with the resource agencies at a later date. He asked that if anyone had any objections to using an in-lieu fee payment should mitigation be required. Those present did not object to the use of the in-lieu fee program.

Rich Roach stated that he felt the wetland impacts were relatively small and that there are substantial environmental benefits to removing the pier within the river. He also noted that if it had not been proposed by the Department, it probably would have been requested by the resource agencies. He acknowledged that eliminating the need for a pier within the river is expensive and since an in-lieu fee payment would be relatively small, perhaps removal of the pier would be enough mitigation. L. Sommer indicated that the rules are fairly strict however this could be discussed at a later date, once the final wetland impacts have been determined.

G. Infascelli indicated that this project would have impacts to areas protected by the Comprehensive Shoreland Protection Act. These impacts may require the Department to provide plantings to mitigate for vegetation removed in association with the construction of the new bridge. J. Evans indicated that since the adjacent shorelines are heavily vegetated anyway, there would not be very many opportunities within the project area to provide plantings. The utility lines to the west of the existing structure will not be moved in association with this project and therefore will probably limit planting opportunities in the area of the existing bridge. J. Evans indicated that once the final shoreland impacts have been finalized the project would be brought back to the resource agencies.

Vernon Lang asked if the new bridge could be constructed on the other side of the existing structure or if the new bridge could be placed in the same location as the existing one. J. Evans and C.R. Willeke indicated that the topography on the western side of the bridge is very steep and a western alternative would require additional impacts to a conservation property and an archaeological site. They also noted that putting the new bridge in the same location as the existing structure would necessitate the construction of a temporary bridge and would require impacts similar to or greater than those of the proposed action.

R. Roach indicated that he felt the proposed action was an environmentally conscious plan and that he felt the project would qualify for coverage under the NH PGP unless any of the other Federal Agencies did not agree. V. Lang indicated that he would like to review the project further before he agreed to PGP coverage. R. Roach noted that this project has relatively few environmental

impacts and is not of a magnitude that would generally require an individual permit. He encouraged the USF&WS to indicate any objections to PGP coverage as soon as possible so as not to delay the project.

This project was previously reviewed on the following date: 3/21/2008

New Hampshire Department of Transportation
BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Lebanon, 13951, X-A000(141)
DATE OF CONFERENCE: June 20, 2008
LOCATION OF CONFERENCE: Project Site (Mill Road, Lebanon)
ATTENDED BY:

NHDOT	**City of Lebanon**
Jon Evans	Kevin Kingston
Charles (C.R.) Willeke	Earl Labonte
Shaun Flynn	Tracey Thibault
Zach Schmidt	David Brooks

NOTES ON CONFERENCE:

This meeting, facilitated by Jon Evans of the NH Department of Transportation (NHDOT), was held on Friday June 20, 2008 at 10:30 AM on Mill Road in Lebanon, NH. The purpose of this meeting was to update and receive input from City of Lebanon officials on the progress of the US Route 4 Bridge replacement project. This project involves the replacement of the US Route 4 Bridge over the Mascoma River and the Northern Rail Trail, as well as the addition of a roundabout at the US Route 4/ NH Route 4A intersection.

J. Evans, the project's Environmental Manager, started the meeting with introductions and a brief update of what the project involves. He also indicated that this project was anticipated to impact two City of Lebanon owned properties, Parcel #18 on the northwestern side of the existing bridge and Parcel #12 on the southwestern side of the existing bridge.

J. Evans indicated that a small portion of parcel 12 would be impacted temporarily during construction as equipment is moved across it on an existing access road off of Mill Road to access lower areas of the project site. Kevin Kingston, Assistant Director of the Lebanon Department of Public Works, and Earl Labonte, Lebanon Department of Public Works, indicated that NHDOT used this access road several years ago to access the Rail Trail when working on the Lebanon-Enfield, 13185A project on NH Route 4A. Tracey Thibault, Associate Planner for the Lebanon Planning Office, indicated that parcel 12 (between the Mill Road and the Northern Rail Trail) did not contain a conservation easement as was originally thought by NHDOT.

Shaun Flynn, NHDOT District Construction Engineer, noted that the equipment that would need to use this road was rather large and some of the trees would probably have to be trimmed on either side of the access road. He asked if it was acceptable to do some minor tree trimming if necessary. The City officials present indicated that some minor pruning on the City property was acceptable however for more substantial limb cutting

on City property, the Conservation Commission should be contacted. Those present stated that the temporary impacts to access the site were acceptable and that upon completion, the proposed project will not adversely affect the activities, features, and attributes of parcel 12 or Mill Road. C.R Willeke indicated that a request for parking spaces along Mill Road was made at the last public informational meeting held in September 2007. Potential parking spaces will likely involve tree clearing along Mill Road and the extent of impacts for potential parking spaces would be presented at the upcoming public hearing.

C.R. Willeke, NHDOT Highway Design, and J. Evans indicated that property impacts were also anticipated to the City owned property on the northwestern side of the existing bridge (parcel 18). The exact impacts to this property are unknown at this point, however, it is anticipated that either temporary or permanent impacts will be necessary. The right-of-way plans indicate that there is a small, detached portion of parcel 18 (approximately 5,797 s.f.), located directly beneath the proposed bridge (entirely within the Mascoma River). Although there will be little to no physical impacts to this portion of the property, it is located directly beneath the proposed bridge which will likely require an acquisition.

J. Evans indicated that there is an existing woods road that provides unofficial access to parcel 18 from US Route 4 and runs under the existing bridge. The NHDOT plans to reconstruct this woods road on the western side of the proposed bridge approximately where the existing bridge abutment is located pending the final design of drainage and water quality elements.

T. Thibault indicated that parcel 18 contains a conservation easement held by the Upper Valley Land Trust. J. Evans indicated that he was unaware of this easement and that the Department would take another look at the easement to determine the extent of this easement. He also indicated that if this property did contain an easement, the Department would need to issue the public hearing notice 90-days prior to the hearing rather than the standard 30-days. J. Evans also asked if parcel 18 was a formalized recreational resource. Those present indicated that although the public sometimes uses this conservation property to gain access to the river, it is not considered a formal recreational resource.

J. Evans indicated that the Department will have temporary impacts to the State of NH owned Northern Railroad Rail Trail located adjacent to the Mascoma River. These temporary impacts are mainly associated with moving equipment to the lower level of the project area, as well as replacing and/or updating the existing drainage systems. The Department intends to keep the rail trail open as much as possible during construction however, there may be times when it will need to be closed for safety or logistical reasons. Closures are expected to range from a few minutes to a few days depending on the nature of the work. David Brooks, Senior Planner for the Lebanon Planning Office, requested that for longer closures the Department notify the public ahead of time when the trail will be closed. S. Flynn indicated that prior notification of these closures would be given whenever possible.

J. Evans noted that it is the Department's understanding that the intake for the City's Water supply was downstream from this location. He also noted that the Mascoma River is classified by the NH Department of Environmental Services as a "Class A" water, therefore stormwater must be treated prior to being discharged into the River. He indicated that the Department was investigating how to treat these waters prior to discharge into the Mascoma River. He also indicated that a Stormwater Pollution Prevention Plan (SWPPP) would be prepared prior to beginning construction. The SWPPP will identify the proposed erosion and sediment control techniques to be used on the project. This plan will note the appropriate Best Management Practices (BMP's) used to minimize the discharge of pollutants from the construction site. J. Evans asked if the City's water Department had any other water quality issues that NHDOT should be aware of regarding this project. K. Kingston indicated that he was not aware of any additional issues or concerns beyond those previously mentioned.

J. Evans ended the meeting by indicating that he would be in touch with T. Thibault regarding the impacts to parcel 18.

JAE:jae

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New Hampshire Department of Transportation
BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Lebanon, 13951, X-A000(141)
DATE OF CONFERENCE: July 17, 2008
LOCATION OF CONFERENCE: Lebanon City Hall
ATTENDED BY:

NHDOT	**City of Lebanon**	**Upper Valley Land Trust**
Alex Vogt	Tracey Thibault	Peter Helm
Victoria Chase		Monica Erhart
Jon Evans		

NOTES ON CONFERENCE:

This meeting, requested by Jon Evans of the NH Department of Transportation (NHDOT), was held on Thursday July 17, 2008 at 9 AM at the Lebanon City Hall in Lebanon, NH. The purpose of this meeting was to discuss property impacts to a City of Lebanon property containing a conservation easement held by the Upper Valley Land Trust (UVLT).

J. Evans, Environmental Manager, started the meeting by giving a brief summary of what the project entails. This project involves the replacement of the US Route 4 Bridge over the Mascoma River and the Northern Rail Trail, as well as the addition of a roundabout at the US Route 4/ NH Route 4A intersection. He also indicated that it is anticipated that this project will impact Parcel #18 which is owned by the City of Lebanon and contains an easement held by the UVLT. The right-of-way plans indicate that this property is split into two pieces by the existing right-of-way, leaving a small, detached piece of parcel 18 (approximately 5,797 s.f.) on the eastern side of the existing bridge. This portion of the property is located directly beneath the proposed bridge and entirely within the Mascoma River. Although there will be little to no physical impacts to this portion of the property, it is located directly beneath the proposed bridge which will require the department to obtain property rights prior to beginning construction.

Alex Vogt, Project Manager, indicated that a public hearing would be held in late October or early November and construction is scheduled to begin in the spring or summer of 2011. A. Vogt also indicated that the Department was looking into improving access to this property by reconstructing the existing woods road on the western side of the proposed bridge, approximately where the existing bridge abutment is located.

Pete Helm, Vice President of Stewardship, indicated that it does not make much sense for the UVLT to retain rights on this portion of the property as it is disconnected from the rest of the property. He felt that it would be best to agree to a purchase-in-fee of this portion of the property as well as the property under the existing bridge. This would help

to better define the boundaries of the property and give the Department unrestricted maintenance rights. Though no mitigation is required for the impact to the conservation area, P. Helm also indicated that the UVLT was in support of providing better public access to the easement property, in the form of an improved woods road or walkway, as A. Vogt previously described.

Victoria Chase, Right-of-Way Engineer, indicated that there are several approaches to obtaining the necessary rights of entry, of which a purchase in fee would be the simplest. She indicated that most of the right-of-way work would have to be completed after the public hearing. Once the hearing is held an appraisal for the property would be conducted and then negotiations on the value of the property could begin. She indicated that the Department can provide some funding for property owners to have their own appraisal done, however this does not usually cover the full cost of the appraisal. She also noted that should the Department and the UVLT be unable to come to an agreement the condemnation process could be pursued however this limits further negotiations.

It was agreed that Tracey Thibault and P. Helm would discuss the purchase in fee option with the appropriate members of their organizations and inform the group of their findings. V. Chase indicated that someone from her office would be in touch with T. Thibault and P. Helm when it comes time to complete the appraisal.

JAE:jae

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Exhibit P

Report of the Commissioner

REPORT OF THE COMMISSIONER

LEBANON PUBLIC HEARING

LEBANON
X-A000(141)
13951
COMMISSION PUBLIC HEARING
December 8, 2008
Mount Lebanon School, 5 White Avenue, West Lebanon, NH 7:00 PM

This project involves the replacement of the US Route 4 bridge over the Mascoma River in the City of Lebanon, New Hampshire. This project will include improvements to the intersection of US Route 4 and NH Route 4A just west of the bridge. Shoulders will be included on the bridge and on the roadway approaches at each end of the bridge.

The following decisions are the Department's resolution of issues as a result of testimony presented at the December 8, 2008 Public Hearing, written testimony received during the comment period and follow up meetings with the City Council.

1. Representative Frank Gould expressed concern with the traffic traveling east bound on the down grade into the roundabout having to stop. He asked if this amount of improvement is required and if a traffic signal was needed. Representative Gould felt that upgrades to the intersection improving sight lines would be sufficient without a roundabout or signal.

   Mr. Nate Miller, Upper Valley Lake Sunapee Regional Planning Commission, explained that in 2006 a Route 4 corridor study was completed and that it recommended improvements to the intersection of US Route 4/NH 4A as part of the bridge replacement project. He supported the proposed roundabout as it meets all the criteria in the study.

   Mr. Richard Gavell, Parcel 11, 32 Monica Road expressed support for the bridge replacement and for safety improvements addressing sight lines and traffic flow to the US Route 4/NH 4A intersection. Mr. Gavell stated he does not support the roundabout as it would require every vehicle to slow down, and thus impede flow along Route 4. He explained that during most of the day there is no problem at the intersection. Mr. Gavell stated that a roundabout will increase noise, increase fuel consumption, increase pollution, increase congestion, increase accidents and decrease traffic flow. The intersection would not be as safe due to the grade and speed on Route 4. Mr. Gavell took issue with the environmental report that stated that there will not be additional noise pollution or air pollution considering the roundabout will require vehicles to slow down and brake throughout the day. Mr. Gavell requested another public hearing because city officials were unable to attend due to a meeting conflict. Mr. Gavell suggested the intersection be realigned to improve sight distance and provide some additional road width without signals.

Mr. Fred Walker, Parcel 14, 22 Monica Road, felt the roundabout is overkill for this location. He suggested if the roundabout is installed that landscaping and lighting be provided. He also suggested a climbing lane out of the roundabout west bound be provided to help trucks and prevent back ups.

Representative Laurie Harding was concerned with bicycle traffic and if it would be compatible with the roundabout.

Mr. Gordon Bagley, Parcels 19, 21, 21-1 and 25, felt that the roundabout would be too small for trucks and that the hill would add to the truck problem. He suggested NH 4A run under the bridge and merge on the hill. Mr. Bagley asked for another public hearing due to conflicting meetings that city officials were unable to attend.

Mr. Gene Anderson inquired about bike safety in the roundabout. He asked if a bike path could be provided that cuts the corner for Route 4 east down the hill to NH 4A east. He felt the intersection does not need a roundabout or a signal.

Mr. Tom Linell wrote supporting the roundabout and requested bike lanes on the Route 4 bridge be five feet instead of four feet.

Mr. Joe Roberts, Mr. Matthew Brewer, Mr. Matthew Brown, Mr. Carl Porter, and Mr. Joe Dolliver wrote supporting a traffic signal instead of the roundabout.

Mr. Shawn Donovan wrote supporting the roundabout due to safety and efficiency.

Ms. Jennifer Barton wrote supporting a very large traffic circle.

A petition against the roundabout with a suggestion for an underpass of NH 4A was received. It had over 650 signatures.

Response: As the US 4/NH 4A intersection configuration was the subject of follow up public meetings held with the Lebanon City Council on December 17, 2008 and on June 3, 2009, accordingly another Public Hearing will not be held. The Route 4A under pass suggested by Mr. Bagley was reviewed and found to be technically feasible but, at the cost another $3.5 million, is not considered prudent. On June 3, 2009 after discussion of the options (roundabout, grade separated, signalized intersection or unsignalized intersection that is reconfigured with sight line improvements), the City Council voted to support the unsignalized option rather than the proposed roundabout. This option will improve the existing intersection by eliminating the skew and improving the sight lines. This will provide short term gains and will not preclude other future improvements involving either a roundabout or a signal. The proposed roundabout will not be pursued at this time and the Department will move forward with the unsignalized option. Right-of-way and water quality elements will be designed to accommodate a future roundabout layout. Four foot shoulders will be provided within the project area along US Route 4 that will accommodate bicyclists. A climbing lane is not considered necessary and will not be included.

2. Mr. Mike LaValla, Director of Public Works, City of Lebanon explained that water quality issues are very important to the City because the Mascoma River is the source of water supply in Lebanon. He stated they were pleased with the proposed precautions. Mr. LaValla expressed concern that the sidewalks are considerably beyond the City of Lebanon's urban area for maintenance. Maintaining the sidewalks on the bridge will be a real challenge. Mr. LaValla asked what accommodation would be provided for the trail users when the trail is closed. Mr. LaValla asked if some type of gateway to the City of Lebanon could be accommodated in the roundabout design.

   Response: The importance of water quality near the Mascoma River is recognized and all appropriate water quality measures will be incorporated into the project. It is the Department's policy that sidewalks are the responsibility of the municipality. The City will be required to sign a formal agreement stating that the City shall provide or cause to provide for the maintenance of the sidewalks, which includes winter snow and ice removal in accordance with the requirements of 23 CFR 1.27 and 28 CFR 35.133. Should the City decline to sign the agreement, the design of the project layout will include the width for the eventuality that a sidewalk may be constructed. The additional width will be a grass panel or in the case of the bridge, it will be additional shoulder. The trail will be kept open most of the time. During the short durations that require the trail be closed for safety reasons, advance warning will be provided and a detour established. The roundabout will not be constructed at this time, instead the intersection will be improved and remain unsignalized.

3. Ms. Judy MacNab inquired as to the impacts to the "Mill parcel".

   Response: The "Mill parcel" is on both sides of the Mascoma River. There will be no impacts to the archaeological site(s). Minor right-of-way acquisition will occur directly underneath the bridge on a strip of property that is mostly in the river. Compensation will be made for this impact.

4. Mr. Richard Gavell, Parcel 11, 32 Monica Road, and Mr. Fred Walker, Parcel 14, 22 Monica Road, expressed concern with the bus stop located on the down grade. Mr. Walker recommended it be located on NH 4A at the pull off area.

   Mr. Mike LaValla, Director of Public Works, City of Lebanon questioned the need for bus stops with no pedestrian infrastructure in place to get there and no place to park.

   Response: The bus stops are only conceptually located at this time. Further coordination with Advance Transit and the City will take place to determine the need for bus stops, the appropriate locations, and ancillary elements such as sidewalks or parking. The specific details will be considered during the final design phase.

5. Representative Laurie Harding inquired about expanded parking for Mill Road.

Response: Due to the steep, unstable slopes and the conservation designation for the land adjacent to Mill Road, the improvements along Mill Road are limited. Some parking may be able to be accommodated along or adjacent to Mill Road. The Department will work with the City on the details.

Submitted By:

Date: _____

George N. Campbell, Jr.
Commissioner

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Exhibit Q

Photographs

US Route 4 looking eastbound.

Mascoma River Bridge looking north.

US Route 4 looking westbound.

Area of the proposed roundabout. Looking southwest from NH Route 4A.

Area of the proposed roundabout. Looking south on US Route 4.

US Route 4/NH Route 4A intersection looking westbound.

US Route 4 looking eastbound from bridge.

Looking westbound towards bridge.

Looking eastbound from the east side of the bridge.

Area to the northeast of the bridge.

US Route 4 bridge looking north.

Northern Rail Trail looking northeast.

Northern Rail Trail looking southwest from the western side of the existing bridge.

Northern Rail Trail looking southwest towards the existing bridge.

Approximate location of the proposed southern pier.

US Route 4 bridge looking north.

Looking northeast from bridge.

Eastern side of bridge looking south towards southeast quadrant.

Northeast quadrant.

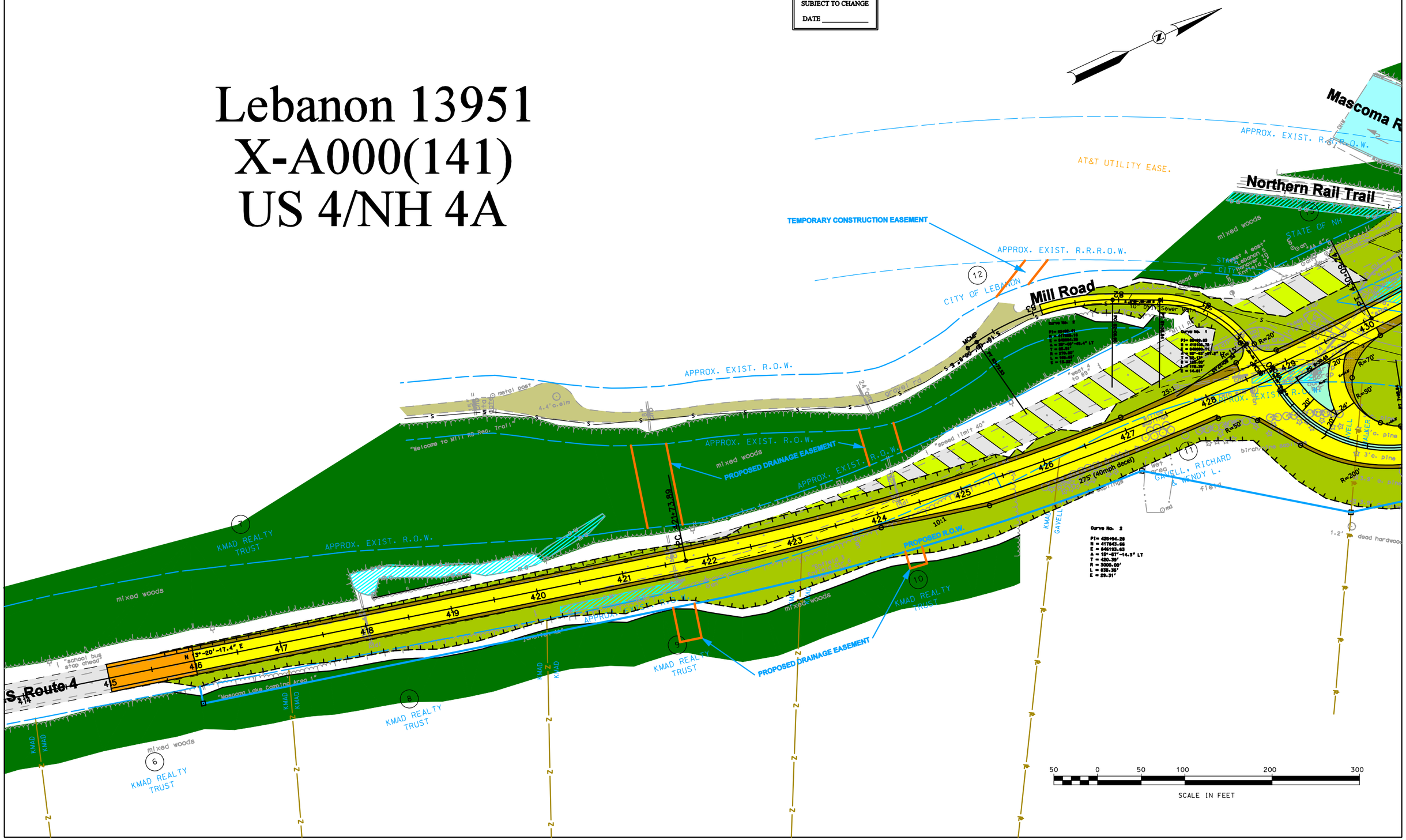
Northwest quadrant.

Exhibit R

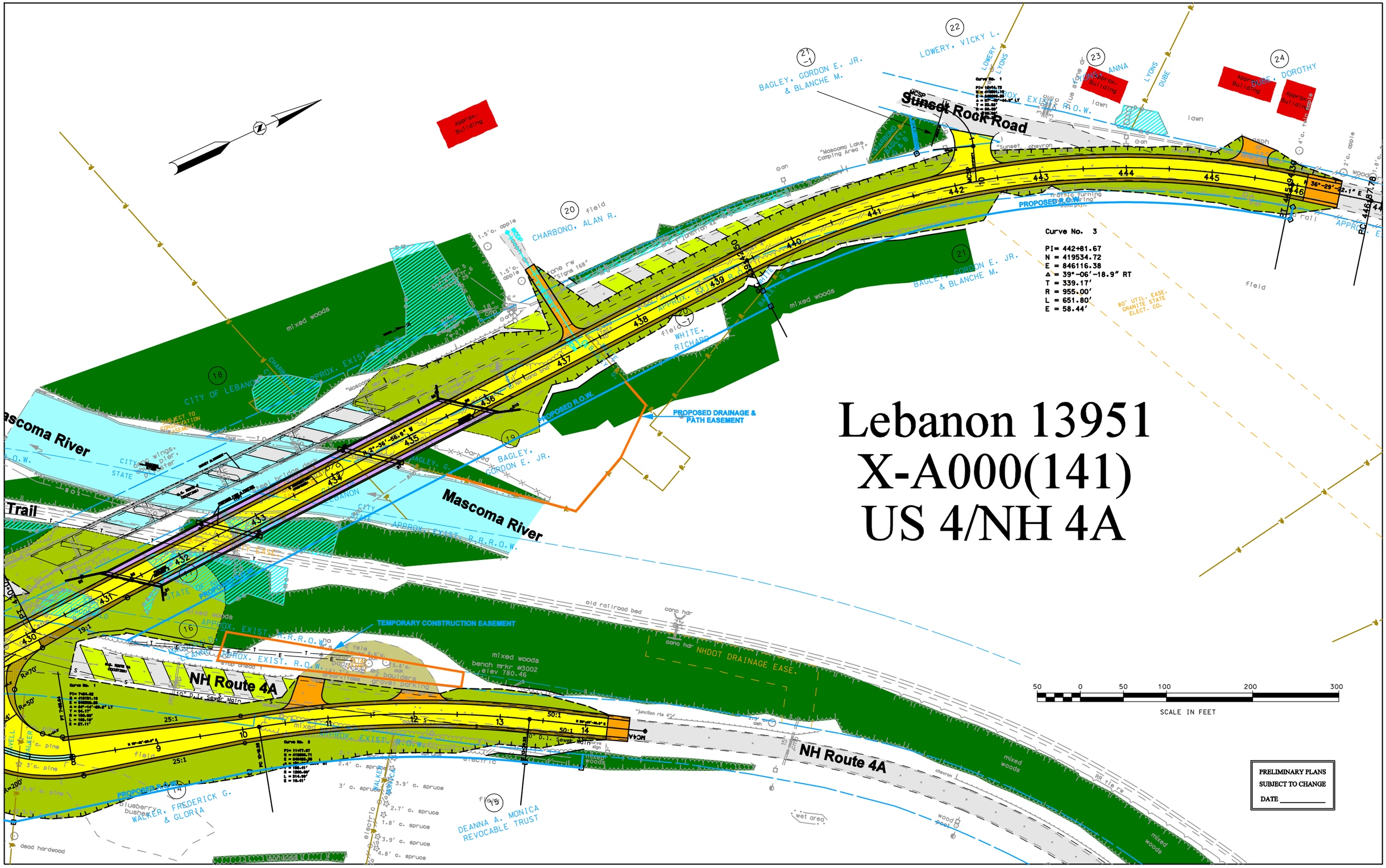
Preliminary Design Plans

PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE _____

Lebanon 13951
X-A000(141)
US 4/NH 4A



Lebanon 13951
X-A000(141)
US 4/NH 4A



PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE _____