RECORD OF DECISION
FHWA-NH-EIS-06-01-F

FEDERAL HIGHWAY ADMINISTRATION

SPAULDING TURNPIKE IMPROVEMENTS
NHS-027-1(37), 11238
STRAFFORD and ROCKINGHAM COUNTIES, NEW HAMPSHIRE

DECISION

The proposed project involves reconstruction and widening of a 3.5-mile section of the Spaulding Turnpike (NH Route 16), beginning just north of the Gosling Road/Pease Boulevard Interchange (Exit 1) in the Town of Newington, and extending northerly across the Little Bay Bridges to a point just north of Exit 6 (US Route 4) and south of the existing toll facility, in the City of Dover.

The Selected Alternative, which consists of a combination of Newington Alternative 13, widen and rehabilitate the Little Bay Bridges, and Dover Alternative 3, involves the reconstruction and widening of the existing four-lane, limited access highway facility mainline and Little Bay Bridges to eight lanes (three general purpose lanes plus an auxiliary lane in each direction) between Exits 3 and Exit 6, while six lanes in total will extend south of Exit 3 to match into the existing highway cross-sections at Exit 1, and north of Exit 6 to the Dover toll plaza. The Selected Alternative also involves the reconstruction and/or reconfiguration of the existing interchanges at Exits 2, 3, 4N, 4, 5 and 6; rehabilitation of the historic General Sullivan Bridge to continue as a pedestrian, bicycle and recreational facility; and provides for the implementation of various TSM, TDM/Mode Alternative measures to compliment the highway and bridge infrastructure improvements.

The New Hampshire Department of Transportation (NHDOT) and Federal Highway Administration (FHWA) chose this alternative to improve safety and increase transportation efficiency due to its consistency with existing short and long term local and regional transportation plans, and based upon the views of the public and consulting agencies that it provides a combination of transportation elements that best minimizes and balances the natural and human environmental impacts in addressing the stated purpose and need of the project.

The basis for this decision is the information presented in the FEIS and supporting technical documents; the associated administrative record; and input received from the public and interested local, State and Federal agencies. In making this decision, the FHWA considered the potential impacts of the project and alternative courses of action under the National Environmental Policy Act (NEPA), Section 4(f), and other laws, balancing the need for safe and efficient transportation with national, State, and local environmental protection goals. FHWA also has a statutory responsibility under 23

U.S.C. 109(h) to reach a project decision that is in the best overall public interest, taking into account the need for safe, fast, and efficient transportation and public services, while eliminating or minimizing adverse natural environmental and community effects.

The Selected Alternative for this project is described in full detail in Section 2.7 of the Final Environmental Impact Statement (FEIS).

FHWA, in cooperation with the NHDOT, intends to issue a future "statute of limitations" (SOL) notice in the Federal Register, pursuant to 23 U.S.C. Section 139(l), indicating that one or more Federal agencies have taken final action that grants permits, licenses, or approvals for this transportation project. The SOL notice establishes that claims seeking judicial review of those Federal agency actions will be barred, unless such claims are filed on or before 180 days after publication of the notice in the Federal Register.

PURPOSE AND NEED

The purpose of this project is to improve transportation efficiency and reduce safety problems, while minimizing social, economical and environmental impacts, for an approximately 3.5-mile section of the Spaulding Turnpike extending north from the Gosling Road/Pease Boulevard Interchange (Exit 1) in the Town of Newington, across the Little Bay Bridges, to a point just south of the existing Toll Plaza in the City of Dover.

The Spaulding Turnpike is eastern New Hampshire's major limited access north-south highway which serves as a major commuter route between the growing residential areas of Dover-Somersworth-Rochester and the industrial and regional commercial centers in Newington, Portsmouth, and northern Massachusetts. It also serves as the major artery for freight into and out of the areas north of project area, and is the economic lifeline of the region, as well as a major tourist route providing access to the northern reaches of the state from the seacoast and points south of New Hampshire.

This portion of the Turnpike corridor has a number of existing geometric deficiencies including substandard shoulder widths on the Little Bay Bridges and substandard merge, diverge and weave areas at the interchanges which contribute to driver discomfort and crashes. During weekday and weekend peak travel periods the Turnpike currently operates at unacceptable levels of service (LOS E and/or F) with motorists experiencing severe congestion and long delays, and for which there are no viable alternate routes. Over the next 20 years the average daily traffic volumes is expected to increase such that the facility will be increasingly less able to operate at levels of service and safety for which it was originally designed.

ALTERNATIVES CONSIDERED

The initial alternatives described in the FEIS focused on identifying and evaluating potential transportation improvements and traffic mitigation measures to improve safety, relieve congestion, reduce travel time and accommodate projected increases in traffic

demand for an approximately 3.5-mile section of the Spaulding Turnpike in Newington and Dover, NH. This was an iterative evaluation process that utilized extensive review and input from the public, local officials, state and federal agencies and others and resulted in a broad range of conceptual alternatives being identified as potentially satisfying the stated purpose and need of the project.

The preliminary screening evaluation of the environmental impacts and transportation benefits resulted in the elimination of off-alignment alternatives that involved relocation of the Spaulding Turnpike and Little Bay Bridges (LBB) outside of the existing Turnpike corridor, as well as other alternatives that had either high levels of environmental impact and/or did not meet the basic project purpose of improving traffic and safety conditions. In addition, the widening to six-lane alternatives (three basic travel lanes in each direction), in conjunction with a combination of TSM, TDM and Mode alternatives, were also eliminated from further consideration during the preliminary screening evaluation as results indicated they would not be sufficient to accommodate the future traffic volume demands between Exits 3 and 6 on the Turnpike. However, the six-lane alternatives were retained in the FEIS for comparison purposes to demonstrate how the differences in environmental impacts between the 6-lane and 8-lane alternatives are relatively minor, as summarized in Table 2.5-5 of the FEIS. The macro screening process used to meet the project's purpose and need, while minimizing social, economic and environmental impacts in the project area, is described in Section 2.5 of the FEIS.

The initial development, refinement, review and screening of alternatives resulted in the following No-Build, TSM, TDM/Mode alternatives, and seven "Build" alternatives being endorsed by the Project's Advisory Task Force (ATF) and carried forward into the development of the EIS for further detailed evaluation:

The No-Build Alternative is the continuation of the existing transportation network in its present configuration with no environmental or infrastructure improvements and serves as establishing the baseline conditions for comparison of other alternatives.

The Transportation Systems Management (TSM) measures that were evaluated as part of the study would not provide the necessary solutions to the long-term needs of the Spaulding Turnpike study area. However, six low-cost TSM measures were identified during the study that would provide immediate, short-term localized improvements to some of the existing safety deficiencies and traffic congestion within the study corridor. These were therefore recommended for implementation in advance of the approval and construction of the Selected Alternative's long-term build solutions. These TSM measures are described in detail in Section 2.4.2 of the FEIS.

The Travel Demand Management (TDM)/Mode Alternative measures, evaluated as part of the study, such as the expansion of existing regional or local passenger bus and rail service, park-and-ride facilities, and promotion of TMA or employer-based TDM options, would not individually, or in combination together, provide sufficient reductions in the current or future design year LOS on the Spaulding Turnpike to minimize the need for, and extent of, the highway and bridge infrastructure improvements associated with

the Selected Alternative. However, seven of the nine TDM/Mode Alternatives evaluated as part of the study were recommended for implementation in advance of the approval and construction of the Selected Alternative's long-term build solutions to complement the bridge and highway infrastructure improvements. These measures were recommended because they could be implemented with relatively modest costs, would enhance the overall transportation efficiency of the Selected Alternative by providing greater travel options to the study area commuters during construction, and would assist in establishing some of the necessary infrastructure for the other TDM/Mode Alternatives not considered viable at this time, but which may be considered in the future if/when ridership demands warrant. A description of, and the rational for, those TDM/Mode Alternative measures, recommended to complement the Selected Alternative's long-term build solutions, is included in Section 2.7.1 of the FEIS.

It should be noted that the TSM/TDM/Mode Alternative measures described above that have or will be implemented, either separately or as part of the Selected Alternative, are considered to be of independent utility from the Selected Alternative's long-term build solutions.

The Highway and Bridge Build Alternatives included in the FEIS were divided into three basic segments identified as the Newington Segment, the Dover Segment, and the Bridge Segment. These included evaluations of possible improvements to the interchanges and connecting local roadways in the study area, as well as Little Bay Bridges and Turnpike Mainline widening options. All of the build alternatives included in the FEIS were evaluated in conjunction with a combination of the TSM and TDM/Mode Alternatives described above. A general description of each of the build alternatives evaluated for the Newington, Dover, and Bridge Segments are included in Sections 2.4.8.2, 2.4.8.3 and 2.4.8.4 of the FEIS respectively, and a summary of the differences in environmental impacts and costs are included in Figures 2.5-1 and 2.6-2 of the FEIS. The alternatives evaluated under each segment were very similar with the exception of the following differences:

Newington Segment

Newington Alternative 10A includes a local connector road on the west side of the Turnpike connecting Exit 3 and Exit 4, as well as a cross connector road alongside the existing at-grade Pease Spur rail corridor, in order to improve local connectivity between the east and west sides of Newington. However, the east-west connector road would require construction of a bridge in order to elevate the eight-lane Turnpike above the rail-crossing and new east-west connector which would introduce a second crest vertical curve on the Turnpike between Exit 3 and the proposed bridge. This alternative would require a total of three bridge structures to be constructed, acquisition and displacement of one residential property, and would have the highest degree of impact to perennial streams and wetlands. Although Alternative 10A would satisfy the purpose and need of the project, it was not selected due to the additional crest vertical curve being created on the Turnpike mainline, and concerns expressed regarding the added cost, visual impacts, and increased noise levels caused by the elevated Turnpike section.

Newington Alternative 12A also includes a connector road on the west side of the Turnpike connecting Exit 3 and Exit 4, as well as a cross connector road to improve local connectivity between the east and west sides of Newington. However, the new east-west connector road and existing Pease Spur rail-crossing would be relocated to an area immediately north of the Exit 3 Interchange in order to take advantage of the higher Turnpike elevations and extend the existing crest vertical curve through the Exit 3 and cross connector area. This alternative would be the most costly, requires a total of seven bridge structures to be constructed, and would also have the highest degree of impact to wildlife habitat and potentially sensitive archeological sites. Although Alternative 12A would satisfy the purpose and need of the project, it was not selected due to concerns expressed regarding the added costs, as well as increased constructability and added local maintenance issues.

Newington Alternative 13 satisfies the purpose and need of the project and was chosen as part of the Selected Alternative. It improves connectivity between the east and west sides of Newington, but eliminates the need for the new local connector road, provides a simpler configuration, more convenient local access to the Turnpike from Nimble Hill Road, and results in a lower profile of the Turnpike at the Pease Spur rail crossing in comparison to all of the other Newington alternatives considered. Alternative 13 requires fewer lane miles and only one bridge structure to be constructed, is the least costly, and has the fewest right-of-way acquisitions and the least environmental impacts to perennial streams, wetlands, potential sensitive archeological sites, farmlands and wildlife habitat.

Dover Segment

Dover Alternative 2 and Alternative 3 both satisfy the purpose and need of the project and are very similar, with the main differences occurring in the Boston Harbor Road and Spur Road area. Dover Alternative 2 proposes four signalized intersections along U.S. Route 4, while Dover Alternative 3 only proposes three signalized intersections. Dover Alternative 3 proposes to eliminate the existing traffic signals at Boston Harbor Road by restricting traffic movements at Boston Harbor Road and Spur Road to right turn in and right turn out only. This would involve the installation of a raised median which results in a narrower footprint for the intersection. However, a grade-separated local connection beneath U.S. Route 4 would be required under Dover Alternative 3 to connect Spur Road with Boston Harbor Road.

The environmental impacts of Dover Alternative 2 and Alternative 3 are nearly identical, but Dover Alternative 3 results in slightly fewer impacts to floodplains and wetlands. Although Dover Alternative 3 has slightly higher total estimated costs due to the limited increased lane miles and one bridge structure required, as compared to Dover Alternative 2, it was strongly supported by the community and has improved operational and safety benefits due to having one fewer signalized intersection. This resulted in Dover Alternative 3 being identified as part of the Selected Alternative.

Bridge Segment

During the preliminary screening of alternatives it was determined that only two main bridge alternatives warranted consideration in the FEIS. The two bridge alternatives that were carried forward and evaluated in the FEIS are very similar in that each involves the proposed rehabilitation and westerly widening of the Little Bay Bridges (LBB) from the current four-lanes to eight-lanes. The environmental impacts between the bridge alternatives are also very similar with the exception that one alternative retains and rehabilitates the General Sullivan Bridge (GSB) to continue as a pedestrian/bicycle/recreational facility, while the other alternative involves the demolition and removal of the GSB.

The GSB is a historic landmark structure eligible for the National Register of Historic Places, and therefore a significant Section 4(f) resource, and is the second highest rated historic bridge in the state (as recognized by the NHDHR and FHWA). The GSB was closed to vehicular traffic in 1984 when the LBB was expanded to its current four-lane capacity, but is currently an important pedestrian/bicycle connection across Little Bay that is also used for fishing and other recreational purposes.

The estimated cost to rehabilitate the GSB as part of the Selected Alternative is $26 million. However, when taking into account the costs that would have been required for removal of the GSB and replacement of the pedestrian, bicycle and recreational connection across Little Bay, the total net cost to the project is approximately $10.9 million.

The fate of the GSB has been one of the primary issues throughout the EIS process and, although FHWA, NHDHR, Strafford Regional Planning Commission (SRPC) and the City of Dover have advocated preservation of the GSB as part of the Selected Alternative, this decision has been questioned by some who feel that the extra funding should go to other important transportation projects in the state. However, after consideration of the landmark status of the GSB and its historic and recreational significance to the area, and that more members of the public have voiced support for the bridge's rehabilitation than for its removal, the Bridge Rehabilitation and Widening option which retains the GSB was identified as part of the Selected Alternative.

SECTION 4(f)

I. Section 4(f) Properties and Archaeological Resources

During project planning, sixteen historic properties and two small historic districts were identified in the project area as being eligible for listing in the National Register (See Table 3.17-1 of FEIS). A total of five of these historic properties will be impacted by the Selected Alternative. These five historic properties and the associated impacts are briefly described below and a full description of these properties and impacts is provided in Sections 3.17-2 and 4.17-1 of the FEIS.

- **Isaac Dow House, Newington** – Built ca. 1820, this 0.57 acre property includes a two story house and is eligible for listing on the National Register under Criterion C for its architectural significance as an example of the federal style and form. Impacts to this property which result in a use under Section 4(f) involve the 435 square feet ("SF") in permanent slope impacts required for the roadway widening, and associated loss of a granite slab (ashlar) retaining wall and shrubs.

- **Beane Farm, Newington** – Built ca. 1905, this 8.22 acre property includes a two and a half story farmhouse and is eligible for listing on the National Register under Criterion C for its architectural significance as a connected farm complex constructed in response to expanding dairy farming in Newington. Impacts to this property which result in a use under Section 4(f) involve the 4,450 SF in permanent slope impacts required for the roadway widening, and associated loss of mature trees.

- **Portsmouth Water Booster Station, Newington** – Built in 1956 during the construction of the Pease Air Force Base, this 2.82 acre property includes a one story red brick pump station building and a round 1.5 million gallon metal storage tank with a domed cap and is eligible for listing on the National Register under Criterion A for its historic association with locally important historic contexts, and Criterion C for its architectural and engineering significance as an unaltered example of a modern waterworks structure. Impacts to this property which result in a use under Section 4(f) involve the 33,125 SF of permanent ROW acquisition required for maintaining the design profile of the reconstructed Turnpike and 400 SF of permanent slope impacts associated with roadway widening.

- **General Sullivan Bridge, Newington and Dover** – Built in 1933-1935, this 1,600 foot long continuous arched bridge structure is eligible for listing on the National Register under Criterion C for national significance in engineering, and under Criterion A in the area of transportation. Impacts to this structure which result in a use under Section 4(f) involve the removal of the roadway and north approach embankment, and the limited reconfiguration of the north abutment and wing wall which is necessary to accommodate the widening of the connector road under the Little Bay Bridges.

- **Ira Pinkham House, Dover** – Built in ca. 1853 - 1856, this 0.8 acre property includes a house and barn and is eligible for listing on the National Register under Criterion A for associations with several important historic contexts on Dover Point, and Criterion C for architectural significance as a mid-19th century farm complex. Impacts to this property which result in a use under Section 4(f) involve the 7,350 SF in permanent ROW strip acquisition required for the roadway widening and the demolition of the historic barn structure.

Various archaeological sites that exhibited historic resource sensitivity were also identified within the project area during the Phase I-A Archaeological Study initiated in

May 2003, and the extent of these sensitivity areas are described in detail in Section 3.17.3 Vol. 1 of the FEIS, and shown in Figures 3.17-2 and 3.17-3 Vol. 2 of the FEIS.

As stipulated in the Section 106 Memorandum of Agreement (MOA) between the FHWA, NHDOT and NHDOT dated April 3, 2008, all appropriate phases of archaeological investigations will be undertaken in archaeological sensitive areas within the project area. However, the exact significance and boundaries of the archaeological sites have not been identified because of the time-consuming nature of archaeological investigations, testing, and data recovery (Phases I-B, II and III) at this stage of the project. The Section 106 Determination of Effects (DOE) and Section 4(f) analysis are usually not completed until a project's final design stage when the Selected Alternative has been confirmed through the completion of the FEIS and issuance of the ROD. Note that impacts on archaeological resources only represent a Section 4(f) use when the archaeological resources are best served by preservation in-place.

Recreational Resources

In addition to the historic properties, two public parks in Dover are impacted by the Selected Alternative. These properties and the associated impacts are described in detail in Vol. 1 Sections 3.15 and 4.15 of the FEIS:

- Bayview Park is a 25.4 acre property located on Royals Cove at the confluence of the Bellamy River and Little Bay which is owned by the New Hampshire Fish & Game Department ("NHF&GD") and is a popular spot for fisherman to gain access to the shoreline of the Bellamy River adjacent to the Scammel Bridge. Impacts to Bayview Park property result in a use under Section 4(f) due to the 14,325 SF of permanent right-of-way acquisition which is necessary as part of the Selected Alternative's reconfiguration of the US Route 4/Spur Road intersection.

- Hilton Park is a 9.2 acre property located at the southern end of Dover Point on both sides of the Turnpike which is owned by the NHDOT and contains a public fishing pier, boat launch, picnic area, playground and parking lot. Although direct impacts to the park have been avoided, a use under Section 4(f) results from the 400 SF of impacts due to the construction of two pier foundations to accommodate a cantilevered pedestrian/bicycle structure over the park in order to access the GSB.

II. Avoidance Alternatives

During the EIS process, consideration was given to choosing alternatives which would avoid the use of any Section 4(f) property such as the No-Build or TSM/TDM and Mode Alternatives. As indicated previously, the No-Build Alternative is simply the continuation of the existing transportation network in its present configuration with no infrastructure improvements, and would therefore not meet the basic purpose and need of the project. The TSM/TDM and Mode Alternatives, evaluated both individually and in combination with one another as stand alone alternatives, were also determined not to

meet the purpose and need of the project and would result in continued and increased safety and traffic operational problems. Because the avoidance alternatives evaluated would not meet the basic purpose and need of the project, and would cause other severe problems of a magnitude that substantially outweigh the importance of protecting the Section 4(f) properties, FHWA determines that there is no feasible and prudent avoidance alternative to the use of land from the Section 4(f) properties impacted by the project.

III. Least Overall Harm Analysis and Measures to Minimize Harm to Section 4(f) Properties

Because avoidance alternatives were determined not feasible or prudent, consideration was then given to which alternatives cause the least overall harm to the Section 4(f) properties and to ensuring the selected alternatives include all possible planning to minimize harm. The least overall harm determination involved balancing the factors enumerated at 23 CFR 774.3(c) (1). Ensuring all possible planning to minimize harm involved making refinements in highway design and adjusting proposed alignments and/or cross-sections of the build alternatives. Appropriate measures were then developed for implementation as part of the Selected Alternative to mitigate those impacts which were unavoidable. The following summary briefly describes how the least harm analysis was conducted for the build alternatives evaluated under each of the three project segments:

A. Newington Segment

Initial build alternatives evaluated would have required the demolition of the Isaac Dow House, but were refined by reducing the proposed 4-lane roadway cross-section of Woodbury Avenue to eliminate this impact. The slope impacts to the Isaac Dow House property were similar under each of the build alternatives evaluated, but Newington Alternative 13 results in slightly fewer slope impacts as compared to Alternatives 10A and 12A. Mitigation for the impacts involves the in-kind replacement of the granite slab (ashlar) retaining wall and appropriate landscaping in consultation with the property owner.

The slope impacts to the Beane Farm property (which is located opposite the Isaac Dow House) were also minimized under Newington Alternative 13 by the reduction of the proposed roadway cross-section of Woodbury Avenue. Therefore, Alternate 13 results in approximately half the impacts that would have occurred under Alternatives 10A and 12A. Mitigation for the impacts involves the planting of new silver maples and lilacs on the property in consultation with the property owner.

The new ROW acquisition and slope impacts to the Portsmouth Water Booster Station are slightly greater under Newington Alternative 13 than the impacts under Alternatives 10A and 12A, however, the relative severity of harm is approximately the same for each Alternative after implementing mitigation (see FEIS Vol. 1 Section 5-16). Mitigation involves leaving a tree buffer between the Turnpike and the historic structures, and the completed documentation of eligibility.

Newington Alternative 13 results in fewer slope impacts to both the Isaac Dow House and the Beane Farm than Newington Alternatives 10A and 12A. After mitigation, impacts to the Portsmouth Water Booster Station that would result from Alternatives 10A, 12A or 13 are substantially equal. In addition, the cost of Alternative 13 is substantially less than Alternatives 10A & 12A (see FEIS Vol. 2 Figure 2.6-2). For these reasons, Newington Alternative 13 was selected since it causes the least overall harm and includes all possible planning to minimize harm.

B. Bridge Segment

The alternatives under consideration in the Bridge segment of the project were the "Widen and Remove" alternative, which would involve removing the historic General Sullivan Bridge ("GSB"), and the "Widen and Rehabilitate" alternative, which would involve rehabilitating the historic GSB for bicycle and pedestrian access and for recreational purposes. Both the "Widen and Remove" and the "Widen and Rehabilitate" alternatives would result in a use of the GSB. On February 3, 2006, the New Hampshire Division of Historical Resources State Historic Preservation Officer (NHDHR/SHPO) concurred in the Section 106 Adverse Effect finding, but agreed that the overall impact of the project on the General Sullivan Bridge will be beneficial. Mitigation involves the rehabilitation of the GSB for use by pedestrians and bicyclists, and its continued use for fishing and other recreational purposes.

Section 4(f) impacts to the Ira Pinkham House and Hilton Park are identical under each of the Bridge Segment Alternatives evaluated. Mitigation for the Ira Pinkham House involves producing a state-level Historic American Building Survey (HABS) for the dwelling and barn structure, preparation of preservation covenants for the house and barn, and marketing the house and barn if structurally feasible, if the entire parcel is acquired. Mitigation for the impacts to Hilton Park involves working with the NHDHR/SHPO to develop and erect a sign that explains the history of the GSB and the significance of the park

The Widen and Rehabilitate alternative retains and rehabilitates the GSB resulting in a net benefit to the resource. Impacts to the Ira Pinkham House and Hilton Park are the same for both alternatives. For these reasons, the Widen and Rehabilitate Alternative was selected as it causes the least overall harm and includes all possible planning to minimize harm.

C. Dover Segment

Impacts to Bayview Park are unavoidable since a key element of the project is to create a safer and more efficient local connection from Spur Road to Boston Harbor Road. Although Dover Alternative 3 results in greater slope impacts to Bayview Park, as compared with Dover Alternative 2, it requires less permanent right-of-way acquisition. Mitigation includes providing improved access to the park from the Scammel Bridge and Boston Harbor Road, as well as providing additional parking spaces to the existing

Bayview Parking lot. For these reasons, Dover Alternative 3 was selected as it causes the least overall harm and includes all possible planning to minimize harm.

IV. Coordination

Meetings were held with the NHDHR/SHPO, FHWA and NHDOT throughout the project development/EIS process. Determinations of Effect were made by consensus on January 5 and January 12, 2006, and an Adverse Effect Memo was signed on February 9, 2006. A Section 106 Memorandum of Agreement (MOA) was executed on April 3, 2008 and, pursuant to 36 CFR Section 800.6(b)(1)(iv), a copy of the Section 106 MOA was then filed with the Advisory Council on Historic Preservation (ACHP) on April 21, 2008.

Additionally, NHDOT coordinated with the NHF&GD regarding recreation opportunities at Hilton Park. This coordination included sharing information on environmental and cultural resources to facilitate NHF&GD's consideration of improved full-tide boating access at Hilton Park. NHDOT also coordinated with the NHF&GD regarding potential impacts to Bayview Park, which led to an agreement to mitigate impacts to the park by increasing angler parking.

As required by Section 4(f), FHWA provided a copy of the Draft EIS and Section 4(f) Evaluation to the US Department of Interior (USDOI) on August 4, 2006 for comment. Based upon their review of the document, the USDOI concurred that there are no feasible and prudent alternatives to the Selected Alternative, and agreed to the measures proposed to minimize harm to the 4(f) resources.

A summary list of all coordination meetings held on the project can be found in Vol. 1 Section 8 of the FEIS.

V. Conclusion

Based upon the above considerations, the FHWA determined that there are no feasible and prudent alternatives to the use of Section 4(f) properties, and the proposed action includes all planning to minimize harm to these properties resulting from such use.

MEASURES TO MINIMIZE HARM

All practicable measures to minimize environmental impacts have been adopted for the Selected Alternative. The NHDOT has developed the comprehensive mitigation package shown in the FEIS based upon the extensive agency review of proposed mitigation options and analysis and, by examining comments offered on the DEIS.

Specific environmental mitigation commitments are made in the FEIS, Section 4, following discussion of each impact. A summary of Project Commitments is included in Section 11 of the FEIS, and are repeated below:

A. Transportation and Highway Design

1. Relative to commercial vehicles accessing and exiting the Wentworth Terrace neighborhood and Hilton Drive, the proposed improvements at Hilton Drive in the vicinity of Wentworth Terrace and Hilton Park (including the local connector roadway traversing under the Turnpike and adjacent to the channel) will be designed to accommodate tractor-trailer trucks. Also, a portion of Hilton Drive extending north from the existing ramps to the pump station will be retained to create a loop road for trucks to more easily exit the neighborhood.

2. The General Sullivan Bridge, a historic bridge eligible for the National Register of Historic Places, will be rehabilitated to a six-ton capacity to continue to function as a pedestrian/bicycle/recreational facility and to accommodate emergency response and maintenance vehicles from Newington.

3. The Exit 6 proposed improvements at the US 4 /Spur Road,/Local connector, and local connector/Boston Harbor Road intersections will be designed to safely and efficiently accommodate heavy commercial vehicles including tractor-trailer trucks.

4. In Dover, new sidewalks will be constructed in the following locations:

   - Along the west side of Dover Point Road, between Hilton Park and the existing sidewalk located opposite the Division of Motor Vehicles (DMV) Property;
   - Along the north side of Spur Road between the Bayview Park parking area and the Scammel Bridge;
   - Along the west side of the connector road between Spur Road and Boston Harbor Road and along the west side of Dover Point Road;
   - Along the new two-way connector beneath the Little Bay Bridges as described above; and
   - Along Hilton Drive connecting to the reconstructed walkway along Pomeroy Cove.

   Sidewalk construction is contingent on the City of Dover agreeing to accept maintenance responsibilities (both winter and summer maintenance) for the sidewalk in accordance with its accepted policies and practices as mandated in RSA 231:92-a. A municipal agreement between the City and NHDOT documenting maintenance responsibilities will need to be executed prior to these sidewalks being incorporated into the project.

5. As part of the project in Dover, the NHDOT proposes to build minimum 4-foot wide shoulder areas, which will accommodate bicycles, along the reconstructed segments of Dover Point Road, US 4, Spur Road, Hilton Drive, along the new two-way

connector beneath the Little Bay Bridges, and along Hilton Drive connecting to the reconstructed walkway along Pomeroy Cove.

6. Retaining walls, ranging from 4 to 14 feet in height, will be constructed along the west side of the Turnpike to reduce slope impacts on the properties between the Turnpike and Dover Point Road.

7. Retaining walls, 4 to 18 feet high, will be constructed along the east side of the Turnpike to avoid impacts to Pomeroy Cove and to limit slope impacts on the properties in the Dover Point Road/Cote Drive neighborhood.

8. The existing bicycle/pedestrian path abutting Pomeroy Cove and connecting Hilton Park and Wentworth Terrace to Dover Point Road will be maintained.

9. The two existing driveways that presently service parcel N031 (Exxon/Mobil gas station/convenience store in Newington) will be maintained. The present driveway on Nimble Hill Road will have direct access to and from the Turnpike on-ramp, but will be restricted to right turns in and out. The second driveway will have a direct connection to the new local connector road that is proposed south of the gas station.

10. A local roadway, which would provide access to the gas station, Thermo Electron, and one other parcel (with existing direct access to the Turnpike) will be constructed as part of the project. This local roadway could also provide access to the former drive-in property via the roadbed of the existing southbound Turnpike if that property is developed in the future.

11. In Newington, new or reconstructed sidewalks will be included in the project on both sides of Woodbury Avenue between Fox Run Road and Exit 3. The sidewalk on the north side of the road will be extended through the interchange, across the Turnpike and into the Tradeport on Arboretum Drive.

    Sidewalk construction is contingent upon the Town of Newington agreeing to accept maintenance responsibilities (both winter and summer) for the sidewalk in accordance with its accepted policies and practices as mandated in RSA 231:92-a. A municipal agreement between the Town and the NHDOT documenting the maintenance responsibilities will need to be executed prior to the sidewalks being incorporated into the project.

12. Roadside shoulder areas (4 to 5 feet wide) to accommodate bicyclists are proposed in Newington within the limits of the project along Woodbury Avenue, the bridge over the Turnpike within the Exit 3 interchange area, and along the reconstructed sections of Arboretum Drive.

13. The project will include provisions for a future Railroad Spur over the Turnpike into Pease Tradeport. Right-of-way and easements will be procured as part of the project and a portion of the railroad bridge's pier foundation will be constructed within the

median of the Turnpike. An agreement between the NHDOT and the PDA (with concurrence from FHWA if federal funds are to be used) will also be secured as part of the project to outline a shared cost arrangement should the rail spur be constructed in the future.

14. In addition to the already completed Transportation System Management provisions identified in the FEIS, NHDOT will implement short-term relief prior to the project at Exit 6 by re-striping the Exit 6 southbound on-ramp area to create two through lanes on the Turnpike and a one-lane on-ramp from US 4, as well as closing the existing access ramp from Boston Harbor Road.

15. Early implementation of the following Travel Demand Management actions will also provide greater options to study area commuters during construction:

    - A new park-and-ride facility consisting of 416 spaces is under construction at the Exit 9 area in Dover. The facility is a separate project under the CMAQ program. Construction is scheduled to be completed in 2008 and will complement the COAST express bus service and Dover's planned downtown transit loop service.

    - A park-and-ride facility consisting of approximately 200 spaces will be pursued at the Exit 13 area in Rochester either under the CMAQ program or as part of the Rochester 10620H project (currently planned to advertise in 2008).

    - A park-and-ride facility consisting of approximately 30 to 50 spaces will be pursued for the US 4/NH 125 intersection area in Lee to accommodate travelers using US 4 eastbound. The NHDOT also recommends advancement of this project under the CMAQ program.

16. To improve bus service in the seacoast area and reduce peak hour headways to provide a more attractive and reliable mass transit mode of travel, three bus alternatives will be advanced with capital investments and consideration of operating subsidies up to a maximum of five years. The items could be accomplished through the CMAQ program or with project-related funds and are intended to mitigate for all the potential increased levels of congestion during construction and overall dependency on SOV travel in the region.

    - Bus Alternative 1, involving expanded intercity service for Rochester, Dover, Portsmouth and Boston to serve the commuter market.

    - Bus Alternative 2, involving expanding the planned COAST express bus service among Rochester, Dover and Portsmouth to reduce headways during the peak period for the planned express commuter bus service.

    - Bus Alternative 3, involving improving connectivity and headways for three existing bus routes: COAST Route 2 service between Rochester and Portsmouth;

Wildcat Transit Route 4 service between Durham and Portsmouth; and COAST Tradeport Trolley services which connects these two routes within the Tradeport.

17. NHDOT has provided support for the expansion of the *Downeaster* service through a joint-sponsored CMAQ project (total cost $6.0 million) by Maine DOT, NHDOT and NNEPRA for Rail Alternative 1C, which funded track and siding improvements in Maine and New Hampshire to allow NNEPRA to operate a fifth weekday roundtrip between Portland and Boston beginning in August 2007.

18. To support the promotion of employer-based measures to encourage travel other than by SOV, NHDOT will support funding for the seacoast area TMA, Seacoast Commuter Options, to help supplement the service for a maximum period of five years. This extension of funding could be accomplished through the CMAQ program or with project-related funds.

B. Socio-Economic Resources

1. Property requiring acquisition will be appraised utilizing techniques recognized and accepted by the appraising profession and in conformity with the Uniform Relocation Assistance and Real property Acquisition Policies Act of 1970, as amended, and applicable New Hampshire State Law.

2. Completed appraisals will be reviewed by an independent appraiser to ensure that requirements of condemnation law and accepted appraisal methods are met.

3. Two businesses will be acquired under the Selected Alternative. The displaced businesses are eligible for relocation benefits, which include:

   - Fair market value for acquired property
   - Relocation advisory assistance services
   - Payments for actual reasonable moving costs
   - Business re-establishment costs

C. Wetland Resources

1. Compensation for unavoidable loses of wetlands and other natural resources will include a combination of restoration/enhancement and preservation.

2. NHDOT and FHWA will collaborate with the affected communities and the state and federal resource agencies, as well as conservation organizations such as the SRC and TNC, to protect approximately 150 – 250 acres at three sites in Dover and Newington, described below:

Preferred Preservation Properties:

- **Tuttle Farm, Dover** – In response to the property owner's request, NHDOT in partnership with the City of Dover, has expedited the acquisition of a conservation easement on the Tuttle Farmstead to permanently preserve the 120-acre farm. The preservation was consummated on January 29, 2007 with the conservation easements executed and property rights on 109.1 acres transferred to the City, the NHDOT, and the SRC.

- **Watson Property, Newington** – This 35-acre parcel would protect upland forest and tidal wetlands adjacent to Little Bay at Tricky's Cove precluding further coastal development.

- **Blackwater Brook Preserve, Dover** – NHDOT and FHWA will continue to work with the City to permanently protect a large portion of the 105-acre Tsimekles property in the Blackwater Brook watershed. If an agreement to acquire a large portion of the Tsimekles parcel is not reached, NHDOT and FHWA will work to acquire 30 to 40 acres of one or more of the several other parcels in the Blackwater Brook area that are deemed worthy of preservation and permanent protection.

Alternative Preservation properties:

- **Knight Brook Riparian Corridor, Newington** – If negotiation for an easement on the Watson Property is not successful, the NHDOT will then pursue preservation of approximately 60 to 70 acres in the Knight Brook area. More that 100 acres in this area have been identified as appropriate for preservation. These parcels lie adjacent to the recently-preserved Frink Farm and would provide additional expansion of a large contiguous area of preserved land extending to Fox-Point.

3. NHDOT and FHWA will work with the affected communities and the state and federal resource agencies to determine the conditions of the conservation easement and easement interest holders for the Watson Property, as well as any parcel protected in the Blackwater Brook or Knights Brook areas.

4. NHDOT and FHWA will collaborate with the Town of Newington, the Pease Development Authority and the state and federal resource agencies to restore approximately 3,100 linear feet of Railway Brook (Restoration Alternative A), a portion of a heavily impacted perennial stream on the property of the Pease International Tradeport. This mitigation measure will include restoration and expansion of floodplain wetlands adjacent to the stream within an approximately 300-ft wide corridor. The restored riparian corridor, including adjacent upland buffer, would be preserved by establishment of a permanent conservation easement.

D. Drainage and Water Quality

1. In Newington, at least five extended detention basins or other appropriate BMP's will be designed for stormwater treatment, with three of the basins in the lower Pickering Brook watershed.

2. Numerous grassed swales will also be used to treat runoff from various roadway sections especially around the proposed Woodbury Avenue interchange area.

3. As part of the project's final design, NHDOT will closely review and evaluate the existing drainage conditions at Dover Point. Careful attention will be exercised to identify drainage-related issues along the Turnpike on Dover Point and not exacerbate the deficient conditions. This will include properly graded and constructed ditches and other drainage appurtenances to prevent the ponding of water adjacent to private property to the degree practicable.

4. In Dover, at least three extended-detention basins or other appropriate BMP's will be constructed to receive and treat runoff from much of the existing and new roadway areas. Numerous grass swales will also be included to treat smaller sections of roadway that cannot be directed to the extended-detention basins.

5. A pollutant loading analysis using Schueler's Simple Method (Schueler 1987), or another method approved by the NHDES, will be completed during the preliminary stage of the final design. If needed, additional or revised BMP's, such as gravel wetlands, will be included to ensure to the maximum extent practicable that the project results in no net increase in estimated pollutant loading relative to existing conditions.

6. NHDOT will evaluate the feasibility of constructing a closed drainage system on the widened LBB to minimize direct stormwater discharge to the Little Bay and the Piscataqua River.

7. NHDOT will continue to investigate various measures and technologies as a means of reducing overall salt use in the project corridor.

8. To minimize the potential for water quality impacts during construction, the NHDOT will require construction contractors to provide detailed erosion control plans including contingency measures and periodic turbidity monitoring of the site discharge during wet weather events.

9. Contractors will also be required to develop a SWPPP, which requires NHDOT approval. Frequent inspections of construction sites will be required to maintain compliance with permit conditions.

E. Navigation

1. Reconstruction of the LBB will maintain the existing limiting vertical clearances for the 100 ft and 200 ft navigation corridors (horizontal clearance) and the extension of

bridge piers will maintain existing alignments to eliminate potential impacts to navigation.

2. The plans for the reconstruction of the Little Bay and General Sullivan Bridges will be submitted to the USGC to address the reasonable needs of navigation, as well as reasonable needs of the land traffic (i.e. highway users), and to procure the necessary USCG permit.

F. Marine Resources

1. A sediment sampling and analysis program will be conducted prior to construction in order to properly plan and mitigate potential impacts from suspension of contaminated sediments.

2. Additional measures will be developed in consultation with state and federal resource agencies and other experts as needed if contaminates in the marine sediments exceed NOAA thresholds for ecological or human health risk.

3. Stringent requirements will be incorporated into the final design plans to require the selected contractor to minimize any movement of sediment beyond the work area, even if sediments are determined to be free of contamination.

4. It is anticipated that all work from the bridge piers will be conducted behind sealed cofferdams, which will substantially limit the movement of suspended sediments. The NHDOT will conduct regular inspections of the measures designed to minimize this risk.

5. The NHDOT will coordinate the design, methods and anticipated schedule of the pier construction during the project's final design with the NHF&GD as well as with the USACOE, the USFWS, and the NHFS to reduce, to the extent practicable, the potential temporary effects that construction activities may have on anadromous fish.

6. NHDOT will coordinate with the NH Estuaries Project to locate and avoid impacts to the existing shellfish monitoring station located between Pier 8 of the Little Bay Bridges and Dover shoreline.

G. Floodplains

1. Measures to minimize or eliminate direct impacts to the 100-year floodplain will continue to be considered during final design by steepening highway embankments and/or utilizing retaining walls, where appropriate.

2. NHDOT has and will continue to coordinate the project both with Dover and Newington and will seek to further minimize floodplain impacts during the project's final design, to the extent practicable.

H. Groundwater

1. To help reduce potential impacts to groundwater recharge, NHDOT will examine the use of infiltration technology during final design of the reconstructed drainage system. Such measures would be incorporated into the drainage system design to allow stormwater to infiltrate back into the ground following treatment.

I. Noise

1. The Selected Alternative will generally maintain existing vertical alignment to minimize noise impacts.

2. If desired by a 75% majority of the benefited first row of property owners, four large noise barriers will be constructed in Dover in the following location:

   - Dover Point Road Area (Noise Barrier #1, 4,100 feet long, 14 feet high)

   - Wentworth Terrace and Cote Drive areas (Noise Barrier #2, 4,200 feet long, 14 feet high)

   - Spur Road and Clearwater Drive areas (Noise Barrier #3, 3,600 feet long, 12 feet high)

   - Homestead Lane and Pearson Drive areas (Noise Barrier #4, 3,700 feet long, 14 feet high)

Additional meetings with the benefited property owners will be held to discuss the noise barriers and ascertain whether the barriers are desired. In accordance with NHDOT's Policy and Procedural Guidelines, a minimum of 75% of the first row property owners will need to support the installation of the barrier in order for it to be constructed.

3. The Spur Road/Clearwater Drive barrier and the Homestead lane/Pearson Drive barrier will extend north of the toll plaza to provide abatement to an additional 25 residences.

4. In an effort to minimize construction noise, proposed noise barriers will be built as soon as practicable so that they may provide a reduction in subsequent construction noise to the residences.

5. During neighborhood meetings, more detailed information on the type, height, special features, and length of the noise barriers will be discussed and input gathered for consideration in the final design of the barriers where determined feasible.

6. NHDOT will strive to design the noise barriers to be as low as possible while still achieving the necessary noise reductions, and will consider various architectural

treatments and landscaping during the final design phase to mitigate the visual impact of the barriers.

7. As part of the project's final design effort, NHDOT will investigate the merits and feasibility of utilizing "quiet pavement" or "porous pavement" to reduce the effect of tire noise throughout the project area.

J. Recreational Resources

Hilton Park

1. Continued access from the park to the rehabilitated General Sullivan Bridge will be provided by an ADA-compliant ramp located in the western portion of Hilton Park.

2. Safer access to the park and to the eastern and western sides of Dover Point will be provided by the widening of the existing single-lane loop road.

3. NHDOT will work with NHDHR to develop and erect an informational sign that explains the history and significance of the park and the General Sullivan Bridge.

4. Reasonable efforts will be made to minimize impacts to the park during construction, including preventing unnecessary disturbance of the areas outside the existing right-of-way and maintaining safe access to the park.

5. NHDOT will continue to coordinate with the NHF&GD and NHDRED to determine whether improvements to the boating infrastructure at Hilton Park could be accomplished concurrently with the Little Bay Bridge and Turnpike Expansion project.

Bayview Park

1. NHDOT will provide improved access to Bayview Park. Pedestrians and bicyclists will benefit from improved access as NHDOT intends to construct a sidewalk connecting the park to the Scammel Bridge and to Boston Harbor Road.

2. The existing parking lot will be expanded from six to ten spaces by extending the parking area to the southwest to benefit users of the park, as well as anglers using the Scammel Bridge and adjacent shoreline to fish.

3. Reasonable efforts will be made to minimize impacts to the park during construction, including preventing unnecessary disturbance of areas outside the authorized right-of-way, and maintaining safe access to the park for vehicles, pedestrians and bicyclists.

K. Visual Resources

1. Landscaping and design treatments will be developed at the final design stage to minimize the aesthetic impact of the proposed action. Measures to be studied include:

   - Minimization of tree clearing and setback areas to the extent practicable.
   - Planting of new trees in select locations to mitigate for the mature trees that will be lost due to construction.
   - Landscape planting and natural revegetation of the cut and fill slopes for the mainline and at all interchanges and, as appropriate, at off-site park-and-ride facilities.
   - Structural design and aesthetic considerations for drainage structures, bridges, noise barriers, etc to enhance their visual appearance.
   - Highway lighting at interchanges and park-and-ride facilities will be designed with cut-offs (shields) or similar features to limit unwanted light where appropriate.
   - Landscaping amenities will be considered in conjunction with the noise barriers, wherever practicable.
   - Landscape screenings or privacy fences to minimize the visual impact of the highway and mitigate for the loss of existing vegetative screening will be considered and evaluated as part of the discussions with affected property owners during the project final design.
   - Potential use of transparent materials in noise barriers at Pomeroy Cove to enable continued viewing of this aquatic resource.

2. NHDOT proposes to plant evergreen trees alongside US 4 to shield the pocket neighborhood on Boston Harbor Road from headlight glare and the increased elevation of US 4. The evergreen trees will, over time, help to obscure the highway.

L. Cultural Resources

Historical Structures

1. A reduced cross-section for Woodbury Avenue will be constructed in front of the Isaac Dow House (NWN0205) and Beane Farm (NWN0204) property to minimize impacts to these two historic resources.

2. Mitigation for impacts to the Beane Farm will include planting of new silver maples and lilacs on the property in consultation with the owner, and their placement in relation to the power lines to avoid the need for future trimming.

3. Mitigation for the Isaac Dow House will include replacement of the granite slab wall in-kind and appropriate landscaping with shrubs in consultation with the owner.

4. Mitigation for the adverse effect to the Portsmouth Water Boost Station (NWN0228) will be accomplished by leaving a tree buffer between the Turnpike and the historic structure and by its documentation within its Determination of Eligibility.

5. Mitigation for the impacts to the General Sullivan Bridge (DOV0158) will include its rehabilitation for use by pedestrians and bicyclists and its continued use for fishing.

6. Work on the bridges will be accomplished in a manner that will not impact the adjacent Hilton Park Picnic Shelter.

7. Mitigation for the property taking at the Ira Pinkham House (DOV0093) will involve producing a state-level Historic American Building Survey for the dwelling, documentation of the barn's structure in the same document, preparation of preservation covenants for the house and barn, marketing the barn for relocation if structurally feasible, and marketing the dwelling if the property is acquired in total.

8. NHDOT will continue to work with the Town of Newington to develop an agreement to transfer the historic former railroad station on Bloody Point and the land immediately surrounding the building to the Town.

Archaeological Resources

1. NHDOT will initiate Phase I-B archaeological investigations in the sensitivity areas that are impacted by the Selected Alternative, as discussed in Section 4.17, in compliance with the May 2004 Phase I-B guidelines for fieldwork and report writing defined by the Bureau of Environment, NHDOT Guidelines.

2. Continued study will be conducted at the impacted verified site on the southern tip of Dover Point (Area 21) to determine its eligibility status for the National Register of Historic Places following a Phase II survey strategy as recommended by NHDOT Guidelines.

3. Temporary construction fencing will be installed between all unimpacted verified sites and the work zone, including Areas 23, 46 and 74 in Newington, and Areas 9 and 13 in Dover. If needed to ensure accurate placement of fencing, the boundaries of these sites will be defined through Phase I-B testing.

4. Mitigation for all impacted verified sites will be developed in consultation with NHDHR and other interested parties following completion of Phase II studies. Mitigation may include the following, depending upon the site:

- Preservation in-place may be necessary, requiring a change in design or location, where feasible and prudent, to satisfy Section 4(f). In some cases, the location of the corridor may be moved slightly or work adjacent to the site may be modified so that it will not be impacted by the Selected Alternative.

- If preservation in-place is determined unnecessary, then recovery of the information from the site will be accomplished by implementing a data recovery plan under a Phase III investigation.

- In a few cases, excavation using a data recovery plan may be conducted on a previously identified unimpacted archeological site in the vicinity of the alignment and of a similar age, type, function, and composition. This form of mitigation would be completed prior to the completion of the project. However, its excavation can continue while work commences within the corridor.

5. Where archeological information is gained through the excavation of sites associated with this project, NHDOT will assist in distributing information to the public through such venues as site reports, public lectures, school programs, interpretive brochures, and, depending on the nature of the site, public visitation during investigations.

M. Petroleum, Hazardous Materials and Solid Waste

1. Initial site assessments (ISA's) will be performed for those properties that could pose a risk to potential contamination if encountered along the Selected Alternative.

2. Following completion of the ISA, and if determined to be warranted, NHDOT will perform a Preliminary Site Investigation (PSI) to determine if contamination levels require remediation in accordance with NHDES regulations.

3. If necessary, NHDOT will coordinate with the NHDES to develop an appropriate remedial action plan for any acquired property determined to contain hazardous materials warranting clean up.

4. If contaminated materials are expected to be encountered during construction, appropriate worker health and safety provisions and waste management provisions will be identified. Provisions may include health and safety plans (HASP's) and soil/groundwater management plans for excavation and on/off-site management of waste materials. All work will be performed in accordance with applicable NHDES regulations and NHDES approved remedial action plans.

5. Prior to any scheduled building, utility or bridge demolition or reconstruction, a comprehensive environmental audit will be performed on the structure to identify and quantify all regulated building materials and special wastes. Materials and wastes that will be inventoried include the following:

   - Asbestos

- Lead-based paint (LBP)
- Polychlorinated biphenyls (PCB's) within fluorescent light ballasts
- Electrical transformers that may contain PCB dielectric oil
- Mercury-containing fluorescent light bulbs
- Mercury thermostats
- Miscellaneous containers of oil or hazardous materials
- Refrigerants (air conditioners, refrigerators)
- Hydraulic lifts
- Above-ground storage tanks
- Underground storage tanks

6. Based upon the findings of the environmental audits, abatement plans will be prepared to address the removal of all regulated building materials as needed.

7. Exposure assessments (air monitoring) will be performed on employees engaged in demolition work that may disturb lead paint or other hazardous substances. Such work will be conducted by properly trained workers using appropriate worker protection and engineering controls.

8. Bridge contractors will be required to fully enclose the General Sullivan Bridge during any work involving LBP removal and provide the material and execution requirements for the installation and use of containment systems for the paint removal.

9. Implementation of an Environmental Protection Plan for the protection of the public and the environment from exposure to harmful levels of dust, paint debris, and lead and other toxic metals that may be present in the paint being removed or repaired will also be required for the reconstruction of the bridges.

N. Construction Impacts

1. To mitigate potential sedimentation impacts by construction, a SWPPP containing a well-defined drainage and erosion control program, including BMP's, will be developed and implemented following NHDOT's Standard Specifications for Road and Bridge Construction, Section 699, Temporary Project Water Pollution Control (Soil Erosion).

2. The drainage and erosion control program will require that areas stripped of vegetation be limited in size and either surfaced or vegetated as quickly as possible after initial exposure. Other measures such as silt fencing, temporary settling basins, temporary erosion check dams and other measures will be installed in appropriate locations.

3. BMP's for fertilizer application during construction will be followed to limit potential water quality impacts.

4. Mechanisms and procedures to avoid and control chemical leaks and spills from construction equipment will be instituted.

5. NHDOT will ensure that all erosion control measures are properly installed and maintained throughout construction to ensure their maximum functionality and effectiveness.

6. In general, construction will be accomplished during daylight hours, although periodic night-time construction should be expected given the traffic volumes during daylight hours and the need to maintain traffic at these times.

7. NHDOT will continue to coordinate with local and state emergency response personnel to develop efficient incident management procedures and protocols during construction. A detailed Traffic Control Plan, to include incident management procedures, will be instituted to reduce traffic-related, short-term disruptions and minimize construction zone delays.

8. The Traffic Control Plan will include the requirement to maintain two lanes of traffic in both directions along the mainline for normal construction activities, and during high volume traffic periods.

9. Construction activities will be coordinated with property owners to ensure that reasonable access to properties is maintained. Temporary signing and other issues related to temporary relocation of access points, caused by construction activities, will be appropriately addressed on an individual basis.

10. Intelligent Transportation Systems, such as Smart Workzone Technologies, will be employed to more efficiently manage traffic/travel demand and enhance incident management. Specific Incident Management procedures and protocols will be incorporated into the contract documents and specifications.

11. NHDOT will require the contractors, involved with the improvements to the Spaulding Turnpike, to include air pollution control devices on heavy diesel construction equipment in accordance with applicable state and federal laws at the time of construction. The merits and practicality of more stringent or voluntary specification measures will be considered through the final design process with input from the contracting community at large.

12. Mitigation measures for fugitive dust emissions will be used for construction including wetting and stabilization to suppress dust generation, cleaning paved roadways, and scheduling construction to minimize the amount and duration of exposed earth.

O. Utility Impacts

1. During the project's final design, NHDOT will closely coordinate the project with Town Officials concerning municipal utilities and with private utility companies concerning their facilities in the project area. Efforts will be initiated to verify location of existing facilities, to identify potential areas of conflict and the utility relocations necessary to accomplish the proposed construction, and to accommodate requests for concurrent municipal or private utility improvements.

2. Where appropriate, the affected municipalities will be given the option to include utility work, at the municipality's expense, in the construction contract. Any property rights or additional right-of-way required for the utility work would be the responsibility of the Town.

3. NHDOT will work closely with Granite State Gas to limit the extent of relocations to only those that are reasonable and prudent.

COMMENTS ON FINAL EIS

The only comment letter received on the FEIS was from the Environmental Protection Agency (EPA). While the EPA indicated in their letter that they had no outstanding objections to the project, they did encourage the FHWA and NHDOT to include commitments as part of the project which would require implementation of diesel retrofits, cleaner fuels, and idle reduction measures for construction and other diesel equipment during construction of the project.

The NHDOT and FHWA will require the contractors involved with the reconstruction of the Spaulding Turnpike to include air pollution control devices on heavy diesel construction equipment in accordance with applicable state and federal laws at the time of construction. However, there are currently no requirements under state and federal law which mandate NHDOT and FHWA to require such air pollution control devices on construction equipment. The merits and practicality of more stringent specification measures will be considered during final design of the project, and will be discussed with the contracting community at large.

Approved by: _____ Date: 10/24/08

Kathleen O. Laffey
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