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Local  
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# WEST ENVIRONMENTAL INC.



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Newington Conservation Commission  
205 Nimble Hill Road  
Newington, NH 03801

September 21, 2006

RE: Spaulding Turnpike Improvements Wetlands Application –August 2006  
SUBJ: Comments and Response

Dear Commission Members:

West Environmental, Inc. submits this preliminary review of the above referenced wetlands application to provide an overview of the proposed wetland impacts and compensatory mitigation package. This report evaluates only that portion of the project in Newington.

### Wetland Impact Assessment

- 1 • Total permanent wetland impacts 11.9 acres mostly forested and emergent wetlands with approximately 1 acre of scrub-shrub and impacts to the bay associated with the bridge piers.
- 2 • Wetland Evaluation is summarized only and does not include photos and data but indicates that groundwater recharge, production export, nutrient removal/transformation and wildlife habitat are the main functions impacted.
- 3 • Temporary wetland impacts are not as clearly defined and their restoration is not detailed in the application package.
- 4 • The majority of the impacts in Newington are associated with the new Exit <sup>3</sup> connection to Arboretum Drive.
- 5 • No discussion of tidal buffer zone impacts is included in the application package.

### Recommended Mitigation Package

#### Railway Brook Restoration

- 6 • The Habitat Assessment of the brook is not provided in the application package but should be reviewed and could be applied to McIntyre Brook for future reference. This information is included in the Draft EIS.
- 7 • A Risk Assessment regarding potential contamination needs to be completed prior to pursuing this wetland restoration work. Alternative sites may need to be substituted if contamination risks are unacceptable.
- 8 • The wetland areas restored and buffers to the new stream system should be protected by a conservation easement. This is discussed in a VHB Memo dated 11-1-05 but is not detailed in the application package.
- 9 • Alternative A (Arboretum Drive north to Pickering Brook intersection) 2,542 linear feet of stream with newly created wetlands that are not estimated for size. Adjacent to Upper Pickering Brook Prime Wetland.

- 10 • Alternative B (Arboretum Drive south to airport runway) 2,700 linear feet of stream with newly created wetlands that are not estimated for size and are adjacent to North Ramp Prime Wetland. Landfill may cause unacceptable risks. Treatment of runway runoff discharging into stream is not discussed.
- 11 • The VHB Memo dated 11-1-05 indicates 10 total acres of wetland restoration for the combined wetland restoration alternatives but this is not detailed in the application package.
- 12 • Protection of the existing prime wetlands adjacent these two sites is an important consideration.

Preservation

- 13 *Watson Property* - This 35 acre parcel would permanently protect Trickey's Cove and Shackford Lot Prime Wetlands and the scenic view from the bridge. This parcel is very high value frontage on Great Bay. No discussion of an easement holder or local access was included in the application package.

Alternate Mitigation Options

Preservation

- 14 *Knight Brook* - Three parcels totaling 100 acres that would provide permanent protection to the Knight Brook Prime Wetland. Diverse upland and wetland complex. No discussion of an easement holder or local access was included.

Restoration/Preservation

- 15 *Drive-Inn Theater Property* – 16 acre site includes potential grassland species habitat. No wetland restoration acreage is given in the application package but the VHB Memo dated 11-1-05 indicates 1.6 acres. This site rated low on previous reviews.

NHDES Requirements.

- 16 Based on almost 12 acres of wetland impact the ratios required for mitigation are as follows:
  - \* Wetland Restoration 1.5 to 1 or 18 acres
  - \* Preservation of Upland Buffer 10 to 1 or 120 acres 50% of which can be wetlandThe Railway Brook Restoration Alternatives do not give acreage of proposed wetland restoration however the VHB Memo dated 11-1-05 estimates 10 acres. The protection of the 35 acre Watson Parcel represents 29% of the required mitigation. Therefore 8.2 acres of wetland impact remain to be mitigated. The railway brook restoration would need to include 12.3 acres of wetland restoration/creation to meet the NHDES requirements. The additional preservation of the restoration site and its buffers will likely meet the mitigation requirements for the Town of Newington. More information would need to be provided as to the risk and benefits of this restoration project including how much wetland will be restored or created by this alternative. The commission may wish to pursue protection of some of the Knight Brook area to compensate for any additional mitigation required to meet the NHDES ratios.

17

Three of the four proposed mitigation parcels appear to be good options with the reservation that the Railway Brook Restoration presents both challenges and potential risks. It appears that Alternative A is the more attractive option because of its distance from the runways however the ideal scenario would be to restore both stretches if either is pursued to create a more complete wetland system.

18

The success of the preservation parcels is easier to predict however the easement holder and restrictions are key components to evaluating the mitigation benefits to the Town of Newington.

Additional information identified in this letter would provide a better understanding of the value of the proposed mitigation. Some of this information may be contained in the EIS and should be reviewed prior to making final recommendations.

This completes our report at this time. Please call our office if you have any questions.

Sincerely,  
West Environmental, Inc.



Mark West, President  
Wetland Scientist

**Response to Comments Made by  
Mark West, Wetland Scientist, President  
West Environmental, Inc.  
122 Mast Road, Suite 6, Lee, NH 03824  
Letter dated September 21, 2006**

1. So noted.
2. The Wetlands Permit Application follows accepted procedure for projects of this scope and incorporates by reference the entire Draft EIS. Neither the Army Corps nor the NHDES has requested individual photographs of wetlands.
3. The NHDOT and FHWA also agree that temporary impacts to wetland resources must be identified. It is expected that all wetland impacts will be contained within the footprint as shown on the project wetland plans. However, additional temporary impacts may be required. These impacts are typically a function of construction sequencing and procedures, and will be determined during the final design or construction phase. As is standard practice for projects such as this, the NHDOT and FHWA will continue to track actual wetland impacts during final design and construction of the project and will submit those updated impacts to the regulatory agencies for their review. It should be noted that temporary impacts are not subject to mitigation requirements. The NHDOT and FHWA will restore any temporarily impacted wetlands as part of the project.
4. So noted.
5. The NHDOT and FHWA agree that it is appropriate to identify impacts to the tidal buffer zone. This information has been developed and will be reported in the Final EIS and submitted as an addendum to the NHDES Wetlands Permit application.
6. So noted. The biological assessment of Railway Brook is reported in the Draft EIS and raw data is included as an appendix to the DEIS. McIntyre Brook is outside the project study area.
7. While the Draft EIS identified two alternatives for restoration of the brook, recent coordination with the PDA, the NHDES - Waste Management Division and the US Air Force has highlighted the environmental risk associated with "Alternative B" which lies in close proximity to Landfill 5 of the former airbase. Groundwater in this area is being monitored in association with the remediation of hazardous waste contamination at Landfill 5. Therefore, the NHDOT and FHWA have chosen to pursue Alternative A as discussed in the Draft EIS, since it lies mostly outside of the groundwater management zone and therefore has relatively minimal environmental risk. The state and federal resource agencies concurred with this approach during a mitigation review meeting on March 21, 2007. Based on the fact that Alternative A will not involve work within a groundwater management zone, the NHDOT and FHWA feel that a formal risk assessment is not warranted.
8. A revised conceptual plan (as shown in Figure 4.6-4) for the restoration of Railway Brook has been developed and is presented in Section 4.6.5 of the Final EIS. The plan shows a

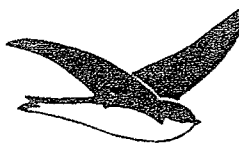
- conservation easement totaling approximately 23 acres will be procured to preserve the area in its restored state in perpetuity.
9. The estimated riparian wetland creation associated with the Railway Brook restoration is approximately 5.4 acres, while the restored stream would be approximately 1.5 acres, for a total of about 6.9 acres. It is expected that this estimate will change as the conceptual plan progresses through the design process.
  10. So noted. As discussed in Response 7, the NHDOT and FHWA are no longer pursuing Restoration Alternative B as an option.
  11. So noted. The intent of the wetland application package is to provide basic information to the USACOE for public notice purposes.
  12. The NHDOT and FHWA agree that the existing prime wetland adjacent to the restoration site is an important consideration. The wetland is a relatively narrow drainage that appears to result from modifications made by the Air Force during construction of the former Pease Air Force Base. The restoration plan calls for creation of floodplain and wetland adjacent to the restored brook which will have the effect of connecting the existing prime wetland to the restoration area, which will enhance its value.
  13. The NHDOT and FHWA are continuing to work with The Nature Conservancy to potentially acquire an easement on the Watson Property, in combination with the Railway Brook restoration, as part of the mitigation plan. Easement and interest holders, as well as access rights, will be determined during right-of-way negotiations.
  14. The three parcels totaling 100 acres along Knight Brook are the second alternative in the mitigation plan. Should an easement on the Watson Property be unachievable, a conservation easement on two of the three Knight Brook parcels would be acquired. Easement and interest holders, as well as access rights, will be determined during right-of-way negotiations.
  15. The Drive-In Theater Property has been removed from mitigation alternatives due to its low ecological value as a mitigation site.
  16. NHDOT and FHWA have met numerous times with state and federal resource agencies to craft a mitigation strategy that is acceptable under both state and federal mitigation policies. The Final EIS contains details of the final proposed mitigation package, which includes the following components:
    - Restoration (Alternative A) of approximately 3,100 linear feet of Railway Brook, as well as preservation of approximately 23 acres, in Newington.
    - Preservation of the Watson property (35 acres) in Newington.
    - Preservation of the 120-acre (±) Tuttle Farm in Dover.
    - Preservation of approximately 30 to 40 acres of the Blackwater Brook Area in Dover.

If negotiation of an easement on the Watson Property is not successful, then the NHDOT and FHWA would pursue preservation of approximately 60 to 70 acres of the Knight Brook area in Newington.

NHDOT and FHWA believe that the mitigation package complies with the latest guidance on mitigation from the USACOE (RGL 06-03) as well as NHDES administrative rules (Env-Wt 800). The compensatory strategy contains a combination of stream and wetland restoration, preservation of wetlands and upland buffer preservation that will compensate for unavoidable impacts from the proposed Spaulding Turnpike Improvements project. The restoration portion of the package will replace lost wildlife habitat and water quality functions, while the preservation component will help to ensure the future integrity of the important Blackwater Brook wetland complex which provides important wildlife habitat and is within the recharge area for Dover municipal water supply wells. Based on the discussion at a meeting of state and federal resource agencies on March 21, 2007, a consensus was reached that the mitigation package as outlined in the Final EIS is acceptable.

17. As discussed above, the NHDOT and FHWA have chosen to pursue Restoration Alternative A. (Also see response #7)
18. The conditions of the conservation easement, as well as easement interest holders, will be identified during the right-of-way process. The NHDOT's standard conservation easement language or language that is approved by the USACOE and NHDES will be used. An environmental steward will be identified to ensure the easement conditions are being met.

# WEST ENVIRONMENTAL INC.



**RECEIVED 7**  
COMMISSIONERS OFFICE

SEP 28 2006

THE STATE OF NEW HAMPSHIRE  
DEPT. OF TRANSPORTATION

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Chairman of the Special Committee  
c/o James Moore, Director of Project Development  
NHDOT  
PO Box 483  
Concord, NH 03302-0483

September 27, 2006

*Jan 9/28/06*

RE: Spaulding Turnpike Improvements Wetlands Application –August 2006  
SUBJ: Follow-up Comments to Public Hearing

Dear Sirs:

West Environmental, Inc. submits these comments with the Newington Conservation Commission(NCC) as a follow-up to our comments submitted at the Public Hearing on September 21, 2006.

### Wetland Impact Assessment/Stormwater Management

1 Due to the extent of wetland impact and amount of proposed impervious surface in close proximity to Great Bay tidal wetlands, details of the proposed storm water management system are needed in order to understand the potential wetland and surface water impacts. This information should be included in the Final EIS so that the Newington Conservation Commission can adequately assess the projects impacts.

### Recommended Mitigation Package

#### Railway Brook Restoration

2 The NCC strongly urges the NHDOT to evaluate and pursue this restoration alternative as we have identified both this site and McIntyre Ditch as significantly degraded stream systems that drain directly into Great Bay. This project presents an excellent opportunity to restore wetland/stream systems that continue to degrade the water quality of Great Bay and its tributaries.

3 Drive-Inn Theater Property – The NCC voted to not recommend this as a mitigation alternative based on the lower ecological value of the site. We request that the NHDOT remove this as a mitigation alternative.

We appreciate the opportunity to comment on this project.

Sincerely,  
West Environmental, Inc.

Mark West, President  
Wetland Scientist

Newington Conservation Commission

*Vincent Frank*  
Vincent Frank  
Chairman



**Response to Comments Made by  
Vincent Frank, Chairman  
Newington Conservation Commission  
205 Nimble Hill Road, Newington, NH 03801  
Letter dated September 27, 2006**

1. Additional details regarding the stormwater management system and treatment devices will be provided as they become more fully developed as the project progresses through the final design stages. At the EIS phase, the general drainage patterns and approximate locations for detention basins have been identified. These locations and the estimated size of the area needed are rough approximations and generally do not account for site-specific constraints. The presence of wetlands and other site constraints are factored into the sizing and final layout of the treatment devices as they are refined during the final design process.

Also, see Letter S-4, response #3.

2. The NHDOT and FHWA acknowledge and appreciate the NCC's support for the restoration of Railway Brook. The NHDOT and FHWA plan to progress Alternative A as the preferred restoration alternative for Railway Brook.
3. Based on public comment, the Drive-In Theater Property has been removed as a mitigation alternative.

BEFORE THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION  
AND THE FEDERAL HIGHWAY ADMINISTRATION

Spaulding Turnpike Improvements  
Newington to Dover, New Hampshire  
NHS-027-1(37), 11238

COMMENTS OF JUSTIN C. RICHARDSON

**I. BACKGROUND & SUMMARY**

- Justin C. Richardson, Esq., Newington Resident, and Member of the Newington Conservation Commission (Vice chair 2005).
- Background in Environmental Law. Former Assistant Attorney General in the NH Department of Justice, Environmental Protection Bureau (1996-2000); NHDES Employee and Intern, Water Management Bureau & Planning Unit (1990-1993).
- Concerns regarding discharge of stormwater to Little Bay resulting from the NHDOT construction at Exit 4 in Newington. Prepared reports documenting stormwater discharges from NHDOT projects in violation of state water quality standards to the Newington Conservation Commission (attached).
- Little Bay, Great Bay & the Piscataqua River are an extremely valuable environmental resource, yet these bodies of water do not meet state water quality standards.
- Because of these concerns, limited space and proximity of Little Bay, significant stormwater treatment and prevention measures should be in place prior to significant construction to mitigate stormwater discharges into Little Bay, both during and post construction.
- Draft EIS does not provide any details that would allow reader to determine that adequate measures will be in place, prior to, during or post construction. Final EIS should require measures in place at critical locations around Little Bay, and eliminate stormwater at its source.

**II. COMMENTS**

**Stormwater runoff is the #1 pollution problem in the State of New Hampshire.**

- Runoff from rainstorms and snowmelt is the *most significant source of water pollution today*. Stormwater carries sediment, oil, grease, nitrogen, phosphorus,

and other pollutants into storm drains and then, untreated, into nearby waterbodies.<sup>1</sup>

- The New Hampshire Department of Environmental Services (NHDES) ranks stormwater runoff as the highest priority source of non-point source pollution in the state of New Hampshire due to its impact on public health and receiving waters.<sup>2</sup>
- According to the University of New Hampshire Stormwater Center, “Urban stormwater is the second largest source of water quality impairment in estuaries.”<sup>3</sup>

**Great Bay (including Little Bay) is an extremely valuable environmental resource to the region.**

- Great Bay, including Little Bay, has been identified by the NHDES as “one of six high priority areas in the state”.<sup>4</sup>
- Great Bay contains salt marsh habitats that are recognized as one of the highest priorities for protection by the NHDES’s rules which state that “[p]reserving the integrity of saltmarshes and other tidal wetlands *shall be given highest priority by the department*, because of the high productivity, rarity of such wetlands, and difficulty in restoration of value and function for those environments.” Env-Wt 302.01 (a) (emphasis added).
- According to the NHDES Fact Sheet WMB-CP-07 (2004), salt marsh grasses are a critical environmental resource. In addition to their aesthetic value, “salt marsh provides the food for larger fish that are important to the New England fishing industry. Over the past decade, fishery stocks in New England have seriously declined. There is evidence that restoring marshes, along with improved fishing management, will help to restore these fish stocks.”
- According to the NHDES Fact Sheet WMB-CP-03 (2004), mud flats present at Great Bay adjacent to the project are an important environmental resource and “provide important habitat for bottom-dwelling invertebrates, such as clams and mussels, and thus provide food for predatory fish, birds and invertebrates such as the horseshoe crab, mudsnail and shellfish species.”

<sup>1</sup> USEPA *Getting the Word Out...The Role of Local Governments In Implementing the NPDES Stormwater Program for Construction Sites*. EPA 833-F-06-0022. (emphasis added).

<sup>2</sup> NHDES, Nonpoint Source Management Plan (1999), Page ES-2.

<sup>3</sup> Thomas Ballesterio, University of New Hampshire Stormwater Center, May 2005 Presentation to NRPC. Available at <http://www.unh.edu/erg/cstev/Presentations/index.htm>

<sup>4</sup> NHDES Fact Sheet R&L-6 (1997).

- The United States Environmental Protection Agency has identified three priorities for protection of Great Bay as a natural resource.<sup>5</sup> These priorities are:

Triple the acreage of open shellfish beds (to 75% of all beds) and triple number of harvestable clams and oysters in NH estuaries.

Preserve open space in Great Bay watershed area.

2

Increase the acreage and value of salt marshes, wetlands and other estuarine habitats.

- The areas of Little Bay adjacent to the project provide a critical habitat function. In a technical report entitled *Important Habitats of Coastal New Hampshire* the United States Fish and Wildlife Service listed and ranked priority species important for wildlife protection and conservation. Many of these important species and habitats are located at or near the proposed project.

**Water Quality of Little Bay at the project location (Little Bay) does not meet state water quality standards.**

3

- The NHDES reports that the sections of Little Bay and the Piscataqua River adjacent to the proposed project do not meet the state's water quality standards.<sup>6</sup> The Piscataqua River is categorized as a Category I water body in need of restoration.<sup>7</sup>
- Past (and much smaller scale NHDOT projects) have resulted in discharges of turbid water to Little Bay, in violation of state water quality regulations.<sup>8</sup> See Attached Reports. The proposed project, due to its larger scale, presents an even greater risk.
- Impervious cover in the Newington sections of the project is a serious problem. According to the Draft EIS, in Newington Lower Pickering Brook is 19% impervious.<sup>9</sup> It is generally recognized that stormwater discharges are a concern when imperviousness exceeds 10%.<sup>10</sup> The Draft EIS further reports that the

<sup>5</sup> USEPA, *Great Bay and the Seacoast*, Fact Sheet (June 2002).

<sup>6</sup> See generally, NHDES 2004 Section 305(b) and 303(d) Surface Water Quality Report.

<sup>7</sup> NHDES Nonpoint Source Management Plan, Table 1-1 (1999).

<sup>8</sup> Under the Department of Environmental Services regulations, Env-Ws 415.04 Water Quality Degradation Prohibited, "[n]o person undertaking any activity for which a permit is required shall cause or allow the activity to cause any water quality degradation, including siltation or turbidity in surface water." (emphasis added).

<sup>9</sup> Draft EIS, Page ES-14.

<sup>10</sup> Center for Watershed Protection, [www.cwp.org](http://www.cwp.org).

3

capacity of the drainage pipes may also be deficient at some locations due to the amount of impervious area that has been added from development in the area.<sup>11</sup> Stormwater runoff from the project and adjacent impervious areas will add pollutants to the system.

- It is critical that stormwater prevention and treatment measures be in-place prior to construction to (a) prevent stormwater discharges and sediments at their source; and (b) treat stormwater discharges prior to reaching Little Bay.
- The Draft Environmental Impact Statement states that stormwater treatment facilities will be constructed, but does not specify their location.<sup>12</sup> Location is critical in order to evaluate whether the protections will be sufficient to prevent violations of water quality laws and regulations.

#### RECOMMENDATIONS

4

- Stormwater treatment *prevention and treatment* measures be in place prior to construction.

5

- FEIS should identify, evaluate and make recommendations concerning the need for stormwater treatment and mitigation measures at specific locations.

6

- Treatment systems are needed adjacent to Little Bay. Newington/Exit 4 should be considered.

7

- Project specific environmental inspectors reporting to NHDES should be considered given compliance concerns Exit 4.

<sup>11</sup> Draft EIS, Page 3-23.

<sup>12</sup> Draft EIS, Pages ES-18; 2-108.

NEWINGTON EXIT FOUR EROSION / TURBIDITY  
DISCHARGING INTO GREAT BAY

Pictures taken on July 11, 2006 at 7:30 PM, following a rainstorm that ended (approximately) at 4:00 PM. Significantly greater volumes of stormwater discharging directly to Great Bay (Little Bay near Bloody Point) than those depicted were observed earlier in the day but were not photographed. This storm event (and sediment levels) are substantially less than those observed earlier in the day, and during all other rain events in May and June of this year.



Photo A. Culvert discharging to Great Bay immediately to the east of the Exit 4 underpass to the Spaulding Turnpike. Although only 1" deep (approx, not measured) water is opaque due to sediment and turbidity from DOT construction sites west of the turnpike.



Photo B. Looking Southeast towards Nimble Hill Road from Exit 4. No erosion controls or swales present. Storm drain is located adjacent to the road near the standing water. Water containing sediments is washing off the site directly on to the road or into the storm drain.

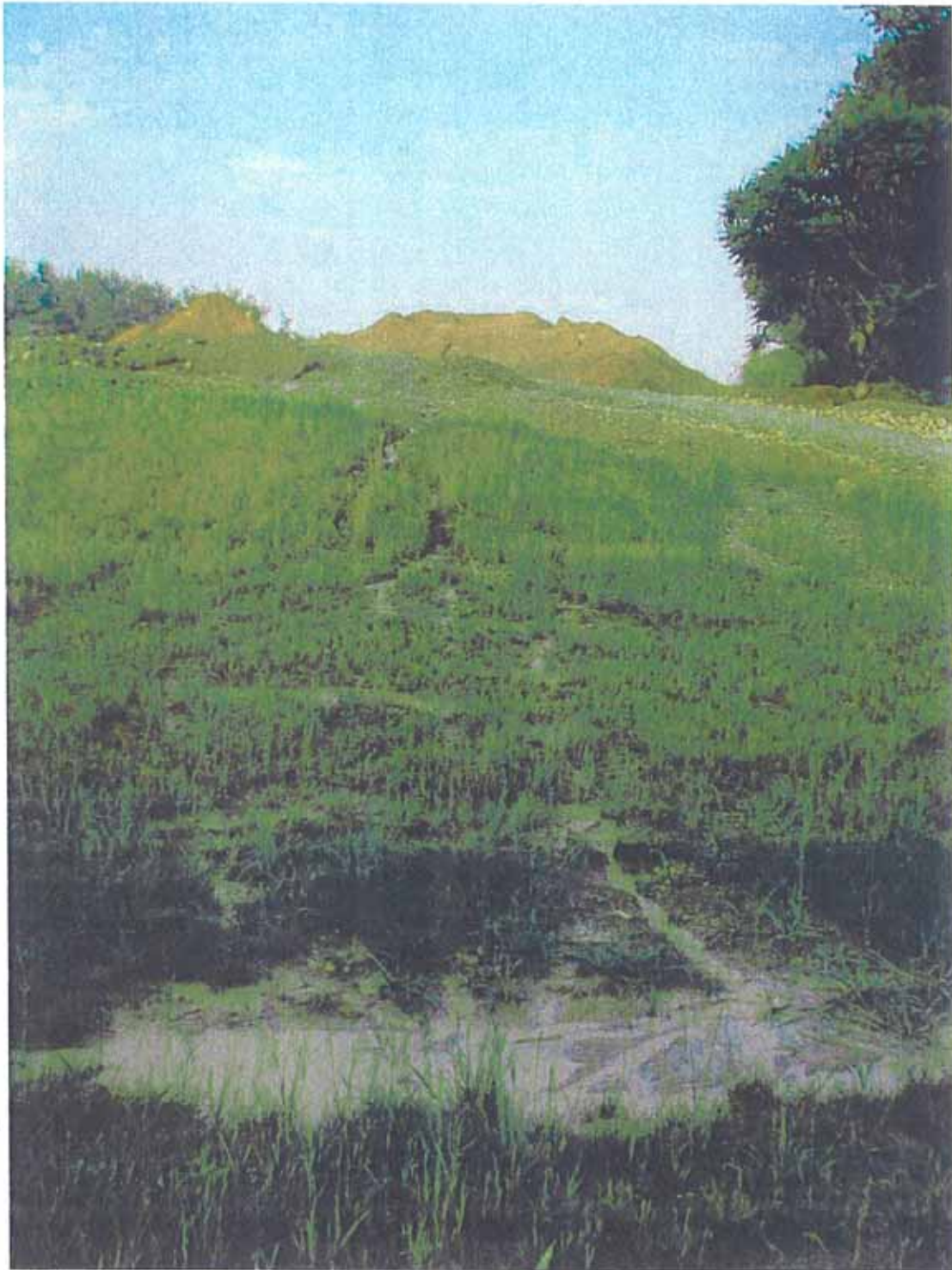


Photo C. North of Photo B looking up at the spoils area west of the Turnpike. Runoff containing high sediment levels is washing down and eroding the slope into drains and onto the road.



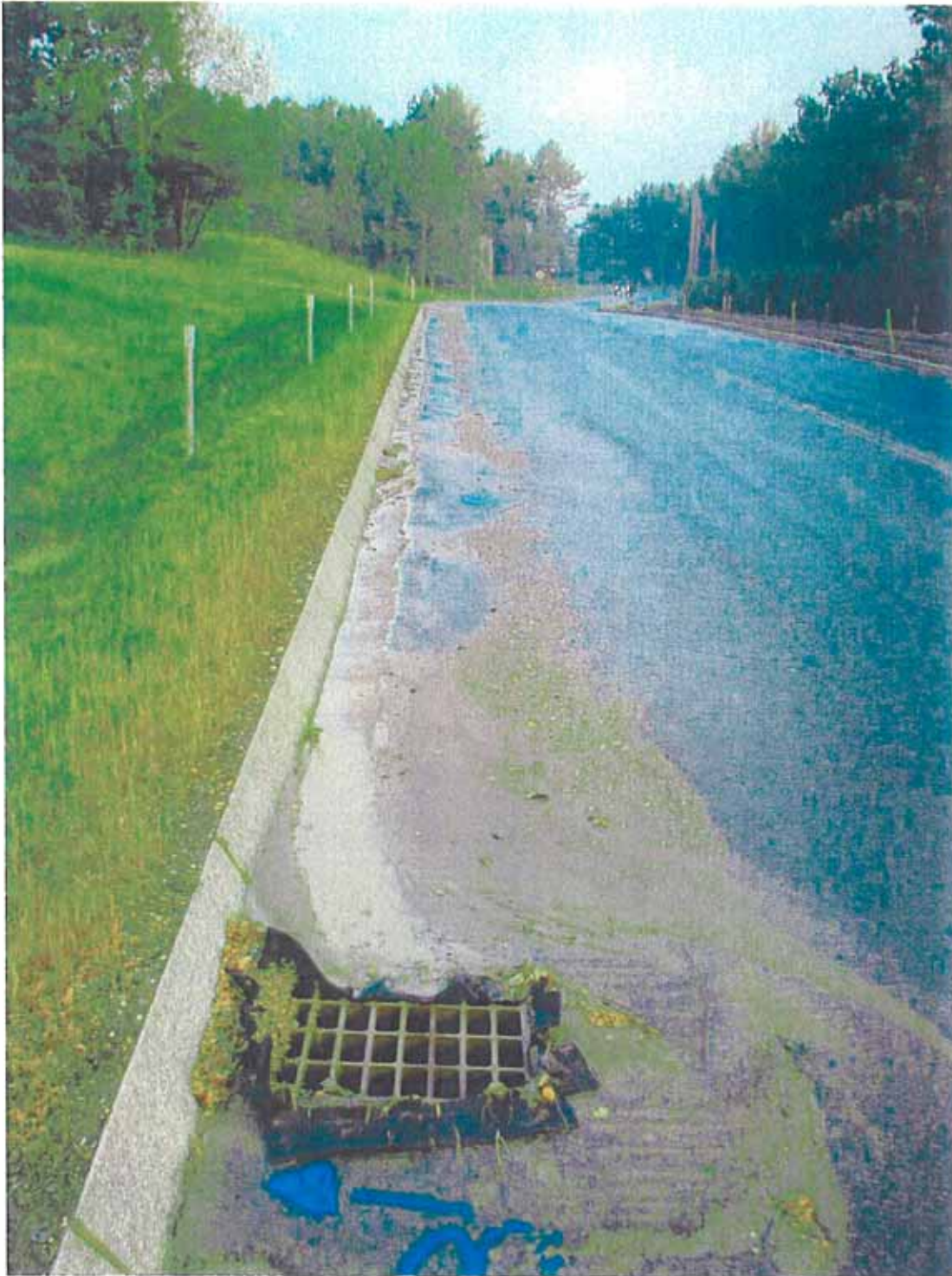


Photo D. Looking south from Photo C. Large volumes of opaque stormwater containing sediments have been observed following rainfall events. Course sediments settled when high discharge volumes decreased shown here. Fine suspended sediments are visible similar to those shown discharging directly into Great Bay (Photo A).

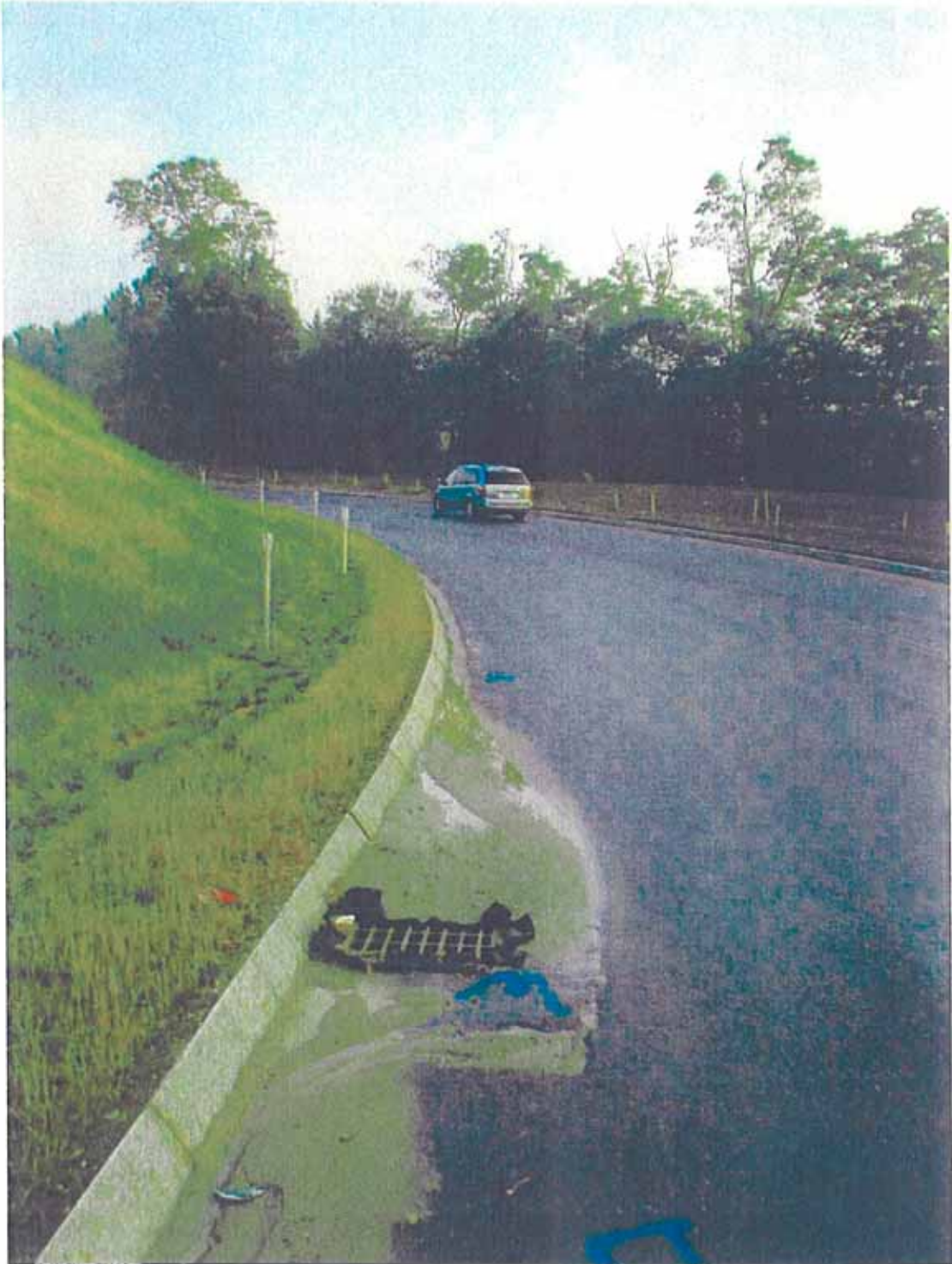


Photo E. More sediments, taken further down from Photo D.

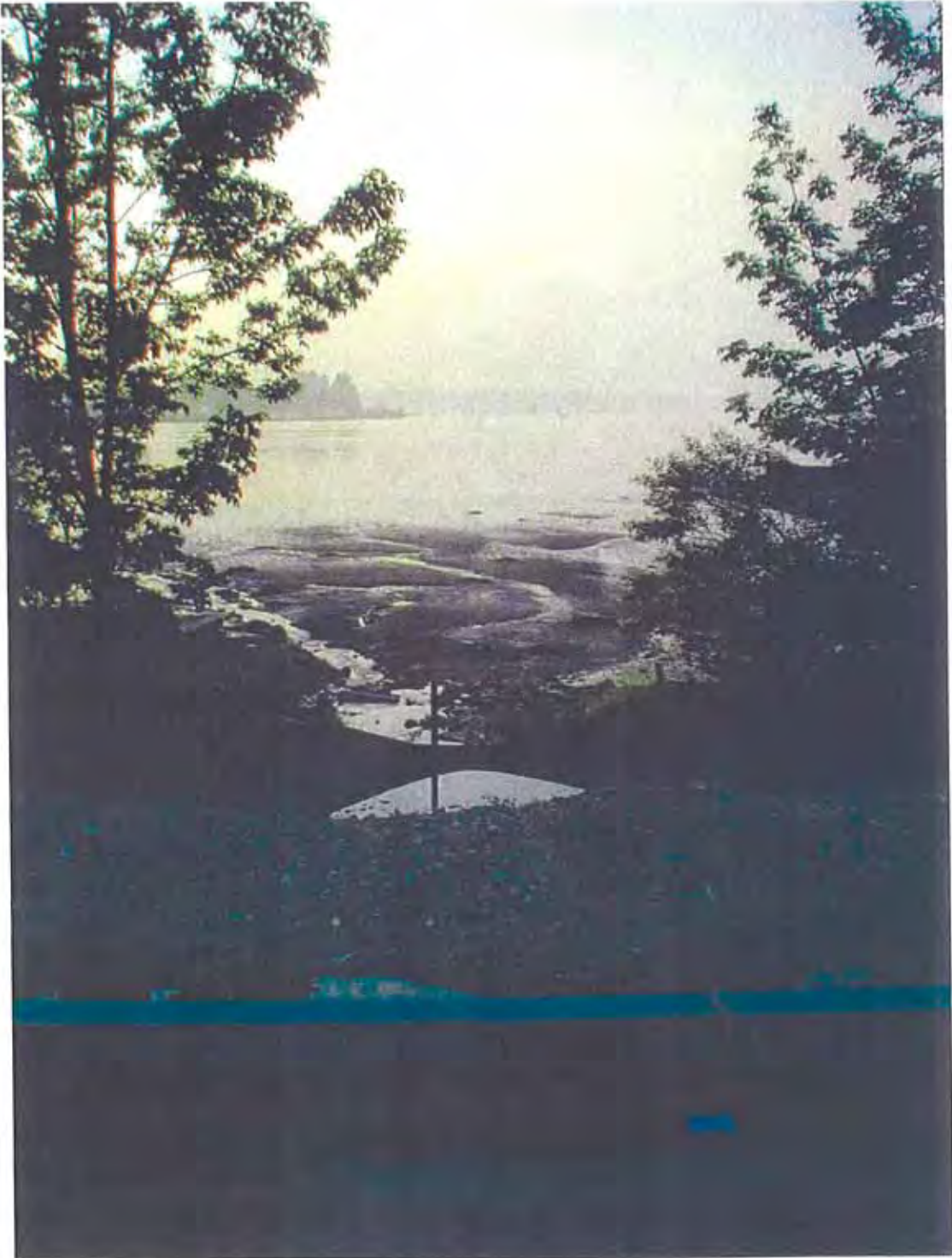


Photo F. Above Photo A, showing the sediments discharging into Great Bay.

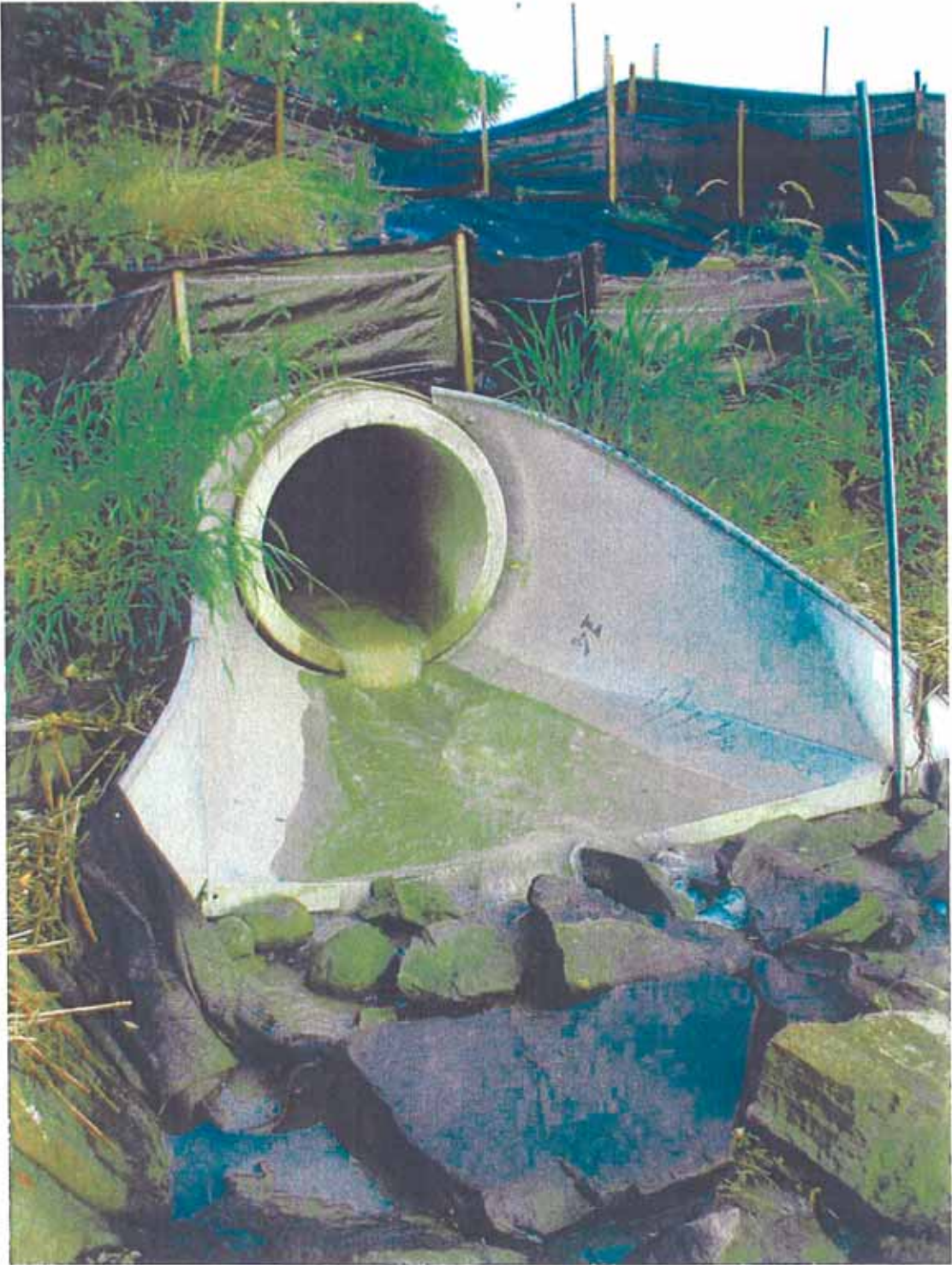


Photo G. Same location as A, below F.

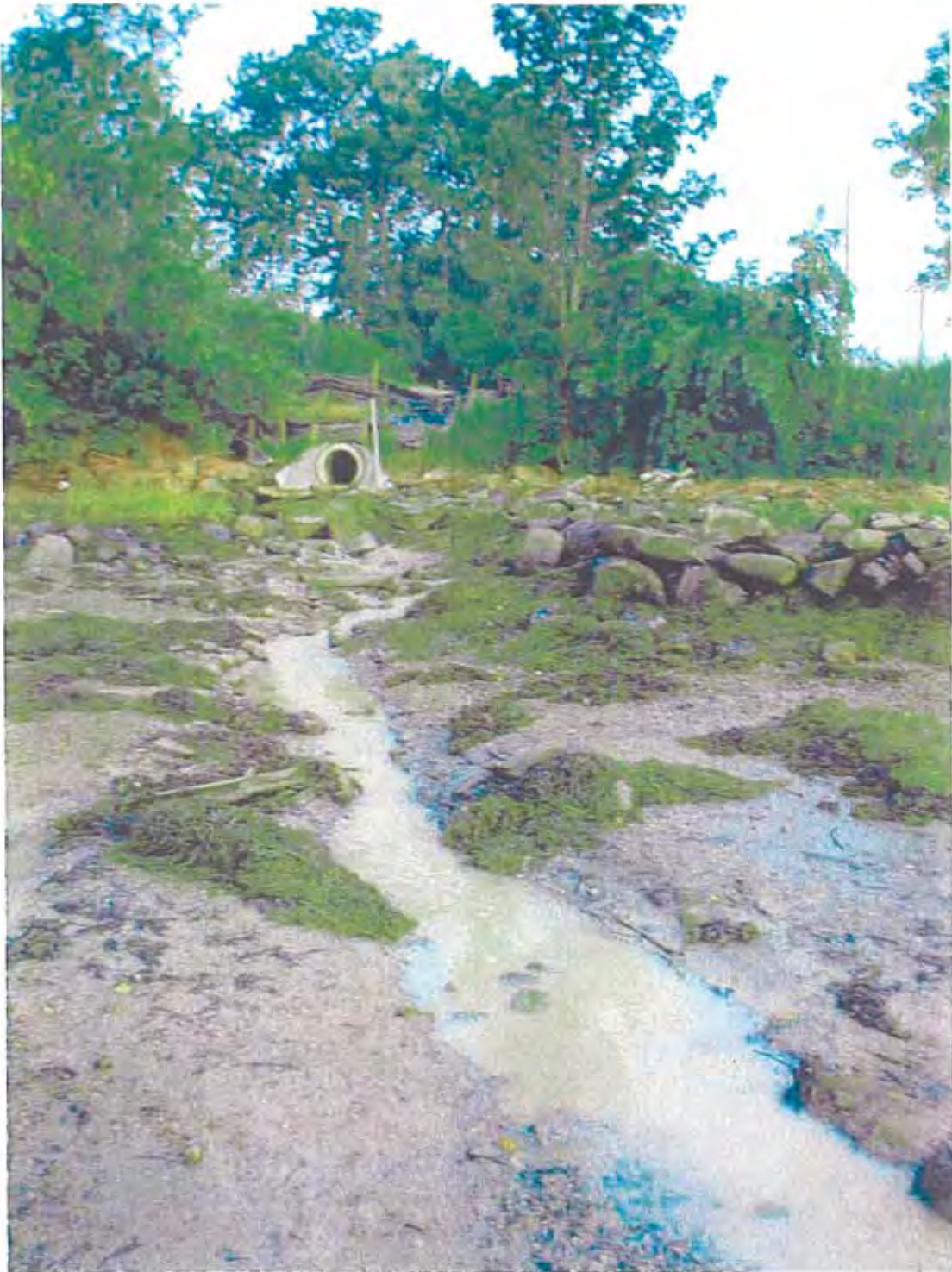


Photo H. Shows sediments discharging into Great Bay at low tide (approx 7:30 PM on July 11, 2006). Stormwater discharge volumes have resulted in channel formation in the Bay. Adjacent areas of the Bay appear to be fine clay deposits which have eroded to form a channel containing courser sediments. This channel is below the mean high water and presumably eroded during low tides.

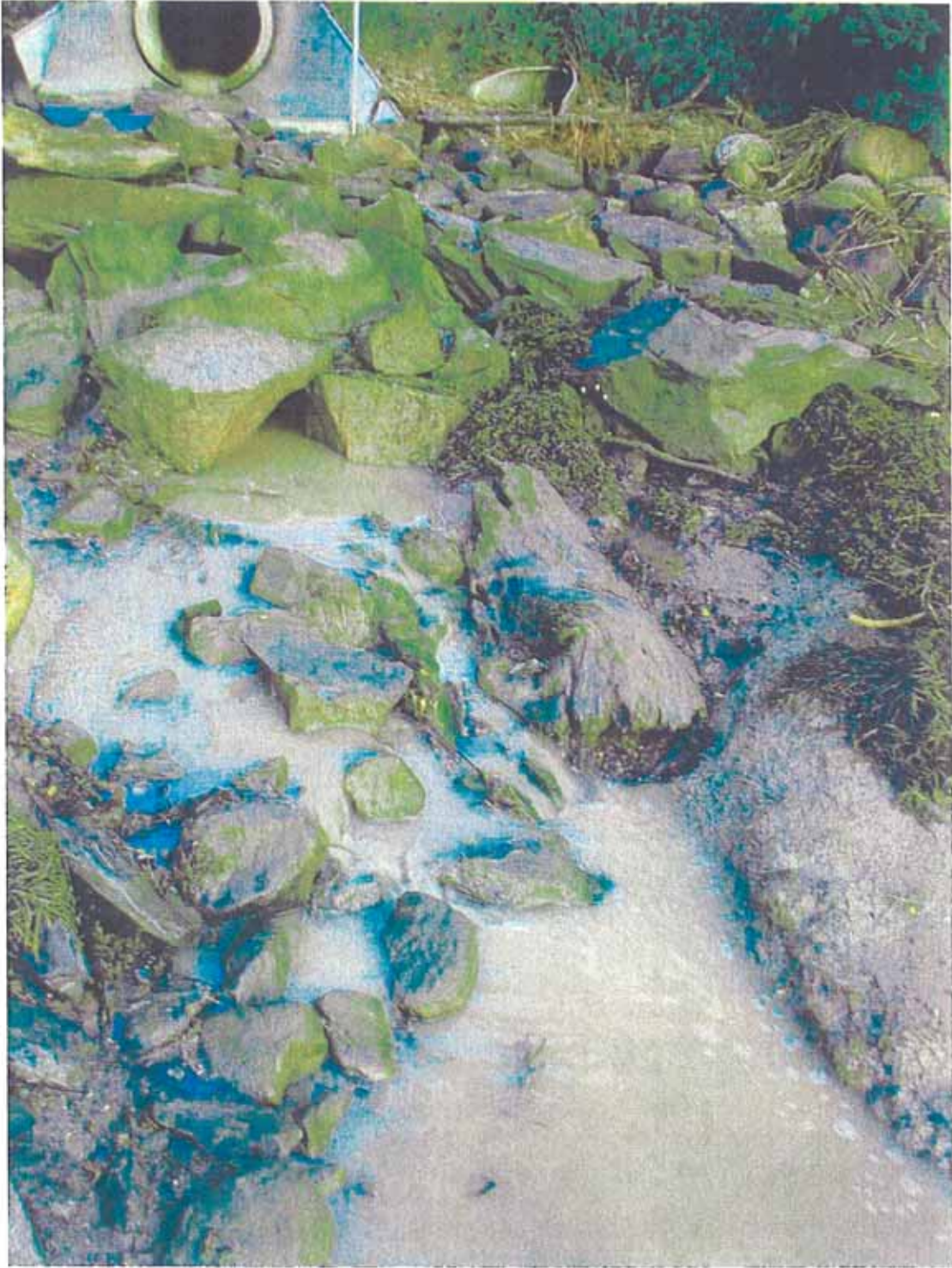


Photo I. Close up of turbidity due to erosion and stormwater from DOT project.

TO: Newington Conservation Commission  
FROM: Justin C. Richardson, Esq., Member  
RE: NHDOT Shattuck Way – Exit 4 Site Visit  
DATE: July 28, 2006  
Cc: David Price, NHDES  
Stephen Labonte, Esq., NH AGO  
Jonathan Pitre, NHDOT

## **I. BACKGROUND**

On Monday July 24, 2006 I forwarded to Assistant Attorney General Stephen Labonte my report concerning turbidity and erosion into Great Bay that I observed from the NH DOT Exit 4 project on July 11, 2006, as discussed at the Commission's July meeting. See attached email.

On Thursday July 27, 2006, I discussed my concerns with Attorney Labonte who informed me that he had forwarded my report to the NH DOT Engineer in charge of the project on site, and that the NH DES (David Price) intended to complete a site inspection the next day. I obtained permission from the NH DOT and NH DES to attend the field inspection in order to report back to the Commission concerning what steps would be taken to prevent further erosion and turbidity discharges in Great Bay.

I understand that the NHDES will be forwarding its field inspection and a follow-up letter to the Commission.

## **II. SITE INSPECTION**

The following are my observations and conclusions regarding the site visit.

- We confirmed that the source of the sediments and turbidity discharging to Great Bay as shown in my report was likely both the Nimble Hill Road and Shattuck Way staging areas.
- The storm drains contained "silt sacks" to trap sediments. Even with the silt sacks, however, David Price indicated that fine particles present in this area can still result in turbidity problems.
- It appears that the sediments trapped in the silt sacks slow the rate that water infiltrates through the silt sacks into the drains. As a result, water unable to pass

through the silt sacks would overflow down Shattuck Way to its lowest point, which is the drain(s) closest and adjacent to Great Bay at the underpass.

- The NHDOT already appeared to have taken steps to correct the problems observed in my report. For example, silt fencing had been installed around the area West of the Turnpike and the area had been regraded to reduce runoff directed onto Shattuck Way from staging areas.
- Several recommendations for further stabilization and erosion control were made by David Price from NHDES. The NH DOT was responsive and agreed to implement all but one of the measures the same day, consistent with the schedule recommended by NHDES.
- David Price stated that he had received a complaint concerning erosion problems and that he conducted a field inspection and made recommendations to the NH DOT on or about May 3 of this year.<sup>1</sup> I believe that David Price indicated that the NH DOT had implemented all of those recommendations. This is consistent with my personal observations that the site conditions in July, although continuing to result in discharges of turbidity to Great Bay, are dramatically better than what I observed driving through the area in May.
- In my opinion, the NH DOT's implementation of David Price's recommendations (both in May and during the field inspection) shows that the NH DOT acts quickly to environmental concerns. However, it does raise a question as to why, after being alerted to the problem in May, the NH DOT was not more aggressive in preventing erosion at its source prior to my report of the July 11, 2006 turbidity discharges into Great Bay.
- David Price indicated to me that it is difficult to assess the level of turbidity based on photographs alone. While he seemed to agree that my report concerning the July 11, 2006 events shows that the project likely violated NH DES's standards for the discharge to surface waters, he indicated that the absence water quality samples (taken using the correct procedures) makes the assessment of any violation and its extent difficult. Had such samples been taken and confirmed a significant violation of the turbidity standard (10 NTUs above background), I got the impression that the NH DES would likely have considered an enforcement action.
- David Price indicated that he would be sending letter concerning his findings to the NH DOT and would copy the Newington Conservation Commission. I indicated that I would make a report to the Commission, which I would copy the NH DES and NH DOT.

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<sup>1</sup> I saw the field inspection report only briefly and my comments are based on limited review.



## CONCLUSIONS AND RECOMMENDATIONS

1. *In my opinion, the NH DOT appears to have responded to my report in a timely and appropriate manner to the issues identified in my report to the Commission. Jonathan Pitre indicated that if there are any concerns in the future to contact him immediately and he would ensure that they were corrected. I have every reason to believe that NH DOT will act immediately to correct any problems that may be identified in the future.*
2. *Never-the-less, the fact that the NH DES had conducted a field inspection in early May on this issue at this location indicates that the NH DOT should improve its efforts to prevent turbidity problems arising, particularly in areas adjacent to Great Bay. It may be that discharge of stormwater into Great Bay containing turbidity levels greater than allowed by Env-Ws 415.04 was unavoidable due to the location of the project, limited space, the volumes of stormwater, soil conditions, and other factors. However, given the importance of Great Bay as a natural resource, every effort should be taken to ensure that reasonable protection measures are in place prior to storm events such as on July 11, 2006.*
3. *The Commission should consider whether it should develop the ability to take water quality samples that could be used by NH DES in the event that a concern arises on a future project. Sampling equipment could be stored at the Town offices for use by Commission members, the building inspector, or other Town officials, if necessary in the event a problem occurs.*
4. *In my opinion, Exit 4 is configured such that there is not much room available for the treatment of stormwater using preferred methods such as vegetated swales, infiltration etc. I recommend that the Commission consider encouraging the NH DOT to develop a stormwater treatment system as part of the turnpike expansion project.*
5. *David Price recommended calling the NH DES field office at Pease in the event a concern like this arises. He indicated that he often is able to be on site the same day to observe the field conditions and take any samples, as warranted.*

## Justin Richardson

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**From:** Justin Richardson  
**Sent:** Monday, July 24, 2006 10:47 AM  
**To:** 'stephen.labonte@doj.nh.gov'  
**Cc:** 'planning@newington.nh.us'; Vincent Frank (E-mail); Justin Richardson  
**Subject:** Newington Exit 4 Turbidity into Great Bay

Steve:

The Newington Conservation Commission is concerned about discharges into Great Bay from the Exit 4 site. As shown on the attached PDF file/report, during both recent thunderstorms and the rain we had earlier this year, massive quantities of sediments have been discharging unchecked into Great Bay, which appears to violate State water quality laws. See e.g., Env-Ws 415.04.

At its July meeting, the Commission voted to forward its concerns to DES regarding its impact on water quality. That has not happened (I don't believe a letter has been written yet), but it occurred to me that it might be more productive if DOT could resolve the issue in the first instance, without the need to go any further. I can't speak for the whole Commission, but I think it would be helpful if DOT came up with a proposal to address stormwater and erosion into Great Bay from the Exit 4 project.

The August Cons. Comm. meeting will likely be the first Thursday in August. If you want to get on the Agenda, I would recommend contacting Tom Morgan who could put you in touch with Vincent Frank, the Chairman. Tom can be reached at 436-7640. I don't have Vincent Frank's number.

Also, just from my personal observation, there appears to be little space available for stormwater management due to the configuration of Exit 4 and Great Bay. I would be curious how DOT plans to address stormwater during the Rout 16 expansion. That is a more long-term consideration, but I think the attached photos confirm that there is a problem. Based on my initial research, it also appears to me that this part of Little Bay does not meet state water quality standards, so we are dealing with an environmental resource that is already under significant stress.

If you have any questions, feel free to call me.

-Justin



20060711 NH DOT  
Route 16 EXIT ...

Justin C. Richardson, Esq.  
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### STATEMENT OF CONFIDENTIALITY

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**Response to Comments Made by  
Justin C. Richardson, Commission Member  
Newington Conservation Commission  
205 Nimble Hill Road, Newington, NH 30801  
Letter dated September 21, 2006**

1. So noted.
2. So noted.
3. Additional details regarding the stormwater management system and treatment devices will be provided as they become more fully developed as the project design progresses through the FEIS and final design stages. At the DEIS phase, only general drainage information is developed such as existing drainage patterns, discharge locations and approximate detention basin location and sizing. More detailed information with regard to specific detention basin locations, their potential size and the estimated treatment requirements are determined as part of the FEIS process.

Final design will incorporate stormwater treatment areas to provide, to the extent practicable, no net increase in pollutant loadings and to limit peak runoff flows to the pre-existing conditions.

4. With regard to the comments pertaining to erosion control measures and the potential for increased turbidity in runoff, erosion control planning, review and monitoring procedures, the NHDOT and FHWA 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. The NHDOT and FHWA will also require the contractors provide frequent inspections of construction sites to maintain compliance with permit conditions. Stringent requirements in final design plans will be incorporated by contractors to minimize any movement of eroded sediment beyond the work area. These requirements are typically conditions of the USACOE and NHDES Wetlands Bureau permits, as well as part of the Section 401 Water Quality Certificate that will be required for the project.
5. See Response #3.
6. It is recognized that the Little Bay is an extremely valuable resource for the region and the state. NHDOT and FHWA have been working with NHDES to develop a better understanding of the stormwater treatment needs and the available methods to assess the potential water quality impacts associated with roadway runoff. NHDOT has also collaborated with the UNH Stormwater Center to explore the latest in innovative treatment measures that can provide a high level of treatment for the various pollutants associated with highway runoff. As a result, NHDOT has most recently incorporated UNH's design guidance in constructing gravel wetlands as water quality treatment measures where appropriate on the Salem-Manchester I-93 project. One of the main advantages of gravel wetlands is that they have been found to have relatively high removal efficiencies for a number of pollutants, particularly for nitrogen, which is a principal parameter of concern in coastal waters. Nitrogen is typically the limiting nutrient in coastal and estuarine waters such that any significant increases in loading could stimulate undesirable algae growth. The use of gravel

wetlands for stormwater treatment on this project will be evaluated as part of the final design process.

7. The NHDOT has the personnel and plans to provide more frequent inspections of construction sites and erosion control measures. In addition, the contractor is required to hire a qualified individual or firm to perform inspections of the erosion control measures on a weekly basis or following a major rain event as part of the USEPA General Permit requirements for Construction Activities. Details of the erosion control measures and inspection requirements will be included in the Stormwater Pollution Prevention Plan that is completed prior to construction.

Also, see Response #4.



PLANNING BOARD

# The Town of Newington New Hampshire

Incorporated 1764

September 26, 2006

RECEIVED  
COMMISSIONERS OFFICE

OCT 02 2006

THE STATE OF NEW HAMPSHIRE  
DEPT. OF TRANSPORTATION

*Jan 10/2/06*

James A. Moore, Director of Project Development  
NH Department of Transportation  
P.O. Box 483  
Concord, NH 03302-0483

RE: Draft EIS on Newington-Dover, NHS-027-1(37), 11238

Dear Mr. Moore:

1 Turnpike Alternatives 10A, 12A & 13 were examined by the Newington Board of Selectmen, the Planning Board, and the Conservation Commission. We are writing to inform you that Alternative 13 best meets our criteria for turnpike design. We endorse Alternative 13 with the understanding that some design elements are to be further refined.

2 The elevation of the future turnpike is the issue of greatest concern to us. A depressed turnpike such as that exemplified by Alternative 13 would have a moderate acoustical impact on our residential district. An elevated turnpike as proposed in Alternatives 10A & 12A would have a severe impact on our residents. We reiterate our request of July 26, 2005 and October 18, 2005 that you reject plans that call for an elevated turnpike.

We have several other comments on your draft Environmental Impact Statement (EIS) dated July 2006:

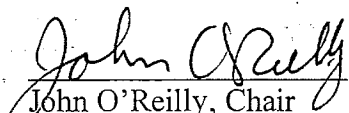
3 **Noise:** We noted that the plans suggest that extensive acoustical mitigation measures are warranted in Dover, but not in Newington. We disagree with that assessment, and request that you take measures to mitigate the noise impact on Newington residents. We further recommend the utilization of pavement that would reduce the acoustical impact to turnpike neighbors.

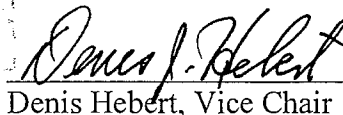
4 **Cross-Connectivity:** In some respects, the proposed turnpike expansion could become a massive barrier that bisects our community. It is essential that every option to breach the barrier is implemented so that motorists, bicyclists, and pedestrians may freely pass over or under the turnpike. Such connectivity has been achieved at Exit 1 and at Exit 4, but nowhere in between. We request that you revise the design for Exit 3 so as to offer safe and convenient passage for bicyclists and pedestrians.

- 4 **Woodbury Avenue Sidewalks:** We noted that Alternative 13 would upgrade and expand Woodbury Avenue as far south as Fox Run Road. Sidewalks on both sides of Woodbury should be incorporated into the plans due to the volume of pedestrians and the unsafe conditions that characterize this corridor.
- 5 **Arboretum Drive** is a lightly-traveled rural road. It serves as a key link in the only bicycle/pedestrian route that connects Portsmouth with Strafford County. The redevelopment of Arboretum Drive should have dedicated bike lanes and sidewalks in order to provide a high level of safety.
- 6 **Alternatives:** One alternative that the EIS fails to mention is the construction of housing at the Pease Tradeport. Housing situated close to the workplace would alleviate traffic congestion at the Little Bay Bridge. In fact, it can be argued that much of the present congestion was caused by a reduction in housing stock in eastern Rockingham County.
- 7 **Wetland Mitigation:** We oppose utilizing the drive-in theater property for wetland mitigation. These 16 acres would be better utilized for job-creating office or industrial development. There are other more worthy candidates for wetland mitigation in Newington. We concur with wetlands scientist Mark West's comments submitted to NH DOT in regards to wetland mitigation.
- 8 **Railway Brook:** Please refer to this waterway as Flagstone's Ditch or Flagstone's Brook. We are unsure as to where NH DOT acquired the term "Railway Brook", but it is not a term that is recognized in Newington.
- 9 **Stormwater Drainage:** We concur with the comments submitted by Justin Richardson and urge you to adopt a design that solves that stormwater discharge problems he has identified.

We would be pleased to elaborate further on these comments. Thank you for your consideration.

Yours truly,

  
John O'Reilly, Chair  
Board of Selectmen

  
Denis Hebert, Vice Chair  
Planning Board

**Response to Comments Made by  
John O'Reilly, Chair  
Newington Board of Selectmen  
205 Nimble Hill Road, Newington, NH 03801  
Letter dated September 26, 2006**

1. & 2. The NHDOT and FHWA acknowledge and appreciate the Town's support for Alternative 13. The NHDOT, in coordination with FHWA, plan to progress the Selected Alternative (Alternative 13 in Newington), as shown in the FEIS, subject to minor refinements during the project's final design development.
3. The noise analysis was conducted by NHDOT's consultant in accordance with NHDOT and FHWA policies. The analysis found that noise barriers are not warranted in Newington. Also see added explanation in Response #4 to P-4 concerning why barriers are not warranted in Newington. However, as part of the project's final design effort, the NHDOT and FHWA will investigate the merits and feasibility of utilizing "quiet pavement" or "porous pavement" to reduce the effect of tire noise in Newington.
4. & 5. The NHDOT and FHWA acknowledge that the Newington Master Plan recommends that sidewalks be provided along several roadways within Newington's Commercial District, including Woodbury Avenue. The Master Plan also provides for funding of such sidewalk construction via negotiations with commercial developers and enterprises located within the Commercial District whose employees, customers and clients could benefit from and utilize such sidewalks.

As part of the Selected Alternative, the reconstruction of Woodbury Avenue proposes a seven (7) foot wide panel, adjacent to the roadway, be provided to accommodate both a future sidewalk and utilities. Should the Town of Newington agree to accept maintenance responsibilities (both summer and winter maintenance) for the new sidewalks in accordance with its accepted policies and practices as mandated in RSA 231:92-a, the NHDOT and FHWA will construct new sidewalks on both sides of Woodbury Avenue within the limits of the reconstruction project. Also, this new sidewalk would be provided along the north side of the bridge crossing over the Turnpike and extending through the new Woodbury Avenue/Arboretum Drive/Exit 3 southbound ramps intersection. The sidewalk would then continue along the west side of Arboretum Drive to the first driveway, which is located at approximately Station 4055 of Arboretum Drive.

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

6. With respect to the suggestion that housing be constructed at Pease as a means to help reduce travel across the bridges, the NHDOT and FHWA acknowledge that mixed use developments offer opportunities to reduce daily vehicular traffic by combining trips and/or by substituting walking, bicycling and transit/trolley service for commuting and other travel purposes (*e.g.*,

shopping, social, recreational). At the Tradeport, the generation of daily vehicular traffic has been reduced as a result of the implementation of transit service, tenant support of employer-based strategies to reduce SOVs, the development of ancillary commercial activities (such as banking, convenience stores and restaurants) and the provision of pedestrian (sidewalk) and bicycle system connectivity. Since transit service within the study area and at the Tradeport will be expanded as part of the Selected Alternative, additional reductions in vehicular traffic generated at the Tradeport can be expected. However, since current zoning at the Tradeport does not allow residential use, further reductions in daily vehicular traffic resulting from some Tradeport tenant employees residing at the Tradeport is infeasible.

7. Due to public comment and recommendations by the Newington Conservation Commission, the Drive-In Theater property has been removed from the list of potential mitigation alternatives.
8. The name “Railway Brook” derives from maps of the area developed by the US Air Force. Prior to the development of the Pease Air Force Base (AFB) in Newington in the 1950s, the watercourse identified as “Railway Brook” was a branch of Pickering Brook which flowed north to join the main stem of Pickering Brook, then east to discharge into the Piscataqua River. Topographic maps from that era show that Flagstone Brook was a relatively short stream located entirely north of Nimble Hill Road and was located in an entirely different watershed which discharged to Trickys Cove. With development of the AFB, the former branch of Pickering Brook was diverted to Flagstone Brook. The informal name “Railway Brook” is used in the EIS and related documents to help distinguish the impacted stream reach located between Arboretum Drive and Nimble Hill Road from the true Flagstone Brook north of Nimble Hill Road.
9. In summary, detailed description of the proposed stormwater management plan will be developed during the final design phase, following the FEIS and FHWA’s Record of Decision. The NHDOT and FHWA have provided a response to each of the comments raised by Mr. Richardson (see responses to L-3).



David Scott  
 220 Back Road - Dover, NH 03820  
 Phone 603 750 5007, Fax 603 750 5081  
 E Mail: [Inter6@comcast.net](mailto:Inter6@comcast.net)

September 28, 2006

Mr. James A Moore *JAM 10/2/06*  
 Director of Project Development  
 State of New Hampshire Department of Transportation  
 PO Box 483  
 Concord, NH 03302

CC: Executive Councilor Chairperson Ruth Griffin  
 Executive Councilor Raymond Wieczorek  
 Executive Councilor Peter J. Spaulding

Subject: The necessity of the \$200 million project  
 Expansion of the bridge and highway at Hilton Point

Dear Mr. Moore and members of the Executive Council:

Before impacting negatively the quality of life and value of real estate of the over 100 residents living in the Dover Point, Boston Harbor, and Spur road area of Dover, by expanding a major highway from 4 lanes to 8 lanes, I suggest we have a study and test of the traffic flow by removing the Dover toll for a number of months to see what happens to the traffic flow.

When I drive to Boston during the morning rush hour the traffic from Dover getting onto the bridge is bad. I had always thought the bottleneck was the 4 lane highway of the bridge that should be expanded.

But now I realize that the problem is caused by heavy merging traffic coming from route 4 and Dover Point Road. Once over the bridge and past the gas station the traffic goes smoothly. It looks like the Newington section of the new design solves that problem.

I believe the problem of the bottleneck on the Dover side of the bridge comes largely because people from Barrington, Madbury, Somersworth, Dover, Rochester and Berwick Maine are not taking the Spaulding turnpike to avoid paying the Dover toll.

Consequently there is a stream of traffic that could get on the Spaulding upstream. Rather than all funneling through a narrow neck at exit 6 this traffic could be spread out entering in exits 7, 8 and 9. By eliminating the Dover toll the traffic now piling up in exit 6 would be spread over 4 rather than one entrance. If the tolls were removed drivers coming from

- a) South Rochester, North Dover, Somersworth and Berwick Maine would enter the Spaulding at exit 9
- b) Barrington, Madbury and northwest Dover would get on the Spaulding Turnpike at exit 8,
- c) those living in Dover Center and half way between exits 6 and 7 would get on the turnpike at exit 7,
- d) those in south Dover would get on the Spaulding as I do at Exit 6.

It seems that without the tolls there would be approximately 75% of the traffic trying to avoid tolls would be spread out on 4 exits and would reduce the bottleneck at exit 6 by a substantial percentage.

I suggest we have a three month test to let drivers go through the Dover tolls without paying to see to what extent the Dover Toll Booth effects the bottleneck entering the Spaulding turnpike at exit 6 and how much congestion this change alleviates.

With a well publicized three month study we could verify how much of the bottleneck is removed and what the impact on the loss of toll revenue might be.

If the revenue change is major the Rochester toll amount could be increased. It is my opinion that much of the toll traffic is paid by tourists going to the mountain and lakes area in both summer and winter.

1 If this 3 month test provides positive results it may be that the expansion of the bridge could be put off for 10 years, bearing in mind that the New Hampshire population is expected to increase by about 1.2% per year and the traffic would be expected to follow the population increase.

A five year delay in starting this \$200 million project would have an interest savings at 5% interest \$10 million per year or \$50 million over the five year period.

But apart from the tangible savings the main benefit would be for all of the people living along Spur Road, Boston Harbor Road and Dover Point road who are concerned about the degradation of their property and quality of life with an eight lane highway going through their immediate neighborhood.

Without cars stopping at the Dover toll booth the stopping and startup of traffic would generate less noise.

2 Many of my constituents in ward 3 living upon or near the Spaulding turnpike have called me since the hearing indicating they are very concerned about the quality of life issue. They were either unable to come to the hearing or did come and were intimidated and discouraged by the "request to speak" to speak up.

I hope you will consider this suggestion to have at least a three month test to verify if removal of the Dover tolls would cause a major part of the traffic bottleneck to evaporate.

Sincerely Yours,



David Scott - Dover Ward three City Councilor

**Response to Comments Made by  
David Scott, City Councilor  
Dover Ward Three  
220 Back Road, Dover, NH 03820  
Letter dated September 28, 2006**

1. It has been consistently stated and acknowledged from the project's initiation, as well as repeated throughout the study at numerous Public Informational and Advisory Task Force meetings, that the Dover toll facility and toll-related issues fall outside the project study area and scope of study. First, the project's study area was identified and established following the 1998 Route 16 Corridor Protection Study and the 2000 Newington-Dover Feasibility Study by determining that the current and future Turnpike traffic operating conditions north of the toll plaza were satisfactory. In contrast, the section of the Turnpike between Exit 1 and the Dover Toll Plaza operates at a poor level of service, both in the current and future design year. Secondly, changes to the Turnpike tolling system require State Legislative and Executive Council approval, and may have revenue impacts. These are considered state-level issues potentially affecting the entire Turnpike system, not project level matters. The Newington-Dover project was never envisioned to include an assessment of potential traffic impacts resulting from changes in toll facility locations or tolling pricing policies.

Relative to the suggestion that congestion on Dover Point is largely the result of motorists using US 4 and Dover Point Road, and not taking the Turnpike to avoid paying the toll at the Dover toll plaza, the following historic traffic data is presented to the contrary. From 1993-2003, traffic volumes (AADT) have increased from 25,223 to 39,109 (55%) at the Dover toll facility, while traffic volumes along Dover Point Road (White Mountain Road) have decreased from 13,547 to 12,901 (-4.7%). During the same 1993-2003 period, NB traffic exiting the Turnpike at Exit 6 to travel east on Dover Point Road has increased slightly (1%) on a daily basis, but has actually decreased by approximately 7.6% during the weekday PM peak hour. With respect to US 4, daily and weekday PM peak hour NB exiting traffic from the Turnpike at Exit 6 to westbound US 4 have decreased during the 1996-2003, 7-year period, by approximately 1.5% and 11%, respectively. Therefore, the assumption that congestion on Dover Point at Exit 6 is related to toll diversion is misconceived. This, coupled with the growing percentage of E-ZPass users (56% of all transactions at Dover Toll utilize E-ZPass), substantiate the assertion that more vehicles are using E-ZPass and the Turnpike, with fewer vehicles diverting to secondary roads. Removal or relocation of the toll plaza will have little effect on traffic congestion experienced at Exit 6.

Historic traffic volume data and regional travel demand projections demonstrate a greater regional transportation dependency on the Turnpike (or allowing more traffic to stay on the Turnpike) as opposed to a larger diversion of traffic to the secondary routes in the region and indicate that the design year volume of traffic between Exits 3 and 6 requires the nature and scale of the Turnpike improvements as reflected in the Selected Alternative. The diamond-type signalized interchange configuration proposed for Exit 6 as reflected in the Selected Alternative addresses the current and future (2025) levels of travel demand at this location and provides a high level of traffic safety and operations efficiency within the project area.

Sound walls are proposed on both sides of the Turnpike from the Exit 6 area through the toll plaza area to a location approximately 2,000 feet north of the plaza for noise mitigation. This will alleviate concerns regarding noise generated at the toll plaza from vehicles slowing and accelerating.

2. The Public Hearing offered several forums for people to discuss the project informally (one-on-one) with NHDOT and FHWA staff or their consultants during the open house forum from 3:30 pm to 6:30 pm, or formally offer testimony during the Public Hearing, which began at 7:00 pm and ended at 9:22 pm. In addition, anyone not interested or unable to speak at the Public Hearing was offered the opportunity to submit comments and/or offer exhibits in writing during the ten-day comment period following the Hearing for inclusion in the official Hearing record. Including the 24 people that offered testimony at the Public Hearing, 46 pieces of correspondence were received during the comment period and included in the official Hearing record. In addition to the Public Hearing, the public participation process for the project involved 16 Advisory Task Force meetings, and 10 Local Public Officials and Informational meetings. All the meetings were open to the public and fairly well attended; thus, the process offered an extraordinary level for public participation.

# Newington Fire & Rescue

80 Fox Point Road  
Newington, NH 03801

Chief  
Roy L. Greenleaf III

Asst. Chief  
Dennis P. Cote

**RECEIVED**  
COMMISSIONERS OFFICE

Office 603-436-9441

OCT 02 2006

Fax 603-430-2007

September 28, 2006

THE STATE OF NEW HAMPSHIRE  
DEPT. OF TRANSPORTATION

James A. Moore, Director of Project Development *JAM 10/2/06*  
NH Department of Transportation  
PO Box 483  
Concord, NH 03302-0483

RE: Draft EIS on Newington-Dover, NHS-027-1(37), 11238

Dear Mr. Moore:

After reviewing the plans for the favorable Turnpike Alternative 13, we have some concerns regarding the impact of the services to the current businesses and potential businesses as frequently brought to light in EIS Volumes 1, 2 and 3. more specifically the 16 acre former Drive-in Theatre parcel.

1

With the goal to alleviate the traffic flow and promote future development, it is imperative to reestablish the services that were utilized when the Drive-in was in operation. Determining the location and upgrading the previous utilities in that location needs to be accomplished to support the goals of the project.

We have several other comments that need to be addressed that did not appear in the EIS Volumes 1, 2 and 3. They were not in any part of the ATF discussions:

2

**Woodbury Ave Widening:** The widening of road just north of the intersection would require the movement of utilities such as hydrants, telephone, electricity and municipal fire alarm system.

3

**Exit 3 Intersection:** Although it appears to be a favorable design, the Maritime Pipeline operating at 1600psi is below this project. The design plan does not show pipeline which originates on the shore line parallel to Patterson Lane and then continues under the current Spaulding Turnpike. It turns slightly southeast towards Arboretum Drive then continues parallel to Arboretum Drive.

**Arboretum Drive:** With increased traffic for the Tradeport and the future business an increase in the hydrants down Arboretum Dr. needs to be addressed. Currently there is a 24" water main feeding the City of Portsmouth pumping station which is already established.

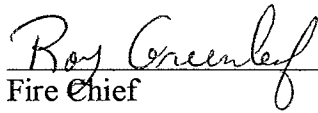
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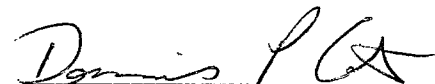
**Exit 4 & Bridge:** The hydrants and water main in the area of the bridge and exit 4 need to be evaluated to provide adequate fire protection for the residential homes in the area and also provide a backup water supply to the established business district along Shattuck Way.

5

We look forward to future discussions regarding the Alternative 13 plans. I am also requesting a copy of Alternative 13 printed in large scale for continued review. Thank you for your time and consideration.

Respectfully Submitted,

  
\_\_\_\_\_  
Fire Chief  
Roy Greenleaf

  
\_\_\_\_\_  
Asst Chief  
Dennis P. Cote

**Response to Comments Made by  
Roy Greenleaf, III, Chief and Dennis P. Cote, Assistance Chief  
Newington Fire Department  
80 Fox Point Road, Newington, NH 03801  
Letter dated September 28, 2006**

1. The purpose of the project is to increase safety and improve transportation efficiency, not to promote the future development of the former Drive-In Theatre property. The NHDOT and FHWA do not envision upgrading the utilities to the former drive-in theater property as part of the project. Utility upgrades can be accomplished by a prospective developer interested in acquiring and developing the property. However, during the project's final design, the NHDOT and FHWA will coordinate with the Town to include municipally-supported utility work, at the Town'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.
  
2. – 4. The NHDOT and FHWA acknowledge Chief Greenleaf's notation of several utility facilities in the project area. During the project's final design, the NHDOT and FHWA will closely coordinate the project with Town Officials concerning municipal utilities and with the private utility companies concerning their facilities in the project area. Efforts will be initiated to verify the 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.
  
5. During the project's final design, a large scale copy of the Selected Alternative will be forwarded for continued coordination.



# The Town of Newington

New Hampshire

Incorporated 1764

HISTORIC DISTRICT  
COMMISSION

**RECEIVED**  
COMMISSIONERS OFFICE

OCT 02 2006

THE STATE OF NEW HAMPSHIRE  
DEPT. OF TRANSPORTATION

Re: NEWINGTON-DOVER NHS-027-1(037), 11238  
PUBLIC HEARING  
St Thomas Aquinas High School, 197 Dover Pt Rd

Attention: Chairman of the Special Committee  
% James A. Moore *JAM 10/2/06*  
Director of Project Development  
New Hampshire Department of Transportation  
P.O. Box 483, Hazen Drive  
Concord, New Hampshire 03302-0483

September 29, 2006

Dear Sir:

Due to information received during the Public Hearing process for the above-referenced project we hereby make the following request of the Special Committee:

1 The Newington Historic District Commission requests information about the status of the railroad station located in the Newington Historic District on the east side of the Little Bay Bridges. The area has been used as field headquarters for construction work on the Exit 4 interim improvement project.

The railroad station itself was mothballed to protect it from deterioration as the Exit 4 interim improvement project was started. Our question is what is planned for this historic resource as the Newington-Dover highway project proceeds?

2 A larger field headquarters for the bridge/highway project could have adverse impact on the station. We are requesting that the DOT remain careful of this sensitive historic building.

We understand that we will be notified in writing of the Special Committee's decision regarding this request. We also understand that this request will be included as part of the official record.

Signed:

Gail Pare, Chairman

Address: 205 Nimble Hill Road  
Newington, NH 03801

Phone: 603-436-6415



**Response to Comments Made by  
Gail Pare, Chair  
Newington Historic District Commission  
205 Nimble Hill Road, Newington, NH 03801  
Letter dated September 29, 2006**

1. The NHDOT is presently working with the Town of Newington to develop an agreement and transfer the historic former railroad station building and immediate land surrounding the building on Bloody Point to the Town.
2. The NHDOT and FHWA do not anticipate locating a field office for the future Turnpike expansion in vicinity of the station. The NHDOT and FHWA have acquired the former drive-in theater property and plan to use the parcel for the project's staging, field offices, and material and equipment storage during the project's construction.



---

Regional Planning  
Commissions  
(R)

# Seacoast MPO

Strafford Regional Planning Commission  
2 Ridge Street, Suite 4  
Dover, New Hampshire 03820  
tel: (603) 742-2523 fax: (603) 742-7986  
e-mail: srpc@strafford.org  
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www.seacoastmpo.org  
Rockingham Planning Commission  
156 Water Street  
Exeter, New Hampshire 03833  
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e-mail@rpc-nh.org  
web: www.rpc-nh.org

October 2, 2006

Hon. Ruth Griffin, Chair, Special Committee  
c/o Mr. James Moore  
Director of Project Development  
NH Department of Transportation  
P.O. Box 483  
Concord, NH 03302-0483

*JAM 10/4/06*

**RECEIVED**  
**COMMISSIONERS OFFICE**

OCT 04 2006

THE STATE OF NEW HAMPSHIRE  
DEPT. OF TRANSPORTATION

**RE: Comments on Newington-Dover Spaulding Turnpike Widening  
Draft Environmental Impact Statement**

Dear Councilor Griffin:

On behalf of the Seacoast Metropolitan Planning Association (MPO), we are providing the following comments relative to the Newington-Dover Spaulding Turnpike Widening Project. These comments were delivered verbally in summary form at the public hearing for the project conducted at St. Thomas Aquinas High School on September 21<sup>st</sup>, 2006. They consist of some overall comments about the project, followed by more detailed comments summarizing the MPO positions on various issues raised in the Draft Environmental Impact Statement.

### General Comments

1

The Seacoast MPO continues to support this project as the region's top priority highway improvement. The bridge expansion is a critically needed improvement to our transportation system. It has been recognized as the single most important highway infrastructure project in the region by the MPO for nearly 10 years.

2

We also want to express our appreciation to the NH Department of Transportation for the expeditious manner in which it has moved in completing the project's Draft EIS, and for their extensive work with the communities, the Advisory Task Force, and the MPO in the development of the alternatives included in the DEIS. The consistent feedback from our communities has been that the DOT has been very responsive to the input received throughout the process, and has incorporated that input into the project design wherever feasible. The best evidence of this is the support from both Newington and Dover for the project's preferred alternatives.

3

We recognize that the turnpike is deficient relative to capacity and safety and concur that the expansion project is necessary to address these long-standing deficiencies. At the same time we advocate that the project include aggressive transit alternatives and a firm commitment to fund and implement those alternatives. We believe that they are necessary to move us toward a more balanced transportation system and allow the region to maintain conformity with the State's mobile source emissions budget established in the State Implementation Plan for air quality attainment. The latter is a strict legal requirement under the Clean Air Act, with which we must comply or risk losing access to Federal transportation funds. We also fully support the implementation of the full range of interim traffic mitigation measures described in the DEIS, including the Incident Management System. We urge early implementation of all proposed TDM and TSM measures included in the preferred alternative to help mitigate existing traffic congestion on the bridges.

### Seacoast Metropolitan Planning Organization

Barrington ♦ Brentwood ♦ Brookfield ♦ Dover ♦ Durham ♦ East Kingston ♦ Epping ♦ Exeter ♦ Farmington ♦ Fremont ♦ Greenland ♦ Hampton ♦ Hampton Falls ♦ Madbury ♦ Kensington ♦ Lee ♦ Middleton ♦ Milton ♦ New Castle ♦ New Durham ♦ Newfields ♦ Newington ♦ Newmarket ♦ North Hampton ♦ Northwood ♦ Nottingham ♦ Portsmouth ♦ Rochester ♦ Rollinsford ♦ Rye ♦ Seabrook ♦ South Hampton ♦ Somersworth ♦ Strafford ♦ Stratham ♦ University of New Hampshire ♦ Wakefield

We have a number of questions, concerns and comments about the DEIS, which are detailed on the following pages.

**MPO Positions On Key Issues**

**Highway and Bridge Alternatives**

4

Perhaps to state the obvious, the MPO believes that the improvements to the corridor will vastly improve the safety and efficiency of travel within the corridor. Analysis in the Draft EIS indicates that 8 lanes are necessary across and adjacent to the Little Bay Bridges. We understand and acknowledge the rationale for 8 lanes (to accommodate with the maneuvering of traffic between exits 4 and 6). Yet we remain concerned about the size of the new bridges. When constructed, each four lane barrel will be 40+ feet wider than currently, including 44-48 feet of shoulder for the two barrels taken together.

The MPO would like DOT to make assurances that this configuration, and specifically the need for the auxiliary lane (given the elimination of Exit 5 and final configurations of Exits 4 and 6), is necessary to meet the need of the project. Similarly, we would like assurances that the shoulder widths and other features contributing to the overall width of the bridge are necessary to accomplish the goals of the project.

Scenic Resources

5

As you are aware, this portion of the Spaulding Turnpike/Route 16 Corridor functions as the scenic gateway into our coastal and upland communities and beyond to the Lakes and White Mountain regions of the state. It provides travelers truly signature views of our National Estuary, including the Great and Little Bays, and the Piscataqua River. Great care should be taken to minimize the visual impact of the bridge replacement.

South of the bridge, the increased width and realignment of the roadway of the facility will eliminate much of the existing forested median area in Newington. We ask that efforts be made to minimize or restore the loss of this visual and sound absorbing buffer wherever possible.

6

While the benefits of sound walls to the adjacent neighborhoods are significant, important and supported by the MPO, we are concerned about their visual impact for the 4200+ feet along the corridor where they are proposed. We urge that the NHDOT utilize the lowest wall possible to achieve the necessary noise reductions and incorporate architectural design treatments, artwork, extensive landscaping or a combination to mitigate the visual impact that the walls will bring.

Renderings/Visualizations of Project Scale

7

Given the setting of the bridge and the size of the expansion, it is important that the public be aware of the scale of the changes that are proposed. As you know, federal law now requires States and MPOs to provide appropriate "visualizations" of the projects contained in our MPO Transportation Improvement Program (TIP). The visualizations included on the project website (and included as graphics at the hearing) probably satisfy this requirement. However, the somewhat distant and elevated perspectives of the main visualizations, and their small format, (as available on the project website) do not provide a good sense of the scale of the change. We suggest that additional visualizations of the project be developed to supplement those already done that will provide residents of Dover, Newington, and the larger region with additional understanding about the visual impact of this project and the relationship to the surrounding area and scenery.

General Sullivan Bridge

8

The MPO has in the past supported the rehabilitation of the General Sullivan Bridge for bike/pedestrian and recreational use and continues to do so. We also support this option because it preserves an alternate crossing of

8 the river should that be necessary in an emergency. However, the current plan to remove the northern approach ramp to the bridge and replace it with a bike/pedestrian ramp, and to weight-limit the rehabilitated bridge to vehicles of less than 6 tons, would appear to preclude this “emergency contingency” use of the bridge. Details are lacking on this aspect of the project. The MPO would like a more thorough explanation of the proposed design for the northern approach to the General Sullivan Bridge, as well as information on what efforts would be necessary to restore the bridge to enable it to carry traffic in an extended emergency (i.e. extended closure of the main bridges). We understand the sensitivity of this issue to the surrounding neighborhood, and we are not advocating restoring the bridge and approaches to use as a secondary road. However, lacking other information, it appears we will be rehabilitating the bridge in a way that precludes its use as a vehicular crossing useable in an emergency.

### **Transit & TDM Components**

We believe that the transit and TDM components of the preferred alternative are essential parts of the project, whether or not they alone play a significant role in meeting the immediate purpose and need. It is essential to provide alternatives to the single occupant automobile in order to manage the future growth of traffic on highways in our region. These alternatives must be in place, convenient and of high quality if they are to succeed.

9 We are pleased to see the inclusion in the preferred alternative of Bus Alternative One (intercity Rochester-Boston), Bus Alternative Two (service improvements to the already planned COAST Express Service), and Bus Alternative Three (service improvements on COAST and Wildcat Transit local routes); together with the Downeaster capacity expansion and an aggressive Transportation Demand Management (TDM) component designed in collaboration with Seacoast Commuter Options, the TMA serving the region. We also note the inclusion the Downeaster expansion, though it was conceived of independently and will be implemented well in advance of this project. To supplement the Downeaster component, we would suggest working with NEEpra to identify other potential small-scale track improvements that might be the subject of further NH/Maine cooperative efforts, to further increase capacity on the Main Line for future service expansion.

### *Methodology & Assumptions*

The MPO has a number of concerns about the methodology and assumptions used to develop ridership and ridesharing projections. Taken together, these assumptions have the effect of minimizing transit ridership projections. We believe that these projections should be reexamined and redone where necessary. We don't expect that higher projections would alter traffic projections in the corridor to change the preferred alternative, and they certainly won't change the need to expand the bridge. However, well supported projections will be needed to justify funding to implement the transit and TDM projects through CMAQ program or other sources.

### *Problems with Assumptions:*

- 10
- **Fuel Prices** - The ridership numbers for the bus, rail and TDM alternatives shown in Tables 2.4 1-4 are based on a gasoline price of \$2.00/gallon. This is unrealistic for 2006, let alone 2025. We recognize that these calculations were originally done in 2004-2005 when prices were closer to \$2.00, but those conditions are no longer relevant. Transit use in the region has increased substantially in the past year in response to higher fuel prices. Ridership on COAST is up 17% over last year; Downeaster ridership is up over 31% in the past year – indicating considerable sensitivity to fuel costs. The Wildcat and C&J systems have also seen increases. Current and realistic future fuel price conditions must be accounted for in ridership projections.
  - **Parking Costs** – The parking costs of \$14.00/day for Boston, and \$2.00/day for Portsmouth, assumed in the calculations do not reflect current downtown parking rates. Daily cost for parking with a monthly pass at the High-Hanover garage in Portsmouth is currently \$3.63 (\$80/month/22 weekdays). 2006 data from Colliers identifies average monthly cost for an unreserved space in Boston at \$375, or \$17.05/day. Cost

for a reserved space is \$450/month or \$20.45/day. Lower than observed parking rates are explained by the averaging of rates for those who pay for parking and those who don't. However, the averaging of parking costs leads to underestimating potential mode choice change by that segment of the population that pays full price for parking. Ridership for these groups should be estimated separately.

- Value of Travel Time – The calculations of impedance for different travel modes appear to use 100% of average hourly wage for Portsmouth and Boston. 1997 USDOT guidance indicates that only 50% of hourly wage should be used for these calculations except for time actually spent waiting at a bus stop. Use of 100% of wage tends to overstate commuter aversion to somewhat longer travel times with transit.
- Avoided Automobile Ownership Costs – One of the two sensitivity analyses performed assumed that for 10% of transit commuters the full costs of automobile ownership could be avoided rather than just marginal travel costs (\$0.60/mile rather than \$0.16/mile). However, rather than calculating the impact of this full \$0.60/mile savings for this 10% of the population, that savings was averaged out over the whole population at \$0.06/mile, at which point it becomes negligible as an influencing factor. As with parking costs, taking a large potential savings (or cost) to a subset of the population and instead averaging it across the entire population distorts the picture of how that pricing will influence mode choice.

#### Problems with the Sensitivity Analyses

As described in Section 2.4.6.6, two Sensitivity Analyses were performed:

- 1) Testing the impact of gas prices at \$2.00, \$3.00, and \$4.00/gallon; and
- 2) Testing the combined impact of gas at \$3.00/gallon and an assumption that 10% of transit users would be able to avoid full auto ownership costs.

Two problems with these analyses are immediately visible. These analyses were performed only on Rail Alternative 2B, and only in the no-build condition – no analysis was performed for the bus or TDM alternatives, or for any of the build configurations. Gasoline prices higher than \$3.00/gallon were not tested in combination with any other factors. Secondly, these analyses showed ridership increases of approximately 60%. However, the section concluded that this increase was inadequate to avoid lane expansion, so the results of the analyses were not included in Tables 2.4. These sensitivity analyses should be rerun, applied to all modal alternatives and lane configuration alternatives, with appropriate assumptions applied.

#### Use of the USEPA COMMUTER Model for TDM Impacts

Were the same assumptions for fuel cost, parking cost, and value of time applied to the COMMUTER model? If so, these TDM usage forecasts should be rerun.

#### Mode-Choice Methodology & Underlying Data

Pages 2-38 and 2-39 note that the equations used for mode choice and ridership projections were taken from National Highway Cooperative Research Program (NCHRP) Report 187. This report, and the mode choice data on which its equations are based, date to 1978. NCHRP 187 was updated in 1998 by NCHRP Report 365, which included data from the 1990 Census and the 1983 and 1990 National Personal Transportation Surveys. The Transportation Research Board currently views even the newer data underlying NCHRP 365 as out of date, as the NPTS has been updated twice (1995 and 2001) since 365 was written, and is currently funding yet another update.

Why was a model based on 30 year old data used when NCHRP 365 is available with newer data that more accurately reflect current personal travel choices? What are the implications of using these data in terms of mode choice?

Funding for Transit & TDM Alternatives

Page 2-100 notes that NHDOT supports implementation of Bus Alternatives 1, 2, and 3 using CMAQ funds. While CMAQ funds may be available and appropriate for the startup of these services, they cannot be used for more than 3 years. Since these bus alternatives are being considered part of the mitigation for the preferred alternative for this project, we assume they will need to be in place not just for the years when CMAQ funds would be available, but until the design year of 2025.

14

In the case of the I-93 widening project and Bus Alternative 1 proposed here, CMAQ funds have been allocated for capital equipment and operating startup period for intercity bus service. Subsequently, the bus service operates out of farebox revenues. It is not realistic to expect that local fixed route transit services, such as COAST Route 2 and the COAST Trolley, can operate out of the farebox. No public transportation system of this type fully covers costs from just farebox revenues.

At present, COAST projects that its annual allocation of FTA 5307 funding will be fully programmed on existing services once current CMAQ funding runs out for the Pease-Portsmouth Trolley, Dover Community Routes, and the original Spaulding Express Service. These routes would be shifted to FTA funding. In light of this, it is not clear how some of the supplemental services proposed in the DEIS will be sustained without state funding. We believe that it is important for the FEIS to address this question in such a way that provides some assurance that the transit and TDM alternatives proposed as part of the project can be sustained.

Mitigation

In section 4.6 on Freshwater Wetland Resources, mitigation is outlined for the preferred alternative. The guiding principles of having roughly proportional mitigation to impacted areas in each community and a mix of restoration and preservation are supported by the choice of projects.

15

In section 4.9 on Surface Water Resources, the MPO notes that no infiltration has been proposed as part of the treatment. We question whether there are any negative impacts from diverting water and runoff away from nearby wetland systems. We would like to know where the detentions basins will outfall to, and whether the impact of temperature of outfall were considered.

16

The MPO strongly supports the Tuttle Farm Preservation of 120 acres of upland and wetland habitats. The Strafford Regional Planning Commission also individually has expressed strong support for this mitigation project. With the change in our regional viewshed along the Spaulding Corridor, it becomes even more critical to preserve the views of our agricultural heritage in the region.

Indirect and Secondary Impact Analysis

17

We have several questions relating to the regional economic modeling used to estimate indirect and secondary impacts. We concur generally that the growth induced by this project will be much smaller in magnitude than compared to that of the I-93 expansion, yet we are somewhat surprised by the negligible amount the economic modeling indicates. We have observed anecdotally that the chronic congestion on the bridges has influenced location decisions in both the residential and commercial/industrial sectors for a number of years.

18

We understand the logic of the method used which appears reasonable. We do note, however, that the REMI model, on which the analysis is based, operates only at the (whole) county level. The inclusion of all of the data for Rockingham County, in which 60% of the population and even more of the economic activity takes place outside the project study area, may have had the effect of diluting and understating the growth impacts of the project. We suggest that this question be reviewed.

19

The effect of the secondary growth on land resources is calculated from the average impact of new development on key resources. In calculating the likely impact of this additional growth on wetlands, the assumption used is that 5% of the study area, on average, is wetland, based on the National Wetland Inventory (NWI). Our analysis of the same source data for our region is that 21% of the area is wetland (though this includes portions of the Great Bay). Using hydric soils as the basis, up to 28% of our region is "wetland." The number used in the analysis should be verified. Also, in our opinion, the basis for calculating acreage for resource impact should not be all the land in the study area as it was, but rather undeveloped land (assuming most future development will continue to occur there). Remaining undeveloped land, on average, has a higher incidence of wetlands, steep slope and other development constraints than all land.

20

While the economic model does not point to significant growth in the region due to the expansion of capacity from this project, there certainly will be growth from other causes. As part of the the I-93 expansion project the DOT included the innovative "Community Technical Assistance Program" (CTAP to help communities plan for anticipated growth to better protect remaining resources. We believe that a similar program would be extremely beneficial in this corridor as well. Such a program could be significantly more limited in scope than the I-93 corridor. We would recommend that it focus on assisting communities in two specific ways: local implementation of the Land Conservation Plan for New Hampshire's Coastal Watersheds (August, 2006), and local assistance to improve the opportunity for workforce housing in the region.

**Other**

21

As you may be aware, last March the NH Tidal Energy Corporation filed a preliminary permit application with the Federal Energy Regulatory Commission (Proj. # 12664-000) for development of tidal power electric generation in the Piscataqua River. A second company has recently expressed similar interest and may file a competing application. Either or both proposals could employ generating arrays anchored to existing structures in the river, including the Little Bay Bridges. We would urge the NHDOT to work proactively with tidal power companies to study and potentially facilitate in the design of the structure the placement of tidal arrays on the new bridge. If proven to be environmentally benign and not a hindrance to navigation, the deployment of such arrays on the bridges could potentially be the source of both revenue and renewable energy for the State.

22

The New Hampshire Estuaries Project (UNH) presently sponsors extensive water quality monitoring in the Great Bay Estuary, including a permanent monitoring site at the Little Bay Bridges. We strongly encourage the NHDOT to coordinate closely with and augment this existing effort when initiating the monitoring that will be required as part of the Newington-Dover project.

**Conclusion**

23

Again we wish to reiterate that the Seacoast MPO continues to support this project as the region's top priority highway improvement and is eager to work with the Department to resolve any of the issues we have raised. We thank and compliment the NHDOT staff, and specifically Mr. Chris Waszczuk, for their effective work with the communities, the Advisory Task Force, and the MPO and your responsiveness in the development of the alternatives included in the DEIS. We wish also thank the Advisory Task Force members, including MPO representative Chris Cross of Newington and Tom Fargo of Dover, for their commitment to creating solutions that benefit the region while protecting the quality of life in our two most directly affected communities.

Sincerely,

Cynthia Copeland, Executive Director  
Strafford Regional Planning Commission

Cliff Sinnott, Executive Director  
Rockingham Planning Commission

cc: MPO Policy Committee and TAC Members  
Carol Murray, Commissioner, NHDOT  
Christopher Waszczuk, Project Manager, NHDOT

Newington Board of Selectmen,  
Dover City Council



**Response to Comments Made by  
Cynthia Copeland, Strafford Regional Planning Commission  
Cliff Sinnott, Rockingham Planning Commission  
Seacoast MPO  
156 Water Street, Exeter, NH 03833  
Letter dated October 2, 2006**

1. The NHDOT and FHWA acknowledge and appreciate the MPO's support, and will progress the project, as proposed, as expeditiously as possible.
2. So noted.
3. The NHDOT and FHWA acknowledge the support for the early implementation of the TDM and TSM elements of the Selected Alternative and will strive to implement these elements prior to or in the early stages of construction. These TDM elements, which are intended to provide a more balanced transportation system in the seacoast region and provide travel opportunities other than single occupant vehicles (SOV), include new park and ride facilities in Rochester, Dover and Lee, expansion of bus and rail service, and support for employer-based measures. The NHDOT and FHWA also propose, as part of the Selected Alternative, to help fund the seacoast area Transportation Management Association (TMA), known as Seacoast Commuter Options, for a maximum five-year period to work with and encourage employers to promote employee travel by means other than SOV's. In addition to area-wide ride-sharing and guaranteed ride-home programs, Seacoast Commuter Options is educating area employers and employees about the availability of employee-paid, pre-tax transportation benefits and employer-paid transportation benefits programs as incentives to not driving alone.
4. The NHDOT and FHWA concur that proposed improvements in Newington and Dover are warranted as shown in the Selected Alternative. Travel demand projections for the project's design year of 2025 and traffic capacity analyses that focused on safety and traffic operations along the Turnpike and across the Little Bay Bridges between Exit 3 (Woodbury Avenue) in Newington and Exit 6 (US 4/Dover Point Road) in Dover indicate that 6-lane options (three basic travel lanes in each direction), in conjunction with a combination of transportation system management (TSM) and travel demand management (TDM) alternatives which included improved bus service, would not be sufficient to accommodate future travel demands (this is more fully documented in Chapter 2 of the Environmental Impact Statement (EIS)). A sensitivity analysis of traffic volume growth on the Little Bay Bridges indicates that a 6-lane bridge (three travel lanes in each direction) would reach capacity and result in unacceptable traffic operations by 2017 (eight years short of the design year). Furthermore, beyond the limits of the bridge, construction of six lanes would also result in congestion and system failure in 2017 between Exits 3 and 6 at the entrance and exit ramp junctions and also eventually adversely affect the local street system.

The Selected Alternative proposes three basic travel lanes and one auxiliary lane between Exits 3 and 6. The auxiliary lanes enable traffic to safely and efficiently enter, exit and

switch lanes between Exits 3 and 6. Shoulder areas are proposed to be 10 feet to 12 feet wide. Experience and safety studies of limited access facilities have demonstrated the safety benefit associated with providing adequate space for disabled vehicles. Narrow shoulder areas are deemed to be safety hazards and are not recommended as they give the appearance of being safe areas for stopping, but are not particularly with respect to the high operating speeds along the Turnpike.

The cross-sectional width for a 6-lane highway is nearly as wide as the 8-lane highway. Specifically, the typical cross-section for a 6-lane highway would be 122 feet in width, whereas the 8-lane highway would be 146 feet (see Figure 2.3-1). Additionally, the interchange configurations at Exits 3 and 6 are relatively the same under both 6- and 8-lane alternatives, with the exception that the length of acceleration and deceleration lanes would need to be longer under a 6-lane alternative in order to attempt to accommodate traffic entering and exiting the Turnpike.

5. The NHDOT and FHWA have held numerous meetings with the communities, Advisory Task Force, and resource agencies to build consensus on a preferred design. The Advisory Task Force, the Newington Selectboard, Newington Planning Board, and Newington Conservation Commission have endorsed Alternative 13 in Newington (*i.e.*, the Selected Alternative), which proposes to construct the Turnpike within the wooded median. This approach has a number of advantages, particularly with regard to constructability and maintenance of traffic during construction. Also by constructing the Turnpike within the wooded median, the facility is further removed from the residential area in Newington.

As part of the project's final design, the NHDOT and FHWA propose to develop a comprehensive landscaping plan and will plant new trees in select locations to mitigate for mature trees that will be lost due to construction and to supplement other locations with new plantings along the corridor, as deemed appropriate. Attention to aesthetic considerations, particularly concerning landscaping, the Little Bay Bridge structure, and proposed soundwalls, will be made during the project's final design.

6. The NHDOT and FHWA will 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. A number of visualizations were developed and presented at the Public Hearing and are posted on the project's website. During the project's final design, additional coordination and meetings with the Advisory Task Force, as well as communities and neighborhoods directly affected by the project will be held to further discuss the project and better explain the project details as they are more fully developed. Additional visualizations to help illustrate the proposed improvements will be developed if necessary and presented at that time.
8. The NHDOT and FHWA propose to progress the rehabilitation of the General Sullivan Bridge as an element of the Selected Alternative identified for the project. The General Sullivan Bridge is a landmark structure, the second highest rated historic bridge in the state, and eligible for the National Register of Historic Places. The bridge offers a unique and

important bicycle / pedestrian connection across Little Bay, as well as other recreational activities, and is deemed a Section 4(f) resource with protection under Federal (USDOT) law. The NHDOT and FHWA have estimated the cost to rehabilitate the General Sullivan Bridge to a six-ton capacity, which will be able to accommodate pedestrians, bicycles, recreational activity, and emergency vehicles, at approximately \$26 million dollars. This represents a net cost to the project of approximately \$10 million dollars taking into account the cost that would be required to dismantle and remove the structure, as well as the cost required to provide a replacement recreational connection across the Bay.

As a result of the need to minimize the negative effect of the Turnpike on Dover Point, a previously considered proposal to elevate the Turnpike in the area just south of the present day Exit 5 and construct a two-way local underpass connecting the Wentworth Terrace neighborhood with Dover Point Road, was dismissed in favor of the Selected Alternative in Dover. The Selected Alternative proposes to reconstruct the existing one-way Hilton Park connector beneath the Little Bay Bridges to a two-way local roadway connecting the east and west sides of Hilton Park and the residential neighborhoods. This underpass location provides the benefit of utilizing the existing grade-separated crossing and reconstructing the Turnpike on the same general grades as currently exist. The Selected Alternative also requires the existing approach embankment leading to the General Sullivan Bridge to be removed to accommodate the two-way connector and proposes to retrofit the end of the General Sullivan Bridge with a new pedestrian / bicycle structure, which will be fully designed during the final design stage of the project.

The Selected Alternative widens the Little Bay Bridges to provide four full travel lanes (12 feet wide) with two full shoulders (10 to 12 feet wide) in each direction. Therefore, incident management and emergency response will be fully accommodated on the Little Bay Bridges once they are reconstructed and widened, and will be greatly improved over the current situation, negating the need to consider the General Sullivan Bridge for incident response or contingent emergency use.

9. The NHDOT and FHWA acknowledge support for the transit and TDM components of the Selected Alternative, and will strive to implement said components prior to, or in the early stages of, construction. Regarding the suggestion that the NHDOT work with NNEPRA to identify other track improvements to supplement the Downeaster component, considerable resources have been devoted towards the TDM aspect of the Selected Alternative. Since the Downeaster provides more of a regional benefit, as opposed to meeting the project's purpose and need, additional project related expenditures are difficult to justify and will not be proposed. The NHDOT is open to working with NNEPRA on a regional basis.
10. See Letter S-8, response #1.
11. See Letter S-8, response #1.
12. See Letter S-8, response #1.
13. See Letter S-8, response #1.

14. See Letter S-8, response #2.
15. The use of infiltration for stormwater treatment will be evaluated as part of final design process following the Final EIS and the FHWA Record of Decision. In general, infiltration is an effective form of stormwater treatment which helps to minimize impacts. However, the opportunities for infiltration may be limited along the project corridor due to the likely prevalence of marine clay soil below the ground surface and the potential shallow depth to groundwater in the low-lying area. NHDOT has recently begun investigating the use of gravel wetlands as a stormwater treatment alternative in watersheds with critical surface waterbodies. The gravel wetlands can be built on marine clays and shallow groundwater areas and have been shown to have relatively high pollutant removal efficiencies based on data from the UNH Stormwater Center. Since gravel wetlands also rely on subsurface gravel beds, these systems also help to mitigate any temperature effects from stormwater discharges. The location and types of stormwater treatment BMPs will become more defined as part of the final design process.
16. The NHDOT and FHWA acknowledge and appreciate the support for the Tuttle Farm preservation component of the mitigation package presented for the project.
17. Information and data about the residential and commercial/industrial sectors in the study area are discussed in the “Revised Draft Socio-Economic Baseline Conditions Technical Report for the Newington-Dover, Spaulding Turnpike Widening Project” prepared by RKG Associates, Inc. (August 1, 2004). (Note: Several relevant portions of the Socio-Economic Baseline Conditions Technical Report were not included in the DEIS).

For example, the section on housing market trends (not included in the DEIS) noted that the Strafford portion of the study area consistently had the lowest average housing price between 1992 and 2002, in comparison to the Rockingham portion of the study area. However, the rate of housing appreciation (value) was higher in Strafford than Rockingham County. These factors, as well as total sales data, indicate that more affordable housing is available in Strafford than the Rockingham portion of the study area. An evaluation of rental data prepared by the New Hampshire Housing Finance Authority also indicates that rental rates generally tend to decrease from south to north within the study area.

An examination of property values in the study area (not included in the DEIS) noted that changes in property values between 1992 and 2002 indicated that the rate of increase was substantially higher in the Rockingham portion of the study area than the Strafford portion. Given the fact that both areas added a generally equivalent number of housing units over the last decade, this is a further indication that new housing constructed in the Rockingham area is more expensive than housing constructed in the Strafford portion of the study area. This disparity in property values also indicates that more commercial and industrial buildings were constructed in the Rockingham portion of the study area during this time period as evidenced by the approximate \$1.6 billion increase in Portsmouth’s equalized property value. A substantial portion of this increase is attributable to the over two million square feet of

non-residential building space added at the Pease International Tradeport over the last decade.

A review of journey-to-work information compiled by the U.S. Census Bureau (not included in the DEIS) reveals some key trends regarding commuting patterns within the study area. The data shows that approximately 74% (85,220) of all workers living in the study area are also employed at businesses located within the study area, while 26% of all workers are employed (29,900) outside the study area. This indicates that there is a strong internal movement of study area residents to employment activities located within the study area. The patterns of commuting within the study area are more prevalent among residents of Strafford County where approximately 82% of workers commuted to jobs within the study area. However, only 66% of workers in the Rockingham portion of the study area commuted to jobs within the study area. In Strafford County, the number of residents working outside the county increased by approximately 20% between 1990 and 2000. The largest portion of this increase represented workers going to Rockingham County, which received approximately 65% of all outbound commuters from Strafford County as of 2000. There was a decrease in the number of Strafford County residents commuting to Maine during the decade, which is probably attributable to the workforce reduction at the Portsmouth Naval Shipyard in Kittery, Maine.

Rockingham County had a larger percentage of residents (47.1%) commuting outside the county in 2000 than did Strafford County (39.8%). Of the total Rockingham study area residents commuting outbound the largest percentages traveled to Hillsborough County (24%) and the State of Massachusetts (59.5%). Only 6% (4,254) of Rockingham County residents commuting outside the County for work had Strafford County as a destination. Although this data represents the whole of Rockingham County, and not just the portion in the study area, it still provides a level of magnitude of the directional flow of commuters residing in Rockingham County.

Carroll County had the largest percentage of residents (65%) who both lived and worked within the county as of 2000. Although only 24% of residents commuted outside the county for work, this figure had increased by almost 58% (1,816) between 1990 and 2000. Of the total outbound commuters from Carroll County in 2000, Belknap County received the largest percentage (24.9%) followed closely by Strafford County (22.6%).

Based on the data analyzed, it is obvious that the Portsmouth-Rochester metropolitan area has become much more integrated from an economic perspective, particularly within the last ten years. This finding is supported by commuting patterns that show that almost three-quarters of all people living in the metropolitan study area also work within the area. This transportation linkage is especially prevalent among residents of Strafford County, many of whom commute to jobs located in Rockingham County. While this trend is also true for residents of the Rockingham County portion of the metropolitan area, there is a somewhat higher percentage of people living in Rockingham County that commute outside the study area to employment locations in Massachusetts and elsewhere in New Hampshire.

Two major factors have helped to shape the commuting patterns mentioned above. The first is that a substantial portion of the business and job growth in the metropolitan study area has occurred within Rockingham County. This observation is illustrated by the closure of Pease Air Force Base and its redevelopment as the Pease International Tradeport in Portsmouth/Newington, where the number of jobs created since 1990 account for approximately 20% of the net job growth over the last decade within the study area. Combined with this higher job growth in the southern tier is a commensurate increase in the cost of housing. Housing costs in Rockingham County have remained consistently higher than those in Strafford and Carroll Counties over the last decade. This change has fostered sustained residential growth in the northern portion of the study area, which has supported an expanding workforce of commuters who require access to the regional transportation system within the study area, thus the chronic congestion on the Little Bay Bridges. In essence, changes within the housing market and the location of employment opportunities have contributed to congestion on the Little Bay Bridges, rather than congestion on the Bridges influencing residential and commercial/industrial location decisions.

18. This question relates to Table 4.3-4 in the DEIS. A comparison of projected population difference for the year 2025 between the 6- and 8-lane alternatives was larger for Rockingham County (262) than Strafford County (246). Data in the table also noted that the difference in employment was larger in Rockingham County (397) than Strafford County (150).<sup>1</sup>

It should be noted that the projected population difference between the two counties for both alternatives indicates that the increase in Strafford County is greater than Rockingham County. The employment numbers under the 6-Lane Alternative are also larger for Strafford County and the rate of change in Rockingham County is declining (after 2015) in comparison to Strafford County (8-Lane Alternative). (See Exhibits 4.3-1 and 4.3-2 in the FEIS.)

It needs to be emphasized that the population and employment base is substantially higher in Rockingham County than Strafford County. The data indicates that in 2005, the population of Strafford County was about 39.5% of Rockingham County and employment in Strafford County was about 31% of Rockingham County. It is estimated that a similar relationship will occur in 2025. Consequently, the growth of Rockingham County in terms of population and economic activity, with or without the bridge alternatives, will continue to expand.

Based on an estimate of 2.4 persons per household in 2025 (See Section 3.3.2.2 in the FEIS for a discussion of household size) the following increase in the number of households related to the build alternatives are projected (See Table 1).

<sup>1</sup> These numbers are not included in Table 4.3-4 as printed in the text. The number was calculated by comparing the 2025 population projection under the 8-lane alternative with the 2025 population projection under the 6-lane alternative (Strafford: 1,151 – 905 = 246; Rockingham: 714-452=262). The same type of calculation related to employment projections was also prepared (Strafford: 887-737=150; Rockingham 1,101-613=397).

**Table 1**  
**Projected Number of Additional Households from No-Build Alternative for 2025**

	2025	2025 with 40% for Rockingham	Difference	Total Percent Difference
<b>Six-Lane Alternative</b>				
Strafford	377	377	0	-
Rockingham	188	75	113	-
<b>Total</b>	<b>565</b>	<b>452</b>	<b>113</b>	<b>20%</b>
<b>Eight-Lane Alternative</b>				
Strafford	480	480	0	-
Rockingham	298	120	178	-
<b>Total</b>	<b>778</b>	<b>600</b>	<b>178</b>	<b>23%</b>

Source: DEIS: Based on Table 4-3-4

As noted in the FEIS, the projected number of households due to the build alternatives was reduced because only 40 percent of the households in Rockingham County are located in the study area. This is an acceptable statistical approach for this type of evaluation. It should be noted, however, this represents a difference of 178 households for the 8-Lane Alternative (as compared to the 6-Lane Alternative) over a 20-year (2005 to 2025) period, or less than one half household per year per municipality in the Rockingham County portion of the study area.

It is important to understand that the projected build alternative growth rates are fairly small when compared to the No-Build Alternative (See Table 2 and Table 4.3-3 in the FEIS). For example, the number of additional households for the Strafford portion of the study area represents a projected increase of about 462 on an average annual basis. For the Rockingham County portion of the study, the increase is about 590 on an average annual basis. This equates to about 1,052 households for the entire study area on an annual average basis over the twenty-year period under the No-Build Alternative. It should be noted that between 1990 and 2000 the total number of households in the study area increased by 10,521 or about 1,052 on an average annual basis.

**Table 2**  
**Projected Average Annual Household Growth, Build Alternatives**

	2005-2025 Projected Population Increase	2025 Projected Number of Households Based on 2.4 Residents per Household	Projected Number of Households With 40% Rockingham	Projected Number of Households (Avg. Annual with 40% Rockingham)
Strafford	22,188	9,245	9,245	462
Rockingham	70,653	29,439	11,771	590
<b>Total</b>	<b>92,841</b>	<b>38,684</b>	<b>21,016</b>	<b>1,052</b>

Finally, it is important to note that the REMI model was used to estimate population growth on a county basis. Due to how model input data is collected by various Federal and State agencies, the county level is the smallest unit for measuring possible social and economic impacts. The model does not allow for analysis of population, employment and housing below the county level. A simple proportional approach was therefore used to compare and analyze potential economic impacts for the Rockingham County portion of the Socio-economic Study Area – which is a standard and accepted statistical practice for this type of analysis. However, given the concerns expressed by the Seacoast MPO and others, the sections of the Final EIS that discuss secondary growth issues has been updated to consider the effects of allocating 100% of the secondary growth to the Rockingham County communities within the Socio-economic Study Area. Also, the methodology used to allocate the projected future growth and corresponding potential wetland impacts has been re-assessed and data updated in the Final EIS.

19. The Seacoast MPO suggests that only undeveloped land be considered in the analysis of secondary impacts to natural resources, reasoning that most future development will occur in undeveloped land and that undeveloped land has a higher incidence of wetlands, steep slopes and other development constraints than developed areas. Upon additional review, the analysis did find that wetlands are more common in undeveloped land than developed land. However, it is important to understand that the definition of “developed land” used in the analysis includes numerous undeveloped parcels and many areas where substantial wetlands also occur. With a renewed emphasis on smart growth and in-fill development in New Hampshire, clearly some portion of the future growth would occur in areas that fall within the definition of “developed land.” So, an approach that allocates 100% of the future growth to undeveloped land would represent an extremely conservative estimate. Also, as more fully described in the EIS, the estimated impacts to wetlands were completed using the basic assumption that future land development would occur in a “spatially random” pattern without regard for the occurrence of environmental resources. This assumption is also highly conservative since it does not take into account the fact that wetlands in New Hampshire are protected under state and federal statutes and local ordinances.

However, in order to develop an absolute worst-case analysis of the potential land use impacts, the Final EIS has been updated to consider the effect of allocating the majority of the future growth to undeveloped land. Consistent with this approach, the proportion of wetlands within the study area has been re-assessed and data updated to reflect the amount of wetland in the undeveloped portions of the Socio-economic Study Area.

20. [See Letter S-8](#), response #10.
21. The NHDOT and FHWA are amenable to consider studies and design of tidal arrays and/or tidal turbines that are developed by the tidal power companies. The NHDOT and FHWA’s concerns reside primarily with any potential degradation and/or deterioration of the Little Bay Bridges and General Sullivan Bridge should turbines or arrays be proposed directly attached to or located in close proximity to the bridges.



22. The NHDOT and FHWA will coordinate with the NH Estuaries Project to locate and avoid impacts to the existing monitoring station located between Pier 8 of the Little Bay Bridges and the Dover shoreline during construction.
23. The NHDOT and FHWA appreciate the support of the Seacoast MPO for this project and will progress the Selected Alternative as expeditiously as possible.

BARRINGTON  
BROOKFIELD  
DOVER  
DURHAM  
FARMINGTON  
LEE  
MADBURY  
MIDDLETON  
MILTON



NEW DURHAM  
NEWMARKET  
NORTHWOOD  
NOTTINGHAM  
ROCHESTER  
ROLLINSFORD  
SOMERSWORTH  
STRAFFORD  
WAKEFIELD

October 4, 2006

Mr. Christopher M. Waszczuk, P.E.  
Chief Project Manager  
New Hampshire Dept. of Transportation  
P.O. Box 483  
Concord, New Hampshire 03302-0483

Re: Comments on Newington-Dover Spaulding Turnpike Widening  
Draft Environmental Impact Statement

Dear Mr. Waszczuk:

As an addendum to the October 2, 2006 comment letter from Seacoast MPA, the Strafford Regional Planning Commission respectfully submits additional comments on the Newington-Dover Spaulding Turnpike Widening Draft Environmental Impact Statement.

The following comments, that were outlined at the public hearing, relate to the Mitigation section on page 5 of the comment letter and Section 4.9 on Surface Water Resources of the draft EIS and the project plans.

Plan: Preferred Alternative 13 - Stormwater Facilities

- |   |  |
|---|--|
| 1 | 1) Detention basins #561 SB, #567 SB are located within wetlands or drainage/stream systems. Have alternative locations been considered to reduce impacts? |
| 2 | 2) The outfall location for proposed detention basin #587 SB is not shown.   |
| 3 | 3) The outfall locations for all swales proposed are not shown.  |

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Plan: Preferred Alternative 3 - Stormwater Facilities

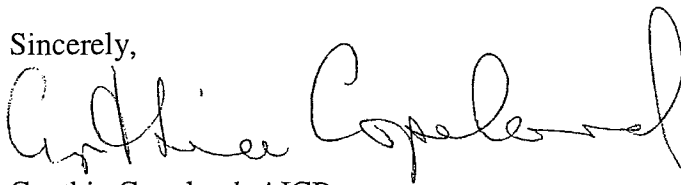
- 4 1) Proposed detention basin #630 SB is located partially within wetlands. Have alternative locations been considered to reduce impacts?
- 5 2) Swale #652 SB is located within wetlands. Have alternative locations been considered to reduce impacts?
- 6 3) The outfall locations for all swales proposed are not shown.
- 7 4) The outfall locations for proposed detention basins #667 NB and #620 NB are not shown.

Impacts to Stream, Wetland and Tidal Habitats

- 8 1) We question whether temperature of stormwater discharge from proposed detention basins and swales will impact stream, wetland, tidal and inter-tidal habitats in the project vicinity. It is noted in the draft EIS that the existing streams on the project site already have diminished water quality and do not support a diversity of aquatic species. Will the proposed discharge further impair or degrade water quality and habitat conditions?
- 9 2) We question whether there will be any shading affects on wetland systems or inter-tidal and shallow water habitats resulting from proposed structures, including expanded bridge decking, overpasses and sound walls.

SRPC would like to thank the Department for their consideration of the questions and comments that we have raised.

Sincerely,



Cynthia Copeland, AICP  
Executive Director

cc: Cliff Sinnott (Executive Director, Rockingham Planning Commission)  
MPO Policy Committee and TAC Members  
Carol Murray, Commissioner, NHDOT  
Newington Board of Selectmen  
Dover City Council

061001\_LBB Draft EIS\_water

*Planning and action for sustainable development and an improved quality of life.*

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**Response to Comments made by  
Cynthia Copeland, Executive Director  
Strafford Regional Planning Commission  
2 Ridge Street, Suite 4, Dover, NH 03820  
Letter dated October 4, 2006**

1.-7. Additional details regarding the stormwater management system and treatment devices will be provided when they become more fully developed as the project progresses through the final design stages. At the EIS phase, the general drainage patterns and approximate locations for detention basins were identified. These locations and the estimated size of the area needed are rough approximations and generally do not account for site-specific constraints. The presence of wetlands and other site constraints will be factored into the sizing and final layout of the treatment devices as the areas become more refined during the final design process, after the issuance of the Final EIS and the FHWA Record of Decision.

8. See Letter S-4, response #3.

With regard to potential temperature impacts, we note that there are no cold water fishery resources within the study area (*i.e.*, the aquatic resource typically considered sensitive to such impacts).

9. The NHDOT and FHWA have reviewed the potential impacts to wetlands and surface waters that may result from shading effects. The most substantial potential effect is associated with the expanded bridge deck over Little Bay. Generally, shading effects result from structures that are in close proximity to the surface of the wetland or surface water, which is not true in this case. However, it is well understood that the availability of light is one of the main factors controlling the distribution of marine flora and fauna in this area (together with tidal velocities). A three dimensional model that allows an examination of this effect has been developed and is discussed in the Final EIS (Section 4.10.11) to better understand the potential impact. Overall, the analysis found that the potential effect is minor.