CORRESPONDENCE

Correspondence received as comments during the DEIS comment period (March 9, 1999 – May 21, 1999) and responses to those comments were provided in the Comments and Responses section. Correspondence and comments received after the DEIS comment period were considered during the preferred alternative selection and the mitigation planning processes described in Sections 3.4 and 7. Substantive correspondence documenting key corridor information, project recommendations and decisions, and agency coordination received after the DEIS comment period is included in Part 1 of this section and is organized alphabetically by agency. These comments were addressed directly or through the various additional studies discussed throughout the document (see complete list in the References section), through extensive agency coordination efforts described in Sections 3.4 and 7.2, and/or by incorporation into this FEIS.

Correspondence from Section 7 of the DEIS is provided in Part 2. This includes letters of coordination with the regulatory agencies received during the preparation of the DEIS, petitions, and a resolution submitted by SCCOG.

PART 1
FEIS
CORRESPONDENCE

ACOE

Robert Desista, USACE
Via Email October 24, 2006

We have the following minor comments on the administrative draft FEIS:

1. Chapter 4 –The DEIS uses 1998 traffic data. What are the FHWA regs/policy on how long information can be used before it becomes not valid/not applicable? Should the FEIS include statements about how the picture has changed/not changed in a way that makes the use of 1998 data still valid?

2. Chapter 3 – as noted in your letter transmitting the administrative draft, Volume 1 was prepared using the 1999 DEIS as the base document. As such, there are statements (e.g. page 47) referring to 'this DEIS'; these should be revised to refer to the FEIS, as appropriate.

3. Para. 5.18.4 – Indirect impacts - the last paragraph (gray text) discusses the local permitting process. It is not clear that this local review includes review of activities affecting federal jurisdictional wetlands. If appropriate, suggest revising first sentence (page 251): 'Wetland impacts, *including federal jurisdictional resources*, would be largely avoided….

4. General comment: The Table Numbers and Pages, as outlined in the Table of Contents, do not correspond to the pages in the EIS; however, we acknowledge that the document is still DRAFT.

5. General NEPA document Comment: The FEIS needs to include a paragraph regarding Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks"; as outlined in our letter dated August 23, 1999 on the DEIS.

Thank you for continuing to provide us with the opportunity to participate in your NEPA process. We will continue to assist you and provide appropriate guidance with respect to the section 404 permit review for this project.
Any questions, please feel free to call.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO:
ATTENTION OF:

November 25, 2002

Regulatory Division
CENAE-R-199702529

Connecticut Department of Transportation
Attn: Mr. Edgar T. Hurle
P.O. Box 317546
2800 Berlin Turnpike
Newington, Connecticut 06131-7546

Dear Mr. Hurle:

This responds to your request for comments on the proposed mitigation plan for the Route 11 project. The proposed mitigation plan is presented in a report entitled "Statement of Wetlands and Wildlife Habitat Block Impacts and Compensation Plan (plan) for the Route 11 Corridor, dated September 2002.

This initial effort encompasses restoration, creation, and includes preservation of large contiguous acreages of currently undeveloped parcels that are privately owned and are under immediate threat of development in the near future. The plan, as a starting point, has some positive features but, as proposed, is considerably insufficient with respect to providing substantive evaluations to support conclusions regarding the extent of indirect and secondary impacts, lacks technical detail regarding specific functions and values impacted, and lacks appropriate documentation regarding mitigation goals for functions and values replacement expectations within the context of the immediate, surrounding, and regional ecosystem environment. The plan, as proposed, does not fully and effectively mitigate the potential adverse effects on the aquatic environment expected from a new highway project through this region of Connecticut.

The Corps acknowledges the difficulty of the task before you to more fully quantify the indirect and secondary impacts, and then formulate and develop appropriate compensatory components commensurate to offset the scope and effects of the estimated direct, indirect, and secondary impacts associated with this project. At the same time, the Corps also acknowledges that the level of information at this time is draft and is intended to be conceptual, that you intended additional plan formulation and development, and that you expected further guidance and input from the Corps and the Federal and State agencies.

The Corps and the EPA recently met to discuss the mitigation plan information. We have reviewed EPA's comment letter to you regarding the mitigation plan and previous letters to date from EPA regarding the Route 11 project. The Corps is in general agreement with EPA with respect to the need for supplemental information to determine the appropriate scope and nature of mitigation requirements for the Route 11 impacts. In short, the mitigation plan will require supplemental evaluation supported by site inventories and studies to properly assess resource

values and impacts before the Corps can make a determination on the adequacy of the mitigation. The Corps' technical comments on the plan as proposed, including recommendations for further considerations, are attached for your use and consideration.

As you know, the EPA steadfastly maintains that construction of a highway on new alignment through the study corridor would cause or contribute to significant degradation of the aquatic ecosystem within the context of the evaluation criteria contained in part 230.10(c) of the 404b(1) Guidelines, and therefore, cannot receive a permit under section 404 of the Clean Water Act. In the Corps letter to you dated September 17, 2001, the Corps indicated that the mitigation burden on this project would be substantial. Given all of this, the Corps is advising that significant additional work will be needed to characterize the impacts and increase the mitigation proposal. In essence, the Corps cannot be totally certain that any amount of realistic mitigation would adequately compensate for the potential adverse impacts on the aquatic ecosystem expected from this project.

At our recent meeting with the EPA, EPA reiterated the strong possibility of veto on this project due to its concerns about the impacts and uncertainties regarding successful attainable mitigation. As such, the Corps asks that you consider the costly burden and cost effectiveness of pursuing additional extensive and time consuming studies and investigations, and additional planning and design efforts to support development of a mitigation plan without the guarantee of final approval and acceptability of such a mitigation plan that would support permit issuance.

The Corps recommends a meeting among the agency executives to determine the best course of action. We will be contacting you shortly to set up a meeting. If you have any questions at this time, please contact me at 978-318-8673.

Sincerely,

Christine Godfrey

Christine Godfrey
Chief, Regulatory Division

Attachment

Copy Furnished:

Federal Highway Administration – CT Division
Attn: Ms. Amy Jackson-Grove
628-2 Hebron Avenue, STE 303
Glastonbury, CT 06033-5007

U S Environmental Protection Agency - Region 1
Attn: Mr. Douglas A. Thompson
One Congress Street, STE 1100
Mail Code SEE
Boston, MA 02114-2023

U.S. Fish & Wildlife Service
Attn: Mr. Michael Bartlett
70 Commercial Street, STE 300
Concord, NH 03301-5087

CENAE-R-PT November 12, 2002

MEMORANDUM THROUGH

Joanne Barry
Chief, Policy Analysis and Technical Support Branch

Robert DeSista
Chief, Permits and Enforcement Branch B

FOR Susan Lee
Permits and Enforcement Branch B

SUBJECT: Review of materials on CTDOT Rt. 11 project, Salem/Montvale/Waterford, CT; File No. 199702529

At the October 2, 2002 meeting at CTDOT, Maguire Group distributed materials for review:

- DRAFT "Seasonal Pool Inventory and Evaluation for the Route 82/85/11 Corridor; Salem/Montville, East Lyme and Waterford, Connecticut" dated September 2002
- DRAFT "Statement of Wetlands and Wildlife Habitat Block Impacts and Compensation Plan for the Route 11 Corridor; Salem, Montville, East Lyme and Waterford, Connecticut" dated September 2002
- 11 x 17" plans of the proposed Route 11 Corridor

At a November 8, 2002 meeting of the Corps, EPA, and the Fish and Wildlife Service, I learned a few points of which I had not been fully aware previously:

- Although general observations were made by Maguire Group and the Connecticut Natural Heritage staff had been contacted for input, there have been no studies of the proposed Route 11 general area for rare species or special habitats. Natural Heritage comments were based on what was in their files which was very limited. It was noted that along Route 6 there had been extensive research by universities and other organizations over the years so much was known without much additional study. This is not the case for Route 11.
- According to the Fish and Wildlife Service, the large habitat blocks along the proposed Route 11 corridor are potential habitat for the New England cottontail and a warbler, species being studied for federal endangered species listings.

- There is an industrial park area on Witch Meadow Road located north of the end of the proposed Route 11 and along the existing Route 11 which Salem expects to benefit from the alignment. Secondary impacts from this development were not covered in the documents provided to date.

The following are my comments on first two of the above documents.

Seasonal Pool Inventory

Direct impacts to seasonal pools were considered to be disturbances from cut, fill, grading, or other construction of the roadway footprint. Indirect impacts were considered to be the above disturbances within 150 meters (500 feet) of a pool, exclusive of areas already disturbed such as existing roads. Pools within 150 feet of one another were grouped as an ecological unit. However, pools outside the study corridor were not included, even if they were part of a complex with pools in the corridor.

A recently released document entitled, "Best Development Practices for Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States" dated 2002 and authored by Aram J.K. Calhoun, Ph.D. and Michael W. Klemens, Ph.D. uses 750 feet as "critical terrestrial habitat" for vernal pool species. This number is based on several referenced research papers. There is also reference to research in Rhode Island which showed that roads within 0.62 miles of a pool may substantially adversely affect vernal pool amphibians. This suggests that there is reason for concern that vernal pool ("seasonal pool") species will be adversely affected by highway construction greater than 150 meters from the pool. 3300 ft

In 1999, painted turtles were noted in SP-5. This is a strong indicator that the pool is part of a larger ecological unit which includes other wetlands and waters – probably Shingle Mill Brook approximately 250 meters to the east or Shingle Mill Pond to the northeast - since the turtles were only 'visitors' to the pool, probably to feed on amphibian eggs.

The presence of a spotted turtle in SP-6 is an indication that this pool is part of a larger system which includes wetlands and waters other than seasonal pools, similar to SP-5. This is supported in the Group B cluster by the presence of Green Frog in SP-7 which is also a likely visitor, as opposed to a year-round resident, since the pool dries up.

SP-9 is already impacted by the Salem Turnpike/Old New London Road which crosses to the south of it. The addition of the new road, which will alter 24% of the 150 meters of upland around the pool is likely to have a very adverse effect on this pool because the new impacts in conjunction with existing impacts may

be too much for the amphibian populations to handle and have much the same effect as direct impacts to part of the pool.

Although specific percentages were not provided, it appears that at least 25% of a 150 meter buffer will be essentially lost for several pools in Group C: SP-12, SP-13, SP-14, SP-21 (for SP-13 there is a ledge 'cliff' which will remain between the pool and the new road but there is still a likelihood of impact as the animals travel around the outcrop). The presence of Green Frogs in SP-14, SP-18, SP-19, SP-20, and SP-21 suggests movement between Group C and some other wetland/water with permanent water. According to the Best Development Practices document referenced above, 25% of a 750 foot radius circle is an approximate threshold between minimal impacts and declines in breeding populations of amphibians.

SP-23 will essentially lose over 25% of its upland habitat since a culvert is only partially effective as a wildlife corridor. This very productive pool is likely to see its production drop dramatically as a result of construction.

SP-24 and SP-25 will be effectively eliminated by the project, regardless of minor adjustments to minimize direct fill.

The conclusion that a pool within a cluster of pools is of low habitat value because it only supports one species is disingenuous. Such clusters support metapopulations and individual pools may serve as genetic links between populations over the long term.

Mitigation approaches are discussed under Section 4.0. Avoidance of direct discharge of stormwater into the pools is recommended. I also recommend items included in the Best Development Practices document:

- Detention and biofiltration ponds should be at least 750 feet from seasonal pools and should not be in amphibian migration routes.
- Avoid alterations to the hydrology of pools.
- Use box culverts at 20' intervals near amphibian migration routes.

Overall, this document was a good snapshot of the conditions in the spring of 2002 and the recommendations are good. However, it will be a challenge to compensate for the impacts to the vernal pool complexes, in particular, some of which may not have been identified as only one pool is in the study area while others associated with it are outside the study area.

Habitat Block Impacts

The current design will result in 16.8 acres of direct impact to wetlands which includes 10 perennial streams and 4 seasonal pools. It should be noted that a recent site walk by Fish and Wildlife Service and EPA staff suggests some streams have not been mapped.

Table 1 on page 2 is a summary of the acres of principal functions and values which will be impacted. There is no discussion in this document of functions and values which are not principal but which, cumulatively, may be important if lost.

Indirect and secondary impacts will occur along the corridor, especially when it passes through relatively undeveloped areas (habitat blocks). A distance of 1,600 feet was chosen as the indirect impact zone based on a review of current literature. There was no differentiation between impacts to habitat close to the road and those nearest the 1,600 foot distance. In actuality, a graph of the impacts probably drops very low within a few hundred feet of the impact and then tapers slowly to zero. Thus, areas which are not considered in this report as experiencing indirect impacts from the road but are, say, 800-1,600 feet from some other impact (subdivision, other road, etc.), are actually experiencing substantial indirect impacts. Also, the type of development will affect the extent of impact. For example, a wide, busy road will have far wider-reaching impacts than a narrow, shaded, little-used road.

Impacts to seasonal pool upland buffers should be expanded to 750 feet.

The above recommendations will not only change the area of indirect impacts for the "seasonal pool" buffer zones but will also change the acreages needed to compensate for the impacts.

Secondary impact is a difficult item to quantify and I think the Maguire Group has made a good beginning effort towards that end. I do have a few comments on the rationale used in Section 2.2.

- Although the majority of trips on the new Route 11 is projected to be through trips, that leaves 37.5% of the trips originating or terminating within the corridor. There was no number of trips estimated. Is the number of trips originating within the corridor expected to increase? How much?

- It is somewhat disingenuous to look at potential impacts at interchanges without anticipating some sort of zoning changes.

Mitigation

Note that Figure 1 is very helpful except that it would be helpful to distinguish DOT lands from all the other "Other State Owned" lands. For example, is the large orange area at the north end of the project and adjacent to Shingle Mill Brook existing excess right-of-way?

Direct impacts

Four areas of wetland creation and restoration are proposed (M3, M4, M5, and M6) to address direct impacts. All are in the Latimer Brook watershed. M3 and M4 are proposed as replacement for the 16.8 acres of direct impacts to wetlands on a 1:1 acreage ratio. Because of temporal losses from the time lag in establishing the functions (as opposed to the hydrology and presence of hydrophytic vegetation), the Corps suggests starting with at least 2:1 and working from there based on the **functions and values lost**. Since soils impact the quality of the water being recharged and/or discharged, this is a time-impacted function. Similarly, sediment/toxicant retention may to some extent occur quickly but is not likely to function at full capacity for years. Microfauna in the soils can take many years to develop. Wildlife habitat is also extremely impacted by the time lag. Initially a site might be used by a wide range of species but are they the species impacted by the work? How long will it take to develop the structure in the wetland to provide habitat for the desired species? How about the development of nesting cavities and mast production?

The restoration of 3,200 linear feet of streambank is a worthy goal as compensation for the direct loss of fish habitat and shoreline stabilization.

An additional 141 acres is proposed to be acquired to offset the loss of that amount of upland directly filled by the project.

Indirect and Secondary Impacts

The use of native, non-invasive plants for landscaping, use of best management practices, and extensive bridging are proposed and are all good ideas.

The incorporation of separated barrels in three locations will reduce large animal mortality when crossing the highway. The increased area of impact is a negative aspect to this approach. It should also be noted that, should the road need to be widened in the future (decades?), it is likely that the median area will be used for the widening. This is what is being seen in Massachusetts. Since areas outside the highway are proposed to be preserved as mitigation, the likelihood of future loss of the median is increased.

Undeveloped parcels adjacent to the median-divided areas are proposed for preservation to maintain connectivity to habitat areas further west. The focus

for site selection was on parcels subject to immediate development threat, as directed at a previous meeting of the agencies and DOT. The two wetland creation areas are within the proposed acquisition area of a total of 686 acres. It was explained that the reason for not trying to protect the area which does not have impacts from existing development nor from the proposed highway (the yellow area on Figure 2) is that it is not under immediate threat of development because of lack of access, lack of access to utilities, property line disputes, and other factors which limit desirability for near-term development. This is a reasonable concept but those same reasons are likely to make acquisition much cheaper than most land in the area. Since the issues raised above are likely to suggest a larger area of indirect and secondary impacts, I encourage exploration of this area and the surrounding land which, over the next decade, is likely to become worth the effort to resolve the problems so it can be developed. This is not far-fetched nor looking far into the future. I can easily imagine a golf course/residential developer taking the same approach I did and buying up those parcels plus access points off Butlertown Road for a very large development.

Does the 74 acres of existing excess right-of-way include the strip along the proposed highway or is it just the block to the east of the highway?

In summary, the reports are very informative and helpful as they grapple with complex and hard-to-document impacts. However, there remain issues that need to be discussed and explored further.

Ruth M Ladd

RUTH M. LADD
Senior Wetland Scientist
Environmental Resource Section
Policy Analysis and Technical Support Branch

Varney

11/29/01
Route 11

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

November 26, 2001

REPLY TO ATTENTION OF

CENAE-R

Mr. Robert Varney
Regional Administrator
EPA Region 1
One Congress Street, Suite 1100
Boston, Massachusetts 02114

Dear Mr. Varney:

This responds to your letter of November 8, 2001 regarding the Route 11 project in Connecticut. Your letter deals with three main area which I would like to address: first, traffic projections and project benefits; secondly, mitigation; and lastly, phasing of the project.

Traffic projections, particularly as they relate to the practicability of an upgrade of existing Route 82/85/11, is an area that both of our agencies have deliberated on at some length in late 2000 and early 2001. We conferred extensively with both Connecticut Department of Transportation (CTDOT) and Federal Highway Administration (FHWA) for technical advice. In fact, FHWA provided independent analysis by their Technical Resource Center in Baltimore concluding that the upgrade is not practicable because it would not adequately address long-term safety and capacity needs in the corridor. This was a system-based analysis, which is independent of disorete treatments at segments or intersections. The reports and technical meeting given by FHWA demonstrated that the intersection and roadway improvements did not resolve the transportation deficiencies in this corridor. There are multiple issues that continue to be a problem, the numerous access connections in the Route 82/85 corridor which cause substantial operational and safety problems, along with the conflicts between local and through traffic. In any event, I concluded in March of 2001 that the upgrade is not practicable and my decision stands. However, I will refer your comments to Mr. Brad Keazer, FHWA Division Administrator for Connecticut, and suggest that FHWA work directly with EPA to further clarify the traffic/transportation issues raised in your letter, so that they can be fully reflected in the FEIS. This clarification may include emphasizing the importance of this project in terms of the statewide strategic transportation plans and objectives.

I agree with most of your comments related to mitigation. Work necessary to identify and address all the mitigation components is being initiated by the CTDOT through the working group. Fully identifying the direct impacts, better describing the indirect/secondary impacts, minimizing impacts through design measures, completing a build-out analysis and identifying key valuable aquatic resources in order to formulate a reasonable preservation component will all be scoped by the working group, approved by the Corps and implemented through permit special conditions. The Greenway proposal,

which may be broader than the permit mitigation, but hopefully complementary to it, will not necessarily be fully developed in a similar time frame. However, the Corps has committed to assisting the Greenway Committee in its efforts to achieve a comprehensive plan that benefits the whole study area. I fully appreciate EPA's concerns over the environmental effects of the proposed project, and recognize the need for a substantial mitigation package to satisfy the regulatory requirements.

Phasing the project as you suggest, for example building the upgrade initially and then gauging the need for the new alignment alternative is problematic. You have referenced the Conway, NH by-pass project where the NHDOT agreed to a phased approach. However, in that case, the RT 16 upgrade, close-in by-pass and complete by-pass all were part of the overall project, not exclusive alternatives. Therefore, in that specific case, the Corps permitted the entire project, and the NHDOT agreed to construct the upgrade and close-in bypass as a first phase, and then reassess the need for the full by-pass. In the case of RT 11, the upgrade and the new alignment are distinct alternatives, and the Corps has determined that the upgrade is not practicable as an alternative to address the purpose and need identified, although Connecticut may certainly pursue this option independently to address local safety and traffic needs.

I look forward to continued good cooperation between our agencies as we deal with this complex but important project. Please feel free to contact me at any time you think my involvement is warranted.

Sincerely,

Brian E. Osterndorf
Colonel, Corps of Engineers
District Engineer

Copy furnished:
Mr. Brad Keazer
Division Administrator
Federal Highway Administration
628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033

Mr. Michael Bartlett
Field Supervisor
U.S. Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, New Hampshire 03301

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Amy —
BL 9/21

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

September 17, 2001

Regulatory Division
CENAE-CO-R-199702529

Mr. Edgar T. Hurle
Connecticut Department of Transportation
P.O. Box 317546
2800 Berlin Turnpike
Newington, Connecticut 06131-7546

Dear Mr. Hurle:

This is in regards to your Route 11 highway project permit application. As you know, the interagency streamlining committee met for 60 days to consider the impacts of alternative E4m, and to develop other alternatives to minimize aquatic environmental effects. The streamlining committee has identified two westerly alternatives (V1 and V3) for evaluation and further consideration in the Corps determination of the least environmentally damaging practicable alternative (LEDPA).

I have reviewed the practicability and environmental impacts of these three options. I have been on location to review the site conditions and wetlands resources, and have further discussed the issues of environmental impacts on aquatic resource systems with the federal and state agencies. Additionally, I attended the Southeastern Connecticut Council of Governments meeting on September 4th in Norwich to listen carefully to the positions of the environmental agencies and the local officials on the three alignments.

In determining the LEDPA, the Corps evaluates the practicability of alternatives in terms of cost, logistics and technology. Included in this is an assessment of impacts on local communities. We have determined that E4m, V1 and V3 are all practicable alternatives.

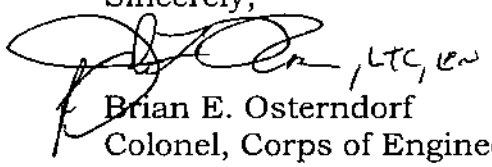
In determining environmental effects, the Corps considers direct, indirect and secondary impacts. The Corps of Engineers methods for evaluating these impacts, particularly for indirect effects, are qualitative rather than quantitative. The direct effects between the three alignments are similar. The indirect effects of E4m (overall habitat fragmentation

and wetland habitat degradation due to proximity of the highway to the valuable wetlands centrally located in Block 2) are substantially greater than those of alignments V1 or V3. Given the location similarities between V1 and V3, precise differences in indirect impacts between these two cannot be determined, and we find no meaningful environmental difference in impacts between V1 and V3. Therefore, either alternative can be considered the LEDPA. Please notify me which alternative (V1 or V3) the Department of Transportation will pursue in its permit application.

The Federal and State Resource agencies have advised us that the environmental impacts of either V1 or V3 remain, in their view, significant. There will be a substantial mitigation burden to offset these impacts to obtain the federal permit. Serious efforts to minimize impacts as design proceeds, and to offset direct and indirect wetland losses will be needed. The Greenway concept, which is being pursued by the state-local Greenway Commission, will likely play a large part, and the Corps and resource agencies are prepared to coordinate our requirements with its efforts.

My staff looks forward to further discussions on this matter as you pursue this important transportation project for Southeastern Connecticut. If you have any questions regarding this matter, please contact Ms. Susan K. Lee at 800-343-4789 or 978-318-8494.

Sincerely,



Brian E. Osterndorf
Colonel, Corps of Engineers
District Engineer

Copy Furnished:

Mr. Brad Keazer, Division Administrator
Federal Highway Administration – CT Division
628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

Mr. Robert Varney, Regional Administrator
U S Environmental Protection Agency
Region 1
One Congress Street, STE 1100
Mail Code RA
Boston, MA 02114-2023

Mr. Michael Bartlett, Field Supervisor
U.S. Fish and Wildlife Service
70 Commercial Street
Concord, NH 03301

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO ATTENTION OF

August 23, 1999

Regulatory Branch
CENAE-CO-R-199702529

Federal Highway Administration
Attn: Mr. Donald J. West
Division Administrator
628-2 Hebron Avenue, STE 303
Glastonbury, Connecticut 06033-5007

Dear Mr. West:

This responds to information presented in the Draft Environmental Impact Statement/Section 4(f) Evaluation (DEIS) for the Route 82/85/11 corridors in Salem, Montville, East Lyme, and Waterford, Connecticut.

Within the context of the defined study area, the DEIS presents the previously agreed upon range of alternatives for addressing the transportation improvement needs occurring on the existing Route 82 and 85 study corridors.

Subsequent to the documentation presented in the DEIS, the Connecticut Department of Transportation (CTDOT) prepared additional alternatives analysis documentation in a report entitled "Impact Minimization Study" dated "June 25, 1999". This report documented the impacts to water resources, including other environmental impacts, associated with the "arterial" design version of the DEIS "E" and "H" alignments, and an additional alignment "EH" (hybrid of E and H). The arterial alternatives are identified as E_4m, H_4m, and EH_4m. We acknowledge the substantial reduction in direct footprint of fill impacts of the subject arterial roadways. This was accomplished by the use of bridges as opposed to a fill section through the same wetlands resource complexes that would be affected by the E and H alignments as identified in the DEIS. These arterial alternatives should be evaluated at a comparable level of analysis as the DEIS alternatives and included in the final EIS (FEIS).

In response to the public comments heard during the DEIS hearings and in light of subsequent meeting discussions between community representatives and USEPA staff, we understand that a "sensitive" upgrade alternative, i.e., an upgrade alternative that is sensitive with respect to associated impacts/effects of improvements on community growth and development objectives, is also under evaluation by the CTDOT.

We acknowledge that the study corridor communities have voiced to the CTDOT that only limited TSM improvements would be acceptable for implementation within the existing Route 82/85 study corridors. There appears to be general opposition to any upgrade improvements that would entail substantial modifications to the existing rural

FHWA CT

character of the Route 82/85 corridors and its current nature and level of growth and development. However, the "sensitive" upgrade alternative, in combination with viable TSM improvements for the Route 82/85 corridors, as appropriate, appears to have merit as far as addressing current and projected future safety and capacity needs in the study corridors. The specific nature and extent of environmental and community impacts should be clearly documented in the FEIS.

The DEIS documentation concludes that the widening alternatives would address the transportation improvement objectives with respect to providing the safety and capacity improvement needs in the study corridor. Given the limited physical improvements that the affected communities would accept, relative to corridor upgrade improvements and TSM measures on the existing Route 82/85 study corridors, the FEIS should include adequate analyses of the effectiveness and adequacy of any "sensitive" upgrade alternative and/or the upgrade/TSM combination alternative for addressing the current and projected future transportation improvement needs in the subject study corridors.

We understand also that the CTDOT, in coordination with your agency, is in the process of preparing supplemental detailed information regarding safety and capacity deficiency needs in the study corridors and additional analysis of the TSM alternative(s) in response to comments raised by the USEPA on the DEIS document. All the DEIS alternatives, including the "sensitive upgrade/TSM improvements and arterial alternatives, should be evaluated, as appropriate, in light of any refinements of information with respect to transportation improvement needs and associated impacts of alternatives, and fully documented in the FEIS.

In closing, the following comment provides our technical input regarding DEIS documentation to comply with NEPA.

Section 6, Page 5, Section 6.1.1.11 Executive Orders

There should be a paragraph regarding Executive Order 13045, "Protection of Children From Environmental Health Risks and Safety Risks" The Executive Order states: (Section 1-101(a)(b)): "...each Federal agency : (a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

We look forward to working with your agency and the CTDOT to identify an environmentally sensitive and effective transportation improvement solution(s) that will address current and future safety improvement and capacity needs in the study corridor.

If you have any questions regarding this matter, please contact Susan Lee in our Regulatory Branch, Permits Section at 978 318-8494.

Sincerely,

John L. Rovero
Lieutenant Colonel, Corps of Engineers
Deputy District Engineer

Copy Furnished:

Mr. Edgar T. Hurle
Director of Environmental Planning
Connecticut Department of Transportation
PO Box 317546
2800 Berlin Turnpike
Newington, Connecticut 06131-7546

Mr. Matt Schweisberg
USEPA REGION 1
One Congress Street, Suite 1100
MAIL CODE CWQ
Boston, MA 02114-2023

Mr. Michael Bartlett
US Fish and Wildlife Service
Ralph Pill Marketplace, 4th Fl.
22 Bridge Street
Concord, New Hampshire 03301-4901

CONNDOT

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

subject: Route 11
Comparative Analysis

Memorandum

date: March 26, 2007

to: Mr. Paul Corrente
Trans. Supervising Planner
Bureau of Policy and Planning

from: Michael Connors
Trans. Supervising Planner
Bureau of Policy and Planning

The Trip Analysis section has compared traffic data projections for the 1999 DEIS, prepared by this office, against recent traffic volume data throughout the project area. This analysis indicates that subsequent traffic counts are consistent with base counts/projections used for the 1999 DEIS.

If you have any questions regarding this information, please contact me at 594-2037.

Attachment

Michael Connors/kdp
cc: Angelo M. Asaro
Edgar Hurle

March 24, 2003

Mr. Vernon Lang
Assistant Supervisor
New England Field Office
U.S. Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, NH 03301-5087

Dear Mr. Lang:

Subject: Route 11 Corridor
Salem, Montville, East Lyme and Waterford, CT

This letter responds to your memorandum of November 13, 2002 in which you provide comments on our initial *Draft Statement of Wetlands and Wildlife Habitat Block Impacts and Compensation Plan for the Route 11 Corridor Salem, Montville, East Lyme and Waterford, CT (September 2002)* (herein referred to as *Draft Plan).* To facilitate a cross reference, the following responses are numbered to coincide with the paragraphs of your memorandum.

2) While we agree with your stated assumption that the *Draft Plan* is intended to serve as a vehicle for dialogue, it is incorrect to state that the report is intended to "begin" the process with the agencies and other interested parties. The subject *Draft Plan* is one of a series of written products in the integrated National Environmental Policy Act (NEPA) and Section 404 of the Clean Water Act (§404) process that has been on-going for the Route 11 corridor in southeast Connecticut for the past five years. Following the publication of the Draft Environmental Impact Statement (DEIS) in February 1999 and subsequent joint NEPA/§404 public hearing, the Connecticut Department of Transportation (ConnDOT) and Federal Highway Administration (FHWA) continued working cooperatively with your agency, U.S. Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), Connecticut Department of Environmental Protection (CTDEP) and the public to further pursue solutions to the transportation problems in the area. We have held numerous interagency meetings that addressed previous steps in the Highway Methodology process. The *Draft Plan* and our October 2, 2002 meeting represent

a continuation of our discussions of compensation for unavoidable impacts to wetlands and wildlife habitat blocks should the preferred alignment be implemented. The *Draft Plan* has been revised in light of input received from your agency and others. It will be available at the upcoming interagency mitigation coordination meeting and I expect that it will undergo further refinement over the next few months.

3) On page 1 paragraph 2 of the *Draft Plan*, we have revised the sentence in question to read that avoidance and minimization measures have been "incorporated" rather than accomplished. A new section summarizing these measures has also been added to the revised *Draft Plan.*

4) Yes, a conservative estimate for identifying and estimating indirect effects on wildlife was used. It is a conservative approach in that this 1,600-foot zone accounts for many of the more sensitive interior species, and overestimates the effects on the less sensitive interior species. Although this approach does overestimate impacts to some individual species, it is not practical or advisable to look at individual species relative to impact (excluding CTDEP listed endangered or threatened species). The wildlife community as a whole must be assessed.

5) It is acknowledged that the community of specific opportunistic predatory species associated with residential development and road corridors may vary; for example, domestic cats would likely be more common predators near residential areas than near remote roadway corridors. The basic principal, however, is that opportunistic predators tend to feed along and within edge habitat, whether natural or man-made, when available. FWS pointed out that impacts from domestic cats would likely be greater near residential areas than along roadway corridors. However, use of the highway edge by other predators known to scavenge along highway corridors would actually have a similar impact via predation on interior species, as would the domestic cat from the residential area.

Based on habitat descriptions by DeGraaf and Yamasaki (2001), many of the same predators attracted to road corridors are also attracted to residential edge habitats, such as raccoon, Virginia opossum (*Didelphis virginiana*), and the striped skunk (*Mephitis mephitis),* among others.

6) Since the goal of this work is to reach a total number of acres indirectly impacted, analyzing different "bands" from the edge of roadway for individual species, as suggested by the Fish & Wildlife Service (FWS), would not produce significant additional data that would contribute to the outcome of the mitigation plan.

7) Species occurrence data was collected using published scientific literature for various animal taxa (birds, herpetofauna). For instance, for bird distribution, the Connecticut Breeding Bird Atlas (Bevier, ed. 1994) was used as a baseline for species distribution information. For herpetofaunal species distribution information, Klemens (1993) was

referenced. Where regional or site-specific literature was lacking for other taxa (i.e., mammals), species occurrence was inferred based on the presence/absence of suitable habitat, aided by the habitat matrices provided initially by DeGraaf and Rudis (1993), and later updated by DeGraaf and Yamasaki (2001). This information was augmented by our own field obeservations, surveys, and general fieldwork conducted during the EIS process.

The estimation of impacts was determined largely for animals that were deemed most sensitive or susceptible to disturbance caused by development, such as forest interior bird species (especially neotropical migrant forest specialists), large mammalian carnivores, and others animals with specialized habitat attribute requirements. This is more practicable and efficient than trying to determine every potential direct and indirect impact to every individual species.

8) The preferred alignment (E(4)m-V3) has resulted from extensive study and public involvement. After the publication of the DEIS, the interagency streamlining committee worked diligently to narrow the practical and environmentally sound options for transportation improvements in the area. The committee's work culminated in the USACE letter of September 17, 2001 that indicated that the E(4)m-V3 alignment may be a LEDPA under §404. Additional documentation on the environmental effects, the avoidance and minimization process, as well as the revised *Draft Plan*, will be presented in the FEIS.

9) The 1:1 replacement of directly impacted wetland acreage was proposed in accordance with the USACE regulatory guidance and the national no net loss policy. ConnDOT has had increasingly successful experience with wetland establishment sites and routinely has wetland site monitoring reports accepted by the USACE. Wetland establishment sites described in the revised *Draft Plan* will provide in-kind replacement of lost functions and values. Compensation for impacts to seasonal pool habitat will also be provided. Chances for success of seasonal pool creation will be improved by the relocation of critical elements and habitat attributes from an existing seasonal pool that would be directly impacted by the new interchange at I-95.

During the development and growth phase of the establishment area, it is expected that the functions and values of the wetland will likewise increase as vegetation becomes mature, cover increases, wildlife use increases, soils develop, and hydrology stabilizes. The juxtaposition of the wetland establishment areas into a forested landscape would actually greatly increase the in-kind function and value compensation of the project. Forested uplands are important parts of the wetland system as they provide seasonal habitat and nesting sites for many species of wildlife that also use the wetland habitat. Since the

majority of impacted wetlands have adjacent forested areas, the incorporation of the establishment areas into a forested landscape is essential in compensating for the wetland functions and values lost. The preservation of a total of approximately 896 acres of land, including wetlands and uplands, will enhance the 1:1 compensation already provided. Although wetland preservation does not result in a gain in wetland area (USACE, 2002), the preservation of wetlands within the acquired parcels will help maintain wetland functions and values in the landscape while the wetland establishment sites are developing. The revised *Draft Plan* includes more detailed discussion on these points.

10) Removal of the dam at Latimer Brook was considered early on in the mitigation compensation plan development. However, based on coordination with the CTDEP Fisheries Division (CTDEP-FD), the existing fish ladder currently functions properly, and the dam would not need to be removed to allow continued fish passage in this area. Also, this area is currently used extensively for recreational fishing and the Town of East Lyme has created a picnic area on the site. Disturbance of the ponded area would impact this recreational value.

11) Literature sources cited for edge effects indicate that these effects are also caused by residential development. For instance, Wilcove (1988) stated:

> "Many of the seminal studies for forest fragmentation were conducted in small woodlots in suburban or rural areas. This has led some people to question whether such studies are applicable to the management of large forested landscapes...However, studies of deleterious edge effects are clearly applicable to the management of large forest ecosystems, because edges are precisely what clearcuts and wildlife openings create."

The focus of the literature search was impact to wildlife from highways/roadway construction and use; however, within the context of the literature, the types of impacts and disturbance identified are also associated with residential development. The disturbance has the same effect, regardless of the source. For instance, residential development may introduce elevated predation pressure from housecats to an area that was originally free of this pressure before the residential development. In comparison, creating an induced edge by constructing a roadway within a forest interior creates a similar effect as it will also attract scavenging and predatory animals that favor searching habitat edges (in this case the roadside).

12) The residential edge is coincident to the habitat block edge along the western edge of Habitat Block No.2. Therefore, an explanation of how the blocks were delineated also explains how the residential interface was defined. Please see Section 4.4.8.2 of the DEIS for a detailed description of this methodology.

13) At the onset of the seasonal pool inventory, the upland habitat area was established as a 500 foot setback from each pool edge, based on information provided in deMaynadier and Hunter (1995). Within this literature review, deMaynadier and Hunter cite a study conducted by Stone (1992), and Raymond and Hardy (1991) to offer an appropriate upland buffer setback to avoid impact to seasonal pool amphibian populations. Stone conducted an analysis of 106 vernal pools in Massachusetts, the results of which suggested that the most important characteristic distinguishing sites utilized by obligate vernal pool breeders was the percentage of forest within a 152 m (500 ft) radius of the pool. The work of Raymond and Hardy (1991) suggested that forest harvesting as much as 156 m away from a breeding pond can effect the migratory movements and survivorship of a pool's breeding population of mole salamanders (*Ambystoma talpoideum).*

We believe these references accurately estimate an appropriate seasonal pool upland habitat area because these studies were based upon a larger number of study sites (Stone, 1992) and addressed impact to entire pool populations, not individuals exhibiting maximal dispersal distances. We recognize that other literature sources offer varying distances, however many studies base findings on the observations of a limited number of individuals within the population, a limited number of study pools, or a combination of both.

The dispersal ability and known maximum dispersal distance of red spotted newt (*Notophthalmus v. viridescens)* was not used to establish a practicable setback distance to address, specifically, the impacts to seasonal pool dependent fauna during the inventory, because they are not an obligate seasonal pool species, and they are not a CTDEP-listed species. In fact, Klemens (2000) lists the conservation status of this species as "secure" in Connecticut. Gill (1978) describes them as "a colonizing species responding to pond habitats that rapidly shift in time and space." *Notophthalmus v. viridescens* was found throughout the original project study area in a number of wetland systems that do not exhibit the criteria that helps to define a seasonal pool (Donahue, 1996). During the studies completed for the DEIS, red spotted newts were found within beaver ponds, hillside sphagnum seeps, slow moving streams, seasonal pools, and other wet areas of apparent varying hydrology or hydroperiod throughout the entire project area.

This Department does not dispute the fact that some obligate seasonal pool species have the ability to disperse farther than 500 feet. However, other factors were also considered when deciding upon use of the 500-foot limit as a practicable distance to use during the assessment. For instance, the proportion of the population of a herpetofaunal species dispersing from a given seasonal pool is expected to decrease with distance from the pool, as was shown by Berven and Grudzien (1990) in their study of a population of wood frogs. The goal for the EIS is to choose a distance beyond which the *majority* of organisms would not disperse.

14) It is a well observed fact that good highway access is an important catalyst to commercial and industrial development. One just needs to travel most any highway to observe gas stations, restaurants, hotels, distribution facilities, office buildings and industrial parks located near entrance and exit ramps of highways. The good access promotes uncongested travel and reduced transportation costs for employees, deliveries and shipments. Certainly, direct access to highway interchanges also offers excellent opportunities for commercial signage and advertising. Communities will frequently have commercial/industrial zoning and in some cases, specific "interchange business" zones (Killingly, CT, for example) near highway interchanges to take advantage of this obvious transportation/economic development connection.

Residential development, on the other hand, is already actively occurring in the towns surrounding the Route 11 corridor. The towns of Salem, Colchester, East Lyme and others in southeast Connecticut have been among the fastest growing communities in the State. Based upon knowledge of the travel patterns within the corridor, the region and the State, we believe that a time savings of two-seven minutes will have negligible effect on inducing new residential development; especially as compared with the influences of existing demand, property value, availability of existing housing stock, utilities, and local development planning objectives. An Oregon DOT report indicates that 2-7 minutes could have a "*weak* to strong" effect on land use change, but uses this for "illustrative" purposes only. The report acknowledges that local factors will influence the effect of this variable.

15) Forest land registered under Connecticut Public Act 490 (CGS 12-107a-d) also exists in Salem, Montville, and East Lyme, as well as Waterford. However, this information was not readily available for all the towns in the GIS data that was used to perform this analysis. This information was included in parcel data from Waterford and was cited in an effort to further characterize land use in proximity to the proposed roadway.

16) As requested, Table 5 of the *Draft Plan* has been revised (now Table 7 in the revised *Draft Plan*) to include a breakdown of the elimination of acreage with development limitations.

17) Habitat blocks have been, and continue to be, an important existing natural resource in the corridor. These habitat blocks provide habitat for forest interior species, including but not limited to avian, herpetofaunal, and some mammalian species. The DEIS (Section 4.4.8.2) identifies literature characterizing the importance of these blocks. This literature also suggests that habitat blocks greater than 125 acres are important to interior species. Likewise, forest patches less than 125 acres are not as important to interior species. A qualitative discussion of impacts to habitat, including both habitat blocks and non-habitat blocks, was provided in the DEIS Section 5.4.1. Methodology, including references and rational for determining habitat block sizes, was provided in the DEIS Section 4.4.8.2.

18) Stationing from the proposed roadway sketch plan has been added to the wetland impact mapping, as requested, and is included in the revised *Draft Plan*.

19) It is not clear from the comment exactly where the suggested "streams that were not delineated" are located. Please provide more detail on the location in question so that we may address your concern.

I look forward to discussing these issues and our revised *Draft Plan* with you at the upcoming interagency mitigation coordination meeting. If you have further questions, please contact me at (860) 594-2920.

Very truly yours,

Edgar T. Hurle
Director of Environmental Planning
Bureau of Policy and Planning

cc: Ms. Christine Godfrey, U.S. Army Corps of Engineers
Mr. Douglas Thompson, U.S. Environmental Protection Agency
Mr. Bradley Keazer, Federal Highway Administration
Mr. Robert Gilmore, Connecticut Department of Environmental Protection

Paul Corrente\jm
bcc: H. James Boice – Bruce H. Garrett
Edgar T. Hurle
Judith S. Cantwell – Steven T. Ladd
S:\Polplan\4802\joan\paulc\FWSresponse letter 03 20 03

February 21, 2003

Mr. Robert Varney
Regional Administrator
U.S. Environmental Protection Agency
Region 1
One Congress Street, Suite 1100
Boston, MA 02114-2023

Dear Mr. Varney:

Subject: Transportation Planning and Design, Inc. (TPD), Report for Route 11

The Connecticut Department of Transportation (ConnDOT) has reviewed the September 27, 2002 report by TPD that was forwarded on January 7, 2003.

It is troubling that EPA continues to question the transportation recommendations and conclusions of this agency and FHWA with regard to the Route 11 project. It is my understanding that much correspondence has been exchanged and numerous meetings have been held between EPA, FHWA and ConnDOT on traffic and transportation issues. As I further understand it, all reasonable EPA transportation issues have been addressed. In short, we feel that good faith efforts to address concerns have been taken, and it is unfortunate that EPA continues to raise already answered questions. The assertion that ConnDOT and FHWA "could not afford the staff resources and time necessary to develop complete and thorough response to those remaining questions..." is not correct. Rather, further expense and effort is not warranted, in light of EPA's unwillingness to accept the information that has previously been presented by the State and federal agencies with expertise in transportation matters. This is a significant difference.

More importantly, the issue of improving Routes 82 and 85 in lieu of completing Route 11 has already been resolved in the NEPA/Section 404 process that has been ongoing for the project. The FHWA has determined that the proposed arterial roadway on new location best meets the collective purposes and needs developed during the full and open NEPA process; and the Corps of Engineers has determined that the improvement of the existing routes, including the Community Sensitive Upgrade, is not practicable and will not meet the regulatory basic project purpose.

The report prepared by TPD appears to add no new information. In general, the firm concurs with the methodologies employed by ConnDOT in the documents of record. The contention by TPD that the NEPA purpose and need statements were inappropriate is simply opinion by an out-of-state firm that was not involved in the extensive community and agency NEPA consensus-building process employed for Route 11. Nothing in the TPD report indicates the need to revisit any of the transportation-related decisions that the Route 11 process has made to date. State and federal efforts should focus on the current issues at hand, namely finalizing the environmental mitigation plans for the project.

Very truly yours,

James F. Byrnes, Jr.
Acting Commissioner

cc: Hon. John G. Rowland
Hon. Arthur Rocque, Jr., ConnDEP
Mr. Bradley Keazer, FHWA
Col. Thomas L. Koning, U.S. Corps of Engineers
Mr. Michael Bartlett, U. S. Fish and Wildlife Services

Edgar T. Hurle\jm
bcc: Acting Comr. Byrnes – Dep. Comr. Adams – Susan H. Sharpley
H. James Boice – Bruce H. Garrett
Edgar T. Hurle
Judith S. Cantwell – Steven T. Ladd – Paul Corrente
S:\Polplan\4802\joan\ned\Varney-EPA (TPD) 2-18-03

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546
Phone: 860-594-2920

October 30, 2001

Colonel Brian E. Osterndorf
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Dear Colonel Osterndorf:

Subject: Final Environmental Impact Statement (FEIS) – Route 11
Salem, Montville, East Lyme and Waterford, CT

Please be advised that a meeting of the Route 11 Advisory Committee (AC) was held October 11, 2001, in Montville. The Connecticut Department of Transportation briefed the AC on work that has transpired subsequent to the last AC meeting of February 2000, and on the Corps' position as stated in your letter of September 17, 2001.

The AC agreed to move forward with evaluating alternative E4m-V3 as the preferred alternative for the FEIS, and work has begun on the preparation of this document. Please contact me at (860) 594-2920 if you have any questions. The Department looks forward to your continued participation on the project.

Very truly yours,

Edgar T. Hurle
Director of Environmental Planning
Bureau of Policy and Planning

copies to:
Ms. Susan K. Lee, U.S. Army Corps of Engineers
Mr. Michael E. Marsh, U.S. Environmental Protection Agency, Region 1
Mr. Bradley Keazer, Federal Highway Administration
Mr. Robert Gilmore, CT Department of Environmental Protection
Mr. Greg Mannesto, U.S. Fish & Wildlife Service
Route 11 Advisory Committee Members

DEP

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ENVIRONMENTAL & GEOGRAPHIC INFORMATION CENTER
79 Elm Street, Store Level
Hartford, CT 06106
Natural Diversity Data Base

February 7, 2002

Ms. Kathleen E. Hall
Maguire Group, Inc.
One Court Street
New Britain, CT 06051

re: Final Environmental Impact Statement for Route 11 in Salem, Montville, East Lyme and Waterford, Connecticut

Dear Ms. Hall:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the Final Environmental Impact Statement for Route 11 in Salem, Montville, East Lyme and Waterford, Connecticut. According to our information there are four state-listed species in the vicinity of the Route 11 alignment. The species are:

Species Name	Common Name	State Status
Xyris smalliana	small's yellow-eyed grass	Endangered
Schwalbea americana	chaffseed	Special Concern
Drosera filiformis	thread-leaf sundew	Endangered
Caprimulgus vociferus	whip-poor-will	Special Concern

In August of 1998, Nancy Murray, a botanist with our program, provided the locations of these three state-listed plants and their habitat requirements. I have attached a copy of her letter for your files. The fourth species, *Caprimulgus vociferus*, is known from the Chesterfield section of Salem. I provided the details of this record to Bob Gilmore (DEP-Inland Water Resources Division) and Jenny Dickson (DEP-Wildlife; 860-675-8130) for further review and comments.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Natural Resources Center's Geological and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at 424-3592. Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

Sincerely,

Dawn M. McKay
Biologist/Environmental Analyst

CC: Jenny Dickson
Bob Gilmore

From: Gilmore, Robert [mailto:Robert.Gilmore@po.state.ct.us]
Sent: Monday, October 23, 2006 2:21 PM
To: Turner, Robert
Subject: Administrative Review Draft - FEIS - Route 11

MEMORANDUM

October 23, 2006

From: Bob Gilmore
Connecticut Department of Environmental Protection
Inland Water Resources Division

Re: Administrative Review Draft
Appendix B
Mitigation Planning - FEIS - Route 11 Corridor
Wetlands Compensatory Mitigation Framework - April 2006

Avoidance, Minimization and Mitigation

- best management practices/stormwater system design ...

These sections should include an expressed commitment to use **best available technology** to achieve the quality of discharge necessary to ensuring the long-term protection of the physical, chemical and biological integrity of the receiving waters.

- over-sized culverts that allow wildlife passage

This section should incorporate references to **fish and wildlife** passage and specific design standards to be applied at stream crossings to maintain aquatic habitat connectivity and provide opportunities for fish and wildlife passage - e.g., "Massachusetts River and Stream Crossing Standards: Technical Guidelines, August 6, 2004", CT DEP Fisheries Division's "Stream Crossing Guidelines, December 2002."

- open median to mitigate wildlife mortality ...

The framework states: "...existing vegetation will be retained where feasible, or replaced with native, non-invasive plantings."

An explanation of what constitutes where feasible should be included.

Compensatory Mitigation

The framework states: "Compensatory mitigation for unavoidable indirect impacts to wetland functions and values and wildlife habitat will be achieved through preservation and potential enhancement of undeveloped, ecological valuable lands within or proximate to the Route 11 corridor."

Potential enhancement does not provide mitigation. The framework should include a stated consideration of opportunities for acquiring impacted lands and enhancing or restoring habitat value to these lands - e.g., lands previously damaged by sand and gravel operations, lands adversely impacted by improper forestry operations, lands previously disturbed and subjected to dumping/disposal activities, or lands with vegetation dominated by invasive plants.

Direct Wetland Impact

The framework states: "Priority will be given to sites exhibiting the following: stable, predictable water table..."

The following modification should be incorporated - "stable, predictable water table **determined through site specific water table monitoring consistent with accepted data collection standards** ..."

Indirect Wetland Impact

Preservation alone does not recoup lost biodiversity units. Consequently, in order for preservation to be considered for compensation, the acreage needed would have to be some multiple greater than the 686 acres that was calculated as equating to the 485 biodiversity units lost.

Bob Gilmore
Inland Water Resources Division
Bureau of Water Protection and Land Reuse
Connecticut Department of Environmental Protection
79 Elm St, Hartford, CT 06106-5127
(860) 424-3866

"Some roads bring renewal; some roads hide and wait; some roads promise everything and steal your fuel away" _NY

EPA

From: Higgins.Elizabeth@epamail.epa.gov
[mailto:Higgins.Elizabeth@epamail.epa.gov]
Sent: Wednesday, October 18, 2006 11:21 AM
To: robert.w.turner@fhwa.dot.gov
Cc: Varney.Robert@epamail.epa.gov; Schweisberg.Matt@epamail.epa.gov; michael_bartlett@fws.gov; christine.a.godfrey@usace.army.mil; betsey.wingfield@po.state.ct.us; edgar.hurle@po.state.ct.us
Subject: Connecticut Route 11-- administrative draft of the Final EIS

Dear Mr. Turner,

Thank you for sending us a copy of the administrative draft of the Final Environmental Impact Statement for the proposed Route 11 project. We appreciate your giving us this opportunity to see the document before it is published.

We recognize that the document contains a substantial amount of new information reflecting the additional work and extensive interagency coordination that has taken place in the nearly 8 years since issuance of the Draft EIS. While the administrative FEIS does not resolve a number of issues that we have raised in the past (see written comments of May 21, 1999; April 20, 2001; Nov. 8, 2001; Nov. 13, 2002; Sept. 20, 2005; March 28, 2006), we remain committed to participating in the ongoing interagency discussions directed toward resolving remaining issues, especially with respect to mitigation for the project's impacts, during the Clean Water Act Section 404 permit process. While the administrative FEIS contains a framework for how the mitigation plan will be developed, we recommend that the FEIS include a mitigation plan that, if not in detail, at least in concept, shows how and to what extent the project's impacts will effectively be mitigated. We also recommend that the FEIS provide responses to the written comments from EPA and other agencies that were submitted in the period between the DEIS and FEIS.

If you have any questions, please contact Matt Schweisberg at 617/918-1628 or me at 617/918-1051.

Sincerely,

Elizabeth A. Higgins
Director, Office of Environmental Review

From: Grantham.Nancy@epamail.epa.gov on behalf of
Varney.Robert@epamail.epa.gov
Sent: Tuesday, September 20, 2005 10:26 AM
To: Keazer, Bradley
Cc: curtis.l.thalken.col@usace.army.mil; Gina McCarthy;
H.james.boice@po.state.ct.us; jane.dauphinais@mail.house.gov; Jane
Stahl; Dymond, Ken; Osterhues, Marlys; michael_Bartlett@fws.gov;
Varney.Robert@epamail.epa.gov; Turner, Robert;
Schweisberg.Matt@epamail.epa.gov
Subject: CT Route 11 Project: EPA Recommendation for Preparing a
Supplemental DEIS

In your August 31st email message to the Principals, you asked individual group members for their positions regarding "the need, or not, to do a supplemental Draft EIS." As you may recall, EPA New England first raised a question about the potential need for a supplemental DEIS in our May 21, 1999, letter commenting on the February
1999 DEIS. In that letter, we advocated for a process to address a wide range of issues and information needs that we believed were unaddressed by the DEIS, and recommended that "the information developed in such a process should be included in a supplemental or revised DEIS and circulated for wider public review and comment."

There have been several substantial changes or additions to the proposed project that would result in significant environmental impacts, as well as much new information or circumstances relevant to environmental concerns, that were not evaluated in the 1999 DEIS. Below is a list (in no particular order) of the primary project changes or additions and new information developed since issuance of the DEIS that should be included in a supplemental or revised DEIS to provide the public with an adequate opportunity to review and comment on this project.

1. The current proposed roadway alignment – E4m-V3 – was not specifically described and discussed in the DEIS.

2. The location, design, and environmental impacts associated with the proposed highway interchanges were not adequately addressed in the DEIS.
In particular, the substantial aquatic resource impacts stemming from the proposed I-95 interchange – the direct, indirect and secondary impacts to wetlands and waterways, including several vernal pools – were not adequately described and discussed in the DEIS. In addition, there is no detailed discussion in the DEIS of the impacts associated with the proposed interchange at Route 161, which would cause direct, indirect and secondary impacts to aquatic resources, including Latimer Brook and its associated wetland systems.

3. None of the information pertaining to this past year's wildlife surveys was included in the DEIS. A supplemental DEIS would provide the opportunity to explain the objectives, methods and results of those surveys. Importantly, these results include the discovery of the presence of federal and state-listed endangered and threatened species, and species of special concern.

4. The use and adverse effects of road salt – an emerging and increasingly important water quality issue -- were not discussed in adequate detail in the DEIS.

5. The trial use of the UMass CAPS modeling and assessment methodology was not included in the DEIS. The CAPS modeling was used in refining the alignment in the southern part of the corridor (i.e., the V1 vs. V3 issue) and for the ongoing development of a compensatory mitigation framework. A supplemental DEIS would provide the opportunity to describe the CAPS method, its limitations, and its application and results in the two circumstances noted above.

6. In light of the issues listed in items 2, 3, and 5, above, the scope and nature of compensatory mitigation required for this project have changed significantly since 1999. The 1999 DEIS discussed compensatory mitigation only in a conceptual sense and offered no details. A supplemental DEIS would provide the opportunity to describe the collaborative efforts and results of the CT Route 11 working group on this critical project component.

7. The DEIS was issued well over six years ago. The target audience has likely changed and presumably increased in this period of time (e.g., new people moving into the area). If the projections regarding growth in the region contained in the 1999 DEIS were correct, there should have been substantial population growth between that time and the present. Assuming this is the case, there is a substantial segment of the population now living in the project area that did not have the opportunity to review the original DEIS, did not attend the public meetings, or otherwise did not have the opportunity to comment on the project.

8. As we have previously recommended, current, up-to-date growth and traffic volume data should be developed as part of a supplemental DEIS and compared to data used in the original DEIS. This comparison could be used to verify and calibrate population and traffic volume growth assumptions used in the DEIS. Such a comparison would be particularly valuable since it has been over seven years since the original data were gathered (1998). Much of the data needed for this analysis should be available already and should be easy to update.

9. The 2002 report produced by EPA's contractor, Weston Solutions, Inc., and its subcontractor, Transportation Planning and Design, Inc., that further evaluated the practicability of the upgrade alternatives for the Route 11 Project, as well as CT DOT and FHWA comments about the report, have not been made available to the public for review and consideration. A supplemental DEIS would provide that opportunity.

Based on the above, it appears that a supplemental DEIS is both necessary and appropriate. As I mentioned at the meeting, failure to do so may significantly delay the project.

Thank you for soliciting the views of the agencies on this key matter. Please let me know if you have any questions or have your staff contact Matt Schweisberg at 617-918-1628.

"Keazer, Bradley" <Bradley.Keazer@fhwa.dot.gov>
08/31/2005 01:13

To
Jane Stahl <jane.stahl@po.state.ct.us>,
Robert Varney/R1/USEPA/US@EPA,

PM

michael_Bartlett@fws.gov,
jane.dauphinais@mail.house.gov,
Gina McCarthy
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"Osterhues, Marlys"
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<Robert.W.Turner@fhwa.dot.gov>

Subject

RE: Route 11

At the 8-23 managers meeting FHWA was asked to address the issue of the need, or not, to do a supplemental Draft EIS. We have begun that evaluation process. The CFR sets up two criteria for us; "1) Changes to the proposed action would result in significant environmental impacts that were not evaluated in the EIS; or 2) New information or circumstances relevant to environmental concerns and bearings on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS".

I know that some of you raised specific issues at the meeting that were not captured in the minutes. I would appreciate it if you or your staff would respond to this e-mail with any issues or concerns that you want to make sure we include in our evaluation of this issue. A response by September 16 would be appreciated.

From: Grantham.Nancy@epamail.epa.gov on behalf of
Varney.Robert@epamail.epa.gov
Sent: Tuesday, March 28, 2006 8:17 AM
To: Keazer, Bradley
Cc: Anne-Marie Costello; Keazer, Bradley; Nottingham, Chip;
curtis.l.thalken.col@usace.army.mil; Blais, Ernie; Skaer, Fred; Gina
McCarthy; H.james.boice@po.state.ct.us; jane.dauphinais@mail.house.gov;
Jane Stahl; Dymond, Ken; Osterhues, Marlys; michael_Bartlett@fws.gov;
Varney.Robert@epamail.epa.gov; Turner, Robert;
steve.korta@po.state.ct.us
Subject: RE: Rte 11 NEPA re-evaluation by FHWA and CONN DOT

Hi Brad –

Thank you for the forwarding the administrative draft of the Re-evaluation document prepared by FHWA to determine the need for a supplement to the CT Route 11 DEIS published in 1999. We greatly appreciate your sharing this internal draft with the federal and state regulatory agencies and seeking our comments before making your final decision. We also recognize the time and effort invested in preparing the draft and commend the FHWA for addressing many of the issues raised by EPA and others with respect to the question of preparing a supplemental DEIS.

The administrative draft Re-evaluation concludes that a supplement is not warranted and explains the reasoning for this conclusion. In my September 20, 2005, email message to you, I listed a variety of factors that EPA felt leaned heavily in favor of the need for a supplement. The administrative draft addresses several of the points we raised, and we better understand the basis for FHWA's conclusion. Still, EPA believes that a supplement is the most appropriate way to advance the NEPA process and develop a public record that fully supports the findings of an eventual Record of Decision. Overall, we remain concerned that significant information contained in several documents (referenced in the administrative draft) that have been produced over the last 8 years has not been provided to the public, the regulatory agencies, and other interested parties in a comprehensive fashion to allow a thorough and complete understanding of this proposed project, and to solicit comments based upon that complete picture. Our concern is heightened by the fact that new information, new analysis and several project changes have occurred over several years. Examples include:

- The location, design, and environmental impacts associated with the proposed highway interchanges;

- The information contained in the recently produced report on the 2005 biological surveys;

- An evaluation of cumulative and secondary impacts, including the use and effects of road salt--an emerging and increasingly important water quality issue;

- In light of the issues mentioned above, the scope and nature of compensatory mitigation required for this project; and,

- Updated data/information on and analysis of traffic (including the 2002 report produced by EPA’s contractor, Weston Solutions, Inc., and its subcontractor, Transportation Planning and Design, Inc., that further evaluated the practicability of the upgrade alternatives and FHWA’s analysis of these

reports), population growth, and development in the study area that would help "ground truth" the projections contained in the DEIS.

Once again, we applaud FHWA's effort to carefully consider the Supplemental EIS questions and I look forward to our discussion on March 30th.

– Bob

"Keazer, Bradley" <Bradley.Keazer@fhwa.dot.gov>

02/16/2006 03:35 PM

To: "Keazer, Bradley" <Bradley.Keazer@fhwa.dot.gov>, Anne-Marie Costello <anne-marie.costello@po.state.ct.us>, Robert Varney/R1/USEPA/US@EPA, michael_Bartlett@fws.gov, jane.dauphinais@mail.house.gov, Gina McCarthy <gina.mccarthy@po.state.ct.us>, H.james.boice@po.state.ct.us, Jane Stahl <jane.stahl@po.state.ct.us>, curtis.l.thalken.col@usace.army.mil, steve.korta@po.state.ct.us

cc: "Dymond, Ken" <Ken.Dymond@fhwa.dot.gov>, "Skaer, Fred" <Fred.Skaer@fhwa.dot.gov>, "Osterhues, Marlys" <Marlys.Osterhues@fhwa.dot.gov>, "Nottingham, Chip" <Chip.Nottingham@fhwa.dot.gov>, "Blais, Ernie" <Ernie.Blais@fhwa.dot.gov>, "Powell, Carol <MARAD>", "Turner, Robert" <Robert.W.Turner@fhwa.dot.gov>

Subject: RE: Rte 11 NEPA re-evaluation by FHWA and CONN DOT

This is a status update. FHWA has received and reviewed a preliminary administrative draft of the re-evaluation document for Route 11 The re-evaluation document is what FHWA will use to determine whether a supplement needs to be made for the Draft EIS, or if the Draft EIS remains adequate and we can proceed to the Final EIS. We have

determined that modifications are necessary in order for the document to meet our needs. Accordingly, FHWA headquarters and local technical staff will be working with the State and their consultant to modify the preliminary administrative draft document. As soon as the modifications are made and we find it acceptable for our needs, we will be making the draft re-evaluation document available to agency leaders and staff for comments as we have agreed.

-----Original Message-----
From: Keazer, Bradley
Sent: Tuesday, November 08, 2005 7:22 AM
To: Keazer, Bradley; 'Anne-Marie Costello';
'Varney.Robert@epa.gov'; 'michael_Bartlett@fws.gov';
'jane.dauphinais@mail.house.gov'; 'Gina McCarthy';
'H.james.boice@po.state.ct.us'; 'Jane Stahl';
'curtis.l.thalken.col@usace.army.mil';
'steve.korta@po.state.ct.us'
Cc: Dymond, Ken; Skaer, Fred; Osterhues, Marlys; Nottingham, Chip;
Blais, Ernie
Subject: RE: Rte 11 NEPA re-evaluation by FHWA and CONN DOT

We have received an inquiry as to the availability of the Route 11 Re-evaluation document to the agencies, prior to final approval by FHWA.

Re-evaluations are covered under 23 CFR 771.129. This is an administrative process, and as such, does not require outside agency review. However, because the Route 11 project is on the Secretary's High Priority list and the agencies have shared their concerns with us through the senior manager's meeting process, we believe it is important to provide the agencies the opportunity to comment on the Re-evaluation in draft form. Therefore we plan to provide the document for agency review prior to our taking final action in accordance with the CFR. We will request that the draft document be kept confidential because it is a pre-decisional document and should not be released to the public until the document is finalized and the re-evaluation decision action is taken. An expedited time frame for reviewing the draft document will be established, when the document is in a draft form that is ready for review.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

January 7, 2003

Edgar T. Hurle
Director of Environmental Planning
Bureau of Policy and Planning
Connecticut Department of Transportation
P.O. Box 317546
Newington, CT 06131-7546

Dear Ned:

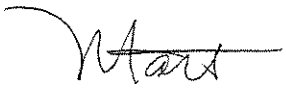
Enclosed you will find a copy of a report regarding the Connecticut Route 11 Project. EPA New England contracted with Weston Solutions, Inc., and its subcontractor, Transportation Planning and Design, Inc. (TPD), to further evaluate the practicability of the upgrade alternatives for the Route 11 Project. As you recall, EPA raised a number of questions regarding this issue that it posed to both the ConnDOT and FHWA. Both agencies responded with useful information, but several key questions remained. We understood that neither ConnDOT nor FHWA could afford the staff resources and time necessary to develop a complete and thorough response to those remaining questions, so EPA hired TPD to do so.

We forward this recently completed report for your information in advance of the interagency principals meeting being scheduled for late January. Copies also were forwarded to the Corps, FHWA, and USFWS. As you will read, TPD concludes that the community sensitive upgrade alternative could satisfy the safety deficiencies and likely satisfy the capacity deficiencies identified for Routes 82 and 85. TPD raises several other interesting points in its report and suggests other potential alternatives not evaluated in the DEIS and subsequent NEPA documents.

After reading the report, if you and/or your staff would like to discuss the TPD report, I will arrange a meeting. Also, if you would like the opportunity to discuss the TPD report directly with its staff, I could arrange for the TPD project manager to attend that meeting. Please let me know.

If there are any questions regarding this report, please call me at 617-918-1628.

Sincerely,



Matt Schweisberg
Office of Ecosystem Protection

Enclosure

November 13, 2002

Mr. Edgar T. Hurle, Director
Environmental Planning
Bureau of Policy and Planning
Connecticut Department of Transportation
P.O. Box 317546
Newington, CT 06131-7546

Dear Ned:

This letter concerns ConnDOT's *Statement of Wetlands and Wildlife Habitat Block Impacts and Compensation Plan for the Route 11 Corridor* ("the Statement and Plan"), handed out at our meeting at your office on October 2, 2002. EPA appreciates the opportunity to review these documents and provide this initial reaction.[1]

We are pleased that the Statement and Plan addresses all three classes of impacts–direct, indirect, and secondary. We also appreciate that ConnDOT used specific methodologies to quantify indirect and secondary adverse impacts. Moreover, we understand that the Plan is preliminary–ConnDOT intends it as an initial proposal to generate discussion. As explained more completely below, we believe that due to certain flaws in the assumptions and methodologies employed, the Statement and Plan markedly underestimates the adverse impacts for all three classes of impacts; as a consequence, this initial proposed compensation plan, even if implemented fully, would be seriously deficient if the goal is to provide a meaningful reduction of and compensation for the significant adverse impacts of the Route 11 project. In the interest of moving the discussion forward, we focus below is on major issues and concerns. We would be happy to provide more detailed comments or analysis if that would be helpful.

Impact Assessment

Direct and Indirect Impacts. Based upon his field visit of November 5, 2002, Vern Lang of the USFWS informed us that several streams and wetland areas may not have been identified in the middle portion of the alignment (located between habitat blocks 1 and 2). Vern found a number of perennial and intermittent streams and a few wetland areas during his field visit that appeared

[1]As you know, EPA has in other correspondence voiced doubt about the environmental acceptability of the Route 11 project and identified the proposal as a candidate for a §404(c) action based on serious concerns about the significance of impacts and the analysis of alternatives. This letter neither alters nor further addresses those issues and pertains only to our review of the Statement and Plan.

not to be identified on the detailed maps handed out at the October 2nd meeting (see USFWS letter on the Statement and Plan for a complete description of his field observations on this point). This issue needs to be addressed to determine if, in fact, resources were missed and need to be delineated and assessed.

Table 1 in the Statement lists the various functions and values of wetlands to be directly affected and quantifies the extent of wetlands that provide these functions and values. However, the Statement addresses none of these functions and values qualitatively. We recognize that the DEIS provided a generic description of the functions and values found in the Route 11 corridor, but the Statement should provide a reasonably detailed description of the specific functions and values of the wetlands and streams that will be directly affected by the proposed highway. Also, the Statement mentions that included in the 16.8 acres of wetlands to be directly affected are 10 perennial streams. Numerous intermittent streams run throughout the preferred alignment and these should be included in the evaluation as well.

Since our first comment letter in May 1999 on this project, EPA has consistently recommended that comprehensive inventories of flora and especially fauna be performed throughout the Route 11 corridor, not just within the confines of the preferred alignment. These inventories have not occurred, nor have studies of wildlife movement patterns been conducted which are necessary to optimally locate impact minimization features such as split barrels/widened medians, bridging, overpasses and underpasses for wildlife. We believe such minimization measures is the only realistic way to reduce the severity of indirect impacts (neither wetland creation nor land preservation is effective in this regard) and thus this dimension should be pursued both aggressively and rigorously. An especially concerted effort to minimize impacts should be undertaken in habitat blocks #1 and #2 by increasing the permeability of the road to wildlife through strategically placed overpasses and underpasses for animal movement.

The seasonal pool inventory[2] is informative while also illustrating a problem in the approach employed for assessing indirect and secondary adverse impacts: ConnDOT first establishes a narrow physical limit for conducting inventories of aquatic resources and the associated plants and wildlife, then evaluates the potential effects of the proposed highway on those resources and the plants and wildlife within those boundaries. Rather, the inventories should be conducted widely throughout the entire corridor first which then allows a fully informed evaluation of indirect and secondary adverse impacts be performed. The seasonal pool inventory should have extended outward from the edge of highway clearing on the order of 1,000 to 2,000 feet, the distance that highly dispersive pool species such as wood frog and red-spotted newt (both found in the pools during the inventory) may travel (well documented in field studies of migration and dispersal distances; see Berven and Grudzien, 1990; Healy, 1975; and Gill, 1978). The 500 feet

[2]We have several specific comments about the Draft Seasonal Pool Inventory and Evaluation which we could provide at a later date.

distance used by ConnDOT both for the inventory and for an upland habitat zone around pools is too limited for a complete sense of the adverse impact likely to occur.

With respect to indirect impacts, we agree that ConnDOT's use of a 1,600 feet zone on either side of the proposed highway is reasonable (but not so for an inventory of resources, as noted above). However, ConnDOT's theory that only 217 acres of the habitat blocks should be considered as adversely affected by the highway appears to rely on unsubstantiated assumptions. We are troubled by ConnDOT's premise that the range and scale of adverse effects of a highway upon aquatic resources effectively equate to those of residences and small country roads, and that the severity of adverse effects are uniform regardless of distance from the source of disturbance, be it highway, small country road or residence. The scientific literature documents these distinctions (see our prior letters on this project as well as on the CT Route 6 project).

Another concern with the approach described in the Statement and Plan is that it discounts the possibility that the highway could cause additional adverse impacts in areas that may have suffered some fragmentation effects already from residential development or small roads. Such an approach would only make sense for areas that have been rendered devoid of any value due to other influences, a situation which does not generally apply in the corridor. For example, if we understand the approach taken in the Statement and Plan, a wetland area located 1500 feet from the edge of a residential development and 200 feet from a new Route 11 would not be considered to suffer any indirect effect from the highway. However, such a conclusion would, on its face, be wrong and points to a problem in the underlying method of assessing the indirect impacts.

In summary, assuming an equal level of impact over 1600 feet would overestimate the harm in some areas and underestimate it in others. The assumption that disturbances which vary markedly from each other (e.g., a small road versus a major highway) have the same reach and magnitude of indirect impact is not valid in our view. And assuming that an area subject to some form of indirect effect currently could not suffer further damage from the highway also does not appear realistic. The net effect of these methodological difficulties is to underestimate the full extent of the indirect impact. Therefore, after the inventory of aquatic resources, including flora and fauna, as described above, we believe that ConnDOT should revise its assessment of indirect impacts taking into account these real world differences (even then we appreciate that the analysis may not be highly precise but it would be more accurate). Moreover, the re-evaluation should include a qualitative assessment of indirect adverse impacts–that is, one that describes in narrative form how the highway will actually impact the functions and values of the affected aquatic resources.

Secondary Impacts. ConnDOT's analysis of secondary impacts acknowledges that consideration of secondary impacts is an important part of the decision-making surrounding this transportation project. Recent studies have shown the strong connection between transportation and land use, and the potential that transportation projects have for inducing secondary impacts such as sprawl, so we applaud ConnDOT's recognition of this issue. However, we believe ConnDOT's analysis

of induced development is too limited and does not provide sufficient information to describe fully the potential secondary impacts of the project. Although we believe that ConnDOT intends to disclose fully the complete suite of impacts from the Route 11 project, we found the analysis problematic in three respects:

1. The analysis is based on unsupported assumptions about the magnitude and types of predicted growth as well as that travel time savings of 2-7 minutes will not have a significant impact on growth; ConnDOT should explain the basis for those assumptions.

2. The analysis area for induced growth is too small; growth is likely to be induced well beyond a one-mile radius around the interchanges, and even beyond the four towns that border the proposed highway.

3. There is no quantitative data regarding the expected changes in population, housing, or employment over the next 20 years (design year 2020), or assessment of the secondary environmental impacts of that induced growth. Examples of such environmental impacts include water quality impacts from runoff; wetland impacts from direct fill and upland development; fragmentation of habitat; and demand on water supplies.

The analysis asserts that because residential development is continuing and because there are no appreciable reductions in commute time (see comments below), Route 11 will not induce additional growth. This assertion needs to be substantiated before any analysis can be based upon it. The question is not whether growth will continue in southeastern Connecticut, but whether the highway will induce growth above and beyond that which will occur without the investment. In other projects, highways have been shown to change the amount and location of growth. For example, in the I-93 corridor in NH, a study commissioned by the NH Department of Transportation has shown that widening an 18-mile segment of I-93 from Manchester to the Massachusetts state line will result in approximately 41,000 more people and 22,000 more jobs in the study area in the year 2020 *above and beyond* the anticipated growth if the highway is not widened. Whether the same pattern of increase would occur in Connecticut cannot be determined without an adequate analysis.

The analysis argues that interchange-related development is confined to industrial and commercial development. We see no evidence for this, and the basis for making this assertion should be presented and validated. Although land in the immediate vicinity of the interchange may be more appealing for industrial and commercial development, it is unlikely that residentially-zoned lands within a mile of an interchange (and beyond) will not be under additional development pressure. Absent some substantive justification for considering these residentially-zoned lands, which occupy the majority of the one-mile radius, as a “development limitation,” analysis should be broadened to include residential development.

The document suggests that the overall reduction in travel time if Route 11 is completed is expected to range from 2.3 to 7.4 minutes, and that these savings would not be a substantial

catalyst for new residential growth. The basis for this conclusion should be provided since time savings of this magnitude are believed to have the potential for moderate to strong changes in land use (Oregon DOT, 2001, *A Guidebook for Evaluating the Indirect Land Use and Growth Impacts of Highway Improvements*.) Further, the analysis indicates that one factor in inducing residential growth is a reduction in commute time to employment centers. Location of

employment centers certainly is a factor in residential growth, but since the majority of trips are for purposes other than work, the analysis should consider more than commute trips.

We are concerned that the analysis underestimates the potential for growth because of the assumption that induced growth impacts from the highway will be limited to within a one-mile radius of the interchanges. Indeed, other state Departments of Transportation have found impacts far beyond a one-mile radius. In the I-93 project cited above, NH DOT delineated a study area that included 29 communities stretching from northern Massachusetts to Concord, NH, and at least two towns "deep" on either side of the road. It neither restricted its analysis to the five communities that border the widening project, nor to a one-mile radius around the interchanges (also, it did not restrict the analysis solely to commercial development, as discussed above). Whether induced growth in southeastern Connecticut would follow the same pattern as in New Hampshire cannot be determined unless ConnDOT conducts a similar analysis without arbitrary constraints of distance and development type. EPA is willing to work with ConnDOT to identify a suitable method for conducting such an analysis.[3]

The secondary impacts assessment does not evaluate the potential changes in population, housing, and employment between now and 2020, nor does it evaluate the secondary environmental impacts of the induced growth. Impacts that should be evaluated include water quality impacts from runoff; wetland impacts from direct fill as well as upland development; fragmentation of habitat; demand on water supplies; and other related issues. Development leads to an increase in impervious surfaces such as rooftops, roads, and parking lots; these impervious surfaces affect the quantity and quality of stormwater runoff that reaches water bodies. In a national runoff study, a 1-acre parking lot was found to produce a runoff volume almost 16 times as large as the runoff volume produced by an undeveloped meadow. In addition to changes in hydrology (and reduced groundwater recharge), development can result in increased pollutant loadings (including nutrients),and increased water temperature. In addition to impacts on streams and lakes, development can have secondary impacts on wetlands. EPA's 404(b)(1) guidelines require an analysis of cumulative impacts, including previous wetland fills and likely future wetland losses from secondary impacts. The CEQ defines cumulative impacts as the

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[3] EPA and FHWA plan to cosponsor training sessions in the next few months on the range of methods available for analyzing secondary impacts, and using the NH I-93 "Delphi process/Expert Panel" as a case study. One of these sessions is planned for Hartford and we would welcome attendance by ConnDOT, CT office of FHWA, the MPO, and others at this training, which will be conducted by Sam Seskin of Parsons-Brinckerhoff.

additive environmental impacts to a region combining past, present, and reasonably foreseeable future actions. ConnDOT has a responsibility under NEPA to disclose impacts on wetlands from secondary development induced by the project.[4]

Compensation Plan

As explained above, EPA believes the Statement and Plan considerably underestimates the extent and severity of direct, indirect and secondary adverse impacts to aquatic resources from the proposed Route 11 project. Correspondingly, the preliminary compensation plan falls far short of fully mitigating those adverse impacts. In particular, the Plan relies on wetland creation to compensate for direct impacts. Wetland creation is the riskiest type of compensation, especially for forested and shrub wetlands and vernal pools, the types of resources affected in this instance. Even where the structure of the wetland can be successfully replicated, it may be impossible to recreate the landscape setting pivotal to the value of the lost wetlands. Creation of forested wetlands rarely has been documented as successful in replacing the suite of lost and degraded wetlands functions and values. It requires especially lengthy monitoring periods (> 10 years) and complex monitoring plans to properly track establishment and progress. In addition, a few of the hydrological (e.g., ground water discharge/recharge) and biogeochemical (e.g., production and export) functions of the lost and degraded forested and shrub wetland systems are likely uncompensable. Where, as may be the case here, one to one acreage of attempted wetland replacement would fall short of replicating for the lost functions and values, a higher ratio of compensation should be considered.

EPA will evaluate further the land preservation component of the compensation plan both in terms of extent and location once a better grasp of the full breadth of the project's impacts becomes clear. At this juncture, we emphasize that the underlying purpose of the land protection aspect is twofold: 1) to preserve habitat of sufficient size and quality to protect the wildlife populations which rely upon the aquatic resources in the corridor and 2) To protect valuable aquatic resources that are vulnerable to development. Both of these entwined objectives aim toward reducing the potential for the project to contribute to significant degradation when viewed in the context of cumulative impacts.

Conclusion

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[4]An issue relevant to ConnDOT's broader NEPA review (though not necessarily from perspective of compensation for aquatic resource losses) evaluation should be done of the potential for negative impacts on the urbanized areas of southeastern Connecticut that are losing population, and on existing commercial centers. Studies have shown that highways influence land prices, population, and employment changes near the project, and the land use effects are likely at the expense of losses elsewhere. Transportation access is only one of several factors that has led to the decentralization of US metropolitan areas, but the potential impacts of Route 11 on urban areas such as Groton, New London, and Norwich that are losing population should be studied and disclosed.

The explanation above underscores EPA's long-running, well-documented reservations about the Route 11 project. The corridor contains outstanding water and wetland resources, and associated upland habitats, that provide an array of highly valuable ecological functions. Attempting to compensate for significant impacts to such complex and valuable areas is a formidable and expensive task. However, we stand ready to assist ConnDOT should it choose to move forward

with a more comprehensive inventory of aquatic resources and with a re-evaluation of direct, indirect, and secondary adverse impacts.

Thank you for the opportunity to comment on this aspect of the Route 11 project. Please feel free to call either Matt Schweisberg at 617-918-1628 or me at 617-918-1543 if we can provide additional information or discuss any aspect of this letter.

Sincerely,

Douglas A. Thompson
Office of Environmental Stewardship

cc: Chris Godfrey, USACE, Concord, MA
Vern Lang, USFWS, Concord, NH
Amy Jackson Grove, FHWA, Glastonbury, CT

References

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Tufts University, Medford, MA.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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BOSTON, MASSACHUSETTS 02114-2023

March 18, 2002

OFFICE OF THE
REGIONAL ADMINISTRATOR

Bradley Keazer, Division Administrator
Federal Highway Administration
628-2 Hebron Avenue, Suite 303
Glastonbury, CT 06033-5007

Dear Mr. Keazer:

Thank you for your February 19, 2002 letter regarding the Route 11 project and for providing the Federal Highway Administration's (FHWA) perspective about the issues raised in my November 8, 2001 letter to the U.S. Army Corps of Engineers. FHWA's letter provides its view with respect to whether or not the project complies with the provisions of EPA's §404(b)(1) guidelines, including matters relating to alternatives, significance of the impacts and mitigation. Let me assure you that EPA will consider fully FHWA's comments about those issues as we evaluate the project's compliance with the guidelines and determine our most appropriate course of action in this case.

Although it appears that we continue to see some important issues differently, we recognize the assistance that FHWA has provided to us thus far and thank you for the additional information contained in your February 19 letter. Moreover, we appreciate the willingness of your office to meet with us in the near future to discuss the issues of concern to EPA regarding project alternatives. We hope this meeting will advance our interest in understanding clearly the combined effect of technologically feasible improvements to the existing roadway in terms of the two key elements identified in the §404 basic project purpose (safety and efficiency). To the extent that FHWA believes that this information is already contained in the existing record, then that should only improve the prospects for clarifying the issue at the upcoming meeting. A clear picture of how the existing road would function in terms of safety and efficiency after feasible improvements were made, enables us to reach a more informed and accurate judgment regarding the question of practicability in light of the criteria contained in the guidelines (costs, logistics, existing technology and basic project purpose). We know that you have been making preparations for this meeting and appreciate those efforts. My staff will continue to be in touch in order to help ensure an agenda that will be mutually beneficial and confirm a date when both agencies can meet. In addition, we will review the information contained in your February19 letter prior to the meeting as that may help narrow the issues for discussion.

We believe it would be useful for us to reply to the various points raised in your letter in order to identify areas of agreement and address those issues we continue to see differently. However, since the upcoming meeting may help shed light on several of the questions under discussion and other sessions have been scheduled (e.g., regarding mitigation), we think it would make more sense to have the benefit of those meetings before providing a more complete response.

Thank you for your continued assistance during our review of this important project. We look forward to meeting with your staff soon. In the meantime, should you have any questions, do not hesitate to call me or have your staff contact Douglas Thompson at (617) 918-1543.

Sincerely,

Robert W. Varney
Regional Adminstrator

cc: Col. Brian Osterndorf, Division Engineer, Corps of Engineers
James Brynes, Acting Commissioner, CTDOT
Congressman Rob Simmons
Art Rocque, Commissioner, CTDEP
Mike Bartlett, Field Supervisor, USFWS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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BOSTON, MASSACHUSETTS 02114-2023

November 8, 2001

Brian E. Osterndorf, Colonel
District Engineer
New England District
U.S. Army Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

Dear Colonel Osterndorf:

Thank you for the copy of your September 17, 2001 letter regarding the Corps' initial determination of the least environmentally damaging practicable alternative ("LEDPA") in keeping with the New England District's highway methodology. The letter followed five sessions held by the interagency work group (a.k.a. the "streamlining committee") during the summer, and the September 4, 2001 meeting of the Southeastern Connecticut Council of Governments in Norwich, which we both attended. While we do not agree with all aspects of the Corps' letter, we appreciate the care you and your staff have taken to coordinate with us during the past few months and look forward to continuing our work together as we move ahead with the regulatory and environmental review of the Route 11 project. At this juncture it might be helpful to review where EPA stands with respect to some of the key issues involved with this case, indicate areas where we believe further work is warranted and outline directions the regulatory process may take from this point.

As you know, EPA has repeatedly expressed serious concerns about the significant adverse environmental impacts of the Route 11 proposal, the fact that less damaging approaches to address the project purpose are not being pursued, and the difficulty of developing effective and permanent mitigation measures. EPA's reviews to date have led the agency to conclude that the Route 11 proposal, at least as currently formulated,[1] would not comply with the §404(b)(1) guidelines because it would cause significant and potentially avoidable adverse impacts, and therefore should be ineligible to receive a Clean Water Act permit. EPA also had identified the Route 11 case as a candidate for review under its §404(c) authority. We discussed the bases for these conclusions in letters of May 21, 1999 and April 20, 2001, and need not repeat them here.

As the NEPA and §404 process moves ahead, it will be important to ensure that a complete and accurate record exists for evaluation by both agency decision makers and the public. This will

[1]For purposes of this letter, the Route 11 proposal refers to a proposed highway on new alignment including Alternative E4m and its variants, V1 and V3.

not only improve prospects for better regulatory decisions but also help prevent problems which could arise from deficiencies in the record. To that end, we wish to identify remaining issues which we believe need further work during the coming months. The following is a summary of those issues, related to the evaluation of alternatives and the development of mitigation proposals.

With regard to the evaluation of alternatives, we recognize that the Connecticut Department of Transportation ("CTDOT"), the Federal Highway Administration ("FHWA"), and the Corps have all spent time exploring upgrade concepts. Nevertheless, we believe several important issues have not been fully addressed. We intend to discuss these issues with the transportation agencies in the near future. The areas we believe should be considered more completely include:

◆*Update and improve traffic data where possible.* FHWA and CTDOT, responding to public concerns, recently incorporated new direct traffic count data for the Route 2/2A/32 project. These data resulted in a downward adjustment in traffic projections for that corridor. Since Route 2 traffic volumes were relied upon to estimate summer conditions for Route 82/85/11, we believe those summer projections should be updated to reflect the newer Route 2 data.

EPA is disappointed that FHWA and CTDOT chose to ignore EPA's request that actual traffic counts be conducted in the Route 82/85/11 corridor in the summer (we made this specific request in our April 20, 2001 letter). According to the DEIS, traffic counts in the nearby Route 2/2A corridor were used as the basis for extrapolating summer weekend conditions, which appear to be the "worst case scenario" for the Route 82/85 corridor. While we understand the use of analogous road systems for traffic modeling, we are concerned that the Route 2/2A corridor is a more heavily traveled road system which may not accurately reflect conditions in the Route 82/85 corridor.

◆*Present level of service (LOS) and volume to capacity (V/C) ratio information.* We believe it would be useful if the LOS and V/C data were presented for the subsegments between key intersections such as those which exhibit the greatest safety and capacity deficiencies. (The Route 2/2A/32 DEIS provides a good example of this type of documentation for a Connecticut highway project.)

◆*Analyze the aggregate effect of combining all reasonable roadway improvements.* The data developed thus far suggest that both capacity and safety problems on the existing road may be localized, perhaps at specific intersections or other discrete trouble spots. We recommend an evaluation of the effect of all intersection and road improvements (e.g., turning lanes, optimizing signals, improved road geometry and other TSM measures) being applied concurrently throughout the corridor to see if such an approach would provide meaningful improvements to safety and capacity.[2]

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[2] Evaluations of this type have contributed in a number of cases regionally and nationally to improving existing roads as a practicable means of addressing safety and capacity concerns. And within

◆*Present a comparative evaluation of potential accident rates and severity.* As you know, the need for improved highway safety was emphasized by local officials at the September 4th meeting. We continue to seek a specific evaluation of potential accident rates and severity that would result on a new freeway. We also seek a comparison of the potential accident rates and severity on a new freeway combined with the potential accident rates and severity on the existing roads once the freeway is built, to the potential accident rates and severity of an upgraded Route 82 and 85.

◆*Present more complete information on project benefits and needs.* Better explain state-wide and regional benefit/need for a Route 11 highway extension, addressing economic development, transportation, emergency response, etc.

Any highway on a new alignment in this corridor raises a number of important mitigation issues. We reiterate that the project would cause significant adverse impacts to the aquatic environment. In keeping with the approach both of our agencies have adopted for other projects which cause significant impacts, mitigation for the Route 11 proposal would need to meet two key standards. First, the mitigation must incorporate all appropriate and practicable steps to lessen and compensate for impacts as required for all permit cases. Second, the mitigation must prevent or offset enough environmental damage so the impacts of the project are no longer significant (i.e., be able to achieve compliance with §230.10(c) of the guidelines). Where, as here, the proposal involves severe impacts to high quality resources, including difficult to mitigate indirect effects, the project proponents face a formidable task. The challenge for the applicant will be to develop an approach which would compensate sufficiently for the lost and damaged aquatic resources and be reasonably assured of success – the bases for a credible finding that the adverse impacts are no longer significant.

While we expect the discussion of mitigation to be an iterative one which becomes more specific during the coming months, we would like to highlight several areas for further work and future discussion:

◆*An accurate tally of all direct impacts.* Not all of the impacts for a highway on new alignment have been sufficiently determined – the planned interchanges at Route 161 and I-95 have yet to be designed conceptually, so a reasonable estimate of the direct impacts to wetlands and other waters has not yet be made.

◆*Conduct appropriate wildlife field surveys.* As we have stated in earlier comments, we believe it is essential that a corridor-wide wildlife survey be undertaken to document properly the wide variety of species present in the study area. This will be important for understanding the full extent of impacts from the road and to determine the appropriate target species for mitigation measures. Moreover, mitigating adverse impacts to animal

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Connecticut, for example, upgrades to Routes 2/2A/32 and Route 6 (Brooklyn section) were selected to improve safety and capacity. Indeed, the portion of Route 85 south of I-395 was upgraded several years ago.

movement requires field surveys to determine the daily and seasonal movement patterns and preferences of the target species in order to properly locate physical structures such as overpasses and underpasses. If these surveys are initiated soon, they can be completed within a reasonable timeframe which will not cause a delay in the project schedule.

◆*A realistic projection of likely secondary impacts.* In order to inform development of the compensatory mitigation measures, especially those related to land protection, a projection of likely secondary impacts (i.e., those additional direct and indirect impacts to aquatic resources which would arise or be accelerated by the presence of the highway) should be made.

◆*Development of measures to minimize adverse impact.* Mitigation for the significant adverse effects of a new highway needs to begin with an aggressive effort to minimize the adverse impacts through a variety of carefully developed design features intended to reduce direct and indirect impacts. An especially concerted effort to minimize impacts should be undertaken in habitat blocks #1 and #2. Direct impacts may be reduced by slight shifts in alignment to reduce filling of aquatic resources, adding bridges and oversized culverts, increasing the span of bridges to allow movement of wildlife that are water resource dependent, reducing median widths and steepening side slopes. Indirect impacts are more difficult to minimize but would be best attempted by increasing the permeability of the road to wildlife through strategically placed overpasses and underpasses for animal movement. In some cases, efforts to reduce direct and indirect impacts may work at cross purposes and would need to be reconciled.

◆*Details of the Greenway proposal.* At the September 4, 2001 meeting, Congressman Simmons and local officials emphasized that the Greenway is an important part of the mitigation package for the proposed highway. We recognize that the Greenway Commission is in the early stages of its formation. In order for Greenway lands to be considered as part of any mitigation package, we soon will need pertinent information such as: the precise location of the Greenway; the time frame for completion; the types of land uses that would be permitted; how property will be acquired if there are unwilling sellers; and source(s) of funding. As these and other details become available, they should be shared.

◆*Current status of land protection measures.* An identification and description of natural resource areas that are currently protected, and such areas which are planned for protection through outright purchase, easements, or other means would help inform the evaluation of a comprehensive mitigation proposal.

◆*Future land use development and protection issues.* We recognize that factors other than the proposed Route 11 project may have a greater affect on the long-term health of the natural resources in the project area. It would be beneficial to the planning process and any final mitigation package to a) see likely build out scenarios for the surrounding towns both with and without the highway so that long range future growth and development effects can be analyzed, and b) develop specific criteria to identify areas for

protection. General considerations with respect to the second issue include: areas which will benefit the wildlife populations which would be adversely affected by a new highway (including from development that might be catalyzed by a new road); parcels of high resource value; natural resources at risk from degradation, particularly from unregulated activities; and areas which adjoin or connect to other already protected lands. Use of these and other ecologically based criteria would have significant implications for the shape (both conceptually and literally) of a land protection plan. For example, land immediately adjacent to a new limited access highway may not be a high priority for protection since such areas would be of diminished value and reduced risk for development (except near interchanges). In any event, to qualify as an useful component of an overall mitigation plan, it is essential that the land protection measures ensure effective and permanent protection of the resource and be in place before any activity regulated under the §404 permit begins.

Where EPA believes issuance of a §404 permit could result in certain types of unacceptable adverse impacts to the aquatic environment, the Agency has the authority to conduct its own evaluation pursuant to the §404(c) procedures. Were such a review undertaken, the outcome could prevent issuance of a permit or allow it to be issued subject to restrictions intended to prevent unacceptable adverse impacts from occurring. In determining whether or not such a review is appropriate in the Route 11 case, we intend to focus on several considerations:

◆*Alternatives*.[3] One that merits consideration is a phased approach whereby improvements are made to the existing road network, their efficacy assessed, and the need for a new alignment reconsidered based on agreed upon criteria. If the improvements address the basic project purpose to a sufficient degree, a resolution would be achieved which incurs far less environmental and financial cost. If the reevaluation shows the need for a new road, then the project on new alignment would proceed. Reasonable safety and level of service improvements to the existing roads would, it seems, be worthwhile in any case and the evaluation period could also be used to develop a comprehensive mitigation program in the event that a new highway proves necessary.[4] State and federal environmental and transportation agencies agreed upon a similar

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[3]The Corps recently evaluated the freeway alternatives known as E4m, V1, and V3 and found all three choices to be practicable. In terms of damage to the aquatic environment, the Corps determined E4m to be the most harmful but found no meaningful difference in environmental impact between alternatives V1 and V3 and concluded that either could be considered the LEDPA. EPA continues to believe that an upgrade of the existing road appears practicable and qualifies as the LEDPA. Among the freeway alternatives, we agree that alternative E4m could not be the LEDPA as it would be far more damaging than any of the upgrade options and also would cause greater environmental harm than alternatives V1 and V3. Between alternatives V1 and V3, we believe that alternative V1 would be meaningfully less damaging, especially from a long term perspective, for the same reason that alternative V3 would be less damaging than E4m: it would be further out of habitat block #2.

[4]In fact, we understand that certain improvements to Route 82/85 have been scheduled for some time but have been delayed in moving forward.

approach in the Conway bypass project in New Hampshire and we believe the circumstances here make it a reasonable approach to consider.

◆*Extent of minimization.* A second consideration will be the extent to which effective measures to minimize impacts become incorporated into any final project design. As noted above, it is essential that such measures be pursued vigorously; the level of effort to minimize impacts should be commensurate with the extraordinary quality of the environmental resources at risk. Particular attention should be directed to achieving a meaningful reduction of impacts in habitat blocks #1 and #2. While we recognize that several legitimate social, engineering and environmental factors complicate efforts to reduce impacts in these blocks, we believe a particularly concerted attempt is warranted given the quality of the resources at risk.

◆*Extent and value of mitigation measures included as conditions of a §404 permit.* In particular, we plan to assess to what degree any such proposed compensatory mitigation would offset the significant direct, indirect and secondary impacts of the highway project. While we appreciate that a greenway which runs adjacent to the highway may have certain benefits (e.g, a visual and noise buffer), it is unlikely to be particularly effective from an ecological standpoint in offsetting the project's significant impacts unless it were significantly expanded in important areas to (a) link or enlarge existing protected areas and (b) permanently protect large tracts of watershed.

We appreciate the efforts of CTDOT, local, regional, and federal officials, and other interests to reduce the impacts of the new highway. In particular, we commend the streamlining committee for working together to find as much common ground as possible. While that process resulted in some improvements to the project from an environmental standpoint, there are many remaining issues which need to be addressed as soon as possible. We hope that additional efforts could lead to a project which we believe would meet regulatory requirements or at the very least reduce the likelihood of a §404(c) review. We look forward to discussing the issues of concerns outlined above as well as other options that may be helpful with you and others involved with the project during the coming months.

Sincerely,

Robert W. Varney
Regional Administrator

cc: Congressman Robert Simmons
Brad Keazer, FHWA
Ned Hurle, CTDOT
Art Rocque, CTDEP
Mike Bartlett, USFWS

Steve

1 Carr Copy – Send to Chris Godfrey – ETC Rowe – return original

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

April 20, 2001

OFFICE OF THE
REGIONAL ADMINISTRATOR

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To Ned Hurle	From Peter Selman	
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Re: Status of the Route 82/85/11 Project

Dear Colonel Osterndorf:

Thank you for helping to arrange our March 30, 2001 meeting and site visit to view the Route 11 corridor. I found the visit useful and revealing, and I appreciate the Corps' participation and our productive discussion during that tour. I write now to provide EPA's perspective regarding the practicability of the upgrade alternatives for the Route 82/85/11 project, and to affirm our position on the significance of adverse impacts that would result from a full-build, new alignment roadway.

After a careful review of the information presented in the record, EPA believes that the upgrade alternatives should not be eliminated from consideration during the §404 review process. The information developed to date leads us to believe that one or more types of upgrade alternatives would be practicable and less environmentally damaging. At the very least, we conclude that the applicant has failed to rebut the regulatory presumption that the less environmentally damaging upgrade alternatives meet the basic project purpose and are practicable. Therefore, we do not concur with the Corps' March 9, 2001 determination that all of the upgrade alternatives are impracticable. It is unclear whether the Corps based its determination on the ability of upgrades to address existing and future safety and traffic capacity deficiencies in the corridor (i.e., to meet the basic project purpose), or whether upgrades were removed from consideration for other reasons, such as a perceived need to separate through and local traffic, to construct a link in the National Highway System, or to avoid potential social impacts. As explained in more detail in the attachment to this letter, we do not believe any of these issues in this case form the basis for ruling out all upgrade options. In addition, we continue to believe that there should be a complete and thorough evaluation of the various upgrade alternatives. Such an evaluation is important not only because, in our judgment, none of the full-build alternatives is the least environmentally damaging practicable alternative (LEDPA), but also because we believe that construction of any of the full-build alternatives on new alignment would cause or contribute to significant degradation of the aquatic ecosystem and cannot receive a permit. The basis for this belief is also discussed in more detail in the attachment.

The full-build new alignment alternatives would not comply with the §404(b)(1) guidelines for two independent reasons: under 40 C.F.R. §230.10(a), none represents the LEDPA; and, under 40 C.F.R. §230.10(c), each would cause or contribute to significant degradation of the aquatic ecosystem. Hence a §404 permit cannot be issued for any of the full-build new alignment alternatives described in the DEIS or the CTDOT's Impact Minimization Study report. EPA considers any of these full-build alternatives a strong candidate for action under our CWA §404(c) authority.

As I mentioned during our March 30th field visit, I agree with your recommendation that the Corps, EPA, and FWS meet with the CTDOT and FHWA to discuss remaining alternatives. My staff and I are ready to assist you with this effort to explore whether it is possible to find an environmentally acceptable approach in this case. Please contact me or have your staff call Matt Schweisberg at 617-918-1628 to arrange this meeting or to discuss this letter.

Sincerely,

Ira W. Leighton,
Acting Regional Administrator

Attachment

cc: J. Sullivan, CTDOT
A. Rocque, CTDEP
D. West, FHWA
M. Bartlett, USFWS
C. Godfrey, USACE
J. Goodin, Wetlands Division, EPA
Board of Selectmen, Salem, Montville, East Lyme, Waterford

ATTACHMENT

I. A Full Build Alternative Does Not Comply with the §404(b)(1) guidelines

The Clean Water Act (CWA) §404(b)(1) guidelines prohibit the discharge of dredged or fill material if there "is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem so long as the alternative does not have other significant adverse environmental consequences." [40 CFR §230.10(a)]. This fundamental requirement of the §404 program is often expressed as the regulatory standard that a permit may only be issued for the "least environmentally damaging practicable alternative" or LEDPA. "Practicable" is defined as "available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall [or, basic] project purposes." [40 CFR §230.3(q)]. For the Route 11 project, the Corps determined, and we concurred, that the basic project purpose is "to address existing and future year (2020) safety and capacity deficiencies in the existing Route 82 and 85 corridor."[1] For "non-water dependent" activities located in wetlands or other special aquatic sites, such as this project, the guidelines presume that practicable alternatives exist and that such alternatives would be less damaging to the aquatic environment. The burden to demonstrate compliance with the alternatives test and rebut the presumption rests squarely with the applicant, in this case the Connecticut Department of Transportation (CTDOT).

A. No comprehensive analysis of upgrade alternatives has ever been conducted.

From the outset of the §404 review process for this project and up to the present, including in our comments on the Public Notice in May 1999 and on subsequent CTDOT and FHWA reports, EPA has emphasized the need for a comprehensive analysis of two- and four-lane upgrades of the existing road system. For any analysis of upgrades to comply with the requirements of the

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[1] During the §404 review process, CTDOT has identified a number of goals that would ideally be achieved by the preferred alternative, such as the separation of through and local traffic, the completion of national highway system linkage, and the desire to avoid community impacts and maintain a rural character in the existing road corridor. While these goals have merit, in this case they are not directly relevant to whether a given alternative is practicable under the §404(b)(1) guidelines. For example, the separation of through and local traffic, while perhaps desirable from a transportation standpoint, is not essential to meet the basic project purpose. There are, of course, numerous safe and effective highways throughout the country which carry both through and local traffic. More importantly, as discussed elsewhere in this letter, we believe the record shows that upgrade measures would meet the basic project purpose without a separation of through and local traffic. Likewise, completing a link in the national highway system may be a desirable transportation outcome, but is not part of the basic project purpose in this case. And while it is important to consider potential community impacts from *all* alternatives, in this case, the impacts from the various alternatives, including upgrades, do not exceed the normal range for highway projects of this nature. Furthermore, it should be noted that, according to the DEIS, the alternatives on new alignment and the upgrade alternatives would affect a similar number of residential and commercial structures.

alternatives test under §230.10(a) of the guidelines, it must evaluate the effects of the combination of **all** reasonable improvements being **concurrently** incorporated into the design. Specifically, EPA requested that CTDOT and FHWA conduct an evaluation of the various upgrade alternatives, with all the traffic and safety improvement features included (e.g. fully upgraded intersections with turning lanes, widened roadway shoulders, coordinated/optimized signalization, roadway geometry improvements, consolidated access points, etc.), as opposed to conducting analyses for individual improvements, for just a few at a time, or in some cases not at all. We do not see how comprehensive upgrade designs can be determined to be impracticable until such designs are actually analyzed. In the absence of such an analysis, we believe CTDOT has not adequately rebutted the presumption that one or more of the upgrade alternatives is practicable.

This is most strikingly illustrated by the failure of CTDOT to incorporate even the most basic design improvements at the intersection at Salem Four Corners (Route 85 and 82). According to FHWA, during the period between 1995 and 1999, there were 28 accidents at this intersection, one of the highest accident rates of any intersection in the corridor. Also according to FHWA, the vast majority of these accidents were turning related, and occurred on the northbound leg of Route 85 [1]. Thus, installing properly designed and signalized turning lanes should result in a safety improvement for this intersection. Furthermore, on page 10 of the FHWA's *Response to EPA's Questions on the Practicability of the Community Sensitive Upgrade and Upgrade/ Widening Alternatives*, it states that

> We found that providing two (2) left turn lanes for the Northbound Route 85 leg of the Route 82/85 intersection would provide an overall Level of Service of "B".

Even though the addition of turning lanes, considered "minor geometric improvements" by FHWA, would directly address the basic project purpose by improving both traffic safety and capacity, this basic improvement was not included in the overall analysis of upgrades, nor were similar features ever applied to other trouble spots in the corridor as part of a comprehensive review of their combined effectiveness. Simply put, a fully upgraded road has never been properly evaluated, much less proven to be impracticable.

We appreciate the work that CTDOT and FHWA have done to date in evaluating the practicability of upgrade options and the responses that both transportation agencies have provided to EPA in response to questions we have raised. A few important issues remain unresolved and we recommend they be addressed in order to ensure that the upgrade alternatives have been adequately studied and so that both EPA and the Corps are able to make a fully informed decision. We highlight four areas here:

❑ CTDOT and FHWA may have used inappropriate design traffic volumes. Due to public comment reflecting a concern that FHWA and CTDOT had overestimated traffic volumes for the Route 2/2A/32 project, CTDOT and FHWA recently incorporated new direct traffic count data for that project. FHWA and CT DOT have now revised the traffic volume figures and

seasonal adjustment factors, resulting in a significant reduction of traffic projections in the corridor. Since Route 2 traffic volume estimations and seasonal adjustments were used to estimate summer conditions for Route 82/85/11, it is possible that summer traffic projections on Route 82/85/11 likewise have been overestimated. This possibility should be investigated.

❑ In addition to reevaluating the estimation of traffic volumes and seasonal increases for the Route 82/85/11 corridor, we strongly recommend that continuous traffic counts be conducted in the corridor this summer. Direct measurement would provide a much more accurate picture of the true traffic volume occurring in the corridor, rather than relying on estimates from limited local data or data from other road corridors.

❑ Level of Service (LOS) and volume to capacity ratio (V/C) data are presented only for large portions of the road corridor in question, rather than being broken down into subsegments between key intersections, such as those intersections which have exhibited the greatest safety and capacity deficiencies. A good example of the documentation of subsegment traffic data is the Route 2/2A/32 DEIS. EPA has requested but never received subsegment LOS and V/C data, which would allow a more focused analysis of the effectiveness of improvements at these locations, and provide a more accurate characterization of traffic flow in the corridor.

❑ In the DEIS and in subsequent reports, FHWA and CT DOT have characterized existing conditions on all of Route 85 (from Route 82 to south of I-395) as operating at LOS E (DEIS, Figure 4-13), despite the fact that average travel speeds throughout the corridor are at or above the posted speed limit, even during peak hour traffic (DEIS, Table 4-5). The speed limit data suggest that any delays causing inadequate LOS along Route 85 must be localized, presumably at poorly designed intersections or other trouble spots. This scenario is supported by the accident data, which clearly show the majority of accidents are either turning or rear end accidents occurring at a few intersections in the corridor. EPA has long believed that improving these intersections through the addition of turning lanes, optimized signalization, improved road geometry and other TSM measures could meaningfully address both traffic capacity *and* safety deficiencies in the corridor. However, the effect of this approach remains unclear since a comprehensive evaluation of traffic volume and safety incorporating these types of improvements for all deficient intersections has not been conducted.

B. The existing record contains information which suggests that upgrading Route 85 is practicable.

The portion of Route 85 from I-395 southward was widened to four lanes several years ago. While EPA recognizes that a full four lane widening of Route 85 may not be the preferred alternative, the existence of an operational widened segment of Route 85, connected to the segment under consideration for upgrade, provides tangible evidence that it is indeed **practicable** to widen Route 85. Continuation of the upgraded segment is plainly capable of being done from an engineering and cost standpoint, and would meet the basic project purpose, according to the information presented by CTDOT and FHWA in the Draft Environmental Impact Statement

(DEIS).

Specifically, the DEIS states that under the four lane widening alternative, "*roadway segment capacity and safety would increase substantially,*" and that "*volume to capacity ratios would decline to less than 0.40 for all segments of Route 85 except south of I-395*" (section 5 page 9 of the DEIS, emphasis added). This means that a four lane road would operate with traffic volume at less than half of the road's capacity for all of Route 85 above I-395. We therefore fail to see a basis for concluding that this alternative would not meet the basic project purpose of addressing existing and future traffic safety and capacity deficiencies. A "practicable" alternative is one which meets the basic project purpose and is feasible in terms of costs, logistics and existing technology [see 40 CFR 230.10(a)]. The agreed upon basic purpose is to "address existing and future safety and capacity deficiencies" and, as noted above, the DEIS states that under a four-lane widening, roadway segment "capacity and safety would increase substantially." As far as costs, logistics and existing technology go, none of these issues would appear to make a four lane widening impracticable. The cost of such an alternative is approximately $33 million, contrasted to a full build alternative, which would cost approximately $255 million, not including mitigation costs. And it is clearly practicable from a technical and logistical standpoint, since a widening was already successfully completed on Route 85.[2] It is therefore inappropriate to remove the four lane widening from consideration as the LEDPA.

Moreover, EPA believes that a full four lane widening may not be necessary to achieve the basic project purpose, and that a two lane upgrade with improvements including intersection upgrades with appropriate turning lanes, enhanced signalization, shoulder widening, and geometric improvements could address traffic capacity and safety deficiencies in the corridor. Such an alternative would presumably involve fewer takings and otherwise be preferable in terms of some of the concerns raised by the communities about improvements to the existing road. In any event, as we stated earlier, this kind of comprehensive upgrade model has never been fully analyzed, and the presumption that it is a less environmentally damaging, practicable alternative remains unrebutted.

We also think it may be useful to examine the Route 11 proposal in the context of how similar cases have been handled. For example, the Corps determined that a two lane upgrade is practicable for Route 2 in nearby North Stonington, a project with the same purpose in a similar, but more congested, road corridor. Route 2 from Preston to North Stonington is a facility similar to Route 85, located in and serving the same general area of the state, conveying traffic between Hartford and I-395, I-95 and the coast, having a combination of through and local traffic, and experiencing seasonal increases in traffic in the summer. Indeed, Route 2's traffic patterns are so

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[2]In some cases, our offices have agreed that an alternative is impracticable based on logistical grounds because it would entail major community disruption or property takings well beyond the normal range for highway projects. That is not the case here and would not form a legitimate basis for eliminating upgrade options from further consideration.

similar to the Route 82/85/11corridor that CTDOT and FHWA chose to use traffic data from Route 2 to estimate seasonal increases of traffic on Route 82/85/11 (although the Route 2 corridor experiences significantly higher traffic volumes).

In making its LEDPA determination for the Route 2/2A/32 project, the Corps considered several alternatives to achieve the basic project purpose, described in terms nearly identical to that of the Route 11 project as "to provide a safe and efficient transportation improvement solution to relieve traffic congestion and improve safety" in the corridor. The build alternatives considered for the Route 2/2A/32 project included a bypass of Route 2 on new alignment in North Stonington and a four lane widening of Route 2 in North Stonington. The Corps determined, however, that a two lane upgrade of this portion of Route 2 was a practicable alternative that would meet the basic project purpose, even though this portion of Route 2 (in fact, all of Route 2) has significantly greater traffic volume than the Route 82/85/11 corridor. In addition, the LEDPA selected by the Corps included either a two- or four-lane upgrade of the existing highway for the adjacent section of Route 2 in Preston, CT, deeming it a practicable and effective means to meet the project purpose.

In another example, at Route 6 in Brooklyn, CT, CTDOT is improving an existing road, rather than creating a new highway, as a practicable alternative to address traffic safety and capacity deficiencies. This is another two lane highway similar to Route 85, with traffic capacity and safety deficiencies, the presence of both through and local traffic, and a rural character where concerns about social impacts were taken into consideration in the design process. Although originally promoting construction of a road on new alignment to address safety and capacity issues, CTDOT decided to retain the existing two lane road, adding shoulders (with reduced width in sensitive areas), reducing curve radii, and improving site distances.

EPA believes the approach taken in these cases reflected a relatively comprehensive review of the record and a selection of a LEDPA based on the criteria established by the §404(b)(1) guidelines. We also agree that there have been cases, such as the Conway Bypass in New Hampshire, where upgrade alternatives were eliminated legitimately. In contrast, for the Route 82/85/11 project, we believe a careful and objective review of the record developed to date supports a conclusion that one or more upgrade alternatives should be considered practicable and, in any case, does not provide a basis for eliminating them from further consideration.

II. A Full Build Alternative is Too Damaging To Receive a Permit

From the earliest stages of project review, EPA expressed concern that the Route 11 project could be too environmentally harmful to receive a permit, a view which has been reinforced as we conducted a more detailed analysis. As first explained in our May 21, 1999, comment letter and technical attachment (which we incorporate here by reference) on the DEIS and §404 Public Notice, and reiterated several times in the ensuing two years, EPA believes that construction of any of the full-build alternatives on new alignment would cause or contribute to significant

degradation of the aquatic ecosystem. Over the last two years, my staff visited the corridor several times and examined the literature on the effects of roads on aquatic and terrestrial ecosystems. In addition, the knowledge and expertise gained from our experiences with the Connecticut Route 6 project inform us further on this subject, as the expected adverse impacts from a new Route 11 are similar in type (but in most respects far greater in range and severity). We remain confident that our conclusions regarding the significance of the impacts of a full-build project are correct scientifically and supported by the record.

A. The aquatic resources of the corridor.

Our March 30th visit to the project area provided you and your staff with a firsthand look at the exceptional quality of stream and wetland systems in the new alignment corridor. The extent and mixture of upland ridges separated by stream and wetland valleys, with vernal pools scattered across this landscape, are striking, especially for southeastern Connecticut. Though we did see that a few residential subdivisions and small roads mark this area, they appear to have had limited effect on the quality of this vast resource and the area remains a remarkable expanse of habitat with mostly high biological integrity.

The stream and wetland systems within the new alignment corridor are outstanding for their ecological integrity and broad range of functions. These functions stem from the mosaic of relatively undisturbed stream, wetland, and upland complexes in and adjacent to the project area. Field work by CTDOT's consultant documented that the Harris Brook and Willys Brook/Oil Mill Brook wetland complexes provide 12 of the 13 functions and values listed in the Corps Highway Methodology-Descriptive Approach. They documented all 13 for the Latimer Brook complex. Principal functions and values exhibited by these wetland systems include wildlife habitat; groundwater recharge/discharge; sediment/toxicant detention; production export; and fish habitat. In short, the area offers some of the finest fish and wildlife habitat remaining in southern New England.

For the record, we note an important issue with respect to vernal pools and amphibian/reptile resources. Our field visits to the project area revealed what appears to be an abundance of vernal and other temporary pools that likely serve as key habitat for a variety of amphibian and reptilian species. During five or six field visits to the corridor over the last two years, EPA staff noted four species of stream and mole salamanders, as well as potential high quality habitat for several species of turtle. We believe it essential that the corridor undergo a comprehensive field survey to identify vernal and other temporary pools, and to carefully explore this area for rare amphibian and reptilian species. Due to the undisturbed nature of the corridor and the mosaic and complexity of aquatic and terrestrial systems, there is a reasonable chance that rare or uncommon amphibian and reptilian species could be found.

B. Adverse environmental impacts.

CTDOT's preferred full-build alignment, known as alternative E4m, consists of a limited-access,

four-lane arterial roadway. As described in the CTDOT's Impact Minimization Study, this roadway would be roughly 100-feet wide, including clearing, and the barrels would be separated by a Jersey barrier--a solid, continuous concrete divider. The Study mentioned that this alternative would result in direct (footprint) fill of approximately 7 acres of wetlands. However, subsequent discussions with CTDOT and the towns revealed that additional modifications would be necessary, particularly at the interchanges with Route 161 and I-95, and that direct filling would likely rise to between 10 and 12 acres of wetlands. While these direct losses of high quality resources are troubling, we are even more concerned about the array of indirect and secondary adverse impacts that would result if this highway were constructed as proposed.

The CTDOT's 1999 DEIS contained a description of the general types of direct and indirect adverse environmental impacts caused by constructing new highways. These impacts include:

- Land clearing, roadway cuts, and road base fill, which remove all vegetation within the right-of-way and dramatically alter the topography and surface hydrology of the land;

- Stream and river culverting at crossings and vegetation clearing around crossings, which cause loss of stream-side and -bottom habitat, sedimentation of waterways, increased water temperatures, and lowered water quality;

- Erosion of cut slopes and unstabilized fill, which causes sedimentation of adjacent water bodies and wetlands that smothers plants and sedentary animal species, degrades water quality, and renders habitat less suitable for fish and wildlife; and,

- Placement of long, wide permanent features through an undisturbed landscape, which separates forest blocks and fragments wildlife habitat, degrading adjacent areas and rendering remaining habitat less valuable.

A more thorough explanation of the ways in which roads affect terrestrial and aquatic ecosystems is presented by Trombulak and Frissell (2000)[2]. They review seven general effects:

1. increased mortality from road construction;
2. increased mortality from collision with vehicles;
3. modification of animal behavior;
4. alteration of physical environment;
5. alteration of chemical environment;
6. spread of exotic species; and,
7. increased alteration and use of habitats by humans.

As the authors recognized, these general effects overlap somewhat. However, we believe these categories provide a useful framework for assessing the ecological effects of roads, which we summarize briefly below.

In their study along Route 2 through several towns west of Boston, Forman and Deblinger (2000)[3] found that fragmentation and other indirect adverse effects of roads create an average "road-effect zone" of 600 meters (approximately 1,800 feet) in width and that this zone is asymmetrical (in some instances, it may reach outwards to 1 kilometer (approximately 3,200 feet)). Furthermore, Trombulak and Frissell (2000) also found that in a diverse landscape like the one that exists in the Route 11 corridor, roads produce a pattern of aquatic habitat loss that differs from the terrestrial pattern and can be more insidious. They coin the term "hyperfragmentation" to describe the multidimensional view of ecological fragmentation and habitat loss that emerges when the consequences of roads on terrestrial and aquatic ecosystems are considered simultaneously. Trombulak and Frissell conclude that "[e]ven where only a small percentage of the land's surface is directly occupied by roads, few corners of the landscape remain untouched by their off-site ecological effects." They emphasize that the larger and wider the road corridor, and more heavily traveled the road, the greater the adverse effects of hyperfragmentation as well as the other adverse impacts of roads. Among others, these effects include the introduction and rapid spread of invasive plant species, an impact of extreme concern in the project corridor.

Road crossings of streams and adjacent wetlands directly change the hydrology of slopes and stream channels, resulting in altered habitats that are often detrimental to native plant and animal communities. Roads intercept shallow ground water flow, changing its pathways and diverting that water along the roadway, routing it efficiently to discharge points at stream crossings (Megahan, 1972[4]; Wemple *et al.*, 1996[5]). This change can lead to changes in the timing and routing of runoff, an effect more pronounced and damaging in smaller, higher quality stream systems (Jones and Grant, 1996)[6]. Changes in the routing of shallow ground water and surface flow can lead to unusually high concentrations of runoff on steep hillslopes that in turn can cause erosion through gully creation, channel head initiation, or slumping of slopes and debris flows (Megahan, 1972; Wemple *et al.*, 1996). Along the E4m alignment, there would be 14 crossings of perennial and intermittent streams, many of which occur in steep hillslopes. Once begun, these processes are difficult to control and their adverse effects upon stream and wetland biota can be felt far downstream of the occurrence.

There are several types of wildlife (small mammals, most amphibians and reptiles) for which <u>any</u> major highway represents an insurmountable obstacle, either because a) they will not attempt to cross it; b) they cannot physically reach the surface of the roadway to cross it (e.g., salamanders); c) once reaching the roadway surface they are too slow to traverse it successfully (e.g., most turtles, many snakes); or d) they cannot get through or around a roadway divider, such as a Jersey barrier. Moreover, many of these wetland dependent species use upland corridors for traversing the landscape, so the proposal by CTDOT for spanning streams and wetlands does little to mitigate this adverse effect. In addition, for these less mobile species, CTDOT's proposal to steepen sideslopes along certain portions of the roadway to reduce the footprint of the fill actually exacerbates the problem. For the few individuals of these smaller wildlife guilds that successfully navigate one barrel of the road, a Jersey barrier leaves them stranded in the middle. Finally, existing literature, particularly Jackson and Griffin (1998)[7], stresses the difficulty and

expense of designing roads with features that only may alleviate some of the adverse effects upon movement of a variety of wildlife species.

The environmentally damaging nature of the proposed project (a limited access highway cutting a swath across the landscape) and its location in an environmentally valuable area would combine to cause significant adverse impacts to the aquatic environment. As we have summarized in this letter and described in greater detail in our comments on the DEIS, a full build proposal would cause direct, indirect and secondary adverse impacts to the aquatic environment. That it may be difficult to be precise in a quantitative way about certain of the impacts, does not make them any less real or less likely to occur. For example, while we can state with certainty that construction of a highway across this unspoiled landscape will cause a decline in sensitive species (e.g., salamanders, forest interior birds), we cannot predict exactly when a particular population will be extirpated from the area.

The landscape through which a new Route 11 would be constructed is among the least disturbed, least fragmented and most valuable habitat in Connecticut. It contains a mosaic of high quality stream and wetland ecosystems interspersed among large habitat blocks that offer important ecological functions. Building a major highway in this location would have profound and deleterious impacts to the resources that §404 is intended to safeguard. In our view these impacts would be significant within the meaning of the §404(b)(1) guidelines.[3]

C. Mitigation

A project that would result in significant degradation may be able to achieve compliance with §230.10(c) if compensatory mitigation can offset the impacts sufficiently such that they would no longer be significant. In this case, the high quality of the resources involved, the magnitude of the impacts and difficulty associated with mitigating for indirect effects, CTDOT faces a daunting task. We doubt whether it is even possible to develop a mitigation package for a new build alignment which would bring the impacts of the road below the significance threshold. In any event, no comprehensive mitigation plan has been proposed.

We are aware that some project proponents favor including a 3000 acre "greenway" with a limited access four lane, arterial highway. CTDOT has yet to embrace this idea officially. As we understand it, this combined approach is intended to reduce the direct impacts of a new road as compared to the originally proposed expressway, and to address habitat fragmentation and

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[3] In a similar case, Connecticut Route 6, the Corps and EPA have determined that significant adverse impacts would occur from the State's current proposal. The Route 11 proposal in our judgment would cause greater environmental harm than the Connecticut Route 6 project, a view also expressed by the U.S. Fish and Wildlife Service and the Connecticut Department of Environmental Protection.

other indirect impacts and potential future secondary impacts by preserving identified areas of valuable habitat. While we agree a greenway would have certain environmental benefits, we do not believe it would prevent alternative E4m from causing or contributing to significant impacts. A greenway may help reduce the potential for secondary impacts stemming from future projects. However, it would not offset the direct impacts in any manner, and would do little or nothing to prevent or offset the indirect impacts that would be caused by the road. These indirect impacts include the separation of forest blocks and fragmentation of wildlife habitat, the imposition of a barrier to wildlife movement, the establishment of a vector for invasive species, the alteration of surface and groundwater flow patterns, and the adverse impact on water quality and fish and wildlife habitat in streams, caused by flow and temperature alteration, culverting, and sedimentation and pollutant loading from erosion and runoff during construction and operation of the road. It is also important to bear in mind that the value of the resources protected under a greenway proposal will be diminished due to the proximity of a major highway facility.

In addition, it is not clear that the greenway proposal would ever in reality be what has been conceived by the local interests. Among other concerns, the CTDOT has not officially endorsed and adopted the towns' greenway proposal; the use of state funds to implement the greenway effort is prohibited by the enabling state legislation; no other source of sufficient funding has been identified to date; the towns that comprise the greenway commission set up by the state legislation have stated publicly that they do not intend to take land from unwilling sellers (even if the commission has eminent domain powers, which itself is unclear); and, no actual plan, surveys, maps, etc., have been produced to identify and evaluate targeted parcels, determine ownership status, rank targeted parcels for acquisition, etc. Other than setting up the framework for a greenway commission, little progress has been made in advancing this concept during the approximately two years that the towns have promoted it. Despite the good intentions of towns, EPA doubts strongly the likelihood of achieving the ultimate goal of the greenway in a time frame suitable for its intended purpose, i.e., as adequate mitigation for the new road.

III. Conclusions

EPA believes that the Route 11 project, as currently proposed, would cause significant and, in a all likelihood, avoidable adverse impacts to the aquatic environment. Therefore, it cannot qualify for a §404 permit. In addition, EPA believes that the applicant has not yet fully evaluated all upgrade alternatives, and has failed to rebut the regulatory presumption that the less environmentally damaging upgrade alternatives are practicable. To summarize, EPA finds that:

Alternatives

- a four lane upgrade is in fact practicable and would meet the basic project purpose;

- comprehensive analyses of two- or four-lane upgrades including the

concurrent incorporation of design improvements throughout the corridor (and especially at high congestion, high accident rate intersections) have not been conducted, therefore the presumption that such upgrades are practicable alternatives remains intact; and,

- the Corps has found two- and four-lane upgrades practicable and effective in addressing traffic safety and capacity deficiencies in analogous situations - comparable facilities with a similar basic project purposes, yet which exhibit higher traffic volumes, and for which bypass alternatives were rejected.

Significance of Impacts

The extensive direct, indirect and secondary adverse effects of constructing any of the full-build alignments would cause lasting and severe environmental damage to the wealth of ecological functions currently provided by the existing stream and wetland systems. The capacity of the landscape to support the existing variety and numbers of fish and wildlife species would be irreparably reduced. Based on the information available to date, EPA believes that these adverse impacts would cause or contribute to significant degradation of the aquatic ecosystem, a violation of 40 C.F.R. 230.10(c) of the §404(b)(1) guidelines, and that none of the full-build alternatives on new alignment could receive a §404 permit.

The full-build new alignment alternatives would not comply with the §404(b)(1) guidelines for two independent reasons: under 40 C.F.R. §230.10(a), none represents the least environmentally damaging practicable alternative; and, under 40 C.F.R. §230.10(c), each would cause or contribute to significant degradation of the aquatic ecosystem. Hence a §404 permit cannot be issued for any of the full-build new alignment alternatives described in the DEIS or the CTDOT's Impact Minimization Study report. EPA considers any of these full-build alternatives to be a strong candidate for action under our CWA §404(c) authority.

TECHNICAL REFERENCES

1. Federal Highway Administration. February, 2001. **Response to EPA's Questions on the Practicability of the Community Sensitive Upgrade and Upgrade/Widening Alternatives, Attachment E.**

2. Trombulak, Stephen C., and Christopher A. Frissell. February 2000. **Review of Ecological Effects on Terrestrial and Aquatic Communities,** in *Conservation Biology*, 14(1): 18-30.

3. Forman, Richard T., and Robert D. Deblinger. February 2000. **The Ecological Road-Effect Zone of a Massachusetts (U.S.A.) Suburban Highway,** in *Conservation Biology*, 14(1): 36-46.

4. Megahan, W.F. 1972. **Subsurface flow interception by a logging road in mountains of central Idaho.** Pages 350-356, in Proceedings of national symposium on watershed in transition. American Water Resources Association. Bethesda, MD

5. Wemple, B.C., J.A. Jones, and G.E. Grant. 1996. **Channel network extension by logging roads in two basins, western Cascades, Oregon.** *Water Resources Bulletin*, 32: 1195-1207.

6. Jones, J.A., and G.E. Grant. 1996. **Cumulative effects of forest harvest on peak streamflow in the western Cascades of Oregon.** *Water Resources Research*, 32: 959-974.

7. Jackson, Scott, and Curtice Griffin. 1998. **Toward a Practical Strategy for Mitigating Highway Impacts on Wildlife,** in Proceedings of the International Conference on Wildlife Ecology and Transportation (ICOWET). FL-ER–69-98. Florida Department of Transportation, Tallahassee, FL. 263pp.

FHWA

Route Slip

Distribution: Vernon Lang (USFWS)
Michael E. Marsh (EPA)
Robert Gilmore (DEP)
Jeffrey Smith (OPM)
David A. Poirier (SHPO)

U.S. DEPARTMENT OF TRANSPORTATION

To:	Date	Org/Rtg Symbol
Robert J. DeSista	11/9/06	ACOE

Subject: Project No. 120-81, Route 11 Admin. Draft FEIS

Enclosed is a CD-ROM containing copies of additional electronic files in Adobe Acrobat PDF format for the subject draft document that were not included on the CD-ROM transmitted to you on September 22, 2006. The list of document filenames contained on this CD-ROM is as follows:

1. AD Executive Summary 110306.pdf
2. STATE & LOCAL OFFICIALS COMMENTS AND RESPONSES_AD#1.pdf
3. PUBLIC COMMENTS AND RESPONSES_AD#1.pdf
4. ORAL COMMENTS TRANSCRIPT 4-7_AD#1.pdf
5. ORAL COMMENTS TRANSCRIPT 4-8_AD#1.pdf

Other appendices, including project correspondence and an updated ROW relocation survey, and revisions to the administrative draft FEIS document to address comments received per our September 22, 2006 request will not be circulated for comment, but will be included in the final EIS.

Please submit any comments each of your agencies may have on the above five (5) portions of the administrative draft Route 11 FEIS document via e-mail **no later than Friday, December 1, 2006** to robert.w.turner@fhwa.dot.gov. If you have any questions concerning this matter, please give me a call.

___Per Your Request
____For Your Information
___Per Our Conversation
____Note and Return
____Discuss With Me
___For Your Approval
____For Your Signature
_XX_Comment
___Take Appropriate Action
____Please Answer
____Prepare Reply For Signature Of

From: Name	Telephone	Org/Rtg Symbol
Robert W. Turner, P.E., Environmental Engineer	(860) 659-6703	HPR-CT
Federal Highway Administration, CT Division Office	Extension 3011	

Form DOT F1320.9 (Rev 5-81) Supersedes All Previous Editions ***U.S. Government Printing Office: 1991 -525-056/40223**

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

September 22, 2006

IN REPLY REFER TO:
HDA-CT

Colonel Curtis L. Thalken
District Engineer
Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Subject: State Project No. 120-81, Extension of Route 11 in Connecticut
Administrative Draft version of Final Environmental Impact Statement
Cooperating Agency Review Comment Solicitation

Dear Colonel Thalken:

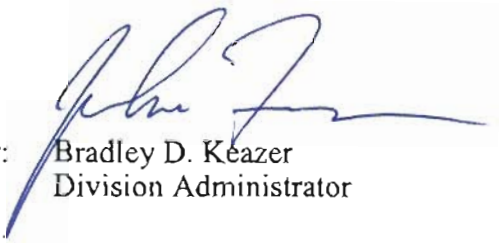
An administrative draft, dated 8/30/06, of the Final Environmental Impact Statement (FEIS) for the subject project is currently under internal review by the Federal Highway Administration. Some portions are still in preparation and are not included in this version as noted below. A CD-ROM containing a copy of this draft as a collection of electronic files in Adobe Acrobat PDF format is being forwarded to your staff contact person copied below for review under your agency's role as a cooperating agency for this combined NEPA/CEPA document.

Volume 1 of this document was prepared using the 1999 Draft Environmental Impact Statement (DEIS) as the base document, with new or revised text shaded in grey; deleted text has been omitted for clarity. Volume 2 includes copies of letters from federal and state agencies commenting on the 1999 DEIS with responses to these comments; copies of letters received from local officials and the public, along with responses are not included. Other sections not included in this version of the administrative draft are the Executive Summary, updates to Appendix E and additional appendices which will include project correspondence.

Although this is not a complete administrative draft document, it is substantially complete. In the interest of time, and in the spirit of cooperation, we are requesting receipt of comments from your agency on this administrative draft document **no later than Monday, October 23, 2006.** The remaining draft sections will be forwarded to your agency as soon as they are available for review.

To expedite our processing of your agency's comments on this administrative draft, please submit them electronically to the e-mail address listed below. If you have any questions concerning this matter, please contact Mr. Robert W. Turner, P.E. of our office at (860) 659-6703 ext. 3011 or by e-mail at: robert.w.turner@fhwa.dot.gov.

Sincerely yours,



For: Bradley D. Keazer
Division Administrator

cc: Robert J. DeSista (ACOE) – w/CD-ROM
Deputy Cmr. Raeanne Curtis – Charles S. Barone - Edgar T. Hurle (ConnDOT)
Jane Dauphinais (Congressman Simmons office)

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

September 22, 2006

IN REPLY REFER TO:
HDA-CT

Mr. Michael Bartlett
Field Supervisor
U. S. Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, NH 03301-5087

Subject: State Project No. 120-81, Extension of Route 11 in Connecticut
Administrative Draft version of Final Environmental Impact Statement
Cooperating Agency Review Comment Solicitation

Dear Mr. Bartlett:

An administrative draft, dated 8/30/06, of the Final Environmental Impact Statement (FEIS) for the subject project is currently under internal review by the Federal Highway Administration. Some portions are still in preparation and are not included in this version as noted below. A CD-ROM containing a copy of this draft as a collection of electronic files in Adobe Acrobat PDF format is being forwarded to your staff contact person copied below for review under your agency's role as a cooperating agency for this combined NEPA/CEPA document.

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Sincerely yours,

For: Bradley D. Keazer
Division Administrator

cc: Vernon Lang (USFWS) – w/CD-ROM
Deputy Cmr. Raeanne Curtis – Charles S. Barone - Edgar T. Hurle (ConnDOT)
Jane Dauphinais (Congressman Simmons office)

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

September 22, 2006

IN REPLY REFER TO:
HDA-CT

Mr. Robert W. Varney
Regional Administrator
U. S. Environmental Protection Agency, Region 1
One Congress Street, Suite 1100
Boston, MA 02114-2023

Subject: State Project No. 120-81, Extension of Route 11 in Connecticut
Administrative Draft version of Final Environmental Impact Statement
Cooperating Agency Review Comment Solicitation

Dear Mr. Varney:

An administrative draft, dated 8/30/06, of the Final Environmental Impact Statement (FEIS) for the subject project is currently under internal review by the Federal Highway Administration. Some portions are still in preparation and are not included in this version as noted below. A CD-ROM containing a copy of this draft as a collection of electronic files in Adobe Acrobat PDF format is being forwarded to your staff contact person copied below for review under your agency's role as a cooperating agency for this combined NEPA/CEPA document.

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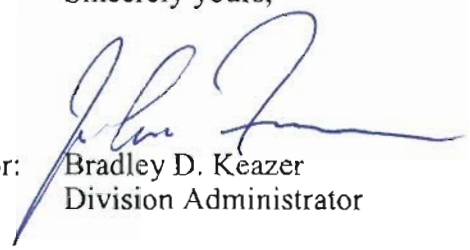
Sincerely yours,



For: Bradley D. Keazer
Division Administrator

cc: Michael E. Marsh (USEPA) – w/CD-ROM
Deputy Cmr. Raeanne Curtis – Charles S. Barone - Edgar T. Hurle (ConnDOT)
Jane Dauphinais (Congressman Simmons office)

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

September 22, 2006

IN REPLY REFER TO:
HDA-CT

Ms. Gina McCarthy
Commissioner
State of Connecticut
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Subject: State Project No. 120-81, Extension of Route 11 in Connecticut
Administrative Draft version of Final Environmental Impact Statement
Cooperating Agency Review Comment Solicitation

Dear Commissioner McCarthy:

An administrative draft, dated 8/30/06, of the Final Environmental Impact Statement (FEIS) for the subject project is currently under internal review by the Federal Highway Administration. Some portions are still in preparation and are not included in this version as noted below. A CD-ROM containing a copy of this draft as a collection of electronic files in Adobe Acrobat PDF format is being forwarded to your staff contact person copied below for review under your agency's role as a cooperating agency for this combined NEPA/CEPA document.

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Sincerely yours,

For: Bradley D. Keazer
Division Administrator

cc: Robert Gilmore (ConnDEP) – w/CD-ROM
Deputy Cmr. Raeanne Curtis – Charles S. Barone - Edgar T. Hurle (ConnDOT)
Jane Dauphinais (Congressman Simmons office)

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

September 22, 2006

IN REPLY REFER TO:
HDA-CT

Mr. Robert L. Genuario
Secretary
State of Connecticut
Office of Policy and Management
450 Capitol Avenue
Hartford, CT 06106-1308

Subject: State Project No. 120-81, Extension of Route 11 in Connecticut
Administrative Draft version of Final Environmental Impact Statement
Cooperating Agency Review Comment Solicitation

Dear Mr. Genuario:

An administrative draft, dated 8/30/06, of the Final Environmental Impact Statement (FEIS) for the subject project is currently under internal review by the Federal Highway Administration. Some portions are still in preparation and are not included in this version as noted below. A CD-ROM containing a copy of this draft as a collection of electronic files in Adobe Acrobat PDF format is being forwarded to your staff contact person copied below for review under your agency's role as a cooperating agency for this combined NEPA/CEPA document.

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Sincerely yours,

For: Bradley D. Keazer
Division Administrator

cc: Jeffrey Smith (OPM) – w/CD-ROM
Deputy Cmr. Raeanne Curtis – Charles S. Barone - Edgar T. Hurle (ConnDOT)
Jane Dauphinais (Congressman Simmons office)

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

September 22, 2006

IN REPLY REFER TO:
HDA-CT

Mr. J. Paul Loether
Deputy State Historic Preservation Officer
State of Connecticut
Commission on Culture & Tourism
Historic Preservation and Museum Division
59 South Prospect Street
Hartford, CT 06106

Subject: State Project No. 120-81, Extension of Route 11 in Connecticut
Administrative Draft version of Final Environmental Impact Statement
Cooperating Agency Review Comment Solicitation

Dear Mr. Loether:

An administrative draft, dated 8/30/06, of the Final Environmental Impact Statement (FEIS) for the subject project is currently under internal review by the Federal Highway Administration. Some portions are still in preparation and are not included in this version as noted below. A CD-ROM containing a copy of this draft as a collection of electronic files in Adobe Acrobat PDF format is being forwarded to your staff contact person copied below for review under your agency's role as a cooperating agency for this combined NEPA/CEPA document.

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Sincerely yours,

For: Bradley D. Keazer
Division Administrator

cc: David A. Poirier (SHPO) – w/CD-ROM
Deputy Cmr. Raeanne Curtis – Charles S. Barone - Edgar T. Hurle (ConnDOT)
Jane Dauphinais (Congressman Simmons office

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

March 8, 2002

IN REPLY REFER TO:
HDA-CT
Doc #4043

Mr. Robert Varney
Regional Administrator
EPA Region One
One Congress Street, Suite 110
Boston, Massachusetts 02114

Dear Mr. Varney:

As you know, the Federal Highway Administration (FHWA), U.S. Army Corps of Engineers (ACOE), U.S. Environmental Protection Agency (EPA) and U.S. Fish and Wildlife Services (FWS) have been working on the resolution of various issues regarding the Route 82/85/11 corridor. One of the issues FHWA has been attempting to obtain resolution has been the long-term operation on the existing Route 82 and 85 corridors. At recent meetings, staff from EPA and FWS were interested in understanding the engineering methodology used to address safety issues for this corridor.

The Federal Highway Administration would like to formally invite your staff to a technical workshop focusing specifically on the traffic and intersection analysis of Route 82 and Route 85. Ms. Emilano Lopez of the FHWA Eastern Resource Center will be leading this workshop. The FHWA Eastern Resource Center role is to provide expert technical and program assistance, training, and technology delivery to FHWA's Divisions, State DOT's and other customers, in advancing the Federal-aid highway improvement and safety programs, while achieving the agency's strategic and quality initiatives. We anticipate the workshop to encompass the fundamentals highway capacity methodology and specific intersection analysis of Route 82 and Route 85. The workshop will span a full day. We welcome your staff to contact Ms. Amy Jackson-Grove at phone # (860) 659-6703 x 3010 to coordinate a convenient time and date.

Sincerely Yours,

Bradley Keazer
Division Administrator

cc: Mr. Matthew Schweisberg, Mr. Doug Thompson, Mr. Michael Marsh, EPA
Mr. William Neidermyer, Mr. Greg Mannesto, FWS
Acting Comm. Byrnes, ConnDOT

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
628-2 Hebron Avenue, Suite 303
Glastonbury, Connecticut 06033-5007

February 19, 2002

\IN REPLY REFER TO:
HAD-CT

Mr. Robert Varney
Regional Administrator
United States Environmental Protection Agency
Region One
One Congress Street, Suite 1100 (Mail Code RAA)
Boston, Massachusetts 02114-2023

Subject: Route 11

Dear Mr. Varney:

Thank you for the copy of your November 8, 2001 letter regarding EPA's position on the U.S. Army Corps of Engineer's LEDPA Determination. FHWA joined the Route 11 Streamlining Committee at the request of U.S. Environmental Protection Agency Administrator Christine Todd Whitman and U.S. Congressman Rob Simmons. This committee was charged with looking at alternatives for completing the Route 11 expressway. We had hoped that this experimental committee, created in part by your Administrator, indicated that your agency truly believed a consensus was possible on an expressway alternative. Therefore, this recent letter, which revisits many of the concluded issues, indicates a summary of resolved issues is needed. While we understand the EPA Region One's long standing interest in upgrading the existing facility, FHWA has demonstrated on several occasions that upgrading Route 82 and Route 85 would not meet the corridor's long term purpose and need or basic project purpose.

To summarize:

The FHWA, on several occasions, has through written documentation (dated September 1999, August 2000, and February 2001) and multiple meetings supplemented information provided in the DEIS (dated February 1999) and Community Sensitive Upgrades Study (dated February 2000) which concludes the upgrade alternatives do not meet the project's NEPA purpose and need and § 404 Basic Project Purpose. Therefore, FHWA considers the statement "that less damaging approaches to address the project purpose are not being pursued" to be inaccurate. Through the abovementioned documents, a full range of approaches has been pursued to address the project's NEPA purpose and need and § 404 Basic Project Purpose. The approaches favored by EPA, i.e. the upgrade alternatives, have been demonstrated to not meet these needs. At the request of your staff, we are arranging an intersection analysis workshop with the Traffic Engineering Staff of the FHWA Eastern Resource Center. The date of this workshop will be forthcoming.

The comment regarding difficulty of developing effective and permanent mitigation measures is premature due to the fact that the mitigation process does not come into play until further in the § 404 permitting process.

We do not agree that the information on the Route 11 alignment does not comply with §404 (b)(1) and the Army Corps of Engineers letter dated September 17, 2001 also states such. The Final Environmental Impact Statement (FEIS), which will be published Spring 2002, will

substantiate this fact. In a survey of transportation projects of similar scope and impact throughout the nation, §404 permitting has not been an issue. Projects with similar scopes, such as Route 13 in Delaware and Route 17 in Virginia, have received §404 permits.

EPA's May 21, 1999 letter was your agency's official comments to the Draft Environmental Impact Statement (DEIS) and the application for a federal permit under § 404 of Clean Water Act. As you know, the DEIS provides an opportunity for government agencies and the public to review a proposed project and alternatives and comment. Under the Council for Environmental Quality (CEQ) – Regulations for Implementing NEPA, FHWA must:

Section 1503.4 Response to comments

a) An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to:

1. Modify alternatives including the proposed action.
2. Develop and evaluate alternatives not previously given serious consideration by the agency.
3. Supplement, improve, or modify its analyses.
4. Make factual corrections.
5. Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons, which support the agency's position and, if appropriate, indicate those circumstances, which would trigger agency reappraisal or further response.

(b) All substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous), should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement.

(c) If changes in response to comments are minor and are confined to the responses described in paragraphs

(a)(4) and (5) of this section, agencies may write them on errata sheets and attach them to the statement instead of rewriting the draft statement. In such cases only the comments, the responses, and the changes and not the final statement need be circulated (Sec. 1502.19). The entire document with a new cover sheet shall be filed as the final statement (Sec. 1502.19).

Therefore, in compliance with CEQ, the comments made in EPA's May 1999 letter have been considered, in consultation with your agency, and FHWA and the Connecticut Department of Transportation (ConnDOT) will address your agency's concerns to the extent feasible. For example, the currently pursued alternative is a result of EPA's comments on habitat blocks, water resources, etc. FHWA and ConnDOT have modified the currently pursued alternative. FHWA and ConnDOT have worked resolutely in an attempt to explain and resolve EPA's comments and concerns.

FHWA has performed a comprehensive analysis and determined the upgrade alternatives (DEIS upgrade alternatives and the Community Sensitive upgrades) will not be able to meet the long-term transportation needs of the corridor and does not meet the Basic Project Purpose, and therefore, can not be considered as an alternative for the LEDPA determination under § 404 or the recommended action under NEPA. Interim FHWA responses, dated September 1999,

August 2000 and February 2001, addressed the substantial comments made by EPA in the April 1999 letter and supplemental correspondence. As required, the official responses to the EPA May 1999 letter will be published in the Final Environmental Impact Statement, in the coming months. EPA's April 20, 2001 letter, which resulted from a meeting and site visit, once more stated EPA's position regarding the upgrade and new alignment alternatives. The FHWA white papers, dated September 1999, August 2000 and February 2001, have effectively addressed the practicability of the upgrade alternatives. This April 2001 letter will also be officially addressed in the FEIS. In addition to documentation, FHWA arranged a meeting, December 7, 2000 for EPA. This documentation and technical session led FHWA to believe the EPA understood the justification and rationale for FHWA's conclusions regarding the upgrade. While we understood EPA was not pleased with this conclusion, EPA understood that legitimate transportation analysis substantiated the new alignment.

We agree with your statement that it is important to ensure that a complete and accurate record exists for evaluation by both agency decision makers and the public. To create a complete and accurate record, FHWA has answered the EPA and ACOE questions, see documents dated September 1999, August 2000, February 2001.

EPA's letter of November 8, 2001 highlights several of the issues and can be quickly concluded by referring to previous documents and analysis: (Note that EPA's comment or concern from letter is in italic)

- *Update and improve traffic data where possible* - EPA stated that new direct traffic count data for the Route 2/2A/32 project have been incorporated into the study. Please see the enclosed map, which depicts the location of the Automatic Traffic Recorders (ATR), located in southeastern Connecticut. As you will see, the logical ATRs for Route 2/2A/32 are not the logical ATRs for the Route 11 corridor due to the traffic directional pattern and position.

  EPA noted disappointment in the FHWA/ConnDOT decision not to add additional ATRs for this study. Because permanent counters are expensive to install, operate, and maintain and are only useful after a minimum of three years of accumulated traffic data; traffic count professionals utilize short duration counts on roads throughout the State to provide accurate measurements of traffic conditions on individual roadway sections. These short duration counts are then adjusted to represent annual or design conditions given the patterns measured at the continuous count locations. When the request for additional ATRs was received, FHWA and ConnDOT reviewed the number of ATRs already in existence in the field and determined the ATRs already available more than sufficiently covered the data requirements. These devices (most incorporating inductance loop detectors) have been used for many years to monitor traffic at specific locations and to produce the factors applied to short duration traffic volume counts in order to estimate annual average traffic volume conditions. This is the manner utilized in the Route 82/85/11 study. FHWA would like to note the State of Connecticut currently operates 37ATRs and this number exceeds FHWA's minimum number of counters specified in FHWA's Traffic Monitoring Guide.

- *Present level of service (LOS) and volume to capacity (V/C) ratio information* – The Level of Service information is provided in the Route 82/85/11 Corridor DEIS, please see Figure 5-8, while the V/C format was not applied. Figure 5-8 demonstrates the

effect the full build alternative would have on the region's roadway network, including Route 11 and Route 82 and 85. We understand that different formats appeal to different people. The format used by the consultant VHB for the Route 2/2A/32 DEIS may appear to be clearer but format alone does not change the information.

- *Analyze the aggregate effect of combining all reasonable roadway improvements* – As stated in FHWA's August 2000 and February 2001 documents, the upgrade alternatives in the DEIS included the combination of all reasonable roadway improvements (turning lanes, signal optimization, improved roadway geometry and other TSM/TDM) and FHWA has performed a comprehensive analysis and determined that these improvements will not meet the long term safety and capacity needs of the corridor. By far the most critical elements, which can not be remedied by the above mentioned roadway improvements, are the inability to separate through and local traffic and the inability to control the numerous access points along the corridor.

- *Present a comparative evaluation of potential accident rates and severity* – FHWA continues to maintain, as stated on page 11 of the February 2001 FHWA document, that the projected accident estimations for a completed Route 11 and for Route 82/85 after a completed Route 11 (including the currently planned improvements) are not an appropriate application of estimation methods due to lack of data on the section of roadway. It is common engineering practice to predict trends and use the predicted trends to evaluate proposals. As the Community Sensitive Upgrade Report stated, the study completed by the National Cooperative Research Program (NCHRP) Report 47, documented trends regarding accident rates on rural highways. The research completed under the Report 47 study found as the ADT increases on two-lane roads, the accident rate of one-vehicle accidents and multi-vehicle accidents on two-lane roads both decrease. However, accident rates of multi-vehicle accidents on four-lane roads increase as ADT increases, and the rate of increase differs according to the access control. On an expressway type roadway, the accident rate (upon completed Route 11) is predicted to be comparable to the rate on the currently built section of Route 11. With the presumption the design standards would be comparable, then the accident rate is predicted to be .71 accidents per million vehicle miles of travel on Route 11 mainline section [2]. This rate can be compared to the accident rate on Route 85, which is 100 accidents per million vehicle miles traveled (table 1- FHWA Response to U.S. EPA Report - October 2000). The FHWA reports (August 2000 and October 2000) point to the difference in accident rates for a rural expressway versus rural principal arterials, which has been related to the mix of through and local traffic.

  Applying accepted engineering techniques for projecting the future traffic volumes for the completed section of Route 11 and Route 85, we are able to predict that overall trend of total accidents will decrease. This prediction can be made using the following principles: 1) the accident rate on the completed section of Route 11 will be comparable to the accident experience occurring on the completed Route 11 a rural expressway. 2) the traffic volumes on Route 85 are projected to decrease, that is

[2] Data found in ConnDOT 1995-1997 Traffic Accident Surveillance Report

through traffic will utilize the Route 11 expressway, reducing the vehicular conflicts on Route 85. 3) traffic traveling from outside the region to a destination outside the region, through traffic, will be separated from local traffic. The Route 85 roadway can be predicted to have a lower accident rate, a rate similar to other rural principal arterials in Connecticut, which is 49.47 accidents per million vehicle miles of travel (Table 1 of FHWA Response to EPA October 2000 Report).

The accident severity can be predicted to be lower due to the fact that though traffic, which is inclined to travel faster than local traffic, will be on the expressway leaving local traffic on Route 85. Data demonstrates that lower speeds result in less severe accidents. Therefore, less severe accidents will occur on Route 82 and 85. The traffic traveling at higher speeds will be on the expressway, which is directionally separated, therefore eliminating head-on type accidents (higher severity) for this portion of the traffic, resulting in lowering the number of severe accidents in the corridor.

- *Present more complete information on project benefits and needs* –FHWA, as well as federal, state, local legislature, Connecticut Department of Transportation and project proponents have highlighted the project benefits and needs. The project purpose and need is clearly cited in the DEIS:

Highway System Linkage

To complete the final link in the limited access highway between the southern terminus of Route 11 in Salem and I-95/I-395 in Waterford.

Roadway Function and Use

To reduce conflicts between increased mobility/efficiency and access to local properties by separating through and local traffic.

Roadway Safety and Accident Reduction

To improve motorist, pedestrian and bicycle safety in the corridor and reduce roadway hazards contributing to accident frequency and/or severity.

Roadway Capacity

To provide transportation system improvements that are capable of meeting current and projected future peak traffic demands for all vehicle types.

Regional Growth and Development

To sustain community character in evaluating long-term transportation options.

Compatibility with Plans of Development

To meet local, regional and statewide transportation needs while observing local growth and development goals and attempting to reduce excess burden on the corridor municipalities.

In addition to the benefits summarized above, the completion of the Route 11 expressway from its current terminus at Route 82 to Interstate 95, will improve the evacuation route of this coastal area for hurricanes, Millstone Nuclear Plant, Navy Submarine Base New London/Groton and Electric Boat in the event of a disaster. Currently the inland evacuation route for this area is Route 85 and Route 82 to Route 11, which will experience capacity problems and subsequent delays in evacuation. It is much more desirable to have an expressway evacuation route to facilitate the speed of evacuation. Long-term benefits also include the economic connection between the State capital, Hartford, and the southeastern coastal area. Expressway connection is noted for positive effects of regional, statewide and interstate prosperity. As noted in the *Connecticut Regional Institute for the 21st Century report*, which evaluated Connecticut's

position in the global economy, the report noted Hartford and the Southeast's portion as a growing center for a wide variety of economic activities and commercial real estate development. " The Southeast economic region is multi-polar with the cities of New London, CT and Newport, RI at either end of the corridor. Both have emerged along a single principal corridor formed by rail line and interstate that accentuates the individual character of each city along the corridor." The report further explains that the roadway networks connect the economies. The completion of Route 11 will connect the coastal area to the Hartford area, which will add to the polar diversity and would further improve this Region's position in the economy. This Region's ability to compete is based on the assets, which include not only the industry in the region but the Region's ability to quickly, easily, affordably access the resources outside the area. The Regions ability to provide choices for quick, easy and affordable access to both Bradley Airport (Hartford/Springfield) as well as Green Airport (Providence) improves the Regions position.

EPA has also expressed concerns regarding the possible significant adverse environmental impacts of the Route 11 proposal. The administrative record contradicts this statement. This project consists of limited environmental impacts. The currently pursued alternative has skirted the large habitat blocks and is minimizing the direct and indirect impacts to water resources and the aquatic ecosystem. The EPA review, which addresses the latest proposed action, referred to in the November 8, 2001 letter, has not been provided. The most recent version of the Route 11 proposal has minimized, to the extent possible, impacts to the natural environment and Final design will continue to minimize impacts using techniques, which are context sensitive for the project. As the federal transportation agency, FHWA has demonstrated that the upgrade does not meet the corridor purpose and need and basic project purpose. Therefore, the upgrade alternative may not be utilized to demonstrate that a less damaging approach exists.

FHWA agrees that the proposal must incorporate all appropriate and practicable steps to lessen and compensate for impacts, as required in all permit cases. FHWA also agrees the mitigation must offset enough environmental damage caused by the proposal. FHWA and ConnDOT have initiated the process of working with the Army Corps of Engineers, U.S. Environmental Protection Agency and U.S. Fish and Wildlife Services to develop a mitigation plan. This will be an ongoing process under the § 404 permit process and the design phase of the project.

The specific bullets, on page 3 and 4 of EPA's November 2001 letter, regarding further work and future discussion on mitigation will be addressed during the permitting process. While the level of detail in the DEIS is abridged, the FEIS will include far more defined and enhanced mapping. This mapping, resulting from fieldwork, will assess the impacts. Mitigation for impacts of the recommended action will be included in the FEIS. The ability to provide an accurate tally of all direct impacts is developed from the refined data accrued from studying the recommended action. All wetlands within the corridor are being field delineated under federal and state protocols, resulting in an accurate determination of direct wetland impacts to state and federal wetlands. Direct impacts to other resources will be totaled in the same manner. This approach is typical in the development of the environmental document.

Although we realize the importance of a solid baseline of information on wildlife within the project corridor, we do not believe additional wildlife surveys are necessary to understand the likely extent of impacts from the road, and to determine the appropriate target species for mitigation measures and we do not feel this information is needed to comply with NEPA or §404. Research and fieldwork performed during the preparation of the DEIS revealed which

wildlife assemblages could be expected within the habitats present in the corridor. The data collected did not produce evidence that would indicate a need for more intensive surveys.

An extensive literature search was conducted for the DEIS utilizing data specific to the region as well as general information on wildlife species. Vegetation communities were also documented in the DEIS using existing information, such as aerial photographs and satellite imaging, ground-truthing, and field surveys. Passive wildlife surveys were conducted during all fieldwork within wetland and upland areas. Active surveys for herpetofauna were conducted during a specific Vernal Pool Survey in the spring of 1999. During this survey, potential vernal pools (PVP) were identified, and species lists developed for each PVP based on sampling. Habitat blocks and wildlife corridors have been mapped in the DEIS, indicating where potential wildlife movement patterns may occur. The vegetation communities documented in the DEIS can be cross-referenced with habitat requirements for specific wildlife species to determine which species can be expected in specific areas. Passive and active survey information can validate presence/absence of certain species in given vegetation communities. Comparison of this information to the system of habitat blocks and corridor areas documented in the DEIS provides insight on specific wildlife species movement patterns and habitat use. Wildlife assemblages have been well documented in the DEIS and further wildlife surveys would not be expected to yield substantial new information.

A projection of likely secondary impacts, with regard to stormwater, vegetation communities, and wildlife will be presented in the FEIS. This impact assessment will be based on a comprehensive inventory of existing resource information, field survey, and recent, accepted scientific literature pertaining to these issues.

Acquisition of land for preservation as mitigation could be focused on those areas having a potential for preservation of resource types that are compromised by secondary impacts from roadway construction. For example, parcels situated outside the required right-of-way, that contain developable uplands in proximity to wetlands or vernal pools may be considered for preservation as open space, thus preserving wetland functions and values. Additionally, the preservation of parcels that offer connectivity with other forestlands may provide some measure of mitigation for wildlife/forest corridors that are bisected by the proposed roadway or by inevitable residential development.

The overall project design will incorporate all practicable measures to avoid and minimize impacts to aquatic and other sensitive resources, as stated in the DEIS. These minimization efforts may include such measures as vertical and horizontal shifts in the roadway alignment, incorporating bridges and oversized culverts, reducing median widths, and increasing steepness of side slopes. These minimization measures were incorporated into the design concept of alternative E4m-V3. Measures to minimize indirect impacts, such as extended bridges and culverts, will also be included, as appropriate, in the recommended action in the FEIS.

The FEIS will include a description of land areas (partial or whole property parcels), adjacent or in proximity to the E4m-V3 right-of-way. Candidate parcels are those that are currently undeveloped and offer potential qualities warranting preservation, such as, wetland/wildlife habitat, suitability for recreational open space or multi-use trails, and cultural resources. The land areas will also be analyzed for connectivity with other parcels of land along the alignment or with existing parcels of State-owned or open space land. The analysis will be coordinated

with the efforts of the Route 11 Greenway Authority Commission. The progress of the Commission in defining a greenway will be reviewed in an effort to link mitigation sites for Route 11 with the greenway if appropriate.

Land acquisition required for the recommended action would be accomplished first for properties directly impacted by the roadway right-of way, including those in which land area extends beyond the impact area; secondly for properties indirectly impacted (e.g. loss of access or development potential) and additionally, properties consisting of the qualities discussed above that may also be available for purchase.

Efforts in the land acquisition process will be coordinated with federal, state, regional and local representatives, who would contribute to the formulation of a land use plan for these areas, depending on eventual jurisdiction. The time frame for completion of the mitigation strategy would coincide with submission of the §404 permit application.

The Route 11 Greenway Authority Commission has begun the process of identifying land that may be acquired for the purpose of preservation as wildlife habitat and/or recreation land, either adjacent to the Route 11 corridor or nearby. The Commission has begun the public hearing process and plans to hold discussions with landowners on possible purchases/easements and with legislators on potential funding sources. The Commission is in the early stages of their work and FHWA and ConnDOT will make all efforts to coordinate and complement efforts with the assistance of federal, state and local resource and municipal agencies. State Forest lands and DEP-owned waterbodies in proximity to the project area were shown in the DEIS and any updates will be included in the FEIS.

Future land use development and protection issues

a) Likely foreseeable development will be discussed in the FEIS. This will include more detailed regional build out scenarios, which are being studied by the Southeastern Connecticut Council of Governments.
b) Specific criteria have been developed for identifying areas for protection (see section on mitigation measures and greenway proposal).

Minimization measures were initiated in the report *Impact Minimization Study* of June 1999, which resulted in the design concept of the E4m alternative. This design reduced the width of required right-of-way by approximately 50%. The roadway profile was adjusted at critical locations to minimize excavation and/or fill. Bridge structures were added or lengthened to reduce wetland impacts. The alignment was also adjusted to avoid wetlands or other resources. The next level of minimization was accomplished with a study of variations of the E4m alignment for the primary purpose of avoiding forest blocks, culminating in the selection of E4m-V3 alternative. Finally, design of bridges and culverts, especially within Forest Blocks 1 & 2 and within areas having the potential to be wildlife corridors, will be investigated to avoid impact and provide mitigation. Minimization measures can be employed throughout the permitting and final design processes.

The FEIS will discuss what degree of compensatory mitigation would offset the direct, indirect, and secondary impacts caused by the project. The mitigation plan, as discussed in the DEIS, will include measures to mitigate for direct, temporary and secondary impacts. Wherever practicable,

lands reserved for this purpose would be acquired to further an ecological purpose, such as linkage with or expansion of an existing protected area.

We recognize EPA's authority under §404(c). FHWA believes the administrative record shows that both ConnDOT and FHWA have provided clear and sound analysis, which justifies the permitting of the expressway alternative currently being pursued, under §404(b)(1).

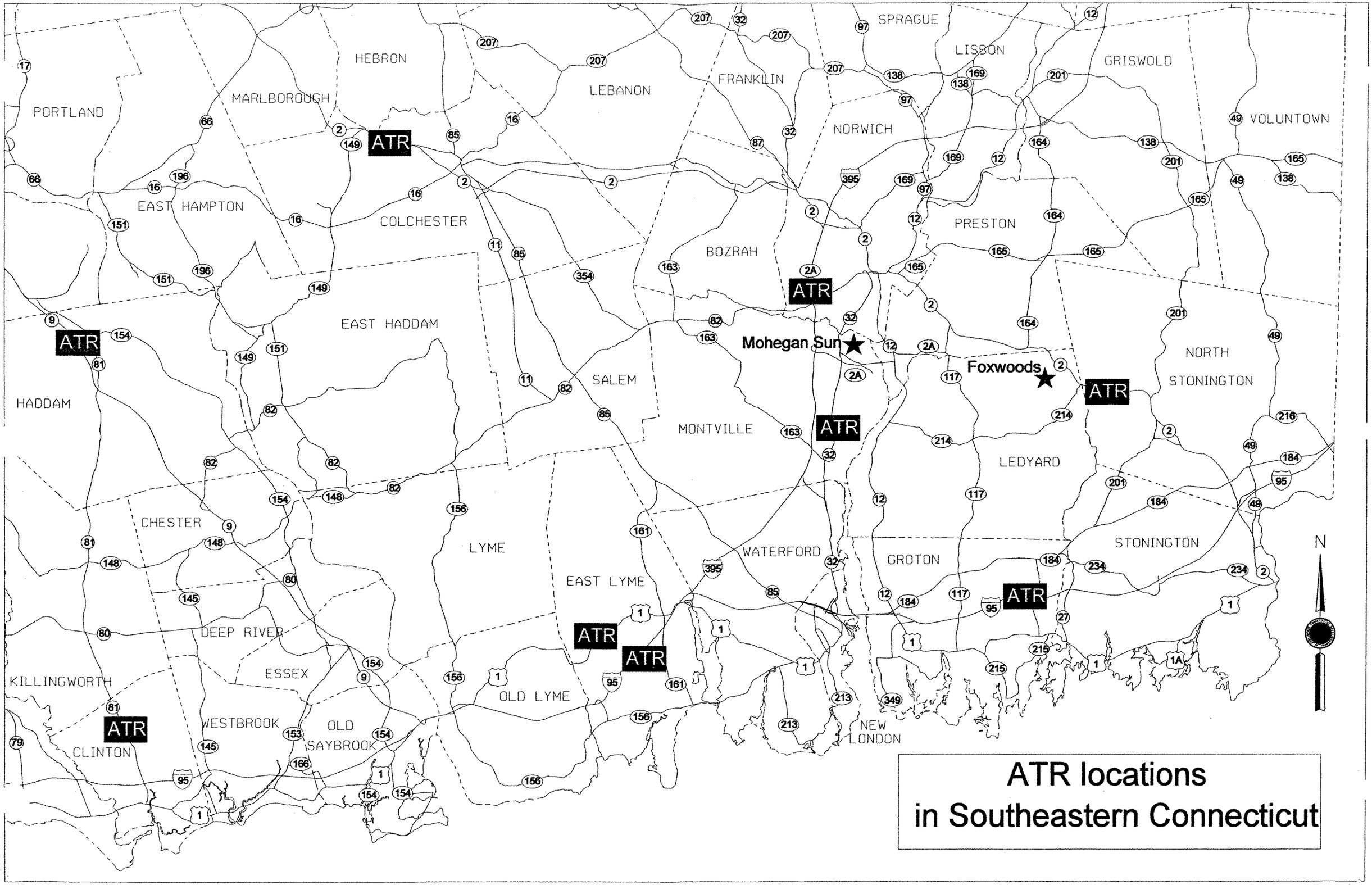
We appreciate EPA's desire to assure every possible option has been analyzed before relegating to the expressway alternative. FHWA has also pursued this course and concluded in order to provide a safe and long-term transportation solution for the corridor the expressway alternative must be selected. We further appreciate your agency's persevering position to minimize impacts on the environment and FHWA commits to standing with your agency in this commitment.

Sincerely yours,

Bradley Keazer

Bradley Keazer
Division Administrator

cc: Col. Brian Osterndorf, ACOE
Acting Commissioner James Byrnes, ConnDOT
Congressman Simmons
Commissioner Arthur Rocque
Director Mike Bartlett, USFWS
Cindy Burbank, FHWA- Planning and Environment CBU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U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

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IN REPLY REFER TO:
HDA-CT

April 6, 2000

Ms. Mindy S. Lubber
Regional Administrator
U.S. Environmental Protection Agency, Region 1,
1 Congress St.
Boston, MA 02114-2023

Dear Ms. Lubber:

As you are aware, the Federal Highway Administration is currently providing the Army Corps of Engineers with an engineering and technical evaluation of the practicability of the sensitive upgrade alternative and the upgrades/widening alternatives from the Draft Environmental Impact Study (DEIS). Through informal electronic mail between Mr. Matt Schweisberg of your staff and Ms. Amy Jackson-Grove of my staff, we understand the U.S. Environmental Protection Agency (EPA) has some additional questions concerning the transportation aspects of the upgrade/widening alternatives. In completing our analysis, FHWA wishes to address all of EPA's transportation concerns which will allow EPA to reach an opinion regarding practicability of the various upgrade/widening alternatives.

Therefore, we are requesting EPA formally submit in writing, similar to the letter from the Army Corps of Engineers dated March 10, 2000, a complete summary of EPA's transportation concerns regarding the practicability of the various upgrade/widening alternatives. Comments summarized in EPA's May 21, 1999 on the Connecticut Route 82/85/11 Corridor - Section 404 Permit Application Public Notice (PN 199702529) and Draft Environmental Impact Statement and Section 4(f) Evaluation (FHWA-CT-EIS-98-01-D) do not have to be reiterated.

Should there be any questions regarding this subject, please do not hesitate to contact Ms. Amy Jackson-Grove at (860) 659-6703 ext. 3010.

Sincerely yours,

For: Donald J. West
Division Administrator

cc: Mr. Matt Schweisberg, EPA
Col. Ostendorf, ACOE
Commissioner Sullivan, ConnDOT

FWS

October 20, 2006

Mr. Robert W. Turner
Federal Highway Administration
628-2 Hebron Avenue, Suite 303
Glastonbury, CT 06033-5007

Dear Mr. Turner:

This is in response to Mr. Bradley Kezar's September 22, 2006 letter, transmitting a CD-ROM containing a copy of the administrative draft of the Final Environmental Impact Statement for the extension of Route 11 in New London County, Connecticut.

We greatly appreciate your willingness to share the administrative draft of the FEIS with the Service, and to provide us with the opportunity to submit comments to the FHWA prior to the completion and release of the document for public review and comment. How, if at all, to complete the uncompleted Route 11 Expressway is a challenge that has been and continues to be a test of the framework of NEPA, Clean Water Act permit review, and our infrastructure planning process. These issues notwithstanding, our interagency coordination has stayed, and continues to stay, above the fray on this controversial project, thanks to the dedication of FHWA and other work group members.

We have reviewed sections of the administrative draft, including purpose and need, alternatives, affected environment, and environmental impacts, as these have been the focus of our joint cooperating agency and permit review functions. As indicated in your transmittal letter, the administrative draft uses the 1999 DEIS as a template with newer, updated information shown in a shaded context. We have found this to facilitate our review of the new information in the document. Our comments follow the outline of the document.

Purpose and Need

On page 2-1, the purpose and need statement includes a criterion, in addition to others, pertaining to highway system linkage as follows: to complete the final link in the limited-access highway between the southern terminus of Route 11 in Salem and I-95/I-395 in Waterford. In the absence of specific statutory direction to do so, this appears to be a narrow, self-limiting criterion, which would defeat or harm non-structural and upgrade alternatives and ensure that only freeway-type

roadways that connect these points could satisfy this element in the purposes and needs. In contrast, the purpose and need statement for the Clean Water Act Section 404/NEPA review on page 2-14 is as follows: to address existing and future year (2020) safety and capacity deficiencies in the existing Route 82 and 85 corridor. This Corps of Engineers purpose and need is somewhat broader than the Federal Highway Administration purposes and needs for the same project. However, it is not clear if the Corps purpose and need is sufficiently broad so as to include a proper geographic area. We think a more expansive purpose and need should be utilized by both agencies. It could also be problematic for the federal government to defend the common alternatives analysis for such radically different purposes and needs (FHWA) or purpose and need (COE) for the same project.

Alternatives

The FEIS provides a brief history and chronology of and updates the alternatives analysis contained in the 1999 DEIS. While no new alternatives as such are included, modifications to upgrade options and expressway alignment E4 are discussed. At this juncture, we think it is useful to draw attention to new information presented elsewhere in this document (FEIS) that appears to have a material bearing on the purpose and need and alternatives sections of the EIS.

On page 4-35, the FEIS presents a new discussion on future operating conditions on I-95 and states: “The results of the highway capacity analysis show that even without the Route 11 Connection, I-95 requires additional lanes in each direction in order to accommodate future (2020) peak hour traffic volumes through the study area.” Thus, it appears to be a questionable enterprise to connect Route 11 to I-95, which itself is projected to be over capacity, unless and until the I-95 issues are addressed first.

We understand that a new evaluation of capacity issues on I-95 from Branford to the Rhode Island border is projected to begin in the near future. This planning process for I-95 would include an EIS that would discuss alternatives and environmental effects from this proposed action. Since nobody can predict in advance what the ultimate outcome of the I-95 evaluation process will be, it seems premature and likely prejudicial to propose the construction of three miles of additional lanes in each direction on I-95 as part of the Route 11/395/I-95 interchange to accommodate traffic from proposed Route 11. We seem to be dealing with closely interrelated actions that are or should be dependent on the outcome of the yet-to-be-started I-95 evaluation from Branford to the Rhode Island line.

In some respects, the current situation regarding the implications of adding traffic from Route 11 onto I-95 is a mirror image of the existing traffic situation on Routes 82/85 created by the construction of Route 11 some 30 years ago. This is precisely one of the relationships between interrelated proposed actions that NEPA is intended to evaluate and disclose.

The data in Table 4-1, page 4-4, indicates that capacity deficiencies on Routes 82 and 85 may be caused either wholly or in part by traffic to or from Route 11. This notion is confirmed on Table 5-69, page 5-255, where the following statement appears: “Existing terminus of Route 11 forces traffic onto Routes 82 and 85, which caused the existing deficiency in the corridor.” Regardless of whether Route 11 is the sole or a major cause of the deficiencies in the 82/85 corridor, none of

the alternatives in the FEIS evaluate ways to alleviate this problem. Instead, the FEIS, like the DEIS, evaluates ways to treat symptoms, but not the cause of the problem. The EIS should evaluate a number of additional alternatives to alleviate the traffic deficiencies on Routes 82/85 caused by Route 11. These should include various alternatives spanning the range of technologies to meter or regulate traffic flow from Route 2 onto Route 11 and from I-95/85/82 onto Route 11. Routes 2/395 and Route 9 are expressways that are about 10-20 miles apart and generally parallel to both sides of Route 11 and extend from the coastal area to the Hartford area. The EIS should evaluate various alternatives, again spanning the range of technologies to encourage or require vehicles, and especially through traffic to utilize these roads instead of Route 11 to alleviate traffic on 82/85. One alternative should evaluate the removal of existing Route 11 from the corridor to alleviate effects on 82/85 and to examine opportunities for environmental restoration in the Eight Mile River and other watersheds traversed by this uncompleted highway. Various combinations of these alternatives and upgrades to 82/85 should be evaluated to determine transportation and environmental effects.

Accordingly, the purpose and need and alternatives sections should be revised based on the new information in the FEIS. Specifically, we think a broad purpose and need statement should be adopted so as not to limit the range of alternatives or the selection of a preferred alternative. The alternatives section should be expanded to include alternatives that evaluate the full range of cause/effect responses in the corridor from Route 2 to I-95, not just symptoms of the problems from the terminus of existing Route 11 at Route 82 to I-95. Since the Route 11/395/I-95 interchange could prejudice the future evaluation and NEPA review of the I-95 study from Branford to the Rhode Island line, the completion of the Route 11 FEIS should be scheduled to occur after completion of the I-95 study. A supplemental DEIS on the Route 11 corridor should be developed to address the outstanding issues, new information, and changed circumstances raised since the 1999 DEIS. This document should be scheduled for public review after the I-95 evaluation and EIS have been completed.

This change in priorities and schedules is appropriate, given that no definitive source of funding has yet been identified for Route 11, and it has not yet been programmed or slated for funding in the State Implementation Plan, page 5-258. Time is therefore available to redress these important issues.

On page 3-25, the design speed for widening alternatives is stated as being 100 kph (60 mph). Previously, on page 3-17, the document discusses new legislation, PA 98-118 (1998) that authorized alternative design standards. Since some seven (7) years have elapsed since the DEIS and PA 98-118 legislation was promulgated, have new alternative design standards been developed, and if so, have these more flexible standards been utilized in the evaluation of the build alternatives in revised Section 3.4? The remaining sections of Chapter 3, except Section 3.4, remain essentially unchanged from the DEIS. If more flexible design standards were utilized in accordance with PA 98-118, it would be a useful clarification to include in the document.

In Section 3.4.2.4, page 3-61/62, the summary discussion on the Community-Sensitive Upgrade Study includes seemingly inconsistent statements concerning the standard(s) for meeting purpose and need such as the following: On page 3-61, “The Community-Sensitive Upgrade Study could meet certain capacity and safety needs in the corridor”; on page 3-61, “The study showed that the

'community-sensitive' alternative would not meet the project purposes and needs"; and, on page 3-62, "None of the upgrade alternatives would meet the project purpose and need". It appears that the upgrades were rejected because they only met certain elements of the project purpose and need. However, on page 3-62, the following statement appears: "it was determined that the $E_{(4)}M$ alignment best met the project purposes and needs". Here it appears that the preferred alternative only meets certain elements of the project purposes and needs. If this is so, then why should a different standard be applied to the upgrade alternatives? In our view, and as confirmed in Section 3.3.9, the upgrade alternatives partially meet the project purposes and needs in a fashion similar to the new alignment alternatives. Consequently, we believe the subjective criteria used to evaluate alternatives should be applied uniformly, such that reasonable alternatives remain open for consideration and not be prematurely discarded.

Another significant shortcoming of this NEPA, CWA, and infrastructure planning process is the number of major issues that are being deferred to the design stage, and not addressed in this FEIS. These include: the feasibility/practicability of developing and implementing compensatory mitigation for project impacts; the landscape effects from roadway cuts and fills, the acidic effects from cuts in pyritic bedrock; roadway runoff, including stormwater, deicing chemicals, and other pollutants in wetlands and other high quality waters; hydrological effects in cut and fill sections; the feasibility of a bikeway adjacent to Route 11; and the lack of a consensus on the least environmentally damaging practicable alternative (LEDPA). Several of these issues could yield environmental effects that would cause major alignment shifts and/or significant cost increases and some, e.g., the failure of compensatory mitigation to offset significant degradation, could result in project denial. Each of these issues has a set of environmental effects which, for the most part, remain unknown, undisclosed, and unquantified. Many involve unresolved conflicts concerning alternative uses of available resources. In our view, these issues involve critical information needs that are necessary to move the 1999 DEIS into the realm of an adequate SDEIS. For these reasons, which are independent from the purpose and need and alternatives issues addressed previously, the subject document should be redrawn, in our view, and re-issued as a SDEIS at some future date.

The major reason advanced by the highway agencies for releasing a FEIS at this time is that it is a necessary requisite to obtain design level funding which could be used to address the outstanding issues in the preceding paragraph. In our view, this is an administrative decision involving funding allocations for planning and design level studies, not funding for construction. It is not clear to us if a bright line distinction exists between planning and design level activities. Even if a sharp distinction exists, it is not clear that it would have sufficient weight to overcome NEPA regulations regarding the need for supplemental statements. The important legal distinctions between a SDEIS and a FEIS are sufficient in our view to outweigh the inconvenience posed by the administrative policies in FHWA and the Connecticut Department of Transportation related to funding decisions on planning and design level studies.

Page 5-88 – This page of the document seems to contain conflicting statements regarding raptors. The second paragraph contains a discussion on the barred owl and broad-winged hawk and indicates that both species are considered area-sensitive. In the fourth paragraph, a statement is made that raptors are unlikely to be impacted by forest fragmentation… We suggest that these two paragraphs be revisited for some possible editorial modification.

Page 5-90 – The New England cottontail is now on the candidate species list (71 FR 53756). It is potentially subject to listing at some future time.

Page 5-95 – The cerulean warbler is undergoing a 12-month status review to determine if the species warrants further listing action.

Page 5-97 – Section 5.4.10.7 contains the following statement concerning fragmentation effects: "Habitat blocks 1, 2, and 5 would still be sufficiently large enough to support forest interior bird species and forest dwelling raptors." Without further qualification, this statement could be interpreted to mean that all of the area-sensitive forest interior species that currently use these forest blocks would continue to do so if the proposed highway were to be built. We think some, maybe most, area-sensitive species will find the remaining habitat less suitable or unsuitable as a consequence of the proposed action. As a general matter, the discussion in Section 5.4 has stopped short of providing an estimate regarding which, if any, species are predicted to find the remaining habitat as being either less suitable or unsuitable. We think these are potential impacts that should be discussed in the EIS.

Page 5-98 – The third paragraph indicates that the bald eagle has been delisted as a threatened federal species. The bald eagle has been proposed for delisting, but the final delisting action has not yet occurred. It currently remains listed as a threatened species on the federal list.

Page 5-155 – The second paragraph contains a discussion on wetland mitigation sites and refers to a Draft Statement of…, and then merges into the next sentence. We suggest that this paragraph be revisited for some editorial modification.

In summary, we have identified the purpose and need and alternatives sections as one area in the EIS where we have a substantially different perspective. We hope our comments articulate this perspective in a constructive fashion. As for the second major issue, the deferral of studies and regulatory processes to the design stage after the FEIS, we think this is a recipe for unnecessary conflict that could likely be avoided by withholding this FEIS and instead, issuing a DSEIS when the deferred studies and other information needs have been completed.

Again, thank you for providing a copy of the administrative draft of the FEIS for our review and comment. Questions should be directed to me at 603-223-2541, or email vernon_lang@fws.gov.

Sincerely yours,

Vernon B. Lang
Assistant Supervisor
New England Field Office

CC: Reading File
W. Neidermyer, FWS
T. Timmerman, EPA
M. Schweisberg, EPA
R. Desista, Corps
R. Gilmore, CT DEP
E. Hurle, CT DOT
G. Mannesto, FWS
ES: VLang:jd:10-20-06:603-223-2541

United States Department of the Interior

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

Paul
Mark
Kim

January 30, 2003

Ms. Amy Jackson-Grove
Federal Highway Administration
628-2 Hebron Avenue, Ste 303
Glastonbury, Connecticut 06033-5007

Dear Ms. Jackson-Grove:

This letter is to advise and update you about two wildlife species that may occur in the Route 11 project area that are currently being evaluated by the U.S. Fish and Wildlife Service (Service) for possible addition to the federal threatened and endangered species list. The cerulean warbler (*Dendroica cerulea*) and the New England cottontail (*Sylvilagus transitionalis*) are the subjects of separate petitions from the environmental community pursuant to section 4 of the Endangered Species Act. The listing petitions were received by the Service during late 2000. We note that discussion about the potential occurrence of these species in the Route 11 project area was addressed at the October 2, 2002 meeting at the Connecticut Department of Transportation (J. Barry, Memorandum, November 12, 2002). These meeting notes also acknowledge that there have been no directed surveys for rare species and special habitats (rare natural communities) in the project corridor.

In Connecticut, the cerulean warbler is at the northeast periphery of its range. It is a small, brightly colored songbird that nests in tall broadleaf trees near water. A preliminary 90-day finding on the petition to list this species was published in the Federal Register on October 23, 2002. This finding concludes that enough information exists to indicate that listing as threatened or endangered may be warranted and initiates a 12-month status review. A copy of the petition and related information can be found at the Service's Region 3 website, http://midwest.fws.gov/endangered/birds/cerw/index.html.

The New England cottontail (*Sylvilagus transitionalis*) was once widespread in New England and occurred throughout Connecticut. For habitat, it requires the dense cover of regenerating forests, beaver flowages or shrub thickets, where both food and cover are found in close proximity. The New England cottontail is presently known to occur in 19 or 20 Connecticut towns [T. Goodie, M. Gregonis and H. Kilpatrick, in litt., August 2002, Connecticut Department of Environmental Protection (CTDEP)], and the CTDEP is continuing efforts to determine its current distribution for the entire state. The Service is presently preparing a 90-day petition finding for this species and anticipates that like the cerulean warbler, a 12-month status review will be required to fully evaluate its candidacy for the endangered species list.

We have currently contracted with the University of New Hampshire to conduct range-wide occurrence surveys for this mammal. However, it is unlikely that this survey's scale is fine enough to be useful in the planning of the Route 11 project. In light of the above, we strongly recommend that the presence/absence of the New England cottontail and the cerulean warbler be determined in the project corridor, as both species are of significant conservation concern and may in the near future be candidates for threatened or endangered species listing.

Questions regarding this letter may be directed to Michael Amaral, Sr. Endangered Species Specialist, or William Neidermyer, Federal Project Coordinator, at 603-223-2541. For site-specific information on the occurrence of the cerulean warbler in Connecticut, we suggest that you contact Jenny Dickson, CTDEP, at 860-675-8130 and for the New England cottontail in Connecticut, contact Michael Gregonis, CTDEP, at 860-642-7239.

Sincerely,

Kenneth C Carr

Please Contact

Kenneth C. Carr
Acting Supervisor
New England Field Office

cc: J. Victoria, and Michael Gregonis, CT DEP Franklin Wlf Mgt Area
Jenny Dickson, CT DEP, Burlington
Christine Godfrey, ACOE
W. Neidermyer, NEFO
Reading File

ES: MAmaral:1-30-03:603-223-2541

UNITED STATES GOVERNMENT

MEMORANDUM

U.S. FISH AND WILDLIFE SERVICE

RECEIVED

NOV 15 2002

ENVIRONMENTAL PLANNING DIVISION

NEW ENGLAND FIELD OFFICE
70 COMMERCIAL STREET, SUITE 300
CONCORD, NEW HAMPSHIRE 03301-5087

TO: Edgar Hurle, Director, Environmental Planning, CT Dept. of Transportation

November 13, 2002

FROM: Vernon Lang, Assistant Supervisor, New England Field Office

SUBJECT: Draft Report on Wetlands and Wildlife Impacts for Route 11 Corridor

In accordance with your request at the October 2, 2002 interagency meeting, I have reviewed the subject draft report and related maps and offer the following comments.

I assume that the draft report was intended to serve as a vehicle to begin a dialogue among the agencies and other interested parties regarding an assessment of the spatial and temporal impacts on wetlands and other wildlife habitat that would likely result if the preferred alignment is developed into the Route 11 expressway. While the analysis of wildlife impacts uses a broad brush approach, it does serve to raise a number of questions concerning the causal relationship of impacts to wildlife and their habitat from the proposed highway and existing residential/commercial development.

On page 1 of the draft report, I believe it is premature to conclude that avoidance and minimization have been accomplished. As you recall, at our October 2, 2002 meeting, a number of questions were raised concerning whether field studies had been conducted in the study corridor to support the selection of various alternatives and highway designs being proposed. As you conceded that field studies have for the most part not been conducted, the pronouncement that avoidance and minimization have been accomplished seems to be premature and conclusory.

On page 6 of the draft report, ConDOT adopts a standard distance of 1,600 feet as measured from the edge of highway or residential development into undeveloped habitat as a conservative estimate for identifying and estimating indirect effects on wildlife. One important effect of this single, broad brush approach is that it may mask or obliterate the habitat fragmentation syndrome of effects on some wildlife and wildlife habitat. Generally speaking, on a species basis, wildlife tend to react differently to various disturbances and site characteristics based on their habitat preferences, tolerance for various disturbance factors, competition, etc. For these reasons and others, the probability of various forest interior species occurring in various patch sizes increases with increasing distance from edge up until some point where the distance from edge effect can no longer be measured. This distance will tend to vary on a species-by-species basis. Consequently, the impacts on interior species should be analyzed on a species-by-species basis to reflect spatial and temporal impacts.

The draft report assumes that indirect effects from residential developments would be the same as those from the Rte 11 expressway. This seems to be unlikely. For example, predation by domestic cats would likely be higher in areas adjacent to residential development than for the expressway. Noise disturbance would likely be more problematic for areas adjacent to the highway than from most residential areas. Some residential areas may have a closed canopy or small openings in the canopy that are not perceived by some interior species as openings or edge. Consequently, all residential areas are not necessarily going to have identical disturbance, edge, or other fragmentation effects. For this reason, determining where to measure for direct and indirect effects would not be as clearcut as the draft report would have you believe.

A more effective way to plot or map direct and indirect effects would be to break the distance from edge or development down into smaller units as measured from edge. This could be done using 50, 100, 200, 300, 400, 500 m bands from the edge of the proposed expressway. Each band could be color coded and area estimates could be measured. Impacts on area-sensitive species could then be estimated using minimum patch size from literature sources, e.g., Robbins et al. 1989.

The preferred way to estimate these impacts is to collect species occurrence data along the various alignments in the study corridor, e.g., breeding bird, mammal and herptile surveys. These data could be plotted to identify occupied territories on the various alignments and in areas adjacent to the alignments. It would then be possible to estimate direct and indirect losses to the various area-sensitive species using literature sources as identified above. Breeding bird and other wildlife surveys could also be done in areas adjacent to various residential sites to obtain occurrence data and better define or delineate edge and interior habitat and extent of direct and indirect/secondary effect.

The advantages of this latter approach are that it would provide data that could be used to more precisely identify impacts on wildlife and wildlife habitat. The data could be used to identify alignment shifts that could be taken to avoid interior habitat, to confirm or refute the acceptability of the Corps LEDPA determination, and to determine if other alternative alignments in the study corridor would be acceptable. It would also provide a more informed basis for considering mitigation/compensation needs and whether such an undertaking is appropriate or practicable given the magnitude of potential impacts.

Specific Comments

Page 3 - The proposal to create 16.8 acres of palustrine wetlands as 1:1 in-kind function and value replacement for direct losses incurred by the highway is a major concern. Wetland creation is subject to great uncertainty even for the less complex herbaceous systems. Here, most of the wetlands are the more structurally and botanically complex forested and scrub/shrub type for which no long-term successful creation has been demonstrated. Even if creation of these types were practicable, it would take many years, perhaps 50 or more, to grow the trees, shrubs and understory vegetation to the point where it would begin to resemble and function like a forested wetland. During this development and growth phase, functions and values would continue to be lost. In order to compensate for these continuing losses, replacement ratios greater than the proposed 1:1 ratio would need to be

determined. When the juxtaposition of these wetlands into a forested landscape is added to the mitigation/compensation issue, the in-kind function and value objective becomes even more dubious.

With respect to Latimer Brook Dam, was dam removal considered as an option? Are insurmountable constraints in place that would preclude this option?

Page 6 - In the second paragraph, a reference is made to cited literature that pertains to indirect effects of highways as measured from the edge into undisturbed habitat blocks. In the third paragraph, a more sweeping pronouncement is made by adapting these highway effects to residential impacts. Do these literature sources cited in paragraph two pertain only to highways or do they pertain to both highways and residential developments?

Page 7 - On this page, Table 3 and Figure 2, it is not clear how the edge of residential development was defined. It would be useful to have an explanation included in the report stating how this edge was determined.

For seasonal pools, an upland habitat distance of 500 feet was utilized to determine acreage estimates. Would you explain why the 500-foot limit was selected, instead of a 200-, 300-meter or greater limit? We are concerned that the number of vernal pools that supply amphibians and perhaps other wildlife to uplands and wetlands in the alignment may be under-represented.

Pages 10 and 11 - The report concludes that completion of Route 11 would not be a substantial catalyst for new residential growth or induce development that would not otherwise occur. However, in the induced development analysis on pages 11-18, the completion of the expressway is projected to induce commercial and industrial development near intersections. It is not clear why induced development would occur for one sector but not the other. It would seem that the result of new commercial/industrial development would be more residential development, that is, more seems to beget more.

Page 14 - The term registered "forest land" is identified within the Town of Waterford but not Salem, E. Lyme, or Montville. Does this restricted land category exist in these other towns within the study corridor? If so, how many acres and where are these lands located in the study corridor?

Page 15 - On Table 5, under Figures 4 and 5, it would be useful to break out the acreage of preserved lands, and the various categories of land with environmental constraints, including acreage figures.

Page 22 - Would you explain the rationale for listing direct and indirect impacts to habitat blocks >130 acres in size but not wildlife habitat in patches of <130 acres in size? How many acres of habitat in patches <130 acres in size would be directly and indirectly affected by the expressway?

Wetland and mitigation site maps

As a general comment, it would be useful to have the survey stations plotted on these maps to assist with ground truthing functions. Currently, it is difficult to identify delineated wetlands and stream courses with a high degree of precision.

Secondly, during a November 5, 2002 field visit to the proposed alignment in the northern sections of the corridor, we noted that some flowing streams and other water courses were not delineated on the maps. Combined with the fact that the stations are not marked on the maps, we are concerned that all of the aquatic habitats may not be identified, tabulated, and considered in the overall planning and evaluation process. Consequently, we believe additional work is necessary to identify and ground truth resources within and adjacent to the study corridor.

Questions may be directed to me at 603-223-2541 or email vernon_lang@fws.gov.

CC: Reading File
M. Bartlett, FWS
B. Neidermyer, FWS
G. Mannesto, FWS
M. Schweisberg, EPA
D. Thompson, EPA
M. Marsh, EPA
C. Godfrey, NED
A. Jackson-Grove, FHWA

ES: VLang:jd:11-13-02:603-223-2541

SHPO

Connecticut Commission on Culture & Tourism

Historic Preservation
& Museum Division

59 South Prospect Street
Hartford, Connecticut
06106

(v) 860.566.3005
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July 10, 2006

Mr. Robert Turner
Federal Highway Administration
628-2 Hebron Avenue, Suite 303
Glastonbury, CT 06033-5007

Subject: Route 11 Corridor
East Lyme, Montville, Salem and Waterford, CT
ConnDOT #120-81

Dear Mr. Turner:

The State Historic Preservation Office has reviewed the *Reevaluation of the Draft Environmental Impact Statement* (June 2006) and proposed revisions to the draft Memorandum of Agreement by the Federal Highway Administration. In particular, this office recommends the following technical corrections be incorporated within the proposed Memorandum of Agreement:

- FHWA and/or ConnDOT shall acquire and preserve, to the maximum extent feasible, historically-associated and archaeologically-sensitive lands with respect to historic archaeological sites #152-132, 152-24, 152-25, 152-26, 152-28, 45-46, 152-29, 152-73, 152-33, 152-34, 152-30, 152-31 and 45-45. Collectively, these archaeological sites substantively constitute the residential core of the Wolf Pit Hills Archaeological District.

  FHWA and/or ConnDOT shall prepare the appropriate materials for the designation of the Wolf Pit Hills Archaeological District as a State Archaeological Preserve pursuant to Connecticut General Statutes Section 10-384. Documentation shall include a public education booklet consistent in overall content and design to the professional standards of the State Historic Preservation Office. FHWA and/or ConnDOT shall provide 1,000 print copies and an electronic (digital media) version to the State Historic Preservation Office for statewide public distribution.

- FHWA and/or ConnDOT shall sponsor the nomination and designation of one archaeological resource, respectively, located within the Towns of Salem, Montville, East Lyme, and Waterford as State Archaeological Preserves. Documentation shall consist of a public-oriented State Archaeological Preserve booklet consistent in overall content and design to the professional standards of the State Historic Preservation Office. FHWA and/or ConnDOT shall provide 500 print copies and an electronic (digital media) version to the State Historic Preservation Office for statewide public distribution.

The State Historic Preservation Office strongly encourages the Federal Highway Administration to coordinate with the Connecticut Department of Environmental Protection and the Archaeological Conservancy regarding potential partnerships vis-à-vis the preservation and conservation of the Wolf Pit Hills Archaeological District.

This office looks forward to further consultation with the Federal Highway Administration, the Connecticut Department of Transportation, the Connecticut Department of Environmental Protection, and all interested parties regarding the satisfactory resolution of project-related impacts with respect to the National Historic Preservation Act and the National Environmental Policy Act.

For additional assistance please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

J. Paul Loether
Division Director and Deputy
State Historic Preservation Officer

cc: Mr. Edgar Hurle/ConnDOT
Dr. Nicholas Bellantoni/OSA

STATE OF CONNECTICUT

State Historic Preservation Office

Commission on Arts, Tourism, Culture, History and Film

October 8, 2003

Mr. Edgar T. Hurle
Environmental Planning
ConnDOT
2800 Berlin Turnpike
Newington, CT

Subject: Route 11
Salem, Montville, East Lyme and Waterford, CT

Dear Mr. Hurle:

The State Historic Preservation Office has reviewed supplemental information provided by the Maguire Group and the end-of-fieldwork management summary prepared by Archaeological & Historical Services regarding the above-named project. In the opinion of the State Historic Preservation Office, the archival and archaeological methodologies employed by Archaeological & Historical Services appear consistent with our *Environmental Review Primer for Connecticut's Archaeological Resources.*

The State Historic Preservation Office concurs with Archaeological & Historical Services' assessment that 21 Gurley Road possesses architectural significance and is eligible for the National Register of Historic Places. In addition, this office believes that the Tarbor Cemetery is an important 19th century rural burial ground which appears eligible for the National Register.

The State Historic Preservation Office concurs with Archaeological & Historical Services that archaeological resources #45-25, 45-28, 45-29, 45-37, 45-39, 45-42, 45-43, 45-48, 45-49, 86-24, 121-8, 121-10, 121-22, 152-108, 152-129, and 152-134 retain scientific integrity, possess archaeological significance, and are eligible for the National Register of Historic Places. This office notes that historic archaeological sites #45-28, 45-39, 45-42, 45-43, 45-48, 45-49 and 152-134 are integral components of the extensive archaeological and cultural features of Wolf Pit Hills Archaeological District, an important 18th and 19th century rural landscape that is eligible for the National Register.

In the opinion of the State Historic Preservation Office, the preferred transportation corridor constitutes an adverse effect upon the above-noted 16 archaeological resources and the Wolf Pit Hills Archaeological District. Therefore, this office recommends that ConnDOT and the Federal Highway Administration draft a Memorandum of Agreement pursuant to the National Historic Preservation Act. We strongly recommend that the Memorandum of Agreement incorporate the following mitigative measures:

59 SOUTH PROSPECT STREET HARTFORD, CONNECTICUT 06106-1901
Telephone: 860-566-3005 Facsimile: 860-566-5078

- The Federal Highway Administration and/or ConnDOT shall provide the State Historic Preservation Office with an opportunity to review and comment upon all project-related improvements proposed in the vicinity of 21 Gurley Road.

- The Federal Highway Administration and/or ConnDOT shall ensure that a 50 foot construction-free buffer is maintained around the Tarbor Cemetery. Protective temporary fencing shall be erected under the field direction of Archaeological & Historical Services in order to ensure during-construction avoidance of the Tarbor Cemetery.

- The Federal Highway Administration and/or ConnDOT shall develop, in consultation with the State Historic Preservation Office, pertinent data recovery plans for archaeological sites #45-25, 45-28, 45-29, 45-37, 45-39, 45-42, 45-43, 45-48, 45-49, 86-24, 121-8, 121-10, 121-22, 152-108, 152-129, and 152-134. Data recovery plans, including the conservation and disposition of artifacts, curation of soil samples, photographs, field notes, and preparation of final reports shall be implemented by qualified archaeological consultants who meet National Park Service qualification standards. All archaeological investigations shall be carried out in accordance with the State Historic Preservation Office's *Environmental Review Primer for Connecticut's Archaeological Resources*.

- The Federal Highway Administration and/or ConnDOT shall implement appropriate reconnaissance, intensive and, if warranted, data recovery studies for all previously inaccessible areas, temporary storage and work locations, additional wetland mitigation areas, and borrow pits. All archaeological investigations shall be consistent with the *Environmental Review Primer for Connecticut's Archaeological Resources*.

- The Federal Highway Administration and/or ConnDOT shall acquire and preserve, to the maximum extent feasible, historically and archaeologically significant property associated with the Wolf Pit Hills Archaeological District. The Federal Highway Administration and/or ConnDOT shall prepare the appropriate materials for the designation of the Wolf Pit Hills Archaeological District as a State Archaeological Preserve pursuant to Connecticut General Statutes Section 10-384. Documentation shall consist of a public-oriented State Archaeological Preserve booklet whose overall content and design shall be developed in consultation with the State Historic Preservation Office. Final paper (1,000 copies) and electronic versions shall be provided to the State Historic Preservation Office for statewide distribution.

- The Federal Highway Administration and/or ConnDOT shall sponsor the nomination and designation of one archaeological resource, respectively, located within the Towns of Salem, Montville, East Lyme and Waterford as State Archaeological Preserves. Documentation shall consist of a public-oriented State Archaeological Preserve booklet whose overall content and design shall be developed in consultation with the State Historic Preservation Office. Final paper (500 copies) and electronic versions shall be provided to the State Historic Preservation Office for statewide distribution.

- The Federal Highway Administration and/or ConnDOT shall develop a public-oriented educational component with respect to the archaeological data recovery program for sites #45-25, 45-28, 45-29, 45-37, 45-39, 45-42, 45-43, 45-48, 45-49, 86-24, 121-8, 121-10, 121-22, 152-108, 152-129, and 152-134. The component shall consist of public-oriented reports, slide presentations, interpretive exhibits, and/or electronic reports concerning the prehistoric, historic and industrial archaeology of Salem, Montville, East Lyme and Waterford. Summary reports shall be prepared and submitted to the *Archaeological Society of Connecticut Bulletin* and the *Society of Industrial Archaeology New England Chapters Newsletter*.

- The Federal Highway Administration and/or ConnDOT shall reposit all artifacts, photographs and field notes generated by project-related archaeological investigations with the Office of State Archaeologist at the University of Connecticut (Storrs) pursuant to Connecticut General Statute Section 10-383.

In the opinion of the State Historic Preservation Office, archaeological sites #45-25, 45-28, 45-29, 45-37, 45-39, 45-42, 45-43, 45-48, 45-49, 86-24, 121-8, 121-10, 121-22, 152-108, 152-129, and 152-134 do <u>not</u> warrant *in situ* preservation. In addition, this office believes that archaeological sites #45-26, 45-27, 45-30, 45-32, 45-33, 45-34, 45-35, 45-36, 45-38, 45-40, 86-18, 86-19, 86-20, 86-21, 86-38, 86-39, 121-2, 121-7, 121-9, 121-13, 121-21, 121-24, 121-25, and 156-116 lack scientific integrity and/or cultural affiliation and are <u>not</u> eligible for the National Register of Historic Places.

The State Historic Preservation Office recommends that the Federal Highway Administration and/or ConnDOT provide final Route 11/82/85 Phase I and II archaeological reports (two copies), including unbound archaeological inventory forms, to our professional staff for further technical analysis. Unless incorporated into the Phase I/II reports, a technical report (two copies) should be prepared and submitted regarding Archaeological & Historical Services historic and architectural evaluations within the Route 11/82/85 corridor.

We strongly encourage submission of these technical reports prior to the initiation of further archaeological investigations.

This office looks forward to additional consultation with the Federal Highway Administration, ConnDOT, and all interested parties regarding the expeditious furtherance of the Route 11 project as well as the professional management of Connecticut's cultural heritage.

This comment updates and supersedes all previous correspondence for the proposed undertaking. For further assistance please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

J. Paul Loether
Deputy State Historic
Preservation Officer

cc: Dr. Nicholas Bellantoni/OSA
Mr. Keith Hall/ConnDOT
Mr. Robert Turner/FHWA
Ms. Kathy Hall/MGI
Ms. Mary Harper/AHS

Paul C,

STATE OF CONNECTICUT

CONNECTICUT HISTORICAL COMMISSION

March 12, 2002

Mr. Ralph Steadham
Environmental Planning
CONNDOT
2800 Berlin Turnpike
Newington, CT

RECEIVED
MAR 15 2002
ENVIRONMENTAL PLANNING
DIVISION

Subject: Route 11
Waterford, CT

Dear Mr. Steadham:

The State Historic Preservation Office appreciates the on-site opportunity coordinated by CONNDOT, the Public Archaeology Survey Team Inc., and the Town of Waterford's Municipal Historian with respect to the domestic residence located at 21 Gurley Road. In the opinion of the State Historic Preservation Office, the house, ancillary structures, and associated historic archaeological components are eligible for the National Register of Historic Places. Despite its current physical condition, the c.1691 residence retains historic and architectural importance as the earliest surviving house in the Town of Waterford. The extant barn, privy, and spring house contribute to the property's historic ambiance. In addition, the brick ruins of the Town of Waterford's 19th Century almshouse, which was a rear ell to the extant residence, possess archaeological integrity and importance.

The State Historic Preservation Office believes that the proposed transportation improvements will constitute an adverse effect upon the historic setting, physical integrity, and archaeological aspects of 21 Gurley Road. This office recommends that the Federal Highway and Administration and CONNDOT draft a Memorandum of Agreement pursuant to the National Historic Preservation Act which would satisfactorily mitigate project-related impact upon this uniquely important historic and archaeological property. We strongly encourage that the following mitigative measures be incorporated into the Memorandum of Agreement:

- Prior to construction-related activities, FHWA and/or CONNDOT shall contact the National Park Service HABS/HAER Office (Philadelphia) to determine what level and kind of recordation is required for 21 Gurley Road. Unless otherwise agreed to by the National Park Service, FHWA and/or CONNDOT shall ensure that all documentation is accepted by HABS/HAER prior to construction-related activities. Final copies of the documentation shall be provided to HABS/HAER, the State Historic Preservation Office, and the Town of Waterford.

Post-it® Fax Note 7671	Date 3-18-02	# of pages ▶ 3
To Kathy Hall	From PAUL CORRENTI	
Co./Dept. Maguire Inc.	Co. DOT	
Phone # 224-9141	Phone # 594-2932	
Fax # 224-9147	Fax # 594 3028	

TEL:
59 :

- Prior to construction-related activities, FHWA and/or CONNDOT shall document the cultural landscape, including the extant barn, privy, spring house, and land use patterns, of 21 Gurley Road to the professional standards of the State Historic Preservation Office. Documentation shall consist of narrative text, unbound 35mm black and white photographs, an index to photographs, and a photographic site plan. Final documentation shall be provided to the State Historic Preservation Office and the Town of Waterford for permanent archiving and public accessibility.

- Prior to construction-related activities, FHWA and/or CONNDOT shall professionlly undertake reconnaissance and intensive investigations in order to locate, identify, and evaluate archaeological components associated with 21 Gurley Road. To the extent feasible, oral history with the current property owner shall be a prerequisite to the archaeological investigations. Upon conclusion of the reconnaissance and intensive survey, FHWA and/or CONNDOT shall consult with the State Historic Preservation to assess whether further archaeological investigations may be warranted. All archaeological studies shall be carried out in accordance with the State Historic Preservation Office's *Environmental Review Primer for Connecticut's Archaeological Resources*.

- FHWA and/or CONNDOT shall, in consultation with the State Historic Preservation Office, develop a public education component vis-a-vis the historic, architectural, and archaeological aspects of 21 Gurley Road. The public education component may include, among others, State Archaeological Preserve designation, a public-oriented publication, popular brochure, Internet web presentation, public lectures, and/or interpretative exhibit.

- FHWA and/or CONNDOT shall consult with the Office of the State Archaeologist at the University of Connecticut (Storrs) concerning all pertinent requirements for the long-term curation of all field notes, photographs, artifacts, and soil samples generated by the archaeological investigations at 21 Gurley Road.

The State Historic Preservation Office looks forward to further coordination with CONNDOT and all interested parties with respect to 21 Gurley Road vis-a-vis proposed Route 11 improvements.

For further assistance please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

John W. Shannahan
Director and State Historic
Preservation Officer

cc: Dr. Nicholas Bellantoni/OSA
Dr. Bruce Clouette/PAST Inc.
Mr. Robert Nye/Municipal Historian

PART 2
DEIS
CORRESPONDENCE

AGENCY COORDINATION LETTERS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
22 Bridge Street, Unit #1
Concord, New Hampshire 03301-4986

March 30, 1998

Daniel Hageman
Maguire Group Connecticut, Inc.
One Court St.
New Britain, CT 06051

Dear Mr. Hageman:

This responds to your letter dated February 25, 1998 for information on the presence of federally-listed and proposed, endangered or threatened species in accordance with environmental scoping for the Route 82/85/11 Corridor EIS in New London County, Connecticut.

Based on information currently available to us, no federally-listed or proposed, threatened and endangered species under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area, with the exception of occasional, transient bald eagles (*Haliaeetus leucocephalus*) or peregrine falcons (*Falco peregrinus*). The potential occurrence of American chaffseed (*Schwalbea americana*), an endangered plant species, should be evaluated (see enclosure). Nancy Murray of the Connecticut Natural Diversity Data Base, 79 Elm St., Store Level, Hartford, Connecticut 06106, at 860-424-3540, may have additional information on historic occurrence of *Schwalbea* and state-listed species that may be present.

This response relates only to endangered species under our jurisdiction. It does not address other legislation or our responsibilities under the Fish and Wildlife Coordination Act.

A list of federally-designated endangered and threatened species in Connecticut is enclosed for your information. Thank you for your cooperation and please contact Michael Amaral of this office at 603-225-1411 if we can be of further assistance regarding endangered species.

Sincerely yours,

Michael J. Bartlett
Supervisor
New England Field Office

Enclosures

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN CONNECTICUT

Common Name	Scientific Name	Status	Distribution
FISHES:			
Sturgeon, shortnose*	Acipenser brevirostrum	E	Connecticut River & Atlantic Coastal Waters
REPTILES:			
Turtle, bog	Clemmys muhlenbergii	PT	Fairfield, Litchfield Counties
Turtle, green*	Chelonia mydas	T	Oceanic straggler in southern New England
Turtle, hawksbill*	Eretmochelys imbricata	E	Oceanic straggler in southern New England
Turtle, leatherback*	Dermochelys coriacea	E	Oceanic summer resident
Turtle, loggerhead*	Caretta caretta	T	Oceanic summer resident
Turtle, Atlantic ridley*	Lepidochelys kempii	E	Oceanic summer resident
BIRDS:			
Eagle, bald	Haliaeetus leucocephalus	T	Hartford, entire state-migratory
Falcon, American peregrine	Falco peregrinus anatum	E	No current nesting; entire state-migratory
Falcon, Arctic peregrine	Falco peregrinus tundrius	T	Entire state migratory-no nesting
Plover, Piping	Charadrius melodus	T	Atlantic coast
Roseate Tern	Sterna dougallii dougallii	E	Atlantic coast
MAMMALS:			
Whale, blue*	Balaenoptera musculus	E	Oceanic
Whale, finback*	Balaenoptera physalus	E	Oceanic
Whale, humpback*	Megaptera novaeangliae	E	Oceanic
Whale, right*	Eubalaena spp. (all species)	E	Oceanic
Whale, sei*	Balaenoptera borealis	E	Oceanic
Whale, sperm*	Physeter catodon	E	Oceanic
MOLLUSKS:			
Mussel, dwarf wedge	Alasmidonta heterodon	E	Hartford County
INSECTS:			
Beetle, puritan tiger	Cicindela puritana	T	Middlesex, Conn. River Valley
Beetle, northeastern beach tiger	Cicindela dorsalis dorsalis	T	Extirpated, coastal beaches
PLANTS:			
Small Whorled Pogonia	Isotria medeoloides	T	Hartford, New Haven, Fairfield, New London, Windham, Tolland, Middlesex, Litchfield Counties
Sandplain Gerardia	Agalinus acuta	E	Hartford

* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service

Rev. 2-19-97

Schoenocrambe (=Glaucocarpum) suffrutescens.	Shrubby reed-mustard (=toad-flax cress).	U.S.A. (UT)	Brassicaceae	E	293	NA	NA
Schoenocrambe argillacea	Clay reed-mustard	.....do	.....do	T	457	NA	NA
Schoenocrambe barnebyi	Barneby reed-mustard	.....do	.....do	E	457	NA	NA
Schoepfia arenaria	None	U.S.A. (PR)	Olacaceae	T	420	NA	NA
Schwalbea americana	American chaffseed	U.S.A. (AL, CT, DE, FL, GA, LA, MA, MD, MI, MS, NC, NJ, NY, SC, TN, VA).	Scrophulariaceae	E	478	NA	NA
Scirpus ancistrochaetus	Northeastern (=Barbed bristle) bulrush.	U.S.A. (MA, MD, NY, PA, VA, VT, WV).	Cyperaceae	E	425	NA	NA
Sclerocactus (=Echinocactus, =Pediocactus) glaucus (=whipplei var. g., =subglaucus, = franklinii).	Uinta Basin hookless cactus	U.S.A. (CO, UT)	Cactaceae	T	59	NA	NA
Sclerocactus (=Coloradoa, =Echinocactus, =Pediocactus) mesae-verdae.	Mesa Verde cactus	U.S.A. (CO, NM)	.....do	T	75	NA	NA
Sclerocactus (=Pediocactus) wrightiae	Wright fishhook cactus	U.S.A. (UT)	.....do	E	58	NA	NA
Scutellaria floridana	Florida skullcap	U.S.A. (FL)	Lamiaceae	T	463	NA	NA
Scutellaria montana	Large-flowered skullcap	U.S.A. (GA, TN)	.....do	E	234	NA	NA
Sedum integrifolium ssp. *leedyi*	Leedy's roseroot	U.S.A. (MN, NY)	Crassulaceae	T	460	NA	NA
Senecio franciscanus	San Francisco Peaks groundsel	U.S.A. (AZ)	Asteraceae	T	137	17.96(a)	NA
+ *Senecio layneae*	Layne's butterweed	U.S.A. (CA)	.....do	T	596	NA	NA
Serianthes nelsonii	Hayun lagu (Guam), Tronkon guafi (Rota).	Western Pacific Ocean: U.S.A. (Guam, Rota).	Fabaceae	E	257, 259	NA	NA
Sesbania tomentosa	'Ohai	U.S.A. (HI)	.....do	E	559	NA	NA
+ *Sicyos alba*	'Anunu	.....do	Cucurbitaceae	E	595	NA	NA
Sidalcea nelsoniana	Nelson's checker-mallow	U.S.A. (OR, WA)	Malvaceae	T	490	NA	NA
Sidalcea pedata	Pedate checker-mallow	U.S.A. (CA)	.....do	E	158	NA	NA
Silene alexandri	None	U.S.A. (HI)	Caryophyllaceae	E	480	NA	NA
Silene hawaiiensis	.....do	.....do	.....do	T	532	NA	NA
Silene lanceolata	.....do	.....do	.....do	E	480	NA	NA
Silene perlmanii	.....do	.....do	.....do	E	448	NA	NA
Silene polypetala	Fringed campion	U.S.A. (FL, GA)	.....do	E	418	NA	NA
Sisyrinchium dichotomum	White irisette	U.S.A. (NC)	Iridaceae	E	438	NA	NA
Solanum drymophilum	Erubia	U.S.A. (PR)	Solanaceae	E	319	NA	NA
Solanum incompletum	Popolo ku mai	U.S.A. (HI)	.....do	E	559	NA	NA
Solanum sandwicense	'Aiakeakua, popolo	.....do	.....do	E	530	NA	NA
Solidago albopilosa	White-haired goldenrod	U.S.A. (KY)	Asteraceae	T	308	NA	NA
Solidago houghtonii	Houghton's goldenrod	U.S.A. (MI), Canada (Ont.)	.....do	T	314	NA	NA
Solidago shortii	Short's goldenrod	U.S.A. (KY)	.....do	E	201	NA	NA
Solidago spithamaea	Blue Ridge goldenrod	U.S.A. (NC, TN)	.....do	T	175	NA	NA
Spermolepis hawaiiensis	None	U.S.A. (HI)	Apiaceae	E	559	NA	NA
Spigelia gentianoides	Gentian pinkroot	U.S.A. (AL, FL)	Loganiaceae	E	406	NA	NA
Spiraea virginiana	Virginia spiraea	U.S.A. (GA, KY, NC, PA, TN, VA, WV).	Rosaceae	T	389	NA	NA
Spiranthes diluvialis	Ute ladies'-tresses	U.S.A. (ID, CO, MT, NV, UT)	Orchidaceae	T	458	NA	NA
Spiranthes parksii	Navasota ladies'-tresses	U.S.A. (TX)	.....do	E	116	NA	NA
Stahlia monosperma	Cóbana negra	U.S.A. (PR), Dominican Republic	Fabaceae	T	380	NA	NA
Stenogyne angustifolia	None	U.S.A. (HI)	Lamiaceae	E	73	NA	NA
Stenogyne bifida	.....do	.....do	.....do	E	480	NA	NA
Stenogyne campanulata	.....do	.....do	.....do	E	464	NA	NA
Stenogyne kanehoana	.....do	.....do	.....do	E	466	NA	NA
Stephanomeria malheurensis	Malheur wire-lettuce	U.S.A. (OR)	Asteraceae	E	126	17.96(a)	NA
Streptanthus albidus ssp. albidus	Metcalf Canyon jewelflower	U.S.A. (CA)	Brassicaceae	E	575	NA	NA
Streptanthus niger	Tiburon jewelflower	.....do	.....do	E	575	NA	NA
Styrax portoricensis	Palo de jazmín	U.S.A. (PR)	Styracaceae	E	461	NA	NA
Styrax texana	Texas snowbells	U.S.A. (TX)	.....do	E	162	NA	NA
Suaeda californica	Seablite, California	U.S.A. (CA)	Chenopodiaceae	E	567	NA	NA
Swallenia alexandrae	Eureka Dune grass	.....do	Poaceae	E	39	NA	NA

STATE OF CONNECTICUT
CONNECTICUT HISTORICAL COMMISSION

February 25, 1998

Ms. Kathleen E. Hall
Maguire Group Connecticut Inc.
One Court Street
New Britain, CT 06051

Subject: Route 82/85/11 Corridor MIS
East Lyme, Montville, Salem, and Waterford, CT

Dear Ms. Hall:

The State Historic Preservation Office has reviewed information provided by Maguire Group Connecticut Inc. concerning the above-named project. In addition, this office has re-examined its correspondence file regarding previous coordination with CONNDOT with respect to the four- town study area.

In the opinion of the State Historic Preservation Office, information concerning the identification and evaluation of historic, architectural, and archaeological resources which was generated through previous interagency coordination for the overall corridor area is outdated and does not represent an appropriate baseline for decision-making regarding the area's cultural heritage. In 1997, this office conducted townwide architectural inventories for Montville and Waterford and a partial survey of East Lyme. Architectural resources within the Town of Salem have not yet been professionally evaluated. These new data need to be field-evaluated vis-a-vis the eligibility criteria for the National Register of Historic Places. In addition, on-site analysis of potential architecturally significant structures in the Town of Salem needs to be undertaken.

The State Historic Preservation Office notes that previous project-related archaeological investigation was limited in focus to the so-called "Wolfpit village" area in the Town of Waterford. However, the entire study area possesses moderate to high sensitivity for prehistoric and historic archaeological resources. This office strongly recommends that a reconnaissance survey of the corridor be undertaken in order to professionally identify and evaluate all archaeological sites that may exist within the project boundaries. All archaeological studies must be undertaken in accordance with our *Environmental Review Primer for Connecticut's Archaeological Resources*. We also recommend that these studies be coordinated with the Town of Waterford's ongoing townwide archaeological assessment.

The State Historic Preservation Office encourages the expeditious implementation of these cultural resource studies in order that the MIS Advisory Committee project analysis can benefit from accurate and up-to-date cultural resource information.

TEL: (203) 566-3005 *FAX: (203)566-5078*
59 SOUTH PROSPECT ST. - HARTFORD, CONN. 06106 - 1901
AN EQUAL OPPORTUNITY EMPLOYER

This office looks forward to working with the MIS Advisory Committee to facilitate this important transportation project.

For further information please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

Dawn Maddox
Deputy State Historic
Preservation Officer

cc: Mr. Edgar Hurle/CONNDOT
Dr. Nicholas Bellantoni/OSA

STATE OF CONNECTICUT
CONNECTICUT HISTORICAL COMMISSION

May 7, 1998

Ms. Nancy Shea
Maguire Group Connecticut Inc.
One Court Street
New Britain, CT 06051

Subject: Route 82/85/11
East Lyme, Montville, Salem, and Waterford, CT

Dear Ms. Shea:

The State Historic Preservation Office has reviewed the technical proposal for archaeological services prepared by the Public Archaeology Survey Team Inc. concerning the above-named project. This office reaffirms its prior recommendation, dated February 25, 1998, that a reconnaissance archaeological survey is warranted for the proposed study corridor. In this regard, we believe that PAST Inc.'s technical proposal is consistent with the professional standards contained within our *Environmental Review Primer for Connecticut's Archaeological Resources*.

The State Historic Preservation Office strongly recommends the implementation of a 15-meter subsurface testing interval for all areas of moderate to high archaeological sensitivity within the study corridor. This testing strategy is state-of-the-art and consistent with current knowledge of Native American archaeological site size, site density, and settlement pattern data. This office believes that testing regimens greater than the 15-meter interval will not yield sufficiently valid and reliable data on the existence and distribution of archaeological resources within the four town corridor. In addition, we believe that information obtained from such testing approaches will be inadequate for cultural resource decision-making vis-a-vis the National Historic Preservation Act, Section 4(f) of the Department of Transportation Act, and the Connecticut Environmental Policy Act.

The State Historic Preservation Office offers no objection to an increased interval of subsurface testing with regards to all areas located along existing Routes 82 and 85. In addition, this office encourages the Maguire Group Connecticut Inc., CONNDOT, and PAST Inc. to coordinate with our professional staff upon completion of 20 percent of the proposed subsurface test units in order to refine, refocus, and readjust, as appropriate, PAST Inc.'s testing strategy for the remaining unsurveyed areas. In light of CONNDOT's proposed fast-track schedule for environmental and cultural resource analysis, it is imperative that all archaeological data-gathering be comprehensive in order that the responsible federal and state partners may effectively evaluate potential alternatives and alignments.

TEL: (203) 566-3005 *FAX: (203)566-5078*
59 SOUTH PROSPECT ST. - HARTFORD, CONN. 06106 - 1901
AN EQUAL OPPORTUNITY EMPLOYER

For further information please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

Dawn Maddox

Dawn Maddox
Deputy State Historic
Preservation Officer

cc: Mr. Ralph Steadham/CONNDOT
Mr. Robert Dirks/FHWA
Ms. Kate Atwood/ACOE
Dr. Nicholas Bellantoni/OSA

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATURAL RESOURCES CENTER
79 Elm Street, Store Level
Hartford, Connecticut 06106-5127
Natural Diversity Data Base

February 10, 1998

Kathleen E. Hall
Maguire Group Connecticut, Inc.
One Court Street
New Britain, CT 06051

Dear Ms. Hall:

In response to your request regarding MIS of Route 82/85/11 Corridor, Salem, Montville, East Lyme and Waterford the following information is provided. Three areas occur in the corridor that relate to state-listed species. I have indicated these areas on a copy of the map you provided. Area #1 Horse Pond - *Xyris smalliana*, a State Endangered Species grows along the shore of the pond. Area #2 Silver Falls - an historic report of *Schwalbea americana* from a "dry gravelly bank 3 miles north of Flanders". This species is Federally Endangered and State Special Concern (historic). Area #3 Latimer Brook - this area supported a population of *Drosera filiformis* which is currently listed as State Endangered and proposed for reclassification as State Special Concern (historic).

Please contact me if you have questions regarding this information. If any proposed activities are planned for any of these areas please contact me (860-424-3589) for specific recommendations. Thank you for contacting this office.

Sincerely,

Nancy M. Murray
Biologist/Environmental Analyst III

NMM/dmd

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATURAL RESOURCES CENTER
79 Elm Street, Store Level
Hartford, Connecticut 06106-5127
Natural Diversity Data Base

August 3, 1998

Anthony Zemba
Maguire Group
1 Court Street
New Britain, CT 06051

Dear Mr. Zemba:

The following is provided as follow up to your request for detailed information on the (3) sites identified in my February 10, 1998 letter regarding the Route 82/85/11 Corridor in Salem, Montville, East Lyme and Waterford.

Area 1 - Horse Pond, *Xyris smalliana*, State Endangered. I visited this site on July 28, 1998. The population is estimated to be 500-600 individuals growing along the pond margin with several concentration areas.

Area 2 - Silver Falls, *Schwalbea americana*; State Special Concern. The only additional information I can provide is a map showing the approximate location of this historic report. See attachment A.

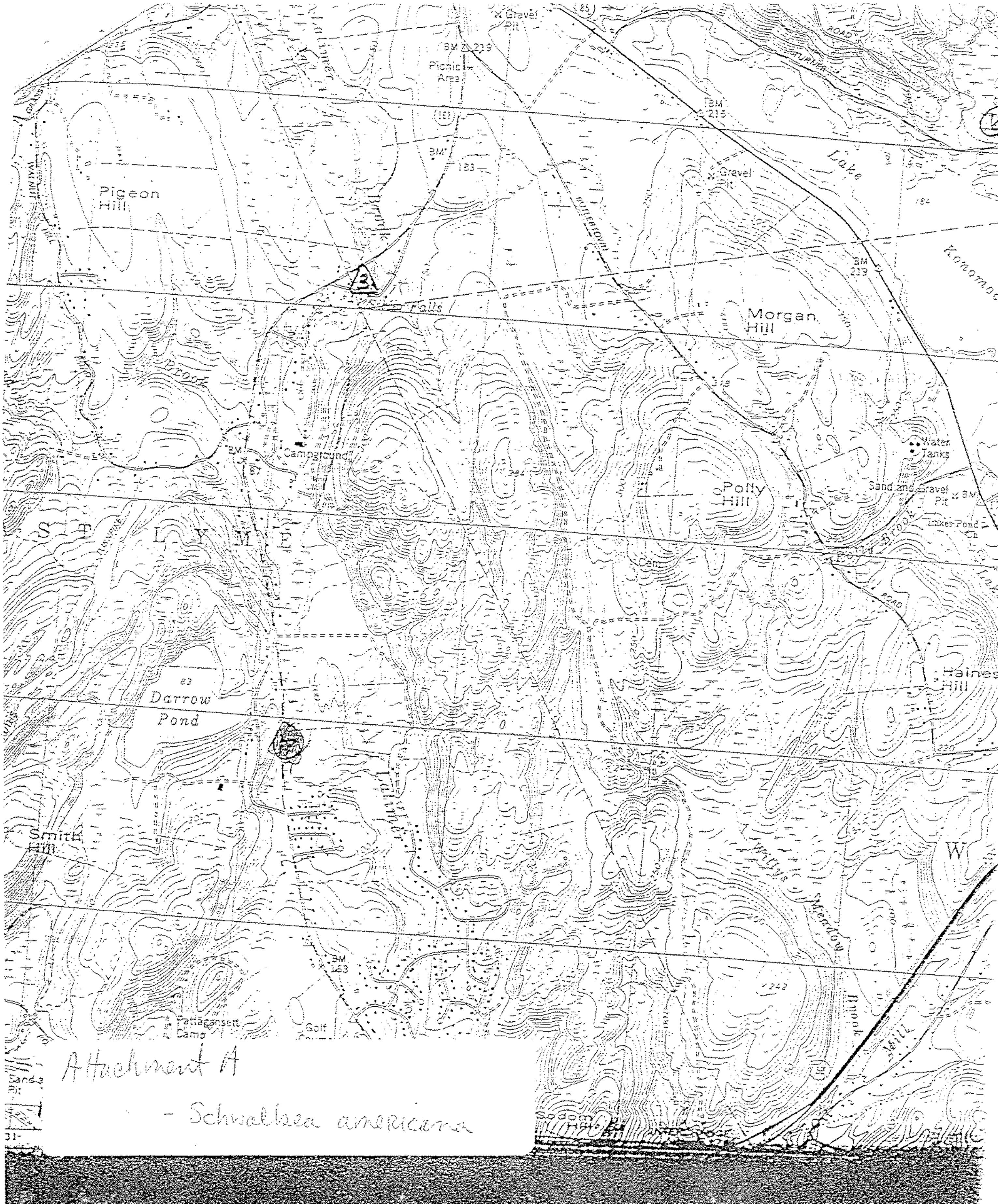
Area 3 - Latimer Brook, *Drosera filiformis*; State Endangered. This population was last observed in 1986 with only (2) plants found. In 1984 approximately 100 plants were found. Site visits conducted in 1988 and 1989 were unable to locate any plants. It is believed that the site became overgrown. The habitat is described as "scalped area in moist somewhat boggy bushy field". If site restoration activities were conducted, we may be able to recover the species. A map showing the location is attached (Attachment B).

Please contact me if you have any questions at (860) 424-3589.

Sincerely,

Nancy Murray
Biologist/Environmental Analyst III

c: Attachment A
Attachment B



Attachment A

- Schwalbea americana

Attachment B

- Drosera filiformis

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Fisheries Division

Neal T. Hagstrom
Eastern District Headquarters
209 Hebron
Marlborough, CT 06447

Tel: (860) 295-9523 or 9524 Fax: 344-2941

To: **Shannon Windish** **June 15, 1998**

McQuire Group
1 Quirk St.
New Britian, CT 06051

From: Neal Hagstrom Senior Fisheries Biologist

Subject: Latimer Brook Data Inquiry

MS. Windish;

Enclosed are copies of our data from Latimer Brook as requested. I have included physical, chemical, invertebrate and fish population data. I have also included Creel Survey information indicating the level of anlger usage on this stream. You should also be aware that this stream has significant runs of anadromous clupieds and has historically supports sea run brown trout. I hope this information is helpful. Please call me if you have any questions (860) 295-9523. Data on other streams are available from individual site reports on file in our office at 79 Elm ST. or from annual sampling reports also available from our Hartford office (860) 424-3474.

Sincerely yours,

Neal Hagstrom

Maguire Group Inc.
Architects / Engineers / Planners
One Court Street
New Britain, CT 06051
Telephone: 860 / 224-9141
Fax: 860 / 224-9147

7/20/98

Mr. Joseph J. Dippel
State of Connecticut Department of Agriculture
Farmland Preservation Program
State Office Building, Room 273
Hartford, CT 06106

RE: Major Investment Study (MIS)/Environmental Impact Statement (EIS)
Route 82/85/11 Transportation Corridor
Salem, Montville, East Lyme and Waterford, CT

Dear Mr. Dippel:

To follow up on a telephone message I left for you today, the following is provided to give you some background on the referenced project and the information requested.

Maguire Group, Inc. has been retained by the State of Connecticut Department of Transportation to conduct a MIS/EIS for transportation alternatives in the above mentioned corridor. The study area extends from the terminus of Route 11 at the junction of Route 82 in Salem, and follows Route 82 eastbound to the junction of Route 85, where it continues southbound along Route 85 through Montville to the junction of Interstate 95 in Waterford. The southern boundary of the study area follows I-95 westbound to the junction of Route 161. The western boundary follows Route 161 northbound in East Lyme, then continues in a northwesterly direction along the eastern edge of the Nehantic State Forest, ending at the junction of Route 11 and Route 82 in Salem. The area of study is outlined on the attached copy of the USGS Topographic Quadrangle Map for New London County.

Additionally, attached is a map showing a preliminary inventory of Prime Farmland in the study area based upon soils and current development status. I would like to request your review of this corridor and identification of any areas that are considered by the State to be "preserved farmland"(protected through purchase of development rights) pursuant to the federal Farmland Protection Policy Act and CGS Chapter 422a.

Thank you for your cooperation. Please feel free to contact me with any questions or concerns.

Very Truly Yours,
Maguire Group, Inc.

Kathleen E. Hall
Environmental Planner
/attachments

7/27/98 Reply by phone from Jay Dippel: 566-3207
No protected lands are designated in this corridor.
- K. Hall

PETITIONS

15 Corrina Lane
Salem, CT 06420
June 26, 1998

Letters to the Editor of *The Day*
P.O. Box 1231
New London, CT 06320

To the Editor:

We, the residents of Valley Drive and Corrina Lane in Salem, strongly support completing Route 11 rather than widening Routes 82 and 85. We feel as we do for a number of reasons, but the one we are most concerned about is public safety.

Today's high traffic volume has made Route 85 a dangerous road, heavily traveled by commuters and truckers whose only interest is speed. Tailgating is common; residents frequently feel pushed off Route 85 onto their streets or driveways. Because of the long lines of traffic, people take unsafe chances pulling out into traffic. Impatient drivers often pass in the face of oncoming traffic, pulling back in sharply and unsafely, and many pass on solid yellow lines.

We always thought that, human nature being what it is, it would take a terrible accident before anything would be done, as when the state removed the toll booths from I-95 in response to a fatal tanker truck explosion. Inexplicably, there was no state response whatsoever to a similar fatal tanker truck explosion on Route 85 a few years ago. How many more accidents will it take?

Our worst fear is complacency among Route 11 supporters. Most opponents we have heard are actively and effectively expressing self-interest, not regional interest. They have the right to be heard, but theirs will be the only voices raised if the overwhelming majority who desire (see attached) the completion of Route 11 do not make the effort to speak out.

This is a rare political and economic opportunity for southeastern Connecticut, and we should not let it pass. If we expect the process to work for us, we must actively participate in it. Trite though it may be, democracy is, in fact, not a spectator sport.

What is it to be – what's good for some well-organized aggressive individuals, or what's good for the entire region?

Respectfully,

Lewis Buckley

Lewis Buckley
859-3705

We, the undersigned, agree with Lew Buckley's Letter to the Editor of *The Day*, dated June 26, 1998.

Signature	Name	Street Address, Salem CT
Annette Fung	FUNG, ANNETTE	71 Corrina Lane Salem CT 064
John M. Weaver	John M. Weaver	55 Corrina Lane, Salem, CT 0642
JoAnn M. Weaver	JOANN M. WEAVER	55 Corrina Lane
Sheralyn S. Ostrander	Sheralyn S. Ostrander	50 Corrina Lane
Marijane Mitchell	Marijane Mitchell	47 Corrina Lane
Ronald Lasky	RONALD LASKY	47 CORRINA LANE
Robert Smith	ROBERT SMITH	90 VALLEY DRIVE
Janet Nelson-Smith	Janet Nelson-Smith	90 Valley Dr.
Ann + Tom Jernigan	Ann + Tom Jernigan	63 Valley Dr.
Timothy Frick	Timothy Frick	46 Valley Dr. Salem
Beverly DeVore	Beverly DeVore	34 Valley Dr. Salem
Charles Corrado Jr.	Charles Corrado Jr. PhD	26 Valley Dr. Salem
Sandra Corrado	Sandra Corrado	26 Valley Dr Salem
Annamay Hejl	ANNAMAY HEJL	10 VALLEY DR. SALEM
Michael R. Ostrander	MICHAEL OSTRANDER	50 CORRINA LANE SALEM
Rajalakshmi V. Atree	Rajalakshmi V. Atree	21, Corrina Lane Salem
Vaidya S. Atree	VAIDYA S. ATREE	21, Corrina Lane Salem
Robert Andrews	ROBERT ANDREWS	30 Corrina Lane Salem
Eva Barniak	EVA BARNIAK	37 Corrina Lane
Linda Barniak	Linda Barniak	37 Corrina Lane
Stephen T. Drago	STEPHEN T. DRAGO	80 CORRINA LANE
Linda K. Drago	80 Corrina La	Linda K. Drago
JoAnn Straatveit	82 Corrina Lane	JoAnn Straatveit
Judith A. Tubbs	81 Corrina Lane	Judith A. Tubbs
Andrew C. Tubbs	81 Corrina LN	Andrew C. Tubbs
Richard Costello	Richard Costello	89 Valley Dr. Salem
Kim Costello	Kim Costello	89 Valley Dr Salem
Gwen Costello	Gwen Costello	89 Valley DR

August 15, 1998

Salem residents petition for completion of Rt.11

To the Editor of the Day:

We the residents of Skyline Drive in Salem submit the following petition to strongly state our position regarding the need for completion of Rt. 11.

We all recognize that Rt. 85 is and has been a safety issue due to the volume and speed of traffic using this country road. Widening Rt. 85, creating an unlimited access highway, will exacerbate the problem for the hundreds of families exiting onto Rt. 85.

We have suffered greatly from accidents on this road. From Skyline Drive alone, three families have lost children to this traffic, needlessly. Accidents, tractor trailer traffic, diesel fuel spills threaten our lives and our environment.

Improvements to safety will only be achieved by completing Rt. 11 (a limited access highway) for the residents of Skyline Dr. and all the residents and visitors to Southeastern Connecticut.

Name (print)	Address	Signature
James R. Dimitri	131 Skyline Dr. Salem	James R. Dimitri
David H. Wordell	509 N. London Rd. Salem	David H. Wordell
Karin A. Dimitri	131 Skyline Dr. Salem	Karin A. Dimitri
Michael D. Acree	134 Skyline Dr. Salem	Michael D. Acree
Janie M. Faircloth	106 Skyline Dr. Salem	Janie M. Faircloth
Herbert [illegible] Yarhouse	33	Herbert Yarhouse
Evelyn Brigman	113 Skyline Dr	Evelyn Brigman
Louis J. Rovero	99 Skyline Dr.	Louis J. Rovero
Jeanne A Rovero	99 Skyline Dr Salem	Jeanne A. Rovero
John O'Brien	77 Skyline Dr. Salem	John O'Brien
Rosemary O'Brien	77 Skyline Dr. Salem	Rosemary O'Brien
Michael Jodoin	74 Skyline Dr Salem	Michael Jodoin
Sherry Jodoin	74 Skyline Dr. Salem	Sherry Jodoin
David Kabat	67 Skyline Dr. Salem	David Kabat
Caterina Kabat	67 Skyline Dr Salem	Caterina Kabat
Raymond Rancourt	60 Skyline Dr Salem	Raymond Rancourt
~~Kathleen [illegible]~~	~~16 Skyline Dr Salem~~	~~[illegible]~~
~~Stanley [illegible]~~	~~16 Skyline Dr Salem~~	~~[illegible]~~

We, the undersigned, demand rapid completion of the long overdue Route 11 project.

	Name (Print)	Address	Signature
F	PETER SIELMAN	369 WEST ROAD - 06420	Peter F. Sielman
F	DONALD W BOURDEAU, JR.	345 OLD COLCHESTER RD	Donald W Bourdeau
F	John W Dyk[illegible]	279 Rattlesnake Ledge Rd	John W Dyk[illegible]
	James Lee Miller	19 Norm rd	[illegible]
	George Zegn[illegible]	9 Shingle Mill Rd	George A Zegn[illegible]
F	Cynthia B. Rowin	11 Salem Ridge Dr Salem	Cynthia B. Rowin
	Linda K. Drago	80 Corrina Lane Salem	Linda K. Drago
F	[illegible]	[illegible] Salem	[illegible]
F	Robert [illegible]	[illegible]	[illegible]
	Frank S[illegible]	232 West Rd Salem	Frank [illegible]
	Patricia M Reid	29 Norwich Rd Salem	Patricia M Reid
F	Michelle R Horan	197 Witt Rd Salem	Michelle R. HORAN
	Emily Gianquinto	25 Pheasant Hill Rd	Emily Gianquinto
	Matthew Gianquinto	25 Pheasant Hill Rd	Matthew Gianquinto
	Deanna St Jean	299 Old Colchester Rd	Deanna St. Jean
	Margaret Walton	355 Broad St NL	
	Margaret [illegible]	60 Denison Ave NL	
	Gloria Fogarty	373 Old New London Rd	Gloria Fogarty
	[illegible]	43 FAIRY LAKE RD	SALEM
F	LINDA PARKER	424 DARLING RD	SALEM
	Debra Woodward	16 South Ledyard St	New London

Route 82/85/11 Corridor MIS

Salem, Montvillè, Waterford, East Lyme

WE WELCOME YOUR COMMENTS • • •

Comments provided by both the Corridor Advisory Committee and members of the general public are an integral part of the MIS process - you are invited and encouraged to forward your comments to the Route 82/85/11 consultant team.

Name: Affected Residents and Businesses (See Attached)

Address: (See Attached)

Do you own/rent residential property within the corridor study area? ☒ yes ☐ no

Do you own/rent residential property on Route 82 or 85? ☒ yes ☐ no

Do you own or operate a business on Route 82 or 85? ☒ yes ☐ no

If yes, what type? _____

On average, how often do you travel Route 85? (e.g., daily, twice/week, monthly, etc.) Daily

PLEASE INDICATE HERE ⟹ ☐ IF YOU WOULD LIKE YOUR NAME ADDED TO THE PROJECT MAILING LIST

Comments and/or observations: Building a new highway in this area incurs major environmental impacts and significant cost as identified repeatedly in studies conducted over the past 14 years. These major impacts reaffirm the need to consider ALL potential solutions in the complex trade-off of environmental impact, safety, cost, convenience and effects on residents and businesses in the affected area. Serious consideration must be given to widening existing Routes 82 and 85.

Questions or additional comments may be directed, as follows:

Nancy Shea (Maguire Group Project Manager): 1-800-261-9141

Paul Corrente (ConnDOT Project Manager): 1-860-594-2932

E-mail: mis-ed@MaguireGroup.com

FOLD, FASTEN AND MAIL... PLEASE BE SURE THAT ADDRESS ON REVERSE IS VISIBLE

2

FAMILIES AND BUSINESSES FOR RESPONSIBLE UPGRADE OF THE ROUTE 11/82/85 CORRIDOR

We support a responsible upgrade to the existing Route 11/82/85 Corridor and object to a new road. Some of us have worked to locate businesses along the existing routes; some of us have worked to locate our homes away from the existing routes; all of us would be hurt by a new road. Upgrading existing routes is the right solution to:

1. **Avoid new destruction of the environment.**
2. **Improve safety now.**
3. **Avoid spending $300 Million for 5-minutes of convenience.**

We are confident that upgrading existing routes will bring reasonable improvements to families established along the road, encourage development of the area and avoid destruction of businesses and outlying property.

NAME	STREET AND TOWN
Roy C. Davidson	30 Holmes Rd Oakdale CT 06370
Wm R. Clements	10 Holmes Rd Oakdale CT 06370
Salvatore Athonne	1847 Route 85 Montville CT
Daniel Villiams	36 Birch Terrace Oakdale CT
Marlee Jones	34 Maiville Dr Oakdale CT
Robert W Taylor	49 Holmes Rd. Oakdale, CT
Bill Rozanski	SALEM Package Store RT 85.
[illegible]	FFIFFS Frozen Dessert CTR Salem Rt 85
Mark W Reif	17 Salem Town Cntr Salem, CT
Karen A. Jensen.	23 Salem Town Center
[illegible]	72 Morgan Rd Salem
[illegible]	1 New London Tpk. Salem.
Cynthia Chong.	Uncle Chong's Chinese Rest.
[illegible]	Salem Prime Cuts
Ann Marie Robida	Brighter Futures
[illegible]	20 Hartford Rd. Bartholomew's
Sue Panfili	142 East Haddam RD Salem, CT.
Julie Mazzo	1049 E. Lake Rd. Oakdale, CT 06370
[illegible]	1049 E. LAKE Rd, Oakdale, CT 06370
William [illegible]	420 Gay Hill Rd. - Uncasville, CT 06382

SAINT MATTHIAS CHURCH
317 CHESTERFIELD ROAD
EAST LYME, CT 06333

August 26, 1998

From: Reverend Michael T. Donohue, Pastor of Saint Matthias
To: The Honorable John G. Rowland, Governor of Connecticut
Subject: Completion of Route 11

Dear Governor Rowland:

The attached petition represents the majority of the parishioners of Saint Matthias Church.

With the rapid growth in southeastern Connecticut, it is important to the infrastructure of our State that Route 11 highway be completed. As stated in the petition, we are not opposed to the original route. We are opposed to the western F (2 & 4 lane) proposal. This route would directly impact our church complex. We are presently in the final stages of completing a new, three million dollar church.

I am reiterating our request to you, that you will give this your most conscientious attention to this Project. You are most welcome to visit this beautiful, Romanesque design church at 317 Chesterfield Road (Route 161) in East Lyme.

Sincerely,

Rev. Michael T. Donohue

Reverend Michael T. Donohue
Pastor

Enclosures

cc: Richard A. Martinez, Ct. Dept. of Transp., Bureau Chief
Susan Lee, U.S. Army Corps of Engineers
Douglas Thompson, U.S. E.P.A.
Wayne Fraser, First Selectman, East Lyme
Melodie Peters, Senator, 20th. District
Gary Orefice, Representative, 37th. District
Andrea Stillman, Representative, 38th. District

SCCOG RESOLUTION

SOUTHEASTERN CONNECTICUT COUNCIL OF GOVERNMENTS
139 Boswell Avenue/Norwich, Connecticut 06360
Tel. (860) 889-2324 / FAX: (860) 889-1222 / E-Mail: seccog@snet.net

19 August 1998

TO: Patrick Dougherty, Mayor, Montville
James Fogarty, First Selectman, Salem
Wayne Fraser, First Selectman, East Lyem
Donald Maranell, First Selectman, Town of Stonington
Tony Sheridan, First Selectman, Waterford

FROM: Richard B. Erickson, Executive Director

Below is a **CORRECTED** copy of the resolution relating to Routes 11 and 85, as adopted by the council at its meeting this morning.

RESOLUTION NO 98-10, RELATING TO ROUTES 11 AND 85

RESOLVED, that the Southeastern Connecticut Council of Governments hereby: (1) reaffirms its support for the completion of Connecticut Route 11, with due consideration of environmental effects; (2) indicates its opposition to Alternatives F and G among the several corridors being considered for the extension of Route 11; and (3) recommends that improvements to Connecticut Route 85 be limited to safety improvements within available funding.