however, to makes a convincing case that the SCDOT preferred alignment, Alternative 3, is the least environmentally damaging route for this project. In fact, the underlying data in the DEIS and associated Technical Support Memoranda strongly support the conclusion that Alternative 7 is the least environmentally damaging practicable alternative, and, therefore, the only route for which permits can be issued under federal and state law.

The following is a summary of our concerns regarding the alternatives analysis in the DEIS, which are discussed further in the attached detailed comments:

1. The DEIS analysis of the relative environmental impacts of the various alternatives relies primarily on the potential raw acreage of wetland fill in proposing Alternative 3 as the preferred alternative, and gives little weight to other important environmental concerns that clearly favor the selection of Alternative 7. Because all proposed routes would have a similar level of anticipated direct wetland impacts, especially considering that further avoidance and minimization efforts will occur for the selected alternative based on field work, in the permitting process and as a final design is developed, other aquatic and non-aquatic impacts should be given appropriate weight in assessing which corridor is the "least damaging practicable alternative." Based on the relative magnitude of stream crossings, impacts to important natural areas such as the Vaughn Tract and Lake Swamp, and other environmental impacts, Alternative 7 should be selected as the preferred alternative.

2. Fragmentation of habitat is increasingly recognized by wildlife biologists, ecologists and other scientists as the most pervasive long term environmental impact of major rural highway projects, such as this interstate traversing 45 miles of relatively undeveloped coastal plain. The DEIS fails to consider this key factor in the alternatives analysis and fails to give appropriate weight to consideration of alternatives that would limit fragmentation by maximizing the use of, or be routed in close proximity to, existing major highway corridors. Specifically, the SC 38/US 501 or SC 9 corridors would be preferable to proposed Alternative 3 and no corridor was evaluated that would consist primarily of upgrades to existing highways.

3. SCDOT concedes that five of the eight alternatives studied in the DEIS are reasonable options for the project, yet proposes a route which impacts property protected under Section 4(f) of the Federal Transportation Act of 1966. Under this law, a route with impacts to such protected property cannot be selected if a viable alternative exists without such impacts. Two such alternatives with no 4(f) impacts are identified in the DEIS, Alternatives 2 and 5. In addition, the potential Section 4(f) impact for Alternative 7 is minimal compared to Alternative 3, consisting of a single "potentially eligible" archeological site that easily could be avoided or otherwise mitigated. In addition, the document speculates that Alternative 7 "might have visual impacts on the Galivant's Ferry Historic District" (DEIS, p. 2-65). If the 4(f) limitation is to be relaxed for Alternative 3, however, to allow the use of a route that will have significant impacts to Heritage Preserve property, equivalent treatment must be accorded in the DEIS to the Alternative 7 corridor in the vicinity of Galavant's Ferry Historic District.

Comment noted.

The use of existing roadways was considered during alternative development (refer to Chapter 2, Section 2.1, page 2-1 and the *Alternative Development Technical Memorandum)* and during refinement of the Preferred Alternative. As explained, the use of existing roadways increased potential relocations to residents and businesses, which would also negatively impact the economics of the area. As stated in Chapter 1, page 1-10, a primary need of the project is to promote economic development. Chapter 2, page 2-11, has been revised to include a discussion pertaining to the use of existing roadways. In addition, the Preferred Alternative does parallel the existing S.C. Route 917 crossing of the Little Pee Dee River to minimize potential habitat fragmentation. Furthermore, the Preferred Alternative was modified to also parallel the existing crossing of Nichols Highway over Lake Swamp to minimize potential habitat fragmentation.

The Section 4(f) Evaluation (refer to Appendix E) has been updated to further address the potential impacts of the Preferred Alternative to the Little Pee Dee Heritage Preserve, as well as to more thoroughly explain why other alternatives are not either feasible and/or prudent.

4. The alternatives analysis fails to consider the most important cumulative impact of the various southern project alternatives--the location of the northern section of I 73 between I 95 and the Rockingham, North Carolina area. Potential locations for the northern project should be factored into the alternatives analysis for the southern project as a readily foreseeable cumulative impact, resulting in the selection of a combined route for the two sections of the interstate in South Carolina that has the least adverse environmental impacts overall. In fact, the SCDOT prematurely eliminated from consideration the corridor, in the vicinity of SC 9, which SCDOT's CAT tool shows to have the least overall aquatic impacts for the entire interstate from the North Carolina state line to SC 22. See Exhibit A, attached.

Of the three primary corridors under consideration at the inception of the EIS process, identified based on the single most critical environmental impact for this project- the location of the crossing of the Little Pee Dee River, the transportation agencies have proposed the least environmentally desirable. Alternative 3 would cross in the vicinity of SC 917 in a remote stretch of the river. Alternative 7, which crosses the Little Pee Dee near US 501, has less direct impact to this key natural resource and is the least damaging overall for the southern project. In addition, a crossing in the vicinity of SC 9 would be preferable to the 917 crossing, would not raise Section 4 (f) issues and appears to be the least damaging overall for the southern and northern projects combined.

These important issues must be addressed by SCDOT prior to the completion of the EIS and issuance of a Record of Decision, resulting in the selection of a preferred alternative to advance to advance to the permitting stage. Given the scope of these unresolved issues, we are concerned that SCDOT may compromise the ACT and public participation process through its decision to move forward immediately after the release of the DEIS in May with detailed fieldwork on Alternative 3 only. At a minimum, the comments from the various federal and state resource agencies, as well as the general public, should be digested, and concerns resolved if possible, prior to investing substantial further resources in a detailed study of SCDOT's preferred alternative.

With the publication of the DEIS, it remains far from clear that I-73 is "necessary" to cut travel time to the beach by 5 or 10 minutes, especially given the number of other highway improvements planned to improve transportation to and in the Myrtle Beach area. We recognize that SCDOT considers I 73 to be important to the continued growth of the tourism industry in the Grand Strand area and that significant political momentum that has been generated for this project in the last several years. It is essential, though, that the project move forward in "an environmentally responsible manner" as committed to in the DEIS Purpose and Need Statement (DEIS, p. 1-9).

Given the magnitude of the concerns with the alternatives analysis, we recommend that a supplemental DEIS be prepared to address the issues outlined in the attached comments. We urge the DOT not to attempt to finalize the EIS on a preordained timeframe, when such a course will serve to complicate and delay the permitting phase of this important project. It makes no sense to rush to a conclusion for the largest, most

The I-73 North Project has been added to the document to accurately represent potential cumulative impacts.

The ACT decided on December 9, 2004, to not move forward with the corridor in the vicinity of S.C. Route 9 because, relative to other corridors, it had approximately 100 acres more wetland impacts, minimal economic development opportunities for Marion County due to the limited length in that County, and more potential natural resources impacts that could result from the extension of I-73 north of where the Preferred Alternative would intersect with I-95.

As detailed in Chapter 2 and the *Alternative Development Technical Memorandum*, the CAT was utilized to develop the preliminary Build Alternatives. The preliminary Build Alternatives were compared utilizing the same footprint width to eliminate alternatives with potentially high impacts. Once the CAT generated the preliminary Build Alternatives, the program was only used to quantify potential impacts. The preliminary Build Alternatives were further modified through engineering and consideration of potential impacts to the human and natural environment.

Comment noted.

Based upon the continuous involvement of the ACT, agency input on the project and the proposed alternatives has been possible from the onset. Due to this early and consistent coordination, the FHWA and SCDOT were able to perform the field work for only the Preferred Alternative. The potential cost and time savings of completing the field work for one alternative versus all eight reasonable Build Alternatives was attributable to the oversight of the ACT. In addition, the Draft EIS was published one month prior to the initiation of field work and after three Public Hearings were held, one in each county within the project study area, before field work began. Changes were made to the alignment to reduce potential impacts after the initiation of field work.

Please refer to Chapter 1, Section 2.7.1.1, page 1-25, and Section 2.7.1.2, page 2-42, for the discussion of how the project would relieve local traffic congestion. In addition, text has been added in Chapter 2, page 2-16, to further explain the travel efficiencies that would result from implementation of the Preferred Alternative. A 15 to 20 minute decrease in total time results in significant savings over time given the projected volume of traffic.

Comment noted. No new information has become available to warrant the preparation of a supplemental EIS.

important project in the State, especially if that conclusion cannot be supported in the permitting process.

We appreciate the opportunity to submit these comments and look forward to continuing to closely follow the EIS and permitting process to a conclusion for this major project that will forever change the landscape of a large portion of South Carolina.

Sincerely,

J. David Farren
Senior Attorney

Cc:

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Ramona McConney, EPA Office of Environmental Assessment
Bob Lord, EPA Wetlands Permitting
Mark Caldwell, US Fish & Wildlife
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SELC Comments on I 73 Southern Project Draft EIS

1. The DEIS alternatives analysis is flawed because it relies on the maximum potential acreage of wetland fill in the proposed corridor in selecting Alternative 3 as preferred, giving virtually no consideration to other important aquatic and non aquatic concerns that clearly favor the selection of Alternative 7.

The "heart" of an EIS is its alternatives analysis. 40 CFR Section 1502.14 For a highway project for which a Clean Water Act Section 404 wetlands fill permit is necessary, the alternatives analysis is even more crucial because the EIS can provide the basis for determining which route is the "least damaging practicable alternative." Clean Water Act Section 404(b) Guidelines, 40 CFR Section 230.10(a). In this case, because SCDOT intends to submit a Section 404 permit application prior to the issuance of a Final EIS and Record of Decision, it is essential that the analysis of environmental impacts in the alternatives analysis in the DEIS be especially thorough.

Far from providing a detailed comparison of the most important environmental impacts of the various alternatives, the explanation for the selection of the preferred alternative in the DEIS is just over one page in length, including discussion of both environmental and non-environmental factors (DEIS, p. 2-66-67). In fact, the only environmental data discussed on a comparative basis in this section is the potential amount of wetland fill for the various alternatives. The DEIS states that Alternative 3 is preferable environmentally because it has the lowest anticipated wetland acreage to be impacted (384 acres), and that from an environmental standpoint "Alternative 7 was eliminated primarily because it has such high wetland impacts (492 acres)." Other important environmental pros and cons, such as stream crossings and special natural areas, are only briefly noted in the preceding sections of the document discussing each alternative, and are not discussed on a comparative basis. Thus, the overall level of analysis of alternatives in the most important part of the DEIS, Section 2.5.4., is very narrow, basically limited to a comparison of anticipated wetland fill.

There are several fundamental flaws with this approach to the alternatives analysis in the DEIS. First, even if wetlands impacts were intended to be the sole criterion on which to base a comparison of environmental impacts, it is far from clear at this point in the process that the any of the routes ultimately will have a significant difference in the amount of fill. There are several reasons for this. At this early stage in the process, the comparison in the DEIS is based on 400 foot corridors, including a 6 lane highway, continuous frontage roads, and a rail corridor on *each* side of the highway (DEIS, p. 1-2; See DEIS Figure 1-4).

It is very unlikely that one, much less two rail lines would ever be built along Alternative 3, which bypasses rather than connects with existing population centers including the three county seats and makes no use of existing rail infrastructure in the area. In fact, the selection Alternative 3 would virtually guarantee that the I 73 corridor would never become a rail corridor as well, thus defeating one of the five identified purposes for the project, "Multimodal Planning" (DEIS, Section 1.4.2.).

As discussed in Chapter 2, Section 2.7.5, page 2-70, the designation of Alternative 3 as the Preferred Alternative was determined because it would have the least wetland impact, in both acreage and wetland value, lowest cost, least impact to farmland, least impact to potential historic sites, was one of the three preferred by SCDNR and USFWS, and along with Alternative 6, would be the most constructible.

Please refer to Chapter 2, Section 2.7.5, page 2-70, that lists the factors that were compared in the designation of the Preferred Alternative. These factors do include wetland impacts, as well as wetland value, cost, farmland, historic resources, and constructability. In addition, Table 2.5 on page 2-31, and pages 2-57 through 2-66 explain in detail each Reasonable Build Alternative. As stated in Chapter 2, Build Alternatives 2, 3, 5, 6, and 7 were all viable alignments. Although it does state that "Alternative 7 was eliminated primarily because it had such high wetland impacts (492 acres)" it continues on to state that "...,but also because of the constructability issues for the portions at the U.S. Route 501 Bypass and at the Little Pee Dee River crossing." Furthermore, each environmental and non-environmental factor was discussed on a comparative basis in Chapter 3 of the Draft EIS, which has been included as Appendix C in the Final EIS.

As discussed in Chapter 2, Alternative 3 was determined to be the Preferred Alternative because it would have the least wetland impact, in both acreage and wetland value, lowest cost, least impact to farmland, least impact to potential historic sites, was one of the three preferred by SCDNR and USFWS, and along with Alternative 6, would be the most constructible. The analysis of the reasonable Build Alternatives was based upon a conceptual design that was specific for each alternative and only included frontage roads where needed. As stated in Section 1.9, page 1-25, the proposed rail corridors were designed so as to not require additional right-of-way. Since the NEPA process is being done at the same time as the Section 404 permitting process, the need to find a least impact alternative was a major consideration.

The project seeks to plan for future transit options by preserving a corridor adjacent to the proposed I-73. This corridor could provide a connection between the Southeast High-Speed Rail corridor and the Myrtle Beach region (refer to Chapter 1, page 1-25). In addition, the Preferred Alternative will only preserve 100 feet for future multimodal accommodations.

As eventually constructed, the project corridor likely will be closer to 300 feet at its widest (see DEIS Figure 1-3), and perhaps less than 300 feet where frontage roads are not needed. This narrower corridor will allow more flexibility in the design phase to adjust the alignment to avoid wetlands. In addition to tweaking the alignment where feasible to avoid wetlands, impacts to larger wetland areas can be reduced further by design features such as narrowing the 72' medians and over 30' shoulders on each side. Even more important is the open issue of the amount of bridging that will be required in the selected corridor. As the DEIS states, this will be decided on a site by site basis (DEIS, p. 3-156). The DEIS comparison is based on the flawed assumption that only a small fraction of the wetland crossings will be bridged, just over 10%, as opposed to all significant wetlands including entire streamside wetland systems (DEIS Table 2.5) In short, given the number of site-specific issues related to opportunities to further reduce wetland impacts, the difference between the maximum potential fill of Alternatives 3 and 7 is not as significant as portrayed in the DEIS, and certainly should not be elevated to the sine qua non of the alternatives analysis at this early stage in the process.

The potential difference in wetland impacts between Alternative 3 and 7 is further reduced when functions and values of the specific wetlands at issue is taken into account. Based on the data in the DEIS, the wetland quality assigned to these two alternatives is 2486 versus 3106, a similar ratio to the fill impact. This is a somewhat arbitrary comparison, however, based on spontaneous opinions about the relative value of broad habitat types (such as upland pine forests, which can greatly vary in value) on a one to ten scale- literally shouted out by participants who happened to attend particular ACT meetings. Further subjectivity was introduced into the rankings by assigning an arbitrary percentage weighting to each of the four categories of environment, roadways, infrastructure and demographic/socioeconomic (Alternative Development Technical Memorandum Table 2.3).

The subjective nature of these rankings is well illustrated by the fact that they were modified for the northern I 73 project because they were found to be in need of revision. No subsequent corrections were made to the habitat rankings used for the southern project corridors alternatives analysis, however. Equally important, the rankings assigned to specific locations were based on NWI maps, rather than on the ground observations, which are generally considered highly unreliable and out of date and not used as the basis for permitting decisions by the U.S. Army Corps of Engineers. In particular, it is likely that detailed reconnaissance would reveal that more wetlands have been degraded, and have lower functions and values, along Alternative 7 because it is closer to existing developed corridors than Alternative 3. In addition, the ranking system failed to account for the extra value that should have been assigned to particularly pristine habitat, such as Lake Swamp and the Vaughn tract.

Section 404 of the Clean Water Act requires that I 73 be sited where it would have the least amount of environmental damage overall. Contrary the implication in the DEIS, the alternatives analysis cannot be reduced to a numbers game simply comparing acreage of wetland fill. As the statute's implementing regulations make clear, many

The proposed median width was based on accommodating three lanes of traffic in each direction (refer to Chapter 1, page 1-2). The interim design, which is only two lanes in each direction, would be modified in the future by adding a third lane in each direction within the median. This would allow the accommodation of future traffic without the necessity of acquiring additional right-of-way. Narrowing the proposed median width would require additional right-of-way to be purchased when future widening was needed, and in turn additional impacts to residents and natural resources.

At the time of the Draft EIS, bridging criteria was established and applied consistently to all reasonable Build Alternatives. After the selection of the Preferred Alternative each crossing was examined. As stated in Chapter 3, Section 3.12.13, pages 3-162 through 3-164, bridge lengths would be determined by performing detailed hydraulic studies during the final design phase and would be dependent on several factors, such as watershed size, and the presence of FEMA-regulated floodplains and floodways.

As presented in Chapter 2, Section 2.4, page 2-4, and in the *Alternative Development Technical Memorandum*, state and federal resource and regulatory agencies were given the opportunity to assign a numerical value to each feature within the 52 potential data layers, as well as the four categories used by the CAT. Representatives of the FHWA, USACE, USCG, USEPA, USFWS, NOAA Fisheries, SCDAH, SCDNR, SCDOT, and SCPRT attended the September 23, 2004 ACT Meeting when the methodology was determined. The ACT members are regarded as experts in their respective fields, were given advance notice of the ranking, and as such were consulted throughout the project.

All the numerical values assigned by the agencies for this project were utilized by the CAT for the I-73 North Project, except the values for Evergreen Irregularly Flooded Uplands and Evergreen Forested Uplands, which were changed from a four to a value of one. As documented in the *Alternative Development Technical Memorandum,* the CAT was designed to find the least-cost path, which would ideally be a corridor with a path that traverses all cells with a value of one. A value of one would allow the CAT program to develop a potential alignment with more flexibility, rather than attempting to minimize impacts to Evergreen Irregularly Flooded Uplands and Evergreen Forested Uplands when it was valued higher. A CAT analysis was completed with the modified values and compared to the original CAT analysis. The modified CAT analysis was found to have consistently higher potential wetland impacts, which indicated that the CAT program, as originally configured, was developing minimal impact paths.

ACT members determined that although the NWI mapping was dated, it was the only available wetland mapping that provided comprehensive coverage for the entire project study area. Although the NWI wetland layer was used to define wetlands until the reasonable Build Alternatives were developed, at that point the wetland boundaries were reevaluated (refer to Chapter 3, Section 3.12.3, page 3-145). Aerial photography, USGS topographic maps, SCDNR streams, and NRCS soil maps were used to revise the NWI mapping. Field visits were also performed for the reasonable Build Alternatives on questionable areas that were indicated as wetlands on the NWI, but did not exhibit typical wetland signatures on the aerial photography. Likewise, areas that were identified as upland on the NWI map, but were found to be wetland during field visits were also revised. The Little Pee Dee River was assigned a value of 10 (the highest value) and was also buffered in the CAT.

other environmental factors must be evaluated to provide a fair comparison of the eight alternatives, and one that will withstand scrutiny in the permitting process:

> Except as provided under Section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impacts on the *aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.*

40 C.F.R. Section 230.10(a). As the Section 404 regulations make clear, there are many other factors beyond wetlands that must be considered when comparing impacts to aquatic resources. These include potential impacts to physical, chemical, biological impacts, special aquatic sites and human use. 40 CFR Part 230, Subparts C through F. Especially given that the preliminary relative wetlands impacts of the eight DEIS alternatives is well within the same ballpark, it is incumbent on the transportation agencies carefully to compare the many other important environmental impacts, both aquatic and non-aquatic, of the project.

Even a cursory comparison of the overall aquatic impacts of the various alternatives in DEIS Table 2.5 points to the conclusion that Alternative 7 is preferable to Alternative 3. While there is a 20% difference in potential wetland fill acreage (ignoring the many flaws discussed above), there is an approximately 50% difference in the level of stream impacts, this time favoring the selection of Alternative 7. Also, Alternative 7 would result in 41 stream crossings compared to 58 crossings for Alternative 3. The differential in linear feet of impacts to perennial streams is even greater: 10,863 versus 16,243. Nor does the DEIS discuss that the significance of these aquatic impacts is magnified by the fact that they can extend far upstream and downstream from the crossing in the form of polluted runoff, increased noise and habitat fragmentation.

Two other factors of particular relevance to the DEIS aquatics impacts comparison are special aquatic sites including sanctuaries and refuges, section 230.40(a), and human use including water-related recreation, section 230.52. As noted in the DEIS, Alternative 3 would impact a special aquatic site that is used for water recreation, the Heritage Trust preserve along the Little Pee Dee River known as the Vaughn Tract. It would also impact an important natural tributary in this area known as Lake Swamp. In contrast, by crossing the Little Pee Dee near US 501, and having no aquatic impact similar in scope to Lake Swamp, Alternative 7 would have far fewer impacts to special aquatic sites. Nowhere does the DEIS discuss on a comparative basis these important aquatic impacts on which the Section 404 evaluation must be based.

Nor are non-aquatic environmental impacts discussed in the DEIS alternatives analysis on a comparative basis. Both NEPA and the Section 404 regulations require that these impacts be evaluated and contemplate the selection of the least damaging alternative overall, allowing a marginal difference in relative aquatic impacts to be trumped by other important impacts where appropriate. At a minimum, a comparison of impacts to rare and important non-aquatic ecosystems and important wildlife habitat,