

Appendix H
Agency and Public
Comment/Response Matrix

Note: Comments on CD

Public Comment Summary Responses
for I-73 Joint Public Notice
SAC 2008-1333

I-73 Public Comment Summary Matrix

	Summarized Comment	Type of Comment			Comment Sub-Category for Type B Comments				
a: Letter	Environmental threats. Two other alternatives: 501 & highway 9. 2010 EIS needs to be updated, including mitigation plan	D: Statement of Opposition	B: Distinct Statement(s) or Question(s)	G: General Environmental Remark	2: Alternatives Analysis	22: Wetlands			
a: Letter	How is SCDOT going to pay for it? Too much wetland to be filled relative to benefit. State would support of tolls fall short.	D: Statement of Opposition			5: Project Costs	22: Wetlands			
a: Letter	Improving existing roads would be less costly and less environmental damage. People have not be told true cost. It would result in net loss of jobs. There is a simpler solution to hurricane evacuation.	D: Statement of Opposition	G: General Environmental Remark			5: Project Costs	8: Socioeconomics		
a: Letter	This money needs to be spent on existing roads.	D: Statement of Opposition	A: General Remark		5: Project Costs				
a: Letter	There are better alternatives such as upgrading existing roads, Aynor bypass, and a Conway bypass.	D: Statement of Opposition			2: Alternatives Analysis				
a: Letter	Upgrade current roads to handle current traffic. Fix current roads and bridges.	D: Statement of Opposition	A: General Remark						
a: Letter	Fix the current roads.	D: Statement of Opposition	A: General Remark						
a: Letter	Need to find an alternative solution.	D: Statement of Opposition			2: Alternatives Analysis				
a: Letter	We have existing roads and interstates that need attention.	D: Statement of Opposition	A: General Remark						
a: Letter	Traffic will be at a dangerous level. We need to make improvements to existing roads. Expand SC 9 and SC 31.	D: Statement of Opposition	B: Distinct Statement(s) or Question(s)		2: Alternatives Analysis	4: Traffic			
a: Letter	The increased population will bring more crime and take our jobs. Upgrade 501, 9, and 31 to the NC border. Problems with beach access.	D: Statement of Opposition			2: Alternatives Analysis	8: Socioeconomics			
a: Letter	We need to make improvements to existing roads. Take care and extend 501 and 22. The wetlands will be destroyed to benefit only a few tourists. Only low paying jobs will be created.	D: Statement of Opposition	B: Distinct Statement(s) or Question(s)		22: Wetlands	8: Socioeconomics			
a: Letter	Wetlands are important resources. Impacts would negatively impacts the ecosystem of the area. We need to make improvements to existing roads.	D: Statement of Opposition	B: Distinct Statement(s) or Question(s)		22: Wetlands	23: Fish Habitat			
a: Letter	Project will split the Aynor community and school district. Will effect wildlife, wetlands, and water quality of community. The close proximity affect our farming lifestyle. Reroute to use woods as a barrier.	D: Statement of Opposition	G: General Environmental Remark		22: Wetlands	18: Water Resources	2: Alternatives Analysis	7: Noise	9: Community Impacts
b: Email	Waste of taxpayer money and natural resources. We need to make improvements to existing roads.	D: Statement of Opposition			5: Project Costs	22: Wetlands			
b: Email	It will increase congestion in Myrtle Beach. Will degrade environmental quality of the area. We need to make improvements to existing roads.	D: Statement of Opposition	G: General Environmental Remark		4: Traffic				

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	Summarized Comment	Type of Comment			Comment Sub-Category for Type B Comments				
b: Email	We need to make improvements to existing roads. Widen existing roads to accommodate beach traffic. Will destroy wetlands that are vital to our ecosystem and wildlife habitats. Will put small business out of business.	D: Statement of Opposition			22: Wetlands	8: Socioeconomics	20: Terrestrial and Aquatic Habitat		
b: Email	We need to make improvements to existing roads.	D: Statement of Opposition	A: General Remark						
b: Email	No need for the project. We need to make improvements to existing roads. Increased traffic. Improve 31 and 22. More trees and less concrete. Suggest using busses and/or rail.	D: Statement of Opposition			1: Purpose and Need	4: Traffic			
b: Email	It will make Horry County more urban, crowded, and less pleasant. Will destroy wildlife habitat.	D: Statement of Opposition	G: General Environmental Remark		20: Terrestrial and Aquatic Habitat	8: Socioeconomics			
a: Letter	Modify existing roads to get same results. Too costly. Will destroy too much wetland and streams.	D: Statement of Opposition			22: Wetlands	5: Project Costs			
b: Email	Its not the lowest cost way to provide interstate to Myrtle Beach. Based on unbelievable job creation. Toll plan is too risky. Suggest improving 31 and SC 9.	D: Statement of Opposition			8: Socioeconomics	5: Project Costs			
b: Email	Can improve existing roads to serve the same need. We need to make improvements to existing roads. Already a lot of Myrtle Beach traffic in the area.	D: Statement of Opposition			4: Traffic	1: Purpose and Need			
b: Email	We need to make improvements to existing roads first.	D: Statement of Opposition	A: General Remark		5: Project Costs				
b: Email	We need to make improvements to existing roads first. We cannot afford it.	D: Statement of Opposition	A: General Remark		5: Project Costs				
b: Email	We need to make improvements to existing roads first. Will destroy the environment and lead to flooding.	D: Statement of Opposition	G: General Environmental Remark		19: Floodplains				
b: Email	Please don't waste any more time or money on this project.	D: Statement of Opposition			5: Project Costs				
a: Letter	It will violate the Paris Agreement to reduce greenhouse gasses. Will destroy large number of trees, increase CO2. Trains are a viable option for cargo and passengers. Existing roads can handle the traffic.	D: Statement of Opposition			14: Air Quality				
a: Letter	Project is not needed and uncalled for costs. Can improve existing roads to serve the same need.	D: Statement of Opposition			5: Project Costs				
a: Letter	The project is too costly. Toll road may fail and result in use of tax funds. Are the funds coming from funds set for other purposes. You can improve existing roads to serve the same need.	D: Statement of Opposition	G: General Environmental Remark		5: Project Costs				
b: Email	It is an unnecessary use of tax money. Increase in taxes. Damaging to wetlands and waterways that can affect wildlife habitat, water quality, and flooding. It will not reduce traffic. It needs a broader goal than just MB access.	D: Statement of Opposition			17: Farmlands	18: Water Resources	22: Wetlands	5: Project Costs	19: Floodplains

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	Summarized Comment	Type of Comment			Comment Sub-Category for Type B Comments				
b: Email	Not opposed to I-73, only the I-73/SC 308 interchange. It will bring the potential for vandalism, theft, commercialism, and urbanization.	D: Statement of Opposition			4: Traffic	9: Community Impacts			
a: Letter	It will lead to higher road congestion and higher taxes.	D: Statement of Opposition			4: Traffic	5: Project Costs			
a: Letter	Concerned about permanent loss of wetland and environmental impacts. It is an unnecessary and costly. Hwy 9 should be widened.	D: Statement of Opposition	G: General Environmental Remark		22: Wetlands	2: Alternatives Analysis	5: Project Costs		
b: Email	It is not needed to improve travel or hurricane evacuation. Also vote no to the Gunter's Island mitigation plan.	D: Statement of Opposition			1: Purpose and Need	22: Wetlands			
b: Email	A safer evacuation route would be to go to Florence. It is a wasteful use of funds. There needs to be full disclosure of chairman's involvement in the project and mitigation plan. Other alternatives would be less costly.	D: Statement of Opposition	G: General Environmental Remark		1: Purpose and Need	5: Project Costs			
b: Email	I do not support the project.	D: Statement of Opposition							
a: Letter	Concerned about the loss of trees planted under the USDA FSA tree program. Concerned that jobs will not stay after construction. The project will not help the Marion County economy.	D: Statement of Opposition			8: Socioeconomics	17: Farmlands			
a: Letter	Please do not build unless SC does not have to provide matching funds.	D: Statement of Opposition			5: Project Costs				
b: Email	SELL needs to be accomplished concurrent with I-73.	E: Out of Scope	A: General Remark						
a: Letter	Too big of an impact on SC taxpayers. Toll roads don't generally pay their way. SC 51 is currently being widened and can be utilized. There are several other routes to access the coast and provide hurricane evacuation. We need to make improvements to existing roads first. The wetlands that will be damaged are critical to the coast and effects flooding. Gunter's island is a swap, not mitigation. The project may not reduce seasonal coastal congestion.	D: Statement of Opposition			2: Alternatives Analysis	22: Wetlands	4: Traffic	5: Project Costs	19: Floodplains
a: Letter	It will not reduce traffic in Myrtle Beach. Look into different alignment routes for I-73, such as paralleling SC 9.	B: Distinct Statement(s) or Question(s)			2: Alternatives Analysis	4: Traffic			
a: Letter	No need for more visitors to Myrtle Beach. SR 9 and 501 are not overcrowded.	B: Distinct Statement(s) or Question(s)			1: Purpose and Need				
a: Letter	Opposition to the commercialism following the project.	D: Statement of Opposition			8: Socioeconomics	9: Community Impacts			

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	Summarized Comment	Type of Comment			Comment Sub-Category for Type B Comments				
a: Letter	Hwy 501 should be widened instead. It will not relieve traffic on 501.	D: Statement of Opposition			4: Traffic	2: Alternatives Analysis			
c: Form	It is not acceptable due to wetland destruction. Wetland mitigation not as good as original wetland. The project is too costly relative to benefit.	D: Statement of Opposition			22: Wetlands	5: Project Costs			
a: Letter	Existing roads are acceptable for purpose. Natural animal habitats will be destroyed. Will animals be relocated to new preserve? A possible solution would be a bypass around Conway as this would congestion.	D: Statement of Opposition			20: Terrestrial and Aquatic Habitat	2: Alternatives Analysis	22: Wetlands		
a: Letter	No funding is available and out of date studies. Improve 501 instead of damaging the environment.	D: Statement of Opposition	G: General Environmental Remark		2: Alternatives Analysis	5: Project Costs			
a: Letter	The funds should be better spent elsewhere, 501 as an example). We already have good hurricane evacuation routes. We need to make improvements to existing roads.	D: Statement of Opposition			1: Purpose and Need	5: Project Costs			
a: Letter	Economic projects do not take into account loss of jobs in areas where beach traffic is currently present. It will cause irreparable harm to streams, rivers, and wildlife areas. Hwy 9, 38, and 501 could be upgraded. It will not reduce traffic. The project is too costly relative to benefit. Make improvements to existing roads.	D: Statement of Opposition			8: Socioeconomics	22: Wetlands	2: Alternatives Analysis		
b: Email	If I-73 is connected to 22, then locals will have a difficult time getting on. Use highway 9 instead.	D: Statement of Opposition			2: Alternatives Analysis				
b: Email	There is not enough information in the public notice for the public to comment. There has been no mention of the required mitigation credits. No other states are constructing this project. The problem is not getting to Myrtle Beach, but getting around once you are there. The project will not resolve objectives stated in the FEIS and will destroy wetlands.	D: Statement of Opposition			1: Purpose and Need	22: Wetlands	28: Public Involvement		
b: Email	There is not enough information in the public notice for the public to comment, requesting a public hearing. How can Gunter's Island mitigate with the project crosses 2 other drainages?	D: Statement of Opposition			22: Wetlands	28: Public Involvement			
a: Letter	Make improvements to existing roads.	D: Statement of Opposition	A: General Remark		5: Project Costs				
a: Letter	The original scope was to begin in Michigan. It is currently too localized in scope. Other states could opt out of the agreement. Make improvements to existing roads. It does not improve hurricane evacuation. Proposes to extend I-20	D: Statement of Opposition	E: Out of Scope		1: Purpose and Need				
c: Form	It would destroy a family farm, red-cockaded woodpecker habitat, and a native American burial site.	D: Statement of Opposition			24: Protected Species	17: Farmlands	11: Historic Properties		

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a: Letter	<p>The quantifiable benefits of building 1-73 come nowhere near the cost of the project, nor the cost of the impacts on the environment and waters of the state. 1-73 will provide a very small travel time savings to a very small number of visitors to the area.</p> <p>The Chmura report is not part of SCDOT's documentation regarding I-73 and therefore the Department has not taken a position of endorsing or refuting information contained within that report.</p> <p>The project is not necessary, other alternative exist.</p> <p>The project is the result of the Chmura economic report, which is flawed.</p>	D: Statement of Opposition			1: Purpose and Need	8: Socioeconomics	5: Project Costs		

I-73 Stakeholder Comment/Response Matrix

Stakeholder	Date	Comment	Response
Todd Davis Mayor City of Dillon	29-Jul-16	Opposed to the project. The project will bypass Dillon County that depends on traffic heading to Myrtle and North Myrtle Beach. Also concerned on the environmental effects from a wetlands standpoint. Hwy 38 would be a better option. It will hurt small town America.	Comment noted. Please Refer to I-73 Re-evaluations and I-73 EISs for the projects' effects to the Town of Dillon.
South Carolina Environmental Law Project (Amy Armstrong)	6-Sep-16	<p>We request that the 404 permit and 401 water quality and coastal zone consistency certifications be denied for the reasons set forth in this letter.</p> <p>-The NEPA review fails to consider the fact that the proposed highway will cross through the Little Pee Dee Heritage Preserve, which is a Special Aquatic Site under the NEPA. In addition to the direct physical taking, the highway will fragment valuable public trust property, thereby significantly diminishing the resource values for which this Heritage Preserve was dedicated.</p> <p>-The Sierra Club and LWVGC assert that less damaging practicable and feasible alternatives exist and this project would have significant adverse effects on wildlife, aquatic life, the aquatic ecosystem diversity, stability and productivity, among other effects.</p> <p>-Other practical alternatives exist - In assessing alternatives, an overarching question the Corps and DHEC must consider is whether this highway is the purpose and need of the highway and whether it is actually needed. The applicable regulations and guidelines require serious consideration be given to feasible and/or practicable alternatives that would meet the project purpose with less environmental impacts. Thus, when considering alternatives, the Corps and DHEC must look at whether the project purpose can be accomplished by other, less damaging, alternatives. Both the size and nature of the wetlands that would be impacted by this project.</p> <p>-It is feasible to improve transportation without paving an entirely new highway, particularly where improvements to existing routes would be much less\ expensive and much less environmentally damaging. Specifically, the Coastal Conservation League commissioned a study, which found that improving the existing Highway 38 and 501 corridor would deliver similar economic and transportation benefits at a fraction of the cost and without the significant adverse effects.</p>	Please refer to USACE additional Information, response to Question 3(F), page 23.
		<p>-The \$2.4 billion dollar price tag for constructing I-73 dates back to 2005 and has not been updated since that time.-A significant deficiency in the FEIS for this project is its assessment of future development. The environmental impact of the highway itself is significant, but when added to the potential impacts from development that this road will facilitate the cumulative effects are catastrophic for South Carolina's environment and quality of life. It appears that very little has been done to assess the extent of indirect and cumulative impacts from this highway flowing from secondary development.</p> <p>-We believe that these cumulative effects presents unacceptable impacts requiring denial of this permit and certifications.</p> <p>-Habitat like Little Pee Dee Heritage Preserve is protected for the species that utilize that habitat. In this case, Little Pee Dee Heritage Preserve is a GAPC, it will be significantly impacted and there are feasible alternatives that would minimize these significant impacts.</p>	Please refer to USACE additional Information, response to Question 3(F), page 24.
Southern Environmental Law Center (Christopher K. DeScherer)	6-Sep-16	<p>As it stands now, the Corps and DHEC must deny the permits either because the applicant has not provided sufficient information in either Final Environmental Impact Statement (FEIS) to support issuing the permits or, if the Corps and DHEC engage in their own analysis, because less damaging practicable alternatives exist to the project as proposed.</p> <p>-One of the main flaws is that the FEIS narrowly construes the purpose of the project to exclude viable alternatives that would have less impact on the environment and lower cost. Since issuance of the FEIS, the project and circumstances have changed dramatically, but the applicant has neither reevaluated nor supplemented the FEIS, as federal law requires. As a result, the FEIS is nearly a decade old, does not assess the project as currently proposed, and fails to adequately consider alternatives.</p> <p>-With respect to the new mitigation plan, the applicant must first demonstrate that it has sufficiently avoided and minimized impacts to aquatic resources before considering a mitigation plan. Here, SCDOT has failed to demonstrate by clear and convincing evidence that less damaging practicable alternatives to its preferred alternative do not exist.</p> <p>-If the Corps and DHEC move forward and somehow attempt to update the information contained in the FEIS on their own, their analysis will likely show that less damaging, practicable alternatives to the project as proposed exist, like upgrading portions of S.C. 38 and U.S. 501 to an expressway between I-95 and the Conway Bypass (S.C. 22).</p>	Please refer to USACE additional Information, response to Question 3(F), page 23.

I-73 Stakeholder Comment/Response Matrix

	Date	Comment	Response
<p align="center">Southern Environmental Law Center (Christopher K. DeScherer)</p>		<p>-Rather than constructing a new interstate, Michigan, Ohio, and North Carolina have satisfied Congressional intent by using existing roadways. In contrast, the I-73 project in South Carolina has never seriously considered improving existing roadways to fulfill the stated need.</p> <p>-The JPN does not identify or explain the "modifications to the previously advertised work," and does not include any documents or information about the new proposed mitigation plan involving Gunter's Island.</p> <p>-The Corps and DHEC should urge the applicant to withdraw its requests for permits until the applicant reevaluates and supplements the FEIS. The FEIS was completed in 2007 -almost a decade ago - and although the applicant reevaluated the FEIS in 2010, the applicant decided not to supplement it. As a result, the major environmental assessments of this project have not been updated since 2007. For example, the JPN mentions changes to the project design and notes that an entirely different mitigation plan has been proposed, significantly altering the environmental costs and benefits of the project as compared to the non-revised version originally assessed in the FEIS. Moreover, crucially important facts like the \$2.3 7 billion estimated cost of the project have undoubtedly changed since the last estimates produced by the SCDOT.</p> <p>-In our previous comments, we explained that the evaluation process for I-73 in South Carolina has been artificially constrained to prohibit meaningful consideration of alternatives that would consist largely of upgrading already existing roadways, such as S.C. 38 and U.S. 501. The Corps must not allow its own analysis under the Clean Water Act to be shortchanged by relying on an outdated FEIS.</p> <p>-The JPN's statement of purpose and need remains flawed. This stated project purpose - to build an interstate - essentially mandates a specific project design rather than consider viable alternatives that use and upgrade existing roads to satisfy the needs of the project. As we have explained through numerous letters and expert reports, there are alternative designs that use and upgrade existing roads to fulfill the stated needs for this project with far less environmental impact and at much lower cost.</p> <p>-The purpose and need for the project cannot lawfully be defined in a way that mandates a new alignment corridor and precludes the consideration of upgrading an existing highway corridor.</p> <p>-The proposed project does not satisfy the requirements of the Section 404(b)(1) Guidelines. The applicant faces a heavy burden to prove to the Corps by clear and convincing evidence that there is no other viable alternative that will have less impact on wetlands. As we have explained in previous letters, the applicant's proposed route does not satisfy this requirement. The analysis in the FEIS is unreasonably constrained by an assumption that the purpose of the project is to "to build an interstate" rather than fulfill the stated need.</p>	<p>Please refer to USACE additional Information, response to Question 3(E), page 18.</p>
		<p>-Additional information is needed to assess the mitigation plan. As an initial matter, the applicant has not demonstrated that mitigation is appropriate because there are less damaging practicable alternatives to the project as proposed. In addition, the JPN did not include any information about the proposed Gunter's Island compensatory mitigation plan. Overall, the mitigation plan cannot be fully evaluated since details of the plan have not been provided, and there is no mitigation work plan, which might address some of the concerns regarding inadequacy of information, including baseline information, maintenance plans, performance standards, monitoring requirements, and long-term management of the site.</p> <p>-The level of detail in the mitigation plan is not commensurate with the scale and scope of the impacts. Additional details regarding the mitigation resources are needed. The 89,836 linear feet of stream preservation and/or enhancement is misleading since only one side of the Little Pee Dee River (58,080 feet) will be protected while both sides of Evans Branch (18,467 feet) and UT to Little Pee Dee (13,289 feet) will be protected. Also, the 4,583.1 acres of wetland preservation appears to be based on the National Wetland Inventory (NWI).</p> <p>-The Corps cannot ignore previously submitted comments about I-73. It is unreasonable for the Corps to only consider comments submitted in response to this 2016 JPN, rather than the voluminous public comments and administrative record developed over many years.</p>	<p>Please refer to USACE additional Information, response to Question 3(E), page 18.</p>

General Environmental (Waters of the US) Remark

The project has been designed to minimize environmental impacts to the greatest extent possible. This is fully documented in the Alternative Development Technical Memoranda as well as the FEIS/RODs for both I-73 North and South. The Corridor Analysis Tool was developed and used for I-73. As part of the tool, constraints were identified by the project team and the Agency Coordination Team, and the tool was programmed to specifically avoid these constraints, such as Heritage Trust Properties, Carolina Bays, and high quality wetlands completely or if unavoidable, to cross at areas of low quality or at the narrowest point. After the computer modeling identified the initial routes, the alignments were further refined to avoid wetland impacts. The Agency Coordination Team used consensus voting to eliminate segments with high environmental impacts, primarily higher wetland impacts, from further consideration or refined corridor alternatives that resulted in a reduction of impacts were discussed and substituted for the higher impact segments. During design, impacts were further reduced wherever possible. Unavoidable impacts to waters of the U.S. will be mitigated by a landscape scale mitigation permittee-responsible project, Gunter's Island. Refer to the Final Gunter's Island Mitigation Plan for further detail.

SUMMARY OF COMMENT RESPONSES BY COMMENT TYPE.

Purpose and Need summary: *Project is not needed; improve existing roads; don't need another hurricane evacuation route; too many visitors in Myrtle Beach already.*

The purpose and need for both I-73 North and South clearly states that the purpose is to construct an interstate link to improve system linkage. The purpose and need for I-73 was developed with input from the ACT, and was approved of by the ACT, prior to the development of alternatives.

I-73 South FEIS (Chapter 1, page 1-10)

The purpose of the proposed I-73 South project is to provide an interstate link between I-95 and the Myrtle Beach region to serve residents, businesses, and tourists while fulfilling congressional intent in an environmentally responsible and community sensitive manner.

The Primary Needs for the project are to provide system linkage between the interstate system and the Myrtle Beach region and to enhance economic opportunities and tourism in South Carolina. Secondary needs are to relieve local traffic congestion and improve hurricane evacuation.

I-73 North FEIS (Chapter 1, page 1-11)

The purpose of the proposed I-73 North project is to provide an interstate link between the southernmost proposed segment of I-73 (between I-95 and the Myrtle Beach Region) and the North Carolina I-73/I-74 Corridor to serve residents, businesses and travelers while fulfilling congressional intent in an environmentally responsible and community sensitive manner. The Primary Needs for the project are to provide system linkage and to enhance economic opportunities in the project study area, while the Secondary Needs include improving the safety of existing roadways and improve access for tourism.

The needs for the project are fully described in Chapter 1, Section 1.3 of the I-73 North FEIS, and Section 1.4 of the South FEIS. These needs were revisited in the 2017 Re-evaluations (see Chapters 1 and 2 of each Re-evaluation) and validated.

Alternatives Analysis and Preferred Alternative: *Look at existing routes; find an alternative solution; will not reduce traffic in Myrtle Beach.*

The Corridor Analysis Tool (CAT) was used to identify the initial I-73 routes by avoiding constraints in the study area. The constraints included high quality wetlands, intact Carolina bays, cultural resources, communities, cemeteries, parks, hazardous material sites, prime farmlands, and others. The alignments were further refined to avoid and minimize wetland and stream impacts. A field review was conducted, which provided the Agency Coordination Team (ACT) members the opportunity to view the potentially impacted wetlands within the corridors and to provide comments. Centerlines were established and wetland impacts were calculated within 400-foot wide corridors that represented approximated construction limits. Requests from the ACT for corridor modifications that would further avoid wetland impacts were investigated and modifications were made where practicable. These corridors and segments of corridors were presented at the ACT meetings for discussion. Votes were conducted and segments with high environmental impacts, primarily higher wetland impacts, were removed from further consideration or refined corridor alternatives that resulted in a reduction of impacts were discussed and substituted for the higher impact segments. For additional information on the development of the alternatives, refer to Alternative Development Technical Memorandum From I-95 to the Myrtle Beach Region, and Alternative Development Technical Memorandum From I-95 to Future Interstate 74 in North Carolina.

During the development of Alternatives for the I-73 Environmental Impact Statements, the CAT Tool was used to develop 141 preliminary build alternatives for the I-73 South project and 1,896 preliminary build alternatives for I-73 North (refer to the Alternative Development Technical Memorandums for both projects). Some of these alternatives included the use of existing roadways including, but not limited to, S.C. 38, S.C. 9, U.S. 301, and U.S. 501. However, these alternatives were found to have more impacts to the natural and human environment when compared to new alignment alternatives. Using the Alternative Evaluation Criteria developed in conjunction with the Agency Coordination Team (ACT), the alignments with the highest impacts were eliminated, leaving 25 preliminary build alternatives for I-73 South and 205 preliminary build alternatives for I-73 North. Through public, stakeholder, and ACT input as well as further environmental studies, the preliminary build alternatives were narrowed down to reasonable alternatives that were studied further in the Draft EISs.

There were eight reasonable alternatives for I-73 South, and of these, Alternative 3 was determined to be the Preferred Alternative, as it had the least wetland impacts in both acreage and wetland value, as well as minimized impacts to other resources. The Preferred Alternative was further refined after input from the public and agencies during the Draft EIS comment period, as shown in the Final EIS. The FHWA and SCDOT selected the Preferred Alternative as the Selected Alternative for the project in the ROD in 2008.

For I-73 North, the preliminary build alternatives were narrowed down to three reasonable alternatives through ACT input, and public involvement, and Alternative 2 was selected as the Preferred Alternative. FHWA and SCDOT selected the Preferred Alternative as the Selected Alternative for the project in the ROD in 2008.

Contrary to the statement that a new location interstate was the only solution examined, upgrading existing roads was also evaluated in the 2003 I-73 Feasibility Study and during the alternative development process using data available via GIS layers. As described in the Alternative Development

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Technical Memorandum,¹ “Use of Existing Transportation Infrastructure” was one of the Alternative Evaluation Criteria considered by the Corridor Analysis Tool (CAT), with a scale value ranging from 1 for Principal Arterials to 3 for Local Roads. The CAT overall scale value ranged from 1 to 10, with 1 being the feature that is least important to avoid and 10 being the feature most important to avoid. The results of the CAT analysis indicate the upgrade of most of the existing roadway segments resulted in greater impacts than new alignments. The following table quantifies the potential impacts associated with the preliminary alternative corridors that evaluated the use of existing roads (shaded) as compared with the preliminary alternative corridors that were voted on by the Agency Coordination Team (ACT, December 9, 2004 meeting). Of the corridors listed below, the ACT Alternatives 1 through 7 were recommended for further analysis.

Alternative Corridor	Wetland Impacts (acres)	Potential Relocations	Other Info
S.C. 38/U.S. 501 (B-1)	679.6	1 Fire Dept., 7 Churches	Potential impacts to 10 Potentially Eligible NRHP Sites, two National Register Sites, the Little Pee Dee Heritage Preserve, and two cemeteries
U.S. 501 Bypass/S.C. 41/ U.S. 378 (1-K)	862.0	6 Churches	
S.C. 41/ U.S. 378 (3-K)	800.0	1 Fire Dept., 7 Churches	
ACT Alternative 1 (1-W1-W20-B)	596.5	1 Fire Dept., 2 Churches	Recommended for further consideration
ACT Alternative 2 (2-W1-W20-B)	603.8	4 Churches	Recommended for further consideration
ACT Alternative 3 (3-I)	636.0	2 Fire Dept., 2 Churches	Recommended for further consideration
ACT Alternative 4 (1-W1-W20-G)	603.4	1 Fire Dept., 2 Churches	Recommended for further consideration
ACT Alternative 5 (1-I)	660.7	1 Fire Dept., 3 Churches	Recommended for further consideration
ACT Alternative 6 (3-W20-B)	523.5	2 Fire Dept., 1 Church	Recommended for further consideration
ACT Alternative 7 (3-W20-I)	552.4	3 Fire Dept., 2 Churches	Recommended for further consideration
S.C. 9 Alternative (5-C)	688.1	2 Fire Dept., 5 Churches	Potential Impacts to Mitigation Site (Kozo Briggs) and two cemeteries; crossing of state scenic designated area of the Little Pee Dee River.
S.C. 9 Alternative (4-W8-C)	764.8	1 Church	
S.C. 9 Alternative (3-W8-C)	634.7	None	Crossing of state scenic designated area of Little Pee Dee River.
SOURCE: Alternative Development Technical Memoranda for I-73 North and I-73 South			

¹ SCDOT, *Alternative Development Technical Memorandum, from I-95 to the Myrtle Beach Region*, page 8 and Table 2.3.

Traffic: *Upgrade existing roads to fix traffic; traffic will be at a dangerous level, need to improve existing roads such as SC 9 and SC 31; will increase congestion in Myrtle Beach; will lead to higher road congestion*

Based upon the traffic analysis completed for I-73 (see the I-73 Traffic Technical Memorandum), the construction of I-73 would divert traffic primarily from S.C. Route 38, S.C. Route 9 and U.S. Route 501. The benefit provided by the construction of I-73 would be the diversion of some longer distance trips from the existing local roadway network, especially U.S. Route 501. This diversion of traffic would free up existing capacity that could be used by local residents and businesses for shorter distance trips, thereby, reducing overall local traffic congestion.

Traffic data was updated for the 2017 Re-evaluations. A Travel Demand Model was developed that incorporated the latest travel demand model data that spans the I-73 South study area and the region, the South Carolina Statewide Model developed in 2015, and the North Carolina Statewide Model developed in 2016. Additionally, the statewide model highway networks and origin-destination trips were stitched together, providing for a base year of 2010 and forecast year of 2040. The other changes made to model inputs, as well as the overall functionality of the updated model, resulted in differences in the results. (These changes are discussed in Section 2.3 of the North Re-evaluation and Section 2.4 of the South Re-evaluation.) Due to these differences, the results cannot be directly compared to those in the 2008 FEISs.

Average Annual Daily Traffic (AADT) projections were generated for the No-build and Selected Alternatives for 2010 and 2040. The results of the modeling show that the Selected Alternative for I-73 South would allow traffic to travel between I-95 and S.C. 22 approximately 27 minutes faster when compared to the No-build Alternative (existing roadway network). In addition, there would be a reduction in the vehicle hours traveled (VHT) in the roadway network (refer to Tables 2.4 and 2.5), which would reduce congestion in the roadway network. For I-73 North, the results of the modeling show that the Selected Alternative would reduce the travel time from I-74 to I-95 by 24 minutes when compared to the No-build Alternative (existing road network).

During the alternative development process, it was decided that S.C. 22 would be used to connect the Selected Alternative to U.S. 17 in the Myrtle Beach area to reduce impacts to human and environmental resources as well as reduce overall project costs. Currently, the local road network experiences a traffic bottleneck in the Conway and Aynor areas, as traffic from U.S. 701, S.C. 90, S.C. 544, U.S. 378, S.C. 22, and S.C. 319 all connect to U.S. 501 in the Conway-Aynor area. The Selected Alternative connects to S.C. 22, and would decrease VMT and VHT and increase travel speed along the rest of the existing local roadway network by diverting longer distance trips, especially those related to recreational and vacation travel, onto I-73.

Noise: *Reroute to use woods as barrier.*

Noise Studies were completed for both the I-73 North and South FEISs, and the noise analyses were updated with the most recent federal and state guidance in the 2017 re-evaluations. The results of the updated noise studies can be found in the re-evaluations for both I-73 North and I-73 South (. While noise impacts are predicted, barriers were determined not to be reasonable or feasible. In addition, the use of woods as a barrier is not an acceptable federal-aid noise abatement measure because only dense stands of evergreen vegetation at least 100 feet in depth will reduce noise levels.

Summary Responses to Public Comments for I-73 Public Notice

Socioeconomics: *Costs are not worth project; loss of jobs would occur; only low paying jobs will be created; will put small businesses out of business; will make Horry County more crowded; project won't help Marion County's economy; opposed to commercialism following project;*

I-73 North - Section 2.2.3 Economic Results for I-73 North Re-evaluation:

After annualizing the incremental changes in daily TDM characteristics and applying respective monetization factors, the monetized benefits from I-73 North amount to \$30.5 million in 2025, escalating to \$53.2 million in 2040. Travel time savings are the dominant category, stemming from VHT reductions, which are partially offset by dis-savings in vehicle-operating, accident, and emissions cost increases stemming from VMT increases.

Monetized annual travel-efficiency-related benefits are categorized by policy for the purposes of deriving economic impact measures via applying ratios of annual GRP/production cost savings from work done for the SC MTP. Such policy variables, specifically the production cost savings, translate via the ratio application into gross regional product impacts from \$36.5 million in 2025 to \$51.5 million in 2040. Given SC MTP effective ratios of average GRP-and income-per-employee, the GRP impacts translate into 358 jobs earning \$25.0 million in 2025, to 432 jobs earning \$38.4 million in 2040.”

Additional information on Economic Development Opportunities can be found in Section 2.2 of the I-73 North Re-evaluation, as well as Chapters 1 and 2 of the I-73 North FEIS.

I-73 South - Section 2.2.3 South Results, taken from the Re-evaluation:

After annualizing the incremental changes in daily TDM characteristics and applying respective monetization factors (refer to Table 2.2), the monetized benefits from I-73 South amount to \$10.2 million in 2025, escalating to \$58.5 million in 2040 (refer to Appendix A). Travel time savings are the dominant category, stemming from VHT reductions, which are partially offset by dis-savings in vehicle-operating, accident, and emissions cost increases stemming from VMT increases.

Monetized annual travel-efficiency benefits are categorized by policy variables for deriving economic impact measures via applying simple ratios of annual GRP/production cost savings from work done for the SC MTP. Such policy variables, specifically the production cost savings, translate via the ratio application into GRP impacts from \$10.8 million in 2025 to \$43.6 million in 2040. Given SC MTP effective ratios of average GRP-and income-per-employee, the GRP impacts translate into 106 jobs earning \$7.4 million in 2025, to 365 jobs earning \$32.5 million in 2040.”

Additional information on Economic Development Opportunities can be found in Section 2.2 of the I-73 South Re-evaluation and Chapters 1 and 2 of the I-73 South FEIS.

The project costs have not increased majorly since the FEISs were published in 2008. Below are the costs for the I-73 North and South Projects:

Please refer to Section 1.2 of the North and South Re-evaluations. In the South FEIS (Section 2.8.3, page 2-82), the estimated construction cost was determined in 2006 dollars, and then factored up by six percent per year to the Years 2011 and 2016.

Summary Responses to Public Comments for I-73 Public Notice

2008 I-73 South FEIS/ROD Construction Cost Estimate	
Year	Cost
2006	\$0.964 Billion
2011	\$1.29 Billion
2016	\$1.726 Billion

These construction cost estimates for the Selected Alternative were updated in January 2017. The estimated construction cost was determined in 2017 dollars, and then factored up by six percent per year to the Years 2020 and 2025.

2017 I-73 South Re-evaluation Construction Cost Estimate	
Year	Cost
2017	\$1.313 Billion
2020	\$1.564 Billion
2025	\$2.093 Billion

In the North FEIS (Section 2.7.3, page 2-59), the estimated construction cost was determined in 2008 dollars, and then factored up by six percent per year to the Years 2013 and 2018.

2008 I-73 North FEIS/ROD Construction Cost Estimate	
Year	Cost
2008	\$0.841 Billion
2013	\$1.125 Billion
2018	\$1.505 Billion

These construction cost estimates for the Selected Alternative were updated in January 2017. The estimated construction cost was determined in 2017 dollars, and then factored up by six percent per year to the Years 2020 and 2025.

2017 I-73 North Re-evaluation Construction Cost Estimate	
Year	Cost
2017	\$1.070 Billion
2020	\$1.275 Billion
2025	\$1.706 Billion

Relocations: *Will split Aynor School District and community;*

The I-73 Project Team worked with the Town of Aynor, the Horry County School District, and Horry County during the development and evaluation of alternatives. The Selected Alternative was developed to most closely approximate the school attendance boundary for the Aynor area schools to minimize impacts to the school district and bus routes (refer to page 2-64 of I-73 South FEIS).

Historic Properties: *Will destroy a native American burial site;*

Cultural/Historic surveys were completed for the Preferred Alternative corridors for I-73 North and South. The findings were shared with the State Historic Preservation Office (SHPO) upon completion of

the reports. No resources potentially eligible for inclusion on the National Register of Historic Places (NRHP) would be impacted by the I-73 South project. One architectural resource, the Beauty Spot Motor Court, located off of US 15/401 near Bennettsville, South Carolina, would be impacted by the I-73 North project. Additionally, seven archaeological sites potentially eligible for listing on the NRHP were identified within the construction footprint. Memorandums of Agreement between SCDOT and the SHPO signed regarding mitigation for the impacts from the proposed project on these resources. Coordination occurred with the Tribal Historic Preservation Officers (THPOs) for this project (refer to Chapter 4 of both I-73 North and South FEISs).

Air Quality: Will increase CO2 and violate Paris agreement to reduce GHGs.

The I-73 North and South FEISs completed for both the I-73 North and I-73 South projects included an assessment of Air Quality impacts. All of the counties traversed by the I-73 project corridor are currently in attainment for the National Ambient Air Quality Standards set by USEPA, as discussed in the re-evaluations.

In addition, per guidance from the Council on Environmental Quality, greenhouse gases were estimated for construction, operation and maintenance of the roadways and are included in Section 3.7.2 of both the I-73 North and South Re-evaluations. At this time, no mitigation is required for greenhouse gases (per the CEQ guidance on Climate Change). It should be noted that this CEQ guidance was recently rescinded through the *Presidential Executive Order on Promoting Energy Independence and Economic Growth*, dated March 28, 2017.² Even though this guidance has been rescinded, the GHG analysis was completed prior to that date, and has been left in the 2017 Re-evaluations.

Farmlands: *will destroy family farm, concerned about loss of trees planted under USDA FSA program.*

All of the proposed corridors included in the alternatives analysis would cause some impacts to farmlands, and consideration was taken to trying to avoid uneconomic remnants of farmlands when refining alternatives. Land protected by permanent easements through the Farmland Protection Policy Act were avoided when developing the alternatives. Trees planted under the FSA program will be taken under consideration during the right-of-way process. The Preferred Alternatives for I-73 North and South would have the lowest farmland impacts (5,071 acres).

Water Resources: *will affect water quality;*

This project would be located in mainly rural areas, so the roadway stormwater management design would consist of grassy swales and vegetated slopes on the sides of the pavement which would filter pollutants from the runoff. The runoff would be collected in grassy ditches, and as it moves through the ditches, it would continue to be filtered prior to entering streams. Detention ponds would be in place in some areas to allow pollutants to settle prior to entering streams. These Best Management Practices (BMP's), along with those found in the SCDOT and FHWA guidelines, would be used during design and construction to minimize the amount of runoff pollution from streams. A Spill Prevention, Control, and Countermeasures Plan will be developed to address potential impacts from construction activities.

²<https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energy-independence-and-economy-1>

Summary Responses to Public Comments for I-73 Public Notice

Prior to the start of any construction, a Stormwater Management Plan will be completed and approved as required by Federal and state law and SCDHEC NPDES regulation. The plan will address stormwater impacts not only during the construction phase but also the future use of the roadway.

This project was designed to minimize impacts to wetlands in the project study area. Wetlands provide a natural function of filtering pollutants from waters before they enter stream systems. By preserving wetlands, additional areas of filtration would be in place for highway runoff prior to it entering streams. Impacts were minimized where wetlands and streams would be crossed by bridges. Currently there are 16 bridge crossings of streams with riparian wetlands where impacts would be minimized.

During the alternatives development, values were assigned to the wetland types within the study area and the wetland data layer was given an overall weighted value of 40 percent, which forced the Corridor Analysis Tool (CAT) to avoid wetlands where possible and when avoidance was not possible, to cross the lower valued wetland systems and/or to cross at the narrowest point. Streams were treated similarly during alternative development and during roadway design by aligning the crossing as perpendicular as possible to limit impacts.

SCDHEC regulation does not require stream mitigation for water quality impacts to streams. Impacts are instead avoided and minimized through the NPDES permitting process.

Unavoidable impacts to streams and wetlands will be mitigated by permittee-responsible mitigation. The Final Mitigation Plan for the Gunter's Island mitigation site has been completed.

Additional information on wetlands and water quality can be found in the I-73 North Re-evaluation in Section 3.7 Jurisdictional Waters of the United States, and Section 3.9 Water Resources/Water Quality, page 37. Information can be found in the I-73 South Re-evaluation in Section 3.9 Jurisdictional Waters of the United States, and Section 3.11 Water Resources/Water Quality.

Terrestrial and Aquatic Habitat: *potential destruction of habitat*

The project has been designed to minimize environmental impacts to the greatest extent possible. The computer modeling tool was programmed to specifically avoid Heritage Trust Properties, Carolina Bays, and high quality wetlands completely or if unavoidable, to cross at areas of low quality or at the narrowest point. The crossings of the Little Pee Dee River (and the Heritage Trust Property adjacent to it) and Lake Swamp were aligned immediately adjacent to the existing crossing where the wetland has already been impacted thereby reducing the overall impacts. After the computer modeling tool identified the initial routes, the alignments were further refined to avoid wetland impacts. Votes were conducted among the ACT members and segments with high environmental impacts, primarily higher wetland impacts, were removed from further consideration or refined corridor alternatives that resulted in a reduction of impacts were discussed and substituted for the higher impact segments. During design, impacts were further reduced wherever possible. Unavoidable impacts will be mitigated by a landscape scale mitigation permittee-responsible project, Gunter's Island. The Final Mitigation Plan has been completed.

Habitat fragmentation and loss caused by the project was addressed during the NEPA process. Habitat fragmentation discussion can be found in the I-73 North FEIS in Section 3.14, page 3-193. Habitat fragmentation discussion can be found in the I-73 South FEIS in Section 3.14, page 3-172. A total of 16

bridges will be constructed. All of the proposed bridge locations were presented to the ACT throughout the NEPA process. Records of black bear/vehicle collisions were investigated and were found to be all located well to the east of the I-73 South Preferred Alternative; therefore, the project is not expected to increase the incidence of black bear/vehicle collisions.

Hydrologic studies have been completed for the I-73 South project. Pipes and/or culvert passages in perennial streams were designed to not impede movement of aquatic species. In addition, a total of 16 bridges over perennial streams (12 in I-73 South and 4 in I-73 North) will be constructed thereby eliminating impacts to movement of aquatic species at these streams.

Wetlands

This project was designed to minimize impacts to wetlands in the project study area. Efforts were made to produce accurate wetland maps and to identify and avoid high value wetlands. The soils layer, USGS topographic quadrangle maps and aerial photography were used to update the NWI mapping as well as field ground-truthing.

Areas of particular concern, such as the large wetland areas along US 501, were shown to the USACE during several field visits for confirmation of wetland status. On the basis of this information, the NWI maps were corrected and the modified NWI maps were used for the comparison analysis. Intact Carolina bays were identified from aerial photography and were designated as constraints on the GIS data layer which ensured that they would be avoided. Values were assigned to the wetland types within the study area and the wetland data layer was given an overall weighted value of 40 percent, which forced the Corridor Analysis Tool (CAT) to avoid wetlands where possible and when avoidance was not possible, to cross the lower valued wetland systems.

After the CAT identified the initial routes, the alignments were further refined to avoid wetland impacts. A field review was conducted, which provided the Agency Coordination Team (ACT) members the opportunity to view the potentially impacted wetlands within the corridors and to provide comments. Centerlines were established and wetland impacts were calculated within 400-foot wide corridors that represented approximated construction limits. Requests from the ACT for corridor modifications that would further avoid wetland impacts were investigated and modifications were made where practicable. These corridors and segments of corridors were presented at the ACT meetings for discussion. Votes were conducted and segments with high environmental impacts, primarily higher wetland impacts, were removed from further consideration or refined corridor alternatives that resulted in a reduction of impacts were discussed and substituted for the higher impact segments.

Prior to the submittal of the 2011 permit application, a Value Engineering Study for the I-73 South portion of the project was completed. Based upon this study, several sections of the alignment were shifted resulting in an overall reduction of impacts to wetlands. In addition, two projects, the Catfish Bay Church Road Overpass Replacement and the U.S. 301/501 Intersection Improvement Project, were completed under the TIGER grant program. These projects were, therefore, removed from the 2016 permit application submittal. Neither project impacted any waters of the U.S. including wetlands and did not change the overall project impacts.

Unavoidable impacts to streams and wetlands will be mitigated by permittee responsible mitigation. The I-73 Compensatory Mitigation Plan proposes to preserve 4,618.5 acres of wetlands, 89,836 linear feet of

Summary Responses to Public Comments for I-73 Public Notice

stream through protection of 6,258 acre Gunter's Island tract. The plan also includes the restoration of 2.2 acres of wetlands through the removal of existing roadway fill on some timber access roads, and the hydrologic enhancement of 18.6 acres of wetlands. The site contains many unique ecological resources including an intact 85 acre Carolina Bay, 12 oxbow lakes, and 11 miles of river frontage along the Little Pee Dee River. The site will be protected by dedication into the SCDNR Heritage Trust Program. The site reduces the threat of habitat fragmentation by offering connectivity to other large, undisturbed tracts of land such as Woodbury WMA, and the Little Pee Dee Heritage Preserve. Additionally, because the site will be included in the Heritage Trust Program, public access opportunities will also be provided by the site.

Fish Habitat

Impacts to migratory diadromous fish species, such as the American eel and blueback herring, which may use the perennial tributaries to the Great Pee Dee and Little Pee Dee Rivers as habitat for juvenile and adult fish maturation or nursery habitat were considered. Hydrologic studies have been completed for the I-73 South project. Pipes and/or culvert passages in perennial streams were designed to not impede movement of aquatic species. In addition, a total of 16 bridges over perennial streams (12 in I-73 South and 4 in I-73 North) will be constructed thereby eliminating impacts to movement of aquatic species at these streams. All of the proposed bridge locations were presented to the ACT throughout the NEPA process. Similar hydrologic studies would be performed for the I-73 North project to determine where the use of pipes or box culverts would be appropriate during the final design phase. The installation of pipes or box culverts would require water body modification and could affect aquatic species movement. Where practicable, stream channels could be relocated outside of the fill limits of the roadway and cross pipes and culverts could be placed perpendicular to the roadway to reduce the length of pipe or culvert required. This would reduce the distance that aquatic species would have to travel through the structures.

Public Involvement

The Joint Public Notice serves as the USACE's vehicle to solicit input from the general public as well as regulatory agencies as part of the Clean Water Act Section 404 permitting process. Agencies and the general public can contact the designated USACE project manager to request additional information about the project. SCDOT maintains an I-73 website where the NEPA documents and other pertinent project information can be viewed by the public. The website address is www.i73insc.com.



I-73 Agency Comment and Response Matrix

SCDHEC August 18, 2016 comment letter to SCDOT	
Comment	Response
<p>The supplemental information submitted with the revised application includes a discussion of watershed conditions and impaired 303(d) listed monitoring sites (sic) in the preferred alternative corridor under Water Supply and Conservation (including pages 63-79). However, the impaired sites discussed were based on the 2006 303(d) list and does not reflect more recent data. In addition, TMDL watersheds in the project corridor need to be considered to address impairments. Please provide a revised water quality discussion based on the most recent (2014) 303(d) list and current</p>	<p>Information provided with the 2016 Permit application submitted to the USACE and SCDHEC included an updated Water Quality Assessment based upon the 2014 303(d) list.</p> <p>Additional water quality information can be found in Water Resources/Water Quality Sections of the I-73 North (Section 3.10) and South (Section 3.12) Re-evaluations.</p>
<p>Please include an updated post construction stormwater treatment management plan to address project wetland/stream crossings that could potentially contribute to downstream impairments based on current conditions.</p>	<p>Information provided with the 2016 Permit application submitted to the USACE and SCDHEC included an updated Water Quality Assessment based upon the 2014 303(d) list.</p>
<p>In order to evaluate the proposed mitigation and facilitate constructive comments, we ask that an interagency site visit be conducted at the Gunter's Island mitigation site.</p>	<p>An interagency site visit was conducted on November 17, 2016.</p>
<p>The comment period for the Joint Public Notice has been extended an additional 30 days (60 days total) until September 6, 2016 for parties requesting the extension. We will request that the South Carolina Department of Transportation (SCDOT) address comments received during the 60-day comment period. Therefore, we will forward comments received for a response after the 60-day comment period.</p>	<p>Comments have been addressed and submitted to both the USACE and SCDHEC.</p>
<p>We will ask that you submit the requested responses to comments when forwarded to you. Pursuant to Regulation 61 -30, and Regulation 61-101 A.6., the Department has 180 days to complete action on an application for 401 Water Quality Certification. These 180 days include only those days in which the department is actively reviewing the application; processing is suspended, and the clock stops, when information is requested and the Department is waiting on a response. Accordingly, processing is suspended until all requested information is received.</p>	<p>Requested information will be submitted as soon as possible after completion.</p>



I-73 Agency Comment and Response Matrix

SCDHEC September 29, 2016 comment letter to SCDOT	
Comment	Response
In our letter dated August 25, 2016, we requested information addressing water quality, stormwater treatment, mitigation, and addressing comments received based on an extended comment period.	Information provided with the 2016 Permit application submitted to the USACE and SCDHEC included an updated Water Quality Assessment based upon the 2014 303(d) list. Additional water quality information can be found in Water Resources/Water Quality Sections of the I-73 North and South Re-evaluations.
The comment period ended on September 6, 2016 and we have received comments from South Carolina Department of Natural Resources (SCDNR), U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), Southern Environmental Law Center (SELC), South Carolina Environmental Law Project (SCELP) and other interested parties (copies attached). Also, we received a CD from the Corps of Engineers with over 10,000 comments, mostly form letters in support of the project. This CD was delivered to SCDOT and SCDHEC on September 16, 2016. Approximately 45 letters on the CD expressed opposition to the project for various reasons. Please respond to the opposition letters contained on the CD.	Comments received during the extended comment period have been addressed and submitted to both the USACE and SCDHEC.
Also, as pointed out by SELC, the National Environmental Policy Act (NEPA) Environmental Impact Assessment (EIS) re-evaluation has yet to be completed. Because the EIS re-evaluation will provide information needed to complete our assessment, we request that the reevaluation be provided.	Re-evaluations of both the I-73 North and South FEISs have been completed.
In addition, we require a response to any additional information requested by the Charleston District Corps of Engineers.	Information requested by the USACE Charleston District compiled and submitted to both the USACE and SCDHEC. The response to USACE comments is also included as an Appendix in the 2017 Re-Evaluation.
Please provide the information requested by December 1, 2016.	A response will be submitted as soon as it is completed.



I-73 Agency Comment and Response Matrix

NOAA NMFS comment letter to USACE	
Comment	Response
<p>The Charleston District has determined the proposed work is not within areas designated essential fish habitat (EFH). The NMFS agrees with this determination and offers no comments under the authorities of the Magnuson-Stevens Fishery Conservation and Management Act.</p>	<p>No response necessary.</p>
<p>Additionally, as part of the Agency Coordination Team, the NMFS commented on numerous versions of the proposed mitigation plan, which are best summarized by letter dated August 13, 2014, reviewing the SCDOT's Permittee-Responsible Final Mitigation Plan for Joiner Bay and Long Branch Creek.</p>	<p>Responses to those comments within the letter dated August 13, 2014 have already been provided to the USACE and SCDHEC. SCDOT's new mitigation plan is attached as an Appendix to the 2017 re-evaluation and is consistent with the request of the ACT for a large landscape-scale mitigation plan.</p>
<p>The loss of freshwater wetlands can adversely affect water quality as this habitat filters pollutants, stabilizes shorelines, and facilitates transport of organic material. Consideration of the losses to these habitats and the ecosystem services they provide is essential during the Charleston District's analysis of the proposed project.</p>	<p>This project was designed to minimize impacts to wetlands in the project study area. Wetlands provide a natural function of filtering pollutants from waters before they enter stream systems. Preliminary stormwater facilities have been incorporated into the design of the proposed roadway and are shown on the project permit drawings. This project would be located in mainly rural areas, so the roadway stormwater management design would consist mainly of grassy swales and vegetated slopes on the sides of the roadway which would filter pollutants from the runoff. The runoff would be collected in grassy ditches, and as it moves through the ditches it would continue to be filtered prior to entering streams. Detention ponds would be in place in some areas to allow pollutants to settle prior to entering streams. These best management practices, along with those found in the SCDOT and FHWA guidelines, would be used during design and construction to minimize the amount of runoff pollution to streams. A Spill Prevention, Control, and Countermeasures Plan will be developed to address potential impacts from construction activities.</p> <p>Although stormwater BMPs are designed to perform some of the functions provided by the wetlands in the project study area, there will be some impact resulting in the loss of function. To compensate for this loss of function, SCDOT will provide a compensatory mitigation plan that will be reviewed by the Charleston District. The updated I-73 Compensatory Mitigation Plan (Mitigation Plan), preserves 4,618.5 acres of wetlands that are located in close proximity to most of the project impacts. Through the execution of the Mitigation Plan, these wetlands will be protected in perpetuity and continue to provide functions such as transport of organic material and the filtration of pollutants.</p>



I-73 Agency Comment and Response Matrix

NOAA NMFS comment letter to USACE	
Comment	Response
<p>The Little Pee Dee River includes spawning, foraging, and migration habitat for anadromous fish species, including American shad (<i>Laos sapidissima</i>) and blueback herring (<i>Alosa aestivalis</i>). Anadromous fishes occur within, upstream, and downstream of the proposed I-73 crossing of the Little Pee Dee River, however, the public notice does not describe potential adverse impacts to these species or their habitats. Sediment input into streams and rivers is a major threat to anadromous fishes and their habitat. This input can directly impact individuals and spawning aggregations as well as permanently eliminate migration and spawning habitat. Additionally, impacts from noise, vibrations, and other elements associated with construction activities can adversely affect anadromous fish spawning and migratory patterns and behavior. The NMFS recommends the Charleston District examine impacts to anadromous fishes, including downstream impacts, during final analysis of the permit application.</p>	<p>This project was designed to minimize impacts to wetlands in the project study area. Wetlands provide a natural function of filtering pollutants from waters before they enter stream systems. By preserving wetlands, additional areas of filtration would be in place for highway runoff prior to it entering streams.</p> <p>Impacts to migratory diadromous fish species, such as the American shad and blueback herring, which may use the perennial tributaries to the Great Pee Dee and Little Pee Dee Rivers as habitat for juvenile and adult fish maturation or nursery habitat were considered. Hydrologic studies have been completed for the I-73 South project. Pipes and/or culvert passages in perennial streams were designed to not impede movement of aquatic species. In addition, a total of 16 bridges over perennial streams (12 in I-73 South and 4 in I-73 North) will be constructed thereby eliminating impacts to movement of aquatic species at these streams. All of the proposed bridge locations were presented to the ACT throughout the NEPA process. Similar hydrologic studies would be performed for the I-73 North project to determine where the use of pipes or box culverts would be appropriate during the final design phase. The installation of pipes or box culverts would require water body modification and could affect aquatic species movement.</p> <p>Where practicable, stream channels could be relocated outside of the fill limits of the roadway and cross pipes and culverts could be placed perpendicular to the roadway to reduce the length of pipe or culvert required. This would reduce the distance that aquatic species would have to travel through the structures. Additionally, pipe and culvert bottoms would be recessed below the bottom of the perennial stream channels to help maintain movement of aquatic species through the structure.</p>



I-73 Agency Comment and Response Matrix

NOAA NMFS comment letter to USACE	
Comment	Response
<p>NMFS does not object to the use of the Gunter's Island site for permittee-responsible compensatory mitigation for unavoidable impacts from the proposed project. The NMFS believes Gunter's Island represents a unique mitigation opportunity providing significant value due to its size, aquatic resources, and connectivity to anadromous fish habitat in the Little Pee Dee River, including the 11-mile segment of the site along the east bank of the river. However, the public notice does not describe any ecological performance standards for mitigation activities. Performance standards are used to assess whether a project is achieving its goals and should be objective and verifiable. The public notice also fails to include any on-site restoration as a component of the mitigation plan, and only describes enhancement and preservation activities. The NMFS recommends the Charleston District examine potential restoration opportunities at Gunter's Island and require comprehensive performance standards be included in the final mitigation plan.</p>	<p>The I-73 Compensatory Mitigation Plan includes restoration of 2.2 acres of wetlands through the removal of roadway fill and associated culverts. The removal of these roads is expected to hydrologically enhance 18.6 acres of wetlands. The details of these activities are discussed in Section 4.5 Mitigation Work Plan beginning on page 32 of the final mitigation plan. The plan also includes performance standards which are discussed in Section 4.7.</p>
<p>To the extent practicable, the SCDOT should restrict in-water work in the Little Pee Dee River to May 1 to February 14 of each year (no in-water work conducted between February 15 and April 30), and avoid blocking or constricting the river throughout the year to avoid impacts to migrating, foraging, and spawning anadromous fishes.</p>	<p>SCDOT has already agreed to an in-water work moratorium from February 1 to April 30 for the Little Pee Dee River, and will continue to honor this commitment. Contracts will specify that all contractors must comply with the restrictions.</p> <p>SCDOT has already agreed to limit the amount of in-water work from May 1 to January 31 by not obstructing more than 50 percent of the Little Pee Dee River at any one time and will continue to honor this commitment. Construction contracts will specify that contractors must comply with this requirement. Refer to Section 3.11.1 of the I-73 South Re-evaluation for further information.</p>
<p>Additionally, the SCDOT should pursue construction methods that avoid and minimize impacts to the river, including the use of top-down construction, temporary work trestles, work barges, or other methods that reduce or eliminate impacts to the river. Should the SCDOT require use of in-water structures during construction, such as rip-rap pads or rock jetties, hydraulic analysis should be conducted to assess whether current changes will alter rates of fish passage and sedimentation in spawning areas, and the permit should require monitoring of these habitats to assess project impacts and trigger remedial action if necessary.</p>	<p>SCDOT will pursue construction methods that avoid and minimize impacts to the river. The use of top down construction, temporary trestles, work barges and other low impact methods will be used to the greatest extent practicable. The contractor will be limited to methods as specified in the Section 404 permit conditions. Should construction methods dictate a deviation from what is shown in the permit, SCDOT will submit a permit modification request and any impacts that may result in hydraulic modification will be reviewed at that time.</p>
<p>Furthermore, if blasting is required in the Little Pee Dee River, a blasting plan should be developed and submitted to the NMFS for review.</p>	<p>No blasting is anticipated at this time, however if blasting is required during construction, a blasting plan would be completed and submitted for review by USACE, SCDHEC and NOAA-NMFS.</p>



I-73 Agency Comment and Response Matrix

NOAA NMFS comment letter to USACE	
Comment	Response
<p>Lastly, the SCDOT should install, inspect, and maintain appropriate erosion and sedimentation control Best Management Practices in accordance with local and state stormwater guidelines to avoid sediment input into adjacent waters.</p>	<p>Construction of the I-73 project would likely be completed under a design-build contract and the contractor awarded the project would be required to install and maintain erosion and sedimentation control Best Management Practices in accordance with local and state stormwater guidelines. SCDOT has a construction inspection program which includes weekly inspection of erosion and sedimentation control Best Management Practices and the contractor would be required to maintain and/or repair any such facilities or structures found to be deficient in a timely manner, in some cases, as quickly as 48 hours after notification. Recently, SCDOT has also set up an environmental compliance inspection program with both in-house personnel and outside contracts to third party inspectors to further insure project compliance with all environmental regulations.</p>

SCDHEC-OCRM comment letter to SCDOT	
Comment	Response
<p>In order that we may complete our review and reach a consistency determination, we must receive the information indicated below: Final Approved Compensatory Mitigation Information for all projects impacting wetlands. This should include Mitigation SOP Worksheets and details of the mitigation proposal.</p>	<p>The final Mitigation Plan will be provided to OCRM. Mitigation SOP worksheets will not be submitted for this project, because the SOP was not used to develop the final mitigation plan. SCDOT is proposing land-scape scale mitigation that meets the 2008 Mitigation Rule, and fully compensates for all impacts from the I-73 project.</p>
<p>OCRM must receive this information within 180 days of the date of this letter and further action on this project will be stayed until this information is received. If this information is not received within the time indicated, OCRM may find the project inconsistent with the S. C. Coastal Zone Management Program due to a lack of necessary information to adequately evaluate the project.</p>	<p>SCDOT is in the process of completing the final Mitigation Plan. Development of the plan will likely exceed the 180 day timeframe. As such, SCDOT requested an extension in writing to OCRM in a letter dated November 28, 2016.</p>

SCDPRT comment letter to USACE	
Comment	Response
<p>On behalf of the South Carolina Department of Parks, Recreation & Tourism, I would like to express our support for the construction of I-73 in South Carolina.</p>	<p>No response required.</p>



I-73 Agency Comment and Response Matrix

USEPA August 9, 2016 comment letter to USACE	
Comment	Response
<p>The Environmental Protection Agency, Region 4 has partially reviewed the JPN, dated July 8, 2016. We would like to further evaluate the applicant's information and collect additional information related to the project and impacts. Due to the large scale and complexity of the project, the EPA requests a 30-day extension of the comment period.</p>	<p>The comment period was extended to 60 days (to September 6, 2016) by the USACE.</p>

USEPA September 6, 2016 comment letter to USACE	
Comment	Response
<p>While the EPA believes this plan may have potential to provide compensatory mitigation for impacts to waters of the United States, the plan does not currently include enough information to make this determination. At this time, the applicant's plan is primarily preservation. Within the 2008 Mitigation Rule, preservation as compensatory mitigation may be authorized, but the Rule sets out five very specific requirements that must be met before preservation will be considered. These requirements (for preservation as compensatory mitigation) are:</p> <ol style="list-style-type: none"> 1) The resources to be preserved provide important physical, chemical, or biological functions for the watershed; 2) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available; 3) Preservation is determined by the district engineer to be appropriate and practicable; 4) The resources are under threat of destruction or adverse modifications; and 5) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust). 	<p>Additional information has been added to the Final Mitigation Plan. The plan includes details on the physical, chemical, and biological functions of wetland resources that are proposed for preservation. Additionally, the plan discusses the ecological attributes of the Gunter's Island that would contribute to the ecological sustainability of the watershed. The plan provides information for the District Engineer to evaluate to make the determination that preservation is practicable.</p> <p>Several components of the Mitigation Plan discuss the threats to the aquatic resources within the Little Pee Dee Watershed. The plan discusses the SCDNR Pee Dee-Lumber Focus Plan and other reference materials that identify threats to the watershed. The plan addresses these threats by proposing to incorporate the mitigation site into the Heritage Trust program through transfer to a state agency (SCDNR) for permanent protection. The plan includes a draft of the Dedication and Declaration of Trust Agreement (Appendix C), which is the legal instrument that will be used to permanently protect the site by dedication in the Heritage Trust Program.</p>
<p>The applicant has addressed the protection of the site and mentioned the resources' contribution to the watershed. However, the contribution to the physical, chemical, and biological functions and ecological sustainability of the watershed should be further explained.</p>	<p>The physical, chemical, and biological functions and ecological sustainability is discussed in the Mitigation Plan in Section 4.2.1 Ecological Suitability (pages 13 and 14).</p>



I-73 Agency Comment and Response Matrix

USEPA September 6, 2016 comment letter to USACE	
Comment	Response
Page 16 of the revised mitigation plan dated June 20, 2016, states that stream hydrology has been adversely affected by road crossings associated with timber management. Therefore, it's unclear if waters of the United States on site are functioning sufficiently to be considered preservation worthy.	Additional data discussing the hydrologic conditions of the site is contained in the revised Mitigation Plan dated January 11, 2017. The effects of the road crossings used for timber management are limited to the immediate wetland area adjacent to the roads. The wetlands on the site were evaluated using NCWAM and the resulting scores were high for the areas proposed as preservation. The details of the wetland preservation and the NCWAM methodology are discussed in Section 4.5.2 Wetland Preservation (pages 33-35).
The threat of destruction or modification should also be explained in detail.	Additional discussion of the threats to the site is included in the updated Mitigation Plan. The current landowner has a business plan for the property that involves sand mining, logging, and sub-division for retail sale and future development. These threats are discussed in Section 4.4.2 Mitigation Site (page 31).
The mitigation plan includes wetland and stream enhancement; however, the mitigation plan is not fully fleshed out. Specifics regarding the removal of hydrological impairments and vegetation enhancement are not included.	Section 4.5.4 (Pages 35-38) discusses the details of the restoration/enhancement activities.
A determination of potential credits was not supplied with the mitigation plan. The EPA requests the applicant use the U.S. Army Corps of Engineers Charleston District 2010 Guidelines for Preparing a Compensatory Mitigation Plan or some other assessment method to determine the credits needed to mitigate impacts and the potential credit production of the proposed plan.	<p>Several resource agencies recommended a landscape approach to mitigation for the I-73 project. The proposed I-73 corridor crosses three 8 digit HUC watersheds and two USEPA Level III ecoregions. Using the Charleston District 2010 Guidelines is not consistent with that recommendation because it would take many small sites to meet the watershed and ecoregion requirement. To fully meet the requirements in the 2010 Guidelines, several smaller mitigation sites would have to be used.</p> <p>The Mitigation Plan discusses how the plan is consistent with the 2008 Mitigation Rule. The approach used for I-73 mitigation is also consistent with other large-scale projects recently approved by the Charleston District.</p>
Further, performance standards and monitoring plans are not provided.	Performance standards and monitoring are in the final plan in Section 4.7 Performance Standards (pages 38 and 39).



I-73 Agency Comment and Response Matrix

USEPA September 6, 2016 comment letter to USACE	
Comment	Response
A mitigation plan must include objectives; a site protection instrument: a baseline data collection plan for biotic communities, hydrology, etc.; determination of credits; a mitigation work plan; a maintenance plan; performance standards: monitoring requirements: a long-term management plan: an adaptive management plan: and financial assurances, as stated in the 2008 Mitigation Rule.	The Mitigation Plan includes additional information to demonstrate consistency with the 2008 Mitigation Rule.
Based on the above observations, the EPA has determined that the project must address these concerns to comply with the Clean Water Act Section 404(b)(I) Guidelines.	These concerns have been addressed in the Mitigation Plan.



I-73 Agency Comment and Response Matrix

USEPA March 31, 2017 comment letter to USACE	
Comment	Response
<p>The U.S. Environmental Protection Agency Region 4 received a re-evaluation package for the I-73 project electronically on March 2, 2017. This package included a response to previous comments and an updated compensatory mitigation plan.</p> <p>The applicant has addressed the EPA's previous comment concerning the quality of preserved wetlands as a primary part of the mitigation plan, laying out how the wetlands met the five requirements of preservation in the 2008 Mitigation Rule. See 33 CFR §332.3(h). Further, the applicant assessed the functions of the wetlands as well as the potential functional lift through the enhancement and restoration projects using the North Carolina Wetland Assessment Method.</p> <p>To further alleviate concerns that the mitigation plan was primarily preservation and would not meet the goals of the no net loss wetland policy, the applicant has agreed to include enhancement and restoration in the mitigation plan through road and culvert removal which will reestablish hydrologic connectivity across the site. The work will be completed by the SCDNR. The SCDNR has entered into an Memorandum of Agreement with the applicant, SCOOT, which will include a provision that the proposed work is completed in accordance with the mitigation plan. The SCDNR will perform the removal of the culverts and associated roadway fill to return the area as close as possible back to original grade. Through long-term management of the site, SCDNR will also remove planted pine and restore the reference wetland community in areas of historic silvicultural activity.</p> <p>The updated mitigation plan now includes all the components required by the 2008 Mitigation Rule: objectives; a site protection instrument; a baseline data collection plan for biotic communities, hydrology, etc.; determination of credits; a mitigation work plan; a maintenance plan; performance standards; monitoring requirements; a long-term management plan; an adaptive management plan; and financial assurances.</p> <p>Based on the above observations, the EPA has determined that all concerns regarding mitigation have been addressed and has no further comments.</p>	<p>Comment noted.</p>



I-73 Agency Comment and Response Matrix

USFWS July 19, 2016 comment letter to USACE	
Comment	Response
<p>The public notice does not identify borrow areas that will provide material that will be used for wetland impacts. A project of this magnitude will no doubt require a significant amount of fill which increases the likelihood of additional impacts to wetland resources. If wetland resources are impacted by the borrow areas, the Service recommends that the SCDOT develop a project plan detailing use of the borrow sites allowing resource agencies an opportunity to evaluate potential long-term impacts to the areas.</p>	<p>Construction of the I-73 project would likely be completed under a design-build contract and the contractor awarded the project would be required to identify sources of borrow materials and to meet all local and state regulations regarding the collection and transport of suitable borrow materials to the construction site.</p> <p>Wetland delineations would be performed at the borrow pit sites and potential impacts to federally listed species and cultural resources would be evaluated prior to beginning excavation, in accordance with the SCDOT Engineering Directive (EDM – Borrow Pit Location and Monitoring). It will be written into the contracts that it is the responsibility of the contractor to perform wetland delineations and assess potential impacts to federally listed species and cultural resources and to provide SCDOT with copies of all documentation related to these actions prior to beginning excavation at borrow sites. It would also be the responsibility of the contractor to secure any needed permits, authorizations, licenses, etc. regarding potential impacts to cultural resources, federally listed species and/or Waters of the U.S prior to beginning excavation. Failure of the contractor to provide copies of all documentation to SCDOT would be considered as breach-of-contract and would be handled pursuant to SCDOT regulations and procedures in place at that time.</p> <p>Discussions concerning borrow pits and the borrow pit screening efforts can be found in Section 3.12.8, pages 3-173 and 3-174 in the I-73 North FEIS, and in Section 3.12.8, pages 3-156 and 3-157 in the I-73 South FEIS.</p>



I-73 Agency Comment and Response Matrix

USFWS July 19, 2016 comment letter to USACE	
Comment	Response
<p>From the previous project development, SCDOT had committed to reduce the likelihood of invasive species gaining a foothold in disturbed areas. However, no plans or descriptive process were provided in the public notice indicating how this will be accomplished. The Service recommends SCDOT develop an invasive species control and monitoring plan for all areas disturbed during the life of this construction project.</p>	<p>SCDOT has already committed to reducing the likelihood of introduction of invasive species and will honor that commitment. Recently, SCDOT has set up an environmental compliance inspection program with both in-house personnel and outside contracts to third party inspectors to further insure project compliance with all environmental regulations. Invasive species control and monitoring would be considered as an element under that program for the I-73 project.</p> <p>During the construction of I-73, control measures would be implemented to reduce the likelihood of the spread of non-native invasive plant species along the project corridor. However, many invasive species are already present within the project corridor and, therefore, are expected to remain present in the vicinity regardless of any control measures taken during construction or after completion of construction. It will be written into contracts that contractors must institute control measures to prevent the spread and establishment of invasive species to the extent practicable.</p>



I-73 Agency Comment and Response Matrix

USFWS July 19, 2016 comment letter to USACE	
Comment	Response
<p>SCDOT committed (previously that) temporary roads that may be placed in wetlands during bridge construction will be removed upon completion of each bridge and the impacted area will be reseeded with native seed mixes. Bridge construction is a long-term process and may encompass several years. This translates into a significant temporal loss of functions and values the wetland resource provides for the benefit of the surrounding area. Further, this temporal loss accrues until the reseeded area reaches ecological maturity. The added functional loss over time may be significant especially if the wetland affected is a mature bottomland hardwood resource. To offset the temporal loss, the Service believes appropriate compensation should be required prior to the action taking place. We also recommend SCDOT compliment the reseeded activities by planting native seedlings, where appropriate, to hasten the full recovery of the affected wetland resource.</p>	<p>SCDOT will honor its previous commitment to remove and reseed temporary construction facilities and contracts will specify that all contractors must comply with this requirement. Construction of the I-73 project would likely be completed under a design-build contract and the contractor awarded the project would likely be required to implement the native seed reseeded program.</p> <p>Temporary construction/access impacts have already been included in the impact calculations for the permit application. Clearing impacts, temporary and permanent, are shown on the drawings and are included in the Impact Assessment Form provided with the permit application. An additional 45 feet off of the bridge parapet on one or both sides for construction access at each bridge location was included and is shown on the drawings. Upon completion of the bridges, the temporary means of access would be removed and the area reseeded with native species to deter colonization by invasive species. The temporary access for bridge construction is anticipated to consist of vegetation clearing and the use of mats or similar devices and/or barges. Construction activities would be confined within the permitted limits to prevent the unnecessary disturbance of adjacent wetland areas. During construction, potential temporary impacts to wetlands would be minimized by implementing sediment and erosion control measures to include seeding of side slopes, silt fences, and sediment basins, as appropriate. Other best management practices would be required of the contractor to ensure compliance with the policies of 23 CFR 650B. All temporary and permanent impacts to Waters of the U.S., including wetlands, were included in the mitigation calculations and will be mitigated. The Charleston District Compensatory Mitigation SOP includes a temporal factor to offset the functional loss over time. All mature bottomland hardwood resources proposed to be impacted were given the highest temporal loss factor during the calculation of the required mitigation credits.</p> <p>Discussions of temporary impact restoration can be found in Chapter 3 of the I-73 North FEIS on page 3-181 and Chapter 3 of the I-73 South FEIS on page 3-163.</p>



I-73 Agency Comment and Response Matrix

USFWS July 19, 2016 comment letter to USACE	
Comment	Response
<p>We find that Gunter's Island has the potential to meet the SCDOT need to compensate for impacts that will result from the I-73 project. Further, Gunter's Island will be acquired by the South Carolina Department of Natural Resources for inclusion into the Heritage Trust Program which offers, among other benefits, permanent protection to the property. While we anticipate no objections to this site, we believe it would be prudent to conduct a multi-agency site visit to Gunter's Island and review the potential restoration and enhancement opportunities. Without a site visit, we cannot provide comments on specific aspects of the mitigation site. Regardless, a final mitigation plan for Gunter's Island should be reviewed by all resource and regulatory agencies to ensure the site will adequately offset the proposed impacts of I-73. We also recommend all restoration activities begin and preferably be completed prior to commencement of the I-73 construction activities.</p>	<p>A multi-agency visit was held on November 17, 2016. The restoration activities proposed in the Final Compensatory Mitigation Plan will be completed by the long term steward, SCDNR. As included in the plan, SCDNR has agreed to complete the restoration activities within one year of taking ownership of the site. If events beyond the control of SCDNR prevent the completion of the proposed work, SCDNR will request an extension from the USACE and SCDHEC. While completion of the restoration activities will be outside the control of SCDOT, it is likely that the activities will be completed prior to the start of construction on I-73.</p>
<p>Upon review of the public notice, the Service concurs with the Corps' determination that this proposed action may affect, but will not adversely affect, threatened or endangered species known to occur in the Counties encompassed by this project. Further, no critical habitat has been designated within the project area. In view of this, we believe that the requirements of Section 7 of the ESA have been satisfied.</p>	<p>Comment noted.</p>



I-73 Agency Comment and Response Matrix

SCDNR April 3, 2017 Comment Letter to SCDOT	
Comment	Response
<p>The South Carolina Department of Natural Resources (DNR) has received the above referenced documents for review and comment (I-73 South and North Re-evaluations). This letter serves as a response to both documents.</p> <p>DNR was an active participant in the Agency Coordination Team (ACT) effort that facilitated the development of Final Environmental Impact Statements for both the northern and southern corridors of I-73 as part of the National Environmental Policy Act (NEPA) process. DNR submits the NEPA process and Record of Decision satisfied the determination of the proposed roadway purpose and need.</p> <p>The I-73 South document indicates that impacts to streams increased from 3,805 linear feet to 4,571 linear feet as a result of refining the boundaries and limits of jurisdiction during field reviews and USACE approval. Wetland impacts decreased by 2.9 acres between the approval of the 2010 Re-evaluation and the current document.</p> <p>The I-73 North document indicates that impacts to wetlands increased from 57.2 acres to 75.8 acres due to changes in the limits and boundaries of jurisdictional areas during field delineations and USACE review and approval. Impacts to streams decreased from 14,994 linear feet to 3,322.9 linear feet as a result of re-classification by the USACE from streams to jurisdictional ditches. These linear features were determined to have been created in uplands for the purpose of draining predominantly upland areas.</p> <p>DNR submits that the changes to the affected environment as described in the documents do not result in a significant increase in the overall impacts associated with the proposed project provided that these impacts are reflected in the final compensatory mitigation plan.</p>	<p>Comment noted. Change made to language specified in Section 4.6 on page 37 of the plan.</p>



I-73 Agency Comment and Response Matrix

SCDNR April 3, 2017 Comment Letter to SCDOT	
Comment	Response
<p>The mitigation plan has been included in Appendix I of both documents. DNR concurs that the Applicant has proposed a mitigation plan that aligns with a high standard for projects that result in a significant amount of unavoidable impacts to Waters of the United States. DNR staff have worked with the Applicant to develop the proposed plan, and we submit that the proposed mitigation plan will result in profound natural resource benefits through protection of regionally significant wetlands and critical fish and wildlife habitats, while adding to the collective conservation efforts of DNR and its many public and private partners.</p> <p>DNR notes that in Section 4.6 on page 37 of the plan, the second sentence should read “Until success has been documented, SCDOT will notify USACE and SCDHEC if any issues develop that requires maintenance within the restoration/enhancement areas.”</p>	

**Additional Information Requested by USACE
Charleston District for I-73 Project
SAC 2008-1333 (I-73)**

Updated May 2017

Additional Information Requested by USACE, Charleston District

1) Please include the following information/discussion regarding the I-73 Project:

- A. Please provide a description that explains interstate design criteria (i.e., lane width, median width, shoulder requirements, etc.) and also include how and why interstate design best addresses project purpose and need.

Response:

- Please refer to Section 1.2 of the North and South Re-evaluations and Appendix A for the design criteria.
- Please refer to Sections 1.1 and 1.2 of the North and South Re-evaluations for the information as to why an interstate design best addresses the project purpose and need.

- B. Please provide details explaining whether transportation facilities, other than an interstate would meet project purpose and need. Please include a discussion of the potential environmental consequences of non-interstate alternatives, including widen the existing roadway design.

Response:

- Please refer to Section 1.2 of the North and South Re-evaluations and Appendix A (Alternative Development Tech Memorandum).

- C. Provide a summary of the process SCDOT utilizes to identify needed roadway projects throughout the State of South Carolina, and how these roadway projects are prioritized. Please also indicate how this process was applied to the I-73 project, and why the I-73 project was identified as a priority over other roadway projects throughout the State of South Carolina.

Response:

- Please refer to Section 1.1 of the North and South Re-evaluations.
- I-73 was programmed into the STIP prior to 2007, when Act 114 was passed.
- Act 114 defines the process for prioritizing transportation projects. SCDOT must take into consideration: (a) financial viability, (b) public safety, (c) potential for economic development, (d) traffic volume and congestion, (e) truck traffic, (f) the pavement quality index, (g) environmental impact, (h) alternative transportation solutions, and (i) consistency with local land use plans when establishing project priority lists.
- No additional funding has been added to the I-73 project since Act 114 was passed; thus, the I-73 project has not gone through the current prioritization process.
- Should additional state or federal funding be added, I-73 would be ranked against any other new interstate projects, and would be the only project in the category of “new interstates” in the state.

- D. Please provide a current estimate of costs necessary to build the I-73 project, including any details associated with the sources of funding for constructing the I-73 project.

Response: Please refer to Section 1.2 of the North and South Re-evaluations.

In the South FEIS (Section 2.8.3, page 2-82), the estimated construction cost was determined in 2006 dollars, and then factored up by six percent per year to the Years 2011 and 2016.

2008 I-73 South FEIS/ROD Construction Cost Estimate	
Year	Cost
2006	\$0.964 Billion
2011	\$1.29 Billion
2016	\$1.726 Billion

These construction cost estimates for the Selected Alternative were updated in January 2017. The estimated construction cost was determined in 2017 dollars, and then factored up by six percent per year to the Years 2020 and 2025.

2017 I-73 South Re-evaluation Construction Cost Estimate	
Year	Cost
2017	\$1.313 Billion
2020	\$1.564 Billion
2025	\$2.093 Billion

In the North FEIS (Section 2.7.3, page 2-59), the estimated construction cost was determined in 2008 dollars, and then factored up by six percent per year to the Years 2013 and 2018.

2008 I-73 North FEIS/ROD Construction Cost Estimate	
Year	Cost
2008	\$0.841 Billion
2013	\$1.125 Billion
2018	\$1.505 Billion

These construction cost estimates for the Selected Alternative were updated in January 2017. The estimated construction cost was determined in 2017 dollars, and then factored up by six percent per year to the Years 2020 and 2025.

2017 I-73 North Re-evaluation Construction Cost Estimate	
Year	Cost
2017	\$1.070 Billion
2020	\$1.275 Billion
2025	\$1.706 Billion

Funding sources:

Approximately \$38.1 million remains in federal funding from money “earmarked” in prior Highway Transportation Acts, such as ISTEA (1991), TEA-21 (1998), and SAFETEA-LU (2005). A state or local funding match would be required to fully utilize these federal funds. Funding sources to cover the remainder of this project have not been identified at this time.

- E. Please provide any revised estimates regarding the potential economic benefits of the proposed I-73 project. Some commenters indicated that the previous economic studies may contain mathematical calculations errors and/or unsubstantiated assumptions related economic benefit of the proposed I-73 project. Please include information to address these comments.

Response:

The 2008 FEIS used the best available information, methodologies, and modeling during the time of the NEPA study, including the use of the REMI and EDGE Models. The methodology and data used for the 2008 FEIS can be found in the Economic Impact Technical Memorandum. The economic benefits were updated for the 2016 Re-evaluation. The process used to estimate economic impacts for the 2016 Re-evaluation varies from the original study completed in the 2008 FEIS due to various factors, including but not limited to the following:

- the level of detail in the travel demand modeling;
- the benefits monetization process;
- the availability of economic impacts tools and modeling, as well as the changes in assumptions in analyses procedures; and,
- changes in the economic climate from since 2005.

Please refer to Section 2.2 of the North and South Re-evaluations, which discusses these differences in greater detail, as well as in Appendix B of the North Re-evaluation and Appendix C of the South Re-evaluation, which includes an Economic Impact Methodology Update Report. Due to the differences, the economic benefits from the 2008 FEIS and 2016 Re-evaluation are not comparable. The updated economic benefits for the project can be found in Section 2.2.3 of the Re-evaluations.

- F. Please provide any revised traffic data for the I-73 project, including details related to how the project will alleviate existing traffic issues on U.S 501 from I-95 to SC-22. Please also provide a discussion addressing public comments that the I-73 project will do little to alleviate traffic congestion on US 501 from SC-22 to Myrtle Beach.

Response: Traffic data was updated for the 2017 Re-evaluations. A Travel Demand Model was developed that incorporated the latest travel demand model data that spans the I-73 South study area and the region, the South Carolina Statewide Model developed in 2015, and the North Carolina Statewide Model developed in 2016. Additionally, the statewide model highway networks and origin-destination trips were stitched together, providing for a base year of 2010 and forecast year of 2040. The other changes made to model inputs, as well as the overall functionality of the updated model, resulted in differences in the results. (These changes are discussed in Section 2.3 of the North Re-

evaluation and Section 2.4 of the South Re-evaluation.) Due to these differences, the results cannot be directly compared to those in the 2008 FEISs.

Average Annual Daily Traffic (AADT) projections were generated for the No-build and Selected Alternatives for 2010 and 2040. The results of the modeling show that the Selected Alternative for I-73 South would allow traffic to travel between I-95 and S.C. 22 approximately 27 minutes faster when compared to the No-build Alternative (existing roadway network). In addition, there would be a reduction in the vehicle hours traveled (VHT) in the roadway network (refer to Tables 2.4 and 2.5), which would reduce congestion in the roadway network. For I-73 North, the results of the modeling show that the Selected Alternative would reduce the travel time from I-74 to I-95 by 24 minutes when compared to the No-build Alternative (existing road network).

During the alternative development process, it was decided that S.C. 22 would be used to connect the Selected Alternative to U.S. 17 in the Myrtle Beach area to reduce impacts to human and environmental resources as well as reduce overall project costs. Currently, the local road network experiences a traffic bottleneck in the Conway and Aynor areas, as traffic from U.S. 701, S.C. 90, S.C. 544, U.S. 378, S.C. 22, and S.C. 319 all connect to U.S. 501 in the Conway-Aynor area. The Selected Alternative connects to S.C. 22, and would decrease VMT and VHT and increase travel speed along the rest of the existing local roadway network by diverting longer distance trips, especially those related to recreational and vacation travel, onto I-73.

- G. Please provide a discussion regarding the potential use of tolls/fees on Interstate I-73. This discussion should include a brief history of previous discussions of charging tolls/fees for the I-73 project, as well as details regarding how tolls/fees might (or would) change the design of the I-73 project (e.g., construction impacts). Please also address the steps (including timing) that SCDOT would take to notify agencies if a decision is made to charge fees/tolls for the I-73 project.

Response: An Intermediate Traffic and Revenue Study was completed for SCDOT in February 2016 that evaluated the feasibility of tolling I-73 North, I-73 South, S.C. 22, and the Southern Evacuation Lifeline. Note, this study was for feasibility only, and if tolling were pursued, an investment grade study would need to be completed. This feasibility study evaluated different eight different tolling scenarios, as well as different toll rates. The feasibility study is located on the I-73 project website at www.i73insc.com. The feasibility study also assumed that an all-electronic toll system would be used, with overhead gantries placed at certain locations on the mainline of the roadways. The disturbance footprint associated with this type of tolling system would be minimal.

However, there is currently no plan by SCDOT to toll I-73 (May 2017). If tolls were to be implemented in the future, NEPA documentation would be completed to address the direct, indirect, and cumulative impacts that would result from installation of the tolling system and operations. Agencies would be notified of this decision via the NEPA process.

- 2) Regarding Gunter's Island Mitigation Plan for the I-73 project, please provide information/responses that address the following:
- A. The Gunter's Island Mitigation Plan provided to the Corps includes a discussion of how the mitigation site will be held in fee simple ownership by SCDNR for inclusion into the Heritage Preserve program and includes a copy of another project's legal agreement as an example of what SCDOT intends to do to provide a site protection instrument for this site. In Section 4.9.2 (Identity of the Long-Term Steward) of the Gunter's Island Mitigation Plan, SCDOT indicates that, "Following transfer of the tract to the SCDNR's Heritage Trust Program, SCDNR will enter into a Site Protection Instrument with SCDHEC and the USACE Charleston District for the long-term protection of the Site and its underlying property." Please be advised that 33 C.F.R. 332.7(a)(4) states that "A real estate instrument, management plan, or other long-term protection mechanism used for site protection of permittee-responsible mitigation must be approved by the district engineer in advance of, or concurrent with, the activity causing the authorized impacts." Please explain how (along with an anticipated time schedule) the current land ownership will be transferred to SCDOT, how the property will be transferred to SCDNR and the details (along with an anticipated time schedule) related to inclusion into the Heritage Preserve program. In addition, this plan does not include any draft legal document (Memorandum of Agreement) that could be utilized between all parties to stipulate how the ownership transfer will occur along with the terms/conditions of the operation of the site. Please provide additional details related to how SCDOT will provide a site protection instrument for the mitigation site along with a draft legal document to ensure the long-term protection of the mitigation project site.

Response: The I-73 Compensatory Mitigation Plan has been updated to include additional details on how the site will be transferred and protected. Currently, Gunter's Island is owned by a private company. SCDOT has been working with the current land owner to purchase the property upon approval of the permit for I-73. After purchasing the property, SCDOT will immediately transfer the fee simple ownership of the property to SCDNR. SCDNR will then place the property into the Heritage Trust Program. The Heritage Trust Program is a system dedicated to inventorying, preserving, using and managing "outstanding natural or cultural areas and features" in South Carolina. Properties generally enter the Heritage Trust Program through dedication.

In order to facilitate the transfer of the property and to give assurance the wetland restoration and enhancement activities as described in this plan will be completed in manner consistent with Section 404 permitting requirements; SCDOT has worked with SCDNR to develop a memorandum of agreement (MOA). A draft of the MOA between SCDOT and SCDNR is included in Appendix B of the Final Mitigation Plan. The final MOA will be signed by SCDOT and SCDNR prior to transfer of the property. Included in the MOA are the obligations by each party to cover the transfer of the property.

A Dedication and Declaration of Trust document will serve as the site protection instrument and will be immediately executed by SCDNR after the property is transferred. A draft of this document is included as Appendix C of the Final Mitigation Plan. The

Dedication and Declaration of Trust lists the conditions, restrictions, and terms of use for the property. The document also includes provisions for enforcement by USACE and/or SCDHEC in the event that there is a breach in the terms of the instrument.

- B. Please explain how SCDOT has reached the conclusion that the mitigation site contains 4,643 linear feet of tributaries and 342 acres of wetland, as stated in the Gunter's Island Mitigation Plan. Along with this explanation, please provide any documents, data forms, maps, or photographs that were utilized by SCDOT in making this determination.

Response: The aquatic resources contained on Gunter's Island consist of 4,618.5 acres of wetlands and 89,836 linear feet of stream. The quantity of streams on the site was determined by GIS analysis of the National Hydrography Data (NHD) set available from the United States Geological Survey (USGS). The streams shown in the NHD data were then field verified by SCDOT staff biologists. Only the streams that had defined channels were included in the stream preservation portion of the mitigation plan. Many of the streams shown on the NHD data were not counted because observations in the field showed some of these streams had anastomosed channels with limited flows. These systems were located within the wetland areas and were included in the wetland preservation portion of the mitigation plan.

A GIS desktop survey with field verifications was used to determine the quantity of wetland areas on the site. The publically available spatial data from US Fish and Wildlife Service (National Wetland Inventory), Natural Resource Conservation Service (soils), and US Geological Survey (National Land Cover Database) were combined, utilizing at least two sources, to identify these areas included in the total. There were expansive areas of wetlands on the Gunter's Island tract preventing data collection for all wetlands; however, some data collection was accomplished by selecting representative wetland preservation sampling stations and completing the USACE wetland determination data sheets.

The Appendices of the I-73 Compensatory Mitigation Plan have been updated to include data forms, NCWAM assessment scores, and photos of the site. Appendix D includes the stream information, Appendix E includes the wetland preservation information, and Appendix F includes details on the wetland restoration and enhancement areas.

- C. Please provide a discussion of how the proposed mitigation plan, utilizing a large preservation only component, meets the criteria set forth in 33 C.F.R. 332.3(h)(1)(i), (ii), (iv), and (v) and (2). Specifically, this discussion should include the following;
- Details on how the resources present on the site are providing important physical, chemical, or biological functions for the Little Pee Dee River watershed.
 - Details on how the resources proposed to be preserved contribute significantly to the ecological sustainability of the Little Pee Dee River watershed. These details should utilize appropriate quantitative assessment tools where practicable.
 - Details on how the resources in the site are under threat of destruction or adverse modification.

Response: The preservation of Gunter's Island meets the criteria set forth in 33 CFR §332.3 for large scale preservation. These criteria are discussed in detail in the I-73 Compensatory Mitigation Plan in Section 4.2.1 Ecological Suitability. The criteria used to make the determination that Gunter's Island is consistent with large scale preservation as discussed in the mitigation rule were determined by analyzing the functions associated with wetlands in general. Analytical data was then used to show that the wetlands on Gunter's Island are relatively undisturbed and high quality when using a rapid assessment tool, specifically, the North Carolina Wetland Assessment Method (NCWAM). The NCWAM data was collected at various representative wetland locations throughout the Gunter's Island property. The result showed high scores for the wetlands so the conclusion is made that these wetlands provide a high degree of functional values. The methodology used to develop NCWAM and the application to the evaluation of the Gunter's Island tract is discussed in detail in Section 4.5.3 of the final mitigation plan.

Certain conclusions can also be drawn by reviewing various references discussed in the mitigation plan. Specifically, the SCDHEC Watershed Water Quality Assessment of the Pee Dee River Basin and the SCDNR Little Pee Dee-Lumber focus plan discuss some of the environmental stressors currently impacting the Little Pee Dee watershed. The I-73 Compensatory Mitigation has been updated to include details to discuss these issues and the contribution that preservation of the aquatic resources on Gunter's Island will provide.

- D. Please provide a discussion, including specific details, of the restoration/enhancement component of the Gunter's Island mitigation site. The current mitigation plan indicates that 150 linear feet of streams will be restored/enhanced by the removal of existing culverts, bridges, roads and that stream bank stabilization above and below these existing culverts will occur. The mitigation plan does not include specific details beyond removal of structures/fills in streams and does not include the details of the stream bank stabilization or plantings. The mitigation plan indicates that the Gunter's Island mitigation site contains 1,113.8 acres of planted pines and that these areas may provide opportunities for wetland restoration without any further details. For any areas within this mitigation site that will include restoration/enhancement, please provide specific details related to location, type of restoration/enhancement action at each location, and details on the specific actions that will occur to specifically restore or enhance waters.

Response: The I-73 Compensatory Mitigation Plan has been updated to include details for the restoration enhancement activities. The details are discussed in Section 4.5.4, of the mitigation plan. Drawings depicting the details of the restoration/enhancement areas are included as Figures 18-36. Appendix F includes wetland data forms, NCWAM forms, and photographs of the restoration/enhancement areas.

- E. The current mitigation plan includes the following performance standard, "An ecologically-based standard will be used to determine whether the mitigation site is achieving its objective". In addition, the plan states, "These standards will be developed as part of the developed work plan submitted to the Corps for review and approval one year following dedication of the property as a Heritage Preserve". These performance

standards are not appropriate even for a conceptual mitigation plan. The Corps recommends that SCDOT consider that the mitigation plan for Gunter's Island utilize the data from the quantitative analysis of the biological, chemical, and physical functions to not only demonstrate the significant contribution to the ecological contribution to the Little Pee Dee River watershed, but to also establish a baseline or standard of the quality of the functions provided by waters on the site that will be utilized as a performance standard to demonstrate how maintenance/restoration/enhancement of this mitigation site is maintaining the documented level of functions or improving the level of functions during the monitoring period.

Response: SCDOT selected to use the North Carolina Wetland Assessment Method (NCWAM) to evaluate wetland function. NCWAM was developed by an interagency team of federal and state agencies with the mission to develop a protocol to rapidly and accurately determine the level of function for each of the 16 wetland types in North Carolina. Gunter's Island is located 25 miles from the state line and the Little Pee Dee watershed (including the Lumber River) has its headwaters in North Carolina. Refer to the Final Gunter's Island Mitigation Plan 4.5.3 for more detail on Baseline scores and 4.7 for how SCDOT proposes to quantify uplift to the site.

- F. Please provide a copy of the completed/signed FHWA/SCDOT NEPA document for the purchase of the Gunter's Island Mitigation Site.

Response: The Categorical Exclusion Document prepared for Gunter's Island is included in the I-73 Compensatory Mitigation Plan as Appendix A.

- G. The proposed Gunter's Island Mitigation Plan includes several maintenance activities that will be required to ensure the continued viability of the Site once initial construction is completed. In addition, the mitigation plan indicates that until success has been documented and final credits are released, the Contractor will notify the USACE and SCDOT if any issues develop on the mitigation site that require maintenance. Since maintenance activities are important for the success of a mitigation site, please provide the identity of the Contractor, and also explain SCDOT proposed commitments to providing for the mitigation site's maintenance (or provide funding for maintenance) until the time that SCDOT legally transfers ownership of the mitigation site to another party.

Response: The goal of I-73 Compensatory Mitigation Plan is to provide documentation that the preservation and protection of Gunter's Island meets the criteria for mitigation through preservation as specified in 33 C.F.R. § 332.3 (f) of the Rule. To accomplish this goal, the site will be transferred to SCDNR for dedication into the Heritage Trust Program. The entire site will be managed in accordance with Heritage Trust Act requirements. These requirements and typical SCDNR property management objectives are discussed in more detail in Section 4.9 of the mitigation plan.

In addition to the preservation of the site, some restoration/enhancement construction activities are proposed to generate ecological uplift in some of the wetland areas. These activities will be completed by SCDNR after ownership of the site has been transferred.

Due to the nature of the proposed work very little maintenance will be required to ensure the continued viability of the wetland restoration/enhancement areas once the initial construction is completed. Until success has been documented, SCDNR will notify USACE and SCDHEC if any issues develop that requires maintenance within the restoration/enhancement areas. The extent of the issue, measures taken to correct the issue, and whether the issue has been resolved will be documented in the annual monitoring report.

- H. The Gunter's Island Mitigation Plan includes a discussion of the monitoring of the mitigation site. Specifically, the current mitigation plan indicates that, "Specific monitoring requirements for restoration or enhancement activities will be developed as part of the work plan submitted to the Corps for review and approval one year following the dedication of the property as a Heritage Preserve. Please be advised that the Corps anticipates that the provision of monitoring requirements for the mitigation site could extend several years beyond the issuance of a DA permit for the proposed project. Please provide a description of proposed parameters to be monitored to inform the Corps' determination of whether the mitigation project is on track to meet performance standards, and if adaptive management is needed. A schedule for monitoring and reporting monitoring results to the District Engineer must be included.

Response: SCDOT will be responsible for any monitoring and has agreed to coordinate monitoring activities with SCDNR to not interfere with other activities taking place on the site. After restoration activities have been completed, SCDOT will submit a report to the USACE within 30 days documenting the completion of the restoration activities. After this initial report, annual monitoring reports will be completed by SCDOT and submitted to the USACE for review.

Refer to the I-73 Compensatory Mitigation Plan section 4.8 for details on proposed Monitoring.

- 3) Please provide information and responses that address the following:
- A. Please address the comments in USEPA's letter dated September 6, 2016, including regulatory requirements for mitigation sites that utilize a large preservation component.

EPA Comment, September 6, 2016 Comments

Comment 1: *Within the 2008 Mitigation Rule, preservation as compensatory mitigation may be authorized, but the Rule sets out five very specific requirements that must be met before preservation will be considered. These requirements (for preservation as compensatory mitigation) are:*

- 1) *The resources to be preserved provide important physical, chemical, or biological functions for the watershed;*
- 2) *The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district*

engineer must use appropriate quantitative assessment tools, where available;

- 3) Preservation is determined by the district engineer to be appropriate and practicable;*
- 4) The resources are under threat of destruction or adverse modifications; and*
- 5) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust).*

Response: 1) It is difficult to quantify the contribution of wetland resources contained on a 6,258-acre site to the Little Pee Dee River watershed. However; the I-73 Compensatory Mitigation Plan does provide wetland data and NCWAM assessment scores to demonstrate that the wetlands on Gunter's Island are fully functioning. Wetlands that are intact and fully functioning do provide many ecological benefits. These benefits are discussed in the Ecological Suitability portion of the mitigation plan in Section 4.2.1.

2) The I-73 Compensatory Mitigation has been revised to include analytical documentation in the form of NCWAM assessment scores, wetland data sheets, and stream functional assessment worksheets to provide documentation to the district engineer to make the determination that the preservation mitigation is appropriate and practicable. The methodology for the use of NCWAM and the metrics used to evaluate the wetlands preserved on the site are included in the plan in Section 4.5 pages 32-38.

3) The I-73 Compensatory Mitigation Plan gives ample documentation for the district engineer to determine that the proposed mitigation is appropriate and practicable.

4) The resources on the site are under the threat of destruction or adverse modification. The current property owner has a development plan for the site that includes additional timber harvest, sand mining, and subdivision into retail properties. The river frontage on the site is very attractive to retail development. The details of the threats to the site are discussed in the mitigation plan in the Section 4.4.2 on page 31.

5) The long-term steward for the site is the SCDNR. Upon approval of the permits/certifications for I-73, SCDOT will purchase the property and immediately transfer the property to SCDNR. The site will be protected through dedication into the Heritage Trust Program. The details are addressed in the I-73 Compensatory Mitigation Plan in Section 4.3.

Comment 2: *The applicant has addressed the protection of the site and mentioned the resources' contribution to the watershed. However, the contribution to the physical, chemical, and biological functions and ecological sustainability of the watershed should be further explained.*

Response: Wetland and stream resources such as those preserved, restored, and enhanced by the I-73 Compensatory Mitigation Plan provide many important physical, chemical, and biological functions. The relatively undisturbed aquatic resources located on Gunter's Island contribute significantly to the Little Pee Dee watershed by providing these functions. The Little Pee Dee watershed is under threat from various activities such as mining, silviculture, and hydrologic modification. Environmental stressors have degraded water quality in some portions of the watershed and there are several impaired water quality monitoring stations. Although the preservation of Gunter's Island alone will not correct all of the impairment issues observed within the watershed, the functions provided by the aquatic resources located on Gunter's Island will contribute to the ecological sustainability of the watershed by removing some threats from future pollution sources.

Refer to the I-73 Compensatory Mitigation Plan Section 4.2.1 for a detailed discussion on the physical, chemical, and biological functions of the aquatic resources located on the Gunter's Island Tract.

Comment 3: *Page 16 of the revised mitigation plan dated June 20, 2016, states that stream hydrology has been adversely affected by road crossings associated with timber management. Therefore, it's unclear if waters of the United States on site are functioning sufficiently to be considered preservation worthy.*

Response: Below are tables pull from the Final Gunter's Island Mitigation Plan; Table 9 and Table 10. The tables are included to demonstrate the baseline conditions of the preservation sites as well as the baseline conditions of the restoration areas.

Preservation Location	Hydric Soils	Hydrophytic Vegetation	Hydrology	NCWAM	Photo
1	Yes	Yes	Yes	High	1
2	Yes	Yes	Yes	High	2
3	Yes	Yes	Yes	High	3
4	Yes	Yes	Yes	High	4
5	Yes	Yes	Yes	High	5
6	Yes	Yes	Yes	High	6
7	Yes	Yes	Yes	High	7

Restoration Location	Hydric Soils	Hydrophytic Vegetation	Hydrology	NCWAM	Photo	Acres Restored	Figure Numbers
1	No	Yes	No	Low	8, 9	0.2	19-21
2	No	Yes	No	Low	10, 11	0.1	22-24
3	No	Yes	No	Low	12	0.4	25-27
4	No	Yes	No	Low	13	0.3	28-30
5	No	Yes	No	Low	14	0.7	31-33
6	No	Yes	No	Low	15	0.5	33-36

Refer to the Final Gunter's Island Mitigation Plan Section 4.5. Baseline information was collected to demonstrate the high quality of the site.

Comment 4: *The threat of destruction or modification should also be explained in detail.*

Response: The resources on the site are under the threat of destruction or adverse modification. The current property owner has a development plan for the site that includes additional timber harvest, sand mining, and subdivision into retail properties. The river frontage on the site is very attractive to retail development. The details of the threats to the site are discussed in the mitigation plan in the Section 4.4.2 on page 31.

Comment 5: *The mitigation plan includes wetland and stream enhancement; however, the mitigation plan is not fully fleshed out. Specifics regarding the removal of hydrological impairments and vegetation enhancement are not included.*

Response: The Gunter's Island tract contains a network of maintained roads used for recreational access and timber management activities. Many of these roads cross wetlands in various locations. It is generally acknowledged that roadway fill areas crossing wetlands disrupt natural flow and changes wetland hydrology by creation of a barrier that disrupts water movement across the floodplain. Although the vast majority of wetlands on Gunter's Island have been shown to be fully functional and represent high quality preservation, some ecological benefits can be achieved by the removal of the existing roadway fill in some wetland areas on the site where these negative impacts from the road crossings have been observed. It should also be noted that the negative impact from the road crossings is limited to the wetland areas directly adjacent to the road crossings.

Specific details of the restoration/enhancement plan are included in the updated I-73 Compensatory Mitigation Plan in Section 4.5.4 pages 35-38.

Comment 6: *A determination of potential credits was not supplied with the mitigation plan. The EPA requests the applicant use the U.S. Army Corps of Engineers Charleston District 2010 Guidelines for Preparing a Compensatory*

Mitigation Plan or some other assessment method to determine the credits needed to mitigate impacts and the potential credit production of the proposed plan.

Response: Several resource agencies recommended a landscape approach to mitigation for the I-73 project. The proposed I-73 corridor crosses three 8 digit HUC watersheds and two US EPA Level III ecoregions. Using the Charleston District 2010 Guidelines (2010 Guidelines) is not consistent with that recommendation because it would take many small sites to meet the requirements in the Guidelines for both wetlands and streams. Using several smaller sites is not feasible or practicable for a large project such as I-73. Furthermore, breaking up the mitigation into several sites is not consistent with a landscape scale mitigation approach as recommended by the ACT members.

The Mitigation Plan discusses how the plan is consistent with the 2008 Mitigation Rule. The approach used for I-73 mitigation is also consistent with other large-scale projects recently approved by the Charleston District. In keeping with the ACT request to mitigate with a landscape plan, credits should not be calculated. Instead the plan demonstrates adequate mitigation in the form of ratios. Wetlands are mitigated at a 13:1 ratio and streams are mitigated at a 19:1 ratio.

Comment 7: *Further, performance standards and monitoring plans are not provided.*

Response: Refer to the I-73 Compensatory Mitigation Section 4.7 for performance standards and Section 4.8 for monitoring requirements.

Summary to EPA Concerns: Additional information has been added to the Mitigation Plan. The plan includes details on the physical, chemical, and biological functions of wetland resources that are proposed for preservation. Additionally, the plan discusses the ecological attributes of the Gunter's Island that would contribute to the ecological sustainability of the watershed. The plan provides information for the District Engineer to evaluate to make the determination that preservation is practicable.

Several components of the Mitigation Plan discuss the threats to the aquatic resources within the Little Pee Dee Watershed. The plan discusses the SCDNR Pee Dee-Lumber Focus Plan and other reference materials that identify threats to the watershed. The plan addresses these threats by proposing to incorporate the mitigation site into the Heritage Trust program through transfer to a state agency (SCDNR) for permanent protection. The plan includes a draft site protection agreement that specifies the limitations to the activities on the site and will permanently protect the aquatic resources.

- B. Please address the comments in USFWS' letter dated July 19, 2016, including impacts from borrow areas, steps to reduce projects spread of invasive species, impacts from the use of temporary roadways, and details related to restoration/enhancement opportunities within the Gunter's Island Mitigation Site. **USFWS July 19, 2016 Comments**

Comment 1: *The public notice does not identify borrow areas that will provide material that will be used for wetland impacts. A project of this magnitude will no doubt require a significant amount of fill which increases the likelihood of additional impacts to wetland resources. If wetland resources are impacted by the borrow areas, the Service recommends that the SCDOT develop a project plan detailing use of the borrow sites allowing resource agencies an opportunity to evaluate potential long-term impacts to the areas.*

Response: Construction of the I-73 project would likely be completed under a design-build contract and the contractor awarded the project would be required to identify sources of borrow materials and to meet all local and state regulations regarding the collection and transport of suitable borrow materials to the construction site.

Wetland delineations would be performed at the borrow pit sites and potential impacts to federally listed species and cultural resources would be evaluated prior to beginning excavation, in accordance with the SCDOT Engineering Directive (EDM – *Borrow Pit Location and Monitoring*). It will be written into the contracts that it is the responsibility of the contractor to perform wetland delineations and assess potential impacts to federally listed species and cultural resources and to provide SCDOT with copies of all documentation related to these actions prior to beginning excavation at borrow sites. It would also be the responsibility of the contractor to secure any needed permits, authorizations, licenses, etc. regarding potential impacts to cultural resources, federally listed species and/or Waters of the U.S prior to beginning excavation. Failure of the contractor to provide copies of all documentation to SCDOT would be considered as breach-of-contract and would be handled pursuant to SCDOT regulations and procedures in place at that time.

Discussions concerning borrow pits can be found in Section 3.12.8, pages 3-173 and 3-174 in the I-73 North FEIS, and in Section 3.12.8, pages 3-156 and 3-157 in the I-73 South FEIS.

Comment 2: *From the previous project development, SCDOT had committed to reduce the likelihood of invasive species gaining a foothold in disturbed areas. However, no plans or descriptive process were provided in the public notice indicating how this will be accomplished. The Service recommends SCDOT develop an invasive species control and monitoring plan for all areas disturbed during the life of this construction project.*

Response: SCDOT has already committed to reducing the likelihood of introduction of invasive species and will honor that commitment. Recently, SCDOT has set up an environmental compliance inspection program with both in-house personnel and outside contracts to third party inspectors to further insure project compliance with all environmental regulations. Invasive species control and monitoring would be considered as an element under that program for the I-73 project.

During the construction of I-73, control measures would be implemented to reduce the likelihood of the spread of non-native invasive plant species along the project

corridor. However, many invasive species are already present within the project corridor and, therefore, are expected to remain present in the vicinity regardless of any control measures taken during construction or after completion of construction. It will be written into contracts that contractors must institute control measures to prevent the spread and establishment of invasive species to the extent practicable.

Comment 3: *SCDOT committed (previously that) temporary roads that may be placed in wetlands during bridge construction will be removed upon completion of each bridge and the impacted area will be reseeded with native seed mixes. Bridge construction is a long-term process and may encompass several years. This translates into a significant temporal loss of functions and values the wetland resource provides for the benefit of the surrounding area. Further, this temporal loss accrues until the reseeded area reaches ecological maturity. The added functional loss over time may be significant especially if the wetland affected is a mature bottomland hardwood resource. To offset the temporal loss, the Service believes appropriate compensation should be required prior to the action taking place. We also recommend SCDOT compliment the reseeded activities by planting native seedlings, where appropriate, to hasten the full recovery of the affected wetland resource.*

Response: SCDOT will honor its previous commitment to remove and reseed temporary construction facilities and contracts will specify that all contractors must comply with this requirement. Construction of the I-73 project would likely be completed under a design-build contract and the contractor awarded the project would likely be required to implement the native seed reseeded program.

Temporary construction/access impacts have already been included in the impact calculations for the permit application. Clearing impacts, temporary and permanent, are shown on the drawings and are included in the Impact Assessment Form provided with the permit application. An additional 45 feet off of the bridge parapet on one or both sides for construction access at each bridge location was included and is shown on the drawings. Upon completion of the bridges, the temporary means of access would be removed and the area reseeded with native species to deter colonization by invasive species. The temporary access for bridge construction is anticipated to consist of vegetation clearing and the use of mats or similar devices and/or barges. Construction activities would be confined within the permitted limits to prevent the unnecessary disturbance of adjacent wetland areas. During construction, potential temporary impacts to wetlands would be minimized by implementing sediment and erosion control measures to include seeding of side slopes, silt fences, and sediment basins, as appropriate. Other best management practices would be required of the contractor to ensure compliance with the policies of 23 CFR 650B. All temporary and permanent impacts to Waters of the U.S., including wetlands, were included in the mitigation calculations and will be mitigated. The Charleston District Compensatory Mitigation SOP includes a temporal factor to offset the functional loss over time. All mature bottomland hardwood resources proposed to be impacted were given the highest temporal loss factor during the calculation of the required mitigation credits.

Discussions of temporary impact restoration can be found in Chapter 3 of the I-73 North FEIS on page 3-181 and Chapter 3 of the I-73 South FEIS on page 3-163.

Comment 4: *We find that Gunter's Island has the potential to meet the SCDOT need to compensate for impacts that will result from the I -73 project. Further, Gunter's Island will be acquired by the South Carolina Department of Natural Resources for inclusion into the Heritage Trust Program which offers, among other benefits, permanent protection to the property. While we anticipate no objections to this site, we believe it would be prudent to conduct a multi-agency site visit to Gunter's Island and review the potential restoration and enhancement opportunities. Without a site visit, we cannot provide comments on specific aspects of the mitigation site. Regardless, a final mitigation plan for Gunter's Island should be reviewed by all resource and regulatory agencies to ensure the site will adequately offset the proposed impacts of I-73. We also recommend all restoration activities begin and preferably be completed prior to commencement of the I-73 construction activities.*

Response: A multi-agency visit was held on November 17, 2016. In response to this comment, SCDOT has agreed to complete all construction activities associated with the wetland enhancement areas prior to the construction of the I-73 project.

- C. Please address the following recommendations in the NOAA-NMFS letter dated July 29, 2016:

Comment 1: *Incorporate a restriction of in-water work activities in the Little Pee Dee River from May 1 to February 14 each year with a no-work restriction in the Little Pee Dee River between February 15 and April 30.*

Response: SCDOT has already agreed to an in-water work moratorium from February 1 to April 30 for the Little Pee Dee River, and will continue to honor this commitment. Contracts will specify that all contractors must comply with the restrictions.

Comment 2: *That during construction of the bridge across Little Pee Dee River, SCDOT will avoid blocking or constricting the river throughout the year to avoid impact to migrating, foraging, and spawning anadromous fishes.*

Response: SCDOT has already agreed to limit the amount of in-water work from May 1 to January 31 by not obstructing more than 50 percent of the Little Pee Dee River at any one time and will continue to honor this commitment. Construction contracts will specify that contractors must comply with this requirement. Refer to Section 3.11.1 of the I-73 South Re-evaluation for further information.

Comment 3: *That SCDOT will pursue construction methods that avoid and minimize impact to the river including top-down construction, temporary work trestles, work barges, or other methods that reduce or eliminate impact to the river.*

Response: SCDOT will pursue construction methods that avoid and minimize impacts to the river. The use of top down construction, temporary trestles, work barges and other low impact methods will be used to the greatest extent practicable. The contractor will be limited to methods as specified in the Section 404 permit conditions. Should construction methods dictate a deviation from what is shown in the permit, SCDOT will submit a permit modification request and any impacts that may result in hydraulic modification will be reviewed at that time.

Comment 4: *That SCDOT should install, inspect, and maintain appropriate erosion and sedimentation control Best Management Practices in accordance with local and state stormwater guidelines to avoid sediment input into adjacent waters.*

Response: Construction of the I-73 project would likely be completed under a design-build contract and the contractor awarded the project would be required to install and maintain erosion and sedimentation control Best Management Practices in accordance with local and state stormwater guidelines. SCDOT has a construction inspection program which includes weekly inspection of erosion and sedimentation control Best Management Practices and the contractor would be required to maintain and/or repair any such facilities or structures found to be deficient in a timely manner, in some cases, as quickly as 48 hours after notification. Recently, SCDOT has also set up an environmental compliance inspection program with both in-house personnel and outside contracts to third party inspectors to further insure project compliance with all environmental regulations.

- D. Please address the comments in Mr. Stickler's letter (and letter attachments) dated August 29, 2016 related to concerns related to the quantifiable (economic) benefits projected to occur from the construction of I-73.

Response: The I-73 North and South FEISs used the best available information, methodologies, and modeling during the time of the NEPA study, including the use of the REMI and EDGE Models. The methodology and data used for the 2008 FEISs can be found in the Economic Impact Technical Memorandum. The economic benefits were updated for the 2017 Re-evaluations. The process used to estimate economic impacts for the 2017 Re-evaluations varies from the original studies completed in the 2008 FEISs due to various factors, including but not limited to the following:

- the level of detail in the travel demand modeling;
- the benefits monetization process;
- the availability of economic impacts tools and modeling, as well as the changes in assumptions in analyses procedures; and,
- changes in the economic climate from since 2005.

Please refer to Section 2.2 of the I-73 North and South Re-evaluation, which discuss these differences in greater detail, as well as in Appendix C, which includes an Economic Impact Methodology Update Report. Due to the differences, the economic benefits from the 2008 FEISs and 2017 Re-evaluations are not comparable. The updated economic benefits for the project can be found in Section 2.2.3 of the Re-evaluation.

This response is from Xiaobing Shuai, Ph.D from Chumra Economics and Analytics regarding Mr. Stickler's assertion that the economic analysis by Chumra was flawed:

1. First, Mr. Stickler claimed that we used a different travel time saving than the FEIS for the tourism section. It is correct that FEIS showed a time saving of 35 minutes for I-73, and we cited that in our analysis. But when we tried to estimate increased tourists number, we used two hour for peak and one hour for non-peak seasons. Those are the time saving for the whole trip, not just the segment of I-73. The reason is that we think when tourists decide to where to make a trip, they do consider the whole trip time, not just the last segment. With the I-73, it will help divert traffic on I-95 on the east coast, and help reduce travel time on I-95. More importantly, it will significantly reduce travel time for potential customers in Midwest---Ohio and Michigan, and increasing the appeal of Myrtle Beach. Mr. Stickler's focus is too narrow, and ignores the effect of I-73 on a wide range of markets for Myrtle Beach.
2. Second, Mr. Stickler claimed that we use the total 15.2 million tourist base, not the number of tourists who are using I-95 to Myrtle Beach. He thought only those travelling down I-95 will benefit from it. Once again, he missed the network benefits of the I-73, that it will not only provide a shorter travel for tourists using I-95, it will also provide benefits for others who currently do not use I-95—such as Midwest visitors from Ohio and Michigan, West Virginia, North Carolina. That is the reason we used a broader base. Even those flying to Myrtle Beach will benefit as it makes getting in or out of airport, or getting around the region easier. Mr. Stickler's estimate used some rural segment as an indicator of tourists, which is grossly under-counting tourists.
3. Our 7% increase in tourism is consistent with tourism operator's expectations on the ground, that I-73 can bring 10-20% increase in tourism in the region. The effects of interstate on tourism also are supported by other academic studies cited in our study.

The construction cost estimates have been updated, see the response to Question 1.D. And the economic benefits have been updated, see response to Question 1.E.

- E. Please address the comments in the Southern Environmental Law Center letter dated September 6, 2016, including comments related to the Final Environmental Impact Statements, Project Purpose and Need, Alternatives Analysis, and the request for additional information related to the proposed mitigation site.

Topic Comment 1 from SELC: The FEIS needs to be re-evaluated and/or supplemented given its age. The FEIS must be supplemented to reflect the current estimated cost in addition to other significant changes that have occurred since 2007, including changes in the economic development, traffic, and environmental quality contexts. In addition, the FEIS fails to consider important alternatives we have identified that would satisfy the need for the project by upgrading existing roadways.

Response 1: The FHWA, per its regulations in 23 CFR Part 771, are requiring that re-evaluations be completed for both I-73 North and I-73 South Projects. The re-evaluations

are being completed in conjunction with the I-73 permit application and public notice so that the final mitigation plan can be incorporated into the re-evaluations. Based on the information in the re-evaluations, the FHWA will determine whether a supplemental EIS needs to be completed per the criteria in 23 CFR §771.130(a). An EIS shall be supplemented whenever the Administration determines that: (1) changes to the proposed action would result in a significant environmental impacts that were not evaluated in the EIS: or (2) New information or circumstances relevant to environmental concerns and bearing on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS.

The NEPA Re-evaluations contain the update construction costs, revised economic development, updated traffic, as well as any changes to resources that have occurred since the 2008 FEIS/RODs as well as regulatory updates. The FEISs considered the upgrading of existing roadways, thus the information brought forth by the SELC and the “Smart Mobility” study was already evaluated in the 2003 Feasibility Study and the DEISs’ Alternatives Development and Evaluation Process.

Topic Comment 2 from SELC: Purpose and Need is for interstate; too narrowly focused

Response 2: The I-73 Corridor was identified as a High Priority Corridor by the U.S. Congress in the *Intermodal Surface Transportation Efficiency Act of 1991* (ISTEA). Congress designated high priority corridors as those that would provide the most efficient way of integrating regions, linking major population centers of the country, providing opportunities for increased economic growth, and serving the travel and commerce needs of the nation.¹ The corridors that Congress designated were to be included in the National Highway System (NHS). Congress wanted the FHWA and states to develop long-range plans and feasibility studies for these corridors, and focus federal funds towards these areas for road construction. The I-73 project is a portion of the South Carolina segment of the I-73/I-74 High Priority Corridor, and is currently listed as number five on the NHS High Priority Corridors list.²

In 1994, the South Carolina Department of Transportation (SCDOT) initiated a corridor feasibility study based on ISTEA that evaluated upgrading existing roads starting at the North Carolina state line at U.S. Route 1 in Marlboro County, going through Dillon, Marion, Horry, Georgetown, or possibly Williamsburg and Berkeley Counties, and ending on the U.S. Route 17 Corridor near the city of Charleston, SC, in Charleston County.³ As the study was being completed, Congress passed the *National Highway System Designation Act of 1995* which included language that I-73 was eligible for inclusion on the Interstate System provided it was constructed to Interstate standards and

¹ FHWA, “High Priority Corridors,” December 18, 2015
http://www.fhwa.dot.gov/planning/national_highway_system/high_priority_corridors/, (Accessed September 15, 2016).

² 23 U.S.C. §1105(c) (P.L. 102-240), (1991, as amended through P.L. 114-94).

³ SCDOT, *I-73 Feasibility Study* (April 1997).

connected to an existing Interstate route.⁴ The feasibility study preliminarily looked at the potential for new corridors, but not in detail.

The *Transportation Equity Act* (TEA-21), enacted by Congress in 1998, built on what ISTEA had established but shortened the I-73/I-74 High Priority Corridor by changing its terminus from Charleston, SC, to the general vicinity of Myrtle Beach, Conway, and Georgetown, SC. A second feasibility study was completed by the SCDOT for I-73 in South Carolina in June of 2003. The study was completed in response to the change of the I-73 terminus from Charleston, SC, to the Myrtle Beach, SC, area in TEA-21. The study cited the needs of fulfilling congressional intent and providing an interstate link to the Grand Strand area along with the benefits of improved hurricane evacuation, improved capacity for vehicular and freight movement in the area, and support of population and economic growth as reasons for building I-73. The feasibility study recognized that there had been some improvements to roads in the project study area; however, the improved roads were predicted to have capacity problems along some segments in 2025, based on traffic modeling. Future traffic projections indicated that I-73 would divert traffic from existing roadways, thereby improving capacity and reducing traffic congestion.⁵

The *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) was passed by Congress on August 10, 2005. SAFETEA-LU acknowledges the prior purpose for, and designation of, I-73 as a High Priority Corridor along with designating it as a project of “national and regional significance.”⁶

SCDOT and FHWA pursued this project as an interstate facility, based on Congressional intent from the aforementioned Acts⁷ and input from agencies, stakeholders, and the public during scoping period. As a result, the following purpose and need statement was developed for the South:

The purpose of the I-73 South project is to provide an interstate link between I-95 and the Myrtle Beach region to serve residents, businesses, and tourists while fulfilling congressional intent in an environmentally responsible and community sensitive manner.

This purpose and need statement was finalized on December 4, 2004, with a consensus vote by the Agency Coordination Team and was carried forward into the alternative development process. The roadway design criteria were developed in late 2004 based on the purpose and need statement for an interstate facility.

In addition the following purpose and need statement was developed for the North and also finalized with a consensus vote by the Agency Coordination Team on June 19, 2006:

⁴ P.L. 104-59 §332, 1995.

⁵ SCDOT, *I-73 Feasibility Study* (June 2003).

⁶ 23 U.S.C. §101(2005).

⁷ It should be noted that Congress referred to this project as an interstate in ISTEA, NHS Act, TEA-21, and SAFETEA-LU.

The purpose of the I-73 North project is to provide an interstate link between the southernmost proposed segment of I-73 (between I-95 and the Myrtle Beach Region) and the I-73/I-74 Corridor to serve residents, businesses, and tourists while fulfilling congressional intent in an environmentally responsible and community sensitive manner.

Topic Comment 3 from SELC: LEDPA – use of existing roadways was not evaluated. The study done by Smart Mobility shows an expressway was less impact.

Response 3: During the development of Alternatives for the I-73 Environmental Impact Statements, the CAT Tool was used to develop 141 preliminary build alternatives for the I-73 South project and 1,896 preliminary build alternatives for I-73 North (refer to the Alternative Development Technical Memorandums for both projects). Some of these alternatives included the use of existing roadways including, but not limited to, S.C. 38, S.C. 9, U.S. 301, and U.S. 501. However, these alternatives were found to have more impacts to the natural and human environment when compared to new alignment alternatives. Using the Alternative Evaluation Criteria developed in conjunction with the Agency Coordination Team (ACT), the alignments with the highest impacts were eliminated, leaving 25 preliminary build alternatives for I-73 South and 205 preliminary build alternatives for I-73 North. Through public, stakeholder, and ACT input as well as further environmental studies, the preliminary build alternatives were narrowed down to reasonable alternatives that were studied further in the Draft EISs.

There were eight reasonable alternatives for I-73 South, and of these, Alternative 3 was determined to be the Preferred Alternative, as it had the least wetland impacts in both acreage and wetland value, as well as minimized impacts to other resources. The Preferred Alternative was further refined after input from the public and agencies during the Draft EIS comment period, as shown in the Final EIS. The FHWA and SCDOT selected the Preferred Alternative as the Selected Alternative for the project in the ROD in 2008.

For I-73 North, the preliminary build alternatives were narrowed down to three reasonable alternatives through ACT input, and public involvement, and Alternative 2 was selected as the Preferred Alternative. FHWA and SCDOT selected the Preferred Alternative as the Selected Alternative for the project in the ROD in 2008.

Contrary to the statement that a new location interstate was the only solution examined, upgrading existing roads was also evaluated in the 2003 I-73 Feasibility Study and during the alternative development process using data available via GIS layers. As described in the Alternative Development Technical Memorandum,⁸ “Use of Existing Transportation Infrastructure” was one of the Alternative Evaluation Criteria considered by the Corridor Analysis Tool (CAT), with a scale value ranging from 1 for Principal Arterials to 3 for Local Roads. The CAT overall scale value ranged from 1 to 10, with 1 being the feature that is least important to avoid and 10 being the feature most important to avoid. The

⁸ SCDOT, *Alternative Development Technical Memorandum, from I-95 to the Myrtle Beach Region*, page 8 and Table 2.3.

results of the CAT analysis indicate the upgrade of most of the existing roadway segments resulted in greater impacts than new alignments. The following table quantifies the potential impacts associated with the preliminary alternative corridors that evaluated the use of existing roads (shaded) as compared with the preliminary alternative corridors that were voted on by the Agency Coordination Team (ACT, December 9, 2004 meeting). Of the corridors listed below, the ACT Alternatives 1 through 7 were recommended for further analysis.

Alternative Corridor	Wetland Impacts (acres)	Potential Relocations	Other Info
S.C. 38/U.S. 501 (B-1)	679.6	1 Fire Dept., 7 Churches	Potential impacts to 10 Potentially Eligible NRHP Sites, two National Register Sites, the Little Pee Dee Heritage Preserve, and two cemeteries
U.S. 501 Bypass/S.C. 41/ U.S. 378 (1-K)	862.0	6 Churches	
S.C. 41/ U.S. 378 (3-K)	800.0	1 Fire Dept., 7 Churches	
ACT Alternative 1 (1-W1-W20-B)	596.5	1 Fire Dept., 2 Churches	Recommended for further consideration
ACT Alternative 2 (2-W1-W20-B)	603.8	4 Churches	Recommended for further consideration
ACT Alternative 3 (3-I)	636.0	2 Fire Dept., 2 Churches	Recommended for further consideration
ACT Alternative 4 (1-W1-W20-G)	603.4	1 Fire Dept., 2 Churches	Recommended for further consideration
ACT Alternative 5 (1-I)	660.7	1 Fire Dept., 3 Churches	Recommended for further consideration
ACT Alternative 6 (3-W20-B)	523.5	2 Fire Dept., 1 Church	Recommended for further consideration
ACT Alternative 7 (3-W20-I)	552.4	3 Fire Dept., 2 Churches	Recommended for further consideration
S.C. 9 Alternative (5-C)	688.1	2 Fire Dept., 5 Churches	Potential Impacts to Mitigation Site (Kozo Briggs) and two cemeteries; crossing of state scenic designated area of the Little Pee Dee River.
S.C. 9 Alternative (4-W8-C)	764.8	1 Church	
S.C. 9 Alternative (3-W8-C)	634.7	None	Crossing of state scenic designated area of Little Pee Dee River.
SOURCE: I-73 Alternative Development Technical Memorandums			

For a detailed response to the Smart Mobility Study, please see attachment.

Topic Comment 4 from SELC: Additional information is needed in the mitigation plan.

Response 4: The final mitigation plan includes the detail identified within the comments.

- F. Please address the comments in the South Carolina Environmental Law Project letter dated September 6, 2016. Specifically their comments related to the availability of practicable and feasible alternatives (other than I-73 project), evaluation of the projects direct, cumulative & secondary impacts, and impacts to the Little Pee Dee heritage Preserve.

SCELP Comment 1: The Little Pee Dee Heritage Preserve is a special aquatic site, and would convert these lands into a major highway. In addition to the direct physical taking, the highway will fragment valuable trust property. The Preserve is a Geographic Area of Particular Concern, and will be significantly impacted and there are feasible alternatives that would minimize these significant impacts. Moreover, there is no overriding public interest for the significant impacts on the GAPC.

Response 1: Crossings of the Little Pee Dee River were initially proposed downstream of the S.C. 917 crossing, avoiding the Little Pee Dee Heritage Preserve. Placing the crossings downstream outside of the Little Pee Dee Heritage Preserve would have caused greater impacts to wetlands adjacent to the Little Pee Dee River and caused greater habitat fragmentation. Placing the I-73 bridges parallel to the existing S.C. 917 crossing would cause impacts to wetlands already impacted by the existing roadway and bridges rather than non-impacted wetlands. In addition, it would widen the existing area of disturbed habitat, rather than creating an “island” of habitat between the I-73 bridges and S.C. 917, which would result in additional fragmentation. After discussion with the Agency Coordination Team (ACT), all the agencies reached consensus on moving the crossing into the Preserve to be parallel to the existing S.C. 917 (except SCDNR who deferred to the Heritage Trust Board for final decision), thus avoiding additional habitat fragmentation along the Little Pee Dee River corridor (refer to meeting notes dated 1/19/2006 in Appendix G of the Public Involvement Technical Memorandum for I-73 South). SCDOT agreed to compensate SCDNR for the loss of the impacted area of the Heritage Trust property.

As noted in the I-73 South Re-evaluation (Section 3.12.1), the proposed bridges over the Little Pee Dee River will be 1,053 feet in length. Bridge runoff will be captured in a closed drainage system and piped to the east end of the bridges where it will be routed into a grass-lined median ditch for pretreatment prior to discharge into adjacent wetlands.

SCELP Comment 2: There are practicable and feasible alternatives to impacting a special aquatic site, such as that in the study funded by the Coastal Conservation League (Smart Mobility study).

Response 2: See response 3 to SELC Comment.

SCELP Comment 3: The cost of the project has increased substantially.

Response 3: In the South FEIS (Section 2.8.3, page 2-82), the estimated construction cost was determined in 2006 dollars, and then factored up by six percent per year to the Years 2011 and 2016.

2008 I-73 South FEIS/ROD Construction Cost Estimate	
Year	Cost
2006	\$0.964 Billion
2011	\$1.29 Billion
2016	\$1.726 Billion

These construction cost estimates for the Selected Alternative were updated in January 2017. The estimated construction cost was determined in 2017 dollars, and then factored up by six percent per year to the Years 2020 and 2025.

2017 I-73 South Re-evaluation Construction Cost Estimate	
Year	Cost
2017	\$1.313 Billion
2020	\$1.564 Billion
2025	\$2.093 Billion

In the North FEIS (Section 2.7.3, page 2-59), the estimated construction cost was determined in 2008 dollars, and then factored up by six percent per year to the Years 2013 and 2018.

2008 I-73 North FEIS/ROD Construction Cost Estimate	
Year	Cost
2008	\$0.841 Billion
2013	\$1.125 Billion
2018	\$1.505 Billion

These construction cost estimates for the Selected Alternative were updated in January 2017. The estimated construction cost was determined in 2017 dollars, and then factored up by six percent per year to the Years 2020 and 2025.

2017 I-73 North Re-evaluation Construction Cost Estimate	
Year	Cost
2017	\$1.070 Billion
2020	\$1.275 Billion
2025	\$1.706 Billion

The cost estimates from the Smart Mobility Study were preliminary, as noted on page 11 of 11 of the Smart Mobility study, the costs are based on "planning level" information and not based on conceptual or site specific engineering.

SCELP Comment 3: The FEIS did not adequately assess indirect and cumulative impacts.

Response 3: Details of how the indirect and cumulative analysis was conducted, including information used, and assumptions made, are detailed in the Indirect and Cumulative Effects Plan Technical Memorandum. In addition, the approach taken to evaluate indirect and cumulative effects was discussed with the ACT on January 19, 2006, and the agencies were encouraged to provide comments on the strategy. Comments on the strategy were discussed with the ACT on March 2, 2006, before it was finalized. The FEIS addressed indirect and cumulative impacts based on this plan, and were adequately addressed in the NEPA document by resource of concern.

In addition, indirect and cumulative impacts were re-assessed and updated in the I-73 Re-evaluations.

ATTACHMENT

Review of *Grand Strand Expressway, An Alternative to the Proposed I-73 to the Myrtle Beach, SC area* (Smart Mobility Inc.)

This review is in response to comments received from the South Carolina Coastal Conservation League (SCCCL) in the form of a report entitled *The Grand Strand Expressway, An Alternative to the Proposed I-73 to the Myrtle Beach, SC area*, which was prepared by Smart Mobility Inc. and dated March 25, 2011. This report is included as Attachment 1 and is referenced by page and paragraph throughout this review.

Smart Mobility Statement 1 (page 1, paragraph 2)

The EIS identified greater connectivity between I-95 and Myrtle Beach as a primary need for this project, but only examined a new interstate highway as the solution. However, there are numerous variations of roadway design that could be applied to the same purpose which could greatly reduce the costs and environmental impacts.

SCDOT Response 1

The overall purpose of the I-73 project in South Carolina is to provide an interstate link between the I-73/I-74 corridor in North Carolina and the Myrtle Beach region in South Carolina, to serve residents, businesses, and travelers while fulfilling congressional intent in an environmentally sensitive manner. Thus, providing an interstate facility is an integral part of the project's purpose and has been since I-73 was identified as Corridor 5 under Section 1105 of ISTEA, which designated corridors that were undeserved by the interstate highway system.

A Primary Need is an essential need for the project that must be met. The two Primary Needs identified for the I-73 project include:

- **System Linkage** – Improve national and regional connectivity by providing a direct link between the I-73/I-74 National Corridor and the Myrtle Beach region; and,
- **Economic Development** – Enhance economic opportunities and tourism in South Carolina.

Contrary to the Smart Mobility statement that a new location interstate was the only solution examined, upgrading existing roads was also evaluated in the 2003 I-73 Feasibility Study and during the alternative development process using data available via GIS layers. As described in the Alternative Development Technical Memorandum,¹ “Use of Existing Transportation Infrastructure” was one of the Alternative Evaluation Criteria considered by the Corridor Analysis Tool (CAT), with a scale value ranging from 1 for Principal Arterials to 3 for Local Roads. The CAT overall scale value ranged from 1 to 10, with 1 being the feature that is least important to avoid and 10 being the feature most important to avoid.

The Grand Strand Expressway report by Smart Mobility, Inc. provides limited quantification (page 11) in support of the statements regarding the reduced costs and environmental impacts that could result from additional alternatives to be considered. However, the results of the CAT analysis indicate the upgrade of most of the existing roadway segments resulted in greater impacts than new alignments. The following table quantifies the potential impacts associated with the preliminary alternative corridors that evaluated the use of existing roads (shaded) as compared with the preliminary alternative corridors that were voted on by the Agency Coordination Team (ACT, December 9, 2004 meeting). Of the corridors listed below, the ACT Alternatives 1 through 7 were recommended for further analysis.

¹ SCDOT, *Alternative Development Technical Memorandum, from I-95 to the Myrtle Beach Region*, page 8 and Table 2.3.

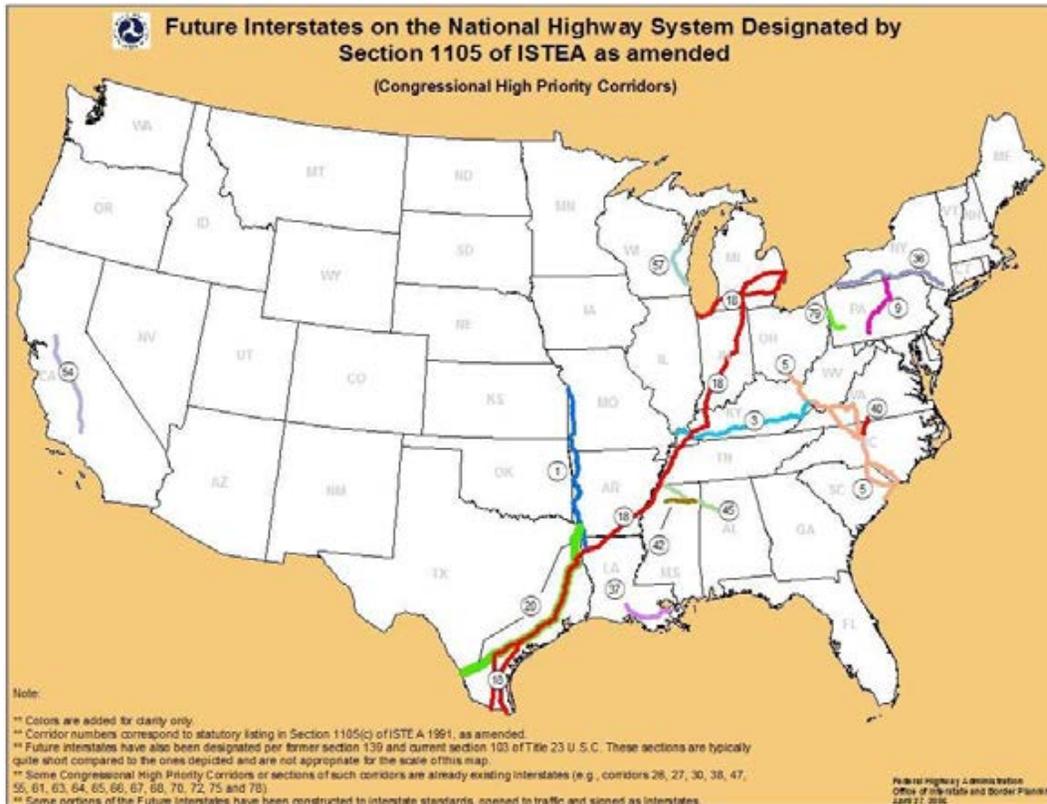
Table 1: Preliminary Alternative Corridors Evaluated for I-73 South

Alternative Corridor	Wetland Impacts (acres)	Potential Relocations	Other Info
S.C. 38/U.S. 501 (B-1)	679.6	1 Fire Dept., 7 Churches	Potential impacts to 10 Potentially Eligible NRHP Sites, two National Register Sites, the Little Pee Dee Heritage Preserve, and two cemeteries
U.S. 501 Bypass/S.C. 41/ U.S. 378 (1-K)	862.0	6 Churches	
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ACT Alternative 1 (1-W1-W20-B)	596.5	1 Fire Dept., 2 Churches	Recommended for further consideration
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S.C. 9 Alternative (4-W8-C)	764.8	1 Church	
S.C. 9 Alternative (3-W8-C)	634.7	None	Crossing of state scenic designated area of Little Pee Dee River.
SOURCE: I-73 South and North Alternative Development Technical Memoranda			

Smart Mobility Statement 2 (page 2, paragraph 1)

There are several important things to note from the below map, which was prepared in April 27, 2006.

1) The I-73 and I-74 corridors are closely intertwined. Constructing full interstate highways along both corridors would be redundant, excessive, result in unnecessary environmental impacts, and be wasteful of public and/or private funds. Currently, both North Carolina and South Carolina are proceeding with separate studies for each corridor, and neither considers the potential of the other corridor in their analysis.



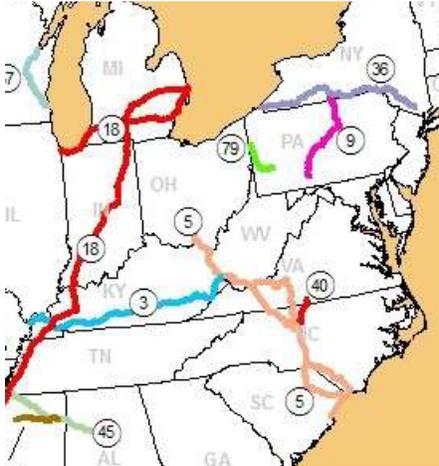
SCDOT Response 2

The referenced map is from the FHWA website and depicts the portion of I-73/I-74 that will be included in the Interstate Highway System once it is completed/converted based on the National Highway System Designation Act of 1995. Congress designated two routes, I-73 and I-74, in ISTEA, National Highway System Designation Act of 1995, and TEA-21. Both I-73 and I-74 have independent utility and different purposes, and serve different, underserved areas.

I-73 in South Carolina will serve the tourism industry as well as provide interstate access to the Pee Dee Region (refer to Chapter 1 of I-73 South and I-73 North). South Carolina's economy is highly dependent on tourism, which is the largest employer and fourth largest generator of gross state product in S.C. Of the \$8.5 billion spent on tourism in the state in 2005, 32 percent was spent in Horry County. Most recent information from SCPRT complements the information in the I-73 South FEIS and shows that tourism in Horry County is still a major factor in the state. \$14 billion was spent on tourism in 2009, and the travel and tourism sector supports the jobs of nearly 1 in 10 South Carolinians. The highest amount of domestic travel expenses was spent in Horry County in 2009, and Horry County had the highest number of direct tourism jobs. The Myrtle Beach area had approximately 14 million visitors in 2010 according to the Myrtle Beach Chamber of Commerce Statistical Abstract.

The purpose and need of I-74 in this area is to provide a link to serve the Wilmington area, including the Wilmington Port, as well as the southeastern counties of North Carolina that are currently not served by an interstate.

[Smart Mobility Statement 3 \(page 2, paragraph 2\)](#)



The above map indicates (correctly) that I-73 is no longer planned through Ohio and Michigan. These states have both dropped the interstate corridor from their long range plans for both fiscal and environmental reasons. The states of Michigan and Ohio are both fulfilling the congressional intent of Priority Corridor 5 by improving existing roadway corridors. The legislative description of this as a priority corridor does not in any way constrain or require the states to construct a new interstate highway.

SCDOT Response 3

Michigan DOT conducted a feasibility study in 2001. According to a press release from MDOT, released June 12, 2001, the MDOT postponed further studies for I-73 because “The department is suspending the study process until we believe adequate funding exists to proceed into design, right-of-way acquisition and construction,” said State Transportation Director Gregory J. Rosine. “We will continue to work with local communities and the Ohio Department of Transportation to coordinate future improvements.” According to Mr. Hugh McNichol, of the MDOT Project Planning Department (personal communication, October 2011), as states to the south, especially Ohio move forward with I-73, it will become a higher priority for Michigan.

Based on a discussion with Mr. Scott Phinney from Ohio DOT Statewide Planning and Research (personal communication, October 2011), I-73 is currently not recognized as a priority project in Ohio due to funding constraints. The project is not included in the update to their Long Range Plan. However, the upcoming Statewide Freight plan will evaluate whether a freight corridor would be needed in the next 20 years, and could consider I-73 as such a corridor. One significant challenge for I-73 in Ohio is changing access along the proposed route and upgrading the existing roadway. Portions of the existing route along U.S. 23 are controlled/limited access; however other segments are highly developed and commercialized, and the impacts to existing residents/businesses and ROW costs would be high to upgrade to interstate standards and install frontage roads to maintain access.

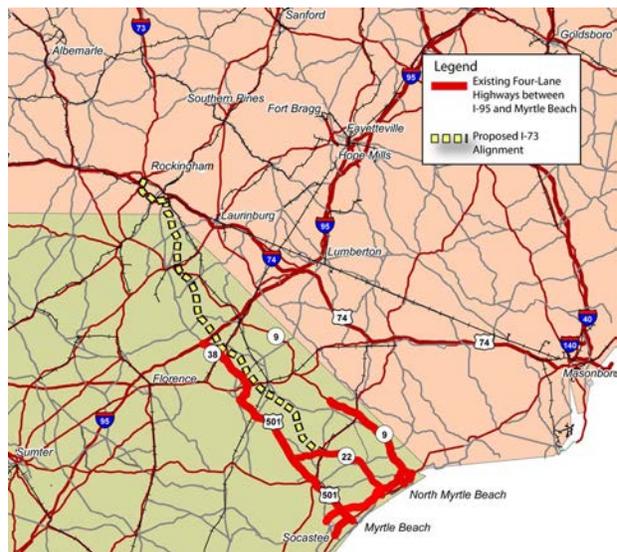
Smart Mobility Statement 4 (page 2, paragraph 3)

Another factor that is not considered in the EIS is the redundancy with the proposed I-74 corridor in North Carolina. This corridor is nearly parallel with the proposed I-73, but this is not considered in defining the need for or consideration of alternatives in the EIS.

SCDOT Response 4

Since I-74 has independent utility, and would not meet the purpose and need for I-73 in South Carolina, it was not included in the I-73 South or I-73 North Environmental Impact Statements. A roadway travel demand model was developed to support traffic analyses undertaken as part of the I-73 Corridor EIS. Over 17,767 completed surveys were obtained during the summer and winter roadside travel surveys. This survey data was then incorporated into urban and statewide models to determine traffic assignments for the various alternatives. Thus, the trips and associated traffic evaluated in the I-73 EIS are based on Myrtle Beach origin/destination traffic, not travelers from Wilmington NC or other NC coastal regions.

This segment of U.S. Route 74 from N.C. 41 to the U.S. Route 74/76 interchange just west of Whiteville, NC, will need to be upgraded to interstate standards prior to becoming designated I-74. This upgrade is not included in the North Carolina Statewide Transportation Improvement Program (STIP). The new and upgraded section of I-74, from Union Valley Road (SR 1585) in Whiteville to U.S. Route 17, is known as Segment R-3436. A feasibility study was completed for R-3436 in 2005 by NCDOT. Existing U.S. Route 74 and new alignment would be constructed for this segment, ranging from 63.3 to 65.5 miles in length, not including the additional roadway that would have to be built in South Carolina to connect to the existing Carolina Bays Parkway. The feasibility study recommended an alternative that would cost \$641 million in 2005 dollars, and result in 190 residential and 32 business relocations. In addition, this segment is not currently funded in the STIP, has not gone through the environmental documentation/permitting phase, and is not ranked as a high priority within the 1,200 projects scored by NCDOT in its Strategic Prioritization Process (which provides the projects being funded in the STIP). Based on personal communication with Alpesh Patel (October 2011) with the NCDOT Strategic Planning Office, due to the project’s potential for large human and natural resource impacts and high costs, it appears unlikely that it will be funded in the near future. Because of the importance of the interstate connection for the Myrtle Beach region, and the economic benefits to the rest of the Pee Dee Region, South Carolina cannot be dependent upon a connection that may or may not be constructed by NCDOT.



Smart Mobility Statement 5 (page 3, paragraph 1)

A set of improvements to existing corridors has the potential to have nearly all of the same benefits of the proposed interstate highway at a fraction of the cost, and with far less impact to the environment.

SCDOT Response 5

What is the basis for the statement regarding the “same benefits... at a fraction of the cost”? and the “EIS’s single focus”?

S.C. Route 38/U.S. Route 501 and S.C. Route 9 were both evaluated in the SCDOT’s I-73 Feasibility Study, published June 2003. These existing corridors were eliminated from further consideration due to costs, community impacts, input from residents, government entities, and school districts, and potential access issues (due to the close proximity of development to the roadway, there would not be room for access/frontage roads along the facility). The I-73 Feasibility Study determined that the upgrade of S.C. Route 38/U.S. Route 501 and S.C. Route 9 would cost more than new alignment alternatives, with the S.C. Route 9 existing corridor costing almost \$360 million more and the S.C. Route 38/U.S. Route 501 existing corridor costing over \$150 million more than the highest cost, new alignment alternative studied. Extensive new alignment construction would also be required in the form of bypasses around communities with the existing routes.

The existing roadways within the project study area (S.C. Route 9, S.C. Route 38, S.C. Route 917, and U.S. Route 501) are either two or four-lane roadways that have numerous access points for adjacent properties. In addition, many local roadways intersect with these roads, which increases the number of access points. In order to upgrade these uncontrolled access roads to interstate design standards, access would have to be closed to the main roads and frontage roads would have to be constructed parallel along existing roadways to provide access. This would result in a larger roadway footprint, acquiring homes, businesses, churches, and cemeteries along each roadway. Interchanges would have to be constructed along the existing roadways to provide access to/from the frontage roads and intersecting roads to the roadway. The existing roadway would have to be brought up to interstate standards, which are found in the *I-73 South Carolina Design Criteria* (dated February 21, 2005). Due to interstate design, some existing interchanges on U.S. Route 501 also would need to be replaced with ones that meet design criteria (such as S.C. Route 38, U.S. Route 301, S.C. Route 41, U.S. Route 501 Bypass for example).

Although it was concluded in the Feasibility Study that the existing alignments of S.C. Route 38/U.S. Route 501 and S.C. Route 9 would result in extensive community impacts, require considerable new location construction in the form of bypasses, and in some instances may not be able to accommodate the necessary frontage roads, they were still evaluated during the DEIS preliminary alternatives analysis with the CAT. The results of using these existing alignments were presented to the ACT. Of the 25 preliminary Build Alternatives presented to the ACT for I-73 South, nine used portions of U.S. Route 501, four used a portion of S.C. Route 9, three used portions of S.C. Route 917, and one alternative used existing S.C. Route 38 (refer to page 2-11 of I-73 South FEIS or the I-73 South Alternative Development Technical Memorandum). Seven of these 25 preliminary Build Alternatives were voted on to be carried forward for study by the ACT, based upon their lower potential impacts than the other Build Alternatives.

The CAT analysis results for using some existing roadways are previously summarized in Table 1, with more detailed explanation below:

CAT run B-1 used major portions of U.S. 501, and was found to have almost 680 acres of wetland impacts, as well as potential impacts to 10 potentially eligible NRHP sites, two

National Register Sites, the Little Pee Dee Heritage Preserve, two cemeteries, seven churches, and 1 fire department. In addition, using U.S. Route 501 through the Town of Aynor and Horry County was opposed (one petition included almost 900 signatures) by those living in the area. Horry County Council in a letter dated March 13, 2006, reported a unanimous vote against the route that crossed at Galivants Ferry and extended southeast along U.S. Route 501 through Aynor. The Town of Aynor voted unanimously (letter dated March 21, 2006) to oppose the route that would be constructed along existing U.S. Route 501 at Galivants Ferry and through Aynor. Letters were also received from the Horry County School Administration (refer to letters dated April 6, 2005, April 12, 2005 and January 27, 2006) that expressed opposition to the segment that would go through Aynor along U.S. Route 501. The SCDNR and USFWS also expressed opposition to this segment. This segment was eliminated from further analysis based on the results of the Preliminary Alternatives analysis described above and provided in Table 1, as well as public and agency input. However, in response to comments received during the Section 404 permitting process regarding use of existing roadway facilities, an additional analysis was conducted using a 400-foot wide corridor and aerial photography from Google Maps. Results from this analysis indicated that in addition to the institutional/public land uses, such as the churches, cemeteries, and the fire department included in Table 1, use of this route would result in relocation of 157 residences and 49 businesses.

CAT run 5-C followed S.C. Route 9 from Dillon, SC, to S.C. 410, before going south to connect to S.C. Route 22. This alternative was found to impact approximately 688 acres of wetlands, two fire departments, three churches, two cemeteries, the Kozo Briggs Mitigation Site, and would cross the Little Pee Dee River, at a point where it is now a state-designated scenic river. This segment was in the process of being nominated as a state scenic river at the time of the evaluation and SCDNR asked that this alternative be eliminated. The ACT agreed on December 9, 2004, by consensus vote to eliminate this alternative.

CAT run 4-W8-C also used a portion of existing S.C. Route 9. Considerable discussion with the ACT centered around this potential corridor that would closely follow the S.C. 9 corridor south from I-95 near the NC state line, passing approximately two miles west of Lake View, crossing the Little Pee Dee River on S.C. 9, turning off of S.C. 9 to the southwest, and intersecting S.C. 22 at S.C. 410. This alignment would have approximately 765 acres of impacts to wetlands and would have impacted one church. The amount of wetland impacts was more than 100 acres greater for this alignment versus the rest being proposed. A thumbs-up consensus was reached by the ACT to move forward with 7 other corridors, but the consensus was to not move forward with this S.C. 9 corridor. The SCDNR asked that this consensus be reconsidered. The FHWA and SCDOT responded that this corridor was dropped from further consideration because it had greater wetland impact (~100 acres) than other alternative corridors, minimal access to Marion County (important for economic development, one of the primary needs for the project), and had the potential for more natural resource impacts resulting from any extension of I-73 north of where this alternative would intersect I-95. At this point, SCDNR dropped their “appeal” to maintain this alternative.

Public comments were received in support of using existing S.C. Route 38, including intersecting with I-95 at the existing S.C. Route 38 interchange. The existing interchange at S.C. Route 38

and I-95 would have required expansion to accommodate the larger design of an interstate to interstate connection, I-73 to I-95. Four commercial establishments that provide approximately seven million dollars annually for Dillon County would have been eliminated. The businesses could not be relocated at the same interchange since both I-73 and I-95 would have fully controlled access, thus not allowing motorists to leave the interstate to reach these businesses (like the I-95/I-26 interchange) and potentially losing this annual revenue for Dillon County. In addition, utilizing the existing S.C. Route 38 north of I-95 would have impacted the communities of Oak Grove, Brownsville, Bristow, Blenheim, and Monroe Crossroads before entering downtown Bennettsville. The potential impacts to the residences, churches, and cemeteries in these communities would have been much higher than those associated with the three reasonable alternatives. Maximum use of existing S.C. Route 38 was attempted north of Bennettsville, but existing communities such as Brightsville, Aaron's Temple, and Prevatts Chapel would have been severely impacted (page 2-14 of I-73 North EIS).

It was determined that existing S.C. Route 22 (Conway Bypass) could be incorporated into the I-73 design. Currently, S.C. Route 22 is a four-lane divided highway extending 29 miles between U.S. Route 501 near Conway to U.S. Route 17 in North Myrtle Beach. The portion of S.C. Route 22 from the intersection of I-73 all the way to its eastern terminus at U.S. Route 17 would be incorporated into I-73. It is a fully controlled access roadway and would meet interstate design standards except that the paved portion of the road shoulders is too narrow. Meeting standards would require additional paving of the existing road shoulders. However, the footprint of the roadway would not change, thus no additional direct impacts would result. By utilizing approximately 24 miles of S.C. Route 22, an estimated \$500 million would be saved,² as well as minimizing potential impacts to human and environmental resources along another route. (This information can be found on page 1-12 of I-73 South FEIS).

Smart Mobility Statement 6 (page 3, paragraph 2)

The EIS's single focus on a new interstate highway eliminates numerous opportunities to reduce environmental impacts and save taxpayer money. The states of Michigan and Ohio are intending to fulfill congressional intent through modest improvements to existing corridors, an approach that should be included in this EIS essentially as a "TSM" alternative.

SCDOT Response 6

What is the basis for this statement? The status of I-73 in Michigan and Ohio was previously discussed based on information and correspondence with MDOT and ODOT. It is also important to note that congressional intent varies by State, as described in the National Highway System Designation Act of 1995, 1105 (c). This Act specifically cites existing routes in Ohio, Kentucky, West Virginia, Virginia, and North Carolina that the "Corridor shall generally follow." In South Carolina, however, the Corridor is described only as extending from the "South Carolina State line to the Myrtle Beach Conway region."

² The cost to construct S.C. Route 22 over 10 years ago was approximately \$386 million. Adjusting for inflation, inclusion of the 24-mile S.C. Route 22 into I-73 would save approximately \$500 million.

FHWA guidance requires that all “reasonable alternatives” or a “reasonable range of alternatives” be considered during the EIS process.³ Transportation System Management alternatives include strategies intended to increase the efficiency of existing facilities without increasing the number of through lanes, such as incorporating high-occupancy vehicle lanes, turning lanes, reversible lanes, ridesharing, traffic signal coordination, and mass transit. As stated previously, the purpose of the I-73 project in South Carolina includes providing an interstate link to the Myrtle Beach region in order to address the primary needs of providing system linkage and economic development opportunities, as well as the secondary need of hurricane evacuation. TSM alternatives would not meet these project needs and thus, are not applicable.

Smart Mobility Statement 7 (page 4, paragraph 6)

The benefits of the expressway option provide far greater flexibility as implementation can unfold in stages, which is much more difficult when constructing a limited access highway on a new alignment. The cost of an expressway will be far lower than an interstate highway, as the amount of property acquisition would be considerably lower due to the smaller footprint and right-of-way costs. This would also reduce the environmental impact of the corridor improvements, as very little new construction through undisturbed areas would be required.

SCDOT Response 7

How is the “Grand Strand Expressway” that is described any different than existing U.S. Route 501? What is the basis for these statements regarding constructability, cost and environmental impacts? Alternatives evaluated for I-73 that included use of existing roadways presented greater constructability issues⁴ as compared to those on new alignment. While U.S. Route 501 is a four-lane road, it would have to be significantly modified to meet interstate standards. Major reconstruction would include widening the median, providing shoulder widths in accordance with SCDOT design standards, and adding frontage roads. Building on the existing U.S. Route 501 corridor would require an extensive frontage road system on both sides to maintain access to businesses and residences. This extensive system of frontage roads and the upgrades to U.S. Route 501 would result in impacts to residences, businesses, and other facilities and create additional challenges for construction and maintenance of traffic.

Minimal quantification of the anticipated reduced costs or environmental impacts are provided in the Smart Mobility report. Although the Expressway design could possibly result in lower wetland impacts due to the presence of existing development, the large footprint that would be necessary to accommodate a widened facility including the wider median for the Superstreet design, would result in a greater amount of impacts to businesses and residences.

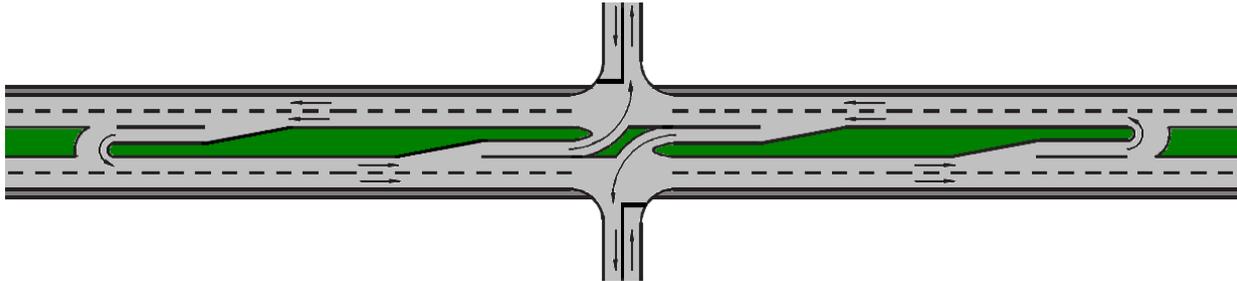
³ FHWA, Environmental Review Toolkit, <http://environment.fhwa.dot.gov/projdev/tdmalts.asp> (June 8, 2012).

⁴ FHWA/SCDOT, *Interstate 73 FEIS, from I-95 to the Myrtle Beach Region*, p. 2-17.

Smart Mobility Statement 8 (page 5, paragraphs 2 and 3)

The Superstreet, or “J” unsignalized intersection design, shown below, is an alternative that can improve both the safety and efficiency of an existing four lane roadway, especially during high volume periods such as summer changer over weeks.

J Intersection for Superstreet Expressway Design



A recently completed “superstreet” upgrade of an arterial on Route 17 in Wilmington, NC provides a nearby example of this intersection configuration.

SCDOT Response 8

How would the safety and efficiency of the Superstreet design compare to an interstate with controlled access? Based on information from the FHWA,⁵ the signalized Superstreet design (like the Route 17 in Wilmington, NC, example referenced by Smart Mobility Inc.) “can result in more stops for through vehicles ... and create out-of-direction travel for the cross street through and left-turn movements, which limits their capacity and increases their travel times.” Although there are fewer conflict points as compared to a four-leg traditional intersection, potential liabilities of the superstreet crossover that were identified by the FHWA include: longer travel distance and time for minor street movements, wide median needed, possible restrictions to access, and potential for driver and pedestrian confusion.⁶ This alternative could create issues for driver expectancy and the required wide median width could result in increased impacts to frontage roads and ROW requirements.

An expressway would not provide the travel efficiency benefits that an interstate would. Lower speeds on a non-controlled access facility would result in longer trip times. Refer to the No-build versus the Preferred Alternative travel time savings in Chapter 2 of the I-73 South FEIS. As discussed in this FEIS text, the large number of visitors arriving to and departing from the area in vehicles congests the local transportation network. Traffic congestion is currently a problem for this area, particularly on “change-over day,” when the tourists at the beach leave and new tourists arrive. This causes delays along U.S. Route 501 from Aynor south. This traffic situation has gotten so bad in Aynor that the SCDOT is in the process of constructing an overpass so the residents of Aynor can get from one side of U.S. Route 501 to the other on days with heavy traffic congestion. By providing an interstate connection from S.C. Route 22 and U.S. Route 17 all the way to I-95, a high-speed alternative route that would reduce this congestion would be available. The diversion of traffic to I-73 would reduce congestion on local roads and improve

⁵ FHWA, *Signalized Intersections: Informational Guide*, Publication No. FHWA-HRT-04-091, p. 263.

⁶ *Ibid.*, p. 264.

the travel efficiency within the three-county (Dillon, Marion, and Horry Counties) I-73 South study area.

Based upon the results of the I-73 traffic modeling, the average speed of vehicles on the network would increase from slightly less than 52 miles per hour to more than 56 miles per hour. This is a large increase in speed when applied to the over 22,000 trips in the network each day. The significance of this increase in travel efficiency is also reflected in the reduced travel times that would be recognized with the construction of I-73. The travel time maps that were developed to evaluate this time savings depict an approximately 20-minute reduction in 2030 travel times between I-95 and the junction of S.C. Route 22 and U.S. Route 17, an approximately 65-mile distance.⁷ This travel time savings increases to approximately 25 minutes during the three-month peak season (June 1 to August 30). Applying these minutes of travel savings to the projected 2030 Annual Average Daily Traffic (AADT) volumes for I-73 of 22,683 vehicles per day,⁸ increasing to 29,619 vehicles per day during the peak season,⁹ represents a daily time savings of 7,561 hours, increasing to over 12,341 hours in daily time savings for trips made on I-73 between I-95 and S.C. Route 22/U.S. Route 17 during the peak season. Annually, this represents a total travel time savings of 3,199,525 hours in 2030.

Smart Mobility Statement 9 (page 6, paragraph 1)

For purposes of illustrating how the concepts of expressway upgrades could be considered for alternatives to the proposed I-73, several alternative concepts are presented in this report for consideration. These are presented as planning level concepts offered for consideration and discussion, and in no way are proposed as engineered designs. However, these concepts may merit further consideration in the EIS and permitting process, which could be amended to include non-interstate highway alternatives. Because the EIS documents for the two sections of I-73 are incomplete in their analysis of alternatives, a new or supplemental EIS could be prepared that considers a balance of environmental consequences, economic benefits, and transportation utility of a wider range of alternatives. Such an analysis would allow for a more serious consideration of the costs and benefits of various investment and design options.

SCDOT Response 9

As discussed previously, the alternatives analyses completed for I-73 did evaluate the incorporation of existing roadways, including S.C. Route 38, U.S. Route 501, and S.C. Route 9. However, it was determined that the Preferred Alternative would best satisfy the public need while minimizing impacts. The Preferred Alternative was selected based on input from the public and from elected officials, input from the resource and regulatory agencies, the many potential environmental and human resource impacts associated with the Build Alternatives, constructability, and construction costs.

As discussed throughout these responses to the report prepared by Smart Mobility, Inc., the expressway alternative concepts would not provide the travel efficiency benefits of an interstate facility, would not address the primary need for economic development, nor would they provide for improved hurricane evacuation, a secondary need.

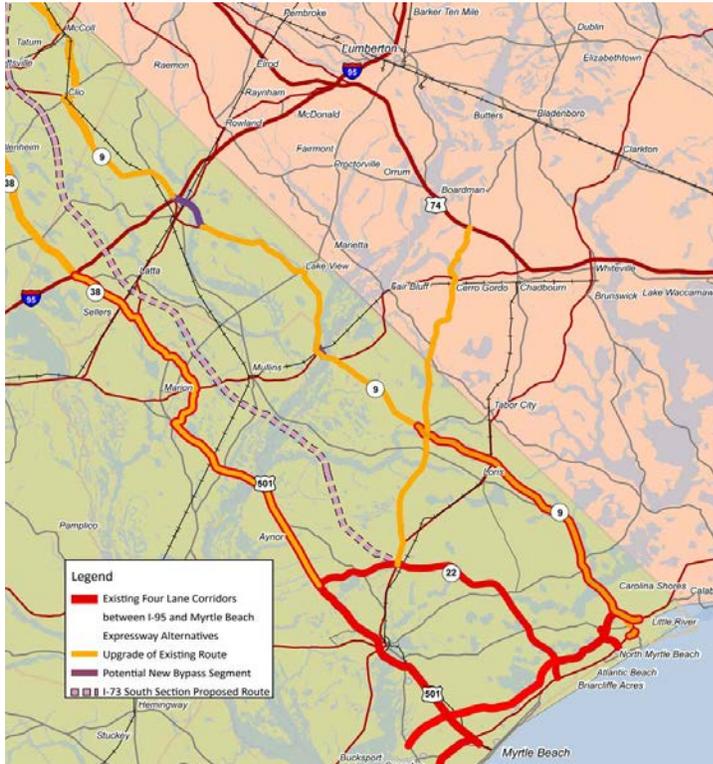
⁷ FHWA/SCDOT, *Interstate 73 FEIS, from I-95 to the Myrtle Beach Region*, pp. 2-32 through 2-40.

⁸ FHWA/SCDOT, *I-73 Traffic Technical Memorandum, from I-95 to the Myrtle Beach Region*, p. 37.

⁹ *Ibid*, p. 81.

[Smart Mobility Statement 10 \(page 6, paragraph 3, and page 7, paragraph 1\)](#)

While the concepts in this report focus particularly on the corridor between I-95 and the Myrtle Beach area, as that is the current priority for construction, these concepts can be applied to existing corridors north to Rockingham NC as well, as a complete alternative to the I-73 proposal described in the EIS. The following map provides the locations of these alternatives.



These concepts are illustrated on the above map, with upgrade of existing facilities shown in orange and new bypass sections shown in purple. The facilities could be four lane expressways, with 2 lanes in each direction separated by a median of 40 feet or more. Intersections with major roads could be grade separated interchanges at major junctions, and local intersections could be upgraded to “superstreet” design, or other modern arterial intersection designs suitable for rural environments.

SCDOT Response 10

The North Carolina Department of Transportation (NCDOT) is building an interstate facility for I-73/I-74. To achieve this, the NCDOT is upgrading some existing roads to interstate standards, and in other areas, the facility will be constructed on new alignment designed to interstate standards. Resolutions signed by the SCDOT Commission on February 17, 2005, and the North Carolina Board of Transportation on March 3, 2005, acknowledged that the states would work together to further I-73 and I-74 in their respective states. These resolutions indicated that the tie-in point for I-73 would be near Rockingham, North Carolina, in the vicinity of the SC 38 Corridor.

Four endpoints were initially proposed where I-73 North would tie into I-74 near Hamlet, North Carolina.¹⁰

- Endpoint NC1 was located where U.S. Route 1 and I-74 intersected.
- Endpoint NC2 was located midway between the existing interchanges with N.C. Route 177 and N.C. Route 38.
- Endpoint NC3 was located where N.C. Route 38 intersected I-74.
- Endpoint NC4 was located where N.C. Route 177 and I-74 intersected.

The NCDOT and the North Carolina regulatory/resource agencies expressed concern about the reasonable build alternatives connecting to Endpoint NC2. Alternatives connecting to Endpoint NC2 would have impacted Mark's Creek, which is a significant natural heritage area in North Carolina. In addition, an interchange at Endpoint NC2 would require property acquisition from the Richmond County Industrial Park, and require the relocation of a water tower. A modification was made to connect reasonable build alternatives to Endpoint NC3A. The proposed change was presented to the ACT on May 9, 2007, and a unanimous consensus was reached to eliminate Endpoint NC2 in favor of NC3A. Based on this vote, all reasonable build alternatives were modified to connect to endpoint NC3A which was located east of the N.C. Route 38/I-74 interchange.

During the project, the SCDOT and SC-FHWA met six times with the NCDOT, NC-FHWA, and North Carolina regulatory and resource agencies, including one field trip to view the reasonable corridors. These agencies were able to provide information and ask questions about the project during the meetings and throughout the project.¹¹

The Expressway Alternative would also fail to address the secondary project need of hurricane evacuation, which is a concern for the Myrtle Beach region due to the dramatic increase in the resident population and coinciding tourist and hurricane seasons. The region is currently served by three designated hurricane evacuation routes that connect U.S. Route 17 to I-95: S.C. Route 9; U.S. Route 501; and U.S. Route 521. In addition, U.S. Route 378, designated as a hurricane evacuation route, connects to U.S. Route 501 in Conway. Lane reversal is feasible on a portion of U.S. Route 501; however, it results in negligible clearance time reductions because the other major bottleneck that controls clearance time on this road (U.S. Route 501 at Aynor) is "upstream" of the reversal area.¹² The addition of a four-lane interstate system would help reduce the time for evacuation and as a controlled-access facility, it also would make lane reversal simpler. I-73 would allow people leaving the Myrtle Beach area an alternative to the bottleneck on U.S. Route 501 and provide additional capacity for evacuees.

Based on the evacuation study results, by providing another route for evacuation, I-73 would reduce clearance times along U.S. Route 501 by over 10 hours (from 37.4 hours to 26.5 hours for a Category 4-5 hurricane). The southbound lanes of I-73 and the Conway Bypass (S.C. Route 22) could also be reversed, allowing more cars to evacuate at the same time. With lane reversal,

¹⁰ Information from the *I-73 North Alternative Development Technical Memorandum*, Chapter 3.

¹¹ Information from Chapter 4 of the *I-73 North Environmental Impact Statement*, pages 4-23 to 4-24.

¹² SCEMD, *The South Carolina Hurricane Plan*, June 2003.

evacuation time would be reduced by an additional 4 hours along U.S. Route 501 (from 26.5 hours to 22.4 hours) and an additional 10 hours on I-73 (from 29 hours to 18.9 hours).

Without construction of I-73, the evacuation time in 2030 could exceed 37 hours in a worst-case scenario (Category 4-5) on U.S. Route 501. With clearance times this long, the decision to evacuate would have to be made early in the hurricane watch period before the National Hurricane Center has reliable data to make predictions concerning storm track or hurricane intensity. This could result in needless evacuations of residents and tourists, which would hurt the region's economy. (Note: Based on a major change incorporated into the 2012 South Carolina Hurricane Guide,¹³ voluntary evacuation orders will no longer be made. All future hurricane evacuation orders made by the Governor will be considered mandatory. By eliminating the staged evacuation provided by an initial voluntary evacuation order, more people could be trying to leave the South Carolina coastal area at the same time. Furthermore, if the decision to issue a mandatory evacuation is delayed in an effort to avoid needless evacuations, the additional capacity that would be provided by I-73 would be critical in reducing clearance times and getting people out of harm's way.)

Regarding the use of existing facilities, once again, they were included in the CAT analysis and evaluated throughout the FEIS alternatives evaluation. As previously discussed, existing S.C. Route 22 was evaluated and determined that it could be easily upgraded to interstate standards without any additional ROW impact. It is a controlled-access road. Therefore, it was incorporated into I-73 South Project, which saved approximately \$500 million.¹⁴

For the project as a whole, however, the proposed upgrade alternatives fail to address the purpose of the project as well as one of the primary needs: economic development. "Interstate development is often viewed as a significant part of economic planning/development program initiatives as prioritized by local, regional and state economic development authorities. Such initiatives usually address a range of factors that make an area appealing to employment-generating development. Labor force characteristics, land availability, public community and institutional services, housing, educational resources, other infrastructure services, cultural/recreational resources, and attractive nearby downtowns are often cited as appealing and important 'quality of life' attributes or factors in addition to interstate access. As long as there is an emphasis on the current highway surface transportation technology to service the economic development initiatives and needs within and between many regions, interstate development will likely play a significant and important role as one of many factors that help improve local, regional, and national level economies."¹⁵

¹³ South Carolina Emergency Management Division, *2012 South Carolina Hurricane Guide*.

¹⁴ The cost to construct S.C. Route 22 over 10 years ago was approximately \$386 million. Adjusting for inflation, inclusion of the 24-mile S.C. Route 22 into I-73 would save approximately \$500 million.

¹⁵ I-73 Project Team, "Economic development from Interstate Highway Investments," transmitted via November 8, 2004 memo from Mitchell Metts, SCDOT.

Smart Mobility Statement 11 (page 8, paragraph 1)
SC 38/US 501

This route already provides a direct connection between Route 22 and I-95, and is four lanes along its entire length. There are already grade separated interchanges at major crossings, making this route essentially an expressway in its current configuration. For the vast majority of its length, there is a wide median. The following aerial photographs show typical conditions on these corridors.

SCDOT Response 11

The current roads between Myrtle Beach and I-95, such as U.S. Route 501, U.S. Route 378, and S.C. Route 9, are used heavily during the tourist season (which runs from April to September). A 2005 study locating the top summer traffic bottlenecks in the country identified the drive between I-95 and the Myrtle Beach area on U.S. Route 501 in the list of top 25 trips for vacation travel delays and congestion.¹⁶ These bottlenecks were based on information from the FHWA, state departments of transportation, and the travel and tourism industry. The proposed I-73 project would enable tourists to access the area more efficiently and provide a high-speed access route to the region. The effect of the future peak day traffic on the local network congestion was also examined. The projected 2030 peak day roadway levels of service for the No-build and the eight Build Alternatives were determined using the SCDOT level of service (LOS) criteria. U.S. Route 501, between U.S. Route 76 west of Marion and S.C. Route 22, is predominantly projected at LOS F during the 2030 peak day No-build scenario.¹⁷ The Preferred Alternative is generally projected to operate at LOS C during the 2030 peak day, with congestion on large segments of U.S. Route 501 improving to LOS C and D under this scenario, as well.¹⁸

Smart Mobility Statement 12 (page 9, paragraph 1)
Route 9

This option would require widening of about 30 miles of rural four lane roadway into an expressway, and an additional 30 miles of rural two lane roadway into a four lane expressway. The path would generally follow SC Route 9, but could use local roads for bypass routes around several communities, which could result in up to 4 miles of new expressway construction to avoid impacts to communities.

SCDOT Response 12

In areas that were not bypassed, what would the impacts to residences, businesses, and communities be if S.C. Route 9 were widened to four lanes under the Expressway Concept? No quantification of these potential impacts is provided in support of the statements that this concept would result in less impact.

¹⁶ AAA, *Are We There Yet? A Report on Summer Traffic Bottlenecks and Steps Needed to Ensure That Our Favorite Vacation Destinations Remain Accessible*, (June 30, 2005).

¹⁷ FHWA/SCDOT, *I-73 Traffic Technical Memorandum, from I-95 to the Myrtle Beach Region*, Figure 91, page 135.

¹⁸ FHWA/SCDOT, *I-73 Traffic Technical Memorandum, from I-95 to the Myrtle Beach Region*, Figure 94, page 138.

Smart Mobility Statement 13 (page 9, paragraph 2)

I-74 Connector

This route would connect the I-74 corridor in North Carolina (currently a four lane US highway, but planned for upgrade to an interstate) with SC Route 22 primarily by the upgrade of about 34 miles of two lane rural roadways. In some areas, bypass sections might be appropriate to avoid natural or socioeconomic impacts. The following map shows a potential route for this connection. In general, this corridor is somewhat higher in elevation, so while there would be some wetlands impacts, there would be no need to fragment or disturb significant pristine natural areas.

I-74 Connector Route



SCDOT Response 13

This route seems to follow Green Sea Road (SC 410) in South Carolina, and connects to S.C. Route 22 using U.S. Route 701. Way points were set in the CAT analysis to ensure that an alignment alternative followed this same corridor; however, due to the higher impacts this corridor was eliminated. Based on just a cursory review of aerial photography, there is a school located at Bakers Chapel Road and U.S. Route 701, as well as numerous businesses, cemeteries, churches, and residences located along the roadway. There are also several farms along the alignment that could be impacted by the upgrade of two-lane rural roadways for those proposed alternatives.

What is the basis for the statement regarding the corridor being “somewhat higher in elevation”? General conclusions regarding elevation of the overall corridor are insufficient to support statement that this alternative would not fragment or disturb pristine natural areas.

Smart Mobility Statement 14 (page 10, paragraph 1)

Transit Service

Providing a corridor for future rail transit service is also mentioned as a long term goal of the I-73 south project, although no detail or analysis is provided of its feasibility, cost or impacts. AMTRAK service is currently provided to Florence SC, Kingstree SC, and Lumberton NC.

There are many potential alternatives to improved transit connections to and within Myrtle Beach that would be far more cost effective than a new rail corridor. A premium, convenient bus service could be provided to meet trains at the AMTRAK station and bring passengers to their destination. Local service that operates for extended hours, nights and weekends, would allow travelers to explore tourist destinations in the area. This could be supplemented by improved bicycle facilities and car sharing services, making Myrtle Beach a great destination for visitors seeking active travel and outdoor experiences. New rail service directly to Myrtle Beach is unlikely to be a cost effective solution to promote transit, and there are many more appealing and cost effective options to meet this goal that have not yet been explored.

SCDOT Response 14

Rail transit was referred to in the EIS under multimodal planning as a secondary need. Since the alignment of the Southeast High-Speed Rail (HSR) corridor could come near the ultimate I-73 corridor, this project only seeks to proactively provide for future rail options by preserving a corridor within the proposed I-73 right-of-way.

Smart Mobility Statement 15 (page 11, second table)
Compare Expressway Alternative to Proposed I-73

	1-73 (South) as Proposed in EIS	Grand Strand Expressway Alternatives
Design	New Interstate Highway, 44 miles of new construction	Upgrade of existing 2 or 4 lane roads, with bypass sections of new construction where needed
Right of way width	About 300 feet	About 100 feet right of way, which can be accommodated on most existing arterial corridors
Wetlands impacts	Inflexible and excessive interstate highway design criteria result in significant impacts to wetland areas. Proposed alignment requires crossing of major wetlands and filling	Minimizes wetlands impacts by upgrading existing roadways, many of which need only minor upgrades, and minimizing need to cross wetland areas with new facilities. More flexible expressway design criteria will reduce impact areas where new roadway construction is required.
Posted Speed limit	65 mph	Varies; typically 50 to 65 mph
Cost	\$1,300 million	\$1,47 to \$428 million
Ability to phase construction	Limited; route will not operate effectively until entire corridor is complete	Route 501 option can easily be phased and will have utility as soon as first phase is constructed. NC and Route 9 options cannot be phased as easily due to limited capacity of existing roadway network.

SCDOT Response 15

Construction on new alignment provides greater flexibility than the widening/upgrade of existing facilities and allows for the avoidance of natural and human environment impacts. The design was not inflexible. The Reasonable Build Alternatives and subsequently the Preferred Alternative were modified and shifted to avoid and minimize impacts to resources throughout the project development. The Preferred Alternative was shifted to be adjacent to the existing S.C. Route 917 crossing of the Little Pee Dee River based on a consensus vote from the ACT (January 19, 2006) to minimize the number of road crossings of this waterway. With regard to

the other major wetland crossings, the Preferred Alternative was shifted to avoid crossing Buck Swamp and to be parallel and immediately adjacent to the existing crossing of Lake Swamp. Thus, both major wetland crossings by the Preferred Alternative avoid further habitat fragmentation and cross at previously impacted wetland areas.

Widening/improving existing roadways does not allow for the shifting/modification of alignments to avoid natural and human resources.

Although the table comparing the Expressway Alternative to Proposed I-73 on page 11 includes the greater potential impacts to the natural environment (wetlands) associated with construction on new alignment, potential impacts to the human environment are excluded. As stated previously on page 7, based on public involvement throughout the I-73 EIS process, residents, governmental entities, and school districts voiced opposition to alternatives involving the upgrade of existing roadways. Alternatives 1, 4 and 8 each have a segment that crosses the Little Pee Dee River on U.S. Route 501, and then extends around the Galivants Ferry Historic District back along U.S. Route 501 through Aynor to intersect S.C. Route 22. These alternatives were strongly opposed, as evidenced by community petitions, unanimous votes by the Horry County Council and Town of Aynor, as well as input from the Horry County School Administration and natural resource agencies.

Contrary to the table included on page 11 of the Smart Mobility study, I-73 could be constructed in phases, as was S.C. Route 31, or all at once like S.C. Route 22. The first phase of I-73 South will be from I-95 to the 301/501 interchange. This will have independent utility, use/value, and functionality when completed.

Furthermore, the ability to phase construction of the Expressway Alternative does not address the constructability issues that are associated with upgrading existing roadway facilities. Throughout Chapter 2 of the FEIS, constructability issues associated with segments of the Build Alternatives that would involve existing roadways, including U.S. Route 501, are considered. Construction impacts to residents are greater with the upgrade of existing alternatives. Temporary detours and closures of facilities could lead to more inconveniences for local residents and travelers throughout the areas of construction. Businesses along these roadways could experience a loss of revenue during construction due to the inconvenience placed on customers to access these businesses. As explained in the I-73 FEIS, the difficulty of building along and within the U.S. Route 501 corridor, and the traffic management problems associated with building there, make them even less attractive alternatives.¹⁹

¹⁹ FHWA/SCDOT, *Interstate-73 FEIS, from I-95 to the Myrtle Beach Region*, p 2-70.