Reasonable Alternatives Comments
May 13, 2009

David A. Kinard, P.E.
South Carolina Department of Transportation
Post Office Box 191
Columbia, South Carolina 29202-0191

Dear Mr. Kinard:

It was a pleasure meeting you at the April 30 Public Information Meeting regarding the proposed I-526 Mark Clark Expressway Environmental Impact Statement. Thank you for addressing the questions proposed on behalf of the Department of Agriculture (USDA), Agricultural Research Service (ARS) pertaining to this project. ARS was pleased to have you confirm that Alternatives 16 and 32 are being tabled.

In follow up to the call for comments on this project and its considered routes, ARS wishes to submit the following comments pertaining to the potential impact on its research and holdings:

- ARS does not consider any land at the U.S. Vegetable Laboratory (Lab) in Charleston to be excess to research program needs. ARS anticipates the continued growth of its programs based on future needs of the agricultural industry. USDA Researchers at this site have plans to expand research on organically-grown crops which requires considerable land to be dedicated exclusively to organic crop production. Reduction of available research land would adversely impact agricultural research on a regional scale and diminish the capability to fulfill our mission.

- Should Alternatives 16 and 32 be reconsidered, ARS is concerned that the project not impact land in its custody and control to ensure there is sufficient crop rotation acreage for research farm operations and adequate buffer areas between research plots and nearby highways.

- Should Alternative 32 be reconsidered, its proximity to ARS’ laboratory research facilities and probable reduction of ARS’ land holdings are a security and safety issue. Any proposed design would have to address ARS security requirements (i.e., fencing or retaining walls between the proposed route and ARS’ facilities) and safety issues (i.e., visitor and employee safety for those entering and exiting the facility if an interchange were constructed at U.S. Highway 17).
Furthermore, ARS wishes to submit the following comments related to possible cultural resources and environmental impacts of the proposed Alternatives 16 and 32:

- Addressing environmental and drainage impacts would be of utmost importance. The area along the easterly boundary of USDA's property borders is approximately a 65-acre marshland along Long Branch Creek. Increased pollutants (air, surface run off, etc.) could impact crop quality and production; ongoing research; wetlands; and the existing irrigation and retention ponds on ARS land.

- The U.S. Vegetable Laboratory has not been recorded on the National Register; however, there is one prehistoric site within the 451-acre site that has been recorded. There have been artifacts found that are tied to an antebellum settlement that was established on the property. Two archaeological sites were also defined as a result of a previous field study. One was an eighteenth century domestic site and the second was an eighteenth/early nineteenth century domestic site. Both included artifacts and structural refuse. These sites were associated with an African-American slave settlement and Location representatives have found grave markers on the south side of U.S. Highway 17. An extensive archaeological effort and detailed historical research would be necessary to evaluate the area more.

The following ARS contact information is provided for future reference. The following representatives wish to continue to be kept appraised of this project's progress.

**Area Office**
Dr. Darrell F. Cole  
Area Director  
USDA-ARS, South Atlantic Area Office  
950 College Station Road  
Athens, Georgia 30604

**Location**
Dr. Richard Fery  
Research Leader  
USDA-ARS  
U.S. Vegetable Laboratory  
2700 Savannah Highway  
Charleston, South Carolina 29414

**Facilities Division**
Patrick Barry, P.E.  
Director  
USDA-ARS  
Facilities Division  
5601 Sunnyside Avenue  
Beltsville, Maryland 20705
Should you wish to discuss the above comments, please contact me on (706) 546-3311.

Sincerely,

[Signature]

DARRELL F. COLE
Area Director, SAA

cc:
P. Barry, FD
E. Reilly, FD
R. Fery, SAA
V. McNutt, SAA
J. Morrison, SAA
South Carolina Department of
Natural Resources

May 21, 2009

David A. Kinard, P.E.
Project Manager
South Carolina Department of Transportation
Post Office Box 191
Columbia, SC 29202-0191


Dear Mr. Kinard:

As a participating agency in the development of an EIS for this project, our department attended the April 21, 2009, Agency Coordination Meeting. The focus of this meeting was to discuss and provide input on the process used in developing a set of reasonable alternatives to be considered in the DEIS. Discussions included information on the Tier I Criteria evaluation process used in determining whether preliminary alternatives would meet project goals. A total of 38 preliminary alternatives were presented and have been analyzed for this project using traffic performance, safety and environmental criteria. In response to this meeting and the submitted information, we offer the following comments.

As part of the Tier I Criteria evaluation process, the project team established units of measure for each criterion and used two tools for evaluating the alternatives. Natural breaks in the data were identified and preliminary alternatives were either eliminated or carried forward depending on how they compared to a selected break point and other alternatives. This initial evaluation resulted in the elimination of 11 preliminary alternatives.

While we can see some logic to analyzing data in this manner, we are concerned that it is somewhat arbitrary and has resulted in the quick elimination of a number of important alternatives that should be given careful consideration, particularly those that avoid and minimize impacts to natural resources by utilizing and improving existing infrastructure. We do not consider breaks in data alone as a justifiable means for evaluating reasonable alternatives. Additional information is needed in order to determine acceptable levels of impact and/or improvements in traffic safety and mobility. Several alternatives were eliminated based solely on the number of relocations with an arbitrary threshold of 58 (Alternatives 20-24). These alternatives should be further evaluated to determine if there are combinations of these improvements that minimize property loss to an acceptable level. This evaluation should also consider operational improvements.
in conjunction with road widening activities. Alternative 19 was eliminated because of its lack of improvements in regional mobility. While this may be true for this individual alternative, it may be that when combined with other alternatives or portions of alternatives, this alternative can reach acceptable improvement levels. This alternative should be given further consideration.

The second tier of this evaluation process involves the comparison of similar alternatives in order to reduce redundancy and determine those alternatives that best meet project needs with the fewest impacts. Three alternatives that utilize the existing Stono River Bridge from Johns Island to James Island were evaluated using these criteria (Alternatives 27, 29 & 30). Alternatives 27 & 29 were eliminated based on slight differences in performance for traffic categories. Despite the fact that Alternative 30 involves a higher number of relocations and greater wetland impacts, it was carried forward only to be eliminated in the final evaluation round because it was determined to be unreasonable. The end result is no consideration for alternatives that utilize the existing bridge and avoids a second crossing of the Stono River. We question the rationale behind the elimination of alternatives 27 & 29 and recommend that they be given further consideration.

Our department appreciates the opportunity to provide input in the early stages of this project, and DNR staff will be available for future consultation. Please feel free to contact me if you have any further questions.

Sincerely,

Susan F. Davis
Coastal Environmental Coordinator

Cc: SCDHEC/Giffin
    OCRM/Rodgers
    USEPA/Lord
    USFWS/Caldwell
    NMFS
Mr. David A. Kinard, P.E.
Project Manager
South Carolina Department of Transportation
P.O. Box 191
Columbia, SC 29202-0191

Re: Mark Clark Expressway, Charleston, SC
FWS Log No. 42410-2009-FA-0212

Dear Mr. Kinard:

In a continuing effort to participate in development of the Environmental Impact Statement (EIS), the U.S. Fish and Wildlife Service (Service) attended the April 21, 2009, Agency Coordination Meeting for the proposed Mark Clark Expressway. The South Carolina Department of Transportation (SCDOT) and the Federal Highway Administration (FHWA) presented the preliminary alternatives selected for further study in the EIS. Upon review of the information provided, the Service offers the following comments for your consideration.

This project is the last leg of the Mark Clark Expressway that has been under development for over 30 years. Initially referred to as the Charleston Inner Belt Freeway, the first EIS for the Mark Clark Expressway completed in the early 1970s. Based upon alternative selections in the EIS a portion of the expressway was constructed in the late 1980s. In the 1990s a Supplemental EIS (SEIS) was performed to address the uncompleted portion of the roadway connecting West Ashley to James Island, however, construction of the final leg based on the SEIS did not occur. The Service applauds SCDOT and the FHWA upon their decision to reopen the previous EIS documents for review now that funding for completion of the roadway has been obtained.

The Service is concerned however that preliminary alternatives selected for inclusion into the new EIS were based mainly upon manually and arbitrarily selecting Natural Data Gaps (NDG) instead of thoroughly reviewing or comparing impacts to the project area. While the use of NDGs may be an accepted process, it is further arbitrary in that the final outcome of reasonable alternatives is merely a function of the order in which of the elimination criteria were reviewed.
Another possible and more defensible selection process would be to identify the highest ranked alternatives based upon the least environmentally damaging or most beneficial for each of the criteria. Only those alternatives with the highest rankings common for each criteria would move forward as the final, reasonable alternatives for evaluation in the EIS. This proven process was utilized for the I-73 project in Horry County.

It is evident that 4(f) impacts were not considered during the elimination methodology. Avoidance of 4(f) resources should be a tenet within the Context Sensitive Design approach for this and all EIS documents. Several of the reasonable alternatives will result in significant adverse impacts to the James Island County Park, a popular tourist destination also serving the local community with a variety of recreational and natural amenities. We recommend that SCDOT and FHWA readdress the alternative selection process to consider alternatives which avoid impacts to this park.

One of the elimination steps assesses each of the alternative’s potential to improve travel times between West Ashley, John’s Island and James Island. The Service finds that the representation of Vehicular Hours of Travel in this section will be misleading and misinterpreted by the general public to imply that the amount of time spent in their vehicle will be reduced by hours. It is our understanding that the noted savings in VHT represents the sum total time savings of all travelers over the course of a single day, not the time saved by individuals during that period. SCDOT provided projected time savings for individual vehicles in a separate table which more accurately reflects savings in travel time that can be expected. Upon review of the data regarding this project’s ability to improve regional mobility the Service finds the benefits of improved individual travel times, at most five minutes, does not justify nor should it buttress the expenditure of more than $400 million dollars for the final leg of the Mark Clark Expressway.

The Service recommends that SCDOT and FHWA revisit the alternative selection process and incorporate possible impacts to existing 4(f) resources into the elimination steps. We also recommend using a ranking process rather than manually selected arbitrary data gaps to determine the most reasonable alternatives. The Service appreciates the opportunity to provide comments on this early phase of the project. If you have any questions, please contact the Service’s project manager, Mark Caldwell. He may be reached at the Service’s Charleston field office, (843) 727-4707 ext. 215.

Sincerely,

[Signature]
Timothy N. Hall
Field Supervisor

TNH/MAC
Mr. Robert L. Lee
Division Administrator
Federal Highway Administration
1835 Assembly Street Suite 1270
Columbia, South Carolina  29201

Attention: Daniel Hinton

Dear Mr. Lee:

NOAA’s National Marine Fisheries Service (NMFS) attended the meeting on April 21, 2009, that the Federal Highway Administration (FHWA) and SC Department of Transportation (SCDOT) held to obtain comments from state and federal agencies participating in development of an Environmental Impact Statement for the Interstate 526 Mark Clark Expressway (I-526) in Charleston, South Carolina. FHWA and SCDOT requested that participating agencies provide comments by June 5 on the draft alternatives analysis presented during the meeting.

The draft alternatives analysis is based on the Tier I Criteria Evaluation developed by Wilbur Smith Associates (WSA), and these criteria include parameters that examine traffic performance, safety, relocations of businesses and residences, and impacts to wetlands. Two tools were used to evaluate the alternatives: the Charleston Area Transportation Study (CHATS) Traffic Model and a Geographic Information System (GIS). Of the 38 alternatives developed, six (1, 8, 10, 11, 11A, and 36) were selected as “reasonable alternatives” using the Tier I Criteria. FHWA and SCDOT intend to advance these six alternatives plus a no-build alternative, mass transit alternative, and transportation system management (TSM) alternative for further evaluation.

NMFS believes the Tier I Criteria Evaluation have flaws that affect the reliability of results from the initial screening. While these flaws are significant, we believe they can be addressed for the final report that conveys results of the alternatives analysis.

WSA identified what they believed are natural breaks in the data and used these break points to eliminate several alternatives. Acreage of wetland impacts was one of the parameters used in this manner. NMFS has three concerns about using wetland acreage in this way:

- The analysis may be oversimplified by not considering the quality of wetlands that would be impacted. NMFS recommends the screening tool be revised to reflect the type and
quality of wetlands and buffer habitats that would be impacted so that further planning can focus on avoiding the higher quality areas. Related to this oversimplification is the reliance upon data from the National Wetland Inventory without the groundtruthing recommended by the National Wetland Inventory program.

- According to the material provided, estuarine wetlands and open water were not included in the calculations of impacts because WSA believes these habitats would be bridged. If this assumption proves wrong, impact acreages are underestimates. Even if this assumption proves correct, the analysis does not include indirect impacts from the roadway, such as shading and altered hydrology, which also lead to underestimates. Without estimating these omissions or at least considering which alternatives are most affected by the omissions, conclusions based on the analysis are suspect.

- The ability to successfully mitigate for wetland impacts varies greatly by wetland type, and these differences reflect the status of mitigation science as well as the availability of suitable mitigation sites within the affected watershed. NMFS recommends the initial screening consider the feasibility of compensatory mitigation for the wetlands that would be impacted by the alternatives.

Alternative 26 provides an example of where these concerns come into play. This alternative was eliminated because it exceeded the 26.4-acre break point for wetland impacts, but other factors may have skewed the analysis away from this alternative. The landscape position of Alternative 26 indicates it would have fewer impacts to fishery species, fewer indirect impacts, and lower compensatory mitigation costs than alternatives the draft report recommends move forward.

Alternatives 27, 29, and 30 provide additional examples. These three alternatives would utilize the existing Stono River Bridge (Maybank Road). Alternatives 27 and 29 were eliminated based on traffic performance. However Alternative 30, which would involve more relocations and greater wetland impacts, was initially carried forward but later eliminated due to the corridor including a roadway recently designated as a Scenic Highway by the Scenic Highways Committee. This sequence of events resulted in no alternatives remaining that would utilize the existing bridge and instead leaves alternatives that would impact salt marsh along the Stono River to move forward. Failure to recognize the high value of salt marsh to fishery species and the difficulty of adequately mitigating for this habitat may have skewed results towards alternatives costly to implement. NMFS recommends that Alternatives 27, 29, and 30 be given further consideration and be evaluated in conjunction with existing infrastructure improvements.

Alternative 19 and the New Way to Work (NWTW) alternative provide another example of alternatives that were prematurely discarded. By redeveloping areas along the existing road network in West Ashley, James Island, and Johns Island to give drivers more choices to get to their destinations than currently exists, Alternative 19 and the NWTW alternative would enable drivers to avoid choke points on congested streets by connecting existing surface streets and would be better for the environment by avoiding and minimizing the destruction of salt marsh and forested wetlands that the I-526 extension would require. Based on landscape position, these alternatives would have lower mitigation costs than alternatives the draft report recommends move forward.
In summary, NMFS recommends the screening criteria be refined to avoid oversimplification and to more accurately reflect the concerns of regulatory agencies. Once this is done, the refined criteria should be reapplied to the alternatives to develop a more defensible list of candidates for further study. A valid alternatives analysis is the key to successful analyses under the National Environmental Policy Act (NEPA). To ensure the project is not unnecessarily delayed by challenges related to the NEPA, the Clean Water Act, and other authorities, NMFS recommends FHWA and SCDOT improve the rigor of the alternatives analysis.

We appreciate the opportunity to provide these comments and recommendations. Please direct related questions or comments to the attention of Ms. Kay Davy at our Charleston Office. She may be reached by telephone at (843) 953-7202 or by e-mail at Kay.Davy@noaa.gov.

Sincerely,

/ for

Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division

cc:

FHWA, Daniel.Hinton@fhwa.dot.gov
SCDOT, kinardda@scdot.org
COE, Travis.G.Hughes@usace.army.mil, Michael.R.Patrick@usace.army.mil
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F/SER47 Kay.Davy@noaa.gov
August 10, 2009

Mr. Chad C. Long  
Archaeologist/Environmental Project Manager  
South Carolina Department of Transportation  
955 Park Street  
Columbia, SC 29201  

Re:  *Extension of I-526 Mark Clark Expressway in Charleston County - Background Research and Recommended Boundaries for Fenwick Hall*

Dear Mr. Long:

Thank you for providing the cover letter, report, and maps regarding the project referenced above (dated 4/22/09 and received on 4/27/09). The State Historic Preservation Office (SHPO) has used this information, observations from a site visit on 8/5/08, and issues discussed at the 8/6/09 meeting with South Carolina Department of Transportation (SCDOT) and Wilbur Smith staff to determine a revised boundary for the National Register listed Fenwick Hall property. The enclosed map delineates the boundary of Fenwick Hall as determined by the SHPO.

The revised boundary excludes areas of modern development around Fenwick Hall to the southwest, west, northwest, and northeast. An area of modern development in the northern quadrant of the intersection of River Road and Maybank Highway is also excluded. The revised boundaries in these areas are shown well in the graphic entitled “Proposed National Register Boundary for Fenwick Hall” in the appendix of the 4/22/09 report. This graphic, however, does not accurately reflect the Fenwick Hall boundary to the east of Maybank highway. That boundary will remain as delineated in the “Proposed Fenwick Hall Boundaries, 12-27-00, SHPO” graphic included in the 4/22/09 report (and as shown on the enclosed map). A disturbed area of the causeway extending from Fenwick Hall to the Stono River does not contribute to the Fenwick Hall listing but remains within the boundary to provided continuity between two contributing portions of the causeway (illustrated on the enclosed map).

We are providing these comments to assist you with your responsibilities as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act. If you have any questions, please call me at (803) 896-6184.

Sincerely,

David P. Kelly  
DOT Project Coordinator

Enclosure: Fenwick Hall Boundary Map
December 21, 2009

Ms. Elizabeth Johnson  
Deputy State Historic Preservation Officer  
South Carolina Department of Archives and History  
8301 Parklane Road  
Columbia, SC 29223-4905

PCN: 36932_PE01 File No: 10.036932A

Dear Ms. Johnson:

Enclosed is one copy of a draft report that describes cultural resource investigations and background research conducted for the proposed extension of Interstate 526 in Charleston County. This report was compiled as part of the Environmental Impact Statement (EIS) that is being prepared for the project.

An intensive historic architectural resources survey of the project’s Area of Potential Effects (APE) was conducted in May 2009. Thirteen newly surveyed resources (5726-5737) were identified as part of the study. Of these resources, the Caretaker’s House at the Dill Sanctuary, Resource Number 5737, is the only property recommended eligible (as a contributing property) for listing in the National Register of Historic Places.

The report also includes an assessment of effect for each of the seven Reasonable Alternatives. The following historic properties may be affected by the proposed project:

- The Fenwick Hall Historic District would be adversely affected by Alternatives A, C, D, E, F, and G through right-of-way acquisition and construction activities.

- The proposed Dill Historic District would be adversely impacted by Alternatives A and B through right-of-way acquisition and construction activities.

- Murray-LaSaine Elementary would be impacted by Alternative F through right-of-way acquisition. However, the impacts are not anticipated to cause adverse effects due to the minimal amount of right-of-way that would be required.

Additional cultural resource investigations (e.g. archaeological survey), assessments of effect, and consultation with your office will take place upon the selection of a Preferred Alternative.
In accordance with the memorandum of agreement approved by the Federal Highway Administration, March 16, 1993, the Department is providing this information as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act.

It is requested that you review the enclosed material and, if appropriate, indicate your concurrence in the Department's findings.

Sincerely,

Chad C. Long
Archaeologist

CCL: ccl

Enclosures (2)

I (Stewart) concur in the above determination.

Signed: [Signature]

Date: 1/6/10

cc: Patrick Tyndall, FHWA