



A

Appendix A - Agency Coordination

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Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Tuesday, June 23, 2015 12:54 PM
To: Parker, G. Clifton; Glover, Samuel; Rozier, Jim; berryre@dhec.sc.gov; TomDavis@scsenate.gov; CAMPSEN@scsenate.org; westonnewton@schouse.org; CurtisBrantley@schouse.gov; ShannonErickson@schouse.gov; BillHerbkersman@schouse.gov; KennethHodges@schouse.gov; AndyPatrick@schouse.gov; sanforcc@dhec.sc.gov; michael_allen@nps.gov; williabn@dhec.sc.gov; psommerville@bcgov.net; wmcbride@bcgov.net; rmcfee@bcgov.net; gkubic@bcgov.net; erniewilson@fippsd.org; generalmanager@frippislandliving.com; manager@harborislandoa.com; billyk@islc.net; diane.leone@sc.usda.gov; wprokop@cityofbeaufort.org; mcconney.ramona@epa.gov; laycock.kelly@epa.gov; travis.hughes@usace.army.mil; elizabeth.williams@usace.army.mil; stephen.a.brumagin@usace.army.mil; Larry.Knightner@hud.gov; emjohnson@scdah.state.sc.us; leader@sc.edu; MixonG@dnr.sc.gov; daviss@dnr.sc.gov; PerryB@dnr.sc.gov; Mark_Caldwell@fws.gov; prestohs@dhec.sc.gov; wilsonde@dhec.sc.gov; giffinma@dhec.sc.gov; reecemc@dhec.sc.gov; neeldg@dhec.sc.gov; sirondl@dhec.sc.gov; hathcoam@dhec.sc.gov; brownrj@dhec.sc.gov; ROBERTLN@dhec.sc.gov; shealyrg@dhec.sc.gov; dparrish@scprt.com; rbuxton@schac.sc.gov; bhitt@sccommerce.com; mlybrand@scda.sc.gov; BAnderson@budget.sc.gov; ben@scwf.org; Hnicholson@scfc.gov; Lawton, Emily - FHWA; kurt.henning@sierraclub.org; andrea.marks@sierraclub.org; mrobertson@tnc.org; Barry.Dragon@uscg.mil; wenonahh@ccppcrafts.com; tylehowe@nc-cherokee.com; lstopp@unitedkeetoowahband.org; Grace@scnhc.com; jack@tillersantiques.com; cmarks@nwtf.net; Jaclyn.Daly@noaa.gov; Keith Hanson - NOAA Affiliate (keith.hanson@noaa.gov)
Cc: Wade, Blair
Subject: SCDOT Letter of Intent for US 21 over Harbor River Beaufort County SC
Attachments: LOI for US 21 Harbor River Beaufort County.pdf; Figure 1 Project Map 8 x 11.pdf

June 23, 2015

Electronic Correspondence – In an effort to save resources and expedite delivery you are receiving this document in an electronic format. Please consider the environment before printing.

RE: LOI for the Proposed U.S. 21 Bridge Replacement over Harbor River; Beaufort County, South Carolina.

Dear Sir/Madame:

Please see the attached Letter of Intent (LOI) and project location map. The South Carolina Department of Transportation (SCDOT) is soliciting feedback from agencies and individuals concerning the potential impacts of the proposed bridge replacement of U.S. 21 (Sea Island Parkway) over Harbor River. Please mail or email any comments, questions, or concerns to SCDOT by July 23, 2015.

If you need additional information, please let me know. You may contact me at 803-737-0841 or via e-mail at RiddleNL@scdot.org

Sincerely,

Nicole Levinson Riddle
Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: 803-737-0841 C: 803-351-8480



South Carolina
Department of Transportation

June 23, 2015

Electronic Correspondence: You are receiving this document in electronic format in an effort to save resources and expedite delivery.

Re: Letter of Intent for the Proposed U.S. 21 Bridge Replacement over Harbor River in Beaufort County, South Carolina. SCDOT PIN: P026862

Dear Sir/Madam:

The South Carolina Department of Transportation (SCDOT) proposes to replace the U.S. 21 (Sea Island Parkway) bridge over the Harbor River in Beaufort County, South Carolina. U.S. 21 is a two-lane highway that provides the only vehicle access from St. Helena Island to Harbor Island, Hunting Island State Park, and Fripp Island. U.S. 21 crosses the Harbor River via an existing two-lane bridge with a moveable swing span over the channel. The purpose of the proposed project is to replace the existing structurally-deficient and functionally-obsolete U.S. 21 bridge over Harbor River.

The purpose of this letter is to solicit information that you may have related to the potential social, economic, and environmental impacts of the proposed project on the area. The SCDOT, in consultation with the Federal Highway Administration (FHWA), is preparing an Environmental Assessment (EA) to evaluate the benefits and impacts from the proposed project, in accordance with the *National Environmental Policy Act* (NEPA) and implementing regulations.

The project study corridor consists of U.S. 21 from 150 feet west of Gay Fish County Road to 150 feet past the intersection of Harbor Drive in Beaufort County, South Carolina. Field studies and surveys are being conducted within 600 feet of the existing U.S. 21 centerline. As shown on Figure 1, land adjacent to the study corridor is mostly undeveloped and consists of tidal wetland areas. Gay Seafood Company and a public boat ramp are located on the south side of U.S. 21 in the western portion of the study area. Harbor Island, a residential and vacation community, is located on the north side of U.S. 21 in the eastern portion of the study area.

Preliminary field work has been initiated for wetlands and waters of the U.S. Tidal wetlands, including creeks, ponds, and estuarine emergent wetlands, are present throughout the study corridor. The project will be designed to minimize wetland impacts to the maximum extent practicable. Coordination will occur with the U.S. Army Corps of Engineers (USACE), Charleston District and South Carolina Department of Health and Environmental Control (SCDHEC) Office of Ocean and Coastal Resource Management (OCRM) as the project continues.

In accordance with Section 7 of the *Endangered Species Act*, a database search and field survey was conducted in September 2014 for Federally-protected species. Biologists identified suitable habitat for the Loggerhead sea turtle (*Caretta caretta*), Atlantic sturgeon (*Acipenser oxyrinchus*), Wood stork (*Mycteria americana*), and Florida manatee (*Trichechus manatus*). A



raptor nest was identified near the eastern project termini, next to the eastbound lane of U.S. 21. No signs of use or activity have been observed at the nest, which was monitored monthly between September 2014 and May 2015. In accordance with the *Migratory Bird Treaty Act*, biologists surveyed the existing bridge for nests; no nests were observed. Coordination will occur with the U.S. Fish and Wildlife Service and NOAA National Marine Fisheries Service as the project continues. An assessment of essential fish habitat in accordance with the *Magnuson-Stevens Act* will also occur and findings coordinated with the NOAA National Marine Fisheries Service.


Cultural resource surveys will be conducted within the project study area and coordinated with the State Historic Preservation Office. A noise analysis will also be conducted for the study area to predict future noise levels in accordance with the current SCDOT Noise Policy. Shellfish beds are located within 1000 feet of the existing bridge; therefore, potential water quality treatment methods will be considered in the EA. Through conformance with Best Management Practices and standard SCDOT procedures during construction, no adverse impacts to the area's air quality and water quality are anticipated.

As an integral part of the environmental process, the SCDOT is soliciting input from agencies and individuals concerning the potential social, economic, and environmental impacts of the proposed project on the area. To ensure that issues of the proposed project are fully evaluated, the SCDOT requests your written response concerning any beneficial or adverse impacts of the project relating to the interest of your agency. The SCDOT looks forward to receiving your comments on the project within 30 days of the receipt of this letter. Comments should be addressed to the following:

Mr. Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29201

Your expeditious handling of this notice will be appreciated. Should you have any questions, please contact me at (803) 737-1396.

Sincerely,

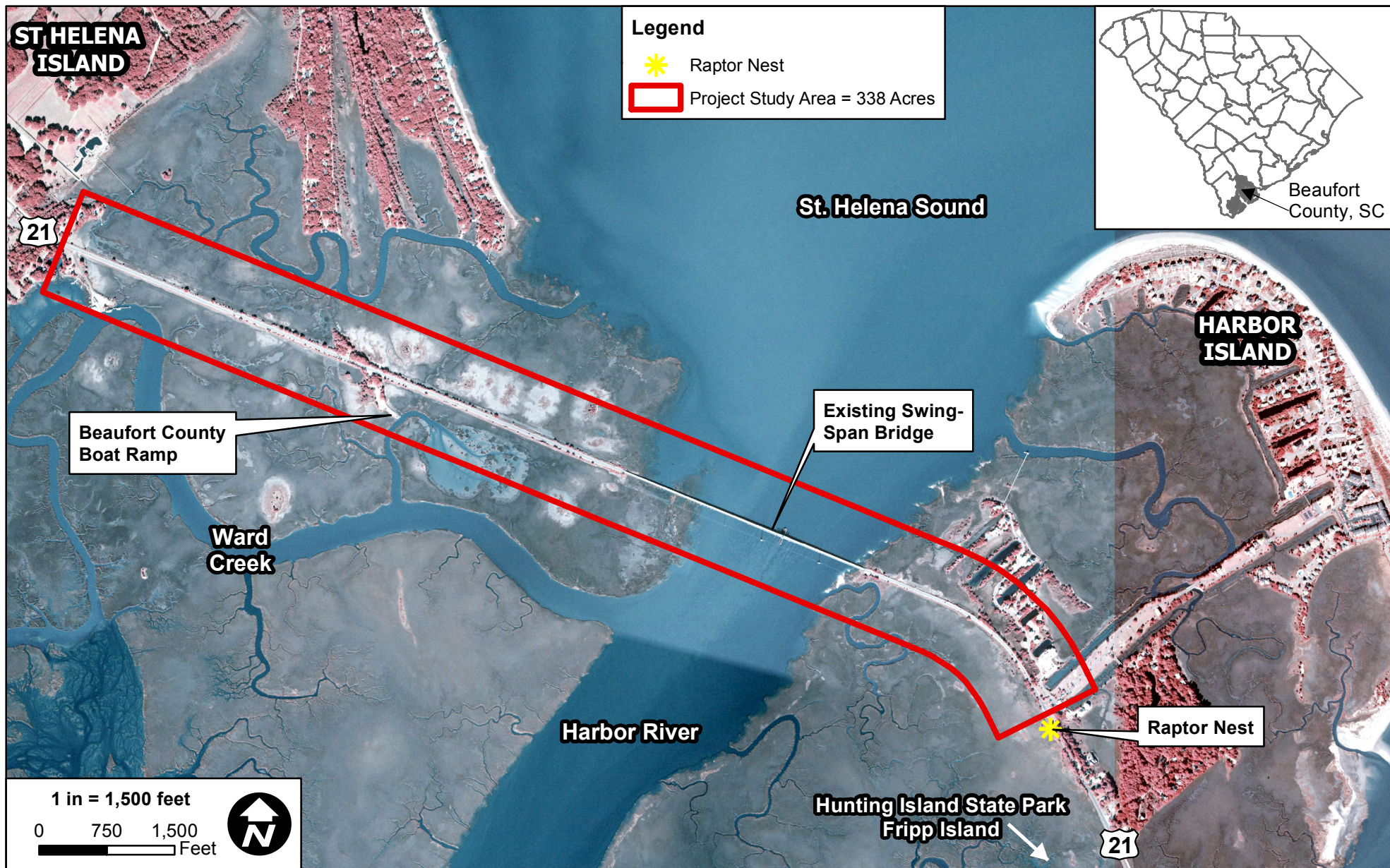


sol

Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation

EC: James (Jae) H. Mattox, III, P.E., SCDOT Program Manager
Blair Wade, HDR Project Manager

Enclosures



Appendix A-1

US Coast Guard

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U.S. Department
of Transportation
**Federal Highway
Administration**

South Carolina

August 13, 2015

1835 Assembly Street, Suite 1270
Columbia, SC 29201
803-765-5411
803-253-3989

In Reply Refer To:
HDA-SC

Commander (dpb)
U.S. Coast Guard 7th District
909 SE 1st Avenue, Suite 432
Miami, FL 33131-3028

Attn: Mr. Barry Dragon, Director, Bridge Branch

Subject: Invitation to Become a Cooperating Agency for the Preparation of an Environmental Assessment (EA) for the Proposed U.S. 21 Bridge Replacement Project over the Harbor River, in Beaufort County, South Carolina; Federal Project Number P026862.

Dear Mr. Dragon:

The Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), is preparing an Environmental Assessment (EA) for the proposed U.S. 21 Bridge Replacement Project. As shown on the enclosed location map, the existing swing span bridge is located southeast of the town of Beaufort and connects St. Helena Island and Harbor Island. The enclosed Letter of Intent (LOI) was previously sent out to various Federal and State Resource Agencies, to include the U.S. Coast Guard, to provide early notification of the project. The FHWA, in coordination with your office has determined that a U.S. Coast Guard Bridge Permit will be required for the proposed replacement bridge across the Harbor River. Since your agency has legal jurisdiction over such permits, we are inviting you to become a Cooperating Agency along with the FHWA in the development of the EA.

Areas of concern to be emphasized in the EA will include potential environmental impacts upon existing ecological resources, wetlands, water resources, historic and archaeological resources, parks and recreation facilities, noise, social and community character, hazardous/contaminated materials, cumulative and indirect impacts, and impacts due to project construction.

Your agency's involvement in the proposed project would entail those areas under its jurisdiction. No direct writing or analysis by your agency will be necessary for this document unless you request to do so. We suggest that your agency's role in the development of the above project should include the following as they relate to your area of expertise:

1. Participate in coordination meetings as appropriate.
2. Consultation on any relevant technical studies that may be required for the project.

3. Timely review and comment on the environment document to reflect the views and concerns of your agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

You have the right to expect that the EA will enable your agency to fulfill its jurisdictional responsibilities. Likewise, your agency has the obligation to tell us if, at any point in the process, your agency's needs are not being met. We expect that at the end of the process the EA will satisfy your agency's NEPA requirements including those related to project alternatives, environmental consequences, navigational clearances, and mitigation. Further, we intend to utilize the EA as our decision-making document for the bridge permit application.

To become a Cooperating Agency with the FHWA, please respond to this office in writing within thirty (30) days. If you accept, please identify the appropriate contact person within your organization for coordination. If your agency declines, please provide a written response that states your reason for declining the invitation, such as:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss in more detail the project or each agency's respective roles and responsibilities during the preparation of the EA, please contact Mr. J. Shane Belcher at 803-253-3187 or by e-mail at jeffrey.belcher@dot.gov.

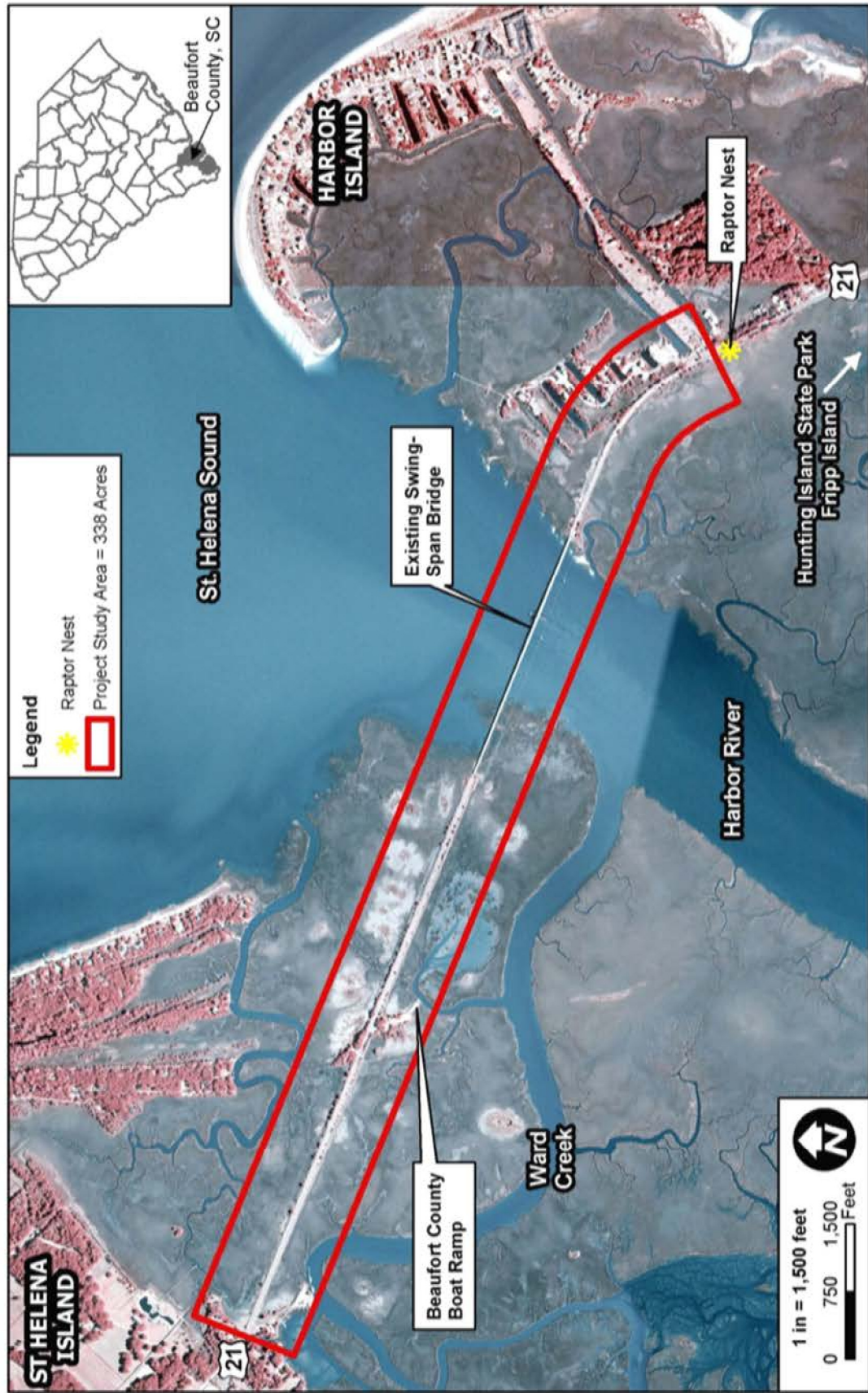
Sincerely,



(for) Emily O. Lawton
Division Administrator

Enclosures

cc: Ms. Heather Robbins, SCDOT NEPA Division Manager
Mr. Chad Long, SCDOT NEPA Coordinator, RPG 1 (via e-mail)
Mr. Jae Mattox, SCDOT Program Manager (via e-mail)
Ms. Jennifer Zercher, USCG Bridge Management Specialist (via e-mail)



U.S. 21 Harbor River Bridge Replacement
Project Location
Figure 1



June 23, 2015

Electronic Correspondence: You are receiving this document in electronic format in an effort to save resources and expedite delivery.

Re: Letter of Intent for the Proposed U.S. 21 Bridge Replacement over Harbor River in Beaufort County, South Carolina. SCDOT PIN: P026862

Dear Sir/Madam:

The South Carolina Department of Transportation (SCDOT) proposes to replace the U.S. 21 (Sea Island Parkway) bridge over the Harbor River in Beaufort County, South Carolina. U.S. 21 is a two-lane highway that provides the only vehicle access from St. Helena Island to Harbor Island, Hunting Island State Park, and Fripp Island. U.S. 21 crosses the Harbor River via an existing two-lane bridge with a moveable swing span over the channel. The purpose of the proposed project is to replace the existing structurally-deficient and functionally-obsolete U.S. 21 bridge over Harbor River.

The purpose of this letter is to solicit information that you may have related to the potential social, economic, and environmental impacts of the proposed project on the area. The SCDOT, in consultation with the Federal Highway Administration (FHWA), is preparing an Environmental Assessment (EA) to evaluate the benefits and impacts from the proposed project, in accordance with the *National Environmental Policy Act* (NEPA) and implementing regulations.

The project study corridor consists of U.S. 21 from 150 feet west of Gay Fish County Road to 150 feet past the intersection of Harbor Drive in Beaufort County, South Carolina. Field studies and surveys are being conducted within 600 feet of the existing U.S. 21 centerline. As shown on Figure 1, land adjacent to the study corridor is mostly undeveloped and consists of tidal wetland areas. Gay Seafood Company and a public boat ramp are located on the south side of U.S. 21 in the western portion of the study area. Harbor Island, a residential and vacation community, is located on the north side of U.S. 21 in the eastern portion of the study area.

Preliminary field work has been initiated for wetlands and waters of the U.S. Tidal wetlands, including creeks, ponds, and estuarine emergent wetlands, are present throughout the study corridor. The project will be designed to minimize wetland impacts to the maximum extent practicable. Coordination will occur with the U.S. Army Corps of Engineers (USACE), Charleston District and South Carolina Department of Health and Environmental Control (SCDHEC) Office of Ocean and Coastal Resource Management (OCRM) as the project continues.

In accordance with Section 7 of the *Endangered Species Act*, a database search and field survey was conducted in September 2014 for Federally-protected species. Biologists identified suitable habitat for the Loggerhead sea turtle (*Caretta caretta*), Atlantic sturgeon (*Acipenser oxyrinchus*), Wood stork (*Mycteria americana*), and Florida manatee (*Trichechus manatus*). A



Page 2 of 2
June 23, 2015

raptor nest was identified near the eastern project termini, next to the eastbound lane of U.S. 21. No signs of use or activity have been observed at the nest, which was monitored monthly between September 2014 and May 2015. In accordance with the *Migratory Bird Treaty Act*, biologists surveyed the existing bridge for nests; no nests were observed. Coordination will occur with the U.S. Fish and Wildlife Service and NOAA National Marine Fisheries Service as the project continues. An assessment of essential fish habitat in accordance with the *Magnuson-Stevens Act* will also occur and findings coordinated with the NOAA National Marine Fisheries Service.

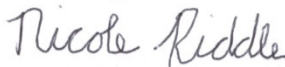
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As an integral part of the environmental process, the SCDOT is soliciting input from agencies and individuals concerning the potential social, economic, and environmental impacts of the proposed project on the area. To ensure that issues of the proposed project are fully evaluated, the SCDOT requests your written response concerning any beneficial or adverse impacts of the project relating to the interest of your agency. The SCDOT looks forward to receiving your comments on the project within 30 days of the receipt of this letter. Comments should be addressed to the following:

Mr. Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29201

Your expeditious handling of this notice will be appreciated. Should you have any questions, please contact me at (803) 737-1396.

Sincerely,



sd

Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation

EC: James (Jae) H. Mattox, III, P.E., SCDOT Program Manager
Blair Wade, HDR Project Manager

Enclosures

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
Seventh Coast Guard District

909 SE 1st Ave. (Rm432)
Miami, FL 33131
Staff Symbol: (dpb)
Phone: 305-415-6740
Fax: 305-415-6763
Email: jennifer.n.zercher@uscg.mil

16475/272
Serial: 42
August 17, 2015

Mr. J. Shane Belcher
Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201

Mr. Belcher,

In reference to your letter dated August 13, 2015 requesting the Coast Guard participate as a cooperating agency in the environmental review process for the proposed U.S. 21 Bridge Replacement Project over the Harbor River, I as the Coast Guard Seventh District Bridge Branch representative acknowledge receipt of and accept the invitation to be a cooperating agency.

The Coast Guard will be a cooperating agency on the U.S. 21 Harbor River project in accordance with 40 CFR 1501.6 and as such provide comments concerning proposed bridges over navigable waterways of the United States that fall within the project corridor.

If you have any questions or concerns please call me at (305) 415-6740 or email jennifer.n.zercher@uscg.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Zercher", with a long horizontal line extending to the right.

JENNIFER N ZERCHER
Federal Permitting Agent
Bridge Management Specialist
U.S. Coast Guard

Copy: Ms. Heather Robbins, SCDOT NEPA Division Manager (via email)
Mr. Chad Long, SCDOT NEPA Coordinator, RPG 1 (via email)
Mr. Jae Mattox, SCDOT Program Manager (via email)

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Tuesday, July 14, 2015 8:42 AM
To: Wade, Blair; Long, Chad C.
Subject: FW: US 21 Sea Island Pkwy Bridge project
Attachments: BPQ FORMAT.doc

Follow Up Flag: Follow up
Flag Status: Flagged

-----Original Message-----

From: Zercher, Jennifer N CIV [<mailto:Jennifer.N.Zercher@uscg.mil>]
Sent: Tuesday, July 14, 2015 8:11 AM
To: Riddle, Nicole L.
Subject: US 21 Sea Island Pkwy Bridge project

Good morning Ms. Riddle,

I have a few questions with regards to the Letter of Intent email that I responded to on July 7, 2015. Will the bridge be replaced with another swing bridge or are the plans for a different type? If the design is going to change it would be beneficial to coordinate in the early stages of the project to what type of structure the Coast Guard would consider reasonably permissible. A navigation study would need to be completed as well as the attached Bridge Project Questionnaire to assist the Coast Guard in the determination. The project will still require a Coast Guard Bridge Permit.

If you have any questions, please let me know.

Respectfully,
Jennifer Zercher
Bridge Management Specialist
U.S. Coast Guard District 7 Bridge Branch
909 SE 1st Ave Ste 432
Miami FL 33131-3050
PH: 305.415.6740

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Thursday, July 09, 2015 10:35 AM
To: Wade, Blair
Cc: Long, Chad C.
Subject: FW: SCDOT Letter of Intent for US 21 over Harbor River Beaufort County SC
Attachments: Bridge Application Guide2011.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

See comment below.

-----Original Message-----

From: Zercher, Jennifer N CIV [<mailto:Jennifer.N.Zercher@uscg.mil>]
Sent: Tuesday, July 07, 2015 2:04 PM
To: Riddle, Nicole L.
Subject: SCDOT Letter of Intent for US 21 over Harbor River Beaufort County SC

Good afternoon Ms. Riddle,

The proposed bridge replacement will require a Coast Guard Bridge Permit. Please reference the attached Application Guide when you are ready to submit the bridge application. Portions of the application guide may not be applicable to your project. Section 2.C. Environmental Documentation Requirements is the most often overlooked section of the guide, prior to the issuance of a Coast Guard Bridge Permit, environmental documentation must be completed.

If you have questions, please give me a call.

I look forward to working with you on this project.

Respectfully,
Jennifer Zercher
Bridge Management Specialist
U.S. Coast Guard District 7 Bridge Branch
909 SE 1st Ave Ste 432
Miami FL 33131-3050
PH: 305.415.6740

-----Original Message-----

From: Riddle, Nicole L. [<mailto:RiddleNL@scdot.org>]
Sent: Tuesday, June 23, 2015 12:54 PM
To: Parker, G. Clifton; Glover, Samuel; Rozier, Jim; berryre@dhec.sc.gov; TomDavis@scsenate.gov; CAMPSEN@scsenate.org; westonnewton@schouse.org; CurtisBrantley@schouse.gov; ShannonErickson@schouse.gov; BillHerbkersman@schouse.gov; KennethHodges@schouse.gov; AndyPatrick@schouse.gov; sanforcc@dhec.sc.gov; michael_allen@nps.gov; williabr@dhc.sc.gov; psommerville@bcgov.net; wmcbride@bcgov.net; rmcftee@bcgov.net; gkubic@bcgov.net; erniewilson@fipsd.org; generalmanager@frippislandliving.com; manager@harborislandoa.com; billyk@islc.net; diane.leone@sc.usda.gov; wprokop@cityofbeaufort.org; mcconney.ramona@epa.gov; laycock.kelly@epa.gov; travis.hughes@usace.army.mil; elizabeth.williams@usace.army.mil; stephen.a.brumagin@usace.army.mil; Larry.Knightner@hud.gov; emjohnson@scdah.state.sc.us; leader@sc.edu; MixonG@dnr.sc.gov; daviss@dnr.sc.gov; PerryB@dnr.sc.gov; Mark_Caldwell@fws.gov; prestohs@dhec.sc.gov; wilsonde@dhec.sc.gov; giffinma@dhec.sc.gov; reecemc@dhec.sc.gov; neeldg@dhec.sc.gov; sirondl@dhec.sc.gov; hathcoam@dhec.sc.gov; brownrj@dhec.sc.gov; ROBERTLN@dhec.sc.gov; shealyrg@dhec.sc.gov; dparrish@scprt.com; rbuxton@schac.sc.gov; bhitt@sccommerce.com; mlybrand@scda.sc.gov; BAAnderson@budget.sc.gov; ben@scwf.org;

Hnicholson@scfc.gov; Lawton, Emily - FHWA; kurt.henning@sierraclub.org; andrea.marks@sierraclub.org; mrobertson@tnc.org; Dragon, Barry CIV; wenonahh@ccppcrafts.com; tylehowe@nc-cherokee.com; lstopp@unitedkeetoowahband.org; Grace@scnhc.com; jack@tillersantiques.com; cmarks@nwtf.net; Jaclyn.Daly@noaa.gov; Keith Hanson - NOAA Affiliate (keith.hanson@noaa.gov)
Cc: Blair.Wade@hdrinc.com

Subject: SCDOT Letter of Intent for US 21 over Harbor River Beaufort County SC

June 23, 2015

Electronic Correspondence - In an effort to save resources and expedite delivery you are receiving this document in an electronic format. Please consider the environment before printing.

RE: LOI for the Proposed U.S. 21 Bridge Replacement over Harbor River; Beaufort County, South Carolina.

Dear Sir/Madame:

Please see the attached Letter of Intent (LOI) and project location map. The South Carolina Department of Transportation (SCDOT) is soliciting feedback from agencies and individuals concerning the potential impacts of the proposed bridge replacement of U.S. 21 (Sea Island Parkway) over Harbor River. Please mail or email any comments, questions, or concerns to SCDOT by July 23, 2015.

If you need additional information, please let me know. You may contact me at 803-737-0841 or via e-mail at RiddleNL@scdot.org

Sincerely,

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)

Environmental Services Office

South Carolina Department of Transportation

O: 803-737-0841 C: 803-351-8480

**U.S. Department of
Homeland Security**

**UNITED STATES
COAST GUARD**



Commander
United States Coast Guard
Seventh District

909 S. E. 1st Avenue (Rm 432)
Miami, FL 33131
Staff Symbol: (dpb)
Phone: (305) 415-6740
Fax: (305) 415-6763
Email: jennifer.n.zercher@uscg.mil

16450
February 8, 2016

William "Tyke" Redfearn III, PE
SCDOT / Design-Build
955 Park Street, Room 421
Columbia, SC 29202-0191

Dear Mr. Redfearn:

In December 2015, the U.S. Coast Guard received a draft copy of the Navigation Study for the US 21 (Sea Island Parkway) Bridge Replacement project over Harbor River, Beaufort County, South Carolina. This report was prepared by the applicant (SCDOT) and their consultants (HDR, Inc. /F&ME) using the USCG Bridge Program Reasonable Needs of Navigation White Paper as guidance. Since then a final copy of the Navigation Study was given to the Coast Guard for review on 1/26/2016.

The SCDOT is evaluating the construction of both a fixed span bridge and a new moveable bridge. US 21 Bridge is a 2,851-foot long bridge over the Harbor River constructed in 1939. The existing bridge includes a 170-foot long, 76-year-old metal truss swing span. The vertical navigational clearance is 15 feet when the swing span is closed. The horizontal navigational clearance is 60 feet.

To advance the NEPA process, we have no objections to SCDOT developing alternative designs using the minimum navigational clearances determined by the Navigation Study. The minimum vertical clearance at Mean High Water (MHW) was determined to be 65 feet and a minimum horizontal clearance was determined to be 120 feet between the bridge piers normal to the axis of the channel. This letter does not constitute final approval by the Coast Guard. A Coast Guard Bridge Permit will be required for approval of plans and location of the proposed bridge project.

If you have any questions or concerns, please contact me at jennifer.n.zercher@uscg.mil or (305)415-6740.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Zercher", with a stylized flourish at the end.

JENNIFER N. ZERCHER
Bridge Management Specialist
U.S. Coast Guard

eCopy: J. Shane Belcher, FHWA Environmental Coordinator
James (Jae) H. Mattox, III, P.E., SCDOT
Chad Long, NEPA Coordinator/Archeologist
Michael Darby, P.E., HDR Project Manager

Wade, Blair

From: Long, Chad C. <LongCC@scdot.org>
Sent: Thursday, March 17, 2016 1:50 PM
To: Wade, Blair; Redfearn, Tyke
Subject: FW: US 21 Bridge Replacement over the Harbor River

fyi

-----Original Message-----

From: Zercher, Jennifer N CIV [<mailto:Jennifer.N.Zercher@uscg.mil>]
Sent: Thursday, March 17, 2016 1:01 PM
To: Belcher, Jeffery - FHWA
Cc: Long, Chad C.
Subject: RE: US 21 Bridge Replacement over the Harbor River

Good afternoon Shane,

The Coast Guard does not need to be considered when developing the MOA. We will adopt the final MOA that is developed.

Thanks and Happy St. Patrick's Day,

Jennifer

-----Original Message-----

From: Jeffrey.Belcher@dot.gov [<mailto:Jeffrey.Belcher@dot.gov>]
Sent: Thursday, March 17, 2016 12:38 PM
To: Zercher, Jennifer N CIV
Cc: LongCC@scdot.org
Subject: [Non-DoD Source] US 21 Bridge Replacement over the Harbor River

Jennifer,

I left you a message but wanted to follow-up with an e-mail. As you know the US 21 bridge is eligible for the National Register of Historic Places (NRHP) and the project will have an adverse effect due to the removal of the bridge. We are in the process of developing a memorandum of agreement (MOA) with the SHPO to address the impacts for the loss of the bridge. We would like to know if USCG would need to be a full signatory to that MOA or a concurring party only? Once we get the draft MOA put together we'll send you a copy for review. Also, the bridge has been advertised for alternative use per our regulations regarding historic bridges. The advertisement is attached for your files. Any questions please let us know.

Thanks,

J. Shane Belcher

Environmental Coordinator

Federal Highway Administration

1835 Assembly Street, Suite 1270

Appendix A-2

US Army Corps of Engineers

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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
CHARLESTON, SOUTH CAROLINA 29403-5107

March 15, 2016

Regulatory Division

Mr. Sean Connolly
SC Department of Transportation
Post Office Box 191
Columbia, South Carolina 29202-0191

RECEIVED
MAR 18 2016
Environmental Management
SCDOT

Dear Mr. Connolly:

This is in response to your letter which was received on August 3, 2015, requesting a Preliminary Jurisdictional Determination (Preliminary JD), on behalf of SC Department of Transportation, for a 339 acre project area, located along Highway 21 (Sea Island Parkway) in Beaufort County, South Carolina. The project area is depicted on the plats (Sheet 1-9 of 9) prepared by Richard L. Wooten, Jr. entitled "Plat Showing the CRITICAL AREA ALONG US HIGHWAY 21 – SEA ISLAND PARKWAY OVER THE HARBOR RIVER LOCATED BETWEEN SAINT HELENA ISLAND AND HARBOR ISLAND IN BEAUFORT COUNTY SOUTH CAROLINA PREPARED FOR HDR, INC. S.C.D.O.T. PROJECT " and dated September 9, 2015, signed by Richard L. Wooten on February 17, 2016 and approved by OCRM on 22, 2016. A Preliminary JD is used to indicate that this office has identified wetlands and/or other waters on the property, and that in lieu of making an Approved Jurisdictional Determination, relies on the presumption of jurisdiction for the purpose of expediting the request for a Preliminary JD.

Based on OCRM approval, a review of aerial photography, topographic maps, National Wetlands Inventory maps, and soil survey information, and Wetland Determination Data Forms, it has been concluded that the boundaries shown on the referenced plat are an accurate representation of the wetlands and/or other waters found within the project area. The site in question contains 303.5 acres of federally defined wetlands and/or other waters.

This office should be contacted prior to performing any work in or around these wetlands and/or other waters. In order for a definitive determination of jurisdiction to be provided, you must submit a request for an Approved Jurisdictional Determination (Approved JD) rather than the presumption of jurisdiction provided in this letter. Enclosed is a Preliminary Jurisdictional Determination Form describing the areas in question and clarifying the option to request an Approved JD. You should also be aware that the areas identified as wetlands and/or other waters may be subject to restrictions or requirements of other state or local government entities.

Please note that since this is a Preliminary JD, it is subject to change and therefore is not an appealable action under the Corps of Engineers administrative appeal procedures defined at 33 CFR 331. If a permit application is forthcoming as a result of this Preliminary JD, a copy of this letter, as well as the plats should be submitted as part of the application. Otherwise, a delay could occur in confirming that a Preliminary JD was performed for the proposed project area.

This Preliminary JD is a non-binding action and as such has no expiration until it is superseded by an Approved JD. If you intend to request an Approved JD in the future, you are advised not to commence work in these wetlands and/or waters prior to receiving the Approved JD. Please note that the accuracy of the boundaries of wetlands and/or other waters shown on the attached plat are **valid for a period of five years from the date of this letter. Beyond five years from the date of this letter this office will consider those boundaries to be a reasonable approximation and therefore subject to change.**

This delineation/determination has been conducted pursuant to Corps of Engineers regulatory authority for the purpose of identifying the geographic extent of waters on the particular site identified in this request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

In future correspondence concerning this matter, please refer to SAC 2015-964. You may still need state or local assent. Prior to performing any work, you should contact the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management. A copy of this letter is being forwarded to them for their information.

Enclosed are two copies of the Preliminary Jurisdictional Determination Form signed by our office. Please sign both copies, retain one copy for your records and return one signed copy to this office in the enclosed self-addressed envelope.

If you have any questions concerning this matter, please contact Elizabeth Williams at 843-329-8044 or toll free at 1-866-329-8187.

Respectfully,

A handwritten signature in black ink, appearing to read 'Travis G. Hughes', with a long horizontal line extending to the right.

Travis G. Hughes
Chief, Regulatory Division

Enclosures:
Preliminary Jurisdictional Determination Form

Copy Furnished:

South Carolina Department of Health
and Environmental Control
Office of Ocean and Coastal
Resource Management
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): March 2, 2016

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Mr. Sean Connolly
SC Department of Transportation
Post Office Box 191
Columbia, South Carolina 29202-0191

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

SAC 2015-00964; US 21 Bridge Replacement over Harbor River

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE
WATERBODIES AT DIFFERENT SITES)**

State: SC County/parish/borough: Beaufort City: Beaufort
Center coordinates of site (lat/long in degree decimal format): Lat.
32.404239°N, Long. -80.452811°W.

Universal Transverse Mercator:

Name of nearest waterbody: Harbor River

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet: width (ft) and/or 64.7 acres.

Cowardin Class: Riverine

Stream Flow:

Wetlands: 238.8 acres.

Cowardin Class: Emergent

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: 303.5

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: August 2015, March 2016

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps:

☐ Corps navigable waters' study:

☐ U.S. Geological Survey Hydrologic Atlas:

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name:USGS Saint Helena Sound Quad.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation:SC NRCS Beaufort County.

☒ National wetlands inventory map(s). Cite name:St. Helena.

☐ State/Local wetland inventory map(s):

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

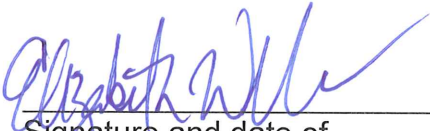
☐ Photographs: ☐ Aerial (Name & Date):

or ☐ Other (Name & Date):

☐ Previous determination(s). File no. and date of response letter:

☒ Other information (please specify):Critical Area Approval from OCRM 2/22/16.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.



Signature and date of
Regulatory Project Manager
(REQUIRED)

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining
the signature is impracticable)

Critical Area	Acres	Latitude	Longitude	Cowardin Class	Class of Aquatic Resource
A (MARSH)	3.7	32.41197383	-80.47842009	E2EM1	Section 10 – Tidal; OCRM Critical Area
A (TOW)	3.6	32.411002	-80.476217	E1UB	Section 10 – Tidal; OCRM Critical Area
A-1	0.7	32.41074549	-80.47609309	E2EM1	Section 10 – Tidal; OCRM Critical Area
B	0.5	32.4145454	-80.47767666	E2EM1	Section 10 – Tidal; OCRM Critical Area
C	0.8	32.407836	-80.46626	E1UB	Section 10 – Tidal; OCRM Critical Area
D (MARSH)	1	32.407836	-80.46626	E2EM1	Section 10 – Tidal; OCRM Critical Area
D (TOW)	1.8	32.402387	-80.45006	E1UB	Section 10 – Tidal; OCRM Critical Area
D-1	0.4	32.401143	-80.448704	E1UB	Section 10 – Tidal; OCRM Critical Area
E	4.3	32.4007206	32.40071143	E2EM1	Section 10 – Tidal; OCRM Critical Area
E-1	0.4	32.40080889	-80.44353454	E1UB	Section 10 – Tidal; OCRM Critical Area
F	0.5	32.40175555	-80.44399212	E1UB	Section 10 – Tidal; OCRM Critical Area
G	0.8	32.40249724	-80.44472851	E2EM2	Section 10 – Tidal; OCRM Critical Area
P	173.6	32.40908739	-80.46664588	E2EM1	Section 10 – Tidal; OCRM Critical Area
R	3.5	32.40218901	-80.4504465	E2EM1	Section 10 – Tidal; OCRM Critical Area
S	0.1	32.40107656	-80.44876436	E2EM1	Section 10 – Tidal; OCRM Critical Area
T	50.6	32.40149101	-80.44665186	E2EM1	Section 10 – Tidal; OCRM Critical Area
U	0.05	32.411368	-80.46814	E1UB	Section 10 – Tidal; OCRM Critical Area
V	0.1	32.413187	-80.473422	E1UB	Section 10 – Tidal; OCRM Critical Area
RIVER	57	32.404607	-80.453129	E1UB	Section 10 – Tidal; OCRM Critical Area

091015 ACE MEETING NOTES

Old Business - Clements Ferry

- phases made due to Right of Way Acquisition
- ICA is updating drawings

New Business

- General Permit will expire 8/1/2016
- will begin discussion with the Corps
- no emergency capabilities

US 21 Bridge over Harbor River – Beaufort County

- plan is to continue collecting data
- US Coast Guard requires new bridge to meet needs of the majority of users; questionnaire should be submitted after accurate reflection of vessel traffic/users is determined
- US Coast Guard mentioned fixed structure would require additional length/span; structure type and length is based on navigational survey
- NMFS supports northern alignment
- large title creeks, southern alignment all cause issue
- possible recommendation/alternative, do a 65 foot investigation north

Charleston County SC 174

Maintenance process:

- process is a one (1) page form explaining scope of work, pictures of areas to be repaired are attached to the form
- will need substantial justification why a retaining wall is being put where it is; looks like more than maintenance & repair
- plan is in place if failure after open cutting the road

EFH Assessment:

- indicates form being submitted on behalf of Federal Highways
- Keith requested we send him an email, copy everyone on correspondence since FHWA is not involved
- need an estimate on timeframe

Appendix A-3

National Oceanic and Atmospheric Administration National Marine Fisheries – EFH Coordination

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UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

August 7, 2015

F/SER47:KH/pw

(Sent via Electronic Mail)

Mr. Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29201

Attention: Nicole Riddle

Dear Mr. Long:

NOAA's National Marine Fisheries Service (NMFS) submits the following response to the request by the South Carolina Department of Transportation (SCDOT) and Federal Highway Administration (FHWA), dated June 23, 2015, for scoping comments on the draft Environmental Assessment (EA) for the proposed U.S. 21 (Sea Island Parkway) bridge replacement over Harbor River in Beaufort County (SCDOT PIN: P026862). Sea Island Parkway is a two-lane highway providing the only vehicle access from St. Helena Island to Harbor Island, Hunting Island State Park, and Fripp Island. The SCDOT views the bridge as structurally deficient and functionally obsolete. While the SCDOT and FHWA have not yet selected an alignment for the new bridge, it likely will parallel and be in close proximity to the existing bridge. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the following comments and recommendations are provided pursuant to authorities of the Fish and Wildlife Coordination Act (FWCA) and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Essential Fish Habitat in the Project Area

On July 13, 2015, NMFS biologists and representatives from SCDOT visited the area of the proposed bridge. The area includes high quality tidal salt marsh habitat, specifically estuarine emergent wetlands, intertidal non-vegetated flats, tidal creeks, oyster reef/shell, and unconsolidated bottom. The fishery management plans from the South Atlantic Fishery Management Council (SAFMC) with EFH designations most applicable to this project are the plans for penaeid shrimp and the snapper-grouper complex. Also, please note the fishery management plan for the snapper-grouper complex includes oyster/shell habitat as a Habitat Area of Particular Concern (HAPC). HAPCs are a subset of EFH that are either rare, particularly susceptible to human-induced degradation, especially important ecologically, or located in an environmentally stressed area. The SAFMC provides additional information on EFH for federally managed species in Volume IV of the *Fishery Ecosystem Plan of the South Atlantic Region*¹.

¹ Available at <http://safmc.net/EcosystemLibrary/FEPVolumeIV>



The waters of the Harbor River, the tidal creeks connected to it, and the surrounding coastal marsh also serve as nursery and forage habitat for other species, such as red drum (*Sciaenops ocellatus*), black drum (*Pogonias cromis*), Atlantic menhaden (*Brevoortia tyrannus*), and blue crab (*Callinectes sapidus*). Many of these species are prey for other fish managed under the Magnuson-Stevens Act, such as mackerels, snappers, groupers, billfish, and sharks. Red drum is an important state-managed fishery, and estuarine wetlands within the project area provide habitat necessary for development and survival of several life stages of red drum. The NMFS recommends the EA address these species as well as those managed under the Magnuson-Stevens Act.

Comments on Potential Effects to EFH and Federally Managed Fisheries

The NMFS recommends SCDOT construct the new bridge in the same footprint as the existing bridge because this approach would require the least amount of new impacts to EFH. If this approach is proven impracticable, the NMFS recommends SCDOT construct the new bridge northward of the existing bridge. Marsh vegetation on the northern side of U.S. 21 is less dense than vegetation on the southern side, and intertidal flats on the northern side of the creek appear to contain debris and spoils from the construction of the original roadway. A northern alignment would also avoid impacts to the numerous small tidal creeks located south of the existing bridge and a large tidal creek on the eastern end of the project boundary. The project should avoid the oyster reef the South Carolina Department of Natural Resources (SCDNR) South Carolina Oyster Restoration and Enhancement (SCORE) program built north of the existing bridge. All oyster reefs should be spanned to the maximum extent practicable or relocated. Lastly, the NMFS requests the EA include a detailed alternatives analysis for the new bridge and for the analysis to include detailed information on the type, amount, and site-specific function of wetlands directly and/or indirectly impacted by each alternative.

The NMFS recommends SCDOT avoid construction practices that smother marsh vegetation. The NMFS has documented the impacts to salt marsh vegetation from barges and barge mats lasting longer than three years at Shem Creek Park and the Folly River Bridge. These and similar projects should be reviewed for adjusting best management practices to improve impact forecasts.

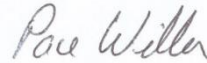
The NMFS prefers onsite mitigation and restoring existing bridge approach sections to salt marsh habitat could contribute to satisfying onsite mitigation. During the site visit, the NMFS and SCDOT discussed mitigating through the SCDNR SCORE program as one component of a larger mitigation plan, should there be unavoidable impacts to oyster reef/shell habitat. The NMFS would be happy to assist SCDOT and FHWA by providing preliminary reviews of the mitigation plan during its development.

The Magnuson-Stevens Act requires federal agencies to consult with NMFS regarding actions that may adversely affect EFH. Based on the information provided, NMFS believes adverse impacts to EFH are likely and the project requires a detailed EFH assessment. The level of detail should be commensurate with the complexity and magnitude of the potential adverse effects of the action. The SCDOT and FHWA may provide the EFH assessment as a stand-alone document or within an EA. In either case, the NMFS recommends communications occur during

development of the EFH assessment to ensure all issues are adequately covered and to avoid unnecessary delays in final evaluations.

The NMFS appreciates the opportunity to provide these comments. Please direct related questions or comments to the attention of Keith M. Hanson at our Charleston Area Office, 219 Fort Johnson Road, Charleston, South Carolina 29412-9110, Keith.Hanson@noaa.gov or by phone at (843)762-8622.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc: SCDOT, LongCC@scdot.org, RiddleNL@scdot.org
DHEC, trumbumt@dhec.sc.gov
SCDNR, DavisS@dnr.sc.gov
EPA, Laycock.Kelly@epa.gov
FWS, Karen_Mcgee@fws.gov
F/SER4, David.Dale@noaa.gov
F/SER47, Jaclyn.Daly@noaa.gov, Keith.Hanson@noaa.gov

**US 21 over Harbor River
EFH Field Coordination Meeting**

SCDOT/HDR/Edwards-Pitman Environmental

July 13, 2015

Attendance: Nicole Riddle (SCDOT), Jaclyn Daly (NOAA NMFS), Keith Hanson (NOAA NMFS), Blair Wade (HDR), Collin Lane (EPEI), and Lee Williams (EPEI)

Meeting Notes

Field delineations & habitat

- EFH Assessment should use the habitat types based off of NOAA EFH guidelines
 - Can take habitats from the SCDOT EFH screening form
- NOAA-NMFS prioritizes Habitat Areas of Particular Concern (HAPCs) – includes oyster beds. We need clarification from NOAA-NMFS on additional HAPCs relevant to Harbor River.
 - “Shell hash” was mentioned as a potential shrimp habitat.
- Be sure to delineate out the non-vegetated mud flats from the vegetated areas, as impacts to mud flats are preferred over vegetated areas.
- Locate shellfish beds of 1-m² or greater.
 - The smaller scattered oysters can just be included in the habitat discussions
- A shellfish bed restoration project was noted on northwest side of existing bridge. Contact Nancy Hadley with SCDNR to find out more information about the shellfish bed.
- The open water tidal areas near Harbor Island community can be categorized as man-made canals

Avoidance/minimization/alternatives

- Avoid the tidal creek on the southeast side of the existing bridge. It flows very close to existing causeway which would be a concern to any shifts in this direction.
- NOAA-NMFS places higher value on *Spartina* vegetated marsh than unvegetated flats – when considering alternatives, avoid and minimize impacts to *Spartina* vegetated marsh
 - NOAA-NMFS expressed a preference for a northern alignment due to more unvegetated mud flats to the north and to avoid *Spartina* vegetated marshes in southwest quadrant of project and the tidal creek in southeast quadrant of project.
- Avoid placing bridge pilings next to shellfish beds to minimize scour/sedimentation in beds
- SCDOT prepared a study of how different bridge pile/bent types affect shading underneath bridges – Nicole Riddle to provide a copy of study.
- NOAA-NMFS asked about whether the causeway would be removed. Unknown at this time. SCDOT may want to keep causeway for future use. SCDOT does not want to use causeway removal as mitigation for EFH because of monitoring requirements; however, would like to see if the causeway could be removed anyway.
- Mitigation still be calculated using the USACE SOP
- NOAA-NMFS has different calculations and success criteria for shellfish bed mitigation – need to obtain from NOAA-NMFS

- Discussion of construction practices:
 - Project is design-build, so specific construction practices will not be known during the Environmental Assessment. The EFH Assessment should present range of impacts associated with varying construction practices. NOAA-NMFS will consult based on worst-case scenario. NOAA-NMFS suggested that if worst case scenario is presented in the EFH Assessment, re-opening the EFH process would not be necessary once the project is transferred to the design-build team, unless something is discovered during the design process that would require a shift to an alternative not discussed that would result in worse impacts or substantially different impacts.
 - We need to consider long-term effects of construction barges on marsh vegetation – NOAA-NMFS has documented long-term impacts on recovery of salt marsh grasses on similar bridge projects.

EFH Assessment documentation

- EFH Assessment should indicate future permitting mechanisms for project – i.e. Individual Permit – so they know of future review opportunities
- EFH Assessment should not include detailed discussion of project purpose and need or general fisheries information. The Assessment should be specific to the Harbor River project and impacts to EFH.
- If EFH cannot be avoided during alternatives analysis, SCDOT needs a detailed explanation of why - i.e. geotechnical issues.
- EFH Assessment should include detailed descriptions of habitat types at Harbor River, with photographs and mapping.
 - However, do not add much discussion on biological function of the habitats.
 - Discuss only what is there (species considered for EFH and habitats being utilized) and how they would be impacted. The discussion on each species (i.e. white shrimp) at the beginning of the document could potentially be a table summary.

Section 7 and Marine Mammal Act

- The BA should address how the project will comply with MMA.
 - The BA should incorporate data about bottlenose dolphin populations.
 - The BA should discuss how construction methods will impact marine mammals – i.e. pile driving techniques.
 - Obtain acoustics policy from NOAA-NMFS.
- Sturgeon moratorium – information from Nicole Riddle: NOAA-NMFS will allow work in areas as long as there is no standing water (during low tide). Pile driven “spudding” of barges is usually not permitted during moratorium, but gravity spudding has recently been allowed.

Future coordination

- NOAA NMFS will be sending a follow-up letter with more information on the habitat types that they identified during the field visit.
- NOAA NMFS does not require any more coordination from us until the EFH Assessment, but are more than happy to help and provide guidance as the design progresses and if the project limits change.
- Nicole offered to help review pieces of the EFH Assessment since it will likely progress before project design.

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Thursday, November 19, 2015 12:34 PM
To: Wade, Blair
Subject: FW: FW: US 21 Harbor River EFH Boundaries for Review

They had a few comments. I almost mentioned the top one myself but left that to them. Let me know if you have any questions about these comments

From: Keith Hanson - NOAA Affiliate [<mailto:keith.hanson@noaa.gov>]
Sent: Thursday, November 19, 2015 12:07 PM
To: Riddle, Nicole L.
Cc: Jaclyn.Daly@noaa.gov
Subject: Re: FW: US 21 Harbor River EFH Boundaries for Review

Hi Nicole,

We took a look at the shape files and had a few issues:

1. Two tidal creeks on the south side of US-21 and a very small piece of one tidal creek on the north side of US-21 are characterized as unconsolidated bottom (pink coloration). These areas should be accurately characterized as tidal creeks (blue coloration) instead of unconsolidated bottom.
2. There is an area on the east bank of the Harbor River, south of US-21 that is characterized as shell bank (about 0.72 acres), however, there appears to be a patch of estuarine emergent vegetation sized approximately 0.09 acres within that area.

The remaining polygons appear to accurately characterize the habitats.

Thanks,
Keith

On Tue, Nov 17, 2015 at 8:53 AM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

Jaclyn and Keith, I have attached the KMZ shape files of the EFH boundaries the consultant delineated for US 21 over Harbor river. Could y'all take a look and let us know if we missed anything. We just want us to get this right the first time. We would appreciate this pretty soon thanks! As always give me a call if you have any questions.

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)

Environmental Services Office

South Carolina Department of Transportation

O: [803-737-0841](tel:803-737-0841) C: [803-351-8480](tel:803-351-8480)

--

Keith M. Hanson

Contractor, Jamison Professional Services, Inc.
Environmental Specialist, NOAA - National Marine Fisheries Service
Southeast Regional Office - Habitat Conservation Division
219 Fort Johnson Road
Charleston, SC 29412
Office: 843-762-8622
Cell: 440-532-9327
Keith.Hanson@noaa.gov

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Monday, November 30, 2015 2:40 PM
To: Wade, Blair
Subject: FW: FW: FW: US 21 Harbor River EFH Boundaries for Review

Looks like we need to capture the vegetated areas as veg even though it grows through the shell.

From: Keith Hanson - NOAA Affiliate [<mailto:keith.hanson@noaa.gov>]
Sent: Monday, November 30, 2015 2:29 PM
To: Riddle, Nicole L.
Subject: Re: FW: FW: US 21 Harbor River EFH Boundaries for Review

Hi Nicole,

Accurately capturing the habitat types/acreages that are "on-the-ground" today will generate the best maps and overall analysis, which will lead to the most comprehensive evaluation of potential impacts. The dominant habitat type in some of that area appears to be estuarine emergent wetland and should be classified as such.

Thanks,
Keith

From: Wade, Blair [<mailto:Blair.Wade@hdrinc.com>]
Sent: Thursday, November 19, 2015 4:18 PM
To: Riddle, Nicole L.
Cc: Lee Williams
Subject: FW: FW: US 21 Harbor River EFH Boundaries for Review

Nicole,

See Lee's email below and the attachments.

Thanks,

Blair

Blair Goodman Wade, ENV SP

D [843.414.3740](tel:843.414.3740) **M** [843.693.9938](tel:843.693.9938)

hdrinc.com/follow-us

From: Lee Williams [<mailto:lwilliams@edwards-pitman.com>]
Sent: Thursday, November 19, 2015 4:09 PM
To: Wade, Blair
Subject: RE: FW: US 21 Harbor River EFH Boundaries for Review

Hey Blair,

I have a question regarding comment #2. This seems to me a very complicated area. Keith is correct that there is a vegetated area within the shell bank that we have mapped, but the veg is growing up through the shells (see attached). But before I reclassified this small area as emergent veg, I wanted to run it by you. In terms of EFH, I'm not sure if one would "trump" the other.

Thanks,

Lee W.

--

Keith M. Hanson

Contractor, Jamison Professional Services, Inc.
Environmental Specialist, NOAA - National Marine Fisheries Service
Southeast Regional Office - Habitat Conservation Division
219 Fort Johnson Road
Charleston, SC 29412
Office: 843-762-8622
Cell: 440-532-9327
Keith.Hanson@noaa.gov

Wade, Blair

From: Keith Hanson - NOAA Affiliate <keith.hanson@noaa.gov>
Sent: Tuesday, May 03, 2016 10:03 AM
To: Wade, Blair
Subject: Re: US 21 Harbor River Bridge Replacement Agency Site Visit - SCDOT Project ID P026862

Hi Blair,

Thanks for this. Just to be clear, it would be our Protected Resources Division that would be responsible for any in-water work windows (moratoria).

Additionally, any oyster impacts, including those to the clusters on the existing bridge piles must be compensated for.

Hope all is well and please contact me if you need anything at all.

Best,
Keith

On Mon, May 2, 2016 at 10:13 AM, Wade, Blair <Blair.Wade@hdrinc.com> wrote:

Good morning,

Revised meeting minutes are attached for your files. We received revisions from Rob McFee, PE with Beaufort County clarifying his comments about the turn lanes.

Kind regards,

Blair

Blair Goodman Wade, ENV SP

[D 843.414.3740](tel:843.414.3740) [M 843.693.9938](tel:843.693.9938)

hdrinc.com/follow-us

From: Wade, Blair
Sent: Monday, April 25, 2016 12:27 PM
To: 'rmcfee@bcgov.net'; 'gkubic@bcgov.net'; 'dwilhelm@bcgov.net'; 'Jeffrey.Belcher@dot.gov'; 'Jaclyn.Daly@noaa.gov';

'keith.hanson@noaa.gov'; 'giffinma@dhec.sc.gov'; 'trumbumt@dhec.sc.gov'; 'vlewis@scprt.com'; 'dgambrell@scprt.com'; 'williabn@dhec.sc.gov'; 'MADLINGJ@dhec.sc.gov'; 'daviss@dnr.sc.gov'; 'christopher.d.mims@usace.army.mil'; 'laycock.kelly@epa.gov'; 'Mark_Caldwell@fws.gov'; 'ADaggett@scdah.sc.gov'; 'Long, Chad C.'; 'McGoldrick, Will'; 'Redfearn, Tyke'; P. E. James (Jae) H. Mattox III (mattoxjh@scdot.org); 'Williams, Elizabeth G SAC'; Darby, Michael M.; Carter, Brad; 'John.Z.Downing@uscg.mil'; Ruleman, Christopher L BOSN4; Olson, Sean W BM1; 'rstevens@scprt.com'; 'Kinton, Colin'; Burdette, Benjamin; Hutcherson, Phillip; 'Larson, Eric'; 'Anderson, Bobby'

Subject: US 21 Harbor River Bridge Replacement Agency Site Visit - SCDOT Project ID P026862

Hello everyone,

Thanks again for attending the site visit last week at Harbor River. Your comments and input are helpful as SCDOT moves forward with the Environmental Assessment. Meeting minutes are attached for your review and files. Please let me know if you have any changes or additions.

Kind regards,

Blair

Blair Goodman Wade, ENV SP

Sr. Environmental Planner/Project Manager

HDR

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North Charleston, SC 29405-8580
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Keith M. Hanson

Contractor, Jamison Professional Services, Inc.
Environmental Specialist, NOAA - National Marine Fisheries Service
Southeast Regional Office - Habitat Conservation Division
219 Fort Johnson Road
Charleston, SC 29412
Office: 843-762-8622
Cell: 440-532-9327
Keith.Hanson@noaa.gov

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Thursday, May 19, 2016 2:26 PM
To: Keith Hanson - NOAA Affiliate (keith.hanson@noaa.gov)
Cc: michelle.herrell@dot.gov; Belcher, Jeffery - FHWA; Jaclyn.Daly@noaa.gov
Subject: US 21 Bridge Replacement over Harbor River in Beaufort County EFH submittal
Attachments: Final EFH for US 21 over Harbor River Submitted to NMFS 2016.05.19.pdf

Keith,

SCDOT has plans to replace the bridge on US 21 over Harbor River in Beaufort county, SC. Attached is the EFH submittal. The South Carolina Department of Transportation (SCDOT) is submitting this packet on behalf of Federal Highway Administration (FHWA). Please provide a response by **June 7, 2015**. Let me know if you need any additional information or if you have any questions. Thanks!

Nicole Levinson Riddle
Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: 803-737-0841 C: 803-351-8480



UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

June 6, 2016

F/SER47:KH/pw

(Sent via Electronic Mail)

Mr. Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29201

J. Shane Belcher
Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, South Carolina 29201

Attention: Nicole Riddle

Dear Mr. Long and Mr. Belcher:

NOAA's National Marine Fisheries Service (NMFS) reviewed the Essential Fish Habitat (EFH) Assessment, dated May 2016, prepared by the South Carolina Department of Transportation (SCDOT) for the proposed U.S. Highway 21 (Sea Island Parkway) Bridge replacement over Harbor River in Beaufort County (SCDOT Project ID: P026862). In an email dated May 19, 2016, the SCDOT stated it was submitting the EFH Assessment on behalf of the Federal Highway Administration in conformance with the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The SCDOT's initial determination is the project would adversely impact EFH or federally managed fishery species. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the following comments and recommendations are provided pursuant to authorities of the Fish and Wildlife Coordination Act (FWCA) and the Magnuson-Stevens Act.

Description of the Proposed Project

The SCDOT proposes to replace the existing US 21 Bridge over Harbor River to correct structural and functional deficiencies and to upgrade the bridge and its approaches to current design standards. The existing bridge is approximately 2,851 feet long, 25 feet wide, and includes a 170-foot metal-truss swing-span over the navigation channel. The proposed bridge would be constructed approximately 65 feet north of the existing alignment and would be a fixed-span structure approximately 3,602 feet in length, 47 feet in width, and approximately 65 feet above Mean High Water over the navigation channel. The proposed bridge would include 28 bents, each supported by two 8-foot diameter columns installed using drilled shaft construction. A system of temporary work trestles approximately 3,800 feet in length and requiring approximately 370 steel piles would be used to construct the new bridge. Steel piles for the temporary work trestle and steel casings for drilled shafts would be installed using vibratory hammers. Barges would be used for work in deep-water areas and barges and timber mats may also be used in salt marsh habitat. The existing bridge would be demolished and removed upon completion of the new bridge. If blasting is required for any activities, the contractor would submit a blasting plan to the NMFS for review and further coordination. As this is a design-build project, numerous project elements and associated impacts may change during project development and construction.



Consultation History

The SCDOT has closely coordinated this project with the NMFS and other resources agencies, including meetings and site inspections. On July 13, 2015, NMFS biologists and representatives from SCDOT visited the area of the proposed project. By letter dated August 7, 2015, the NMFS provided scoping comments on the draft Environmental Assessment and recommended SCDOT construct the new bridge in the same footprint as the existing bridge to minimize impacts to EFH. If this were not feasible, the NMFS recommended SCDOT construct the new bridge northward of the existing bridge to avoid sensitive habitats. During interagency meetings on September 10, 2015, and January 14, 2016, numerous alignment alternatives were presented and discussed. On April 19, 2016, the NMFS attended an on-site interagency meeting to further analyze the site of the proposed project and reach agreement on the preferred alternative – Alternative 1B, new bridge approximately 65 feet north of the existing alignment.

Essential Fish Habitat in the Project Area

The site of the proposed project includes tidal salt marsh habitat, specifically estuarine emergent wetlands, intertidal non-vegetated flats, tidal creeks, oyster/shell, and unconsolidated bottom. The South Atlantic Fishery Management Council (SAFMC) identifies the two former habitats as EFH for penaeid shrimp, including white shrimp (*Litopenaeus setiferus*) and brown shrimp (*Farfantepenaeus aztecus*). Salt marshes are EFH because larvae and juveniles concentrate and feed extensively and shelter within these habitats. As a consequence, growth rates are high and predation rates are low, which makes these habitats effective nursery areas. SAFMC also identifies estuarine emergent vegetation, tidal creeks, oyster/shell, and unconsolidated bottom as EFH for estuarine-dependent species of the snapper-grouper complex. The fishery management plan for the snapper-grouper complex also includes oyster/shell habitat as a Habitat Area of Particular Concern (HAPC). HAPCs are a subset of EFH that are either rare, particularly susceptible to human-induced degradation, especially important ecologically, or located in an environmentally stressed area. The SAFMC provides additional information on EFH for federally managed species in Volume IV of the *Fishery Ecosystem Plan of the South Atlantic Region*¹.

The waters of the Harbor River, tidal creeks connected to it, and the surrounding coastal marsh also serve as nursery and forage habitat for other species, such as red drum (*Sciaenops ocellatus*), black drum (*Pogonias cromis*), Atlantic menhaden (*Brevoortia tyrannus*), and blue crab (*Callinectes sapidus*). Many of these species are prey for other fish managed under the Magnuson-Stevens Act, such as mackerels, snappers, groupers, billfish, and sharks. Red drum is an important state-managed fishery, and estuarine wetlands within the project area provide habitat necessary for several life stages of red drum.

Impacts to Essential Fish Habitat

The proposed project would permanently fill 3.032 acres of estuarine emergent wetlands, 0.059 acres of intertidal flats, 0.036 acres of tidal creek, and 0.036 acres of unconsolidated bottom. Additionally, the proposed project would temporarily clear 0.47 acres of estuarine emergent wetlands and temporarily fill 0.025 acres of estuarine emergent wetlands, intertidal flats, or oyster/shell habitat, or a combination of these habitats². The proposed project would also result in the permanent shading of 0.96 acres of estuarine emergent wetlands and removal of approximately 0.092 acres of oysters colonizing the 276 piles of the existing bridge. Filled or removed salt marsh habitats would not provide nursery and foraging habitat for fishery species and their prey. Additionally, because light energy drives the photosynthetic process, which in turn controls plant growth and survival, permanently shaded areas would have lower

¹ Available at <http://safmc.net/EcosystemLibrary/FEPVolumeIV>

² Habitat specific impacts would be determined by the design-build contractor's configuration of the temporary work trestle.

primary productivity and reduced vegetation compared to non-shaded areas. This reduction in vegetation can lead to sediment erosion and decreased diversity and densities of benthic prey species³.

Avoidance and Minimization

The SCDOT has taken several steps to avoid or minimize impacts to EFH from the proposed project including selecting Alternative 1B, which constituted the least impacts to EFH of the five build alternatives. Additionally, appropriate erosion and sedimentation control Best Management Practices (BMPs) would be installed, inspected, and maintained throughout all stages of construction in accordance with local and state stormwater guidelines. Furthermore, the design-build contractor may further minimize impacts to EFH by steepening side slopes on the bridge approaches or by replacing the proposed fill with flat slab bridge approaches. While the NMFS appreciates SCDOT's avoidance and minimization efforts, including the selection of a northern alignment, further avoidance and minimization measures appear practicable. The NMFS recommends reducing the amount of fill by extending the bridge to further span the marsh, using flat slab bridge approaches, steepening side slopes of approaches, or utilizing the existing causeway for the new approach sections, or a combination of these. The SCDOT has indicated the existing causeway would remain in place and portions of the causeway may be used for stormwater management. The NMFS believes removing portions of the existing causeway not used for stormwater management and restoring the areas to salt marsh are practicable impact minimization measures.

The NMFS also recommends avoiding any permanent or temporary impacts to oyster/shell habitat from the placement of fill, steel piles or casings, columns, timber mats, or other structures. Furthermore, the NMFS recommends SCDOT avoid construction practices that smother marsh vegetation. The NMFS has documented the impacts to salt marsh vegetation from barges and timber mats lasting longer than three years at Shem Creek Park and the Folly River Bridge. If barges and timber mats are used in salt marsh, temporary and permanent impact forecasts should be adjusted. Lastly, the SCDOT should conduct work affecting EFH during periods of low biological use (October 15 to January 31), to the extent practicable. Conducting in-water work, including installing steel piles and casings, during this period would minimize impacts to EFH, federally managed species, and their prey. Additionally, installing piles and casings during periods of low tide, when sediments are exposed, will further minimize turbidity, sedimentation and acoustic impacts.

Compensatory Mitigation

For unavoidable impacts to EFH from the proposed project, SCDOT indicated the contract would require development of an EFH Mitigation Plan in coordination with SCDOT and NMFS during the USACE permitting process. The SCDOT indicated the EFH Mitigation Plan may include causeway removal, living shorelines, or oyster bed restoration. The NMFS will assist SCDOT and the contractor by providing preliminary reviews of the mitigation plan during its development. The NMFS recommends all mitigation occur in the area of the proposed project and oyster restoration be one component of a larger mitigation plan.

EFH Conservation Recommendations

Section 305(b)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH Conservation Recommendations for any federal action or permit which may result in adverse impacts to EFH. Therefore, NMFS recommends the following to ensure the conservation of EFH and associated fishery resources:

- The bridge design should further avoid and minimize impacts to EFH by reducing the amount of permanent fill in salt marsh habitat. Suggestions for how this might occur are provided above.

³ Whitcraft, C.R. and L.A. Levin. 2007. Regulation of benthic algal and animal communities by salt marsh plants: Impact of shading. *Ecology* 88:904-917.


- The portions of the existing causeway not used for stormwater treatment or approach sections should be restored to salt marsh habitat by removing fill and grading the areas to match elevations in adjacent marsh where marsh vegetation occurs.
- The SCDOT should provide mitigation for the unavoidable impacts to EFH, including oyster restoration totaling at least 0.1 acre in size. Removal of the causeway and restoring the area to salt marsh habitat should be one component of the mitigation.

Section 305(b)(4)(B) of the Magnuson-Stevens Act and implementing regulation at 50 CFR Section 600.920(k) require the FHWA and SCDOT to provide a written response to this letter within 30 days of its receipt. If it is not possible to provide a substantive response within 30 days, an interim response should be provided to the NMFS. A detailed response then must be provided ten days prior to final approval of the action. The detailed response must include a description of measures proposed by the FHWA and SCDOT to avoid, mitigate, or offset the adverse impacts of the activity. If the response is inconsistent with an EFH conservation recommendation, a substantive discussion justifying the reasons for not following the recommendation must be provided.

In accordance with section 7 of the Endangered Species Act of 1973, as amended, it is the responsibility of the Federal Highway Administration to review and identify any proposed activity that may affect endangered or threatened species and their designated critical habitat. Determinations involving species under the NMFS jurisdiction should be reported to the NMFS Protected Resources Division at the letterhead address

The NMFS appreciates the opportunity to provide these comments. Please direct related questions or comments to the attention of Keith M. Hanson at our Charleston Area Office, 219 Fort Johnson Road, Charleston, South Carolina 29412-9110, Keith.Hanson@noaa.gov or by phone at (843)762-8622.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc: SCDOT, LongCC@scdot.org, RiddleNL@scdot.org
FHWA, Jeffrey.Belcher@dot.gov
DHEC, trumbumt@dhec.sc.gov
SCDNR, DavisS@dnr.sc.gov
EPA, Laycock.Kelly@epa.gov
FWS, Karen_Mcgee@fws.gov
F/SER4, David.Dale@noaa.gov
F/SER47, Keith.Hanson@noaa.gov

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Thursday, June 23, 2016 11:42 AM
To: Pace Wilber - NOAA Federal
Cc: Belcher, Jeffery - FHWA; trumbumt@dhec.sc.gov; Susan Davis; EPA Kelly Laycock; David Dale - NOAA Federal; Keith Hanson - NOAA Affiliate; Long, Chad C.; Charleston_regulatory@fws.gov; Long, Chad C.; Redfearn, Tyke; Wade, Blair; elizabeth.williams@usace.army.mil
Subject: RE: NMFS comments on Sea Island Parkway Bridge (SCDOT Project ID: P026862)
Attachments: Finalresponse letter to NMFS for US 21 over Harbor river.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Please find the attached letter to address EFH conservation recommendations for the proposed Bridge Replacement of US 21 over Harbor River in Beaufort County, SC. Please let me know if you have any further questions or comments.

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: 803-737-0841 C: 803-351-8480

From: Pace Wilber - NOAA Federal [<mailto:pace.wilber@noaa.gov>]
Sent: Monday, June 06, 2016 10:53 AM
To: Riddle, Nicole L.
Cc: Belcher, Jeffery - FHWA; trumbumt@dhec.sc.gov; Susan Davis; EPA Kelly Laycock; Karen_Mcgee@fws.gov; David Dale - NOAA Federal; Keith Hanson - NOAA Affiliate; Long, Chad C.
Subject: NMFS comments on Sea Island Parkway Bridge (SCDOT Project ID: P026862)

June 23, 2016

Ms. Virginia Fay
National Oceanic and Atmospheric Administration
National Marine Fisheries Service, Habitat Conservation Division
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505

Re: US 21 Bridge Replacement over the Harbor River in Beaufort County, SC: PIN P026862;
Response to NOAA-NMFS letter regarding conservation recommendations for EFH

Attention: Keith Hanson

Dear Ms. Fay:

The South Carolina Department of Transportation (SCDOT) in coordination with the Federal Highway Administration (FHWA) are issuing this joint response to your June 6, 2016 letter which included EFH Conservation Recommendations for the proposed bridge replacement of US 21 in Beaufort County, SC.

In response to your recommendation: *"The bridge design should further avoid and minimize impacts to EFH by reducing the amount of permanent fill in salt marsh habitat."*

SCDOT is developing this project as a Design-Build contract. The Design-Build Contractor will be responsible for final design of the bridge and approaches. As noted in the EFH Assessment, the contractor may further minimize impacts to EFH by steeping side slopes on the new bridge approaches (from 4:1 to 2:1), or replacing the proposed fill with flat slab bridge approaches. Design-Build procurement methods generally encourage further avoidance and minimization of impacts to wetlands and EFH so the contractor can avoid additional mitigation costs and permitting delays. SCDOT cannot commit to these minimization measures at this time, but NOAA-NMFS will have another opportunity for project review during final design and 404/401 permitting. When the proposals for the Design-build projects are submitted mitigation will likely be one of the criteria used to measure quality.

In response to your recommendation: *"The portions of the existing causeway not used for stormwater treatment or approach sections should be restored to salt marsh habitat by removing fill and grading areas to match elevations in adjacent marsh where marsh vegetation occurs."*

SCDOT is developing this project as a Design-Build contract. Once the contract is awarded the contractor will be responsible for securing a USACE permit for the project. During that process the contractor will be required to write an EFH mitigation plan; which could include steeping side slopes on the new bridge approaches (from 4:1 to 2:1), removing portions of the old causeway fill, or replacing the proposed fill with flat slab bridge approaches. The existing



causeway removal will be considered during that time.

In response to your recommendation: *"The SCDOT should provide mitigation for the unavoidable impacts to EFH, including oyster restoration totaling at least 0.1 acre in size. Removal of the causeway and restoring the area to salt marsh habitat should be on component of mitigation."*

As mentioned above, SCDOT is developing this project as a Design-Build contract. Once the contract is awarded the contractor will be responsible for securing a USACE permit for the project. During that process the contractor will be required to write an EFH mitigation plan. SCDOT also plans to work with the SCDNR SCORE program in order to mitigate for the 0.1 acre of impacts to oyster reefs.

We appreciate your agency's cooperation throughout the development of this project. Please let me know if you have any comments or concerns related to this response. I can be reached at (803) 737-0841.

Sincerely,



Nicole Riddle
EFH Coordinator

NR:bag

cc: NMFS, Keith Hanson
NOAA, David Dale
FHWA, Shane Belcher
USACE, Elizabeth Williams
SCDHEC, Tess Trumbull
SCDNR, Susan Davis
EPA, Kelly Laycock
FWS, Mark Caldwell
SCDOT: Chad Long
SCDOT: Tyke Redfern
HDR: Blair Wade

File: Env/NR

Wade, Blair

From: Long, Chad C. <LongCC@scdot.org>
Sent: Friday, August 26, 2016 3:08 PM
To: Wade, Blair
Cc: Redfearn, Tyke
Subject: FW: US-21

fyi

From: Long, Chad C.
Sent: Friday, August 26, 2016 10:29 AM
To: 'Keith Hanson - NOAA Affiliate'
Subject: RE: US-21

Keith,

Our responses to your questions are provided below. Please let us know if these commitments satisfy the NMFS's EFH conservation recommendations.

Is the SCDOT willing to commit to reducing the amount of permanent fill in salt marsh habitat from the currently proposed 3.032 acres using whichever methods deemed most appropriate by the SCDOT and it's contractor?

SCDOT will require the contractor to reduce the amount of permanent fill in salt marsh habitat from the currently proposed 3.032 acres.

Is the SCDOT willing to commit to removing some portion of the existing causeway and grading the areas to match elevations in adjacent marsh where marsh vegetation occurs? Causeway removal areas would be best identified by SCDOT and it's contractors, however, focusing on removing portions of the causeway nearest to the Harbor River first could provide the most value.

SCDOT will require the contractor to remove some portion of the existing causeway and grade the removal areas to match elevations in adjacent marsh where marsh vegetation occurs.

Is the SCDOT willing to commit to providing mitigation for the unavoidable impacts to EFH, including oyster restoration totaling at least 0.1 acre in size for the oysters that will be removed from the existing pilings?

SCDOT commits to mitigating for the unavoidable impacts to EFH (shellfish habitat) by implementing a mitigation plan that would restore at least 0.1 acre of oyster habitat.

Please let know if you have any questions or need additional information.

Regards,

Chad

From: Keith Hanson - NOAA Affiliate [<mailto:keith.hanson@noaa.gov>]
Sent: Thursday, August 25, 2016 2:31 PM
To: Long, Chad C.
Subject: US-21

Hey Chad,

NOAA's National Marine Fisheries Service (NMFS) reviewed the South Carolina Department of Transportation's (SCDOT) letter, dated June 23, 2016, responding to essential fish habitat (EFH) conservation recommendations the NMFS provided for the proposed U.S. Highway 21 (Sea Island Parkway) Bridge replacement over Harbor River in Beaufort County (SCDOT Project ID: P026862). By letter dated June 6, 2016, the NMFS provided three EFH conservation recommendations for the project. To organize the record, the conservation recommendations are summarized below followed by a summary of the SCDOT's response and any additional comments the NMFS may have.

The NMFS' EFH conservation recommendations, include:

- The bridge design should further avoid and minimize impacts to EFH by reducing the amount of permanent fill in salt marsh habitat. Suggestions for how this might occur are provided above.
- The portions of the existing causeway not used for stormwater treatment or approach sections should be restored to salt marsh habitat by removing fill and grading the areas to match elevations in adjacent marsh where marsh vegetation occurs.
- The SCDOT should provide mitigation for the unavoidable impacts to EFH, including oyster restoration totaling at least 0.1 acre in size. Removal of the causeway and restoring the area to salt marsh habitat should be one component of the mitigation.

In response, the SCDOT indicated that because the project is being developed as a Design-Build contract, the Design-Build Contractor will be responsible for final design of the bridge and approaches, as well as mitigation measures. SCDOT also stated that it cannot commit to the recommended minimization measures, but NOAA-NMFS will have another opportunity for project review during final design and 404/401 permitting. When the proposals for the Design-Build project are submitted, SCDOT will likely use mitigation as one of the criteria used to measure quality of the proposals.

The NMFS understands the benefits of Design-Build contracting, but believes that further avoidance and minimization is practicable. Avoiding and minimizing impacts to fully functional aquatic resources, including EFH, is always preferred to compensatory mitigation because the habitats are currently functioning as part of the ecosystem and there would be no temporal or qualitative loss of functions.

Is the SCDOT willing to commit to reducing the amount of permanent fill in salt marsh habitat from the currently proposed 3.032 acres using whichever methods deemed most appropriate by the SCDOT and it's contractor?

The NMFS is concerned with the existing causeway (and fill) remaining in the aquatic environment for a number of reasons. If not used for stormwater treatment, as part of the new bridge approaches, or for other reasons, the existing causeway will continue to offer no habitat value for species and will continue altering the hydrodynamics of the area. Additionally, if the existing causeway is left in place, there may be additive effects from the placement of new bridge structures that could further alter the hydrodynamics of the area. If removed, the areas of the existing causeway could be restored to EFH, providing ecologically important areas for species in and adjacent to the Harbor River. Furthermore, removing portions of the causeway and restoring the areas to salt marsh habitat is a routine measure undertaken by SCDOT for bridge replacement projects and has been successful in other areas, including portions of Folly Creek in Charleston County.

Is the SCDOT willing to commit to removing some portion of the existing causeway and grading the areas to match elevations in adjacent marsh where marsh vegetation occurs? Causeway removal areas would be best identified by SCDOT and it's contractors, however, focusing on removing portions of the causeway nearest to the Harbor River first could provide the most value.

The NMFS also believes the originally recommended mitigation measures are practicable. Oyster restoration totaling at least 0.1 acre in size should be one component of the mitigation for unavoidable impacts to EFH, as the project will permanently remove approximately 0.1 acres of oysters in the project area. Oyster/shell habitat is identified as an EFH-Habitat Area of Particular Concern (HAPC) for the snapper-grouper complex. HAPCs are a subset of EFH that are either rare, particularly susceptible to human-induced degradation, especially important ecologically, or located in an environmentally stressed area.

Is the SCDOT willing to commit to providing mitigation for the unavoidable impacts to EFH, including oyster restoration totaling at least 0.1 acre in size for the oysters that will be removed from the existing pilings?

Thank you for your time and I look forward to hearing from you soon.

Best,

Keith

--

Keith M. Hanson

Contractor, Jamison Professional Services, Inc.
Environmental Specialist, NOAA - National Marine Fisheries Service
Southeast Regional Office - Habitat Conservation Division
219 Fort Johnson Road
Charleston, SC 29412
Office: 843-762-8622
Cell: 440-532-9327
Keith.Hanson@noaa.gov

Wade, Blair

From: Long, Chad C. <LongCC@scdot.org>
Sent: Friday, August 26, 2016 3:09 PM
To: Wade, Blair
Cc: Redfearn, Tyke; Belcher, Jeffery - FHWA
Subject: FW: US 21

From: Keith Hanson - NOAA Affiliate [<mailto:keith.hanson@noaa.gov>]
Sent: Friday, August 26, 2016 2:23 PM
To: Long, Chad C.
Subject: US 21

Hi Chad,

I apologize if my first email caused any confusion, but the SCDOT has addressed each of our EFH Conservation Recommendations. I appreciate SCDOT's flexibility in this process and am glad we can reach an agreement that both protects EFH and allows for the replacement of vital infrastructure.

The NMFS always encourages bridge replacement projects to reduce the amount of fill and remove existing causeway to the maximum extent practicable, so that a project results in no (zero) net fill of EFH. The NMFS appreciates any and all efforts of the SCDOT and their contractor(s) to move towards no (zero) net fill for this project.

I am glad we have reached a resolution and see it as an opportunity for our agencies (and others, e.g. SCDNR) to collaborate on an on-site project that would increase the amount of EFH and EFH-HAPC, restore connectivity and hydrodynamics of the area, and provide an aesthetically pleasing natural area for the public that encourages both consumptive and non-consumptive uses. This would provide great value to the local environment and community as a whole. NMFS biologists are available to aid in the development of such a project or provide technical review of any plans. Additionally, NMFS biologists will be available to work with SCDOT with on-site work (e.g. placing oyster bags, sprigging *Spartina sp.*, etc).

Please let me know if you have any questions or need additional information.

Best,
Keith

--

Keith M. Hanson

Contractor, Jamison Professional Services, Inc.
Environmental Specialist, NOAA - National Marine Fisheries Service
Southeast Regional Office - Habitat Conservation Division
219 Fort Johnson Road
Charleston, SC 29412
Office: 843-762-8622
Cell: 440-532-9327
Keith.Hanson@noaa.gov

Appendix A-4

National Oceanic and Atmospheric Administration National Marine Fisheries – Protected Resources Division

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From: Riddle, Nicole L.
To: ["nmfs.ser.esa.consultations@noaa.gov"](mailto:nmfs.ser.esa.consultations@noaa.gov)
Cc: [Belcher, Jeffery - FHWA](#); [Long, Chad C.](#)
Subject: BA submittal of US 21 over Harbor River in Beaufort County
Date: Friday, January 15, 2016 1:24:00 PM
Attachments: [US 21 over Harbor River Bridge replacement NOAA BA 2016-1-14 \(1\).pdf](#)

The South Carolina Department of Transportation (SCDOT) proposes to replace the existing US 21 (Sea Island Parkway) Bridge over Harbor River, located in Beaufort County, South Carolina. The project involves the bridge replacement as well as the construction of a new roadway approach alignment. The purpose of the project is to correct structural and functional deficiencies of the US 21 Bridge over the Harbor River and to upgrade the bridge and its approaches to current design standards.

SCDOT is submitting the attached biological assessment and is requesting section 7 consultation.

Please contact me or Chad Long (803-737-1396) if additional information is needed or should you have any questions.

Nicole Levinson Riddle
Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: 803-737-0841 C: 803-351-8480

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Monday, February 29, 2016 3:05 PM
To: Wade, Blair
Cc: Long, Chad C.
Subject: FW: ESA Section 7 consultation for US 21 Harbor River Bridge

Hmm, I'm not entirely sure how we tackle all of these questions about construction given this is a design build project. Thoughts? Also please note the disagreement in effect calls at the bottom.

From: David Rydene - NOAA Federal [<mailto:david.rydene@noaa.gov>]
Sent: Monday, February 29, 2016 3:00 PM
To: Riddle, Nicole L.
Subject: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

I have looked at the Biological Assessment (BA) for the US 21 Harbor River Bridge replacement. While I do not see any major issues with the project, there are some things that will need to be addressed before I can proceed with the Section 7 consultation.

While NMFS is not particularly concerned about which alignment alternative is chosen or whether the new bridge is fixed-span or moveable, there are a number of unknowns with regards to the construction specifics that NMFS would need in order to describe the project and analyze potential effects on ESA-listed species. The BA states that a combination of drilled shaft and pile driving will "probably" be used, but not much more detail is given beyond that. NMFS would have to know the types (materials) and sizes of piles and/or drilled shafts, how many would be installed in a day, and how long it would take to install each one in order to analyze in-water noise effects. At the minimum, SCDOT would have to provide a "worst case scenario" for NMFS to use in the analysis for one or both techniques.

In addition, while the use of barges seems highly probable, the use of temporary work trestles seems to be less certain. If work trestles will be used, NMFS would need information about the type, size, and number of piles required for the trestle and how they would be installed and removed (e.g., the maximum number installed per day and how long to install each trestle pile). This could also be presented as a "worst case" scenario.

NMFS would have to have a general idea of how any of the existing causeway would be removed and how the resulting spoil would be disposed of.

NMFS would also need commitments regarding construction specifics (e.g., Will NMFS's sea turtle construction conditions be followed, will work be limited to daylight hours, will noise abatement techniques be used during pile installation, what BMPs will be required for turbidity control, etc..).

Another unknown is whether or not explosive demolition will be used to take down any parts of the existing bridge structures. This could be dealt with 2 ways, either it is included in the consultation now with the caveat that a blast plan (including the marine wildlife watch plan) must be submitted and approved by NMFS once a blasting contractor is selected (at some point in the future), or the blast consultation is done as a separate consultation in the future.

With regards to in-water noise thresholds for injury and behavioral disturbance, NMFS Southeast Region is presently using the following:

Peak Pressure injury: 206 dB (for sea turtles and fishes)

Single-strike Sound Exposure Level injury: 187 dB (for sea turtles and fishes > 2g)

Cumulative Sound Exposure Level injury: 187 dB (for sea turtles and fishes)

Behavioral disturbance: 150 dB (for fishes only)

Behavioral disturbance: 160 dB (for sea turtles only)

Also, NMFS disagrees with the effects determination of "no effect" for green and Kemp's ridley sea turtles. While there may not be nests in the project vicinity, it is still entirely possible that both species may occur in the waters near the project area, as estuaries are known to be used as foraging areas, particularly by juveniles. NMFS suggests a "may affect, not likely to adversely affect" for green and Kemp's ridley sea turtles.

Thanks, Dave

--

David Rydene, Ph.D.
Fish Biologist
National Marine Fisheries Service
Habitat Conservation Division
263 13th Avenue South
St. Petersburg, FL 33701
Office (727) 824-5379

Cell (813) 992-5730
Fax (727) 824-5300

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Tuesday, April 05, 2016 1:28 PM
To: David Rydene - NOAA Federal
Cc: 'mark_caldwell@fws.gov'; Belcher, Jeffery - FHWA
Subject: RE: ESA Section 7 consultation for US 21 Harbor River Bridge
Attachments: 040416 Mr. Rydene Ph.D.pdf; Final NOAA BA 2016-04-04.pdf

Hey Dave, SCDOT has updated our BA for US 21 over Harbor River to reflect the comments you made back in February. We have also attached a comments response letter. We are copying USFWS as well so that they are aware of the changes that were made. Please let me know if you have an additional comments or questions. Thanks again!

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: 803-737-0841 C: 803-351-8480

From: David Rydene - NOAA Federal [<mailto:david.rydene@noaa.gov>]
Sent: Monday, February 29, 2016 3:00 PM
To: Riddle, Nicole L.
Subject: ESA Section 7 consultation for US 21 Harbor River Bridge

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required for the trestle and how they would be installed and removed (e.g., the maximum number installed per day and how long to install each trestle pile). This could also be presented as a "worst case" scenario.

NMFS would have to have a general idea of how any of the existing causeway would be removed and how the resulting spoil would be disposed of.

NMFS would also need commitments regarding construction specifics (e.g., Will NMFS's sea turtle construction conditions be followed, will work be limited to daylight hours, will noise abatement techniques be used during pile installation, what BMPs will be required for turbidity control, etc.).

Another unknown is whether or not explosive demolition will be used to take down any parts of the existing bridge structures. This could be dealt with 2 ways, either it is included in the consultation now with the caveat that a blast plan (including the marine wildlife watch plan) must be submitted and approved by NMFS once a blasting contractor is selected (at some point in the future), or the blast consultation is done as a separate consultation in the future.

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Also, NMFS disagrees with the effects determination of "no effect" for green and Kemp's ridley sea turtles. While there may not be nests in the project vicinity, it is still entirely possible that both species may occur in the waters near the project area, as estuaries are known to be used as foraging areas, particularly by juveniles. NMFS suggests a "may affect, not likely to adversely affect" for green and Kemp's ridley sea turtles.

Thanks, Dave

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David Rydene, Ph.D.
Fish Biologist
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263 13th Avenue South
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Fax (727) 824-5300

April 4, 2016

Dear Mr. Rydene, Ph.D.,

We appreciate your review of the Biological Assessment (BA) for the US 21 Harbor River Bridge Replacement Project (SCDOT Project ID 026862). The following provides a response to your comments received via email on February 29, 2016. The BA has been revised to address NOAA-NMFS comments and is attached via PDF.

The BA states that a combination of drilled shaft and pile driving will “probably” be used, but not much more detail is given beyond that. NMFS would have to know the types (materials) and sizes of piles and/or drilled shafts, how many would be installed in a day, and how long it would take to install each one in order to analyze in-water noise effects. At the minimum, SCDOT would have to provide a “worst case scenario” for NMFS to use in the analysis for one or both techniques.

The SCDOT revised Section 4.2 and 4.3 to provide an estimate of the number, size, and timeframes associated with the drilled shaft construction. For the preferred alternative, the proposed bridge would have approximately 56 8-foot-diameter concrete columns installed using drilled shaft construction. The steel casing can typically be installed in two hours using the vibratory hammer. Two casings are typically installed within one day, with the remainder of the drilling and concrete process occurring over the following week. Therefore, noise from the vibratory hammer would be intermittent during drilled shaft construction. Approximately 20 columns would be installed within the Harbor River, while approximately 36 columns would be installed in salt marsh or intertidal flat areas.

If 30-foot-long flat slab spans were used over the marsh instead of new causeway fill, approximately 308 concrete piles would be needed to support the flat slab spans. For the purposes of this construction scenario, the concrete piles would be 24-inch-square and would be installed using an impact pile driver. It was assumed that each flat slab pile would take approximately 1 hour of pile driving. Several piles would likely be installed during the same day, with a subsequent lapse in pile driving as the bent is constructed.

Two end bents would be constructed, one on each end of the proposed bridge. Each end bent is typically supported by eight 14-inch wide H-piles, which are installed using an impact hammer. Pile driving would generally occur over 8 hours for each end bent.

The end bents would be constructed at the bridge approach in the new causeway fill material; therefore, pile driving for the end bents would not occur in deep water or estuarine habitats.

In addition, while the use of barges seems highly probable, the use of temporary work trestles seems to be less certain. If work trestles will be used, NMFS would need information about the type, size, and number of piles required for the trestle and how they would be installed and removed (e.g., the maximum number installed per day and how long to install each trestle pile). This could also be presented as a "worst case" scenario.

The SCDOT revised Section 4.2 and 4.3 to provide an estimate of the number, size, and timeframes associated with a temporary work trestle. For the preferred alternative, temporary trestles, including spurs for bent construction, would be approximately 3,800 feet long and require approximately 370 steel piles. The steel piles would be approximately 24-inch-diameter and would be installed using a vibratory hammer. Most of the temporary trestle would be constructed over the salt marsh; approximately 24 of the 370 piles would be installed in open water habitats. Total construction time for the temporary work trestles is expected to be four months. Two piles are constructed at the beginning of each span; each span typically takes three days to construct. The vibratory hammer typically takes one hour to install one pile; therefore, two hours of pile installation would occur approximately every three days during construction of the temporary trestle. Removal of the piles is also assumed to take one hour per pile.

NMFS would have to have a general idea of how any of the existing causeway would be removed and how the resulting spoil would be disposed of.

The SCDOT revised Section 4.2 of the Biological Assessment to clarify removal of the causeway. Portions of the upland causeway may be used to install stormwater management features. The existing causeway would remain because it would be used for stormwater drainage and treatment and because of the substantial costs to remove, transport, and dispose of the fill material. If portions of the causeway were removed, the fill material would be disposed of in upland areas away from wetlands, waters, and/or other sensitive sites. The contractor would utilize SCDOT Best Management Practices for soil and erosion control, which may include seeding of slopes, silt fences, and sediment basins as appropriate, and prepare a spill prevention and pollution control plan to minimize the potential impact on adjacent wetlands.

NMFS would also need commitments regarding construction specifics (e.g., Will NMFS's sea turtle construction conditions be followed, will work be limited to daylight hours, will noise abatement techniques be used during pile installation, what BMPs will be required for turbidity control, etc..).

Section 6.1 has been revised to clarify the SCDOT's environmental commitments during construction. In general, the SCDOT commits to the following practices:

- Follow SCDOT Best Management Practices during construction
- Contain and filter stormwater runoff from bridges within a closed drainage system
- Obtain NPDES permit and prepare a Stormwater Pollution Prevention Plan
- Ensure equipment does not obstruct or impede passage through more than 50 percent of the channel.
- Use of "slow starts"
- Prepare a blasting plan, including marine wildlife watch plan, and reinitiate consultation with USFWS and NOAA-NMFS if explosives are used for demolition.
- Follow NOAA-NMFS Sea Turtle Construction Conditions (Appendix E of NOAA BA)
- No permanent roadway lighting
- Reduced or shielded construction lighting during nesting season (May 1 through October 31)
- The contractor would restrict in-water work during nighttime between May and October (sea turtle nesting and hatching season), to the maximum extent practicable. Nighttime would be defined as 30-minutes after sunset to 30-minutes before sunrise.

Noise abatement would not be used during drilled shaft construction or installation of the temporary work trestle because in-water noise is not expected to exceed peak or SEL injury thresholds for sea turtles. Noise from the vibratory or impact hammer would also be intermittent; installation typically takes one to two hours per pile, followed by several hours or days of work to complete the drilled shaft or trestle span. Lastly, most of the drilled shafts, concrete piles, and trestle piles would be installed in the salt marsh, not in open water conditions that are more conducive to noise transmission.

Another unknown is whether or not explosive demolition will be used to take down any parts of the existing bridge structures. This could be dealt with 2 ways, either it is included in the consultation now with the caveat that a blast plan (including the marine wildlife watch plan) must be submitted and approved by NMFS once a blasting contractor is selected (at some point in the future), or the blast consultation is done as a separate consultation in the future.

Information regarding the use of explosives for bridge demolition was included in Section 4.2 of the Biological Assessment. The existing bridge would be demolished upon completion of construction. The bridge would be demolished using standard practices to remove the existing piers and swing span. Concrete bridge decks and the existing swing span will likely be placed on barges and transported offsite for disposal and/or recycling. Standard deconstruction practices may include using vibratory methods to remove existing pilings. The SCDOT has revised this section to clarify that, if explosives are

used for demolition, the contractor would be responsible for evaluating the potential effect on protected species and obtaining concurrence from the USFWS and NOAA-NMFS. Future separate consultation on blasting would be required if the contractor would plan to use explosives. The contractor and SCDOT would reinitiate consultation to examine blasting and develop a blasting plan, which would include a marine wildlife watch plan.

With regards to in-water noise thresholds for injury and behavioral disturbance, NMFS Southeast Region is presently using the following:

- **Peak Pressure injury: 206 dB (for sea turtles and fishes)**
- **Single-strike Sound Exposure Level injury: 187 dB (for sea turtles and fishes > 2g)**
- **Cumulative Sound Exposure Level injury: 187 dB (for sea turtles and fishes)**
- **Behavioral disturbance: 150 dB (for fishes only)**
- **Behavioral disturbance: 160 dB (for sea turtles only)**

The SCDOT has updated the in-water noise thresholds for generalist fish and sea turtles in the enclosed Biological Assessment. See Table 5-1 and 5-2.

Also, NMFS disagrees with the effects determination of “no effect” for green and Kemp’s ridley sea turtles. While there may not be nests in the project vicinity, it is still entirely possible that both species may occur in the waters near the project area, as estuaries are known to be used as foraging areas, particularly by juveniles. NMFS suggests a “may affect, not likely to adversely affect” for green and Kemp’s ridley sea turtles.

The SCDOT has revised the effects determination for green and Kemp’s ridley sea turtles within the attached Biological Assessment.

Sincerely,



Nicole Riddle
Biologist, Assistant NEPA Coordinator
South Carolina Department of Transportation

NR:bag

cc: Mark Caldwell USFWS South Carolina Field Office

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Thursday, April 14, 2016 10:31 AM
To: Wade, Blair
Subject: Fwd: ESA Section 7 consultation for US 21 Harbor River Bridge

Follow Up Flag: Follow up
Flag Status: Completed

Sent from my Verizon Wireless 4G LTE smartphone

----- Original message -----

From: David Rydene - NOAA Federal <david.rydene@noaa.gov>
Date: 4/14/2016 10:13 AM (GMT-05:00)
To: "Riddle, Nicole L." <RiddleNL@scdot.org>
Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

Here are a couple more questions.

- 1) I am interpreting the work trestle situation to be that 2 work trestles would be built, one extending out into Harbor River from each shoreline. Is that correct?
- 2) In regards to the end bents that are discussed in the BA, there are 2 scenarios. One would involve putting fill in the salt marsh to create new causeways and the end bents would go in at the end of those causeways at each end of the bridge. However, if they go with the pile-supported flat slab span approach, there is no causeway where the flat slabs meet the bridge structure. Do they have end bents under that scenario, and if so, where are the end bents located (before the flat slabs on land, at the end of the flat slabs but not in causeway fill, etc)?
- 3) Can I get time estimates for each pile-driving activity discussed in the BA, and one for the total project (construction only, not design)?
- 4) Below is my description of drilled shaft construction. Can you see if it is accurate (it's based on the description for the I-16/I-75 project)

"SCDOT anticipates that the construction of the new bridge will require the installation of 56 drilled-shaft concrete columns with a diameter of 8 ft. Each drilled-shaft concrete column is a one-piece cylindrical steel casing that is installed into the river bottom permanently using a vibratory hammer. It takes about 2 hours of vibratory hammer use to install a single casing and 2 casings can be installed in a single day. Following casing installation, soil and rock are removed from inside the casing using an auger (hereafter referred to as "augering") and disposed of at an appropriate upland site. Reinforcing steel is then placed in the casing and concrete is poured into the casing. As the concrete is poured, the river water within the casing is removed and

captured for disposal. The completed drilled shaft concrete columns will serve as the foundations (i.e., substructures) that support each bridge's bents and piers. Once 2 casings have been installed (in a single day), it takes approximately 1 week to complete the process (augering and concrete pouring) for both. Of the 56 drilled shaft concrete columns, 20 will be constructed in the waters of Harbor River and 36 will be built in salt marsh or intertidal flats."

Thanks, Dave

On Wed, Apr 13, 2016 at 3:55 PM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:
Thank you. I will get you responses to these. You can mail it to me at 955 park street columbia sc 29202

Sent from my iPhone

On Apr 13, 2016, at 11:22 AM, "David Rydene - NOAA Federal" <david.rydene@noaa.gov> wrote:

Hi Nicole,

One other thing. I need a name and mailing address that the letter should be addressed to. I didn't know if that would be you or someone else at SCDOT.

Thanks, Dave

On Tue, Apr 5, 2016 at 1:27 PM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

Hey Dave, SCDOT has updated our BA for US 21 over Harbor River to reflect the comments you made back in February. We have also attached a comments response letter. We are copying USFWS as well so that they are aware of the changes that were made. Please let me know if you have an additional comments or questions. Thanks again!

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)

Environmental Services Office

South Carolina Department of Transportation

O: [803-737-0841](tel:803-737-0841) C: [803-351-8480](tel:803-351-8480)

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]

Sent: Monday, February 29, 2016 3:00 PM

To: Riddle, Nicole L.

Subject: ESA Section 7 consultation for US 21 Harbor River Bridge

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Thanks, Dave

--

David Rydene, Ph.D.
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Fax (727) 824-5300

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Friday, April 15, 2016 9:59 AM
To: Wade, Blair
Subject: FW: FW: ESA Section 7 consultation for US 21 Harbor River Bridge

Follow Up Flag: Follow up
Flag Status: Completed

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]
Sent: Friday, April 15, 2016 9:25 AM
To: Riddle, Nicole L.
Subject: Re: FW: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

It's my daily email. Can you find out if the 370 pipe piles discussed for the work trestles is the number for just one trestle (with 24 of them in the water and 346 in salt marsh) or does that include both trestles? I'm trying to figure out if I need to multiply those numbers by 2 or not.

Thanks, Dave

On Thu, Apr 14, 2016 at 9:54 AM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

See the consultants response below. Feel free to send me any other questions. We will hopefully have a response to the other questions very soon.

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)

Environmental Services Office

South Carolina Department of Transportation

O: [803-737-0841](tel:803-737-0841) C: [803-351-8480](tel:803-351-8480)

From: Wade, Blair [mailto:Blair.Wade@hdrinc.com]
Sent: Wednesday, April 13, 2016 3:33 PM
To: Riddle, Nicole L.; Long, Chad C.
Subject: RE: ESA Section 7 consultation for US 21 Harbor River Bridge

Thanks Nicole. The contractor is highly likely to use barges for the deep water work. The work trestle would only be over the marsh and edges of the river and would be used to support construction activities on the barges. We mention the use of barges throughout the BA – Dave can reference Section 4.2.2, 4.2.4, and line 6 of Section 6.0. We can clarify in our response that construction vessels include barges.

Blair Goodman Wade, ENV SP

D [843.414.3740](tel:843.414.3740) M [843.693.9938](tel:843.693.9938)

hdrinc.com/follow-us

From: Riddle, Nicole L. [<mailto:RiddleNL@scdot.org>]
Sent: Wednesday, April 13, 2016 3:13 PM
To: Wade, Blair; Long, Chad C.
Subject: Fwd: ESA Section 7 consultation for US 21 Harbor River Bridge

Sent from my iPhone

Begin forwarded message:

From: David Rydene - NOAA Federal <david.rydene@noaa.gov>
Date: April 13, 2016 at 2:05:23 PM EDT
To: "Riddle, Nicole L." <RiddleNL@scdot.org>
Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

Another question, does SCDOT think the contractor might use barges to do some of the construction work or do they believe that it will all be done from work trestles? I didn't see any mention of barges in the BA, just "construction vessels".

- Dave

On Tue, Apr 5, 2016 at 1:27 PM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

Hey Dave, SCDOT has updated our BA for US 21 over Harbor River to reflect the comments you made back in February. We have also attached a comments response letter. We are copying USFWS as well

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Thursday, April 21, 2016 3:44 PM
To: David Rydene - NOAA Federal
Cc: Belcher, Jeffery - FHWA
Subject: RE: ESA Section 7 consultation for US 21 Harbor River Bridge
Attachments: NOAA NMFS Response Comments_20160421.docx

Hey Dave, Please see the attached responses to your questions. Please don't hesitate to ask if you have anymore. Thanks!

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: 803-737-0841 C: 803-351-8480

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]
Sent: Wednesday, April 20, 2016 4:11 PM
To: Riddle, Nicole L.
Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

Because the animals of concern would be juvenile sea turtles or sturgeon and they could be around any time of the year, we would like the year-round use of daylight only in-water construction activities.

Thanks, Dave

On Wed, Apr 20, 2016 at 3:19 PM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

Hey Dave, I have one quick question. For the question you asked below in yellow. Are you wanting this commitment for a certain time frame or all year round?

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: [803-737-0841](tel:803-737-0841) C: [803-351-8480](tel:803-351-8480)

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]
Sent: Wednesday, April 13, 2016 10:35 AM

To: Riddle, Nicole L.

Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

I have looked at the letter and the revised BA and I have a few additional questions and information requests.

- 1) In regards to the 24-inch by 24-inch square concrete piles (impact driven) that could potentially be used to support flat slab spans, are any of these going to be in the water or will they all be in the marsh. I'm trying to figure out if these marshes only get inundated once in a while (high marsh) or if it happens pretty much every day (i.e., would ESA species be able to access these areas and what is the potential for noise transmission into the water)? I'm thinking that the situation may be similar to the end bent scenario and that it will not be much of an in-water noise issue.
- 2) If it turns out that some 24-inch by 24-inch square concrete piles would be impact driven in the water, I need to have an estimate of the total number of pile strikes that might occur in a single day (e.g., a maximum of 5 piles might be driven in a day and it will take about 200 pile strikes for each pile = 1,000 strikes per day total). I realize this would be an estimate and the that number of strikes varies with substrate conditions, but I just need a ballpark figure to calculate the potential for cumulative sound exposure level (cSEL) injury.
- 3) I use the amount of time (number of seconds per day) to do the cSEL calculations for vibratory driving, so I already have that information.
- 4) For the 8-foot diameter steel casings that will be vibrated in as part of the drilled shaft construction, it sounds like they get 2 casings installed, then go at completing those 2 drilled shafts before moving on to install 2 more casings. Is that correct ? It's not a big deal if it's done differently, but I want to make sure I'm describing the process correctly in the letter.
- 5) It sounds like the steel pipe piles for the temporary work trestle will be removed using a vibratory hammer, is that correct?
- 6) There was a small problem with the noise analysis in the BA. The noise numbers they used (from the CALTRANS document) were based on measurements made at 10 meters, so to get the noise level at the source (right next to impact or vibratory pile driving) you have to add 15 dB to the CALTRANS numbers. I reran the analysis with that correction and there is still no injury potential for the vibratory driving, just some potential for

behavioral disturbance. If it turns out that some 24-inch by 24-inch square concrete piles (impact driven/flat slab spans) will be in the water, then there might be a relatively small cSEL injury zone for that one and some behavioral disturbance as well. There should not be any major issues (show-stoppers) though.

7) The BA states that the construction is expected to occur between mid-2018 and mid-2020. I am interpreting that as meaning that the new bridge construction and old bridge demolition is estimated to take 2 years to complete. Is that correct?

8) I am assuming that the references to "siltation barriers" is equivalent to "turbidity curtains", is that correct?

9) Can I get a commitment that the NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions will be applied to shortnose and Atlantic sturgeon as well?

10) NMFS would prefer that no in-water work is done at night since detecting the presence of ESA animals near the work area is difficult enough during daylight hours, and is pretty much impossible at night (in terms of implementing the Construction Conditions). I don't know if you can make that commitment, but that is what we would like.

I can start writing the letter now to get things rolling and pending the additional information I requested above.

Thanks, Dave

On Tue, Apr 5, 2016 at 1:27 PM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

Hey Dave, SCDOT has updated our BA for US 21 over Harbor River to reflect the comments you made back in February. We have also attached a comments response letter. We are copying USFWS as well so that they are aware of the changes that were made. Please let me know if you have an additional comments or questions. Thanks again!

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)

Environmental Services Office

South Carolina Department of Transportation

O: [803-737-0841](tel:803-737-0841) **C:** [803-351-8480](tel:803-351-8480)

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]

Sent: Monday, February 29, 2016 3:00 PM

To: Riddle, Nicole L.

Subject: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

I have looked at the Biological Assessment (BA) for the US 21 Harbor River Bridge replacement. While I do not see any major issues with the project, there are some things that will need to be addressed before I can proceed with the Section 7 consultation.

While NMFS is not particularly concerned about which alignment alternative is chosen or whether the new bridge is fixed-span or moveable, there are a number of unknowns with regards to the construction specifics that NMFS would need in order to describe the project and analyze potential effects on ESA-listed species. The BA states that a combination of drilled shaft and pile driving will “probably” be used, but not much more detail is given beyond that. NMFS would have to know the types (materials) and sizes of piles and/or drilled shafts, how many would be installed in a day, and how long it would take to install each one in order to analyze in-water noise effects. At the minimum, SCDOT would have to provide a “worst case scenario” for NMFS to use in the analysis for one or both techniques.

In addition, while the use of barges seems highly probable, the use of temporary work trestles seems to be less certain. If work trestles will be used, NMFS would need information about the type, size, and number of piles required for the trestle and how they would be installed and removed (e.g., the maximum number installed per day and how long to install each trestle pile). This could also be presented as a "worst case" scenario.

NMFS would have to have a general idea of how any of the existing causeway would be removed and how the resulting spoil would be disposed of.

NMFS would also need commitments regarding construction specifics (e.g., Will NMFS’s sea turtle construction conditions be followed, will work be limited to daylight hours, will noise abatement techniques be used during pile installation, what BMPs will be required for turbidity control, etc..).

Another unknown is whether or not explosive demolition will be used to take down any parts of the existing bridge structures. This could be dealt with 2 ways, either it is included in the consultation now with the caveat that a blast plan (including the marine wildlife watch plan) must be submitted and approved by NMFS once a blasting contractor is selected (at some point in the future), or the blast consultation is done as a separate consultation in the future.

With regards to in-water noise thresholds for injury and behavioral disturbance, NMFS Southeast Region is presently using the following:

Peak Pressure injury: 206 dB (for sea turtles and fishes)

Single-strike Sound Exposure Level injury: 187 dB (for sea turtles and fishes > 2g)

Cumulative Sound Exposure Level injury: 187 dB (for sea turtles and fishes)

Behavioral disturbance: 150 dB (for fishes only)

Behavioral disturbance: 160 dB (for sea turtles only)

Also, NMFS disagrees with the effects determination of “no effect” for green and Kemp’s ridley sea turtles. While there may not be nests in the project vicinity, it is still entirely possible that both species may occur in the waters near the project area, as estuaries are known to be used as foraging areas, particularly by juveniles. NMFS suggests a “may affect, not likely to adversely affect” for green and Kemp’s ridley sea turtles.

Thanks, Dave

--

David Rydene, Ph.D.
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National Marine Fisheries Service
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263 13th Avenue South
St. Petersburg, FL 33701
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Received April 13, 2016

1) In regards to the 24-inch by 24-inch square concrete piles (impact driven) that could potentially be used to support flat slab spans, are any of these going to be in the water or will they all be in the marsh. I'm trying to figure out if these marshes only get inundated once in a while (high marsh) or if it happens pretty much every day (i.e., would ESA species be able to access these areas and what is the potential for noise transmission into the water)? I'm thinking that the situation may be similar to the end bent scenario and that it will not be much of an in-water noise issue.

The potential flat slabs would all be located in the marsh on either side of the Harbor River. The flat slab portions of the bridge would be over high marsh with an elevation of approximately 3 feet (NAVD88). Mean High Water at the Harbor River Bridge Station 8668146 is approximately 2.58 feet (NAVD88). The high marsh inundates occasionally, likely with less than 6 inches of water.

2) If it turns out that some 24-inch by 24-inch square concrete piles would be impact driven in the water, I need to have an estimate of the total number of pile strikes that might occur in a single day (e.g., a maximum of 5 piles might be driven in a day and it will take about 200 pile strikes for each pile = 1,000 strikes per day total). I realize this would be an estimate and the that number of strikes varies with substrate conditions, but I just need a ballpark figure to calculate the potential for cumulative sound exposure level (cSEL) injury.

None of the concrete piles for the flat slab would be impact driven into open water. All of the piles supporting the flat slab would be driven into the marsh. The estimated number of pile strikes per day associated with the flat slab construction is based on the following assumptions:

- 5 piles would be driven per day
- 15 strokes per foot on average per pile
- 50-foot pile length
- 750 pile strikes for each pile

Based on these assumptions, installation of the concrete piles would result in approximately 3,750 pile strikes per day. However, as noted above, the impact hammer would occur in the marsh, not open water.

3) I use the amount of time (number of seconds per day) to do the cSEL calculations for vibratory driving, so I already have that information.

Comment noted. No response required.

4) For the 8-foot diameter steel casings that will be vibrated in as part of the drilled shaft construction, it sounds like they get 2 casings installed, then go at completing those 2 drilled shafts before moving on to install 2 more casings. Is that correct? It's not a big deal if it's done differently, but I want to make sure I'm describing the process correctly in the letter.

Yes, this is correct. The typical drilled shaft construction process is completed 2 casings at a time. Construction timing may vary as a result of the site or weather conditions or contractor scheduling. The contractor would coordinate with SCDOT and NOAA-NMFS if the drilled shaft construction would vary substantially from the process outlined in the Biological Assessment.

5) It sounds like the steel pipe piles for the temporary work trestle will be removed using a vibratory hammer, is that correct?

Yes, that is correct.

6) There was a small problem with the noise analysis in the BA. The noise numbers they used (from the CALTRANS document) were based on measurements made at 10 meters, so to get the noise level at the source (right next to impact or vibratory pile driving) you have to add 15 dB to the CALTRANS numbers. I reran the analysis with that correction and there is still no injury potential for the vibratory driving, just some potential for behavioral disturbance. If it turns out that some 24-inch by 24-inch square concrete piles (impact driven/flat slab spans) will be in the water, then there might be a relatively small cSEL injury zone for that one and some behavioral disturbance as well. There should not be any major issues (show-stoppers) though.

Comment noted. No response required.

7) The BA states that the construction is expected to occur between mid-2018 and mid-2020. I am interpreting that as meaning that the new bridge construction and old bridge demolition is estimated to take 2 years to complete. Is that correct?

Yes, the 2 year schedule includes bridge construction and demolition.

8) I am assuming that the references to "siltation barriers" is equivalent to "turbidity curtains", is that correct?

We assume that siltation barriers would be either silt fence or turbidity curtains. The type of siltation barrier used depends on the depth of water at the barrier. For example, silt fence would be used in tidal areas that are less than 1-foot deep, because turbidity curtains would not be effective in these conditions.

9) Can I get a commitment that the NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions will be applied to shortnose and Atlantic sturgeon as well?

The SCDOT will commit to the contractor implementing the NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions for the shortnose and Atlantic sturgeon.

10) NMFS would prefer that no in-water work is done at night since detecting the presence of ESA animals near the work area is difficult enough during daylight hours, and is pretty much impossible at night (in terms of implementing the Construction Conditions). I don't know if you can make that commitment, but that is what we would like.

The SCDOT commits to following a year-round nighttime in-water work moratorium on the proposed project. The contractor would not conduct in-water work for a minimum of 8 hours each night. The moratorium would minimize the potential for sturgeon or sea turtle strikes at night, when visibility is low, and would provide an 8-hour lapse in in-water noise.

Another question, does SCDOT think the contractor might use barges to do some of the construction work or do they believe that it will all be done from work trestles? I didn't see any mention of barges in the BA, just "construction vessels".

The contractor is highly likely to use barges for the deep water work. Construction vessels include barges. The work trestle would only be over the marsh and edges of the river and would be used to support construction activities on the barges. Please refer to Section 4.2.2, 4.2.4, and line 6 of Section 6.0 of the Biological Assessment.

Received April 14, 2016

1) I am interpreting the work trestle situation to be that 2 work trestles would be built, one extending out into Harbor River from each shoreline. Is that correct?

Yes, that is correct.

2) In regards to the end bents that are discussed in the BA, there are 2 scenarios. One would involve putting fill in the salt marsh to create new causeways and the end bents would go in at the end of those causeways at each end of the bridge. However, if they go with the pile-supported flat slab span approach, there is no causeway where the flat slabs meet the bridge structure. Do they have end bents under that scenario, and if so, where are the end bents located (before the flat slabs on land, at the end of the flat slabs but not in causeway fill, etc)?

Under the flat slab scenario, the bridge construction would still include end bents. The new bridge cannot tie directly into the existing roadway, because the roadway must remain open during construction. Therefore, the end bents would continue to tie into new causeway fill, but the amount of total causeway fill would be reduced by the construction of flat slabs. In summary, the pile driving for the end bents would not occur in deep water or estuarine habitats.

3) Can I get time estimates for each pile-driving activity discussed in the BA, and one for the total project (construction only, not design)?

Total estimated pile driving timeframes in hours are presented in Table 4-1 of the NOAA-NMFS Biological Assessment (dated April 4, 2016). Construction is expected to occur between mid-2018 and mid-2020. Detailed construction timeframes are not available because the schedule would be determined by the Design-Build contractor.

4) Below is my description of drilled shaft construction. Can you see if it is accurate (it's based on the description for the I-16/I-75 project)

"SCDOT anticipates that the construction of the new bridge will require the installation of 56 drilled-shaft concrete columns with a diameter of 8 ft. Each drilled-shaft concrete column is a one-piece cylindrical steel casing that is installed into the river bottom permanently using a vibratory hammer. It takes about 2 hours of vibratory hammer use to install a single casing and 2 casings can be installed in a single day. Following casing installation, soil and rock are removed from inside the casing using an auger (hereafter referred to as "augering") and disposed of at an appropriate upland site. Reinforcing steel is then placed in the casing and concrete is poured into the casing. As the concrete is poured, the river water within the casing is removed and captured for disposal. The completed drilled shaft concrete columns will serve as the foundations (i.e., substructures) that support each bridge's bents and piers. Once 2 casings have been installed (in a single day), it takes approximately 1 week to complete the process (augering and concrete pouring) for both. Of the 56 drilled shaft concrete columns, 20 will be constructed in the waters of Harbor River and 36 will be built in salt marsh or intertidal flats."

This statement is generally accurate with the following clarifications. Regarding the river water, during the auguring process, the remaining water trapped in the steel casing is used to facilitate auguring and is eventually removed with the augured material. This material is disposed of at an appropriate upland site. As the concrete is poured, slurry used during auguring is contained and sent through a de-sanding machine, which cleans the slurry for reuse on subsequent drilling.

Two casings would be installed in the same day, with the remainder of the drilled shaft construction process occurring over the following week. Construction timing may vary as a result of the site or weather conditions or contractor scheduling. The contractor would coordinate with SCDOT and NOAA-NMFS if the drilled shaft construction would vary substantially from the process outlined in the Biological Assessment.

Received April 15, 2016

Can you find out if the 370 pipe piles discussed for the work trestles is the number for just one trestle (with 24 of them in the water and 346 in salt marsh) or does that include both trestles? I'm trying to figure out if I need to multiply those numbers by 2 or not.

The 370 pipe piles for the trestles include both trestles.

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Friday, April 22, 2016 2:51 PM
To: Wade, Blair
Subject: FW: ESA Section 7 consultation for US 21 Harbor River Bridge

Follow Up Flag: Follow up
Flag Status: Completed

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]
Sent: Friday, April 22, 2016 1:33 PM
To: Riddle, Nicole L.
Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

I think I just have one more question (famous last words) I need answered to complete the draft letter. The BA states that all 8 H-piles for an end bent can be installed in a single day (8 hours). Could you get me an estimate of the total number of impact hammer blows it would take to install all 8 H-piles?

Thanks, (Have a good weekend) Dave

On Thu, Apr 21, 2016 at 3:43 PM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

Hey Dave, Please see the attached responses to your questions. Please don't hesitate to ask if you have anymore. Thanks!

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)

Environmental Services Office

South Carolina Department of Transportation

O: [803-737-0841](tel:803-737-0841) C: [803-351-8480](tel:803-351-8480)

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]
Sent: Wednesday, April 20, 2016 4:11 PM
To: Riddle, Nicole L.

Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

Wade, Blair

From: Wade, Blair
Sent: Monday, April 25, 2016 4:05 PM
To: 'Riddle, Nicole L.'
Cc: 'Long, Chad C.'; Darby, Michael M.
Subject: RE: ESA Section 7 consultation for US 21 Harbor River Bridge
Attachments: Pile Strikes Estimate.xlsx

Hi Nicole,

We evaluated the impact hammer strikes for the end bents and flat slabs again based on David's question. Our construction personnel provided some information about the variability of pile driving. See attached spreadsheet.

The spreadsheet is based on a couple assumptions:

- soils would be muck, then sand, and eventually marl as the pile is installed
- piles would not have to be extended.

Typically, pile driving in muck requires about 1 to 2 strikes per foot of pile. The number of hammer strikes would increase in the sand layer to between 5 and 10 strikes per foot. Once the pile enters the stiffer material (marl), the number of strikes could range between 20 and 100 strikes per foot (depending on the length of pile needed to be embedded into the marl). Once the pile is driven, if the Pile Dynamic Analysis determines the piles did not have capacity, there's a chance the piles would need to be spliced and driven deeper. This would be an unknown that may or may not need to be accounted for.

The attached spreadsheet estimates the # of strikes based on 10 feet of muck, 20 feet of sand, and 20 feet of marl. Based on our estimates and assumptions, a 50-foot pile would require between 510 and 2,220 strikes.

- Flat slab concrete piles – 308 piles – total pile driving between 157,080 and 683,760 strikes.
- End bent H piles – 16 piles – total pile driving between 8,160 and 35,520 strikes.

Note, the flat slabs would be constructed over high marsh, while the end bents would be constructed in upland material. None of this pile driving would occur in deep water habitats.

Let me know if you or David has any questions!

Thanks,

Blair

Blair Goodman Wade, ENV SP
D 843.414.3740 M 843.693.9938

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From: Riddle, Nicole L. [<mailto:RiddleNL@scdot.org>]
Sent: Friday, April 22, 2016 2:51 PM
To: Wade, Blair
Subject: FW: ESA Section 7 consultation for US 21 Harbor River Bridge

From: David Rydene - NOAA Federal [<mailto:david.rydene@noaa.gov>]
Sent: Friday, April 22, 2016 1:33 PM
To: Riddle, Nicole L.
Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

End Bents (14-Inch H Piles)

Number of H-Piles per End Bent	8
Number of End Bents	2
Total H-Piles	16

Assumed Length of Pile 50 Feet

Assumed Soil Type	Assumed Depth of Each Soil Type	Assumed Minimum # of Hammer Strikes	Hammer Strikes per Soil Layer
Muck Soils	10	1	10
Sandy Soils	20	5	100
Marl	20	20	400
Total Strikes per Pile (Minimum)			510

Assumed Soil Type	Assumed Depth of Each Soil Type	Assumed Maximum # of Hammer Strikes	Hammer Strikes per Soil Layer
Muck Soils	10	2	20
Sandy Soils	20	10	200
Marl	20	100	2,000
Total Strikes per Pile (Maximum)			2,220

Total Strikes for End Bents	8,160	Minimum
	35,520	Maximum

Estimated # of Concrete Piles	308
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Assumed Soil Type	Assumed Depth of Each Soil Type	Assumed Minimum # of Hammer Strikes	Hammer Strikes per Soil Layer
Muck Soils	10	1	10
Sandy Soils	20	5	100
Marl	20	20	400
Total Strikes per Pile (Minimum)			510

Assumed Soil Type	Assumed Depth of Each Soil Type	Assumed Maximum # of Hammer Strikes	Hammer Strikes per Soil Layer
Muck Soils	10	2	20
Sandy Soils	20	10	200
Marl	20	100	2,000
Total Strikes per Pile (Maximum)			2,220

Total Strikes for End Bents	157,080	Minimum
	683,760	Maximum

Wade, Blair

From: Riddle, Nicole L. <RiddleNL@scdot.org>
Sent: Monday, June 06, 2016 8:25 AM
To: Wade, Blair; Long, Chad C.
Subject: FW: ESA Section 7 consultation for US 21 Harbor River Bridge

FYI

From: David Rydene - NOAA Federal [mailto:david.rydene@noaa.gov]
Sent: Thursday, June 02, 2016 12:49 PM
To: Riddle, Nicole L.
Subject: Re: ESA Section 7 consultation for US 21 Harbor River Bridge

Hi Nicole,

It is with the last reviewer in our Protected Resources Division, then it goes to one of our attorneys. I would guess that it should be finished in about 3-4 weeks.

- Dave

On Thu, May 26, 2016 at 2:09 PM, Riddle, Nicole L. <RiddleNL@scdot.org> wrote:

Hi, Dave, I hope all is well. I am emailing to see if you have an idea of when we will get the final response letter from you? It will just help me get an idea of where we are at. Thanks!

Nicole Levinson Riddle

Assistant NEPA Coordinator (Lowcountry)

Environmental Services Office

South Carolina Department of Transportation

O: [803-737-0841](tel:803-737-0841) C: [803-351-8480](tel:803-351-8480)

From: Riddle, Nicole L.
Sent: Tuesday, April 26, 2016 8:38 AM
To: David Rydene - NOAA Federal (david.rydene@noaa.gov)
Subject: FW: ESA Section 7 consultation for US 21 Harbor River Bridge

Please see the info below and the attached spreadsheet. I hope this helps.

**UNITED STATES DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

F/SER46:DR

JUL 18 2016

Ms. Nicole Riddle
Assistant NEPA Coordinator (Lowcountry)
South Carolina Department of Transportation
Environmental Services Office
955 Park Street
Columbia, South Carolina 29201-3959

Dear Ms. Riddle:

This letter responds to your request for consultation with us, the National Marine Fisheries Service (NMFS), pursuant to Section 7 of the Endangered Species Act (ESA) for the following action.

SER Number	Project Type
SER-2016-17718	U.S. 21 (Sea Island Parkway) Harbor River Bridge replacement

Consultation History

We received your letter requesting consultation and a Biological Assessment on January 15, 2016. We requested additional information on February 29, 2016. We received a revised Biological Assessment on April 5, 2016. We requested further information on April 13, 14, 15, and 22, 2016. We received an initial response on April 21, 2016, and a final response on April 25, 2016, and we initiated consultation that day.

Project Location

Address	Latitude/Longitude	Water body
U.S. 21 Bridge, St. Helena Island, Beaufort County, South Carolina	32.404235°N, 80.452792°W (North American Datum 1983)	Harbor River





Image of the project location and surrounding area (©2015 Google)

Existing Site Conditions

The existing U.S. 21 (Sea Island Parkway) Bridge spans Harbor River. Harbor River is an estuarine waterbody located approximately 0.88 mile south of St. Helena Sound and about 3.2 miles from the Atlantic Ocean (swimming distance). The bridge connects St. Helena Island with Harbor Island, Hunting Island, and Fripp Island. The bridge's approaches traverse salt marsh. In addition, shell banks and oyster bars can be found along the Harbor River and its associated tidal creeks.

The tidal range in Harbor River is about 6.1 feet (ft). The width of the waterbody at the bridge is approximately 1,835 ft at mean high tide, but it decreases to around 1,415 ft at mean low tide. Water depth in the bridge's navigation channel is about -35 ft at high tide. Bottom sediments in Harbor River consist of soft sediments mixed with some sand. Salinity levels are generally above 30 parts per thousand (ppt) and below 36 ppt.

Project Description

The South Carolina Department of Transportation (SCDOT) proposes replacing the existing structurally deficient and functionally obsolete 2-lane metal truss, swing span bridge with a new 2-lane concrete fixed span bridge. The new bridge's approximate length (based on the preferred alignment alternative) would be 7,198 ft. The new bridge's vertical clearance in the navigation channel would be 65 ft. The existing bridge would remain open until completion of the new bridge, followed by demolition of the existing bridge.

The following design and construction methods are based on "worst case" scenarios considered most likely by SCDOT. The new bridge's true final design is not known at this point and will not be known until a design/construction contractor has been selected. The SCDOT is aware that any changes to the bridge design that deviate from the specifications described below, revealing potential effects to listed species or critical habitat that were not previously considered, will require reinitiation of Section 7 consultation with NMFS.

In-water or over-water work will be accomplished from barges (where water depths allow) or from temporary work trestle bridges. As with similar bridge and transportation projects, it is expected that heavy equipment such as cranes, backhoes, and dump trucks will be used to accomplish construction activities. It is estimated that construction of the new bridge and demolition of the old bridge will take 2 years to complete.

SCDOT anticipates that the construction of the new bridge will require the installation of 56 drilled-shaft concrete columns with a diameter of 8 ft each. Each drilled-shaft concrete column is contained within a 1-piece cylindrical steel casing that is installed into the river bottom permanently using a vibratory hammer. It takes about 2 hours of vibratory hammer use to install a single casing, and 2 casings can be installed in a single day. Following casing installation, soil and rock are removed from inside the casing using an auger (hereafter referred to as "augering"). Water remaining in a casing after casing installation is used to facilitate augering and is eventually removed along with the augered sediments. All augered material will be disposed of at an appropriate upland site. Following augering, reinforcing steel is placed in the casing, then concrete is poured into the casing. As the concrete is poured, slurry used during augering is removed and sent through a de-sanding machine that cleans the slurry for reuse during the next augering event. The completed drilled-shaft concrete columns will serve as the foundations (i.e., substructures) that support each bridge's bents and piers. Typically, 2 casings are installed in a single day. It then takes approximately 1 week to complete these drilled-shaft columns (augering and concrete pouring) before moving on to the next 2 column installations. Of the 56 drilled-shaft concrete columns, 20 will be constructed in the waters of Harbor River, and 36 will be built in salt marsh or intertidal flats. It is estimated that there will be about 112 hours of active in-water vibratory work to install casings.

The construction of approaches at each end of the new bridge will either use fill to create new causeways through the salt marshes or will use pile-supported 30-ft-long flat slab spans to bridge the salt marshes. The flat slab spans would require the impact hammer installation of approximately 308 square concrete piles measuring 24-inches (in) by 24-in. It will take about 1 hour of impact driving and up to approximately 2,220 hammer strikes to install a single concrete pile with 5 piles driven each day (a maximum total of 11,100 hammer strikes per day). All

concrete columns would be installed in high salt marsh. This high marsh is usually exposed (i.e., above the waterline) and inaccessible to fish and turtles, and is only inundated during extreme high water events. The salt marsh has an elevation of + 3 ft (North American Vertical Datum or NAVD), while the mean high water only rises to + 2.58 ft (NAVD). It is estimated that there will be about 308 hours of in-water impact pile-driving work to install concrete piles if the flat slab span option is chosen.

Two end bents would be constructed on each end of the bridge approaches in causeway fill material. The amount of causeway fill material would be reduced if the flat slab span option is chosen (i.e., fill would only be only placed where the flat slab spans terminate). Construction of the 2 end bents will require a total of 16 steel H-piles (14-in width) to be installed via impact hammer. Each end bent's 8 H-piles can be driven in a single day (8 hours of impact driving) requiring a maximum of 17,760 hammer strikes per day. The end bent's H-piles would only be placed in causeway fill, not in salt marshes or the open waters of Harbor River.

Bridge construction will likely require temporary work trestles extending from each shoreline. The trestles would extend across the salt marshes to the edges of the open water. The trestles would be used for construction activities and to load and unload barges working in the open water. Each work trestle would be approximately 3,800-ft-long, requiring the installation of a total of about 370 steel pipe piles for both trestles. Each pipe pile would have a diameter of about 24-in and would be installed using a vibratory hammer. It takes about 1 hour to install each pipe pile. Typically, 2 piles are installed in a day, followed by 3 days of span construction before another 2 piles are installed and another span is built. Only 24 of the 370 pipe piles would be installed in open water, with the remainder being placed in salt marsh. The work trestles will be dismantled and the pipe piles pulled out using a crane and vibratory hammer when they are no longer needed. Total time for work trestle construction is expected to be 4 months.

While the existing causeway is expected to remain in place, if portions of it are removed, the material would be disposed of at an appropriate upland site. The demolition of the old bridge will involve the use of standard mechanical deconstruction methods to remove the piers, decking, and swing span. Vibratory methods may be used to remove the existing bridge piles. Demolished bridge materials will likely be placed on barges and transported offsite for disposal and/or recycling. It is not known if any explosive demolition will be required, but if it is, then reinitiation of Section 7 consultation with NMFS will be necessary.

Pile Installation

Pile type	Number of Piles	Installation Method	Confined Space or Open Water
Drilled shaft concrete columns (8-ft diameter)	56 (20 located in water, 36 located in salt marsh or tidal flats)	Vibratory hammer and augering	Open water (20 located in water)
Square concrete piles (24-in by 24-in)	308 (Located in salt marsh only)	Impact hammer	N/A

Pile type	Number of Piles	Installation Method	Confined Space or Open Water
Steel H-piles (14-in wide)	16 (Located in causeway fill only)	Impact hammer	N/A
Steel pipe piles (24-in diameter)	370 (24 located in water, 346 located in salt marsh)	Vibratory hammer	Open water (24 located in water)

Construction Conditions

The applicant will ensure the use of SCDOT's Best Management Practices for soil and erosion control, and develop a spill prevention and pollution control plan to minimize impacts to wetlands and the Harbor River. Turbidity curtains will be deployed (as necessary) in waters greater than 1-ft deep to contain suspended sediments until they settle back to the bottom, and silt fences would be used in waters less than 1-ft deep. No more than 50% of the waterway will be obstructed by construction equipment. A "slow start" method will be used to initiate impact driving of piles. The "slow start" method involves slowly increasing the power of the impact hammer, and the noise it produces, over a pre-determined period of time to give marine species an opportunity to leave the work area. The applicant has agreed to implement NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*, dated March 23, 2006, and apply those conditions to shortnose and Atlantic sturgeon as well. The applicant has agreed to a year-round restriction on nighttime work so that no in-water work occurs during at least 8 hours per night.

Effects Determinations for Species the Action Agency or NMFS Believes May Be Affected by the Proposed Action

Species	ESA Listing Status	Action Agency Effect Determination	NMFS Effect Determination
Sea Turtles			
Green (North and South Atlantic distinct population segments [DPS])	T	NLAA	NLAA
Kemp's ridley	E	NLAA	NLAA
Leatherback	E	NLAA	NE
Loggerhead (Northwest Atlantic Ocean DPS)	T	NLAA	NLAA
Fish			
Shortnose sturgeon	E	NLAA	NLAA
Atlantic sturgeon (Carolina DPS)	E	NLAA	NLAA
T = Threatened; E = endangered; NLAA = may affect, not likely to adversely affect; NE = no effect			

We believe that only shortnose and Atlantic sturgeon, loggerhead sea turtles (Northwest Atlantic Ocean DPS), green sea turtles (North and South Atlantic DPS), and Kemp's ridley sea turtles may be found in or near the action area and may be affected by the project. We believe the project will have no effect on leatherback sea turtles, due to the species' very specific life history

strategies, which are not supported at the project site. Leatherback sea turtles have a pelagic, deepwater life history, where they forage primarily on jellyfish.

Critical Habitat

The project is not located in designated critical habitat, and there are no potential routes of effect to any designated critical habitat.

Analysis of Potential Routes of Effects to Species

Effects to Atlantic sturgeon, shortnose sturgeon, and sea turtles include the risk of injury from direct impact by construction machinery and associated activities (e.g., barge and work boat movement, impact and vibratory hammer operations), which will be discountable due to the species' ability to move away from the project site if disturbed. An animal's movement away from the injurious impact zone is a behavioral response, with the same effects discussed below. The potential effects due to the noise from installing steel casings and piles are discussed separately below. The applicant's compliance with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*, dated March 23, 2006, (also applied to shortnose and Atlantic sturgeon) will provide an additional measure of protection by causing the construction activities to stop if sea turtles or sturgeon are spotted within 50 ft of operations.

As referenced above, sea turtles and sturgeon may avoid the project sites due to construction activities, and will also be physically excluded from active work areas by turbidity curtains or silt fences. Any impacts to these species from physical exclusion or avoidance of the project areas due to project activities will be insignificant, as there are numerous suitable alternative sites in the area that sea turtles and sturgeon could use for foraging or refuge, and any exclusion effects will be temporary.

In-water construction activities will result in temporary increases in turbidity that could affect water quality. Yet, these highly turbid areas will be contained within turbidity barriers or silt fences, and these barriers will not be removed until after turbidity levels decrease to ambient levels. Therefore, we anticipate any effects on listed species due to elevated turbidity will be insignificant.

The in-water installation of 20 drilled-shaft concrete columns (8-ft diameter) will result in the permanent loss of 0.023 acre of unvegetated estuary bottom (e.g., silt and sand) where sturgeon and sea turtles might forage for invertebrate prey. In addition, 0.0017 acre of estuarine bottom will be temporarily displaced by the 24 steel pipe piles (24-in diameter) installed for the work trestles. However, this type of substrate is highly abundant in Harbor River and St. Helena Sound. The eventual removal of the obsolete bridge's in-water substructure elements will help offset the permanent loss of estuarine bottom, and the temporary work trestle pipe piles will be removed once the new bridge is built. Invertebrates will quickly recolonize this estuarine bottom upon removal of these substructures. We believe the effects on sturgeon and sea turtles caused by the loss of estuary bottom habitat due to this project will be insignificant.

Effects to sturgeon and sea turtles as a result of noise created by the installation of drilled-shaft columns, concrete piles, steel H-piles, and pipe piles (e.g., vibratory installation of the cylindrical steel casings followed by augering within the casings, and impact or vibratory hammering of

piles) can physically injure animals in the affected areas or change animal behavior in the affected areas. Physical injurious effects can occur in 2 ways. First, effects can result from a single noise event's exceeding the threshold for direct physical injury to animals, and these constitute an immediate adverse effect on these animals. Second, effects can result from prolonged exposure to noise levels that exceed the daily cumulative exposure threshold for the animals, and these can constitute adverse effects, if animals are exposed to the noise levels for sufficient periods. Behavioral effects can be adverse if such effects interfere with migrating, feeding, resting, or reproducing, for example. All in-water noise levels discussed below are referenced to 1 micropascal. The NMFS-accepted noise thresholds for impact pile driving are 206 decibels (dB) for peak-pressure injury, 187 dB for single-strike sound exposure level (sSEL) injury, 187 dB for cumulative sound exposure level (cSEL) injury, 150 dB root mean square (RMS) for behavioral disturbance of fishes, and 160 dB RMS for behavioral disturbance of sea turtles.¹ The NMFS-accepted noise thresholds for vibratory driving are the same as for impact driving with the exception of the cSEL injury threshold, which is 234 dB for vibratory driving.

Atlantic and shortnose sturgeon and sea turtles may be affected by noise associated with the vibratory hammer installation of cylindrical steel casings (for drilled-shaft concrete columns) into the estuary's bottom. Because no noise data exist for the vibratory installation of steel casings (8 ft in diameter), we used data on the vibratory installation of 6-ft-diameter steel pipe piles as a surrogate.² The 6-ft-diameter steel pipe piles are the largest size that vibratory installation in-water noise data are available for, and due to the nature of vibratory hammer installation, noise levels tend not to increase incrementally as pipe pile diameters get larger. Additionally, 6-ft-diameter steel pipe piles would have a greater wall thickness than the casings which would increase their vibratory noise levels. Based on our noise analysis, the vibratory installation of casings will not cause peak-pressure, sSEL, or cSEL injury to sea turtles or sturgeon. The peak-pressure noise level at the source (i.e., immediately next to active vibratory driving) will be approximately 198 dB, while the NMFS-accepted peak-pressure injury threshold is 206 dB. The maximum sSEL at the source will be approximately 185 dB, while the NMFS-accepted sSEL injury threshold is 187 dB. The maximum cSEL at the source will be approximately 227 dB, while the NMFS-accepted cSEL injury threshold is 234 dB. The applicant's compliance with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*, dated March 23, 2006, (also applied to shortnose and Atlantic sturgeon) will provide an additional measure of protection by causing the installation activities to stop if sea turtles or sturgeon are spotted within 50 ft of operations. Thus, it is extremely unlikely that sea turtles and sturgeon will be injured from the vibratory installation of casings and the effect of such installation is discountable.

Based on our noise calculations, the vibratory installation of steel casings could cause behavioral disturbance effects at radii of 152 ft (46 meters [m]) from the source for sea turtles and 707 ft (215 m) from the source for sturgeon. The 152-ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 160 dB for sea

¹ NMFS 2014. Regional General Permit SAJ-82 (SAJ-2007-1590), Florida Keys, Monroe County, Florida.

² California Department of Transportation. 2009. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish (with updated 2012 Compendium). Final. February (ICF 645.10). Prepared by ICF Jones & Stokes, Sacramento, CA and Illingworth & Rodkin, Inc., Petaluma, CA.

turtles, while the 707-ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 150 dB for sturgeon. If an individual chooses to remain within the behavioral disturbance zone, it could be exposed to behavioral noise effects during pile installation and alter its behavioral pattern. Yet, due to the mobility of sea turtles and sturgeon, we expect them to move away from noise disturbances to similar habitat nearby and resume normal behaviors. In addition, these species will be able to resume normal activities during quiet periods between pile installations, and for at least 8 hours every night. Therefore, we anticipate any behavioral effects will be insignificant.

Augering the soil and rock from within the casings could produce noise that may affect Atlantic and shortnose sturgeon and sea turtles. Based on the best available information on augering noise levels, this project's peak-pressure noise levels should be below the threshold for injury or mortality to sea turtles and sturgeon. The best available noise data come from a study of in-water noise produced during the installation of drilled-shaft columns using auger bits in Bechers Bay, Santa Rosa Island, California, that found the sound levels at the source ranged from 121-184.5 dB with an average noise level of 154.2 dB.³ The "sea floor" at Bechers Bay consisted of sand, rock, and other geographic features similar to the Harbor River bottom; thus, the study is pertinent to this analysis. The maximum reported noise level from the Bechers Bay study, 184.5 dB, is below the NMFS-accepted peak-pressure and sSEL noise injury thresholds of 206 dB and 187 dB, respectively. Based on the 154.2 dB average noise level and 8 hours of augering in a day, the cSEL level at the source would be 199 dB, which is below the 234 dB cSEL injury threshold. The applicant's compliance with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*, dated March 23, 2006, (also applied to shortnose and Atlantic sturgeon) will provide an additional measure of protection by causing the installation activities to stop if sea turtles or sturgeon are spotted within 50 ft of operations. Therefore, the potential for injury from augering within the cylindrical steel casings is extremely unlikely and the effect of augering is discountable.

Based on the 154.2 dB average noise level, noise levels due to augering within the cylindrical steel casings will not exceed the 160 dB threshold for potential behavioral disturbance effects to sea turtles, but will slightly exceed the 150 dB behavioral disturbance threshold for Atlantic sturgeon and shortnose sturgeon. Based on this information, sturgeon may exhibit behavioral changes when within a 6-ft radius (2 m) of the casing when augering is occurring, because that is the distance at which noise levels are expected to dissipate to the accepted threshold. Due to the mobility of sturgeon, however, we expect them to move away from noise disturbances. In addition, these species will be able to resume normal activities during any quiet periods between pile installations, and for at least 8 hours every night. Because the disturbance radius is so small and we expect the animals to relocate to similar habitat nearby, we believe behavioral effects will be insignificant. The project has adequate avenues for a sturgeon to leave or avoid the project area during augering.

Sturgeon and sea turtles may be affected by noise associated with the vibratory hammer installation of steel pipe piles (24-in diameter) into the estuary's bottom for the construction of

³ Dazey, E., McIntosh, B., Brown, S., and Dudzinski, K.M. 2012. Assessment of Underwater Anthropogenic Noise Associated with Construction Activities in Bechers Bay, Santa Rosa Island, California. *Journal of Environmental Protection*. 3: 1286-1294.

temporary work trestles (as well as their later removal). The potential removal of the existing obsolete bridge's piles via vibratory hammer during the demolition process would have effects similar to those described below for pipe piles. Based on our noise analysis, the vibratory installation or removal of pipe piles will not cause peak-pressure, sSEL, or cSEL injury to sea turtles or sturgeon. The peak-pressure noise level at the source (i.e., immediately next to active vibratory driving) will be approximately 195 dB, while the NMFS-accepted peak-pressure injury threshold is 206 dB. The maximum sSEL at the source will be approximately 185 dB, while the NMFS-accepted sSEL injury threshold is 187 dB. The maximum cSEL at the source will be approximately 224 dB, while the NMFS-accepted cSEL injury threshold is 234 dB. The applicant's compliance with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*, dated March 23, 2006, (also applied to shortnose and Atlantic sturgeon) will provide an additional measure of protection by causing the installation activities to stop if sea turtles or sturgeon are spotted within 50 ft of operations. Thus, the risk of injury to sea turtles and sturgeon from the vibratory installation or removal of 24-in-diameter pipe piles or vibratory removal of the existing bridge's piles is extremely unlikely, and the effect of such activity is discountable.

Based on our noise calculations, the vibratory installation or removal of steel pipe piles or vibratory removal of the existing bridge's piles could cause behavioral disturbance effects at radii of 152 ft (46 m) from the source for sea turtles and 707 ft (215 m) from the source for sturgeon. The 152-ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 160 dB for sea turtles, and the 707-ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 150 dB for sturgeon. If an individual chooses to remain within the behavioral disturbance zone, it could be exposed to behavioral noise effects during pile installation and alter its behavioral pattern. Due to the mobility of sea turtles and sturgeon, we expect them to move away from noise disturbances to similar habitat nearby and resume normal behaviors. In addition, these species will be able to resume normal activities during quiet periods between pile installations, and for at least 8 hours every night. Therefore, we anticipate any behavioral effects will be insignificant.

Assuming that the flat slab span approach is selected, 24-in by 24-in square concrete piles would be installed via impact hammer. Because all of these piles would be installed in high salt marsh rather than open water, we assume an 11-dB reduction to in-water noise levels due to this circumstance.⁴ This is a conservative approach since the high salt marsh is usually above the waterline and only occasionally covered by a few inches of water to transmit noise. Based on our noise analysis, the impact hammer installation of 24-in by 24-in square concrete piles will not cause peak-pressure or sSEL injury to sea turtles or sturgeon. The peak-pressure noise level at the source (i.e., immediately next to active impact driving) will be approximately 189 dB, while the NMFS-accepted peak-pressure injury threshold is 206 dB. The sSEL level at the source will be approximately 164 dB, while the NMFS-accepted sSEL injury threshold is 187 dB. Thus, the risk of immediate injury to sea turtles and sturgeon from the impact hammer installation of 24-in by 24-in square concrete piles is extremely unlikely, and the effect of such activity is discountable.

⁴ NMFS 2014. Regional General Permit SAJ-82 (SAJ-2007-1590), Florida Keys, Monroe County, Florida.

The maximum cSEL at the source will be approximately 204 dB, while the NMFS-accepted cSEL injury threshold is 187 dB. The cSEL due to of multiple pile strikes (11,100 strikes per day) to concrete piles over the course of a day could cause injury to sturgeon or sea turtles at a radius of up to 28 ft (9 m) from pile driving, if a sturgeon or sea turtle remained within this zone for a full day's pile driving. Due to the mobility of sturgeon and turtles, we expect them to move away from noise disturbances. The project has adequate avenues for a sturgeon or sea turtle to leave or avoid the project area during pile-driving activities, and there is similar habitat nearby. Also, because all of the piles will be placed in high salt marsh, the cSEL injury zone for most piles will not extend into open water, and ESA-listed species will only be able to get within 28 ft of those piles installed at the edge of the salt marsh where it meets open water. Because most piles will be inaccessible to sturgeon and sea turtles and we anticipate that animals will move away from those piles installed near the salt marsh edge, we believe that an animal's suffering physical injury from cumulative noise exposure is extremely unlikely to occur. Thus, we believe the risk of injury is extremely unlikely and the effect of such activity is discountable. An animal's movement away from the injurious impact zone is a behavioral response, with the same effects discussed below.

The impact hammer installation of concrete piles in high salt marsh could cause behavioral disturbance effects at radii of 28 ft (9 m) from the source for sea turtles and 131 ft (40 m) from the source for sturgeon. The 28-ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 160 dB for sea turtles, and the 131-ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 150 dB for sturgeon. If an individual chooses to remain within the behavioral disturbance zone, it could be exposed to behavioral noise effects during pile installation and alter its behavioral pattern. Due to the mobility of sea turtles and sturgeon, we expect them to move away from noise disturbances to similar habitat nearby and resume normal behaviors. Again, because these piles are all being installed in high salt marsh, the behavioral disturbance zones will not extend into open water for most pile installations. In addition, sturgeon and turtles will be able to resume normal activities during quiet periods between pile installations, and for at least 8 hours every night. Therefore, we anticipate any behavioral effects will be insignificant.

Based on our noise calculations, the installation of 14-in-wide steel H-piles in causeway fill (for end bent construction) by impact hammer could cause peak-pressure injury to sturgeon and sea turtles, but no sSEL injury should result. As with the concrete piles, we assume an 11-dB reduction in in-water noise because piles will be installed on land near open water, but not in open water. Peak-pressure sound levels at the source would be 212 dB and sSEL levels would be 181 dB. The NMFS-accepted peak-pressure noise injury threshold is 206 dB for sturgeon and turtles, and the sSEL injury threshold is 187 dB. Peak-pressure injury could occur if a sturgeon or sea turtle was within 8 ft (3 m) of the pile driving. The use of the "slow start" technique prior to full-force driving will provide sturgeon and turtles ample opportunity to leave the project area as noise levels increase and before the peak-pressure injury threshold is reached. Because we anticipate that sturgeon and turtles will move away from the project area during the "slow start" period, we believe that an animal's suffering physical injury from peak-pressure noise exposure is extremely unlikely to occur. The applicant's compliance with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*, dated March 23, 2006, (also applied to shortnose

and Atlantic sturgeon) will provide an additional measure of protection by causing the installation activities to stop if sea turtles or sturgeon are spotted within 50 ft of operations. Also, part or all of the peak-pressure injury zone would be on land and inaccessible to sturgeon and sea turtles. There are adequate avenues for a sturgeon or sea turtle to leave or avoid the project area during pile-driving activities, and there is similar habitat nearby. Thus, we believe that the potential for peak-pressure injury effects is extremely unlikely and the effect of such activity is discountable. An animal's movement away from the injurious impact zone is a behavioral response, with the same effects discussed below.

The maximum cSEL at the source will be approximately 223 dB, while the NMFS-accepted cSEL injury threshold is 187 dB. The cSEL of multiple pile strikes to H-piles (17,760 strikes per day) over the course of a day may cause injury to sturgeon and sea turtles at a radius of up to 383 ft (117 m) from pile driving, if a sturgeon or turtle remained within this zone for a full day's pile driving. Due to the mobility of sturgeon and turtles, we expect them to move away from noise disturbances. Because we anticipate that sturgeon and turtles will move away from the project area during the "slow start" period, we believe that an animal's suffering physical injury from cSEL noise exposure is extremely unlikely to occur. The project has adequate avenues for a sturgeon or sea turtle to leave or avoid the project area during pile-driving activities, and there is similar habitat nearby. Thus, we believe the risk of injury is extremely unlikely and the effect of such activity discountable. An animal's movement away from the injurious impact zone is a behavioral response, with the same effects discussed below.

The impact hammer installation of H-piles in causeway fill could cause behavioral disturbance effects at radii of 606 ft (185 m) from the source for sea turtles and 2,814 ft (858 m) from the source for sturgeon. The 606-ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 160 dB for sea turtles, and the 2,814 ft radius marks the point at which the RMS noise level drops below the NMFS-accepted RMS behavioral disturbance threshold of 150 dB for sturgeon. If an individual chooses to remain within the behavioral disturbance zone, it could be exposed to behavioral noise effects during pile installation and alter its behavioral pattern. Due to the mobility of sea turtles and sturgeon, we expect them to move away from noise disturbances to similar habitat outside of the behavioral disturbance zones and resume normal behaviors. In addition, sturgeon and turtles will be able to resume normal activities during quiet periods between pile installations, and for at least 8 hours every night. Also, the installation of all 16 H-piles will only take 2 days. Therefore, we anticipate any behavioral effects will be insignificant.

Conclusion

Because all potential project effects to listed species were found to be discountable, insignificant, or beneficial, we conclude that the proposed action is not likely to adversely affect listed species under NMFS's purview. This concludes your consultation responsibilities under the ESA for species under NMFS's purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. NMFS's findings on the project's potential effects are based on the project description in this response. Any changes to the

proposed action may negate the findings of this consultation and may require reinitiation of consultation with NMFS.

We have enclosed additional relevant information for your review. We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions regarding this consultation, please contact Dr. Dave Rydene, Consultation Biologist, at (727) 824-5379, or by email at David.Rydene@noaa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Crabtree', with a stylized, flowing script.

Roy E. Crabtree, Ph.D.
Regional Administrator

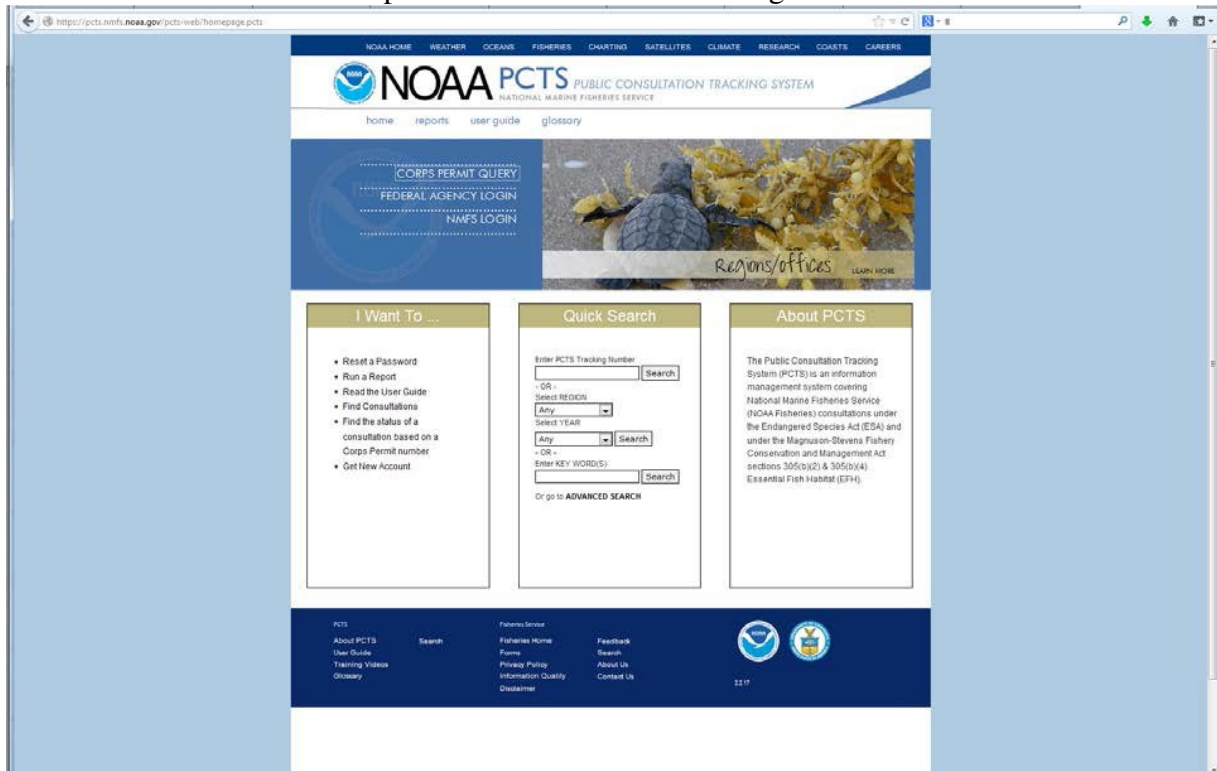
Enc.: 1. *Sea Turtle and Smalltooth Sawfish Construction Conditions* (Revised March 23, 2006)
2. *PCTS Access and Additional Considerations for ESA Section 7 Consultations*
(Revised March 10, 2015)

File: 1514-22.L.2

PCTS Access and Additional Considerations for ESA Section 7 Consultations (Revised 03-10-2015)

Public Consultation Tracking System (PCTS) Guidance: PCTS is a Web-based query system at <https://pcts.nmfs.noaa.gov/> that allows all federal agencies (e.g., U.S. Army Corps of Engineers - USACE), project managers, permit applicants, consultants, and the general public to find the current status of NMFS's Endangered Species Act (ESA) and Essential Fish Habitat (EFH) consultations which are being conducted (or have been completed) pursuant to ESA Section 7 and the Magnuson-Stevens Fishery Conservation and Management Act's (MSA) Sections 305(b)2 and 305(b)(4). Basic information including access to documents is available to all.

The PCTS Home Page is shown below. For USACE-permitted projects, the easiest and quickest way to look up a project's status, or review completed ESA/EFH consultations, is to click on either the "Corps Permit Query" link (top left); or, below it, click the "Find the status of a consultation based on the Corps Permit number" link in the golden "I Want To..." window.

The screenshot shows the NOAA PCTS homepage. At the top is a navigation bar with links: NOAA HOME, WEATHER, OCEANS, FISHERIES, CHARTING, SATELLITES, CLIMATE, RESEARCH, COASTS, CAREERS. Below this is the NOAA logo and the text "NOAA PCTS PUBLIC CONSULTATION TRACKING SYSTEM NATIONAL MARINE FISHERIES SERVICE". A secondary navigation bar includes: home, reports, user guide, glossary. The main content area features a large banner with a sea turtle and the text "Regions/offices" and "LEARN MORE". Below the banner are three columns: "I Want To ..." with links like "Reset a Password", "Run a Report", "Read the User Guide", "Find Consultations", "Find the status of a consultation based on a Corps Permit number", and "Get New Account"; "Quick Search" with fields for "Enter PCTS Tracking Number", "OR -", "Select REGION", "Any", "Select YEAR", "Any", "OR -", "Enter KEY WORD(S)", and "Or go to ADVANCED SEARCH"; and "About PCTS" with a description of the system. The footer contains links for PCTS, About PCTS, Search, Fisheries Service, Fisheries Home, Forms, Privacy Policy, Information Quality, Disclaimer, Feedback, Search, About Us, and Contact Us, along with NOAA and USACE logos and the date 11/17.

Then, from the "Corps District Office" list pick the appropriate USACE district. In the "Corps Permit #" box, type in the 9-digit USACE permit number identifier, with no hyphens or letters. Simply enter the year and the permit number, joined together, using preceding zeros if necessary after the year to obtain the necessary 9-digit (no more, no less) number. For example, the USACE Jacksonville District's issued permit number SAJ-2013-0235 (LP-CMW) must be typed in as 201300235 for PCTS to run a proper search and provide complete and accurate results. For querying permit applications submitted for ESA/EFH consultation by other USACE districts, the procedure is the same. For example, an inquiry on Mobile District's permit MVN201301412 is entered as 201301412 after selecting the Mobile District from the "Corps District Office" list. PCTS questions should be directed to Kelly Shotts at Kelly.Shotts@noaa.gov or (727) 551-5603.

EFH Recommendations: In addition to its protected species/critical habitat consultation requirements with NMFS' Protected Resources Division pursuant to Section 7 of the ESA, prior to proceeding with the proposed action the action agency must also consult with NMFS' Habitat Conservation Division (HCD) pursuant to the MSA requirements for EFH consultation (16 U.S.C. 1855 (b)(2) and 50 CFR 600.905-.930, subpart K). The action agency should also ensure that the applicant understands the ESA and EFH processes; that ESA and EFH consultations are separate, distinct, and guided by different statutes, goals, and time lines for responding to the action agency; and that the action agency will (and the applicant may) receive separate consultation correspondence on NMFS letterhead from HCD regarding their concerns and/or finalizing EFH consultation.

Marine Mammal Protection Act (MMPA) Recommendations: The ESA Section 7 process does not authorize incidental takes of listed or non-listed marine mammals. If such takes may occur an incidental take authorization under MMPA Section 101 (a)(5) is necessary. Please contact NMFS' Permits, Conservation, and Education Division at (301) 713-2322 for more information regarding MMPA permitting procedures.

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006

Appendix A-5

US Fish and Wildlife Service

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407



July 1, 2015

Mr. Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation
P.O. Box 191
Columbia, SC 29202-0191

Re: Letter of Intent, U.S. Highway 21 Bridge Replacement, Harbor River,
Beaufort County, SC, FWS Log No. 2015-CPA-0112

Dear Mr. Long:

The U.S. Fish and Wildlife Service (Service) has received your June 23, 2015, Letter of Intent (LOI) for the proposed replacement of the U.S. Highway 21 Bridge over Harbor River in Beaufort County, South Carolina. The South Carolina Department of Transportation (SCDOT) is proposing to replace U.S. Highway 21, which connects St. Helena Island to Harbor Island, Fripp Island, and Hunting Island State Park. The SCDOT is soliciting comments for consideration and incorporation into an Environmental Assessment (EA) which is being prepared pursuant to the National Environmental Policy Act of 1969, as amended (43 U.S.C. 4321 *et seq.*) (NEPA).

The Service believes it is imperative that the EA is designed to conserve local natural resources to the maximum extent possible. As such, we recommend that project planning efforts incorporate all possible means to avoid and/or minimize impacts wetlands along the corridor through a rigorous alternatives analysis. Analyses should include the consideration of a longer bridge span rather than a causeway to span the salt marsh critical area. Once a range of alternatives has been identified, we recommend that SCDOT schedule a multi-agency site visit in order to review each alternative.

The LOI stated that a threatened and endangered species survey was performed for the site in September 2014, and determined that the project area contains suitable habitat for several federally protected threatened and endangered (T&E) species. The Service recommends the project efforts continue to consider potential impact to these species as well as species that may be listed in the future. The Service has included with this letter a list of species that are currently protected under the Endangered Species Act of 1973 (ESA), species that are considered as a candidate for listing under the ESA, and those that have been petitioned for listing under the

ESA. The species which have been petitioned for listing are considered "At-Risk Species" (ARS) and may occur in Beaufort County, South Carolina. Although there are no Federal protections afforded to ARS, please consider including ARS in your survey efforts. Incorporating proactive measures to avoid or minimize harm to ARS may improve their status and assist with precluding the need to list these species. Additional information on ARS can be found at:

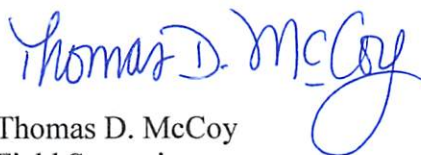
<http://www.fws.gov/southeast/candidateconservation>

The Service finds that this project is similar in nature to recent SCDOT projects where the subject corridor serves as the single access and egress route. Replacement of the Folly Road bridges leading to Folly Beach, South Carolina, and the US Hwy 701 bridges connecting Horry and Georgetown Counties are similar in that the roadways were or will be required to remain open during construction of the new, adjacent structures. Detouring traffic for these projects was not considered feasible, as they served as the sole transportation route in the project area. With this understanding we find that a new alignment is the most likely alternative for US 21.

Construction of U.S. Highway 21 on a new alignment presents an opportunity SCDOT to develop a Permittee Responsible Mitigation plan to minimize impacts while performing onsite restoration, thereby satisfying future mitigation requirements. The Service recommends SCDOT consider eliminating the use of fill for a causeway and bridge the entire span of salt marsh between St. Helena Island and Harbor Island for the new U.S. Highway 21 corridor. Once the new bridge is completed and traffic re-routed SCDOT could remove the abandoned U.S. Highway 21 Bridge and causeway and restore the underlying land to salt marsh wetlands. This onsite wetland restoration would serve as compensatory mitigation for impacts associated with the new bridge's construction.

The Service appreciates the opportunity to provide input at this early stage of the project's development. If you have any questions, please contact Mr. Mark Caldwell at (843) 727-4707 ext. 215, and reference FWS Log No. 2015-CPA-0112.

Sincerely,



Thomas D. McCoy
Field Supervisor

TDM/MAC

South Carolina List of At-Risk, Candidate, Endangered, and Threatened Species - Beaufort County

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS
Amphibian	Frosted flatwoods salamander (T, CH)	<i>Ambystoma cingulatum</i>	January 1-April 30	Larvae present in breeding ponds
Bird	American wood stork (T)	<i>Mycteria americana</i>	February 15-September 1	Nesting season
	Bald eagle (BGEPA)	<i>Haliaeetus leucocephalus</i>	October 1-May 15	Nesting season
	Black rail (ARS)	<i>Laterallus jamaicensis</i>	May-July	
	MacGillivray's seaside sparrow (ARS)	<i>Ammodramus maritimus macgillivrayi</i>	May-June	
	Piping plover (T, CH)	<i>Charadrius melodus</i>	July 15-May 1	Migration and wintering
	Red-cockaded woodpecker (E)	<i>Picoides borealis</i>	April 1-July 31	Nesting season
	Red knot (T)	<i>Calidris canutus rufa</i>	August 1-May 31	Migration and wintering
Crustacean	None Found			
Fish	American eel (ARS)	<i>Anguilla rostrata</i>	March 1-May 30; October 1-December 15	Temperature dependent: normally (17-20°C); can be found between 13-25°C
	Atlantic sturgeon* (E)	<i>Acipenser oxyrinchus*</i>	February 1-April 30	Spawning migration
	Blueback herring (ARS)	<i>Alosa aestivalis</i>	Mid-January-mid May	Peak: March-April
	Shortnose sturgeon* (E)	<i>Acipenser brevirostrum*</i>	February 1-April 30	Spawning migration
Insect	Monarch butterfly (ARS)	<i>Danaus plexippus</i>	August-December	Overwinter population departs: March-April
	Rare skipper (ARS)	<i>Problema bulenta</i>	May; July-September	Two brood periods
Mammal	Finback whale* (E)	<i>Balaenoptera physalus*</i>	November 1-April 30	Off the coast
	Humpback whale * (E)	<i>Megaptera novaengliae</i>	January 1-March 31	Migration off the coast
	Rafinesque's big-eared bat (ARS)	<i>Corynorhinus rafinesquii</i>	Year round	Found in mines, caves, large hollow trees, buildings, and bat towers
	Right whale* (E)	<i>Balaena glacialis</i>	November 1-April 30	Off the coast
	Tri-colored bat (ARS*)	<i>Perimyotis subflavus</i>	Year round	Found in mines and caves in the winter
	West Indian manatee (E)	<i>Trichechus manatus</i>	May 15-October 15	In coastal waters
Mollusk	None Found			
Plant	Canby's dropwort (E)	<i>Oxypolis canbyi</i>	Mid-July-September	
	Carolina bishopweed (ARS)	<i>Ptilimnium ahlesii</i>	May-July	
	Godfrey's privet (ARS)	<i>Forestiera godfreyi</i>	April-June	
	Pondberry (E)	<i>Lindera melissifolia</i>	February-March	
	Raven's seedbox (ARS)	<i>Ludwigia ravenii</i>	June-October	
Reptile	Eastern diamondback rattlesnake (ARS)	<i>Crotalus adamanteus</i>	Most of the year	Peak: April-November
	Green sea turtle ** (T)	<i>Chelonia mydas **</i>	May 1-October 31	Nesting and hatching
	Kemp's ridley sea turtle ** (E)	<i>Lepidochelys kempii**</i>	May 1-October 31	In coastal waters
	Leatherback sea turtle ** (E)	<i>Dermochelys coriacea **</i>	May 1-October 31	Nesting and hatching
	Loggerhead sea turtle ** (T, CH)	<i>Caretta caretta **</i>	May 1-October 31	Nesting and hatching
	Southern hognose snake (ARS)	<i>Heterodon simus</i>	Most of the year	

South Carolina List of At-Risk, Candidate, Endangered, and Threatened Species - Beaufort County

* Contact National Marine Fisheries Service (NMFS) for more information on this species

** The U.S. Fish and Wildlife Service (FWS) and NMFS share jurisdiction of this species

ARS Species that the FWS has been petitioned to list and for which a positive 90-day finding has been issued (listing may be warranted); information is provided only for conservation actions as no Federal protections currently exist.

ARS* Species that are either former Candidate Species or are emerging conservation priority species

BGEPA Federally protected under the Bald and Golden Eagle Protection Act

C FWS or NMFS has on file sufficient information on biological vulnerability and threat(s) to support proposals to list these species

CH Critical Habitat

E Federally Endangered

P or P - CH Proposed for listing or critical habitat in the Federal Register

S/A Federally protected due to similarity of appearance to a listed species

T Federally Threatened

These lists should be used only as a guideline, not as the final authority. The lists include known occurrences and areas where the species has a high possibility of occurring. Records are updated as deemed necessary and may differ from earlier lists.

For a list of State endangered, threatened, and species of concern, please visit <https://www.dnr.sc.gov/species/index.html>.

From: Riddle, Nicole L.
To: ["Charleston@fws.gov"](mailto:Charleston@fws.gov)
Cc: [Belcher, Jeffery - FHWA](#); [Long, Chad C.](#)
Subject: BA submittal of US 21 over Harbor River in Beaufort County
Date: Friday, January 15, 2016 1:19:00 PM
Attachments: [Final USEWS BA 2016-01-14 \(1\).pdf](#)

The South Carolina Department of Transportation (SCDOT) proposes to replace the existing US 21 (Sea Island Parkway) Bridge over Harbor River, located in Beaufort County, South Carolina. The project involves the bridge replacement as well as the construction of a new roadway approach alignment. The purpose of the project is to correct structural and functional deficiencies of the US 21 Bridge over the Harbor River and to upgrade the bridge and its approaches to current design standards.

SCDOT is submitting the attached biological assessment and is requesting consultation. Please contact me or Chad Long (803-737-1396) if additional information is needed or should you have any questions.

Nicole Levinson Riddle
Assistant NEPA Coordinator (Lowcountry)
Environmental Services Office
South Carolina Department of Transportation
O: 803-737-0841 C: 803-351-8480



United States Department of the Interior

FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407



January 27, 2016

Ms. Nicole Riddle
Assistant NEPA Coordinator
South Carolina Department of Transportation
P.O. Box 191
Columbia, SC 29202-0191

Re: Biological Assessment, US 21 Bridge Replacement, Harbor River, Beaufort County, SC
FWS Log No. 2015-CPA-0112

Dear Ms. Riddle:

The U.S. Fish and Wildlife Service (Service) has received your January 15, 2016, Biological Assessment (BA) for the proposed replacement of the U.S. Highway 21 bridge over the Harbor River in Beaufort County, South Carolina. The South Carolina Department of Transportation (SCDOT) proposes to replace U.S. Highway 21 which connects St. Helena Island to Harbor Island, Fripp Island, and Hunting Island State Park. The SCDOT prepared the BA and is requesting the Service's consultation regarding potential impacts to species protected under the Endangered Species Act of 1973 (16 U.S.C. 1531-1543) (ESA). The BA will be incorporated into an Environmental Assessment which is being prepared pursuant to the National Environmental Policy Act of 1969, as amended (43 U.S.C. 4321 *et seq.*) (NEPA).

U.S. Highway 21 is a two-lane roadway with earthen shoulders on a causeway connecting St. Helena Island with Harbor Island, Hunting Island, and Fripp Island. The project corridor is approximately two miles long and 600 feet wide. Terrain in the corridor is flat with the surface runoff draining to the adjacent tidal wetlands through roadside ditches. Existing land uses along the corridor include small areas of residential and commercial development. The project involves the bridge replacement, the construction of a new roadway approach alignment to correct structural and functional deficiencies, and to upgrade the bridge and its approaches to current design standards.

The Services previously provided comments and recommendations to SCDOT, regarding the bridge replacement project on July 1, 2015. Our letter focused on measures to minimize impacts to resources as well as potential mitigation options. We also recommended that SCDOT perform a survey for threatened and endangered (T&E) species that may be in the project area. The BA provides SCDOT's assessment of T&E species, as well as designated critical habitat that may be

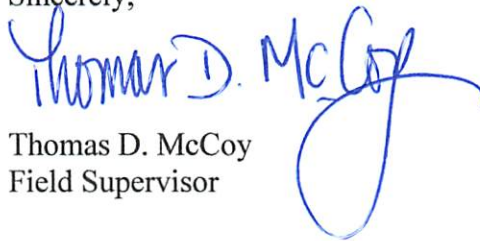
impacted by the bridge replacement project in Section 2. Table 2-1 lists each of the species that are known to occur within Beaufort County. The majority of the T&E species reviewed by SCDOT do not occur in the project area due to the lack of suitable habitat. Therefore, SCDOT concluded (Section 5 of the BA) that the proposed bridge replacement will have no effect upon those species. The ESA does not require section 7 consultation for no effect determinations; therefore, no further action is required regarding these species.

Of the T&E species that occur in Beaufort County, SCDOT determined that the project area contains suitable habitat for the American wood stork, piping plover, Rufa red knot, West Indian manatee, and four separate sea turtle species. An assessment was performed for each species to determine the project's potential impacts. Although no individuals of the above species were observed, SCDOT concluded that due to the presence of suitable habitat, the replacement of the U.S. Highway 21 bridge may affect, but is not likely to adversely affect, the wood stork, piping plover, red knot, or the West Indian manatee. The Service concurs with SCDOT's determination. No federally designated critical habitat for these species is present in the project area. Please contact the National Marine Fisheries Service – Protected Species Division for consultation requirements regarding sea turtles, as they maintain jurisdiction, while the turtles are in the marine environment.

Obligations under the ESA must be reconsidered if: (1) new information reveals impacts of this identified action may affect any listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner, which was not considered in this assessment; or (3) a new species is listed or critical habitat is designated that may be affected by the identified action.

The Service appreciates the opportunity to provide input at this early stage of the project's development. If you have any questions, please contact Mr. Mark Caldwell at (843) 727-4707 ext. 215, and reference FWS Log No. 2015-CPA-0112.

Sincerely,



Thomas D. McCoy
Field Supervisor

TDM/MAC

Appendix A-6

SC Department of Health and Environmental Control

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Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

RECEIVED

JUL 24 2015

Environmental Management
SCDOT

July 21, 2015

S. C. Department of Transportation
Attn: Chad Long – Archaeologist/NEPA Coordinator
Environmental Management Office, Rm. 509
P.O. Box 191
Columbia, SC 29202-0191

Re: Proposed U.S. 21 Bridge Replacement over Harbor River in Beaufort County
PIN: P026862

Dear Mr. Long:

The South Carolina Department of Health and Environmental Control (SCDHEC) is providing comments regarding potential environmental impacts of the above project, as requested in your letter dated June 23, 2015. As you are aware, SCDHEC's Bureau of Water administers applicable regulations pertaining to water quality standards and classifications, including wetland protection, in accordance with the South Carolina Pollution Control Act, the Federal Clean Water Act, the State Stormwater Management and Sediment Reduction Act, Construction in Navigable Waters Permitting, and associated regulations for all of these statutes. SCDHEC's Office of Ocean and Coastal Resource Management (OCRM) administers regulations in accordance with provisions of the Coastal Zone Management Act.

The following comments are provided as input concerning the environmental impacts of the proposed project as SCDOT prepares an Environmental Assessment (EA) in accordance with regulations of the Federal Highway Administration (FHWA) and National Environmental Policy Act (NEPA).

The project consists of replacing the U.S. 21 (Sea Island Parkway) bridge over the Harbor River in Beaufort County. The existing U.S. 21 2-lane bridge on crossing the Harbor River has a moveable swing span over the channel. The purpose of the proposed work is to increase vehicle safety by replacing the existing structurally deficient and functionally obsolete bridge.

The project corridor runs from U.S. 21 from 150 feet west of Gay Fish County Road to 150 feet past the intersection of Harbor Drive. Tidal wetlands, including creeks, pond and estuarine emergent wetlands are present throughout the project corridor. Therefore, a delineation will be needed to identify jurisdictional aquatic impacts resulting from the project based on a final design. If impacts to aquatic resources will result from the proposed project, SCDHEC recommends that efforts be made to minimize such impacts when planning and constructing this project. For example, bridge construction access should be attained from highland, from the portion of the bridge already completed ("end on end construction") or from temporary work trestles, floating barges or mats instead of barge canals or causeways. Finally, the use of best management practices to minimize sediment migration during construction, as well as other post construction stormwater management practices will minimize water quality impacts. Information provided indicates that Shellfish beds are located within 1000 feet of the existing bridge; therefore, potential water quality treatment methods will be considered in the EA.

Page 2
July 21, 2015
Mr. Chad Long

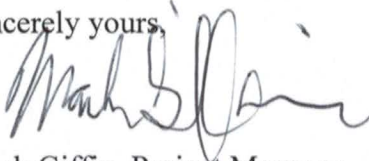
In accordance with Section 7 of the Endangered Species Act (ESA) biologists identified suitable habitat for the loggerhead sea turtle (*Caretta caretta*), Atlantic sturgeon (*Acipenser oxyrinchus*), the Florida manatee (*Trichechus manatus*) as well as non water dependant species. Coordination will occur with the U.S. Fish and Wildlife Service and NOAA National Marine Fisheries Service (NMFS) as the project continues. An assessment of essential fish habitat will also occur and findings coordinated with the NMFS.

Because the project is located in an estuarine area, a Critical Area Permit will be required from SCDHEC – OCRM for the proposed work. In addition to the aforementioned permit, the proposed work must be in compliance with State Sediment and Erosion Control and NPDES MS4 stormwater permitting requirements administered by the Bureau of Water.

Finally, please ensure that all other necessary environmental permits for this project are obtained in accordance with applicable State and Federal regulations. If you have not done so already, please contact the Bureau of Air Quality and the Bureau of Land and Waste Management for input regarding those program areas' assessments of this proposed project.

Please call me at 898-4179 if you have any questions.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Mark Giffin', written over a horizontal line.

Mark Giffin, Project Manager
Water Quality Certification and Wetlands Section

cc: Heather Preston
Chuck Hightower
Jill Stewart
Low Country EQC Region



W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

RECEIVED

JUL - 6 2015

Environmental Management
SCDOT

June 30, 2015

Mr. Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation
Post Office Box 191
Columbia, SC 29201

Re: Letter of Intent for the Proposed U.S. 21 Bridge Replacement over Harbor River in Beaufort County, South Carolina SCDOT PIN: P026862

Dear Mr. Long:

On June 23, 2015, we received an electronic copy of the Letter of Intent for the proposed U.S. 21 bridge replacement over Harbor River in Beaufort County, SC. *Based on the information provided, I am responding on behalf of the South Carolina Department of Health and Environmental Control, Bureau of Air Quality (Bureau).*

The Bureau is tasked with implementing the Federal Clean Air Act (1990, as amended) in the State of South Carolina. The Bureau is required to ensure compliance with the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. Currently two criteria pollutants are of particular concern in South Carolina:

- **Ozone** – The 2008 8-hour ozone standards (primary and secondary) are currently set at 0.075 parts per million (ppm). The area represented in this proposal is meeting the 2008 ozone standards. New standards of between 65 and 70 parts per billion (ppb) were proposed in November 2014, with a final standard anticipated by the end of 2015. For more information regarding this proposal, see www.epa.gov/glo/.
- **Particulate Matter 2.5** (Particulates 2.5 microns in size and smaller) – The 2012 standard for maximum daily concentration is set at 35 micrograms per cubic meter. The 2012 standard for the maximum annual concentration is set at 12 micrograms per cubic meter. The area represented in this proposal is meeting the 2012 particulate matter 2.5 standards.

Presently only the eastern portion of York County has been designated nonattainment for the 2008 8-hour ozone NAAQS. For more information on which areas have been designated nonattainment, please visit <http://www.epa.gov/oar/oaqps/greenbk>. South Carolina may gain additional nonattainment areas when designations for the new ozone standards are made. If a project is located in a nonattainment area, it may be subject to prescriptive requirements such as Transportation Conformity or air quality modeling.

An asbestos survey and project license may be required prior to any demolition activities such as deconstruction of a building or removal of structures in the right-of-way of a road project. If you have any questions regarding asbestos regulatory applicability you may contact Robin Mack (with the Bureau's Asbestos Section) at (803) 898-4270 or mackrs@dhec.sc.gov.

All necessary environmental permits for the subject project must be obtained in accordance with applicable state and federal regulations. If you have not already done so, please contact the Bureau of Water at (803) 898-4300 and the Bureau of Land and Waste Management at (803) 898-2000 for input regarding those program areas' assessments of this proposed project.

Emissions from construction equipment are regulated by federal standards. The Bureau would like to offer the following suggestions on how this project can help us stay in compliance with the NAAQS. More importantly, these strategies are beneficial to the health of citizens of South Carolina.

- Utilize alternatively fueled equipment.
- Utilize emission controls applicable to your equipment.
- Reduce idling time on equipment.
- Fugitive dust emissions should be minimized through good operating practices.

The Bureau can provide model clean construction contract language. A vendor may need to retrofit, repower or replace older and more polluting diesel construction equipment in order to satisfy clean construction requirements. These types of projects can be financed with Congestion Mitigation and Air Quality (CMAQ) funds, and are in fact a high priority for CMAQ funding. Please contact our office if assistance is needed.

Thank you for the opportunity to comment on this project. Should you have any further questions or comments concerning this matter, please do not hesitate to contact me at (803) 898-4122 or at robertln@dhec.sc.gov.

Sincerely,



L. Nelson Roberts, Jr., Manager
Air Programs Implementation and Mobile Sources Section
SCDHEC Bureau of Air Quality

ec: Chris Vaigneur, Lowcountry EQC Beaufort Office, vaignecl@dhec.sc.gov
Russell Berry, Lowcountry EQC Region, berryre@dhec.sc.gov

Appendix A-7

SC State Historic Preservation Office

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Wade, Blair

From: Long, Chad C. <LongCC@scdot.org>
Sent: Thursday, March 17, 2016 1:23 PM
To: Daggett, Adrienne (ADaggett@scdah.sc.gov)
Cc: Belcher, Jeffery - FHWA; Wade, Blair
Subject: US 21 over Harbor River
Attachments: US 21 over Harbor River SHPO Transmittal.pdf

Adrienne,

Attached is a transmittal letter for the US 21 over Harbor River bridge replacement project in Beaufort County, SC. I am sending hard copies of the report and survey cards via interagency mail. I will send you a digital copy of the report via wetransfer (ftp service).

Let me know if you have any questions.

Chad C. Long | Archaeologist/NEPA Coordinator
Environmental Services Office
South Carolina Department of Transportation
955 Park Street | Room 519
Columbia, South Carolina 29201
Phone 803.737.1396 (office) | 803.420.8115 (mobile)



South Carolina
Department of Transportation

March 17, 2016

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

**Re: Cultural Resources Survey of the US 21 Harbor River Bridge Replacement Project,
Beaufort County, South Carolina**

Dear Ms. Johnson:

Enclosed are two copies of a draft survey report that describes cultural resource investigations conducted for the proposed US 21 over Harbor River bridge replacement project in Beaufort County, South Carolina. The survey resulted in the evaluation of two previously recorded archaeological resources (38BU113 and 38BU147). Archaeological site 38BU113 has been determined eligible for listing in the National Register of Historic Places (NRHP). This site is located outside of the project's footprint and will not be affected by construction. Contractors will be made aware that the site cannot be used as a staging or laydown area during construction. Archaeological site 38BU147 was determined to be not eligible for the NRHP.

Two above-ground resources (Resource 5070 and Resource 5071) were identified and evaluated during the investigations. Resource 5070, the Harbor River Bridge, is eligible for listing in the NRHP and would be adversely affected by the project. Resource 5071, the Gay Fish Company, was determined eligible for listing in the NRHP but will not be affected by the project.

Based on the results of background research and field investigations, the Department has determined that the proposed undertaking will result in an **adverse effect** to historic properties. A draft Memorandum of Agreement has been developed for your review and comment.

Per the terms of the Section 106 Programmatic Agreement executed on August 18, 2014, the Department is providing this information on behalf of the Federal Highway Administration. It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with SCDOT findings. SCDOT plans hold additional meetings with your office regarding the proposed measures to resolve adverse effects. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,


Chad C. Long
Archaeologist/NEPA Coordinator

CCL:ccl

I (do not) concur in the above determination.

Signed: _____ Date: _____

cc: Shane Belcher, FHWA
cc: Wenonah G. Haire, Catawba Nation THPO
Robin Dushane, Eastern Shawnee

File: ENV/CCL



**DRAFT MEMORANDUM OF AGREEMENT BETWEEN
THE FEDERAL HIGHWAY ADMINISTRATION,
THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION,
AND THE SOUTH CAROLINA STATE HISTORIC PRESERVATION OFFICE**

**REGARDING THE REPLACEMENT OF THE US ROUTE 21 BRIDGE OVER THE HARBOR
RIVER, BEAUFORT COUNTY, SOUTH CAROLINA**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), proposes to the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina; and

WHEREAS, the FHWA has determined that the replacement of the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina, will have an adverse effect upon the Harbor River Bridge (Resource 5070), a historic property that is eligible for listing in the National Register of Historic Places (see Appendix A); and

WHEREAS, the FHWA and the SCDOT have consulted with the South Carolina (State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800) to resolve adverse effects, and

WHEREAS, the proposed undertaking will require a bridge permit the United States Coast Guard (USCG), and in accordance with a Memorandum of Agreement between FHWA and the USCG, the USCG has agreed to become a cooperating agency in the environmental review process; and

WHEREAS, the proposed measures for resolving adverse effects to historic properties involves coordination with Hunting Island State Park, the South Carolina Department of Parks, Recreation, and Tourism (SCPRT) has therefore been invited to sign the MOA as a concurring party; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), the FHWA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination providing the specified documentation, and the ACHP has decided (to or not to) participate, and

NOW, THEREFORE, the FHWA, the SCDOT, and the South Carolina SHPO agree that the undertaking will be implemented according to the following stipulations in order to take into account the effects of the undertaking on the Harbor River Bridge.

I. STIPULATIONS

The FHWA and the SCDOT will ensure that the following stipulations are implemented:

A. Harbor River Bridge Mitigation

1. To mitigate adverse effects to the Harbor River Bridge, SCDOT will work with the SHPO, SCPRT, and the Hunting Island State Park Manager to develop and fund a public interpretation plan related to the impact of Depression-era Work Programs on the Hunting Island State Park and its associated landscape. The interpretation plan should include elements that relate to the construction of the US 21 roadway and bridge over Harbor River as well as the history of the Civilian Conservation Corps at Hunting Island State Park.
2. The draft public interpretation plan shall be developed within 6 months after the execution of the MOA. Copies of the draft interpretation plan shall be provided to the FHWA, SHPO,

and Hunting Island State Park Manager for review and comment. A final public interpretation plan that incorporates comments received from FHWA, SHPO, and the Hunting Island State Park Manager shall be developed within 60 days after receipt of comments.

3. The components of the interpretation plan shall be developed and installed at the Hunting Island State Park within one-year of the production of the final interpretation plan.
4. Bridge Placard: SCDOT will remove the existing bridge placard on the US 21 Bridge and provide it to SCPRT to be used as part of the interpretive plan developed for the park.

II. Duration

This MOA shall be null and void if its terms are not carried out within ten (10) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

III. Late Discoveries

If unanticipated cultural materials (e.g., large, intact artifacts or animal bones; large soils stains or patterns of soil stains; buried brick or stone structures; clusters of brick or stone) or human skeletal remains are discovered during construction activities, then the Resident Construction Engineer shall be immediately notified and all work in the vicinity of the discovered materials shall cease until an evaluation can be made by the SCDOT archaeologist in consultation with the South Carolina SHPO and the CIN THPO.

IV. Monitoring and Reporting

Each year following the execution of this MOA until it expires or is terminated, the SCDOT shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FHWA's and SCDOT's efforts to carry out the terms of this MOA.

V. Dispute Resolution

The FHWA, the SCDOT, and the South Carolina SHPO will attempt to resolve any disagreement arising from the implementation of the MOA. This will include any disputes that arise concerning the contents of the report(s), including but not limited to its merit as a cultural resource management document.

In the event that the terms of this agreement cannot be carried out, the FHWA and SCDOT will submit a new (or amended) MOA to the South Carolina SHPO and the ACHP for review. If consultation to prepare a new MOA or amendments proves unproductive, the FHWA will seek ACHP comment in accordance with 36 CFR § 800.6(b)(2).

VI. Amendment and Modification

*US 21 over Harbor River
Section 106 Memorandum of Agreement*

Any signatory to this MOA may request that it be amended or modified at any time, whereupon the parties will consult with each other to consider such amendment or modification.

VII. Termination

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop and amendment per Stipulation VI, above. If within (30) days an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, the FHWA and the SCDOT must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request comments from the ACHP under 36 CFR § 800.7. The FHWA and the SCDOT will notify the signatories as to the course of action it will pursue.

EXECUTION of this Memorandum of Agreement by the Federal Highway Administration, the South Carolina Department of Transportation, and the South Carolina State Historic Preservation Office and implementation of its terms, is evidence that the FHWA has taken into account the effects of the undertaking on the Harbor River Bridge (Resource 5070) and in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800).

SIGNATORIES:

Federal Highway Administration

By: _____ Date: _____

South Carolina Department of Transportation

By: _____ Date: _____

South Carolina State Historic Preservation Office

By: _____ Date: _____

Advisory Council on Historic Preservation

By: _____ Date: _____

CONCURRING PARTY:

South Carolina Department of Parks, Recreation, and Tourism

By: _____ Date: _____

Wade, Blair

To: Josh Fletcher
Subject: RE: Comments on US 21 Harbor River bridge replacement

From: Josh Fletcher [<mailto:JoshFletcher@brockington.org>]
Sent: Monday, April 11, 2016 2:19 PM
To: Wade, Blair
Subject: FW: Comments on US 21 Harbor River bridge replacement

From: Long, Chad C. [<mailto:LongCC@scdot.org>]
Sent: Monday, April 11, 2016 1:38 PM
To: Josh Fletcher
Subject: Fwd: Comments on US 21 Harbor River bridge replacement

Begin forwarded message:

From: "Daggett, Adrienne" <ADaggett@scdah.sc.gov>
Date: April 11, 2016 at 1:36:29 PM EDT
To: "Long, Chad C." <LongCC@scdot.org>
Cc: "Johnson, Elizabeth" <EJohnson@scdah.sc.gov>
Subject: Comments on US 21 Harbor River bridge replacement

Dear Chad,

Thank you for sending along the draft report for the Harbor River bridge replacement on US-21 in Beaufort. We have a few requests we'd like to see addressed in the final report. I appreciate you sending these along to Brockington.

P 3: Please clarify, either in the map legend or through a label, whether the red polygon in Figure 1.2 is the project APE. If this is not the APE, please depict the APE.

P 4: Briefly describe sites 38BU147 and 113 in terms of context, finds, etc.

P 4: Eliminate the word "is" from 1st sentence of pp 3.

P 6: Was there walkover of the areas not subject to shovel testing? If so please describe in the text.

P 9: Can the map showing the locations of STPs be included?

P 29: Repeat of text from previous page, starting with "Site 38BU113 was originally recorded..." and ending with "During the current investigations archaeologists revisited site 38BU113 (See Chapter 3)." This text also repeats on p 31-32.

P 31: How were boundaries for site 113 determined? The methods and results sections both state that 25 STPs were placed during survey, but only 11 are reported for site 113 and 2 for site 147. Where were the locations of the remaining 12 and why are they not discussed?

P 38: Please assess site by all 4 NR criteria; please also include a sample profile of the STPs, including Munsell soil types.

P 44-46: Rationale for placing only 2 JTUs for site 147? Rationale for location of these JTUs? Please include location of site 147 on the project location aerial. Please also include sample JTu profile.

Please don't hesitate to contact me with any questions.

Regards,

Adrienne Daggett, PhD.
Transportation Review Coordinator
State Historic Preservation Office
SC Department of Archives and History
8301 Parklane Road
Columbia, SC 29223
803-896-6184
adaggett@scdah.sc.gov

Wade, Blair

From: Long, Chad C. <LongCC@scdot.org>
Sent: Friday, May 06, 2016 10:47 AM
To: Wade, Blair; Josh Fletcher (JoshFletcher@brockington.org)
Subject: FW: Comments on US 21 Harbor River bridge replacement
Attachments: Revised Draft US 21 over Harbor River MOA_version 2.docx

Attached is the draft MOA that will be going to ACHP for review.

From: Daggett, Adrienne [mailto:ADaggett@scdah.sc.gov]
Sent: Friday, May 06, 2016 9:07 AM
To: Long, Chad C.
Subject: RE: Comments on US 21 Harbor River bridge replacement

Good morning,
I took a look at the revised draft and I think it looks good. Thanks for your work on this.
Cheers,
Adrienne

From: Long, Chad C. [mailto:LongCC@scdot.org]
Sent: Thursday, May 05, 2016 8:03 AM
To: Daggett, Adrienne
Subject: RE: Comments on US 21 Harbor River bridge replacement

Here's a revised draft. I addressed the majority of comments. We approached Coast Guard about whether they wanted to be an invited signatory but they declined. Regarding these two comments:

Stipulation 1: Who will be the party taking the lead on developing
Stipulation 3: Can a location for the placement of the interpretation
specified?

I didn't make any changes. I think the MOA is clear that SCDOT is responsible for taking the lead on the plan. We cannot identify a location for the placement of the interpretation materials within the park at this time. The location will be specified within the public interpretation plan.

Let me know if you are okay with changes and will submit this to ACHP.

Chad

From: Daggett, Adrienne [mailto:ADaggett@scdah.sc.gov]
Sent: Wednesday, May 04, 2016 10:48 AM
To: Long, Chad C.
Subject: RE: Comments on US 21 Harbor River bridge replacement

Good morning,

The letter is on its way to you in hard copy, and a PDF of it is attached. Please let me know if you need anything else!

Cheers,
Adrianne

From: Long, Chad C. [<mailto:LongCC@scdot.org>]
Sent: Tuesday, May 03, 2016 7:42 PM
To: Daggett, Adrianne
Subject: Re: Comments on US 21 Harbor River bridge replacement

Hey, once you have comments on the MOA, please provide us with a letter accepting the report and concurring with recommendations + MOA comments. Josh would like to incorporate your letter into the final report for a complete package. I will send you the final copies once all of that is complete. Need ASAP.

Thanks,
Chad

On May 3, 2016, at 12:57 PM, Daggett, Adrianne <ADaggett@scdah.sc.gov> wrote:

Hey again Chad,
The report looks good to go. I've got comments on the MOA but I asked John Sylvest, who's got more experience reviewing MOAs, to look over my comments before I send them on to you. I'll send those in a separate email.
Cheers,
Adrianne

From: Long, Chad C. [<mailto:LongCC@scdot.org>]
Sent: Monday, May 02, 2016 5:49 PM
To: Daggett, Adrianne
Subject: Fwd: Comments on US 21 Harbor River bridge replacement

Adrianne,

The revised report is attached for your review. If acceptable, I will ask Josh to make this a final report then send you the required hard copies with a transmittal letter. We need to forward with this ASAP. We also need comments on the MOA if you have any to offer.

Thanks,

Chad

Begin forwarded message:

From: Josh Fletcher <JoshFletcher@brockington.org>
Subject: FW: Comments on US 21 Harbor River bridge replacement
Date: May 2, 2016 at 4:04:25 PM EDT
To: Chad Long <LongCC@dot.state.sc.us>
Cc: "longcc@scdot.org" <longcc@scdot.org>

Chad,

Please see the attached emailable (reduced file size) pdf of the US 21 Harbor River Bridge report. Again, our responses to Adrienne's comments are below in red. If you need anything else, please let me know.

Thanks,
Josh

From: Daggett, Adrienne [<mailto:ADaggett@scdah.sc.gov>]
Sent: Tuesday, April 12, 2016 11:41 AM
To: Long, Chad C.
Subject: RE: Comments on US 21 Harbor River bridge replacement

Great, thanks!

From: Long, Chad C. [<mailto:LongCC@scdot.org>]
Sent: Tuesday, April 12, 2016 11:27 AM
To: Daggett, Adrienne
Subject: FW: Comments on US 21 Harbor River bridge replacement

Adrienne,

Josh and I discussed your comments and are making changes where we can. See responses below.

Chad

From: Josh Fletcher [<mailto:JoshFletcher@brockington.org>]
Sent: Tuesday, April 12, 2016 10:34 AM
To: Long, Chad C.
Subject: RE: Comments on US 21 Harbor River bridge replacement

Chad, please see our responses to Dr. Daggett's comments below. If either of you need any additional clarification, please let me know.

Thanks,
Josh

From: Long, Chad C. [<mailto:LongCC@scdot.org>]
Sent: Monday, April 11, 2016 1:38 PM
To: Josh Fletcher
Subject: Fwd: Comments on US 21 Harbor River bridge replacement

Begin forwarded message:

From: "Daggett, Adrienne" <ADaggett@scdah.sc.gov>
Date: April 11, 2016 at 1:36:29 PM EDT
To: "Long, Chad C." <LongCC@scdot.org>
Cc: "Johnson, Elizabeth" <EJohnson@scdah.sc.gov>
Subject: Comments on US 21 Harbor River bridge replacement

Dear Chad,

Thank you for sending along the draft report for the Harbor River bridge replacement on US-21 in Beaufort. We have a few requests we'd like to see

addressed in the final report. I appreciate you sending these along to Brockington.

P 3: Please clarify, either in the map legend or through a label, whether the red polygon in Figure 1.2 is the project APE. If this is not the APE, please depict the APE. **The APE is labeled in a box located in the Harbor River. It is also labeled on Figure 1.3 (aerial photo).**

P 4: Briefly describe sites 38BU147 and 113 in terms of context, finds, etc. **I will add a brief description of each site on this page.**

P 4: Eliminate the word “is” from 1st sentence of pp 3. **I will delete “is”.**

P 6: Was there walkover of the areas not subject to shovel testing? If so please describe in the text. **Yes, we walked the entire project corridor. I will add a sentence to that effect.**

P 9: Can the map showing the locations of STPs be included? **The locations of shovel tested areas are shown on Figure 1.3. The sentence on p. 9 is referring to the site plans for each site. The shovel tests excavated within each site are depicted on Figures 3.1 and 3.10 (the site plans for each site).**

P 29: Repeat of text from previous page, starting with “Site 38BU113 was originally recorded...” and ending with “During the current investigations archaeologists revisited site 38BU113 (See Chapter 3).” This text also repeats on p 31-32. **The repetition on p. 29 was an oversight and one of those paragraphs will be deleted. Thank you for catching that. The text was intentionally repeated on pp. 31-32.**

P 31: How were boundaries for site 113 determined? **The boundaries of this site were determined by the limits of the landform. I added some text to page 38.** The methods and results sections both state that 25 STPs were placed during survey, but only 11 are reported for site 113 and 2 for site 147. Where were the locations of the remaining 12 and why are they not discussed? **The remainder of the shovel tests outside of sites 38BU113 and 38BU147 were excavated in the hatched areas shown in Figure 1.3. They were not discussed extensively because they produced no findings.**

P 38: Please assess site by all 4 NR criteria; please also include a sample profile of the STPs, including Munsell soil types. **We assessed the site under all 4 criteria, but given the type of the site, it only meets Criterion D. I will add a sentence to that effect. Two different shovel test profiles were described on p. 38. Given the budget constraints and timing of this project, we will not be adding a sample profile drawing, but we will on future SCDOT projects.**

P 44-46: Rationale for placing only 2 JTUs for site 147? Rationale for location of these JTUs? **We determined through the study of historic aerial photographs that the shell deposits located within “site” 38BU147 were placed there as a result of the construction of the road causeway. Nevertheless, we excavated those two judgmental shovel tests on the highest “islands” on each end of the site to confirm that interpretation and to make sure that these areas contained no cultural materials. Please include location of site 147 on the project location aerial. Site 38BU147 is shown on Figure 1.2 and Figure 1.3 (the aerial photo). Please also include sample JTu profile. The two shovel test profiles were described on p. 44. Given the budget constraints and timing of this project, we**

will not be adding a sample profile drawing, but we will on future SCDOT projects.

Please don't hesitate to contact me with any questions.

Regards,

Adrienne Daggett, PhD.
Transportation Review Coordinator
State Historic Preservation Office
SC Department of Archives and History
8301 Parklane Road
Columbia, SC 29223
803-896-6184
adaggett@scdah.sc.gov

4 May 2016

Mr. Chad Long
South Carolina Department of Transportation
955 Park Street
Columbia, SC 29201

Re: US-21 Harbor River Bridge Replacement
Beaufort County, South Carolina
SHPO Project No. 15-EJ0056
SCDOT Project No. P026862

Dear Mr. Long:

Thank you for your letter of May 3, 2016, which we received on the same day, regarding the US-21 Harbor River bridge replacement in Beaufort County. We also received the final report titled "Cultural Resources Survey of the US-21 Harbor River Bridge Replacement Project," as well as the draft Memorandum of Understanding for the project, as supporting documentation for this undertaking. The State Historic Preservation Office is providing comments to the South Carolina Department of Transportation pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public.

Based on the description of the Area of Potential Effect (APE) and the identification of historic properties within the APE, our office concurs with the assessment that both Site 38BU113 and Resource 5071 (the Gay Fish Company) are eligible for listing in the National Register of Historic Places, and that the project will have an adverse effect on Resource 5070 (the Harbor River Bridge), which has previously been determined eligible for listing in the National Register. We also concur with the recommendation that site 38BU113 and the Gay Fish Company be avoided during all phases of construction.

If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.13(b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, human skeletal materials, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, and metal and glass objects. The federal agency or the applicant receiving federal assistance should contact our office immediately.

Our comments on the Memorandum of Understanding are listed below. In preparing these comments, I referred to the guidance provided by the American Council of Historic Preservation on their website at <http://achp.gov/agreementdocguidance.html>, in particular their template MOA (<http://achp.gov/docs/Template%20MOA%20and%20Amendment-S.pdf>), their agreement content checklist (<http://achp.gov/docs/Section%20106%20GAD%20Checklist%20-%20Content.pdf>), and their agreement reviewer checklist (<http://achp.gov/docs/Section%20106%20GAD%20Checklist%20-%20Reviewer's%20Guide.pdf>).

Technical comments:

In the third “whereas” clause, change “it’s” to “its”

In the sixth “whereas” clause, clarify whether ACHP is participating

In stipulation 3, change “one-year” to “one year”

Under “Late Discoveries”, include the full version of the name of the CIN THPO since it is not written out elsewhere

Content:

Following the guidelines on the ACHP’s website, I recommend including “whereas” clauses that describe the scope of the undertaking and lay out a brief description of the project APE. It may also be helpful to include a clause describing public outreach efforts for the project – e.g., stating that the local Gullah community was consulted and they have no concerns, as well as one stating that site 38BU113 is eligible and within the APE but that it will be avoided.

Other content that may bear inclusion is an “other federal involvement” stipulation addressing the role of the Coast Guard in the environmental review process. Does the Coast Guard also need to be included as an invited signatory on the document?

Can a stipulation be included that lays out what process will be followed to decide what to do with the bridge itself (e.g., laying out which options are being considered and how to evaluate them)? There’s been discussion of what to do with it but it doesn’t seem like we have a clear path forward.

Stipulation 1: Who will be the party taking the lead on developing the public interpretation plan?

Stipulation 3: Can a location for the placement of the interpretation materials within the park be specified?

Per the ACHP guidance, also included at the end of the stipulations should be an “affirmation statement” with the following: The stipulations section should end with a statement affirming that by carrying out the terms of the MOA or PA, the federal agency will meet its responsibilities under Section 106 of the NHPA to “take into account” the undertaking’s effects on historic properties, and afford the ACHP a “reasonable opportunity” to comment on the undertaking. The statement follows the statutory language to demonstrate fulfillment of the agency’s responsibilities under Section 106 of the NHPA.

If you have any questions, please contact me at (803) 896-6184 or at ADaggett@scdah.sc.gov.



Sincerely,
Adrienne Daggett, PhD.
Transportation Review Coordinator
State Historic Preservation Office

Historic Bridge Available for Adaptive Reuse



US Route 21 over Harbor River
Beaufort County, South Carolina.
Coordinates: 32N 24' 15.25", 80W 27' 10.11"

The US Route 21 (Sea Island Parkway) Bridge over Harbor River in Beaufort County will be available for adaptive reuse at a new location. The 172-foot historic Warren through truss, swing span section of the bridge is being offered to potential recipients, who must agree to move the structure, preserve the bridge and its historic features, and assume all legal and financial responsibilities for the bridge subsequent to its removal from its current location. If the swing span truss section of the bridge is transferred to another party, deed covenants may require the new owner to re-erect and maintain the bridge in accordance with established standards for historic bridges. Funding equal to the amount allocated for demolition of the truss section of the bridge is available to assist in relocation efforts. **Responses/requests for adaptive bridge reuse of the US 21 Bridge over the Harbor River must be received by 2/12/2016.**



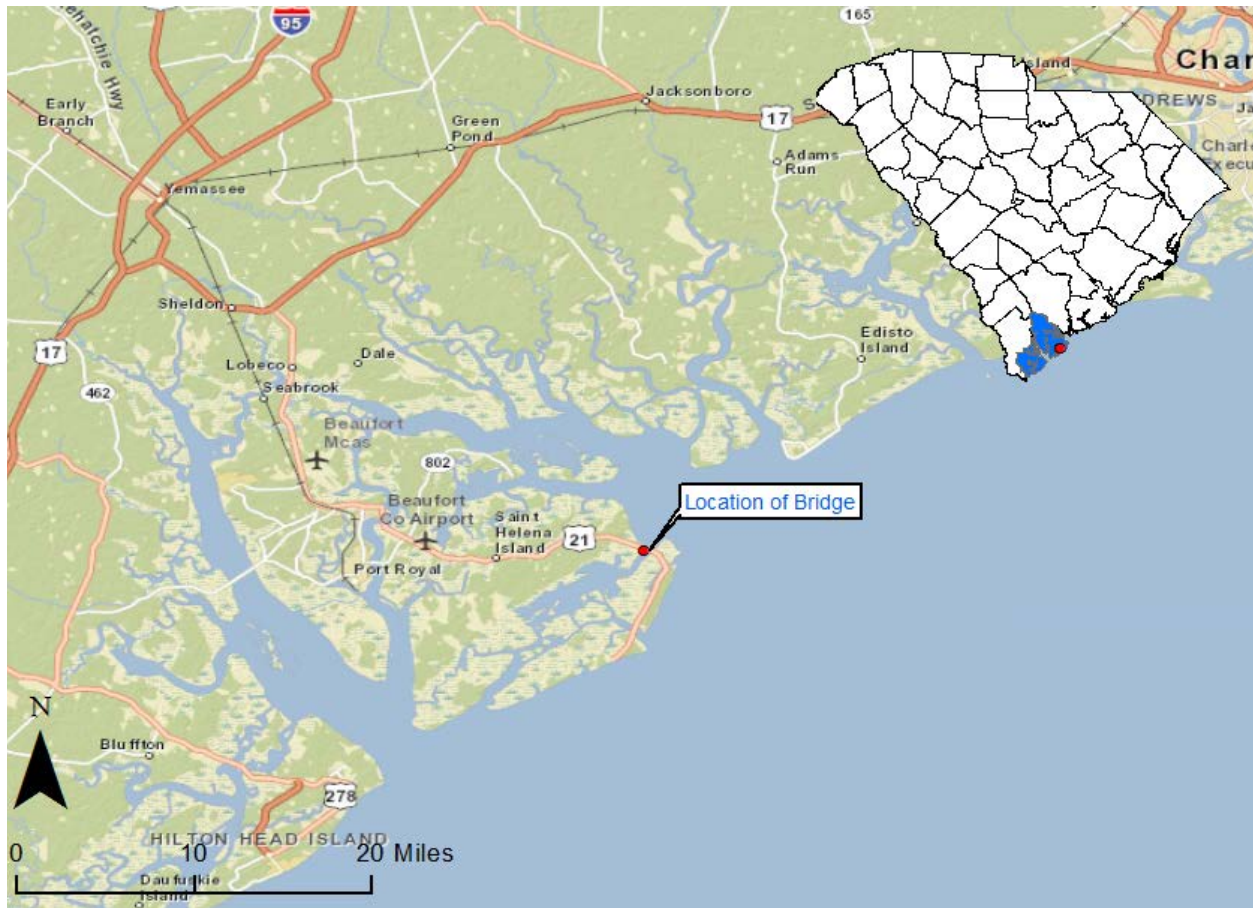
Bridge Description: The main span of the 68-span, 2,851'-long and 21'-wide bridge is a 172'-long, modified Warren through truss swing span. The bridge is operated by electric motors driving the rack and pinion drive mechanism set atop the concrete pivot pier located in the center of the navigable channel. The movable span rotates in a horizontal plane on a center pivot and is stabilized by a girder box balance frame with wheels. Centered overhead is the octagonal-shape operator's house that was rebuilt in 1997.

Historical Significance:

The swing span bridge built in 1938-1939 is a later example of its type and design. By the time it was constructed, its structural and mechanical technologies were well established and representative, but in the statewide contexts of Depression-era work relief programs and development of the state's network of state parks, it is historically significant under National Register Criterion A. The bridge was constructed using Depression-era work relief programs to link a private island, used for livestock and hunting and the location of a lighthouse maintained by the federal lighthouse service, to St. Helena Island. It was paid for using Progressive Works

Administration (WPA) funds and was fabricated by the Virginia Bridge Company headquartered in Roanoke, VA.

Bridge Location: The bridge is located on US Route 21 (Sea Island Parkway) over Harbor River. This location is 12.5 miles southeast of the City of Beaufort between St. Helena Island and Harbor Island. GPS Coordinates for the location are: 32N 24' 15.25", 80W 27' 10.11". A location map is below.



Bridge Location

Contact: David Kelly at (803) 737-1645 or kellydp@scdot.org

From: [Johnson, Elizabeth](#)
To: [Historical Services Staff](#)
Subject: Historic Preservation News and Notes from the State Historic Preservation Office
Date: Thursday, January 21, 2016 2:50:29 PM

**HISTORIC PRESERVATION NEWS AND NOTES from the State
Historic Preservation Office (SHPO)
SC Department of Archives and History (SCDAH)
January 21, 2016**

In this issue:

- [Opening of New Exhibit at the Archives and History Center: February 9](#)
- [Grant Applications for FY 2016: Deadline February 5](#)
- [Last Call for Updates to Local History Organizations Directory](#)
- [New Listing in the National Register of Historic Places](#)
- [SCDOT Offers Historic Bridges for Reuse](#)
- [2016 Is the Year of PRESERVATION 50!](#)
- [Advisory Council on Historic Preservation Seeks Input on National Historic Preservation Program](#)
- [Historic Preservation Wins and Losses in 2015](#)
- [Conferences / Workshops / Events \(8 New Listings\)](#)
- [Grant Application Deadlines](#)
- [Subscription Information](#)

[Opening of New Exhibit at the Archives and History Center: February 9](#)

Please join the South Carolina Department of Archives and History and the South Carolina Archives and History Foundation at the opening reception for *"Nothing is more necessary... than the... Publick Records," The Records of Proprietary Era South Carolina, 1663 – 1721*. The reception will be Tuesday, February 9, 2016 from 6:00 pm – 7:30 pm at 8301 Parklane Road in Columbia. Hors d'oeuvres and beverages will be provided. For more information contact Grace Salter at GSalter@scdah.sc.gov.

For over three centuries, South Carolina has held in high regard the importance of caring for its public records. The records of South Carolina's Proprietary Era have withstood the test of time, and the best examples currently are on display at the South Carolina Archives and History Center. Visitors to this exhibit will come face-to-face with the first version of the Fundamental Constitutions of Carolina (1669), the first surviving government record (1671), and South Carolina's first "Declaration of Independence" (1719). Also on display is the Agreement Between the Proprietors to Further Supply the Fledgling Colony (1674), which established funding for the colony for an additional four years. Visitors can see the signature of John Locke on that

document, which will broaden their understanding of him as not only a highly regarded, 17th century philosopher, but also as an important part of the early colonization of South Carolina.

Grant Applications for FY 2016: Deadline February 5

Applications and instructions for the FY 2016 Historic Preservation Fund (HPF) matching grants are available at <http://shpo.sc.gov/programs/Pages/Grants.aspx>. Two types of projects are eligible: survey and planning, and stabilization (only for projects located in one of SC's 35 [Certified Local Government \(CLG\) communities](#)). **Applications will be accepted until 5:00 pm, February 5, 2016.** Please contact Brad Sauls at 803-896-6172, or bsauls@scdah.sc.gov to discuss your project before you apply.

Last Call for Updates to Local History Organizations Directory

Thank you to everyone who has responded to requests for information about local and state history organizations for an update of the *Directory of South Carolina's Local History, Historic Preservation, and Cultural Organizations* (available at http://shpo.sc.gov/pubs/Documents/Local_History_Organizations_Directory.pdf). We are making the final edits to the directory, so if your organization has not yet responded, please e-mail Doug Taylor at dtaylor@scdah.sc.gov.

New Listing in the National Register of Historic Places

The **Apalache Mill Historic District** was listed in the National Register of Historic Places on December 15, 2015 for its association with the history of the textile industry in the late part of the nineteenth century and first half of the twentieth century in Spartanburg County. Throughout the mill's existence it produced fancy cotton, sheeting, and linen goods. Included in the listing are the 1888 mill and 1903 mill with additions; four contributing structures - water tower, granite retaining wall, dam, and millpond; and two contributing objects - fire pump and turbine/generator.

SCDOT Offers Historic Bridges for Reuse

The SC Department of Transportation is currently offering two bridges for adaptive reuse. Potential recipients must agree to move the structure, preserve the bridge and its historic features, and assume all legal and financial responsibilities for the bridge subsequent to its removal from its current location. Deed covenants may require the new owner to re-erect and maintain the bridge in accordance with established standards for historic bridges. Funding equal to the amount allocated for demolition of the truss section of the bridges is available to assist in relocation efforts. Responses/ requests must be received by February 12, 2016. For more information

contact David Kelly at (803) 737-1645 or kellydp@scdot.org.

- US Route 21 (Sea Island Parkway) Bridge over Harbor River in Beaufort County: The 172-foot historic Warren through truss, swing span section of the bridge is being offered for adaptive reuse at a new location.
- S-19-68 (Key Road) Bridge over Turkey Creek in Edgefield and McCormick Counties: The 150-foot historic Parker thru truss, main span section of the bridge is being offered for adaptive reuse at a new location.

2016 Is the Year of PRESERVATION 50!

In 2016 the [National Historic Preservation Act of 1966](#) turns 50 years old. This monumental year will celebrate half a century of achievements in preservation, archaeology, and more. Tag photos on social media with **#preservation50** all year long to celebrate your favorite places! Learn more about how to get involved at <http://preservation50.org/about/nhpa-history/>.

Advisory Council on Historic Preservation Seeks Input on National Historic Preservation Program

The Advisory Council on Historic Preservation, the independent federal agency that promotes the preservation, enhancement, and productive use of our nation's historic resources, and that advises the President and Congress on national historic preservation, is inviting comments for a report on the challenges and opportunities facing the national historic preservation program. The ACHP has posted initial observations on the challenges and opportunities facing the national preservation program and is inviting the public to add their comments. Read more at <http://www.achp.gov/50-challenges-opportunities.html> and **send comments and suggestions by March 1, 2016** to NHPA50@achp.gov. The final report will be submitted to the incoming Administration and the 115th Congress.

Historic Preservation Wins and Losses in 2015

The National Trust for Historic Preservation compiled a list of both saves and losses for historic preservation in the past year. See this report to learn more about the properties featured <http://www.cnn.com/2015/12/31/travel/historic-preservation-wins-losses-2015-feat/index.html>.

Conferences / Workshops / Events (8 New Listings)

NEW National Preservation Institute Seminars. See the 2016 calendar for seminars on a variety of preservation topics <http://www.npi.org/seminar-listing>. Upcoming seminars in the southeast this spring include:

**MEMORANDUM OF AGREEMENT BETWEEN
THE FEDERAL HIGHWAY ADMINISTRATION,
THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION,
AND THE SOUTH CAROLINA STATE HISTORIC PRESERVATION OFFICE**

**REGARDING THE REPLACEMENT OF THE US ROUTE 21 BRIDGE OVER THE HARBOR
RIVER, BEAUFORT COUNTY, SOUTH CAROLINA**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), proposes to replace the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina; and

WHEREAS, the FHWA and SCDOT defined the Area of Potential Effects (APE) for the project as a corridor that measures approximately two miles long and 1200' feet wide centered along existing US Route 21; and

WHEREAS, the FHWA and SCDOT have conducted public involvement activities and consulted with the Gullah Geechee Heritage Corridor Commission regarding the effects of the undertaking on historic properties,

WHEREAS, the FHWA has determined that the replacement of the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina, will have an adverse effect upon the Harbor River Bridge (Resource 5070), a historic property that is eligible for listing in the National Register of Historic Places (see Appendix A); and

WHEREAS, the SCDOT has advertised the bridge for alternative use as required by 23 USC Part 144(o) and no entities have accepted the bridge; and

WHEREAS, the FHWA and SCDOT identified one eligible archaeological site (38BU113) within the project's APE but determined that the site would be avoided by construction activities; and

WHEREAS, the FHWA and the SCDOT have consulted with the South Carolina (State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800) to resolve adverse effects, and

WHEREAS, the proposed undertaking will require a bridge permit from the United States Coast Guard (USCG), and in accordance with a Memorandum of Agreement between FHWA and the USCG, the USCG has agreed to become a cooperating agency in the environmental review process; and

WHEREAS, the proposed measures for resolving adverse effects to historic properties involves coordination with Hunting Island State Park, the South Carolina Department of Parks, Recreation, and Tourism (SCPRT) has therefore been invited to sign the MOA as a concurring party; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), the FHWA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination providing the specified documentation, and the ACHP has decided not to participate, and

NOW, THEREFORE, the FHWA, the SCDOT, and the South Carolina SHPO agree that the undertaking will be implemented according to the following stipulations in order to take into account the effects of the undertaking on the Harbor River Bridge.

RECEIVED

AUG 18 2016

Environmental Management
SCDOT

I. STIPULATIONS

The FHWA and the SCDOT will ensure that the following stipulations are implemented:

A. Harbor River Bridge Mitigation

1. To mitigate adverse effects to the Harbor River Bridge, SCDOT will work with the SHPO, SCPRT, and the Hunting Island State Park Manager to develop and fund a public interpretation plan related to the impact of Depression-era Work Programs on the Hunting Island State Park and its associated landscape. The interpretation plan should include elements that relate to the construction of the US 21 roadway and bridge over Harbor River as well as the history of the Civilian Conservation Corps at Hunting Island State Park.
2. The draft public interpretation plan shall be developed within 6 months after the execution of the MOA. Copies of the draft interpretation plan shall be provided to the FHWA, SHPO, and Hunting Island State Park Manager for review and comment. A final public interpretation plan that incorporates comments received from FHWA, SHPO, and the Hunting Island State Park Manager shall be developed within 60 days after receipt of comments.
3. The components of the interpretation plan shall be developed and installed at the Hunting Island State Park within one year of the production of the final interpretation plan.
4. Bridge Placard: SCDOT will remove the existing bridge placard on the US 21 Bridge and provide it to SCPRT to be used as part of the interpretive plan developed for the park.
5. SCDOT will consider options for reuse of the bridge through advertisement, relocation, or salvaging a section of the bridge for display within Hunting Island State Park.

II. Duration

This MOA shall be null and void if its terms are not carried out within ten (10) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

III. Late Discoveries

If unanticipated cultural materials (e.g., large, intact artifacts or animal bones; large soils stains or patterns of soil stains; buried brick or stone structures; clusters of brick or stone) or human skeletal remains are discovered during construction activities, then the Resident Construction Engineer shall be immediately notified and all work in the vicinity of the discovered materials shall cease until an evaluation can be made by the SCDOT archaeologist in consultation with the South Carolina SHPO, the Catawba Indian Nation Tribal Historic Preservation Office, and the Eastern Shawnee Tribal Historic Preservation Office.

IV. Monitoring and Reporting

Each year following the execution of this MOA until it expires or is terminated, the SCDOT shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FHWA's and SCDOT's efforts to carry out the terms of this MOA.

V. Dispute Resolution

The FHWA, the SCDOT, and the South Carolina SHPO will attempt to resolve any disagreement arising from the implementation of the MOA. This will include any disputes that arise concerning the contents of the report(s), including but not limited to its merit as a cultural resource management document.

In the event that the terms of this agreement cannot be carried out, the FHWA and SCDOT will submit a new (or amended) MOA to the South Carolina SHPO and the ACHP for review. If consultation to prepare a new MOA or amendments proves unproductive, the FHWA will seek ACHP comment in accordance with 36 CFR § 800.6(b)(2).

VI. Amendment and Modification

Any signatory to this MOA may request that it be amended or modified at any time, whereupon the parties will consult with each other to consider such amendment or modification.

VII. Termination

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation VI, above. If within (30) days an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, the FHWA and the SCDOT must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request comments from the ACHP under 36 CFR § 800.7. The FHWA and the SCDOT will notify the signatories as to the course of action it will pursue.

US 21 over Harbor River
Section 106 Memorandum of Agreement

EXECUTION of this MOA by the Federal Highway Administration, the South Carolina Department of Transportation, and the South Carolina State Historic Preservation Office and implementation of its terms, is evidence that the FHWA has taken into account the effects of the undertaking on the Harbor River Bridge (Resource 5070) in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800). Fulfillment of this MOA by FHWA satisfies the Section 106 requirements of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulation (36 CFR Part 800).

SIGNATORIES:

Federal Highway Administration

By: *J. Shane Blevins* Date: 8/22/2016

South Carolina Department of Transportation

By: *Chad Galt* Date: 8/15/16

South Carolina State Historic Preservation Office

By: *Elizabeth M. Johnson* Date: 8/16/2016

CONCURRING PARTY:

South Carolina Department of Parks, Recreation, and Tourism

By: *Paul Samuels* Date: 8/29/2016 n

Appendix A-8

Advisory Council on Historic Preservation

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Wade, Blair

From: Long, Chad C. <LongCC@scdot.org>
Sent: Thursday, May 12, 2016 1:41 PM
To: Wade, Blair
Cc: Josh Fletcher (JoshFletcher@brockington.org)
Subject: FW: FHWA-SC: Adverse Effect Notification US 21 Bridge over Harbor River, Beaufort County, SC
Attachments: US 21 Bridge ACHP Electronic e106 Form.docx; Project Map 8 x 11.pdf; US21 Harbor River Bridge FINAL Cultural Resources Survey.pdf; Correspondence_US 21 over Harbor River.pdf; Notice of bridge available for adaptive reuse_US21.pdf; Reasonable Alternatives.pdf; Revised Draft US 21 over Harbor River MOA_version 2.docx

fyi

From: Belcher, Jeffery - FHWA
Sent: Thursday, May 12, 2016 1:30 PM
To: e106@achp.gov
Cc: ADaggett@scdah.sc.gov; Long, Chad C.
Subject: FHWA-SC: Adverse Effect Notification US 21 Bridge over Harbor River, Beaufort County, SC

The Federal Highway Administration, South Carolina Division Office is notifying the ACHP as required by 36 CFR Part 800.6(a)(1) of an adverse effect that will occur as a result of the proposed US 21 (Sea Island Parkway) Bridge Replacement over the Harbor River. The proposed project includes replacing the existing structurally-deficient and functionally-obsolete 1939 swing span bridge. Attached are various reports and coordination documents per 36 CFR Part 800.11(e) for your use. A draft Memorandum of Agreement (MOA) has been developed in coordination with the SHPO and the SC Parks, Recreation, and Tourism to address mitigation efforts for the project. A copy of the draft MOA is attached for your review and comment. All mitigation stipulations agreed to during the Section 106 process will be included in the Environmental Assessment (EA) for the project. As part of the project development process a Programmatic Section 4(f) for the Use of Historic Bridges will be prepared for the project.

Please feel free to reach me with any questions or concerns you may have regarding the project.

Much thanks,

J. Shane Belcher
Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201
Phone: 803-253-3187
Fax: 803-253-3989

Advisory Council on Historic Preservation
Electronic Section 106 Documentation Submittal System (e106) Form
MS Word format

Send to: *e106@achp.gov*

I. Basic information

- 1. Name of federal agency.** (If multiple agencies, state them all and indicate whether one is the lead agency): Federal Highway Administration South Carolina (FHWA-SC)

- 2. Name of undertaking/project.** (Include project/permit/application number if applicable):

U.S. Route 21 Bridge Replacement over the Harbor River, Federal-aid Project No. P026862.

- 3. Location of undertaking.** (Indicate city(s), county(s), state(s), land ownership, and whether it would occur on or affect historic properties located on tribal lands):

Beaufort County, South Carolina, 32.404233, -80.452802 (location map attached). Project is not located on tribal lands.

- 4. Name and title of federal agency official and contact person for this undertaking,** including email address and phone number:

J. Shane Belcher
Environmental Coordinator
jeffrey.belcher@dot.gov
803-253-3187
Strom Thurmond Federal Building
1835 Assembly Street, Suite 1270
Columbia, SC 29201

- 5. Purpose of notification.** Indicate whether this documentation is to:

- **notify the ACHP of a finding that an undertaking may adversely affect historic properties, and/or**
- invite the ACHP to participate in a section 106 consultation, and/or
- propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings in accordance with 36 C.F.R. 800.14(b)(3).

II. Information on the undertaking*

- 6. Describe the undertaking and nature of federal involvement** (if multiple federal agencies are involved, specify involvement of each): The project involves the replacement of the U.S. 21 Bridge over the Harbor River. The FHWA-SC is the lead federal agency as the project will utilize federal-aid highway funds for the bridge replacement. The project will also require permits from the USCG and the USACE. The USCG is a cooperating agency with FHWA in the preparation of the Environmental Assessment (EA) for the project.
- 7. Describe the area of potential effects:** The defined APE consists of a two-mile long and 1200 ft. wide corridor along the existing U.S. Route 21 (reference Figure 1.2 in the attached cultural resources survey).
- 8. Describe steps taken to identify historic properties:** Coordination has occurred with the SC SHPO, the Catawba Indian Nation, the Eastern Shawnee, and the Gullah Geechee Cultural Heritage Corridor to identify historic properties within the APE. A Cultural Resources Survey (attached) has been completed by Brockington and Associates (Final, May 2016).
- 9. Describe the historic property** (or properties) and any National Historic Landmarks within the APE (or attach documentation or provide specific link to this information):

The historic properties are described in more detail in the attached Cultural Resources Survey. One archaeological site (38BU113) has been determined eligible for the National Register of Historic Places but is located outside of the project's footprint and will not be affected. The existing Harbor River Bridge (Resource 5070) is a swing span bridge built in 1939 and is eligible for the National Register. As proposed the bridge is to be replaced and will be adversely affected by the project. The Gay Fish Company (Resource 5071) was determined eligible for the National Register but will not be affected by the project.

- 10. Describe the undertaking's effects on historic properties:** The proposed project will have an adverse effect on the existing U.S. 21 swing span bridge as the project proposes to demolish and replace the bridge.
- 11. Explain how this undertaking would adversely affect historic properties** (include information on any conditions or future actions known to date to avoid, minimize, or mitigate adverse effects): The U.S. 21 Bridge would be adversely affected due to the need to replace the bridge. The existing bridge has been advertised for alternative use per 23 USC Part 144(o) but to date no entities have accepted the bridge. Avoidance and rehabilitation alternatives have been evaluated and have not been deemed a viable solution. Closing and abandoning the bridge would avoid impacts to the bridge; however, this alternative was eliminated from further review because of impacts to the public. Approximately 4,100 vehicles use the bridge as the only connection between Harbor Island, Hunting Island, Fripp Island and mainland Beaufort County; therefore, closing and abandoning was considered an unacceptable alternative.

Rehabilitating the existing swing-span bridge was also considered. Rehabilitation includes measures that address the structural condition of the bridge to maintain the carrying capacity rating. This would require extensive inspections, maintenance, and repairs to allow the bridge to be structurally sufficient without posting a vehicle weight limit. Rehabilitation would likely require temporary closures of the bridge, which is not feasible since the bridge provides the only link between mainland Beaufort County and the islands. The rehabilitation measures would also not address the substandard geometry of the bridge deck, including the width of travel lanes and shoulders. In light of the age of and

structural condition of the bridge, rehabilitation was eliminated from further review. All other alternatives being evaluated include the replacement of the bridge in some form.

Due to the proposed impacts a draft Memorandum of Agreement (MOA) has been developed in coordination with the SC SHPO and the SC State Parks, Hunting Island State Park to address mitigation strategies for the impacts to the historic bridge. The USCG has stated they do not need to be a signatory to the MOA as they would simply adopt the MOA once completed. A copy of the draft MOA is attached for your review and comment. A Programmatic Section 4(f) Evaluation will also be prepared for the project.

12. Provide copies or summaries of the views provided to date by any consulting parties, Indian tribes or Native Hawai'ian organizations, or the public, including any correspondence from the SHPO and/or THPO. Correspondence attached:

- SC SHPO
- Gullah Geechee Cultural Corridor
- Catawba Indian Nation, No response from the Eastern Shawnee was received.
- Public Meeting was held 9-15-15
- Agency field review was held 4-19-16

* see *Instructions for Completing the ACHP e106 Form*

III. Optional Information

13. Please indicate the status of any consultation that has occurred to date. Are there any consulting parties involved other than the SHPO/THPO? Are there any outstanding or unresolved concerns or issues that the ACHP should know about in deciding whether to participate in consultation?

- Ongoing consultation with the SC SHPO regarding MOA development
- Ongoing coordination with Hunting Island State Park regarding mitigation items associated with the Civilian Conservation Corps (CCC) and the option to possibly display a section of the bridge within the park.

14. Does your agency have a website or website link where the interested public can find out about this project and/or provide comments? Please provide relevant links: No website has been established for the project.

15. Is this undertaking considered a “major” or “covered” project listed on the Federal Infrastructure Projects Permitting Dashboard or other federal interagency project tracking system? If so, please provide the link or reference number: The project is not considered a major Federal Infrastructure Project.

The following are attached to this form (check all that apply):

- ☒ Section 106 consultation correspondence
- ☒ Maps, photographs, drawings, and/or plans
- ☒ Additional historic property information (Cultural Resource Survey)
- ☒ Other: Draft MOA for review/comment



Preserving America's Heritage

May 27, 2016

J. Shane Belcher
Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201

Ref: *Proposed US Route 21 (Sea Island Parkway) Bridge Replacement over the Harbor River*
Beaufort County, South Carolina
Federal-Aid Project Number-P026862

Dear Mr. Belcher:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and it is determined that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the South Carolina State Historic Preservation Office (SHPO), and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA, and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the notification of adverse effect. If you have any questions or require further assistance, please contact MaryAnn Naber at 202-517-0218 or via e-mail at mnaber@achp.gov.

Sincerely,

LaShavio Johnson
Historic Preservation Technician
Office of Federal Agency Programs

Wade, Blair

From: Long, Chad C. <LongCC@scdot.org>
Sent: Tuesday, May 31, 2016 8:52 AM
To: Wade, Blair
Subject: FW: Proposed US Route 21 Bridge Replacement over the Harbor River, Beaufort County, SC
Attachments: sc.fhwa.us route 21 bridge replacement over harbor river.np.27may16.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

From: Belcher, Jeffery - FHWA
Sent: Tuesday, May 31, 2016 8:18 AM
To: Long, Chad C.
Cc: Adrienne Daggett (ADaggett@scdah.sc.gov); Herrell, Michelle (FHWA)
Subject: FW: Proposed US Route 21 Bridge Replacement over the Harbor River, Beaufort County, SC

Chad,

ACHP response on the US 21 Bridge for your project file. They do not want to enter as a consulting party at this time and I didn't see any comments on the draft MOA.

J. Shane Belcher
Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201
Phone: 803-253-3187
Fax: 803-253-3989

From: OFAP [<mailto:OFAP2@achp.gov>]
Sent: Friday, May 27, 2016 1:24 PM
To: Belcher, Jeffrey (FHWA)
Cc: Elizabeth Johnson; Lindauer, Owen (FHWA); MaryAnn Naber
Subject: Proposed US Route 21 Bridge Replacement over the Harbor River, Beaufort County, SC

From: Office of Federal Agency Programs

Advisory Council on Historic Preservation

Attached is our letter on the subject undertaking (in Adobe Acrobat PDF format)

If you have any questions concerning our letter, please contact:

MaryAnn Naber
mnaber@achp.gov



Preserving America's Heritage

September 16, 2016

Mr. J. Shane Belcher
Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201

Ref: *Proposed US Route 21 (Sea Island Parkway) Bridge Replacement over the Harbor River
Beaufort County, South Carolina
Federal-Aid Project Number-P026862*

Dear Mr. Belcher:

The Advisory Council on Historic Preservation (ACHP) has received the Memorandum of Agreement (MOA) for the above referenced project. In accordance with Section 800.6(b)(1)(iv) of the ACHP's regulations, the ACHP acknowledges receipt of the MOA. The filing of the MOA, and execution of its terms, completes the requirements of Section 106 of the National Historic Preservation Act and the ACHP's regulations.

We appreciate you providing us with a copy of the MOA and will retain it for inclusion in our records regarding this project. Should you have any questions or require additional assistance, please contact Ms. MaryAnn Naber at (202) 517- 0218 or via e-mail at mnaber@achp.gov.

Sincerely,

LaShavio Johnson
Historic Preservation Technician
Office of Federal Agency Programs

Appendix A-9

Gullah Geechee Heritage Corridor

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US 21 Harbor River Bridge Project

Gullah Geechee Cultural Heritage Corridor Consultation (Phone conversations)

Brockington and Associates, Inc. (Josh Fletcher-Principal Investigator)

11/11/15: Michael Allen directed me to Herman Blake, PhD, Executive Director, Gullah Geechee Cultural Heritage Corridor Commission. I called him yesterday to discuss the project but it wasn't a good time for him. So, I am going to call him again early next week.

11/24/15: I spoke with Dr. Blake today. He is going to talk to some more people from the St. Helena area and get back to me early next week. He asked if anyone from the Penn Center was at the public info meeting and also asked for the attendance signup sheet from that meeting. I got that from HDR and forwarded it to him.

12/8/15: Dr. Blake of the Gullah Geechee Cultural Heritage Corridor called me and said that he'd looked over our project material and spoken with some "select people" near the project area and said he came up with no objections to the project. I told him that I thought there was going to be another public info meeting in the coming months, and that I'm sure he would be on the invite list.

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: US 21 Harbor River Bridge Replacement Project
Date: Friday, May 06, 2016 8:34:32 AM
Attachments: [US21_Handout_11x17_FINAL_20150914_compressed.pdf](#)

Here's my first email to Michael Allen.

From: Josh Fletcher
Sent: Wednesday, September 23, 2015 12:55 PM
To: Michael_Allen@nps.gov
Subject: US 21 Harbor River Bridge Replacement Project

Mr. Allen,

My name is Josh Fletcher and I'm an archaeologist with Brockington and Associates here in Mount Pleasant. I believe we have met before, but it has been a while. We are working on the cultural resources study for the US 21 Harbor River Bridge Replacement Project in Beaufort County. This is the area between St. Helena Island and Harbor Island. I was hoping that I could speak with you about any possible Gullah Geechee resources or concerns within our study area. I have attached the flier that was distributed at the recent public information meeting on St. Helena Island. So, if you have a moment to speak, could I please give you a call, or could you give me a call at the number below?

Thank you,
Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org

Brockington and Associates, Inc.
A Woman-Owned Small Business
498 Wando Park Boulevard
Suite 700
Mt. Pleasant, South Carolina 29464
843-881-3128 x25 office
www.brockington.org

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: US 21 Harbor River Bridge
Date: Friday, May 06, 2016 8:35:37 AM

Sorry, there will probably be some overlap in these email chains. Here's the second one...at the bottom is my second email to Michael Allen, along with his reply and my initial email to Herman Blake.

-----Original Message-----

From: Herman Blake [<mailto:executivedirector@gullahgeecheecorridor.org>]
Sent: Wednesday, November 11, 2015 10:22 AM
To: Josh Fletcher
Subject: RE: US 21 Harbor River Bridge

Josh:

I am sorry I was unable to spend time with you yesterday. Next week should be much better and I hope you will call.

Keep on keeping on.

J. Herman Blake, PhD
Executive Director
Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007
Office: 843.793.2841
executivedirector@gullahgeecheecorridor.org
Click here to sign up for our newsletter!
Online exhibit at University of California Santa Cruz

-----Original Message-----

From: Josh Fletcher [<mailto:JoshFletcher@brockington.org>]
Sent: Tuesday, November 10, 2015 9:53 AM
To: Herman Blake <executivedirector@gullahgeecheecorridor.org>
Subject: US 21 Harbor River Bridge

Dr. Blake,

I look forward to speaking with you about this bridge project in Beaufort County. In case Michael didn't pass it along, I've attached a couple of location maps. Also, Beaufort County's Comprehensive Plan identifies a "St. Helena Cultural Overlay" on St. Helena Island. <http://www.bcgov.net/departments/administrative/beaufort-county-council/comprehensive-plan/documents/2010-comprehensive-plan-documents/chapter-4-land-use-element.pdf> (see page 31). I'd be interested to learn more about that. I will give you a call a little later on this morning.

Thank you,
Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org

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498 Wando Park Boulevard
Suite 700
Mt. Pleasant, South Carolina 29464

843-881-3128 x25 office
www.brockington.org

-----Original Message-----

From: Allen, Michael [<mailto:michael.allen@nps.gov>]
Sent: Tuesday, November 10, 2015 9:29 AM
To: Josh Fletcher
Subject: Re: US 21 Harbor River Bridge

Josh

Please contact the ED of the Gullah Geechee Corridor. His contact info is below.

Mike

Thank you Michael. Have him contact me.

Keep on keeping on.

J. Herman Blake, PhD
Executive Director
Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007
Office: 843.793.2841
executivedirector@gullahgeecheecorridor.org
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On 11/9/15, Josh Fletcher <JoshFletcher@brockington.org> wrote:

> Hi Michael,
> I hope you have been well. Just checking in with you again with
> regards to a Beaufort County project I'm working on for the SCDOT, the
> US 21 Harbor River Bridge Replacement Project. I've attached a couple
> of maps to show you where it is, but basically, it's centered on the
> US 21 bridge over the Harbor River, between St. Helena Island and
> Harbor/Hunting islands. Part of my scope of is to consult with the
> SCDOT and the Gullah Geechee Cultural Heritage Corridor Commission, as
> necessary, to determine if there are any resources in the project area
> that are part of, and important to, the Gullah Geechee community. So,
> I would like to discuss this with you when you have a few minutes. Is
> there a time this week that I could give you a call? As far as I can
> tell, I will be in the office all week. Thank you in advance for your help with this project.
> Thank you,
> Josh
>
> Josh Fletcher
> Senior Archaeologist
> joshfletcher@brockington.org<<mailto:joshfletcher@brockington.org>>
>
> Brockington and Associates, Inc.
> A Woman-Owned Small Business
> 498 Wando Park Boulevard
> Suite 700
> Mt. Pleasant, South Carolina 29464

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: US 21 Harbor River Bridge
Date: Friday, May 06, 2016 8:37:26 AM

Email 3.

-----Original Message-----

From: Josh Fletcher
Sent: Wednesday, November 11, 2015 10:40 AM
To: 'Herman Blake'
Subject: RE: US 21 Harbor River Bridge

Dr. Blake,
Not a problem at all. I hope that the rest of your week goes well, and I will try to give you a call sometime early next week.
Thank you,
Josh

-----Original Message-----

From: Herman Blake [<mailto:executivedirector@gullahgeecheecorridor.org>]
Sent: Wednesday, November 11, 2015 10:22 AM
To: Josh Fletcher
Subject: RE: US 21 Harbor River Bridge

Josh:

I am sorry I was unable to spend time with you yesterday. Next week should be much better and I hope you will call.

Keep on keeping on.

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-----Original Message-----

From: Josh Fletcher [<mailto:JoshFletcher@brockington.org>]
Sent: Tuesday, November 10, 2015 9:53 AM
To: Herman Blake <executivedirector@gullahgeecheecorridor.org>
Subject: US 21 Harbor River Bridge

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Thank you,

Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org

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-----Original Message-----

From: Allen, Michael [<mailto:michael.allen@nps.gov>]
Sent: Tuesday, November 10, 2015 9:29 AM
To: Josh Fletcher
Subject: Re: US 21 Harbor River Bridge

Josh

Please contact the ED of the Gullah Geechee Corridor. His contact info is below.

Mike

Thank you Michael. Have him contact me.

Keep on keeping on.

J. Herman Blake, PhD
Executive Director
Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007
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On 11/9/15, Josh Fletcher <JoshFletcher@brockington.org> wrote:

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> US 21 bridge over the Harbor River, between St. Helena Island and
> Harbor/Hunting islands. Part of my scope of is to consult with the
> SCDOT and the Gullah Geechee Cultural Heritage Corridor Commission, as
> necessary, to determine if there are any resources in the project area
> that are part of, and important to, the Gullah Geechee community. So,
> I would like to discuss this with you when you have a few minutes. Is
> there a time this week that I could give you a call? As far as I can
> tell, I will be in the office all week. Thank you in advance for your help with this project.
> Thank you,

> Josh
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> Senior Archaeologist
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> www.brockington.org<<http://www.brockington.org/>>
>
>
>

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: Gullah Geechee
Date: Friday, May 06, 2016 8:38:56 AM

Email 4.

-----Original Message-----

From: Herman Blake [<mailto:executivedirector@gullahgeecheecorridor.org>]
Sent: Wednesday, November 18, 2015 10:20 AM
To: Josh Fletcher
Cc: Sharon Scott
Subject: RE: US 21 Harbor River Bridge

Josh:

Thank you for your follow-up. I will ask Sharon Scott to be in touch with you and schedule a time we can talk for about 30 minutes. I am anxious to learn as much as possible about your interests/concerns.

Keep on keeping on.

J. Herman Blake, PhD
Executive Director
Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007
Office: 843.793.2841
executivedirector@gullahgeecheecorridor.org
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-----Original Message-----

From: Josh Fletcher [<mailto:JoshFletcher@brockington.org>]
Sent: Wednesday, November 18, 2015 9:08 AM
To: Herman Blake <executivedirector@gullahgeecheecorridor.org>
Subject: RE: US 21 Harbor River Bridge

Good morning, Dr. Blake,
I hope you are doing well. Would you be available for a call sometime this week? I will give you a call whenever it is convenient for you.

Thank you,
Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org

Brockington and Associates, Inc.
A Woman-Owned Small Business
498 Wando Park Boulevard
Suite 700
Mt. Pleasant, South Carolina 29464
843-881-3128 x25 office
www.brockington.org

-----Original Message-----

From: Herman Blake [<mailto:executivedirector@gullahgeecheecorridor.org>]
Sent: Wednesday, November 11, 2015 10:22 AM
To: Josh Fletcher
Subject: RE: US 21 Harbor River Bridge

Josh:

I am sorry I was unable to spend time with you yesterday. Next week should be much better and I hope you will call.

Keep on keeping on.

J. Herman Blake, PhD
Executive Director
Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007
Office: 843.793.2841
executivedirector@gullahgeecheecorridor.org
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-----Original Message-----

From: Josh Fletcher [<mailto:JoshFletcher@brockington.org>]
Sent: Tuesday, November 10, 2015 9:53 AM
To: Herman Blake <executivedirector@gullahgeecheecorridor.org>
Subject: US 21 Harbor River Bridge

Dr. Blake,

I look forward to speaking with you about this bridge project in Beaufort County. In case Michael didn't pass it along, I've attached a couple of location maps. Also, Beaufort County's Comprehensive Plan identifies a "St. Helena Cultural Overlay" on St. Helena Island. <http://www.bcgov.net/departments/administrative/beaufort-county-council/comprehensive-plan/documents/2010-comprehensive-plan-documents/chapter-4-land-use-element.pdf> (see page 31). I'd be interested to learn more about that. I will give you a call a little later on this morning.

Thank you,
Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org

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Mt. Pleasant, South Carolina 29464
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-----Original Message-----

From: Allen, Michael [<mailto:michael.allen@nps.gov>]
Sent: Tuesday, November 10, 2015 9:29 AM
To: Josh Fletcher
Subject: Re: US 21 Harbor River Bridge

Josh

Please contact the ED of the Gullah Geechee Corridor. His contact info is below.

Mike

Thank you Michael. Have him contact me.

Keep on keeping on.

J. Herman Blake, PhD

Executive Director

Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007

Office: 843.793.2841

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>

>

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: US 21 Harbor River Bridge
Date: Friday, May 06, 2016 8:40:42 AM
Attachments: [US21_PIMAttendees_20151125.xls](#)
[HarborRiver_StakeholderExport_20150902.xml](#)

Now up to Nov. 25 email.

-----Original Message-----

From: Josh Fletcher
Sent: Wednesday, November 25, 2015 11:22 AM
To: Herman Blake
Subject: FW: US 21 Harbor River Bridge

Dr. Blake,

Thank you for taking the time to speak with me yesterday. I have attached the the PIM attendee list (based on the sign in sheets) and the stakeholder list. The project engineers/meeting organizers emailed the stakeholder list the PIM invitation. They did not receive any comments from the Penn Center or comments from/related to Gullah Geechee communities. If you need any additional information, please let me know. I hope you and yours have a very happy Thanksgiving.

Thank you,
Josh

Josh Fletcher
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-----Original Message-----

From: Allen, Michael [<mailto:michael.allen@nps.gov>]
Sent: Tuesday, November 10, 2015 9:29 AM
To: Josh Fletcher
Subject: Re: US 21 Harbor River Bridge

Josh

Please contact the ED of the Gullah Geechee Corridor. His contact info is below.

Mike

Thank you Michael. Have him contact me.

Keep on keeping on.

J. Herman Blake, PhD

Executive Director

Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007

Office: 843.793.2841

executivedirector@gullahgeecheecorridor.org

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>

>

>

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: US 21 Harbor River Bridge
Date: Friday, May 06, 2016 8:41:20 AM
Attachments: [harborriver_stakeholder.xls](#)

Another from Nov. 25.

-----Original Message-----

From: Josh Fletcher
Sent: Wednesday, November 25, 2015 11:47 AM
To: 'Herman Blake'
Subject: RE: US 21 Harbor River Bridge

Dr. Blake, I resaved that file in a different format. Can you open the attached file?

-----Original Message-----

From: Herman Blake [<mailto:executivedirector@gullahgeecheecorridor.org>]
Sent: Wednesday, November 25, 2015 11:34 AM
To: Josh Fletcher
Subject: RE: US 21 Harbor River Bridge

Thank you Josh Fletcher. Your message arrived at a very opportune time. I was just thinking about you and our conversation. I was able to open the invitation/attendee list and it is very helpful. Unfortunately the report was not accessible with my software. If there is another format it would be helpful--but regardless I will continue to pursue these matters.

Keep on keeping on.

J. Herman Blake, PhD
Executive Director
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Sent: Wednesday, November 25, 2015 11:22 AM
To: Herman Blake <executivedirector@gullahgeecheecorridor.org>
Subject: FW: US 21 Harbor River Bridge

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-----Original Message-----

From: Allen, Michael [mailto:michael_allen@nps.gov]
Sent: Tuesday, November 10, 2015 9:29 AM
To: Josh Fletcher
Subject: Re: US 21 Harbor River Bridge

Josh

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Mike

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Keep on keeping on.

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>
>
>

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: US 21 Harbor River Bridge
Date: Friday, May 06, 2016 8:43:00 AM

My email to Dr. Blake on 12/7. This may be the last one; we spoke soon thereafter on the phone, but I'm still looking through my emails.

-----Original Message-----

From: Josh Fletcher
Sent: Monday, December 07, 2015 8:34 AM
To: 'Herman Blake'
Subject: RE: US 21 Harbor River Bridge

Good morning, Dr. Blake,

Was just checking to see if you'd had a chance to talk to anyone about this project, and if you and I could possibly touch base this week. The project engineers are having a meeting this Friday and were wondering if we had any updates on our end of the project.

Thanks,

Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org

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-----Original Message-----

From: Herman Blake [<mailto:executivedirector@gullahgeecheecorridor.org>]
Sent: Wednesday, November 25, 2015 11:46 AM
To: Josh Fletcher
Subject: RE: US 21 Harbor River Bridge

Thank you Josh Fletcher. I can open this file.

Keep on keeping on.

J. Herman Blake, PhD
Executive Director
Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007
Office: 843.793.2841
executivedirector@gullahgeecheecorridor.org
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-----Original Message-----

From: Josh Fletcher [<mailto:JoshFletcher@brockington.org>]
Sent: Wednesday, November 25, 2015 11:47 AM
To: Herman Blake <executivedirector@gullahgeecheecorridor.org>
Subject: RE: US 21 Harbor River Bridge

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Subject: FW: US 21 Harbor River Bridge

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-----Original Message-----

From: Allen, Michael [mailto:michael_allen@nps.gov]

Sent: Tuesday, November 10, 2015 9:29 AM

To: Josh Fletcher

Subject: Re: US 21 Harbor River Bridge

Josh

Please contact the ED of the Gullah Geechee Corridor. His contact info is below.

Mike

Thank you Michael. Have him contact me.

Keep on keeping on.

J. Herman Blake, PhD

Executive Director

Gullah Geechee Cultural Heritage Corridor Commission PO Box 1007 (Physical location: 2817 Maybank Highway)
Johns Island, SC 29457-1007

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>

From: Josh Fletcher
To: [Chad Long](#)
Subject: FW: Harbor River update
Date: Friday, May 06, 2016 8:45:11 AM
Attachments: [image001.png](#)

My 12/8 email to Blair Wade summarizing my 12/8 phone conversation with Dr. Blake. I believe this is the end of our correspondence (both phone and email) with Dr. Blake.

From: Josh Fletcher
Sent: Tuesday, December 08, 2015 11:51 AM
To: Wade, Blair (Blair.Wade@hdrinc.com)
Subject: FW: Harbor River update

Hi Blair,
I hope that you and the family are recovering from the daycare bug! Before I forget, just wanted to let you know that Dr. Blake of the Gullah Geechee Cultural Heritage Corridor called me back this morning and said that he'd looked over our project material and spoken with some "select people" near the project area and said he came up with no objections to the project. I told him that I thought there was going to be another public info meeting in the coming months, and that I'm sure he would be on the invite list.
Take care,
Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org



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From: Josh Fletcher
Sent: Monday, December 07, 2015 9:28 AM
To: 'Wade, Blair'
Subject: RE: Harbor River update

Hey Blair,
I'm sorry to hear you have the daycare funk in your house! I know how that is.

I just sent an email to Herman Blake with the Gullah Geechee Cultural Heritage Corridor

Commission to see if he'd spoken to any of his contacts down on St. Helena and to see if we could have a quick call this week before your meeting on Friday. The last I spoke with him is when I forwarded him the meeting attendee list and the stakeholders list that you sent to me. He was then going to follow up with some people to see if they have any concerns. As soon as I hear back from him, I will let you know.

I was thinking we were going to wait until we had the preferred alignment so that we could say how the archaeological site may be affected, but I guess I was confused on that. Maybe we could discuss this when you are back in the office? I don't want to disturb you at home today. I just spoke with our architectural historian about his portion of the report and he will be wrapping that up in January. It will not take long to incorporate that into the rest of the report.

I hope that you and the family are able to rest up and feel better today! Let's talk when you're back in the office.

Thanks,
Josh

Josh Fletcher
Senior Archaeologist
joshfletcher@brockington.org



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843-881-3128 x25 office
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From: Wade, Blair [<mailto:Blair.Wade@hdrinc.com>]
Sent: Monday, December 07, 2015 7:07 AM
To: Josh Fletcher
Subject: Harbor River update

Hey Josh –

Hope you had a good weekend! Could you give me an update of where you guys stand with the cultural resource report and Gullah Geechee Coordination? We have a project status meeting on Friday. We now have GIS files of the final five alternative alignments. What information do you need to complete the cultural report? I can send you a figure showing the alignments, or send you the GIS files if you are going to create your own figure for the report.

I'm working from home today – my entire household seems to have caught the daycare plague.

Thanks,

Blair

Blair Goodman Wade, ENV SP

Sr. Environmental Planner/Project Manager

HDR

3955 Faber Place Drive, Suite 300

North Charleston, SC 29405-8580

D 843.414.3740 **M** 843.693.9938

Blair.Wade@hdrinc.com

hdrinc.com/follow-us

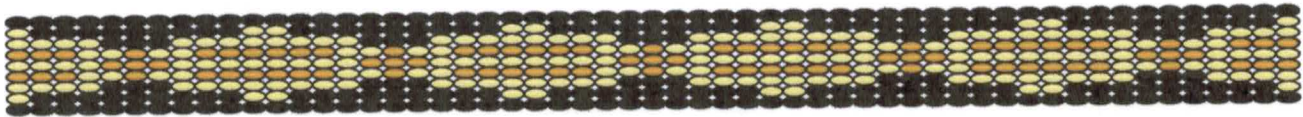
Appendix A-10

Tribal Coordination

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Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427
Fax 803-328-5791



July 14, 2015

Attention: Chad Long
SCDOT
P.O. Box 191
Columbia, SC 29201

Re. THPO #	TCNS #	Project Description
2015-66-14		LOI for the Proposed U.S. 21 Bridge Replacement over Harbor River in Beaufort Co., SC

Mr. Long,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Totherow at 803-328-2427 ext. 226, or e-mail caitlinh@ccppcrafts.com.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer

RECEIVED

JUL 17 2015

Environmental Management
SCDOT



South Carolina
Department of Transportation

March 17, 2016

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

**Re: Cultural Resources Survey of the US 21 Harbor River Bridge Replacement Project,
Beaufort County, South Carolina**

Dear Ms. Johnson:

Enclosed are two copies of a draft survey report that describes cultural resource investigations conducted for the proposed US 21 over Harbor River bridge replacement project in Beaufort County, South Carolina. The survey resulted in the evaluation of two previously recorded archaeological resources (38BU113 and 38BU147). Archaeological site 38BU113 has been determined eligible for listing in the National Register of Historic Places (NRHP). This site is located outside of the project's footprint and will not be affected by construction. Contractors will be made aware that the site cannot be used as a staging or laydown area during construction. Archaeological site 38BU147 was determined to be not eligible for the NRHP.

Two above-ground resources (Resource 5070 and Resource 5071) were identified and evaluated during the investigations. Resource 5070, the Harbor River Bridge, is eligible for listing in the NRHP and would be adversely affected by the project. Resource 5071, the Gay Fish Company, was determined eligible for listing in the NRHP but will not be affected by the project.

Based on the results of background research and field investigations, the Department has determined that the proposed undertaking will result in an **adverse effect** to historic properties. A draft Memorandum of Agreement has been developed for your review and comment.

Per the terms of the Section 106 Programmatic Agreement executed on August 18, 2014, the Department is providing this information on behalf of the Federal Highway Administration. It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with SCDOT findings. SCDOT plans hold additional meetings with your office regarding the proposed measures to resolve adverse effects. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,


Chad C. Long
Archaeologist/NEPA Coordinator

CCL:ccl

I (do not) concur in the above determination.

Signed: _____ Date: _____

cc: Shane Belcher, FHWA
cc: Wenonah G. Haire, Catawba Nation THPO
Robin Dushane, Eastern Shawnee

File: ENV/CCL



**DRAFT MEMORANDUM OF AGREEMENT BETWEEN
THE FEDERAL HIGHWAY ADMINISTRATION,
THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION,
AND THE SOUTH CAROLINA STATE HISTORIC PRESERVATION OFFICE**

**REGARDING THE REPLACEMENT OF THE US ROUTE 21 BRIDGE OVER THE HARBOR
RIVER, BEAUFORT COUNTY, SOUTH CAROLINA**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), proposes to the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina; and

WHEREAS, the FHWA has determined that the replacement of the US Route 21 Bridge over the Harbor River in Beaufort County, South Carolina, will have an adverse effect upon the Harbor River Bridge (Resource 5070), a historic property that is eligible for listing in the National Register of Historic Places (see Appendix A); and

WHEREAS, the FHWA and the SCDOT have consulted with the South Carolina (State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800) to resolve adverse effects, and

WHEREAS, the proposed undertaking will require a bridge permit the United States Coast Guard (USCG), and in accordance with a Memorandum of Agreement between FHWA and the USCG, the USCG has agreed to become a cooperating agency in the environmental review process; and

WHEREAS, the proposed measures for resolving adverse effects to historic properties involves coordination with Hunting Island State Park, the South Carolina Department of Parks, Recreation, and Tourism (SCPRT) has therefore been invited to sign the MOA as a concurring party; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), the FHWA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination providing the specified documentation, and the ACHP has decided (to or not to) participate, and

NOW, THEREFORE, the FHWA, the SCDOT, and the South Carolina SHPO agree that the undertaking will be implemented according to the following stipulations in order to take into account the effects of the undertaking on the Harbor River Bridge.

I. STIPULATIONS

The FHWA and the SCDOT will ensure that the following stipulations are implemented:

A. Harbor River Bridge Mitigation

1. To mitigate adverse effects to the Harbor River Bridge, SCDOT will work with the SHPO, SCPRT, and the Hunting Island State Park Manager to develop and fund a public interpretation plan related to the impact of Depression-era Work Programs on the Hunting Island State Park and its associated landscape. The interpretation plan should include elements that relate to the construction of the US 21 roadway and bridge over Harbor River as well as the history of the Civilian Conservation Corps at Hunting Island State Park.
2. The draft public interpretation plan shall be developed within 6 months after the execution of the MOA. Copies of the draft interpretation plan shall be provided to the FHWA, SHPO,

and Hunting Island State Park Manager for review and comment. A final public interpretation plan that incorporates comments received from FHWA, SHPO, and the Hunting Island State Park Manager shall be developed within 60 days after receipt of comments.

3. The components of the interpretation plan shall be developed and installed at the Hunting Island State Park within one-year of the production of the final interpretation plan.
4. Bridge Placard: SCDOT will remove the existing bridge placard on the US 21 Bridge and provide it to SCPRT to be used as part of the interpretive plan developed for the park.

II. Duration

This MOA shall be null and void if its terms are not carried out within ten (10) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

III. Late Discoveries

If unanticipated cultural materials (e.g., large, intact artifacts or animal bones; large soils stains or patterns of soil stains; buried brick or stone structures; clusters of brick or stone) or human skeletal remains are discovered during construction activities, then the Resident Construction Engineer shall be immediately notified and all work in the vicinity of the discovered materials shall cease until an evaluation can be made by the SCDOT archaeologist in consultation with the South Carolina SHPO and the CIN THPO.

IV. Monitoring and Reporting

Each year following the execution of this MOA until it expires or is terminated, the SCDOT shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FHWA's and SCDOT's efforts to carry out the terms of this MOA.

V. Dispute Resolution

The FHWA, the SCDOT, and the South Carolina SHPO will attempt to resolve any disagreement arising from the implementation of the MOA. This will include any disputes that arise concerning the contents of the report(s), including but not limited to its merit as a cultural resource management document.

In the event that the terms of this agreement cannot be carried out, the FHWA and SCDOT will submit a new (or amended) MOA to the South Carolina SHPO and the ACHP for review. If consultation to prepare a new MOA or amendments proves unproductive, the FHWA will seek ACHP comment in accordance with 36 CFR § 800.6(b)(2).

VI. Amendment and Modification

*US 21 over Harbor River
Section 106 Memorandum of Agreement*

Any signatory to this MOA may request that it be amended or modified at any time, whereupon the parties will consult with each other to consider such amendment or modification.

VII. Termination

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop and amendment per Stipulation VI, above. If within (30) days an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, the FHWA and the SCDOT must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request comments from the ACHP under 36 CFR § 800.7. The FHWA and the SCDOT will notify the signatories as to the course of action it will pursue.

EXECUTION of this Memorandum of Agreement by the Federal Highway Administration, the South Carolina Department of Transportation, and the South Carolina State Historic Preservation Office and implementation of its terms, is evidence that the FHWA has taken into account the effects of the undertaking on the Harbor River Bridge (Resource 5070) and in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. Sec. 470f) and its implementing regulations (36 CFR Part 800).

SIGNATORIES:

Federal Highway Administration

By: _____ Date: _____

South Carolina Department of Transportation

By: _____ Date: _____

South Carolina State Historic Preservation Office

By: _____ Date: _____

Advisory Council on Historic Preservation

By: _____ Date: _____

CONCURRING PARTY:

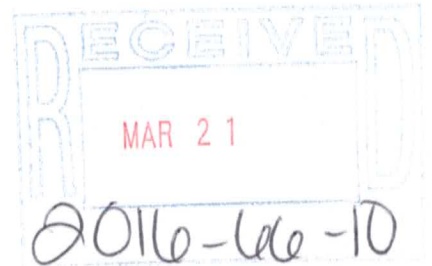
South Carolina Department of Parks, Recreation, and Tourism

By: _____ Date: _____



South Carolina
Department of Transportation

March 17, 2016



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

OK
was

**Re: Cultural Resources Survey of the US 21 Harbor River Bridge Replacement Project,
Beaufort County, South Carolina**

Dear Ms. Johnson:

Enclosed are two copies of a draft survey report that describes cultural resource investigations conducted for the proposed US 21 over Harbor River bridge replacement project in Beaufort County, South Carolina. The survey resulted in the evaluation of two previously recorded archaeological resources (38BU113 and 38BU147). Archaeological site 38BU113 has been determined eligible for listing in the National Register of Historic Places (NRHP). This site is located outside of the project's footprint and will not be affected by construction. Contractors will be made aware that the site cannot be used as a staging or laydown area during construction. Archaeological site 38BU147 was determined to be not eligible for the NRHP.

← for your records

Two above-ground resources (Resource 5070 and Resource 5071) were identified and evaluated during the investigations. Resource 5070, the Harbor River Bridge, is eligible for listing in the NRHP and would be adversely affected by the project. Resource 5071, the Gay Fish Company, was determined eligible for listing in the NRHP but will not be affected by the project.

Based on the results of background research and field investigations, the Department has determined that the proposed undertaking will result in an **adverse effect** to historic properties. A draft Memorandum of Agreement has been developed for your review and comment.

Per the terms of the Section 106 Programmatic Agreement executed on August 18, 2014, the Department is providing this information on behalf of the Federal Highway Administration. It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with SCDOT findings. SCDOT plans hold additional meetings with your office regarding the proposed measures to resolve adverse effects. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,

Chad C. Long
Archaeologist/NEPA Coordinator

CCL:ccl

I (~~do not~~) concur in the above determination.

Signed: Wenonah G. Haire Date: 4/4/16

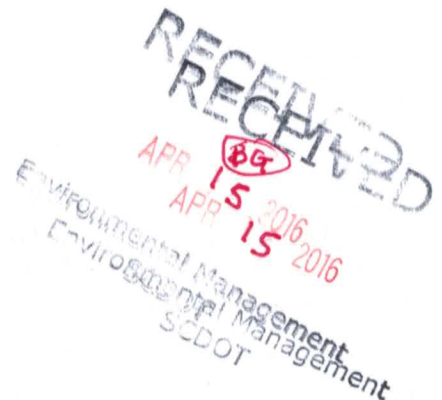
ec: Shane Belcher, FHWA
cc: Wenonah G. Haire, Catawba Nation THPO
Robin Dushane, Eastern Shawnee

File: ENV/CCL



Phone: (803) 737-2314
TTY: (803) 737-3870

Post Office Box 191
Columbia, South Carolina 29202-0191



AN EQUAL OPPORTUNITY
AFFIRMATIVE ACTION EMPLOYER

Appendix A-11

Beaufort County

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Wade, Blair

To: Long, Chad C.
Subject: RE: US 21 over Harbor River Bridge Replacement
AMServiceURLStr: <https://Slingshot.hdrinc.com:443/CFSS/control?view=services/FTService>

From: Long, Chad C.
Sent: Wednesday, July 27, 2016 2:22 PM
To: Wilhelm, David
Cc: McFee, Robert
Subject: Re: US 21 over Harbor River Bridge Replacement

David,

Sorry for the confusion and the poorly written email. I think we have what we need with your statement below. Just needed to confirm the property was not a significant recreational resource.

Thank you,

Chad

On Jul 27, 2016, at 2:19 PM, Wilhelm, David <dwilhelm@bcgov.net> wrote:

Mr. Long. I looked at the site this morning and I have received comments back from Rob McFee and Eric Klatt. We are all in agreement the subject property does not represent a significant public park or recreational resource. However, I am not sure what you are requesting from me (see yellow highlighted statement below). Let me know if this response confirming the County's position on this property is all you need at this time or if you're looking for further action.

Thanks.
Dave

David M. Wilhelm, P.E.
Director of Public Works
120 Shanklin Road
Beaufort, SC 29906
843-255-2733 office
843-986-4301 mobile
dwilhelm@bcgov.net

From: Long, Chad C. [<mailto:LongCC@scdot.org>]
Sent: Tuesday, July 26, 2016 2:16 PM
To: Wilhelm, David
Cc: McFee, Robert
Subject: US 21 over Harbor River Bridge Replacement

Mr. Wilhelm,

The South Carolina Department of Transportation (SCDOT) is preparing an environmental assessment for the proposed US 21 Harbor River Bridge Replacement Project in Beaufort County, South Carolina. During the course of this assessment, it was determined that Beaufort County is the owner of the 0.7-acre Parcel R300 020 00B 0030 0000 (Subject Parcel). The parcel is located on the eastern bank of the Harbor River, to the south of US 21. Please see the attached screenshot from Beaufort County's GIS website, which illustrates the location of the property.

From Beaufort County's GIS website, the legal description of the property is "Boat Landing Harbor River". The Class Code is "Gov Imp County Boat Ramp". The Title to Real Estate document on file at the Beaufort County Register of Deeds Office, which references a plat prepared by Niels Christensen dated October 25, 1973, states that "The within property consists of areas being given to Beaufort County by the Grantor herein for use as boat landings for use by the general public and for no residential purpose, one of said boat landings being near Harbor River and the other near Johnson Creek, both on Harbor Island." This Title of Real Estate document is attached.

Beaufort County's website and GIS mapping do not indicate a designated boat ramp or landing at the Subject Parcel. The Subject Parcel is currently being used by SCDOT for the bridge operator's parking. The preferred alternative alignment for US 21 is located to the north of the highway's current alignment, but would impact approximately 0.09 acres of the Subject Parcel. The current alignment of US 21 and the bridge operator's parking area would be closed upon the completion of the new bridge and roadway. Guardrail would prevent vehicles from pulling off US 21 onto the remaining Beaufort County parcel.

In order to ensure compliance with Section 4f of the USDOT Act, SCDOT is requesting input from Beaufort County to determine whether the property's primary use. Based upon our review of the property, the Subject Parcel does not appear to represent a *significant public park or recreational resource*.

Please let me know if you concur with this finding or have any questions.

Regards,

<image001.jpg>

Chad C. Long | NEPA Division Manager
Environmental Services Office
South Carolina Department of Transportation
955 Park Street | Room 519
Columbia, South Carolina 29201
Phone 803.737.1396 (office) | 803.420.8115 (mobile)

Appendix A-12

City of Beaufort

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William A. Prokop
CITY MANAGER
843-525-7070
FAX 843-525-7013



CITY OF BEAUFORT
1911 Boundary Street
BEAUFORT, SOUTH CAROLINA 29902

COUNCIL MEMBERS:
Billy Keyserling, Mayor
Mike McFee, Mayor Pro Tem
George O' Kelley
Philip Cromer
Stephen Murray

July 6, 2015

Mr. Chad Long
Archaeologist/NEPA Coordinator
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29201

RE: Proposed Bridge Replacement over Harbor River

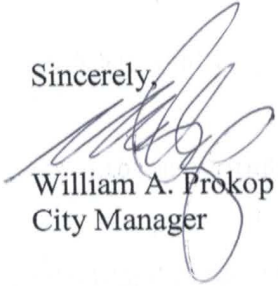
Dear Mr. Long:

On behalf of the City of Beaufort we feel that the above bridge replacement is warranted particularly in view of the potential vehicle safety and emergency vehicle response issues that will be improved. Many of our residents travel that route and are concerned about traffic safety issues that they currently encounter.

We feel that with proper study and the mitigation of any environmental issues this project will be a benefit to not only our city but to the state of South Carolina as well. We encourage this project to be moved forward in the SCDOT transportation improvement plan.

Thank you for giving us the opportunity to share our comments with you.

Sincerely,


William A. Prokop
City Manager

RECEIVED

JUL - 9 2015

Environmental Management
SCDOT

Appendix A-13

Non-Governmental Organizations

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RECEIVED

JUL 27 2015



COASTAL
CONSERVATION
LEAGUE

Environmental Management
SCDOT

Mr. Chad Long
Archaeologist/ NEPA Coordinator
South Carolina Department of Transportation
P. O. Box 191
Columbia, SC 29201

July 23, 2015

RE: Letter of Intent for the Proposed U. S. 21 Bridge Replacement over Harbor River in Beaufort County, South Carolina. SCDOT PIN: P026862

Mr. Long:

Thank you for the opportunity to comment on the Proposed U. S. 21 Bridge Replacement over Harbor River in Beaufort County, South Carolina. SCDOT PIN: P026862.

We request your consideration of the following:

1. Replacing the bridge with an updated swing bridge should be an alternative. This design would involve the least environmental impact and wetlands disturbance to the waterways of St. Helena and Harbor, Hunting and Fripp islands. Replacing the existing swing bridge with a new modern swing bridge eliminates the need for additional wetland fill along the route and maintains current levels of impact to other resources along the route. In addition, this is the most aesthetically pleasing option as it does not interfere with the viewshed as an elevated fixed-span bridge would. An elevated bridge would likely be the tallest structure within miles of the site, other than communication towers. A replacement to the swing bridge would accommodate current traffic volumes, as the existing bridge does, and support the land use plans for the surrounding area including the St. Helena Community Preservation plans for continued rural land uses, and Hunting Island State Park. Since the Harbor River is not on the Intracoastal Waterway, a higher bridge would seem to be unnecessary.
2. Bridge design and approaches should incorporate a bike and walking lane to accommodate cyclist and pedestrian access across St. Helena to the State Park on Hunting Island.
3. Design of the bridge should accommodate stormwater runoff, such that stormwater is directed by pipe off the bridge and conveyed to highland areas for processing and volume control. These waters and marshes are classified by DHEC as Outstanding Resource Waters, which requires special attention to water quality protection.

Again, thank you for the opportunity to comment on this proposal. Please inform me via mail or email on subsequent actions and decisions regarding this project.

Respectfully,

Kate Schaefer
South Coast Office Director,

RECEIVED

JUL 27 2015

Environmental Management

"Nature and Community in Balance"

P.O. Box 1861 • Beaufort, S.C. 29901-1861 • Telephone (843) 522-1800 • Fax (843) 525-1197

www.CoastalConservationLeague.org • info@sccl.org

Wade, Blair

Subject: RE: New Harbor River Bridge

AMServiceURLStr: <https://Slingshot.hdrinc.com:443/CFSS/control?view=services/FTService>

From: Riddle, Nicole L. [<mailto:RiddleNL@scdot.org>]

Sent: Thursday, July 23, 2015 8:22 AM

To: Long, Chad C.

Cc: Wade, Blair

Subject: FW: New Harbor River Bridge

From: Don W [<mailto:manager@harborislandoa.com>]

Sent: Wednesday, July 22, 2015 9:13 AM

To: Riddle, Nicole L.

Subject: New Harbor River Bridge

Good morning Nicole,

Attached is a list of questions and concerns residents of Harbor Island have sent to me. Will you please be sure they are passed on to Mr. Chad Long.

Thank you,

Don Woelke

Island Manager

Harbor Island Owners Association

manager@harborislandoa.com

(843)838-5257

Wade, Blair

Subject: RE: New Harbor River Bridge

AMServiceURLStr: <https://Slingshot.hdrinc.com:443/CFSS/control?view=services/FTService>

From: Riddle, Nicole L. [<mailto:RiddleNL@scdot.org>]

Sent: Thursday, July 23, 2015 8:22 AM

To: Long, Chad C.

Cc: Wade, Blair

Subject: FW: New Harbor River Bridge

From: Don W [<mailto:manager@harborislandoa.com>]

Sent: Wednesday, July 22, 2015 9:13 AM

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Subject: New Harbor River Bridge

Good morning Nicole,

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Thank you,

Don Woelke

Island Manager

Harbor Island Owners Association

manager@harborislandoa.com

(843)838-5257

Harbor Island Owners Association

Questions regarding the new Harbor River Bridge

1. What is the construction starting date and estimated completion date?
2. What about noise, noise mitigation and view shed?
3. Total number of traffic lanes in each direction?
4. Will a barrier separating directions of travel be included?
5. Will bicycle lanes be included?
6. Will portions of the old bridge be left for recreation purposes?
7. Would you consider a boat ramp near the old bridge location?
8. Will the speed limit be increased on the new bridge?
9. How will it impact the Harbor Island entry?
10. What is the current traffic count?
11. How would construction of the bridge impact our Harbour Key neighborhood?
12. What effects will the bridge have on our immediate environment?
13. When will the environmental impact study be available for the public?
14. Does the volume of traffic justify additional traffic lanes?
15. Will the roadway be expanded in width to add a left turn lane into Harbor Island?
16. When will a representative be available to meet with our owners to provide additional information and answer additional questions or concerns?

Appendix A-14

Agency Site Visit

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Meeting Minutes

Project: US 21 Harbor River Bridge Replacement

Subject: Agency Site Visit

Date: Tuesday, April 19, 2016

Location: Beaufort County Butchers Island Boat Ramp

Attendees:	Chad Long (SCDOT)	David Wilhelm (Beaufort County)
	Will McGoldrick (SCDOT)	Geordie Madlinger (DHEC OCRM)
	Blair Wade (HDR)	Adrienne Daggett (SHPO)
	Michael Darby (HDR)	Mark Caldwell (USFWS)
	Brad Carter (HDR)	Susan Davis (SCDNR)
	Benjamin Burdette (HDR)	Keith Hanson (NOAA NMFS)
	Phillip Hutcherson (HDR)	Daniel Gambrell (SCPRT)
	Christopher Mims (USACE)	Ray Stevens (SCPRT)
	Bobby Anderson (Beaufort County)	CWO Chris Ruleman (USCG)
	Rob McFee (Beaufort County)	BM1 Sean Olson (USCG)
	Colin Kinton (Beaufort County)	

Introductions and Safety Briefing (Blair Wade)

Project Introduction and Discussion of Design Build Process (Michael Darby)

- Proposed construction schedule is mid-2018 to mid-2020
- Project will be constructed through the Design-Build process
- A contractor would be selected in early 2017 who would prepare the final bridge design.
- Decisions made during the Environmental Assessment (EA) are based on conceptual designs but can limit or restrict the final design to avoid resources. Additional coordination with agencies would occur during the permitting phases of the project and during final design if impacts increase beyond what was anticipated in the EA.

Overview of NEPA Process, Environmental Matrix, and Alternatives Analysis (Chad Long and Blair Wade)

Timeline

- LOI was sent to the agencies in June 2015
- Public Information Meeting – September 2015
- EA on Notice – end of May
- Public Hearing – mid-June

Purpose and Need

HDR provided information about the project's purpose and need. The purpose of the project is to correct structural and functional deficiencies of the US 21 bridge over the Harbor River.

Bridge replacement is needed because the bridge is functionally obsolete – the existing travel lanes are narrow and the bridge does not have a shoulder. The bridge is also structurally deficient. The bridge superstructure is in poor condition and the supporting structure and bridge deck are in fair condition. The existing bridge is currently load restricted.

Alternative Analysis

HDR provided an overview of how the alternatives were developed. Three alternatives, Alternative 1, 2, and 3, were presented at the public information meeting in September 2015. The Harbor Key community expressed concern about Alternative 1 because of its proximity to their homes. The alternatives were further developed into Alternative 1A, 1B, 2A, 2B, and 3 to minimize impacts on the Harbor Key community and important ecological features on the southern side of the bridge. These alternatives are being considered in the EA.

HDR provided an overview of alternatives that were considered but eliminated from further review in the EA, including the following:

Considered alternative	Reason for elimination
Close and abandon the existing US 21 bridge	US 21 bridge provides only vehicle access across Harbor River to Harbor Island, Hunting Island, and Fripp Island.
Replace US 21 bridge on existing alignment	Closing and detouring traffic is not an option because the US 21 bridge provides the only vehicle access across Harbor River to Harbor Island, Hunting Island, and Fripp Island. Construction of a temporary bridge would be costly and cause project delays.
Rehabilitate the existing swing-span bridge	Rehabilitation would not address functional deficiencies of bridge, including travel lane widths. Rehabilitation would also likely require temporary bridge closures, which would block vehicle access on the only route to Harbor Island, Hunting Island, and Fripp Island.
Replace causeway and existing bridge between St. Helena and Harbor Island	New bridge would cost approximately \$30 million more than proposed reasonable alternatives.
New alignment to the south	New bridge and causeway would result in substantial environmental impacts and could affect navigation between the Fripp Island and St. Helena Sound.
Moveable-span bridge	Constructing a moveable-span bridge would result in higher construction, operations and maintenance costs, and potential constructability issues.

Are there any viable alternatives that are not included? And, is there agreement by the agencies that this represents the full range of alternatives?

Colin Kinton with Beaufort County suggested that a tunnel alternative be included as alternative even though not viable. The agencies were asked whether SCDOT has considered the full

range of alternatives. There was general agreement that the range of alternatives considered was satisfactory.

Preferred Alternative Discussion

HDR provided an overview of the Environmental Matrix and discussed the impacts associated with the 5 reasonable build alternatives.

Which alternative do you prefer and why? Keith Hanson (NOAA NMFS), Susan Davis (SCDNR), and Colin Kinton (Beaufort County) expressed a preference for Alternative 1B. The SCDOT is still evaluating alternatives, but at this time, Alternative 1B is the recommended preferred alternative.

What further avoidance and minimization measures would your agency recommend during permitting?

Suggestions from the USFWS and SCDNR include causeway removal. Other suggestions included replacing fill with additional bridge. Christopher Mims asked whether impacts could be minimized on Alternative 3 by tying the alternative into the roadway closer to the bridge ends.

Would your agency object an alternative that had greater wetland or EFH impacts but minimized impacts on the Harbor Key community?

The agencies were asked if they would object to an alternative that had greater wetland or EFH impacts but minimized impacts on the Harbor Key community. Keith Hanson (NOAA NMFS) and Susan Davis (SCDNR) stated that their agencies would object to a proposal with greater environmental impacts. Christopher Mims (USACE) indicated an application with greater wetland impacts would more difficult authorize than an alternative with less impacts unless the alternative with greater impacts was avoiding another significant ecological resource. The USACE stated that without significant justifications, it would be challenging to approve a permit application with greater environmental impacts. If the quantity of impacts were closer between the considered alternatives, it may make the permit process less challenging.

Are there remaining issues or problems that you foresee with the preferred alternative?

No potential issues or problems were stated.

Discussion of Navigation Study

Chris Ruleman (US Coast Guard) asked about the justification for a 65-foot bridge height. Blair Wade and Chad Long provided an overview of the Navigation Study. The study was conducted between September and December 2015. The following data were used to determine current waterway usage on the Harbor River:

- Location of local marinas, boat ramps, and marine-dependent businesses
- US 21 Harbor River Bridge opening logs (1 ½ years)
- Completed questionnaires received from residential dock owners, commercial vessels, and marinas and yacht clubs.

- Telephone interviews with local shrimping companies, sea rescue, marinas, and dock builders.
- 2 months of results from a camera system that documented bridge openings on US 21 over the Harbor River. The on-site camera was calibrated by surveyed field measurements to estimate the approximate vessel height.

The study also considered future navigation needs. Because of the zoning in the area, it is likely that existing marinas and docks will continue to support maritime uses.

Site Visit

The group visited the northwestern side of the bridge to look at the existing marsh conditions and the SCE&G wooden power poles. The group then carpooled to the eastern side of the bridge to look at the existing tidal creek, shell bank, oyster beds, and Harbor Key community. The group also visited a bald eagle nest on the eastern project boundary that has been monitored for activity but was deteriorating. Only small remnants of the nest remain.

The following provides a summary of comments made by individual agencies during the introduction and the remainder of the site visit.

Colin Kinton (Beaufort County)

- Prefers Alternative 1B due to the softer curve approaching Harbor Drive. The less curve in the road, the better the roadway.
- Will there be any issues with relocating the wooden power poles?
 - Blair Wade: Yes, we have coordinated with SCE&G and the relocation of wooden power poles is minor and will not be an issue. The relocation of the steel power poles on the south side of the bridge would be more costly.

David Wilhelm (Beaufort County)

- In regards to staging, the Butcher's Island Boat Ramp can be partially closed or periodically entirely closed with notice, but the daily use needs to be maintained.

Rob McFee (Beaufort County)

- Beaufort County does not have any interest in managing or maintaining part of the old bridge or causeway as a fishing structure.
- Supports bike/pedestrian infrastructure on the proposed bridge.
- Beaufort County does not have a need for stockpiling excavated causeway materials.
- Beaufort County supports a left turn lanes on US 21 at the Boat Ramp if it is justified. The County also supports a left turn lane on US 21 at Harbor Drive and states it may be justified based on tourist traffic.

CWO Chris Ruleman (USCG)

- No real concern as far as height goes if it is 65'. That's an easy yes. Less height may be workable, but 65' is no problem.
- Local Coast Guard Station will be responsible for notifying the local mariners.

Keith Hanson (NOAA NMFS)

- If there is any structure, new or old, that is to be used as a fishing structure in sea turtle habitat, NOAA Office of Protected Resources would consider the fishing activity to cause a 'take' of sea turtles. Formal sea turtle consultation with NOAA Office of Protected Resources would be required. Primary concerns are hooking and line entanglement. He would strongly advise against leaving any structure for fishing.
- There is likely to be an in-water work moratorium associated with sturgeon and sea turtle species.
- Impacts from construction barges can be worse due to groundings and impacts on salt marsh grasses, although temporary trestles can cause acoustic issues.
- Longer spans on the proposed bridge are always better, single column vs double column is debatable, but priority is keeping them from the tidal creek.
- Alternative 2A/2B would not be able to cross the shell bank and tidal creek on the eastern side of the bridge without pilings. Concerns over whether the contractor would use spans that long and unsupported.
- No night work is good, but would like to specify having a 12 hour break every day. Summer nights can be short. Some species may not want to cross an "acoustic wall" which the construction will create. Having the 12 hour break will allow time for species to cross.
- Confirmed that the shading calculations were very thorough and conservative.
- EFH assessment will need to be its own section.
 - Blair Wade: A separate EFH Assessment is being prepared as a technical report and will be provided to NOAA NMFS in early May.
- EFH mitigation, combined with removing of causeway and the Huspa Creek mitigation, could likely take care of the EFH requirements for mitigation.
- Instead of working to use shell bags for oyster banks, SCDOT could focus on site and look to reestablish current shell banks which would assist with onsite mitigation.
- Suggested replacing causeway with oyster castles and living shoreline for mitigation, would prefer onsite mitigation.

Mark Caldwell (USFWS)

- Curious as to the type of rookery on the map.
 - Blair Wade: Rookery provides habitat for herons and egrets; no protected species. None of the alternatives would directly impact the rookery. The project would indirectly affect the rookery; construction noise may temporarily deter birds from the area.
- Will the construction take place via crane on a temporary causeway?
 - Blair Wade: Temporary trestle over each side of the bridge is the worst case scenario as far as acoustic is concerned. The contractor would be restricted from constructing a temporary construction causeway with fill.
 - USFWS supported the use of a temporary trestle over a temporary causeway.
- Suggested avoiding the use of barge mats
- What mitigation is proposed?
 - Chad Long: SCDOT is currently proposing to use Huspa Creek for mitigation credits.
 - Mark Caldwell: Suggested avoiding Clydesdale Club because USFWS and SCDNR did not approve of its use. Also supported the idea of onsite mitigation by removing parts of the causeway and replanting salt marsh grasses.

- How would deconstruction of the existing bridge take place?
 - Michael Darby: Ideally top down with pilings pulled out. If pilings cannot be pulled out USACE and SCDOT regulations mean it would be cut off two feet below the mudline.
- Suggested that SCDOT consider establishing shell bank habitat at bridge's western end instead of just placing oyster bags in the area. Asked whether the oyster beds on the pilings would be considered as part of the analysis.
 - Blair Wade responded that oysters on the pilings were included in the analysis of the project's impacts.
 - Mark Caldwell also asked recommended that any shellfish restoration through SCORE should occur within the project boundaries.

Geordie Madlinger (DHEC ORCM)

- Alternative 1B is preferred to other alternatives.
- Advised that Harbor Island community will be concerned about Alternative 1B. Suggested that the SCDOT be prepared with visualizations.

Adrienne Daggett (SHPO)

- Be sure to keep the archeological site protected from any construction or staging activities.
- When is the next public meeting?
 - Blair Wade: The public hearing will be in mid-June. Agencies will be given copies of the EA to review prior to the hearing.

Susan Davis (SCDNR)

- Agreed with NOAA-NMFS that a shift to the south would not be ideal due to the natural resources affected.
- SCDOT should consider stormwater management on the bridge itself (referenced Isle of Palms Connector) and remove the causeway as much as possible.
- Agrees that there would be no major difference in visual disruption between the different alternatives.
- Asked about osprey nests in the study area
 - Blair Wade: No osprey nests are located in the study area; there is a nest platform nearby, but no activity in this or in the Bald Eagle nest.
- Asked about the SCDNR shellfish restoration areas
 - Blair Wade: There are two SCDNR shellfish restoration areas; the preferred alternative will not impact these areas.
- Wanted to reiterate that sea turtle and manatee protection guidelines should be followed
 - Blair Wade: Manatee, sea turtle, and saw-tooth conditions would be followed by the contractor. There would be no work at night.
- Contact Shannon Hicks or SCDHEC 401 Division about stormwater treatment and obtain input. Untreated water cannot be discharged within 1000' of shellfish beds.
- Asked whether the existing causeway would be removed.
 - Blair Wade: The existing causeway would remain to treat stormwater before it is discharged into the surrounding marsh.
 - SCDNR wants as much as possible of the causeway removed.

- Oysters on pilings are not typical SCDNR concern as they are usually self mitigating with the pilings of the new bridge. Recommended to keep these estimates in the EFH assessment.
 - Keith Hanson agreed.
- Recommended the SCDOT 'stay the course' with Alternative 1B as the preferred alternative.

Will McGoldrick (SCDOT)

- What additional DNR coordination will be required for NEPA?
 - Susan Davis: Deconstruction of the bridge and reuse as a reef would require consultation with SCDNR and DHEC-OCRM
 - Blair Wade: If DNR was interested, the bridge could be repurposed as a reef. The deconstruction process may be open to the contractor
 - Chad Long: Could be possible to relocate the existing bridge to a park or incorporate in a trail system due to the low number of steel truss bridges left in South Carolina.

Christopher Mims (USACE)

- Requested that the SCDOT evaluate whether Alternative 3 could tie in closer to existing roadway to reduce salt marsh impacts and mitigation needs.

Wade, Blair

From: Keith Hanson - NOAA Affiliate <keith.hanson@noaa.gov>
Sent: Tuesday, May 03, 2016 10:03 AM
To: Wade, Blair
Subject: Re: US 21 Harbor River Bridge Replacement Agency Site Visit - SCDOT Project ID P026862

Hi Blair,

Thanks for this. Just to be clear, it would be our Protected Resources Division that would be responsible for any in-water work windows (moratoria).

Additionally, any oyster impacts, including those to the clusters on the existing bridge piles must be compensated for.

Hope all is well and please contact me if you need anything at all.

Best,
Keith

On Mon, May 2, 2016 at 10:13 AM, Wade, Blair <Blair.Wade@hdrinc.com> wrote:

Good morning,

Revised meeting minutes are attached for your files. We received revisions from Rob McFee, PE with Beaufort County clarifying his comments about the turn lanes.

Kind regards,

Blair

Blair Goodman Wade, ENV SP

[D 843.414.3740](tel:843.414.3740) [M 843.693.9938](tel:843.693.9938)

hdrinc.com/follow-us

From: Wade, Blair
Sent: Monday, April 25, 2016 12:27 PM
To: 'rmcfee@bcgov.net'; 'gkubic@bcgov.net'; 'dwilhelm@bcgov.net'; 'Jeffrey.Belcher@dot.gov'; 'Jaclyn.Daly@noaa.gov';

'keith.hanson@noaa.gov'; 'giffinma@dhec.sc.gov'; 'trumbumt@dhec.sc.gov'; 'vlewis@scprt.com'; 'dgambrell@scprt.com'; 'williabn@dhec.sc.gov'; 'MADLINGJ@dhec.sc.gov'; 'daviss@dnr.sc.gov'; 'christopher.d.mims@usace.army.mil'; 'laycock.kelly@epa.gov'; 'Mark_Caldwell@fws.gov'; 'ADaggett@scdah.sc.gov'; 'Long, Chad C.'; 'McGoldrick, Will'; 'Redfearn, Tyke'; P. E. James (Jae) H. Mattox III (mattoxjh@scdot.org); 'Williams, Elizabeth G SAC'; Darby, Michael M.; Carter, Brad; 'John.Z.Downing@uscg.mil'; Ruleman, Christopher L BOSN4; Olson, Sean W BM1; 'rstevens@scprt.com'; 'Kinton, Colin'; Burdette, Benjamin; Hutcherson, Phillip; 'Larson, Eric'; 'Anderson, Bobby'

Subject: US 21 Harbor River Bridge Replacement Agency Site Visit - SCDOT Project ID P026862

Hello everyone,

Thanks again for attending the site visit last week at Harbor River. Your comments and input are helpful as SCDOT moves forward with the Environmental Assessment. Meeting minutes are attached for your review and files. Please let me know if you have any changes or additions.

Kind regards,

Blair

Blair Goodman Wade, ENV SP

Sr. Environmental Planner/Project Manager

HDR

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Keith M. Hanson

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