South Carolina Department of Transportation

On Behalf of the Federal Highway Administration - South Carolina Division Office

PROCESSING FORM FOR PROGRAMMATIC CATEGORICAL EXCLUSIONS
NON MAJOR FEDERAL ACTIONS

Project ID	P041164	Route	S-42-197	County	Spartanburg

Part 1 - Project Description

Include the Project Name/Description

S-42-197 (Old Spartanburg Highway) Bridge Replacement over the South Tyger River.

South Carolina Department of Transportation (SCDOT) proposes to replace the S-42-197 (Old Spartanburg Highway) Bridge over South Tyger in Spartanburg County.

The purpose of this project is to correct the load restriction placed on the bridge and restore all components to good condition. The existing bridge is posted for load restrictions and has one or more components in poor condition. The bridge was built in 1969. According to the SCDOT Structure Inventory and Appraisal Report from August 2022, the bridge has a sufficiency rating of 25.0. An off-site detour may be utilized during construction. The bridge is currently open to traffic.

NEPA studies revealed no significant impacts or effects to resources within the project study area.

Part 2 - PCE Type

Select the appropriate Categorical Exclusion from 23 CFR Part 771.117 that best fits the entire project from the drop-down menu. **Reference Appendix A of the PCE Agreement for a more detailed description of each CE contained in 23 CFR 771.117.**

23 CFR 771.117(c)	Bridge rehabilitation, reconstruction, or replacement or railroad crossing improvements
23 CFR 771.117(d)	

Part 3 - Thresholds

To be processed as a Programmatic Categorical Exclusion (PCE) the following conditions must be met in addition to the General Criteria (as outlined in the PCE Agreement between FHWA-SC and SCDOT). Place a "X" in the appropriate box below. If the answer is "Yes" to any of the below criteria, SCDOT will consult with FHWA-SC to determine the appropriate level of NEPA documentation required and forward to FHWA-SC for approval. ***Reference Part 4 of the Processing form or Section IV of the PCE Agreement for more details and definitions regarding each threshold.**

1.	Involves any unusual circumstances as described in *23 CFR Part 771.117(b)	☐ Yes	☒ No
2.	The acquisition of more than *minor amounts of temporary or permanent strips of right-of-way	☐ Yes	☒ No
3.	Involves acquisitions that result in residential or non-residential displacements	☐ Yes	☒ No
4.	Involves any adverse impacts to EJ populations	☐ Yes	☒ No

PCE Processing Form Continued:

Part 3 - Thresholds Continued			
5.	Results in capacity expansion of a roadway by adding through lanes	☐ Yes	☒ No
6.	Involves construction that would result in *major traffic disruptions	☐ Yes	☒ No
7.	Involves *changes in access control requiring FHWA approval	☐ Yes	☒ No
8.	An adverse effect determination under Section 106 of the National Historic Preservation Act.	☐ Yes	☒ No
9.	Use of Section 4(f) property that cannot be documented with a FHWA *de minimis* determination or a programmatic Section 4(f) other than the programmatic evaluation for the use of historic bridges	☐ Yes	☒ No
10.	Any use of a Section 6(f) property	☐ Yes	☒ No
11.	Requires an Individual USACE 404 Permit	☐ Yes	☒ No
12.	Requires an Individual U.S. Coast Guard Permit.	☐ Yes	☒ No
13.	Work encroaching in a regulatory floodway, adversely affecting the base floodplain (100 yr.) pursuant to E.O. 11988 and 23 CFR Part 650 Subpart A	☐ Yes	☒ No
14.	Construction in, across, or adjacent to a river designated as a National Wild and Scenic River	☐ Yes	☒ No
15.	Involves an increase of 15 dBA or greater on any noise receptor or abatement measures are found to be feasible and reasonable due to noise impacts	☐ Yes	☒ No
16.	May affect and is likely to adversely affect a Federally listed species or designated critical habitat or projects with impacts subject to the BGEPA	☐ Yes	☒ No
17.	Involves acquisition of land for hardship, protective purposes, or early acquisition	☐ Yes	☒ No
18.	Does not meet the latest Conformity Determination for air quality non-attainment areas (if applicable).	☐ Yes	☒ No
19.	Any known or potential major hazardous waste sites within the right-of-way.	☐ Yes	☒ No
20.	Is not included in or is inconsistent with the STIP and/or TIP	☐ Yes	☒ No

Part 3 Continued - Additional criteria to be completed for disposal of excess right-of-way PCE		
1. Is the parcel part of a SCDOT environmental mitigation effort or could it be used for environmental mitigation?	☐ Yes	☐ No
2. Is there a formal plan to use this parcel for a future transportation project (is it part of an approved LRTP)?	☐ Yes	☐ No

Part 4 - Threshold Definitions

Unusual Circumstances (23 CFR Part 771.117) - Unusual circumstances are defined as:

a. Significant environmental impacts;
b. Substantial controversy on environmental grounds;
c. Significant impact on properties protected by Section 4(f) of the DOT ACT or Section 106 of the National Historic Preservation Act; or
d. Inconsistencies with any Federal, State, or local law, requirement, or administrative determination relating to the environmental aspects of the action.

Minor Amount of Right-of-Way (ROW):

A minor amount of ROW is defined as less than 3 acres per linear mile for linear projects or less than 10 acres of impacts for non-linear projects (eg: intersections, bridges), and no removal of major property improvements. Examples of major improvements include residential and business structures, or the removal of other features which would change the functional utility of the property. Removal of minor improvements, such as fencing, landscaping, sprinkler systems, and mailboxes would be allowed.

Major Traffic Disruptions:

A major traffic disruption is defined as an action that would result in: a) adverse effects to through-traffic businesses or schools, b) substantial change in environmental impacts, or c) public controversy associated with the use of the temporary road, detour, or ramp closure.

Changes in Access Control:

Requires approval from FHWA for changes in access control on the Interstate system (eg: Interchange Modification Reports or Interchange Justification Reports).

Environmental Commitments: (Check all that apply)

☒ USTs/Hazardous Materials	☐ General Permit	☐ Right of Way
☒ Water Quaility	☐ Individual Permit	☒ Floodplains
☒ Migratory Bird Treaty Act	☐ Essential Fish Habitat	☐ Lead Based Paint
☒ Stormwater	☒ Cultural Resources	
☐ Coast Guard Permit Exclusion	☐ Noise	☐ Non-Standard Commitment (see below)

Relevant field studies and environmental reviews have been completed to determine that the project meets the criteria set forth in the Programmatic Categorical Exclusion Agreement signed by FHWA-SC and SCDOT. It is understood that any additions/deletions to the project may void environmentally processing the project as presently classified; consequently, any engineering changes must be bought to the attention of SCDOT Environmental Services Office immediately. A copy of this form is included in the project file and one (1) copy has been provided to FHWA.

Approved By: Caycee Cleaver Date April 10, 2025

Primavera: ☒ Yes ☐ No NEPA Start Date: 02/28/2025

Does the project contain additional commitments?: (if Yes attach to form) ☒ Yes ☐ No

Date: 03/17/2025

NEPA ENVIRONMENTAL COMMITMENTS FORM

Project ID : P041164 County : Spartanburg District : District 3 Doc Type: PCE Total # of Commitments: 6

Project Name: S-42-197 Old Spartanburg Highway over South Tyger River

The Environmental Commitment **Contractor Responsible** measures listed below **are to be included in the contract and must be implemented**. It is the responsibility of the Program Manager to make sure the Environmental Commitment **SCDOT Responsible** measures are adhered to. If there are questions regarding the commitments listed please contact:

CONTACT NAME: Michael Pitts **PHONE #:** (803)737-2566

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

USTs/Hazardous Materials NEPA Doc Ref: Responsibility: CONTRACTOR

If avoidance of hazardous materials is not a viable alternative and soils that appear to be contaminated are encountered during construction, the South Carolina Department of Health and Environmental Control (SCDHEC) will be informed. Hazardous materials will be tested and removed and/or treated in accordance with the United States Environmental Protection Agency and the SCDHEC requirements, if necessary.

☐ Special Provision

Water Quality NEPA Doc Ref: Responsibility: CONTRACTOR

The contractor will be required to minimize possible water quality impacts through implementation of BMPs, reflecting policies contained in 23 CFR 650B and the Department's Supplemental Specification on Erosion Control Measures (latest edition) and Supplemental Technical Specifications on Seeding (latest edition). Other measures including seeding, silt fences, sediment basins, etc. as appropriate will be implemented during construction to minimize impacts to water quality.

☐ Special Provision

Migratory Bird Treaty Act NEPA Doc Ref: Responsibility: CONTRACTOR

The federal Migratory Bird Treaty Act, 16 USC § 703-711, states that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. The South Carolina Department of Transportation (SCDOT) will comply with the Migratory Bird Treaty Act of 1918 in regard to the avoidance of taking of individual migratory birds and the destruction of their active nests.

The contractor shall notify the Resident Construction Engineer (RCE) at least four (4) weeks prior to construction/demolition/maintenance of bridges and box culverts. The RCE will coordinate with SCDOT Environmental Services Office (ESO), Compliance Division, to determine if there are any active birds using the structure. After this coordination, it will be determined when construction/demolition/maintenance can begin. If a nest is observed that was not discovered after construction/demolition/maintenance has begun, the contractor will cease work and immediately notify the RCE, who will notify the ESO Compliance Division. The ESO Compliance Division will determine the next course of action.

The use of any deterrents by the contractor designed to prevent birds from nesting, shall be approved by the RCE with coordination from the ESO Compliance Division. The cost for any contractor provided deterrents will be provided at no additional cost to SCDOT.

☐ Special Provision

Project ID : P041164	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	SCDOT ENVIRONMENTAL SERVICES

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Stormwater	NEPA Doc Ref:		Responsibility:	CONTRACTOR

Stormwater control measures, both during construction and post-construction, are required for SCDOT projects with land disturbance and/or constructed in the vicinity of 303(d), TMDL, ORW, tidal, and other sensitive waters in accordance with the SCDOT's MS4 Permit. The selected contractor would be required to minimize potential stormwater impacts through implementation of construction best management practices, reflecting policies contained in 23 CFR 650 B and SCDOT's Supplemental Specifications on Seed and Erosion Control Measures (latest edition).

☐ Special Provision

Cultural Resources	NEPA Doc Ref:		Responsibility:	CONTRACTOR

The contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics,flakes, bones, graves, gravestones, or brick concentrations during the construction phase of the project, if any such remains are encountered, the Resident Construction Engineer (RCE) will be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise.

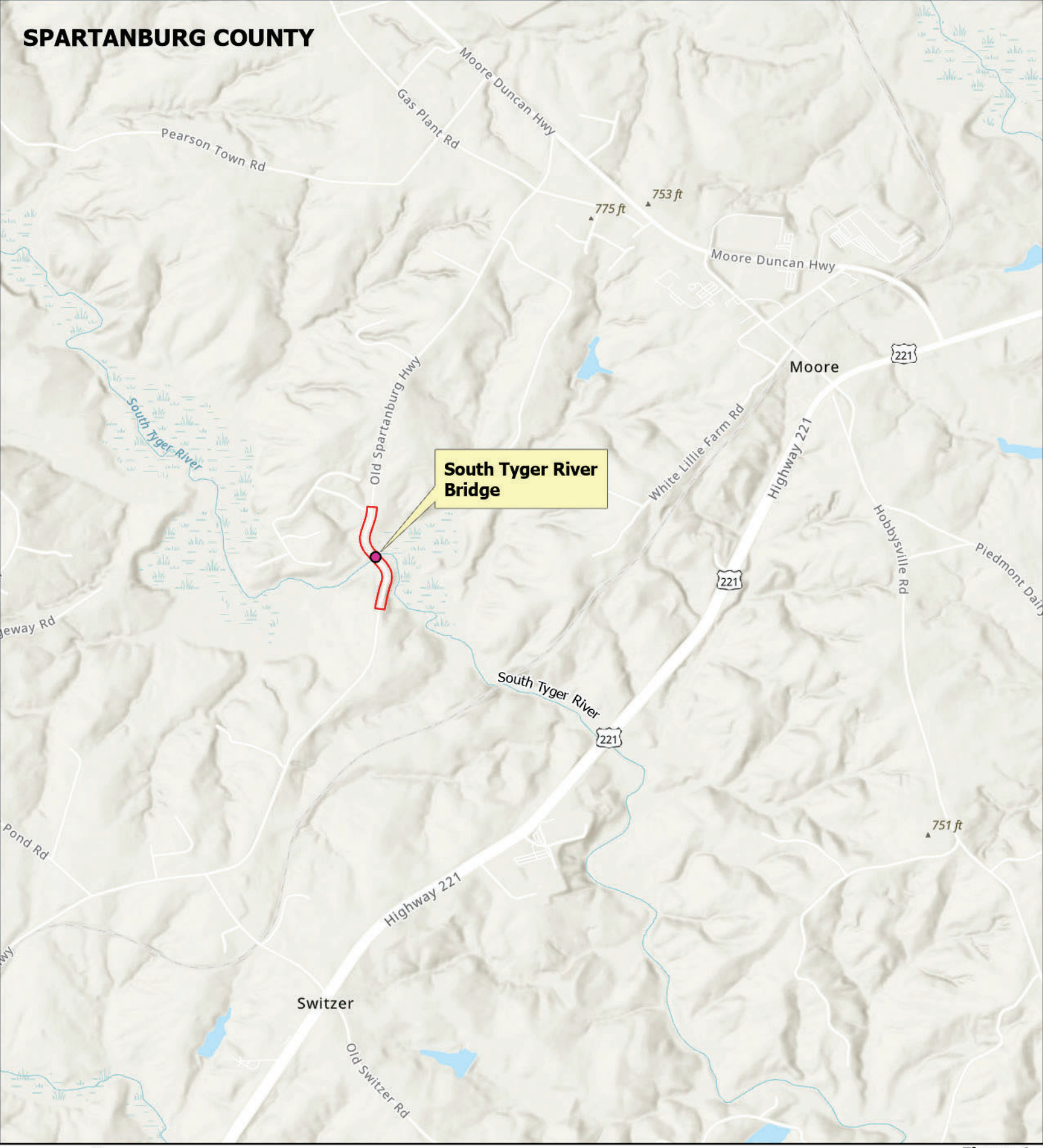
☐ Special Provision

Floodplains	NEPA Doc Ref:		Responsibility:	SCDOT

The Engineer of Record will send a set of final plans and request for floodplain management compliance to the local

County Floodplain Administrator.

☐ Special Provision



Legend

- Study Area
- Bridge

N

0 0.25 0.5 Mile

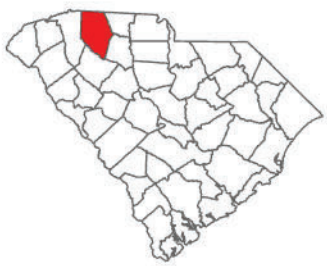


Figure 1.
Vicinity Map
Replacement of SC Bridge 5624
in Spartanburg County, SC

HNTB

8/16/2023

Sources: SCDOT, ArcGIS Basemap. 2023.

Legend

- Study Area
- Bridge
- Stream

N

0 250 500 Feet

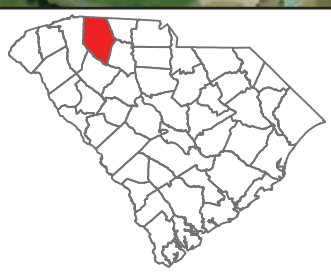


Figure 2.
Study Area Map
Replacement of SC Bridge 5624
in Spartanburg County, SC

HNTB

8/16/2023

Sources: SCDOT, ArcGIS Basemap. 2023.

Attachments

Attachment A- Cultural Resources Field Report

Attachment B- Natural Resources Technical Memorandum

Attachment C- Bridge Replacement Scoping Risk Assessment Form

Attachment D- Floodplain Checklist

Attachment A- Cultural Resources Field Report

Cultural Resources Project Screening Form

File Number: | PIN: 41164 | Route: S-42-197 | County: Spartanburg

Project Name:

S-42-197 over South Tyger River Bridge Replacement (CLRB 2022, Package 21)

Type 1: Resurfacing, installation of fencing, signs, pavement markings, traffic signals, passenger shelters, railroad warning devices, installation of rumble strips, and landscaping

Type 2: Bridge replacements on alignment, construction of bicycle/pedestrian facilities, and intersection improvements

Type 3: Projects that do not fall into Type 1 and Type 2 categories (e.g. road widening)

Project Type: 2

Comments

SCDOT proposes to replace the S-42-197 (Old Spartanburg Highway) bridge over the South Tyger River. The project area is defined as that area within 75 feet of either side of the roadway centerline and extending approximately 1,500 feet on either side of the bridge. The archaeological survey examined the project area. The architectural survey examined the Area of Potential Effects, which was defined as all above-ground resources with sightlines to the bridge. New South conducted background research and a cultural resources field survey in August of 2023 and created a short form report detailing the project (attached). The survey consisted of a pedestrian reconnaissance of the entire APE augmented by the excavation of shovel tests. A total of 42 shovel test locations were investigated. Of these, 30 were not excavated due to the presence of developed/modified areas, extensive slope, or wetlands. All excavated shovel tests were negative for cultural material. The historic architecture survey identified no new resources. The bridge to be replaced, Asset ID 5624, is a concrete slab bridge that was constructed in 1969. This bridge was not recorded and evaluated for inclusion on the NRHP because it qualifies for streamlined review under the FHWA's Post-1945 Bridges Program Comment. No historic properties will be affected by this project. No additional cultural resources investigations are recommended.

Effect Determination: No Historic Properties Affected

*SHPO consultation is required for all Type 3 projects and any project with a No Adverse or Adverse Effect Determination.

This screening form was developed to satisfy documentation requirements for Type I and Type II projects under a Programmatic Agreement between the Federal Highway Administration, the South Carolina State Historic Preservation Office, the US Army Corps of Engineers, and the South Carolina Department of Transportation. For Type I and Type II projects that have no effect on historic properties, the completion of this screening form with supporting documentation (e.g. ArchSite Map) provides evidence of FHWA and SCDOT's compliance with Section 106 of the National Historic Preservation Act.

Prepared by: Rebecca Shepherd | Review Date: 5/2/2024

CULTURAL RESOURCE FIELD REPORT
SCDOT ENVIRONMENTAL SECTION

TITLE: Phase I Cultural Resources Survey of Proposed Improvements to the S-42-197 Bridge over the South Tyger River

DATE OF RESEARCH: 8/4/23 **ARCHAEOLOGIST:** Lauren Christian, MA, RPA

ARCHITECTURAL HISTORIAN: Sean Stucker, MHP

COUNTY: Spartanburg **PROJECT**: Closed and Load Restricted Bridge Replacements- Package 19

F. A. No.: **File No.** **PIN**: P041164

DESCRIPTION:

The South Carolina Department of Transportation (SCDOT) proposes to replace various closed or load-restricted bridges including the S-42-197 (Old Spartanburg Highway) bridge over the South Tyger River in Spartanburg County, South Carolina. The project area is defined as that area within 75 feet of either side of the proposed roadway centerline and extending 1,500 feet from the bridge. The archaeological survey covered the entire project area, while the architectural survey examined all above-ground resources with sightlines to the bridge. This cultural resource survey was performed under contract with HNTB.

LOCATION:

The project is located approximately 1.4 miles southwest of the town of Moore in southeastern Spartanburg County, South Carolina (Figure 1).

USGS QUADRANGLE: Reidville, SC **DATE:** 2014 **SCALE:** 1:24000

UTM: NAD83 **ZONE:** 17N **EASTING:** 407336 **NORTHING:** 3853817

ENVIRONMENTAL SETTING:

The project area is situated in the Piedmont physiographic region, which is characterized by rolling hills formed from extensive weathering of ancient mountain ranges. The topography in the project area ranges from 620 feet above mean sea level (amsl) at the northern and southern ends of the project area to 580 feet amsl in the vicinity of South Tyger River. The surrounding landscape is rural, with fallow fields and a subdivision in the northern portion of the project area and mixed hardwood and pine with a heavy overgrowth of kudzu in the southern portion.

NEAREST RIVER/STREAM AND DISTANCE:

The South Tyger River (Hydrological unit code [HUC] 0305010703) bisects the project area and flows into the Tyger River (HUC 03050107) approximately 7.3 miles southeast of the project area. The Tyger River is a tributary of the Broad River (HUC 03050106) and joins the river just north of the town of Clayton, South Carolina, approximately 40 miles southeast of the project area.

SOIL TYPE:

Soils in the project area were formed from alluvium or residuum weathered from granite, gneiss, and/or diorite. The majority of the soils are well drained (88.2 percent), with 8.1 percent identified as somewhat poorly drained and 3.6 percent water. By the early twentieth century, continuous row cropping destroyed soil nutrients, and large tracts of

farmland were rendered unsuitable for cultivation. The Natural Resource Conservation Service (NCRS) maps two soil types in the project area (88.2 percent) as moderately eroded (Table 1; Figure 2).

Table 1. Soils Mapped in the Project Area

Map Unit	Map Name	Drainage Class	Notes	Acres in Project Area	Percent of Project Area
CeC2	Cecil sandy clay loam	Well Drained	6–10% slopes, moderately eroded	0.2	2.4
CwA	Chwacla loam	Somewhat Poorly Drained	0–2% slopes, frequently flooded	0.6	8.1
PcD2	Pacolet sandy clay loam	Well Drained	10–15% slopes, moderately eroded	6.0	85.8
W	Water			0.3	3.6
Total				10.9	100

REFERENCE FOR SOILS INFORMATION:

USDA-NCRS Soil Survey Division, Custom Soil Resource Report (websoilsurvey.sc.egov.usda.gov)

GROUND SURFACE VISIBILITY: **0% __ 1-25% _X_ 26-50% __ 51-75% ___ 76-100% ___**

CURRENT VEGETATION:

The vegetation in the project area primarily consists of mixed pines and hardwoods with a heavy overgrowth of kudzu in the southern portion of the project area. The majority of the northern portion of the project area consists of fallow fields and a subdivision. Additionally, exposed subsoil is present in patches along the transmission line in the fallow field on the northeast side of the project area (Figures 3–5).

INVESTIGATION:

BACKGROUND RESEARCH

New South Associates, Inc. (NSA) conducted background research prior to fieldwork using the ArchSite GIS database maintained by the South Carolina Institute of Archaeology and Anthropology (SCIAA) and the South Carolina Department of Archives and History (SCDAH). The background research indicated that there are no previously recorded cultural resources located within either the project area or the 0.5-mile search radius.

SURVEY RESULTS

The archaeological survey identified no archaeological sites or isolated finds within the project area, and the architectural survey, likewise, did not record any new resources. The results of both surveys are discussed below.

ARCHAEOLOGY

The Phase I Archaeology Survey was conducted on August 4, 2023. Lauren Christian, MA, RPA, served as Field Director and was assisted in the field by Archaeological Technician John Tomko. The archaeological investigation included a pedestrian walkover of the entire project area and the excavation of shovel tests at 30-meter (100-foot) intervals within the project area. Shovel tests were placed along a single transect parallel to either side of Old Spartanburg Highway. Representative soil profiles were recorded for the shovel tests, and location data was recorded for all investigated shovel tests using handheld GPS instruments.

Forty-two shovel test locations were plotted at 30-meter intervals across the project area. However, shovel tests that occurred in developed/modified areas, on steep side slopes, or in wetlands were not excavated. All other areas were documented by shovel test excavation or by examining exposed subsoil. As a result 12 were either excavated or were documented based on surface visibility (Figure 6). In the northeastern quadrant, ST 1 to ST 9 exhibited spotty exposed subsoil, while ST 10 was in the wetlands of the South Tyger River. In the southeast quadrant, ST 11 was in wetlands, while ST 12 to 21 were in areas of considerable slope. In the southwestern quadrant, ST 22 to ST 30 are located on a heavily terraced side slope. In the northwestern quadrant, ST 32 to 35 are moderately sloped, although STs 32 and 35 were excavated. ST 36 to 38 exhibited exposed subsoil and ST 39 to 42 were modified by a residential development.

One general soil profile was noted, consisting of approximately 10 centimeters of yellowish-red (5YR 4/6) sandy clay subsoil (Figure 7). No archaeological sites or isolated finds were identified in the project area.

ARCHITECTURAL SURVEY

The architectural survey was conducted on August 25, 2023, by Architectural Historian Sean Stucker, MHP. No newly recorded or previously surveyed architectural historic resources were identified within the project area or its viewshed. The bridge carrying S-42-197 over the South Tyger River, constructed in 1969, was not evaluated per the FHWA's Post-1945 Bridges Program Comment (U.S. Department of Transportation, Federal Highway Administration 2012). This bridge (ID 05624) is of a common type, with prestressed concrete channel beams and wood piers that have concrete caps and that are set into the riverbed (Figure 8).

REMARKS AND RECOMMENDATIONS:

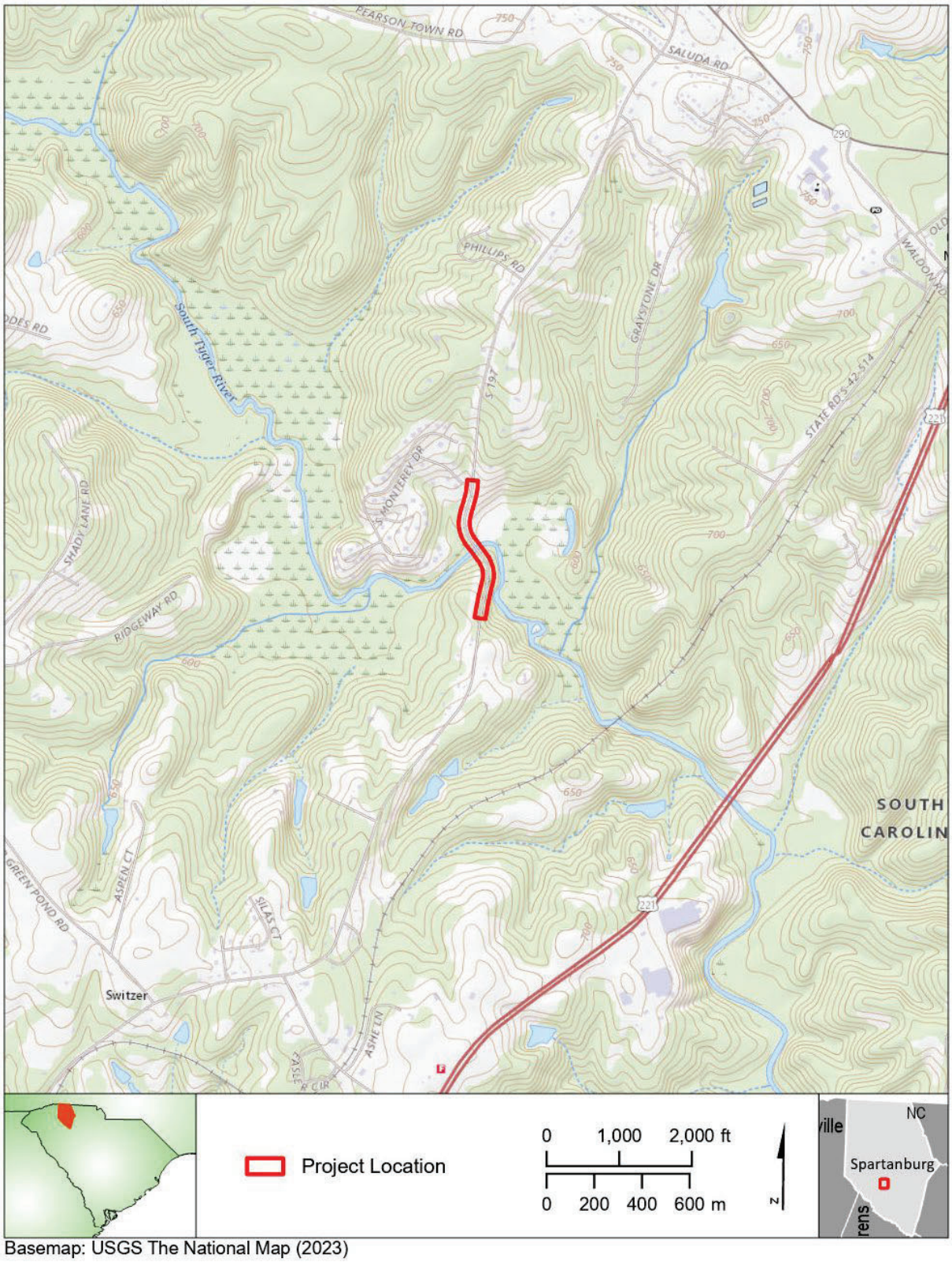
The survey identified no archaeological sites or isolated finds, nor did it record any new or revisit any previously recorded architectural resources. The proposed project, as currently defined, would have no effects on historic properties.

SIGNATURE: Principal Investigator **DATE:** April 16, 2024

BIBLIOGRAPHY AND FIGURES

U.S. Department of Transportation, Federal Highway Administration. 2012. Program Comment for Actions Affecting Post-1945 Concrete and Steel Bridges. Advisory Council on Historic Preservation, Washington, D.C.

Figure 1. Project Location Map



Basemap: USGS The National Map (2023)

Figure 2. Soils Mapped in the Project Area

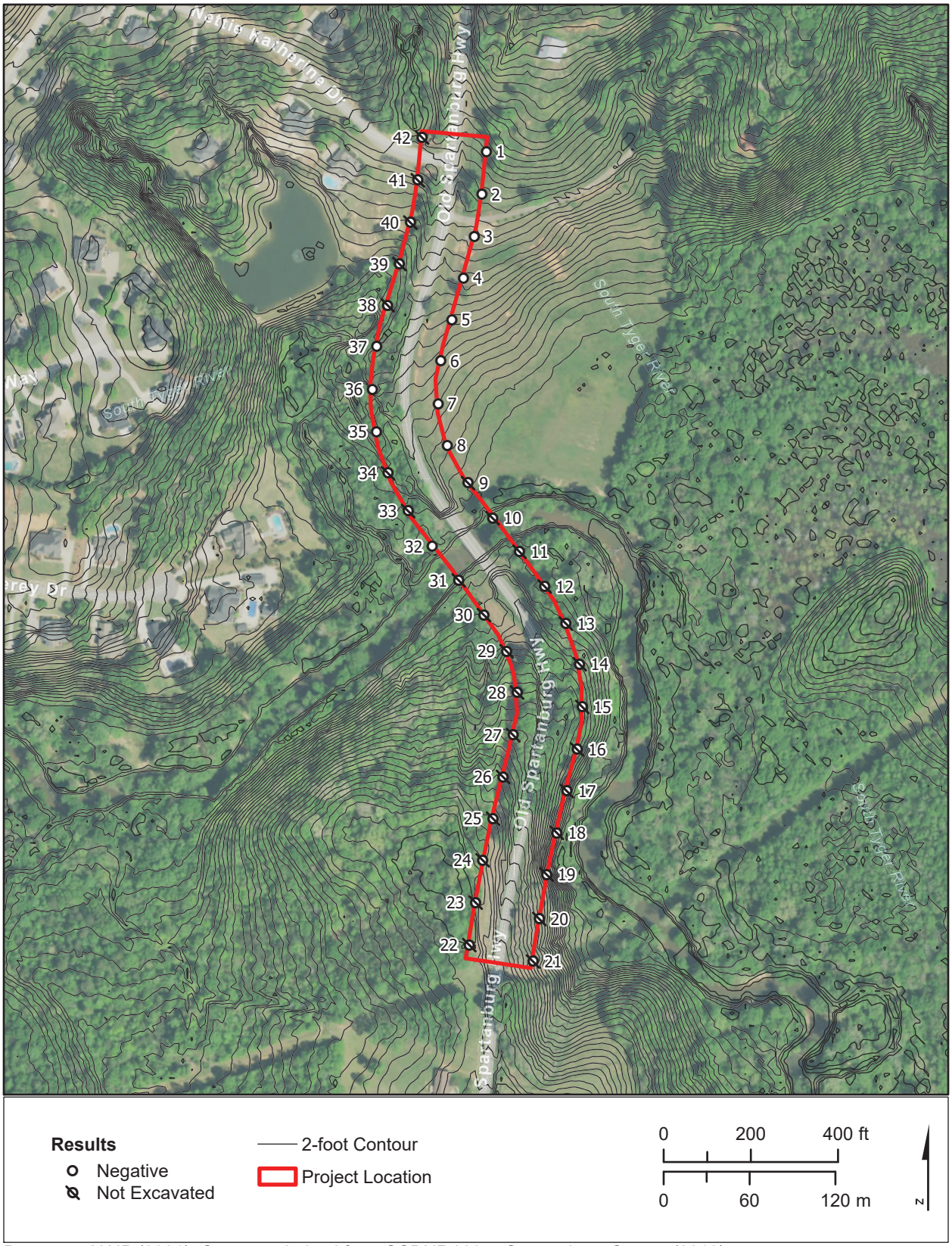
Basemap: NAIP (2021)

Figure 3. Area of Kudzu in the Project Area (Looking North)

Figure 4. Fallow Field in Northern Portion of Project Area (Looking North)

Figure 5. Manicured Lawn and Subdivision Wall in Northern Portion of Project Area (Looking South)

Figure 6. Shovel Tests Results Map



Basemap: NAIP (2021), Contours derived from SCDNR Lidar: Spartanburg County (2013)

Figure 6. Soil Profile of STP 6 (Looking East)

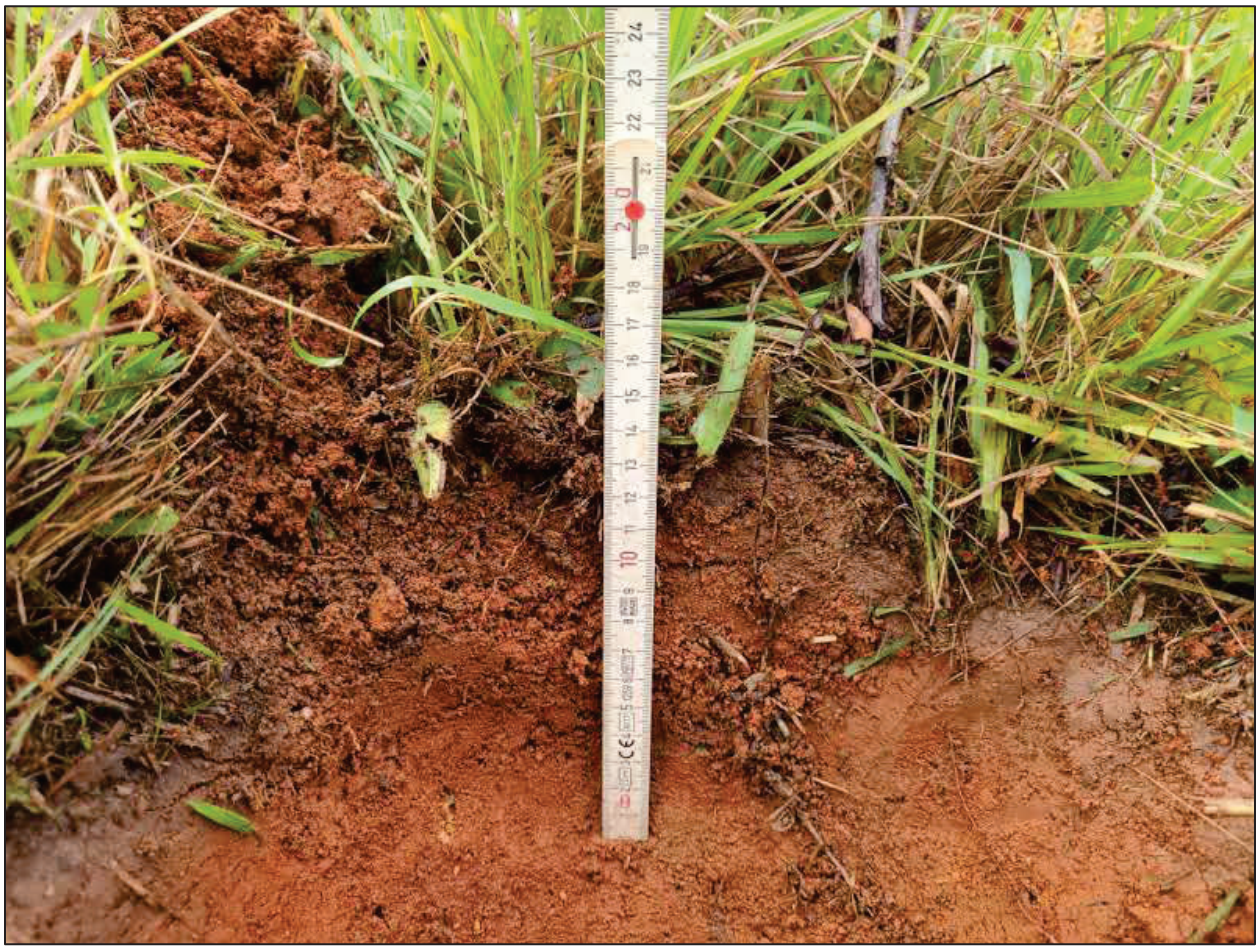


Figure 7. S-42-197 Bridge Over the South Tyger River, Built 1969 and Not Assessed

a. Overview, Looking Southwest

b. Detail of Wooden Piers

Attachment B- Natural Resources Technical Memorandum

Natural Resources Technical Memorandum

S-197 (Old Spartanburg Highway) Bridge Replacement over South Tyger River

SCDOT Project ID: P041164

ROBBINS & DEWITT

February 28, 2025

Introduction

The South Carolina Department of Transportation (SCDOT) proposes to replace the S-197 bridge over South Tyger River in Spartanburg County, South Carolina. Specifically, the project is approximately 9.75 miles southwest of the City of Spartanburg. The project is located in the Tyger River Watershed (03050107 8-digit Hydrologic Unit Code) and the 45b Southern Outer Piedmont Level IV Ecoregion. Please see Attachment A, Figure 1 for a Site Location Map.

A Project Study Area (PSA) has been established, based on preliminary design, to encompass all potential impacts of the project. The PSA encompasses an area approximately 6.96 acres in size and approximately 2,022 feet (0.38 mile) in total length, generally centered on the South Tyger River in either direction. Furthermore, the PSA is 150 feet in total width, generally centered on the centerline of Old Spartanburg Highway.

Robbins & DeWitt conducted a desktop analysis, scientific literature review, and field surveys for natural resources associated with the proposed bridge replacement. This technical memorandum provides a summary of methods and findings related to natural resources and potential project related impacts. Attached to this memorandum are supporting figures, a SCDOT Permit Determination Form, South Carolina Department of Health and Environmental Control (SCDHEC) Watershed and Water Quality Information Report, and a biological evaluation for federally protected species.

Desktop Analysis Methods

A desktop analysis was completed as part of an initial evaluation of the PSA to identify key environmental resources to be considered for permitting and/or avoidance and minimization by the design team. The potential resources identified in the desktop evaluation were field verified by Robbins & DeWitt to ensure that critical regulatory items would not be adversely impacted by the project. The following resources were consulted during the desktop analysis:

- Federal Emergency Management Agency (FEMA) Map Service Center (https://msc.fema.gov/portal)
- SCDHEC Watershed Atlas (https://gis.dhec.sc.gov/watersheds)
- South Carolina Department of Natural Resources (SCDNR) and South Carolina Natural Heritage Program (SCNHP) (https://schtportal.dnr.sc.gov/portal/apps/sites/#/natural-heritage-program)
- SCDNR Digital Elevation Mapping (DEM) and Light Detection and Ranging (LiDAR) (https://www.dnr.sc.gov/GIS/lidar.html)
- SCDNR Open Source Geospatial Data (https://data-scdnr.opendata.arcgis.com/)
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (https://websoilsurvey.nrcs.usda.gov/app/)
- U.S. Fish and Wildlife Services (USFWS) Environmental Conservation Online System (ECOS) (https://ecos.fws.gov/ecp/)
- USFWS Information for Planning and Consultation (IPaC) (https://ecos.fws.gov/ipac/)
- USFWS National Wetland Inventory (NWI) (http://www.fws.gov/wetlands)
- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) (http://nhd.usgs.gov/)
- USGS Topographic Quadrangle Maps (1:24,000-scale) – Reidville, SC Quadrangle

Jurisdictional Waters of the U.S.

After completing the desktop analysis, Robbins & DeWitt performed field reviews to determine the boundaries of jurisdictional waters of the U.S., including wetlands, in the PSA. Field reviews were conducted on July 21, 2023. A summary of jurisdictional features identified in the PSA is provided in Table 1.

Table 1 - Summary of Delineated Streams and Non-Wetland Waters in the Project Study Area

Stream	Latitude	Longitude	Centerline Length (feet)	Area (acre)
Stream A	34.8223798	-82.0132472	152	0.21
Total			**152 feet**	**0.21 acres**

Permitting Considerations

Based on the conceptual bridge design, impacts to jurisdictional waters have been avoided; therefore, a Section 404/401 permit is not anticipated. However, a permit for Construction in State Navigable Waters from SC Department of Environmental Services is necessary. A completed SCDOT Permit Determination Form and SCDHEC Watershed and Water Quality Information Report are provided in Attachment B.

Federally Protected Species

Environmental scientists performed literature and field reviews to determine the likelihood of protected species within the PSA and the potential for project-related impacts. Field reviews were conducted on July 21, 2023. The SCDNR South Carolina Natural Heritage Species Viewer was also reviewed to determine the presence of known populations of protected species within the vicinity of the project. Based on the literature and field reviews it is determined that the proposed project will have a biological conclusion of 'no effect' on federally protected species. A Biological Evaluation is provided in Attachment C.

Migratory Birds

Certain bird species are protected under the Migratory Bird Treaty Act of 1918. The USFWS IPaC online database was reviewed for information pertaining to migratory bird species. Migratory birds were not observed nesting on the existing bridge.

Vegetation

Land use in the PSA includes undeveloped forestland and residential housing. The vegetative communities observed within the PSA consists of small stream forest and mesic mixed hardwood forest. Refer to the Biotic Communities section in Attachment C for a detailed description of vegetation observed in the PSA.

Soils

According to the (USDA-NRCS) Soil Survey Geographic (SSURGO) data, 3 Soil Map Units (SMU) and water (W) are mapped within the PSA. Each SMU IS included in Table 2 below.

Table 2 - Soil Map Units (SMU) in the Project Study Area

SMU	SMU Name	Area (acres)	Percentage of PSA
CeC2	Cecil sandy clay loam, 6 to 10 percent slopes, moderately eroded	0.2	2.4%
CwA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	0.6	8.1%
PcD2	Pacolet sandy clay loam, 10 to 15 percent slopes, moderately eroded	6.0	85.9%
W	Water	0.3	3.6%

If you have any questions, or if Robbins & DeWitt can be of additional assistance, please feel free to contact Matt DeWitt at (864) 201-8446 or matt.dewitt@robbins-dewitt.com.

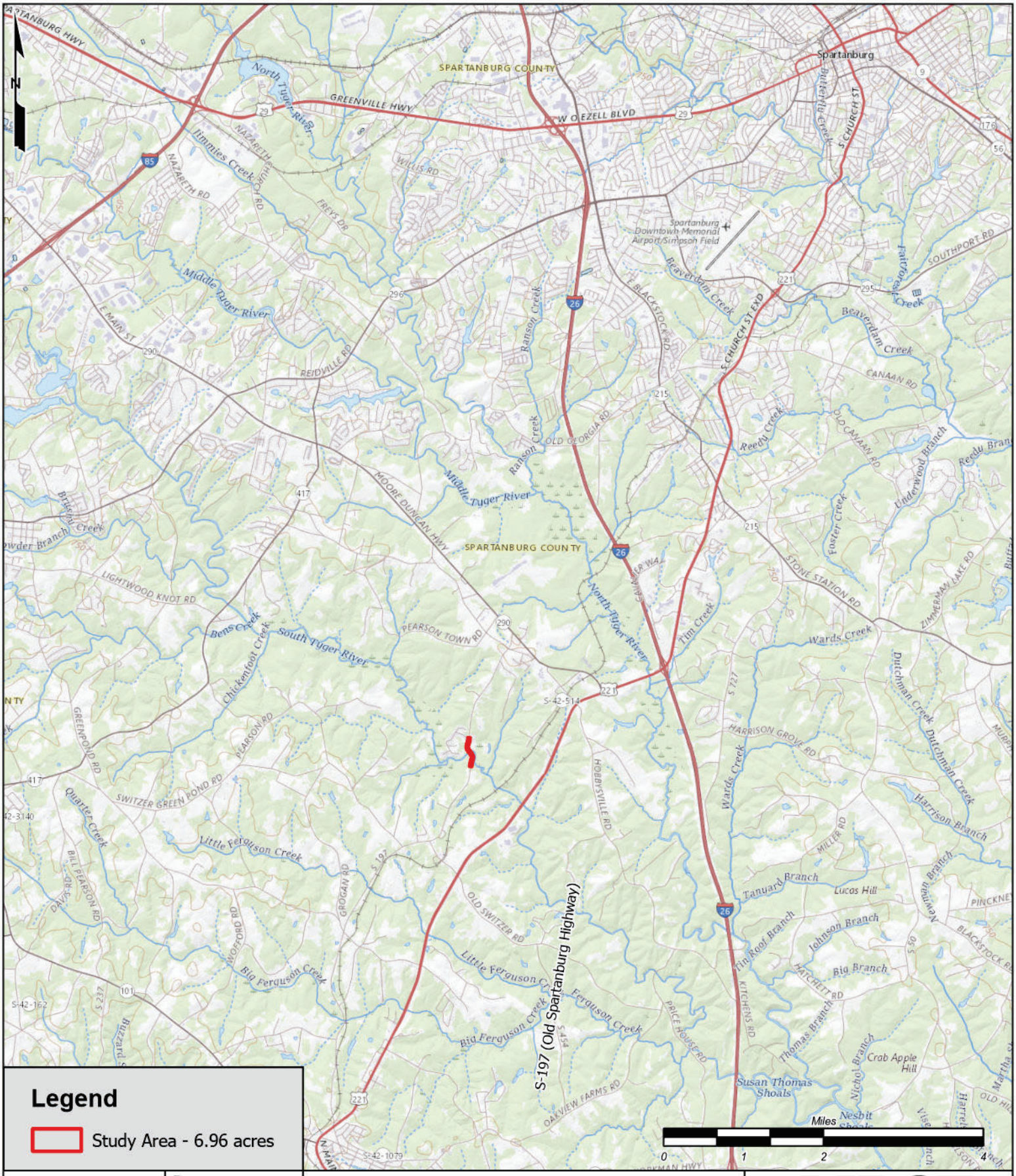
Respectfully Submitted

Matt DeWitt, AICP
Robbins & DeWitt, LLC

Attachment A

Figures

ROBBINS
& DEWITT



ROBBINS & DEWITT
www.Robbins-DeWitt.com

S-197 BRIDGE REPLACEMENT OVER SOUTH TYGER RIVER
PROJECT ID: P041164

SPARTANBURG COUNTY, SOUTH CAROLINA

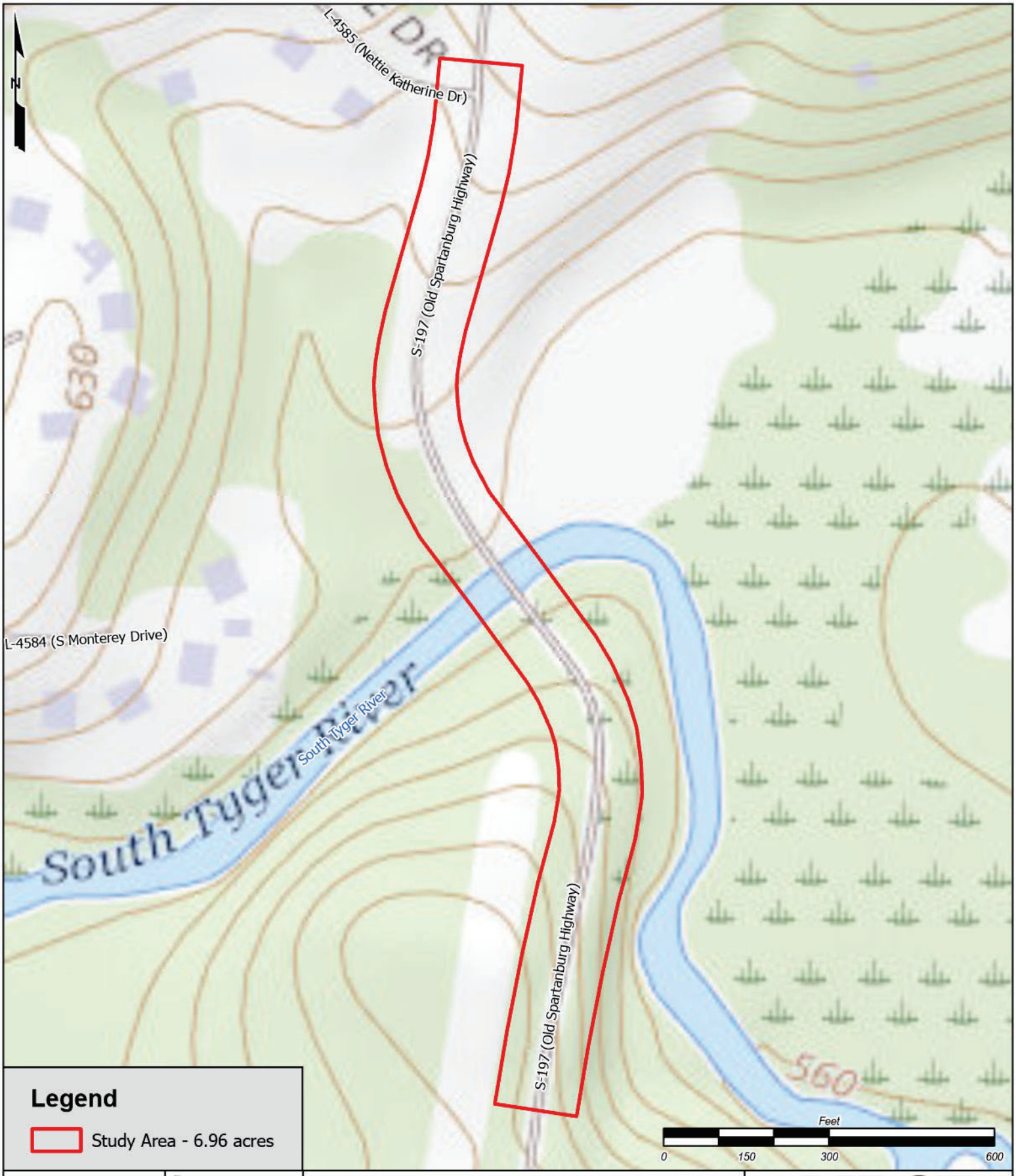
Source: USGS National Map (2023); USGS Greer, SC Quadrangle (2020)

SCDOT
South Carolina Department of Transportation

DRAWN BY: TRC | DATE: 10/19/2023

PROJECT VICINITY

FIGURE 1



Legend

Study Area - 6.96 acres

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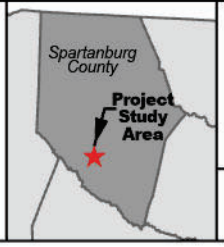

S-197 BRIDGE REPLACEMENT OVER SOUTH TYGER RIVER
PROJECT ID: P041164

SPARTANBURG COUNTY, SOUTH CAROLINA

Source: USGS National Map (2023); USGS Greer, SC Quadrangle (2020)

SCDOT
South Carolina Department of Transportation

DRAWN BY: TRC	DATE: 10/19/2023

USGS TOPOGRAPHIC MAPPING

FIGURE 2

Legend

- Study Area - 6.96 acres
- Bridges
- NHDFlowline

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S-197 BRIDGE REPLACEMENT OVER SOUTH TYGER RIVER
PROJECT ID: P041164

SPARTANBURG COUNTY, SOUTH CAROLINA

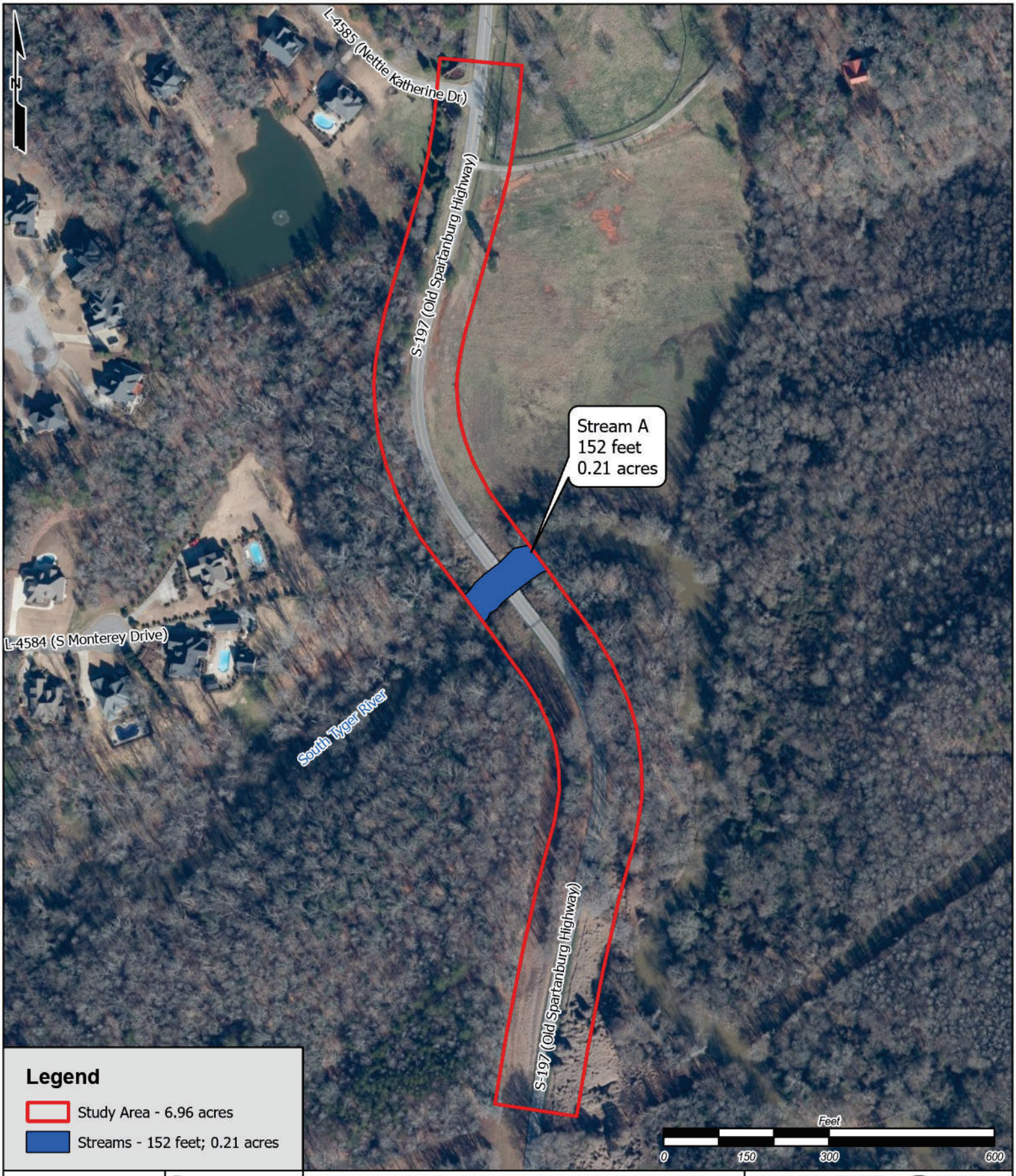
Source: USGS NHD Flowlines (2018); SC Geodetic High Resolution 6-inch, RGB Aerial Imagery [Statewide, South Carolina (2020)]

SCDOT
South Carolina Department of Transportation

DRAWN BY: TRC	DATE: 10/19/2023

AERIAL IMAGERY

FIGURE 3



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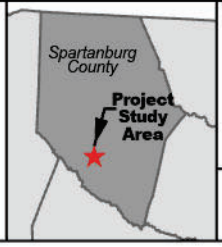


S-197 BRIDGE REPLACEMENT OVER SOUTH TYGER RIVER
PROJECT ID: P041164

SPARTANBURG COUNTY, SOUTH CAROLINA

Source: Approximate boundaries of WOTUS were delineated on July 7, 2023; SC Geodetic High Resolution 6-inch, RGB Aerial Imagery [Statewide, South Carolina (2020)]

SCDOT
South Carolina Department of Transportation

DRAWN BY: TRC	DATE: 10/19/2023

APPROXIMATE BOUNDARY OF WOTUS

FIGURE 4

Attachment B

SCDOT Permit Determination Form & Water Quality Information Report

ROBBINS & DEWITT

PERMIT DETERMINATION

Date: 01/24/2025 Project ID: P041164

From: Matt DeWitt Company: Robbins & DeWitt

Contact Info (phone and/or email): matt.dewitt@robbins-dewitt.com

Permit Manager: Will McGoldrick - Alternative Delivery Coordinator

Project Name: S-197 over S Tyger River

County: Spartanburg (Optional) Structure #:

STUDY AREA:

Does there appear to be WOTUS in the study area? ◉ YES ○ NO

PERMIT TYPE:

○ It has been determined that no permit is required because:

◉ The following permit(s) is/are necessary:

(Please check which type(s) of permit the project will need)

USACE Permit GP ☐ IP ☐ NWP ☐

OCRM Permit Individual CAP ☐ CAP GP ☐

Navigable Permit State NAV ☑ USCG ☐

408 PROJECT INFO:

Is it within a 408 Project: ○ YES ◉ NO

408 Project Name:

MITIGATION:

Mitigation Bank: ◉ YES ○ NO

Mitigation Bank Name: Two Rivers Wetland and Stream Mitigation Ba

Comments:

The determination above was based on the most recently available information at the time. This is a preliminary determination and is subject to change if the design of the project is modified.

Matt DeWitt

Biologist, SCDOT/Consultant

02/13/2025

Date

Revised 04/2024

SC DES

SC Department of Environmental Services

Watershed and Water Quality Information

General Information

Applicant Name: SCDOT
Address: 375 S MONTEREY DR, MOORE, SC, 29369
MS4 Designation: Not in designated area
Within Coastal Critical Area: No
Waterbody Name: TYGER RIVER

Permit Type: Construction
Latitude/Longitude: 34.822379 / -82.013275
Monitoring Station: B-332
Water Classification (Provisional): FW
Entered Waterbody Name:

Parameter Description

NH3N	Ammonia	CD	Cadmium	CR	Chromium
CU	Copper	HG	Mercury	NI	Nickel
PB	Lead	ZN	Zinc	DO	Dissolved Oxygen
PH	pH	TURBIDITY	Turbidity	ECOLI	Escherichia coli (Freshwaters)
FC	Fecal Coliform (Shellfish)	BIO	Macroinvertebrates (Bio)	TP	(Lakes) Phosphorus
TN	(Lakes) Nitrogen	CHLA	(Lakes) Chlorophyll a	ENTERO	Enterococcus (Coastal Waters)
HGF	Mercury (Fish Tissue)	PCB	PCB (Fish)		

Impaired Status (downstream sites)

Station	NH3N	CD	CR	CU	HG	NI	PB	ZN	DO	PH	TURBIDITY	ECOLI	FC	BIO	TP	TN	CHLA	ENTERO	HGF	PCB
B-332	X	F	F	F	F	F	F	F	F	F	F	InTN	X	F	X	X	X	X	X	X

F = Standards full supported
N = Standards not supported
A = Assessed at upstream station
X = Parameter not assessed at station
WnTN = Within TMDL, parameter not supported
InTN = In TMDL, parameter not supported
WnTF = Within TMDL, parameter full supported
InTF = In TMDL, parameter full supported

Parameters to be addressed (those not supporting standards)

ECOLI - Escherichia coli (Freshwaters)

Fish Consumption Advisory

Waters of Concern (WOC)

TMDL Information - TMDL Parameters to be addressed

In TMDL Watershed: Yes
TMDL Report No: 021-04
TMDL Document Link: https://des.sc.gov/sites/des/files/docs/HomeAndEnvironment/Docs/tmdl_tyger_fc.pdf

TMDL Site: B-014
TMDL Parameter: Fecal

Report Date: January 24, 2025

Attachment C

Biological Evaluation – Section 7 of the Endangered Species Act

ROBBINS & DEWITT

Introduction

The proposed project consists of replacing the S-197 (Old Spartanburg Highway) bridge over South Tyger River, and associated road work, in Spartanburg County, South Carolina.

Pursuant to Section 7 of the Endangered Species Act (ESA), a field survey was conducted within the Project Study Area (PSA) for the project. A Resource List was also requested from the USFWS Information for Planning and Consultation (IPaC) in January 2025 to detail protected species under USFWS jurisdiction that are known or expected to be on or near the project area. Table 1 below includes the species that appear on this resource.

Federally Protected Species

Species with the federal classification of Endangered (E) or Threatened (T) or Threatened due to Similarity of Appearance (T [S/A]) are protected under the ESA of 1973, as amended (16 U.S.C. 1531 et seq.). Although Section 7 of the ESA does not provide protections for Candidate species, they are listed in Table 1 in the event of a status changes prior to completion of the project. Additionally, species that are proposed for listing are not subject to Section 7 compliance until the time they are formally listed. The bald eagle is protected by the Bald and Golden Eagle Protection Act (BGEPA) and is included in this evaluation.

Table 1: Threatened and Endangered Species

Category	Common Name	Scientific Name	Protection Status
Bird	Bald eagle	*Haliaeetus leucocephalus*	*BGEPA*
Insect	Monarch butterfly	*Danaus plexippus*	Proposed Threatened
Mammal	Tri-colored bat	*Perimyotis subflavus*	Proposed Endangered
Flowering Plant	Dwarf-flowered Heartleaf	*Hexastylis naniflora*	Threatened

Methodology

Environmental scientists performed literature and field reviews to determine the likelihood of protected species within the PSA and the potential for project-related impacts. Field reviews were conducted on July 12 and August 8, 2023. The SCDNR South Carolina Natural Heritage Species Viewer was also reviewed to determine the presence of known populations of protected species within the vicinity of the project.

Biotic Communities

Land use in the PSA is composed of undeveloped forestland and residential housing. Invasive kudzu (*Pueraria montana*) was also observed in the PSA, primarily along the banks of the South Tyger River and its riparian zone. The natural communities observed within the PSA consisted of small stream forest and mesic mixed hardwood forest.

The small stream forest consists of an open to dense understory or shrub layer and a sparse to dense herb layer. The canopy has a mixture of bottomland and mesophytic trees including river birch (*Betula*

nigra), sycamore (*Platanus occidentalis*), sweetgum (*Liquidambar styraciflua*), tulip poplar (*Liriodendron tulipifera*), American elm (*Ulmus americana*), hackberry (*Celtis laevigata*), green ash (*Fraxinus pennsylvanica*), and red maple (*Acer rubrum*). Vine species are typically common and can include poison ivy (*Toxicodendron radicans*), summer grape (*Vitis aestivalis*), and crossvine (*Bignonia capreolata*). The subcanopy consists of young canopy species and many tall shrubs including pawpaw (*Asimina triloba*) and blackhaw (*V. prunifolium*). The herb layer contains cardinal flower (Lobelia cardinalis), longleaf lobelia (*L. elongata*), Nepalese browntop (*Microstegium vimineum*), netted chainfern (*Woodwardia areolatea*), royal fern (*Osmunda regalis*), and eastern marsh fern (*Thelypteris palustris*).

The mesic mixed hardwood forest consists of a closed canopy, an open to sparse understory or shrub layer, and a sparse herb layer. The canopy, or overstory, comprises a mixture of many hardwoods including American beech (*Fagus grandifolia*), tulip poplar, white oak (*Quercus alba*), sweetgum, red maple, American hornbeam (*Carpinus caroliniana*), flowering dogwood (*Cornus florida*), and American holly (*Ilex opaca*). The understory consists of saplings of the overstory layer.

Results

The SCDNR South Carolina Natural Heritage Species Viewer does not identify any known occurrences of dwarf-flowered heartleaf or any other protected species within the PSA or within a one-mile radius of the PSA. Additionally, no individuals were identified during field review. Invasive kudzu (*Pueraria montana*) dominates the banks of Snow Creek and adjacent riparian zone, eliminating any potential habitat for the species.

Field reviews of the PSA found no suitable habitat for bald eagle.

Suitable habitat for tri-colored bat exists in the PSA. Roosting habitat exists under the existing South Tyger River bridge and in cavities and crevices of trees within the PSA. A structure survey of the existing bridge found no evidence of bat roosting. Additionally, a visual inspection and borescope review of cavities and crevices in trees within the PSA did not indicate the presence of any bat species. A Structures Survey Data Sheet and Habitat Assessment Data Sheet are included in Attachment D.

Conclusions

Based on desktop review for known occurrences and field surveys, the project will have a biological conclusion of 'no effect' on dwarf-flowered heartleaf.

Effect conclusions for the bald eagle are not required under the Endangered Species Act. However, the project is not anticipated to result in the mortality of any bald eagles or limit the ability of the species to adequately breed, feed, or shelter.

The project team will re-evaluate the project's effect on tri-colored bats at the time the species is formally listed under the ESA, and, if necessary, initiate consultation at that time.

If you have any questions, or if Robbins & DeWitt can be of additional assistance, please feel free to contact Matt DeWitt at (864) 201-8446 or matt.dewitt@robbins-dewitt.com.

Respectfully Submitted

Matt DeWitt, AICP
Robbins & DeWitt, LLC

Attachment D

Biological Assessment Attachments

ROBBINS & DEWITT

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Spartanburg County, South Carolina

Local office

South Carolina Ecological Services

(843) 727-4707
(843) 727-4218

176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Tricolored Bat Perimyotis subflavus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Flowering Plants

NAME	STATUS
Dwarf-flowered Heartleaf Hexastylis naniflora Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2458	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Prairie Warbler Setophaga discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee

is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

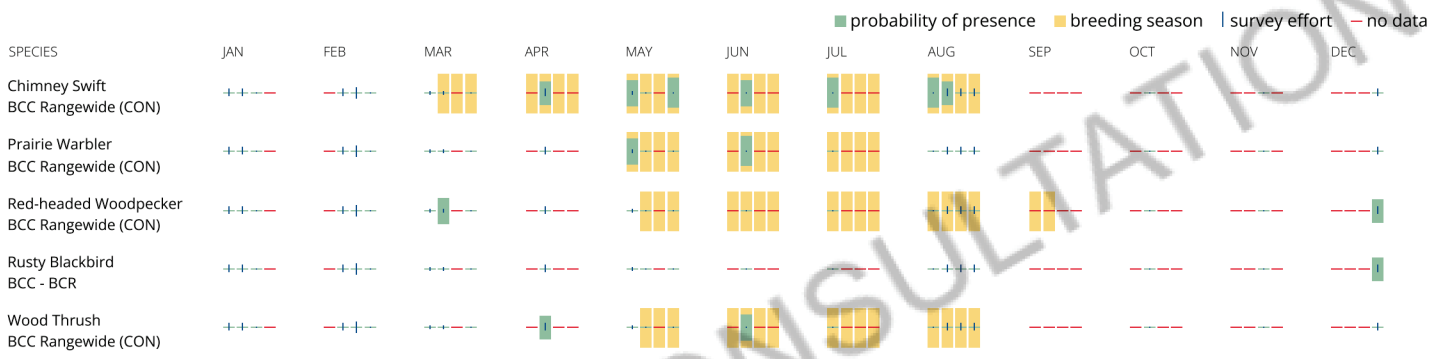
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list),

there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND
- PFO1A

RIVERINE
- R2UBH
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Bridge/Culvert Bat Assessment Form

Date & Time of Assessment	DOT Project Number or IPaC Code	Route/Facility Carried	County
2023-07-12		S-197	Spartanburg
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
05624	34.8224254, -82.0132678	26 ft	195 ft

Structure Type (check one)

Bridge Construction Style

	Cast-in-place		Pre-stressed Girder
X	Flat Slab/Box		Steel I-beam
	Truss (Side View)		Covered
	Parallel Box Beam		Other:

Culvert Type

	Box
	Pipe/Round
	Other:

Other Structure

Structure Material (check all that apply)

Deck Material		*Beam Material*		*End/Back Wall Material*	
	Metal		None	x	Concrete
x	Concrete	x	Concrete		Timber
	Timber		Steel		Stone/Masonry
	Open grid		Timber		Other:
	Other:		Other:		

Culvert Material

	Metal
	Concrete
	Plastic
	Stone/Masonry
	Other:

Creosote Evidence

	Yes	x	No
	Unknown		

Notes:

Crossings Traversed (check all that apply)

x	Bare ground	x	Open vegetation
x	Rip-rap		Closed vegetation
x	Flowing water		Railroad
	Standing water		Road/trail - Type:
	Seasonal water		Other:

Surrounding Habitat (check all that apply)

x	Agricultural		Grassland
	Commercial		Ranching
	Residential-urban	x	Riparian/wetland
x	Residential-rural		Mixed use
x	Woodland/forested		Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	**Assessment Notes**	**Evidence of Bats** (include photos if present)			
■	All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
x	Concrete surfaces (open roosting on concrete)	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
■	Spaces between concrete end walls and the bridge deck	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
■	Crack between concrete railings on top of the bridge deck (Gap / Railing)	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
■	Vertical surfaces on concrete I-beams	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
■	Spaces between walls, ceiling joists	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
x	Weep holes, scupper drains, and inlets/pipes	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
■	All guiderails	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species
■	All expansion joints	x Not present	Visual - live # dead # / Guano / Staining	Audible / Odor / Photos	Species

Name: Amanda Chandler

Signature: Amanda Chandler

BAT HABITAT ASSESSMENT DATA SHEET

Project Name: S-197 (Old Spartanburg Hwy) over S Tyger River

Date: 2023-07-12

County: Spartanburg

Lat Long: 34.8224254, -82.0132678

Surveyor: A. CHANDLER

Brief Project Description
Replacing the S-197 bridge over S Tyger River and associated roadway approach work.

Project Area			
	Total Acres	Forest Acres	Open Acres
Project	6.96	2.45	4.51
	Completely Cleared	Partially Cleared (Will Leave Trees)	Preserve Acres – No Clearing
Proposed Tree Removal	0.9 (anticipated)	None	1.55 (anticipated)

Vegetation Cover Types	
Pre-Project	Post-Project
Forested Fields Maintained ROW	Forested Fields Maintained ROW

Landscape within 5-mile Radius
Flight corridors to other forested areas?
Roadway, S Tyger River, Utility corridor
Describe Adjacent Properties (e.g., forested, grassland, commercial or residential development, water sources)
Forested, Residential, Agricultural, S Tyger River

Proximity to Public Land
What is the distance from the project area to forested public lands (e.g., national or state forests, national or state parks, conservation areas, wildlife management areas)?

Sample Site Description	
Sample Site No. (s):	Project Study Area (6.96 acres)

Water Resources at Sample Site			
Stream Type (# and length)	Ephemeral	Intermittent	Perennial
			152 lf

Pools/Ponds (# and size)	N/A	Open and accessible to bats?	

Wetland (approx. acres)	Permanent	Seasonal

Describe existing condition of water sources: Flowing

Forest Resources at Sample Site			
Closure/Density	Canopy (> 50')	Midstory (20-50')	Understory (< 20')
	2 (11-20%)	3 (21-40%)	1 (11-20%)

Dominant Species of Mature Trees	Sycamore, birch, poplar, hickory, pine spp., oak spp.

Exfoliating Bark (%)	1%

Size of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (> 15 in)
	1 (11-20%)	3 (21-40%)	2 (11-20%)

No. of Suitable Snags	1%
Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.	

1 = 1-10%, 2 = 11-20%, 3 = 21-40%, 4 = 41-60%, 5 = 61-80%, 6 = 81-100%

IS THE HABITAT SUITABLE FOR NORTHERN LONG-EARED BATS?	Outside known range
IS THE HABITAT SUITABLE FOR TRI-COLORED BATS?	Yes

Additional Comments:

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat.

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources


N
Old Spartanburg
South Tyger River
South Tyger River
South Tyger River
Forested
Study Area - 6.96 acres
Bridges
0 30 60 120
Meters
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Maxar

Photograph 1
Date: 2023-07-12
Taken by: A. Chandler
S-197 bridge and S Tyger River, facing south

Photograph 2
Date: 2023-07-12
Taken by: A. Chandler
S-197 roadway, facing south

Photograph 3
Date: 2023-07-12
Taken by: A. Chandler
From S-197 bridge, facing west

Photograph 4
Date: 2023-07-12
Taken by: A. Chandler
Forested area east of bridge

Attachment C- Bridge Replacement Scoping Risk Assessment Form

BRIDGE REPLACEMENT SCOPING TRIP RISK ASSESSMENT FORM

COUNTY: Spartanburg DATE: 02/04/2025

ROAD #: S-197 STREAM CROSSING: South Tyger River

Purpose & Need for the Project:

The purpose of the project is to correct the load restriction placed on the bridge and restore all components to good condition. The existing bridge is posted for load restrictions and has one or more components in poor condition.

I. FEMA Acknowledgement

Is this project located in a regulated FEMA Floodway? [X] Yes [ ] No

Panel Number: 45083C0359D Effective Date: 01/06/2011 (See Attached)

II. FEMA Floodmap Investigation

FEMA Flood Profile Sheet Number 117P illustrates the existing 100 year flood:

- [ ] Passes under the existing low chord elevation.
- [✔] Is in contact with the existing low chord elevation.
- [ ] Overtops the existing bridge finished grade elevation.

III. No Rise/CLOMR Preliminary Determination

- [✔] Preliminary assessment indicates this project may be constructed to meet the "No-Rise" requirements. A detailed hydraulic analysis will be performed to verify this assessment.

Justification: Bridge is located in FEMA Zone AE with an established floodway. Preliminary analysis indicates the proposed bridge will satisfy all SCDOT criteria for determine a finding of "No Impact".

- [ ] Preliminary assessmnet indicates this project may require a CLOMR/LOMR. Impacts will be determined by a detailed hydraulic analysis.

Justification:

BRIDGE REPLACEMENT SCOPING TRIP RISK ASSESSMENT FORM

IV. Preliminary Bridge Assessment

A. Locate Existing Plans

a. Bridge Plans ☑ Yes ☐ No File No. 42.415.1 Sheet No. 9 (See Attached)

b. Road Plans ☑ Yes ☐ No File No. 42.415 Sheet No. 9 (See Attached)

B. Historical Highwater Data

a. USGS Gage ☐ Yes ☑ No Gage No. _____ Results: _____

b. SCDOT/USGS Documented Highwater Elevations ☑ Yes ☐ No Results: 570.2'

c. Existing Plans ☑ Yes ☐ No See Above

V. Field Review

A. Existing Bridge

Length: 195 ft. Width: 27.5 ft. Max. span Length: 30 ft.

Alignment: ☑ Tangent ☐ Curved

Bridge Skewed: ☐ Yes ☑ No Angle: _____

End Abutment Type: Spill Through

Riprap on End Fills: ☐ Yes ☑ No Condition: _____

Superstructure Type: Concrete Deck

Substructure Type: RC Caps with Timber Piles

Utilities Present: ☑ Yes ☐ No

Describe: Cast iron pipe along upstream side of bridge

Debris Accumulation on Bridge: Percent Blocked Horizontally: <5 %

Percent Blocked Vertically: <5 %

Hydraulic Problems: ☑ Yes ☐ No

Describe: Large log in channel

BRIDGE REPLACEMENT SCOPING TRIP RISK ASSESSMENT FORM

V. Field Review (cont.)

B. Hydraulic Features

a. Scour Present: ☑ Yes ☐ No Location: North end of bridge downstream

b. Distance from F.G. to Normal Water Elevation: 17.5 ft.
c. Distance from Low Steel to Normal Water Elev.: 14.8 ft.
d. Distance from F.G. to High Water Elevation: 6.0 ft.
e. Distance from Low Steel to High Water Elev.: 3.3 ft.

f. Channel Banks Stable: ☑ Yes ☐ No
Describe: erosion on downstream side of bridge

g. Soil Type: Sand / Gravel

h. Exposed Rock: ☐ Yes ☑ No Location:

i. Give Description and Location of any structures or other property that could be damaged due to additional backwater.

There is a residential neighborhood upstream of the bridge. The majority of other land in the vicinity is undeveloped or pasture.

C. Existing Roadway Geometry

a. Can the existing roadway be closed for an On-Alignment Bridge Replacement
☑ Yes ☐ No
Describe:

An adequate detour route is available.

If "yes", does the existing vertical and horizontal curves meet the proposed design speed criteria?

Yes.

If "No", will the proposed bridge be:
☐ Staged Constructed
☐ Replaced on New Alignment

VI. Field Review (cont.)

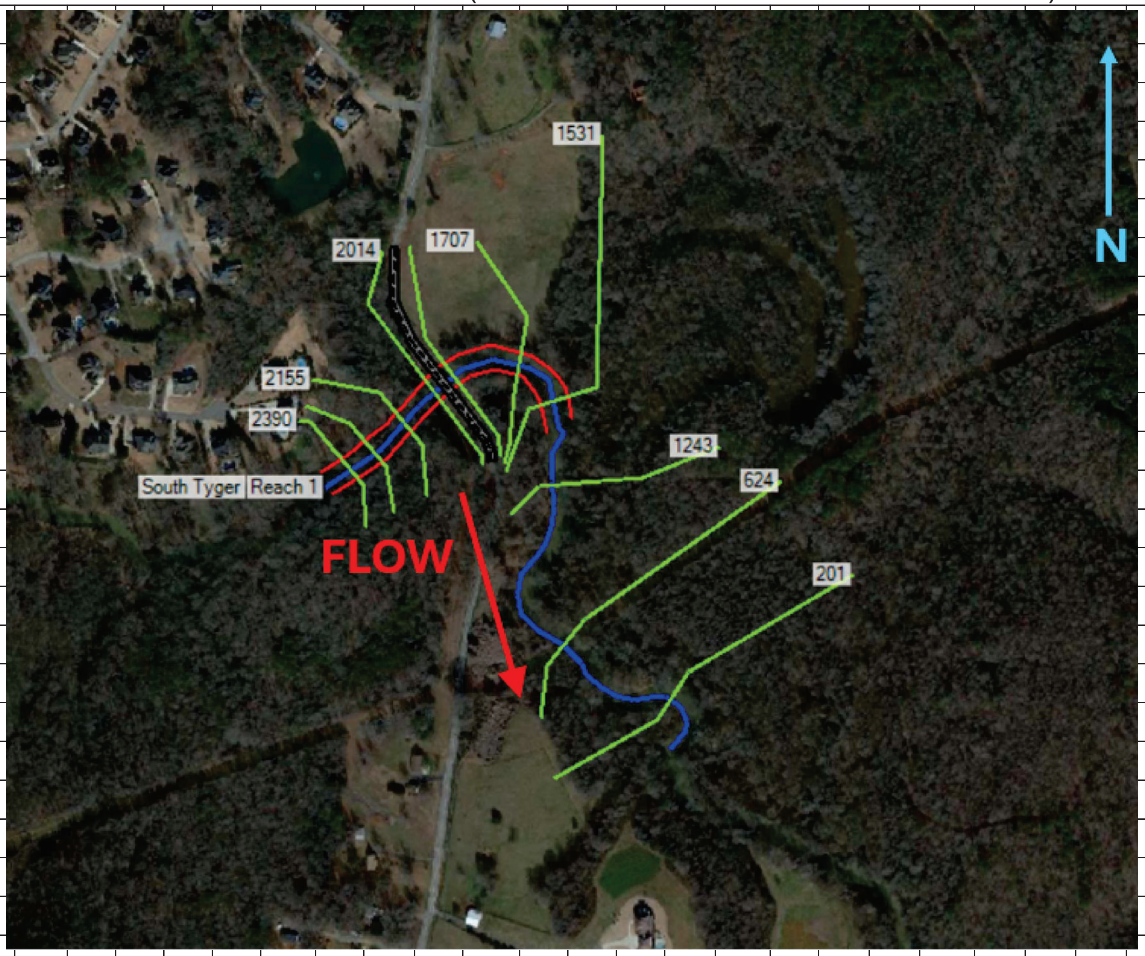
A. Proposed Bridge Recommendation:

Length: 210 ft. Width: 27.5 ft. Elevation: 576.30 ft.

Span Arangement: 70'-90'-50' spans

Notes: Proposed minimum low chord elevation is 576.30'. Proposed minimum profile/deck elevation is 579.29'. Proposed west 24" deep 70' cored slab span connects to a 33" deep box beam 90' span over the channel and a 21" deep 50' cored slab span on the east end.

BRIDGE SITE DIAGRAM: (Show North Arrow and Direction of Flow)



Performed By: Hassan Ismail

Title: Project Manager

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **Floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **Floodways** were computed at cross-sections and interpolated between cross-sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map was State Plane South Carolina FIPS 3900. The **horizontal datum** was NAD 83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit their website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by Spartanburg County, South Carolina.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate Limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities Participating in the National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Information eXchange** at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Information eXchange may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

DNR

This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of South Carolina and the Federal Emergency Management Agency (FEMA). The State of South Carolina has implemented a long term approach of floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map its floodplains in order that they may be regulated. As a part of this effort, the State of South Carolina has joined in a cooperative technical partnership agreement with FEMA to produce and maintain this digital FIRM.

http://www.dnr.state.sc.us/

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Special Flood Hazard Areas include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** — No Base Flood elevations determined.
- **ZONE AE** — Base Flood elevations determined.
- **ZONE AH** — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** — Area of Special Flood Hazard formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood elevations determined.
- **ZONE V** — Coastal flood zone with velocity hazard (wave action); no Base Flood elevations determined.
- **ZONE VE** — Coastal flood zone with velocity hazard (wave action); Base Flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- Cross section line
- Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 3907000 mE — 1000-meter Universal Transverse Mercator grid values, zone 17
- 4000000 mN — 1000-foot grid ticks: South Carolina State Plane coordinate system, FIPS zone 3900 (Lambert Projection)
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
JANUARY 6, 2011

EFFECTIVE DATE(S) REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
0 500 1000 FEET
0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0350D

FIRM
FLOOD INSURANCE RATE MAP

SPARTANBURG COUNTY, SOUTH CAROLINA AND INCORPORATED AREAS

PANEL 350 OF 555

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:			
COMMUNITY	NUMBER	PANEL	SUFFIX
SPARTANBURG COUNTY	450176	0350	D

MAP NUMBER
45083C0350D
EFFECTIVE DATE
JANUARY 6, 2011

Federal Emergency Management Agency

Attachment D- Floodplains Checklist

South Carolina Department of Transportation
Location and Hydraulic Design of Encroachments on Floodplains Checklist

23 CFR 650, this regulation shall apply to all encroachments and to all actions which affect base floodplains, except for repairs made with emergency funds. Note: These studies shall be summarized in the environmental review documents prepared pursuant to 23 CFR 771.

I. PROJECT DESCRIPTION

The purpose of the project is to correct the load restriction placed on the bridge and restore all components to good condition. The existing bridge is posted for load restrictions and has one or more components in poor condition.

A. Narrative Describing Purpose and Need for Project
   a. Relevant Project History:
   b. General Project Description and Nature of Work (attach Location and Project Map):
   c. Major Issues and Concerns:

Roadway improvements are limited to those associated with accommodating the new structure.
The project crosses South Tyger River which is shown on the Flood Insurance Rate Map (FIRM) Panel 45083C0359D. South Tyger River is within a designated Special Flood Hazard Area Zone AE with a regulatory floodway in the vicinity of the Project. The project is not expected to be a significant or longitudinal encroachment as defined under 23 CFR 650A, nor is it expected to have an appreciable environmental impact on the base flood elevation. In addition, the project would be developed to comply with all appropriate floodplain regulations and guidelines.

B. Are there any floodplain(s) regulated by FEMA located in the project area?
   Yes☒ No☐

C. Will the placing of fill occur within a 100-year floodplain?
   Yes☒ No☐

D. Will the existing profile grade be raised within the floodplain?

The roadway grade will be raised to accommodate the larger bridge structure.

E. If applicable, please discuss the practicability of alternatives to any longitudinal encroachments.

Minor longitudinal encroachments are expected based on the revised roadway profile The bridge will be constructed on existing alignment to reduce longitudinal impacts.

F. Please include a discussion of the following: commensurate with the significance of the risk or environmental impact for all alternatives containing encroachments and those actions which would support base floodplain development:

a. What are the risks associated with implementation of the action?

Risks are minimal; the project will replace the existing bridge with larger bridge opening. The increased opening will have a minimal impact on the BFE's along the floodplain.

b. What are the impacts on the natural and beneficial floodplain values?

The project is not expected to impact the floodplain values, as the hydraulics will be retained/improved.

c. What measures were used to minimize floodplain impacts associated with the action?

A similar bridge size will be used and constructed on the existing alignment.

d. Were any measures used to restore and preserve the natural and beneficial floodplain values impacted by the action?

Not Applicable

G. Please discuss the practicability of alternatives to any significant encroachments or any support of incompatible floodplain development.

The impacts are not considered significant encroachments and would not support incompatible floodplain development. The proposed project will have no significant impact to base flood elevations along the stream and will not impact the potential for development within the floodplain

H. Were local, state, and federal water resources and floodplain management agencies consulted to determine if the proposed highway action is consistent with existing watershed and floodplain management programs and to obtain current information on development and proposed actions in the affected? Please include agency documentation.

All analysis for the project was performed in accordance with SCDOT, FEMA, and local regulations. As the project progresses to final construction plans, the hydraulic modeling will be updated based on the final bridge layout

4 February 2025

SCDOT Hydraulic Engineer — Date

Attachment E- Public Comments

Date Received	Full Name	Comment	Response
01/29/2025 01:40:50.423	Neil F Beers JR	S42-197 As best I recall this bridge was built in the 1960s, it replaced an old steel and iron bridge. The existing bridge was built upstream from the old bridge. By moving the existing bridge to the present location, the road was moved also and this created two bad curves at each end if said bridge. There have been countless accidents that contributed by these sharp curves. Constructing the new bridge where the old steel was originally would allow these curves to be straightened. I have also personally witnessed the present bridge flooded 4 times and on one occasion the water was four feet or more over the entire bridge. I agree we need a new bridge and wanted to express my thoughts. Thank you Neil	Thank you for your comment on the proposed replacement of the S-42-197 bridge on Old Spartanburg Highway in Spartanburg County, SC. The bridge is anticipated to be lengthened and raised to provide a larger opening for the river to meet current hydraulic design standards. SCDOT's review of recent crash data does not support a costly realignment of the road so the existing alignment is anticipated to remain. However, wider travel lanes and shoulders on the bridge and bridge approaches will be incorporated into the project to meet current design standards. Guardrail, signing, and pavement markings designed and constructed to current standards will also be included. Your feedback has been reviewed and logged in the project record. We appreciate your input and engagement in this important project.
02/10/2025 16:27:26.817	Seth Kiser	It would be great if there was a way to provide river access on the South Tyger River for Canoes and Kayaks. Even having a small pull-of would be really nice.	Thank you for your comment on the proposed replacement of the S-42-197 bridge on Old Spartanburg Highway in Spartanburg County, SC. This project is focused on replacing the existing bridge and does not include improvements to river access in the area at this time. Your feedback has been reviewed and logged in the project record. We appreciate your input and engagement in this important project.

From: PITTS, MICHAEL, E.
To: xring40x@yahoo.com
Cc: MCGOLDRICK, WILLIAM, R.; Robert Flagler; Nicole Weirich
Subject: SCDOT Bridge Package 21 - Public Comment Response
Date: Tuesday, March 11, 2025 12:43:21 PM

Good Afternoon –

Thank you for your comment. The bridge is anticipated to be lengthened and raised to meet current hydraulic design standards. SCDOT's review of recent crash data does not support a realignment of the road at this time. However, wider travel lanes and shoulders on the bridge and bridge approaches will be incorporated into the project to meet current design standards. Guardrail, signing, and pavement markings designed and constructed to current standards will also be included. These items should improve safety of the roadway and at the bridge. Your feedback has been reviewed and logged in the project record. We appreciate your input and engagement in this important project.

Thank you,

Michael Pitts, PE, Assoc. DBIA
Office of Alternative Delivery

P 803-737-2566 **E** pittsme@scdot.org

South Carolina Department of Transportation
955 Park Street, P.O. Box 191, Columbia, SC 29202-0191

From: PITTS, MICHAEL, E.
To: kiser.seth.t@gmail.com
Cc: MCGOLDRICK, WILLIAM, R.; Robert Flagler; Nicole Weirich
Subject: SCDOT Bridge Package 21 - Public Comment Response
Date: Tuesday, March 11, 2025 12:44:57 PM

Good Afternoon –

Thank you for your comment. This project is focused on replacing the existing bridge and does not include improvements to river access in the area at this time. However, wider travel lanes and shoulders on the bridge and bridge approaches will be incorporated into the project to meet current design standards. Guardrail, signing, and pavement markings designed and constructed to current standards will also be included. Your feedback has been reviewed and logged in the project record. We appreciate your input and engagement in this important project.

Thank you,

Michael Pitts, PE, Assoc. DBIA
Office of Alternative Delivery

P 803-737-2566 **E** pittsme@scdot.org

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