

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 P044270

Route S-38-634 (Deer Trail Rd.)

County Orangeburg

Part 1 - Project Description

Include the Project Name/Description

S-38-634 Bridge/Culvert Replacement over Cooper Swamp in Orangeburg County

S-38-634 (Deer Trail Rd.) Bridge/Culvert Replacement over Cooper Swamp in Orangeburg County. This project proposes to install a replacement bridge along S-634 due to damage caused by the 11/07/2024 storm (Orangeburg County Storm). The new bridge will be an on-alignment configuration and will be constructed to comply with current design criteria. Bridge Package 32.

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 <u>*23 CFR Part 771.117(b)</u>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
2.	The acquisition of more than <u>*minor amounts</u> of temporary or permanent strips of right-of-way	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
3.	Involves acquisitions that result in residential or non-residential displacements	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
4.	Involves any adverse impacts to EJ populations	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Part 3 - Thresholds Continued

5.	Results in capacity expansion of a roadway by adding through lanes	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6.	Involves construction that would result in <u>*major traffic disruptions</u>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7.	Involves <u>*changes in access control</u> requiring FHWA approval	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
8.	An adverse effect determination under Section 106 of the National Historic Preservation Act.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
9.	Use of Section 4(f) property that cannot be documented with a FHWA <i>de minimis</i> determination or a programmatic Section 4(f) other than the programmatic evaluation for the use of historic bridges	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
10.	Any use of a Section 6(f) property	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
11.	Requires an Individual USACE 404 Permit	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
12.	Requires an Individual U.S. Coast Guard Permit.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
14.	Construction in, across, or adjacent to a river designated as a National Wild and Scenic River	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
17.	Involves acquisition of land for hardship, protective purposes, or early acquisition	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
18.	Does not meet the latest Conformity Determination for air quality non-attainment areas (if applicable).	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
19.	Any known or potential <u>major</u> hazardous waste sites within the right-of-way.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
20.	Is not included in or is inconsistent with the STIP and/or TIP	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2.	Is there a formal plan to use this parcel for a future transportation project (is it part of an approved LRTP)?	<input type="checkbox"/> Yes	<input type="checkbox"/> 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)

- | | | |
|---|--|--|
| <input type="checkbox"/> USTs/Hazardous Materials | <input type="checkbox"/> General Permit | <input type="checkbox"/> Right of Way |
| <input checked="" type="checkbox"/> Water Quality | <input type="checkbox"/> Individual Permit | <input checked="" type="checkbox"/> Floodplains |
| <input checked="" type="checkbox"/> Migratory Bird Treaty Act | <input type="checkbox"/> Essential Fish Habitat | <input type="checkbox"/> Lead Based Paint |
| <input checked="" type="checkbox"/> Stormwater | <input checked="" type="checkbox"/> Cultural Resources | |
| <input type="checkbox"/> Coast Guard Permit Exclusion | <input type="checkbox"/> Noise | <input type="checkbox"/> 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 brought 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:

Date:

Primavera: Yes No NEPA Start Date:

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

Date: 02/13/2025



Project ID: P044270 County: Orangeburg District: Doc Type: PCE Total # of Commitments: 5

Project Name: S-38-634 Bridge/Culvert Replacement over Cooper Swamp in Orangeburg County

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: Tyler Clark **PHONE #:** (803)-737-4596

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

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

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

Project ID: P044270

SCDOT
NEPA ENVIRONMENTAL COMMITMENTS
FORM



ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

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:

CONTRACTOR

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

NEPA Doc Ref:

Responsibility:

Special Provision



Cultural Resources Project Screening Form

File Number: PIN: Route: County:

Project Name:

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

Project Type

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)

Comments

This project will replace the pipe culvert carrying S-634 (Deer Trail Road) over Cooper Swamp, which was damaged during a flooding event. The pipe culvert will be replaced on alignment and a small amount of new right-of-way (ROW) may be required. The archaeological area of potential effect (APE) extends 75 feet to each side of the roadway centerline and 800 feet from either end of the pipe. The archaeological survey examined the archaeological APE. The architectural survey examined the architectural APE, which consisted of a 300-foot buffer around the archaeological APE. The APEs were reviewed using ArchSite, Google Earth, Web Soil Survey, historic topographic maps, and aerial photographs. The review determined that the areas has not been previously surveyed for cultural resources and no previously recorded historic properties are located within or in the vicinity of the APEs. Web Soil Survey maps the majority of the soils within the APE (54 percent) as well drained. The remaining soils are poorly drained (33 percent) and somewhat poorly drained (13 percent). A cultural resources field survey, consisting of a pedestrian reconnaissance of the entire APE, augmented by the excavation of shovel tests, was conducted on January 29, 2025 with assistance from HDR. At the time of survey, the pipe culvert crossing was significantly damaged and the road was closed to traffic. Thirty-four shovel test locations were investigated. Twenty-two of these shovel tests were excavated; the 12 remaining shovel tests were not excavated due to wetlands. All shovel tests were negative for cultural material. No archaeological sites or historic architectural resources were identified. No additional cultural resources investigations are recommended.

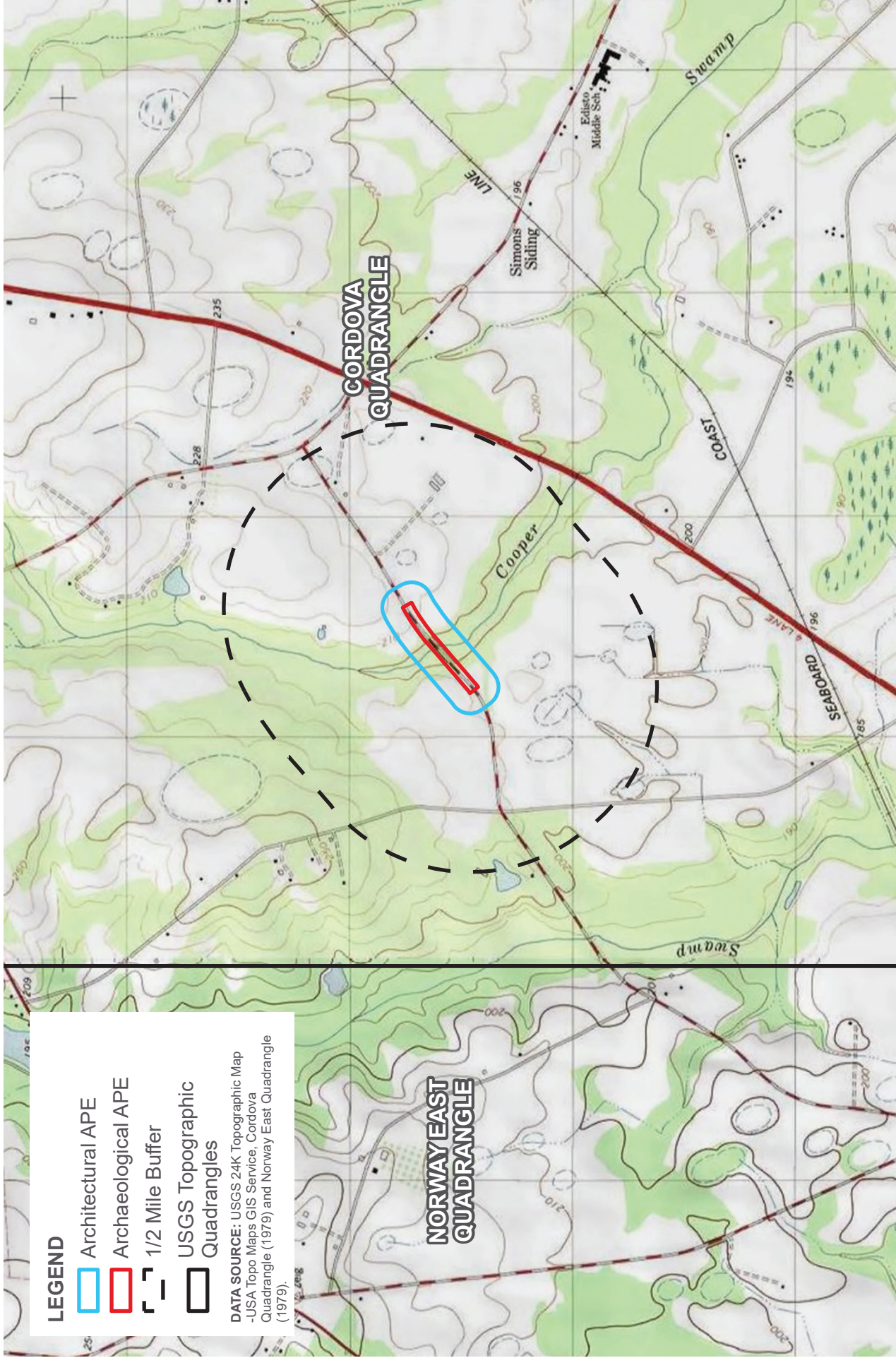
Effect Determination:

*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:

Review Date:



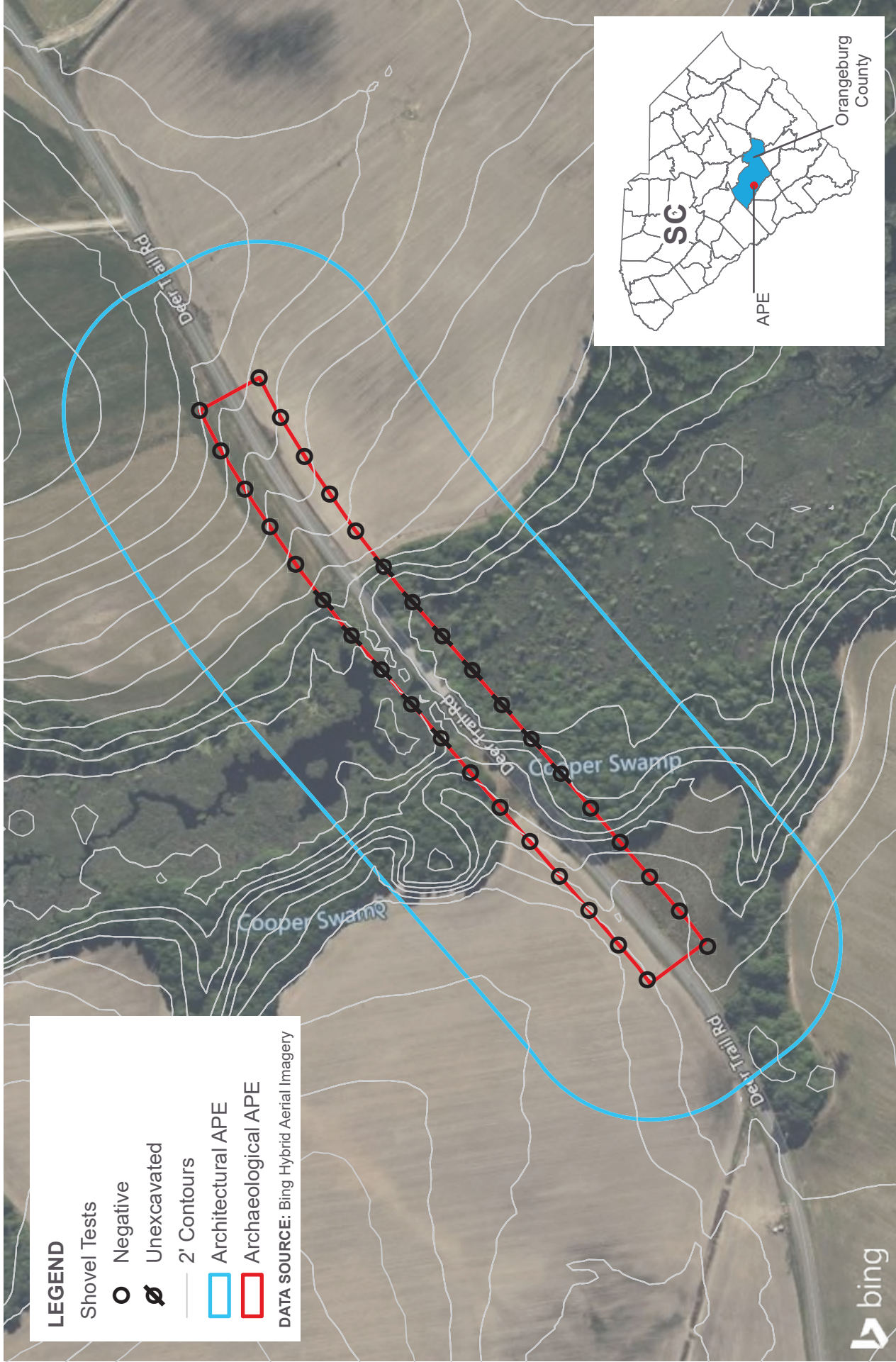
LEGEND

- Architectural APE
- Archaeological APE
- 1/2 Mile Buffer
- USGS Topographic Quadrangles

DATA SOURCE: USGS 24K Topographic Map
 -USA Topo Maps GIS Service, Cordova Quadrangle (1979) and Norway East Quadrangle (1979).



PROJECT LOCATION: S-38-634 OVER COOPER SWAMP
Figure 1



LEGEND

Shovel Tests

- Negative
- ∅ Unexcavated
- 2' Contours
- Architectural APE
- Archaeological APE

DATA SOURCE: Bing Hybrid Aerial Imagery



SHOVEL TEST LOCATIONS: S-38-634 OVER COOPER SWAMP
Figure 2



Biological Assessment Report

Project Title: SC-634 Over Cooper Swamp (Emergency Replacement)

County: Orangeburg

SCDOT PIN: P044270

Date: 1/3/2025

Prepared By: Keith Walker

Pursuant to Section 7 of the Endangered Species Act, a field survey was conducted within the project corridor. The following list of threatened (T) and endangered (E) species was obtained from the U.S. Fish and Wildlife Service:

Description

Emergency replacement of the existing washed out culvert on SC-634 with a bridge over Cooper Swamp, Orangeburg County. The project site is in a rural area and consists primarily of scrub/shrub/emergent wetlands and hardwood bottoms associated with Cooper Swamp.

Species List

Species	Common Name	Status
<i>Haliaeetus leucocephalus</i>	Bald Eagle	BGEPA
<i>Perimyotis subflavus</i>	Tricolored Bat	Proposed Endangered
<i>Danaus plexippus</i>	Monarch Butterfly	Proposed Threatened
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	Threatened
<i>Oxypolis canbyi</i>	Canby's Dropwort	Endangered

Birds

Haliaeetus leucocephalus: No Effect. The project impact area is approximately 5 miles from the South Fork Edisto River and six miles from the North Fork Edisto River. No suitable nesting trees or individuals were observed.

Dryobates borealis: No Effect. Red-cockaded woodpecker habitat consists of mature (30 years or older) pine tree stands with little or no midstory. The project site is primarily shrub/scrub and

emergent wetlands with some adjacent hardwood bottoms and mixed hardwood uplands. No habitat or nesting cavities were observed.

Insects

Danaus plexippus: At this time, the Monarch butterfly is proposed for federal listing as Threatened. Monarch butterflies use a variety of habitats that support flowering herbaceous plants and require milkweed for reproduction. No individuals or milkweed were observed. When listing becomes final, the project will be further evaluated for potential effects on the species and consultation will be initiated if required.

Mammals

Perimyotis subflavus: At this time, the tri-colored bat is proposed for federal listing as endangered. The project area does contain suitable summer habitat and potential roosting trees for the tri-colored bat. Tri-colored bats are known to use various canopy tree species for roosting and man-made structures. Since the project involves a minimal amount of tree clearing, the project should not adversely affect the species. When listing becomes final, the project will be further evaluated for potential effects on the species and consultation will be initiated if required.

Plants

Oxypolis canbyi: No effect. Canby's dropwort is found in a variety of Coastal Plain habitats prone to long periods of inundation, including pond cypress ponds, grass-sedge dominated Carolina bays, wet pine savannas, shallow pineland ponds and cypress-pine swamps or sloughs. Known soil types that support this species are Rembert loam, Portsmouth loam, McColl loam, Grady loam, Coxville fine sandy loam, and Rains sandy loam. Historically, fire prevented kept sites open and prevented competition from other species. This site contains trace amounts of Coxville soils (2-3%) which are currently in agriculture.

Results

No federally threatened, endangered, or otherwise protected species or their habitats were observed in the project area. Based on the results, no current federally protected species will be adversely affected by the proposed project.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Carolina Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558
Phone: (843) 727-4707 Fax: (843) 727-4218

In Reply Refer To:

01/13/2025 13:39:18 UTC

Project code: 2025-0040159

Project Name: S-634 Over Cooper Swamp

Subject: Consistency letter for 'S-634 Over Cooper Swamp' for specified federally threatened and endangered species and designated critical habitat that may occur in your proposed project area consistent with the South Carolina Ecological Services Field Office (ESFO) Determination Key (DKey) for project review and guidance for federally listed species.

Keith Walker:

The U.S. Fish and Wildlife Service (Service) received on **January 13, 2025** your effect determination(s) for the 'S-634 Over Cooper Swamp' (the Action) using the South Carolina ESFO DKey for project review and guidance for federally-listed species within the Information for Planning and Consultation (IPaC) application. The Service developed this application in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Based on your answers and the assistance of the Service's South Carolina ESFO DKey, you made the following effect determination(s) for the proposed Action:

Species	Listing Status	Determination
Canby's Dropwort (<i>Oxypolis canbyi</i>)	Endangered	No effect
Red-cockaded Woodpecker (<i>Dryobates borealis</i>)	Threatened	No effect

Consultation Status

Your agency has met consultation requirements for the species listed above by informing the Service of the "no effect" determinations. No further consultation for this project is required for these species. This consistency letter confirms you may rely on effect determinations you reached by considering the South Carolina ESFO DKey to satisfy agency consultation requirements under Section 7(a) (2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.; ESA).

The following species and/or critical habitats may also occur in your project area and **are not** covered by this conclusion:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

Please note that due to obligations under the ESA, potential impacts of this project must be reconsidered if: (1) new information reveals impacts of this identified action may affect any listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner which was not considered in this assessment; or (3) a new species is listed or critical habitat is designated that may be affected by the identified action. If any of the above conditions occurs, additional consultation with the South Carolina ESFO should take place before project changes are final or resources committed.

Bald and Golden Eagle Protection Act (BGEPA): Bald and golden eagles are not included in this section 7(a)(2) consultation and this information does not constitute a determination of effects by the Service. The Service developed the [National Bald Eagle Management Guidelines](#) to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the BGEPA may apply to their activities. The guidelines should be consulted prior to conducting new or intermittent activity near an eagle nest.

If the Federal Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) may be required. Please contact Ulgonde Kirkpatrick (phone: 321/972-9089, e-mail: ulgonde_kirkpatrick@fws.gov) with any questions regarding potential impacts to bald or golden eagles.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

S-634 Over Cooper Swamp

2. Description

The following description was provided for the project 'S-634 Over Cooper Swamp':

Emergency culvert replacement. Replace washed out culvert in place with a bridge

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@33.396192299999996,-80.97648265250058,14z>



QUALIFICATION INTERVIEW

1. Does the proposed project involve research or other actions that include the collection, capture, handling, or harassment of any individual federally listed threatened, endangered or proposed species?

No

2. Is the action authorized, funded, or being carried out by a Federal agency?

Yes

3. Are you the Federal agency or designated non-federal representative?

Yes

4. Is the project an existing structure that requires maintenance, repair, or replacement?

Yes

5. Will all project take place within the existing structure's footprint?

Yes

6. Does the project intersect the red-cockaded woodpecker AOI?

Automatically answered

Yes

7. Is the action area located within suitable Red-cockaded woodpecker [foraging habitat](#) (pine or pine/hardwood stands in which 50% or more of the dominant trees are pines and the dominant pine trees are 30 years of age or older or >10-inches diameter breast height (dbh) and the midstory height does not exceed 12 feet)?

No

8. Does the project intersect the Canby's dropwort AOI?

Automatically answered

Yes

9. Is there suitable habitat for Canby's dropwort located within the project area?

Note: Canby's Dropwort can be found in a variety of coastal plain habitats, including natural ponds dominated by pond cypress, grass-sedge-dominated Carolina bays, wet pine savannas, shallow pineland ponds and cypress-pine swamps or sloughs. The largest and most vigorous populations have been found in open bays or ponds that are wet throughout most of the year, but which have little or no canopy cover. Soils are sandy loams or acidic peat mucks underlain by clay layers which, along with the slight gradient of the areas, result in the retention of water.

No

IPAC USER CONTACT INFORMATION

Agency: South Carolina Department of Transportation

Name: Keith Walker

Address: 955 Park Street

City: Columbia

State: SC

Zip: 29201

Email: walkerke@scdot.org

Phone: 8037371387

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Carolina Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558
Phone: (843) 727-4707 Fax: (843) 727-4218

In Reply Refer To:

01/10/2025 15:45:07 UTC

Project Code: 2025-0040159

Project Name: S-634 Over Cooper Swamp

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Carolina Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558
(843) 727-4707

PROJECT SUMMARY

Project Code: 2025-0040159

Project Name: S-634 Over Cooper Swamp

Project Type: Culvert Repair/Replacement/Maintenance

Project Description: Emergency culvert replacement. Replace washed out culvert in place with a bridge

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@33.396192299999996,-80.97648265250058,14z>



Counties: Orangeburg County, South Carolina

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [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.

MAMMALS

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Red-cockaded Woodpecker <i>Dryobates borealis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Canby's Dropwort <i>Oxypolis canbyi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7738	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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 habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO BALD AND GOLDEN EAGLES WITHIN THE VICINITY OF YOUR PROJECT AREA.

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.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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.

NAME	BREEDING SEASON
Painted Bunting <i>Passerina ciris</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9511	Breeds Apr 25 to Aug 15

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 (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

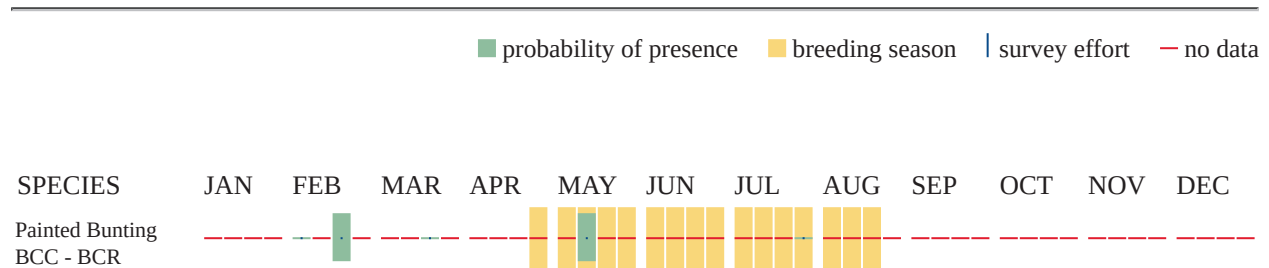
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; 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.



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-incident-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>

WETLANDS

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.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C

RIVERINE

- R5UBH

IPAC USER CONTACT INFORMATION

Agency: South Carolina Department of Transportation

Name: Keith Walker

Address: 955 Park Street

City: Columbia

State: SC

Zip: 29201

Email: walkerke@scdot.org

Phone: 8037371387

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

PERMIT DETERMINATION

Date: Feb 13, 2025

Project ID: P044270

From: Caycee Cleaver

Company: SCDOT

Contact Info (phone and/or email): cleavercc@scdot.org

Permit Manager: Will McGoldrick - Alternative Delivery Coordinator

Project Name: S-38-634 Bridge/Culvert Replacement over Snake Swamp

County: Orangeburg

(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 <input type="checkbox"/>	IP <input type="checkbox"/>	NWP <input checked="" type="checkbox"/>
OCRM Permit	Individual CAP <input type="checkbox"/>	CAP GP <input type="checkbox"/>	
Navigable Permit	State NAV <input type="checkbox"/>	USCG <input type="checkbox"/>	

408 PROJECT INFO:

Is it within a 408 Project: YES NO

408 Project Name: _____

MITIGATION:

Mitigation Bank: YES NO

Mitigation Bank Name: RMC - Roberts Swamp MB

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.

Caycee Cleaver
Digitally signed by Caycee Cleaver
Date: 2025.02.13 08:27:53 -05'00'
Biologist, SCDOT/Consultant

Feb 13, 2025

Date



Watershed and Water Quality Information

SC Department of Environmental Services

General Information

Applicant Name: Caycee Cleaver **Permit Type:** Construction
Address: 592 DEER TRAIL RD, COPE, SC, 29038 **Latitude/Longitude:** 33.395469 / -80.998780
MS4 Designation: Not in designated area **Monitoring Station:** E-500
Within Coastal Critical Area: No **Water Classification (Provisional):** FW
Waterbody Name: SNAKE SWAMP **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		
E-500	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	X	
E-012	X	F	F	F	F	F	F	F	F	F	F	WnTN	X	F	X	X	X	X	A	X		ECOLI - Escherichia coli (Freshwaters)

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

Parameters to be addressed (those not supporting standards)

Fish Consumption Advisory

HGF - Mercury (Fish Tissue)

Waters of Concern (WOC)

TMDL Information - TMDL Parameters to be addressed

In TMDL Watershed: Yes **TMDL Site:** E-012
TMDL Report No: 9D21-11 **TMDL Parameter:** Fecal
TMDL Document Link: https://des.sc.gov/sites/des/files/docs/HomeAndEnvironment/Docs/tmdl_mlEdisto.pdf

Report Date: January 6, 2025



S-634 over Cooper Swamp

Area of Interest (AOI) Information

Area : 10.24 acres

Buffer: 75 Feet

Dec 23 2024 12:29:32 Eastern Standard Time

Environmental Questions for Feasibility Study:

What is the anticipated NEPA Document Type?

PCE

Is noise analysis required?

No

What is the anticipated Permit Type(s)?

NWP 3

Are there navigable waters in the project area?

No

Is the project within an existing Mitigation Bank Service area?

Has a SCDHEC Water Quality Report been provided?

Yes

Additional Comments:

Summary

Name	Count	Area(acres)	Length(ft)
Watershed	1	10.24	N/A
Ecoregion	1	10.24	N/A
Wetlands Likelihood Layer	7	3.29	N/A
USGS Streams	1	N/A	150.81

Watershed

#	Basin	HUC 8	Area(acres)
1	Edisto	03050203	10.24

Ecoregion

#	L4_KEY	L3_KEY	Area(acres)
1	65I Atlantic Southern Loam Plains	65 Southeastern Plains	10.24

Wetlands Likelihood Layer

#	ATTRIBUTE	WETLAND_TY	Area(acres)
1	No Data	No Data	3.06
2	PFO1C	Freshwater Forested/Shrub Wetland	0.23

USGS Streams

#	NAME	Length(ft)
1	Cooper Swamp	150.81

The Screening
widget allows you to define an area of interest and analyze below listed layers
for potential impacts.

Boundary: Cities;
COG, Watershed; Ecoregion

**Roads &
Bridges:** Statewide Bridges; Roads; State Highways

Biological
Resources: T & E Species; Statewide Element Occurrence's; T & E
Critical Habitat; Oyster Habitat Corridor; Bald Eagle Nests

Cultural
Resources: Archaeological Point; Civil War Earthworks; Historic Structures;
National Register Points; Restricted National Register Points; Survey Lines; Archaeological
Site; Survey Areas; Historic Areas; National Register Polygon; Restricted
National Register Polygon

Protected
Lands: NWF Wildlife Refuges Area; NRCS Easments; Heritage Preserves; Parks;
US Forest; Wildlife Management Areas

WOTUS: Streams; Lakes; NWI Wetlands; Wetlands
Likelihood Layer

Coastal

Resources: Shellfish Monitoring Station; Critical Area Boundary; Shellfish
Classification; SCDNR Oyster Habitat; SCDNR Oyster Beds

Water

Quality: Bio Station; TMDL

Land and

Waste: Solid Waste Landfill; Underground Storage Tank; Above Ground Storage
Tank; CERCLA; Compliance and Enforcement; DryCleaners; Leaking Underground
Storage Tank

Others: Soil
Classification

S-634 over Cooper Swamp

Legend

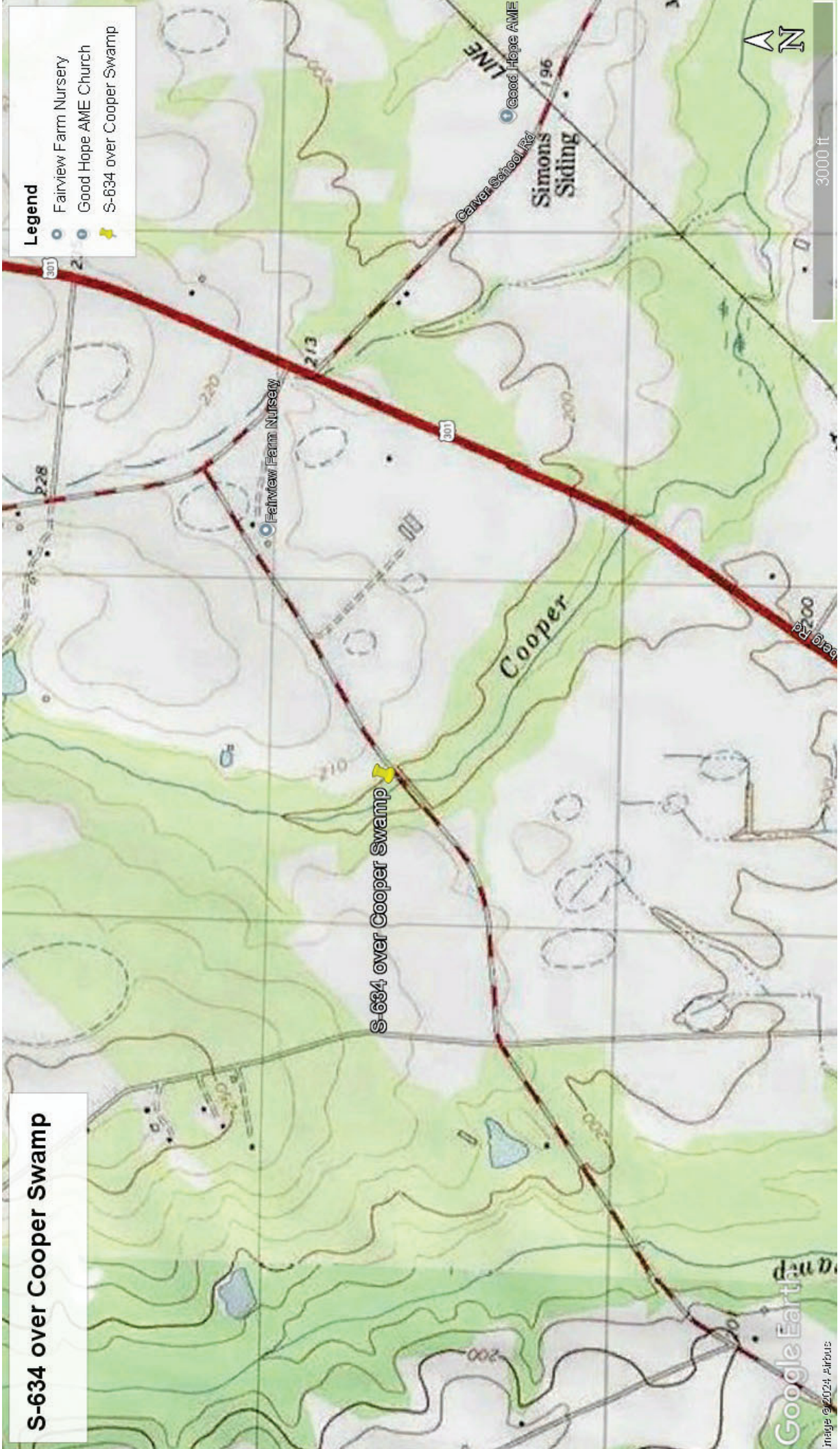
- Fairview Farm Nursery
- S-634 over Cooper Swamp



S-634 over Cooper Swamp

Legend

- Fairview Farm Nursery
- Good Hope AME Church
- S-634 over Cooper Swamp



National Flood Hazard Layer FIRMette

81°0'15"W 33°23'58"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*

Future Conditions 1% Annual Chance Flood Hazard *Zone X*

Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*

Area with Flood Risk due to Levee *Zone D*

Area of Minimal Flood Hazard *Zone X*

Effective LOMR

Area of Undetermined Flood Hazard *Zone D*

Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall

Cross Sections with 1% Annual Chance Water Surface Elevation

Coastal Transect

Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transect Baseline
Profile Baseline
Hydrographic Feature

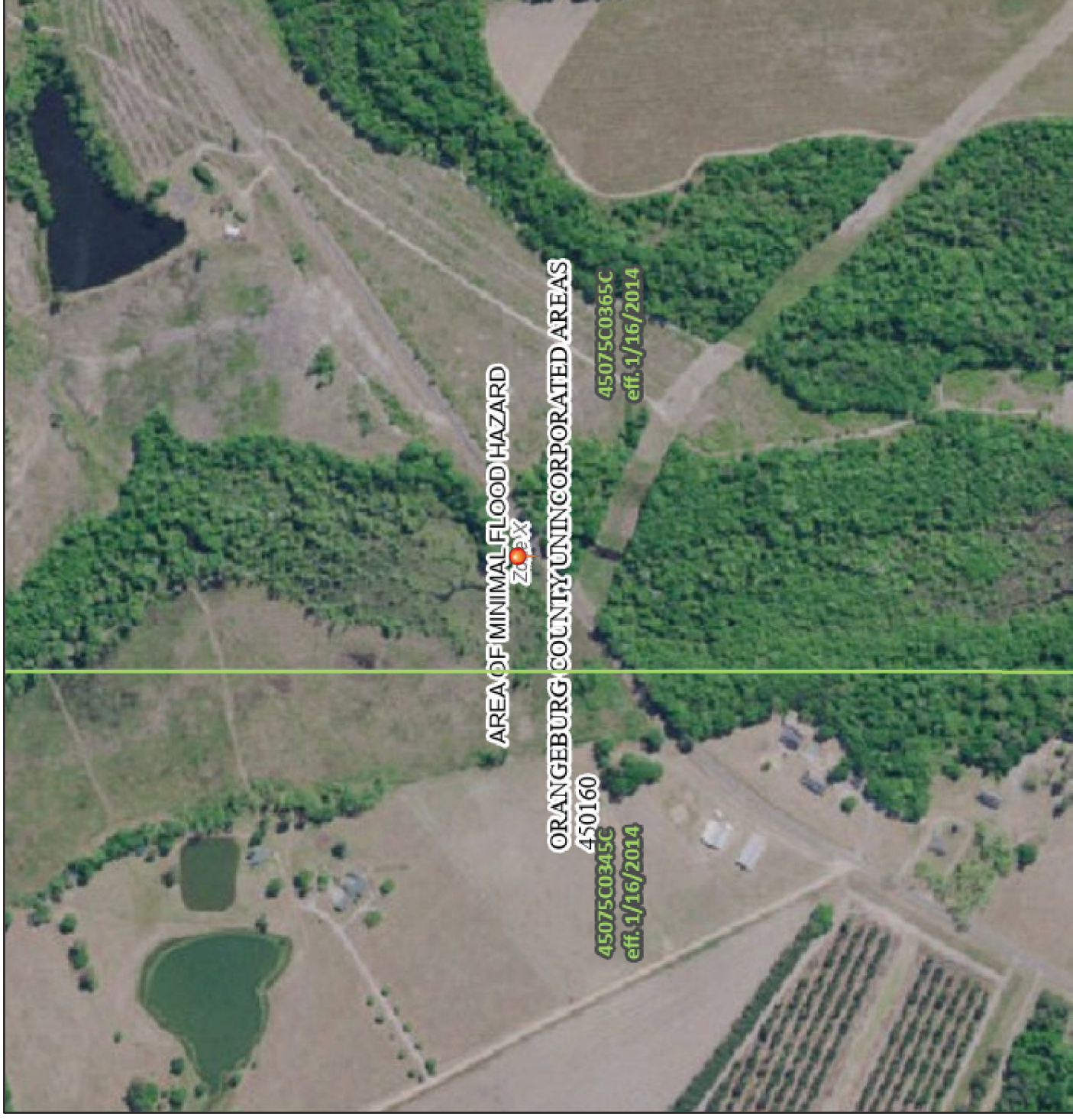
Digital Data Available
No Digital Data Available
Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/6/2025 at 5:44 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



80°59'37"W 33°23'28"N

1:6,000

Feet

2,000

1,500

1,000

500

**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

S-634 Emergency Bridge replacement of a damaged culvert for Cooper Swamp in Orangeburg County.

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:

Culvert has been damaged from the 11/07/2024 storm (Orangeburg County Storm) and is no longer safe or functional. Route is currently closed to traffic and a detour is in place. Repair under emergency funds.

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?

Yes. There is a potential grade raise but there is no FEMA floodplain.

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

Longitudinal encroachments should retain within SCDOT right of way.

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?

No risks are anticipated.

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

SCDOT No Impact should be achieved.

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

Bridge or culvert will be designed to achieve no impact criteria.

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

Bridge or culvert will be designed to achieve no impact criteria.

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

No encroachments are anticipated.

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 will be performed in accordance with SCDOT, FEMA, and local regulations.

Levi McLeod Digitally signed by Levi McLeod
Date: 2025.01.13 14:47:59
-05'00'
SCDOT Hydraulic Engineer

1/13/25
Date

BRIDGE SCOPE AND RISK ASSESSMENT FORM

COUNTY: Orangeburg

DATE: 01/08/2025

ROAD #: S-634

STREAM CROSSING: Cooper Swamp

Purpose & Need for the Project:

S-634 Emergency Bridge replacement of a damaged culvert for Cooper Swamp in Orangeburg County. Culvert has been damaged from the 11/07/2024 storm (Orangeburg County Storm) and is no longer safe or functional. Route is currently closed to traffic and a detour is in place. Repair under emergency funds.

I. FEMA Acknowledgement

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

Panel Number: 45075C0365C Effective Date: 01/16/2014 (See Attached)

II. FEMA Floodmap Investigation

FEMA Flood Profile Sheet Number _____ 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:

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

Justification:

BRIDGE SCOPE AND RISK ASSESSMENT FORM

IV. Preliminary Bridge Assessment

A. Locate Existing Plans

a. Bridge Plans Yes File No. _____ Sheet No. _____ (See Attached)
 No

b. Road Plans Yes File No. 38.601 Sheet No. 7 (See Attached)
 No

B. Historical Highwater Data

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

b. SCDOT/USGS Documented Highwater Elevations
 Yes Results: _____
 No

c. Existing Plans Yes See Above
 No

V. Field Review

A. Existing Bridge

Length: 18 ft. Width: 30 ft. Max. span Length: 8 ft.

Alignment: Tangent Curved

Bridge Skewed: Yes No Angle: _____

End Abutment Type: N/A, box culvert

Riprap on End Fills: Yes No Condition: _____

Superstructure Type: double barrel 8'x8' concrete box culvert

Substructure Type: _____

Utilities Present: Yes No

Describe:

Debris Accumulation on Bridge: Percent Blocked Horizontally: 0 %
Percent Blocked Vertically: 10 %

Hydraulic Problems: Yes No

Describe:

BRIDGE SCOPE AND RISK ASSESSMENT FORM

V. Field Review (cont.)

B. Hydraulic Features

a. Scour Present: Yes No Location: culvert undermined and settled

b. Distance from F.G. to Normal Water Elevation: _____ 5 ft.

c. Distance from Low Steel to Normal Water Elev.: _____ 4 ft.

d. Distance from F.G. to High Water Elevation: _____ 2 ft.

e. Distance from Low Steel to High Water Elev.: _____ 1 ft.

f. Channel Banks Stable: Yes No

Describe:

embankments washed out in flood event. Bridge needed to span washout and establish banks.
--

g. Soil Type: sandy

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.

none, swampy floodplain

C. Existing Roadway Geometry

a. Can the existing roadway be closed for an On-Alignment Bridge Replacement

Yes No

Describe:

road currently closed due to culvert washout
--

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

yes (low-volume)

If "No", will the proposed bridge be:

Staged Constructed

Replaced on New Alignment

BRIDGE SCOPE AND RISK ASSESSMENT FORM

VI. Field Review (cont.)

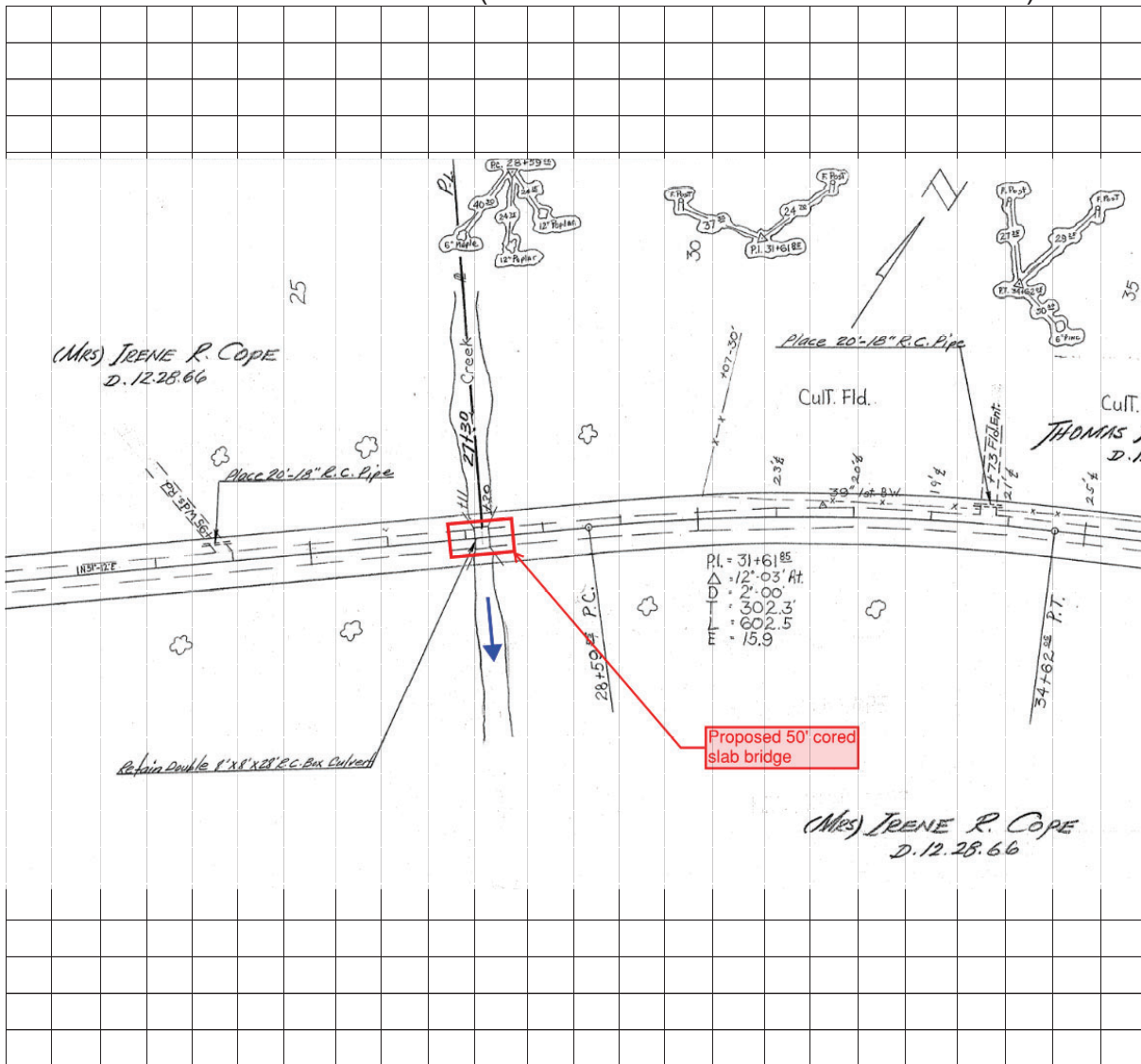
A. Proposed Bridge Recommendation:

Length: 50 ft. Width: 30 ft. Elevation: TBD ft.

Span Arrangement: 50-ft single span

Notes: Proposed single span (40' to 60' +/-) bridge to replace washed out box culvert and embankment, based on preliminary/rough hydraulic analysis. Span length should be adjusted to meet low volume hydraulic design criteria with final/refined hydraulic modeling. Existing backwater to be reduced.

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



Performed By: John Caver & Levi McLeod

