



PROCESSING FORM FOR PROGRAMMATIC CATEGORICAL EXCLUSIONS  
NON MAJOR FEDERAL ACTIONS

Project ID P044048

Route S-147

County Greenville

Part 1 - Project Description

Include the Project Name/Description

S-147 over Reedy River ; 23-011-ER  
Damage occurred at MP 1.24 on S-147 W. Washington Street crossing the Reedy River due to flood damages associated with Hurricane Helene. Specific damages occurred when debris pushed an interior bent out of alignment. The bridge deck joint opened up beyond its limits due to the bent shifting, resulting in the need to close the bridge. SCDOT proposes to replace the bridge and approaches. Additional repairs would include installing new guardrail and reestablishing vegetation. Reviews indicate the proposed action will not affect and threatened or endangered species or critical habitats and will not affect known cultural resources. A portion of the Swamp Rabbit Trail designated as "Orange Line" intersects S-147 at the bridge approach. This intersection will be closed during construction. Per guidance in the FHWA Policy Paper dated July 20, 2012 Part II, Question 15C states: "If a path or trail is simply described as occupying the right way of the highway and is not limited to any specific location within the right of way, a use of land would not occur provide that adjustments or changes in the alignment of the highway or the trail would not substantially impair the continuity of the path or trail." S-147 is part of the active roadway and not identified as part of the SWT. Therefore no use results from the proposed work. The trail will remain in its current location post construction. In addition, an alternate connection exists along Hampton Ave Extension to the north for users.

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 checked="" 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 checked="" 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: WILL MCGOLDRICK Digitally signed by WILL MCGOLDRICK  
Date: 2024.12.09 15:10:05 -05'00' Date Dec 9, 2024

Primavera:  Yes  No NEPA Start Date: Dec 6, 2024 Does the project contain additional commitments?: (if Yes attach to form)  Yes  No

December 6, 2024

Ms. Mary Sherrer  
Review Coordinator for Transportation Projects  
State Historic Preservation Office  
SC Department of Archives & History  
8301 Parklane Road  
Columbia, SC 29223

***RE: Cultural Resources Survey of the S-147 over Reedy River Emergency Bridge Replacement Project, Greenville County, South Carolina***

***SCDOT Project #: P044048***

Dear Ms. Sherrer:

Please find attached a copy of the above referenced report that describes cultural resources investigations conducted for the emergency replacement of the S-147 (W. Washington Street) bridge over the Reedy River in Greenville County.

The South Carolina Department of Transportation (SCDOT), proposes the emergency replacement of the S-147 bridge over the Reedy River. The existing S-147 bridge was irreparably damaged due to flooding associated with Hurricane Helene. SCDOT proposes to replace the bridge and approaches. Additional repairs would include installing new guardrail and reestablishing vegetation. The bridge will be replaced on alignment and small amount of new right-of-way (ROW) will be required. The project area is defined as the area within 75 feet to the north and 85 feet to the south of the proposed roadway centerline, and extending 400 feet from the western end of the bridge and 250 feet from the eastern end of the bridge. The archaeological survey covered the project area while the architectural survey examined the Area of Potential Effects (APE), which includes a 300-foot viewshed buffer around the project area.

The archaeological survey identified no new archaeological sites. The historic architectural survey revisited four previously recorded resources, SHPO Site Nos. 1260.01-1260.03 and 1261, and identified seven new architectural resources, SHPO Site Nos. 1260.04-1260.05 and 6444-6447.01. SHPO Site Nos. 1260.01-1260.3, the extant buildings of the River Junction Shops of the Piedmont and Northern Railway, were originally recommended **eligible** for inclusion on the National Register of Historic Places (NRHP) under Criteria A, B, and C and this report concurs with that recommendation. Two new sub-resources at SHPO Site No. 1260 were recorded, a retaining wall/foundation remnant (SHPO Site No. 1260.04) and the rail line segments utilized by the shops (SHPO Site No. 1260.05). Both of the resources are recommended as **not eligible** for the NRHP and do not contribute to the overall eligibility of the resource. SHPO Site No. 1261, the 1950 S-147 bridge over CSX Railroad, was found to be no longer extant.

The other newly recorded resources include the 1928 S-147 bridge over Brushy Creek (SHPO Site No. 6444), an abandoned circa-1937 railroad segment associated with the Norfolk Southern Railroad and Monaghan Mill (SHPO Site No. 6445), an active CSX Railroad segment that was constructed as part





of the Piedmont and Northern Railway circa 1912 (SHPO Site No. 6446), and a circa 1920 industrial building complex (SHPO Site Nos. 6447-6447.01). Of the newly recorded resources SHPO Site Nos. 6445-6447.01 are recommended **not eligible** for inclusion on the NRHP. SHPO Site No. 6444 is a 1928 concrete deck arch bridge over Brushy Creek. It is an intact and notable early example of a bridge type once common in the 1910s and 1920s and the only extant example of an unaltered standard deck arch bridge in Greenville County. It is recommended **eligible** for inclusion on the NRHP under Criterion C for engineering design at the local level.

SHPO Site No. 6444 is located well outside of the project's area of direct effects and will not be directly impacted by the undertaking. SHPO Site No. 1260 is located within the project area, however no impacts to the contributing buildings will occur and no new ROW will be obtained from the resource's proposed NRHP boundary. The only work anticipated within the resource's boundary is repaving work needed to tie the facility's existing asphalt driveway to the improved roadway. This work will be completed with a ROW permissions agreement instead of purchasing any new property. Additionally, the S-147 bridge over the Reedy River will be replaced on alignment and the replacement bridge will be visually similar to the existing one. No visual impacts are expected to either of the eligible resources or their historic settings.

Based on the results of the background research and field investigations, the SCDOT has determined that there will be **no historic properties affected** by the proposed undertaking.

Per the terms of the Section 106 Programmatic Agreement executed on October 6, 2017, the Department is providing this information on behalf of the FHWA. It is requested that you review the enclosed material, and, if appropriate, indicate your concurrence in the Department's findings. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,



Rebecca Shepherd  
Chief Archaeologist

RES:res  
Enclosures: Cultural resources survey report

I (~~do not~~) concur in the above determination.

Signed: Mary Sheu Date: 12/6/24

ec: Shane Belcher, FHWA  
Russell Townsend, Eastern Band of Cherokee Indians  
Stephen J. Yerka, Eastern Band of Cherokee Indians



Elizabeth Toombs, Cherokee Nation  
LeeAnne Wendt, Muscogee (Creek) Nation  
Whitney Warrior, United Keetoowah

cc: Wenonah G. Haire, Catawba Nation  
Keith Derting, SCIAA

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CULTURAL RESOURCES FIELD REPORT  
SCDOT ENVIRONMENTAL SECTION



**TITLE:** Cultural Resources Survey of the S-147 over Reedy River Emergency Bridge Replacement Project

**DATE OF RESEARCH:** November 7, 2024

**ARCHAEOLOGIST:** Rebecca Shepherd, Tracy Martin

**COUNTY:** Oconee

**ARCHITECTURAL HISTORIAN:** David Kelly

**PIN:** P044048

**PROJECT:** S-147 over Reedy River Emergency Bridge Replacement

**DESCRIPTION:** The South Carolina Department of Transportation (SCDOT) proposes the emergency replacement of the S-147 (W. Washington Street) Bridge over the Reedy River (**Figure 1**). The existing S-147 bridge was irreparably damaged due to flooding associated with Hurricane Helene. Storm waters and debris undermined and pushed an interior bent out of alignment which caused a bridge deck joint to open up beyond its limits. SCDOT proposes to replace the bridge and approaches. Additional repairs would include installing new guardrail and reestablishing vegetation. The bridge will be replaced on existing alignment. The project area is defined as the area within 75 feet to the north and 85 feet to the south of the proposed roadway centerline, and extending 400 feet from the western end of the bridge and 250 feet from the eastern end of the bridge. The archaeological survey covered the entire project area, while the architectural survey examined the Area of Potential Effects (APE), which includes a 300-foot viewshed buffer around the project area.

**LOCATION:** The project area is located in central Greenville County within an industrial and residential area approximately 1.5 miles northwest of the City of Greenville.

**USGS QUADRANGLE:** Greenville, SC

**DATE:** 1983

**SCALE:** 7.5

**UTM: DATUM:** NAD83

**ZONE:** 17N

**PROJECT CENTERPOINT: EASTING:** 370211 **NORTHING:** 3858784

**ENVIRONMENTAL SETTING:** The project is situated in the Piedmont physiographic region. Elevations within the project area range from 900 to 950 feet above mean sea level (amsl). The eastern landscape of the project area is primarily characterized as industrial and contains railroad lines and industrial facilities. The western half of the project area was historically industrial, but now is moderately wooded.

**NEAREST RIVER/STREAM AND DISTANCE:** The Reedy River bisects the project area. The Reedy River is a tributary of the Saluda River and flows southward through Greenville and Laurens County to Lake Greenwood. Brushy Creek, tributary of the Reedy River is located northwest of the project area and an unnamed tributary of the Reedy River flows just southeast of the bridge to be replaced.

**SOIL TYPE:** The project area is comprised of two soil types. Cecil-Urban Land Complex covers 98 percent of the project area. This soil type is comprised of 51 percent Cecil soils and 49 percent Urban Land, indicating a high degree of past disturbance from urban development. The remaining two percent of soils in the project area are Chewacla soils, which are classified as somewhat poorly drained. (**Figure 2**).

**REFERENCE FOR SOILS INFORMATION:**

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

**GROUND SURFACE VISIBILITY:** 1-25% X 26-50% \_\_\_ 51-75% \_\_\_ 76-100% \_\_\_

**CURRENT VEGETATION:** The project area is situated in a historically industrial area and is not heavily vegetated, particularly on the eastern side of the Reedy River bridge. The Reedy River parallels the northwestern side of S-147 through the western half of the project area and then turns southward, crossing under S-147. A small wooded area of new growth hardwoods with a moderately dense understory is located along the northwestern quadrant of the project area, surrounding the Reedy River. Scattered hardwoods are present on the southern side of S-147, particularly around the river and associated wetlands. (Figures 3-6).

**BACKGROUND INVESTIGATION:** Background research was conducted prior to the field investigation using the online ArchSite GIS database maintained by the South Carolina Institute of Archaeology and Anthropology (SCIAA) and the South Carolina Department of Archives and History (SCDAH). Three previous cultural resources surveys have occurred within 0.5 miles of the project area (Figure 7). In 1993 Brockington and Associates conducted a cultural resources survey for the widening of SC 183, located north of the current project area (Butler, et al. 1993). In 2002 SCDOT conducted a cultural resources survey of the replacement of the S-147 bridge over the CSX Railroad (Roberts 2002). This survey area covers the eastern half of the current survey area. Finally, the *Greenville County, South Carolina Historic Resources Survey* (Owens, et al. 2013) included the current project area and search radius.

Thirty-four previously recorded resources are located within the 0.5-mile background search radius (Table 1; Figure 7). Of these, four are located within the current project area, including SHPO Site Nos. 1260.01-1260.03 and SHPO Site No. 1261. These four resources were revisited during the current survey and are discussed in more detail in the results section below.

**Table 1. Previously Recorded Resources within 0.5-mile of the Project Area**

SHPO Site No.	Resource Name/Type	Date	NRHP Eligibility	Source
	F.W. Poe Manufacturing Company Store and Office Building	c. 1900	Eligible	Owens, et al. 2013
	Monaghan Mill	1900	Listed	NRHP Nomination Form
	Woodside Cotton Mill Village	1902	Listed	NRHP Nomination Form
0092	Double pen house	c. 1920	Not Eligible	Butler, et al. 1993
0093	Double pen house	c. 1920	Not Eligible	Butler, et al. 1993
0094	Double pen house	c. 1920	Not Eligible	Butler, et al. 1993

0095	Double pen house	c. 1920	Not Eligible	Butler, et al. 1993
0096	Double pen house	c. 1920	Not Eligible	Butler, et al. 1993
0097	Double pen house	c. 1920	Not Eligible	Butler, et al. 1993
0098	Craftsman bungalow	c. 1930	Not Eligible	Butler, et al. 1993
0099	Queen Anne cottage	c. 1910	Not Eligible	Butler, et al. 1993
0100	Craftsman bungalow	c. 1930	Not Eligible	Butler, et al. 1993
0101	Craftsman bungalow	c. 1925	Not Eligible	Butler, et al. 1993
0901	Railroad depot	c. 1920	Not Eligible	Butler, et al. 1993
1260.01	Piedmont & Northern RR River Junction Machine Shop	1911-1912; c1950	Eligible	Roberts 2002
1260.02	Piedmont & Northern RR River Junction Car Barn	1911-1912; c1975	Eligible	Roberts 2002
1260.03	Piedmont & Northern RR River Junction Substation	1911-1912	Eligible	Roberts 2002
1261	S-147 Bridge over CSX Railroad (Structure #237014700300)	1950	Not Eligible	Roberts 2002
3743	Unidentified House	c. 1910	Not Eligible	Owens, et al. 2013
3745	Unidentified House	c. 1910	Not Eligible	Owens, et al. 2013
3747	Unidentified House	c. 1910	Not Eligible	Owens, et al. 2013
3749	Unidentified House	c. 1910	Not Eligible	Owens, et al. 2013
3751	Unidentified House	c. 1910	Not Eligible	Owens, et al. 2013
3753	Unidentified House	c. 1905	Not Eligible	Owens, et al. 2013
3755	Unidentified House	c. 1910	Not Eligible	Owens, et al. 2013
3785	Unidentified House	c. 1900	Not Eligible	Owens, et al. 2013
3787	Unidentified House	Early 20th Cent	Not Eligible	Owens, et al. 2013
3789	Unidentified House	c. 1940	Not Eligible	Owens, et al. 2013
3791	Unidentified House	c. 1940	Not Eligible	Owens, et al. 2013
3793	Unidentified House	c. 1940	Not Eligible	Owens, et al. 2013

3795	Unidentified House	c. 1940	Not Eligible	Owens, et al. 2013
3797	F. W. Poe Manufacturing Company General Office	Early 20 <sup>th</sup> Century	Not Eligible	Owens, et al. 2013
6388	Norfolk Southern Railway Office Building	1956	Not Eligible	Greenville Amtrak Station ADA Improvements, 2022
6423	Columbia Baking Company	1952	Not Eligible	PIF for Columbia Baking Company (2024)

In addition to reviewing ArchSite, historic imagery including USGS topographic maps, Sanborn Fire Insurance maps, and USGS aerial photographs showing the APE were examined. These maps and images indicate that the area surrounding the APE has been heavily industrialized since at least the early twentieth century. **Figures 7-14** show the APE on historic imagery.

**ARCHAEOLOGICAL SURVEY:** An archaeological reconnaissance of the project area was conducted on November 7, 2024. The eastern half of the project area had been previously surveyed for archaeological resources (Roberts 2002) and no additional shovel testing was conducted in this area. Survey methods consisted of pedestrian reconnaissance of the western half of the project area augmented by the excavation of shovel tests at 30 meter intervals where possible. Shovel tests were not excavated within areas with a steep slopes (15 percent or greater), wetlands, or areas with obvious ground disturbance or grading.

**ARCHAEOLOGICAL SURVEY RESULTS:** The previously unsurveyed portion of the project area was found to either contain wetlands associated with the Reedy River and nearby tributaries or exhibit signs of significant past ground disturbance from industrial activity. The northwestern side of S-147 is characterized by a slope down to the Reedy River. A culvert and buried water and sewer line is present through much of the southwestern side of S-147. Multiple active and now abandoned railroad lines cross the project area. Given these conditions, no shovel tests were excavated within the project area. No additional archaeological investigations are recommended.

**ARCHITECTURAL SURVEY:** A historic architectural survey was conducted on November 7, 2024 to identify all above-ground resources 50 years of age or older located with the project’s APE. The survey also revisited previously recorded architectural resources that were surveyed more than 15 years ago. Such resources were documented with South Carolina State Survey forms and photographed and assessed for NRHP eligibility in accordance with the *South Carolina State Historic Preservation Office (SHPO) Survey Manual: South Carolina Statewide Survey of Historic Places*.

**ARCHITECTURAL SURVEY RESULTS:** The architectural survey revisited four previously recorded resources, SHPO Site Nos. 1260.01-1260.03 and 1261, and recorded seven new resources, SHPO Site Nos. 1260.04-1260.05 and SHPO Site Nos. 6444-6447.01 (**Figure 15**). The bridge to be replaced (Asset ID: 6680) was constructed in 1975 and was not evaluated per the exemptions associated with the Federal Highway Administration’s Post-1945 Bridges Program Comment. This 4-span pre-cast concrete channel beam structure measures approximately 120 feet in length and 34 feet in width and is a common bridge type for the period. A box culvert constructed in 2005 was also not assessed.

### **SHPO Site No. 1260-1260.05 – The River Junction Shops of the Piedmont and Northern Railroad (Republic Locomotive)**

SHPO Site Nos. 1260.01-1260.03 are the three remaining buildings associated with the River Junction Shops of the Piedmont and Northern Railroad, including the River Junction Machine Shop (SHPO Site No. 1260.01), the River Junction Car Barn (SHPO Site No. 1260.02), and the River Junction Substation (1260.03). These buildings, which were constructed from 1912-1913, served as the principal maintenance shops for the South Carolina Division of the Piedmont and Northern Railway, and later the entire line. These resources were originally recorded by SCDOT in 2002 and recommended eligible for listing on the National Register of Historic Places (NRHP) under Criteria A, B, and C (Roberts 2002). A detailed history and evaluation of these resources is presented in that report and summarized here. This survey revisited the three previously recorded resources and recorded an additional two components of the River Junction Shops as subresources, SHPO Site No. 1260.04, a concrete retaining wall/possible foundation ruin and SHPO Site No. 1260.05, the railroad segments utilized by the shops. A number of modern shed storage buildings and office trailers are also located on the property, which were not recorded. This survey also proposes a National Register boundary for the entire resource (**Figure 16**). **Figures 17-18** show views of the resource as a whole.

SHPO Site No. 1260.01, the River Junction Machine Shop, was originally built as a one-story, rectangular, brick industrial building with an end to front gabled raised seam metal roof. The building was used for the construction and repair of railroad cars and locomotives. According to Roberts (2002), the northern end of the building was raised two stories in height in the early 1950s. The original one story building is comprised of brick walls with buttressing along the eastern and western sides. The walls of the extended stories are made of sheet metal. The lower 15 courses of the brick walls are red while the rest of the walls are made of light, buff, or yellow colored bricks. This two-color brick style is typical of numerous Piedmont and Northern Railway buildings (Roberts 2002). Two garage bay doors are present on the northern façade and three bays are present on the southern façade. Three sets of train tracks lead into the garage bays on the south end and two lead out of the bays on the north end (see SHPO Site No. 1260.05). Few alterations have occurred to SHPO Site No. 1260.01 since its original documentation in 2002. A modern office trailer that was once situated on the northern façade of the building has been replaced by two office trailers along the western façade. Otherwise no other changes were evident. **Figures 19-20** show the resource at the time of survey.

Situated just east of the River Junction Machine Shop is SHPO Site No. 1260.02, the River Junction Car Barn. This is a large one-story, rectangular, end to front gabled brick building with a raised seam metal roof that was used to store out of service rail cars and for additional shop work. It exhibits the same red and buff brickwork pattern as SHPO Site No. 1260.01. Metal ventilators, flues, and skylight windows are located along the ridge of the roof. Two railroad lines lead into the two garage bays on the southern end of the building, but none lead out of the northern end. No apparent alterations have occurred to SHPO Site No. 1260.02 since its original documentation. **Figures 21-22** show the resource at the time of survey.

Situated just north of the River Junction Car Barn and just south of S-147 is SHPO Site No. 1260.03, the River Junction Substation. This is a small, one-story, side gabled brick building with a raised seam metal roof that once served as one of the main power sources for the operation of the South Carolina Division of the Piedmont and Northern Railway. This building exhibits the same red and buff brickwork pattern as SHPO Site No. 1260.01 and 1260.02. Two garage bay doors are present on the western side of the building. A shed roof storage area is present on the eastern side of the building. A steel A-frame structure is located just southeast of the substation, which served as a transmission tower. No apparent alterations have occurred to SHPO Site No. 1260.03 since its original documentation. **Figures 23-24** show the resource at the time of survey.



Situated on the northern end of the River Junction shop property adjacent to the bank of an unnamed tributary to the Reedy River is SHPO Site No. 1260.04, a remnant of a concrete retaining wall and possible foundation of an original River Junction Shop building. The wall stands approximately 4 feet tall from the ground surface on the River Junction shop side of the wall. The ground surface is lower on the river bank side of the wall, where the concrete wall is almost twice as tall. The wall extends approximately 70 feet (22 meters) westward along the bank of the tributary. A modern concrete block storage building is located approximately 10 feet south of the wall. The portion of the wall closest to S-147 has been damaged and does not extend to the full height in this location. The wall turns southward at its western extent, but is only present along the ground surface in this location. The wall is situated near the former location of the River Junction Carpentry and Paint Shop, as shown on a 1927 Sanborn Fire Insurance map (**Figure 25**). Historic imagery indicates the River Junction Carpentry and Paint shop was demolished sometime post-1983. The Sanborn indicates that this building was of frame construction with metal siding and does not indicate it had a concrete foundation. However, this Sanborn also shows that the other River Junction Shop buildings are constructed of concrete, when they are constructed of brick, so the accuracy of its information can be called into question. Given this, it is unclear if the wall is a retaining wall in its own right, or related to the former shop building. Additional research would be needed to determine its original function. **Figures 26-29** show the resource at the time of survey.

The many railway lines associated with the River Junction Shops were collectively designated as SHPO Site No. 1260.05. These lines are depicted on the 1927 Sanborn and many are still visible and actively used by the facility today. All of the rail lines connect to the CSX (formerly Piedmont and Northern) mainline to the south of the River Junction shops. Three lines currently run from the mainline into the southern end of SHPO Site No. 1260.01, although historically 4 lines are shown. Two lines run out of the northern end of this building, up to just south of SHPO Site No. 1260.04. These lines historically ran into the Carpentry and Paint Shop. Two lines run from the mainline into the southern end of SHPO Site No. 1260.02. All lines consist of standard gauge metal rail set flush to the ground without the use of wooden cross ties. **Figures 30-31** show the resource at the time of survey.

The Piedmont and Northern Railway was an electric railway system created in 1914 through the merger of the Piedmont Traction Company out of North Carolina and the Greenville, Spartanburg, and Anderson Railway Company out of South Carolina. The goal of the merger was to link trolley lines in towns and cities in the piedmont region of North and South Carolina, including Anderson, Greenville, Greenwood, Spartanburg, Gastonia, and Charlotte, into an interurban rail system. The driving force behind the Piedmont and Northern Railway was wealthy tobacco magnate and industrialist, James Buchanan Duke, owner of the Southern Power and Utilities Company (later the Duke Power Company and now Duke Energy). Duke saw the railway as an opportunity to combine his power interests with his trolley systems to better facilitate industrial development in the Carolina piedmont and compete with the Southern Railroad.

In 1950 the Piedmont and Northern Railway system switched from electric to diesel locomotives. Passenger service on both the North Carolina and South Carolina division of the system discontinued in 1951 and freight became the railway's main focus. The Seaboard Coastline Railway, now known as CSX, took over the Piedmont and Northern Railway system in 1969 and still owns the track adjacent to the resources. SHPO Site No. 1260 is currently owned by Republic Locomotive, a company that builds and repairs locomotives, and the site is still utilized similarly to its historic function.

The architectural style of SHPO Site Nos. 1260.01-1260.03, with their mix of red and buff brickwork, reflect the distinctive architectural style of Piedmont and Northern buildings throughout the railway system. These buildings have seen few alterations and retain good historic integrity. SHPO Site Nos. 1260.01-1260.03 were originally recommended eligible for inclusion on the NRHP under Criterion A for

their association with the development and industrialization of the Carolina piedmont at the state and local level and association with the development of the railroad systems in general and electric railroad in particular at the national level. This report concurs with that recommendation. SHPO Site Nos. 1260.01-1260.03 was also recommended eligible for inclusion on the NRHP under Criterion B for their association with two figures important to the development and management of the Piedmont and Northern Railway, James Buchanan Duke and William States Lee. This report concurs with that recommendation. Finally, SHPO Site Nos. 1260.01-1260.03 were recommended eligible for inclusion the NRHP under Criterion C for their easily identifiable and distinctive brickwork style associated with the Piedmont and Northern Railway building. This report concurs with that recommendation.

Although the overall complex of SHPO Site No. 1260 is recommended eligible under Criteria A, B, and, C, SHPO Site Nos. 1260.4 and 1260.05 should be considered non-contributing resources and are recommended not individually eligible. SHPO Site No. 1260.04 is a wall/foundation ruin and does not retain the integrity or significance to convey its association with the Piedmont and Northern Railway on its own. SHPO Site No. 1260.05 represents a series of standard gauge railroad tracks that connect the River Junction Shop buildings to the main rail line. Although important to the function of the site as a whole, the rail lines lack the ability to individually convey the significance of the Piedmont and Northern Railway.

#### **SHPO Site No. 1261 – S-147 Bridge over CSX Railroad**

SHPO Site No. 1261 was a creosote timber multi-beam bridge constructed in 1950. The bridge was originally recorded in 2002 as part of the cultural resources survey for its replacement and recommended not eligible for inclusion on the NRHP (Roberts 2002). The original 1950 bridge was replaced with a new structure in 2005 and SHPO Site No. 1261 is no longer extant. **Figure 5** shows the resource location and new bridge at the time of survey.

#### **SHPO Site No. 6444 – S-147 Bridge over Brushy Creek**

SHPO Site No. 6444 is the S-147 (W. Washington Street) Bridge over Brushy Creek (Asset ID 290). The structure is a single-span deck arch reinforced concrete bridge that measures 40 feet in length and approximately 26 feet in width. The form liner planks used to cast the arch concrete into place have left ghost marks which are still visible. The bridge deck is flanked by a rail/parapet that has a rectangular inset “frieze” feature set into the concrete. A section of the bridge rail includes an engraving with the following manufacturer information: *Built By Carolina Concrete Co., Greensboro, N.C.; J.P. Goodwin Co. Supervisor; 19--*. The date on the engraving is eroded and difficult to read clearly. According to SCDOT bridge inventory records the bridge was constructed in 1928, however, original construction plans could not be found. Despite what is shown in the inventory, there is evidence for an earlier construction date. Greenville County records at the South Carolina Department of Archives and History show that the J.P. Goodwin mentioned on the engraving was the Greenville County supervisor responsible for approving expenditures on roads and bridges. Goodwin died in 1912, so it seems probable that construction on the bridge had to have at least begun prior to 1912. Further research is needed to confirm the actual construction date. Given the uncertainty, this report will apply the 1928 construction date noted in the SCDOT bridge inventory. The bridge, which is still in use and has not been altered over the years, retains good historical integrity. **Figures 32-34** show the resource at the time of survey.

The first reinforced concrete arch bridges in the United States were built in the 1880s and 1890s. The earliest extant reinforced concrete arch bridge in South Carolina is the 1910 South Main Street Bridge over the Reedy River in Downtown Greenville, designed by the H.S. Jordan Engineering Company of Savannah Georgia and also built by the Carolina Concrete Company of Greensboro, NC. (TransSystems

and Lichtenstein Consulting Engineers 2014: 20-21). The South Main Street Bridge is a larger and more technologically complex example of a concrete arch bridge type than SHPO Site No. 6444, which is representative of the more common uses for deck arch bridges in South Carolina. The use of arch bridges began to decline in the 1930s in favor of other concrete and steel bridge types, like the T beam, slab, and stringer, which were more cost efficient to construct. (TransSystems and Lichtenstein Consulting Engineers 2014: 22). Although once a common type, today many examples early-twentieth century deck arch bridges in South Carolina have been lost to replacement or impacted by widening, replacement of key components like railing, or other alterations. Although extant, unaltered examples of similar deck arch bridges are present in neighboring Spartanburg County, SHPO Site No. 6444 appears to be the only extant example of an unaltered deck arch bridge of this scale in Greenville County.

SHPO Site No. 6444 is an intact and notable early example of a bridge type once common in the 1910s and 1920s and the only extant example of an unaltered standard deck arch bridge in Greenville County. Therefore, SHPO Site No. 6444 is recommended eligible for the NRHP under Criterion C for significance in engineering design at the local level. The bridge was constructed by the Carolina Concrete Company under the supervision of Greenville County Supervisor J.P. Goodwin, however Goodwin or individuals associated with the Carolina Concrete Company are not known to be significant to the development of early twentieth century bridge design in South Carolina. Therefore, SHPO Site No. 6444 is recommended as not eligible under Criterion B. The S-147 over Brushy Creek crossing does not hold great significance to the overall transportation network or industrial development of Greenville County and SHPO Site No. 6444 is recommended not eligible for the NRHP under Criterion A.

#### **SHPO Site No. 6445 – Railroad Segment: remnant/ruin**

SHPO Site No. is an abandoned remnant of railroad spur segment and trestle bridge located within the wooded area north of S-147 and south of the Water Tower Apartment complex. The spur line is not present on the 1935 USGS Greenville topographic quadrangle, but is mapped on the 1938 Greenville quadrangle, therefore a construction date of circa-1937 was applied. According to historic imagery the railroad segment connected the Monaghan Textile Mill (located west of the APE) to the Norfolk-Southern Railroad mainline (located east of the APE) from approximately 1937 through the 1970s. The 1983 Greenville quadrangle indicates that by then the segment had been rerouted to run from the Norfolk-Southern mainline to another industrial building east of Monaghan Mill. It is unclear when the segment fell out of use and was cut off from the mainline, but only a portion of the segment is intact today.

Currently an extant portion of this segment runs westward from the entrance road of the Water Tower Apartment complex to the intersection of S-147 with the Swamp Rabbit Trail. The segment was cut off during construction of the Swamp Rabbit trail, but additional tracks associated with the railroad segment were observed on the northern side of S-147 in the small wooded area just east of the Swamp Rabbit Trail and on the southern side of S-147 adjacent to Monaghan Mill. The segment is a single track system of standard gauge. The track crosses the Reedy River with a wooden trestle bridge.

The integrity of the railroad segment has been significantly affected by neglect and decay. The eastern and western most portions of the segment now consist of only the metal tracks. The wooden crossties have begun to decay and in many locations trees grow between the tracks. The wooden trestle bridge is more intact and is still standing with intact track and crossties in most locations. However, sections of the bridge have been damaged by tree falls and the section closest to S-147, near SHPO Site No. 6444, has begun to collapse and tilt southward. **Figures 35-39** show the resource at the time of survey.

SHPO Site No. 6445 is an abandoned railroad segment remnant associated with both the Monaghan Mill and Norfolk Southern Railroad. Although both of the associated resources were important to local

industry and transportation, the poorly preserved segment of this railroad spur within the APE cannot convey this significance. The railroad segment is not known to be associated with any significant person or event and does not possess distinctive characteristics of its period or method of construction and does not possess significance for its engineering or materials. Therefore, SHPO Site No. 6445 is recommend not eligible for the NRHP under any criteria.

### **SHPO Site No. 6446 – CSX Railroad Segment**

SHPO Site No. 6446 is a segment of the CSX Railroad that runs beneath S-147. This railroad segment is part of a longer CSX line that runs relatively north-northeast, connecting the town of Belton to Greenville and Greenville to Spartanburg. The railroad was constructed circa-1912 by the Greenville, Spartanburg, and Anderson Railway Company, the South Carolina Division of what would become the Piedmont and Northern Railway (American-Rails.com; Roberts 2002). The Piedmont and Northern Railway was an interurban electric rail system founded by James Buchanan Duke that operated throughout the piedmont region of North and South Carolina. Although the Piedmont and Northern Railway operated as both a passenger and freight system, its greater emphasis was on freight and passenger service on the line was discontinued by 1951. In 1969 the Piedmont and Northern Railway lines were sold to the Seaboard Coastline Railway (now CSX) which integrated the lines into its system (American-Rails.com; Roberts 2002).

In this location SHPO Site No. 6446 is comprised of a three track system of standard gauge. The primary materials which comprise the resource, ballast, crossties, and tracks, have been replaced over time, however the general alignment of the rail bed remains unaltered. The railroad line traverses the APE in a northeasterly direction, passing beneath S-147. SHPO Site No. 1260.05, the railroad spur segment associated with the River Junction Shops, connects to this CSX line approximately 180 meters southwest of S-147. **Figures 40-41** show the resource at the time of survey.

SHPO Site No. 6446 is a segment of the CSX Railroad, formerly used as the Piedmont and Northern Railway. The Piedmont and Northern Railway was associated with the development and industrialization of the South Carolina piedmont region at the state and local level and at the national level was associated with the development of the railroad systems in general and electric railroad in particular. The Piedmont and Northern Railroad as also associated with the historically significant industrialist, James Buchanan Duke. Given this, it is recommended that the larger Piedmont and Northern Railway line system be further researched and evaluated as whole under Criterion A and B. However, this particular segment of railroad within the APE in isolation lacks significance. Therefore, SHPO Site No. 6446 is recommend not eligible for inclusion on the NRHP under Criteria A and B. The railroad segment is a standard gauge three tack system and does not possess distinctive characteristics of its period or method of construction and does not possess significance for its engineering materials. Therefore, SHPO Site No. 6446 is recommended not eligible for inclusion on the NRHP under Criterion C.

### **SHPO Site No. 6447 and 6447.01 – 1325 Hampton Avenue Extension (Norris Metal and Iron, Inc.)**

SHPO Site No. 6447 is the circa 1920 industrial complex located at 1325 Hampton Avenue Extension. The 1927 Sanborn Fire Insurance map indicates that this complex was originally the site of the McCarter Textile Products Company-Rag Balling Division (see **Figure 25**), but it is currently operated as a metal scrap yard by Norris Metal and Iron, Inc.

The complex contains two primary large warehouse-type buildings. The northernmost building, SHPO Site No. 6447, is the larger building and has a primary core structure that is gabled-end brick with a standing seam metal roof (**Figures 42-43**). This primary core has been altered with several additions—the majority of which could not be seen from the public right-of-way but are evident in aerial photographic

images. The building now has several wings, all of which appear to have standing seam metal roofs. The largest addition is visible from the public right-of-way and is a shed roofed concrete block structure with large garage bays. Portions of the building are clad in vinyl siding. Examination of historic aerial photography and Sanborn Fire Insurance maps indicate that the building's footprint has expanded and reduced over time in such a manner that it is difficult to discern what components of the greater building form/envelope are recent additions, are historic additions, or are original pieces either orphaned or reattached during the building's evolution. This building is not known to be associated with any significant person or event and is not architecturally significant (and has been altered from its original form and appearance).

The southernmost of the buildings, SHPO Site No. 6447.01, is a concrete block building with a gable end and standing seam roof (**Figure 44**). The roof itself is double sloped, with a section of steeper and a section of flatter pitch. There is no fenestration in the structure other than the garage-door bays facing northward. This building is not known to be associated with any significant person or event and is not architecturally significant.

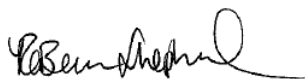
SHPO Site No. 6447 and 6447.01 are not known to be associated with any significant persons or events and are not architecturally significant. The resource's importance within the greater history of the textile industry in South Carolina is of no particular significance and its appearance does not convey as a traditional textile mill facility. The complex is recommended not eligible for the NRHP under all criteria.

#### **REMARKS AND RECOMMENDATIONS:**

The cultural resources survey resulted in the identification of no archaeological sites. Four previously recorded architectural resources were revisited (SHPO Site Nos. 1260.01-1260.3 and 1261) and seven new resources were recorded (SHPO Site Nos. 1260.04-1260.05 and 6444-6447.01). SHPO Site Nos. 1260.01-1260.3, the extant buildings of the River Junction Shops of the Piedmont and Northern Railway, were originally recommended eligible for inclusion on the NRHP under Criteria A, B, and C and this report concurs with that recommendation. Two new sub-resources at SHPO Site No. 1260 were recorded, a retaining wall/foundation remnant (SHPO Site No. 1260.04) and the rail line segments utilized by the shops (SHPO Site No. 1260.05). Both of the resources are recommended as not eligible and do not contribute to the overall eligibility of the resource. SHPO Site No. 1261, the 1950 S-147 bridge over CSX Railroad, was found to be no longer extant. Of the newly recorded resources SHPO Site Nos. 6445-6447.01 are recommended not eligible for inclusion on the NRHP. SHPO Site No. 6444 is a 1928 concrete deck arch bridge over Brushy Creek. It is recommended eligible for inclusion on the NRHP under Criterion C at the local level.

SHPO Site No. 6444 is located well outside of the project's area of direct effects and will not be directly impacted by the undertaking. SHPO Site No. 1260 is located within the project area, however no impacts to the contributing buildings will occur and no new right-of-way (ROW) will be obtained from the resource's proposed NRHP boundary. The only work anticipated within the resource's boundary is repaving work needed to tie the facility's existing asphalt driveway to the improved roadway. This work will be completed with a ROW permissions agreement instead of purchasing any new property. Additionally, the S-147 bridge over the Reedy River will be replaced on alignment and the replacement bridge will be visually similar to the existing one. No visual impacts are expected to either of the eligible resources or their historic settings. Given this, no historic properties will be affected by the proposed undertaking. No additional cultural resources investigations are recommended.

**SIGNATURE:**



**DATE:** 12-05-2024

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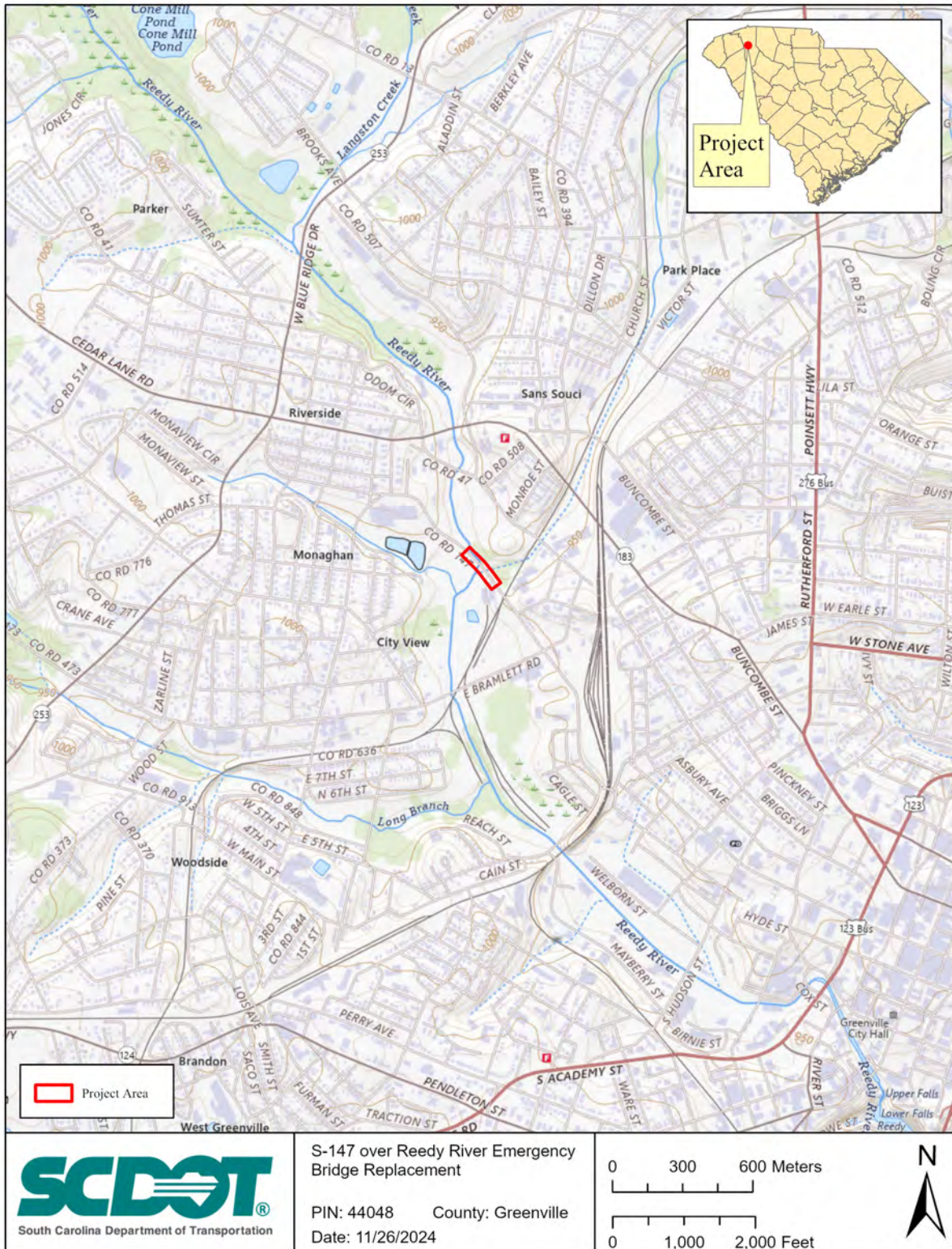


Figure 1. Project Location





Figure 2. Soils Mapped in the Project Area





Figure 3. View of Project Area, looking southeast toward the bridge



Figure 4. View of Project Area, looking northwest toward the bridge





Figure 5. View of Project Area, looking southeast from bridge



Figure 6. View of Project Area, looking north toward the bridge



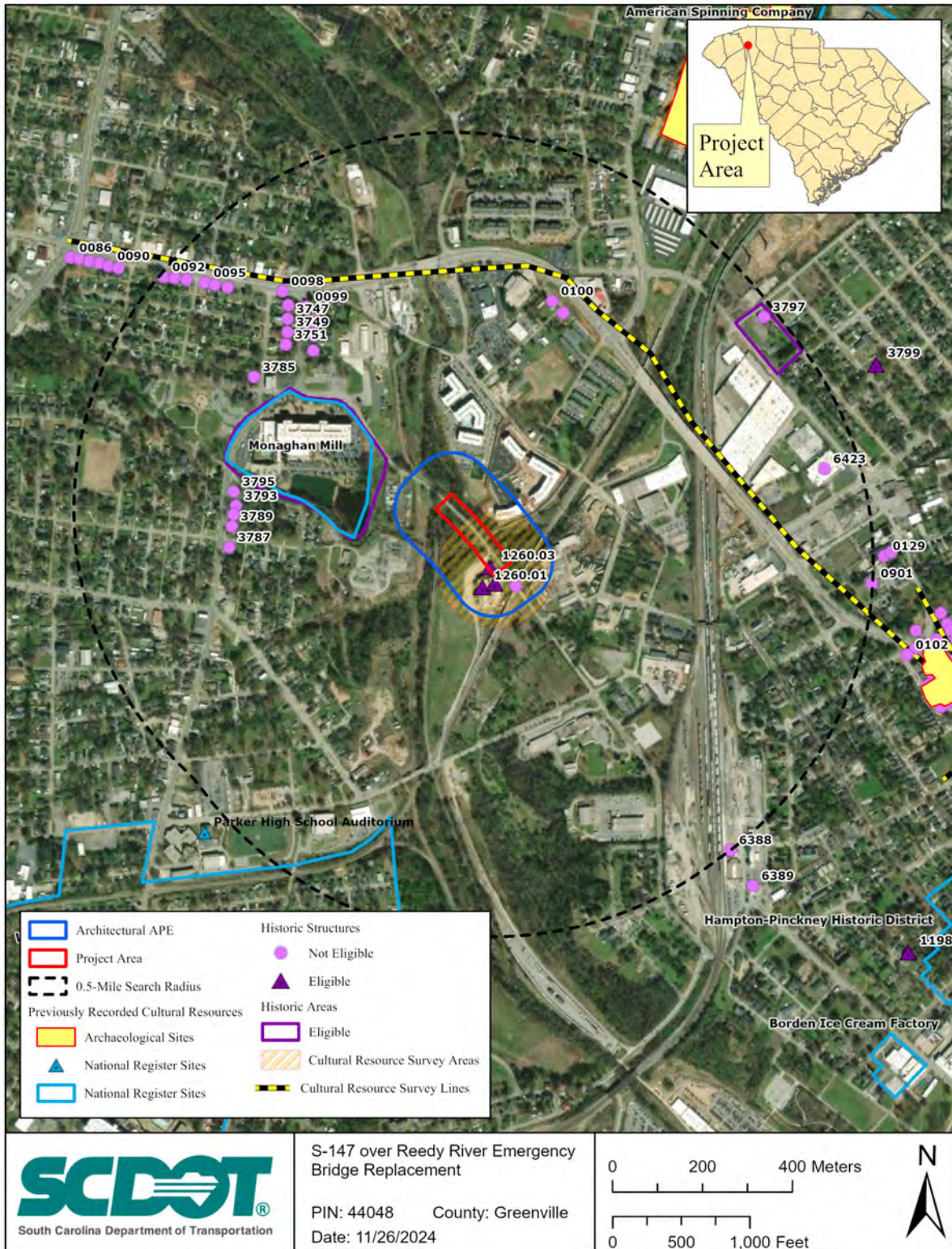


Figure 7. Previously Recorded Resources within 0.5 miles of the Project Area



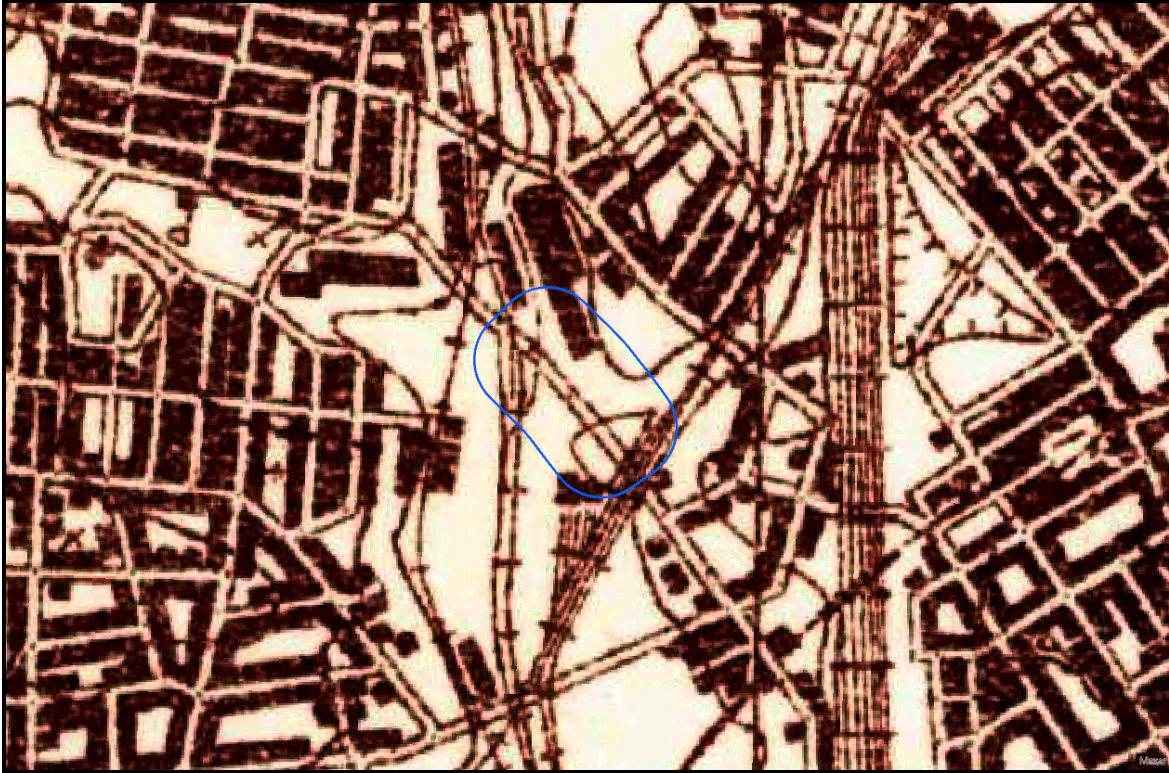


Figure 8. APE (in blue) on the 1935 Greenville USGS Topographic Quadrangle

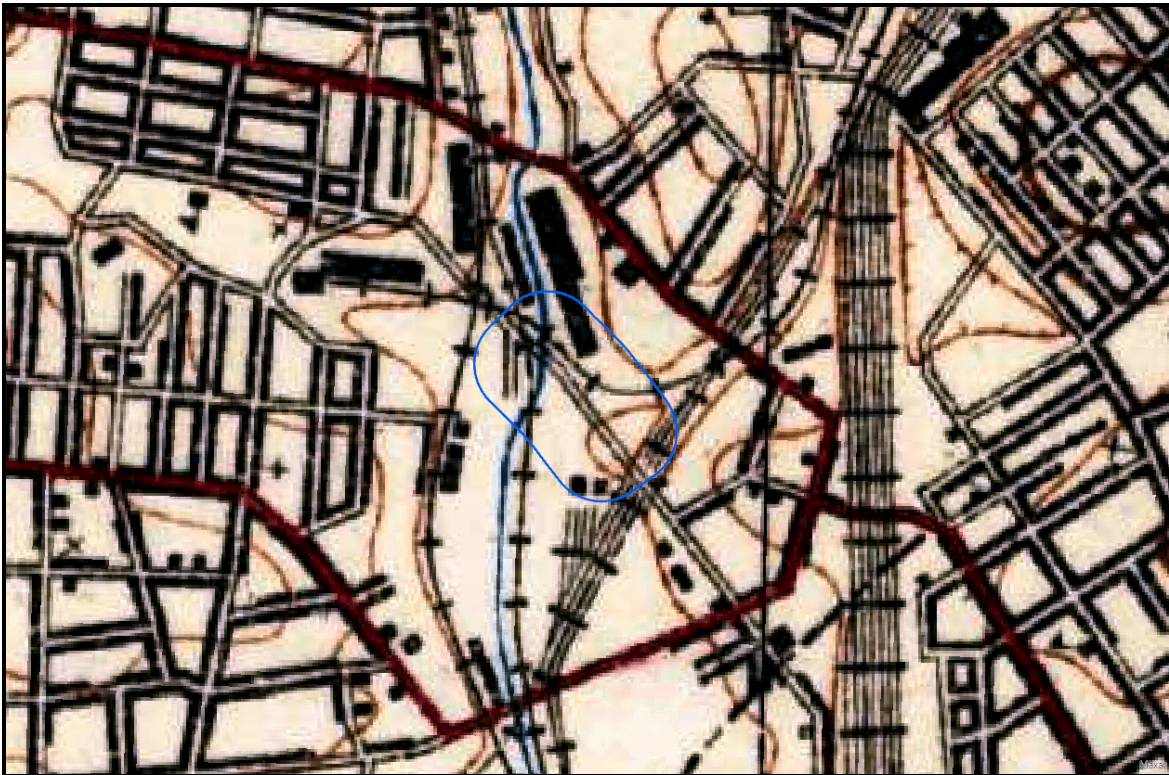


Figure 9. APE (in blue) on the 1938 Greenville USGS Topographic Quadrangle



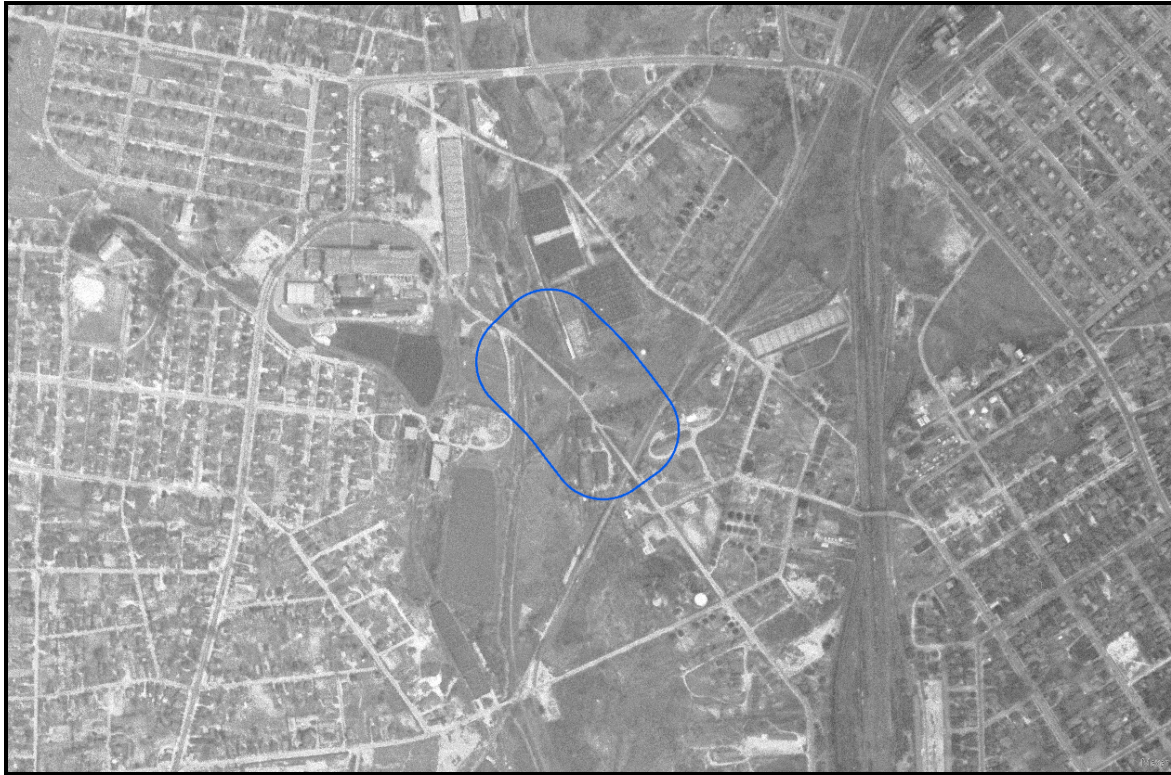


Figure 10. APE (in blue) on a 1948 USGS Aerial Photograph

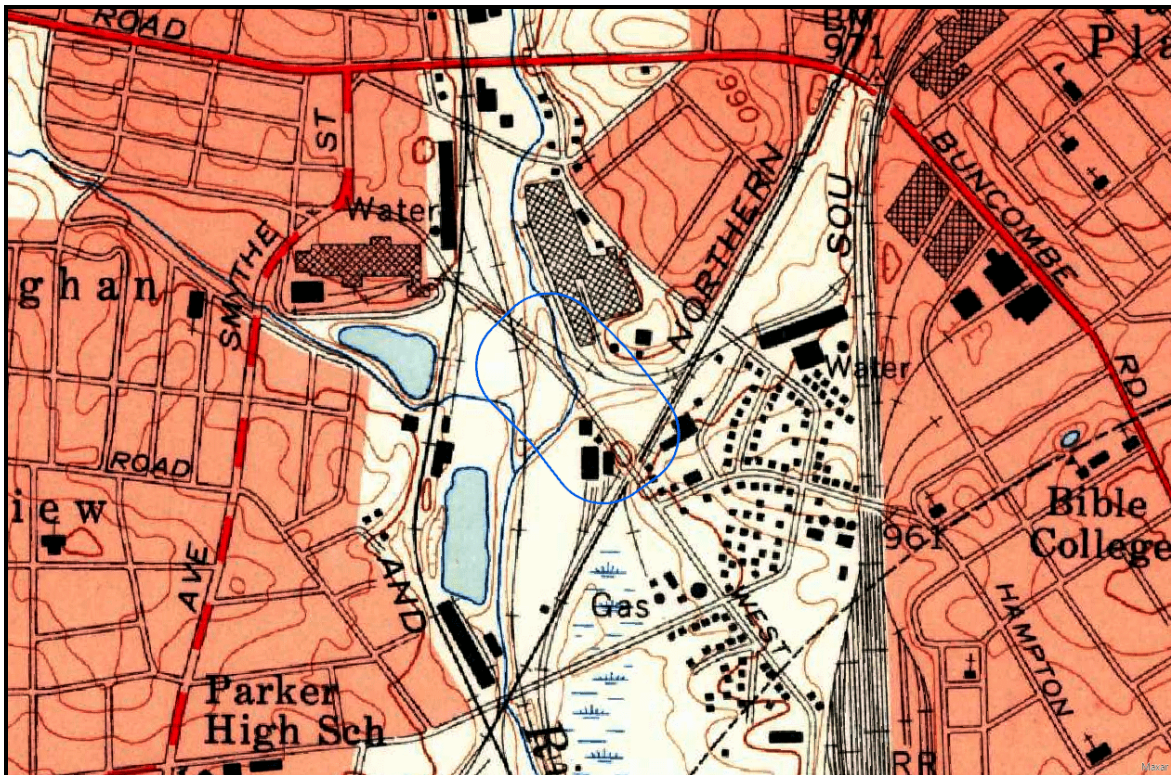


Figure 11. APE (in blue) on the 1957 Greenville USGS Topographic Quadrangle



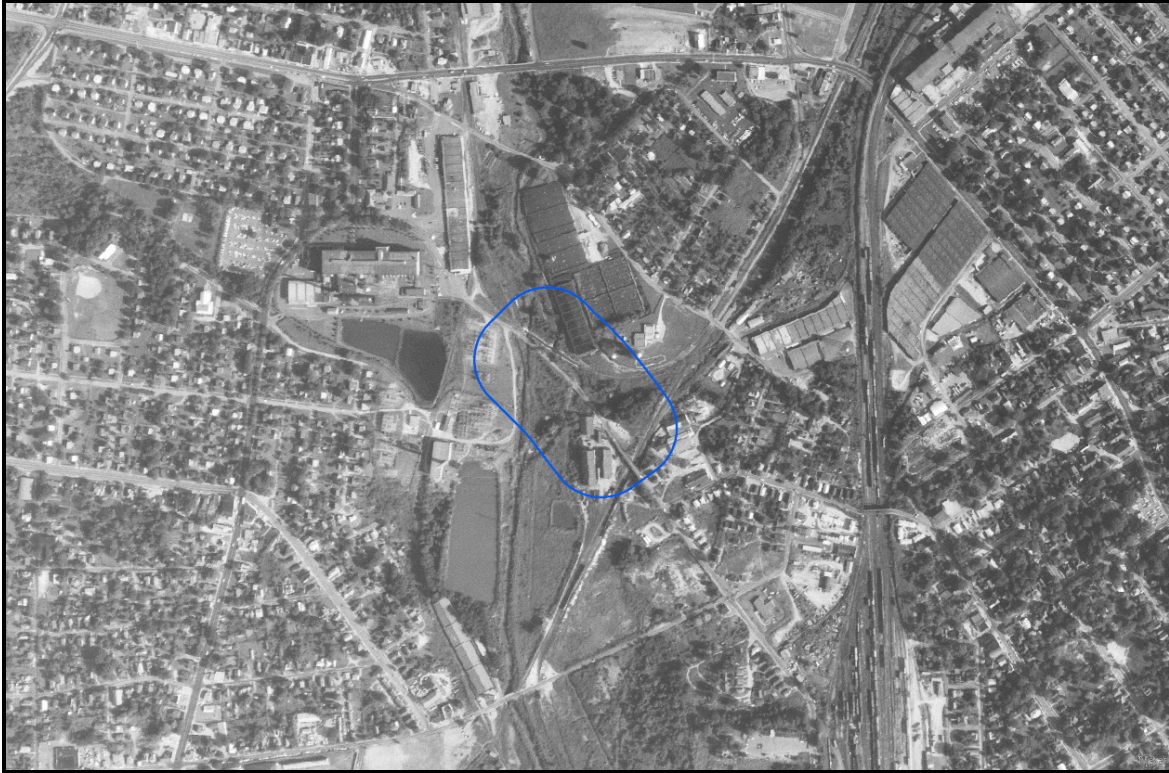


Figure 12. APE (in blue) on a 1964 USGS Aerial Photograph

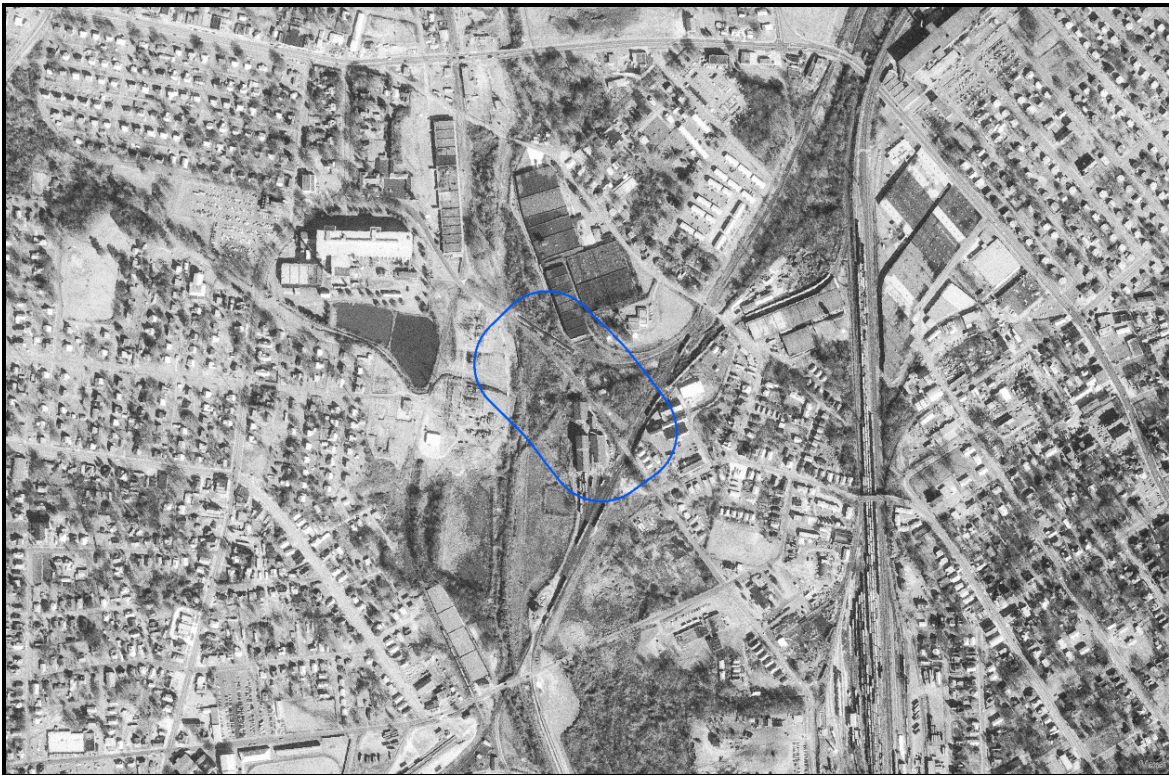


Figure 13. APE (in blue) on a 1976 USGS Aerial Photograph





Figure 14. APE (in blue) on a 1983 Grenville USGS Topographic Quadrangle



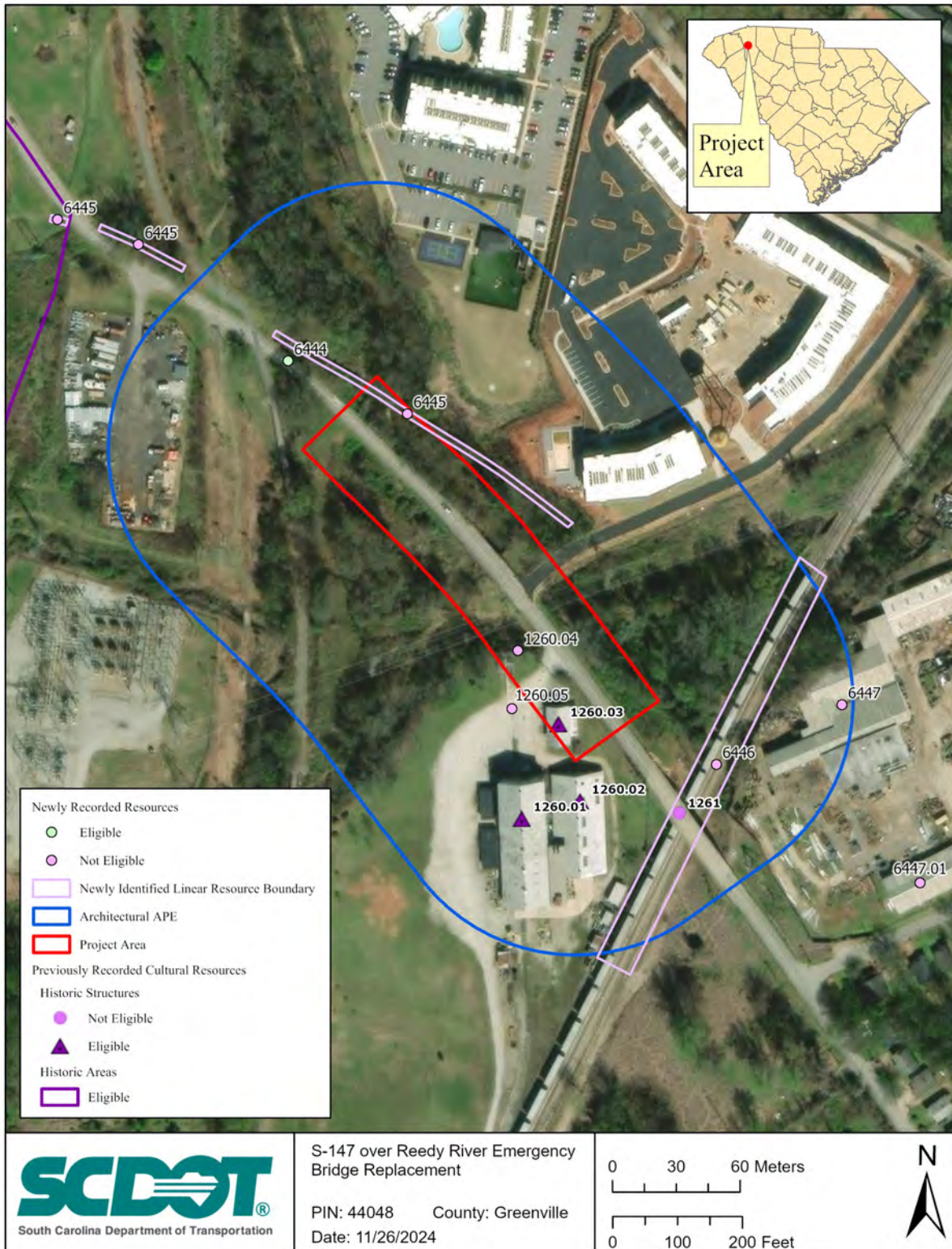


Figure 15. Revisited and Newly Recorded Resources in the APE





Figure 16. Proposed NRHP Boundary for SHPO Site No. 1260





Figure 17. SHPO Site No. 1260, looking east



Figure 18. SHPO Site No. 1260 looking west





Figure 19. SHPO Site No. 1260.01, looking south



Figure 20. SHPO Site No. 1260.01, looking east



Figure 21. SHPO Site No. 1260.02, looking southeast



Figure 22. SHPO Site No. 1260.02, looking west





Figure 23. SHPO Site No. 1260.03, looking west



Figure 24. SHPO Site No. 1260.03, looking south





Figure 25. 1920/1961 Sanborn Fire Insurance Map showing SHPO Site Nos. 1260 and 6447



Figure 26. SHPO Site No. 1260.04, looking northwest





Figure 27. SHPO Site No. 1260.04, looking east



Figure 28. SHPO Site No. 1260.04, looking northeast





Figure 29. SHPO Site No. 1260.04, looking southwest



Figure 30. SHPO Site No. 1260.05, track between 1260.01 and 1260.04, looking southwest





Figure 31. SHPO Site No. 1260.05, tracks connecting to CSX Railroad, looking southwest



Figure 32. SHPO Site No. 6444, looking northwest





Figure 33. SHPO Site No. 6444, looking southeast



Figure 34. SHPO Site No. 6444, plaque detail





Figure 35. SHPO Site No. 6445, looking southeast from SHPO Site No. 6444



Figure 36. SHPO Site No. 6445, trestle bridge approach, looking northwest from Water Tower Apartments





**Figure 37. SHPO Site No. 6445, trestle bridge over Reedy River, looking northwest from Water Tower Apartments**



**Figure 38. SHPO Site No. 6445, rail remnants on either side of S-147, looking northwest from Swamp Rabbit Trail toward Monaghan Mill**





Figure 39. SHPO Site No. 6445, rail remnant, looking southeast toward Water Tower Apartments entrance road



Figure 40. SHPO Site No. 6446, looking east from S-147 over CSX Railroad bridge





Figure 41. SHPO Site No. 6446, looking west from S-147 over CSX Railroad bridge



Figure 42. SHPO Site No. 6447, looking southwest





Figure 43. SHPO Site No. 6447, looking west



Figure 44. SHPO Site No. 6447.01, looking southwest



## Biological Assessment Report

Project Title: S-147 over the Reedy River

County: Greenville

SCDOT PIN:

Date: 11/27/2024

Prepared By: Erin Jenkins *Erin Jenkins*

Pursuant to Section 7 of the Endangered Species Act a field survey was conducted within the project corridor. The project was also entered into the USFWS Information for Planning Consultation (IPaC) tool. A copy of the official species list letter from IPaC is included in Appendix A. The following list of threatened (T) and endangered (E) species was evaluated:

### Description

The project involves the replacement of the S-147 over the Reedy River in Greenville County, South Carolina. The existing bridge was damaged during hurricane Helene and is closed to traffic. The project study area (PSA) includes waters of the Reedy River and approximately 2 acres of kudzu and cleared roadside. The bridge will be replaced on existing alignment and will involve some minor clearing and in-water work for construction access. The area is highly urban within close proximity to an existing railroad and train ayrd.

### Species List

Species	Federal Protection Status	Effect Determination
Gray bat ( <i>Myotis grisescens</i> )	Endangered	NE
Tricolored bat ( <i>Perimyotis subflavus</i> )	Endangered*	NE
Bog turtle ( <i>Glyptemys muhlenbergii</i> )	Threatened	NE
Dwarf flowered heartleaf ( <i>Hexastylis naniflora</i> )	Threatened	NE
Bunched arrowhead ( <i>Sagittaria fasciculata</i> )	Endangered	NE

Mountain sweet pitcher-plant ( <i>Sarracenia rubra ssp.jonesii</i> )	Endangered	NE
Small whorled pogonia ( <i>Isotria medeoloides</i> )	Threatened	NE
Swamp pink ( <i>Helonias bullata</i> )	Threatened	NE
White fringeless orchid ( <i>Platanthera integrilabia</i> )	Threatened	NE
Rock gnome lichen ( <i>gymnoderia lineare</i> )	Endangered	NE

\*Tricolored bat was proposed as endangered in September 2022. The effect determination will be updated when the listing becomes final.

### **Plant Species**

There are seven species of plants on the threatened or endangered species list in Greenville County. There is no suitable habitat in the PSA for these species and there are no known occurrences in the vicinity of the PSA according to the SCDNR Natural Heritage Viewer. There were also no observations of the species during the field review, the project will have no effect on these plant species.

### **Reptiles**

The bog turtle is a threatened species that is found in Greenville County. These turtles occupy shallow wetland habitats. The species is semi-aquatic and is sometimes found on land or vegetation above the water. The flowing river habitat of the Reedy River is not habitat for the bog turtle and there are no wetlands in or near the PSA. Due to lack of suitable habitat the project will have no effect on the bog turtle.

### **Mammals**

The gray bat and the tricolored bat are found within Greenville County and there is no suitable habitat within the project PSA. The PSA is highly urban within close proximity to a railroad and train yard. No bats or evidence of bats were found during the field review.

### **Results**

The impacts of the project will be minimal and will have no effect on the dwarf flowered heartleaf, bunched arrowhead, mountain sweet pitcher-plant, small whorled pogonia, swamp pink, white fringeless orchid, rock gnome lichen, or the bog turtle. The project will have no effect on the tricolored bat and the gray bat.

## **Appendix A – Agency Correspondence**





# 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:

Project Code: 2025-0025047

Project Name: S-147 over Reedy River

11/27/2024 14:34:49 UTC

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: 2025-0025047  
Project Name: S-147 over Reedy River  
Project Type: Bridge - Replacement Project  
Description: emergency bridge repair Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.8652465,-82.41997863892207,14z>



Counties: Greenville County, South Carolina

## ENDANGERED SPECIES ACT SPECIES

There is a total of 11 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 Fisheries<sup>1</sup>, 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.

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<sup>1</sup>. [NOAA Fisheries](https://www.noaa.gov/), 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

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Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6329">https://ecos.fws.gov/ecp/species/6329</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

## REPTILES

### NAME

### STATUS

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Bog Turtle <i>Glyptemys muhlenbergii</i> Population: U.S.A. (GA, NC, SC, TN, VA) No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6962">https://ecos.fws.gov/ecp/species/6962</a>	Similarity of Appearance (Threatened)
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## INSECTS

### NAME

### STATUS

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Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate
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## FLOWERING PLANTS

### NAME

### STATUS

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Bunched Arrowhead <i>Sagittaria fasciculata</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1720">https://ecos.fws.gov/ecp/species/1720</a>	Endangered
Dwarf-flowered Heartleaf <i>Hexastylis naniflora</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2458">https://ecos.fws.gov/ecp/species/2458</a>	Threatened
Mountain Sweet Pitcher-plant <i>Sarracenia rubra</i> ssp. <i>jonesii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4283">https://ecos.fws.gov/ecp/species/4283</a>	Endangered
Small Whorled Pogonia <i>Isotria medeoloides</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1890">https://ecos.fws.gov/ecp/species/1890</a>	Threatened
Swamp Pink <i>Helonias bullata</i> Population: No critical habitat has been designated for this species.	Threatened



Species profile: <https://ecos.fws.gov/ecp/species/4333>

## NAME

## STATUS

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White Fringeless Orchid *Platanthera integrilabia*

Threatened

Population:

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/1889>

## LICHENS

## NAME

## STATUS

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Rock Gnome Lichen *Gymnoderma lineare*

Endangered

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/3933>

## 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<sup>2</sup> and the Migratory Bird Treaty Act<sup>3</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>4</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

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<sup>2</sup> . The [Bald and Golden Eagle Protection Act](#) of 1940.

<sup>3</sup> . The [Migratory Birds Treaty Act](#) of 1918.

<sup>4</sup> . 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

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
Bald Eagle <i>Haliaeetus leucocephalus</i>	Breeds Sep 1 to Jul 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	

## 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 (|)

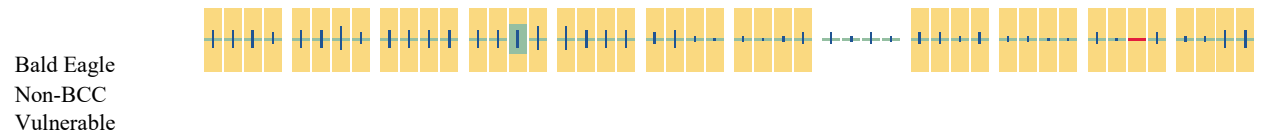
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

### No Data ( )

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

■ probability of presence   ■ breeding season   | survey effort   ) no data

## SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEPOCT NOV DEC



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 conservation 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>

## MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

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	SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	BREEDING Breeds Sep 1 to Jul 31 because
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9406">https://ecos.fws.gov/ecp/species/9406</a>	BREEDING Breeds Mar 15 to Aug 25
Chuck-will's-widow <i>Antrostomus carolinensis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9604">https://ecos.fws.gov/ecp/species/9604</a>	BREEDING Breeds May 10 to Jul 10
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10678">https://ecos.fws.gov/ecp/species/10678</a>	BREEDING Breeds May 1 to Aug 20

Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8329">https://ecos.fws.gov/ecp/species/8329</a>	Breeds Jun 1 to Aug 20
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9439">https://ecos.fws.gov/ecp/species/9439</a>	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9398">https://ecos.fws.gov/ecp/species/9398</a>	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9478">https://ecos.fws.gov/ecp/species/9478</a>	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9431">https://ecos.fws.gov/ecp/species/9431</a>	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 (■)

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.

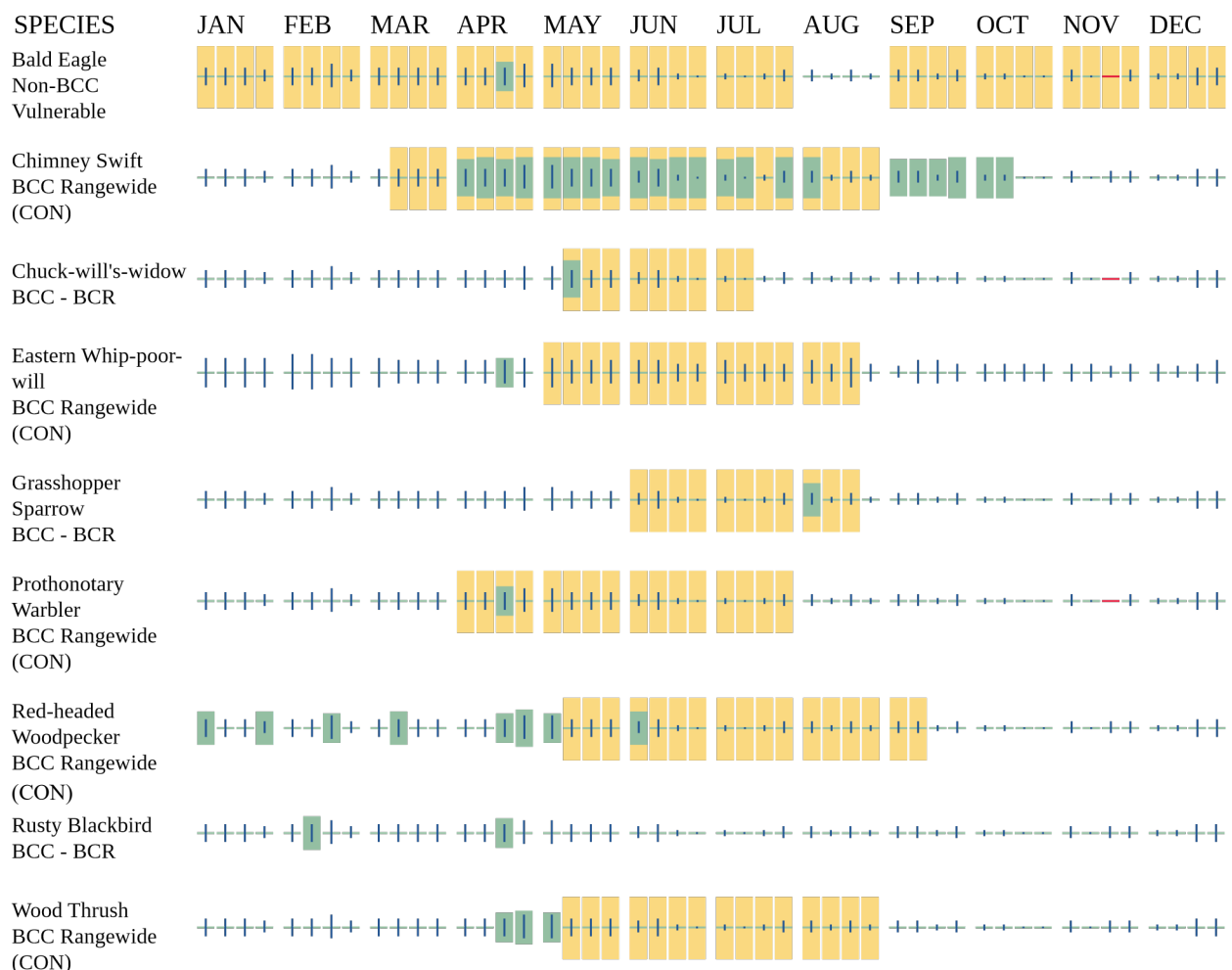
### No Data ( )

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

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■ probability of presence   ■ breeding season   | survey effort   no data





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 conservation 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>

## 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.

- R4SBC

## IPAC USER CONTACT INFORMATION

Agency: South Carolina Department of Transportation  
Name: Erin Jenkins  
Address: 955 Park St  
City: Columbia  
State: SC  
Zip: 29201  
Email: [jenkinsen@scdot.org](mailto:jenkinsen@scdot.org)  
Phone: 8037375812



# PERMIT DETERMINATION

Date:

Project ID:

From: Caycee Cleaver

Company: SCDOT

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

Permit Manager: Will McGoldrick - Alternative Delivery Coordinator

Project Name: S-23-147 Bridge Replacement over Reedy River

County:

(Optional) Structure #: 6680

## 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, Grove Creek

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: 2024.12.09 11:44:12 -05'00'

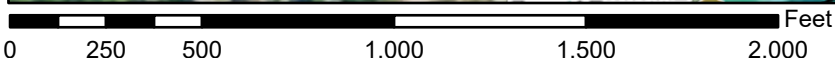
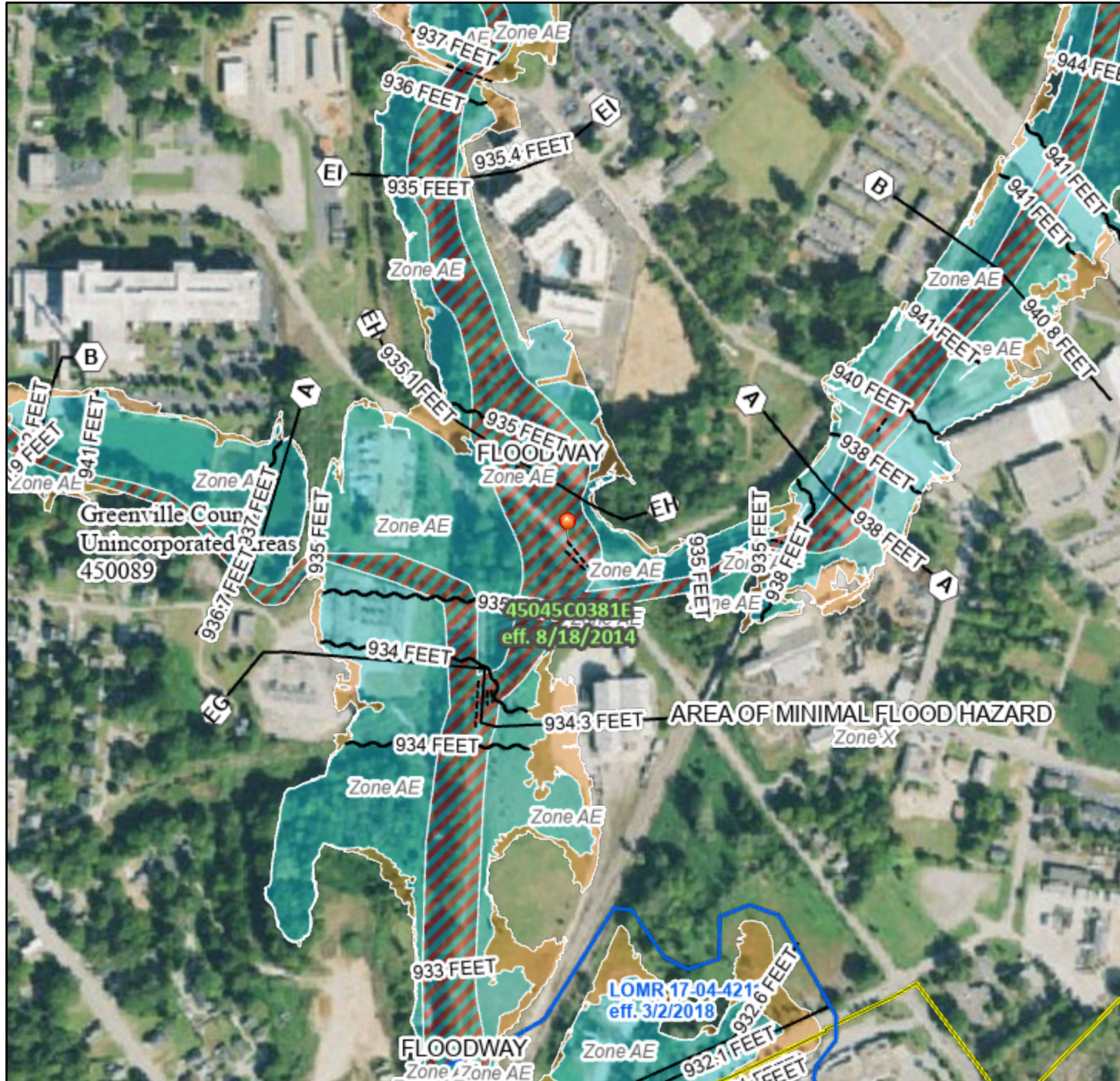
Biologist, SCDOT/Consultant

Date

# National Flood Hazard Layer FIRMette



82°25'31"W 34°52'10"N



1:6,000  
82°24'54"W 34°51'41"N

Basemap Imagery Source: USGS National Map 2023

## Legend

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

<p><b>SPECIAL FLOOD HAZARD AREAS</b></p>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #e0f7fa; border: 1px solid black; margin-right: 5px;"></span> Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #e0f7fa; border: 1px solid black; margin-right: 5px;"></span> With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, #f08080 2px, #f08080 4px); border: 1px solid black; margin-right: 5px;"></span> Regulatory Floodway</li> </ul>
<p><b>OTHER AREAS OF FLOOD HAZARD</b></p>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> 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 <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, #cccccc 2px, #cccccc 4px); border: 1px solid black; margin-right: 5px;"></span> Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, #cccccc 2px, #cccccc 4px); border: 1px solid black; margin-right: 5px;"></span> Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, #cccccc 2px, #cccccc 4px); border: 1px solid black; margin-right: 5px;"></span> Area with Flood Risk due to Levee <i>Zone D</i></li> </ul>
<p><b>OTHER AREAS</b></p>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #fff9c4; border: 1px solid black; margin-right: 5px;"></span> NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; border: 2px solid #0070c0; margin-right: 5px;"></span> Effective LOMRs</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #fff9c4; border: 1px solid black; margin-right: 5px;"></span> Area of Undetermined Flood Hazard <i>Zone D</i></li> </ul>
<p><b>GENERAL STRUCTURES</b></p>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Channel, Culvert, or Storm Sewer</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed gray; margin-right: 5px;"></span> Levee, Dike, or Floodwall</li> </ul>
<p><b>OTHER FEATURES</b></p>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid black; margin-right: 5px;"></span> <b>B</b> 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed black; margin-right: 5px;"></span> 17.5 Coastal Transect</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed gray; margin-right: 5px;"></span> Base Flood Elevation Line (BFE)</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid red; margin-right: 5px;"></span> Limit of Study</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid yellow; margin-right: 5px;"></span> Jurisdiction Boundary</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Coastal Transect Baseline</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid blue; margin-right: 5px;"></span> Profile Baseline</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid blue; margin-right: 5px;"></span> Hydrographic Feature</li> </ul>
<p><b>MAP PANELS</b></p>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #d4edda; border: 1px solid #c3e6cb; margin-right: 5px;"></span> Digital Data Available</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #fff3cd; border: 1px solid #ffeeba; margin-right: 5px;"></span> No Digital Data Available</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #fff3cd; border: 1px solid #ffeeba; margin-right: 5px;"></span> Unmapped</li> </ul>



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 **10/29/2024 at 2:28 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.



# S-147 NWI & Quad

Write a description for your map.

Legend

Ava Laurenne Bride

Riverside Apartments

The Grove

The Lofts Of Greenville

Water Tower Apartments

Escape Artist Greenville - Hampton Station

PUBHh

S-147 over Reedy River (6680)

White Duck Taco Shop

Norris Iron & Metal

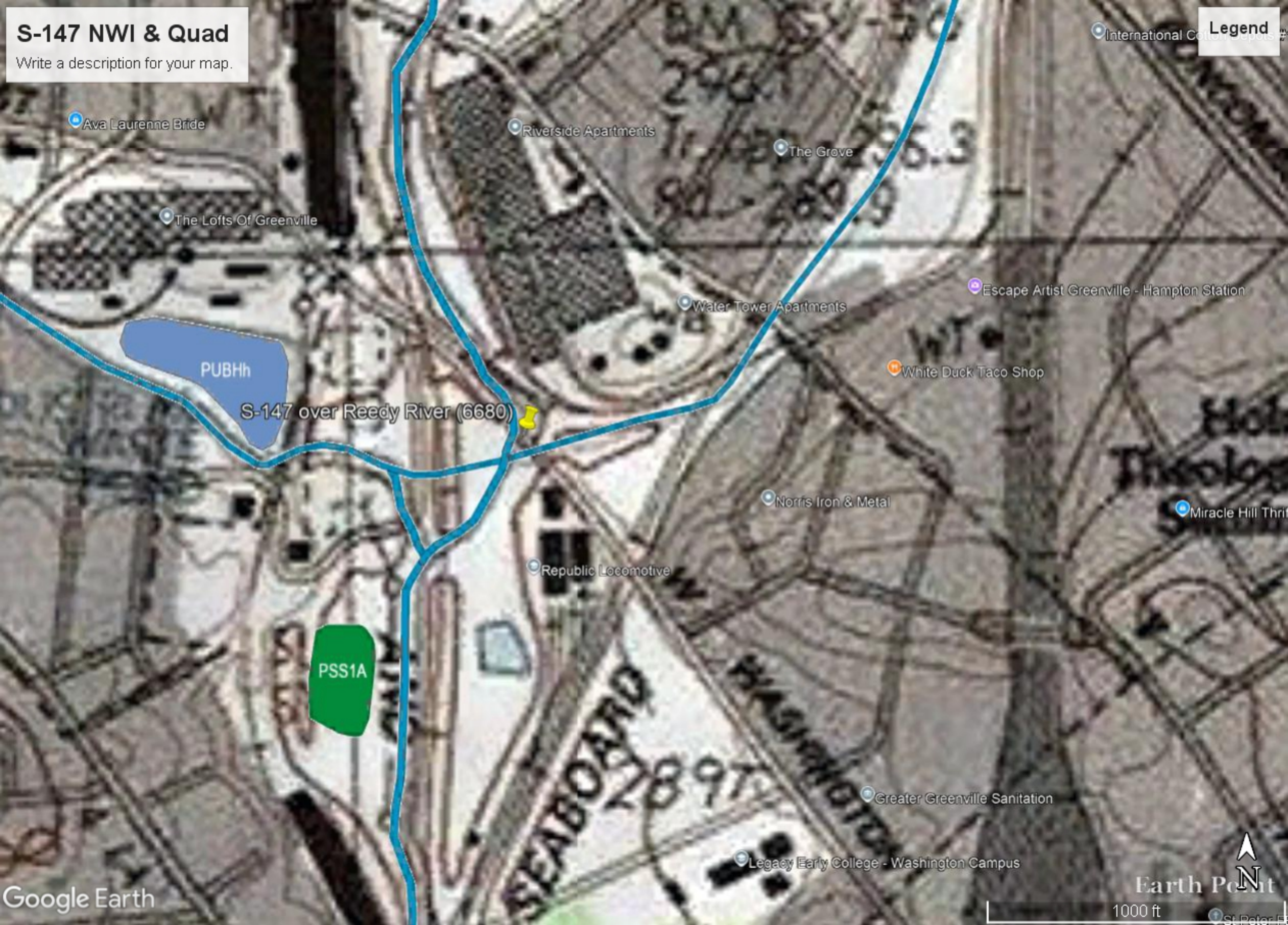
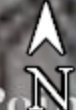
Miracle Hill Thrift

Republic Locomotive

PSS1A

Greater Greenville Sanitation

Legacy Early College - Washington Campus





**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-23-147 Bridge Replacement over Reedy River in Greenville County. Asset ID: 6680 (Bridge Package 31)

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:

Bridge has been damaged from Hurricane Helene and is no longer safe or functional. Route is currently closed to traffic and a detour is in place.

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?

Minimal grade raise is possible.

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

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 new bridge should qualify for a statement of no impact.

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

No impacts are anticipated.

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

No impacts are anticipated.

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

No impacts are anticipated.

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: 2024.11.19 15:18:08  
-05'00'  
SCDOT Hydraulic Engineer

11/19/24  
Date

# BRIDGE SCOPE AND RISK ASSESSMENT FORM

COUNTY: Greenville

DATE: 11/04/2024

ROAD #: S-147

STREAM CROSSING: Reedy River

## Purpose & Need for the Project:

S-147 (S. Washington) Emergency Bridge Replacement over Reedy River in Greenville County (Hurricane Helene Damage). Bridge has been damaged from Hurricane Helene and is no longer safe or functional. Route is currently closed to traffic and a detour is in place. Replacement under emergency funds.

## I. FEMA Acknowledgement

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

Panel Number: 45045C0381E Effective Date: 08/18/2014 (See Attached)

## II. FEMA Floodmap Investigation

FEMA Flood Profile Sheet Number 252P 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: Design new bridge to match existing conveyance.

- 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. 23.495A Sheet No. 6 (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: 120 ft. Width: 34 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: in need of riprap

Superstructure Type: precast concrete channels

Substructure Type: timber piles

Utilities Present:  Yes  No

Describe: 

overhead power (transmission crossing road and distribution parallel to road). sewer downstream
---

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

Hydraulic Problems:  Yes  No

Describe: 

design event currently overtops roadway and bridge. Variance needed to achieve FEMA no-impact.
--

# BRIDGE SCOPE AND RISK ASSESSMENT FORM

## V. Field Review (cont.)

### B. Hydraulic Features

a. Scour Present:  Yes  No Location: interior bent shifted in flood

b. Distance from F.G. to Normal Water Elevation: 12 ft.

c. Distance from Low Steel to Normal Water Elev.: 10 ft.

d. Distance from F.G. to High Water Elevation: -1 ft.

e. Distance from Low Steel to High Water Elev.: -3 ft.

f. Channel Banks Stable:  Yes  No

Describe: channel hugs roadway embankment upstream

g. Soil Type: silty sands

h. Exposed Rock:  Yes  No Location: box culvert, 100-feet east of bridge

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

Apartment complex upstream

### C. Existing Roadway Geometry

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

Yes  No

Describe:

Bridge currently closed due to flood damage

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

Yes. Some straightening or slight shift in existing alignment is expected.

If "No", will the proposed bridge be:

Staged Constructed

Replaced on New Alignment



# BRIDGE SCOPE AND RISK ASSESSMENT FORM

## VI. Field Review (cont.)

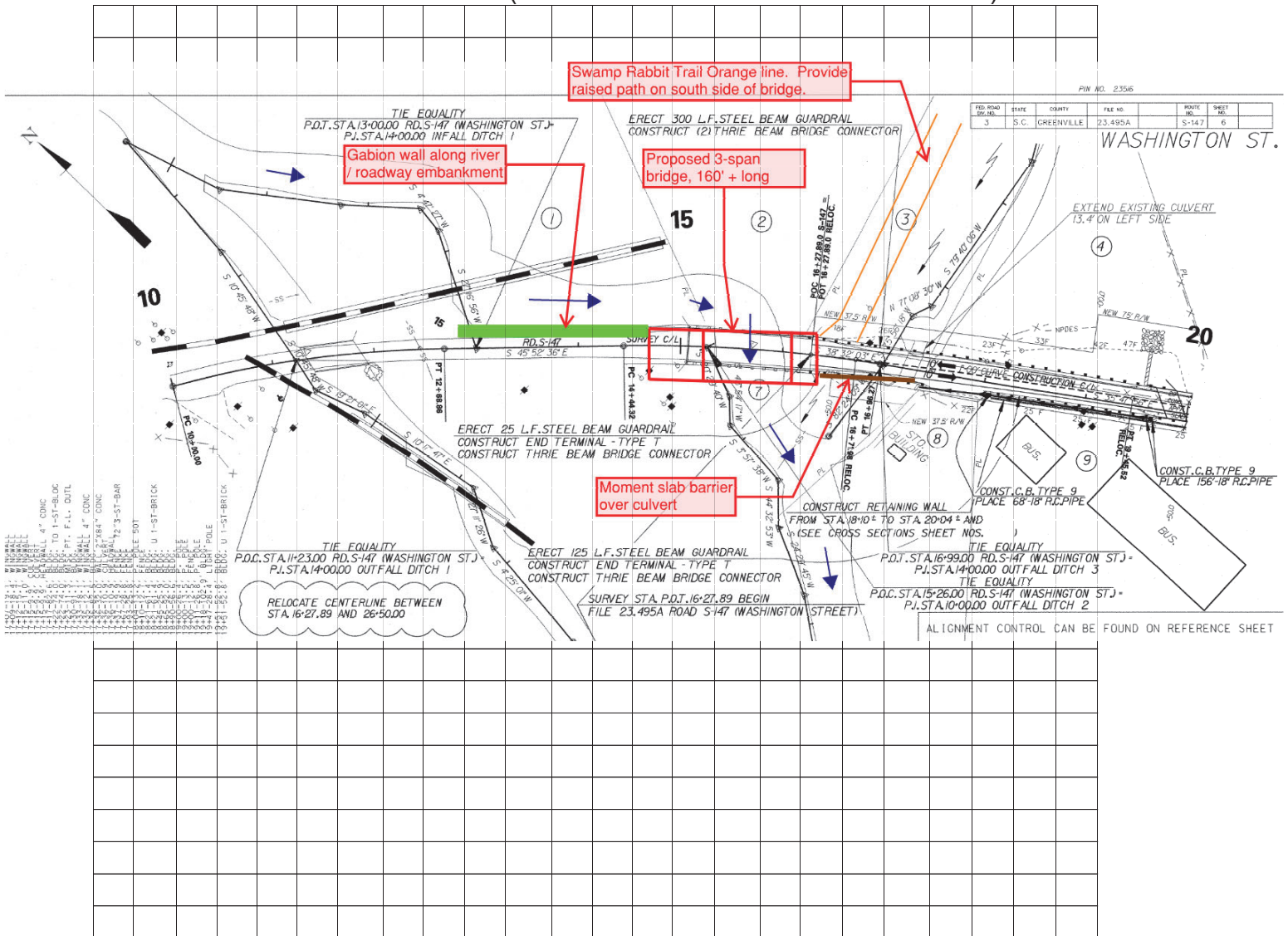
### A. Proposed Bridge Recommendation:

Length: 160 ft.      Width: 40 +/- ft.      Elevation: hold L.C. ft.

Span Arrangement: 50'-80'-30

Notes: Three-span cored slab / box beam structure with concrete overlay (structural variance needed), holding low chord and achieving a FEMA no-impact (maintain current conveyance opening) to avoid a CLMR. Hydraulic variance needed for over-topping. Tie-down vertically to avoid extending box culvert to the east or impacting tributary bridge to the west.

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



Performed By: John Caver













Date: 12/09/2024



Project ID: P044048 County: Greenville District: District 3 Doc Type: PCE Total # of Commitments: 7

Project Name: S-23-147 Bridge Replacement over Reedy 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:** 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: P044048

SCDOT  
NEPA ENVIRONMENTAL COMMITMENTS  
FORM



**ENVIRONMENTAL COMMITMENTS FOR THE PROJECT**

**General Permit**

NEPA Doc Ref:

Responsibility:

CONTRACTOR

Impacts to jurisdictional waters will be permitted under a Department of the Army Section 404 permit from the U.S. Army Corps of Engineers. Based on preliminary design, it is anticipated that the proposed project would be permitted under SCDOT's General Permit (GP). The required mitigation for this project will be determined through consultation with the USACE and other resource agencies.

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:

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



Project ID: P044048

SCDOT  
NEPA ENVIRONMENTAL COMMITMENTS  
FORM



**ENVIRONMENTAL COMMITMENTS FOR THE PROJECT**

**Non-Standard Commitment**

NEPA Doc Ref:

Responsibility:

SCDOT

Cultural Resources

The Section 106 Cultural Resource Report identified TMS 0140000300101 as SHPO Site 1260 which was determined eligible for listing on National Register of Historic Places. Any work related to this parcel (e.g. driveway tie in) shall be completed with a right of way permissions agreement rather than purchasing new permanent right of way.

Special Provision

NEPA Doc Ref:

Responsibility:

Special Provision

NEPA Doc Ref:

Responsibility:

Special Provision