



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

July 21, 2023

U. S. Army Corps of Engineers  
Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28805

NC Division of Water Resources  
Transportation Permitting Branch  
1617 Mail Service Center  
Raleigh NC 27699-1617

ATTN: Ms. Crystal Amschler  
NCDOT Coordinator

Mr. Kevin Mitchell  
NCDOT Coordinator

Subject: **Application for Section 404 Regional General Permit 50, and 401 Water Quality Certification** for the Replacement of Bridge No. 227 on SR 1310 over the Nantahala River in Macon County, North Carolina, Division 14, TIP No. BR-0052. Debit \$240 from WBS Element No. 67052.1.1

Dear Madam and Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace bridge number 227 on SR-1310 (Wayah Rd) over the Nantahala River in Macon County with a 110' two span, cored slab bridge with no deck drains. Due to the absence of a viable off-site detour, traffic will be maintained onsite using staged construction.

This action will result 58 lf of permanent impacts to streams from riprap fill and abutment protection, and 0.14 ac of temporary construction impacts to streams from temporary construction and temporary causeways. Mitigation will be pursued from NCDMS.

Please see enclosed copies of the Pre-Construction Notification (PCN), Stormwater Management Plan, Permit Drawings, DMS Acceptance Letter, Protected Species Info and Reports, Cultural Resource Documents, and Categorical Exclusion (CE).

This project calls for a letting date of April 16, 2024, and a review date of February 27, 2024.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <https://xfer.services.ncdot.gov/pdea/PermApps/>. If you have any questions or need additional information, please contact Jeff Hemphill at (919) 219-8581.

Sincerely,

<sup>800</sup> Michael A. Turchy  
Environmental Coordination and Permitting Group Leader

cc: NCDOT Permit Application Standard Distribution List

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

Telephone: (919) 707-6000  
Customer Service: 1-877-368-4968  
Website: [www.ncdot.gov](http://www.ncdot.gov)

Location:  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

# Pre-Construction Notification



## Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits  
(along with corresponding Water Quality Certifications)

April 13, 2022 Ver 4.3

Please note: fields marked with a red asterisk \* below are required. You will not be able to submit the form until all mandatory questions are answered.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf>

### A. Processing Information

#### Pre-Filing Meeting Date Request was submitted on: \*

4/20/2022

If this is a courtesy copy, please fill in this with the submission date.

#### Is this project connected with ARPA funding? \*

Yes  No

#### County (or Counties) where the project is located: \*

Macon

#### Is this a NCDMS Project? \*

Yes  No

Click Yes, only if NCDMS is the applicant or co-applicant.

**DON'T CHECK YES, UNLESS YOU ARE DMS OR CO-APPLICANT.**

#### Is this project a public transportation project? \*

Yes  No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

#### Is this a NCDOT Project? \*

Yes  No

#### (NCDOT only) T.I.P. or state project number:

BR-0052

#### WBS # \*

67052.1.1

(for NCDOT use only)

#### 1a. Type(s) of approval sought from the Corps: \*

- Section 404 Permit (wetlands, streams and waters, Clean Water Act)  
 Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

#### Has this PCN previously been submitted? \*

Yes  
 No

#### 1b. What type(s) of permit(s) do you wish to seek authorization? \*

- Nationwide Permit (NWP)  
 Regional General Permit (RGP)  
 Standard (IP)

#### 1c. Has the NWP or GP number been verified by the Corps? \*

Yes  No

Regional General Permit (RGP) Number:

201902350 - Work associated with bridge construction, widening, replacement, and interchanges

RGP Numbers (for multiple RGPs):

List all RGP numbers you are applying for not on the drop down list.

**1d. Type(s) of approval sought from the DWR: \***

check all that apply

- 401 Water Quality Certification - Regular
- Non-404 Jurisdictional General Permit
- Individual 401 Water Quality Certification
- 401 Water Quality Certification - Express
- Riparian Buffer Authorization

**1e. Is this notification solely for the record because written approval is not required?**

\*

For the record only for DWR 401 Certification:

- Yes  No

For the record only for Corps Permit:

- Yes  No

**1f. Is this an after-the-fact permit application? \***

- Yes  No

**1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?**

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

- Yes  No

**Acceptance Letter Attachment**

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

**1h. Is the project located in any of NC's twenty coastal counties? \***

- Yes  No

**1j. Is the project located in a designated trout watershed? \***

- Yes  No

You must submit a copy of the appropriate Wildlife Resource Commission Office.

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

## B. Applicant Information



**1a. Who is the Primary Contact? \***

Jeffrey Hemphill

**1c. Primary Contact Phone: \***

(xxx)xxx-xxxx

(919)707-6126

**1b. Primary Contact Email: \***

jhemphill@ncdot.gov

**1d. Who is applying for the permit? \***

- Owner
  - Applicant (other than owner)
- (Check all that apply)

**1e. Is there an Agent/Consultant for this project? \***

- Yes  No

## 2. Owner Information

**2a. Name(s) on recorded deed: \***

NCDOT

**2b. Deed book and page no.:**

**2c. Contact Person:**

(for Corporations)

**2d. Address \***

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

USA

**2e. Telephone Number: \***

(xxx)xxx-xxxx

(919)707-6126

**2f. Fax Number:**

(xxx)xxx-xxxx

**2g. Email Address: \***

ekcheely@ncdot.gov

**3. Applicant Information (if different from owner)**

**3a. Name: \***

Jeffrey Hemphill

**3b. Business Name:**

(if applicable)

**3c. Address \***

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

USA

**3d. Telephone Number: \***

(919)707-6126

(xxx)xxx-xxxx

**3e. Fax Number:**

(xxx)xxx-xxxx

**3f. Email Address: \***

jhemphill@ncdot.gov

**C. Project Information and Prior Project History**



**1. Project Information**



**1a. Name of project: \***

BR-0052 - Replacement of Bridge No. 227 on SR 1310 over the Nantahala River

**1b. Subdivision name:**

(if appropriate)

**1c. Nearest municipality / town: \***

Beechertown

**2. Project Identification**



**2a. Property Identification Number:**

(tax PIN or parcel ID)

**2b. Property size:**

(in acres)

**2c. Project Address**

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

**2d. Site coordinates in decimal degrees**

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

**Latitude: \***

35.27044

ex: 34.208504

**Longitude: \***

-83.67380

-77.796371

**3. Surface Waters**

**3a. Name of the nearest body of water to proposed project: \***

Nantahala river

**3b. Water Resources Classification of nearest receiving water: \***

B; Tr

[Surface Water Lookup](#)

**3c. What river basin(s) is your project located in? \***

Little Tennessee

3d. Please provide the 12-digit HUC in which the project is located. \*

06010202

[River Basin Lookup](#)

## 4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: \*

The existing structure is a 106' long by 19' wide, 3-span, timber floor on steel girders, bridge. Land use in the vicinity is undeveloped forestland, a public fishing area and a lodge.

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? \*

Yes  No  Unknown

4f. List the total estimated acreage of all existing wetlands on the property:

0

4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

999'

4h. Explain the purpose of the proposed project: \*

NCDOT Bridge Management Unit - Bridge Inspection Report, indicates that Bridge No. 227 has a sufficiency rating of 56.76; the bridge is classified as functionally obsolete. The existing two-lane bridge was built in 1950 (reconstructed in 1984) and is 106 feet long with a timber floor atop steel beams/girders. The bridge deck consists of two travel lanes with a roadway width of 19 feet.

Maintenance has been recently performed to improve safety and extend the life of the bridge; however, the maintenance is considered temporary. Based on the low sufficiency rating and the ongoing need for maintenance, the bridge is considered at the end of its useful life and is in need of replacement.

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: \*

The North Carolina Department of Transportation (NCDOT) proposes to replace Macon County Bridge #227 along Wayah Road (SR 1310) over the Nantahala River. The proposed replacement structure will be a two-span bridge approximately 113 feet long using prestressed concrete cored slab units and providing 29.5 feet of clear roadway width. Standard road and bridge building equipment will be used, such as trucks, dozers, and cranes.

## 5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? \*

Yes  No  Unknown

Comments:

The Nantahala River is the only jurisdictional resource in the project area.

5b. If the Corps made a jurisdictional determination, what type of determination was made? \*

Preliminary  Approved  Not Verified  Unknown  N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Pamela R. Ferral

Agency/Consultant Company: Stantec

Other:

## 6. Future Project Plans

6a. Is this a phased project? \*

Yes  No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

## D. Proposed Impacts Inventory



### 1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

Wetlands  Streams-tributaries  Buffers  
 Open Waters  Pond Construction

### 3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact <sup>*(?)</sup>	3b. Impact type <sup>*</sup>	3c. Type of impact <sup>*</sup>	3d. S. name <sup>*</sup>	3e. Stream Type <sup>*(?)</sup>	3f. Type of Jurisdiction <sup>*</sup>	3g. S. width <sup>*</sup>	3h. Impact length <sup>*</sup>
S1	Abutment Protection/Wingwall	Permanent	Rip Rap Fill	Nantahala River	Perennial	Both	60 <small>Average (feet)</small>	58 <small>(linear feet)</small>
S2	Abutment Protection/Wingwall	Temporary	Fill	Nantahala River	Perennial	Both	60 <small>Average (feet)</small>	62 <small>(linear feet)</small>
S3	Temporary Construction	Temporary	Workpad/Causeway	Nantahala River	Perennial	Both	60 <small>Average (feet)</small>	14 <small>(linear feet)</small>

\*\* All Perennial or Intermittent streams must be verified by DWR or delegated local government.

**3i. Total jurisdictional ditch impact in square feet:**

0

**3i. Total permanent stream impacts:**

58

**3i. Total temporary stream impacts:**

76

**3i. Total stream and ditch impacts:**

134

**3j. Comments:**

The causeway = 0.12 acres of temporary impacts

## E. Impact Justification and Mitigation



### 1. Avoidance and Minimization

**1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: \***

Existing drainage patterns have runoff collect in ditches that discharge into the Nantahala River. The proposed drainage has runoff from the bridge collect into two grated inlets just before the beginning of the bridge and discharge out of a pipe in the floodplain through rip rap. Proposed roadway runoff excluding the bridge will collect in ditches and discharge into the Nantahala River and its floodplain.

**1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: \***

Best management practices will be adhered to as well as Design Standards in Sensitive Watersheds (due to trout).

### 2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

**2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?**

Yes  No

**2c. If yes, mitigation is required by (check all that apply):**

DWR  Corps

**2d. If yes, which mitigation option(s) will be used for this project?**

Mitigation bank  Payment to in-lieu fee program  Permittee Responsible Mitigation

### 4. Complete if Making a Payment to In-lieu Fee Program

**4a. Approval letter from in-lieu fee program is attached.**

Yes  No

**4b. Stream mitigation requested:**

(linear feet)

58

**4c. If using stream mitigation, what is the stream temperature:**

cold

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's [RIBITS](#) website.

**4d. Buffer mitigation requested (DWR only):**

(square feet)

**4e. Riparian wetland mitigation requested:**

(acres)

**4f. Non-riparian wetland mitigation requested:**

(acres)

**4g. Coastal (tidal) wetland mitigation requested:**

(acres)

**4h. Comments**

58' @ 2:1

### 5. Complete if Using a Permittee Responsible Mitigation Plan

**5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan including mitigation credits generated.**

## F. Stormwater Management and Diffuse Flow Plan (required by DWR)



\*\*\* Recent changes to the stormwater rules have required updates to this section .\*\*\*

## 1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

Yes  No

For a list of options to meet the diffuse flow requirements, click [here](#).

If no, explain why:

## 2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? \*

Yes  No

Comments:

## G. Supplementary Information



### 1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? \*

Yes  No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? \*

Yes  No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) \*

Yes  No

### 2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? \*

Yes  No

### 3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? \*

Yes  No

3b. If you answered "no," provide a short narrative description.

### 4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? \*

Yes  No  N/A

### 5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? \*

Yes  No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? \*

Yes  No

5c. If yes, indicate the USFWS Field Office you have contacted.

Asheville

5d. Is another Federal agency involved? \*

Yes  No  Unknown

What Federal Agency is involved?

FHWA

5e. Is this a DOT project located within Division's 1-8? \*

Yes  No

5f. Will you cut any trees in order to conduct the work in waters of the U.S.? \*

Yes  No

5g. Does this project involve bridge maintenance or removal? \*

Yes  No

5g(1). If yes, have you inspected the bridge for signs of bat use such as staining, guano, bats, etc.? Representative photos of signs of bat use can be found in the NLEB SLOPES, Appendix F, pages 3-7.

Yes  No

Link to the NLEB SLOPES document: [http://saw-reg.usace.army.mil/NLEB/1-30-17-signed\\_NLEB-SLOPES&apps.pdf](http://saw-reg.usace.army.mil/NLEB/1-30-17-signed_NLEB-SLOPES&apps.pdf)

If you answered "Yes" to 5g(1), did you discover any signs of bat use? \*

Yes  No  Unknown

\*\*\* If yes, please show the location of the bridge on the permit drawings/project plans.

5h. Does this project involve the construction/installation of a wind turbine(s)? \*

Yes  No

5i. Does this project involve (1) blasting, and/or (2) other percussive activities that will be conducted by machines, such as jackhammers, mechanized pile drivers, etc.? \*

Yes  No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? \*

IPAC; USFWS, NCWRC - 2022 Surveys: Virginia Spirea - No Effect with Habitat; Small Whorled Pogonia - No Effect with Habitat; Swamp Pink - No Effect - No Habitat; Mt. Sweet Pitcher Plant - No Effect - No Habitat; Rock gnome lichen - No Effect - No Habitat; Noonday snail - No Effect - Habitat.

June 9, 2022 Bat Survey: Section 7 survey results for the gray bat (*Myotis grisescens*, MYGR), Indiana bat (*Myotis sodalis*, MYSO), northern long-eared bat (*Myotis septentrionalis*, MYSE), tricolored bat (*Perimyotis subflavus*, PESU) and little brown bat (*Myotis lucifugus*, MYLU). A Biological Conclusion of May Affect Not Likely To Adversely Affect is given to each of the above species based on the presence of suitable foraging and commuting habitat. No evidence of federally listed bats was found on the structure, no caves or mines are in the area, and a large area of alternative available suitable habitat exists in the project vicinity. Informal Concurrence from USFWS was requested on 2/13/23.

## 6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? \*

Yes  No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? \*

Review of on-line mapping sources

## 7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? \*

Yes  No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? \*

CE, State Historic Preservation Office Memo, Archaeology Memo and the Tribal Coordination Letters are attached.

## 8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? \*

Yes  No

8b. If yes, explain how project meets FEMA requirements:

NC DOT Hydraulics Unit coordination with FEMA

8c. What source(s) did you use to make the floodplain determination? \*

FEMA Floodmaps

## Miscellaneous



### Comments

Approximately 0.04 acre of trees will be removed for the construction of this project.

The NCWRC identified the Nantahala River as trout waters, in a letter dated September 17, 2018, therefore, mandatory trout moratorium from October 15 to April 15 will be applied.

Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

[Click the upload button or drag and drop files here to attach document](#)

BR-0052 Macon July 21 2023.pdf

9.73MB

File must be PDF or KMZ

## Signature



\*

By checking the box and signing below, I certify that:

- The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief; and
- The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

**Full Name:** \*

Erin K. Cheely

**Signature** \*



**Date**

7/21/2023

# Permit Drawings



North Carolina Department of Transportation

Highway Stormwater Program  
**STORMWATER MANAGEMENT PLAN**  
 FOR NCDOT PROJECTS



(Version 3.00; Released August 2021)

WBS Element: 67052.1.1      TIP/Proj No: BR-0052      County(ies): Macon      Page 1 of 2

**General Project Information**

WBS Element:	67052.1.1	TIP Number:	BR-0052	Project Type:	Bridge Replacement	Date:	1/4/2022
NCDOT Contact:	Jonathan Moore		Contractor / Designer:		Corey Cavalier		
Address:	1590 Mail Service Center Raleigh, NC 27699-1590		Address:	1590 Mail Service Center Raleigh, NC 27699-1590			
Phone:	(919) 707-6738		Phone:	(919) 707-6763			
Email:	jmoore6@ncdot.gov		Email:	cacavalier@ncdot.gov			
City/Town:	N/A		County(ies):	Macon			
River Basin(s):	Little Tennessee		CAMA County?	No			
Wetlands within Project Limits?	No						

**Project Description**

Project Length (lin. miles or feet):	.134 mile	Surrounding Land Use:	National Forest
<b>Proposed Project</b>		<b>Existing Site</b>	
Project Built-Upon Area (ac.)	0.6 ac.		0.4 ac.
Typical Cross Section Description:	Two 10' lanes with 6-9' grassed shoulders.		Two 9' lanes with variable width grass shoulders.
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 640	Year: 2022	Existing: 600 Year: 2019

**General Project Narrative:  
 (Description of Minimization of Water Quality Impacts)**

Project BR-0052 involves replacement of bridge #550227 over the Nantahala River with a total of 0.184 mile of roadwork on SR 1310 (Wayah Road) in Macon County. The existing bridge #550227, a 1@35'-6", 1@35'-0", 1@35'-6" structure with an overall length of 106'-0" and out-out width of 20'-0", is to be replaced by a 2@55'-0" structure with an overall length of 110'-0" and out-out width of 33'-0". The new bridge will be offset from the existing one so that traffic can be maintained through staged construction.

The proposed bridge does not contain deck drains. All storm water runoff from the bridge and approaches will be collected by a storm drainage system on the north side of the bridge and discharged into the floodplain through rip rap. Proposed roadway runoff excluding the bridge will collect in ditches and discharge to the Nantahala River and its floodplain.

The existing bridge does not contain deck drains. All storm water runoff from the bridge collects along the railing, flows down the roadway fill slopes behind the wingwalls, and into a ditch that discharges into the floodplain. Runoff along the rest of the road sheets across the pavement, down the roadway fill slopes, and into a ditch that discharges to the floodplain.



North Carolina Department of Transportation

Highway Stormwater Program  
**STORMWATER MANAGEMENT PLAN**  
 FOR NCDOT PROJECTS



(Version 3.00; Released August 2021)

WBS Element: 67052.1.1      TIP/Proj No.: BR-0052      County(ies): Macon      Page 2 of 2

**General Project Information**

**Waterbody Information**

Surface Water Body (1):	Nantahala River		NCDWR Stream Index No.:	2-57-(22.5)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class B		
	Supplemental Classification:		Trout Waters (Tr)		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	N/A
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (2):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?			Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?		(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					
Surface Water Body (3):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?			Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?		(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

09/06/2022

See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**MACON COUNTY**

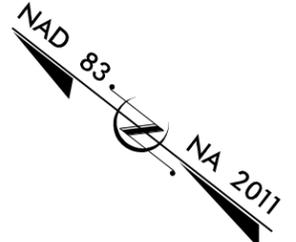
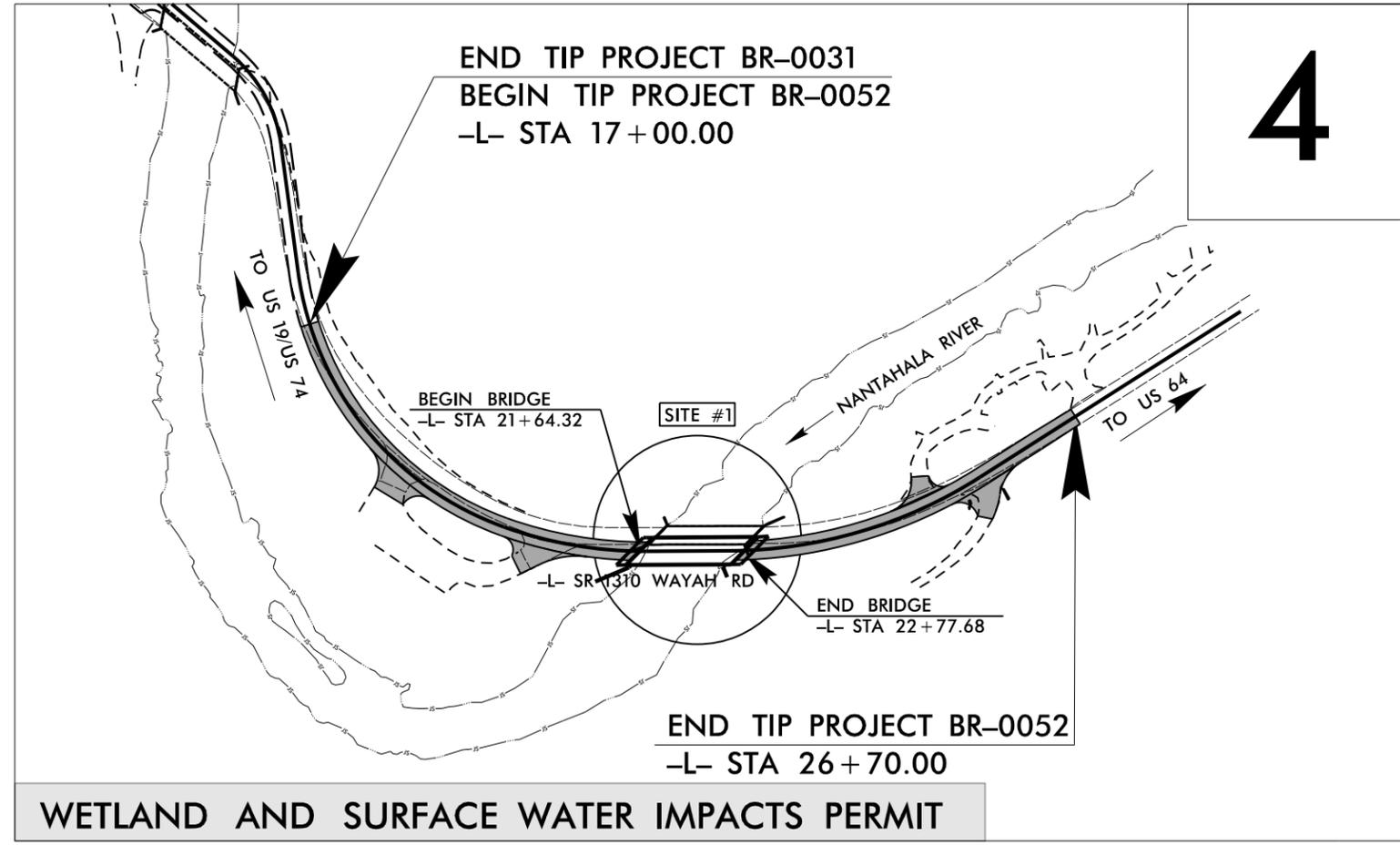
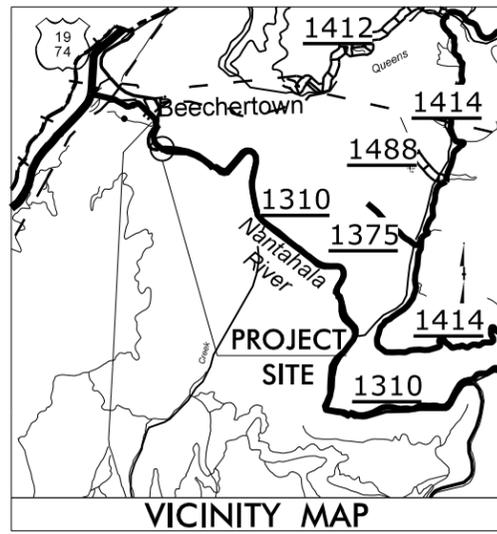
LOCATION: BRIDGE NO. 227 ON SR 1310 OVER  
NANTAHALA RIVER

TYPE OF WORK: GRADING, PAVING, DRAINAGE, RETAINING WALL  
AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0052	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67052.1.1	N/A	PE	
67052.2.1	N/A	ROW & UTIL.	
67052.3.1	N/A	CONST	

**PERMIT DRAWING  
SHEET 1 OF 5**

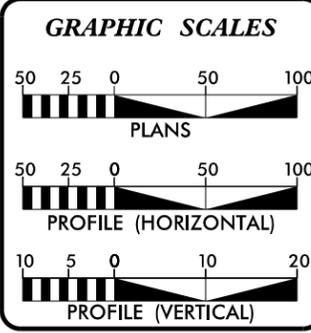
**TIP PROJECT: BR-0052**



DESIGN EXCEPTION FOR DESIGN SPEED  
THIS PROJECT HAS NO CONTROLLED ACCESS  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**DESIGN DATA**

ADT 2017 =	640
ADT ? =	
K =	___ %
D =	___ %
T =	___ % *
V =	40 MPH
* TTST =	___ DUAL ___
FUNC CLASS =	
MAJOR COLLECTOR	
SUB REGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT BR-0052 =	0.163 MI.
LENGTH STRUCTURE TIP PROJECT BR-0052 =	0.021 MI.
TOTAL LENGTH TIP PROJECT BR-0052 =	0.184 MI.

Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2018 STANDARD SPECIFICATIONS

<b>RIGHT OF WAY DATE:</b> MAY 23, 2022	<b>ADAM COLE, PE</b> PROJECT MANAGER
<b>LETTING DATE:</b> JUNE 20, 2023	<b>JORDAN A. WOODARD, PE</b> PROJECT ENGINEER
	<b>DOUGLAS KRETCHMAN, PE</b> PROJECT TEAM LEAD

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DDN\$\$\$\$\$  
\$\$\$\$\$SERNAME\$\$\$\$\$





5/14/99  
 C:\PROJECTS\BR-0052\BR-0052.DWG  
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 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00  
 2150 2140 2130 2120 2110 2100 2090 2080 2070 2060 2050 2040 2030 2020 2010 2000 1990 1980 1970 1960 1950

# WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO. BR-0052	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PERMIT DRAWING SHEET 4 OF 5</b>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



### WETLAND AND SURFACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 21+34 / 23+22	Bridge + Rip Rap Wingwall / Abutment Protection						0.01	0.02	58	62	
		Causeway Work Pad +							0.12		14	
<b>TOTALS*:</b>								0.01	0.14	58	76	0

\*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 9/27/2022  
 Macon  
 BR-0052  
 67052.1.1  
 SHEET 5 OF 5

# Mitigation

ROY COOPER  
Governor

ELIZABETH S. BISER  
Secretary

MARC RECKTENWALD  
Director



NORTH CAROLINA  
Environmental Quality

December 15, 2022

Mr. Jamie Lancaster, P.E.  
Environmental Analysis Unit  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: Mitigation Acceptance Letter:

**BR-0052**, Replace Bridge 550227 over the Nantahala River on SR 1310, Macon County

The purpose of this letter is to notify you that the North Carolina Department of Environmental Quality – Division of Mitigation Services (NCDEQ-DMS) will provide the mitigation for the subject project. Based on the information received from you on December 14, 2022, the impacts are located in CU 06010202 of the Little Tennessee River basin in the Southern Mountains (SM) Eco-Region, and are as follows:

Little Tennessee 06010202	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	58.000	0	0	0	0	0	0	0

The impacts and associated mitigation needs were not projected by the NCDOT in the 2022 impact data. NCDEQ – DMS commits to implementing sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

for James B. Stanfill  
DMS Deputy Director

cc: Mr. Monte Matthews, USACE – Raleigh  
Ms. Amy Chapman, NCDWR  
Mr. Brad Chilton, NCDOT – EAU  
File: BR-0052



North Carolina Department of Environmental Quality | Division of Mitigation Services  
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652  
919.707.8976

# Protected Species/ Section 7



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

February 13, 2023

Ms. Janet A. Mizzi  
Field Office Supervisor  
US Fish and Wildlife Service  
160 Zillicoa Street  
Asheville, NC 28801

Subject: **Section 7 Concurrence Request** for the replacement of Bridge No. 227 on US 74 Bypass over the Nantahala River in Macon County, WBS No. 67052.1.1 in Division 14, **TIP: BR-0052**

Reference: Bat Survey Report, dated November 3, 2022  
Noonday Snail Report, dated July 11, 2022

Dear Ms. Mizzi,

The purpose of this letter is to request concurrence from the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531 et seq.) (ESA). The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge 227 over the Nantahala River in Macon County.

As of November 14, 2022, the US Fish and Wildlife Service’s Information for Planning and Consultation (IPaC) lists the following federally protected species in the project area. Little brown bat, while not yet listed in IPaC for this area, has been included in the table below.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Clemmys muhlenbergii</i>	Bog turtle	T(S/A)	No	Not Required
<i>Myotis septentrionalis</i>	Northern long-eared bat	Threatened	Yes	MANLAA
<i>Myotis sodalis</i>	Indiana bat	Endangered	Yes	MANLAA
<i>Myotis grisescens</i>	Gray bat	Endangered	Yes	MANLAA
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered*	Yes	MANLAA
<i>Myotis lucifugus</i>	Little brown bat	Future Listing	Yes	MANLAA
<i>Mesodon clarki nantahala</i>	Noonday snail	Threatened	Yes	No Effect
<i>Helonias bullata</i>	Swamp pink	Threatened	No	No Effect
<i>Sarracenia rubra ssp. jonesii</i>	Mountain sweet pitcher-plant	Endangered	No	No Effect
<i>Spiraea virginiana</i>	Virginia spiraea	Threatened	Yes	No Effect
<i>Gymnoderma lineare</i>	Rock gnome lichen	Endangered	No	No Effect
<i>Isotria medeoloides</i>	Small whorled pogonia	Threatened	Yes	No Effect

MANLAA = May Affect – Not Likely to Adversely Affect

T(S/A) – Threatened due to similarity of appearance

\* Proposed for federal listing

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

Telephone: (919) 707-6000  
Customer Service: 1-877-368-4968  
Website: www.ncdot.gov

Location:  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

**Species Summary - Bats**

The North Carolina Department of Transportation (NCDOT, Division 14) proposes to replace Bridge No. 227 over Nantahala River on SR 1310 in Macon County, TIP No. BR-0052. The existing bridge is a three-span structure with steel beams, timber deck, concrete end walls and metal guard rails. The overall length of the bridge is 106 feet. No culverts meeting NCDOT’s Standard Operating Procedures for Preliminary Bat Habitat Assessments were identified meeting the criteria of greater than 3 feet wide and 60 feet in length during this site visit.

On June 9, 2022, NV5 biologists assessed all of the structures in the project study area. No crevices suitable for roosting were present on the structure. No evidence of bats (bats, staining, guano) was observed on the structure. Bridge No. 227 was previously surveyed by NCDOT biologists in 2018. No evidence of bats was observed at this survey as well. Trees greater than 3”dbh occur within the project footprint. There are no known caves or mines within one half mile of the project footprint and no caves or mines were observed during the field visit. Large, continuous forests are present in the project vicinity, providing potential foraging and commuting habitat.

Species	Federal Status	Habitat Present*	Biological Conclusion	Distance to Nearest Record**
MYGR	E	Yes	MANLTAA	11.4 mile NE
MYSO	E	Yes	MANLTAA	9.3 mile N
MYSE	T	Yes	MANLTAA	.93 mile N
PESU	PE	Yes	MANLTAA	.93 mile N
MYLU***	FL	Yes	MANLTAA	.5 mile NW

\*\*Nearest known record from latest NHP, WRC, or NCDOT data

\*\*\* The Little Brown Bat (*Myotis lucifugus*), which may become federally listed in the future (FL), may also be found in Macon County.

MANLTAA=May Affect Not Likely To Adversely Affect

Presence (✓) or Probable Absence (X) of various habitat types for bat species present in project area.

Species	Summer Roosting		Winter Roosting	Foraging Habitat	Commuting Habitat
	Tree	Structure			
MYGR	NA	✓	X	✓	✓
MYSO	✓	✓	X	✓	✓
MYSE	✓	✓	X	✓	✓
PESU	✓	✓	X	✓	✓
MYLU	✓	✓	X	✓	✓

A Biological Conclusion of **May Affect Not Likely To Adversely Affect** is given to each of the above species based on the presence of suitable foraging and commuting habitat. No evidence of federally listed bats was found on the structure, no caves or mines are in the area, and a large area of alternative available suitable habitat exists in the project vicinity. Permanent roadway lighting is not present in the project area and BSG is not aware of any plans to install new roadway lighting with this project. If nighttime work during the bat active season becomes necessary, temporary lighting will only be used to illuminate work areas. This project is scheduled to let in September 2023, so tree clearing will be completed prior to the active

season; however, if the schedule is delayed, winter tree clearing will be accomplished prior to project let by state forces or under separate contract. No night work is anticipated for this project.

Pursuant to the ESA Handbook Section 3.5, NCDOT does not request concurrence from the Service for the remaining species, but identifies them below:

Scientific Name	Common Name	Federal Status	Survey Date(s)	Habitat Present	Biological Conclusion
<i>Clemmys muhlenbergii</i>	Bog turtle	T(S/A)	N/A	No	Not Required
<i>Gymnoderma lineare</i>	Rock gnome lichen	Endangered	N/A	No	No Effect
<i>Isotria medeoloides</i>	Small whorled pogonia	Threatened	7/7/18 6/2/22	Yes	No Effect
<i>Mesodon clarki nantahala</i>	Noonday snail	Threatened	4/22/19	Yes	No Effect*
<i>Helonias bullata</i>	Swamp pink	Threatened	No	No	No Effect
<i>Sarracenia rubra ssp. jonesii</i>	Mountain sweet pitcher-plant	Endangered	No	No	No Effect
<i>Spiraea virginiana</i>	Virginia spiraea	Threatened	7/7/18 6/2/22	Yes	No Effect

T(S/A) – Threatened due to similarity of appearance

\*NCDOT does not anticipate any construction activities outside of the Right of Way so no potential Noonday snail habitat should be impacted.

NCDOT, under the delegation authority provided in 50 CFR § 402.08 by the Federal Highway Administration (FHWA), believes that the requirements of Section 7(a)(2) of the ESA have been satisfied and hereby request your concurrence.

If you have any questions, please contact Jeff Hemphill at [jhemphill@ncdot.gov](mailto:jhemphill@ncdot.gov) or 919-707-6126.

Sincerely,



Michael Turchy, ECAP Group Leader  
Environmental Analysis Unit

Enclosures:

Bat Survey Report, dated November 3, 2022  
Noonday Snail Report, dated July 11, 2022

ec:

Ms. Lauren Wilson, USFWS  
Ms. Holland Youngman, USFWS  
Mr. Kevin Barnett, DEO-Div. 14, NCDOT  
Mr. Adam Cole, NCDOT SMU  
Ms. Marissa Cox, NCDOT BSG-EAU  
Mr. Jared Gray, NCDOT BSG-EAU



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

November 3, 2022

TO: Jeff Hemphill, Environmental Senior Specialist  
Environmental Coordination & Permitting Group, EAU

FROM: Melissa Miller, Environmental Program Consultant  
Biological Surveys Group, EAU

SUBJECT: Section 7 survey results for the gray bat (*Myotis grisescens*, MYGR), Indiana bat (*Myotis sodalis*, MYSO), northern long-eared bat (*Myotis septentrionalis*, MYSE), tricolored bat (*Perimyotis subflavus*, PESU) and little brown bat (*Myotis lucifugus*, MYLU), associated with the replacement of Bridge Number 227 over Nantahala River on SR 1310 in Macon County, **TIP No. BR-0052.**

The North Carolina Department of Transportation (NCDOT, Division 14) proposes to replace Bridge No. 227 over Nantahala River on SR 1310 in Macon County, TIP No. BR-0052. The existing bridge is a three span structure with steel beams, timber deck, concrete end walls and metal guard rails. The overall length of the bridge is 106 feet. No culverts meeting NCDOT's Standard Operating Procedures for Preliminary Bat Habitat Assessments were identified meeting the criteria of greater than 3 feet wide and 60 feet in length during this site visit.

On June 9, 2022, NV5 biologists assessed all of the structures in the project study area. No crevices suitable for roosting were present on the structure. No evidence of bats (bats, staining, guano) was observed on the structure. Bridge No. 227 was previously surveyed by NCDOT biologists in 2018. No evidence of bats was observed at this survey as well. Trees greater than 3" dbh occur within the project footprint. There are no known caves or mines within one half mile of the project footprint and no caves or mines were observed during the field visit. Large, continuous forests are present in the project vicinity, providing potential foraging and commuting habitat.

As of November 3, 2022, the following federally protected bat species are listed in IPaC (<https://ecos.fws.gov/ipac/>) as occurring in the action area:

Species	Federal Status	Habitat Present*	Biological Conclusion	Distance to Nearest Record**
MYGR	E	Yes	MANLTAA	11.4 mile NE
MYSO	E	Yes	MANLTAA	9.3 mile N
MYSE	T	Yes	MANLTAA	.93 mile N
PESU	PE	Yes	MANLTAA	.93 mile N
MYLU***	FL	Yes	MANLTAA	.5 mile NW

\*See detailed habitat information in table below

\*\*Nearest known record from latest NHP, WRC, or NCDOT data

\*\*\* The Little Brown Bat (*Myotis lucifugus*), which may become federally listed in the future (FL), may also be found in Macon County.

MANLTAA=May Affect Not Likely To Adversely Affect

Presence (✓) or Probable Absence (X) of various habitat types for bat species present in project area.

Species	Summer Roosting		Winter Roosting	Foraging Habitat	Commuting Habitat
	Tree	Structure			
MYGR	NA	✓	X	✓	✓
MYSO	✓	✓	X	✓	✓
MYSE	✓	✓	X	✓	✓
PESU	✓	✓	X	✓	✓
MYLU	✓	✓	X	✓	✓

A Biological Conclusion of May Affect Not Likely To Adversely Affect is given to each of the above species based on the presence of suitable foraging and commuting habitat. No evidence of federally listed bats was found on the structure, no caves or mines are in the area, and a large area of alternative available suitable habitat exists in the project vicinity. Permanent roadway lighting is not present in the project area and BSG is not aware of any plans to install new roadway lighting with this project. If nighttime work during the bat active season becomes necessary, temporary lighting will only be used to illuminate work areas. This project is scheduled to let in September 2023, so tree clearing will be completed prior to the active season; however, if the schedule is delayed, winter tree clearing will be accomplished prior to project let by state forces or under separate contract.

If you need any additional information, please contact Melissa Miller at 919-707-6127.

NOONDAY GLOBE (*Patera clarki nantahala*) SURVEY REPORT

FOR

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROPOSED REPLACEMENT OF EXISTING BRIDGES ON SR 1310 (WAYAH ROAD)

WAYAH RANGER DISTRICT  
NANTAHALA NATIONAL FOREST

MACON COUNTY

NORTH CAROLINA

Alderman Environmental Services, Inc.

Prepared By:

John Fridell

Phone: (828) 713 2983

E-mail: [fridellj@aol.com](mailto:fridellj@aol.com)

## INTRODUCTION

This report documents the result of surveys for the potential effects on the federally-threatened Noonday Globe (*Patera clarki nantahala*) from the North Carolina Department of Transportation's (NCDOT) proposed replacement of five existing bridges (Bridge #226 – 230; TIP: BR-0031, BR-0052, BR-0053, BR-0054, and BR-0055) over the Nantahala River on SR 1310 (Wayah Road), within the US Forest Service Wayah Ranger District, Nantahala National Forest, Macon Co., North Carolina. (See the project proposal for detailed description of proposal).

## SPECIES CONSIDERED

Potential direct effects to Noonday Globe were analyzed in the areas where construction is proposed or could potentially affect possible habitat of this snail. This area is referred as the project activity area (and for the purpose of this report includes only those areas where construction and tree or shrub removal is likely to occur). The project activity area is shown on the project file maps.

The Noonday Globe was federally-listed as threatened by the US Fish and Wildlife Service (USFWS) on July 27, 1978 (43 FR 28932). Critical Habitat for the snail has not been designated.

Clench and Banks (1932) named this taxon *Polygyra (Triodopsis) nantahala*. Pilsbry (1940) later relegated it to a subspecies of *Mesodon clarki*. Emberton (1991) reclassified *Mesodon clarki* to *Patera clarki*.

The Noonday Globe is a terrestrial snail with a sub-globose, imperforate shell with about 5 1/2 whorls. Its shell is reddish-brown to a tannish-brown and shiny when fresh but can weather to a grayish-white as the snail matures. The lip of the shell aperture is sharply reflected and the peristome is white. The peristome of the basal area of the aperture thickens to form an almost blade-like tooth. The parietal wall, just inside the aperture, has a long recurved tooth. The surface of the shell is sculptured with rather coarse striae that appear on the embryonic whorl as well (Clench and Banks 1932, Pilsbury 1940, USFWS 1984).

The Noonday Globe closely resembles the Dwarf Proud Globe (*Patera clarki clarki*). Both subspecies use similar habitats and the shells of both are similar in color and the number of whorls and can overlap in diameter. Dourson (2013) gives the diameter of the Noonday Globe as 15-20 millimeters (mm) and the Dwarf Proud Globe as 13-18.2 mm. However, the shell of Noonday Globe is lower in profile, that is less domed (Dourson 2013).

The Noonday Globe is known to be endemic only to the southeast side of the Nantahala River Gorge in the Nantahala National Forest, Swain County, North Carolina (USFWS 1984, USFWS 2013). This subspecies has only been documented from the vicinity of Silver Mine Creek at the northern end of the gorge, southwest to the vicinity of the NC Highway 19 Bridge crossing of the Nantahala River near the southern end of the gorge (USFWS 2013; J. Mays, USFWS, Asheville, NC, personal communication 2019). Within the gorge, the snail has been recorded from

scattered sites along the southeast slope of the gorge from the southeast side of NC Highway 19 to near the top ridge of the gorge (USFWS 2013). It is generally found on and around moist rocks and rock outcrops, often covered with a variety of bryophytes and fungi, along streams and scattered seeps, but can also be found in thick leaf litter and humus layers and other moist forested habitats (USFWS 2013). Moist conditions appear to be important to the subspecies. The existing Natural Heritage database does not show the presence of any occurrence of the Noonday Globe within close proximity to the project site. The nearest known occurrence of the subspecies in the vicinity of the NC Highway 19 Bridge crossing of the Nantahala River near the southern end of the gorge is roughly 3.8 air miles from the project location.

Because the Noonday Globe requires cool, moist habitat, any activity resulting in reduction, alteration, or opening of the forest canopy or understory vegetation could result in increased sunlight penetration and increased air temperature and circulation, resulting in drying and loss of the noonday globes' habitat in the understory (USFWS 2013).

## **FIELD SURVEY METHODS AND RESULTS**

Surveys for the Noonday Globe within the project activity area were conducted on April 22, 2019, by Alderman Environmental Services, Inc. biologists, John Fridell (Federal Endangered and Threatened Species Recovery Permit # TE98532B-0) and Joe Alderman. Surveys were conducted by hand, searching through leaf litter; on and under vegetation, logs, and rocks; and, rock outcrops. Focused attention was given during the survey to wetter habitats within the project impact area that appeared most likely to support the snail.

Potential habitat for the snail occurs in scattered areas along both sides of Nantahala River and Wayah Road within the project activity areas, both upstream and downstream from the existing bridge crossings, for all of the bridge projects except Bridge #226, where potentially suitable habitat for the snail is located primarily only along the slopes above the right (descending) bank of the Nantahala River. However, potential habitat at five of the sites is located primarily outside (upslope) of the existing maintained road right-of-way and other openings in the forest canopy and understory, although within the maintained road right-of-way some of the wetter rock road cuts did appear to provide potentially suitable habitat for the Noonday Globe.

Although potential, suitable habitat for the Noonday Globe occurs within close proximity to the project activity areas, no evidence of the snail was found during surveys for Bridge #226 (BR-0031), Bridge #227 (BR-0052), or Bridge #228 (BR-0053). At the Bridge #229 (BR-0054) site, a single shell from a dead snail in the genus *Patera* was found on the left (descending) bank, left hand side of the road, approximately 65 meters downstream of the bridge; and, at the Bridge #230 (BR-0055) site, a shell and one live specimen in the genus *Patera* were collected approximately 60 meters and 75 meters, respectively, downstream from the bridge, also from along the left (descending) bank, left side of the road. All three specimens from both sites were found on the wooded hillside, above/upslope from the maintained right-of-way.

The shell collected at the Bridge #229 site measured 15.4 mm in diameter and the live specimen measured 15.1 mm in diameter. The shell collected at the Bridge #230 site measured 13.7 mm in

diameter. While the shell collected at the Bridge #230 site falls below the range in diameter given by Dourson (2013) for the Noonday Globe, the shell and live specimen collected at the Bridge #229 site fall within the diameter range for the both the Noonday Globe and the Dwarf Proud Globe (Dourson 2013). Although Dourson (2013) doesn't give a height measurement range or height-width ratio for either of the subspecies, the shell and the live specimen collected at the Bridge #230 site appear slightly less domed than the typical Dwarf Proud Globe and to resemble the Noonday Globe or to fall somewhat between the two subspecies in appearance. However, all of the *Patera* specimens found at both the Bridge #229 site and the Bridge #230 site were found outside of the project activity areas/areas likely to be affected by the proposed bridge replacement projects.

**Biological Conclusion:**

Provided NCDOT prohibits any right-of-way widening, tree/shrub removal, or other construction activities outside of the existing bridge crossing sites and the existing maintained right-of-way, potential habitat for the Noonday Globe is unlikely to be affected by the proposed projects, thus the Biological Conclusion would be "no effect." If project activities extend beyond the right-of-way at or near the bridge crossings, then additional subspecies analysis, including possible genetic analysis may be required before a Biological Conclusion can be formulated.

## REFERENCES:

- Clench, W.J., and G.S. Banks. 1932. *Descriptions of some land snails of southwestern North Carolina*. *The Nautilus* 46(1):14-18.
- Dourson, D.C. 2013. *Land Snails of the Great Smoky Mountains and Southern Appalachians Tennessee and North Carolina*. Goatslug Publications, Bakersville, NC. 336 pp.
- Emberton, K.C. 1991. *The genitalic, allozymic and conchological evolution of the Tribe Mesodontini (Pulmonata: Stylommatophora: Polygyridae)*. *Malacologia* 33(1-2):78-178.
- Pilsbry, H.A. 1940. *Land Mollusca of North America (North of Mexico)*. Volume 1, Part 2. Academy of Natural Science. Philadelphia. Monograph No. 3.
- U.S. Fish and Wildlife Service. 1984. Recovery plan for the noonday snail *Mesodon clarki nantahala*. Prepared by Van Devender, A.S., Atlanta, Georgia. 30 pp.
- U.S. Fish and Wildlife Service. 2013. Noonday Globe *Patera (=Mesodon) clarki nantahala* 5-Year Review: Summary and Evaluation. Unpublished report. 12 pp.

## Cheely, Erin K

---

**From:** Hemphill, Jeffrey L  
**Sent:** Thursday, July 6, 2023 3:49 PM  
**To:** Wilson, Lauren B; Youngman, Holland J  
**Cc:** Cheely, Erin K  
**Subject:** BR-0031, BR-0052, BR-0053 | Informal Section 7 Requests  
**Attachments:** BR-0031 Impacts.pdf; BR0052 Impacts.pdf; BR-0053 Impacts.pdf

Lauren

Sorry for the late response – this one got lost in the shuffle. Responses to your questions below in *red*. Btw, congrats on your new job.

### Jeff Hemphill

Environmental Coordinator  
Environmental Analysis Unit  
North Carolina Department of Transportation

919 707 6126 office  
919 219 8581 mobile  
[jhemphill@ncdot.gov](mailto:jhemphill@ncdot.gov)

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1000 Birch Ridge Drive (Delivery)  
Raleigh, NC 27610



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**From:** Wilson, Lauren B <[lauren\\_wilson@fws.gov](mailto:lauren_wilson@fws.gov)>  
**Sent:** Friday, February 17, 2023 7:57 AM  
**To:** Turchy, Michael A <[maturchy@ncdot.gov](mailto:maturchy@ncdot.gov)>  
**Cc:** Youngman, Holland J <[holland\\_youngman@fws.gov](mailto:holland_youngman@fws.gov)>  
**Subject:** Re: [EXTERNAL] BR-0031, BR-0052, BR-0053 | Informal Section 7 Requests

**CAUTION:** External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Hi Michael - I had a chance to review the package. I also looked through our previous correspondence on the projects as well and have a few questions.

1. From some past emails, it looks like several different design alternatives were being considered for BR-0053. For instance, are you going with Alt 1 for BR-0053? Not sure if this was also the case for the other bridges? Can you provide more project details for each bridge and some maps on where exactly the project impacts will be? If you have maps that relate the location of snail suitable habitat to impact areas that would be awesome. *The designs were constricted by the landscape in which the bridges occur therefore the alternatives for each bridge were limited to changing the skew of the bridge or slightly shifting the bridge alignment – the environmental impacts are virtually the same on all alternatives. All impacts (including cut/fill, tree removal and bridge construction) should be limited to the NCDOT Right of Way. The attached pages are from the permit drawings for each project depicting impacts and the NCDOT ROW line. Unfortunately, there is no mapping depicting snail habitat.*
2. What percussive activities will occur? I thought at one point there was discussion of blasting but maybe I'm wrong. *There will be blasting on all three bridge projects. There are no existing pipes over 18" within 500' of any of the bridges and no abandoned structures. Tree clearing will take place prior to blasting.*
3. Can you offer any conservation measures to limit disturbance at the sites? I'm thinking things that you might already be doing or procedures you already follow that I'm either not aware of or would just be good to be explicit about in the consultation. Things like pre-construction meetings to go over env issues, any on-site meetings to go over environmental requirements, any thing that will limit the bounds of disturbance especially where the project borders suitable snail habitat like orange fencing, things like that. *Division personnel generally hold a preconstruction meeting (often onsite) with the contractor or Division crews to go over any environmental concerns on a project (I did them when I worked in a Division). The crews will be informed that they need to work within the right of way line which is staked on each project.*
4. How much tree removal at each site? Can you provide maps of where this will be? Or we can probably infer it from project plans. *Tree removal per project: BR-0031 - 0.14 Acre / BR-0052 – 0.04 Acre / BR-0053 – 0.01 Acre These areas are near the bridges or in cut/fill areas along the road leading to the bridge.*
5. You state "*\*NCDOT does not anticipate any construction activities outside of the Right of Way so no potential Noonday snail habitat should be impacted.*" in each of the letters. John Fridell's snail report says the following: "*Potential habitat for the snail occurs in scattered areas along both sides of Nantahala River and Wayah Road within the project activity areas, both upstream and downstream from the existing bridge crossings, for all of the bridge projects except Bridge #226, where potentially suitable habitat for the snail is located primarily only along the slopes above the right (descending) bank of the Nantahala River.*" Without more project details and impact maps, I can't reconcile these statements. I think you all changed where your impacts are and/or the "project activity area" was bigger than just the right-of-way? Any insights are appreciated. *NCDOT begins most bridge replacement projects with a larger study area that can encompass different design alternatives for approaches, bridge alignments and potential onsite detours. Once an alternative is selected, any impacts should be limited to the project footprint. John Fridell's report utilized the larger study area which included some of the slopes of the gorge.*
6. The letters say "*If nighttime work during the bat active season becomes necessary, temporary lighting will only be used to illuminate work areas.*" but also say "*No night work is anticipated for this project.*" Which is true? *Division 14 confirmed there would be no nightwork for these projects*

## **Lauren B. Wilson**

Section 7 Biologist, NCDOT Liaison, ARM, CWB®

U.S. Fish and Wildlife Service Asheville Ecological Services Field Office

160 Zillicoa Street, Asheville, North Carolina 28801

[lauren\\_wilson@fws.gov](mailto:lauren_wilson@fws.gov)

828.275.8525

(she/her) (*Why pronouns matter*)

---

**From:** Wilson, Lauren B <[lauren\\_wilson@fws.gov](mailto:lauren_wilson@fws.gov)>  
**Sent:** Monday, February 13, 2023 7:57 AM  
**To:** Turchy, Michael A <[maturchy@ncdot.gov](mailto:maturchy@ncdot.gov)>; Youngman, Holland J <[holland\\_youngman@fws.gov](mailto:holland_youngman@fws.gov)>  
**Cc:** Stanton, Tyler P <[tstanton@ncdot.gov](mailto:tstanton@ncdot.gov)>; Gray, Jared S <[jgray@ncdot.gov](mailto:jgray@ncdot.gov)>; Cox, Marissa R <[mrcox@ncdot.gov](mailto:mrcox@ncdot.gov)>; Cole, Adam A <[aacole@ncdot.gov](mailto:aacole@ncdot.gov)>; Barnett, Kevin H <[khbarnett@ncdot.gov](mailto:khbarnett@ncdot.gov)>; Cheely, Erin K <[ekcheely@ncdot.gov](mailto:ekcheely@ncdot.gov)>; Hemphill, Jeffrey L <[jhemphill@ncdot.gov](mailto:jhemphill@ncdot.gov)>  
**Subject:** Re: [EXTERNAL] BR-0031, BR-0052, BR-0053 | Informal Section 7 Requests

Hi Michael - We have received your informal consultation request. Holland or I will get back to you with any questions.  
lbw

## Lauren B. Wilson

Section 7 Biologist, NCDOT Liaison, ARM, CWB®

U.S. Fish and Wildlife Service Asheville Ecological Services Field Office

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[lauren\\_wilson@fws.gov](mailto:lauren_wilson@fws.gov)

828.275.8525

(she/her) (*Why pronouns matter*)

---

**From:** Turchy, Michael A <[maturchy@ncdot.gov](mailto:maturchy@ncdot.gov)>  
**Sent:** Sunday, February 12, 2023 4:29 PM  
**To:** Youngman, Holland J <[holland\\_youngman@fws.gov](mailto:holland_youngman@fws.gov)>; Wilson, Lauren B <[lauren\\_wilson@fws.gov](mailto:lauren_wilson@fws.gov)>  
**Cc:** Stanton, Tyler P <[tstanton@ncdot.gov](mailto:tstanton@ncdot.gov)>; Gray, Jared S <[jgray@ncdot.gov](mailto:jgray@ncdot.gov)>; Cox, Marissa R <[mrcox@ncdot.gov](mailto:mrcox@ncdot.gov)>; Cole, Adam A <[aacole@ncdot.gov](mailto:aacole@ncdot.gov)>; Barnett, Kevin H <[khbarnett@ncdot.gov](mailto:khbarnett@ncdot.gov)>; Cheely, Erin K <[ekcheely@ncdot.gov](mailto:ekcheely@ncdot.gov)>; Hemphill, Jeffrey L <[jhemphill@ncdot.gov](mailto:jhemphill@ncdot.gov)>  
**Subject:** [EXTERNAL] BR-0031, BR-0052, BR-0053 | Informal Section 7 Requests

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Lauren and Holland,  
Please find attached Informal Section 7 requests for the replacement of 3 bridges over the Nantahala River on Wayah Road in Macon County.  
FHWA is the lead federal agency for these bridges.  
Although these are three separate letters, these bridges will be replaced together for logistics purposes.

If you would prefer to issue them as one Action, we would be fine with that approach.

Please let me or Jeff Hemphill know if you have any questions.

Thanks,

Michael

**Michael Turchy**

Environmental Coordination and Permitting [ECAP] Group Leader

Environmental Analysis Unit

North Carolina Department of Transportation

919 707 6157 office

919 818 7427 mobile

[maturchy@ncdot.gov](mailto:maturchy@ncdot.gov)

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Raleigh, NC 27610



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# Archaeology

17-12-0042  
Revised**NO ARCHAEOLOGICAL SURVEY REQUIRED FORM**

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

**PROJECT INFORMATION**

Project No: **BR-0031 & BR-0052** County: **Macon**  
 WBS No: **67053.1.1 & 67052.1.1** Document: **Minimum Criteria**  
 F.A. No: **na** Funding:  State  Federal  
 Federal Permit Required?  Yes  No Permit Type: **FERC and USACE**

**Project Description:**

The project calls for the replacement of Bridge Nos. 226 and 227 on SR 1310 (Wayah Road) over the Nantahala River in Macon County. The archaeological Area of Potential Effects (APE) for the project is defined as an approximately 2,650-foot (807.72 m) long corridor running along Wayah Road starting 800 feet (243.84 m) north from the end of Bridge No. 226 and ending 900 feet (274.32 m) east from the end of Bridge No. 227. The APE is approximately 200 feet (60.96 m) wide extending 100 feet (30.48 m) to either side from the centerline. In all, the APE encompasses approximately 12 acres.

Although this project is state funded, federal permits are anticipated. Therefore, this archaeological review was conducted pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

*This project was originally submitted as TIP BR-0031, which included the proposed replacement of Bridge Nos. 226, 227, 228, 229, and 230 in Macon County. An "Archaeological Survey Required" form was submitted on February 28, 2018. The bridges have since been resubmitted as individual projects for cultural review and the APE has been reduced. The former PA form is now invalid and is replaced by the present "No Archaeological Survey Required" revised form for Bridge Nos. 226 and 227. All other bridges have received separate archaeological PA forms as well to reflect adjustments to the current projects.*

**SUMMARY OF CULTURAL RESOURCES REVIEW****Brief description of review activities, results of review, and conclusions:**

Bridge Nos. 226 and 227 are located northeast of Andrews and southeast of Robbinsville in Macon County, North Carolina. The project area is plotted at the southern end of the Hewitt USGS 7.5' topographic quadrangle (Figure 1).

A site file search was conducted at the Office of State Archaeology (OSA) on January 11, 2018, and a subsequent review of OSA data was carried out on February 18, 2020 based upon the revised project limits. Only one previously recorded site (31MA683) is identified within the APE, while another four sites (31MA687, 31MA740, 31SW390, and 31SW391) are recorded within a mile of the bridges. According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2020), most of project area is within the Determined Eligible Nantahala Hydroelectric Power Project property (MA--) and the Study Listed Nantahala Power and Light Hydroelectric Plant Complex (MA 353). Structures associated with this historic resource are outside of the archaeological APE. It unlikely that intact and significant archaeological deposits that would contribute to the resource's eligibility will be encountered due to heavy disturbance. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), and historic maps (North Carolina maps website) were also examined for information on

environmental and cultural variables that may have contributed to prehistoric or historic settlement within the project limits and to assess the level of ground disturbance. Finally, a field reconnaissance was conducted on March 3, 2020 to assess the potential for archaeological sites.

The APE corridor follows Wayah Road in a northwest to southwest direction (Figure 2). The Nantahala River is crossed twice with Bridge 226 in the north and 227 in the south. The river drains north and is part of the Little Tennessee drainage basin. Landforms consist of floodplains adjacent to the river with steep hillsides and foot slopes to the east (Figures 3 and 4). The APE is predominately forested except for areas surrounding the hydroelectric complex and boat launch at the northern end (Figures 5 and 6) and a parking lot at the southern (Figure 7). These areas are open with scattered trees. Ground disturbance appears mixed, but previous archaeological surveys have found heavy disturbance throughout from human (construction of the road, the hydroelectric plant, boat launch, and other facilities) and natural activities (soil erosion along the floodplain southwest of Bridge 226). The field reconnaissance identified the areas adjacent to the road as level but severally disturbed from grading, road cuts, and erosion. Some areas are made up of fill material (Figure 8). No rock shelters or benches were observed above the road grade.

The USDA soil survey map for Macon County records five soil types within the APE (USDA NRCS 2020) (see Figure 2). The floodplains are made up of Reddies fine sandy loam (ReA) and Udorthents-Urban land complex (UfB). The Reddies series is moderately well drained with a slope of 3 percent or less and subject to frequent flooding, while the Udorthents-Urban land complex consists of soils modified by earth moving activities or covered by impervious surfaces. The foot slopes and hillsides are composed of the Cataska-Syko complex (CcF), the rock outcrop-Cataska complex (RhF), and the Spivey-Santeetlah complex (SrD). These soils are well drained to excessively drained with slopes greater than 15 percent. Most of the above soil types are either unsuited for early settlement activities with steep slopes or unlikely to contain intact deposits due to heavy ground disturbance. They do not require subsurface testing and the field reconnaissance failed to identify any atypical features such as rock shelters. However, the Reddies series has the potential for significant archaeological deposits if disturbance is low, but a previous investigation determined that this series has been washed away exposing large rocks and cobbles at the surface.

A review of the site files shows that nearly entire project area has been covered by three previous archaeological surveys. These were for the Nantahala to Oak Grove power line corridor (Southerlin et al. 1991), the Nantahala River boat launch (Dyson 2006), and the Power Canal Access location (Reid and Southerlin 2007). Areas not covered are the steep hillsides found southeast of Bridge 226 and south of Bridge 227 and the disturbed property between Wayah Road and the hydroelectric substation northeast of Bridge 226. Only one site, 31MA683, has been reported within the currently defined project limits. Site 31MA683 was recorded during the boat launch survey and is situated along the access road leading to a parking lot (Dyson 2006) (see Figure 5). This site consisting of a single prehistoric sherd. It appears four subsurface tests were placed around a positive test in order to delineate the site. All additional tests were negative as were all other tests excavated during the investigation. It is reported that the isolated sherd is most likely redeposited from either road or power plant construction. The investigators estimated that 1.5 meters of fill covers the landform north of Bridge 226. As a result, 31MA683 is ineligible for the National Register and requires no further archaeological work. The Nantahala to Oak Grove power line corridor also covers the area north of Bridge 226 and failed to produce positive results within the project limits (Southerlin et al. 1991). Lastly, the Power Canal Access survey was carried out on the floodplain west of Wayah Road between the two bridges. A total of xx shovel tests were excavated on this property with negative results (Reid and Southerlin 2007). Tests near the road revealed fill over large rock, while those further away showed exposed stone at the surface with the upper soil layers having been washed away. Other known sites (31MA687, 31MA740, 31SW390, and 31SW391) in the vicinity are the result of investigations carried out by archaeologists with National Forests in North Carolina (NFsNC) or Brett Riggs for his Historic Cherokee Farmstead and Citizen Cherokee Reservation projects. None are located

17-12-0042 Revised
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on hillsides similar to the uninvestigated areas within the current APE. This suggest no unidentified site are present, which was confirmed during the field reconnaissance.

A historic map review was also conducted for the project area. One of the earliest in which an approximate location can be determined is the 1837–1838 U.S. Army survey map (Figure 9). This map was produced under the guidance of Major W.G. Williams in preparation for the removal of the Cherokee Indians. The map illustrates the Nantahala River but no other features are in the immediate vicinity. The much later 1906 USGS Nantahala topographic map also depicts no structures or road in the project area (Figure 10). This is seen again in the circa 1910 US Post Office map (Figure 11). The 1938 highway map for the county displays the hydroelectric plant for the first time along with its associated buildings and the initially start of Wayah Road (NCSHPWC 1938) (Figure 12). It is not until the 1950s that Wayah Road is fully depicted, and the bridges are constructed. It is not likely that remains of any historic structures will be encountered by the proposed project.

***Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:***

The proposed Bridge Nos. 226 and 227 replacement projects in Macon County is not likely to impact any significant archaeological resources. Most of the project area has been previously surveyed yielding only a single archaeological isolated fine (31MA683). The remaining areas consists of steep hillsides or areas of heavy disturbance. This was confirmed during a field reconnaissance, which also saw no evidence of undisturbed soils on level landforms or atypical features such as rock shelters along the slopes. No additional archaeological work is recommended for this project. But if design plans change to affect subsurface areas beyond the defined APE, further archaeological consultation will be necessary.

Please note, this project falls within a North Carolina County in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. It is recommended that you contact each federal agency involved with this project to determine their Section 106 Tribal consultation requirements.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence  
 Photocopy of County Survey Notes    Other:

**FINDING BY NCDOT ARCHAEOLOGIST**

**NO ARCHAEOLOGY SURVEY REQUIRED**



C. Damon Jones  
NCDOT ARCHAEOLOGIST

3/11/20

Date

## REFERENCES CITED

Dyson, David McDaniel

2006 *Heritage Resources Survey for the Proposed Nantahala River Commercial Put-In Upgrade, Compartments 19, Wayah Ranger District, Nantahala National Forest, Macon County, North Carolina.* National Forests in North Carolina, Asheville, North Carolina

HPOWEB

2020 North Carolina State Historic Preservation Office GIS Web Service.  
<http://gisNCDCCR.gov/hpoweb/>. Accessed February 18, 2020.

North Carolina State Highway and Public Works Commission (NCSHPWC)

1938 *North Carolina State Highway Map for Macon County.* North Carolina State Highway and Public Works Commission, Raleigh.

Reid, Dawn and Bobby Southerlin

2007 *Archaeological Survey of the Power Canal Access Area, Macon County, North Carolina.* Archaeological Consultants of the Carolinas, Inc., Clayton, North Carolina. Submitted to Devine Tarbell & Associates, Inc, Charlotte, North Carolina.

Southerlin, Bobby, Linda Allan, Marion Roberts, and Christopher Espenshade

1991 *An Archaeological Survey of the Nantahala to Oak Grove Transmission Corridor, Macon County, North Carolina.* Brockington and Associates, Inc., Atlanta, Georgia. Submitted to Duke Power Company, Charlotte, North Carolina.

United States Department of Agriculture Natural Resources Conservation Services (USDA NRCS)

2020 Macon County Soil Survey. Available online at  
<http://webosilsurvey.nrcs.usda.gov/app/>. Accessed February 18, 2020.

United States Geological Survey (USGS)

1906 Nantahala, North Carolina-Tennessee, 30-minute quadrangle map. Reprinted 1924.  
2000 Hewitt, North Carolina 7.5 minute quadrangle map.

United States Post Office

c. 1910 *Rural Delivery Routes for Macon County, North Carolina.* U.S. Post Office Department, Washington D.C. On file at North Carolina Collections, University of North Carolina, Chapel Hill.

William, W.G.

1838 *Map of Part of the Cherokee Territory Situated Among the Mountains of N. Carolina, Georgia, and Tennessee.* Map on file, Record Group 49, US National Archives Cartographic Division, Suitland, Maryland.

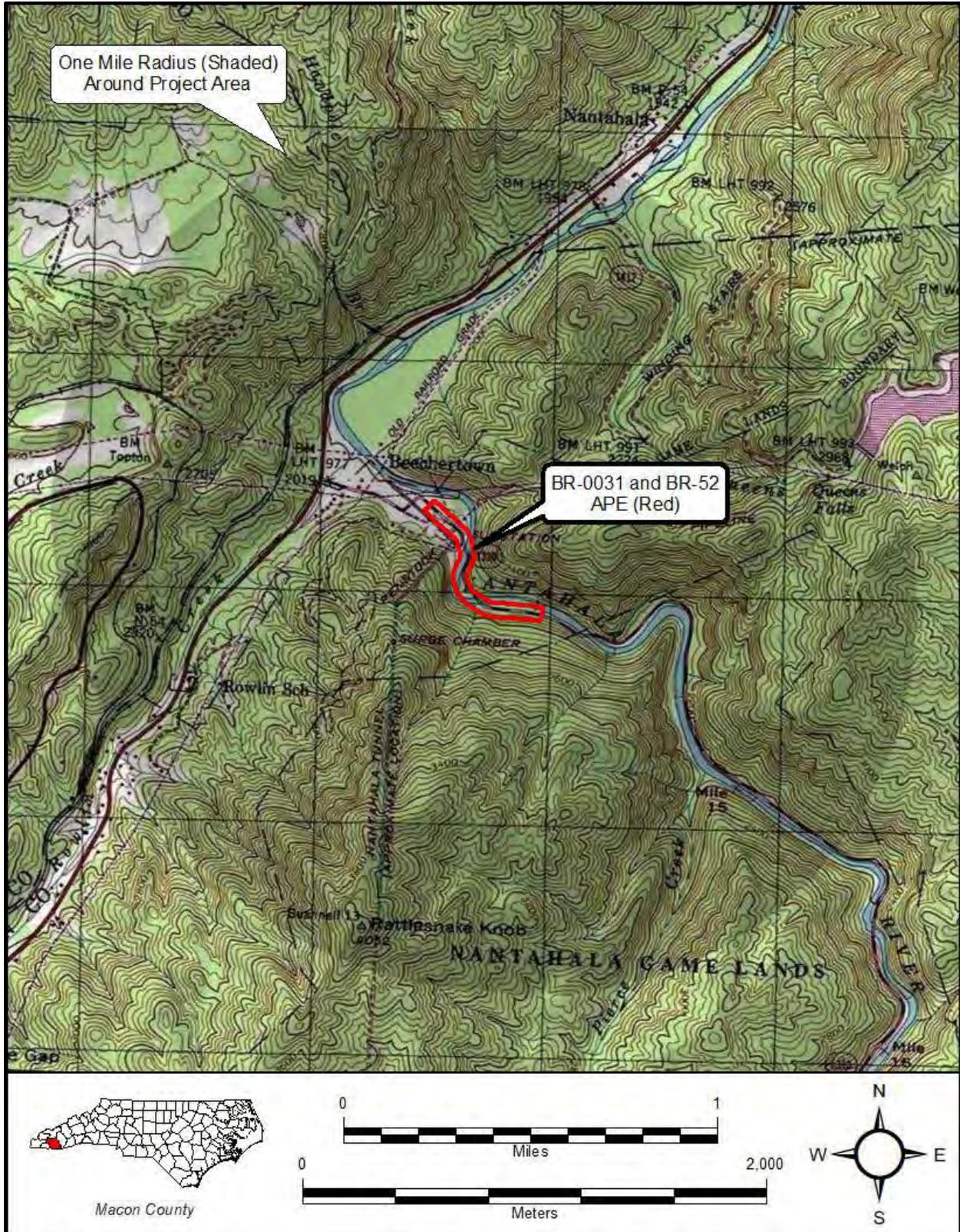


Figure 1. Topographic Setting of the Project Area, Hewitt (2000), NC USGS 7'5 Topographic Quadrangle.

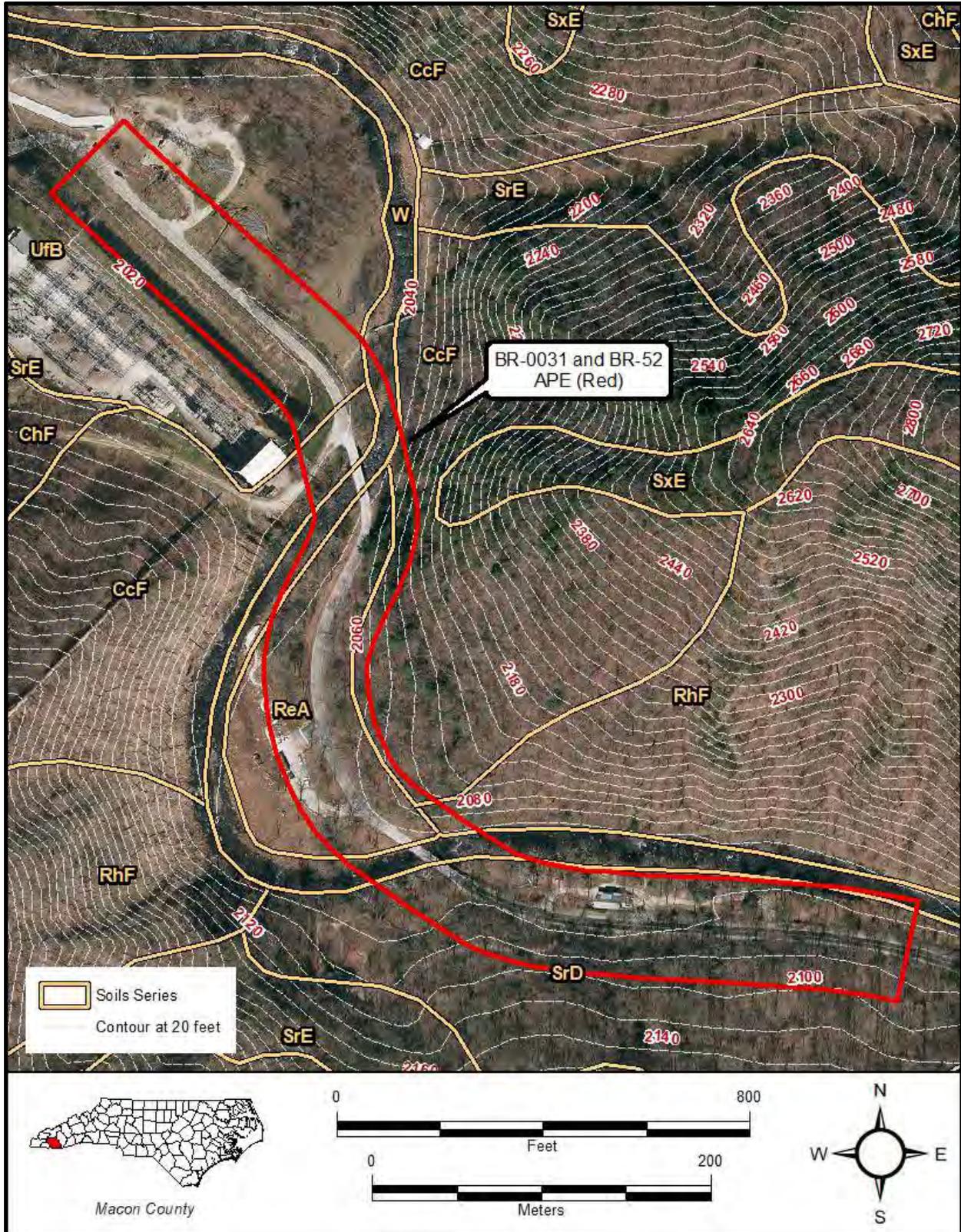


Figure 2. Aerial photograph of the APE showing development, contours, and soils.



Figure 3. General view of the floodplain southwest of Bridge 226, looking south from the bridge.



Figure 4. General view of hillside slope northeast of Bridge 227, looking north from the bridge.



Figure 5. General view of the boat launch parking lot and site 31MA683 northeast of Bridge 226, looking northwest.



Figure 6. General view of the canal and the hydroelectric complex northwest of Bridge 226, looking northwest.



Figure 7. General view of the parking lot in the floodplain west of Wayah Road between Bridges 226 and 227, looking north.



Figure 8. Area of fill northeast of Bridge 226, looking north.

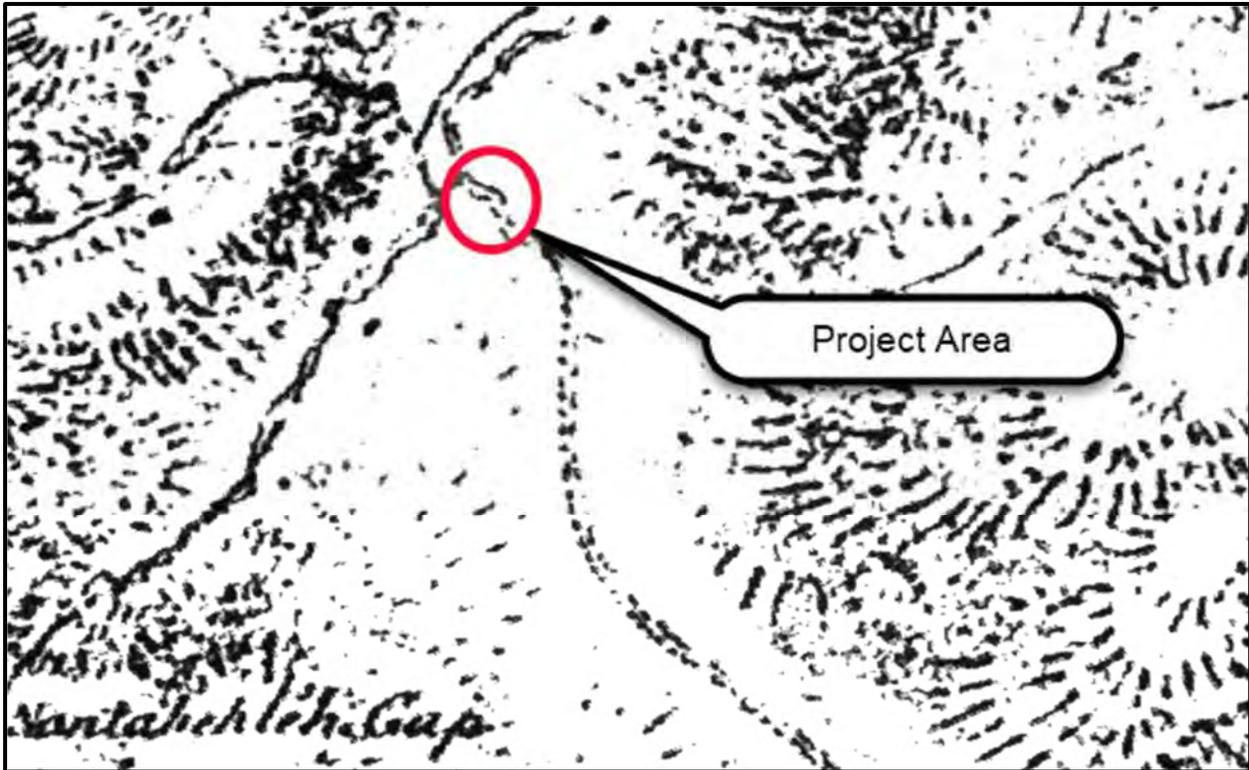


Figure 9. The 1837–1838 U.S. Army survey map showing the approximate project area location

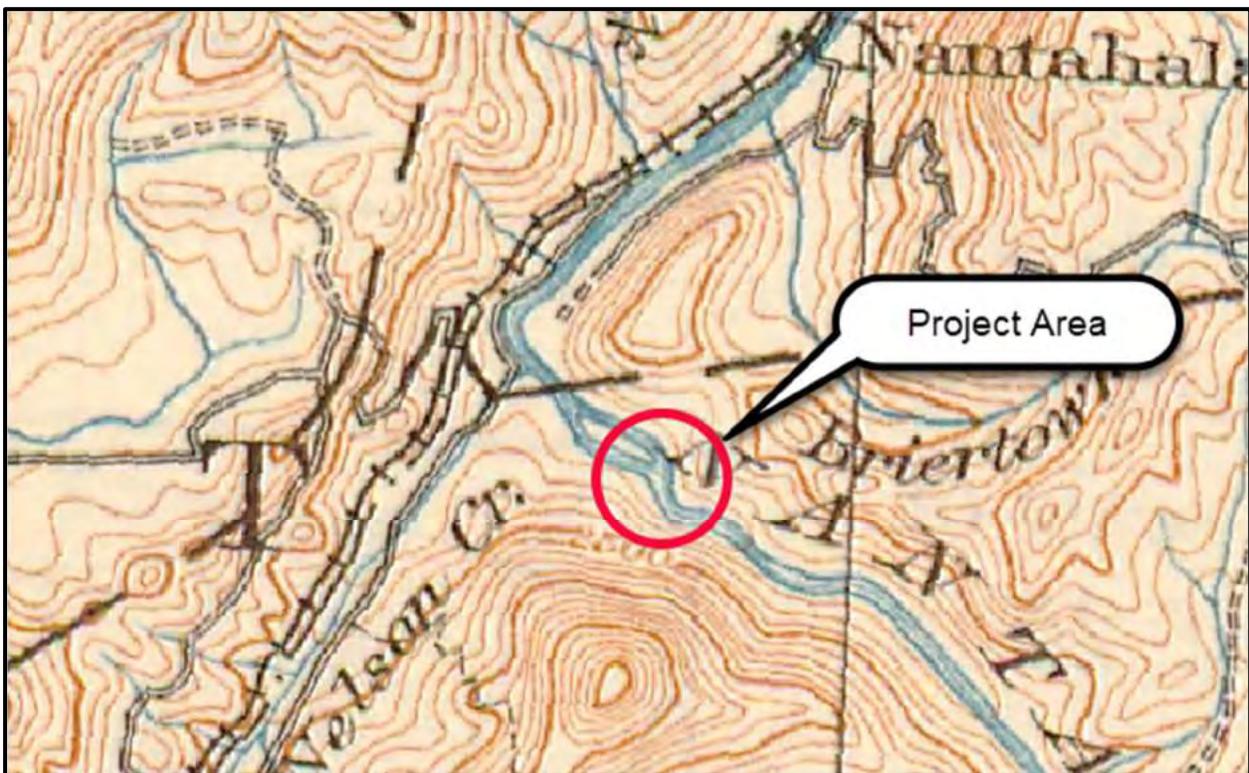


Figure 10. The 1906 USGS Nantahala topographic map showing the location of the project area.



Figure 11. The circa 1910 US Post Office map showing the project area.

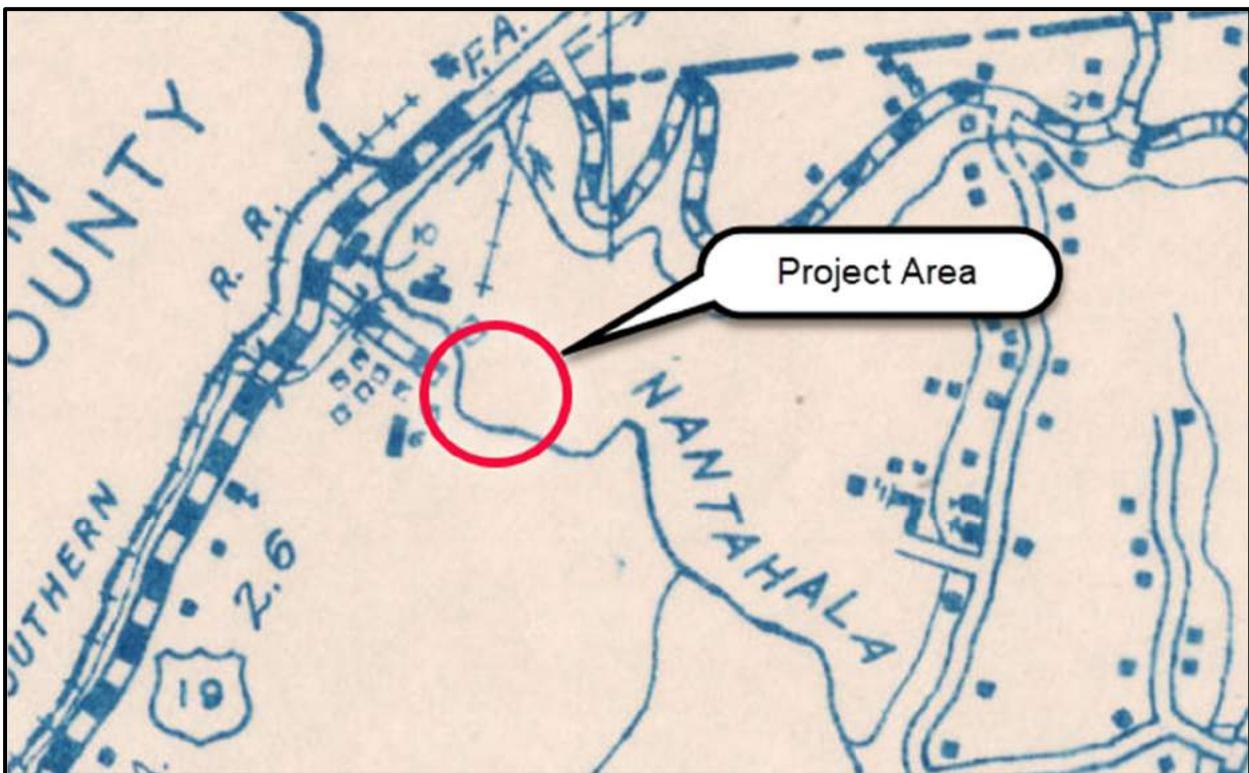


Figure 12. The 1938 North Carolina State Highway Map for Macon County showing the project area.

# Historic Architecture and Landscapes

17-12-0042



## HISTORIC ARCHITECTURE AND LANDSCAPES

### \*\*EFFECTS REQUIRED FORM\*\*

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

#### PROJECT INFORMATION

<b>Project No:</b>	BR-0031	<b>County:</b>	Macon
<b>WBS No.:</b>	67031.3.1	<b>Document Type:</b>	MCC
<b>Fed. Aid No:</b>	N/A	<b>Funding:</b>	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	USACE
<b><u>Project Description:</u></b> Replace Bridges 5500226-5500230 on SR 1310 (Wayah Road) over Nantahala River.			

#### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

##### **Description of review activities, results, and conclusions:**

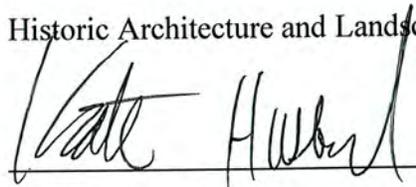
Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on January 8, 2018. Based on this review, the three bridges fall within the Determined Eligible Nantahala Power and Light Complex. An assessment of effects will be required.

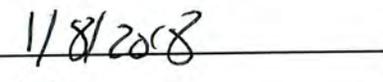
#### SUPPORT DOCUMENTATION

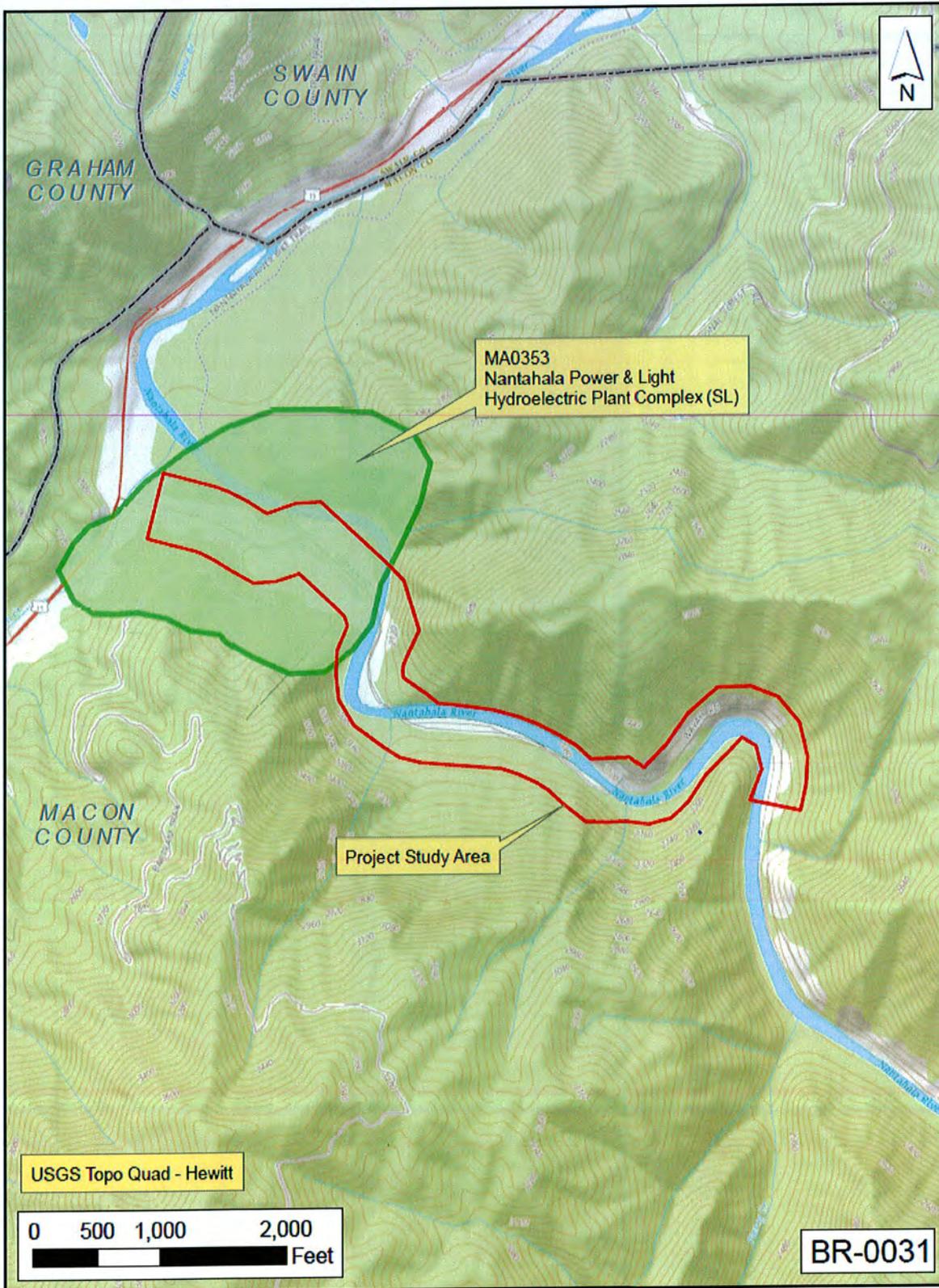
Map(s)  
  Previous Survey Info.  
  Photos  
  Correspondence  
  Design Plans

#### FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- **\*\*EFFECTS REQUIRED\*\***

  
 \_\_\_\_\_  
 NCDOT Architectural Historian

  
 \_\_\_\_\_  
 Date





17-12-0042



## HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

### PROJECT INFORMATION

<b>Project No.:</b>	BR-0031, BR-0052	<b>County:</b>	Macon
<b>WBS No.:</b>	67031.3.1	<b>Document Type:</b>	MCC
<b>Fed. Aid No.:</b>	N/A	<b>Funding:</b>	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	USACE
<b><u>Project Description:</u></b> Replace Bridge Nos. 226 and 227 on SR 1310 (Wayah Road) over Nantahala River.			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

<b><u>Description of review activities, results, and conclusions:</u></b> Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on January 8, 2018. Based on this review, the project falls within the Determined Eligible Nantahala Power and Light Complex. An assessment of effects is required.
---

### ASSESSMENT OF EFFECTS

<b>Property Name:</b>	Nantahala Hydroelectric Power Project	<b>Status:</b>	Determined Eligible
<b>Survey Site No.:</b>		<b>PIN:</b>	
<b>Effects</b> <input type="checkbox"/> No Effect <input checked="" type="checkbox"/> No Adverse Effect <input type="checkbox"/> Adverse Effect			
<b><u>Explanation of Effects Determination:</u></b> There will be no adverse effect with the following environmental commitments listed below.			
<b><u>List of Environmental Commitments:</u></b> <ol style="list-style-type: none"> <li>1. Maintain Right of Way</li> <li>2. Oregon Rail to be utilized for bridge rails</li> <li>3. Retaining walls will utilize a natural stone design</li> </ol>			

**FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):**

Nantahala Hydroelectric Power Project

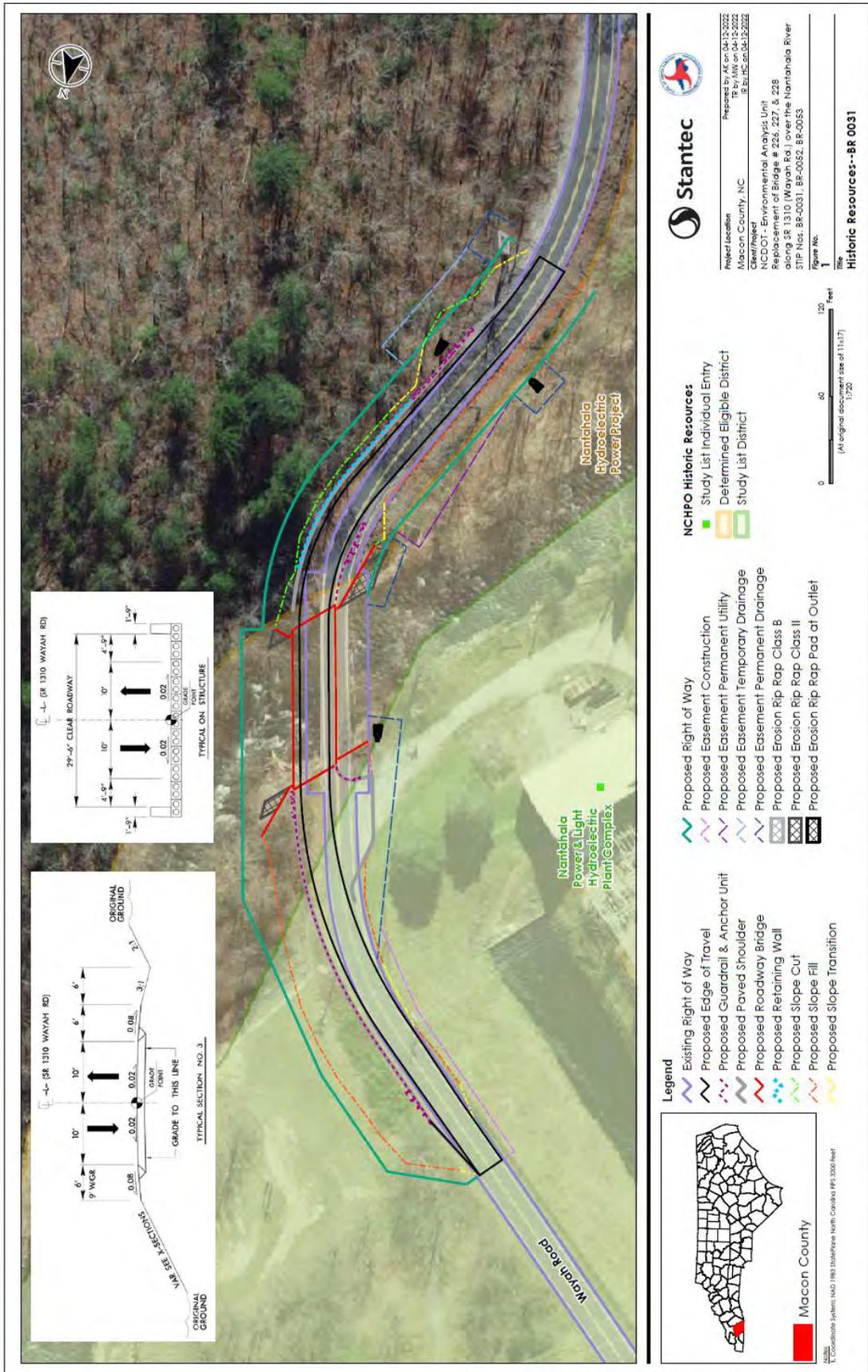
**SUPPORT DOCUMENTATION**

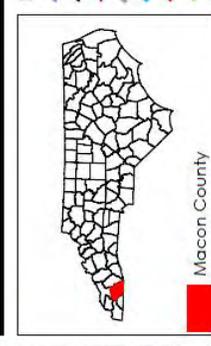
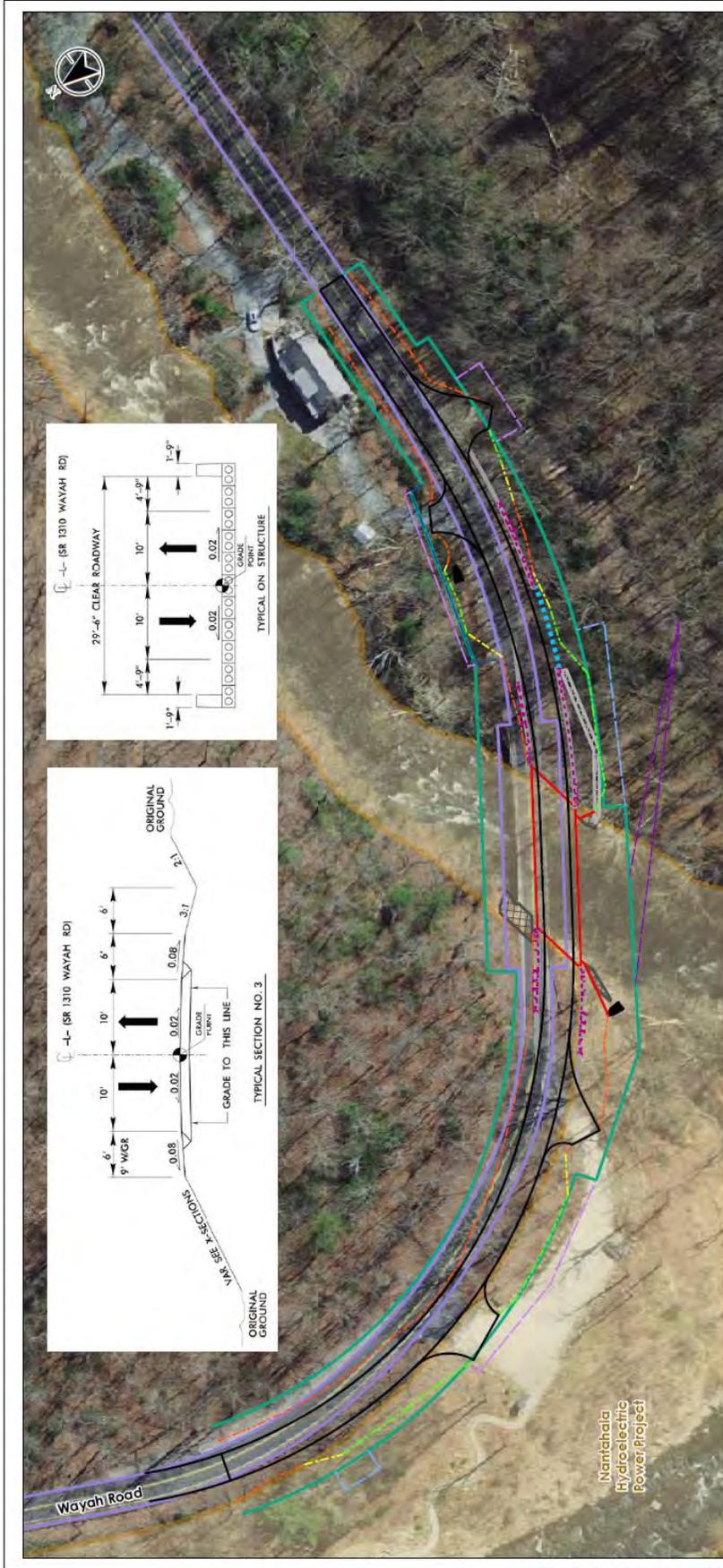
Map(s)     Previous Survey Info.     Photos     Correspondence     Design Plans

**FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE**

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

<p>DocuSigned by: <i>Katherine Husband</i> C47FECA930B040B...</p>	04/28/2022
NCDOT Architectural Historian	Date
<p>DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...</p>	04/29/2022
State Historic Preservation Office Representative	Date
<p>DocuSigned by: <i>Seth Wilcher</i> 9967A500E8714E0...</p>	05/02/2022
Federal Agency Representative	Date





- Legend**
- Existing Right of Way
  - Proposed Edge of Travel
  - Proposed Guardrail & Anchor Unit
  - Proposed Paved Shoulder
  - Proposed Retaining Wall
  - Proposed Roadway Bridge
  - Proposed Slope Cut
  - Proposed Slope Fill
  - Proposed Slope Transition
  - Proposed Right of Way
  - Proposed Easement Construction
  - Proposed Easement Permanent Utility
  - Proposed Easement Temporary Drainage
  - Proposed Easement Permanent Drainage
  - Proposed Erosion Rip Rap Class B
  - Proposed Erosion Rip Rap Class II
  - Prop Erosion Rip Rap Pad at Outlet
  - NCHPO Historic Resources
  - Determined Eligible District

- Scale**
- 0 70 140 Feet  
(At original document size of 11x17)  
1:340
- Project Location**  
Macon County, NC
- Prepared by:** AK on 04/12/2022  
TB by MM on 04/12/2022  
SR by HC on 04/12/2022
- Client/Project**  
NCDOT - Environmental Analysis Unit  
Replacement of Bridge # 226, 227, & 228  
along SR 1310 (Wayah Rd.) over the Nantahala River  
STIP Not: BR-0031, BR-0052, BR-0053
- Figure No.**  
2
- Title**  
Historic Resources--BR 0052

# Tribal Coordination



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

April 30, 2021  
Dr. Wenonah Haire  
Tribal Historic Preservation Office  
Catawba Indian Nation  
1537 Tom Steven Road  
Rock Hill, SC 29730

Dear Dr. Haire,

The North Carolina Department of Transportation has started the project development, environmental, and engineering studies for the Replacement of Bridges # 226, #227, and #228 over the Nantahala River on Wayah Road (SR 1310) in Macon County as projects BR-0031, BR-0052, BR-0053 respectfully. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE.

A project vicinity map is attached with the survey reports (one report for BR-0031 & BR-0052 and one report for BR-0053). The coordinates of these projects are approximately as follows:

BR-0031: 35.27136, -83.67538

BR-0052: 35.26922, -83.67481

BR-0053: 35.26768, -83.66747

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project including recommendation of alternates to be studied. Your comments may be used in the preparation of a NEPA/ State Environmental Policy Act (SEPA) Environmental Document.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

Please respond by June 11th so that your comments can be used for NEPA documentation. If you have any questions concerning this project, or would like any additional information, please contact me at [dstutts@ncdot.gov](mailto:dstutts@ncdot.gov) or (919) 707-6442.

Thank you,

DocuSigned by:

A4A2999A8BC64F2...

David Stutts, P.E.  
NCDOT Project Engineer – PEF/Program Management

cc: Matt Wilkerson, NCDOT Archaeology Team Leader  
Crystal Amschler, USACE Asheville Field Office

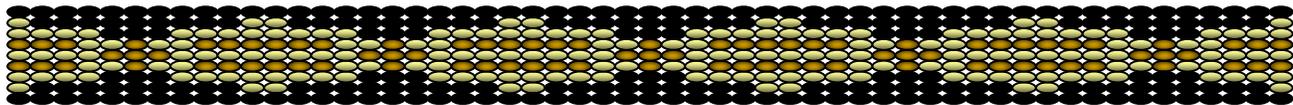
*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

*Telephone:* (919) 707-6000  
*Customer Service:* 1-877-368-4968  
*Website:* [www.ncdot.gov](http://www.ncdot.gov)

*Location:*  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, South Carolina 29730

Office 803-328-2427  
Fax 803-328-5791



June 4, 2021

Attention: David Stutts  
NC Department of Transportation  
1598 Mail Service Center  
Raleigh, NC 27699-1598

Re. THPO #	TCNS #	Project Description
2021-193-113		Replacement of Bridges # 226, 227 and 228 over the Nantahala River on Wayah Road in Macon County as projects BR-0031, Br-0052 & BR-0053

Dear Mr. Stutts,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail [Caitlin.Rogers@catawba.com](mailto:Caitlin.Rogers@catawba.com).

Sincerely,

Wenonah G. Haire  
Tribal Historic Preservation Officer



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

April 30, 2021  
Ms. Elizabeth Toombs  
Tribal Historic Preservation Office  
Cherokee Nation  
PO Box 948  
Tahlequah, OK 74465

Dear Ms. Toombs,

The North Carolina Department of Transportation has started the project development, environmental, and engineering studies for the Replacement of Bridges # 226, #227, and #228 over the Nantahala River on Wayah Road (SR 1310) in Macon County as projects BR-0031, BR-0052, BR-0053 respectfully. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE.

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BR-0052: 35.26922, -83.67481

BR-0053: 35.26768, -83.66747

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Thank you,

DocuSigned by:  
  
A4A2999A8BC64F2...

David Stutts, P.E.  
NCDOT Project Engineer – PEF/Program Management

cc: Matt Wilkerson, NCDOT Archaeology Team Leader  
Crystal Amschler, USACE Asheville Field Office



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

April 30, 2021  
Mr. Russell Townsend  
Preservation Specialist  
Eastern Band of Cherokee Indians (EBCI) THPO  
2077 Governors Island Road  
Bryson City, NC 28713

Dear Mr. Townsend,

The North Carolina Department of Transportation has started the project development, environmental, and engineering studies for the Replacement of Bridges # 226, #227, and #228 over the Nantahala River on Wayah Road (SR 1310) in Macon County as projects BR-0031, BR-0052, BR-0053 respectfully. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE.

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Thank you,

DocuSigned by:  
  
A4A2999A8BC64F2...

David Stutts, P.E.  
NCDOT Project Engineer – PEF/Program Management

cc: Matt Wilkerson, NCDOT Archaeology Team Leader  
Crystal Amschler, USACE Asheville Field Office



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

April 30, 2021  
Ms. LeeAnne Wendt  
Preservation Specialist  
Muscogee (Creek) Nation  
PO Box 580  
Okmulgee, OK 74447

Dear Ms. Wendt,

The North Carolina Department of Transportation has started the project development, environmental, and engineering studies for the Replacement of Bridges # 226, #227, and #228 over the Nantahala River on Wayah Road (SR 1310) in Macon County as projects BR-0031, BR-0052, BR-0053 respectfully. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE.

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Thank you,

DocuSigned by:

A handwritten signature in black ink that reads "David Stutts".

A4A2999A8BC64F2...

David Stutts, P.E.  
NCDOT Project Engineer – PEF/Program Management

cc: Matt Wilkerson, NCDOT Archaeology Team Leader  
Crystal Amschler, USACE Asheville Field Office

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

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*Location:*  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC 27610



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

April 30, 2021  
Ms. Whitney Warrior  
Preservation Specialist  
United Keetoowah Band of Cherokee Indians  
PO Box 1245  
Tahlequah, OK 74465

Dear Ms. Warrior,

The North Carolina Department of Transportation has started the project development, environmental, and engineering studies for the Replacement of Bridges # 226, #227, and #228 over the Nantahala River on Wayah Road (SR 1310) in Macon County as projects BR-0031, BR-0052, BR-0053 respectfully. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE.

A project vicinity map is attached with the survey reports (one report for BR-0031 & BR-0052 and one report for BR-0053). The coordinates of these projects are approximately as follows:

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BR-0052: 35.26922, -83.67481

BR-0053: 35.26768, -83.66747

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project including recommendation of alternates to be studied. Your comments may be used in the preparation of a NEPA/ State Environmental Policy Act (SEPA) Environmental Document.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

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Thank you,

DocuSigned by:

A handwritten signature in black ink that reads "David Stutts".

A4A2999A8BC64F2...

David Stutts, P.E.  
NCDOT Project Engineer – PEF/Program Management

cc: Matt Wilkerson, NCDOT Archaeology Team Leader  
Crystal Amschler, USACE Asheville Field Office

*Mailing Address:*  
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ENVIRONMENTAL ANALYSIS UNIT  
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*Website:* [www.ncdot.gov](http://www.ncdot.gov)

*Location:*  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

17-12-0042  
Revised**NO ARCHAEOLOGICAL SURVEY REQUIRED FORM**

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

**PROJECT INFORMATION**

*Project No:* **BR-0031 & BR-0052**      *County:* **Macon**  
*WBS No:* **67053.1.1 & 67052.1.1**      *Document:* **Minimum Criteria**  
*F.A. No:* **na**      *Funding:*  State       Federal  
*Federal Permit Required?*  Yes       No      *Permit Type:* **FERC and USACE**

***Project Description:***

*The project calls for the replacement of Bridge Nos. 226 and 227 on SR 1310 (Wayah Road) over the Nantahala River in Macon County. The archaeological Area of Potential Effects (APE) for the project is defined as an approximately 2,650-foot (807.72 m) long corridor running along Wayah Road starting 800 feet (243.84 m) north from the end of Bridge No. 226 and ending 900 feet (274.32 m) east from the end of Bridge No. 227. The APE is approximately 200 feet (60.96 m) wide extending 100 feet (30.48 m) to either side from the centerline. In all, the APE encompasses approximately 12 acres.*

*Although this project is state funded, federal permits are anticipated. Therefore, this archaeological review was conducted pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).*

*This project was originally submitted as TIP BR-0031, which included the proposed replacement of Bridge Nos. 226, 227, 228, 229, and 230 in Macon County. An "Archaeological Survey Required" form was submitted on February 28, 2018. The bridges have since been resubmitted as individual projects for cultural review and the APE has been reduced. The former PA form is now invalid and is replaced by the present "No Archaeological Survey Required" revised form for Bridge Nos. 226 and 227. All other bridges have received separate archaeological PA forms as well to reflect adjustments to the current projects.*

**SUMMARY OF CULTURAL RESOURCES REVIEW*****Brief description of review activities, results of review, and conclusions:***

Bridge Nos. 226 and 227 are located northeast of Andrews and southeast of Robbinsville in Macon County, North Carolina. The project area is plotted at the southern end of the Hewitt USGS 7.5' topographic quadrangle (Figure 1).

A site file search was conducted at the Office of State Archaeology (OSA) on January 11, 2018, and a subsequent review of OSA data was carried out on February 18, 2020 based upon the revised project limits. Only one previously recorded site (31MA683) is identified within the APE, while another four sites (31MA687, 31MA740, 31SW390, and 31SW391) are recorded within a mile of the bridges. According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2020), most of project area is within the Determined Eligible Nantahala Hydroelectric Power Project property (MA--) and the Study Listed Nantahala Power and Light Hydroelectric Plant Complex (MA 353). Structures associated with this historic resource are outside of the archaeological APE. It unlikely that intact and significant archaeological deposits that would contribute to the resource's eligibility will be encountered due to heavy disturbance. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), and historic maps (North Carolina maps website) were also examined for information on

environmental and cultural variables that may have contributed to prehistoric or historic settlement within the project limits and to assess the level of ground disturbance. Finally, a field reconnaissance was conducted on March 3, 2020 to assess the potential for archaeological sites.

The APE corridor follows Wayah Road in a northwest to southwest direction (Figure 2). The Nantahala River is crossed twice with Bridge 226 in the north and 227 in the south. The river drains north and is part of the Little Tennessee drainage basin. Landforms consist of floodplains adjacent to the river with steep hillsides and foot slopes to the east (Figures 3 and 4). The APE is predominately forested except for areas surrounding the hydroelectric complex and boat launch at the northern end (Figures 5 and 6) and a parking lot at the southern (Figure 7). These areas are open with scattered trees. Ground disturbance appears mixed, but previous archaeological surveys have found heavy disturbance throughout from human (construction of the road, the hydroelectric plant, boat launch, and other facilities) and natural activities (soil erosion along the floodplain southwest of Bridge 226). The field reconnaissance identified the areas adjacent to the road as level but severally disturbed from grading, road cuts, and erosion. Some areas are made up of fill material (Figure 8). No rock shelters or benches were observed above the road grade.

The USDA soil survey map for Macon County records five soil types within the APE (USDA NRCS 2020) (see Figure 2). The floodplains are made up of Reddies fine sandy loam (ReA) and Udorthents-Urban land complex (UfB). The Reddies series is moderately well drained with a slope of 3 percent or less and subject to frequent flooding, while the Udorthents-Urban land complex consists of soils modified by earth moving activities or covered by impervious surfaces. The foot slopes and hillsides are composed of the Cataska-Syko complex (CcF), the rock outcrop-Cataska complex (RhF), and the Spivey-Santeetlah complex (SrD). These soils are well drained to excessively drained with slopes greater than 15 percent. Most of the above soil types are either unsuited for early settlement activities with steep slopes or unlikely to contain intact deposits due to heavy ground disturbance. They do not require subsurface testing and the field reconnaissance failed to identify any atypical features such as rock shelters. However, the Reddies series has the potential for significant archaeological deposits if disturbance is low, but a previous investigation determined that this series has been washed away exposing large rocks and cobbles at the surface.

A review of the site files shows that nearly entire project area has been covered by three previous archaeological surveys. These were for the Nantahala to Oak Grove power line corridor (Southerlin et al. 1991), the Nantahala River boat launch (Dyson 2006), and the Power Canal Access location (Reid and Southerlin 2007). Areas not covered are the steep hillsides found southeast of Bridge 226 and south of Bridge 227 and the disturbed property between Wayah Road and the hydroelectric substation northeast of Bridge 226. Only one site, 31MA683, has been reported within the currently defined project limits. Site 31MA683 was recorded during the boat launch survey and is situated along the access road leading to a parking lot (Dyson 2006) (see Figure 5). This site consisting of a single prehistoric sherd. It appears four subsurface tests were placed around a positive test in order to delineate the site. All additional tests were negative as were all other tests excavated during the investigation. It is reported that the isolated sherd is most likely redeposited from either road or power plant construction. The investigators estimated that 1.5 meters of fill covers the landform north of Bridge 226. As a result, 31MA683 is ineligible for the National Register and requires no further archaeological work. The Nantahala to Oak Grove power line corridor also covers the area north of Bridge 226 and failed to produce positive results within the project limits (Southerlin et al. 1991). Lastly, the Power Canal Access survey was carried out on the floodplain west of Wayah Road between the two bridges. A total of xx shovel tests were excavated on this property with negative results (Reid and Southerlin 2007). Tests near the road revealed fill over large rock, while those further away showed exposed stone at the surface with the upper soil layers having been washed away. Other known sites (31MA687, 31MA740, 31SW390, and 31SW391) in the vicinity are the result of investigations carried out by archaeologists with National Forests in North Carolina (NFsNC) or Brett Riggs for his Historic Cherokee Farmstead and Citizen Cherokee Reservation projects. None are located

17-12-0042 Revised
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on hillsides similar to the uninvestigated areas within the current APE. This suggest no unidentified site are present, which was confirmed during the field reconnaissance.

A historic map review was also conducted for the project area. One of the earliest in which an approximate location can be determined is the 1837–1838 U.S. Army survey map (Figure 9). This map was produced under the guidance of Major W.G. Williams in preparation for the removal of the Cherokee Indians. The map illustrates the Nantahala River but no other features are in the immediate vicinity. The much later 1906 USGS Nantahala topographic map also depicts no structures or road in the project area (Figure 10). This is seen again in the circa 1910 US Post Office map (Figure 11). The 1938 highway map for the county displays the hydroelectric plant for the first time along with its associated buildings and the initially start of Wayah Road (NCSHPWC 1938) (Figure 12). It is not until the 1950s that Wayah Road is fully depicted, and the bridges are constructed. It is not likely that remains of any historic structures will be encountered by the proposed project.

***Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:***

The proposed Bridge Nos. 226 and 227 replacement projects in Macon County is not likely to impact any significant archaeological resources. Most of the project area has been previously surveyed yielding only a single archaeological isolated fine (31MA683). The remaining areas consists of steep hillsides or areas of heavy disturbance. This was confirmed during a field reconnaissance, which also saw no evidence of undisturbed soils on level landforms or atypical features such as rock shelters along the slopes. No additional archaeological work is recommended for this project. But if design plans change to affect subsurface areas beyond the defined APE, further archaeological consultation will be necessary.

Please note, this project falls within a North Carolina County in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. It is recommended that you contact each federal agency involved with this project to determine their Section 106 Tribal consultation requirements.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence  
 Photocopy of County Survey Notes    Other:

**FINDING BY NCDOT ARCHAEOLOGIST**

**NO ARCHAEOLOGY SURVEY REQUIRED**



C. Damon Jones  
NCDOT ARCHAEOLOGIST

3/11/20

Date

## REFERENCES CITED

- Dyson, David McDaniel  
2006 *Heritage Resources Survey for the Proposed Nantahala River Commercial Put-In Upgrade, Compartments 19, Wayah Ranger District, Nantahala National Forest, Macon County, North Carolina.* National Forests in North Carolina, Asheville, North Carolina
- HPOWEB  
2020 North Carolina State Historic Preservation Office GIS Web Service.  
<http://gisNCDCCR.gov/hpoweb/>. Accessed February 18, 2020.
- North Carolina State Highway and Public Works Commission (NCSHPWC)  
1938 *North Carolina State Highway Map for Macon County.* North Carolina State Highway and Public Works Commission, Raleigh.
- Reid, Dawn and Bobby Southerlin  
2007 *Archaeological Survey of the Power Canal Access Area, Macon County, North Carolina.* Archaeological Consultants of the Carolinas, Inc., Clayton, North Carolina. Submitted to Devine Tarbell & Associates, Inc, Charlotte, North Carolina.
- Southerlin, Bobby, Linda Allan, Marion Roberts, and Christopher Espenshade  
1991 *An Archaeological Survey of the Nantahala to Oak Grove Transmission Corridor, Macon County, North Carolina.* Brockington and Associates, Inc., Atlanta, Georgia. Submitted to Duke Power Company, Charlotte, North Carolina.
- United States Department of Agriculture Natural Resources Conservation Services (USDA NRCS)  
2020 Macon County Soil Survey. Available online at  
<http://webosilsurvey.nrcs.usda.gov/app/>. Accessed February 18, 2020.
- United States Geological Survey (USGS)  
1906 Nantahala, North Carolina-Tennessee, 30-minute quadrangle map. Reprinted 1924.  
2000 Hewitt, North Carolina 7.5 minute quadrangle map.
- United States Post Office  
c. 1910 *Rural Delivery Routes for Macon County, North Carolina.* U.S. Post Office Department, Washington D.C. On file at North Carolina Collections, University of North Carolina, Chapel Hill.
- William, W.G.  
1838 *Map of Part of the Cherokee Territory Situated Among the Mountains of N. Carolina, Georgia, and Tennessee.* Map on file, Record Group 49, US National Archives Cartographic Division, Suitland, Maryland.

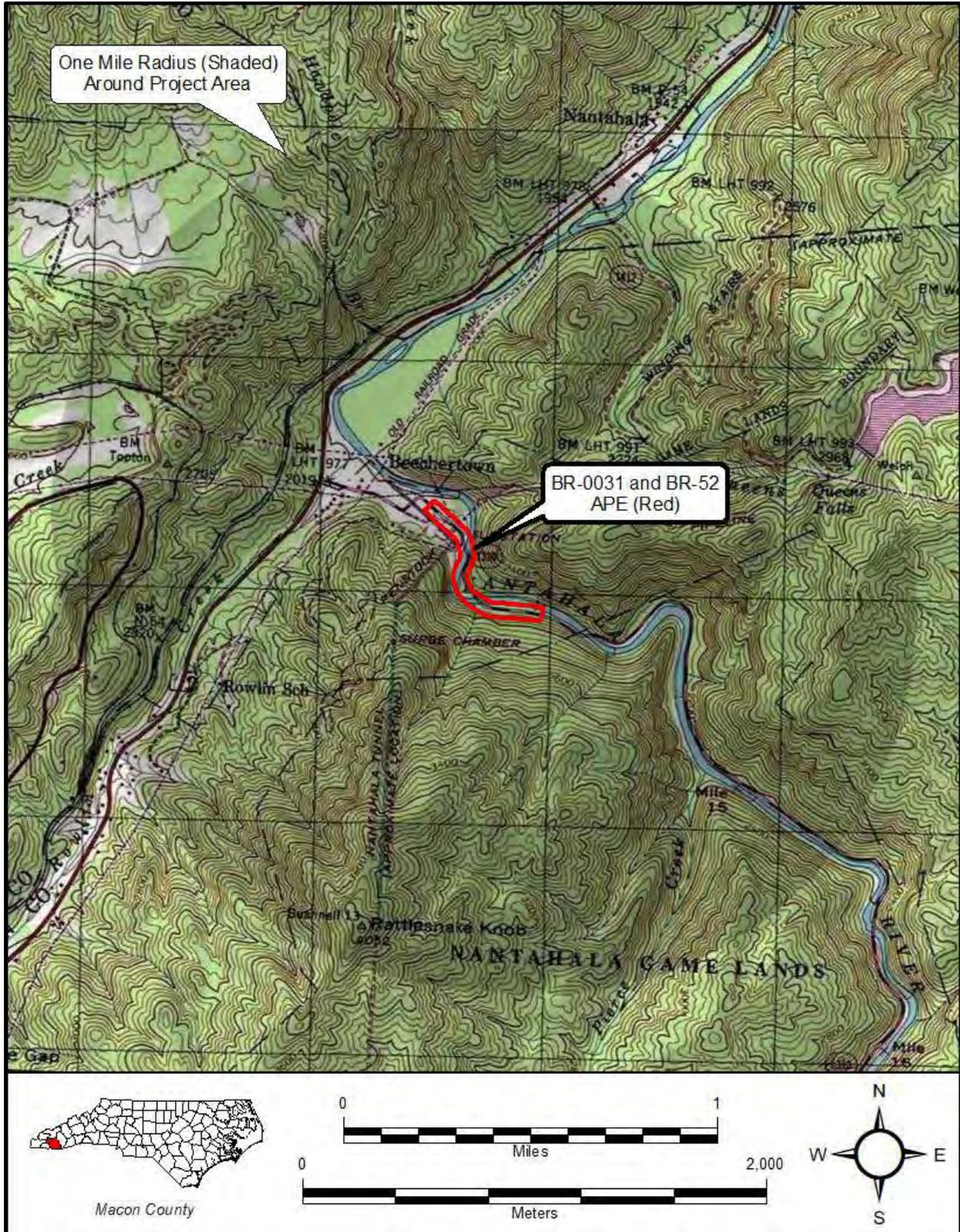


Figure 1. Topographic Setting of the Project Area, Hewitt (2000), NC USGS 7'5 Topographic Quadrangle.

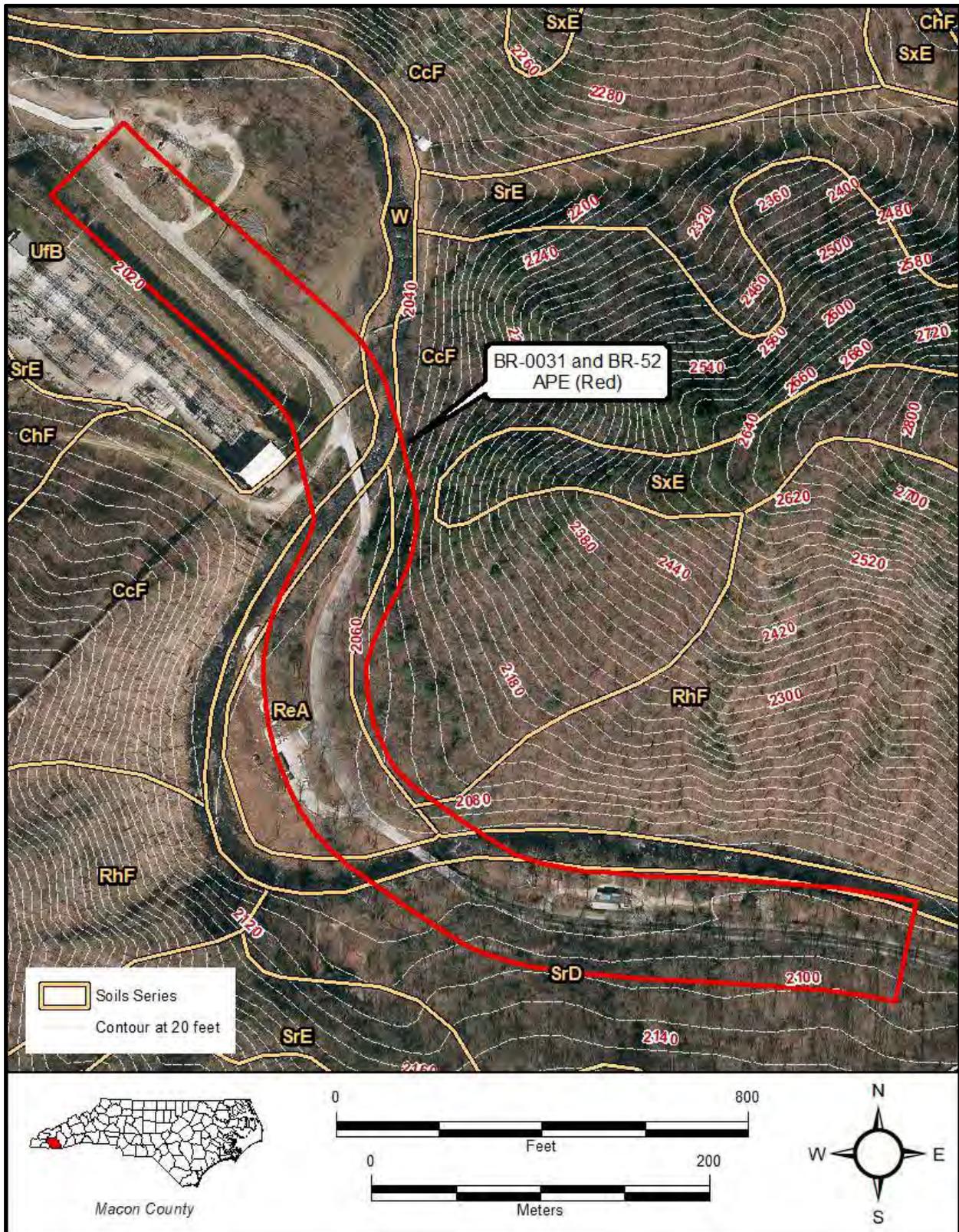


Figure 2. Aerial photograph of the APE showing development, contours, and soils.



Figure 3. General view of the floodplain southwest of Bridge 226, looking south from the bridge.



Figure 4. General view of hillside slope northeast of Bridge 227, looking north from the bridge.



Figure 5. General view of the boat launch parking lot and site 31MA683 northeast of Bridge 226, looking northwest.



Figure 6. General view of the canal and the hydroelectric complex northwest of Bridge 226, looking northwest.



Figure 7. General view of the parking lot in the floodplain west of Wayah Road between Bridges 226 and 227, looking north.



Figure 8. Area of fill northeast of Bridge 226, looking north.

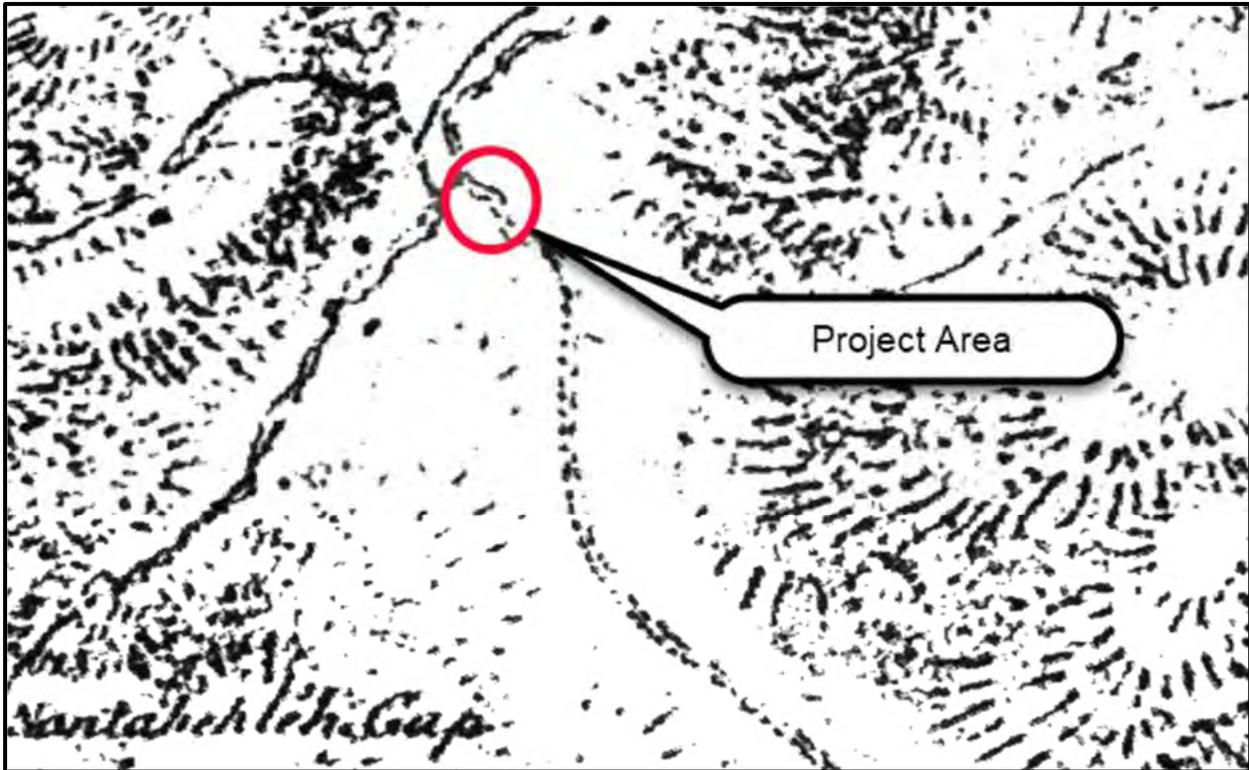


Figure 9. The 1837–1838 U.S. Army survey map showing the approximate project area location

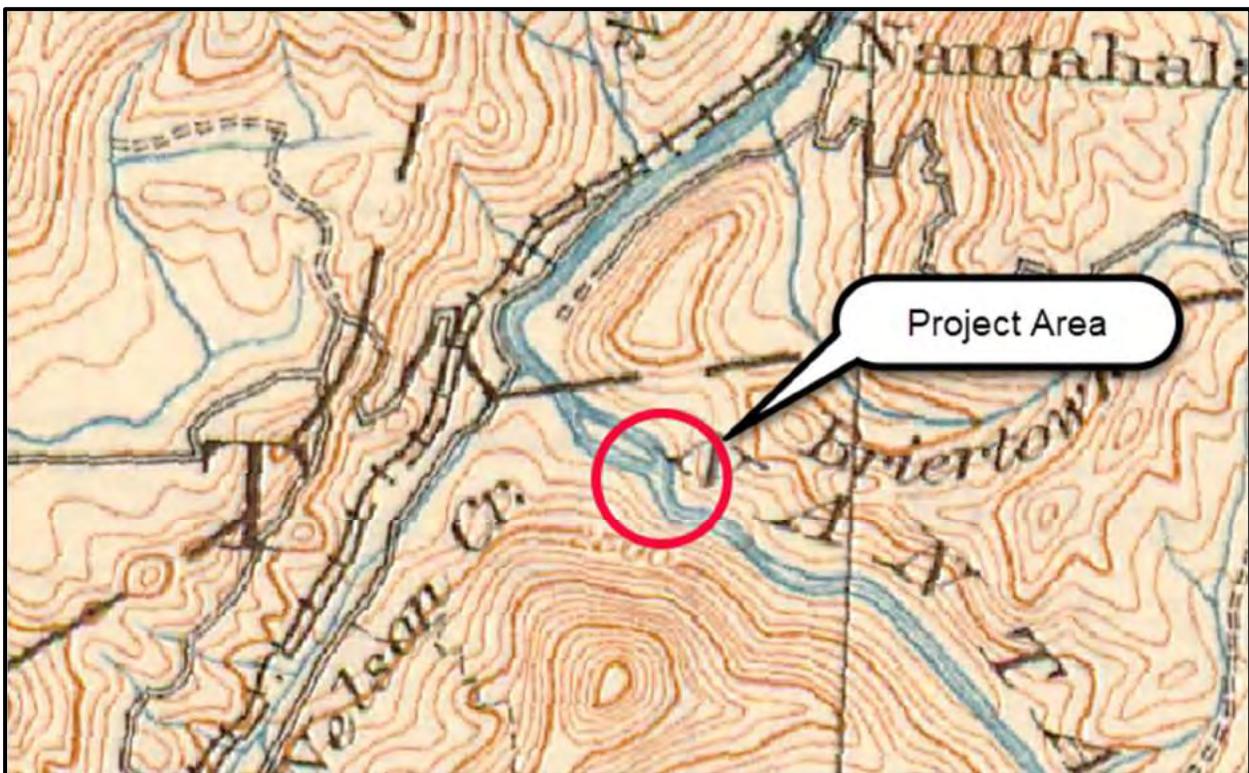


Figure 10. The 1906 USGS Nantahala topographic map showing the location of the project area.



Figure 11. The circa 1910 US Post Office map showing the project area.

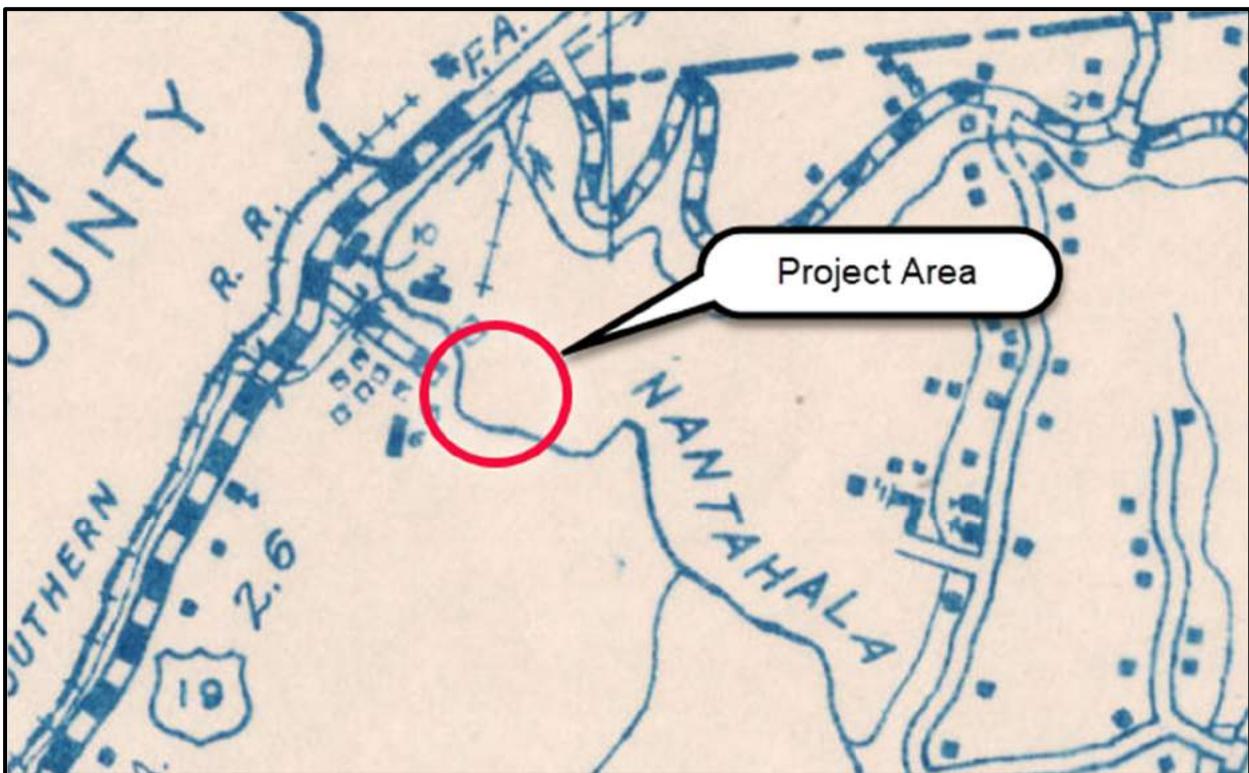


Figure 12. The 1938 North Carolina State Highway Map for Macon County showing the project area.



## NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



### PROJECT INFORMATION

**Project No:** BR-0053                      **County:** Macon  
**WBS No:** 67053.1.1                      **Document:** Minimum Criteria  
**F.A. No:** na                                      **Funding:**  State       Federal  
**Federal Permit Required?**  Yes     No      **Permit Type:** USACE

#### **Project Description:**

The project calls for the replacement of Bridge No. 228 on SR 1310 (Wayah Road) over the Nantahala River in Macon County. The archaeological Area of Potential Effects (APE) for the project is defined as an approximately 2,200-foot (670.56 m) long corridor running 875 feet (266.70 m) east and 1,325 feet (403.86 m) west along Wayah Road from the center of the bridge. The APE is approximately 200 feet (60.96 m) wide extending 100 feet (30.48 m) to either side from the centerline. In all, the APE encompasses approximately 10 acres.

Although this project is state funded, federal permits are anticipated. Therefore, this archaeological review was conducted pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance (36 CFR Part 800).

*This project was originally part of TIP BR-0031, which included the proposed replacement of Bridge Nos. 226, 227, 228, 229, and 230 in Macon County. An "Archaeological Survey Required" form was submitted on February 28, 2018. The bridges have since been resubmitted as individual projects for cultural review and the APE has been reduced. The former PA form is now invalid and is replaced by the present "No Archaeological Survey Required" form for Bridge No. 228. All other bridges have received separate archaeological PA forms as well to reflect adjustments to the current projects.*

### SUMMARY OF CULTURAL RESOURCES REVIEW

#### **Brief description of review activities, results of review, and conclusions:**

The proposed Bridge No. 228 replacement project is located northeast of Andrews and southeast of Robbinsville in Macon County, North Carolina. The project area is plotted in the southern half of the Hewitt USGS 7.5' topographic quadrangle (Figure 1).

A site file search was conducted at the Office of State Archaeology (OSA) on January 11, 2018. A subsequent review of OSA data was carried out on February 18, 2020 based upon the revised project limits. No previously recorded archaeological sites are within or adjacent to the APE, but three sites (31MA683, 31MA687, and 31MA740) are within a mile of the bridge. Shawn Jones, archaeological with the National Forests in North Carolina (NFsNC), reviewed Forest Service files and deeds and found no new or significant information. According to the North Carolina State Historic Preservation Office (SHPO) online data base (HPOWEB 2020), a portion of the project area is within the Determined Eligible Nantahala Hydroelectric Power Project property (MA--), but no contributing archaeological deposits to the property's eligibility will be encountered. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), historic maps (North Carolina maps website), and Google Street View application were further examined for information on environmental and cultural variables that may have contributed to precontact or historic settlement within the project limits and to assess the level of ground

disturbance. Finally, a field reconnaissance was conducted on March 3, 2020 to assess the potential for archaeological sites.

Wayah Road and Bridge No 228 run roughly east-west crossing the Nantahala River (see Figure 2). The river drains east and north and is part of the Little Tennessee drainage basin. The APE east of the bridge is partially located on National Forests in North Carolina property. The project area is characterized by steep forested slopes to either side of the road and river (Figures 3 and 4). The river runs alongside the road occupying the northwest and southeast quadrants. The field reconnaissance identified the areas adjacent to the road as level but severally disturbed from the road cut and erosion (Figure 5). Some areas are made up of fill material from the hillsides. No rock shelters or benches were observed above the road grade.

The USDA soil survey map for Macon County identifies four soil types within the APE (USDA NRCS 2020) (see Figure 2). The foot slope at the western end of the project is composed of the Spivey-Santeetlah complex (SrD). This is a well drained but stony series with slope of 15 to 30 percent. The remainder of the project area is made up of hillside slopes consisting of Cheoah channery loam (ChF), Cullasaja very cobbly fine sandy loam (CsE), the rock outcrop-Calaska complex (RhF), and another variant of the Spivey-Santeetlah complex (SrE). These are excessively drained to well drained soils with slope exceeding 30 percent. None of the soils are well suited for early settlement activities and do not usually require shovel testing. As previously mentioned, however, the project area was visually inspected for atypical features such as rock shelters with negative results.

A review of the archaeological site files shows no previous investigations or sites within the APE and only three sites (31MA683, 31MA687, and 31MA740) within a mile. All three are to the west with 31MA683 and 31MA740 situated on wide low terraces next to the river. Site 31MA687, however, is on a high terrace or bench above the river. These settings are dissimilar to the current project setting, which is a very narrow drainage with steeply sloped hillsides. Site 31MA683 consists of a single precontact pottery sherd found during a survey for the Proposed Nantahala River Commercial Put-In (Dyson 2006). Testing was limited but it is estimated that 1.5 meters of fill covers the landform adjacent to Wayah Road. As a result, it is reported that the isolated sherd is most likely redeposited from construction activities associated with either the road or the Nantahala Power and Light Hydroelectric Plant Complex. 31MA683 is ineligible for the National Register. The other two sites are the result of investigations carried out by the NFS/NC or for Historic Cherokee Farmstead and Citizen Cherokee Reservation projects (site files only). Site 31MA687 is Esuttee or Esuttahee cabin reported by Brett Riggs in 1997. The location of this historic Cherokee Farmstead appears to be based upon map data, but it has not been verified. Site 31MA740 is a multicomponent Middle Archaic artifact scatter and 19th to 20th century home and barn recorded by NFS/NC in 2005. Eligible for both is unassessed due to a lack of information. Overall, the site file review suggests the unlikelihood of significant resources within the project's APE with known sites in the region found on wider and level landforms.

A historic map review was also conducted for the project area. One of the earliest in which an approximate location can be determined is the 1837–1838 U.S. Army survey map (Figure 6). This map was produced under the guidance of Major W.G. Williams in preparation for the removal of the Cherokee Indians. The map illustrates the Nantahala River but no other features are in the immediate vicinity. The much later 1906 USGS Nantahala topographic map also depicts no structures or road in the project area (Figure 7). This is seen again in the circa 1910 US Post Office map (Figure 8). The 1938 highway map for the county displays the hydroelectric plant for the first time along with its associated buildings and the initial start of Wayah Road (NCSHPWC 1938) (Figure 9). It is not until the 1950s that Wayah Road is depicted. It is not likely that remains of any historic structures will be encountered by the proposed project.

***Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:***

The proposed Bridge No. 228 replacement project in Macon County is not likely to impact any significant archaeological resources. The steep hillsides are not suitable for early habitation, while property along the river has been disturbed by road construction. This was confirmed during a field reconnaissance, which also saw no evidence for atypical features such as rock shelters. No additional archaeological work is recommended for this project. But if design plans change to affect subsurface areas beyond the defined APE, further archaeological consultation will be necessary.

Please note, this project falls within a North Carolina County in which the Catawba Nation, the Eastern Band of Cherokee Indians, the Cherokee Nation, the United Keetoowah Band of Cherokee Indians, and Muscogee (Creek) Nation have expressed an interest. It is recommended that you contact each federal agency involved with this project to determine their Section 106 Tribal consultation requirements.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence  
 Photocopy of County Survey Notes    Other:

**FINDING BY NCDOT ARCHAEOLOGIST****NO ARCHAEOLOGY SURVEY REQUIRED**

**0/10/20**


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C. Damon Jones  
NCDOT ARCHAEOLOGIST

Date

## REFERENCES CITED

Dyson, David McDaniel

2006 *Heritage Resources Survey for the Proposed Nantahala River Commercial Put-In Upgrade, Compartments 19, Wayah Ranger District, Nantahala National Forest, Macon County, North Carolina.* National Forests in North Carolina, Asheville, North Carolina

HPOWEB

2020 North Carolina State Historic Preservation Office GIS Web Service.  
<http://gisNCDCCR.gov/hpoweb/>. Accessed February 18, 2020.

North Carolina State Highway and Public Works Commission (NCSHPWC)

1938 *North Carolina State Highway Map for Macon County.* North Carolina State Highway and Public Works Commission, Raleigh.

United States Department of Agriculture Natural Resources Conservation Services (USDA NRCS)

2020 Macon County Soil Survey. Available online at  
<http://webosilsurvey.nrcs.usda.gov/app/>. Accessed February 18, 2020.

United States Geological Survey (USGS)

1906 Nantahala, North Carolina-Tennessee, 30-minute quadrangle map. Reprinted 1924.  
2000 Hewitt, North Carolina 7.5 minute quadrangle map.

United States Post Office

c. 1910 *Rural Delivery Routes for Macon County, North Carolina.* U.S. Post Office Department, Washington D.C. On file at North Carolina Collections, University of North Carolina, Chapel Hill.

William, W.G.

1838 *Map of Part of the Cherokee Territory Situated Among the Mountains of N. Carolina, Georgia, and Tennessee.* Map on file, Record Group 49, US National Archives Cartographic Division, Suitland, Maryland.

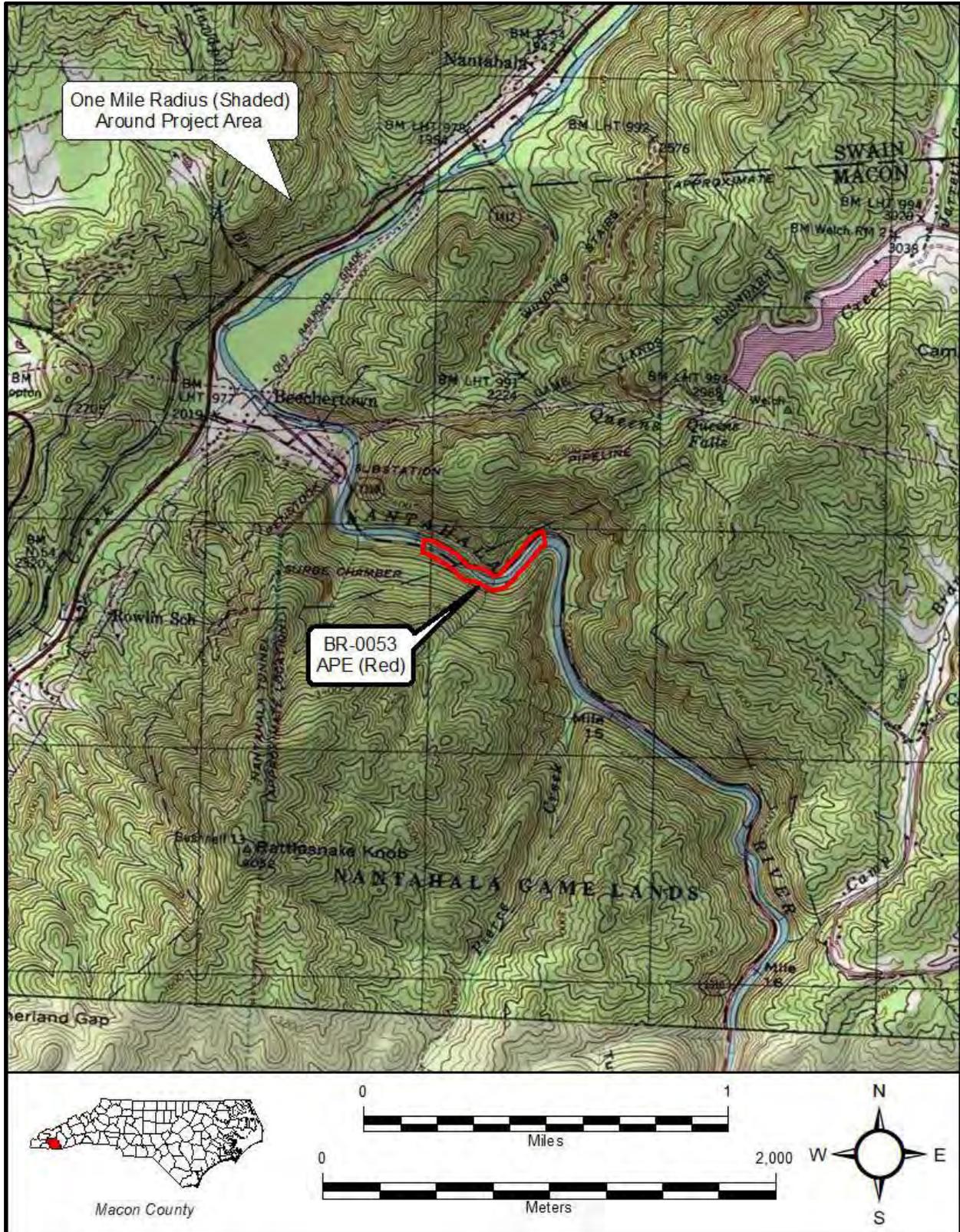


Figure 1. Topographic Setting of the Project Area, Hewitt (2000), NC USGS 7'5 Topographic Quadrangle.

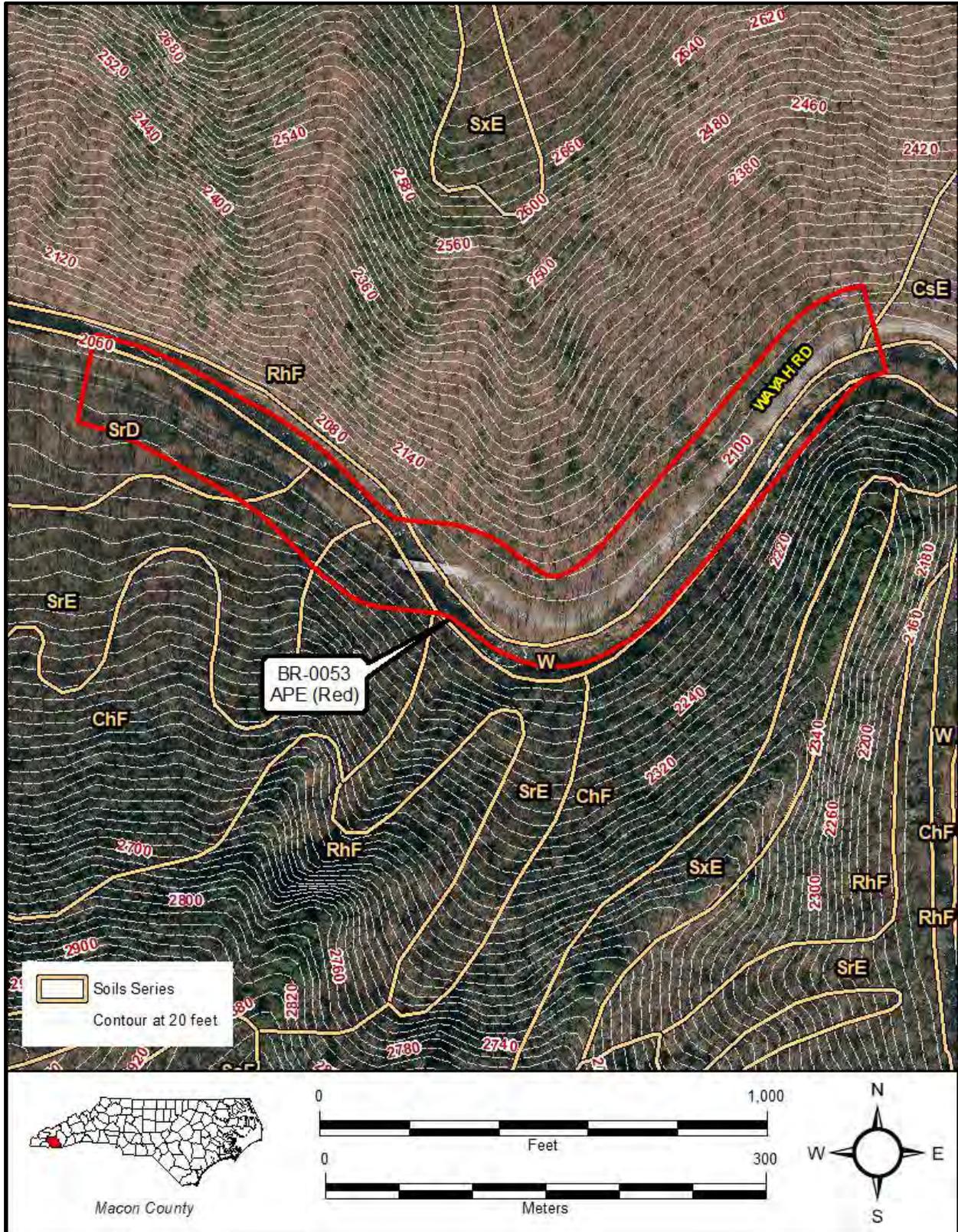


Figure 2. Aerial photograph of the APE showing development, contours, and soils.



Figure 3. General view of the project area showing slope, looking south from the bridge.



Figure 4. General view of the project area's northern end showing slope, looking south towards the bridge.



Figure 5. General view of the project area's southeast quadrant showing level terrace with rocks at the surface associated with either fill or erosion, looking west towards the bridge.

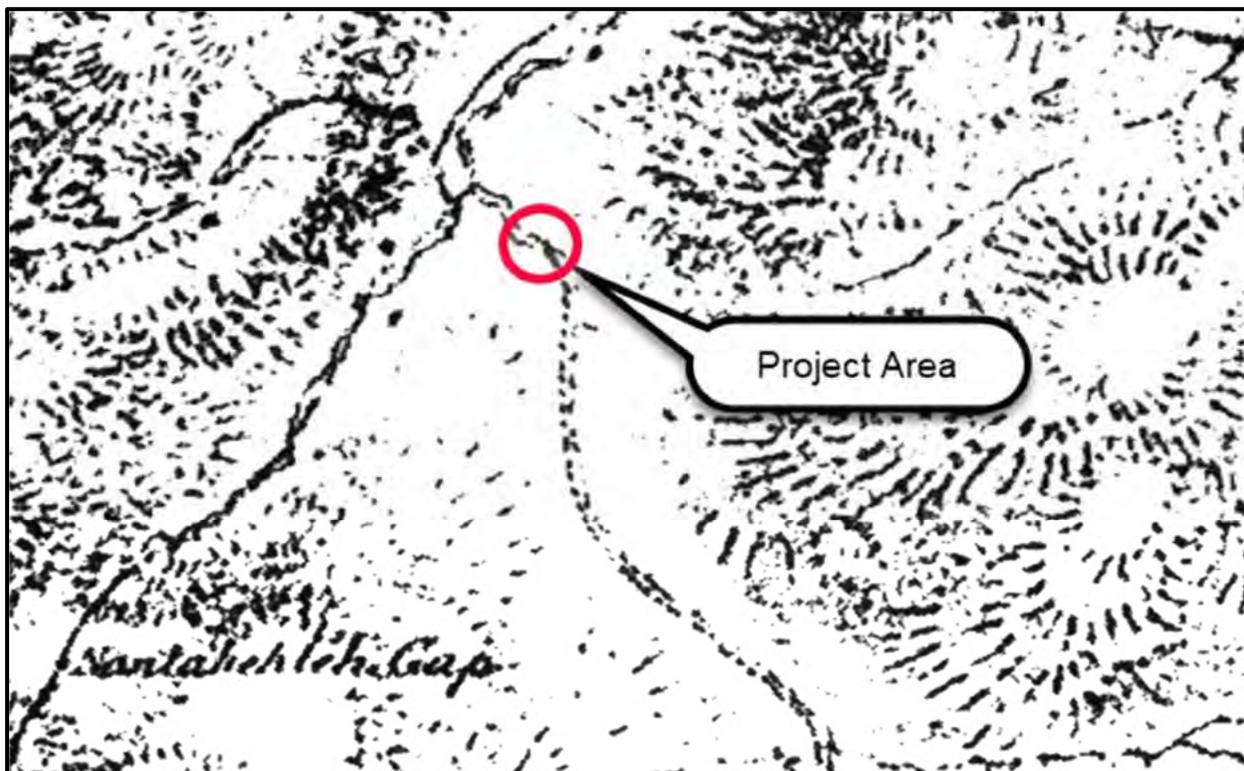


Figure 6. The 1837–1838 U.S. Army survey map showing the approximate project area location



Figure 7. The 1906 USGS Nantahala topographic map showing the location of the project area.

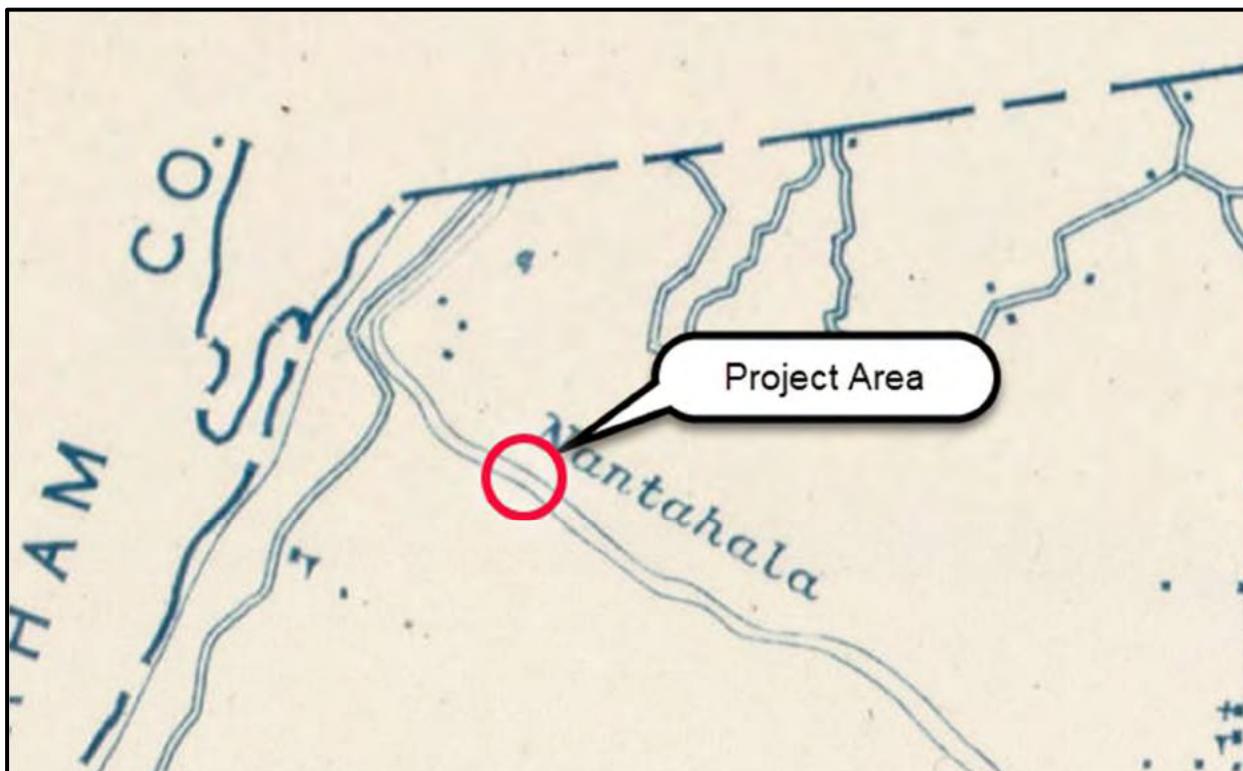


Figure 8. The circa 1910 US Post Office map showing the project area.

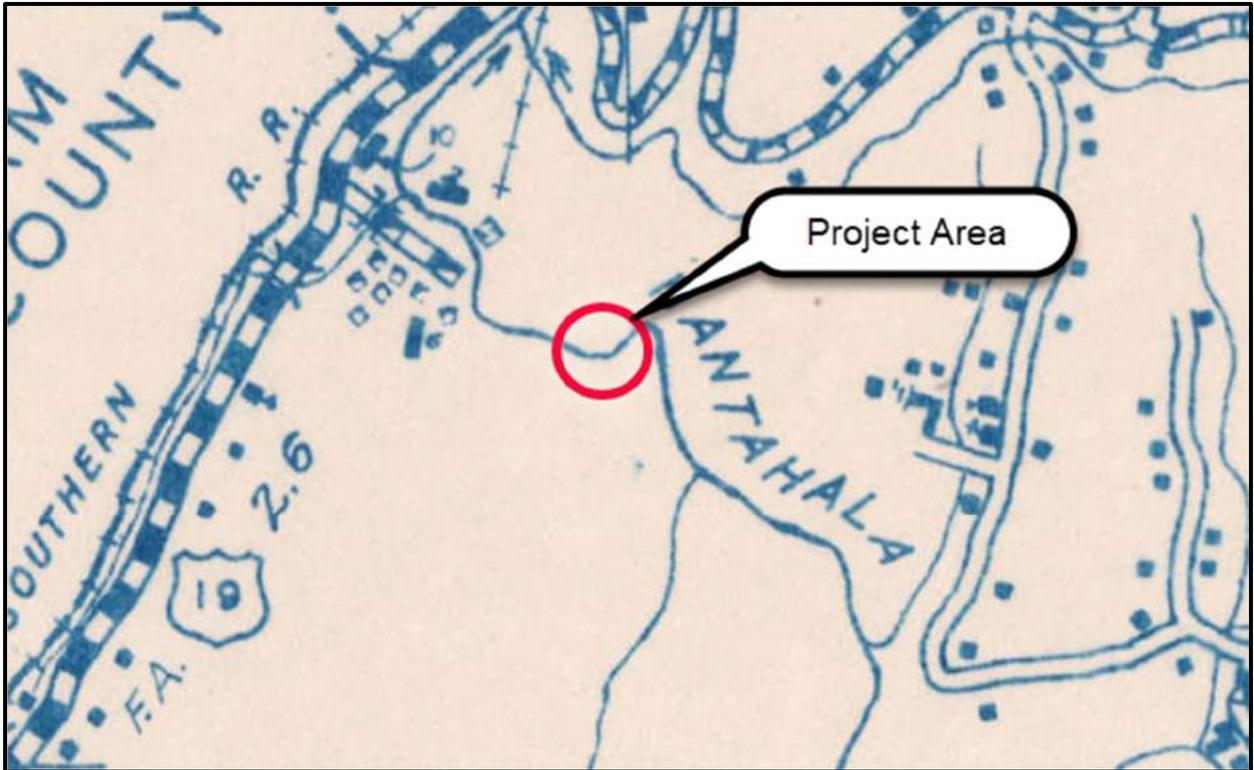


Figure 9. The 1938 *North Carolina State Highway Map for Macon County* showing the project area.

# NEPA/SEPA Document

## Type I or II Categorical Exclusion Action Classification Form

STIP Project No.	<b>BR-0052</b>
WBS Element	67052.1.1
Federal Project No.	N/A

### A. Project Description:

The North Carolina Department of Transportation (NCDOT) proposes to replace Macon County Bridge #227 along Wayah Road (SR 1310) over the Nantahala River (Vicinity Map and Environmental Features Map, attached). The proposed replacement structure will be a two-span bridge approximately 113 feet long using prestressed concrete cored slab units and providing 29.5 feet of clear roadway width. The proposed improvements to the approach roadway will extend approximately 395 feet from the south end of the new bridge and 465 feet from the north end of the new bridge. The approaches will include a 20-foot pavement width providing two 10-foot lanes with both paved shoulder and grass shoulder sections with guardrail. The roadway is classified as a major collector and will be designed using the Regional Tier Classification, with a design speed of 40 miles per hour and a posted speed of 35 miles per hour.

Right-of-way acquisition is scheduled to begin in mid-2022, and construction is scheduled to begin in late 2023.

### B. Description of Need and Purpose:

NCDOT Bridge Management Unit - Bridge Inspection Report, indicates that Bridge No. 227 has a sufficiency rating of 56.76; the bridge is classified as functionally obsolete. The existing two-lane bridge was built in 1950 (reconstructed in 1984) and is 106 feet long with a timber floor atop steel beams/girders. The bridge deck consists of two travel lanes with a roadway width of 19 feet. Maintenance has been recently performed to improve safety and extend the life of the bridge; however, the maintenance is considered temporary. Based on the low sufficiency rating and the on-going need for maintenance, the bridge is considered at the end of its useful life and is in need of replacement.

The purpose of this project is to replace an aged structure with a new bridge that complies with current AASHTO Greenbook guidelines.

### C. Categorical Exclusion Action Classification:

**Type I(A) - Ground Disturbing Action**

### D. Proposed Improvements:

28. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings, if the actions meet the constraints in 23 CFR 771.117(e)(1-6).

E. Special Project Information:**Estimated Costs:**

The estimated costs, based on 2022 prices, are as follows\*:

Right of Way and Utilities:	\$ 438,500
Construction:	\$ 2,150,000
<b>Total (including prior costs):</b>	<b>\$ 2,588,500</b>

\*Costs subject to change

**Estimated Traffic:**

SR 1310 - AADT (2020): 550 vpd

**Maintenance of Traffic:**

On-site staging will be utilized during construction of the project, shifting traffic in both directions to a single lane. Construction has the potential to temporarily alter traffic patterns and increase vehicular travel time to some residences and business by up to five minutes.

**Emergency Response:**

NCDOT will coordinate with law enforcement and emergency services in Macon County before and during construction.

**Jurisdictional Resources:**

One jurisdictional stream was identified in the study area (Table 1). The location of the stream is shown on Figure 1.

**Table 1. Characteristics of jurisdictional streams in the study area**

Map ID	Length (ft.)	Classification	Compensatory Mitigation Required	River Basin Buffer
Nantahala River	999	Perennial	Yes	Not Subject
<b>Total</b>	<b>999</b>			

The NCWRC identified the Nantahala River as trout waters, in a letter dated September 17, 2018, therefore, mandatory trout moratorium from October 15 to April 15 will be applied.

**Protected Species:**

The United States Fish and Wildlife Service (USFWS) lists the following federally protected species within the project study area under the Endangered Species Act (ESA) (Table 2). Listed for each species is habitat presence along with the Biological Conclusion rendered based on survey results in the study area.

**Table 2. ESA federally protected species listed for the study area**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Haliaeetus leucocephalus</i>	Bald Eagle	BGPA	No	No Effect
<i>Glyptemys muhlenbergii</i>	Bog Turtle	T (S/A)	No	No Effect
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	T	Yes	Unresolved
<i>Myotis grisescens</i>	Gray Bat*	E	No	Unresolved
<i>Myotis sodalis</i>	Indiana Bat*	E	Yes	Unresolved
<i>Mesodon clarki nantahala</i>	Noonday Snail	T	Yes	No Effect
<i>Sarracenia rubra ssp. jonesii</i>	Mountain Sweet Pitcher-plant	E	No	No Effect

<i>Isotria medeoloides</i>	Small Whorled Pogonia	T	Yes	No Effect
<i>Helionas bullata</i>	Swamp Pink	T	No	No Effect
<i>Spiraea virginiana</i>	Virginia Spiraea	T	Yes	No Effect
<i>Gymnoderma lineare</i>	Rock Gnome Lichen	E	No	No Effect

E - Endangered

T – Threatened

T (S/A) – Threatened due to similarity of appearance

MA-NLAA – May Affect-Not Likely to Adversely Affect

\* - Probable/potential record (the species is likely to occur in county based on proximity of known records and/or the presence of potentially suitable habitat)

Surveys for the Gray Bat, Indiana Bat, and Northern Long-Eared Bat are scheduled for Summer 2022 and biological conclusions will be updated prior to permitting.

### **Cultural Resources:**

NCDOT’s cultural resources staff reviewed the project under the Section 106 Programmatic Agreement for Minor Transportation Projects (NCDOT, North Carolina State Historic Preservation Office-NCHPO, Federal Highway Administration-FHWA, United States Army Corps of Engineers-USACE, Advisory Council on Historic Preservation-ACHP, and United States Forest Service-USFS, 2020). They determined that no significant archaeological resources are likely to be impacted within the Area of Potential Effects (APE), and therefore no additional survey is required.

Cultural resources staff initiated a review of HPO quad maps, HPO GIS information, historic designations roster, and indexes on January 8, 2018. Based on this review, the project falls within the Determined Eligible Nantahala Power and Light Complex. An assessment of effects was required. The NCHPO and FHWA completed an assessment of effects on April 28, 2022. A ruling of No Adverse Effect was issued with the inclusion of several environmental commitments, which include maintenance of proposed right-of-way, utilization of Oregon rail on the bridge, and utilization of natural stone design on retaining walls. FHWA intends to use the State Historic Preservation Office’s concurrence as a basis for a “de minimis” finding for the Nantahala Hydroelectric Power Project, pursuant to Section 4(f). This correspondence, as well as review forms for both Archaeology and Historic Architecture, can be found on the SharePoint project site:

<https://connect.ncdot.gov/site/Preconstruction/division/div14/BR-0052%20Macon%20227/Human%20Environment/Forms/AllItems.aspx>

If modifications to the current designs are made, additional review and coordination with HPO will be conducted.

### **Residential and Commercial Impacts:**

The proposed project would occur primarily within the existing NCDOT right-of-way. Additional right of way would be required along the length of the new bridge. New right of way segments would affect seven (7) parcels; however, the proposed improvements are not anticipated to cause any residential or commercial relocations. Small segments of permanent utility easement, temporary drainage easement, and temporary construction easement would also be required. Four total driveways (two commercial driveways to Wishon’s Fishing Hole) may be impacted during construction; however, temporary access would be provided.

### **Pedestrian and Bicycle Accommodations:**

The proposed improvements include 4'-9" paved shoulders for bicycles on each side of the bridge. Bicycle-safe railing (Oregon Rail) will be included on the bridge.

**Recreational Areas:**

Wishon's Fishing Hole is located just north of the existing bridge. Right of way and easements will be required from the property to accommodate the shift in roadway alignment, and driveways to the property will be adjusted to tie-in to the new alignment. A new ditch will run along the front of the property parallel to the alignment; therefore, the existing sign will need to be relocated. No impacts are anticipated to the existing parking area.

**Public Involvement:**

On June 1, 2022, a total of 13 newsletters were mailed to all residents (owners and tenants) along Wayah Road from US 74 to Old River Road. The newsletter provided an update on the project as well as information on the proposed project schedule, cost estimates, maintenance of traffic, typical sections, and an overview map of all three bridges.

One citizen comment was received in response to the newsletter. The comment was in favor of the proposed improvements and requested to be notified of further project details (traffic maintenance, noise, construction schedule, etc.). The NCDOT Project Manager contacted the citizen after receiving the comment.

**Other Projects in the Area** – BR-0031 and BR-0053 are adjacent to BR-0052 along Wayah Road. Construction schedules and maintenance of traffic for the three bridge replacements will be coordinated.

**FERC Coordination** - The proposed project crosses the Nantahala FERC project boundary (P-2692). Coordination is ongoing with Duke Energy; a conveyance application will be submitted for approval.

**Other Agency Comments:**

The start of study letter was sent to federal, state, and local agencies on September 27, 2018.

Comments were received from Macon County Schools, Macon County Emergency Management Services (EMS), NCDOT-Division of Bicycle/Pedestrian Transportation (DBPT), North Carolina Wildlife Resources Commission (NCWRC), Southwestern Commission (RPO), and USFWS. No other agencies provided a response.

Macon County Schools and Macon County EMS noted that closure of the bridge due to construction would have a high impact on school and emergency transportation services. NCDOT-DBPT stated that there were no known bike/ped facilities along the corridor, but that Wayah Road was part of a Macon County Bike Route and bicycle accommodations should be considered in design. NCWRC mentioned the October to April trout moratorium as well as using sediment/erosion control measures. The RPO noted that heavy use of de-icing salts corrodes the bridges and may leak into the river, and also suggested wider bridge shoulders for cyclists. USFWS addressed threatened/endangered species, migratory birds, stream crossing design measures, and sediment/erosion control.

A tribal coordination letter was sent out to the Catawba Indian Nation, Cherokee Nation, EBCI, Muscogee (Creek) Nation, and the United Keetoowah Band of Cherokee Indians on April 30, 2021. A response was received from the Catawba on June 4, 2021, in which they indicated that they have no immediate concerns with the project but requested to be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of the project.

F. Project Impact Criteria Checklists:

<b>F2. Ground Disturbing Actions – Type I (Appendix A) &amp; Type II (Appendix B)</b>				
Proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22 (ground disturbing), 23, 24, 25, 26, 27, 28, &/or 30; &/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B) answer the project impact threshold questions (below) and questions 8 – 31.				
<ul style="list-style-type: none"> <li>• If any question 1-7 is checked “Yes” then NCDOT certification for <b>FHWA approval is required.</b></li> <li>• If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.</li> </ul>				
<u>PROJECT IMPACT THRESHOLDS</u> (FHWA signature required if any of the questions 1-7 are marked “Yes”.)			Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6	Does the project require an Individual Section 4(f) approval?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.				
<u>Other Considerations</u>			Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11	Does the project impact Waters of the United States in any of the designated mountain trout streams?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

<u>Other Considerations for Type I and II Ground Disturbing Actions (continued)</u>		Yes	No
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
29	Is the project considered a Type I under the NCDOT Noise Policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

8. Surveys for the Gray Bat, Indiana Bat, and Northern Long-Eared Bat are scheduled for Summer 2022 and biological conclusions will be updated prior to permitting.
11. The NCWRC identified the Nantahala River as trout waters, in a letter dated September 17, 2018, therefore, mandatory trout moratorium from October 15 to April 15 will be applied.
13. The proposed project crosses the Nantahala FERC project boundary (P-2692). Coordination is ongoing with Duke Energy.
14. Cultural resources staff initiated a review of HPO quad maps, HPO GIS information, historic designations roster, and indexes on January 8, 2018. Based on this review, the project falls within the Determined Eligible Nantahala Power and Light Complex. An assessment of effects was required. The North Carolina State Historic Preservation Office (NCHPO) and FHWA completed an assessment of effects on April 28, 2022. A ruling of No Adverse Effect was issued with the inclusion of several environmental commitments, which include maintenance of proposed right-of-way, utilization of Oregon rail on the bridge, and utilization of natural stone design on retaining walls.
16. The proposed bridge replacement is located within and adjacent to a Flood Zone AE which surrounds the Nantahala River.
21. The project is located within the Nantahala National Forest. Coordination with the USFS has been ongoing throughout the planning and design process.
28. FHWA intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the Nantahala Hydroelectric Power Project, pursuant to Section 4(f) , as noted in the Assessment of Effects form.
30. The project passes through a section of farmland classified as "Prime farmland if protected from flooding or not frequently flooded during the growing season." A Preliminary Screening of Farmland Impacts was completed by Stantec and reviewed and approved by NCDOT-Community Studies on July 15, 2021. Forty-eight (48) total impact points were calculated which fall well below the threshold for alternative actions to reduce farmland impacts.

H. Project Commitments:

## NCDOT PROJECT COMMITMENTS

STIP Project No. **BR-0052**

Replacement of Bridge #227 on S.R. 1310 (Wayah Road) over the Nantahala River  
Macon County  
WBS Element 67052.1.1

### **NCDOT – SMU, ECAP, Division 14**

Project coordination will continue as follows:

- Macon County Schools-Transportation will be contacted at least one month prior to start of construction by NCDOT in order to have time to adequately adjust school bus schedules.  
*Phone: (828) 524-3314*
- Macon County Emergency Services will be contacted by NCDOT at least one month prior to start of construction to make the necessary temporary reassignments to primary response units.  
*Phone: (828) 349-2548*
- The project is located within the Nantahala National Forest. Coordination with the USFS will be maintained throughout the duration of the project.
- The proposed project crosses the Nantahala FERC project boundary (P-2692). Coordination with Duke Energy will be maintained throughout the FERC permitting process.

### **NCDOT – ECAP**

Surveys for the Gray Bat, Indiana Bat, and Northern Long-Eared Bat are scheduled for Summer 2022 and biological conclusions will be updated prior to permitting.

### **NCDOT – SMU, Historic Architecture, GeoEnvironmental, Division 14**

Compliance with the No Adverse Effect determination on the Nantahala Hydroelectric Power Project by NCHPO includes adherence as follows:

- If the proposed right of way is expanded from the boundary shown at the historic effects meeting on April 28, 2022, further coordination with NCHPO will be required.
- 42" Oregon rail will be utilized on the bridge.
- Retaining walls will utilize design which resembles a natural stone façade.

### **NCDOT – Roadside Environmental Unit, Division 14**

The Nantahala River has been identified as a NCWRC and NCDEQ trout water. Sedimentation and erosion control measures shall adhere to the Design Standards in Sensitive Watersheds. Mandatory trout moratorium from October 15 to April 15 will be applied.

### **NCDOT – Work Zone Traffic Control, Division 14**

Access will be maintained to the Wishon's Fishing Hole property during construction.

I. Categorical Exclusion Approval:

STIP Project No.	<u>BR-0052</u>
WBS Element	<u>67052.1.1</u>
Federal Project No.	<u>N/A</u>

**Prepared By:**

9/16/2022	DocuSigned by: <i>Michael Wray</i> 0FC17DC30DAE449
<u>Date</u>	<u>Michael Wray, P.E.</u> Transportation Engineer, Stantec

**Prepared For:**

Adam Cole, NCDOT Structures Management Unit

**Reviewed By:**

9/16/2022	DocuSigned by: <i>Adam Cole</i> 02EE938FAB674C5
<u>Date</u>	<u>Adam Cole, P.E., Project Engineer, Field Operations</u> NCDOT Structures Management Unit

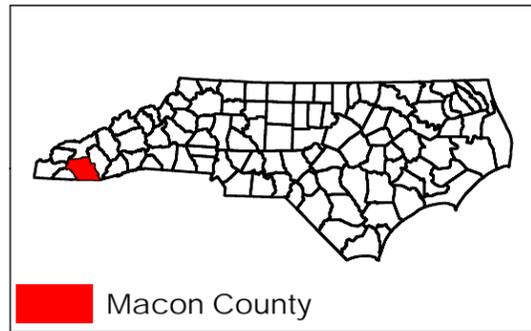
- Approved**
  - If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.
- Certified**
  - If ANY grey boxes are checked in Section F (pages 2 and 3), NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.
  - If classified as Type III Categorical Exclusion.

9/16/2022	DocuSigned by: <i>Kevin Fischer, PE</i> ED19A18D98EC496
<u>Date</u>	<u>Kevin Fischer, P.E.</u> Assistant State Structures Engineer—Program Management and Field Operations, NCDOT Structures Management Unit

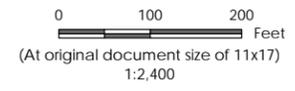
FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

<u>Date</u>	<u>N/A</u> for John F. Sullivan, III, PE, Division Administrator Federal Highway Administration
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*Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).*



- Legend**
-  BR0031 Proposed Edge of Travel
  -  BR0052 Proposed Edge of Travel
  -  BR0053 Proposed Edge of Travel
  -  Proposed Roadway Bridge
  -  Roads
  -  Streams



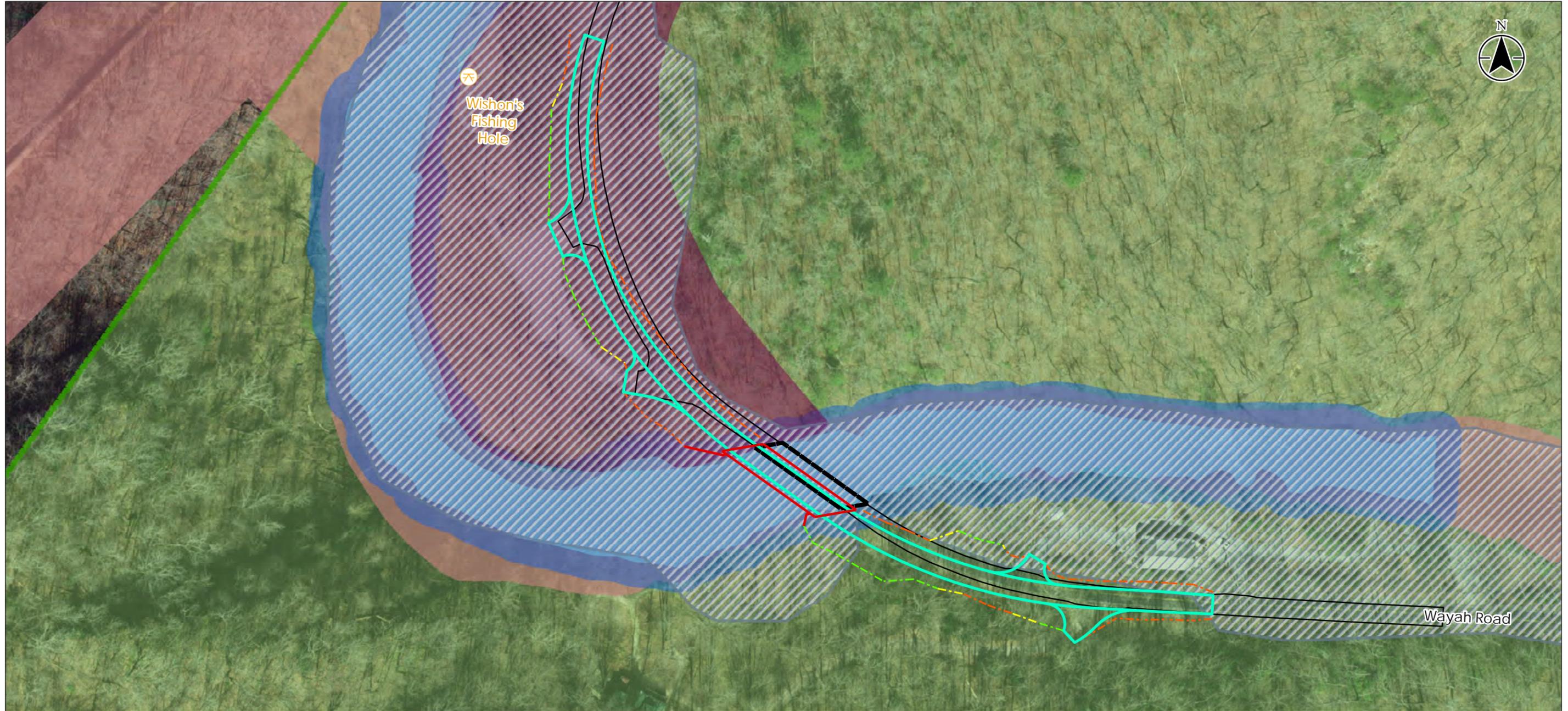
*Project Location*  
 Macon County, NC

*Client/Project*  
 NCDOT - Environmental Analysis Unit  
 Replacement of Bridge # 226, 227, & 228  
 along SR 1310 (Wayah Rd.) over the Nantahala River  
 STIP Nos. BR-0031, BR-0052, BR-0053

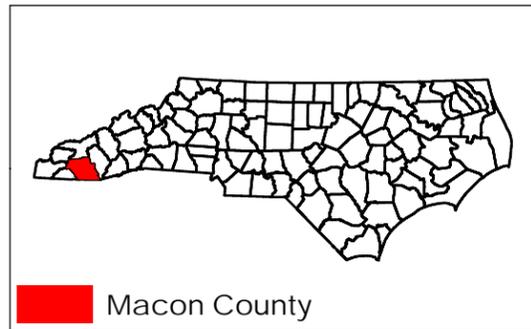
Prepared by AK on 05-20-2021  
 TR by MW on 05-20-2021  
 Revised by AK on 04-19-2022

*Figure No.*  
 1

*Title*  
 Vicinity Map

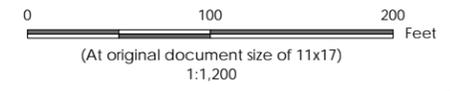


U:\172610012\transportation\BR0031\PEA\Maping\GIS\MXD\BR0052\_EnvFeats.mxd Revised: 2022-07-11 By: alekennedy



**Legend**

- Proposed Edge of Travel
- Proposed Roadway Bridge
- Proposed Slope Cut
- Proposed Slope Fill
- Proposed Slope Transition
- Existing Road
- Existing Bridge
- Recreational Facility
- Duke Energy Nantahala
- Streams
- Trout Streams 25' Buffer
- 100-Year Floodplain
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Natural Area



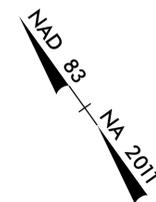
*Project Location*  
Macon County, NC

*Client/Project*  
NCDOT - Environmental Analysis Unit  
Replacement of Bridge # 226, 227, & 228  
along SR 1310 (Wayah Rd.) over the Nantahala River  
STIP Nos. BR-0031, BR-0052, BR-0053

*Figure No.*  
**2**

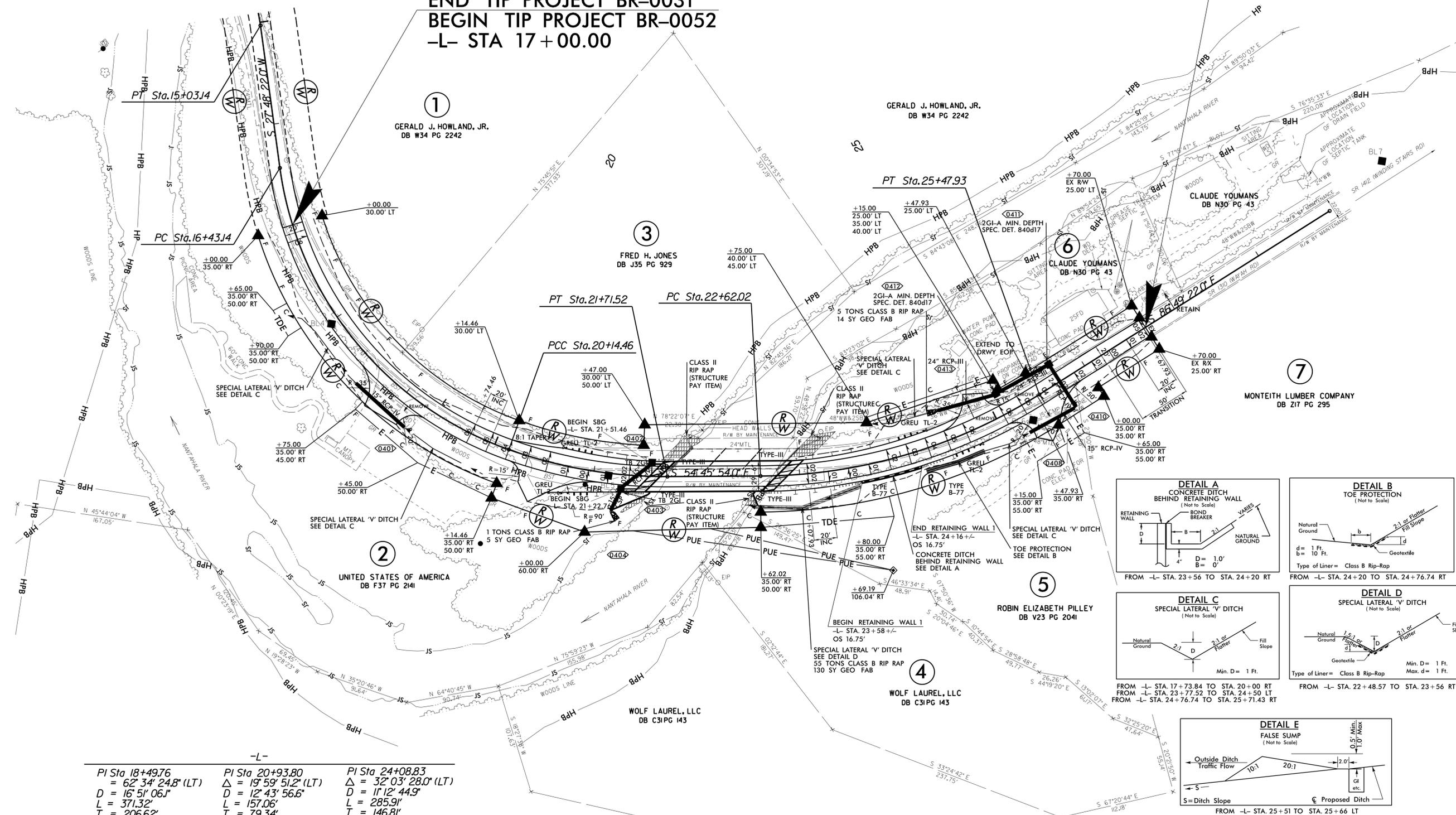
*Title*  
**BR-0052 Environmental Features**

PROJECT REFERENCE NO.		SHEET NO.	
BR-0052		4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			

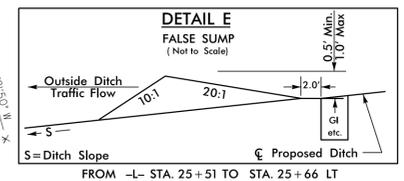
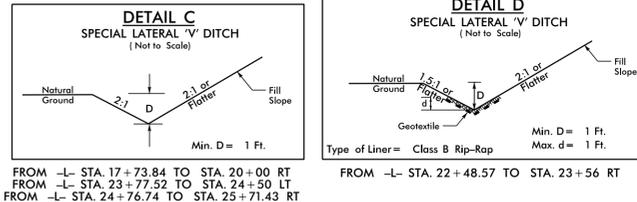
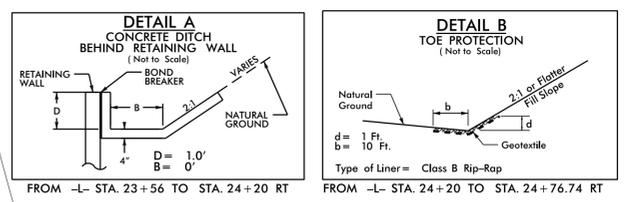


**END TIP PROJECT BR-0052**  
**-L- STA 26 + 70.00**

**END TIP PROJECT BR-0031**  
**BEGIN TIP PROJECT BR-0052**  
**-L- STA 17 + 00.00**



-L-		
PI Sta 18+49.76	PI Sta 20+93.80	PI Sta 24+08.83
$\Delta = 62^\circ 34' 24.8''$ (LT)	$\Delta = 19^\circ 59' 51.2''$ (LT)	$\Delta = 32^\circ 03' 28.0''$ (LT)
D = 16' 51' 06.1"	D = 12' 43' 56.6"	D = 11' 12' 44.9"
L = 371.32'	L = 157.06'	L = 285.91'
T = 206.62'	T = 79.34'	T = 146.81'
R = 340.00'	R = 450.00'	R = 511.00'
SE = 06	SE = 06	SE = 06
RUNOFF = 120'	RUNOFF = 120'	RUNOFF = 120'
V = 35 MPH	V = 35 MPH	V = 35 MPH



FOR -L- PROFILE, SEE SHEET 5  
FOR STRUCTURE PLANS, SEE SHEETS S-1 THROUGH S-?  
FOR RETAINING WALL PLANS, SEE SHEETS W-1 THROUGH W-?

8/17/19  
19-MAY-2022 12:29 BR0052.Roadway\Proc\BR0052.Rdw\_psh\_04.dgn