



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

October 24, 2024

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
450 West Hanes Mill Rd, Suite 300
Winston-Salem, NC 27105

ATTN: Ms. Lori Beckwith,
NCDOT Coordinator

Ms. Kaylie Yankura
NCDOT Coordinator

Subject: **Request for Modification and Extension of the Section 404 Individual Permit and Section 401 Water Quality Certification** for the proposed widening along NC 105 from SR 1136 (Clark's Creek Road) to SR 1107 (NC 105 Bypass) including the replacement of Bridge No. 5 over the Watauga River, Watauga County. TIP No. R-2566B and R-2566BA. Debit \$767 from WBS 37512.1.5

Reference: USACE Individual Permit Action ID SAW-2010-00653, November 6, 2019.
NCDWR Project No. 20190397, Certification No. 4194, June 19, 2019.

Dear Madams:

The purpose of this letter is to request a modification and extension of the United States Army Corps of Engineers (USACE) Section 404 Individual Permit and North Carolina Division of Water Resources Section 401 Certification for the above referenced project. The original 2019 permit application presented final impacts for R-2566BA (replacement of bridge No. 5) and preliminary impacts for R-2566B (widening along NC 105 from SR 1136 to SR 1107). This application requests a permit modification at Permit Site 1 within R-2566BA, and an extension of the current December 31, 2024 permit expiration date.

Project Schedule and Status

The R-2566BA bridge replacement section was let in November 2021 and is currently under construction. The work proposed at Permit Sites 3 and 4 have been completed, and there is partial work completed on Permit Site 2 (a portion of the causeway and interior bent has been constructed). Tree removal and more than half of the blasting has been completed.

R-2566B is scheduled to let on December 15, 2026. The proposed widening of NC 105 will span several years due to the location and length of the project. An extension of 10 years is requested at this time, though the exact duration of construction for this section is not yet known.

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

Impacts to Jurisdictional Resources

R-2566BA

There has been one proposed modification to the impacts associated with R-2566BA at Permit Site 1. This modification replaces a 25’ section of proposed pipe with a 25’ rock lined ditch instead. A revised permit drawing identifying this change is attached.

At Permit Site 1, there was a proposed 100’ pipe system carrying a very small UT to the Watauga River. With the presence of hard rock in this slope, the contractor would have to blast some of the cut slope in order to “under-shoot” this area to get the proposed 24” pipe in. In addition to the constructability issue, the steepness of the initial 25’ section of the proposed pipe has raised concerns that water will seep through the new cut area and follow the rock cut underneath the pipe, and bypass the pipe system entirely. To remedy this issue, NCDOT is proposing to replace the first pipe section with a rock lined ditch composed of Class 1 rock (no geotextile fabric). At the base of the ditch, there will be a 4GI (grated inlet) structure that will collect water flowing down the ditch and route it into the rest of the proposed pipe system, which will be installed as permitted.

This modification does not result in any change to the amount of impacts to the stream at this site, total impacts for the project, or mitigation requirements.

R-2566B

There are no changes to preliminary impacts associated with R-2566B at this time. Final impacts to this section will be permitted in a future phased modification request.

Protected Species

As of October 3, 2024, the USFWS’s Information for Planning and Consultation (IPaC) lists the following federally protected species in the project area.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Myotis grisescens</i>	Gray bat	Endangered	Yes	MA-NLAA
<i>Myotis sodalis</i>	Indiana bat*	Endangered	Yes	MA-NLAA
<i>Myotis septentrionalis</i>	Northern long-eared bat	Endangered	Yes	MA-NLAA
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	Yes	MA-NLAA
<i>Corynorhinus (=Plecotus) townsendii virginianus</i>	Virginia big-eared bat*	Endangered	Yes	MA-NLAA
<i>Clemmys muhlenbergii</i>	Bog turtle	SAT	Yes	Not Required
<i>Lasmigona subviridis</i>	Green floater*	Proposed Threatened	Yes	MA-NLAA

* Critical Habitat designated for species does not overlap with project area

SAT – Threatened due to similarity of appearance

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

Informal concurrence for biological conclusions of May Affect, Not Likely to Adversely Affect was requested for gray bat, Indiana bat, northern long-eared bat, tricolored bat, Virginia big-eared bat, and green floater from the USFWS on October 3, 2024 (request attached).

Cultural Resources

There have been no changes or updates to Section 106 information since the 2019 permits.

The original permit application for this project pre-dated NCDOT's current Tribal Coordination process. Letters to all five tribes for Watauga County including archaeological screening/survey reports were sent on August 26, 2024. A response was received from the Catawba Indian Nation on October 2, 2024. Tribal coordination letters and subsequent Catawba Indian Nation response are attached.

Mitigation

Compensatory mitigation for all impacts associated with the R-2566BA final impacts and R-2566B preliminary impacts is being provided by the Division of Mitigation Services (DMS). The small modification to Permit Site 1 in R-2566BA does not result in any change to impact numbers, therefore mitigation needs have not changed since the initial 2019 permits.

Regulatory Approvals

Section 404: Application is hereby made for a modification and extension to the USACE Individual 404 Permit as required for the above-described and previously permitted activities.

Section 401: We are hereby requesting a modification and extension to the 401 Water Quality Certification from the N.C. Division of Water Resources for the above-described and previously permitted activities. Authorization to debit the \$767 application fee from WBS 37512.1.5 is hereby given.

A copy of this permit application has been posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please contact Erin Cheely at ekcheely@ncdot.gov or (919) 707-6108.

Sincerely,

Erin Cheely
for Michael A. Turchy

Environmental Coordination and Permitting Group Leader

ec: NCDOT Permit Application Standard Distribution List

Project Submittal Interim Form



Updated December 4, 2023

*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.*

- Project Type: ***
- For the Record Only (Courtesy Copy)
 - New Project
 - Modification/New Project with Existing ID
 - More Information Response
 - Other Agency Comments
 - Pre-Application Submittal
 - Re-Issuance/Renewal Request
 - Stream or Buffer Appeal

Project Contact Information

Name: Erin Cheely
Who is submitting the information?

Email Address: * ekcheely@ncdot.gov

Project Information

Existing ID #: *	Existing Version: *
20190397	1
<i>20170001 (no dashes)</i>	<i>1</i>

Project Name: * R-2566 B and BA - Widening of NC 105 in Watauga County

Is this a public transportation project? *

- Yes
- No

Is this a DOT project? *

- Yes
- No

Is the project located within a NC DCM Area of Environmental Concern (AEC)? *

- Yes No Unknown

Does this project involve maintenance dredging funded by the Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund, electric generation projects located at an existing or former electric generating facility, or involve the distribution or transmission of energy or fuel, including natural gas, diesel, petroleum, or electricity? *

- Yes No

Is this project connected with ARPA funding? *

- Yes No

TIP#:

R-2566B

WBS#:

37512.1.5

*(Applies to DOT projects only)***County (ies) ***

Watauga

Please upload all files that need to be submitted.*Click the upload button or drag and drop files here to attach document*R-2566 B and BA Watauga Renewal and
Modification October 24 2024.pdf


11.48MB

*Only pdf or kmz files are accepted.***Describe the attachments or add comments:**

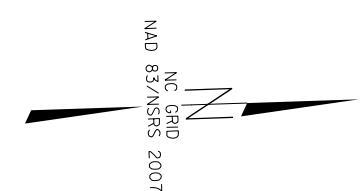
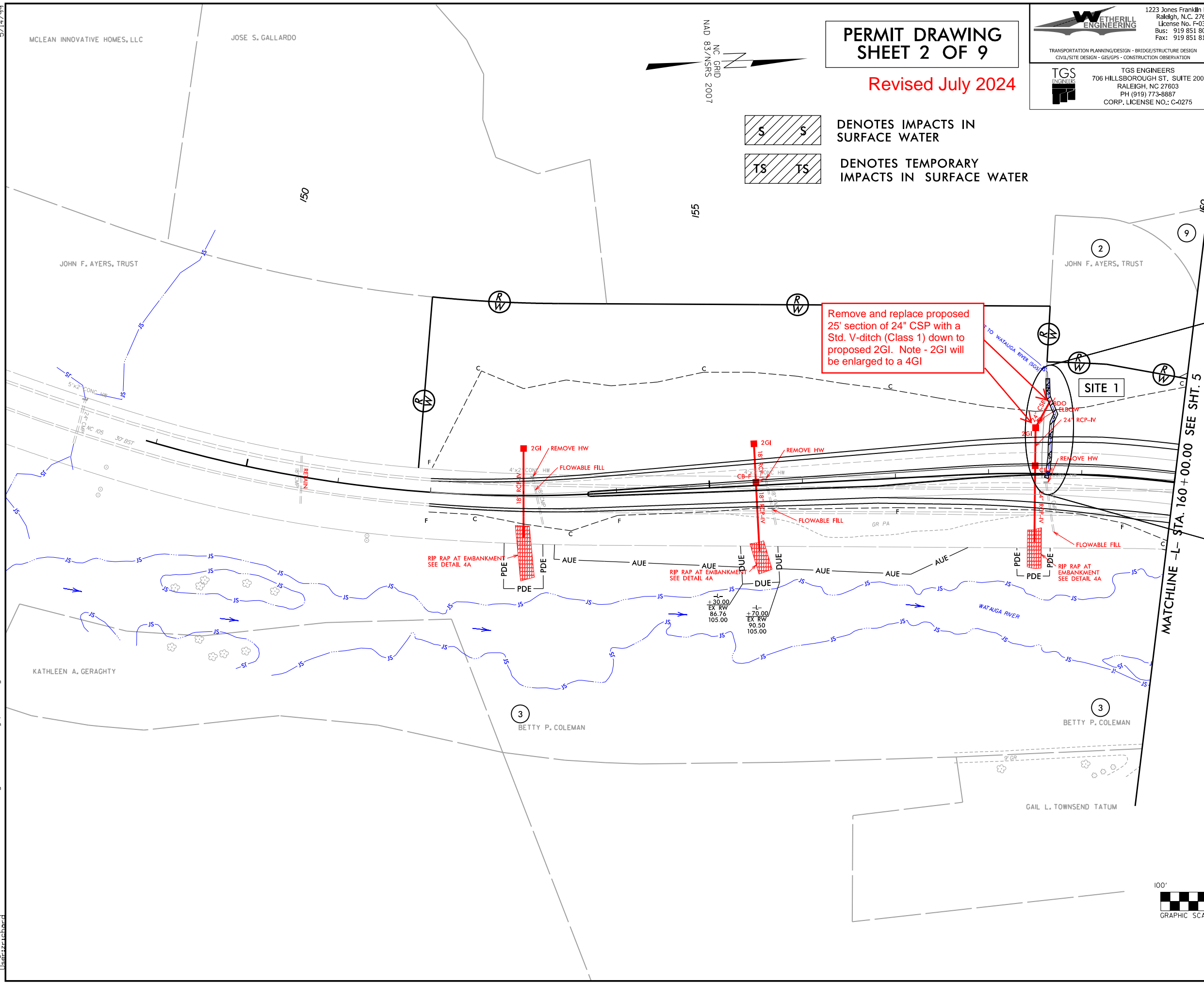
Cover Letter, Revised Permit Drawing, Section 7 Concurrence Request, and Tribal Coordination

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

- I, the project proponent, hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.
- I, 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 agree that submission of this online 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 online form.

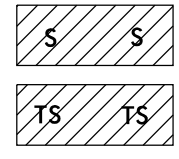
Signature: *A rectangular box containing a handwritten signature in black ink that reads "Erin K. Cheely".**Submittal Date:**

5/14/19
3/25/2019 PERMITS.Environmental Drawings\R-25666BA-Rdy.psh_04.dgn
25666BA_Hydro.psh_04.dgn 3/25/2019 3:02:00 PM TGS



PERMIT DRAWING SHEET 2 OF 9

Revised July 2024



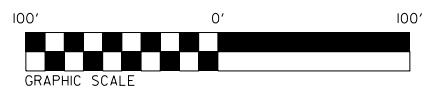
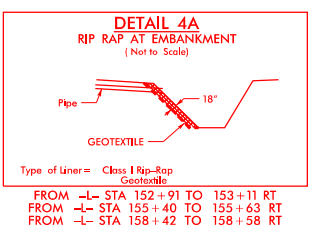
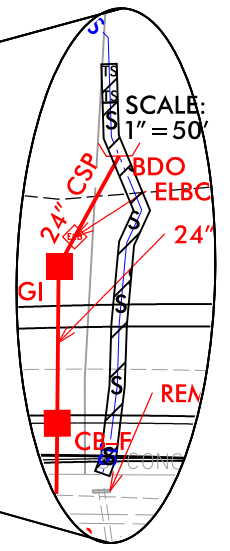
WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

TGS ENGINEERS
706 HILLSBOROUGH ST., SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO. R-2566BA	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

Remove and replace proposed 25' section of 24" CSP with a Std. V-ditch (Class 1) down to proposed 2GI. Note - 2GI will be enlarged to a 4GI

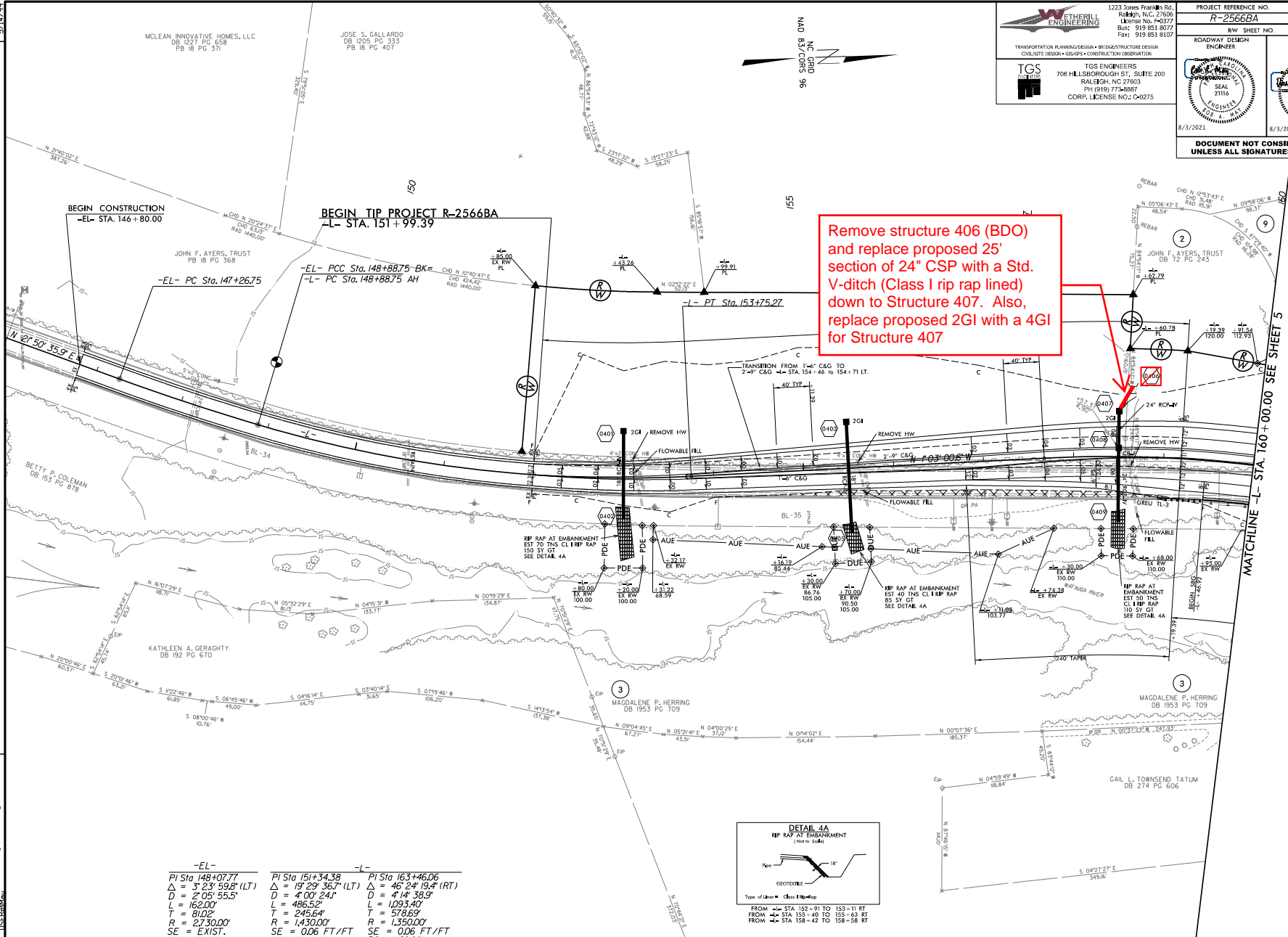


SEE SHT. 7 FOR -L- PROFILE

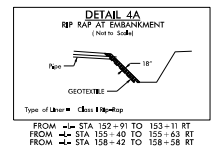
Roadway plan sheet

		PROJECT REFERENCE NO. R-2566BA	SHEET NO. 4
TRANSPORTATION PLANNING DESIGN • BRIDGE/STRUCTURE DESIGN CIVIL/SEE DESIGN • ROADS • CONSTRUCTION OBSERVATION		RW SHEET NO.	HYDRAULICS ENGINEER
	TGS ENGINEERS 708 HILLSBOROUGH ST., SUITE 200 RALPH, NC 27603 PII (019) 778-8807 CORP. LICENSE NO.: C-0275		
		8/3/2021	8/3/2021
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

Remove structure 406 (BDO) and replace proposed 25' section of 24" CSP with a Std. V-ditch (Class I rip rap lined) down to Structure 407. Also, replace proposed 2GI with a 4GI for Structure 407



-EL-	-L-	-L-
PI Sta 148+107.77	PI Sta 151+34.38	PI Sta 163+46.06
$\Delta = 3' 23'' 59.8''$ (LT)	$\Delta = 19' 29'' 36.7''$ (LT)	$\Delta = 46' 24'' 19.4''$ (RT)
D = 2' 05'' 55.5"	D = 4' 00'' 24"	D = 4' 14'' 38.5"
L = 162.00'	L = 486.52'	L = 1093.40'
T = 81.02'	T = 245.64'	T = 578.63'
R = 2730.00'	R = 1430.00'	R = 1350.00'
SE = EXIST.	SE = 0.06 FT/FT	SE = 0.06 FT/FT
RO = EXIST.	RO = 240.00'	RO = 160.00'



5/14/2021

REVISIONS

C:\30\25666A_Rdw\pwb_04.dgn

SEE SHEET 7 FOR -L- PROFILE



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

October 3, 2024

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

Subject: **Section 7 Concurrence Request** for proposed improvements to NC 105 from Clark's Creek Road (SR 1136) to NC 105 Bypass (SR 1107) in Boone, Watauga County, WBS No. 37512.1.5 in Division 11, **TIP No. R-2566B**

Reference: Aquatics Survey Report, dated September 17, 2024
Bat Survey Report, dated September 30, 2024

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) propose improvements to NC 105 in Boone, Watauga County. The project involves widening along NC 105 from SR 1136 (Clark's Creek Road) to SR 1107 (NC 105 Bypass) including the replacement of Bridge No. 5 over the Watauga River and realignment of Old Shulls Mill Road in Watauga County as project R-2566B/BA/BB.

This project includes the following improvements:

The section between Old Shull's Mill Road and Broadstone Road will consist of two 12-foot lanes (one in each direction) with 6-foot wide paved shoulders on both sides. The current design proposes to extend the existing climbing lane (located near Old Shull's Mill Road) to Broadstone Road. The section between Broadstone Road and NC 105 Bypass will consist of four 12-foot lanes, a 23-foot wide raised median and 6-foot wide paved shoulders (R-2566B). In addition to widening, the two intersections where Old Shull's Mill Road tees into NC 105 have safety concerns. These are referenced as "Old Shull's Mill Road (north)" and "Old Shull's Mill Road (south)." To address these issues, the southern intersection (NC 105/Old Shull's Mill Road (south)) will be realigned, and the northern intersection (NC 105/Old Shull's Mill Road (north)) will be closed (R-2566BB).

The phase of this project involving the replacement of the bridge that carries NC 105 over the Watauga River north of the Broadstone Road intersection (R-2566BA) is currently under construction.

As of October 3, 2024, the USFWS’s Information for Planning and Consultation (IPaC) lists the following federally protected species in the project area.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Myotis grisescens</i>	Gray bat	Endangered	Yes	MA-NLAA
<i>Myotis sodalis</i>	Indiana bat*	Endangered	Yes	MA-NLAA
<i>Myotis septentrionalis</i>	Northern long-eared bat	Endangered	Yes	MA-NLAA
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	Yes	MA-NLAA
<i>Corynorhinus (=Plecotus) townsendii virginianus</i>	Virginia big-eared bat*	Endangered	Yes	MA-NLAA
<i>Clemmys muhlenbergii</i>	Bog turtle	SAT	Yes	Not Required
<i>Lasmigona subviridis</i>	Green floater*	Proposed Threatened	Yes	MA-NLAA

* Critical Habitat designated for species does not overlap with project area

SAT – Threatened due to similarity of appearance

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

Species Summary – Bats

Three bridges occur in the project study. Bridge No. 940005 is a five-span structure with metal beams, and concrete deck, guard rails and end walls. The overall length of the structure is 263 feet. Bridge No. 940094 is a three-span structure with concrete beams, deck, guard rails and end walls. The overall length of the structure is 110 feet. The third bridge in the project study area is a private owned one span structure with timber beams, deck and guard rails, and masonry end walls. NCDOT bridge 940094 and the private bridge are not within the project construction footprint and will not be replaced. Bridge 940005 over the Watauga River is already under construction and is being replaced with a 270 ft long two-span bridge.

Fourteen culverts meeting NCDOT’s Standard Operating Procedures for Preliminary Bat Habitat Assessments were identified during the site visit. NCDOT’s operational threshold for surveying culverts is greater than 3 feet high and 60 feet in length. One abandoned structure was observed in the project study area. This structure is a collapsed fruit stand approximately 36 ft long, 30 ft wide and 8 ft high with mixed material siding and a metal roof.

On July 23, 24 and August 1, 2024, RK&K biologists assessed all structures within the project study area. Crevices suitable for roosting are present on all three bridges. Bridge No. 940094 had evidence of bats in the form of guano found on deck joints. Due to the large guano size, it is assumed to be from Big-brown bats (*Eptesicus fuscus*). All culverts had crevices or rough surfaces suitable for roosting. No evidence of bats was observed in any of the culverts. No evidence of bats was observed in the collapsed fruit stand.

Trees greater than 3” dbh are present in the project area. Trees greater than 5” dbh are present in the project area. There are no known caves, but one surface mine (Hodges Gap Quarry) occurs within the project study area. Large, continuous forests are present in the project vicinity, providing potential foraging and commuting habitat.

Species ¹	Federal Status	Habitat Present	Biological Conclusion	Distance to Nearest Record ²
MYGR	Endangered	Yes	MA-NLAA	0.7 miles SW
MYSO	Endangered	Yes	MA-NLAA	19 miles SW (pre – 1962)
MYSE	Endangered	Yes	MA-NLAA	Within project study area (2011)
COTO	Endangered	Yes	MA-NLAA	3.1 miles W
PESU	Proposed Endangered	Yes	MA-NLAA	Within project study area (2011)

¹ Detailed habitat information shown in table below

² Nearest known record from latest NHP, WRC, or NCDOT data

MYGR = Gray bat; MYSO = Indiana bat; MYSE = Northern long-eared bat; COTO = Virginia big-eared bat; PESU = Tricolored bat

MA-NLAA – 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	✓	✓
COTO	NA	NA	X	✓	✓
PESU	✓	✓	X	✓	✓

MYGR = Gray bat; MYSO = Indiana bat; MYSE = Northern long-eared bat; COTO = Virginia big-eared bat; PESU = Tricolored bat

A Biological Conclusion of **May Affect, Not Likely to Adversely Affect** is proposed for all currently listed bat species based on the presence of suitable foraging, commuting and/or roosting habitat. No caves or mines occur in the area.

- Tree clearing can be done during the winter months. Due to the higher elevation of the project (>2800') and therefore cooler temps and shorter foraging season, NCDOT can commit to only clearing trees from September 15 through May 1.
- If necessary, during the first and last month of the clearing window (i.e. from Sept 15-Oct 15, and April 1-May 1) NCDOT can additionally commit to only cutting trees when temperatures are above 50°F.
- Blasting is anticipated for this project; however, it will occur after tree clearing has been done.
- Several tools will be used during project upgrades including but not limited to jack hammering, rock drilling and road grading. This equipment is vibratory or percussive in nature. The maximum noise level for activities that will occur as part of this project is 101-110 dBA, attributed to the tools listed above.

- Temporary lighting will be necessary for some nighttime work however, lighting will be directed at the construction activities. Permanent lighting already exists in the project study area, but no new lighting will be added by NCDOT as part of this project. If existing lighting is in the way of construction, then it will be removed and set back up following construction.

Species Summary – Aquatic

The waterways potentially affected by the project include the Watauga River, Big Branch, Laurel Fork and unnamed tributaries (UTs) within the Watauga River Basin HUC# 06010103. From the project location, Big Branch flows approximately 0.05 RM to the confluence with the Watauga River and Laurel Fork flows approximately 2.50 RM to the confluence with Watauga River. UTs to the Watauga River flow less than 0.22 RM to the respective confluence with the Watauga River and UTs to Laurel Fork flow less than 0.06 RM to the respective confluence with Laurel Fork.

Mussel surveys were conducted by RK&K personnel Tyler Black (Federal Permit# ES67197D, NC Permit # ESP24000013), Hal Bain, and Loretta Lutackas on July 2, 2024, at two survey locations. Survey location 1 (SL1) is within the Watauga River at SR 1112 (Broadstone Road) and survey location 2 (SL2) at Atkins River conservation easement (NC 105). The project is not located within proposed Critical Habitat for the Green Floater.

At the survey locations, the Watauga River is a small to medium sized higher gradient river with substrate predominately composed of cobble, boulder, and bedrock. The targeted species surveys did not document the presence of the Green Floater or other native mussels at the two survey locations within the Watauga River. Asian Clam were very rare at SL1 and presumed absent at SL2; however, sufficient interstitial space composed of sand and gravel was available for freshwater bivalve mollusks to burrow.

The results indicate that the survey areas currently lack a native mussel population, potentially due to high gradient or historical impacts within the watershed. It should be noted that two additional activities within the Watauga River or watershed in the vicinity of the project location could directly affect the project area. Specifically, the Shull’s Mill Dam, located near the intersection of NC 105 and Old Shull’s Mill Road (SR 1568) was removed in early July of 2024. Additionally, the survey crew notified USFWS and NCWRC about excessive turbidity observed upstream of Shull’s Mill Dam. The source of the turbidity was not investigated by the survey crew; however, the turbidity source was entering the Watauga River somewhere between Shull’s Mill Road (SR 1557) and the Atkins River Conservation Easement access. Although no Green Floater individuals were detected during the surveys, given the presence of stable substrate, mobility of host fish species, and presence of a current EO located approximately 5.6 RM downstream on the Watauga River (EO ID 3754), completion of this project may affect the Green Floater.

Pursuant to the ESA Handbook Section 3.5, NCDOT does not request concurrence from the USFWS 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	SAT	Yes	Not Required	<i>Clemmys muhlenbergii</i>

SAT – Threatened due to similarity of appearance

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 Erin Cheely at ekcheely@ncdot.gov or 919-707-6108.

Sincerely,

A handwritten signature in black ink, appearing to read "Erin K. Cheely". The signature is fluid and cursive, with the first name "Erin" and last name "Cheely" clearly distinguishable.

Erin K. Cheely
ECAP Western Regional Team Lead
NCDOT - Environmental Analysis Unit

Enclosures:

Aquatics Survey Report, dated September 17, 2024

Bat Survey Report, dated September 30, 2024

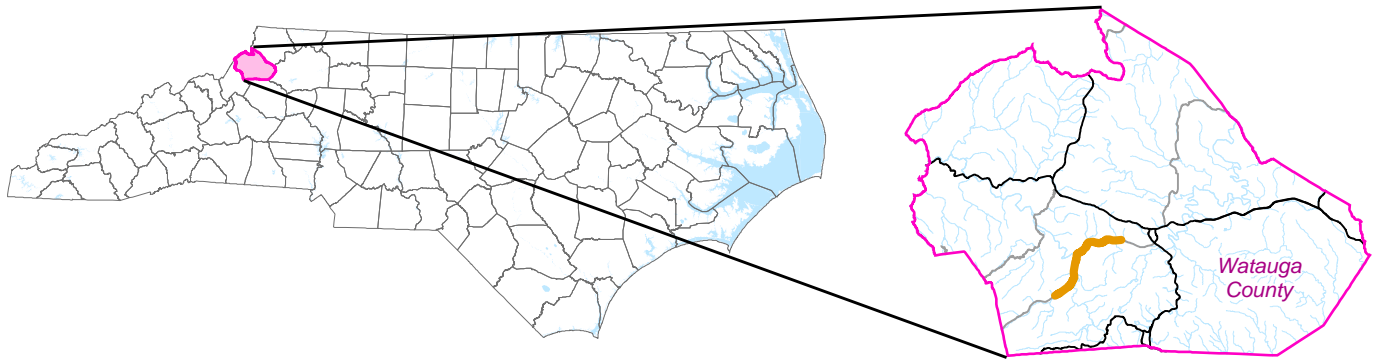
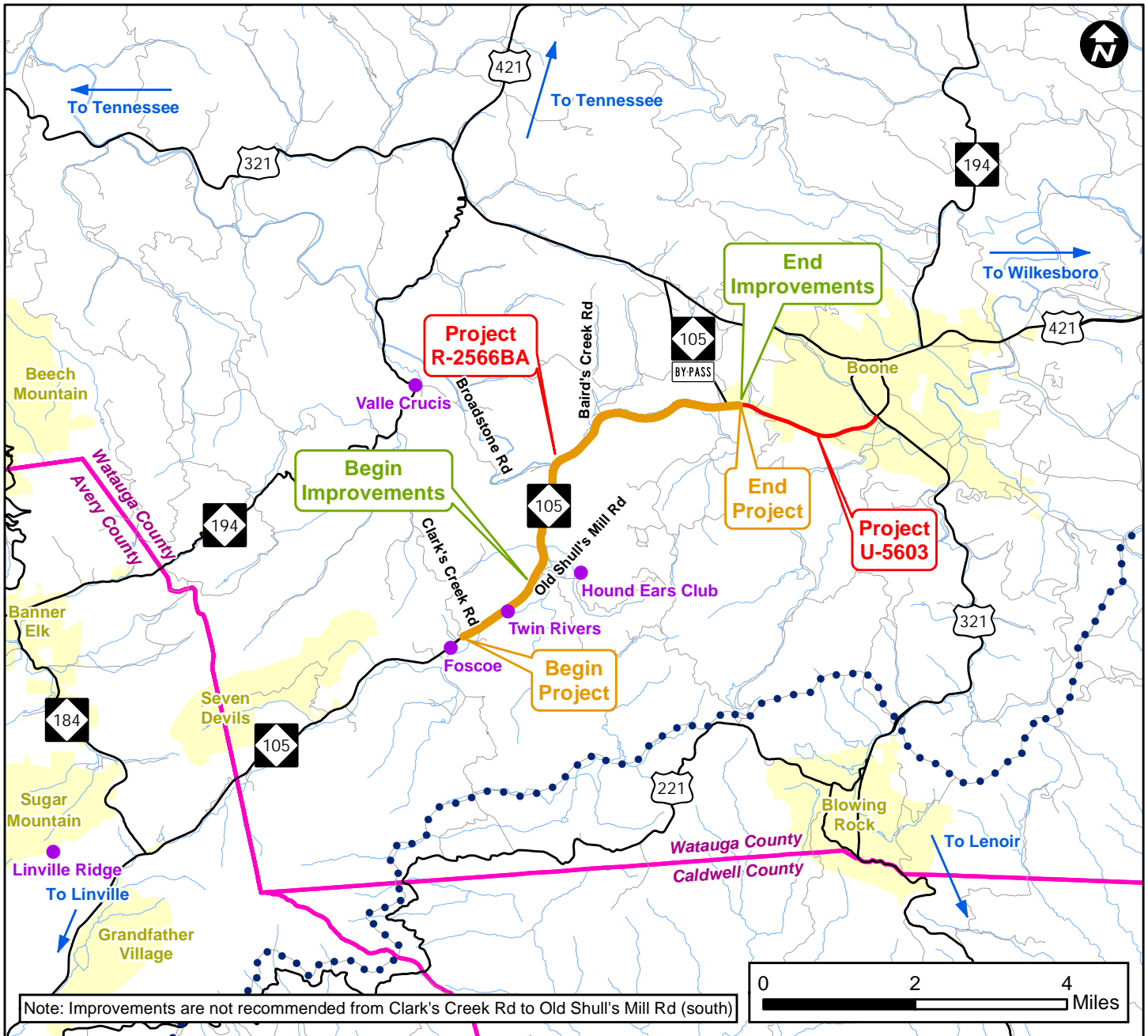
cc:


Ms. Holland Youngman, USFWS

Mr. Kevin Hining, NCDOT Div. 11

Mr. Nora McCann, NCDOT PMU

Mr. Tyler Stanton, NCDOT EAU-BSG





— Project R-2566B

•• Blue Ridge Parkway

— Nearby STIP Project

• Communities

Municipal Boundary

County Boundary

Figure 1
Vicinity Map
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County

Aquatic Species Survey Report

NC 105 Widening from SR 1136 (Clarks Creek Road) in Foscoe to
SR 1107 (NC 105 Bypass) in Boone
Watauga County, North Carolina

TIP # R-2566B
WBS Element # 37512.1.5

Prepared For:



NC Department of Transportation
Raleigh, North Carolina

Contact Person:

Anne M. Burroughs
Biological Surveys Group
North Carolina Department of Transportation
amburroughs@ncdot.gov
1598 Mail Service Center
Raleigh, NC 27699-1598

September 17, 2024

Prepared by:



8601 Six Forks Road, Forum 1 Suite 700
Raleigh, NC 27615

Contact Person:

Neil Medlin
Project Delivery Leader, Natural Resources
nmedlin@rkk.com
919-878-9560

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Appendix A. Figures:

Figure 1: Project Vicinity and Survey Location

Figure 2: NCNHP Element Occurrences

Figure 3: NPDES Dischargers and 303(d) Listed Waters

Appendix B. Qualifications of Contributors

1.0 Introduction

The North Carolina Department of Transportation (NCDOT) proposes the widening of NC 105 to a multi-lane facility from SR 1136 (Clarks Creek Road) in Foscoe to SR 1107 (NC 105 Bypass) in Boone, Watauga County (Appendix A, Figure 1). As of July 11, 2024, the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) webpage listed the Green Floater (*Lasmigona subviridis* (Proposed Threatened)) as a protected species under the Endangered Species Act (ESA) that potentially may be affected by activities in the project location. The IPaC webpage indicated that there are no critical habitats that overlap with the project location.

A review of the NC Natural Heritage Program (NCNHP) records, last accessed on June 24, 2024, indicated that an element occurrence (EO) exists for the target species within a 5-mile buffer of the project location (Table 1; Figure 2).

Table 1. NC Natural Heritage Program Element Occurrence record and approximate distance from the project location (i.e., river miles (RM)).

Species	EO ID	EO Status	Waterway	First Observation	Last Observation	RM
Green Floater	3754	Current	Watauga River	June 1989	August 2004	7.5*

*Downstream

As part of the federal permitting process that requires an evaluation of potential project related impacts to federally protected species, RK&K was contracted by NCDOT to conduct aquatic surveys for the Green Floater.

2.0 Waters Affected

The waterways potentially affected by the project includes the Watauga River, Big Branch, Laurel Fork and unnamed tributaries (UTs) within the Watauga River Basin HUC# 06010103. From the project location, Big Branch flows approximately 0.05 RM to the confluence with the Watauga River and Laurel Fork flows approximately 2.50 RM to the confluence with Watauga River. UTs to the Watauga River flow less than 0.22 RM to the respective confluence with the Watauga River and UTs to Laurel Fork flow less than 0.06 RM to the respective confluence with Laurel Fork.

2.1 National Pollutant Discharge Elimination System (NPDES) Dischargers

There are 19 NPDES permitted dischargers in locations that could directly affect the project area within the 5-mile project area buffer (Figure 3, Table 2). Specifically, there are 17 Wastewater Treatment Plants (WWTP), one single family domestic wastewater discharge, and one fish farm with a packing and rinsing wastewater discharge that are located on the Watauga River or a tributary to the Watauga River. All facilities are located approximately 0.8 to 11.3 RM upstream of the project.

Table 2. NPDES Dischargers and approximate distance from the project location (i.e., river miles (RM)).

Facility	Permit No.	RM
Willow Valley Resort WWTP	NC0061425	0.8
Hound Ears WWTP	NC0032123	1.4
Laurel Seasons WWTP	NC0038041	1.5
Hebron Colony & Grace Home WWTP	NC0032191	2.3
NC 105 WWTP	NC0089036	2.9
Stone Bridge WWTP	NC0088579	3.2
The Ponds WWTP	NC0050610	4.1
Mill Ridge Development WWTP	NC0030473	4.2
Seven Devils Resort WWTP	NC0035149	5.4
Yonahlossee WWTP	NC0032212	5.8
Art Plaza WWTP	NC0070408	6.8
Grandfather Trout Ponds (Fish Farm)	NCG530047	6.9
10890 NC Highway 105 South (Single Family)	NCG551312	7.6
Valley Creek Apartments WWTP	NC0033448	7.6
Valley Creek WWTP	NC0058891	8.1
Buckeye Creek WWTP	NC0087963	8.5
Smoketree Lodge WWTP	NC0049174	9.7
Adams Apple Condominiums WWTP	NC0042358	10.2
Tynecastle WWTP	NC0062961	11.3

2.2 303(d) Classification

None of the waterways (i.e., Watauga River and all tributaries) upstream of the project are on the North Carolina Department of Environmental Quality (NCDEQ) - Division of Water Resources 2022 303(d) list of impaired waters (Figure 3).

3.0 Target Species Descriptions

3.1 Green Floater (*Lasmigona subviridis*)

3.1.1 Characteristics

The Green Floater (*Lasmigona subviridis* (Conrad 1835)) is a small freshwater mussel that rarely exceeds 55 millimeters (mm) in length. Shells are thin, slightly inflated, and subovate to trapezoidal in shape. The umbo is low and rarely extends above the hinge line, and uneroded shells have double-looped sculpturing. The periostracum is typically yellow to brownish green with numerous dark green rays. The nacre is white to bluish with a tinge of iridescence toward the posterior end. Furthermore, the nacre often contains a yellow to salmon blotch in the beak cavity. Lateral teeth are moderately developed but thin and the pseudocardinal teeth are relatively small and blade-like. In addition, the left valve often contains an interdental projection.

The Green Floater is a long-term brooding (bradytic) species, and it is generally considered to be a hermaphroditic species (individuals contain both male and female gonadal tissues, self-fertilize, and do not require a host to metamorphose); however, transformation on host fish species has been documented in the laboratory. The reproductive season for the Green Floater extends from August to June. Direct transformation of glochidia into juvenile mussels has been documented, and glochidia have also successfully metamorphosed to juveniles on five host fish species. Identified hosts fish species for Green Floater include the Rock Bass (*Ambloplites rupestris*), Central Stoneroller (*Campostoma anomalum*), Mottled Sculpin (*Cottus bairdii*), Margined Madtom (*Noturus insignis*), and Blacknose Dace (*Rhinichthys atratulus*).

3.1.2 Distribution and Habitat Requirements

The Green Floater has a unique distribution, which includes Atlantic Slope and Interior Basin drainages. Historically, this species occurred from the Cape Fear River Basin in North Carolina north to the Hudson River Basin, and west to the Genesee River of New York. It also occurs in the New, Greenbrier, and Watauga rivers in North Carolina, Tennessee, Virginia, and West Virginia. The historical range within North Carolina included the Neuse, New, Roanoke, Tar and Watauga River basins.

4.0 Survey Efforts

Mussel surveys were conducted by RK&K personnel Tyler Black (Federal Permit# ES67197D, NC Permit # ESP24000013), Hal Bain, and Loretta Lutackas on July 2, 2024.

4.1 Waterway Conditions at Time of Survey:

4.1.1 Survey Location 1 (SL1): Watauga River at SR 1112 (Broadstone Road)

At the SL1, the Watauga River is a moderately deep river with riffle and run flow regimes. Wetted width was approximately 8.0-18.0 meters (m) and depth ranged from 0.10-1.50 m but averaged approximately 0.50 m. The substrate was a mix of silt, sand, gravel, cobble, boulder, and bedrock. The dominant benthic substrate was boulder, while cobble was the subdominant substrate. The bank height was approximately 1.00 m, and some bank erosion/undercutting areas were observed. Evidence of American Beaver (*Castor canadensis*) activity in the form of gnawed sticks was noted at the time of the survey. A narrow, forested buffer was present along the left descending bank and a wide forested buffer was present along the right descending bank.

4.1.2 Survey Location 2 (SL2): Watauga River at Atkins River Conservation Easement (NC 105)

At SL2, the Watauga River is a small, shallow river with riffle and run flow regimes. Wetted width was approximately 1.0-7.0 m and depth ranged from 0.10-0.50 m but averaged approximately 0.30 m. The substrate was a mix of silt, sand, gravel, cobble, boulder, and bedrock. The dominant benthic substrate was boulder, while bedrock was the subdominant substrate. The bank height was approximately 1.00-2.00 m, and some bank erosion/undercutting areas were observed. No evidence of American Beaver activity was observed at the time of the

survey. A narrow, forested buffer was present along the left descending bank and a wide forested buffer was present along the right descending bank.

4.2 Methodology

4.2.1 Mussel Survey

The SL1 mussel survey was conducted from approximately 1,100 m downstream of the NC 105 bridge crossing of the Watauga River to approximately 600 m downstream of the crossing for a total of approximately 500 m. SL2 was located on the Atkins River Conservation Easement (36.162649, -81.761974) and the survey was conducted from the downstream property boundary to the upstream property boundary for a total of approximately 350 m. Areas of appropriate habitat were searched, concentrating on the stable habitats preferred by the target species. Visual surveys were conducted by snorkeling along with tactile methods that were employed where appropriate. All bivalves were recorded and returned to the substrate. Timed survey efforts typically provide Catch Per Unit Effort (CPUE) data for each species.

5.0 Results

5.1 Mussel Survey

No evidence of native mussels was observed during the survey. Two shells of the nonindigenous Asian Clam (*Corbicula fluminea*) were observed at SL1; however, no live specimens were observed. No Green Floaters were observed during the surveys. A total of 6.75-person hours (3.75-person hours in SL 1 and 3.0-person hours in SL2) of survey time were spent in the survey locations with zero mussel species observed.

6.0 Critical Habitat

The project is not located within proposed Critical Habitat for the Green Floater.

7.0 Discussion/Conclusions

At the survey locations, the Watauga River is a small to medium sized higher gradient river with substrate predominately composed of cobble, boulder, and bedrock. The targeted species surveys did not document the presence of the Green Floater or other native mussels at the two survey locations within the Watauga River. Asian Clam were very rare at SL1 and presumed absent at SL2; however, sufficient interstitial space composed of sand and gravel was available for freshwater bivalve mollusks to burrow. The results indicate that the survey areas currently lack a native mussel population, potentially due to high gradient or historical impacts within the watershed. It should be noted that two additional activities within the Watauga River or watershed in the vicinity of the project location could directly affect the project area. Specifically, the Shull's Mill Dam, located near the intersection of NC 105 and Old Shull's Mill Road (SR 1568) was removed in early July of 2024. Additionally, the survey crew notified USFWS and NCWRC about excessive turbidity observed upstream of Shull's Mill Dam. The source of the turbidity was not investigated by the survey crew; however, the turbidity source

was entering the Watauga River somewhere between Shull's Mill Road (SR 1557) and the Atkins River Conservation Easement access. Although no Green Floater individuals were detected during the surveys, given the presence of stable substrate, mobility of host fish species, and presence of a current EO located approximately 5.6 RM downstream on the Watauga River (EO ID 3754), completion of this project may affect the Green Floater.

Recommended Biological Conclusion for Green Floater: May Affect; Not Likely to Adversely Affect

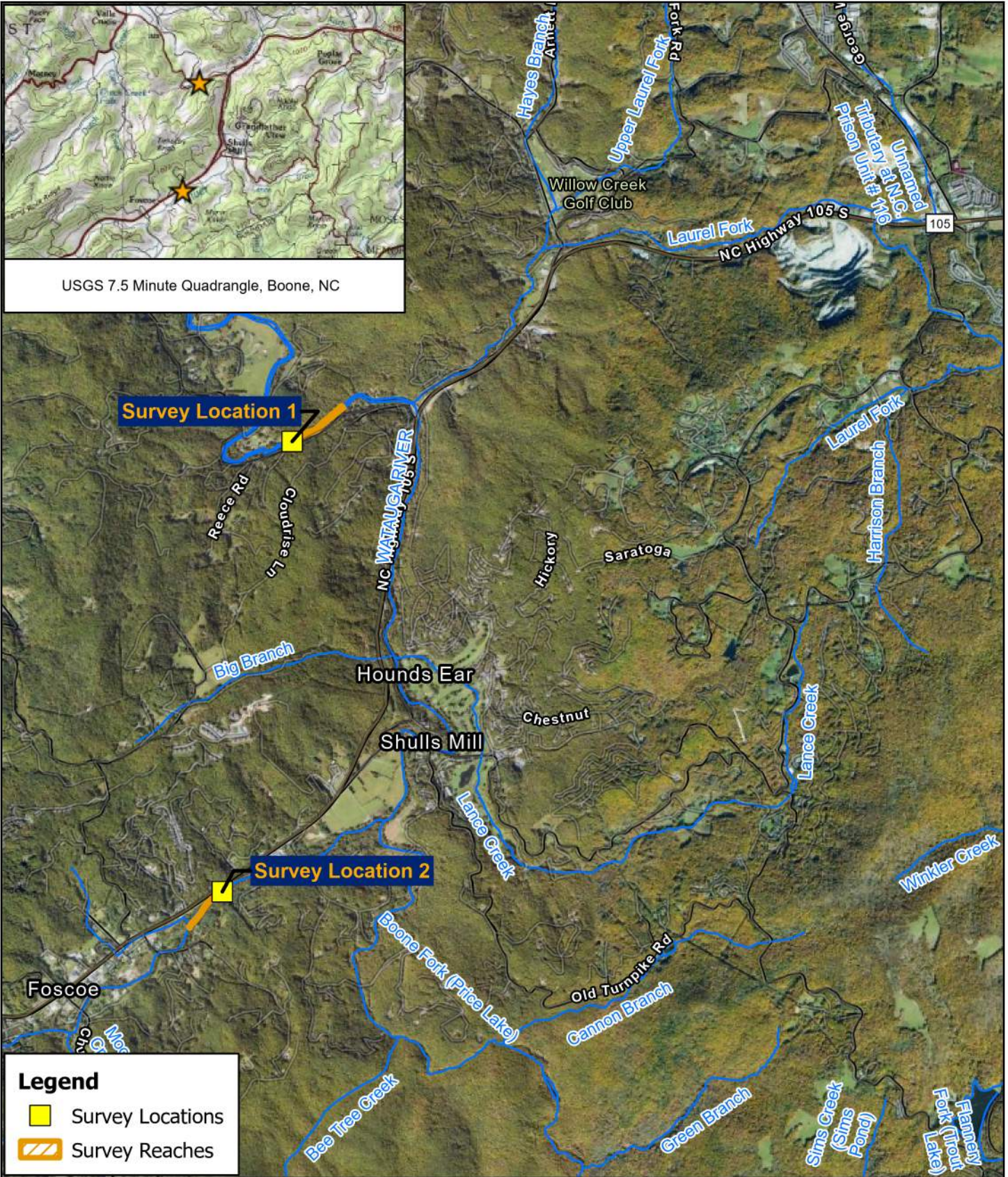
The USFWS is the regulating authority for Section 7 Biological Conclusions and as such, it is recommended that they be consulted regarding their concurrence with the finding of this document. The federal action agency, or its nonfederal designee (NCDOT), must render a biological conclusion for each species.

8.0 References

- NCDEQ (North Carolina Department of Environmental Quality) - Division of Water Resources. 2022 North Carolina 303(d) List. Available: [NC303d2022-1.pdf](#). (June 2024).
- NCDEQ (North Carolina Department of Environmental Quality). 2024. NPDES Wastewater Discharge Permits. Available: <https://data-ncdenr.opendata.arcgis.com/datasets/npdes-wastewater-discharge-permits?geometry=-87.493%2C33.635%2C-72.200%2C36.776>. (June 2024).
- NCNHP (North Carolina Natural Heritage Program). 2024. Natural Heritage Element Occurrence polygon shapefile. (June 2024).
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- NCWRC (North Carolina Wildlife Resources Commission) 2023. Green Floater Species Profile. Available: <https://www.ncwildlife.org/Learning/Species/Mollusks/Green-Floater>. (September 2023).
- Parmalee, P. W. and A. E. Bogan. 1998. The Freshwater Mussels of Tennessee. The University of Tennessee Press, Knoxville, TN.
- USFWS (U.S. Fish and Wildlife Service). 2021. Species Status Assessment Report for the Green Floater (*Lasmigona subviridis*). Version 1.1. Cortland, NY.
- USFWS (U.S. Fish and Wildlife Service). 2024. Information for Planning and Consultation (IPaC). Available: <https://ecos.fws.gov/ipac/>. (July 2024).
- U.S. Office of the Federal Register. 2023. Endangered and Threatened Wildlife and Plants; Threatened Species Status with Section 4(d) Rule for Green Floater and Designation of Critical Habitat. Federal Register 88:142 (26 July 2023):48294–48349.

Appendix A

Figures

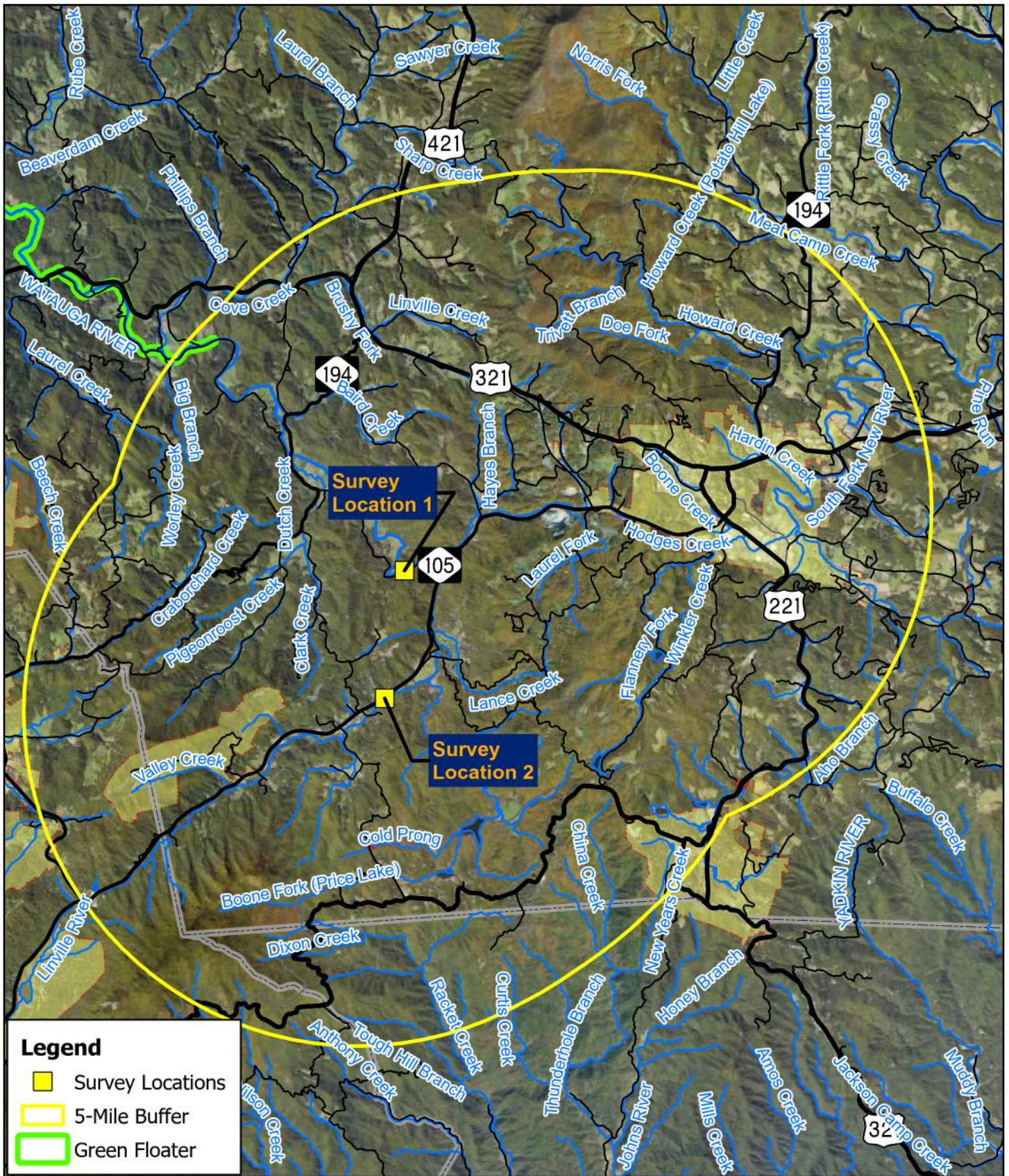


USGS 7.5 Minute Quadrangle, Boone, NC

Legend

- Survey Locations
- Survey Reaches

Prepared By: 	Prepared For: 	<p>Aquatics Species Survey</p> <p>NC 105 WIDENING FROM SR 1136 (CLARKS CREEK ROAD) IN FOSCOE TO SR 1107 (NC 105 BYPASS) IN BOONE WATAUGA COUNTY</p>	Date: September 2024 Scale: Job No.: R-2566B Drawn by: GSM Checked by: TRB	Figure 1
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Legend

- Survey Locations
- 5-Mile Buffer
- Green Floater

Prepared By:



Prepared For:



NC NHP
Element Occurrence
 NC 105 WIDENING FROM SR 1136
 (CLARKS CREEK ROAD) IN
 FOSCOE TO SR 1107
 (NC 105 BYPASS) IN BOONE
 WATAUGA COUNTY

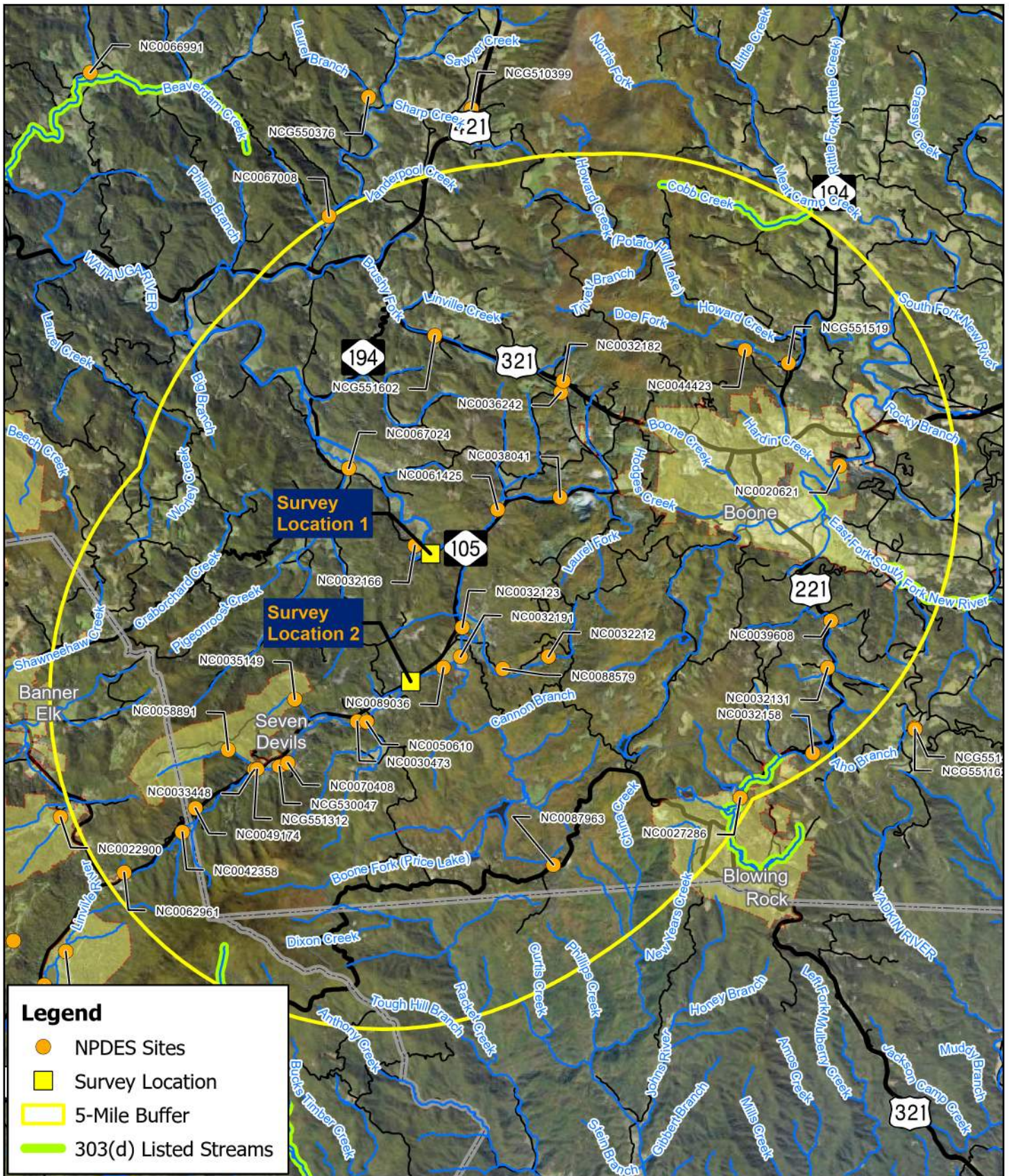
Date: September 2024

Scale: 0 1 2 Miles

Job No. R-2566B

Drawn by: GSM Checked by: TRB

Figure
2



Legend

- NPDES Sites
- Survey Location
- 5-Mile Buffer
- ▬ 303(d) Listed Streams

Prepared By:



Prepared For:



NPDES Dischargers and 303(d) Listed Streams
 NC 105 WIDENING FROM SR 1136 (CLARKS CREEK ROAD) IN FOSCOE TO SR 1107 (NC 105 BYPASS) IN BOONE WATAUGA COUNTY

Date:	September 2024
Scale:	0 1 2 Miles
Job No.:	R-2566B
Drawn by:	GSM
Checked by:	TRB

Figure 3

Appendix B

Qualifications of Contributors

Qualifications of Contributors

- Investigator: Neil Medlin, RK&K
Education: M.A. Biology, Appalachian State University, 1986
B.S. Biology, Appalachian State University, 1984
Experience: Project Delivery Leader, RK&K, 2018-Present
Project Manager, RK&K, 2017-2018
Senior Environmental Scientist, RK&K, 2016-2017
Biological Surveys Group Leader, NCDOT, 2012-2016
Environmental Supervisor, NCDOT, 2004-2012
Environmental Specialist, NCDOT, 2002-2004
Environmental Biologist, NCDENR, 1990-2002
Environmental Biologist, FLDER, 1986-1990
Responsibilities: QA/QC, Project Management
- Investigator: Tyler Black, Ph.D., RK&K
Education: Ph.D. Environmental Sciences, TN Technological University, 2011
M.S. Biology, TN Technological University, 2007
B.S. Biology, Pennsylvania State University, 2004
Experience: Project Manager, RK&K, 2020-Present
Senior Environmental Scientist, RK&K, 2019-2020
Adjunct Assistant Professor in Applied Ecology, North Carolina State University, 2016-present
Aquatic Wildlife Diversity Research Coordinator, NCWRC, 2015-2019
Aquatic Wildlife Diversity Biologist, NCWRC, 2010-2015
Responsibilities: Aquatic survey, reporting
- Investigator: Martin Melville, RK&K
Education: M.S. Biology, TN Technological University, 2006
B.S. Biology, TN Technological University, 2003
Experience: Project Manager, RK&K, 2023-Present
Senior Aquatic Ecologist, ICF, 2022-2023
Senior Aquatic Ecologist, NV5, 2021-2022
Senior Aquatic Ecologist, EPEI, 2009-2021
Aquatic Ecologist, CCR Environmental, 2007-2009
Aquatic Ecologist, EPEI, 2005-2007
Responsibilities: Reporting

Investigator: Hal Bain, RK&K
Education: M.S. Coastal Ecology Track, UNC Wilmington, 1989
B.S. Biology, Campbell University, 1985
Experience: Senior Environmental Project Scientist, RK&K, 2009-Present
Natural Resources Team Leader, ARCADIS, 2003-2008
Biological Surveys Group Leader, NCDOT, 1995-2003
Senior Biologist, NCDOT, 1992-1995
Biology Teacher/Coach, Wake County Public Schools, 1989-1992
Responsibilities: Aquatic survey

Investigator: Loretta Lutackas
Education: B.S. Natural Sciences, Colorado State University, 2013
Experience: Environmental Scientist, RK&K, 2024-Present
Conservation Aquaculturist, Yates Mill Aquatic Conservation Center, North Carolina State University, 2021-Present
Park Technician and Outreach Coordinator, Eno River State Park, 2020-2021
Hydroponics Farm Manager, Halona Farms, 2019-2020
Aquatic Conservation Technician, North Carolina Wildlife Resources Commission, 2018-2019
Molecular Biology Technician for Biofuel Engineering, National Renewable Energy Laboratory, 2015-2016
Responsibilities: Aquatic survey



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

September 30, 2024

TO: Erin Cheely, Western Regional Team Lead
Environmental Coordination and Permitting, 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), Virginia big-eared bat (*Corynorhinus townsendii virginianus*, COTO) and tricolored bat (*Perimyotis subflavus*, PESU) associated with the widening of NC 105 to a multi-lane facility from Twin River Drive to SR 1107 in Watauga County, **TIP No. R-2566B**.

The North Carolina Department of Transportation (NCDOT, Division 11) proposes to widen NC 105 to a multi-lane facility from Twin river Drive to SR 1107 in Watauga County, TIP No. R-52566B. Three bridges occur in the project study area. Bridge No. 940005 is a five span structure with metal beams, and concrete deck, guard rails and end walls. The overall length of the structure is 263 feet. Bridge No. 940094 is a three span structure with concrete beams, deck, guard rails and end walls. The over all length of the structure is 110 feet. The third bridge in the project study area is a private owned one span structure with timber beams, deck and guard rails, and masonry end walls. Neither of the two NCDOT bridges will be replaced. Fourteen culverts meeting NCDOT's Standard Operating Procedures for Preliminary Bat Habitat Assessments were identified during the site visit. NCDOT's operational threshold for surveying culverts is greater than 3 feet high and 60 feet in length. One abandoned structure was observed in the project study area. This structure is a collapsed fruit stand approximately 36 ft long, 30 ft wide and 8 ft high with mixed material siding and a metal roof.

On July 23, 24 and August 1, 2024, RK&K biologists assessed all structures within the project study area. Crevices suitable for roosting are present on all three bridges. Bridge No. 940094 had evidence of bats in the form of guano found on deck joints. Due to the large guano size, it is assumed to be from Big-brown bats (*Eptesicus fuscus*). All culverts had crevices or rough surfaces suitable for roosting. No evidence of bats was observed in any of the culverts. No evidence of bats was observed in the collapsed fruit stand.

Trees greater than 3” dbh are present in the project area. Trees greater than 5”dbh are present in the project area. There are no known caves, but one surface mine (Hodges Gap Quarry) occurs within the project study area. Large, continuous forests are present in the project vicinity, providing potential foraging and commuting habitat.

As of September 30, 2024, USFWS Information Planning and Consultation (IPaC) site lists the following federally protected bat species as potentially affected by activities within the project area (<https://ipac.ecosphere.fws.gov/>).

Species	Federal Status	Habitat Present*	Distance to Nearest Record**
<i>MYGR</i>	Endangered	Yes	0.7 miles SW
<i>MYSO</i>	Endangered	Yes	19 miles SW (pre- 1962)
<i>MYSE</i>	Endangered	Yes	Within project study area (2011)
<i>COTO</i>	Endangered	Yes	3.1 miles W
<i>PESU</i>	Proposed Endangered	Yes	Within project study area (2011)

*See detailed habitat information in table below

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

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

Species	Summer Roosting		Winter Roosting	Foraging Habitat	Commuting Habitat
	Tree	Structure			
<i>MYGR</i>	NA	✓	X	✓	✓
<i>MYSO</i>	✓	✓	X	✓	✓
<i>MYSE</i>	✓	✓	X	✓	✓
<i>COTO</i>	NA	NA	X	✓	✓
<i>PESU</i>	✓	✓	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, commuting and/or roosting habitat. No caves or mines occur in the area. After consulting with Division 11 staff, it has been determined that tree clearing can be done during the winter months. Blasting is anticipated for this project; however, it will occur after tree clearing has been done. Several tools will be used during project upgrades including but not limited to jack hammering, rock drilling and road grading. This equipment is vibratory or percussive in nature. The maximum noise level for activities that will occur as part of this project is 101-110 dBA, attributed to the tools listed above. Temporary lighting will be necessary for some nighttime work however, lighting will be directed at the construction activities. Permanent lighting already exists in the project study area, but no new lighting will be added by NCDOT as part of this project. If existing lighting is in the way of construction, then it will be removed and set back up following construction.

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



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

August 26, 2024

Dr. Wenonah Haire
Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill SC 29730

Dear Dr. Haire,

The North Carolina Department of Transportation is seeking a permit renewal/reissuance from the U.S. Army Corps of Engineers for the subject project, which is currently partly under construction and the permit will expire prior to the end of construction.

Original project permitting pre-dated our current Tribal Coordination Process. However, this project was reviewed and surveyed for Archaeological resources. Those survey results are included with this letter.

The project involves widening along NC 105 from SR 1136 (Clark's Creek Road) to SR 1107 (NC 105 Bypass) including the replacement of Bridge No. 5 over the Watauga River and realignment of Old Shulls Mill Road in Watauga County as project R-2566B/BA/BB. 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). Project vicinity map is attached. The coordinates of this project are approximately 36.161033, -81.766423 to 36.206835, -81.704673 from south to north.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts. 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 September 27, 2024 so that your comments can be used in the permitting evaluation of this project.

If you have any questions concerning this project, or would like any additional information, please contact me at namccann@ncdot.gov or (919) 707-6043.

Thank you,

DocuSigned by:

D90039258B724A3...

Nora A. McCann, EIT
NCDOT Project Manager

Enclosures:
Project Vicinity Map
Archaeology Screening/Survey Reports

ec:
Matt Wilkerson, NCDOT Archaeology Team Leader
Lori Beckwith, USACE Project Manager

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
PROJECT MANAGEMENT UNIT
1595 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



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

August 26, 2024

Elizabeth Toombs
Tribal Historic Preservation Officer
PO BOX 948
Tahlequah OK 74465

Dear Ms. Toombs,

The North Carolina Department of Transportation is seeking a permit renewal/reissuance from the U.S. Army Corps of Engineers for the subject project, which is currently partly under construction and the permit will expire prior to the end of construction.

Original project permitting pre-dated our current Tribal Coordination Process. However, this project was reviewed and surveyed for Archaeological resources. Those survey results are included with this letter.

The project involves widening along NC 105 from SR 1136 (Clark's Creek Road) to SR 1107 (NC 105 Bypass) including the replacement of Bridge No. 5 over the Watauga River and realignment of Old Shulls Mill Road in Watauga County as project R-2566B/BA/BB. 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). Project vicinity map is attached. The coordinates of this project are approximately 36.161033, -81.766423 to 36.206835, -81.704673 from south to north.

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Thank you,

DocuSigned by:

D90039258B724A3...

Nora A. McCann, EIT
NCDOT Project Manager

Enclosures:
Project Vicinity Map
Archaeology Screening/Survey Reports

ec:
Matt Wilkerson, NCDOT Archaeology Team Leader
Lori Beckwith, USACE Project Manager

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Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
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RALEIGH NC 27610



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

August 26, 2024

Russell Townsend
Tribal Historic Preservation Officer
2077 Governors Island Road
Bryson City NC 28713

Dear Mr. Townsend,

The North Carolina Department of Transportation is seeking a permit renewal/reissuance from the U.S. Army Corps of Engineers for the subject project, which is currently partly under construction and the permit will expire prior to the end of construction.

Original project permitting pre-dated our current Tribal Coordination Process. However, this project was reviewed and surveyed for Archaeological resources. Those survey results are included with this letter.

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DocuSigned by:

D90039258B724A3...

Nora A. McCann, EIT
NCDOT Project Manager

Enclosures:
Project Vicinity Map
Archaeology Screening/Survey Reports

ec:
Matt Wilkerson, NCDOT Archaeology Team Leader
Lori Beckwith, USACE Project Manager

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
PROJECT MANAGEMENT UNIT
1595 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



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

August 26, 2024

PO BOX 580
Okmulgee OK 74447

To Whom It May Concern,

The North Carolina Department of Transportation is seeking a permit renewal/reissuance from the U.S. Army Corps of Engineers for the subject project, which is currently partly under construction and the permit will expire prior to the end of construction.

Original project permitting pre-dated our current Tribal Coordination Process. However, this project was reviewed and surveyed for Archaeological resources. Those survey results are included with this letter.

The project involves widening along NC 105 from SR 1136 (Clark's Creek Road) to SR 1107 (NC 105 Bypass) including the replacement of Bridge No. 5 over the Watauga River and realignment of Old Shulls Mill Road in Watauga County as project R-2566B/BA/BB. 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). Project vicinity map is attached. The coordinates of this project are approximately 36.161033, -81.766423 to 36.206835, -81.704673 from south to north.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts. 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 September 27, 2024 so that your comments can be used in the permitting evaluation of this project.

If you have any questions concerning this project, or would like any additional information, please contact me at nameccann@ncdot.gov or (919) 707-6043.

Thank you,

DocuSigned by:

A handwritten signature in black ink that reads "Nora A. McCann".

D90039258B724A3...

Nora A. McCann, EIT
NCDOT Project Manager

Enclosures:
Project Vicinity Map
Archaeology Screening/Survey Reports

ec:
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

August 26, 2024

Roger Cain
Section 106 Coordinator
PO BOX 746
Tahlequah OK 74465

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DocuSigned by:

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Nora A. McCann, EIT
NCDOT Project Manager

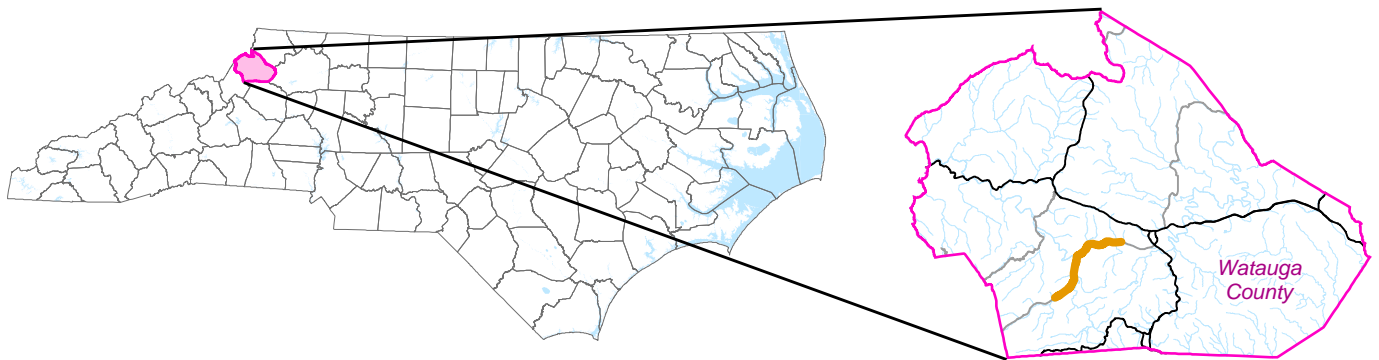
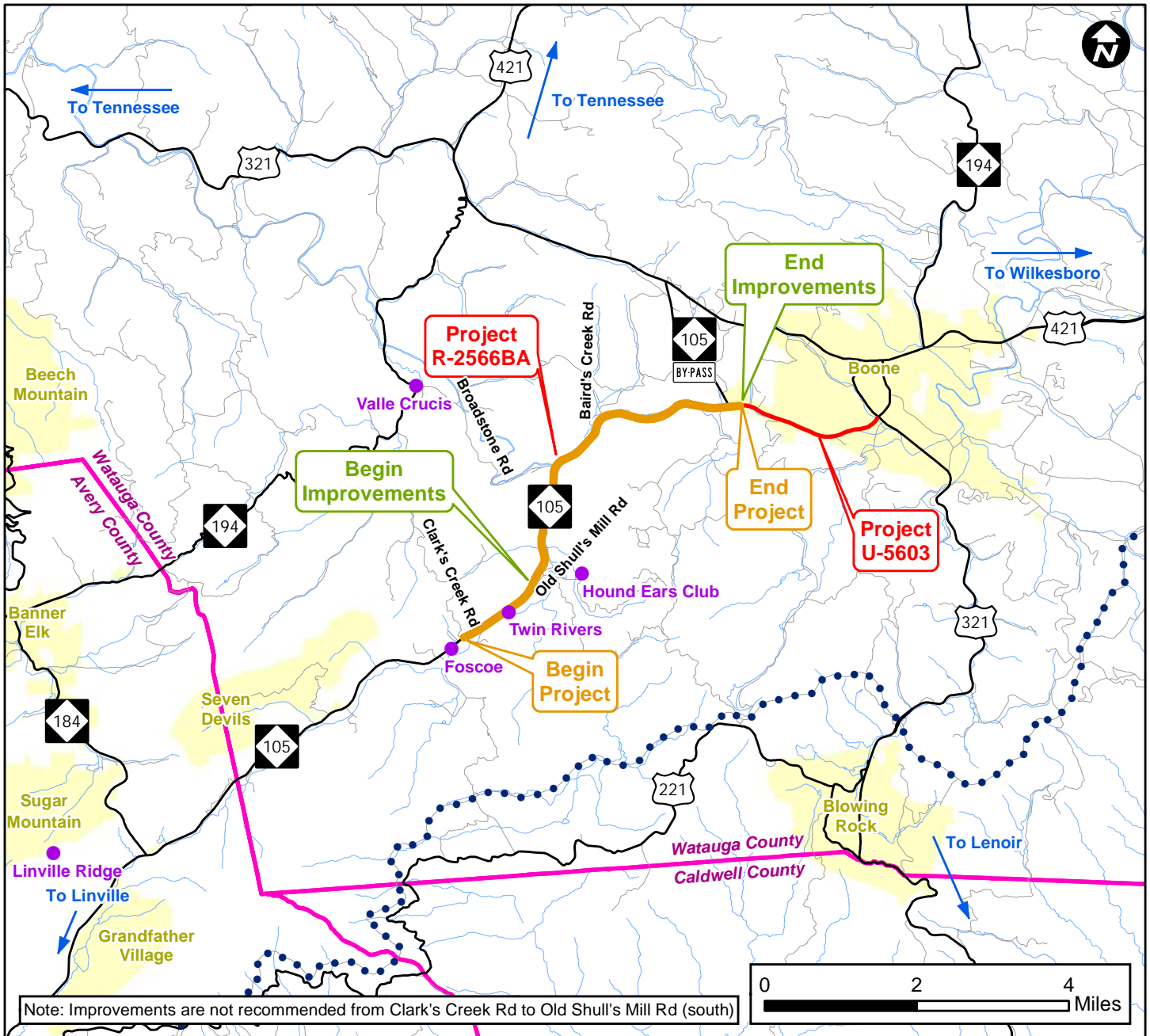
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- Project R-2566B
- Blue Ridge Parkway
- Nearby STIP Project
- Communities
- Municipal Boundary
- County Boundary

Figure 1
Vicinity Map
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County



**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT 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: R-2566B *County:* WATAUGA
WBS No: 37512.1.1 *Document:* ENVIRONMENTAL ASSESSMENT/
FINDING OF NO SIGNIFICANT IMPACT
F.A. No: NHPP-0150(004) *Funding:* State Federal
Federal Permit Required? Yes No *Permit Type:* INDIVIDUAL

Project Description:

Improve NC 105 from Clark's Creek Rd. (SR 1136) in Foscoe to the NC 105 Bypass (SR 1107) in Boone in Watauga County. However, to meet the project's purpose and need, improvements were determined to be necessary only along the 7.2 kilometers (4.5 miles) of that corridor from Old Shulls Mill Road to the NC 105 Bypass in Boone. The project also includes the replacement of Bridge 5 on NC 105 over the Watauga River (R-2566BA). The Area of Potential Effects (A.P.E.) is approximately 7.2 kilometers (4.5 miles) long and 27 meters (90 ft.) wide at its widest. Design plans have been provided.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

See attached report describing the 2012 reconnaissance and the 2017 archaeological survey.

The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

- There are no National Register listed or eligible ARCHAEOLOGICAL SITES present within the project's area of potential effects. (Attach any notes or documents as needed)
- No subsurface archaeological investigations were required for this project.
- Subsurface investigations did not reveal the presence of any archaeological resources.
- Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

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

This project was first assigned for Cultural Resources Review in March 2012 (TIP R-2556) as

"NC 105 Improvements from Linville to Boone in Avery and Watauga Counties." It was not part of the Programmatic Agreement (PA) review process for minor transportation projects. The scope of the project was later reduced to include only the segment from Foscoe to Boone in Watauga County. In April 2016 the project was submitted for Cultural Resources Review under the PA. An Archaeological Survey Required form was submitted on 5/9/2016. A revised Archaeological Survey Required form containing a description of an archaeological reconnaissance was submitted on 3/15/2017.

The attached report includes a description of an archaeological reconnaissance that was conducted in 2012. The reconnaissance report describes the archaeological potential of the entire A.P.E. It found the most of the landforms within the A.P.E. have a low potential for archaeological sites. It identified only one section of the A.P.E. with potential for archaeological sites. It recommended an archaeological survey of the improvements to the NC 105/ SR 1568 (Old Shull's Mill Road) interchange. This part of the A.P.E. includes a section of terrace/floodplalin along the Watauga River, as well as a previously recorded historic archaeological site (31WT371**).

The attached report also contains a description of the results of the archaeological survey conducted in April 2017. The survey identified two historic archaeological sites, 31WT371** and 31WT396**. These sites are believed to be the former locations of the Robbins Hotel and an unidentified business supporting the Boone Fork Lumber Company located a short distance to the east. Both sites are recommended ineligible for the National Register of Historic Places, (NRHP), and no further archaeological work is recommended for this project.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
Signed:

CALEB SMITH

5/18/2017

NCDOT ARCHAEOLOGIST

Date

Archaeological Reconnaissance:
Improvements to NC 105 from Clark's
Creek Road in Foscoe to the NC 105 Bypass
in Boone, Watauga County,
North Carolina

(TIP R-2566B; Federal Aid # NHPP-0150[004]; ER 04-2452)



By Caleb Smith, Archaeologist
North Carolina Department of Transportation

March 2017

Archaeological Reconnaissance:
Improvements to NC 105 from Clark's Creek Road in Foscoe to the NC 105 Bypass
in Boone, Watauga County, North Carolina
(TIP R-2566B; Federal Aid # NHPP-0150(004); ER 04-2452)

By Caleb Smith, Archaeologist
March 2017

Introduction

On June 20, 2012, North Carolina Department of Transportation (NCDOT) archaeologists Caleb Smith and Scott Halvorsen conducted an archaeological reconnaissance of proposed improvements to NC 105 in Watauga County (Figure 1). The goal of the reconnaissance was to identify which parts of the proposed NC 105 improvement area might require archaeological survey. The reconnaissance consisted of background research and a visual inspection of the parts of the Area of Potential Effects (A.P.E.) with some potential for archaeological sites. Design plans were not available in 2012 (but are in March 2017). This document will describe the proposed improvements (in 2017), summarize the NCDOT's consultation with the North Carolina State Historic Preservation Office (HPO), describe the results of the 2012 archaeological reconnaissance, and identify areas with archaeological potential that will be impacted.

The NC 105 project as proposed in 2012 extended from the intersection with US 221 in Linville (Avery County) approximately 23.5 kilometers (14.6 miles) north to SR 1107 (NC 105 Bypass) in Boone (Watauga County). It was divided into two sections, Section A from US 221 in Linville to Clarks Creek Road in Foscoe, and Section B from Clarks Creek Road to SR 1107 in Boone (Figure 2). Section A has not yet been funded, so the archaeological reconnaissance included the approximately 8.6-kilometer (5.3-mile) long Section B from Foscoe to Boone (Figure 3). Planning and design for Section A will be completed when funding becomes available.

Detailed design plans were not yet available in 2012, so an A.P.E. was established to include the area within 60 meters (200 ft.) from centerline on each side of the road. It was assumed that the improvements would avoid direct impacts to the Watauga River and Laurel Fork (unless completely unavoidable), so those streams were considered the boundary of the A.P.E. Figures 4-6 provide a detailed view of the project area. They show the topography, land use (circa-1978), previously recorded archaeological sites, previous archaeological projects, and the areas that were visually examined during this reconnaissance.

HPO Consultation

HPO has reviewed previous improvements to NC 105, when climbing lanes and left and right turn lanes were added to the two-lane highway. On August 9, 1989, HPO recommended an evaluation of previously recorded site 31WT64 and an archaeological survey of the proposed improvements (CH 90-E-4220-0041). The NCDOT conducted an archaeological survey of the project and identified no archaeological sites (Padgett 1989). HPO concurred with the findings of the report on November 14, 1989 (ER 90-7393).

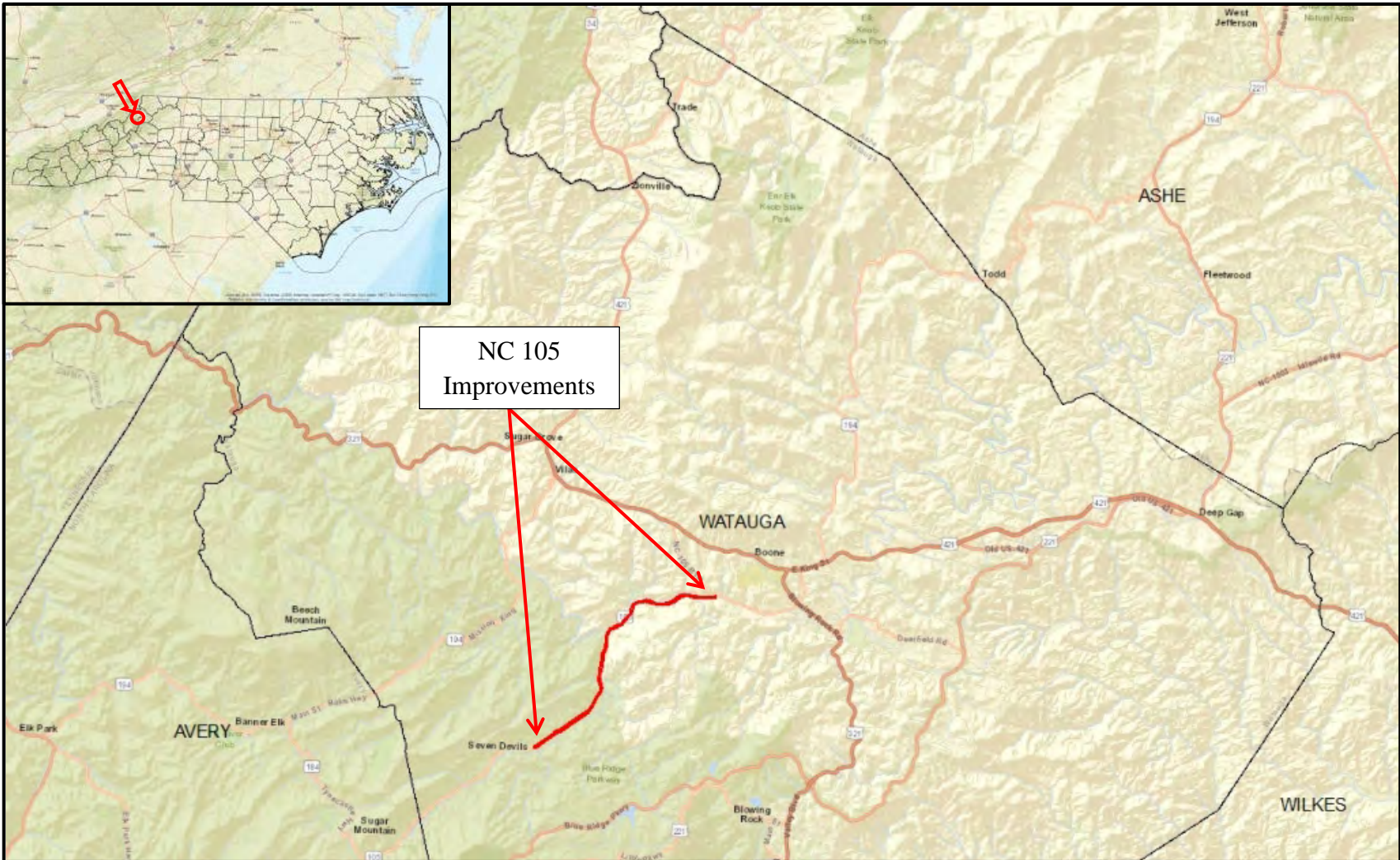


Figure 1: Location of the NC 105 improvement project from Foscoe to Boone.

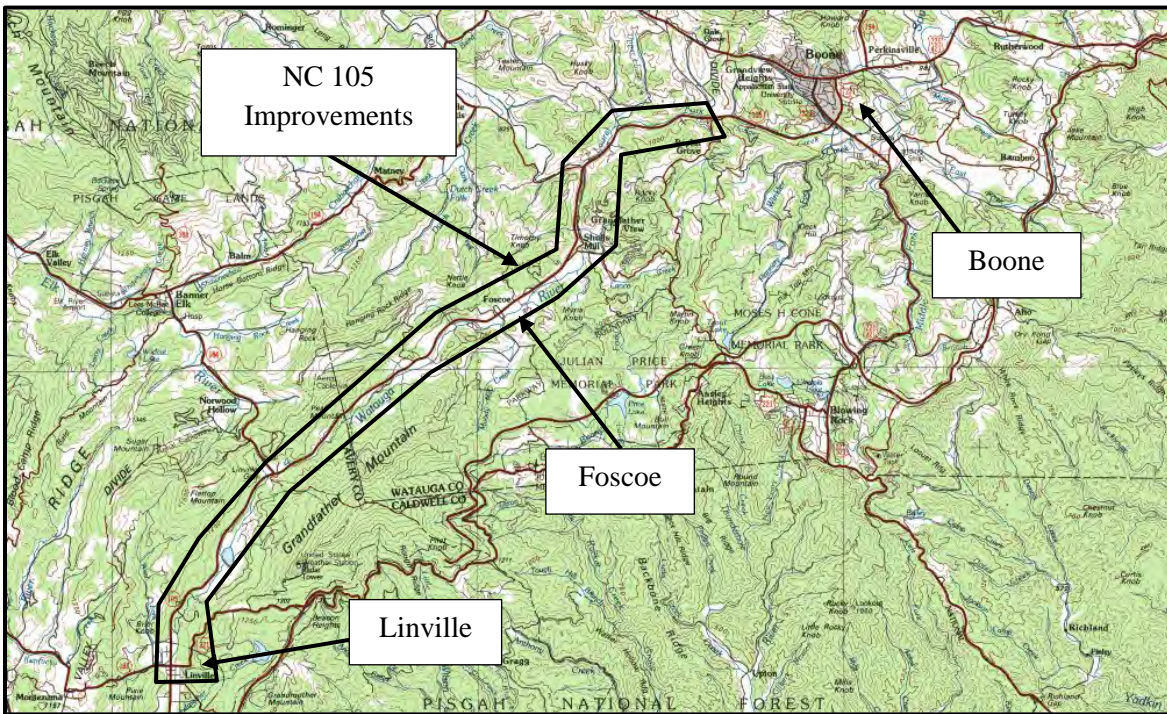


Figure 2: Location of sections A and B of the NC 105 project from Linville to Boone (USGS 1985 *Boone, N.C.-Tenn.* 1:100,000-scale topographic map).

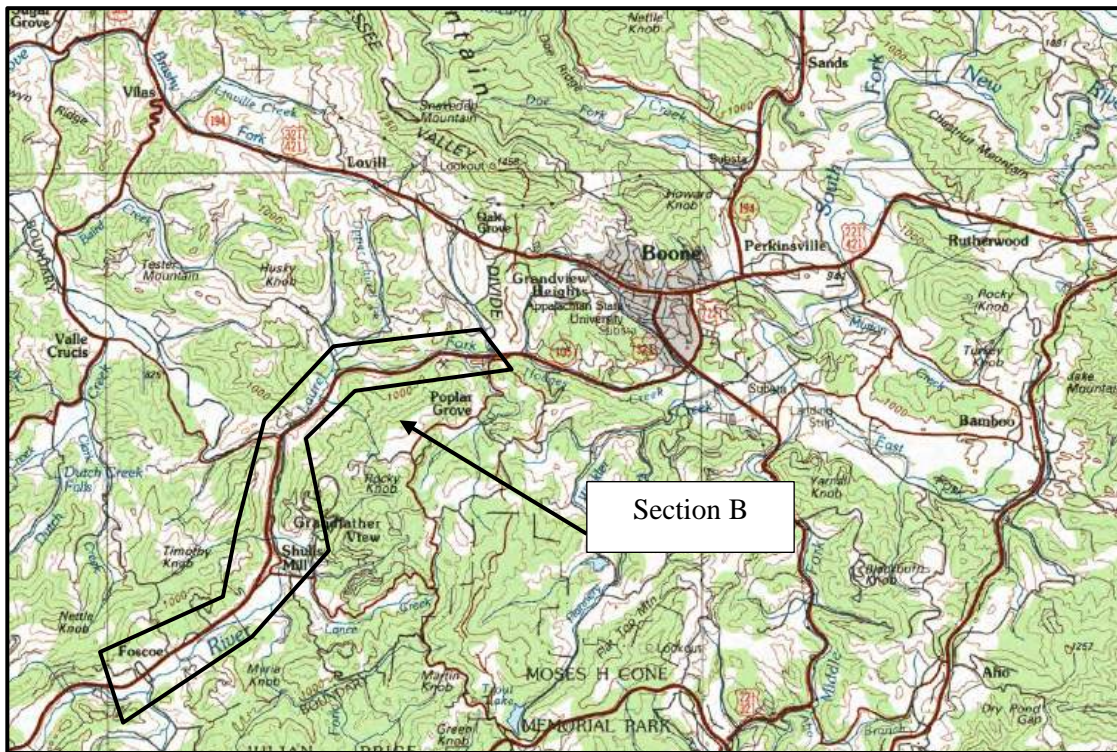


Figure 3: Location of Section B of the NC 105 project from Foscoe to Boone (USGS 1985 *Boone, N.C.-Tenn.* 1:100,000-scale topographic map)

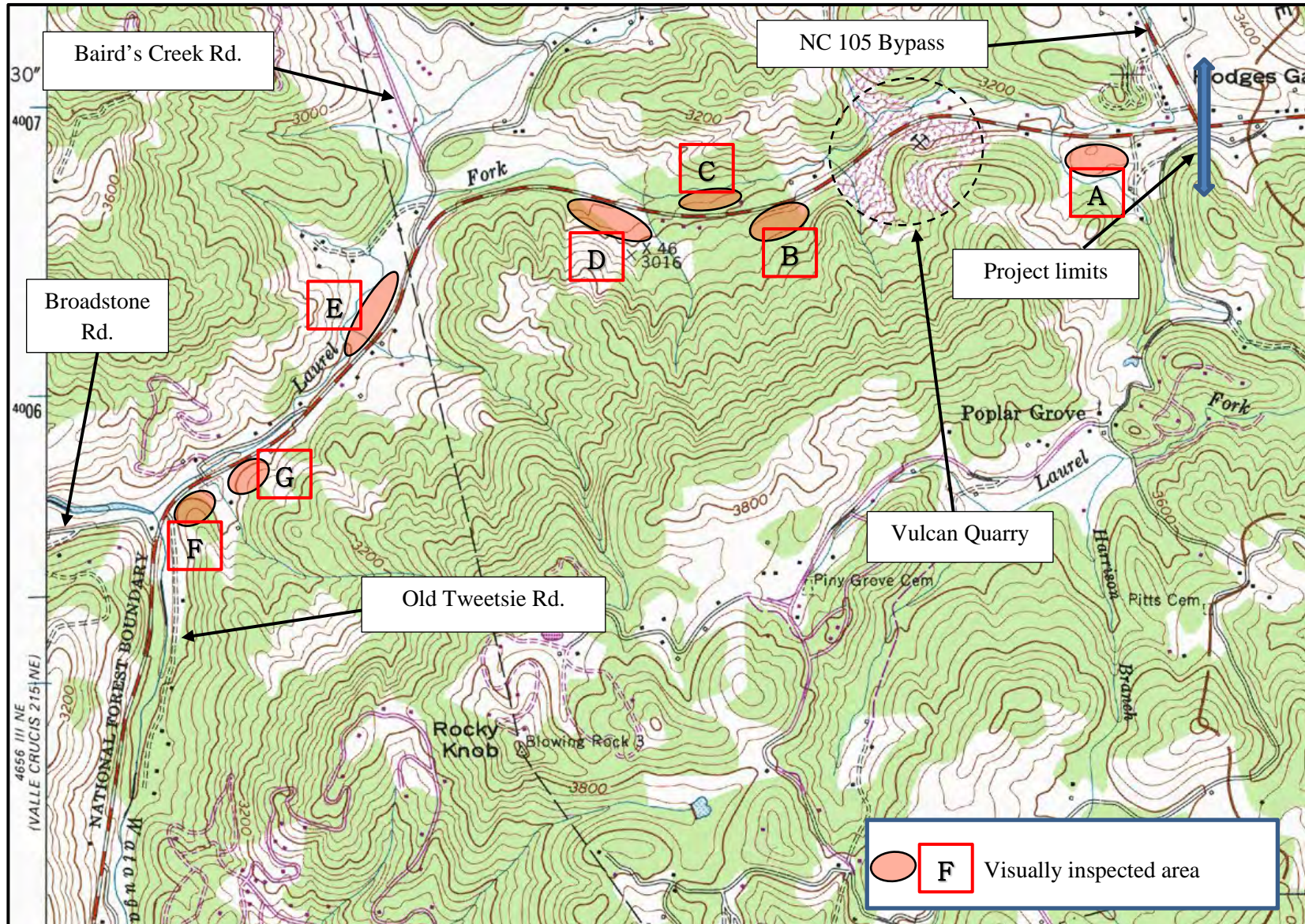
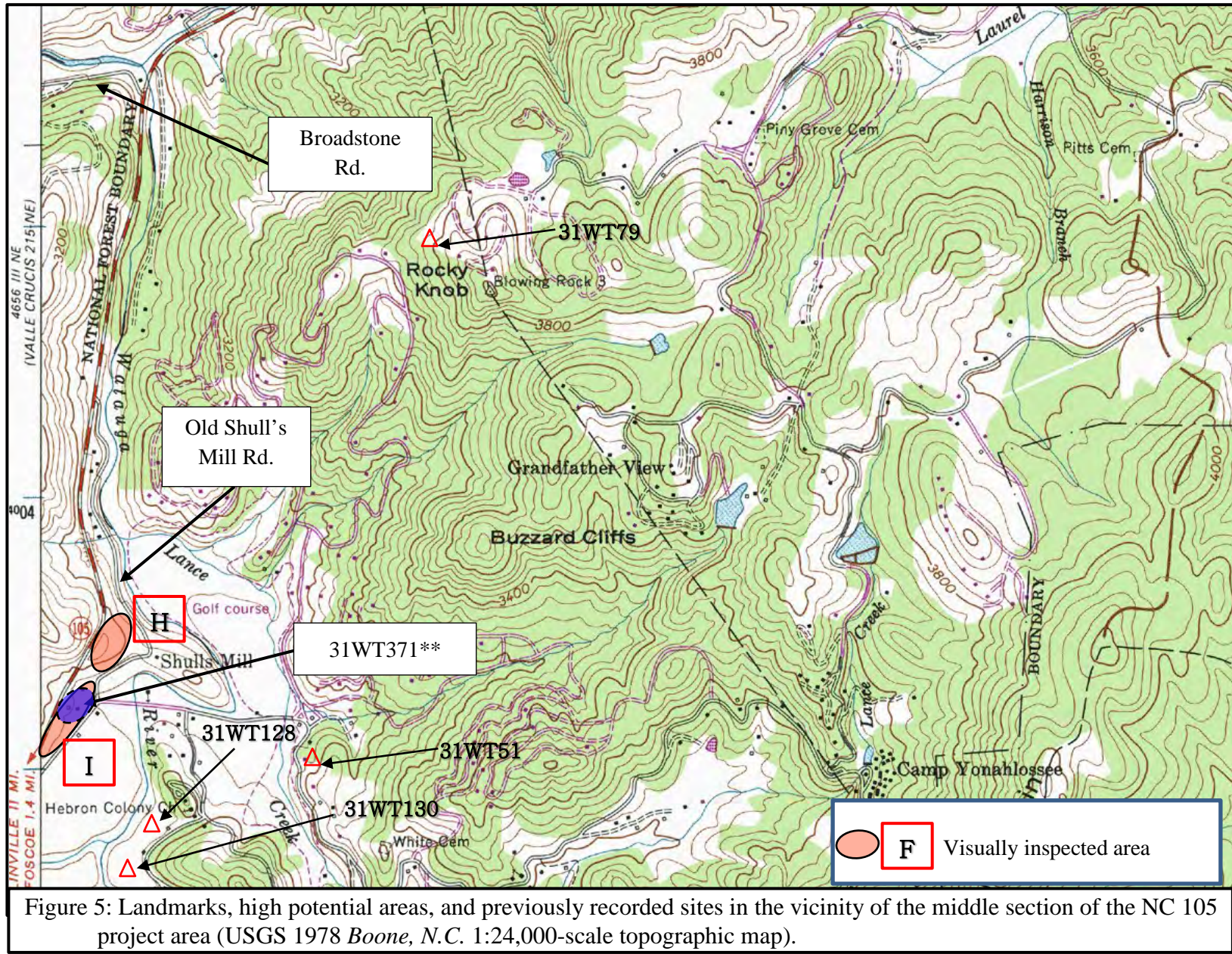


Figure 4: Landmarks, high potential areas, and previously recorded sites in the vicinity of the north section of the NC 105 project area (USGS 1978 *Boone, N.C.* 1:24,000-scale topographic map).



Adjacent to this project, the NCDOT improved a 2.6-kilometer (1.6-mile) long section of NC 105 in the town of Boone from the NC 105 Bypass east to SR 1625 in the late 1980s or early 1990s. It does not appear to have been reviewed by HPO. Additional improvements to NC 105 in Boone from the NC 105 Bypass to US 221/321 are currently (March 2017) being planned. The NCDOT (Smith 2016) conducted a cultural resources review of that project and recommended no archaeological survey in September 2016.

For the current project, NCDOT provided scoping information to HPO on September 7, 2004. On February 23, 2005 HPO recommended that a comprehensive archaeological survey be conducted to identify and evaluate the significance of archaeological remains that may be damaged or destroyed by the proposed project (ER 04-2452). Also, HPO personnel have participated in Concurrence Point meetings held in August 2010, March 2012, August 2014, and May 2015. Another concurrence meeting will be held in March 2017, and the Finding of No Significant Impact (FONSI) document will be completed in June 2017.

Background Research

Background research consisted of a review of available information about previous archaeological work in the area, and the examination of early to middle twentieth-century maps and aerial photographs. The review of previous archaeological research was conducted at the Office of State Archaeology (OSA) in Raleigh. The historic maps are available from the University of North Carolina Library's Digital Collections website.

Previous Archaeology

The review found several previously recorded sites in the vicinity, and several small archaeological projects that have been conducted in the area. Figures 4-6 (above) show the landmarks, high potential areas, and previously recorded sites in the vicinity of the project. Table 1 is a summary of the previously recorded sites in the vicinity.

Padgett (1989) conducted an archaeological survey of a previous round of improvements to NC 105 in Avery and Watauga Counties. The improvements included the addition of climbing lanes at three locations, and of left- and right-turn lanes at two locations. The impacts were mostly limited to within the existing right of way. The survey identified no archaeological sites, nor did it find either of the two previously recorded sites (31WT61 and 31WT64).

Padgett (1989:2) mentions that Maurice Williams (no date) conducted an archaeological survey in the Devil's Den area on a ridge located along the west side of NC 105 at Foscoe. The surveyed area is located a short distance outside of the A.P.E. The survey identified 17 archaeological sites, most of which were small lithic scatters located on the steep hill side. No reference for the survey is provided other than "personal communication" with Dr. Harvard Ayers. Appalachian State University Anthropology Professor Dr. Thomas Whyte (personal communication 2012) suggests Williams' (n.d.) survey may have been conducted as part of an archaeological field school, and the only "report" of the results (if one exists) may have been a term paper.

Table 1: Summary of Previously Recorded Archaeological Sites in the Vicinity of the NC 105 Improvements.

Site #	Temp. site #	Cultural Affiliation	Reference:
31WT51	ASU 31WT30	Unknown (rockshelter)	Purrington 1975
31WT61	ASU 31WT42	Middle Archaic (Morrow Mountain; Guilford)	Purrington 1975
31WT63	ASU 31WT44	Early Woodland (Swannanoa); Early Mississippian (Pisgah); "Devil's Den site"	Purrington 1975
31WT64	31WT45	Middle Archaic (Morrow Mountain); Early-Middle Woodland (Connestee; Transylvania); "Fox site"	Purrington 1975
31WT79	ASU 31WT60	Middle Archaic (Morrow Mountain II)	Purrington 1975
31WT82	ASU 31WT63	Unknown (cave)	Purrington 1975
31WT128	ASU 31WT112	Late Archaic (Savannah River)	Purrington 1975
31WT130	ASU 31WT114	Middle-Late Archaic (Morrow Mountain; Guilford; Savannah River)	Purrington 1975
31WT224	ASU 31WT230		Williams? 1983?
31WT225	ASU 31WT231		Williams? 1983?
31WT226	ASU 31WT232		Williams? 1983?
31WT227	ASU 31WT233		Williams? 1983?
31WT228	ASU 31WT234		Williams? 1983?
31WT229	ASU 31WT235		Williams? 1983?
31WT230	ASU 31WT236		Williams? 1983?
31WT231	ASU 31WT237		Williams? 1983?
31WT232	ASU 31WT238		Williams? 1983?
31WT233	ASU 31WT239		Williams? 1983?
31WT234	ASU 31WT240		Williams? 1983?
31WT235	ASU 31WT241		Williams? 1983?
31WT236	ASU 31WT242		Williams? 1983?
31WT237	ASU 31WT243		Williams? 1983?
31WT311	ASU 31WT284; 31WTSSJ-2	Possible Morrow Mountain; possible Guilford; possible Swannanoa	Stan Vance 1977
31WT312	ASU 31WT285; 31WTSSJ-3		1995?
31WT313	ASU 31WT286; 31SSJ-6	Unknown	Sherri Blakely 1978
31WT314	ASU 31WT314; 31SSJ-7		1995?
31WT315	ASU 31WT288; 31SSJ-8	Unknown (points, flakes, historic pottery)	Sherri Blakely 1978
31WT327			NCDOT
31WT329	ASU 31WT283; 31WTSSJ-1	Unknown (quartz flakes); "Purrington rockshelter"	Sherri Blakely 1978

Padgett (1993) conducted an archaeological survey for a bridge replacement over the Watauga River in Foscoe, near the south end of the A.P.E. for this project. The A.P.E. for that project included some high potential floodplain along the Watauga River, but the survey did not identify any archaeological sites.

Wilkerson (2011) conducted an archaeological survey for a bridge replacement over the Watauga River in Foscoe, a short distance southwest of the south end of the A.P.E. for this project. The A.P.E. for that project included some high potential floodplain along the Watauga River, but the survey did not identify any archaeological sites.

The previously recorded sites in the vicinity of the project are summarized in Table 1 (above). Eight were recorded as part of Purrington's (1975) archaeological reconnaissance of Watauga County. The reconnaissance report provides basic details about each site's location, elevation, the materials collected, and cultural affiliation (and in some cases remarks), but does not evaluate them for potential inclusion on the National Register of Historic Places (NRHP). The report provides only the temporary (ASU) site numbers, and does not include locator or site maps. The sites' locations are shown on the OSA topographic maps, and the site forms have both the permanent and temporary site numbers.

Fourteen of the sites were recorded during Williams' (n.d.) survey of the Devil's Den area. As mentioned above, no report of the survey is available. The site forms provide some basic information about the sites. Most sites appear to have been located in rock shelters on a steep hillside.

Historic Maps

Early to mid-twentieth century maps used for this project included the circa-1920 Postal Service map of Watauga County (Post Office Department 1920), the 1928 Watauga County soil map (U.S. Department of Agriculture [USDA] 1928), the 1938 Watauga County highway map (North Carolina State Highways and Public Works Commission [NCSHPWC] 1938), a 1944 aerial photograph (used as the base map for the Watauga County soil survey), and a 1967 Watauga County highway map (North Carolina State Highway Commission [NCSHC] 1967). These maps show various aspects of the project area, including the evolution of the highway that would become NC 105, the former locations of structures, and the changing land uses.

The maps (Figures 7-10) show there has been a road connecting Foscoe, Shull's Mill and Boone since the 1920s. While some version of NC 105 has existed since the early twentieth-century, it has most likely moved or shifted one or more times. The historic maps are not detailed enough to re-create its exact locations through time. In some sections it has probably not moved much because of the limitations of the terrain. It appears that NC 105 between Foscoe and Baird's Creek Road has been in the same general location since then. However, the section from Baird's Creek Road northeast to Boone was not constructed until after 1944. Prior to that, the main route from Foscoe to Boone probably followed the future route of NC 105 from Foscoe northeast to Shull's Mills, then turned east on future Shull's Mill Road and/or Old Turnpike Road, then north on today's Poplar Grove Road to today's NC 105 at the NC 105 Bypass/Hodges Gap (near the north end of this project area). The section of NC 105 north of Shull's Mill was probably used to travel to Valle Crucis and communities located west of Boone.

The maps also show a railroad (the Linville River Railway) near the project area. This railroad was a "narrow-gauge" rail that shipped lumber products to and from the Boone Fork Lumber Company (Quinn 2003). The Boone Fork Lumber Company was located in Shull's Mills, along the Watauga River a very short distance east of the NC 105 project area. The rail line was extended from the main line of the East Tennessee-Western North Carolina Railroad in Linville to Shull's Mill by 1916. The line was constructed from Shull's Mill to Boone by 1918. The maps show the railroad ran along the east side of NC 105 from Foscoe north along the Watauga River, then turned to the north and east to follow (approximately) Laurel Branch to Hodges Gap. It appears to have run along Laurel Branch for much of the way, but did break away to south in one section.

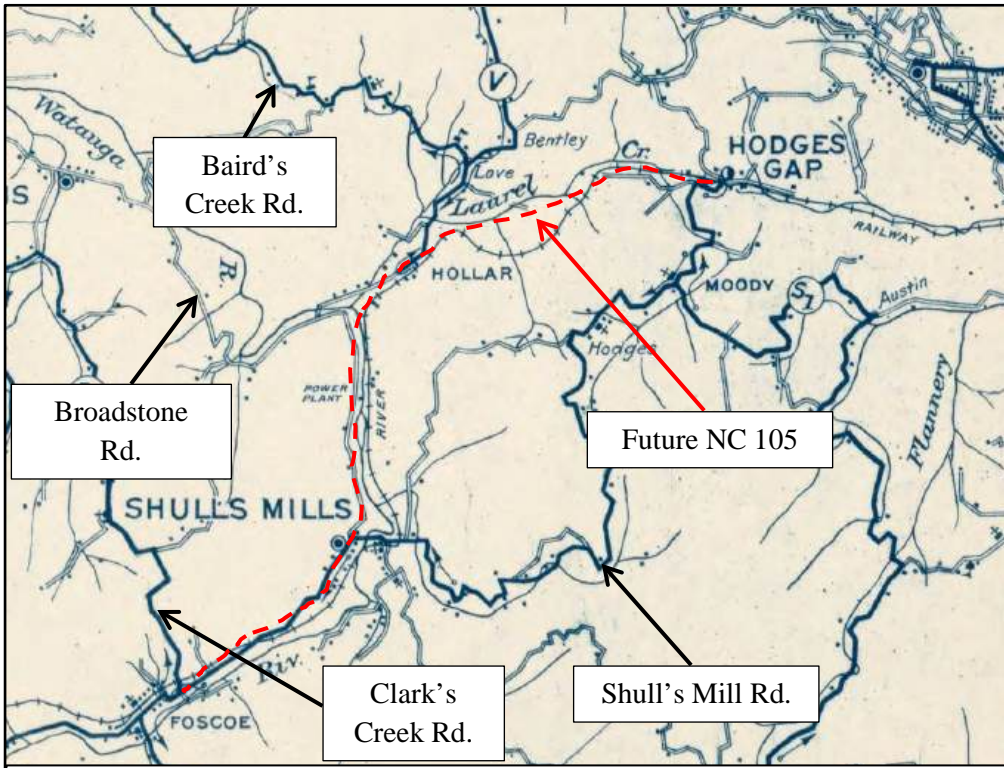


Figure 7: Map of the project area in the 1920s (U.S. Post Office Department ca. 1920).

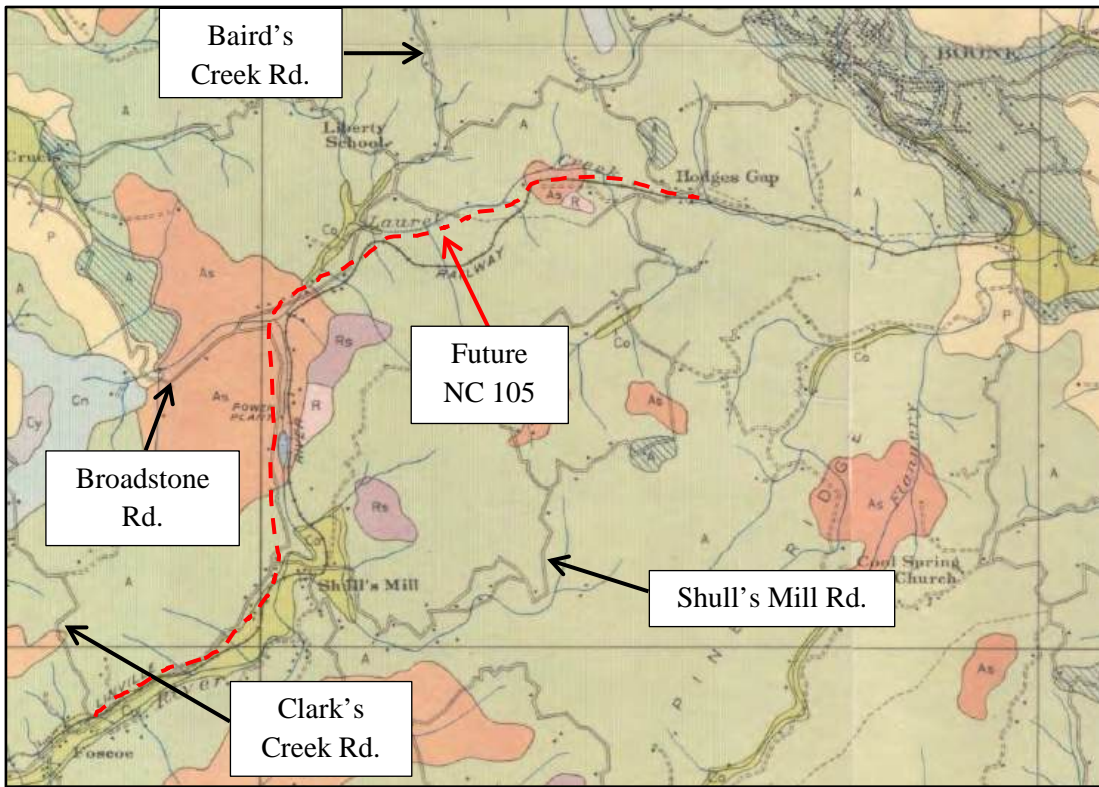


Figure 8: Map of the project area in 1928 (USDA 1928).

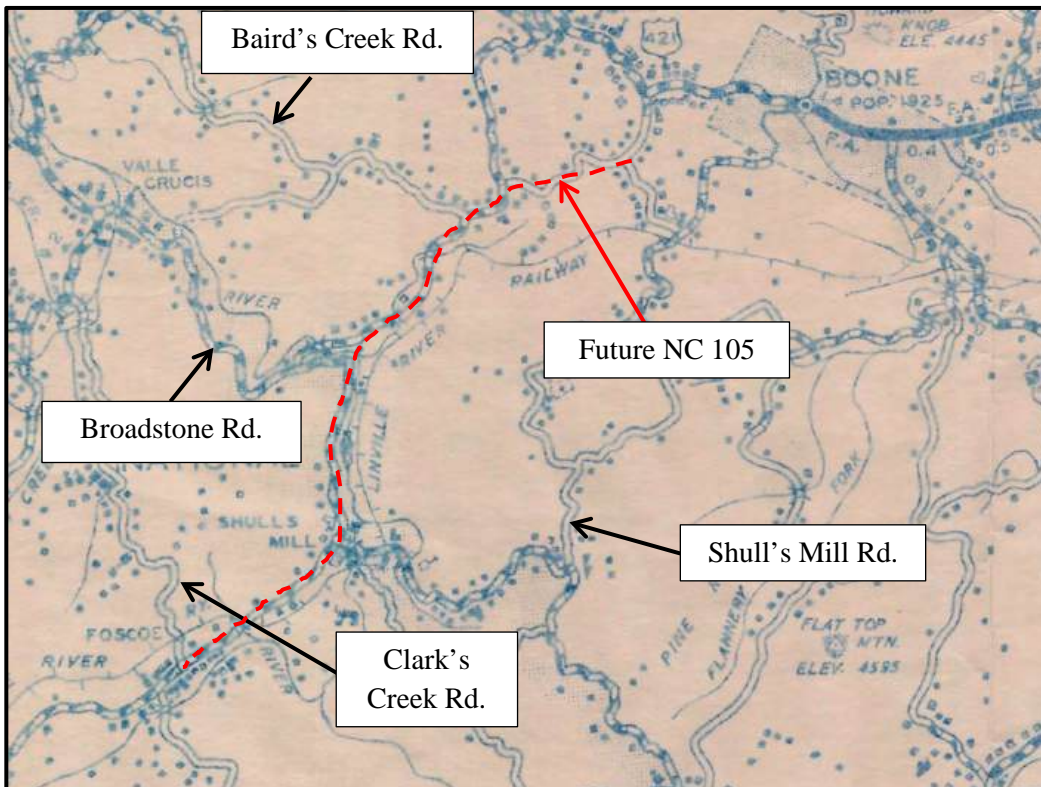


Figure 9: Map of the project area in 1938 (NCSHPWC 1938).

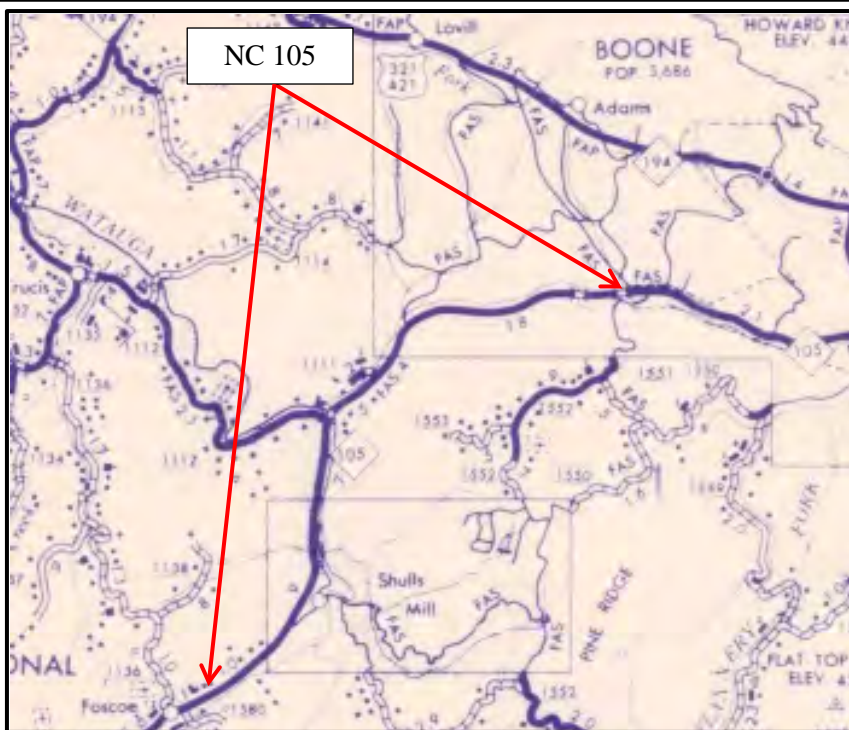


Figure 10: Map of the project area in 1967 (North Carolina State Highway Commission 1967).

Field Investigation

For the majority of the project corridor, the land along NC 105 is a moderately- to steeply-sloped hill on one side and either the Watauga River (in the south half) or Laurel Branch (in the north half) on the other. From Clarks Creek Road in Foscoe, NC 105 runs north along the west bank of the Watauga River for approximately 4.3 kilometers (2.7 miles). NC 105 crosses the Watauga River at the SR 1112 (Broadstone Road) intersection, and then runs northeast along Laurel Fork for approximately 4.3 kilometers (2.7 miles) to SR 1107 in Boone. Eleven high potential areas (A-K) were identified based on an examination of topographic maps and aerial photographs (see Figures 4-6 above). The topographic maps were inspected to identify all of the level, well-drained landforms near water along NC 105. Since they were published in the late 1970s, modern aerial photographs were also inspected to determine which of the identified areas have not been disturbed by development. Each area was then visually inspected during a reconnaissance in June 2012. Each of the areas is described below. The project's impact at each area (according to the 2016 design plans) is discussed.

Area A

Area A is located on the south side of NC 105, 305-427 meters (1,000-1,400 ft.) west of the intersection with SR 1107, across the street from Chandler Concrete Company (Figures 11 and 12). The topographic map depicts the area as a level ridge toe overlooking Laurel Fork to the west and an unnamed tributary to the north. Neither the topographic map nor the aerial photograph shows much development in the area. However, our visual examination indicates it is a far steeper slope uphill from NC 105 than appears on the topographic map. It has a low potential for archaeological sites.

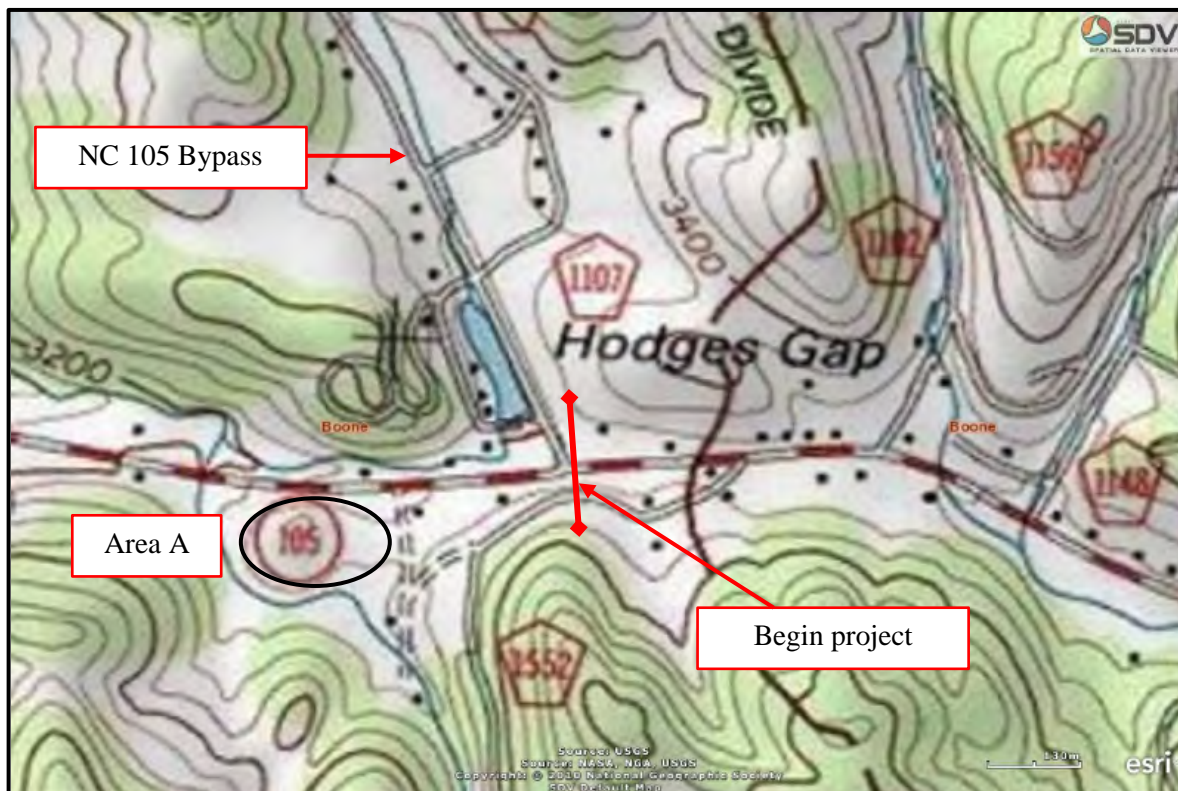


Figure 11: Topographic map showing the location of Area A.

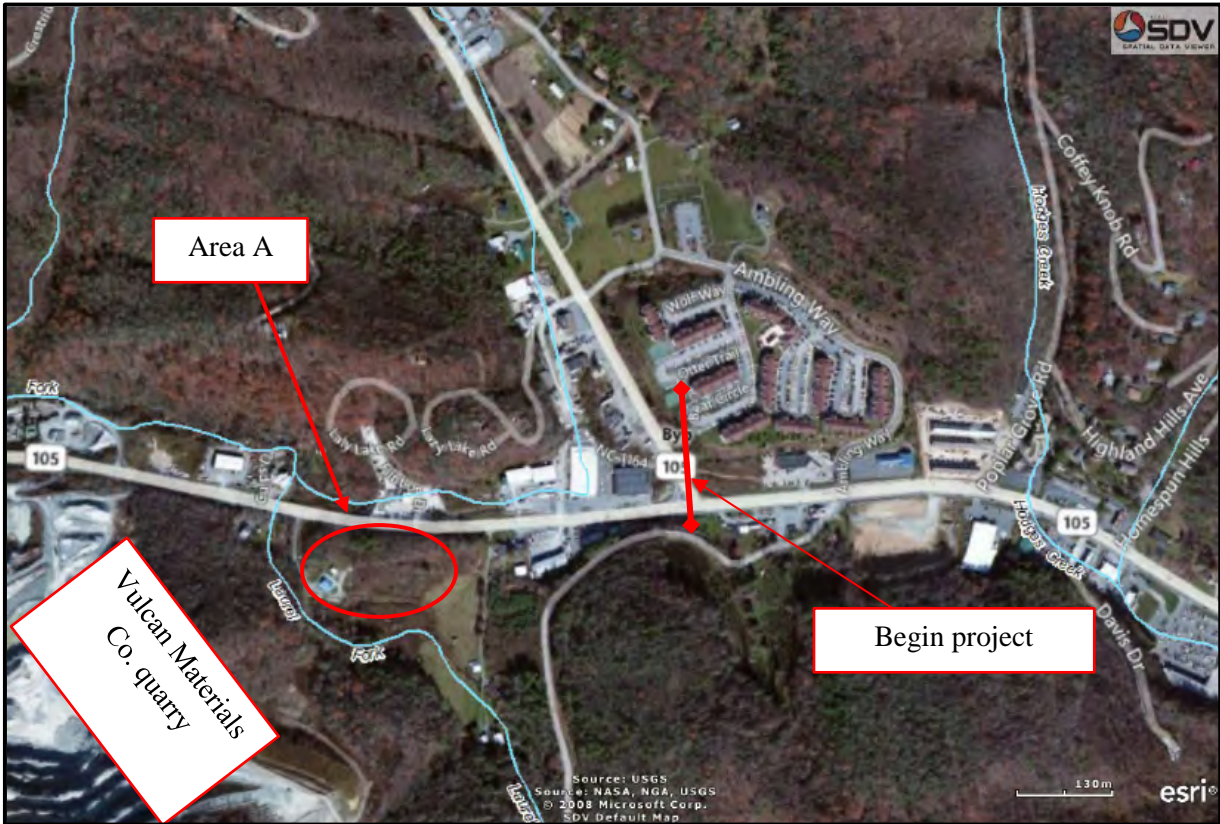


Figure 12: Aerial photograph showing the location of Area A.

The design plans show that the improvements will mostly impact the area along the south side of the road in this section. Therefore no archaeological survey is recommended for Area A.

Area B

Area B is located on the south side of NC 105, a short distance west of the Vulcan Materials Company quarry, across the street from a small shopping center (Figures 13 and 14). The topographic map depicts the area as an approximately 488-meter (1,600-ft.) wide ridge toe overlooking Laurel Fork to the north. Visual examination indicates it is steeper than appears on the topographic map, and that it has been cleared and graded (Figure 15). It appears to be a former (or future?) residential or commercial site. The design plans show the improvements will impact mostly the south side of the road in this area. Therefore no archaeological survey is recommended at this location.

Area C

Area C is located on the north side of NC 105 approximately 488 meters (1,600 ft.) west of the Vulcan quarry (see Figures 13 and 14). The topographic map depicts the area as a gently- to moderately-sloped ridge toe overlooking Laurel Fork to the north. Visual examination showed it to be a flat roadside area, then a steep slope down to a level “bench” landform, then a steep slope down to Laurel Fork. The flat roadside appears to have been graded and possibly paved, and may be the former site of a residence or commercial building (Figure 16).

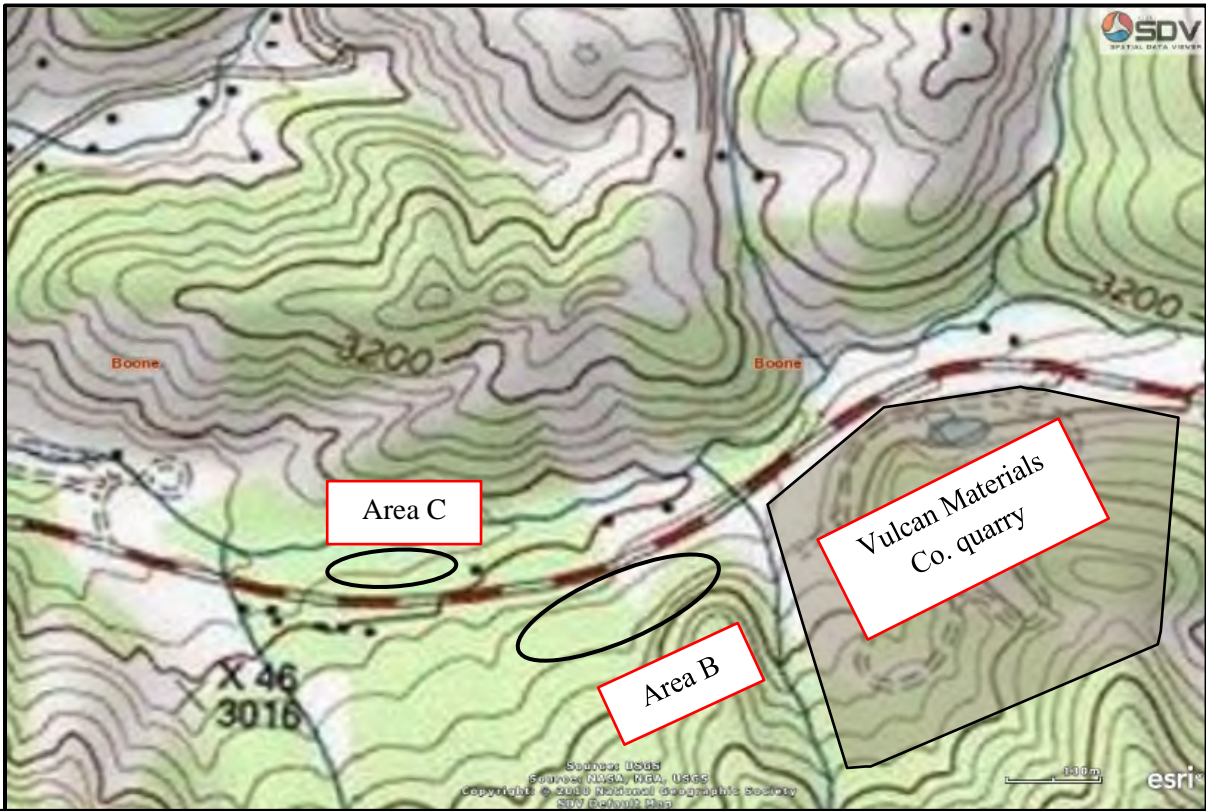


Figure 13: Topographic map showing the location of Areas B and C.



Figure 14: Aerial photograph showing the location of Areas B and C.



Figure 15: East view of Area B.



Figure 16: West view of Area C.

It is separated from the bench below by a steep slope, and the bench may have also been graded. The slope down from roadside to bench is a very “clean” cut indicative of a machine-graded landform. Also, it is suspicious that both the roadside and bench are so flat. The design plans show the improvements will impact mostly the other (south) side of the road at this location. The work on the north side will be mostly within the existing right-of-way. Therefore, no archaeological survey is recommended in Area C.

Area D

Area D is located on the south side of NC 105, approximately 427 meters (1,400 ft.) east of the intersection with Baird’s Creek Road (Figures 17-18). The topographic map depicts the area as a gently-sloped ridge toe overlooking the Laurel Fork floodplain to the north. A small tributary joins Laurel Fork a short distance to the east. Visual examination shows this landform is now occupied by Heritage Propane (Figure 19). The design plans show the improvements will impact the area along the south side of the road in this location. No archaeological survey is recommended in Area D.

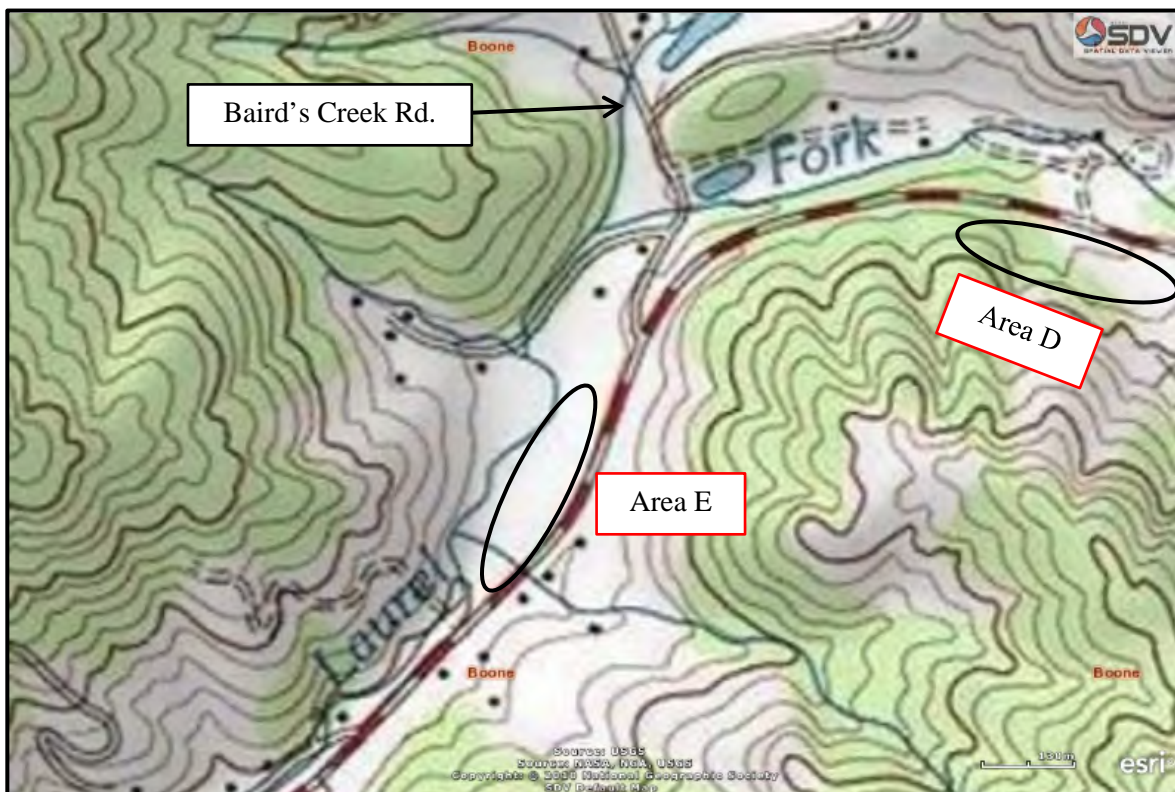


Figure 17: Topographic map showing the location of Areas D and E.

Area E

Area E is located on the west side of NC 105, approximately 183 meters (600 ft.) south of the intersection with Baird’s Creek Road (Figures 17-18). The topographic map depicts the area as a level floodplain on the east bank of Laurel Fork. An unnamed tributary joins Laurel Fork near the south end of the area. Visual examination showed the floodplain is used for small-scale agriculture or gardens.

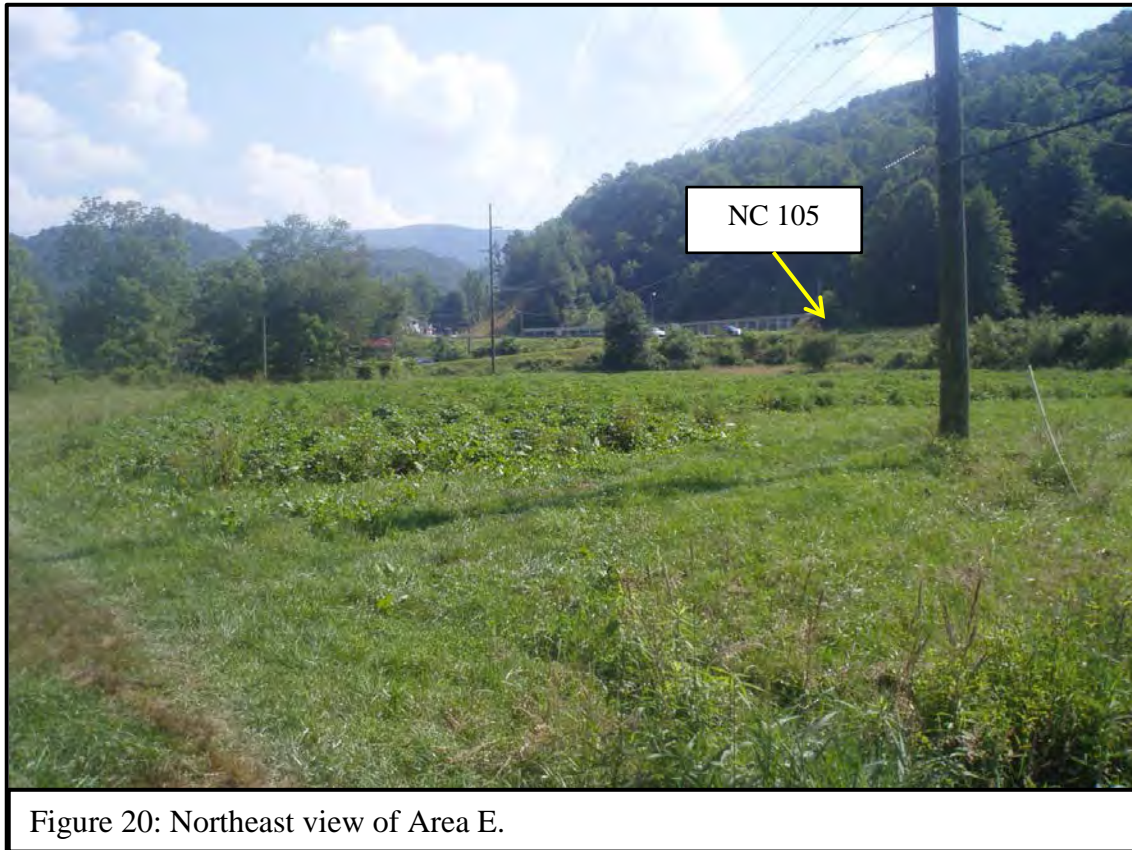


Figure 18: Aerial photograph showing the location of Areas D and E.



Figure 19: Southeast view of Area D.

Much of the area appears to be fallow agricultural fields (Figure 20). The landform is a large floodplain, and the area is cut by several small tributaries and drainage ditches. There are several access roads in the floodplain, and storage buildings and/or old farm structures are scattered about. Visual examination of several plowed areas identified very rocky soil. The visual inspection did not identify any artifacts on the surface. The design plans show the improvements will impact the other (east) side of the road in this area. Improvements on the west side will impact the existing right-of-way. Therefore, no archaeological survey is recommended in Area E.



Area F

Area F is located on the south/east side of NC 105 approximately 153 meters (500 ft.) north of the intersection with Broadstone Road (Figures 21-22). The topographic map depicts the area as a moderately-sloped ridge toe overlooking the confluence of Laurel Fork and the Watauga River to the northwest, and the confluence of a tributary stream and Laurel Fork to the northeast. Visual examination showed that the ridge toe is much steeper than appears on the topographic map (Figure 23). There might be some level areas on the ridge toe, but the part within the A.P.E. is a steep, densely wooded hillside. The design plans show the improvements will impact the area along the south side of the road at this location. The improvements also include the construction of a new bridge over the Watauga River along the south/east side of NC 105, as well as a new entrance to Tweetsie Road. The impacts along the north/west side of NC 105 will be within the existing right of way. Therefore, no archaeological survey is recommended in Area F.

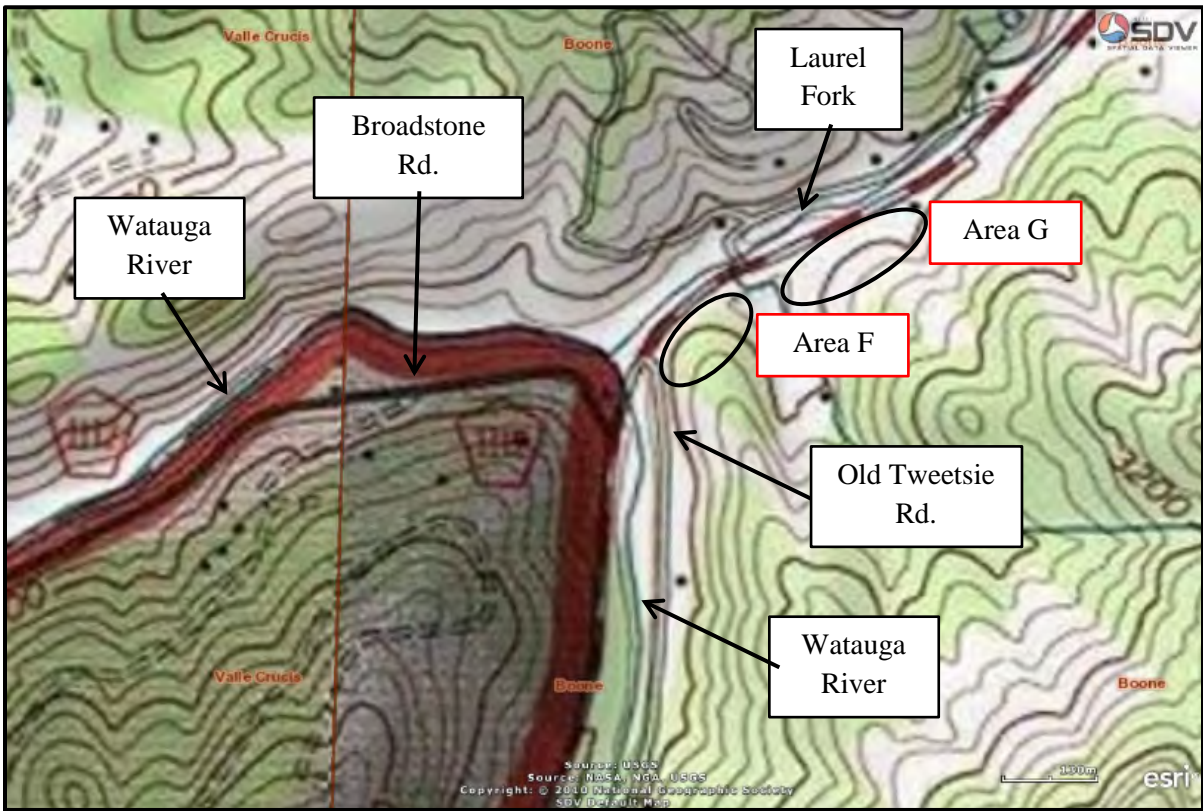


Figure 21: Topographic map showing the locations of Areas F and G.



Figure 22: Aerial photograph showing the locations of Areas F and G.



Figure 23: Southwest view of area F.

Area G

Area G is located on the south side of NC 105 approximately 275 meters (900 ft.) northeast of Broadstone Road (see Figures 21-22 above). The topographic maps depict the area as a flat area at the base of a moderately-sloped ridge toe on the east side of the confluence of Laurel Fork and a tributary stream. A small road (Roby Bentley Rd.) follows the tributary stream up the valley to the southeast. Visual examination showed that the ridge toe is much steeper than appears on the topographic map, and the flat area at the base is not so flat (Figure 24). The ridge toe is currently used as a cleared pasture or yard, and the level part of the ridge toe is located outside of the A.P.E. Also, the moderately level tributary stream valley is occupied by a home and several outbuildings. The design plans show the improvements will impact the area along the south side of the road at this location. The impacts along the north side of NC 105 will be within the existing right of way. Therefore, no archaeological survey is recommended in Area G.

Area H

Area H is located on the east side of NC 105 approximately 671 meters (2,200 ft.) south of the northern intersection with Old Shull's Mill Road (Figures 25-26). (Old Shull's Mill intersects with NC 105 in two places.) The topographic map depicts the area as a gently-sloped ridge toe. Visual examination showed that the ridge toe is occupied by an electric substation. The landform is part of a long, northwest/southeast oriented ridge toe that extends southeast to a point overlooking the Watauga River. Old Shull's Mill Road appears to be a remnant of the previous version of NC 105.



Figure 24: East view of area G.

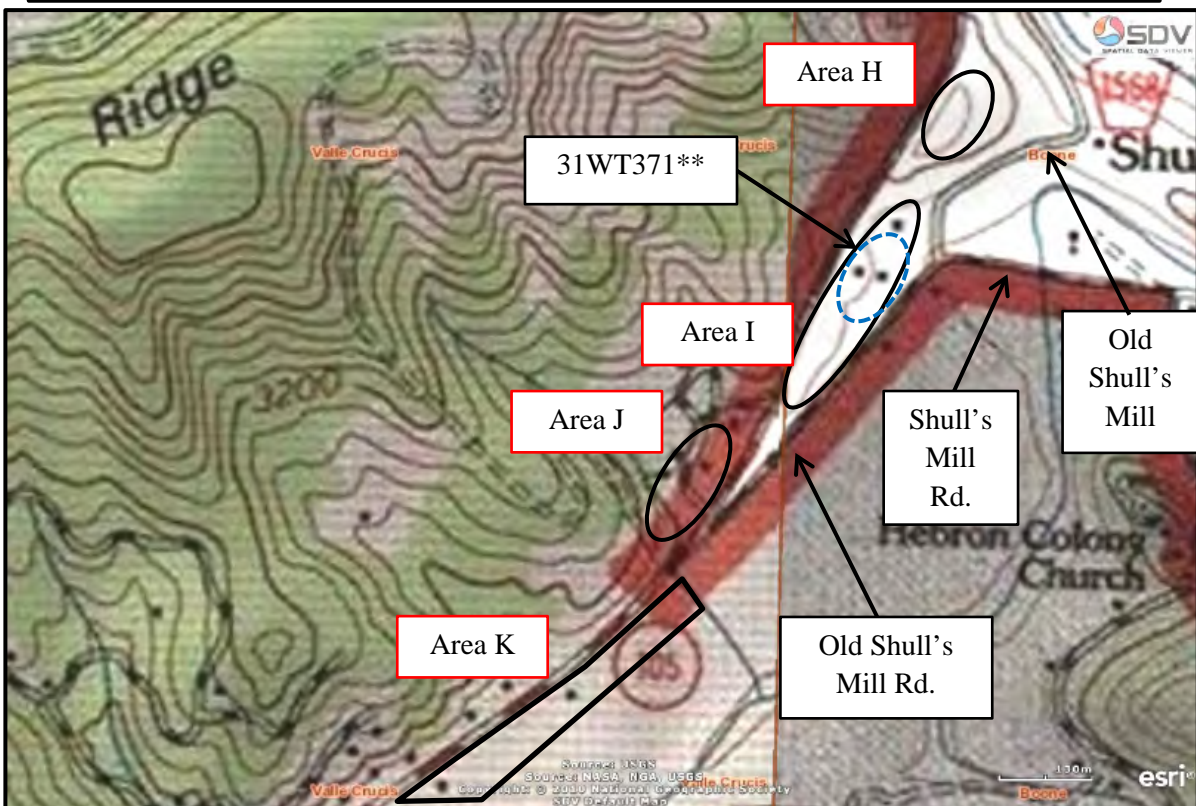


Figure 25: Topographic map showing the locations of Areas H, I, J and K.



Figure 26: Aerial photograph showing the locations of Areas H, I, J and K.

The historic maps show that NC 105 was moved upslope to the west sometime after 1944. It was excavated deeply into the ridge toe to take out the steep curve, leaving the ridge toe at Area H elevated approximately 12 meters (40 ft.) above the road surface. The impacts to NC 105 at this point will be within the existing right of way on both sides of the road. Therefore, no archaeological survey is recommended in Area H.

Area I

Area I is located on the east side of NC 105 approximately 92 meters (300 ft.) north of the southern intersection with Old Shull's Mill Road (see Figures 25-26 above). The topographic map depicts the area as the base of a gently-sloped ridge toe overlooking the Watauga River floodplain to the east, a landform with a moderate to high potential for archaeological sites. The area is located between NC 105 and Old Shull's Mill Road.

The north part is a gently-sloped ridge toe covered with large hardwoods. It is a level, well-drained landform between two small tributary streams that overlooks the Watauga River floodplain/terrace. This is a landform with a high potential for prehistoric archaeological sites. Visual inspection identified the remains of at least two structures (site 31WT371**). One is a collapsed structure that includes several low, concrete pyramid-shaped features with metal re-bar extruding from the top (Figures 27 and 28). They appear to be footings for some kind of machinery, a radio antenna, or perhaps a water tower, windmill, or silo. (I have seen this kind of footing several times at light industrial sites.) The other structure is identified by a foundation and a cellar.



Figure 27: Northwest view of collapsed structure at 31WT371**.



Figure 28: North view of structure footings at 31WT371**.

The site also has several landscape features made of mortared river cobbles (Figures 29 and 30). There is also a low wall of mortared river cobbles located along Old Shull's Mill Road (Figure 31), and a set of river cobble entrance steps and walkway (Figure 32). Depending upon the date range of occupation at the site, these landscape features may have been a luxury indicative of a prominent structural complex. This could have been a wealthy individual's residence, or perhaps a civic or business office.



Figure 29: North view of a rectangular landscape feature at 31WT371**.

The 1978 edition of the topographic map shows three structures at this location, and two other structure on the other side of Old Shull's Mill Road. Historic maps (1928 and 1938) show structures at this location, and the 1920s postal route map places a large dot with the name "Shull's Mills" at this location. This complex was probably associated with the community of Shull's Mill, perhaps the post office. Or, it could have been associated with the lumber mill (Boone Fork Manufacturing Company) that operated in this valley in the first quarter of the twentieth-century.

The south part of Area I is a gently- to moderately sloped ridge toe currently used as grass pasture (Figure 33). It appears to have some archaeological potential.

Design plans show the improvements to NC 105 at this location will impact areas within the existing right of way on both sides of the road. However, the plans also show improvements to Old Shull's Mill Road, including the construction of a new intersection with NC 105 a short distance north of the current intersection (the south intersection). The designs show two options for a new intersection, one of which goes through the south part of Area I.



Figure 30: Northwest view of a circular landscape feature at 31WT371**.



Figure 31: Northeast view of a wall along Old Shull's Mill Road at 31WT371**.



Figure 32: South view of front steps at 31WT371**.



Figure 33: Southwest view of the south half of Area I.

The improvements to Old Shull's Mill Road also include a change to the intersection of Old Shull's Mill Road and Shull's Mill Road. While the changes to Old Shull's Mill Road might be limited, there may be some easements required along both sides of the road for drainage, utilities, etc. The land along the east side of Old Shull's Mill Road is a gently-sloped terrace or floodplain of the Watauga River, a landform with a moderate to high potential for archaeological sites. Archaeological survey is recommended on both sides of Old Shull's Mill Road from its southern intersection with NC 105 north to the intersection with Shull's Mill Road. Survey is also recommended for the area that will be impacted by the construction of the new NC 105/Old Shull's Mill Road intersection. Site 31WT371** should be investigated to determine its age, origin, and purpose. The site's boundaries should be established, and it should be evaluated for potential inclusion on the National Register of Historic Places (NRHP).

Area J

Area J is located on the west side of NC 105, across the street from the south intersection with Old Shull's Mills Road (see Figures 25-26). The topographic map depicts the area as a flat ridge toe along the north side of a Watauga River tributary and overlooking the Watauga River terrace/floodplain to the southeast. It is also located where two drainage valleys empty into the floodplain. A seasonal tributary runs along the south side of the drainage valley. Visual examination showed the area is currently a grass field located on both sides of Clark Circle (Figure 34). There is no visible disturbance other than Clark Circle, but the area looks like there may have been roadside development in the past (Figure 35). The 1978 topographic map shows one abandoned structure located on the north side of Clark Circle. The improvements to NC 105 at this point will impact areas next to the road, within the existing right of way. Therefore, no archaeological survey is recommended in Area J.



Figure 34: Northeast view of Area J.



Figure 35: Southwest view of Area J.

Area K

Area K is located on the south side of NC 105, extending approximately 366 meters (1,200 ft.) southwest from Old Shull's Mills Road to Twin Rivers Drive (see Figures 25-26; Figures 36-37). The topographic map depicts the area as a wide (approximately 160 meters [525 ft.] at its widest), level floodplain of the Watauga River. The section has the highest probability for prehistoric archaeological sites in the project area. Visual examination showed that most of this area is undeveloped agricultural land, but there may have been roadside development in the past. The 1978 topographic map shows two structures on the south side of the road in this location. This is located at the south end of the proposed improvements to NC 105. In 2012, the project limits extended to Clark's Creek Road in Foscoe, but more recent designs show the intersection with Old Shull's Mill Road being the end of the project. The design plans show the project will impact the area next to the road within the existing right of way. Therefore, no archaeological survey is recommended in Area K.

Summary and Conclusion

In 2012, the NCDOT began planning for proposed improvements to NC 105 from Clark's Creek Road in Foscoe to the NC 105 Bypass in Boone, Watauga County, North Carolina. The proposed improvements originally extended from Linville in Avery County to Boone, but were later limited to the section between Foscoe and Boone. Between 2012 and 2016, the NCDOT Archaeology Group reviewed the project's potential to impact archaeological resources.

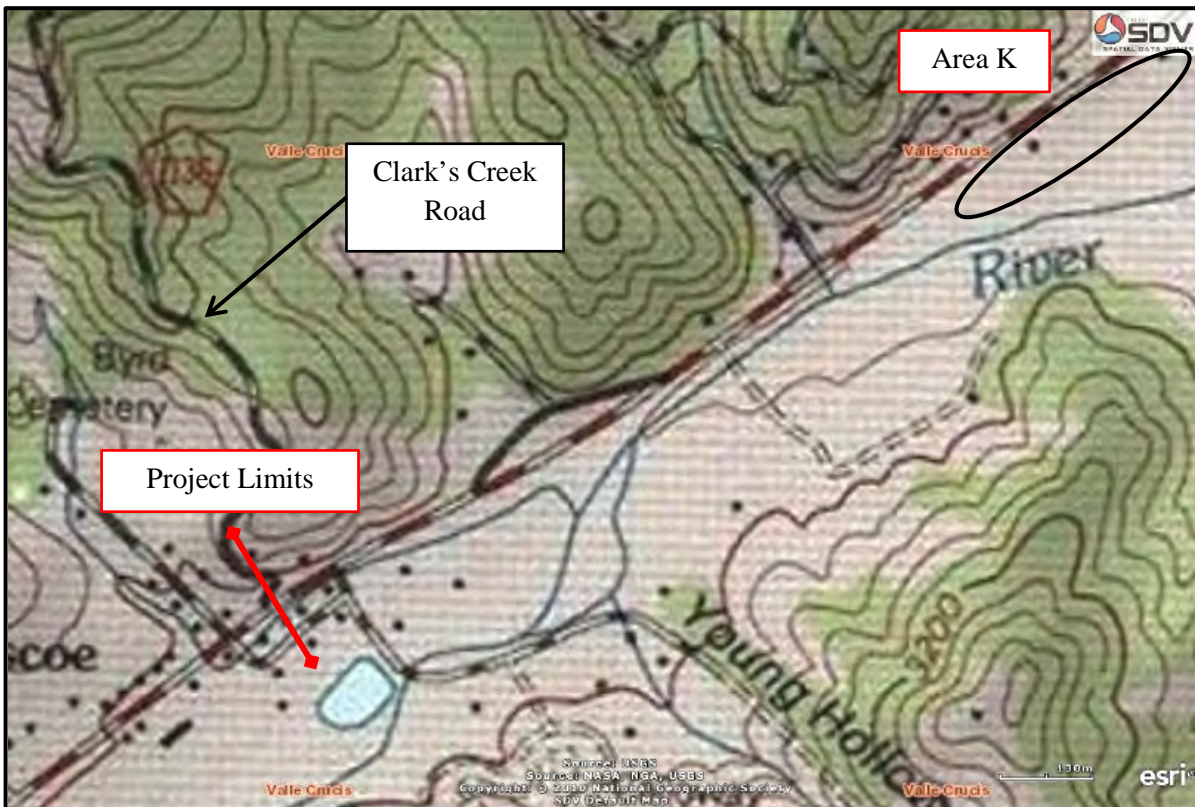


Figure 36: Topographic map showing the location of Area K.



Figure 37: Aerial photograph showing the location of Area K.



Figure 38: Southwest view of Area K from Old Shull's Mill Road.

The review included background research, identification of landforms with the potential for archaeological sites, and a visual reconnaissance. In May 2016, an archaeological survey was recommended on all level, well-drained, undeveloped landforms within the A.P.E. An analysis of the proposed design for the NC 105 improvements indicates that most of the impacts will be to areas that have a low potential for archaeological sites. Archaeological survey is recommended only for one section of the A.P.E., the area along both sides of Old Shull's Mill Road from its intersection with NC 105 north to the intersection with Shull's Mill Road. No archaeological survey is recommended for the rest of the A.P.E.

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**Intensive Archaeological Survey and Evaluation
for Proposed Improvements to NC 105 from
Clarks Creek Road in Foscoe to NC 105 Bypass
in Boone**

Watauga County, North Carolina



New South Associates, Inc.

Intensive Archaeological Survey and Evaluation for Proposed Improvements to NC 105 from Clarks Creek Road in Foscoe to NC 105 Bypass in Boone, Watauga County, North Carolina

By Colin Bean, Ellen Turco, and Shawn Patch, New South Associates, Inc.

May 2017

Introduction

The North Carolina Department of Transportation (NCDOT) proposes to improve a nine-kilometer (5.6-mi.) long section of NC 105 from Clarks Creek Road (SR 1136) in Foscoe to the NC 105 Bypass (SR 1107) in Boone, Watauga County, North Carolina. However, it has been determined that no improvements are needed for the 1.6-kilometer (1-mi.) section of Clarks Creek Road to Old Shull's Mill Road (SR 1568). Improvements are recommended for the approximately 7.2-kilometer (4.5-mi.) long section from Old Shull's Mill Road to NC 105 Bypass, based on future traffic operations and safety concerns.

The APE includes both sides of Old Shull's Mill Road from the intersection with NC 105 northeast for approximately 474 meters (1,555 ft.) to the intersection with Shull's Mill Road (Figures 1 and 2). Design plans show that the APE is narrow along the south/east side of Old Shull's Mill Road. The survey will include the land within 30 meters (100 ft.) of the east side of Old Shull's Mill Road from the NC 105 intersection northeast to the intersection with Shull's Mill Road. The plans show two possible interchanges between NC 105 and Old Shull's Mill Road, so the APE will include all of the land between those two roads. This also includes archaeological site 31WT371**, an historic site located between NC 105 and Old Shull's Mill Road at the north end of the APE.

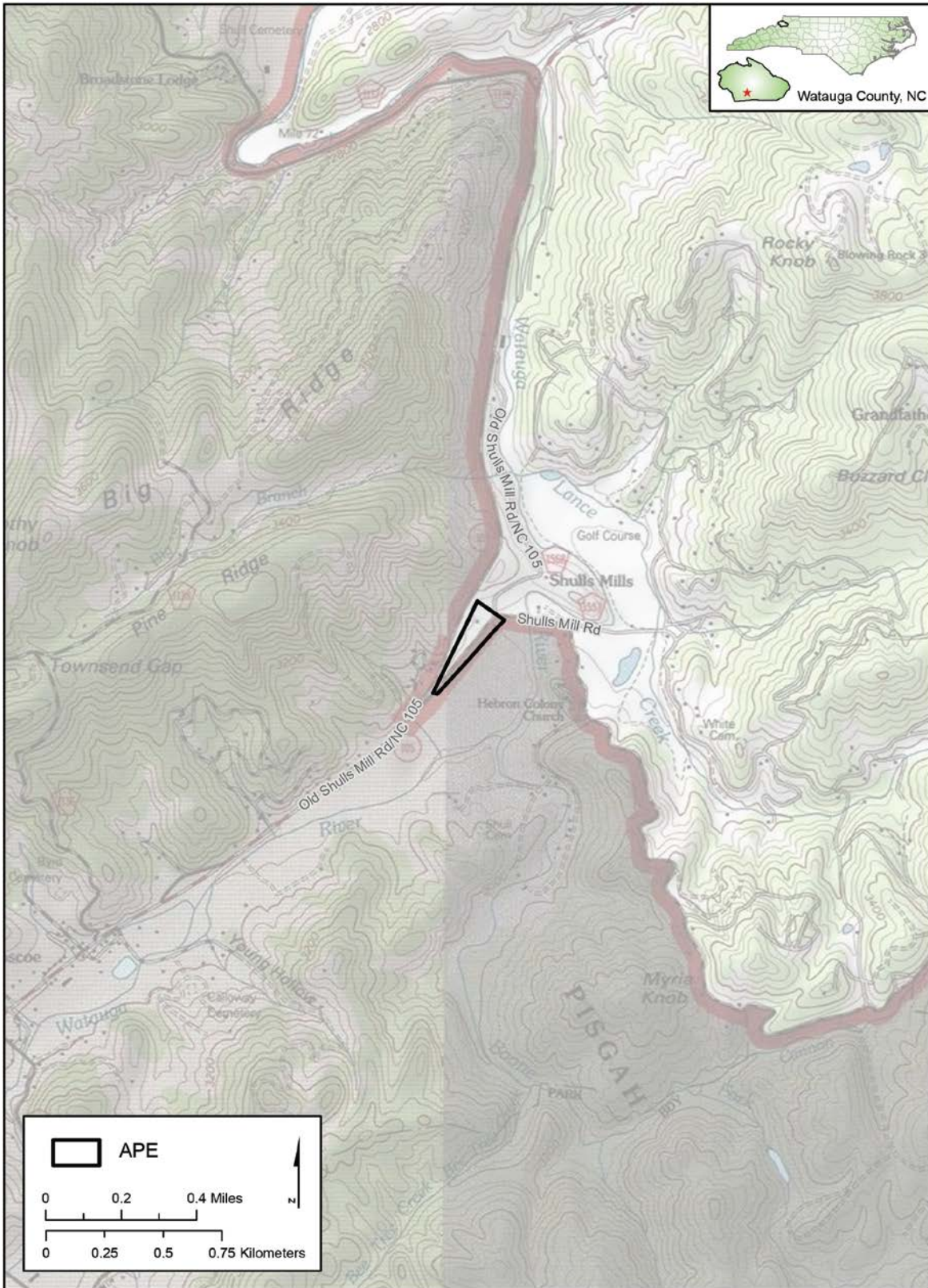
NCDOT archaeologist Caleb Smith conducted initial review of the project in May of 2016. The review included examination of topographic maps, aerial photographs, and visual examination of the project area. The NCDOT recommended that a survey of the level, undeveloped floodplains of the Watauga River within the APE be conducted.

The archaeological survey was conducted by Colin Bean and Matt Spice on April 11-13, 2017.

Background Research

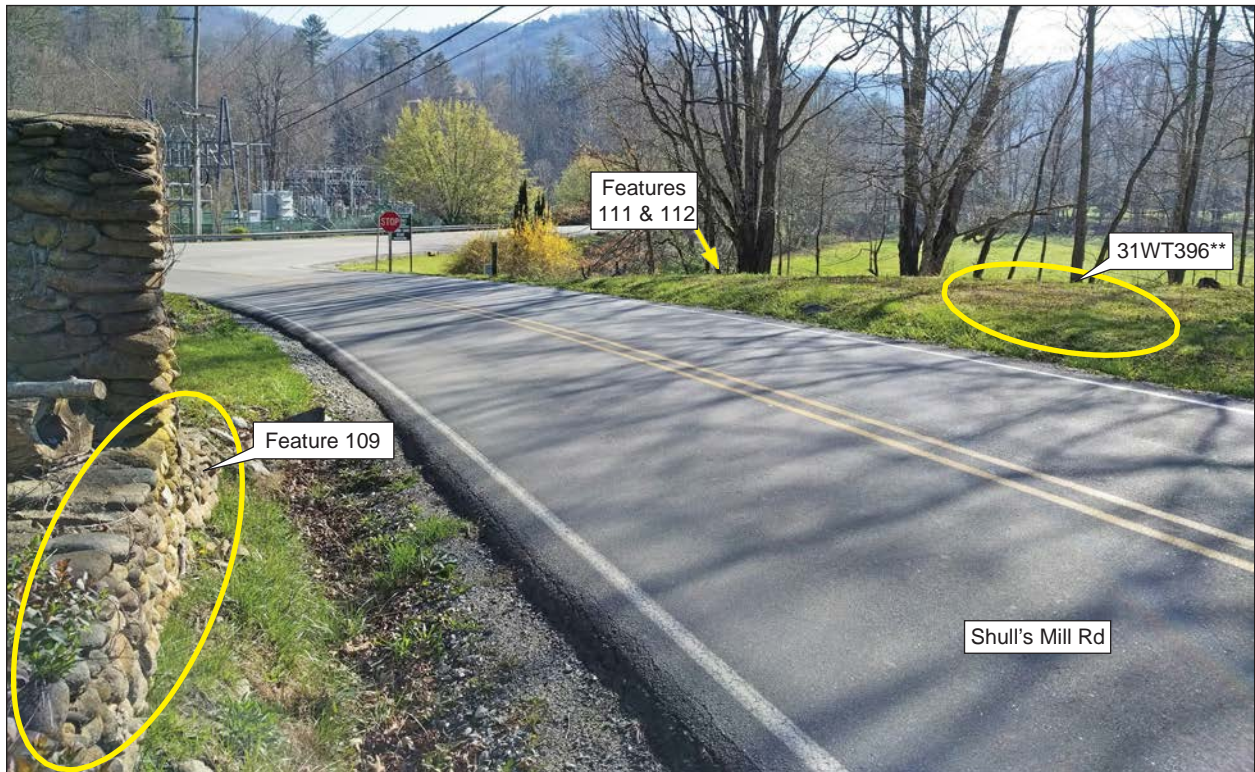
Background research was conducted at the Office of State Archaeology (OSA) in Raleigh, North Carolina. The APE does not appear to have been part of any previous archaeological surveys. Five previously recorded sites are located within one mile of the APE (Table 1). Two sites, 31WT285 and 31WT286, were recorded from amateur recommendations and never fully delineated or surveyed. Site 31WT285 yielded one serrated projectile point, "4mm length, 2mm width", while 31WT286 yielded multiple projectile points of unknown types. Both sites are noted to have owner collections. Site 31WT51 is a precontact site located on a narrow terrace of the Watauga River and contains numerous projectile points in the owner's possession, one quartz flake, and 13 chert flakes. Site 31WT128 is located on a finger ridge of Dutch Creek and contained one chert Pisgah projectile point. Site 31WT130 is a Middle to Late Archaic site that yielded a large quartzite knife and cobble hammerstone.

Figure 1. Topographic Map Showing the Location of the Project APE



Sources: USGS Topographic Quadrangle Maps, Valle Crucis, NC (1979) and Boone, NC (1980)

Figure 2. Photographs Showing APE Extents



- A. Facing North at Feature 109, Showing APE
- B. Facing Southwest at Shovel Test 10, Showing APE



Table 1. Previously Recorded Archaeological Sites Within One Mile of the APE

Site	Cultural Affiliation	NRHP Recommendation
31WT51	Precontact	Unknown
31WT128	Precontact (Pisgah)	Unknown
31WT130	Precontact (Middle to Late Archaic)	Unknown
31WT285	Precontact	Unknown
31WT286	Precontact	Unknown

Historic Context

Between 1915 and 1925, Shull’s Mills was a lumber boomtown situated in the valley of the Watauga River and Boone Fork. In the nineteenth century, Shull’s Mills was a small backcountry farming community. The Shull family is recorded in the 1850 U.S. Census for Watauga County, which was created in 1849, although other published sources recount that Phillip Shull had established feed and gristmills there by 1835. Land grants were issued to Shulls in the late eighteenth century (Lehmann 2010).

The steep mountain terrain of the Blue Ridge Mountains limited the development of transportation networks and industry in Watauga County. Railroads began to open up isolated mountain valleys to commercial lumbering in the 1880s. Shull’s Mill remained sparsely inhabited until around 1915 with the arrival of the East Tennessee and Western North Carolina Railroad (ET & WNC) and William S. Whiting’s Boone Fork Lumber Company (Figure 3). Whiting was one of a group of Northern industrialists who acquired large tracts of land in Southern Appalachia beginning in the 1880s. These men saw great economic opportunity in the hardwood forests of Appalachia. Whiting and his brother and business partner, Frank R. Whiting focused their acquisitions in eastern Tennessee and Western North Carolina. Between circa 1890 and circa 1942, William S. Whiting established multiple timber companies, under various names and with various partners.

Figure 3. “Whiting in His 30s,” Circa 1895.



Source: Appalachian State University Digital Collections

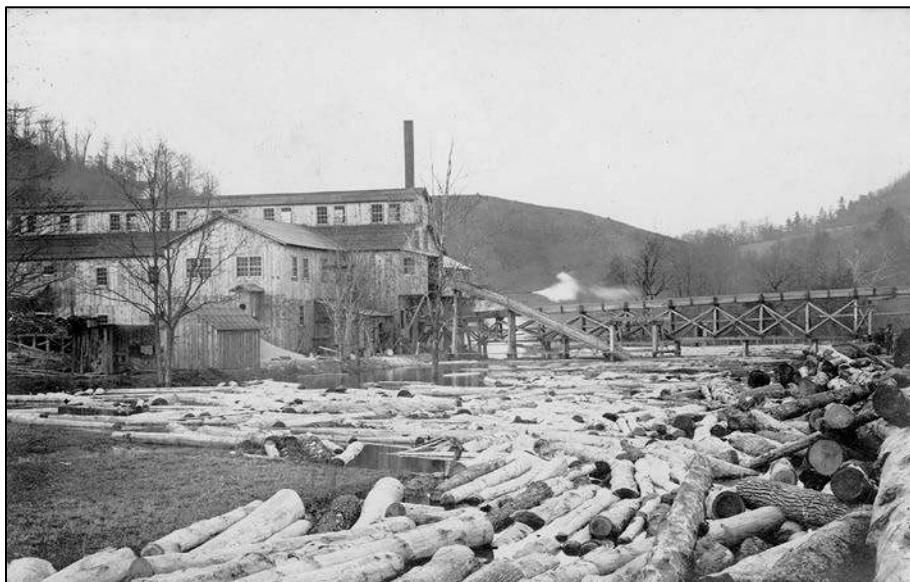
In the nineteenth century, Watauga County timber was selectively cut and transported to semi-permanent saw mills by waterways or by draft animals along primitive roads (Quinn 2003:21).

These inefficiencies limited areas that could be harvested. Railroad construction in the late nineteenth century enabled timber harvesting on an industrial scale. As a result, logging practices shifted from selective cutting to clear-cutting and industrial scale saw mills were built. The lumber industry was constantly changing as mountainsides were depleted and tracts were abandoned. New rail lines had to be continually built to access virgin timber. Saw mills and mill towns were relocated with regularity to be proximate to uncut forests.

In 1913, William S. Whiting purchased the timber rights to the area around Shulls Mills from the Lenoir Lumber Company. In addition to acreage, Whiting needed a rail line to get his Boone Fork Lumber to market. He invited the ET & WNC Railroad to extend the tracks from Montezuma, 14 miles southwest of Shulls Mills, to his plant. The railroad agreed, and by late 1916 the line was complete. In 1919, the ET & WNC had connected Shulls Mills to Boone to the northeast (Quinn 2003:40–42). By 1915, Whiting had acquired 10,000 acres in Watauga County and incorporated the Boone Fork Lumber Company to “develop the marketable timber resources of his property” (Lowery 2016:6–7; Quinn 2003:49).

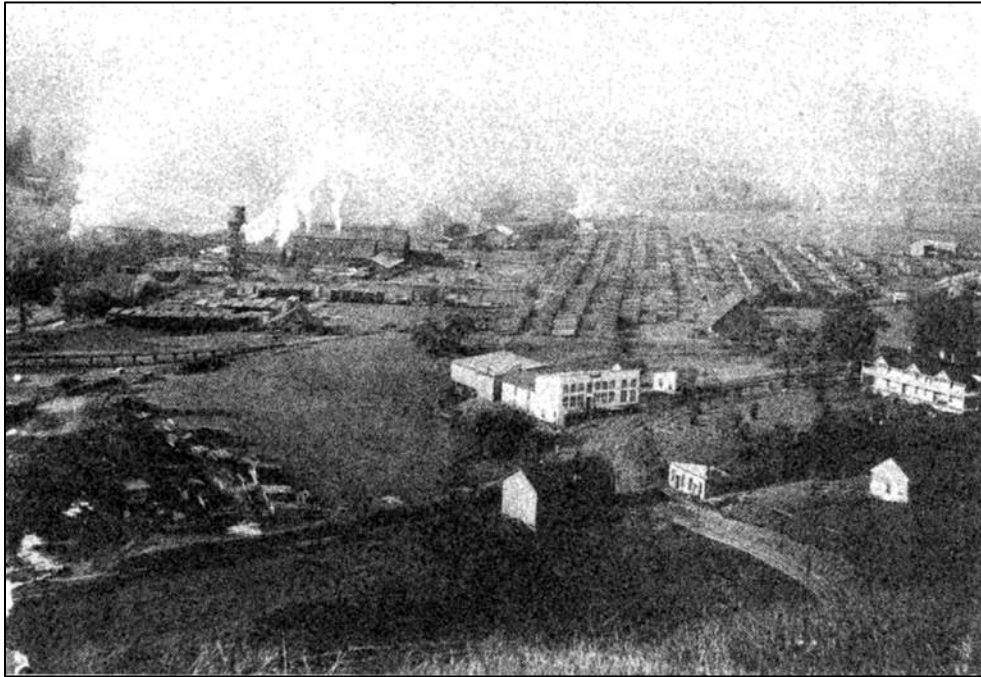
In the summer of 1916, Whiting had completed the construction of the Shulls Mills Band and Resaw Mills, a single band, electric powered board mill that produced one and two inch lumber (Figure 4). The mill produced 80,000 board feet per day at its peak (Quinn 2003:49). The complex included boiler houses, lumberyards, drying kilns warehouses, machine shops, rail spurs, a train depot and even a railroad engine house to house the company locomotive (Figures 5 and 6). A company town was built for the estimated 300 local people who worked in the sawmill and on the mountainsides cutting timber. At its height, Shulls Mills was home to 1,000 residents (Quinn 2003:52; Lehmann 2010). It had the amenities of any mid-sized North Carolina town such as a movie theater, post office, hotel, a store (WT 272) and a small hospital. Whiting built a stone and shingle Craftsman house he called “Ottaray” in 1917 east of the mill near the present-day location of Hebron Colony Church (Lowery 2016:5–6).

Figure 4. “Boone Fork Lumber Company Band Mill,” Undated



Source: Appalachian State University Digital Collections

Figure 5. Boone Fork Lumber Company at Shulls Mills Circa 1919



Source: Appalachian State University Digital Collections

**The large white building in the center is the company commissary and supply warehouse; the small building the right is the post office. At the bottom center is the movie house and across the road to right is the barbershop. The white multi-gabled building at the right side of the frame is the Robbins Hotel.

Figure 6. "Scenic View of Band Saw Mill," Undated.

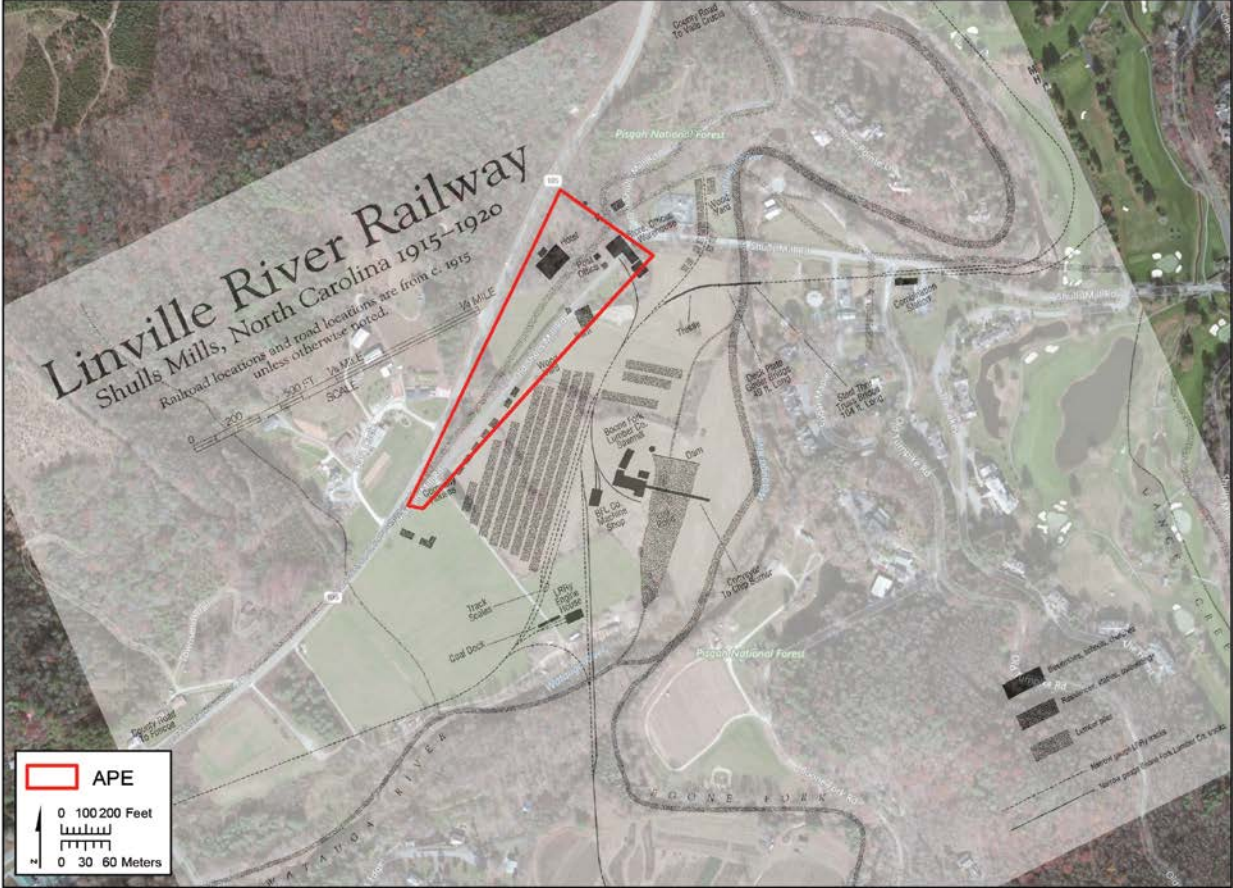


Source: Appalachian State University Digital Collections

**View of Boone Fork Lumber Company at Shulls Mills. The mill is in the center of the frame and the Robbins Hotel is the white multi-gabled building left of the mill.

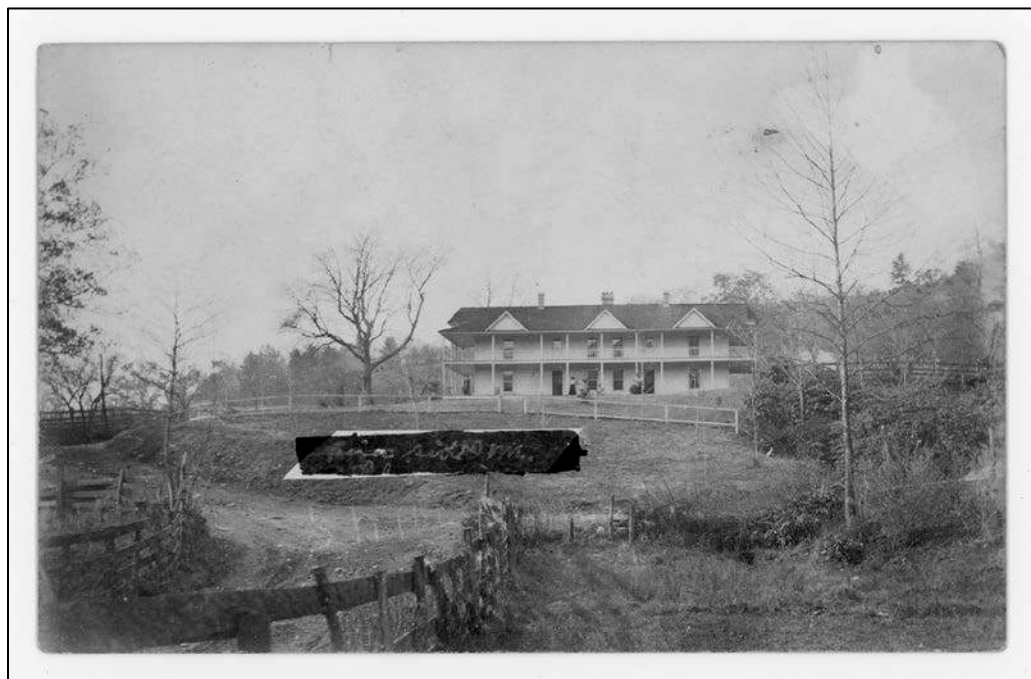
The Robbins Hotel was a two-story, triple gabled building with a double-tiered front porch (Figures 7 and 8). Its construction date was not determined during this study but its form suggests a construction date between 1880 and 1920. Since Shulls Mills was a small rural farming community prior to the mill's completion in 1916, it is most plausible that the building was erected around 1916 to accommodate business travelers. The owner of the hotel was George W. Robbins, who is listed in the 1920 U.S. Census as a "lumber buyer." Robbins was married to Luna Patrick Robbins, whose mother was a Shull (Department of Commerce and Labor 1913; U.S. Census Bureau 1920).

Figure 7. Geo-Referenced Historic Map of the Linville River Railway



Sources: Bing Maps (2017) & Waite (2003)

Figure 8. "Inn with People on Porch," Robbins Hotel, Undated.



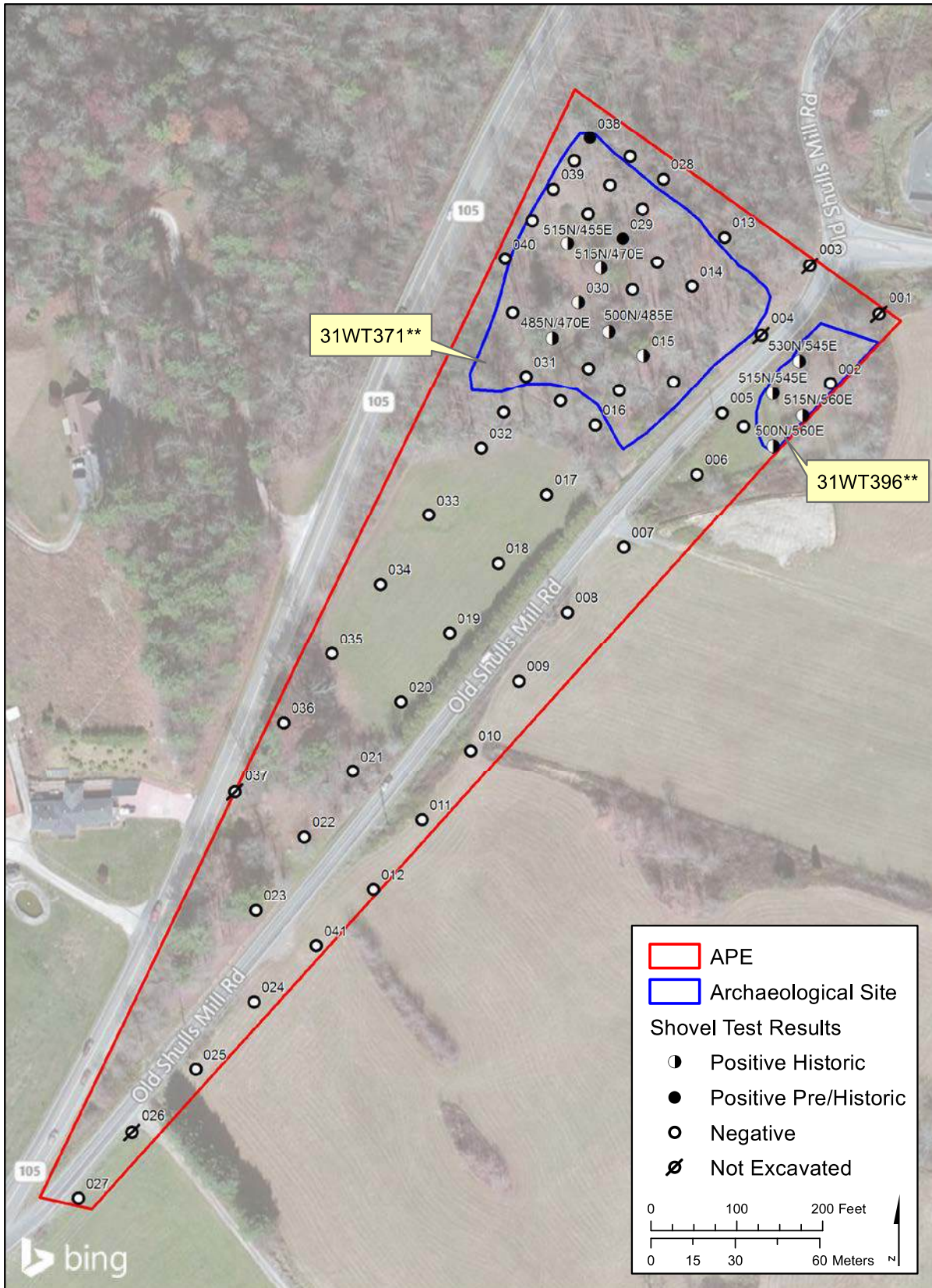
Source: Appalachian State University Digital Collections.

Watauga County timber was exhausted by 1925 and Whiting began transferring his assets west to his holdings in Butler, Tennessee (Quinn 2003:53). Many of the workers at Shulls Mills transferred to the new mill. Having lost much of its population and its major employer and economic engine, the town reverted to the small agricultural community it was prior to Whiting's arrival (Quinn 1955:25). A tropical storm in 1940 caused massive flooding of the Watauga River and the remnants of the mill and railroad tracks were washed away. The damaged tracks were not rebuilt since by this time automobile and truck traffic had supplanted rail as the region's primary mode of transportation. What railroad tracks were not washed away were pulled up in the 1950s. William S. Whiting remained at Ottaray until 1942 when he relocated to Florida for retirement (Lowery 2016:5).

Archaeological Survey

The archaeological survey consisted of shovel testing and pedestrian survey along five transects at a 30-meter (98.42-ft.) interval (Figure 9). Shovel tests at a 15-meter interval were also excavated if deemed necessary to improve coverage of the APE. All shovel tests measured 30 centimeters in diameter and were excavated at least 10 centimeters into culturally sterile subsoil unless natural impediments such as water or bedrock impeded excavation. All excavated soils were screened through 0.25-in (0.64-cm) mesh screen and backfilled upon documentation. In areas with more than 75 percent ground visibility, pedestrian surveys were also conducted to locate any surface artifacts. Shovel tests were not excavated at any locations with a greater than 15 percent slope or in clearly disturbed contexts. A single 1x1-meter test unit was also excavated. All tests were recorded with a Trimble GeoExplorer handheld GPS and later post-processed for greater accuracy.

Figure 9. Aerial View of the Project Area Showing Shovel Test Results



Source: Bing Maps (2013)

Fieldwork included 50 shovel test locations, 12 of which were positive (Table 2, Figure 9). Positive tests were bounded at 15-meter and 7.5-meter intervals until surrounded by two negative tests in order to delineate the site boundary. When natural obstacles such as slope or a waterway were present, delineations were not excavated.

Table 2. Summary of Shovel Test Locations

Shovel Test	Positive/Negative/Not Excavated	Depth	Comments
1	Not Excavated		Located in drainage
2	Negative	30 cm (12 in.)	
3	Not Excavated		Located at junction of Shull's Mill Road and gully
4	Not Excavated		Located in Shull's Mill Road
5	Negative	30 cm (12 in.)	
6	Negative	30 cm (12 in.)	
7	Negative	30 cm (12 in.)	
8	Negative	30 cm (12 in.)	
9	Negative	36 cm (14 in.)	
10	Negative	20 cm (8 in.)	
11	Negative	56 cm (22 in.)	
12	Negative	20 cm (8 in.)	
13	Negative	40 cm (16 in.)	
14	Negative	36 cm (14 in.)	
15	Positive	40 cm (16 in.)	Nail
16	Negative	30 cm (12 in.)	
17	Negative	24 cm (10 in.)	
18	Negative	50 cm (20 in.)	
19	Negative	20 cm (8 in.)	
20	Negative	30 cm (12 in.)	
21	Negative	28 cm (11 in.)	
22	Negative	50 cm (20 in.)	
23	Negative	55 cm (22 in.)	
24	Negative	30 cm (12 in.)	
25	Negative	60 cm (24 in.)	
26	Not Excavated		Located in driveway
27	Negative	36 cm (14 in.)	
28	Negative	32 cm (13 in.)	
29 – 530/470	Positive	30 cm (12 in.)	Biface fragment, nail, iron
30 – 500/470	Positive	29 cm (11 in.)	Glass, metal
31	Negative	30 cm (12 in.)	
32	Negative	10 cm (4 in.)	
33	Negative	36 cm (14 in.)	
34	Negative	50 cm (20 in.)	

Table 2. Summary of Shovel Test Locations

Shovel Test	Positive/Negative/Not Excavated	Depth	Comments
35	Negative	30 cm (12 in.)	
36	Negative	30 cm (12 in.)	
37	Not Excavated		Located on NC105 slope
38 – 560/440	Positive	45 cm (18 in.)	Chert debitage, whiteware sherd
39	Negative	20 cm (8 in.)	
40	Negative	20 cm (8 in.)	
470/485	Negative	30 cm (12 in.)	
485/500	Negative	10 cm (4 in.)	
485/485	Negative	10 cm (4 in.)	
485/470	Positive	26 cm (10 in.)	Glass, historic ceramics, iron
485/455	Negative	28 cm (11 in.)	
500/560	Positive	30 cm (12 in.)	Window glass
500/545	Negative	40 cm (16 in.)	
500/485	Positive	30 cm (12 in.)	Wire nails, clear glass
500/515	Negative	28 cm (11 in.)	
515/545	Positive	40 cm (16 in.)	Window glass
515/500	Negative	30 cm (12 in.)	
515/470	Positive	36 cm (14 in.)	Coal, window glass, nails, historic ceramics
515/455	Positive	34 cm (14 in.)	Glass ink well, brick fragments
515/560	Positive	35 cm (14 in.)	Glass, nails, iron
530/485	Negative	40 cm (16 in.)	
530/455	Negative	30 cm (12 in.)	
530/545	Positive	32 cm (13 in.)	Glass, unidentified metal
545/470	Negative	25 cm (10 in.)	
545/440	Negative	26 cm (10 in.)	

The northwest quadrant featured a steep slope facing east from NC 105 that runs the entire length of the APE and a large gully or drainage to the north. Site 31WT371/31WT371** is located in this area (described in more detail below). One isolate along this drainage was located in a shovel test, comprised of one sherd of whiteware and one piece of chert debitage, but it is believed to be out of context and a remnant from the construction of NC 105. The U.S. Department of Agriculture (USDA) soil survey categorizes soils in this quadrant as Saunook loam (SnC), a loamy soil typically found on the footslopes, toeslopes, and base slopes of mountains. Soils in this class generally exist on an 8-15 percent slope.

Shovel Test 13 was located at the northern end of the APE and was excavated just south of the large gully that bounded the APE to the north. Shovel Test 13 uncovered 15 centimeters (6 in.) of dark brown silty clay loam on top of 25 centimeters of strong yellowish brown silty clay. Shovel Test 14 uncovered 20 centimeters (8 in.) of dark brown silty clay loam on top of 16 centimeters of strong yellowish brown silty clay. Shovel Test 15, 500N 500E, uncovered 18 centimeters (7 in.) of

dark brown silty clay loam on top of 12 centimeters (5 in.) of strong yellowish brown silty clay. Shovel Test 15 also led to the recovery of one possible nail fragment in level one.

Shovel Test 16, 480N 500E, was located just north of a drainage that ran east to west through the site and uncovered 30 centimeters (12 in.) of mottled red/brown/black hydric sandy loam. Shovel Test 28, 560N 470E, uncovered 16 centimeters (6 in.) of dark brown silty clay loam on top of 16 centimeters (6 in.) of strong yellowish brown silty clay. Shovel Test 29, 530N 470E, uncovered 20 centimeters (8 in.) of brownish red silty clay on top of 10 centimeters (4 in.) of strong yellowish brown silty clay. The first level of shovel Test 29 also yielded one biface fragment, three nails, and three pieces of indeterminate iron. Shovel Test 30, 500N 470E, uncovered 16 centimeters (6 in.) of strong yellowish brown silty clay on top of 13 centimeters (5 in.) of strong yellowish brown silty clay. Shovel Test 30 also produced 10 window glass shards and one indeterminate iron fragment. Shovel Test 31, 460N 470E, uncovered 30 centimeters (12 in.) of mottled red/brown/black hydric sandy loam.

Shovel Test 38, 560N 440E, was located at the intersection of the eastward facing slope from NC 105 and the gully that bounded the APE to the north. Shovel Test 38 uncovered 35 centimeters (14 in.) of brown silty clay loam on top of 10 centimeters (4 in.) of pale reddish brown silty clay. Shovel Test 38 also produced one chert debitage and one sherd of whiteware. Shovel Test 39 and 40 uncovered 10 centimeters (4 in.) of mottled brown/yellow/red silty clay. Due to the presence of artifacts on the site, 15 additional delineation shovel tests were also excavated. Shovel Test 470N 485E, located north of the drainage, uncovered 30 centimeters (12 in.) of mottled red/brown/black hydric sandy loam. Shovel Tests 485N 500E and 485N 485E uncovered 10 centimeters of gravel fill from what appears to be an old road bed leading into the site from Shull's Mill Road. Shovel Test 485N 455E uncovered 16 centimeters (6 in.) of brown silty clay loam over 12 centimeters (5 in.) of reddish brown silty clay.

Shovel Test 500N 515E was located directly to the east of the extant road and uncovered 18 centimeters (7 in.) of brown silty loam and 10 centimeters (4 in.) of reddish brown silty clay. Shovel Test 515N 500E yielded 20 centimeters (8 in.) of brown silty clay loam on top of 10 centimeters (4 in.) of reddish brown clay silt. Shovel Test 530N 485E uncovered 30 (12 in.) centimeters of brown silty clay loam over 10 centimeters (4 in.) of reddish brown silty clay. Shovel Test 530N 455E 20 (8 in.) centimeters of brown silty clay loam over 10 centimeters (4 in.) of reddish brown silty clay. Shovel Test 545N 440E uncovered 16 centimeters (6 in.) of brown loamy clay over 10 centimeters (4 in.) of reddish brown silty clay. Shovel Test 545N 470E uncovered 25 centimeters (10 in.) of pale brown compacted silty clay. Due to the compactness of the clay, further excavation was not possible. Shovel Test 485N 470E uncovered 16 centimeters (6 in.) of brown silty clay loam over 10 centimeters (4 in.) of reddish brown silty clay and led to the recovery of 21 window glass and bottle glass fragments, five ceramic sherds, and one iron fragment. Shovel Test 500N 485E uncovered 16 centimeters (6 in.) of brown silty clay loam over 10 centimeters (4 in.) of reddish brown silty clay. A total of 18 nails and 16 window glass shards were recovered from level one. Shovel Test 515N 455E uncovered 24 centimeters (9 in.) of brown silty clay loam over 10 centimeters (4 in.) of reddish brown silty clay with one glass inkwell, three glass shards, two unidentified iron fragments, and two brick fragments. Shovel Test 515N 470E uncovered 26 centimeters (10 in.) of brown silty clay loam over 10 centimeters (4 in.) of reddish brown silty clay. One sherd of blue, shell-edge whiteware, four additional sherds of regular whiteware, three nails, and 13 glass shards were recovered.

Shulls Mill Road bisected the northeast quadrant along the length of the APE (Figure 10). Site 31WT396/31WT396** is located in this area (described in more detail below). Two different landscapes were present in the northeast quadrant, both pastureland and a cleared area with trees and architectural remains. The area farthest north where the architectural remains were located was tested at a 15-meter interval where possible and served as the location for a subsequent test unit for site 31WT396/31WT396**. The pastureland to the south of site 31WT396/31WT396** was devoid of any artifacts. Soils in the area were mottled in color and texture, indicating that the area had previously been plowed. The USDA soil survey categorized soils in this area as Cullowhee loam (Cua), a poorly drained soil with slopes ranging from 0-3 percent. Shovel Test 1 was located along a drainage of the Watauga River and was not excavated. Shovel Test 2 was located on the eastern edge of the terrace and exposed 10 centimeters (4 in.) of brown loamy clay on top of 20 centimeters of reddish brown silty clay. Shovel Test 3 was not excavated due to its location at the intersection of Shull's Mill Road and a large drainage gully at the far north of the APE. Shovel Test 4 was not excavated due to its location in Shull's Mill Road. Shovel Test 5 was located at the top of the land form adjacent to Shull's Mill Road and exposed 20 centimeters (8 in.) of dark brown loamy clay overlaying 10 centimeters (4 in.) of brownish yellow clay silt. Shovel Test 6 was located on the southernmost end of the landform in an area near the creek. Shovel Test 6 uncovered 20 centimeters (8 in.) of brown silty clay loam on top of 10 centimeters (4 in.) of strong reddish brown silty clay. Five additional 15-meter shovel tests were excavated to further survey the landform due to a lack of any artifacts in the 30-meter tests. Shovel Test 530N 545E, located almost directly in the center of the terrace landform, exposed 22 centimeters (9 in.) of brownish black silty clay loam on top of 10 centimeters (4 in.) of pale red brown silty clay. Three shards of window glass and two iron fragments were recovered. Shovel Test 515N 545E uncovered 30 centimeters (12 in.) of brownish black silty clay loam on top of 10 centimeters of pale red brown silty clay. One shard of window glass was recovered. Shovel Test 515N 560E was located on the foot slope of the terrace and exposed 24 centimeters (10 in.) of brownish black silty clay loam on top of 30 centimeters (12 in.) of pale red brown clay silt. Twelve shards of window glass and seven wire nails were recovered. Shovel Test 500N 560E was excavated on the backside of the toe slope of the terrace and uncovered 20 centimeters (8 in.) of brown silty clay loam on top of 10 centimeters (4 in.) of strong reddish brown silty clay. Historic window glass was recovered. Shovel Test 500N 545E uncovered 30 centimeters (12 in.) of brown silty clay loam over 10 centimeters (4 in.) of reddish brown silty clay.

The southeast quadrant was comprised of pastureland and the junction of Shulls Mill Road and NC105. Shovel tests that would have been located in Shulls Mill Road were moved east in order to survey more of the APE. Two soil types made up the area: Saunook loam (SnB) and Reddies loam (RnB). Saunook loams are generally located in areas with 2-8 percent slope while Reddies loams are generally located in poorly drained areas with 0-3 percent slope. Shovel Test 7 uncovered 10 centimeters (4 in.) of dark brown silty clay loam and 20 centimeters (8 in.) of

Figure 10. Northeast Quadrant of the APE

A. Facing West at Shovel Test 37 (Test Not Excavated Due to Slope)



B. Facing East at Shovel Test 1 (Test Not Excavated Due to Creek)

C. Facing North at Shovel Test 4 (Test Not Excavated Due to Road)



strong brownish yellow silty clay. Shovel Test 8 uncovered 5 centimeters (2 in.) of dark brown silty clay loam on top of 25 centimeters (10 in.) of brownish yellow silty clay. Shovel Test 8 was heavily disturbed due to its proximity to Shull's Mill Road and a power pole. Shovel Test 9 was located in the open field near Shull's Mill Road and uncovered 10 centimeters of brown silty clay loam on top of 16 centimeters of mottled brown/yellow silty clay over 10 centimeters of yellow compact clay, indicating disturbance by the construction of Shull's Mill Road and utility installation. Shovel Test 10, adjacent to a farm drainage, uncovered 20 centimeters (8 in.) of strong brownish yellow silty clay. The stratigraphy of Shovel Test 10 showed intense oxidation of iron particles (small, red iron concretions) and points to numerous flooding events adjacent to the drainage. Shovel Test 11 was heavily disturbed, uncovering 10 centimeters (4 in.) of brown silty clay on top of 36 centimeters (14 in.) of grayish brown silty clay over 10 centimeters of yellow compact silty clay. Shovel Test 12 was located in a low section of the field near a tree outcropping and uncovered 20 centimeters (8 in.) of strong brownish yellow silty clay, much like shovel test 10. Shovel Test 41 uncovered 30 centimeters of gray/brown/yellow mottled clay, most likely fill remnants from the construction of Shull's Mill Road. Shovel Test 24 uncovered 30 centimeters (12 in.) of gray/brown/yellow mottled clay, most likely fill remnants from the construction of the adjacent road. Shovel Test 25 was located on a slightly higher rise in the pasture and uncovered 50 centimeters (20 in.) of brown silty loam on top of 10 centimeters (4 in.) of pale reddish brown silty clay. Shovel Test 26 was not excavated due to its location in a driveway. Shovel Test 27 uncovered 26 centimeters (10 in.) of brownish black silty clay loam that was heavily mottled and full of gravel on top of 10 centimeters (4 in.) of pale reddish brown silty clay.

The southwest quadrant of the APE was located mainly on a steep slope facing east from NC 105 down to a small open area adjacent to Shulls Mill Road. Soils in this area were deflated and full of rock and fill, likely from the construction of Shulls Mill Road and NC 105. Soils in this area were a combination of Saunook loam (SnC and SnB) and Reddies Loam (RdA). Approximately 10 meters (33 ft.) of the western most portion of the area was defined by a massive eastward-facing slope that made up the elevated roadbed for NC 105. Soils in this area were generally mottled clay with gravel and asphalt mixed in, likely from the construction of the road. The northern half of the southwest quadrant was open pastureland, while the southern half was a low area with an abutting slope to the north. Shovel Test 37 was located directly adjacent to NC 105 and was not excavated due to the disturbed slope. Shovel Test 36 was located adjacent to an access road or trail and revealed 18 centimeters (7 in.) of brown silty sand mottled with yellow clay fragments and small gravels, followed by two centimeters (1 in.) of light brown coarse sand on top of 10 centimeters (4 in.) of a pale reddish brown compact silty clay. Shovel Test 36 appears to have been heavily disturbed by the location of the access road. Shovel Test 35 uncovered 20 centimeters (8 in.) of brown silty sand on top of 10 centimeters (4 in.) of reddish brown silty clay. Shovel Test 34 was located in a slightly more level area to the west of NC 105 and uncovered 40 centimeters (16 in.) of brownish black clay silt on top of 10 centimeters (4 in.) of strong reddish brown clay silt. Shovel Test 33 uncovered 26 centimeters (10 in.) of brownish black silty clay loam on top of 10 centimeters (4 in.) of reddish brown silty clay. Shovel Test 32 was located directly south of a tree break that separated the north western and southwestern quadrants and uncovered 10 centimeters (4 in.) of gravel fill. Shovel Test 17 uncovered 14 centimeters (5 in.) of dark brown silty loam on top of 10 centimeters (4 in.) of pale reddish yellow sandy clay. Shovel Test 18 uncovered 30 centimeters (12 in.) of brown silty clay loam over 10 centimeters of pale reddish yellow sandy clay. Shovel Test 19 uncovered 10 centimeters (4 in.) of brown silty clay on top of 10 centimeters of pale reddish yellow silty clay. Shovel Test 20 uncovered 10 centimeters (4 in.) of brown silty clay on top of 10 centimeters of pale reddish yellow silty clay. Shovel Test 21 uncovered 12 centimeters (5 in.) of brown silty clay on top of 16 centimeters (6 in.) of pale reddish yellow silty clay. Shovel Test 22 uncovered 40 centimeters (16 in.) of brown silty clay on top of 10

centimeters (4 in.) of reddish brown clay silt. Finally, shovel test 23 uncovered 25 centimeters (10 in.) of dark brown silty clay loam on top of 30 centimeters (12 in.) of mottled brown/gray/yellow silty clay, indicating the presence of redox and flooding.

Site 31WT371/31WT371**

Field Site Number:	31WT371/31WT371**
UTM East	432713
UTM North	4003455
Elevation:	2,945.7 feet amsl
USGS Quadrangle (7.5’):	Watauga
Component(s):	Precontact, Historic, Nineteenth to Twentieth Centuries
Site Type:	Dwelling/Boarding House
Soil(s):	Snc- Saunook loam, 8-15% slopes
Site Size:	84 m E/W by 94 m N/S, 6,526 sq. m
NRHP Recommendation:	Not Eligible

Site 31WT371/31WT371** was previously reported by Caleb Smith of NCDOT as a possible home or company office of the former Boone Fork Lumber Company. No shovel tests or test units were excavated during this initial reconnaissance and the NHRP eligibility was not examined. Archaeological investigations for the current study documented and updated the site information for 31WT371/31WT371**. The site is approximately 84 meters (276 ft.) in width and 94 meters (308 ft.) in length. Investigations for the present study recorded/mapped surface architectural features and identified a precontact component from an unknown period (10,500 B.C.-A.D. 1600). The site boundary did not change. Eight positive shovel tests were excavated (Table 3).

Table 3. Summary of Artifacts Recovered from Shovel Tests

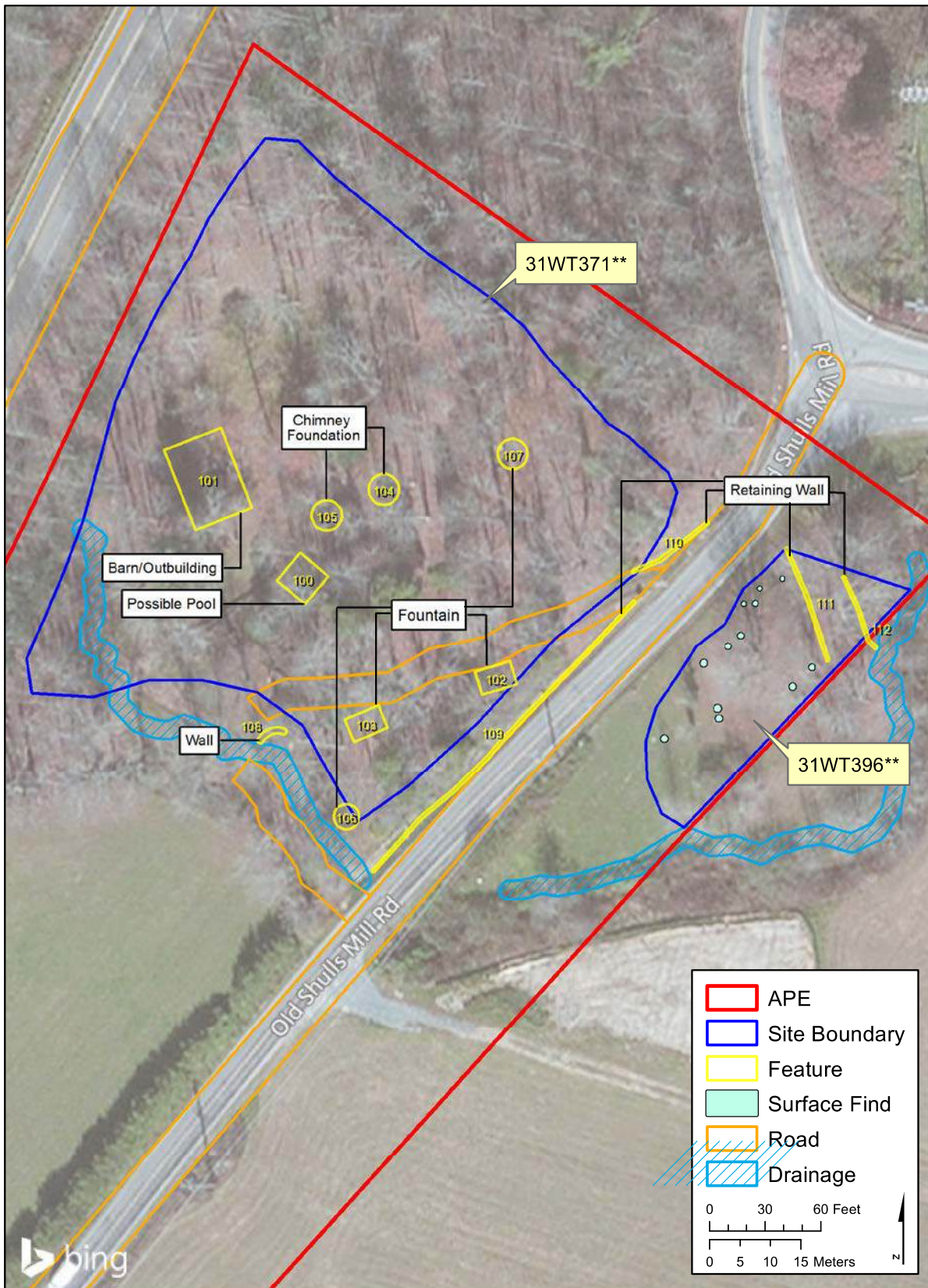
Shovel Test	Artifact Description	Count	Weight (g)
485/470	Aqua Container Glass	4	3.3
	Chimney Glass	1	0.2
	Clear Container Glass	9	17.5
	Glass, Flat	4	4
	Nail	1	2.7
	Stoneware, Alkaline Glazed	3	19.1
	Tableware Glass, Unidentified, Molded	2	23.2
	Whiteware, Plain	2	1.6
485/470 Total		26	71.6
500/470	Clear Container Glass	5	5
	Glass, Flat	5	6
	Nail	1	4.7
500/470 Total		11	15.7
500/485	Asphalt Roofing	3	6.4
	Clear Container Glass	1	1.4

Table 3. Summary of Artifacts Recovered from Shovel Tests

Shovel Test	Artifact Description	Count	Weight (g)
	Glass, Flat	16	21.1
	Nail	18	89.1
500/485 Total		38	118
500/500	Nail	1	1
500/500 Total		1	1
515/455	Blue Feather Edge Whiteware	1	0.7
	Glass, Flat	2	2.8
	Inkwell or Bottle, Glass	1	100.4
	Light Blue Container Glass	1	3.5
	Nail	3	23.4
515/455 Total		8	130.8
515/470	Blue Feather Edge Whiteware	1	5.1
	Clear Container Glass	3	10.2
	Coal	1	17.1
	Glass, Flat	7	19.8
	Light Green Container Glass	1	3.3
	Nail	3	22.5
	Olive Container Glass	1	0.7
	Stoneware, Alkaline Glazed	1	6
	Whiteware, Plain	1	0.5
515/470 Total		19	85.2
530/470	Cinder/Clinker	2	5.8
	Nail	1	7.4
530/470 Total		3	13.2
560/440	Whiteware, Plain	1	6.2
560/440 Total		1	6.2
Grand Total		107	441.7

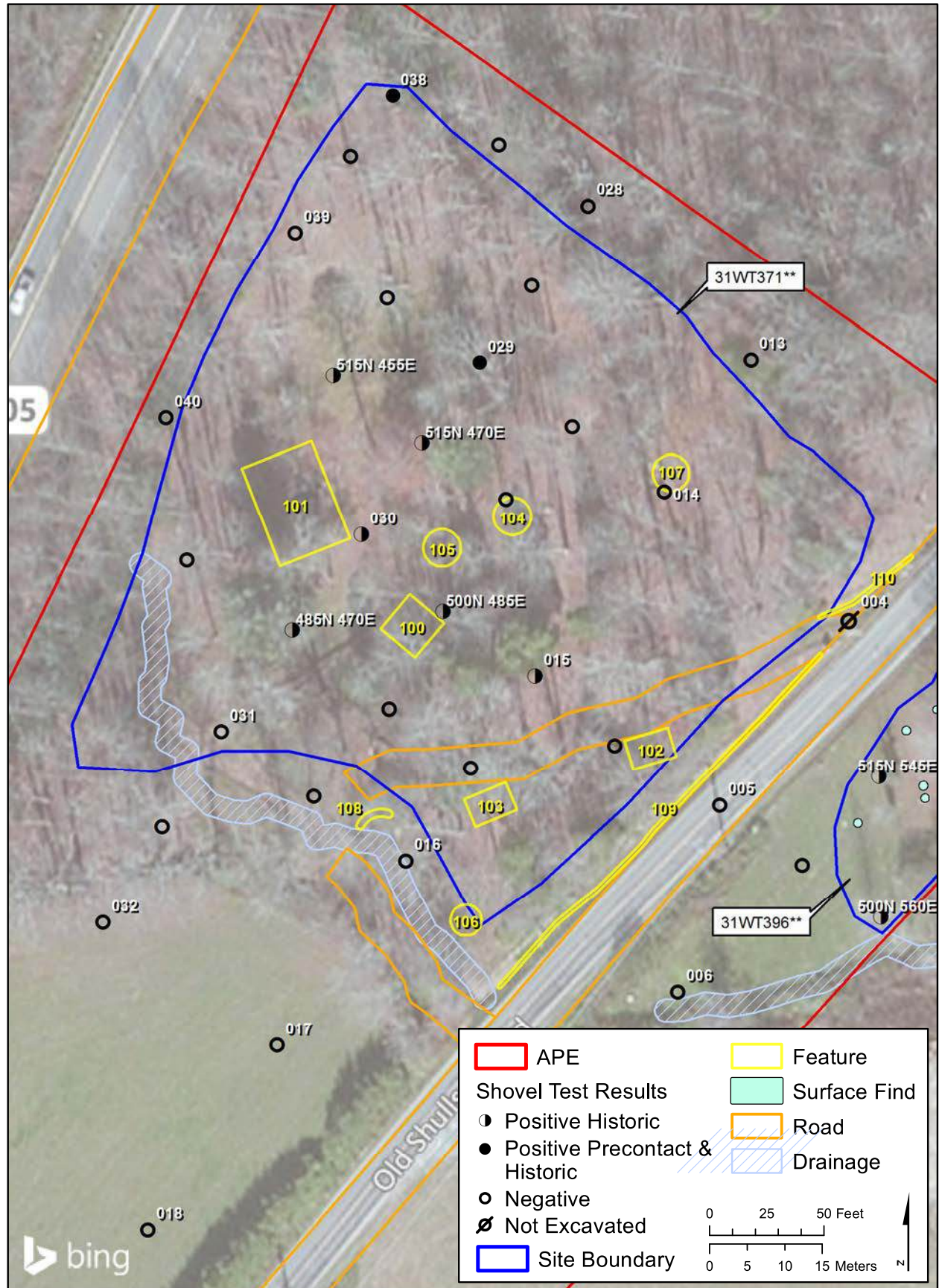
Soils within the site area were generally shallow, with a top A horizon extending approximately 20 centimeters (8 in.), followed by a subsoil clay layer. Shovel Test 500N 500E revealed a typical profile of dark brown (10YR 6/6) sandy loam (Stratum I) to 28 centimeters below surface (cmbs) and reddish brown (7.5YR 4/6) clay (Stratum II) to 40 cmbs.

Figure 11. Aerial View of the Project Area Showing Features and Surface Finds



Source: Bing Maps (2013)

Figure 12. Aerial View Showing 31WT371** Site Boundary



Source: Bing Maps (2013)

Multiple surface architectural features were documented within the previously recorded site area (Figures 11 and 12). Feature 100 is a large, 6x6-meter square semi-subterranean feature adjacent to feature 105. At present this structure is believed to be a swimming pool (Figure 13).

Figure 13. Facing North at Features 100



Feature 101 is a large barn or outbuilding structure, approximately 10x14 meters (32.8x46 ft.) in size (Figure 14). The base of feature 101 is made up of large concrete blocks with vertical rebar posts (Figure 15). The building has a sheet metal roof and lumber construction with wire nails as fasteners.

Features 102 and 103 are stacked-stone fountains measuring 6x4 meters (20x13 ft.) (Figure 16) in size. The stones are locally sourced and are rounded and smooth, indicating that their origins lie in the adjacent creek or the Watauga River nearby. These features are believed to be fountain decorations for the Robbins Hotel due to their flat, concrete bottom and the numerous pipes now visible within the features.

Figure 14. Feature 101

A. Facing Northwest
at Feature 101



B. Facing East at Feature 101

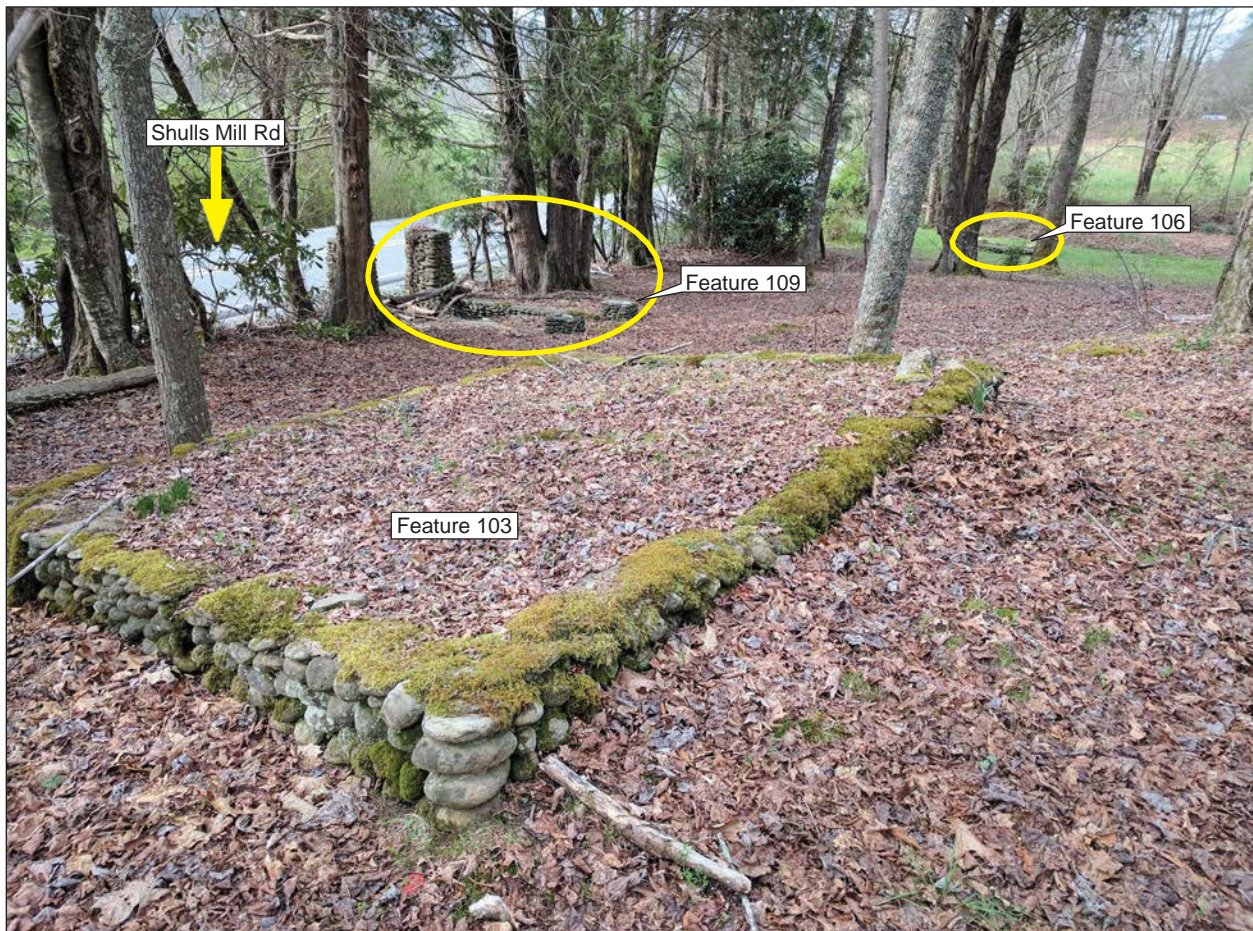
C. Facing West
at Feature 101



Figure 15. Feature 101 Foundation Detail



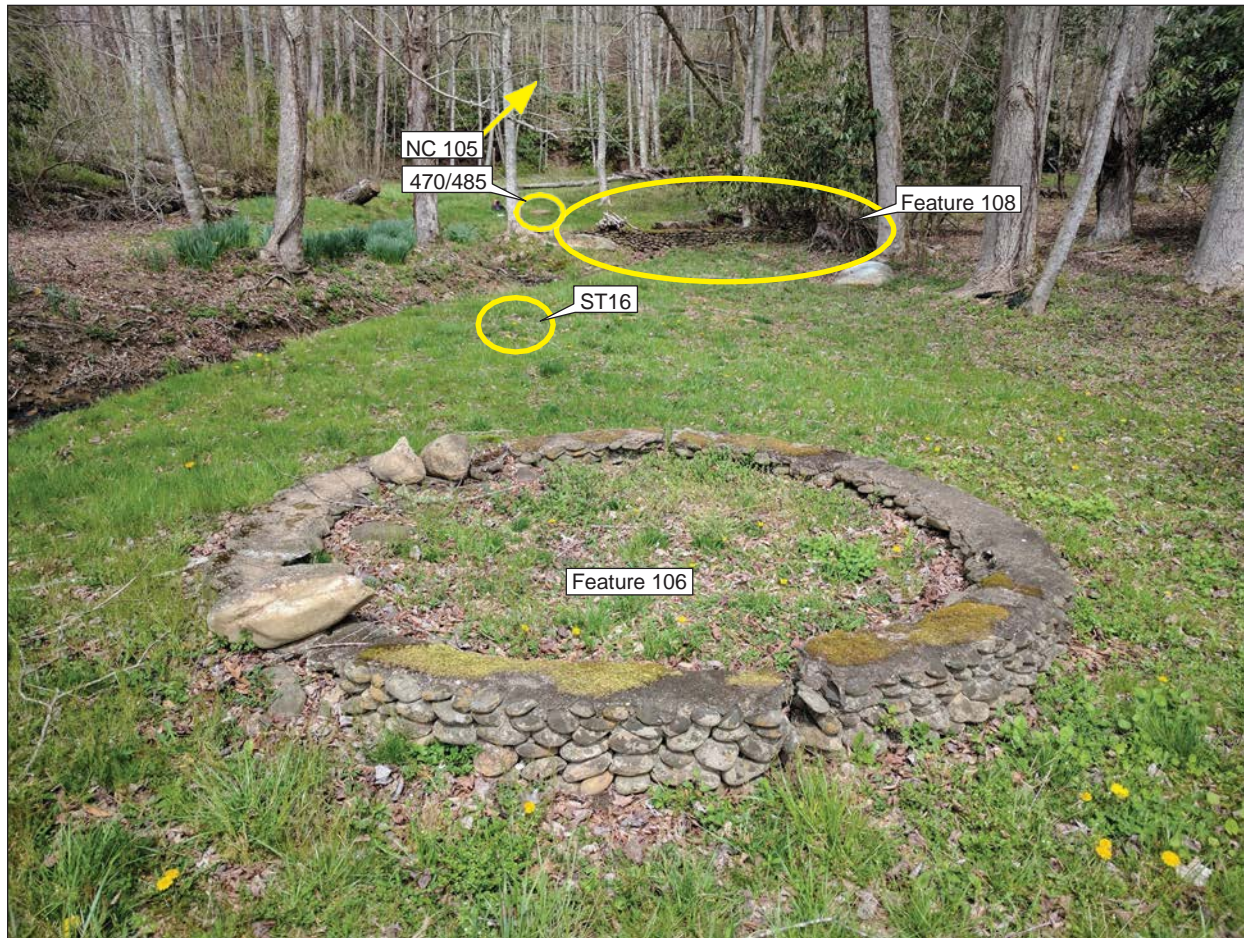
Figure 16. Feature 103



Features 104 and 105 are five-meter (16.5-ft.) diameter circular piles of bricks believed to be the remnants of dual chimneys from the Robbins Hotel main house. Each pile has a large, rectangular opening, believed to be the base of the firebox.

Features 106 and 107 are approximately five-meter (16.5-ft.) diameter stacked stone circular planters or fountains. These features have been used as fire rings recently and contained a vast amount of burned material. Like features 102 and 103, the construction material is local river stone held together with cement (Figure 17).

Figure 17. Features 106 and 108



Feature 108 is a low, half-circle stacked stone wall measuring five meters (16.5 ft.) in length. It is located adjacent to a small drainage that runs through the site area to the south.

Features 109 and 110 are stacked stone walls made from locally sourced river stone. These walls run the full length of the property boundary on the west side of Shull's Mill Road, measuring 60 and 15 meters (197 and 50 ft.) respectively.

Artifacts

The artifact assemblage (n=107) consists of 48 percent Architectural group remains and 24 percent Kitchen group remains by weight. Artifacts from the Miscellaneous (5%), and Personal

(23%) groups made up the smallest sample in the artifact assemblage. Flat window glass (n=34) and nails (n=28) made up the majority of the Architectural group, indicating a modern occupation of the site. The inclusion of asphalt roofing tiles date the site to the early twentieth century. This is reinforced by the historical research, which dates the site to the late-nineteenth/early-twentieth century period when Shull's Mill was at its height. Clear container glass (n=18) and alkaline glazed stoneware (n=4) made up the majority of the Kitchen group, indicating a continual domestic occupation at the site. One clear glass inkwell was recovered, along with various pieces of coal and clinker along with chimney glass. All of these artifacts once again point to a domestic habitation site dating to the early twentieth century.

The precontact component at 31WT371/31WT371** is small in relation to the historic component and provided no diagnostic artifacts to establish a date of occupation or use. The precontact assemblage consists of two quartz biface fragments and one flake of Fort Payne chert. This material points to a very limited occupation of the site area by precontact peoples, uses of which could have been hunting or lithic reduction. The presence of precontact artifacts is not unexpected given the APE's location adjacent to prominent water sources. However, the occupation intensity was light and probably consisted of short visits for limited activities over a long period.

*Table 4. Artifacts from 31WT371***

Group	Artifact	Count	Percentage of Weight (%)
	Asphalt Roofing	3	1
	Glass, Flat	34	12
	Nail	28	34
Architectural Total		65	48
	Aqua Container Glass	4	1
	Blue Feather Edge Whiteware	2	1
	Clear Container Glass	18	8
	Light Blue Container Glass	1	1
	Light Green Container Glass	1	1
	Olive Container Glass	1	0
	Stoneware, Alkaline Glazed	4	6
	Tableware Glass, Unidentified, Molded	2	5
	Whiteware, Plain	4	2
Kitchen Total		37	24
	Cinder/Clinker	2	1
	Coal	1	4
Miscellaneous Total		3	5
	Inkwell or Bottle, Glass	1	23
Personal Total		1	23
	Chimney Glass	1	0
Activities Total		1	0
TOTAL		107	100

NRHP Evaluation

Site 31WT371/31WT371** contains both precontact and historic components. The precontact component contained no diagnostic artifacts. The artifact assemblage is too small to permit meaningful analyses and features are not expected. Due to disturbances to the site from the construction of NC 105 and the destruction of the historic component of the site, no further information about precontact lifeways is expected to be found. For this reason, the precontact component of 31WT371/31WT371** is recommended not eligible for the NHRP.

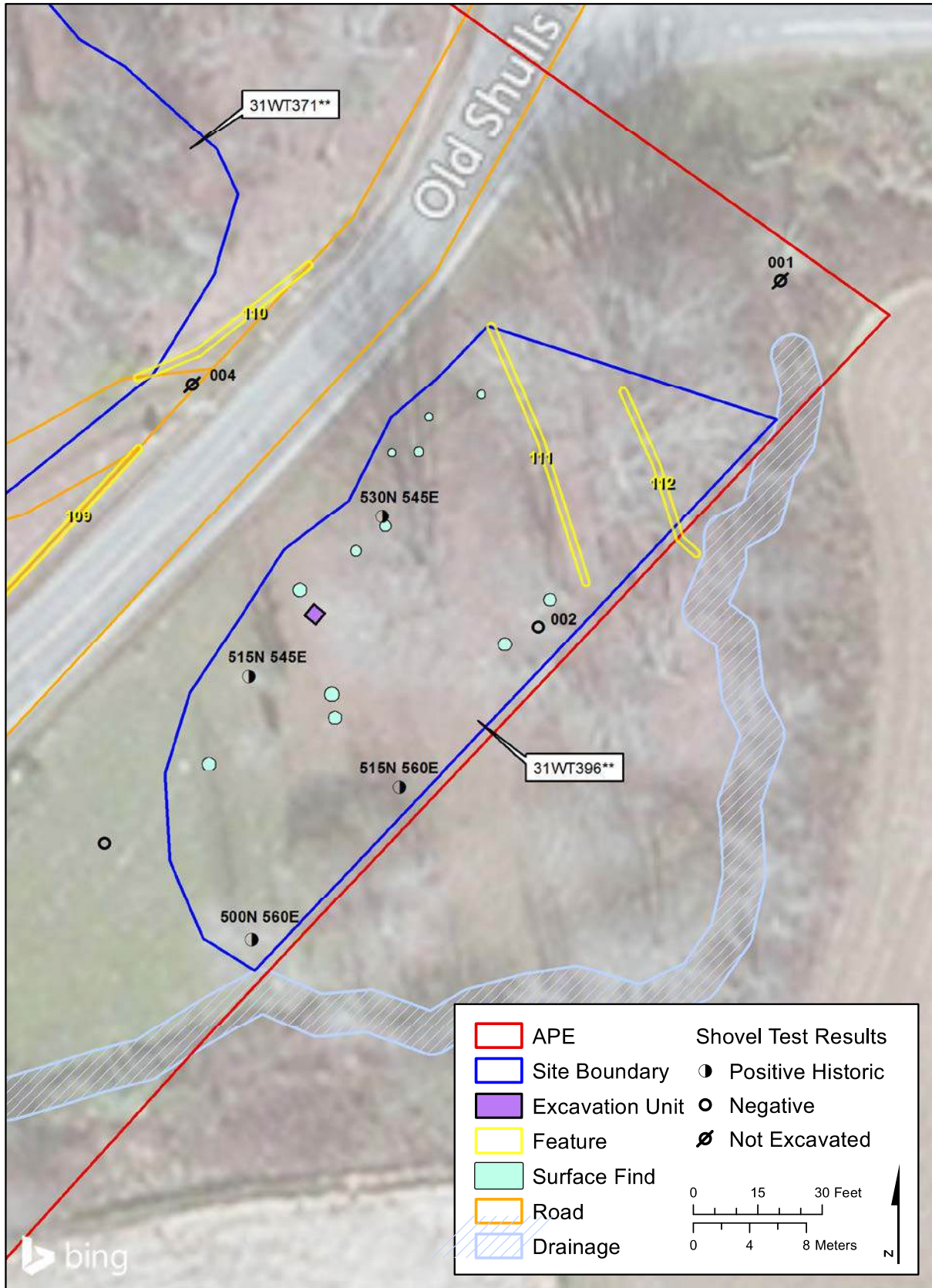
The historic component is the remains of the Robbins Hotel. Archival information suggests it was most likely built circa 1916 and served business travelers or other guests as part of the larger lumber town of Shull’s Mill. Although surface architectural features are present, the buildings themselves have been razed. The artifact assemblage consists primarily of architectural debris. Intact, sealed archaeological deposits such as wells or privies are not expected given the site’s setting. The historic component of site 31WT371/31WT371** is not associated with significant events (Criterion A), significant people (Criterion B), does not possess unique design elements or represent the work of a master (Criterion C), and does not have the potential to yield important information (Criterion D). For these reasons, the historic component of site 31WT371/31WT371** is recommended not eligible for the NRHP. No further work is recommended at this time for the current design.

Site 31WT396/31WT396**

Field Site Number:	FS2
UTM East	432778
UTM North	4003423
Elevation:	2,918 feet amsl
USGS Quadrangle (7.5’):	Watauga
Component(s):	Precontact, Historic, Nineteenth to Twentieth Centuries
Site Type:	Store
Soil(s):	Cua – Cullowhee Loam, 0-3%
Site Size:	20 m E/W by 54 m N/S, 867 sq. m
NRHP Recommendation:	Not Eligible

Site 31WT396/31WT396** consists of surface features and artifacts that are likely associated with the Robbins Hotel or other businesses from Shull’s Mill and a limited precontact artifact scatter from an unknown period (10,500 B.C.-A.D. 1600). Archaeological investigations for the current study recorded/mapped surface architectural features and defined the site’s boundary within the APE (Figure 18). The site is approximately 20 meters (66 ft.) in width and 54 meters (3177 ft.) in length. Four positive shovel tests and one test unit were excavated within the site boundary (Table 5). Soils within the site area were deeper than those in 31WT371** due to the location upon an extant terrace of the Watauga River, with a top A horizon extending approximately 40 centimeters (16 in.), followed by a subsoil clay layer. Features 111 and 112 are low retaining walls located on the east side of Shull’s Mill Road. Together, these features appear to form a driveway.

Figure 18. Aerial View Showing 31WT396/31WT396** Site Boundary, Surface Finds, and Excavation Unit



Source: Bing Maps (2013)

Table 5. Artifacts by Provenience for Site 31WT396/31WT396**

Shovel Test	Artifact Description	Count	Weight (g)
500/560	Clear Container Glass	1	8.4
500/560 Total		1	8.4
515/545	Glass, Flat	1	1.8
515/545 Total		1	1.8
515/560	Aqua Container Glass	1	3
	Clear Container Glass	2	15.1
	Glass, Burned	1	1.3
	Glass, Flat	8	14.1
	Iron/ Steel, Unidentified/ Corroded	2	36.3
	Nail	8	48.3
	White Bodied Earthenware, Burned/ Unidentified	1	0.6
515/560 Total		23	118.7
530/545	Bottle Glass	1	15
	Furniture Part, Other, Metal	1	19
	Glass, Burned	2	4.5
	Nail	1	3.7
530/545 Total		5	42.2
Grand Total		30	171.1

Unit 1

Unit 1 was excavated on the east side of Shull's Mill Road adjacent to a large stone believed to be from a building foundation. The unit was excavated in three levels. Levels 1 and 2 were excavated in the top A/Ap horizon and were a dark brown in color (10YR 3/3) and a fine silty clay loam in texture. Thirty one cut nails, two sherds of Albany Slipped stoneware, four whiteware sherds, two button fragments, a glass ink well, and a quartz biface fragment were located in Levels 1 and 2 (Table 6, Figure 19). A large sheet wash of coal fragments spread across the southwestern corner of the unit in these upper levels. The presence of coal was noted, but it was not collected. Level 3 was excavated 10 centimeters (4 in) into culturally sterile subsoil, a dark yellowish brown (10YR 4/6) silty clay, and no artifacts were recovered (Figures 20).

Figure 19. Photographs of Test Unit 1



A. Test Unit 1 Pre-excitation Facing Northwest



B. Test Unit 1, Base Level 1, Facing North



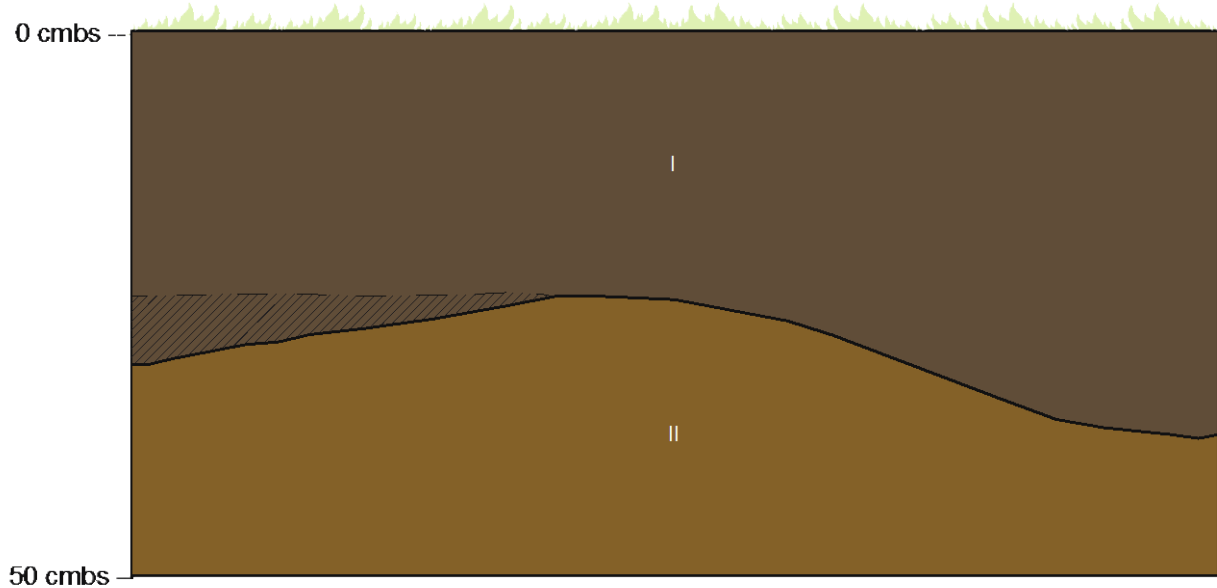
C. Test Unit 1, Base Level 2, Facing North



D. Test Unit 1, Base Level 3, Facing North

Figure 20. Test Unit 1 West Profile Map and Photograph

Test Unit 1
West Profile



Stratum I = 10YR 3/3 Dark Brown Silty Clay Loam
Stratum II = 10YR 4/6 Dark Yellowish Brown Silty Clay
▨ = Coal Concentration

0 5 10 centimeters



Table 6. Artifact Summary for Unit 1

Level	Artifact Description	Count	Weight (g)
Level 1, 0-35 cmbs	Amber Container Glass	2	1.7
	Amethyst Container Glass	2	29.3
	Aqua Container Glass	1	3.8
	Bisque	1	2.3
	Bottle Glass, with Printed Mark	1	5.3
	Button, Porcelain, Prosser	2	1.1
	Canning Seal, Milk Glass	3	8.5
	Cinder/Clinker	1	16.8
	Clear Container Glass	23	45.8
	Coal	3	81.2
	Flatiron (Clothing Iron)	1	353.2
	Glass, Burned	20	123.7
	Glass, Flat	134	353
	Glass, Plate	1	14.7
	Insulator, Porcelain	2	65
	Iron/ Steel, Unidentified/ Corroded	5	41.9
	Modern Strap Hinge	1	91.9
	Nail	92	545.5
	Olive Container Glass	1	10.9
	Plastic Item, Unidentified	1	1.4
	Refined Earthenware, Colored Glazes	3	12.5
	Screw, Pointed Wood	1	3
	Shoe Parts, Leather	1	0.3
	Slate, Roofing	1	4.5
	Staple	1	5.8
	Stoneware, Domestic, Albany Slipped	2	18.3
	Stoneware, Unidentified, Burned	3	13.4
	Strap Iron/ Metal	8	109.9
	Utensil Handle, Metal, Unidentified	1	3.3
	Whiteware, Plain	4	10.8
Level 1 Total		322	1,978.8
Level 2, 35-39 cmbs	Aqua Container Glass	1	0.6
	Clear Container Glass	2	31.3
	Glass, Burned	1	3.1
	Glass, Flat	10	23.2
	Iron/ Steel, Unidentified/ Corroded	5	66.8
	Nail	3	25.1
	Plastic Item, Miscellaneous	1	0.3

Table 6. Artifact Summary for Unit 1

Level	Artifact Description	Count	Weight (g)
	White Bodied Earthenware, Burned/ Unidentified	1	3.5
Level 2 Total		24	153.9
Grand Total		346	2,132.7

Artifacts

The artifact assemblage (n=376) consists of 49 percent Architectural group remains, 10 percent Kitchen group remains, 23 percent Activities group remains, and 16 percent Miscellaneous group remains by weight. Both the Clothing and Furniture group remains accounted for one percent each. Nails and flat window glass made up 44 percent of the Architectural group (Table 7). The presence of burned glass (n=24) indicates that a fire once occurred at the site and helps to explain the lack of surface remains. The site can be dated based on ceramics and glassware that were recovered. Albany slipped stoneware (n=2) had a mean production date of 1863 while amethyst container glass (n=2) had a mean production date of 1899, indicating a late-nineteenth/early-twentieth century occupation, congruent with that of 31WT371/31WT371** and the adjacent mill complex. The presence of such a wide-ranging artifact assemblage indicates that the site is not a house site, but instead a store complex that sold everyday, domestic items. This determination is further reinforced with the historic research which shows that the area across from the Robbins Hotel (31WT371/31WT371**) was the location of a bank, movie theater, and possible general store.

The precontact artifact assemblage consists of one quartz flake and a quart projectile point/knife fragment. Much like the precontact assemblage at 31WT371/31WT371**, the small quantity of recovered materials indicates a very brief habitation or site use that would include lithic reduction and hunting.

Table 7. Artifacts from 31WT396/31WT396**

Group	Artifact Description	Count	Percentage of Weight (%)
	Glass, Flat	153	17
	Glass, Plate	1	1
	Modern Strap Hinge	1	4
	Nail	104	27
	Screw, Pointed Wood	1	0
	Slate, Roofing	1	0
	Staple	1	0
Architectural Total		262	49
	Button, Porcelain, Prosser	2	0
	Shoe Parts, Leather	1	0
Clothing Total		3	1
	Furniture Part, Other, Metal	1	1

Table 7. Artifacts from 31WT396/31WT396**

Group	Artifact Description	Count	Percentage of Weight (%)
Furniture Total		1	1
	Amber Container Glass	2	0
	Amethyst Container Glass	2	1
	Aqua Container Glass	3	0
	Bottle Glass	1	1
	Bottle Glass, with Printed Mark	1	0
	Canning Seal, Milk Glass	3	0
	Clear Container Glass	28	4
	Olive Container Glass	1	0
	Refined Earthenware, Colored Glazes	3	1
	Stoneware, Domestic, Albany Slipped	2	1
	Stoneware, Unidentified, Burned	3	1
	Utensil Handle, Metal, Unidentified	1	0
	White Bodied Earthenware, Burned/ Unidentified	2	0
	Whiteware, Plain	4	0
Kitchen Total		56	10
	Cinder/Clinker	1	1
	Coal	3	4
	Glass, Burned	24	6
	Iron/ Steel, Unidentified/ Corroded	12	6
Miscellaneous Total		40	16
	Bisque	1	0
	Flatiron (Clothing Iron)	1	15
	Insulator, Porcelain	2	3
	Plastic Item, Miscellaneous	1	0
	Plastic Item, Unidentified	1	0
	Strap Iron/ Metal	8	5
Activities Total		14	23
Grand Total		376	100

NRHP Evaluation

Site 31WT396/31WT396** has both precontact and historic components. The precontact component contained no diagnostic artifacts. The assemblage is too small to permit meaningful analyses and features are not expected. Due to disturbances such as the construction of Shull's Mill Road, no further information about precontact lifeways is expected to be found. For this reason, the precontact component of 31WT396/31WT396** is recommended not eligible for the NHRP.

The historic component is likely the remains of a storefront for the adjacent mill complex. Archival and archaeological information suggests it was most likely built in the late nineteenth century and served business travelers or residents as part of the larger lumber town of Shull's Mill. Although surface architectural features are present, the buildings themselves have been razed, most likely after a fire. The artifact assemblage consists primarily of Architectural, Kitchen, and Miscellaneous group debris. The full boundary of the site is unknown because it extends outside of the APE. However, the portion examined inside the APE is not significant. Intact, sealed archaeological deposits such as wells or privies are not expected given the site's setting. Site 31WT396/31WT396** is not associated with significant events (Criterion A), significant people (Criterion B), does not possess unique design elements or represent the work of a master (Criterion C), and does not have the potential to yield important information (Criterion D). For these reasons, site 31WT396/31WT396** is recommended not eligible for the NRHP. No further work is recommended at this time for the current design.

Summary

Two archaeological sites were present in the study area: 31WT371/31WT371** and 31WT396/31WT396**. Site 31WT371/31WT371** appears to be the Robbins Hotel, which is contemporary to the Boone Fork Lumber Company located in the area and dates to the late nineteenth/early twentieth century lumber boom in the area. Site 31WT396/31WT396** appears to be the post office, movie theater, and possible store, also contemporary with the lumber company and associated East Tennessee & Western North Carolina (ET&WNC) railroad. Archival research indicates that the mill complex and associated businesses were important to the local lumber industry, which began to gain importance at the turn of the century as well. However, as archaeological sites, neither 31WT371/31WT371** nor 31WT396/31WT396** meet any of the NRHP criteria and both are recommended not eligible. No further work is recommended for the current design.

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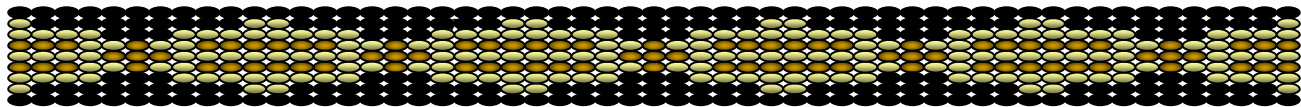
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Catawba Indian Nation
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Fax 803-328-5791



October 2, 2024

Attention: Nora A. McCann
NC Department of Transportation
1595 Mail Service Center
Raleigh, NC 27699-1598

Re. THPO #	TCNS #	Project Description
2024-193-274		Project R-2566B/BA/BB

Dear Ms. McCann,

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.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer