

PROJECT COMMITMENTS

**Union County
Bridge No. 157 on SR 2170
Over Polecat Creek
Federal Aid Project No. BRZ-2170(6)
W.B.S. No. 46092.1.FD1
T.I.P. No. B-5377**

Division 10 Construction, Resident Engineer's Office – Offsite Detour

In order to have time to adequately reroute school buses, Union County Public Schools Transportation will be contacted at (704) 296-3015 at least one month prior to road closure.

Union County Emergency Services will be contacted at (704) 292-2514 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

Union County Emergency Medical Services will be contacted at (980) 993-7600 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

Natural Environment Section (NES) – North Carolina heelsplitter Screening and Surveys

Habitat for the Carolina heelsplitter may be present within Polecat Creek. The NCDOT Biological Surveys Group will conduct screening and surveys for the Carolina heelsplitter prior to project construction.

Division 10 Construction-FEMA Coordination

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Division 10 Construction, Resident Engineer's Office – Bus Turnaround

School bus turnarounds will be provided on both sides of the bridge during construction. The location of the proposed bus turnarounds will be determined prior to project construction.

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	B-5377
W.B.S. No.	46092.1.FD1
Federal Project No.	BRZ-2170(6)

A. Project Description:

The purpose of this project is to replace Union County Bridge No. 157 on SR 2170 (Irby Rd.) over Polecat Creek. See Figure 1 for the project vicinity and Figure 2 for the project study area. The existing structure will be replaced with a new bridge. Bridge No. 157 is 31 feet long with a 19-foot, 2-inch clear roadway width. The replacement structure will be a bridge approximately 55 feet long providing a minimum 24-foot clear deck width. The bridge will include two 10-foot lanes and 3-foot 6-inch offsets. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The approach roadway will extend approximately 205 feet from the southwest end of the new bridge and 190 feet from the northeast end of the new bridge, a total distance of 450 feet. The approaches will include a 20-foot pavement width providing two 10-foot lanes. Three-foot grass shoulders will be provided on each side of the roadway. The roadway will be designed as a Rural Local Route using NCDOT's *Sub Regional Tier Design Guidelines for Bridge Projects* (2008) with a 60-mile per hour design speed. See Appendix A for the proposed design.

Traffic will be detoured off-site during construction (see Figure 1).

B. Purpose and Need:

The purpose of the proposed project is to replace a structurally deficient and functionally obsolete bridge which is in need of replacement. NCDOT Bridge Management Unit records indicate Bridge No. 157 has a sufficiency rating of 21.3 out of a possible 100 for a new structure.

The single span bridge was built in 1960 and is composed of a timber deck on I-beams with timber caps, piles, and bulkheads as end bents. The bridge is considered structurally deficient due to substructure condition appraisal of 3 out of 9 according to Federal Highway Administration (FHWA) standards. The bridge also meets the criteria for functionally obsolete bridges due to a structural evaluation rating of 3 out of 9 and a deck geometry appraisal of 2 out of 9. The bridge is approaching the end of its useful life and is in need of replacement. Replacement of the bridge will result in safer traffic operations.

The bridge replacement is needed because components of Bridge No. 157 has components that have experienced an increasing degree of deterioration that can be no longer be addressed by reasonable maintenance activities.

The superstructure and substructure of Bridge No. 157 have timber elements that are 56 years old. Timber components have a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. Rehabilitation of a timber structure is generally practical only when a few elements are damaged or prematurely deteriorated. However, past a certain degree of deterioration, most timber elements become impractical to maintain and upon eligibility are programmed for replacement.

C. Proposed Improvements:

Circle one or more of the following Type II improvements which apply to the project:

1. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).
 - a. Restoring, Resurfacing, Rehabilitating, and Reconstructing pavement (3R and 4R improvements)
 - b. Widening roadway and shoulders without adding through lanes
 - c. Modernizing gore treatments
 - d. Constructing lane improvements (merge, auxiliary, and turn lanes)
 - e. Adding shoulder drains
 - f. Replacing and rehabilitating culverts, inlets, and drainage pipes, including safety treatments
 - g. Providing driveway pipes
 - h. Performing minor bridge widening (less than one through lane)
 - i. Slide Stabilization
 - j. Structural BMP's for water quality improvement

2. Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.
 - a. Installing ramp metering devices
 - b. Installing lights
 - c. Adding or upgrading guardrail
 - d. Installing safety barriers including Jersey type barriers and pier protection
 - e. Installing or replacing impact attenuators
 - f. Upgrading medians including adding or upgrading median barriers
 - g. Improving intersections including relocation and/or realignment
 - h. Making minor roadway realignment
 - i. Channelizing traffic
 - j. Performing clear zone safety improvements including removing hazards and flattening slopes
 - k. Implementing traffic aid systems, signals, and motorist aid
 - l. Installing bridge safety hardware including bridge rail retrofit

3. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings.
 - a. Rehabilitating, reconstructing, or replacing bridge approach slabs
 - b. Rehabilitating or replacing bridge decks
 - c. Rehabilitating bridges including painting (no red lead paint), scour repair, fender systems, and minor structural improvements
 - d. Replacing a bridge (structure and/or fill)
4. Transportation corridor fringe parking facilities.
5. Construction of new truck weigh stations or rest areas.
6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.
7. Approvals for changes in access control.
8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.
9. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.
10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.
11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.
12. Acquisition of land for hardship or protective purposes, advance land acquisition loans under section 3(b) of the UMT Act. Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.
13. Acquisition and construction of wetland, stream and endangered species mitigation sites.
14. Remedial activities involving the removal, treatment or monitoring of soil or groundwater contamination pursuant to state or federal remediation guidelines.

D. Special Project Information:

The estimated costs, based on 2016 prices, are as follows:

Structure	\$164,000
Roadway Approaches	\$103,000
Structure Removal	\$14,000
Improvements Along Offsite Detour	\$20,000
Misc. and Mob.	\$73,000
Eng. and Contingencies	\$52,000
Total Construction Cost	\$426,000
Right-of-way Costs	\$21,000
Total Project Cost	\$447,000

Note - There are no utility conflicts and no utility costs with this project.

Estimated Traffic:

Current	-	300 vpd
Year 2035	-	600 vpd
TTST	-	Minimal
Dual	-	Minimal

Accidents: Traffic Engineering has evaluated a recent five-year period (2009-2014) and found no accidents occurring in the vicinity of the project.

Design Exceptions: The sag curves (“K” factor) do not meet the Subregional tier guidelines. These exceptions will have to go through the Director of Preconstruction. An exception request will be submitted with the 25 percent plans.

Pedestrian and Bicycle Accommodations: This portion of SR 2170 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. Pedestrian and bicycle activity in the area is minimal to none. Neither permanent nor temporary bicycle/pedestrian accommodations are required for this project.

Bridge Demolition: Bridge No. 157 is constructed entirely of timber and steel and should be possible to remove with no resulting debris in the water based on standard demolition practices.

Alternatives Discussion:

No Build – The no build alternative would result in eventually closing the road. The no build alternative would not meet the purpose and need for the project.

Rehabilitation – The bridge was constructed in 1960 and the timber materials within the bridge are reaching the end of their useful life. Rehabilitation would require replacing the timber components which would constitute effectively replacing the bridge.

Offsite Detour – Bridge No. 157 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during construction. The offsite detour route is five miles long and utilizes SR 2170, SR 2169 (Prospect Rd.), and SR 2146 (Plyler Mill Rd.). The detour for the average road user would result in just under five minutes additional travel time (about 3 miles additional travel). Up to a one-year duration of construction is expected on this project. This is within the acceptable delay standards outlined in the *NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects* (2004).

Considering detour guidelines and the criteria above, based on delay alone, the detour is acceptable. Union County Emergency Medical Services, Union County Emergency Management Department, and Union County Public Schools Transportation have indicated that an offsite detour is acceptable. NCDOT Division 10 has indicated that Union County Bridge No. 159 on SR 2169 over Polecat Creek may not be sufficient to carry the weight of detouring heavier vehicles. The installation of an additional bent to this bridge is recommended and has been included in the cost estimate for this project. In addition, Division 10 recommends providing bus turnarounds on either side of the bridge during construction. With these modifications to the detour route, NCDOT Division 10 concurs with the use of the detour.

Onsite Detour – An onsite detour was not evaluated due to the presence of an acceptable offsite detour.

Staged Construction – Staged construction was not considered because of the availability of an acceptable offsite detour.

New Alignment – Given that the alignment for SR 2170 is acceptable, a new alignment was not considered as an alternative.

Agencies Contacted:

Union County, Rocky River Rural Planning Organization, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, NC Department of Environmental Quality, and U.S. Environmental Protection Agency were contacted and had no comments on this project. Agency comments received are provided in Appendix B.

Public Involvement:

A letter was sent by the Location and Surveys Unit to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date.

A newsletter has been sent to all those living along SR 2170 between its intersection with SR 2169 and its intersection with SR 2146. No comments have been received to date. Based on responses to the newsletter and the Location and Surveys Unit correspondence, a Public Meeting was determined to be unnecessary.

E. Threshold Criteria

The following evaluation of threshold criteria must be completed for Type II actions

<u>ECOLOGICAL</u>	<u>YES</u>	<u>NO</u>
(1) Will the project have a substantial impact on any unique or important natural resource?	<input type="checkbox"/>	<u>X</u>
(2) Does the project involve habitat where federally listed endangered or threatened species may occur?	<input checked="" type="checkbox"/>	<u> </u>
(3) Will the project affect anadromous fish?	<input type="checkbox"/>	<u>X</u>
(4) If the project involves wetlands, is the amount of permanent and/or temporary wetland taking less than one-tenth (1/10) of an acre and have all practicable measures to avoid and minimize wetland takings been evaluated?	<u>X</u>	<input type="checkbox"/>
(5) Will the project require the use of U. S. Forest Service lands?	<input type="checkbox"/>	<u>X</u>
(6) Will the quality of adjacent water resources be adversely impacted by proposed construction activities?	<input type="checkbox"/>	<u>X</u>
(7) Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)?	<input type="checkbox"/>	<u>X</u>
(8) Will the project require fill in waters of the United States in any of the designated mountain trout counties?	<input type="checkbox"/>	<u>X</u>
(9) Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?	<input type="checkbox"/>	<u>X</u>

PERMITS AND COORDINATION

	<u>YES</u>	<u>NO</u>
(10) If the project is located within a CAMA county, will the project significantly affect the coastal zone and/or any "Area of Environmental Concern" (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(11) Does the project involve Coastal Barrier Resources Act resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(12) Will a U. S. Coast Guard permit be required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(13) Could the project result in the modification of any existing regulatory floodway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(14) Will the project require any stream relocations or channel changes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES

	<u>YES</u>	<u>NO</u>
(15) Will the project induce substantial impacts to planned growth or land use for the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(16) Will the project require the relocation of any family or business?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(17) Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(18) If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(19) Will the project involve any changes in access control?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(20) Will the project substantially alter the usefulness and/or land use of adjacent property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(21) Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(22) Is the project included in an approved thoroughfare plan and/or Transportation Improvement Program (and is, therefore, in conformance with the Clean Air Act of 1990)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(23) Is the project anticipated to cause an increase in traffic volumes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(24) Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- (25) If the project is a bridge replacement project, will the bridge be replaced at its existing location (along the existing facility) and will all construction proposed in association with the bridge replacement project be contained on the existing facility?
- (26) Is there substantial controversy on social, economic, or environmental grounds concerning the project?
- (27) Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?
- (28) Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?
- (29) Will the project affect any archaeological remains which are important to history or pre-history?
- (30) Will the project require the use of Section 4(f) resources (public parks, recreation lands, wildlife and waterfowl refuges, historic sites, or historic bridges, as defined in Section 4(f) of the U. S. Department of Transportation Act of 1966)?
- (31) Will the project result in any conversion of assisted public recreation sites or facilities to non-recreation uses, as defined by Section 6(f) of the Land and Water Conservation Act of 1965, as amended?
- (32) Will the project involve construction in, across, or adjacent to a river designated as a component of or proposed for inclusion in the National System of Wild and Scenic Rivers?

F. Additional Documentation Required for Unfavorable Responses in Part E

Scientific Name	Common Name	Federal Status	County	Biological Conclusion
<i>Rhus michauxii</i>	Michaux's sumac	Endangered	Union	No Effect
<i>Helianthus schweinitzii</i>	Schweinitz's sunflower	Endangered	Union	No Effect
<i>Lasmigona decorata</i>	Carolina heelsplitter	Endangered	Union	Unresolved

Response to Question 2: Suitable habitat for the Michaux's sumac and Schweinitz's sunflower is present in the study area along roadside shoulders and utility easements. Surveys were conducted throughout areas of suitable habitat on September 27, 2016. No individuals of Michaux's sumac or Schweinitz's sunflower were observed. A review of NCNHP records, updated October 17, 2016, indicates no known occurrences of either species within 1.0 mile of the study area. Because suitable habitat is present but no individuals were observed during field survey and no known occurrences are found within 1.0 mile, the proposed project would have no effect on Michaux's sumac or Schweinitz's sunflower.

Habitat for the Carolina heelsplitter may be present within Polecat Creek. The NCDOT Biological Surveys Group will conduct screening and surveys for the Carolina heelsplitter prior to project construction.

Response to Question 13: Union County is a participant in the Federal Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). The project is within **a Flood Hazard Zone, designated as Zone AE, for which the 100-year base flood elevations and corresponding regulatory floodway have been established.** The Hydraulic Unit will coordinate with FEMA to determine if a Conditional Letter of Map Revision (CLOMR) and a subsequent final Letter of Map Revision (LOMR) are required for this project. If required, the Division will submit sealed as-built construction plans to the Hydraulic Unit upon project completion certifying the project was built as shown on the construction plans.

G. CE Approval

TIP Project No.	B-5377
W.B.S. No.	46092.1.FD1
Federal Project No.	BRZ-2170(6)

Project Description:

The purpose of this project is to replace Union County Bridge No. 157 on SR 2170 (Irby Rd.) over Polecat Creek.

Categorical Exclusion Action Classification:

TYPE II(A)
 TYPE II(B)

Approved:

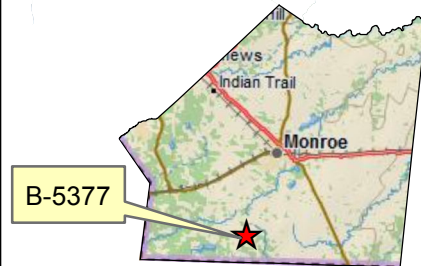
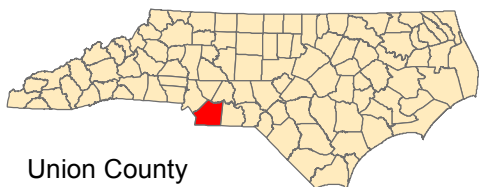
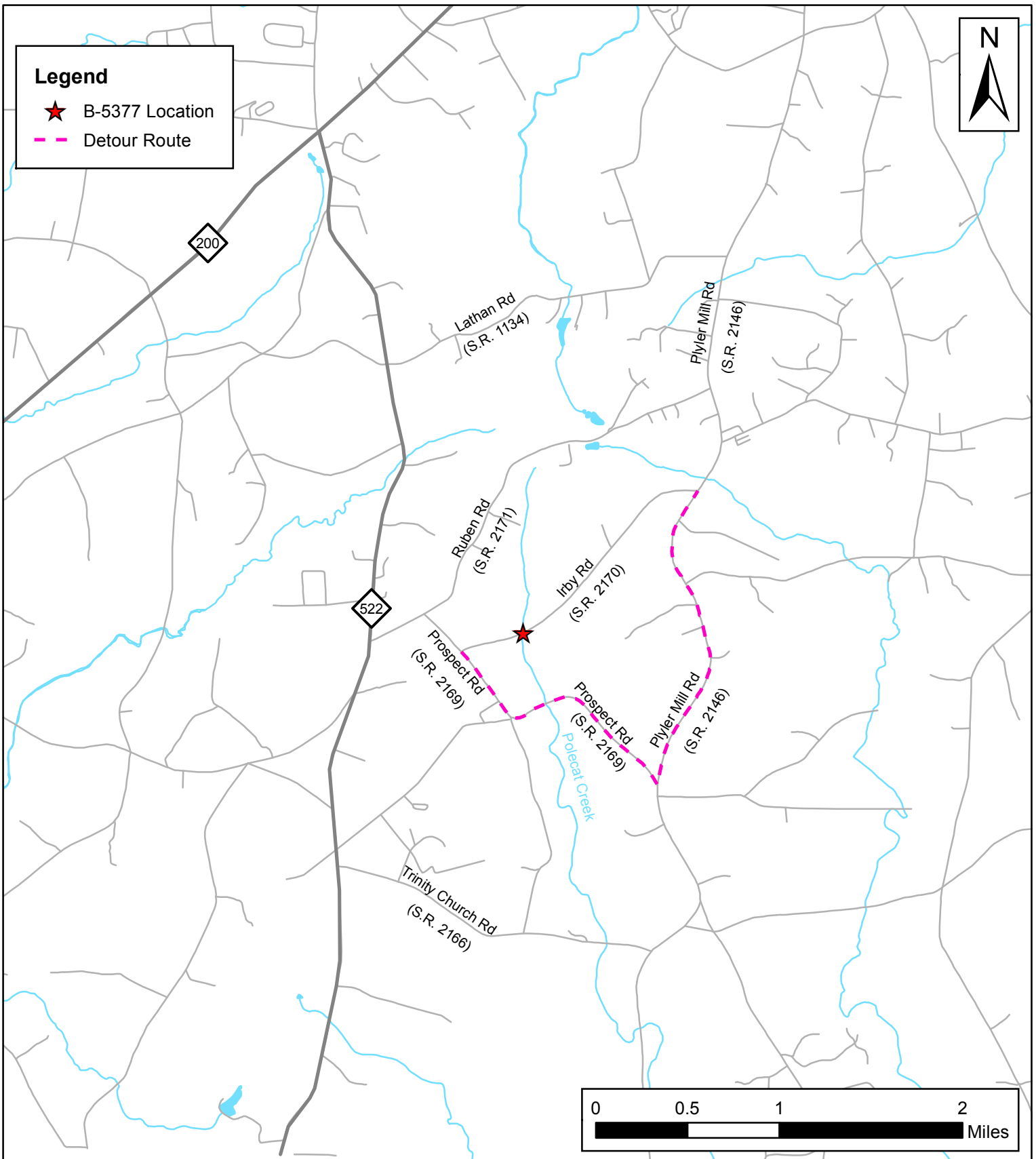
3/10/17 Beverly G. Robinson
 Date Beverly G. Robinson, CPM
 Project Engineer
 Project Development and Environmental Analysis Unit

3/10/17 Eugene Parascio
 Date Eugene Parascio
 Project Planning Engineer
 Project Development and Environmental Analysis Unit

3/10/17 William B. Kerr
 Date William Kerr, AICP
 Consultant Project Manager
 Michael Baker Engineering

For Type II(B) projects only:

3/15/17 John F. Sullivan, III
 Date John F. Sullivan, III, PE, Division Administrator
 Federal Highway Administration




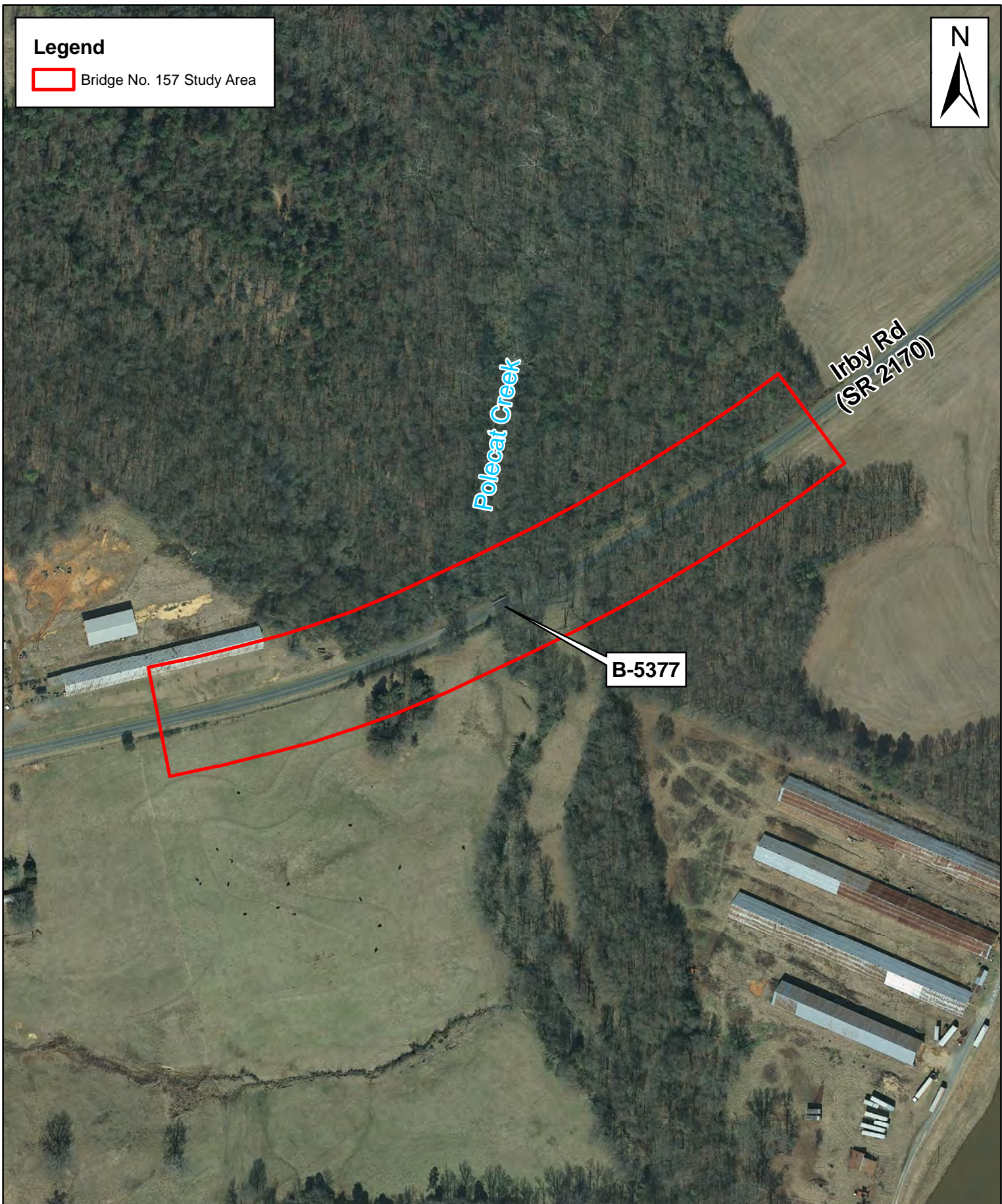
**Figure 1 - Vicinity Map
Replacement Bridge No. 157
STIP No. B-5377**



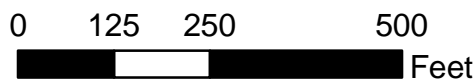
NC Department of Transportation
Project Development and
Environmental Analysis Unit

Legend

 Bridge No. 157 Study Area



NC Department of Transportation
Project Development and
Environmental Analysis Unit



**Figure 2 - Study Area Map
Replacement Bridge No. 157
on SR 2170 over Polecat Creek
STIP No. B-5377**

APPENDIX A

FUNCTIONAL DESIGN

5/14/99

UNION COUNTY B-5377 REPLACE IN PLACE WITH OFFSITE DETOUR

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. B-5377	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

Michael Baker INTERNATIONAL

FOR -L- PROFILE SEE SHEET 5

 BRIDGE APPROACH SLAB

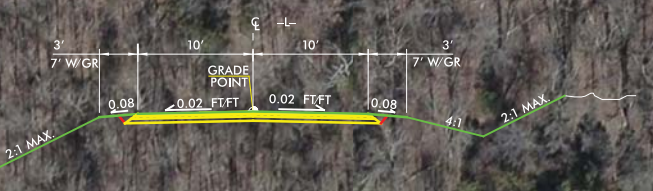


(ENGLISH)

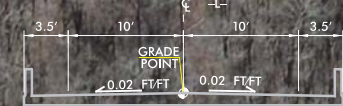
PI Sta 16+92.70
 $\Delta = 15^{\circ} 38' 46.6"$ (LT)
 $D = 2^{\circ} 18' 42.3"$
 $L = 676.82'$
 $T = 340.53'$
 $R = 2,478.46'$
 $DS = > 60$ mph

PI Sta 25+44.33
 $\Delta = 1^{\circ} 25' 37.8"$ (LT)
 $D = 1^{\circ} 43' 12.0"$
 $L = 664.37'$
 $T = 333.29'$
 $R = 3,331.16'$
 $DS = > 60$ mph

ANTICIPATED DESIGN DATA	
DESIGN STANDARDS	= SUBREGIONAL TIER
DESIGN SPEED	= 60 MPH (STAT. 55 mph)
ADT 2014	= 300
ADT 2035	= 600
DHV	= TBD
DUAL	= TBD
TTST	= TBD
MIN. RADIUS	= 1500'
MAX. GRADE	= 6 %
K SAG	= 136
K CREST	= 151
SE MAX.	= 0.04
CLASSIFICATION	= RURAL LOCAL
TERRAIN	= ROLLING
DESIGN EXCEPTION FACTOR	= YES (VERT. 'K')



ROADWAY TYPICAL SECTION



BRIDGE TYPICAL

5/14/99

APPENDIX B

CORRESPONDENCE

14-12-0020



**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT OR AFFECTED 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: **B-5377** County: **Union**
 WBS No: **46092.1.FD1** Document: **PCE or CE**
 F.A. No: **BRZ-2170(6)** Funding: State Federal

Federal Permit Required? Yes No Permit Type: ?

Project Description:

This project calls for the replacement of Bridge No. 157 on SR 2170 (Irby Road) over Polecat Creek in Union County. According to the Request for Cultural Resources Review form, the proposed project length is approximately 1,450 feet (441.96 m). Existing right-of-way (ROW) is 60 feet (18.29 m) wide, but no proposed ROW for the project has been determined. A 200-foot (60.96-m) wide study corridor has been proposed to cover any potential new ROW. Thus, the area of potential effects (APE), for the purposes of the current archaeological review, is estimated to encompass an area of nearly 6.66 acres (2.69 hectares).

SUMMARY OF ARCHAEOLOGICAL FINDINGS

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

- There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects.**
- No subsurface archaeological investigations are 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.
- There are no National Register Eligible or Listed ARCHAEOLOGICAL SITES present or affected by this project. (Attach any notes or documents as needed)**

14-12-0020

RECOMMENDATION

An archaeological survey and evaluation of the proposed replacement of Bridge No. 157 in Union County was conducted on March 3, 2015, by New South Associates. During the course of the survey, no previously unidentified sites were located within the project APE. No further archaeological investigations are needed for this project. I concur with this recommendation, as the proposed bridge replacement project will not impact significant archaeological resources. If the project expands and impacts subsurface areas beyond the defined APE, further archaeological consultations will be necessary.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos
 Other: Shovel Test Results Table

Signed:



March 25, 2015

Shane C. Petersen
NCDOT ARCHAEOLOGIST

Date

14-12-0020



ARCHAEOLOGICAL SURVEY REQUIRED FORM

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



PROJECT INFORMATION

Project No: **B-5377** County: **Union**
 WBS No: **46092.1.FD1** Document: **PCE or CE**
 F.A. No: **BRZ-2170(6)** Funding: State Federal

Federal Permit Required? Yes No Permit Type: ?

Project Description: NCDOT Division 10 intends to replace Bridge No. 157 on SR 2170, Irby Road, over Polecat Creek. According to the Request for Cultural Resources Review form, the proposed project length is approximately 1450 feet (441.96 meters). Existing right-of-way (ROW) is 60 feet (nearly 18.29 meters) wide, but no proposed ROW for the project has been determined. A 200-foot (60.96-meter) wide study corridor has been proposed to cover any potential new ROW. Thus, the area of potential effects (APE), for the purposes of the current archaeological review, is estimated to encompass an area of nearly 6.66 acres (more than 2.69 hectares).

SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: *SURVEY REQUIRED*

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

A review of the site maps and files archived at the North Carolina Office of State Archaeology was conducted on January 8, 2015. While no previously identified archaeological sites are recorded within the proposed APE, some of the landforms within the proposed project area appear to have potential for archaeological resources. Additionally, an examination of the Union County soil maps suggests that on some of those landforms may not have suffered significant erosion or soil deflation. An archaeological survey of the project area should address these questions.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Other: NRCS web soil survey information (<http://websoilsurvey.nrcs.usda.gov/app/>)

FINDING BY NCDOT ARCHAEOLOGIST – *SURVEY REQUIRED*

January 15, 2015

NCDOT ARCHAEOLOGIST

Date

Proposed fieldwork completion date

14-12-0020



HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

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

PROJECT INFORMATION

Project No:	B-5377	County:	Union
WBS No.:	46092.1.FD1	Document Type:	PCE or CE
Fed. Aid No:	BRZ-2170(6)	Funding:	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	
Project Description: Replace Bridge No. 157 on SR 2170 (Irby Rd) over Polecat Creek.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on December 18, 2014. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is 600' from each end of the bridge and 100' from the centerline each way. There are several frame outbuildings, which appear to be chicken houses, within the APE. They are not eligible for National Register listing. In addition, Bridge No. 157 is not eligible for NR listing. There are no National Register listed or eligible properties, and no survey is required. If design plans change, additional review will be required.

Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:

HPO quad maps and GIS information recording NR, SL, LD, DE, and SS properties for the Union County survey, Union County GIS/Tax Information, and Google Maps are considered valid for the purposes of determining the likelihood of historic resources being present. There are no National Register listed or eligible properties within the APE and no survey is required.

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Kate Hubert

12/18/2014

NCDOT Architectural Historian

Date

Input from Local Officials

Local Contact: Tim Adams, Interim Director, Union County EMS

Contact Date: December 2, 2014

- The proposed project is expected to have a little to no impact on EMS services, assuring that 911 is aware of roadway closings and EMS is notified appropriately.
- Additional potential contacts for this project are: Local District VFD, Sandy Ridge VFD.

Local Contact: Joseph T. Lesch, Sr. Transportation Planner, Union County Planning Dept.

Contact Date: January 6, 2015

- The project would have no impact on local planning objectives.
- It would be best to complete the project outside of the traditional school year as much as possible.
- Union County adopted a Multimodal Transportation Plan in November, 2014 which calls for 3-foot shoulders along NC 522 (but none on Irby Road) to accommodate bicycles and pedestrians.

Local Contact: Mandy Benton, Monroe County Schools TIMS Coordinator

Contact Date: January 21, 2015

- The proposed project will have a low impact on school transportation services.
- A total of 6 buses make 8 daily trips within the project corridor.
- Ms. Benton has no knowledge of concerns with the condition/capacity of potential detour routes, or the location of resources along these routes.

Local Contact: Donald Moye, Union County Emergency Management Coordinator

Contact Date: January 9, 2015

- The project is expected to have a low impact on emergency response services.
- An additional contact is Larry Brinker, 911 Communications Director.