

## **PROJECT COMMITMENTS**

**Union County  
Bridge No. 21 on SR 1681  
Over Stewarts Creek  
Federal Aid Project No. BRZ-1681(3)  
W.B.S. No. 46091.1.FD1  
T.I.P. No. B-5376**

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

In order to have time to adequately reroute school busses, 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 Stewarts 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**

A school bus turnaround will be provided during construction of the proposed bridge. It is anticipated that the turnaround will be located between the bridge and SR 1627 (New Salem Road).

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	<b>B-5376</b>
W.B.S. No.	<b>46091.1.FD1</b>
Federal Project No.	<b>BRZ-1681(3)</b>

A. Project Description:

The purpose of this project is to replace Union County Bridge No. 21 on SR 1681 (Old Camden Road) over Stewarts 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. 21 is 151 feet long. The replacement structure will be a bridge approximately 160 feet long providing a minimum 30-foot 10-inch clear deck width. The bridge will include two 11-foot lanes and 5-foot 5-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 337 feet from the south end of the new bridge and 500 feet from the north end of the new bridge, a total distance of approximately 1,000 feet. The approaches will include a 28-foot pavement width providing two 11-foot lanes. Three-foot paved 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 50-mile per hour design speed. See Appendix A for the proposed design.

Traffic will be detoured offsite during the construction period (see Figure 1).

B. Purpose and Need:

The purpose of the proposed project is to replace a structurally deficient bridge. NCDOT Bridge Management Unit records indicate the bridge has a sufficiency rating of 20 out of a possible 100 for a new structure.

The bridge is a 5-span bridge built in 1964 and is composed of precast prestressed concrete channels, precast pier caps, and timber piers encased in concrete. The bridge is considered structurally deficient due to a superstructure condition appraisal rating of 4 out of 9 and a substructure condition appraisal rating of 5 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. 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 Bridge 21 has components that have experienced an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities.

The substructure of Bridge No. 21 has components that are 52 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:

Structures	\$526,000
Utilities	\$134,000
Roadway Approaches	\$328,000
Structure Removal	\$54,000
Misc. & Mob.	\$255,000
Eng. and Contingencies	\$202,000
Total Construction Cost	\$1,499,000
Right-of-way Costs	\$44,000
Utility Relocation Costs	\$169,000
Total Project Cost	\$1,712,000

**Estimated Traffic:**

Current	-	1,300 vpd
Year 2040	-	1,700 vpd
TTST	-	1%
Dual	-	5%

**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), as well as the project length, will not meet the Subregional tier guidelines. These exceptions will have to go through the NCDOT Director of Preconstruction. An exception request will be submitted with the 25 percent plans.

**Pedestrian and Bicycle Accommodations:** This portion of SR 1681 (Old Camden Rd.) is classified as an on-road bicycle facility that needs improvement by the Charlotte Regional Transportation Planning Organization (CRTPO) in their Comprehensive Transportation Plan. This multimodal transportation plan recommends three-foot paved shoulders to accommodate on-road pedestrian activity and bicycle traffic on SR 1681. Although NCDOT Division of Bicycle and Pedestrian Transportation policy establishes a minimum of four-foot wide paved shoulder to accommodate bicyclists, three-foot paved shoulders are included in the project design as requested by the CRTPO.

**Bridge Demolition:** Bridge No. 21 includes a superstructure composed of precast prestressed concrete beams and can be removed by standard techniques with no resulting fill. The substructure is composed of timber piers encased in concrete (in-water). The timber piers will be removed by standard techniques. The concrete footings do not need to be removed for environmental reasons; however, if they are removed, removal should be done under dry conditions.

## **Alternatives Discussion:**

**No Build** – The No Build alternative was not selected because it would not meet the purpose and need and would result in eventually closing Bridge No. 21 which is unacceptable given this section of SR 1681 carries approximately 1,300 vpd and is projected to carry 1,700 vpd by the design year (2040).

**Rehabilitation** – Bridge No. 21 was constructed in 1964. The timber materials and the concrete channels within the bridge are reaching the end of their useful life. Rehabilitation would require replacing the timber components and the concrete channels, which would constitute effectively replacing the bridge.

**Offsite Detour** – Bridge No. 21 will be replaced on the existing alignment and traffic will be detoured offsite for approximately one year during construction (see Figure 1). The detour route is approximately six miles long and utilizes SR 1681, SR 1006 (Olive Branch Rd.), SR 1628 (Austin Chaney Rd.), and SR 1627 (New Salem Rd.). The detour for the average road user would result in seven minutes additional travel time (about 5 miles additional travel). This is within “evaluation” standards outlined in the *NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects* (2004).

Based on the detour guidelines, the criteria above indicates that on the basis of delay alone, the detour requires further evaluation of project variables to determine acceptability. The following additional factors were considered in determining the need for an offsite detour route. 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 the condition of all roads, bridges, and intersections along the detour are acceptable without improvement and concur with the use of the detour. Division 10 recommends providing a school bus turnaround between Bridge No. 21 and SR 1627 (New Salem Road). See Appendix B for input from local agencies.

**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 the availability of an acceptable offsite detour, a new alignment was not considered as an alternative.

## **Agencies Contacted:**

Union County, CRTPO, City of Monroe, 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.

**Public Involvement:**

A letter was sent by the NCDOT 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 1681 between the intersection with SR 1006 and the intersection with SR 1627. No comments have been received to date. Based on responses to the newsletter and 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 (USTs) or hazardous materials sites?	<input type="checkbox"/>	<u>  X  </u>

PERMITS AND COORDINATION

YES

NO

(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)?

X

(11) Does the project involve Coastal Barrier Resources Act resources?

X

(12) Will a U. S. Coast Guard permit be required?

X

(13) Could the project result in the modification of any existing regulatory floodway?

(14) Will the project require any stream relocations or channel changes?

X

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES

YES

NO

(15) Will the project induce substantial impacts to planned growth or land use for the area?

X

(16) Will the project require the relocation of any family or business?

X

(17) Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?

X

(18) If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?

X

(19) Will the project involve any changes in access control?

X

(20) Will the project substantially alter the usefulness and/or land use of adjacent property?

X

(21) Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?

X

(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)?

X

(23) Is the project anticipated to cause an increase in traffic volumes?

X

(24) Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?

X

- (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?  X
- (26) Is there substantial controversy on social, economic, or environmental grounds concerning the project?   X
- (27) Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?  X
- (28) Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?   X
- (29) Will the project affect any archaeological remains which are important to history or pre-history?   X
- (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)?   X
- (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?   X
- (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?   X

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 Stewarts 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-5736  
W.B.S. No. 46091.1.FD1  
Federal Project No. BRZ-1681(3)

Project Description:

The purpose of this project is to replace Union County Bridge No. 21 on SR 1681 (Old Camden Road) over Stewarts Creek.

Categorical Exclusion Action Classification:

   TYPE II(A)  
  X TYPE II(B)

Approved:

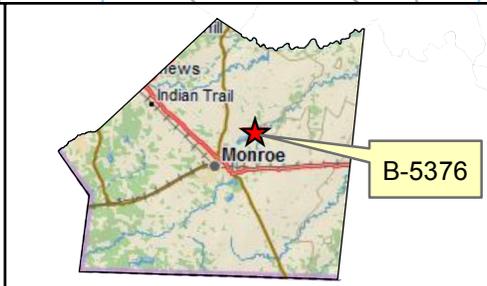
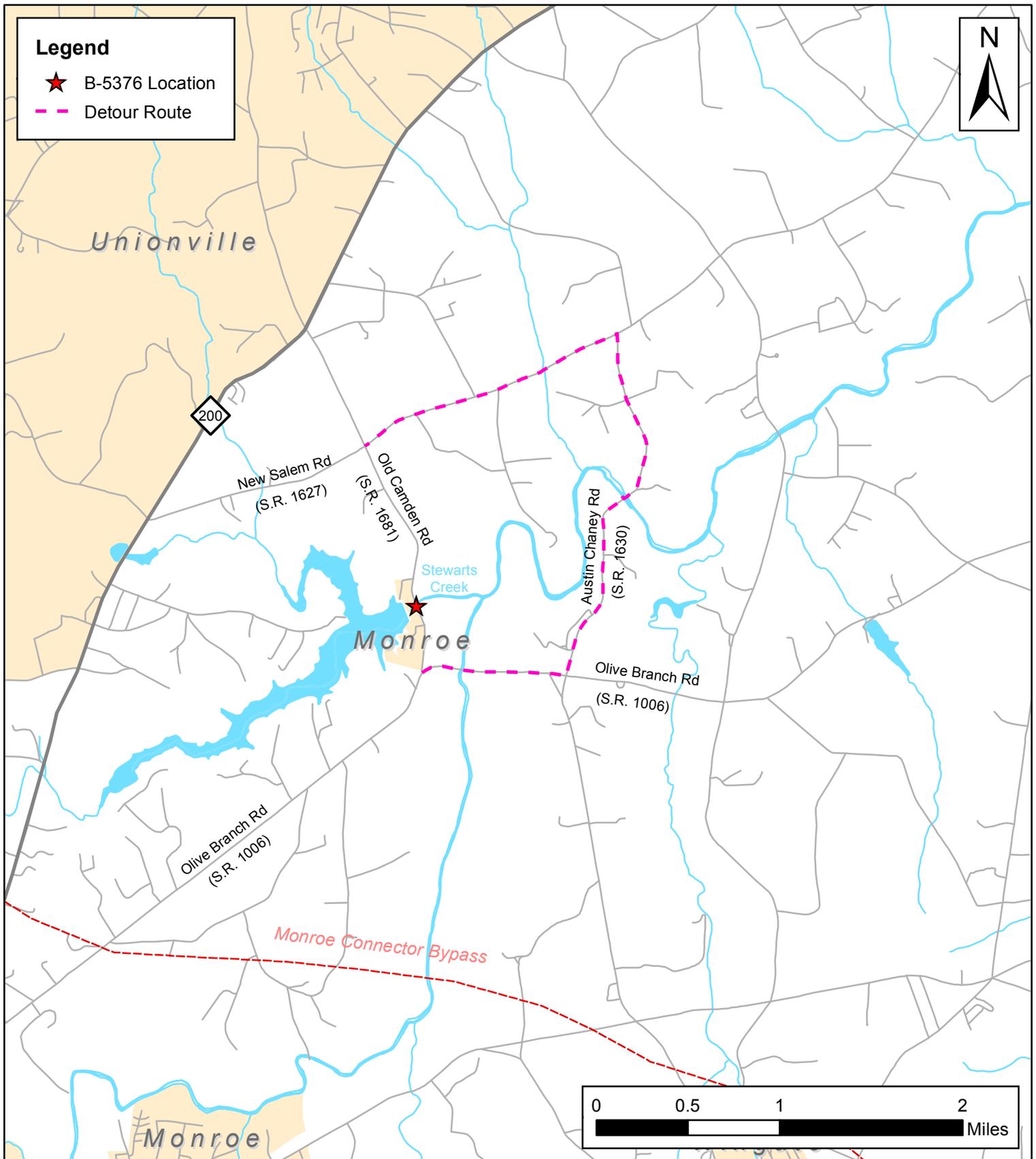
2/16/17  
Date Beverly G. Robinson  
Beverly G. Robinson, CPM  
Project Engineer  
Project Development and Environmental Analysis Unit

2/16/17  
Date Eugene Tarascio  
Eugene Tarascio  
Project Planning Engineer  
Project Development and Environmental Analysis Unit

2/16/17  
Date William B. Kerr  
William Kerr, AICP  
Consultant Project Manager  
Michael Baker Engineering

For Type II(B) projects only:

2/21/17  
Date John F. Sullivan, III  
John F. Sullivan, III, PE, Division Administrator  
Federal Highway Administration



**Figure 1 - Vicinity Map  
Replacement Bridge No. 21  
STIP No. B-5376**

NC Department of Transportation  
Project Development and  
Environmental Analysis Unit

**Legend**

 Bridge No. 21 Study Area



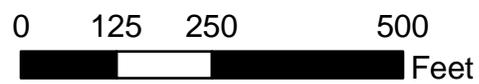
Old Camden Rd  
(SR 1681)

Stewarts Creek

B-5376



NC Department of Transportation  
Project Development and  
Environmental Analysis Unit



**Figure 2 - Study Area Map  
Replacement Bridge No. 21  
on SR 1681 over Stewarts Creek  
STIP No. B-5376**

# APPENDIX A

## FUNCTIONAL DESIGN

5/14/99

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. B-5376	SHEET NO. 4
RW 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

PI Sta 28+02.69  
 $\Delta = 26^{\circ} 07' 04.3" (RT)$   
 $D = 5^{\circ} 49' 40.6"$   
 $L = 448.15'$   
 $T = 228.04'$   
 $R = 983.12'$   
 $DS = 50 \text{ mph}$

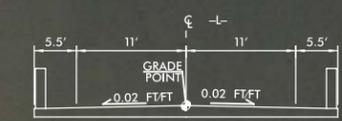
**UNION COUNTY**  
**B-5376**  
**REPLACE IN PLACE**  
**WITH OFFSITE DETOUR**



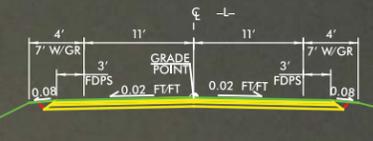
PI Sta 16+41.45  
 $\Delta = 31^{\circ} 00' 24.0" (LT)$   
 $D = 7^{\circ} 29' 50.0"$   
 $L = 413.58'$   
 $T = 211.99'$   
 $R = 764.23'$   
 $DS = 45 \text{ mph}$

ANTICIPATED DESIGN DATA	
DESIGN STANDARDS	= SUBREGIONAL TIER
DESIGN SPEED	= 50 MPH (POSTED 45 MPH)
ADT 2014	= 1300
ADT 2040	= 1700
DHV	= 55%
DUAL	= 5%
TTST	= 1%
MIN. RADIUS	= 926'
MAX. GRADE	= 8%
K SAG	= 96
K CREST	= 84
SE MAX.	= 0.04
CLASSIFICATION	= RURAL LOCAL
TERRAIN	= ROLLING
DESIGN EXCEPTION	= YES (VERT. 'K' FACTOR)

**LAKE TWITTY**



BRIDGE TYPICAL



ROADWAY TYPICAL SECTION



(ENGLISH)

## APPENDIX B

### CORRESPONDENCE

14-12-0021



## 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

<b>Project No:</b>	B-5376	<b>County:</b>	Union
<b>WBS No.:</b>	46091.1.FD1	<b>Document Type:</b>	PCE or CE
<b>Fed. Aid No:</b>	BRZ-1681(3)	<b>Funding:</b>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	
<b>Project Description:</b> Replace Bridge No. 21 on SR 1681 (Old Camden Rd) over Stewarts 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 19, 2014. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which 600' from each end of the bridge and 100' from the centerline each way. There is a dam with various concrete operation buildings directly west of the bridge; they are unremarkable and not eligible for National Register listing. In addition, Bridge No. 21 is not eligible for National Register 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 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

12/19/2014

NCDOT Architectural Historian

Date

14-12-0021



## 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-5376** County: **Union**  
 WBS No: **46091.1.FD1** Document: **PCE or CE**  
 F.A. No: **BRZ-1681(3)** Funding:  State  Federal

Federal Permit Required?  Yes  No Permit Type: ?

**Project Description:** NCDOT Division 10 intends to replace Bridge No. 21 on SR 1681, Old Camden Road, over Stewart's Creek. According to the Request for Cultural Resources Review form, the proposed project length is approximately 1500 feet (472.44 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 7.12 acres (roughly 2.88 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

14-12-0021



**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-5376** County: **Union**  
 WBS No: **46091.1.FD1** Document: **PCE or CE**  
 F.A. No: **BRZ-1681(3)** Funding:  State  Federal

Federal Permit Required?  Yes  No Permit Type: ?

#### **Project Description:**

*This project calls for the replacement of Bridge No. 21 on SR 1681 (Old Camden Road) over Stewart's Creek in Union County. According to the Request for Cultural Resources Review form, the proposed project length is approximately 1,500 feet (472.44 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 7.12 acres (2.88 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)**

**14-12-0021**

**RECOMMENDATION**

An archaeological survey and evaluation of the proposed replacement of Bridge No. 21 in Union County was conducted on March 4, 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

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**Shane C. Petersen**  
**NCDOT ARCHAEOLOGIST**

**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: Unionville VFD, Wingate 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 Old Camden Road to accommodate bicycles and pedestrians. Provisions for these modes should be included in the replacement bridge design.
- Additional potential contacts for this project are the Town of Unionville and the City of Monroe.
- Old Camden Road is identified on Union County's Comprehensive Transportation Plan (CTP) as a minor thoroughfare that needs improvement.

**Local Contact:** Curtis Bridges, Principal Planner, Charlotte Regional Transportation Organization

**Contact Date:** January 26, 2015

- The proposed project will have no impact on local planning objectives.
- Mr. Bridges has no knowledge of concerns with the condition/capacity of potential detour routes, or the location of resources along these routes.
- No greenway bicycle or transit facilities are planned along the proposed detour route.
- This project is within a Census Tract with an above average percentage of low-income residents.
- Additional potential contacts for this project are representatives of the City of Monroe.

**Local Contact:** Mandy Benton, Monroe County Schools TIMS Coordinator

**Contact Date:** January 21, 2015

- The proposed project will have a moderate impact on school transportation services.
- A total of 11 buses make 23 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.
- Additional potential contacts for this project are representatives of the City of Monroe.
- Advance notice of roadway closures is required due to required extensive route changes.

**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.

**Local Contact:** Lisa Stiwinter, City of Monroe Planning Director  
**Contact Date:** January 21, 2015

- The proposed project will have no impact on local planning objectives.
- There are no known development plans in the vicinity of the project.