

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	<b>B-4823</b>
W.B.S. No.	<b>38593.1.2</b>
Federal Project No.	<b>BRZ-1538(9)</b>

A. Project Description:

The purpose of this project is to replace Transylvania County Bridge No. 12 on Becky Mountain Road (SR 1538) over Hogsed Creek. Bridge No. 12 is 26 feet long. The replacement structure will consist of a triple barrel, 11-foot wide by 6-foot high reinforced concrete box culvert. The culvert size is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately one foot higher than the existing grade.

The approach roadway will extend approximately 230 feet from the north end of the new culvert and 237 feet from the south end of the new culvert. The approaches will be widened to include a 20-foot pavement width providing two 10-foot lanes. Three-foot grass shoulders will be provided on each side (7-foot shoulders where guardrail is included). The roadway will be designed with NCDOT's Sub Regional Tier Guidelines with a 45 mile per hour design speed.

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

B. Purpose and Need:

NCDOT Bridge Management Unit records indicate Bridge No. 12 has a sufficiency rating of 43 out of a possible 100 for a new structure.

With a deck geometry rating of 2, the bridge is considered functionally obsolete according to Federal Highway Administration (FHWA) standards. The bridge had temporary shoring put in place in 2014 to keep the bridge sound until replacement.

The posted weight limit on the bridge is down to 14 tons for single vehicles and 19 tons for truck-tractor semi-trailers. Bridge No. 12 currently carries 600 vehicles per day with 700 vehicles per day projected for 2040. In addition the superstructure and substructure of Bridge No. 12 have timber elements that are fifty-five years old. Timber components have a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. The bridge is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

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 2015 prices, are as follows:

Structure 3@11ft. Wx6 ft. H – 40’L RCBC	\$108,000
Roadway Approaches	133,000
Structure Removal	13,000
Misc. & Mob.	58,000
Eng. & Contingencies	63,000
Total Construction Cost	\$375,000
Right-of-way Costs	44,000
Utilities – no impacts from this project	0
Total Project Cost	\$419,000

**Estimated Traffic:**

Current	-	617 vpd
Year 2040	-	700 vpd
TTST	-	1%
Dual	-	2%

**Accidents:** Traffic Engineering has evaluated a recent three year period and found one accidents occurring in the vicinity of the project. There were no safety recommendations from the Safety Review performed by NCDOT’s traffic safety unit.

**Design Exceptions:** There are no anticipated design exceptions for this project.

**Pedestrian and Bicycle Accommodations:** This portion of SR 1538 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. Neither permanent nor temporary bicycle/pedestrian accommodations are required for this project.

**Bridge Demolition:** Bridge No. 12 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/Traffic Maintenance Discussion:**

**No Build** – The no build alternative would result in eventually closing the road which is unacceptable given the volume of traffic served by SR 1718.

**Rehabilitation** – The bridge was constructed in 1961 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. 12 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user

resulting from the offsite detour. Becky Mountain Rd (SR 1538) connects to US 276 on both ends and thus US 276 is the only other road on the detour. The majority of traffic on the road is local traffic with destinations ranging from 2 to 4 miles south of the bridge site. The detour for the average road user would result in 12 minutes additional travel time (6.4 miles additional travel). Up to a 6-month duration of construction is expected on this project.

Based on the Guidelines, the criteria above indicate that on the basis of delay alone, the detour is acceptable. Based on coordination with Division 14, Transylvania County Emergency Services along with Transylvania County Schools Transportation have also indicated that the detour is acceptable. NCDOT Division 14 has also indicated the condition of all roads, bridges and intersections on the offsite detour are acceptable without improvement and 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 1538 is acceptable, a new alignment was not considered as an alternative.

**Structure Type:** The current structure is a bridge built in 1961 and has a drainage area of 3.4 square miles. The reason for building a bridge was not because a culvert would not work but because the design, materials and labor were not practical in the time when this structure was built. Based on the drainage area and design discharges, a 3 @ 11-foot wide by 6-foot high reinforced concrete box culvert was determined to be adequate from a hydraulics standpoint. There will be sills at the inlet and outlet only. The outer sills will be 2 feet high with floodplain benches. The inner barrel will have a 1 foot high sill acting as a low flow channel. The culvert will be designed such that the slope, low flow velocities and low flow channel designs are consistent with the existing stream. Because culverts generally cost less, require less maintenance throughout their service life and last longer than bridges, a culvert is the preferred structure type.

**Other Agency Comments:**

The **N.C. Division of Water Quality** and **N.C. Wildlife Resources Commission** have recommended strong erosion controls measures due to the risk of turbidity violations in trout waters. In addition, all disturbances within trout buffers shall be conducted in accordance with the NC Division of Land Resources and NC Wildlife Resources Commission.

**Response:** NCDOT will implement Design Stands in Sensitive watersheds and a in-water work moratorium from October 15 to April 15<sup>th</sup> of any given year.

The **U.S. Fish & Wildlife Service** has expressed concerns regarding the Appalachian elktoe present just downstream from the project site.

**Response:** NCDOT is currently pursuing informal Section consultation with the USFWS. The expected outcome is that the project may affect but will not likely adversely affect the Appalachian elktoe. This consultation will be completed prior to the Let of the project.

Those having either no comment or no concerns were Transylvania County, the Army Corps of Engineers, the Eastern Band of Cherokee Indians, the Tennessee Valley Authority, NC Division of Parks and Recreation, the Environmental Protection Agency.

**Public Involvement:**

A landowner notification letter was sent by the Natural Environment Section to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date.

NCDOT has coordinated with one property holder who had concerns about this project because of the way a previous project was handled. Division 14 staff met with the gentleman and allayed his concerns regarding the project by sharing with him our present practices for right of way acquisition.

Based on a lack of other responses to the letter, no further public involvement is planned at this time.

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	<u>      </u>	<input type="checkbox"/>

- |     |  |                                     |                          |
|-----|--|-------------------------------------|--------------------------|
|     | to avoid and minimize wetland takings been evaluated?  | <u>N/A</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 checked="" type="checkbox"/> | <u>      </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**

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)? | <input type="checkbox"/> | <u>N/A</u> |
| (11) | Does the project involve Coastal Barrier Resources Act resources?  | <input type="checkbox"/> | <u>X</u>   |
| (12) | Will a U. S. Coast Guard permit be required?   | <input type="checkbox"/> | <u>X</u>   |
| (13) | Could the project result in the modification of any existing regulatory floodway?  | <input type="checkbox"/> | <u>X</u>   |
| (14) | Will the project require any stream relocations or channel changes?  | <input type="checkbox"/> | <u>X</u>   |

**SOCIAL, ECONOMIC, AND CULTURAL RESOURCES**

YES      NO

- |      |   |                          |                          |
|------|---|--------------------------|--------------------------|
| (15) | Will the project induce substantial impacts to planned growth or land use for the area?   | <input type="checkbox"/> | <u>X</u>                 |
| (16) | Will the project require the relocation of any family or business?  | <input type="checkbox"/> | <u>X</u>                 |
| (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"/> | <u>X</u>                 |
| (18) | If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?                        | <u>X</u>                 | <input type="checkbox"/> |

- |      |   |                          |                          |
|------|---|--------------------------|--------------------------|
| (19) | Will the project involve any changes in access control?   | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |
| (20) | Will the project substantially alter the usefulness and/or land use of adjacent property?   | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |
| (21) | Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?  | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |
| (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)?  | <u>  <b>X</b>  </u>      | <input type="checkbox"/> |
| (23) | Is the project anticipated to cause an increase in traffic volumes?   | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |
| (24) | Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?   | <u>  <b>X</b>  </u>      | <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? | <u>  <b>X</b>  </u>      | <input type="checkbox"/> |
| (26) | Is there substantial controversy on social, economic, or environmental grounds concerning the project?  | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |
| (27) | Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?   | <u>  <b>X</b>  </u>      | <input type="checkbox"/> |
| (28) | Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?  | <input type="checkbox"/> | <u>  <b>X*</b>  </u>     |
| (29) | Will the project affect any archaeological remains which are important to history or pre-history?   | <input type="checkbox"/> | <u>  <b>X*</b>  </u>     |
| (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)?             | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |
| (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?  | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |
| (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?   | <input type="checkbox"/> | <u>  <b>X</b>  </u>      |



F. Additional Documentation Required for Unfavorable Responses in Part E

**Endangered Species Habitat-** Response to Question 2

Habitat for the endangered Appalachian elktoe is present just downstream from the project site. A Informal section 7 consultation with USFWS is underway to address the concerns. The anticipated outcome is that the biological conclusion for the Appalachian elktoe will be “May Affect, Not Likely to Adversely Affect.”

There is no habitat for the Northern Long Eared bat and therefore “No Effect.”

**Mountain Trout Waters** – Response to Question 8

NCDOT will implement Design Stands in Sensitive watersheds and an in-water work moratorium from October 15 to April 15<sup>th</sup> of any given year. This should mitigate for concerns regarding trout.

**Historic Architecture** – Response to Question 28

Under the NCDOT’s Programmatic agreement with FHWA and the Historic Preservation Office, a screening was performed (1/09/2012) and yielded the result that a survey for historic architecture was required. The survey report indicated that there were no resources or historic concern present. The form documenting this was signed 10/19/12 and is attached.

**Archaeological Concerns** – Response to Question 29

Under the NCDOT’s Programmatic agreement with FHWA and the Historic Preservation Office, a screening was performed (1/09/2012) and yielded the result that a survey for historic architecture was required. The survey report indicated that there were no resources or historic concern present. The attached form dated 3/27/12 documents that No Prehistoric or historic properties would be affected by this project.

G. CE Approval

TIP Project No.	<u>B-4823</u>
W.B.S. No.	<u>38593.1.2</u>
Federal Project No.	<u>BRZ-1538(9)</u>

Project Description:

The purpose of this project is to replace Transylvania County Bridge No. 12 on Becky Mountain Road (SR 1538) over Hogsed Creek. Bridge No. 12 is 26 feet long. The replacement structure will consist of a triple barrel, 11-foot wide by 6-foot high reinforced concrete box culvert. The culvert size is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately one foot higher than the existing grade.


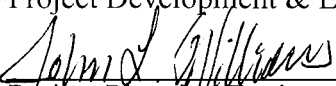
The approach roadway will extend approximately 230 feet from the north end of the new culvert and 237 feet from the south end of the new culvert. The approaches will be widened to include a 20-foot pavement width providing two 10-foot lanes. Three-foot grass shoulders will be provided on each side (7-foot shoulders where guardrail is included). The roadway will be designed with NCDOT's Sub Regional Tier Guidelines with a 45 mile per hour design speed.

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


Categorical Exclusion Action Classification:

<u>      </u>	TYPE II(A)
<u>  X  </u>	TYPE II(B)

Approved:

<u>4/1/16</u>	
Date	Project Engineer
	Project Development & Environmental Analysis Unit
<u>3-28-16</u>	
Date	Project Planning Engineer
	Project Development & Environmental Analysis Unit

For Type II(B) projects only:

<u>4-5-16</u>	
Date	John F. Sullivan, III, PE, Division Administrator
	for Federal Highway Administration

**PROJECT COMMITMENTS:**

**Transylvania County  
Bridge No. 12 on SR 1538  
Over Hogsed Creek  
Federal Aid Project No. BRZ-1538(9)  
W.B.S. No. 38593.1.2  
T.I.P. No. B-4823**

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

In order to have time to adequately reroute school busses, Transylvania County Schools will be contacted at least one month prior to road closure.

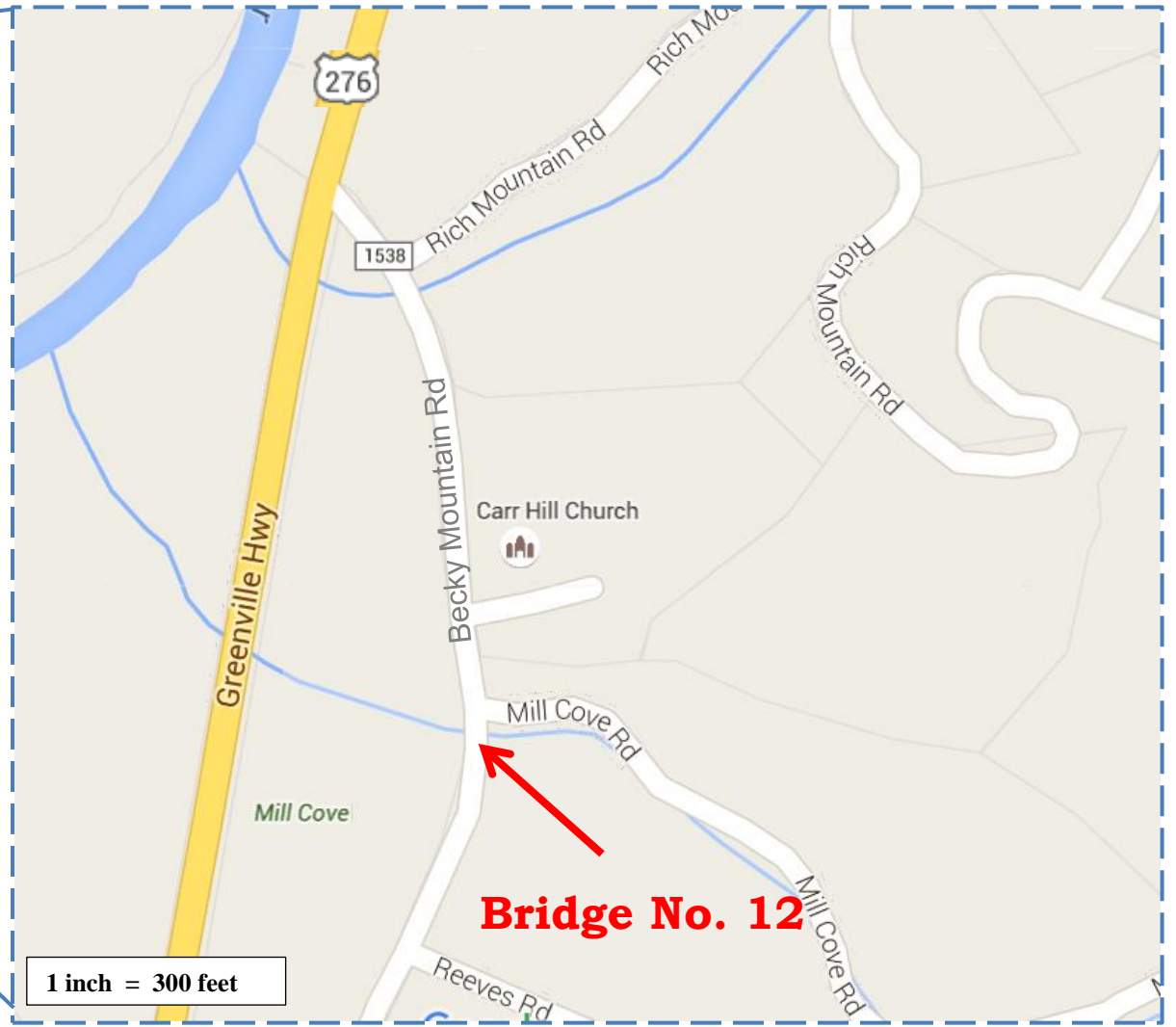
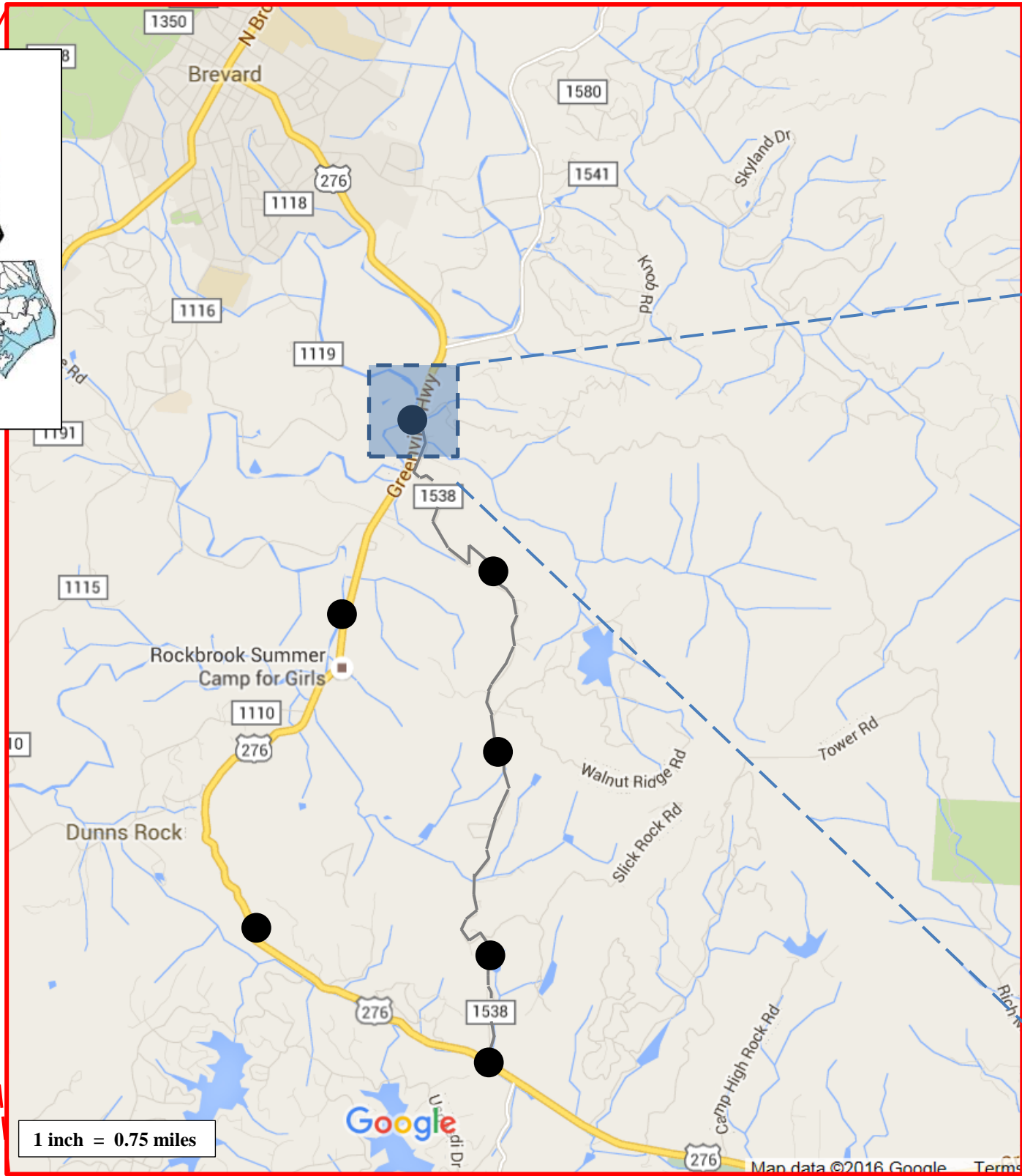
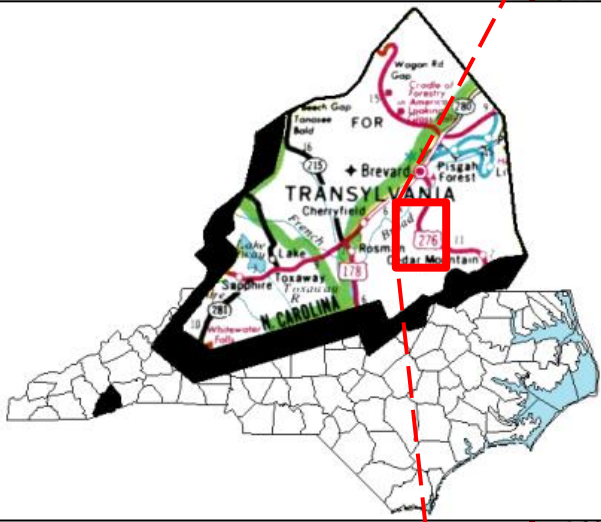
Transylvania County Emergency Services will be contacted at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

**PDEA – Formal Section 7 Consultation for the Appalachian elktoe**


The Natural Environment Section with assistance from Project Development will pursue a formal Section 7 Consultation with the USFWS for the endangered Appalachian elktoe. This consultation will be completed prior to permitting and must be completed prior to requesting construction authorization.

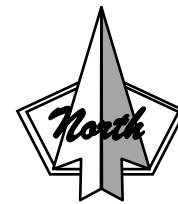
**All Design Groups/Division Resident Construction Engineer – Trout Issues**

- NCDOT will implement **Design Standards in Sensitive Watersheds** for this project
- NCDOT will observe a **moratorium** on in-water work from October 15 – April 15 of any given year.



**B-4823 - Replace Bridge No. 12 on Becky Mountain Rd (SR 1538) over Hogsed Creek in Transylvania County, North Carolina**

  
**Studied Detour Route**

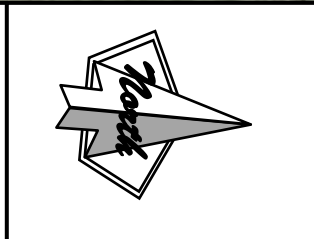


**Figure 1**



**B-4823 - Replace Bridge No. 12 on Becky Mountain Rd (SR 1538) over Hogsed Creek in Transylvania County, North Carolina**

**Scale: 1" = 100'**



**Figure 2**

**NO HISTORIC PROPERTIES PRESENT/AFFECTED FORM****PROJECT INFORMATION**

*Project No:* B-4823 *County:* Transylvania  
*WBS No:* 38593.1.2 *Document:* PCE/CE  
*F.A. No:* BRZ-1538 *Funding:*  State  Federal

*Federal (USACE) Permit Required?*  Yes  No *Permit Type:* Unknown

*Project Description:*

Replace Bridge 12 on SR 1538 (Becky Mountain Rd) over East Branch of French Broad River

**SUMMARY OF FINDINGS**

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

- There are no properties over fifty years old within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- All properties greater than 50 years of age located in the APE have been considered and all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.
- There are no historic properties present or affected by this project. (*Attach any notes or documents as needed*)

11-12-0042

## NO PREHISTORIC OR HISTORIC PROPERTIES PRESENT/AFFECTED FORM

### PROJECT INFORMATION

*Project No:* B-4823 *County:* Transylvania  
*WBS No:* 38593.1.2 *Document:* Categorical Exclusion  
*F.A. No:* BRZ-1538(9) *Funding:*  State  Federal  
*Federal (USACE) Permit Required?*  Yes  No *Permit Type:* Not yet known

#### *Project Description:*

*The project is for the replacement of Bridge No. 12 on SR 1538 (Becky Mountain Road) over Hogsed Creek (East Branch of the French Broad River). The archaeological Area of Potential Effect (APE) covers approximately 10 acres and is defined as a 1,800-foot (548.64 m) long corridor running along SR 1538. The corridor begins at the junction of SR 1538 and US 276 (Greenville Hwy), runs south for 830 feet (252.98 m) to Bridge No. 12 then continues south for another 970 feet (295.66 m). The corridor ranges from 190 feet (57.91 m) in width at either end to 300 feet (91.44 m) in width at the bridge. At its widest point, the APE extends 200 feet (60.96 m) west and 100 feet (30.48 m) east from the center of the bridge.*

### SUMMARY OF FINDINGS

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

#### Archaeology

- There are no National Register-listed or Study Listed properties 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 historic properties present or affected by this project. (*Attach any notes or documents as needed*)

**RECOMMENDATION**

An archaeological investigation of Bridge No. 12 on SR 1538 over Hogsed Creek in Transylvania County (TIP B-4823) was conducted on March 12–15, 2012, by Archaeological Consultants of the Carolinas, Inc. During the course of the survey, one previously recorded site (31TV609) was relocated within the current project APE. The portion of site 31TV609 within the APE has been recommended as ineligible for the NRHP, and no further archaeological investigations are needed for this project. I concur with this recommendation since the proposed bridge replacement 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), Photos, and Cultural Review provided by Archaeological Consultants of the Carolinas, Inc.

Signed:

  
C. Damon Jones  
Cultural Resources Specialist, NCDOT

3/27/12

Date