

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	<u>B-4475</u>
W.B.S. No.	<u>38380.1.1</u>
Federal Project No.	<u>BRZ-1119(3)</u>

A. Project Description:

The purpose of this project is to replace Columbus County Bridge No. 85 on SR 1119 over Tom's Fork Creek. Bridge No. 85 is 53 feet long. The replacement structure will be a bridge approximately 100 feet long providing a minimum 30-foot 10-inch clear deck width. The bridge will include two 10-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 165 feet from the south end of the new bridge and 135 feet from the north end of the new bridge. The approaches will be widened to include a 20-foot pavement width providing two 10-foot lanes. Six-foot grass shoulders will be provided on each side (9-foot shoulders where guardrail is included). The roadway will be designed as a Rural Local Route using Sub Regional Tier guidelines with a 60 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. 85 has a sufficiency rating of 26.2 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to a structural evaluation appraisal of 2 out of 9 and a substructure condition appraisal of 3 out of 9 according to Federal Highway Administration (FHWA) standards and therefore eligible for FHWA's Highway Bridge Program.

The superstructure and substructure of Bridge No. 85 have timber elements that are sixty-five 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. Timber components of Bridge No. 85 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities; therefore the bridge is approaching the end of its useful life.

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 2012 prices, are as follows:

Structure (Bridge & Approach Slabs)	\$ 282,000
Roadway Approaches	\$ 111,000
Detour Structure and Approaches	- 0 -
Structure Removal	\$ 25,000
Misc. & Mob.	\$ 96,000
Eng. & Contingencies	\$ 86,000
Total Construction Cost	\$ 600,000
Right-of-way Costs	\$ 5,000
Utility Costs	\$ 43,000
Total Project Cost	\$ 648,000

Estimated Traffic:

Current	-	800 vpd
Year 2035	-	1400 vpd
TTST	-	1%
Dual	-	2%

Accidents: Traffic Engineering has evaluated a recent three year period and found no accidents occurring in the vicinity of the project.

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

Pedestrian and Bicycle Accommodations: This portion of SR 1119 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. Sidewalks do not exist on the existing bridge and there is no indication of pedestrian usage on or near the bridge. Neither permanent or temporary bicycle nor pedestrian accommodations are required for this project.

Bridge Demolition: Bridge No. 85 is constructed entirely of timber 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 which is unacceptable given the volume of traffic served by SR 1119.

Rehabilitation – The bridge was constructed in 1947 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. 85 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. The offsite detour for this project would include SR 1125, NC 904, and SR 1135. The majority of traffic on the road is through traffic. The detour for the average road user would result in 4 minutes additional travel time (2.9 miles additional travel). Up to a 12-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. Columbus County Emergency Services along with Columbus County Schools Transportation have also indicated that the detour is acceptable. NCDOT Division 6 has indicated that 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 1119 is acceptable, a new alignment was not considered as an alternative.

Other Agency Comments:

The N.C. Division of Water Quality, in a letter dated May 4, 2009, recommends that highly protective sediment and erosion control Best Management Practices be implemented to reduce the risk nutrient runoff to Tom's Fork Creek.

Response: NCDOT will adhere to BMPs for sediment and erosion control.

Public Involvement:

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

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"/>	<input checked="" type="checkbox"/>
(2) Does the project involve habitat where federally listed endangered or threatened species may occur?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Will the project affect anadromous fish?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(5) Will the project require the use of U. S. Forest Service lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6) Will the quality of adjacent water resources be adversely impacted by proposed construction activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(7) Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(8) Will the project require fill in waters of the United States in any of the designated mountain trout counties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(9) Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>PERMITS AND COORDINATION</u>	<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"/>

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| (13) | Could the project result in the modification of any existing regulatory floodway? | <input checked="" type="checkbox"/> | _____ |
| (14) | Will the project require any stream relocations or channel changes? | <input type="checkbox"/> | <u> X </u> |

YES NO

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES

- | | | | |
|------|---|--------------------------|--------------------------|
| (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> X </u> |
| (20) | Will the project substantially alter the usefulness and/or land use of adjacent property? | <input type="checkbox"/> | <u> X </u> |
| (21) | Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness? | <input type="checkbox"/> | <u> X </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> X </u> | <input type="checkbox"/> |
| (23) | Is the project anticipated to cause an increase in traffic volumes? | <input type="checkbox"/> | <u> X </u> |
| (24) | Will traffic be maintained during construction using existing roads, staged construction, or on-site detours? | <u> X </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> X </u> | <input type="checkbox"/> |
| (26) | Is there substantial controversy on social, economic, or environmental grounds concerning the project? | <input type="checkbox"/> | <u> X </u> |
| (27) | Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project? | <u> X </u> | <input type="checkbox"/> |

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|------|---|--------------------------|--------------|
| (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> X </u> |
| (29) | Will the project affect any archaeological remains which are important to history or pre-history? | <input type="checkbox"/> | <u> X </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> X </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> X </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> X </u> |

F. Additional Documentation Required for Unfavorable Responses in Part E

Response to Question 2: Suitable habitat for the Rough-leaf loosestrife and Cooley's meadowrue is present in the project study area. Surveys were conducted on July 17, 2009. No individuals of either species were identified during the survey. A review of the NC National Heritage Program records (updated January 5, 2012) indicates no known populations of Rough-leaf loosestrife or Cooley's meadowrue within 1.0 mile of the study area. The biological conclusion for both species remains "No Effect."

Response to Question 13: Columbus County is a participant in the National Flood Insurance Regular Program, administered by the Federal Emergency Management Agency (FEMA). Tom's Fork Creek is included in a limited detailed flood study. The proposed bridge will be an "in-kind" replacement providing equivalent or improved conveyance at the crossing, therefore a Conditional Letter of Map Revision (CLOMR) is not anticipated.

G. CE Approval

TIP Project No.	<u>B-4475</u>
W.B.S. No.	<u>38380.1.1</u>
Federal Project No.	<u>BRZ-1119(3)</u>

Project Description:

The purpose of this project is to replace Columbus County Bridge No. 85 on SR 1119 over Tom's Fork Creek. Bridge No. 85 is 53 feet long. The replacement structure will be a bridge approximately 100 feet long providing a minimum 30-foot 10-inch clear deck width. The bridge will include two 10-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 165 feet from the south end of the new bridge and 135 feet from the north end of the new bridge. The approaches will be widened to include a 20-foot pavement width providing two 10-foot lanes. Six-foot grass shoulders will be provided on each side (9-foot shoulders where guardrail is included). The roadway will be designed as a Rural Local Route using Sub Regional Tier guidelines with a 60 mile per hour design speed.

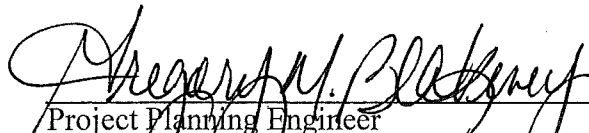
Traffic will be detoured off-site during construction (see Figure 1).

Categorical Exclusion Action Classification:

 TYPE II(A)
 X TYPE II(B)

Approved:


4/3/12
Date


Project Planning Engineer
Project Development & Environmental Analysis Unit

4-3-12
Date



Project Engineer
Project Development & Environmental Analysis Unit

4/3/12
Date


Bridge Project Development Engineer
Project Development & Environmental Analysis Unit

For Type II(B) projects only:

4/3/12
Date


John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

PROJECT COMMITMENTS:

**Columbus County
Bridge No. 85 on SR 1119 over Tom's Fork Creek
Federal Aid Project No. BRZ-1119(3)
W.B.S. No. 38380.1.1
T.I.P. No. B-4475**

All standard procedures and measures, including NCDOT's Best Management Practices for Protection of Surface Waters, Guidelines for Best Management Practices for Bridge Demolition and Removal, will be implemented, as applicable, to avoid or minimize environmental impacts. The following special commitments have been agreed to by NCDOT:

Division 6 Construction:

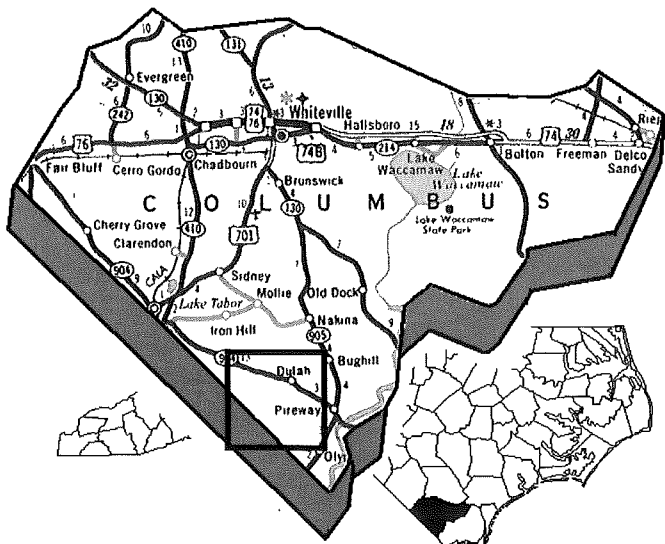
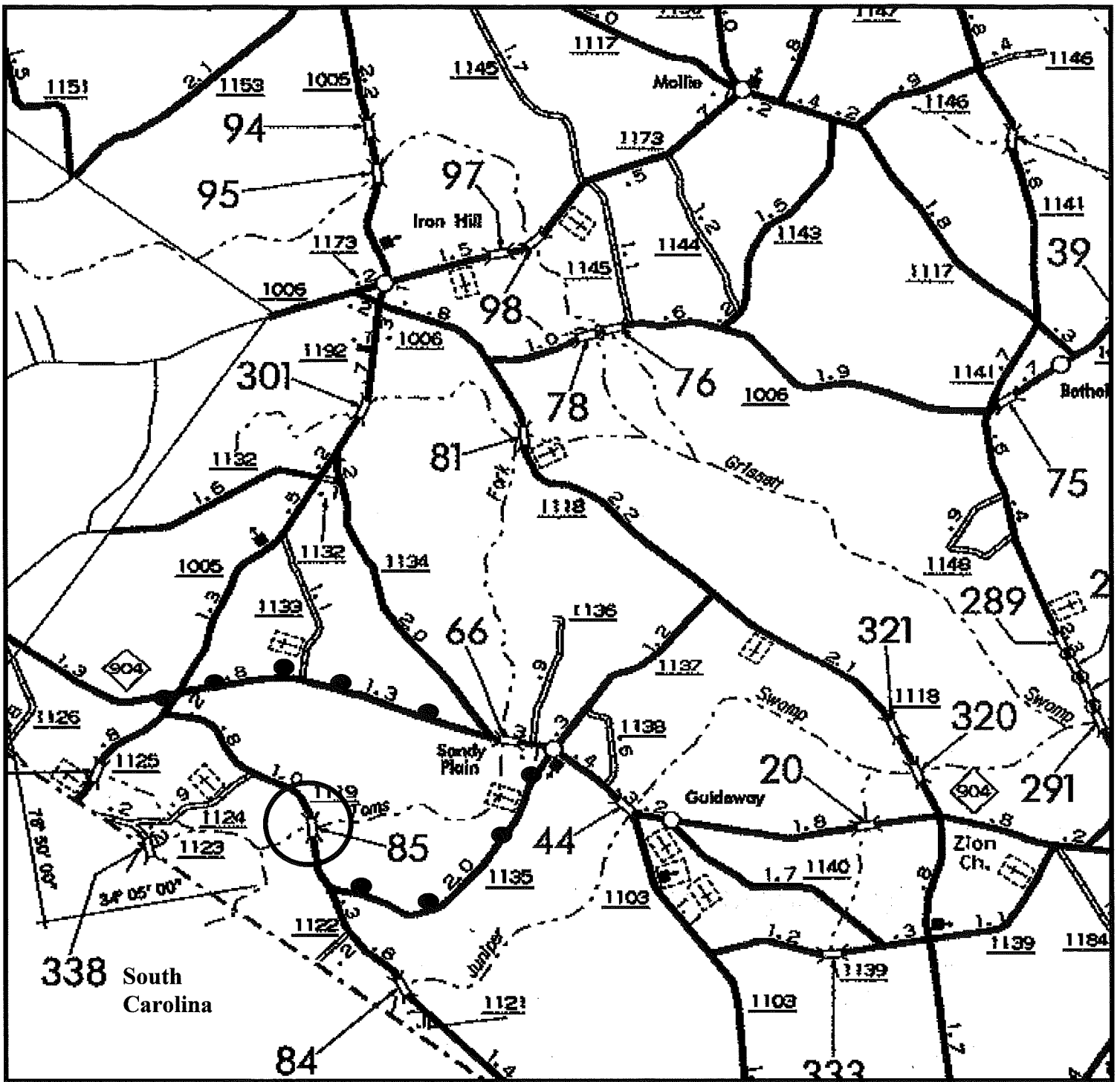
In order to allow Emergency Management Services (EMS) time to prepare for road closure, the NCDOT Resident Engineer will notify the Director of the Columbus County EMS at (910) 640-6610 of the bridge removal 30 days prior to road closure.


In order to allow Columbus County Schools to prepare for road closure, the NCDOT Resident Engineer will notify the Transportation Director at (910) 642-5168 of the bridge removal 30 days prior to road closure.

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.

Hydraulic Unit – FEMA Coordination:

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).



STUDIED DETOUR ROUTE	
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
	COLUMBUS COUNTY REPLACE BRIDGE NO. 85 ON SR 1119 OVER TOM'S FORK CREEK B-4475
Figure 1	



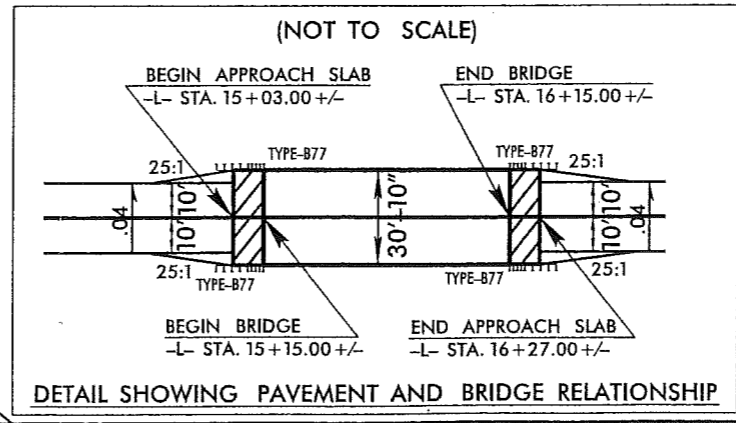
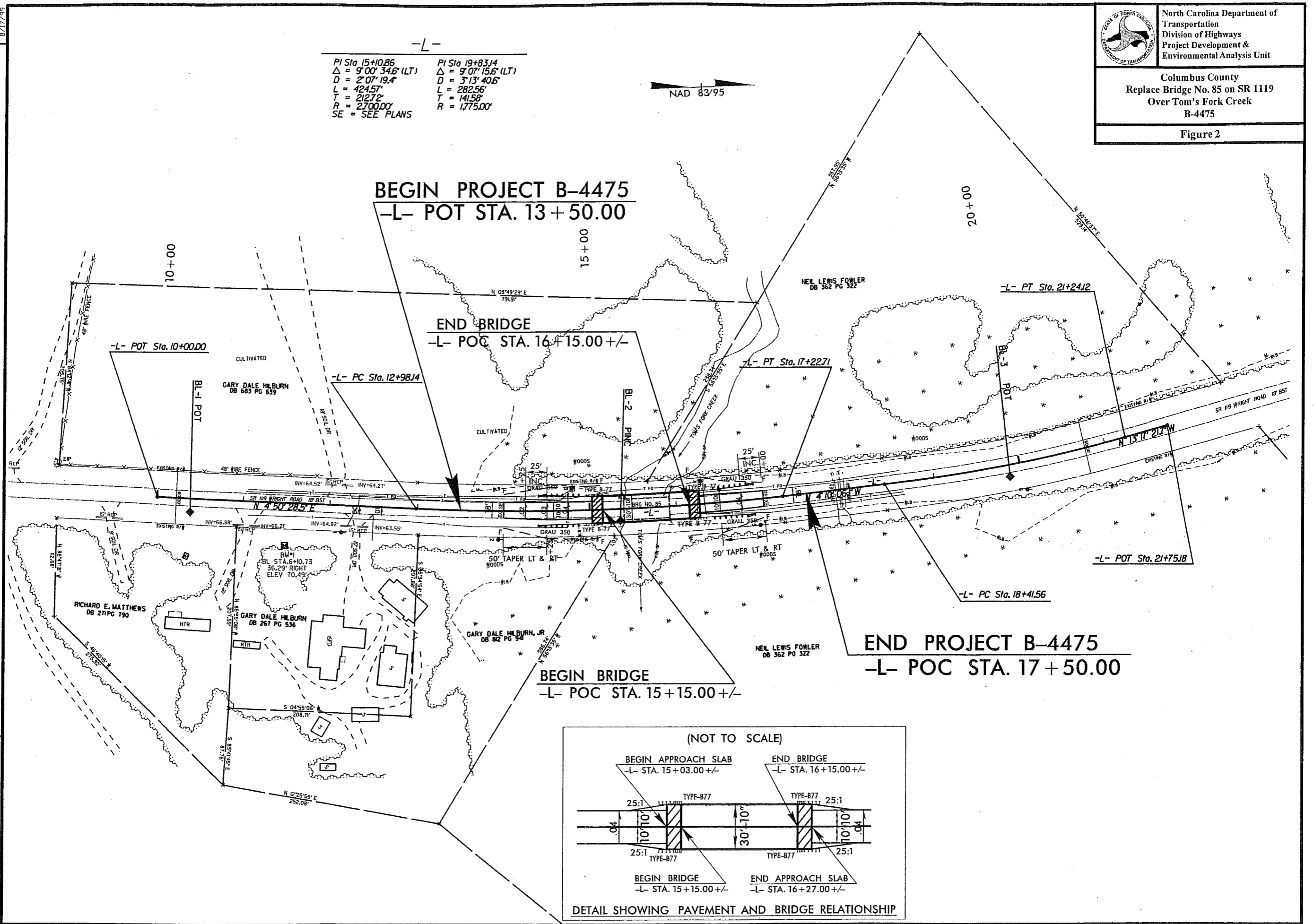
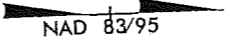
North Carolina Department of
Transportation
Division of Highways
Project Development &
Environmental Analysis Unit

Columbus County
Replace Bridge No. 85 on SR 1119
Over Tom's Fork Creek
B-4475

Figure 2

-L-

PI Sta 15+10.86	PI Sta 19+83.14
$\Delta = 9^{\circ}00'34.6"$ (LT)	$\Delta = 9^{\circ}07'15.6"$ (LT)
D = 2'07'19.4"	D = 3'13'40.6"
L = 424.57'	L = 282.56'
T = 212.72'	T = 141.58'
R = 2700.00'	R = 1775.00'
SE = SEE PLANS	



REVISIONS

B/17/99

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North Carolina Department of Environment and Natural Resources

Division of Water Quality
Coleen H. Sullins
Director

RECEIVED
Division of Highways

MAY - 6 2009

Preconstruction
Project Development and
Environmental Analysis Branch
Secretary

Beverly Eaves Perdue
Governor

May 4, 2009

MEMORANDUM

TO: Gregory Blakeney, NCDOT PDEA Bridge Project Development Unit

FROM: Rob Ridings, NC DWQ Transportation Permitting Unit *RR*

SUBJECT: **Scoping Review of NCDOT's Division 6 Proposed Bridge Replacement Projects: B-4475 & B-4478 (Columbus County), and B-4738 (Cumberland County).**

In reply to your correspondence dated April 30, 2009 in which you requested comments for the above referenced projects, the NC Division of Water Quality offers the following comments:

Project-Specific Comments

B-4475, Bridge 85 over Tom's Fork [15-17-1-10], Columbus County

B-4478, Bridge 216 over Welch Creek [15-4-5], Columbus County

B-4738, Bridge 189 over Buckhead Creek [18-31-24-6], Cumberland County

1. Tom's Fork and Welch Creek are class C; Sw waters of the State. Buckhead Creek is class C waters of the State. DWQ is very concerned with sediment and erosion impacts that could result from these projects. DWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to these waters.

General Comments Regarding Bridge Replacement Projects

1. DWQ is very concerned with sediment and erosion impacts that could result from these projects. NC DOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
2. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3687/Nationwide Permit No. 6 for Survey Activities.
3. If a bridge is being replaced with a hydraulic conveyance other than another bridge, DWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp. of Engineers to determine the required permit(s).

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 2321 Crabtree Blvd., Raleigh, North Carolina 27604
Phone: 919-733-1786 \ FAX: 919-733-6893
Internet: <http://h2o.enr.state.nc.us/ncwetlands/>

One
North Carolina
Naturally

4. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.
5. Whenever possible, the DWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the stream banks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allow for human and wildlife passage beneath the structure, do not block fish passage and do not block navigation by canoeists and boaters.
6. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NC DWQ *Stormwater Best Management Practices*.
7. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
8. Bridge supports (bents) shall not be placed in the stream when possible.
9. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
10. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
11. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NC DWQ. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
12. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
13. In most cases, the DWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour shall be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills shall be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas. \
14. Any anticipated dewatering or access structures necessary for construction of bridges should be addressed in the CE. It is understood that final designs are not determined at the time the CE is developed. However, the CE should discuss the potential for dewatering and access measures necessary due to bridge construction.

General Comments if Replacing the Bridge with a Culvert

1. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and

placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

2. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
3. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures shall be properly designed, sized and installed.
3. Any anticipated bank stabilization associated with culvert installations or extensions should be addressed in the Categorical Exclusion (CE) document. It is understood that final designs are not determined at the time the CE is developed. However, the CE should discuss the potential for bank stabilization necessary due to culvert installation.

Thank you for requesting our input at this time. The DOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Rob Ridings at 919-733-9817.

cc: Richard Spencer, US Army Corps of Engineers, Washington Field Office
Jim Rerko, Division 6 Environmental Officer
Ken Averitte, DWQ Fayetteville Regional Office
File Copy

Bridge Construction CFY 2013-2014

SHPO Number	TIP	Project	County	Division	Project Engineer	Archaeological Survey	Architectural Survey
ER 08-2610	B-4475	Bridge 85 on SR 1119 over Tom's Fork Creek	Columbus	6	G. Blakeney	No	No
ER 08-2611	B-4478	Bridge 216 on SR 1700 over Welches Creek	Columbus	6	G. Blakeney	No	No
ER 08-2613	B-5153	Bridges 97 & 98 on SR 1173 over Grissett Swamp	Columbus	6	G. Blakeney	Removed from list,	No

Previously reviewed,

A- (NC) MWR/BSS 1-12-09

S- (ND) 11/7/08 ces

Pat B Sandburn 11/2/10

Due 12/31/08