STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 1, 2004

MEMORANDUM TO: Mr. Ron Watson, P.E.
Division 14 Engineer

FROM: Philip S. Harris, P.E., Manager
Office of the Natural Environment
Project Development and
Environmental Analysis Branch

SUBJECT: Transylvania County, Replace Bridge Number 116 on SR 1105 over Glady Fork Creek; State Work Order Number 8.2001201; TIP Number B-3914

Attached are the U. S. Army Corps of Engineers Regional Permit No. 23 and No. 33 for the construction of the above referenced project. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

cc: Mr. Art McMillan, P.E.
Mr. Omar Sultan
Mr. Jay Bennett, P.E.
Mr. David Chang, P.E.
Mr. Randy Garris, P.E.
Mr. Greg Perfetti, P.E.
Mr. Mark Staley
Mr. John Sullivan, FHWA
Mr. Mark Davis, Division 14 DEO

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.DOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

PROJECT COMMITMENTS

Transylvania County
Bridge No. 116 on SR 1105
Over Glady Fork Creek
Federal Project BRZ-1105 (9)
State Project 8.2001201
TIP No. B-3914

Commitments Developed Through Project Development and Design

Roadside Environmental Unit, Division 14 Construction, Structure Design Unit
Bridge Demolition: Best Management Practices for Bridge Demolition & Removal will be implemented. The Bridge is composed entirely of timber. Therefore, Bridge No. 116 will be removed without dropping any components into Waters of the United States.

Division 14 Construction
Under no circumstances should rock, sand, or other materials be dredged from the wetted stream channel under authorization of this permit, except in the immediate vicinity of bridge abutments.

All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags or rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.

If concrete is used during construction, adequate precautions must be taken to prevent direct contact between wet concrete and stream water. Water that has contacted uncured concrete will not be discharged to surface waters.

Construction in the stream channel and within the 25-foot buffer is prohibited during the trout-spawning period of October 15 – April 15 in order to protect the egg and fry stages from sedimentation.

Riprap placed for bank stabilization should be limited to the streambank below the high water mark, and vegetation should be used for stabilization above the high water elevation.

All mechanized equipment operated near surface waters should be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.

Any overwidened areas at the bridge site should be restored; and the width/depth ratio typical of the stream should be maintained through the bridge site.

Division 14 Construction, Roadside Environmental
Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities. Erosion control matting in conjunction with appropriate seeding should be used on disturbed streambanks and areas around bridge crossings instead of straw mulch.

Grading and backfilling should be minimized, and tree and shrub growth should be retained if possible. Backfill materials should be obtained from upland sites.

PROJECT COMMITMENTS

Transylvania County
Bridge No. 116 on SR 1105
Over Glady Fork Creek
Federal Project BRZ-1105 (9)
State Project No. 8.2001201
TIP Project B-3914

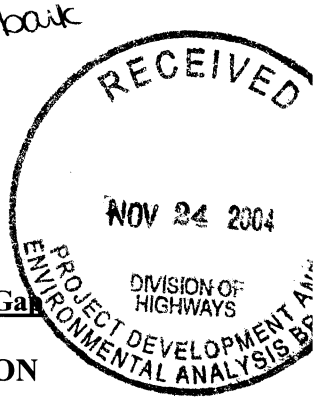
Commitments Developed Through Permitting

The following standard environmental conditions are applicable to this project: Nationwide Permit No.23 Conditions, Nationwide Permit No. 33 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, General Certification Conditions, and Section 401 Conditions of Certification.

Division 14 Construction, Roadside Environmental
Design standards in sensitive watersheds should be strictly adhered to throughout project construction.

There are no other special environmental conditions associated with this project.

Kivenbank



U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action ID. **200431283-1284** County: **Transylvania** USGS Quad: **Eastatoe Ga**

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Property Owner / Authorized Agent: **Dr. Gregory Thorpe**
Address: **North Carolina Department of Transportation**
1548 Mail Service Center
Raleigh, NC 27699
Telephone No.: **919-733-7844**

Size and location of property (water body, road name/number, town, etc.): **The project is located at Bridge No. 116 on SR 1105 (Glady Fork Road), south of SR 1107, over Glady Fork Creek, near Rosman, Transylvania County, North Carolina. TIP No. B-3914.**

Description of projects area and activity: **This permit authorizes The project includes the replacement of Bridge No. 116. The existing structure, a 36-foot timber bridge, will be removed without dropping any of its components into Glady Fork Creek. The new 50-foot, single span, 21" cored slab bridge will be constructed approximately 40 feet west of the existing structure. Proposed impacts include the temporary discharge of fill material into approximately 0.135 acre of stream for the installation of impervious dikes and dewatering. There are no proposed permanent impacts.**

Applicable Law: ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)
Authorization: Regional General Permit Number:
Nationwide Permit Number: **23 and 33**

Special Conditions

1. All work must be performed in strict compliance with the plans received by this office on July 16, 2004, which are a part of this permit. Any modification to the permit plans must be approved by the USACE prior to implementation

2. Failure to institute and carry out the details of these special conditions will result in a directive to cease all ongoing and permitted work within waters and/or wetlands associated with the permitted project, or such other remedies and/or fines as the District Engineer or his authorized representatives may seek.

3. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit, and any authorized modifications. A copy of this permit, and any authorized modifications, including all conditions, shall be available at the project site during construction and maintenance of this project.

4. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area.

5. All conditions of the attached North Carolina Wildlife Resources Commission letter of September 10, 2004 are hereby incorporated as special conditions of this permit.

6. The permittee will report any violation of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act in writing to the Wilmington District, U. S Army Corps of Engineers, within 24 hours of the permittee's discovery of the violation.

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached Nationwide and Special conditions, the attached North Carolina Wildlife Resources Commission conditions, and your submitted plans. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Quality (telephone (919) 733-1786) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management .

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Angie Pennock at 828-271-7980.

Corps Regulatory Official **Angie Pennock** Date: **November 17, 2004**

Expiration Date of Verification: **November 17, 2006**

Determination of Jurisdiction:

☒ Based on preliminary information, there appear to be waters of the US including wetlands within the above described project area. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).

☐ There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ There are waters of the US and/or wetlands within the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ The jurisdictional areas within the above described project area have been identified under a previous action. Please reference jurisdictional determination issued ___. Action ID

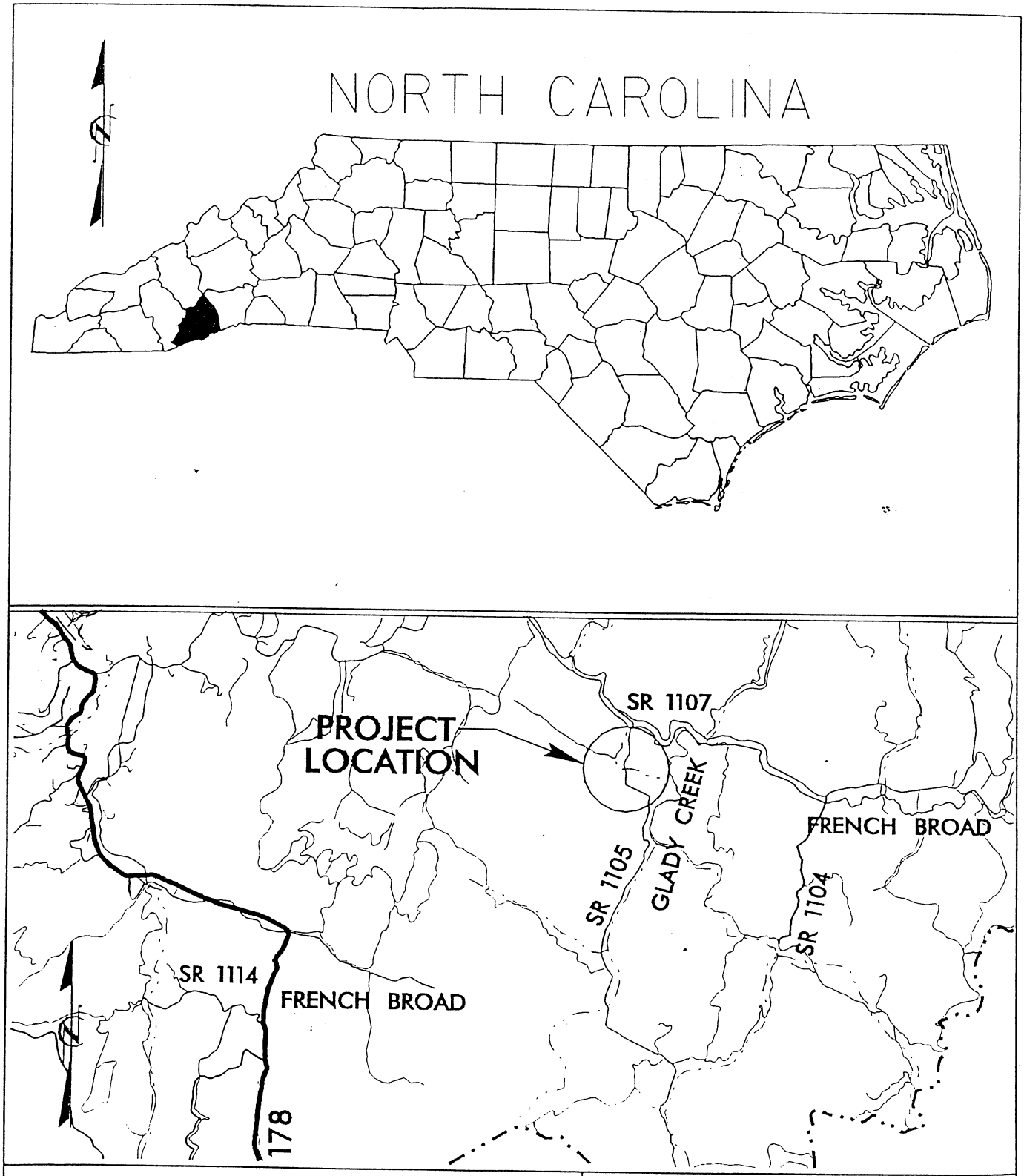
Basis of Jurisdictional Determination: **n/a.**

Corps Regulatory Official: Angie Pennock

Date **November 17, 2004**

SURVEY PLATS, FIELD SKETCH, WETLAND DELINEATION FORMS, PROJECT PLANS, ETC., MUST BE ATTACHED TO THE FILE COPY OF THIS FORM, IF REQUIRED OR AVAILABLE.

Copy Furnished:
Brian Wren, NCDWQ, 1650 Mail Service Center, Raleigh, NC 27699-1650



VICINITY MAPS

NCDOT

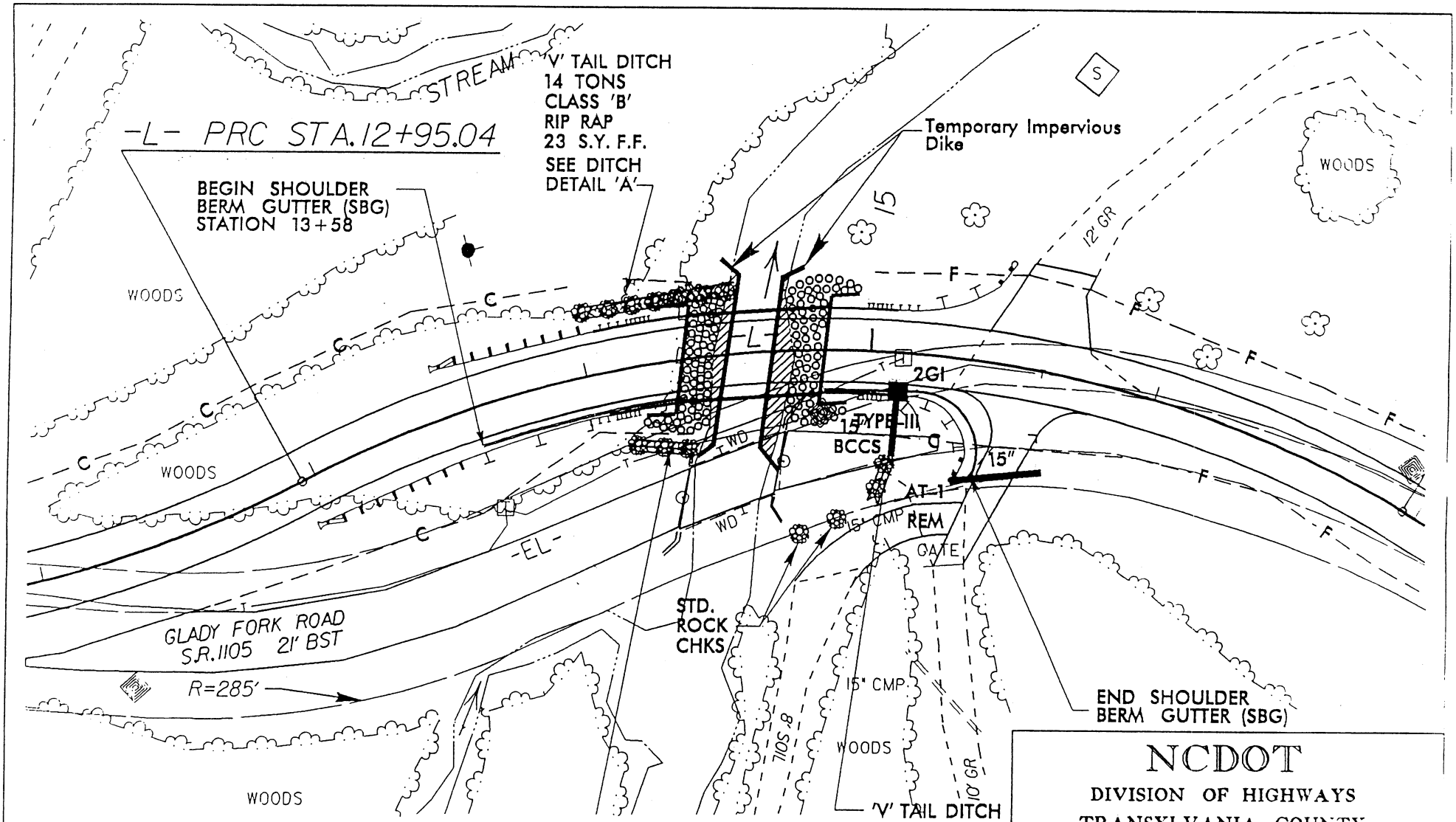
DIVISION OF HIGHWAYS

TRANSYLVANIA COUNTY

PROJECT: 8.2001201 (B-3914)

BRIDGE #116 ON SR1105 BETWEEN SR1107 AND SOUTH CAROLINA STATE LINE OVER GLADY FORK CREEK

SHEET OF 05 / 05 / 04



PLAN VIEW

TS TS DENOTES TEMPORARY FILL IN SURFACE WATER =0.135ac

NCDOT

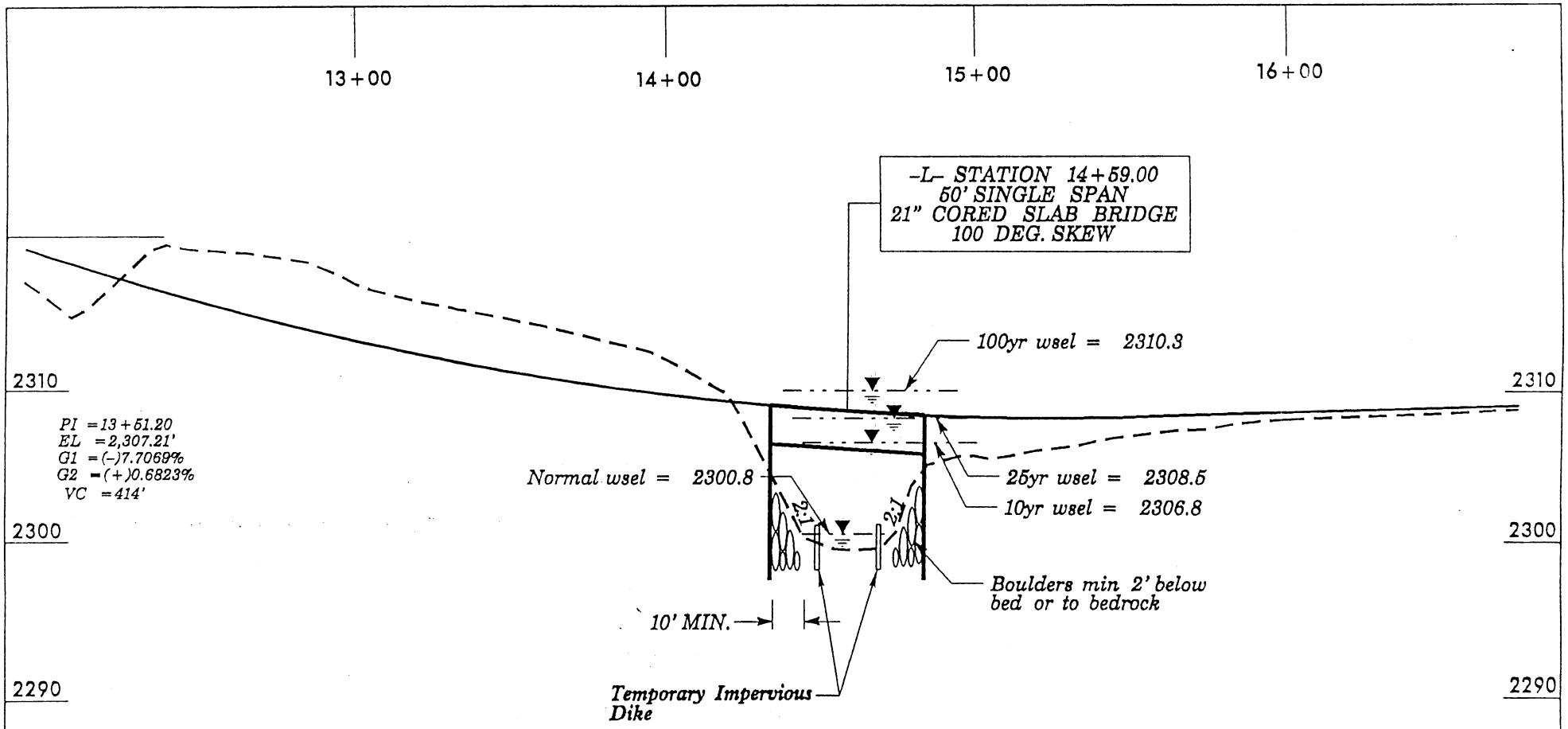
DIVISION OF HIGHWAYS

TRANSYLVANIA COUNTY

PROJECT: 8.2001201 (B-3914)

BRIDGE #116 ON SR1105 BETWEEN SR1107 AND SOUTH CAROLINA STATE LINE OVER GLADY FORK CREEK

SHEET OF 05/04/04



PROFILE VIEW

NCDOT

DIVISION OF HIGHWAYS

TRANSYLVANIA COUNTY

PROJECT: 8.2001201 (B-3914)

BRIDGE #116 ON SR1105 BETWEEN SR1107 AND SOUTH CAROLINA STATE LINE OVER GLADY FORK CREEK

REVISED 05/04/04

SHEET OF 0 / 05 / 04

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation In Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing (Method III) (ac)	SURFACE WATER IMPACTS: Fill In SW (Natural) (ac)	SURFACE WATER IMPACTS: Fill In SW (Pond) (ac)	SURFACE WATER IMPACTS: Temp. Fill In SW (ac)	SURFACE WATER IMPACTS: Existing Channel Impacted (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1	14+83.70	50' BRIDGE							0.0135		
TOTALS:			0.00	0.00	0.00	0.00	0.00	0.00	0.0135	0.00	0.00

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TRANSYLVANIA COUNTY
PROJECT:8.2001201 (B-3914)

Form Revised 3/22/01

PROJECT REFERENCE NO.	SHEET NO.
B-3914	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGLISH

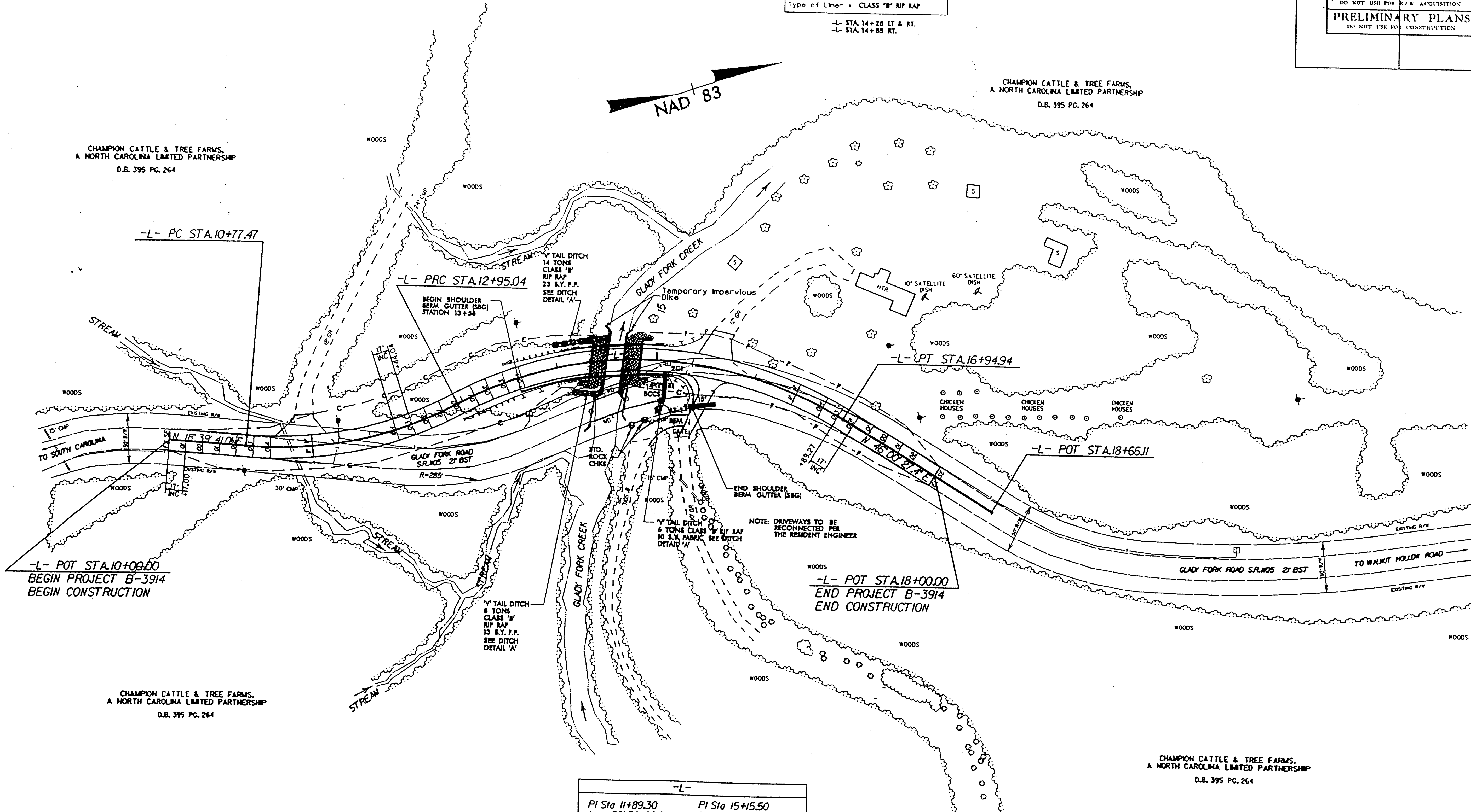
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

STANDARD 'V' TAIL DITCH
(Not to Scale)

Natural Ground — Natural Ground
Min. D = 1 Ft.
Max. d = 1 Ft.
Filter fabric
Type of Liner = CLASS "B" RIP RAP

-L- STA. 14+25 LT & RT.
-L- STA. 14+85 RT.



-L-	
PI Sta 11+89.30	PI Sta 15+15.50
Δ = 32° 38' 00.8" (LT)	Δ = 59° 58' 47.7" (RT)
D = 14° 59' 56.0"	D = 14° 59' 56.0"
L = 217.57'	L = 399.89'
T = 111.83'	T = 220.46'
R = 382.00'	R = 382.00'
SE = .04	SE = .04
RO = 68'	RO = 68'
*V DES = 30 MPH	*V DES = 30 MPH

* DESIGN SPEED EXCEPTION REQUIRED

TS DENOTES TEMPORARY FILL IN SURFACE WATER =0.0135ac

NOTE: REMOVE EXISTING BRIDGE ABUTMENTS AND MATCH TO NATURAL GROUND.

PROJECT REFERENCE NO.	SHEET NO.
B-3914	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GLADY FORK ROAD (SR 1105)

TBM1 R/R SPIKE IN BASE OF 12" RED OAK
-BL- STA. 5+24.21 42.96' RT
EL. = 2347.74'

TBM2 R/R SPIKE IN BASE OF 15" WHITE PINE
-L- STA. 13+91.64 24.57 RT
EL. = 2310.33'

TBM3 R/R SPIKE IN BASE OF 20" WHITE PINE 80.83' RIGHT OF -L- LINE
STA.14+61.68, ELEVATION OF 2308.18'

TBM4 R/R SPIKE IN BASE OF 24" RED OAK
-BL- STA. 19+01.06 34.40' RT
EL. = 2308.99'

-L-

BEGIN RESURFACING AND WIDENING
-L- 10+00.00

PI = 13+50.00
EL = 2,307.21'
VC = 420'
K = 50
V = 35mph *

BEGIN GRADE
-L- STA. 10+60.00
ELEV. 2,329.56

END GRADE
-L- STA. 17+00.00
ELEV. 2,309.59

END RESURFACING AND WIDENING
-L- 18+00.00

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 1700 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 2308.5 FT
BASE DISCHARGE	= 2400 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 2310.3 FT
OVERTOPPING DISCHARGE	= 1930 CFS
OVERTOPPING FREQUENCY	= 25 YRS
OVERTOPPING ELEVATION	= 2309.2 FT

* DESIGN SPEED EXCEPTION REQUIRED

NOTE: SEE SHEET 4 FOR PLAN VIEW

2,340
2,330
2,320
2,310
2,300
2,290
2,280
2,270
2,260
2,250

10 11 12 13 14 15 16 17 18

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
151 PATTON AVENUE
ROOM 208
ASHEVILLE, NORTH CAROLINA 28801-5006

REPLY TO
ATTENTION OF:

Permit Number: 200431283-1284

Permit Type: NW23 and 33

Name of County: Transylvania

Name of Permittee: North Carolina Department of Transportation Gregory Thorpe

Date of Issuance: November 17, 2004

Project Manager: Angie Pennock

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Attention: CESAW-RG-A
151 Patton Avenue, Room 208
Asheville, North Carolina 28801-5006

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee Date

North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

TO: Angie Pennock, NCDOT Coordinator
Asheville Regulatory Field Office, USACE

FROM: Marla Chambers, Western NCDOT Permit Coordinator Marla Chambers
Habitat Conservation Program, NCWRC

DATE: September 10, 2004

SUBJECT: Review of the Categorical Exclusion document and information related to the Section 404 Permit application by NCDOT to replace Bridge No. 116 on SR 1105 (Glady Fork Road) over Glady Fork Creek, Transylvania County, North Carolina. TIP No. B-3914.

North Carolina Department of Transportation (NCDOT) has submitted a Section 404 application to the U.S. Army Corps of Engineers (USACE). Staff biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the Categorical Exclusion and information provided. These comments are provided in accordance with the provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

The NCDOT proposes to replace Bridge No. 116 on SR 1105 (Glady Fork Road) over Glady Fork Creek with a new cored slab bridge approximately 40 feet west of the existing structure. Temporary impacts consist of 60 feet of channel impacts or 0.135 acres due to dewatering involving the use of temporary impervious dikes. No wetland impacts are expected. Glady Fork Creek, classified as C Tr, supports trout and joins the East Fork French Broad River, classified as C Tr HQW (High Quality Water), approximately 1,750 feet downstream. NCDOT indicates High Quality Waters Standards will be enforced throughout project construction. We are pleased that many of our recommendations have been incorporated into the project.

NCWRC can concur with the issuance of a Section 404 permit provided that the following conditions are implemented:

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 733-3633 ext. 281 • **Fax:** (919) 715-7643

1. Instream work and land disturbance within the 25-foot wide buffer zone are prohibited during the trout spawning seasons of October 15 through April 15 to protect the egg and fry stages of trout.

2. Sediment and erosion control measures shall adhere to the design standards for sensitive watersheds (15A NCAC 4B .0124 (a)-(d)) and be strictly maintained until project completion to avoid impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation should be planted on all bare soil as soon as possible and within 10 days of ground disturbing activities to provide long-term erosion control. Tall fescue should not be used in riparian areas. We encourage NCDOT to utilize onsite vegetation and materials for streambank stabilization when practicable. Erosion control matting should be used in riparian areas, instead of straw mulch and well anchored with 12" staples or 12" wooden survey stakes.

3. Discharge of materials into the stream from demolition of the old bridge should be avoided as much as practicable. Any materials that inadvertently reach the stream should be removed.

4. Under no circumstances should rock, sand, or other materials be dredged from the channel, except in the immediate vicinity of bridge supports, if applicable.

5. The natural dimension, pattern, and profile of the stream above and below the crossing should not be modified by widening the stream channel or changing the depth of the stream.

6. Removal of vegetation in riparian areas should be minimized. Native trees and shrubs should be planted along the streambanks to reestablish the riparian zone and to provide long-term erosion control.

7. Grading and backfilling should be minimized, and tree and shrub growth should be retained if possible to ensure long term availability of shoreline cover for fish and wildlife. Backfill materials should be obtained from upland sites.

8. Riprap placed for bank stabilization should be limited to the streambank below the high water mark, and vegetation should be used for stabilization above the high water elevation.

9. Stormwater, including deck drainage, should be directed to buffer areas or retention basins and should not be routed directly into the stream.

10. If concrete will be used during construction, work must be accomplished so that wet (uncured) concrete does not contact surface waters. This will lessen the chance of altering the water chemistry and causing a fish kill.

11. Discharging hydroseeding mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is strictly prohibited.

12. Heavy equipment should be operated from the bank rather than in the stream channel whenever possible in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into the stream. All mechanized equipment operated near surface waters should be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids or other toxic materials.

13. The existing roadway that is to be eliminated should be removed back to original ground elevations and the natural floodplain elevations and functions should be restored. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'.

Thank you for the opportunity to review and comment on this project. If you have any questions regarding these comments, please contact me at (704) 485-2384.

cc: Marella Buncick, USFWS
Brian Wrenn, NCDWQ

NATIONWIDE PERMIT 23
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS
FEDERAL REGISTER
AUTHORIZED MARCH 18, 2002

Approved Categorical Exclusions: Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where that agency or department has determined, pursuant to the Council on Environmental Quality Regulation for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) (40 CFR part 1500 et seq.), that the activity, work, or discharge is categorically excluded from environmental documentation because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment, and the Office of the Chief of Engineers (ATTN: CECW-OR) has been furnished notice of the agency's or department's application for the categorical exclusion and concurs with that determination. Before to approval for purposes of this nationwide permit of any agency's categorical exclusions, the Chief of Engineers will solicit public comment. In addressing these comments, the Chief of Engineers may require certain conditions for authorization of an agency's categorical exclusions under this nationwide permit. (Sections 10 and 404)

NATIONWIDE PERMIT 33
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS
FEDERAL REGISTER
AUTHORIZED MARCH 18, 2002

Temporary Construction, Access and Dewatering: Temporary structures, work and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites; provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard (USCG), or for other construction activities not subject to the Corps or USCG regulations. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must be of materials, and placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if it is determined by the District Engineer that it will not cause more than minimal adverse effects on aquatic resources. Temporary fill must be entirely removed to upland areas, or dredged material returned to its original location, following completion of the construction activity, and the affected areas must be restored to the pre-project conditions. Cofferdams cannot be used to dewater wetlands or other aquatic areas so as to change their use. Structures left in place after cofferdams are removed require a section 10 permit if located in navigable waters of the United States. (See 33 CFR part 322). The permittee must notify the District Engineer in accordance with the "Notification" general condition. The notification must also include a restoration plan of reasonable measures to avoid and minimize adverse effects to aquatic

resources. The District Engineer will add special conditions, where necessary, to ensure environmental adverse effects is minimal. Such conditions may include: Limiting the temporary work to the minimum necessary; requiring seasonal restrictions; modifying the restoration plan; and requiring alternative construction methods (e.g., construction mats in wetlands where practicable.). (Sections 10 and 404)

NATIONWIDE PERMIT GENERAL CONDITIONS

The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. No activity may cause more than a minimal adverse effect on navigation.

2. Proper Maintenance. Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.

3. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

4. Aquatic Life Movements. No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

5. Equipment. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

6. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state or tribe in its Section 401 Water Quality Certification and Coastal Zone Management Act consistency determination.

7. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a 'study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate

Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

8. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

9. Water Quality.

a. In certain states and tribal lands an individual 401 Water Quality Certification must be obtained or waived (See 33 CFR 330.4(c)).

b. For NWPs 12, 14, 17, 18, 32, 39, 40, 42, 43, and 44, where the state or tribal 401 certification (either generically or individually) does not require or approve water quality management measures, the permittee must provide water quality management measures that will ensure that the authorized work does not result in more than minimal degradation of water quality (or the Corps determines that compliance with state or local standards, where applicable, will ensure no more than minimal adverse effect on water quality). An important component of water quality management includes stormwater management that minimizes degradation of the downstream aquatic system, including water quality (refer to General Condition 21 for stormwater management requirements). Another important component of water quality management is the establishment and maintenance of vegetated buffers next to open waters, including streams (refer to General Condition 19 for vegetated buffer requirements for the NWPs).

This condition is only applicable to projects that have the potential to affect water quality. While appropriate measures must be taken, in most cases it is not necessary to conduct detailed studies to identify such measures or to require monitoring.

10. Coastal Zone Management. In certain states, an individual state coastal zone management consistency concurrence must be obtained or waived (see 33 CFR 330.4(d)).

11. Endangered Species.

a. No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or is located in the designated critical habitat and shall not begin work on the activity until notified by the District Engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. As a result

of formal or informal consultation with the FWS or NMFS the District Engineer may add species-specific regional endangered species conditions to the NWPs.

b. Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their World Wide Web pages at http://www.fws.gov/r9endspp/endspp.html and http://www.nfms.noaa.gov/prot res/overview/es.html respectively.

12. Historic Properties. No activity that may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the District Engineer has complied with the provisions of 33 CFR part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the notification must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

13. Notification.

a. Timing; where required by the terms of the NWP, the prospective permittee must notify the District Engineer with a preconstruction notification (PCN) as early as possible. The District Engineer must determine if the notification is complete within 30 days of the date of receipt and can request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the District Engineer will notify the prospective permittee that the notification is still incomplete and the PCN review process will not commence until all of the requested information has been received by the District Engineer. The prospective permittee shall not begin the activity:

1. Until notified in writing by the District Engineer that the activity may proceed under the NWP with any special conditions imposed by the District or Division Engineer; or

2. If notified in writing by the District or Division Engineer that an Individual Permit is required; or

3. Unless 45 days have passed from the District Engineer's receipt of the complete notification and the prospective permittee has not received written notice from the District or Division Engineer. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

b. Contents of Notification: The notification must be in writing and include the following information:

1. Name, address and telephone numbers of the prospective permittee;

2. Location of the proposed project;

3. Brief description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), Regional General Permit(s), or Individual Permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP (Sketches usually clarify the project and when provided result in a quicker decision.);

4. For NWPs 7, 12, 14, 18, 21, 34, 38, 39, 40, 41, 42, and 43, the PCN must also include a delineation of affected special aquatic sites, including wetlands, vegetated shallows (e.g., submerged aquatic vegetation, seagrass beds), and riffle and pool complexes (see paragraph 13(f));

5. For NWP 7 (Cutfall Structures and Maintenance), the PCN must include information regarding the original design capacities and configurations of those areas of the facility where maintenance dredging or excavation is proposed;

6. For NWP 14 (Linear Transportation Projects), the PCN must include a compensatory mitigation proposal to offset permanent losses of waters of the US and a statement describing how temporary losses of waters of the US will be minimized to the maximum extent practicable;

7. For NWP 21 (Surface Coal Mining Activities), the PCN must include an Office of Surface Mining (OSM) or state-approved mitigation plan, if applicable. To be authorized by this NWP, the District Engineer must determine that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are minimal both individually and cumulatively and must notify the project sponsor of this determination in writing;

8. For NWP 27 (Stream and Wetland Restoration Activities), the PCN must include documentation of the prior condition of the site that will be reverted by the permittee;

9. For NWP 29 (Single-Family Housing), the PCN must also include:

i. Any past use of this NWP by the Individual Permittee and/or the permittee's spouse;

ii. A statement that the single-family housing activity is for a personal residence of the permittee;

iii. A description of the entire parcel, including its size, and a delineation of wetlands. For the purpose of this NWP, parcels of land measuring \1/4\-acre or less will not require a formal on-site delineation. However, the applicant shall provide an indication of where the wetlands are and the amount of wetlands that exists on the property. For parcels greater than \1/4\-acre in size, formal wetland delineation must be prepared in accordance with the current method required by the Corps. (See paragraph 13(f));

iv. A written description of all land (including, if available, legal descriptions) owned by the prospective permittee and/or the prospective permittee's spouse, within a one mile radius of the parcel, in any form of ownership (including any land owned as a partner, corporation, joint tenant, co-tenant, or as a tenant-by-the-entirety) and any land on which a purchase and sale agreement or other contract for sale or purchase has been executed;

10. For NWP 31 (Maintenance of Existing Flood Control Facilities), the prospective permittee must either notify the District Engineer with a PCN prior to each maintenance activity or submit a five-year (or less) maintenance plan. In addition, the PCN must include all of the following:

i. Sufficient baseline information identifying the approved channel depths and configurations and existing facilities. Minor deviations are authorized, provided the approved flood control protection or drainage is not increased;

ii. A delineation of any affected special aquatic sites, including wetlands; and,

iii. Location of the dredged material disposal site;

11. For NWP 33 (Temporary Construction, Access, and Dewatering), the PCN must also include a restoration plan of reasonable measures to avoid and minimize adverse effects to aquatic resources;

12. For NWPs 39, 43 and 44, the PCN must also include a written statement to the District Engineer explaining how avoidance and minimization for losses of waters of the US were achieved on the project site;

13. For NWP 39 and NWP 42, the PCN must include a compensatory mitigation proposal to offset losses of waters of the US or justification explaining why compensatory mitigation should not be required. For discharges that cause the loss of greater than 300 linear

feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;

14. For NWP 40 (Agricultural Activities), the PCN must include a compensatory mitigation proposal to offset losses of waters of the US. This NWP does not authorize the relocation of greater than 300 linear feet of existing serviceable drainage ditches constructed in non-tidal streams unless, for drainage ditches constructed in intermittent nontidal streams, the District Engineer waives this criterion in writing, and the District Engineer has determined that the project complies with all terms and conditions of this NWP, and that any adverse impacts of the project on the aquatic environment are minimal, both individually and cumulatively;

15. For NWP 43 (Stormwater Management Facilities), the PCN must include, for the construction of new stormwater management facilities, a maintenance plan (in accordance with state and local requirements, if applicable) and a compensatory mitigation proposal to offset losses of waters of the US. For discharges that cause the loss of greater than 300 linear feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;

16. For NWP 44 (Mining Activities), the PCN must include a description of all waters of the US adversely affected by the project, a description of measures taken to minimize adverse effects to waters of the US, a description of measures taken to comply with the criteria of the NWP, and a reclamation plan (for all aggregate mining activities in isolated waters and non-tidal wetlands adjacent to headwaters and any hard rock/mineral mining activities);

17. For activities that may adversely affect Federally-listed endangered or threatened species, the PCN must include the name(s) of those endangered or threatened species that may be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work; and

18. For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

c. Form of Notification: The standard Individual Permit application form (Form ENG 4345) may be used as the notification but must clearly indicate that it is a PCN and must include all of the information required in (b) (1)-(18) of General Condition 13. A letter containing the requisite information may also be used.

d. District Engineer's Decision: In reviewing the PCN for the proposed activity, the

District Engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. The prospective permittee may submit a proposed mitigation plan with the PCN to expedite the process. The District Engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. If the District Engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the District Engineer will notify the permittee and include any conditions the District Engineer deems necessary. The District Engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee is required to submit a compensatory mitigation proposal with the PCN, the proposal may be either conceptual or detailed. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the District Engineer will expeditiously review the proposed compensatory mitigation plan. The District Engineer must review the plan within 45 days of receiving a complete PCN and determine whether the conceptual or specific proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the District Engineer to be minimal, the District Engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the District Engineer determines that the adverse effects of the proposed work are more than minimal, then the District Engineer will notify the applicant either:

1. That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an Individual Permit;

2. that the project is authorized under the NWP subject to the applicant's submission of a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level; or

3. that the project is authorized under the NWP with specific modifications or conditions. Where the District Engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level. When conceptual mitigation is included, or a mitigation plan is required under item (2) above, no work in waters of the US will occur until the District Engineer has approved a specific mitigation plan.

e. Agency Coordination: The District Engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental

effects to a minimal level.

For activities requiring notification to the District Engineer that result in the loss of greater than \1/2\-acre of waters of the US, the District Engineer will provide immediately (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy to the appropriate Federal or state offices (USFWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the District Engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the District Engineer will wait an additional 15 calendar days before making a decision on the notification. The District Engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The District Engineer will indicate in the administrative record associated with each notification that the resource agencies' concerns were considered. As required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act, the District Engineer will provide a response to NMFS within 30 days of receipt of any Essential Fish Habitat conservation recommendations. Applicants are encouraged to provide the Corps multiple copies of notifications to expedite agency notification.

f. Wetland Delineations: Wetland delineations must be prepared in accordance with the current method required by the Corps (For NWP 29 see paragraph (b)(9)(iii) for parcels less than (\1/4\-acre in size). The permittee may ask the Corps to delineate the special aquatic site. There may be some delay if the Corps does the delineation. Furthermore, the 45-day period will not start until the wetland delineation has been completed and submitted to the Corps, where appropriate.

14. Compliance Certification. Every permittee who has received NWP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

a. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;

b. A statement that any required mitigation was completed in accordance with the permit conditions; and

c. The signature of the permittee certifying the completion of the work and mitigation.

15. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the US authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit (e.g. if a road crossing over tidal waters is constructed under NWP 14, with associated bank

stabilization authorized by NWP 13, the maximum acreage loss of waters of the US for the total project cannot exceed \ 1/3\-acre) .

16. Water Supply Intakes. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in the proximity of a public water supply intake except where the activity is for repair of the public water supply intake structures or adjacent bank stabilization.

17. Shellfish Beds. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4.

18. Suitable Material. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the CWA).

19. Mitigation. The District Engineer will consider the factors discussed below when determining the acceptability of appropriate and practicable mitigation necessary to offset adverse effects on the aquatic environment that are more than minimal.

a. The project must be designed and constructed to avoid and minimize adverse effects to waters of the US to the maximum extent practicable at the project site (i.e., on site).

b. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

c. Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland impacts requiring a PCN, unless the District Engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. Consistent with National policy, the District Engineer will establish a preference for restoration of wetlands as compensatory mitigation, with preservation used only in exceptional circumstances.

d. Compensatory mitigation (i.e., replacement or substitution of aquatic resources for those impacted) will not be used to increase the acreage losses allowed by the acreage limits of some of the NWPs. For example, \1/4\-acre of wetlands cannot be created to change a,\3/4\acre loss of wetlands to a \1/2\-acre loss associated with NWP 39 verification. However, \1/2\-acre of created wetlands can be used to reduce the impacts of a \1/2\-acre loss of wetlands to the minimum impact level in order to meet the minimal impact requirement associated with NWPs.

e. To be practicable, the mitigation must be available and capable of being done

considering costs, existing technology, and logistics in light of the overall project purposes. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferably in the same watershed.

f. Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., easements, deed restrictions) of vegetated buffers to open waters. In many cases, vegetated buffers will be the only compensatory mitigation required. Vegetated buffers should consist of native species. The width of the vegetated buffers required will address documented water quality or aquatic habitat loss concerns. Normally, the vegetated buffer .will be 25 to 50 feet wide on each side of the stream, but the District Engineers may require slightly wider vegetated buffers to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the Corps will determine the appropriate compensatory mitigation (e.g., stream buffers or wetlands compensation) based on what is best for the aquatic environment or, a watershed basis. In cases where vegetated buffers are determined to be the most appropriate form of compensatory mitigation, the District Engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland impacts.

g. Compensatory mitigation proposals submitted with the " notification" may be either conceptual or detailed. If conceptual plans are approved under the verification, then the Corps will condition the verification to require detailed plans be submitted and approved by the Corps prior to construction of the authorized activity in waters of the US.

h. Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases that require compensatory mitigation, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

20. Spawning Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

21. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction

conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream channelizing will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow.

This condition is only applicable to projects that have the potential to affect waterflows. While appropriate measures must be taken, it is not necessary to conduct detailed studies to identify such measures or require monitoring to ensure their effectiveness. Normally, the Corps will defer to state and local authorities regarding management of water flow.

22. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to the acceleration of the passage of water, and/or the restricting its flow shall be minimized to the maximum extent practicable. This includes structures and work in navigable waters of the US, or discharges of dredged or fill material.

23. Waterfowl Breeding Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

24. Removal of Temporary Fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

25. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, National Wild and Scenic Rivers, critical habitat for Federally listed threatened and endangered species, coral reefs, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the District Engineer after notice and opportunity for public comment. The District Engineer may also designate additional critical resource waters after notice and opportunity for comment.

a. Except as noted below, discharges of dredged or fill material into waters of the US are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, and 44 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. Discharges of dredged or fill materials into waters of the US may be authorized by the above NWPs in National Wild and Scenic Rivers if the activity complies with General Condition 7. Further, such discharges may be authorized in designated critical habitat for Federally listed threatened or endangered species if the activity complies with General Condition 11 and the USFWS or the NMFS has concurred in a determination of compliance with this condition.

b. For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with General Condition 13, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The District

Engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

26. Fills Within 100-Year Floodplains. For purposes of this General Condition, 100-year floodplains will be identified through the existing Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps or FEMA-approved local floodplain maps.

a. Discharges in Floodplain; Below Headwaters. Discharges of dredged or fill material into waters of the US within the mapped 100year floodplain, below headwaters (i.e. five cfs), resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, 43, and 44.

b. Discharges in Floodway; Above Headwaters. Discharges of dredged or fill material into waters of the US within the FEMA or locally mapped floodway, resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, and 44.

c. The permittee must comply with any applicable FEMA-approved state or local floodplain management requirements.

27. Construction Period. For activities that have not been verified by the Corps and the project was commenced or under contract to commence by the expiration date of the NWP (or modification or revocation date), the work must be completed within 12-months after such date (including any modification that affects the project).

For activities that have been verified and the project was commenced or under contract to commence within the verification period, the work must be completed by the date determined by the Corps.

For projects that have been verified by the Corps, an extension of a Corps approved completion date maybe requested. This request must be submitted at least one month before the previously approved completion date.

FURTHER INFORMATION

1. District Engineers have authority to determine if an activity complies with the terms and conditions of a NWP.

2. NWPs do not obviate the need to obtain other Federal, State, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

DEFINITIONS

Best Management Practices (BMPs): BMPs are policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or nonstructural. A BMP policy may affect the limits on a development.

Compensatory Mitigation: For purposes of Section 10/404, compensatory mitigation is the restoration, creation, enhancement, or in exceptional circumstances, preservation of wetlands and/or other aquatic resources for the purpose of compensating for unavoidable adverse impacts, which remain, after all appropriate and practicable avoidance and minimization has been achieved.

Creation: The establishment of a wetland or other aquatic resource where one did not formerly exist.

Enhancement: Activities conducted in existing wetlands or other aquatic resources that increase one or more aquatic functions.

Ephemeral Stream: An ephemeral stream has *flowing* water only during and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runnoff from rainfall is the primary source of water for stream flow.

Farm Tract: A unit of contiguous land under one ownership that is operated as a farm or part of a farm.

Flood Fringe: That portion of the 100-year floodplain outside of the floodway (often referred to as "floodway fringe").

Floodway: The area regulated by Federal, state, or local requirements to provide for the discharge of the base flood so the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as set by the National Flood Insurance Program) within the 100-year floodplain.

Independent Utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent Stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the US: Waters of the US that include the filled area and other waters that are permanently adversely affected by flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent above-grade, at-grade, or below-grade fills that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the US is the threshold measurement of the impact to existing waters for determining whether a project may qualify for a NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and values. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the US temporarily filled, flooded, excavated, or drained, but restored to preconstruction contours and elevations after construction, are not included in the measurement of loss of waters of the US. Impacts to ephemeral waters are only not included in the acreage or linear foot measurements of loss of waters of the US or loss of stream bed, for the purpose of determining compliance with the threshold limits of the NWPs.

Non-tidal Wetland: An area that, during a year with normal patterns of precipitation has standing or flowing water for sufficient duration to establish an ordinary high water mark. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. The term "open water" includes rivers, streams, lakes, and ponds. For the purposes of the NWPs, this term does not include ephemeral waters.

Perennial Stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for the most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Permanent Above-grade Fill: A discharge of dredged or fill material into waters of the US, including wetlands, that results in a substantial increase in ground elevation and permanently converts part or all of the waterbody to dry land. Structural fills authorized by NWPs 3, 25, 36, etc. are not included.

Preservation: The protection of ecologically important wetlands or other aquatic resources in perpetuity through the implementation of appropriate legal and physical mechanisms. Preservation may include protection of upland areas adjacent to wetlands as necessary to ensure protection and/or enhancement of the overall aquatic ecosystem.

Restoration: Re-establishment of wetland and/or other aquatic resource characteristics and function(s) at a site where they have ceased to exist, or exist in a substantially degraded state.

Riffle and Pool Complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Single and Complete Project: The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers (see definition of independent utility). For linear projects, the "single and complete project" (i.e., a single and complete crossing) will apply to each crossing of a separate water of the US (i.e., a single waterbody) at that location. An exception is for linear projects crossing a single waterbody several times at separate and distant locations; each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies.

Stormwater Management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater Management Facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and BMPs, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream Channelization: The manipulation of a stream channel to increase the rate of water flow through the stream channel. Manipulation may include deepening, widening, straightening, armoring, or other activities that change the stream cross-section or other aspects of stream channel geometry to increase the rate of water flow through the stream channel. A channelized stream remains a water of the US, despite the modifications to increase the rate of water flow.

Tidal Wetland: A tidal wetland is a wetland (i.e., water of the US) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line (i.e., spring high tide line) and are inundated by tidal waters two times per lunar month, during spring high tides.

Vegetated Buffer: A vegetated upland or wetland area next to rivers, streams, lakes, or other open waters, which separates the open water from developed areas, including agricultural land. Vegetated buffers provide a variety of aquatic habitat functions and values (e.g., aquatic habitat for fish and other aquatic organisms, moderation of water temperature changes, and detritus for aquatic food webs) and help improve or maintain local water quality. A vegetated buffer can be established by maintaining an existing vegetated area or planting native trees, shrubs, and herbaceous plants on land next to openwaters. Mowed lawns are not considered vegetated buffers because they provide little or no aquatic habitat functions and values. The establishment and maintenance of vegetated buffers I a method of compensatory mitigation that can be used in conjunction with the restoration, creation, enhancement or preservation of aquatic habitats to ensure that activities authorized by NWPs result in minimal adverse effects to the aquatic environment. (See General Condition 19.)

Vegetated Shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: A waterbody is any area that in a normal year has water flowing or standing above ground to the extent that evidence of an ordinary high water mark is established. Wetlands contiguous to the waterbody are considered part of the waterbody.

FINAL REGIONAL CONDITIONS FOR NATIONWIDE PERMITS IN THE WILMINGTON DISTRICT

1. Waters Excluded from NWP or Subject to Additional Notification Requirements:

a. The Corps identified waters that will be excluded from use of this NWP. These waters are:

1. Discharges into Waters of the United States designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning area are prohibited during the period between February 15 and June 30, without prior written approval from NCDMF or NCWRC and the Corps.

2. Discharges into Waters of the United States designated as sturgeon spawning areas are prohibited during the period between February 1 and June 30, without prior written approval from the National Marine Fisheries Service (NMFS).

b. The Corps identified waters that will be subject to additional notification requirements for activities authorized by this NWP. These waters are:

1. Prior to the use of any NWP in any of the following North Carolina *designated waters*, applicants must comply with Nationwide Permit General Condition 13. In addition, the applicant

must furnish a written statement of compliance with all of the conditions of the applicable Nationwide Permit. The North Carolina *designated waters* that require additional notification requirements are "Outstanding Resource Waters" (ORW) and "High Quality Waters" (HQW) (as defined by the North Carolina Division of Water Quality), or "Inland Primary Nursery Areas" (IPNA) (as defined by the North Carolina Wildlife Resources Commission), or contiguous wetlands (as defined by the North Carolina Division of Water Quality), or "Primary Nursery Areas" (PNA) (as defined by the North Carolina Division of Marine Fisheries).

2. Applicants for any NWP in a designated "Area of Environmental Concern" (AEC) in the twenty (20) coastal counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA), must also obtain the required CAMA permit. Construction activities may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – P.O. Box 1890, Wilmington, NC 28402 or Washington Field Office – P.O. Box 1000, Washington, NC 27889) for authorization to begin work.

3. Prior to the use of any NWP on a Barrier Island of North Carolina, applicants must comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable Nationwide Permit.

4. Prior to the use of any NWP in a "Mountain or Piedmont Bog" of North Carolina, applicants shall comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP.

Note: The following wetland community types identified in the N.C. Natural Heritage Program document, "Classification of Natural communities of North Carolina (Michael P. Schafale and Alan S. Weakley, 1990), are subject to this regional condition.

Mountain Bogs	Piedmont Bogs
Swamp Forest-Bog Complex	Upland Depression Swamp Forest
Swamp Forest-Bog Complex (Spruce Subtype)	
Southern Appalachian Bog (Northern Subtype)	
Southern Appalachian Bog (Southern Subtype)	
Southern Appalachian Fen	

5. Prior to the use of any NWP in Mountain Trout Waters within twenty-five (25) designated counties of North Carolina, applicants shall comply with Nationwide General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP. Notification will include a letter of comments and recommendations from the North Carolina Wildlife Resources Commission (NCWRC), the

location of work, a delineation of wetlands, a discussion of alternatives to working in the Mountain Trout Waters, why other alternatives were not selected, and a plan to provide compensatory mitigation for all unavoidable adverse impacts to the Mountain Trout Waters. To facilitate coordination with the NCWRC, the proponent may provide a copy of the notification to the NCWRC concurrent with the notification to the District Engineer. The NCWRC will respond both to the proponent and directly to the Corps of Engineers.

The twenty-five (25) designated counties are:

Alleghany	Ashe	Avery	Yancey
Buncombe	Burke	Caldwell	Wilkes
Cherokee	Clay	Graham	Swain
Haywood	Henderson	Jackson	Surry
Macon	Madison	McDowell	Stokes
Mitchell	Polk	Rutherford	
Transylvania	Watauga		

6. Applicants shall notify the NCDENR Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination of the disposal area and allow a temporary shellfish closure to be made. Any disposal of sand to the beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand should be used and no dredged sand from closed shell fishing areas. If beach disposal was to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swim advisory shall be posted and a press release shall be made. NCDENR Shellfish Sanitation Section must be notified before commencing this activity.

2. List of Final Corps Regional Modifications and Conditions for All Nationwide Permits

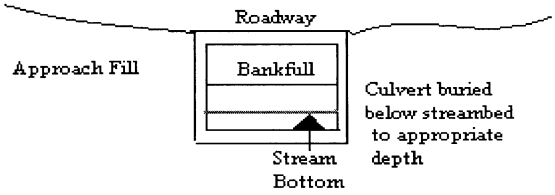
a. Individual or multiple NWPs may not be used for activities that result in the cumulative loss or degradation of greater than 300 total linear feet of perennial streambed or intermittent streambed that exhibits important aquatic function(s).

b. Prior to the use of any NWP (except 13, 27, and 39) for any activity that has more than a total of 150 total linear feet of perennial streambed impacts or intermittent streambed impacts (if the intermittent stream has important aquatic function), the applicant must comply with Nationwide Permit General Condition 13. In addition, the applicant shall furnish a written statement of compliance with all of the conditions listed of the applicable NWP. Compensatory mitigation is typically required for any impact that requires such notification. [Note: The Corps uses the Intermittent Channel Evaluation Form, located with Permit Information on the Regulatory Program Web Site, to aid in the determination of the intermittent channel stream status. Also, NWPs 13, 27 and 39 have specific reporting requirements.]

c. For all Nationwide Permits which allow the use of concrete as a building material, measures will be taken to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with waters of the state until the concrete has hardened.

d. For all Nationwide Permits that allow for the use of riprap material for bank stabilization, filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters.

e. For all NWPs that involve the construction of culverts, measures will be included in the construction that will promote the safe passage of fish and other aquatic organisms.
All culverts in the 20 CAMA coastal counties must be buried to a depth of one foot below the



bed of the stream or wetland. For all culvert construction activities, the dimension, pattern, and profile of the stream, (above and below a pipe or culvert), should not be modified by widening the stream channel or by reducing the depth of the stream. Culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. For culverts 48 inches in diameter or smaller, culverts must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert. Bottomless arch culverts will satisfy this condition. A waiver from the depth specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional Condition would result in more adverse impacts to the aquatic environment.

NORTH CAROLINA DIVISION OF WATER QUALITY
GENERAL CERTIFICATION CONDITIONS
GC3361

1. Proposed fill or substantial modification of wetlands or waters (including streams) under this General Certification requires notification to the Division of Water Quality. Two copies shall be submitted to DWQ at the time of notification in accordance with 15A NCAC 2H .0501(a). Written concurrence from DWQ is not required unless any standard conditions of this Certification cannot be met;

2. Appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" whichever is more appropriate (available from the Division of Land Resources (DLR) in the DENR Regional or Central Offices) shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to assure compliance

with the appropriate turbidity water quality standard;

3. In accordance with 15A NCAC 2H .0506 (h) compensatory mitigation may be required for impacts to 150 linear feet or more of streams and/or one acre or more of wetlands. In addition, buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for buffer impacts resulting from activities classified as "allowable with mitigation" within the "Table of Uses" section of the Buffer Rules or require a variance under the Buffer Rules. A determination of buffer, wetland and stream mitigation requirements shall be made for any Certification for this Nationwide Permit. The most current design and monitoring protocols from DWQ shall be followed and written plans submitted for DWQ approval as required in those protocols. When compensatory mitigation is required for a project, the mitigation plans must be approved by DWQ in writing before the impacts approved by the Certification occur. The mitigation plan must be implemented and/or constructed before any permanent building or structure on site is occupied. In the case of public road projects, the mitigation plan must be implemented before the road is opened to the traveling public;

4. Compensatory stream mitigation shall be required at a 1:1 ratio for all perennial and intermittent stream impacts equal to or exceeding 150 feet and that require application to DWQ in watersheds classified as ORW, HQW, Tr, WS-I and WS-II;

5. All sediment and erosion control measures placed in wetlands or waters shall be removed and the original grade restored within two months after the Division of Land Resources has released the project;

6. Measures shall be taken to prevent live or fresh concrete from coming into contact with waters of the state until the concrete has hardened;

7. In accordance with North Carolina General Statute Section 143-215.3D(e), any request for written concurrence for a 401 Water Quality Certification must include the appropriate fee. If a project also requires a CAMA Permit, one payment to both agencies shall be submitted and will be the higher of the two fees;

8. Impacts to any stream length in the Neuse, Tar-Pamlico, Randleman and Catawba River Basins (or any other river basins with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) requires written concurrence from DWQ in accordance with 15A NCAC 2B.0200. Activities listed as "exempt" from these rules do not need to apply for written concurrence under this Certification. New development activities located in the protected 50-foot wide riparian areas (whether jurisdictional wetlands or not) within the Neuse, Tar-Pamlico, Randleman and Catawba River Basins shall be limited to "uses" identified within and constructed in accordance with 15A NCAC 2B .0200. All new development shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices;

9. Additional site-specific conditions may be added to projects for which written concurrence is

required or requested under this Certification in order to ensure compliance with all applicable water quality and effluent standards;

10. Concurrence from DWQ that this Certification applies to an individual project shall expire three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Nationwide and Regional General Permits, whichever is sooner;

11. When written concurrence is required, the applicant is required to use the most recent version of the Certification of Completion form to notify DWQ when all work included in the 401 Certification has been completed.

NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT STATE CONSISTENCY

Consistent.

Citations:
2002 Nationwide Permits - Federal Register Notice 15 Jan 2002
2002 Nationwide Permits Corrections - Federal Register Notice 13 Feb 2002
2002 Regional Conditions – Authorized 17 May 2002

WQC #3403

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 23 (APPROVED CATEGORICAL EXCLUSIONS) AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)

This General Certification is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality Regulations in 15A NCAC 2H, Section .0500 and 15A NCAC 2B .0200 for the discharge of fill material to waters and wetland areas as described in 33 CFR 330 Appendix A (B) (23) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 2B .0200. This Certification replaces Water Quality Certification Number 2670 issued on January 21, 1992, Certification Number 2734 issued on May 1 1993, Certification Number 3107 issued on February 11, 1997 and Water Quality Certification Number 3361 issued March 18, 2002. This WQC is rescinded when the Corps of Engineers re-authorizes Nationwide Permit 23 or when deemed appropriate by the Director of the DWQ.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Conditions of Certification:

1. Proposed fill or substantial modification of wetlands or waters (including streams) under this General Certification requires notification to the Division of Water Quality. Two copies shall be submitted to DWQ at the time of notification in accordance with 15A NCAC 2H .0501(a). Written concurrence from DWQ is not required unless any standard conditions of this Certification cannot be met;

2. Appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" whichever is more appropriate (available from the Division of Land Resources (DLR) in the DENR Regional or Central Offices) shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to assure compliance with the appropriate turbidity water quality standard;

3. In accordance with 15A NCAC 2H .0506 (h) compensatory mitigation may be required for impacts to 150 linear feet or more of streams and/or one acre or more of wetlands. In addition, buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for buffer impacts resulting from activities classified as "allowable with mitigation" within the "Table of Uses" section of the Buffer Rules or require a variance under the Buffer Rules. A determination of buffer, wetland and stream mitigation requirements shall be made for any Certification for this Nationwide Permit. The most current design and monitoring protocols from DWQ shall be followed and written plans submitted for DWQ approval as required in those protocols. When compensatory mitigation is required for a project, the mitigation plans must be approved by DWQ in writing before the impacts approved by the Certification occur. The mitigation plan must be implemented and/or constructed before any permanent building or structure on

site is occupied. In the case of public road projects, the mitigation plan must be implemented before the road is opened to the travelling public;

4. Compensatory stream mitigation shall be required at a 1:1 ratio for not only perennial but also intermittent stream impacts equal to or exceeding 150 feet and that require application to DWQ in watersheds classified as ORW, HQW, Tr, WS-I and WS-II unless the project is a linear, publicly-funded transportation project, which has a 150-foot per-stream impact allowance;

5. All sediment and erosion control measures placed in wetlands or waters shall be removed and the original grade restored within two months after the Division of Land Resources has released the project;

6. Measures shall be taken to prevent live or fresh concrete from coming into contact with freshwaters of the state until the concrete has hardened;

7. In accordance with North Carolina General Statute Section 143-215.3D(e), any request for written concurrence for a 401 Water Quality Certification must include the appropriate fee. If a project also requires a CAMA Permit, one payment to both agencies shall be submitted and will be the higher of the two fees;

8. Impacts to any stream length in the Neuse, Tar-Pamlico, Randleman and Catawba River Basins (or any other river basins with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) requires written concurrence from DWQ in accordance with 15A NCAC 2B.0200. Activities listed as "exempt" from these rules do not need to apply for written concurrence under this Certification. New development activities located in the protected 50-foot wide riparian areas (whether jurisdictional wetlands or not) within the Neuse, Tar-Pamlico, Randleman and Catawba River Basins shall be limited to "uses" identified within and constructed in accordance with 15A NCAC 2B .0200. All new development shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices;

9. Additional site-specific conditions may be added to projects for which written concurrence is required or requested under this Certification in order to ensure compliance with all applicable water quality and effluent standards;

10. Concurrence from DWQ that this Certification applies to an individual project shall expire three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Nationwide and Regional General Permits, whichever is sooner;

11. When written concurrence is required, the applicant is required to use the most recent version of the Certification of Completion form to notify DWQ when all work included in the 401 Certification has been completed.

Non-compliance with or violation of the conditions herein set forth by a specific fill project shall result in revocation of this Certification for the project and may result in criminal and/or civil penalties.

WQC #3403

The Director of the North Carolina Division of Water Quality may require submission of a formal application for individual certification for any project in this category of activity that requires written concurrence under this certification, if it is determined that the project is likely to have a significant adverse effect upon water quality or degrade the waters so that existing uses of the wetland, stream or downstream waters are precluded.

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

Effective date: March 2003

DIVISION OF WATER QUALITY

By

Alan W. Klimek, P.E.

Director

WQC # 3403

WQC #3366

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 33 (TEMPORARYCONSTRUCTION, ACCESS AND DEWATERING) AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)

This General Certification is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality Regulations in 15A NCAC 2H, Section .0500 and 15A NCAC 2B .0200 for the discharge of fill material to waters and wetland areas as described in 33 CFR 330 Appendix A (B) (33) of the Corps of Engineers regulations (i.e., Nationwide Permit No. 33) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 2B .0200. The category of activities shall include any fill activity for temporary construction, access and de-watering. This Certification replaces Water Quality Certification Number 2727 issued on May 1, 1992 and Certification Number 3114 issued on February 11, 1997. This WQC is rescinded when the Corps of Engineers reauthorize Nationwide Permit 33 or when deemed appropriate by the Director of the DWQ.

The State of North Carolina certifies that the specified category of activity will not violate appropriate portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Conditions of Certification:

1. These activities do not require written concurrence from the Division of Water Quality as long as they comply with all conditions of this General Certification. If any condition in this Certification cannot be met, application to and written concurrence from DWQ are required. Also, Condition No. 2 is applicable to all streams in basins with riparian area protection rules;

2. Impacts to any stream length in the Neuse, Tar-Pamlico and Randleman River Basins (or any other major river basins with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) requires written concurrence from DWQ in accordance with 15A NCAC 2B.0200. Activities listed as “exempt” from these rules do not need to apply for written concurrence under this Certification. New development activities located in the protected 50-foot wide riparian areas (whether jurisdictional wetlands or not) within the Neuse, Tar-Pamlico, Randleman and Catawba River Basins shall be limited to “uses” identified within and constructed in accordance with 15A NCAC 2B .0200. All new development shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices;

3. Appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" whichever is more appropriate (available from the Division of Land Resources (DLR) in the DENR Regional or Central Offices) shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to assure compliance with the appropriate turbidity water quality standard;

4. All sediment and erosion control measures placed in wetlands or waters shall be removed and the original grade restored within two months after the Division of Land Resources has released the project;

5. If an environmental document is required, this Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse;

6. Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed to allow low flow passage of water and aquatic life unless it can be shown to DWQ that providing passage would be impractical. Design and placement of culverts including open bottom or bottomless arch culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in aggradation, degradation or significant changes in hydrology of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested in writing by DWQ. Additionally, when roadways, causeways or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges must be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in aggradation, degradation or significant changes in hydrology of streams or wetlands;

7. Measures shall be taken to prevent live or fresh concrete from coming into contact with waters of the state until the concrete has hardened;

8. All temporary fill shall be removed to the original grade after construction is complete and the site shall be stabilized to prevent erosion;

9. Pipes shall be installed under the road or causeway in all streams to carry at least the 25 year storm event as outlined in the most recent edition of the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" so as not to restrict stream flow during use of this Certification;

10. In accordance with North Carolina General Statute Section 143-215.3D(e), any request for written concurrence for a 401 Water Quality Certification must include the appropriate fee. If a project also requires a CAMA Permit, one payment to both agencies shall be submitted and will be the higher of the two fees;

11. Additional site-specific conditions may be added to projects for which written concurrence is required or requested under this Certification in order to ensure compliance with all applicable water quality and effluent standards;

12. Concurrence from DWQ that this Certification applies to an individual project shall expire three years from the date of the cover letter from DWQ or on the same day as the expiration date of these corresponding Nationwide and Regional General Permits, whichever is sooner;

13. When written concurrence is required, the applicant is required to use the most recent version of the Certification of Completion form to notify DWQ when all work included in the 401 Certification has been completed.

Non-compliance with or violation of the conditions herein set forth by a specific fill project shall result in revocation of this Certification for the project and may result in criminal and/or civil penalties.

The Director of the North Carolina Division of Water Quality may require submission of a formal application for individual certification for any project in this category of activity that requires written concurrence under this certification, if it is determined that the project is likely to have a significant adverse effect upon water quality or degrade the waters so that existing uses of the wetland, stream or downstream waters are precluded.

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

Effective date: 18 March 2002

DIVISION OF WATER QUALITY

By

Gregory J. Thorpe, Ph.D.

Acting Director

WQC # 3366

Transylvania County
Bridge No. 116 on SR 1105
Over Glady Fork Creek
Federal Project BRZ-1105 (9)
State Project 8.2001201
TIP No. B-3914

CATEGORICAL EXCLUSION

U. S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

N. C. DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

APPROVED:

7-31-03 Teresa Hart
Date for **Gregory J. Thorpe, PhD**
Environmental Management Director, PDEA

8-7-03 Filip Dilov
Date for **John F. Sullivan, III**
Division Administrator, FHWA

Transylvania County
Bridge No. 116 on SR 1105
Over Glady Fork Creek
Federal Project BRZ-1105 (9)
State Project 8.2001201
TIP No. B-3914

CATEGORICAL EXCLUSION

Documentation Prepared in
Project Development and Environmental Analysis Branch By:

7-29-03 Robin Y. Hancock

Date **Robin Y. Hancock**
Project Planning Engineer, PDEA

7-31-03 William T. Goodwin Jr.

Date **William T. Goodwin Jr., PE**
Unit Head, PDEA

PROJECT COMMITMENTS

Transylvania County
Bridge No. 116 on SR 1105
Over Glady Fork Creek
Federal Project BRZ-1105 (9)
State Project 8.2001201
TIP No. B-3914

Commitments Developed Through Project Development and Design

Roadside Environmental Unit, Division 14 Construction, Structure Design Unit
Bridge Demolition: Best Management Practices for Bridge Demolition & Removal will be implemented. The Bridge is composed entirely of timber. Therefore, Bridge No. 116 will be removed without dropping any components into Waters of the United States.

Division 14 Construction
Under no circumstances should rock, sand, or other materials be dredged from the wetted stream channel under authorization of this permit, except in the immediate vicinity of bridge abutments.

All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags or rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.

If concrete is used during construction, adequate precautions must be taken to prevent direct contact between wet concrete and stream water. Water that has contacted uncured concrete will not be discharged to surface waters.

Construction in the stream channel and within the 25-foot buffer is prohibited during the trout-spawning period of October 15 – April 15 in order to protect the egg and fry stages from sedimentation.

Riprap placed for bank stabilization should be limited to the streambank below the high water mark, and vegetation should be used for stabilization above the high water elevation.

All mechanized equipment operated near surface waters should be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.

Any overwidened areas at the bridge site should be restored; and the width/depth ratio typical of the stream should be maintained through the bridge site.

Division 14 Construction, Roadside Environmental
Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities. Erosion control matting in conjunction with appropriate seeding should be used on disturbed streambanks and areas around bridge crossings instead of straw mulch.

Grading and backfilling should be minimized, and tree and shrub growth should be retained if possible. Backfill materials should be obtained from upland sites.

Transylvania County
Bridge No. 116 on SR 1105
Over Glady Fork Creek
Federal Project BRZ-1105 (9)
State Project 8.2001201
TIP No. B-3914

INTRODUCTION: Bridge No. 116 is included in the latest approved North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and is eligible for the Federal-Aid Bridge Replacement and Rehabilitation Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion".

I. PURPOSE AND NEED STATEMENT

Bridge Maintenance Unit records indicate Bridge No. 116 has a sufficiency rating of 36.7 out of a possible 100 for a new structure. This bridge is considered to be both functionally obsolete and structurally deficient. The replacement of this inadequate structure will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located in Transylvania County, southeast of Rosman, close to the intersection of SR 1107 and SR 1105 (see Figure 1). Development in the area is primarily residential and forested in nature.

SR 1105 is classified as a Rural Local Route in the Statewide Functional Classification System and it is not a National Highway System Route. This route is not a designated bicycle route and there is no indication that an unusual number of bicyclists use this roadway.

In the vicinity of the bridge, SR 1105 has a 21-foot (6.3-meter) pavement width with 2-foot to 4-foot (0.6-meter to 1.2-meter) grass shoulders (see Figure 3A and 3B). The roadway grade is in a slight vertical sag through the project area. The existing bridge is on a tangent.

The existing Bridge No. 116 is a single span structure constructed in 1963. The superstructure has a timber deck on I-beams with an asphalt wearing surface. The substructure is composed entirely of timber. The bridge is 36 feet (11 meters) long with a clear roadway width of 19.1 feet (5.8 meters). There is approximately 8 feet (2.4 meters) between the deck surface and streambed. There are two lanes of traffic on the bridge. Presently the bridge is posted with weight restrictions of 14 tons for single vehicles and 18 tons for truck-tractor semi-trailers.

An underground telephone and fiber optic line is located along the west side of SR 1105. These go under the stream at a depth of 4 feet (1.2 meters) and are 8-10 feet (2.4 – 3.0 meters) west of the bridge. Utility impacts are considered low.

The current traffic volume of 160 vehicles per day (VPD) is expected to increase to 300 VPD by the year 2025. The projected volume includes 1% truck-tractor semi-trailer (TTST) and 2% dual-tired vehicles (DT). The speed limit in the vicinity of the bridge is statutory 55 mph (90 kmh).

According to NCDOT's Traffic Engineering Branch, no accidents have been reported in the vicinity of the project during a recent 3-year period.

According to the Transportation Director for Transylvania County Schools, there are four school bus crossings per day over this bridge. They would not be able to re-route the buses.

III. ALTERNATIVES

A. Project Description

The replacement structure for Bridge No. 116 will consist of a 55-foot (16.7-meter) long bridge located west of the existing bridge. There will be sufficient width to provide for two 11-foot (3.3-meter) lanes with 2-foot (0.6-meter) offsets on each side.

The roadway grade of the new structure will be approximately the same as the existing bridge.

The existing roadway will be widened to a 22-foot (6.6-meter) pavement width to provide two 11-foot (3.3-meter) lanes. Shoulder widths will be 4 feet (1.2 meters) on each side. The shoulder widths will be increased 3 feet (1 meter) where guardrail is warranted.

B. Reasonable and Feasible Alternatives

There are two "build" options considered for this bridge replacement. They are described as follows:

Alternate 1: Replace Bridge No. 116 with a new 55 foot (16.7 meter) long bridge by realigning SR 1105 east of the existing bridge. Construct the replacement bridge at approximately the same roadway elevation as the existing bridge. Traffic would be maintained using the existing alignment during construction.

Alternate 2: **(Recommended)** Replace Bridge No. 116 with a new 55 foot (16.7 meter) long bridge by realigning SR 1105 west of the existing bridge. Construct the replacement bridge at approximately the same roadway elevation as the existing bridge. Traffic will be maintained using the existing alignment during construction.

C. Alternatives Eliminated From Further Consideration

An off-site detour is not considered to be prudent due to the lack of a suitable detour route.

The "do-nothing" alternative is not practical and will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by SR 1105.

"Rehabilitation" of the existing deteriorating bridge is neither practical nor economical. This is due to the fact that major structural components of this bridge are timber, thus replacement is more prudent than rehabilitation.

D. Recommended Alternate

As recommended in Alternate 2, Bridge No. 116 will be replaced with a new bridge on new location at approximately the same roadway elevation as the existing bridge (see Figure 2). The new Bridge No. 116 will be approximately 55 feet (16.7 meters) in length and 26 feet (7.8 meters) in width. A travelway of 22 feet (6.6 meters) will be accommodated, with an offset of 2 feet (0.6 meter) on each side. During construction, traffic will be maintained along the existing roadway. A design exception may be needed.

The approach roadway will consist of two 11-foot (3.3-meter) travel lanes and shoulder widths of at least 4 feet (1.2 meters). The shoulder widths will be 3 feet (1 meter) wider where guardrail is warranted. There will be approximately 380 feet (116 meters) of approach work on each side of Bridge No. 116.

The construction of the recommended alternate does not have the potential to cause substantial impacts to the local environment. Alternate 1 provides an improved horizontal alignment, but incurs more stream impacts. It also results in impacts to the Cassell Cemetery located approximately 100 feet (30 meters) east of the existing bridge. Alternate 2 crosses the stream at a better location and is more cost effective. For these reasons, Alternate 2 is the preferred alternate.

The NCDOT Division 14 Engineer concurs with the selection of Alternative 2 as the preferred alternative.

IV. ESTIMATED COSTS (Table 1)

The estimated costs for the two alternatives are as follows:

COMPONENT	ALTERNATE 1 (new location east)	**Recommended** ALTERNATE 2 (new location west)
Structures	$ 115,000	$ 115,000
Bridge Removal	$ 6,000	$ 6,000
Roadway & Approaches	$ 796,000	$ 159,000
Detour & Approaches	$ 0	$ 0
Engineering & Contingencies	$ 133,000	$ 70,000
Total Construction	$ 1,050,000	$ 350,000
Right of Way	$ 41,000	$ 52,000
Total Cost	**$ 1,091,000**	**$ 402,000**

V. NATURAL RESOURCES

PHYSICAL RESOURCES

Soil and water resources that occur in the project area are discussed below with respect to possible environmental concerns. Soil properties and site topography significantly influence the potential for soil erosion and compaction, along with other possible construction limitations or management concerns. Water resources within the project area present important management limitations due to the need to regulate water movement and the increased potential for water quality degradation. Excessive soil disturbance resulting from construction activities can potentially alter both the flow and quality of water resources, limiting downstream uses. In addition, soil characteristics and the availability of water directly influence the composition and distribution of flora and fauna in biotic communities, thus affecting the characteristics of these resources.

Regional Characteristics

The project area lies in the western portion of North Carolina within the Blue Ridge physiographic province. Elevations in the project area range from approximately 2250-2400 feet (675-720 meters) (National Geodetic Vertical Datum, 1969). The topography of the project vicinity is mountainous with steep slopes rising from southwest and northeast banks, and gradual slopes rising from the northwest and southeast banks.

The proposed project is in a rural area in Transylvania County approximately 15 miles (24.3 km) southwest of Brevard, NC. Transylvania County's major economic resources are forestry and tourism. The population of Transylvania County in 2000 was 29,429 (North Carolina Office of State Budget, Planning and Management 2002).

Soils

Information about soils in the project area was taken from the *Soil Survey of Transylvania County, North Carolina* (USDA 1974). The map units in the project area are Rosman fine sandy loam, Ashe fine sandy loam with 25-45% slopes, and Tusquitee loam with 6-15% slopes.

- Rosman fine sandy loam is mapped along both banks of Glady Fork within the project area. This soil is very frequently flooded for brief durations. It is a well-drained to moderately well-drained, nearly level soil on stream floodplains. The seasonal high water table is at 2.5 feet (0.75 meters) in winter. This soil is not classified as a hydric soil by the NRCS.
- Ashe fine sandy loam with 25-45% slopes is mapped adjacent to Rosman soils along both sides of Glady Fork Road, and on the north side of Glady Fork. This soil is somewhat excessively drained, sloping soils on side slopes with rough topography. The seasonal high water table remains below a depth of 5 feet (1.5 meters). This soil is not classified as a hydric soil by the NRCS.
- Tusquitee loam with 6-15% slopes is mapped adjacent to Rosman soils along both sides of Glady fork Road, and on the south side of Glady Fork. This soil is found in upland draws and on foot slopes. It is well-drained and the seasonal high water table remains below 5 feet (1.5 meters). This soil is not classified as a hydric soil by the NRCS.

Site index is a measure of soil quality and productivity. The index is the average height, in feet, that dominant and co-dominant trees of a given species attain in a specified number of years (typically 50). The site index applies to fully-stocked, even-aged, unmanaged stands. The soils in the project area have the following site indices:

- The Rosman soils have a site index of 85-95 for white pine (*Pinus strobus*), 75-85 for shortleaf pine (*Pinus echinata*), 95-115 for tulip poplar (*Liriodendron tulipifera*), and 80-90 for red oak (*Quercus rubra*).
- The Ashe soils have a site index of 75-85 for white pine and 55-75 for shortleaf pine.
- Tusquitee soils have a site index of 85-95 for white pine, 75-85 for shortleaf pine, 90-110 for tulip poplar, and 75-85 for red oak.

Water Resources

This section contains information concerning water resources likely to be impacted by the proposed project. Water resources assessments include the physical characteristics likely to be impacted by the proposed project (determined by field survey), best usage classifications, and water quality aspects of the water resources. Probable impacts to surface waters are also discussed, as well as means to minimize impacts.

Best Usage Classification

Surface waters in North Carolina are assigned a classification by the DWQ that is designed to maintain, protect, and enhance water quality within the state. Glady Fork [Index # 6-6-7] is classified as a *Class C Tr* water body (NCDENR, 1999). *Class C* water resources are waters protected for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner. There are no restrictions on watershed development activities. The supplemental *Tr* classification refers to trout waters, which are freshwaters protected for natural trout propagation and survival of stocked trout. The two unnamed tributaries present within the project area and project vicinity have not been classified individually by DWQ, therefore they carry the same *C* rating as their receiving stream.

No streams classified as Water Supplies (WS-I or WS-II) or Outstanding Resource Waters (ORW) occur within 1.0 miles (1.6 km) of the project study area, however two streams classified as High Quality Water (HQW) occur within 1.0 miles (1.6 km) of the project study area. Glady Fork Creek is not designated as a North Carolina Natural and Scenic River, nor is it designated as a National Wild and Scenic River.

Neither stream is located within the watershed drained by Glady Fork. Laurel Branch drains into the north side of the East Fork of the French Broad River approximately 1 mile (1.6 km) downstream from the confluence of Glady Fork and the East Fork of the French Broad River. Boring Creek drains into the south side of the East Fork of the French Broad River approximately 1 mile (1.6 km) upstream from the confluence of Glady Fork and the East Fork of the French Broad River. Both Laurel Creek and Boring Creek are classified as *Class C Tr HQW*.

Physical Characteristics of Surface Waters

The project is located in the French Broad River basin (FBR01 sub-basin, HUC 06010105). Glady Fork originates about 6 miles (9.7 km) south of the project area near the South Carolina state line, as the South Prong of Glady Fork. The West Prong of Glady Fork originates about 5 miles (8 km) southwest of the project site. These two streams converge to form Glady Fork about 1 mile (1.6 km) south of the project site. Within the project area, Glady Fork flows in a northwesterly direction. Just over 1 mile (1.6 km) north of the project site, Glady Fork empties into the East Fork of the French Broad River.

Glady Fork is approximately 15-20 feet (4.5-6 meters) wide in the study area. The 2 to 4 foot (0.6-1.2 meter) high banks are well vegetated and appear to be stable. The stream flows swiftly within the project area, forming small rapids over cobbles, gravel, and sand. Some bedrock is exposed forming a small waterfall just upstream from the bridge. On the day of the site visit the flow seemed higher than normal, as indicated by many submerged, moss-covered rocks, and slightly turbid water conditions. At the center of the channel the water depth ranged from 6 inches to 1.5 feet (0.15-0.45 meters). The stream has a completely closed canopy, except in the area nearest the bridge, and its sinuosity is moderate.

Two unnamed tributaries flow into Glady Fork within or very close to the project area. The first unnamed tributary (called UT1 for the remainder of this report) flows into Glady Fork on its south side, and on the west side of Bridge No. 116. UT1 meanders outside the project area at all times at a distance ranging from 75 to 150 feet (22.5-45 meters). This perennial stream is approximately 3 feet (0.9 meters) wide and 4 inches (10 cm) deep. Its banks are 6 inches to 1 foot (15 cm-0.3 meters) high, and very well vegetated. The substrate is mainly gravel and sand, however some riprap is present in the area where UT1 crosses under a gravel road to the west of Glady Fork Road. On the day of the site visit the water was flowing swiftly and had good clarity.

A second unnamed tributary (UT2) flows into Glady Fork on its south side and on the east side of Bridge No. 116. This tributary actually parallels Glady Fork Road on its west side just south of the project area, crossing under Glady Fork Road near the gravel road mentioned earlier. UT2 then flows in a northeasterly direction, leaving the project area briefly. Outside the project area (80 feet or 24 meters), UT2 flows through a very small wetland. It eventually enters the project area again and flows within 20 feet (6 meters) of Glady Fork Road on its east side before finally reaching Glady Fork. UT2 is a perennial channel with characteristics much like those of UT1. It is approximately 3 feet (0.9 meters) wide and 4-10 inches (10-25 cm) deep. Its banks are 6 inches to 1 foot (15 cm-0.3 meters) high, and well vegetated. Its substrate is mainly sand and gravel. In areas closest to the road, riprap has also been added to the streambed. On the day of the site visit the flow was swift and the water clarity was good.

Water Quality

This section describes the quality of the water resources within the project area. Potential impacts to water quality from point and non-point sources are evaluated. Water quality assessments are based upon published resource information and field study observations.

General Watershed Characteristics

The project area is in a forested, largely undeveloped watershed. Within the immediate vicinity, one residence borders Glady Fork Creek. A small garden and lawn are adjacent to the stream, however a vegetative buffer is in place between the stream and the maintained landscape. Recent small-scale logging activities are evident in the southwest portion of the project area. Potential threats to stream quality in this area are larger scale forestry operations that would result in increased soil erosion.

Basin-wide Assessment Report

Basin-wide water quality assessments are conducted by the Environmental Sciences Branch, Water Quality Section of the DWQ. The program has established monitoring stations for sampling selected benthic macroinvertebrates, which are known to have varying levels of tolerance to water pollution. An index of water quality can be derived from the number of taxa present and the ratio of tolerant to intolerant taxa. Streams can then be given a bioclassification ranging from Poor to Excellent.

There are no monitoring stations on Glady Fork, and no monitoring stations on the East Fork of the French Broad River. In fact, the nearest sampling location is over 20 miles (32.4 km) downstream from the project site, on the French Broad River. This site is located within Transylvania county, northeast from Brevard, where the River crosses SR 1129. This location was sampled in 1997 and was classified as "Excellent".

Impaired Waters

North Carolina's §303(d) List (NCDENR, 2000) is a comprehensive public accounting of all impaired waterbodies. An impaired waterbody is one that is damaged by pollutants, such as nitrogen, phosphorus, and fecal coliform bacteria, and by pollution such as hydromodification and habitat degradation. The source of impairment might be from point sources, non-point sources and atmospheric deposition. The standards violation might be due to an individual pollutant, multiple pollutants, pollution or an unknown cause of impairment. This list is compiled by the North Carolina Division of Water Quality and submitted to the EPA by April 1 of every even year.

None of the water resources described above (Physical Characteristic of Surface Waters Section) are designated as biologically impaired water bodies regulated under the provisions of CWA §303(d).

Point Source Discharge Permits

Point source discharges in North Carolina are regulated through the National Pollutant Discharge Elimination System (NPDES) program administered by the DWQ. Not all discharges, nor all dischargers, are required to obtain a permit under NPDES. There are no permits issued to discharge in Glady Fork as of June 2001 (NCDENR 2001).

Non-Point Source Discharge

Unlike pollution from industrial and sewage treatment, non-point source (NPS) pollution comes from many non-discrete sources. As rainfall or snowmelt runoff moves over the earth's surface, natural and man-made pollutants are picked up, carried, and ultimately deposited into lakes, rivers, wetlands, coastal waters, and groundwater. Non-point source pollution includes fertilizers, herbicides, and insecticides from farms and residential areas; hydrocarbons and chemicals from urban runoff and energy production; sediments from construction sites, land clearing, and eroding stream banks; salt from irrigation activities; acid drainage from abandoned mines; bacteria and nutrients from livestock, animal wastes, and faulty septic systems; and atmospheric deposition. The effects of NPS pollutants on water resources vary, and in many instances, may not be known. These pollutants generally have harmful effects on drinking water supplies, recreation, wildlife, and fisheries (USEPA Office of Water, Non-Point Source Pollution Control Program, What is Non-Point Source (NPS) Pollution? - Questions and Answers; http://www.epa.gov/owow/nps/qa.html).

The investigating biologists conducted a visual observation of potential NPS discharges located within and near the project study area. Atmospheric deposition from passing vehicles; fertilizers, herbicides, and insecticides from nearby residential areas; and hydrocarbon and chemical runoff from nearby residential driveways and parking lots and were identified as potential sources of NPS pollution near the project area. Land clearing activities were observed within the northwestern portion of the project area. These activities have the potential to increase sediment loads in nearby streams.

Summary of Anticipated Impacts

Any action that affects water quality can adversely affect aquatic organisms. Temporary impacts during the construction phases may result in long-term impacts to the aquatic community. In general, replacing an existing structure in the same location with an off-site detour is the preferred environmental approach. Bridge replacement at a new location results in more severe impacts, and physical impacts are incurred at the point of bridge replacement. Alternative 1 would fill approximately 110 linear feet (33 meters) of UT2, and Alternative 2 would fill approximately 60 linear feet (18 meters) of UT2.

Project construction may result in the following impacts to surface water resources:

- Increased sediment loading and siltation as a consequence of watershed vegetation removal, erosion, and/or construction.
- Decreased light penetration/water clarity from increased sedimentation.
- Changes in water temperature with vegetation removal.
- Changes in the amount of available organic matter with vegetation removal.
- Increased concentration of toxic compounds from highway runoff, construction activities and construction equipment, and spills from construction equipment.
- Alteration of water levels and flows as a result of interruptions and/or additions to surface and groundwater flow from construction.

Construction impacts may not be restricted to the communities in which the construction activity occurs, but may also affect downstream communities. Efforts will be made to ensure that no sediment leaves the construction site. NCDOT's Best Management Practices for the Protection of Surface Waters will be implemented, as applicable, during the construction phase of the project to ensure that no sediment leaves the construction site. In addition, "Guidelines for Construction Adjacent to or Crossing Trout Waters" as incorporated into *Erosion and Sediment Control Guidelines* will be implemented and adhered to throughout the project.

BIOTIC RESOURCES

Terrestrial and aquatic communities are included in the description of biotic resources. Living systems described in the following sections include communities of associated plants and animals. These descriptions refer to the dominant flora and fauna in each community and the

relationships of these biotic components. Descriptions of the terrestrial systems are presented in the context of plant community classifications. These classifications follow Schafale and Weakley (1990) where possible. They are also cross-referenced to *The Nature Conservancy International Classification of Ecological Communities: Terrestrial Vegetation of the Southeastern United States* (Weakley *et al.*, 1998), which has recently been adopted as the standard land cover classification by the Federal Geographic Data Committee. Representative animal species that are likely to occur in these habitats (based on published range distributions) are also cited. Scientific nomenclature and common names (when applicable) are used for the plant and animal species described. Subsequent references to the same species are by the common name only. Fauna observed during field investigations are denoted with an asterisk (*).

Terrestrial Communities

Three terrestrial communities were identified within the project area: a disturbed community, a floodplain forest, and an upland forest. Dominant faunal components associated with these terrestrial areas will be discussed in each community description. Many species are adapted to the entire range of habitats found along the project alignment, but may not be mentioned separately in each community description.

Disturbed Community

This community includes three types of habitat that have recently been or are currently impacted by human disturbance including regularly maintained roadside shoulder, powerline right-of-way, and residential area. These habitats are kept in a low-growing, early successional state. The regularly maintained roadside shoulder is mowed frequently and is dominated by herbaceous vegetation. The dominant species include virgin's bower (*Clematis virginiana*), fescue (*Festuca* sp.), touch-me-not (*Impatiens capensis*), lespedeza (*Lespedeza* sp.), Japanese honeysuckle (*Lonicera japonica*), black seed plantain (*Plantain rugelii*), blackberry (*Rubus* sp.), and elderberry (*Sambucus canadensis*).

The powerline right-of-way is periodically mowed or cleared and is dominated by dense, scrubby vegetation. The dominant species include red maple (*Acer rubrum*), joe-pye weed (*Eupatorium fistulosum*), dog-hobble (*Leucothoe axillaris*), tulip poplar (*Liriodendron tulipifera*), blackberry, poison ivy (*Toxicodendron radicans*), goldenrod (*Solidago* sp.), pokeweed (*Phytolacca americana*) and various ferns and grasses.

The residential area includes a maintained yard and garden, as well as a small poultry yard. Several outbuildings and a mobile home are also present. The residential area is dominated by various turf grasses, red maple, white pine (*Pinus alba)*, jack-in-the-pulpit (*Arisaema triphyllum*), forsythia (*Forsythia* sp.), daylily (*Hemerocallis fulva*), rose-of-sharon (*Hibiscus syriacus*), and hosta (*Hosta* sp.).

Floodplain Forest

This community occurs along the banks of Glady Fork. The canopy is dominated by white pine, but red maple and tulip poplar also make up a small component. Due to the planting of white pines, the tree component of this community has been altered from its natural state. The understory is very diverse and includes species such as black cherry (*Prunus serotina*), mountain laurel (*Kalmia latifolia*), spice bush (*Lindera benzoin*), sourwood (*Oxydendrum arboreum*), viburnum (*Viburnum* sp.), yellowroot (*Xanthorhiza simplissima*), great rhododendron (*Rhododendron maximum*), and giant cane (*Arundinaria gigantea*). Herbaceous and viney species include various ferns, jack-in-the-pulpit, galax (*Galax aphylla*), dog-hobble, sphagnum (*Sphagnum* sp.), and grape (*Vitis* sp.). This community probably represents a marginal example of a Montane Alluvial Forest as described by Schafale and Weakley (1990). The TNC classification is most likely I.A.8.N.b.14 *Pinus strobus* Forest Alliance.

Upland Forest

This community occurs at higher elevations along Glady Fork above the floodplain community. Small-scale logging operations have recently taken place in this community within the southwest quadrant of the project area, creating an opening in the otherwise closed canopy. The canopy in this area is dominated by planted white pines. However, a few other species are also present, such as red maple, white oak (*Quercus alba*), and eastern hemlock (*Tsuga canadensis*). The understory is generally dense and includes mountain laurel, black gum (*Nyssa sylvatica*), witch-hazel (*Hamamelis virginiana*), sourwood, sassafras (*Sassafras albidum*), and viburnum. The herbaceous species present here include whorled loosetrife (*Lysimachia quadrifolia*), Indian pipe (*Monotropa uniflora*), poison ivy, and various species of ferns. This community is also a marginal example of a Montane Alluvial Forest as described by Schafale and Weakley (1990). The TNC classification is most likely I.A.8.N.b.13 *Pinus strobus-Tsuga Canadensis* Forest Alliance.

Faunal Component

Species that prefer open, disturbed habitat to feed and nest in can be found in the disturbed communities. The animal species present in these disturbed habitats are opportunistic and capable of surviving on a variety of resources, ranging from vegetation to both living and dead faunal components. The European starling (*Sturnus vulgaris*) and American robin* (*Turdus migratorius*) are common birds that use these habitats to find insects, seeds, or worms. The American crow* (*Corvus brachyrhynchos*) and the Virginia opossum (*Didelphis virginiana*) are true opportunists and will dine on virtually any edible items including vegetation, fruits, seeds, insects, and carrion. The roadside and residential areas may also be used by the woodchuck (*Marmota monax*), which enjoys the grasses. Various species of mice (*Peromyscus* spp.) will collect seeds and nest near human dwellings. The American toad (*Bufo americanus*) eats insects found in grassy areas and near human dwellings, and the Eastern garter snake (*Thamnophis sirtalis*) will feed on the toads.

Many species are highly adaptive and may utilize the edges of forests and clearings or prefer a mixture of habitat types. The Eastern cottontail (*Sylvilagus floridanus*) prefers a mix of herbaceous and woody vegetation and may be found in the dense shrub vegetation or out in the roadside, powerline right-of-way, and residential areas. White-tailed deer (*Odocoileus virginianus*) will utilize the forested areas as well as the adjacent open areas. The black rat snake (*Elaphe obsoleta*) will come out of forested habitat to forage on rodents in open areas. Indigo bunting* (*Passerina cyanea*) and common yellowthroat* (*Geothlypis trichas*) are Neotropical migrants that inhabit dense, shrubby vegetation along transitional areas. Blue jays (*Cyanocitta cristata*) and bluebirds (*Sialia sialis*) also utilize edge habitat.

Forested areas are important habitat for many species. Neotropical migratory birds, in particular, are dependent on these areas. Species such as wood thrush* (*Hylocichla mustelina*), hooded warbler* (*Wilsonia citrina*), and black-throated green warbler* (*Dendroica virens*) thrive in heavily wooded locations. In the leaf litter of the forested habitats, the Northern short-tailed shrew (*Blarina brevicauda*) and the white-footed mouse (*Peromyscus leucopus*) may be found. Gray squirrels (*Sciurus carolinensis*) are often observed in wooded areas. The spring peeper (*Hyla crucifer*) can be found under forest litter and in brushy undergrowth. The Eastern box turtle (*Terrapene carolina*) is a terrestrial turtle but will be found near streams in hot, dry weather. The five-lined skink (*Eumeces fasciatus*) may also be found in forested communities.

Aquatic Communities

Within the project area, Glady Fork is a mid-gradient, third-order stream. The bed material consists of mostly of cobbles and gravel, with a small percentage of bedrock and sand. On the day of the site visit, the water was slightly turbid with small amounts of suspended sediment. The riparian community is mostly evergreen trees, with some deciduous trees and evergreen shrubs. No aquatic vegetation was observed.

Transylvania County is designated a "trout" county by the North Carolina Wildlife Resources Commission (WRC). Although this section of Glady Fork is not designated a Public Mountain Trout Water (PMTW), it supports populations of wild trout. (A portion of the East Fork of the French Broad River just downstream from the confluence with Glady Fork and approximately 1500 feet (450 m) downstream from the project site is Designated Public Mountain Trout Water.) According to a communication with Scott Loftis, District 9 Fisheries Biologist for the WRC, Glady Fork is likely to support brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), blacknose dace (*Rhinichthys atratulus*), longnose dace (*Rhinichthys cataractae*), rosyside dace (*Clinostomus funduloides*), mottled sculpin (*Cottus bairdi*), saffron shiner (*Notropis rubricroceus*), and warpaint shiner (*Luxilus coccogenis*).

Summary of Anticipated Impacts

Project construction will have various impacts to the previously described terrestrial and aquatic communities. Any construction activities in or near these resources have the potential to impact biological functions. This section quantifies and qualifies potential impacts to the natural communities within the project area in terms of the area impacted and the plants and animals

affected. Temporary and permanent impacts are considered here along with recommendations to minimize or eliminate impacts.

Terrestrial Communities

Terrestrial communities in the project area will be impacted permanently by project construction from clearing and paving. Estimated impacts are based on the length of the alternate and the entire project area width. The project length for each proposed Alternate is 800 feet (244 meters) long. The proposed project has variable dimensions. Table 2 describes the potential impacts to terrestrial communities by habitat type. Because impacts are based on the entire project area width, the actual loss of habitat will likely be less than the estimate.

Table 2. Estimated Area of Impact to Terrestrial Communities

	Area of Impact in Acres (Hectares)	
	Alternate 1	**Alternate 2 (Recommended)**
Community	**Permanent**	**Permanent**
Disturbed Roadside	0.19 (0.08)	0.39 (0.16)
Floodplain Forest	0.13 (0.05)	0.01 (0.00)
Upland Forest	1.37 (0.55)	0.26 (0.11)
Total Impact	**1.69 (0.68)**	**0.66 (0.27)**

Destruction of natural communities along the project alignment will result in the loss of foraging and breeding habitats for the various animal species that utilize the area. Animal species will be displaced into surrounding communities. Adult birds, mammals, and some reptiles are mobile enough to avoid mortality during construction. Young animals and less mobile species, such as many amphibians, may suffer direct loss during construction. The plants and animals that are found in the upland communities are generally common throughout western North Carolina.

Impacts to terrestrial communities, particularly in locations having steep to moderate slopes, can result in the aquatic community receiving heavy sediment loads as a consequence of erosion. Construction impacts may not be restricted to the communities in which the construction activity occurs, but may also affect downstream communities. Efforts should be made to ensure that no sediment leaves the construction site.

Aquatic Communities

Impacts to aquatic communities include fluctuations in water temperatures as a result of the loss of riparian vegetation. Shelter and food resources, both in the aquatic and terrestrial portions of these organisms' life cycles, will be affected by losses in the terrestrial communities. The loss of aquatic plants and animals will affect terrestrial fauna that rely on them as a food source.

Temporary and permanent impacts to aquatic organisms may result from increased sedimentation. Aquatic invertebrates may drift downstream during construction and recolonize the disturbed area once it has been stabilized. Sediments have the potential to affect fish and other aquatic life in several ways, including the clogging and abrading of gills and other respiratory surfaces, affecting the habitat by scouring and filling of pools and riffles, altering water chemistry, and smothering different life stages. Increased sedimentation may cause decreased light penetration through an increase in turbidity. Trout populations are particularly sensitive to water-quality degradation.

Wet concrete should not come into contact with surface water during bridge construction as it can adversely affect aquatic life. Potential adverse effects can be minimized through the implementation of NCDOT *Best Management Practices for Protection of Surface Waters*. In addition, "Guidelines for Construction Adjacent to and Crossing Trout Waters" as incorporated into *Erosion and Sediment Control Guidelines* will be implemented and followed throughout the project. In-stream work and land disturbance within the 25-foot wide trout stream buffer zone should be prohibited during the trout spawning season of October 15 through April 15 to protect the egg and fry stages of trout from off-site sedimentation during construction.

JURISDICTIONAL TOPICS

This section provides inventories and impact analyses for two federal and state regulatory issues: "Waters of the United States" and rare and protected species.

Waters of the United States

Wetlands and surface waters fall under the broad category of "Waters of the United States" as defined in 33 CFR §328.3 and in accordance with provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344). These waters are regulated by the U.S. Army Corps of Engineers (USACE). Any action that proposes to dredge or place fill material into surface waters or wetlands falls under these provisions.

Characteristics of Wetlands and Surface Waters

The Eastatoe, NC NWI map shows no wetlands in the project vicinity. No jurisdictional wetlands were observed within the project area. Glady Fork and UT2 meet the definition of surface waters, and are therefore classified as Waters of the United States. The channel of Glady Fork is approximately 15-20 feet (4.5-6 meters) wide within the project area. The tributary's channel is 3 feet (0.9 meters) wide. Both these streams are perennial.

Bridge Demolition

Demolition and removal of a highway bridge over Waters of the United States must be addressed when applying to the U.S. Corps of Engineers (COE) for a permit. A worst-case scenario of dropping components of the bridge in the water is assumed. Effective September 20, 1999, this

issue is included in the permit application for bridge reconstruction. The permit application henceforth will require disclosure of demolition methods and potential impacts to the body of water in the planning document for the bridge reconstruction.

Section 402-2 "Removal of Existing Structures" of NCDOT's Standard Specifications for Roads and Structures stipulates that "excavated materials shall not be deposited....in rivers, streams, or impoundments," and "the dropping of parts or components of structures into any body of water will not be permitted unless there is no other practical method of removal. The removal from the water of any part or component of a structure shall be done so as to keep any resulting siltation to a minimum." To meet these specifications, NCDOT shall adhere to Best Management Practices for the Protection of Surface Waters, as supplemented with Best Management Practices for Bridge Demolition and Removal.

All in-stream work shall be classified into one of three categories as follows:

Case 1) In-water work is limited to an absolute minimum, due to the presence of Outstanding Resource Waters or threatened and/or endangered species, except for the removal of the portion of the sub-structure below the water. The work is carefully coordinated with the responsible agency to protect the Outstanding Resource Water or T&E species.

Case 2) No work at all in the water during moratorium periods associated with fish migration, spawning, and larval recruitment into nursery areas.

Case 3) No special restrictions other than those outlined in Best Management Practices for Protection of Surface Waters and supplements added by the Bridge Demolition document, dated September 20, 1999.

Glady Fork in the vicinity of the proposed project is a Class C Tr water. It is not known to provide habitat for aquatic species on the federal list of threatened and endangered species. It is not classified as Public Mountain Trout Water by the WRC, but it does carry the DWQ supplemental *Tr* classification. Therefore, Case 2 applies to the proposed replacement of Bridge No. 116 over Glady Fork.

The superstructure consists of a timber floor on I-beams. The substructure consists entirely of timber. Therefore, Bridge No. 116 will be removed without dropping any components into Waters of the United States

The stream bed in the project area is nearly all cobbles and gravel. Therefore, conditions in the stream do not raise sediment concerns and a turbidity curtain is not recommended.

Summary of Anticipated Impacts

Project construction cannot be accomplished without infringing on the surface waters. Anticipated surface water impacts fall under the jurisdiction of the USACE and the DWQ. Within the project area, Glady Fork is approximately 20 feet (6 meters) wide, and UT2 is 3 feet (0.9 meters) wide. Table 3 lists the potential stream impacts, assuming a project area of 80 feet

(24 meters) for each alternate.

Table 3. Estimated Area of Impact to Jurisdictional Surface Waters

		Alternative 1		Alternative 2 (Recommended)	
Water body	**Width in ft (m)**	**Impact in Linear ft (m)**	**Impact in sq ft (m)**	**Impact in Linear ft (m)**	**Impact in sq ft (m)**
Glady Fork	20 (6)	80 (24)	1,600 (148.6)	80 (24)	1,600 (148.6)
UT2	3 (0.9)	230 (69)	690 (64.1)	--	--
Total	**23 (6.9)**	**310 (93)**	**2,290 (212.7)**	**80 (24)**	**1,600 (148.6)**

Permits

Impacts to jurisdictional surface waters are anticipated from the proposed project. Permits and certifications from various state and federal agencies may be required prior to construction activities.

Construction is likely to be authorized by Nationwide Permit (NWP) No. 23, as promulgated under 61 FR 2020, 2082; January 15, 2002. This permit authorizes activities undertaken, assisted, authorized, regulated, funded, or financed in whole or in part, by another Federal agency or department where that agency or department has determined that, pursuant to the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act:

- the activity, work, or discharge is categorically excluded from environmental documentation because it is included within a category of actions that neither individually nor cumulatively have a significant effect on the human environment; and
- the Office of the Chief Engineer has been furnished notice of the agency's or department's application for the categorical exclusion and concurs with that determination.

This project will also require a 401 Water Quality Certification No. 3361 from the Department of Environment and Natural Resources (DENR) prior to issuance of the NWP 23. Section 401 of the Clean Water Act requires that the state issue or deny water certification for any federally permitted or licensed activity that results in a discharge into Waters of the U.S. In addition, the project is located in a designated "trout" county, where NCDOT must obtain a letter of approval from the NC Wildlife Resources Commission. Final permit decision rests with the USACE.

Avoidance, Minimization, Mitigation

The function of avoidance, minimization, and mitigation is to restore and maintain the chemical, biological, and physical integrity of waters of the United States by avoiding impacts, minimizing

impacts, and rectifying impacts. Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

Avoidance mitigation examines all appropriate and practical possibilities of averting impacts to waters of the United States. According to a 1990 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and COE, in determining "appropriate and practical" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practical in terms of costs, existing technology and logistics in light of overall project purposes.

Minimization includes the examination of appropriate and practical steps to reduce the adverse impacts to waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Practical means to minimize impacts to surface waters and wetlands impacted by the proposed project include:

- Decreasing the footprint of the proposed project through the reduction of median width, ROW widths, fill slopes and/or road shoulder widths
- Installation of temporary silt fences, earth berms, and temporary ground cover during construction
- Strict enforcement of sedimentation and erosion control BMPs for the protection of surface waters and wetlands
- Reduction of clearing and grubbing activity in and adjacent to water bodies.
- Judicious pesticide and herbicide usage
- Implementation of a proposed tentative in-stream construction moratorium from October 15 through April 15 in order to minimize impacts on fish migration, spawning, and larval recruitment into nursery areas

Compensatory mitigation is not normally considered until anticipated impacts to waters of the United States have been avoided and minimized to the maximum extent possible. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts that remain after all appropriate and practicable minimization has been required. Compensatory actions often include restoration, creation, and enhancement of waters of the United States. Such actions should be undertaken in areas adjacent to or contiguous to the discharge site (*i.e.*, compensatory on-site mitigation).

Because this project will likely be authorized under a Nationwide Permit, mitigation for impacts to surface waters may or may not be required by the USACE. In accordance with the Division of Water Quality Wetland Rules [15A NCAC 2H .0506 (h)] "Fill or alteration of more than one acre of wetlands will require compensatory mitigation; and fill or alteration of more than 150 linear feet of streams may require compensatory mitigation." Written approval of the final mitigation plan is required from NCDWQ before the regulatory agency issues a Water Quality Certification. Furthermore, in accordance with 67 FR 2020; 2092; January 15, 2002, the US

Army Corps of Engineers requires compensatory mitigation when necessary to ensure that adverse effects to the aquatic environment are minimal. The size and type of proposed project impact and function and value of the impacted aquatic resource are factors considered in determining acceptability of appropriate and practicable compensatory mitigation. Final compensatory stream mitigation requirements will be determined by the US Army Corps of Engineers under the statutory provisions of CWA § 404 and the January 15, 2002 Final Notice of Issuance of Nationwide Permits.

There are no wetland impacts associated with this project. However, a small, linear wetland exists along the banks of UT2 approximately 80 feet (24 meters) outside the project area. This wetland will not be affected regardless of which Alternate is chosen.

Each proposed Alternate would impact 80 linear feet (24 m) of Glady Fork. Alternative 1 would fill approximately 110 linear feet (33 meters) of UT2, and Alternative 2 would fill approximately 60 linear feet (18 meters) of UT2. Although impacts to Glady Fork are probably unavoidable since the project proposes a new alignment, choosing Alternative 2 will result in the least impacts to UT2.

In addition, "Guidelines for Construction Adjacent to and Crossing Trout Waters" as incorporated into *Erosion and Sediment Control Guidelines* should be implemented and followed throughout the project. In-stream work and land disturbance within the 25-foot wide trout stream buffer zone should be prohibited during the trout spawning season of October 15 through April 15 to protect the egg and fry stages of trout from off-site sedimentation during construction. Because the stream in the proposed project area is designated as a *Class C Tr,* control methods for high quality waters should be implemented as included in *NCDOT's Best Management Practices for Protection of Surface Waters* and *Erosion and Sediment Control Guidelines*.

If the final length of stream impact is greater than 150 linear feet (45.7 meters), compensatory mitigation may be required. The environmental regulatory agencies will ultimately provide final permit and compensatory mitigation decisions for the project.

Rare and Protected Species

Some populations of plants and animals are declining either as a result of natural forces or their difficulty competing with humans for resources. Rare and protected species listed for Transylvania County, and any likely impacts to these species as a result of the proposed project construction, are discussed in the following sections.

Federally-Protected Species

Plants and animals with a federal classification of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended.

The USFWS lists 9 species under federal protection for Transylvania County as of February 25, 2003. These species are listed in Table 4.

Table 4. Species Under Federal Protection in Transylvania County

Common Name	Scientific Name	Federal Status
Vertebrates		
Bog turtle	*Clemmys muhlenbergii*	T(S/A)
Carolina northern flying squirrel	*Glaucomys sabrinus coloratus*	E
Invertebrates		
Appalachian elktoe	*Alasmidonta raveneliana*	E
Oyster mussel	*Epioblasma capsaeformis*	E
Vascular Plants		
Spreading avens	*Geum radiatum*	E
Swamp pink	*Helonias bullata*	T
Small-whorled pogonia	*Isotria medeoloides*	T
Mountain sweet pitcher plant	*Sarracenia jonesii*	E
Nonvascular Plants		
Rock Gnome Lichen	*Gymnoderma lineare*	E

Notes:
- E — Endangered-A species that is threatened with extinction throughout all or a significant portion of its range.
- T — Threatened-A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- T (S/A) — Similarity of Appearance-A species that is listed as threatened due to similarity of appearance with other rare species.

A brief description of the characteristics and habitat requirements of each species follows, along with a conclusion regarding potential project impact.

***Clemmys muhlenbergii* (bog turtle)** **Threatened due to Similarity of Appearance**

Vertebrate Family: Emydidae
Federally Listed: 1997

The bog turtle is a small freshwater turtle reaching a maximum carapace length of 4.5 in (11.4 cm). These turtles have a domed carapace that is weakly keeled and is light brown to ebony in color. The scutes have a lighter–colored starburst pattern. The plastron is brownish-black with contrasting yellow or cream areas along the midline. This species is distinguished by a conspicuous orange, yellow, or red blotch on each side of the head.

The bog turtle is semi-aquatic and is typically found in freshwater wetlands characterized by open fields, meadows, or marshes with slow-moving streams, ditches, and boggy areas. The bog turtle is also found in wetlands in agricultural areas subject to light to moderate livestock grazing, which helps to maintain an intermediate stage of succession. During the winter, this

species hibernates just below the upper surface of mud. Mating occurs in May and June, and the female deposits two to six eggs in sphagnum moss or sedge tussocks in May, June, or July. The diet of the bog turtle is varied, consisting of beetles, lepidopteran and caddisfly larvae, snails, millipedes, pondweed and sedge seeds, and carrion.

The southern population of the bog turtle is listed as Threatened due to Similarity of Appearance to the northern population, therefore, the southern population is not afforded protection under Section 7 of the Endangered Species Act. No habitat exists in the project area for the bog turtle. There are no freshwater wetlands characterized by open fields, meadows, or marshes with slow moving streams, ditches, or boggy areas near the bridge. A search of the NHP database revealed no occurrences of the bog turtle within 2 miles (3.2 km).

***Glaucomysabrinus coloratus* (Carolina northern flying squirrel)** **Endangered**

Vertebrate Family: Sciuridae
Federally Listed: 1985

The Carolina northern flying squirrel is a small mammal weighing about 3 to 5 ounces (95 to 140 grams). The adult squirrel is gray with a reddish or brownish wash on the back, and a grayish white to white underside. It has a large flap of skin along either side of its body from wrist to ankle. The skin flaps and its broad flattened tail allow the northern flying squirrel to glide from tree to tree. It is a strictly nocturnal animal with large dark eyes.

There are several isolated populations of the northern flying squirrel in the western part of North Carolina along the Tennessee border. This squirrel is found above 5000 feet (1517 meters) in the vegetation transition zone between hardwood and coniferous forests. Both forest types are used to search for food and the hardwood forest is used for nesting sites. The squirrel can subsist on lichens and fungi throughout much of its range; however, the diet can also include seeds, buds, fruits, cones, and insects.

Biological Conclusion: **No Effect**

No habitat exists in the project area for the Carolina northern flying squirrel. The project area is at an average elevation of 2250 feet (675 meters) with no transition zone between hardwood and coniferous forests. A search of the NHP database found no occurrence of this animal within the project vicinity. It can be concluded that the project will not impact this endangered species.

***Alasmidonta raveneliana* (Appalachian elktoe)** **Endangered**

Family: Unionidae
Federally Listed: 1994

The Appalachian elktoe is recognized by a thin, kidney-shaped shell about 3.2 inches (8.1 cm) long, 1.4 inches (3.5 cm) high, and 1 inch (2.5 cm) wide. The outer shell surface of juvenile mussels is yellowish-brown whereas the adult shell is dark brown to greenish-black in color.

Rays may be prominent to obscure. The inside shell surface is shiny white to bluish-white, changing to a salmon, pinkish, or brownish color in the central and beak cavity portions of the shell.

The Federal Register lists two known surviving populations of the Appalachian elktoe. One is in the Little Tennessee River between Emory Lake in Macon County and Fontana Reservoir in Swain County. The other is in the Nolichucky River system in Yancey and Mitchell counties. The habitat in these locations can be described as relatively shallow, medium-sized creeks and rivers with cool, well-oxygenated, moderate- to fast-flowing water. Substrates are gravelly mixed with cobble and boulders, or occasionally coarse and sandy.

Two additional occurrences were found in the files of the North Carolina NHP. One is a finding of a single specimen in Yancey County in the Cane River, a major tributary of the Nolichucky River. The other finding was a single dead specimen in the Tuckasegee River in Swain County. Additional information from the USFWS Asheville Field Office indicates that the extant range has recently been expanded in both the Little Tennessee and French Broad basins.

Major factors contributing to the endangered status of this species include water quality and habitat degradation resulting from impoundments, stream channelization projects, and point and non-point sources of pollution and siltation.

Biological Conclusion: **No Effect**

Historic information indicates that the Appalachian elktoe was once widely distributed in western North Carolina; historic locations include the French Broad River, which lies just downstream from the bridge replacement site. A search of the NHP files found no occurrences of the Appalachian elktoe in the project vicinity. A visual and tactile survey above and below the existing bridge was conducted at the project site on October 23, 2002 by NCDOT biologists Jeff Burleson, Neil Medlin, and Tom Dickinson. No evidence of freshwater mussels was found.

***Epioblasma capsaeformis* (oyster mussel)** **Endangered**
Invertebrate Familiy: Unionidae
Federally Listed: 1997

The shell of the oyster mussel is a dull to sub-shiny, yellowish to green color with numerous narrow dark green rays. The inside of the shell is white to bluish-white. Shells of females are slightly inflated and very thin toward the posterior margin of the shell.

The oyster mussel historically occurred throughout much of the Cumberlandian region of the Tennessee and Cumberland river drainages in Alabama, Kentucky, Tennessee, and Virginia. It is now considered endangered in Kentucky and Virginia, and is known to survive in small populations in only a few locations in Kentucky, Tennessee, and Virginia. Recent research uncovered a record of a collection of this species in Madison County in 1918 and from the French Broad River at Asheville.

Biological Conclusion: **No Effect**

Historic information indicates that the oyster mussel was once widely distributed in western North Carolina; historic locations include the French Broad River, which lies just downstream from the bridge replacement site. A search of the NHP files found no occurrences of the oyster mussel in the project vicinity. A visual and tactile survey above and below the existing bridge was conducted at the project site on October 23, 2002 by NCDOT biologists Jeff Burleson, Neil Medlin, and Tom Dickinson. No evidence of freshwater mussels was found.

***Geum radiatum* (Spreading avens)** **Endangered**
Plant Family: Rosaceae
Federally Listed: 1990

Spreading avens is a perennial herb having stems with an indefinite cyme of bright yellow, radially symmetrical flowers. Flowers of spreading avens are present from June to early July. Spreading avens has basal leaves that are odd-pinnately compound; terminal leaflets are kidney shaped and much larger than the lateral leaflets, which are reduced or absent.

Spreading avens is found only in the North Carolina and Tennessee section of the Southern Appalachian Mountains. Spreading avens occurs on scarps, bluffs, cliffs and escarpments on mountains, hills and ridges. Known populations of this plant have been found to occur at elevations from 5060 to 5800 ft (1535 to 1759 m). Other habitat requirements for this species include full sunlight and shallow acidic soils. These soils are composed of sand, pebbles, humus, sandy loam and clay loam. Most populations are pioneers on rocky outcrops.

Biological Conclusion: **No Effect**

No habitat exists in the project area for spreading avens. The project area is at an average elevation of 2250 feet (675 meters) with no scarps, bluffs, cliffs or escarpments. Furthermore, the soils in this area are generally deep. A search of the NHP database found no occurrence of this plant within the project vicinity. It can be concluded that the project will not impact this endangered species.

***Helonias bullata* (swamp pink)** **Threatened**
Plant Family: Liliaceae
Federally Listed: 1988

Swamp pink is a perennial, subscapose herb with evergreen leaves occurring in a basal rosette. The leaves are oblanceolate, parallel-veined, and about 3.5 to 9.8 inches (9 to 25 cm) long. A stout, hollow stem arises from the basal rosette and can grow from 7.8 to 35.4 inches (20 to 90 cm) during flowering to 5 feet (1.5 meters) during seed maturation. The stem bears an ebracteate raceme about 1.2 to 3.1 inches (3 to 8 cm) long. The raceme consists of a cluster of thirty to fifty fragrant, pink to lavender flowers. The plant often grows in dense clumps as a result of

reproduction by clonal root growth or limited seed dispersal. Swamp pink is one of the first wildflowers to bloom in the spring. In winter, the basal rosette persists and turns reddish-brown, with the next season's flowerhead appearing as a button in the center.

Swamp pink occurs in a variety of wetland types from the coastal plain to the mountains in New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia. It is found in Atlantic white cedar swamps, Blue Ridge swamps, swampy forested wetlands bordering small streams, meadows, and seepage areas. The plant requires saturated but not flooded conditions, and often occurs in association with evergreen trees such as Atlantic white cedar, pitch pine, American larch, and black spruce. The largest North Carolina population occurs in the Pink Beds area of Pisgah National Forest. Other populations are known from Ashe, Jackson, Henderson, and Transylvania counties.

Biological Conclusion: **No Effect**

No habitat exists in the project area for swamp pink. The small wetland just outside the project area was thoroughly searched for state and federally listed species, however none were found. Furthermore, the evergreen trees present within the project area are not those generally associated with swamp pink. A search of the NHP database found no occurrence of this plant within the project vicinity. It can be concluded that the project will not impact this endangered species.

Isotria medeoloides (small whorled pogonia) **Threatened**
Family: Orchidaceae
Federally Listed: 1982

The specific epithet of the small whorled pogonia comes from the resemblance of this perennial orchid to young plants of Indian cucumber root (Medeola virginiana). However, the small whorled pogonia has a stout, hollow stem in contrast to the solid, slender stem of Indian cucumber root. The stem is 3.7 to 9.8 inches (9.5 to 25 cm) tall, with a terminal whorl of 5 or 6 light green leaves that are elliptical in shape and measure up to 3 inches by 1.5 inches (8 by 4 cm). One or two flowers are borne at the top of the stem, appearing from mid-May to mid-June. The flowers lack fragrance and nectar guides, and apparently are self-pollinating.

The small whorled pogonia was formerly scattered in 48 counties in 16 eastern states. Currently, the majority of populations are found in New England at the foothills of the Appalachian Mountains and in northern coastal Massachusetts. The habitat of the small whorled pogonia varies widely throughout its range, although there are a few common characteristics among the majority of sites. These include sparse to moderate ground cover; a relatively open understory; and proximity to features that create extensive, stable breaks in the canopy, such as logging roads or streams. The pogonia has been found in mature forests as well as stands as young as 30 years old. Forest types include mixed-deciduous/ white pine or hemlock in New England, mixed deciduous in Virginia, white pine/mixed-deciduous or white pine/oak-hickory in Georgia, and red maple in Michigan. Understory components in the southern part of the range are most commonly found to be flowering dogwood (*Cornus florida*), sourwood (*Oxydendron arboreum*),

mountain laurel (*Kalmia latifolia*), American chestnut (*Castanea dentata*), witch hazel (*Hamamelis virginiana*), and flame azalea (*Rhododendron calendulaceum*). Early descriptions placed the small whorled pogonia on dry sites, but it has since been found on sites with high soil moisture.

Biological Conclusion: **No Effect**

Within the project area, habitat for small whorled pogonia is poor to marginal. The understory is generally dense and ground cover is moderate to dense. Glady Fork does not create a break in the canopy. The powerline and the gravel road in the northeast quadrant of the project area do create breaks in the canopy. The area under the powerline is vegetated with dense woody shrubs. The area adjacent to the gravel road has a moderately dense understory, however none of the vegetation typically associated with small whorled pogonia is found here. No individuals of this species were located during the site visit, and a search of the NHP database found no occurrence of this plant within the project vicinity. It can be concluded that the project will not impact this endangered species.

***Sarracenia jonesii* (mountain sweet pitcher plant)** **Endangered**

Family: Sarraceniaceae
Federally Listed: 1989

The mountain sweet pitcher plant is a perennial herb with numerous tubular leaves growing in clusters. The leaves grow from 21 to 73 inches tall (53 to 185 cm) and have a heart-shaped hood. The waxy dull green of the leaves is criss-crossed with maroon-purple veins. The erect scape bears one maroon flower with 5 recurved petals.

Populations of mountain sweet pitcher plant are known from 10 locations in North and South Carolina. The four North Carolina populations occur in Henderson and Transylvania counties in the French Broad River drainage basin. The plant is restricted to bogs and streamsides and is usually found in level depressions on floodplains, but has also been found on granite rock faces beside waterfalls. Soils supporting the plant are deep, poorly drained acidic soils with a high organic matter content.

Biological Conclusion: **No Effect**

No habitat exists in the project area for mountain sweet pitcher plant. The small wetland just outside the project area was thoroughly searched for state and federally listed species, however none were found. The streamside was also searched extensively. A search of the NHP database found no occurrence of this plant within the project vicinity. It can be concluded that the project will not impact this endangered species.

***Gymnoderma lineare* (rock gnome lichen)** **Endangered**
Family: Cladoniaceae
Federally Listed: 1994

The rock gnome lichen is a squamose lichen in the reindeer moss family. The lichen can be identified by its fruiting bodies, which are borne singly or in clusters, are black in color, and are found at the tips of the squamules. The fruiting season of the rock gnome lichen occurs from July through September.

The rock gnome lichen is a narrow endemic, restricted to areas of high humidity. These high-humidity environments occur on high-elevation (4000 feet/1220 meters) mountaintops and cliff faces that are frequently bathed in fog, or lower elevation (2500 feet /762 meters) deep gorges in the southern Appalachians. The rock gnome lichen primarily occurs on vertical rock faces where seepage water from forest soils above flows only at very wet times. The rock gnome lichen is almost always found growing with the moss *Adreaea* in these vertical intermittent seeps. The major threat of extinction to the rock gnome lichen relates directly to habitat alteration/loss of high elevation coniferous forests. These coniferous forests usually lie adjacent to the habitat occupied by the rock gnome lichen. The high elevation habitat occurs in Ashe, Avery, Buncombe, Graham, Graham, Mitchell, Swain, and Yancey counties. The lower elevation habitat of the rock gnome lichen can be found in Jackson, Rutherford, and Transylvania counties.

Biological Conclusion: **No Effect**

No habitat exists in the project area for the rock gnome lichen. The elevation of the project area is approximately 2250 feet (675 m). The habitats within the project area are generally dry and no cliff faces are present. A search of the NHP database found no occurrences of rock gnome lichen in the project vicinity. It can be concluded that the project will not impact this threatened species.

Federal Species of Concern and State Listed Species

Federal Species of Concern (FSC) are not legally protected under the Endangered Species Act and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as Threatened or Endangered. Table 5 includes FSC species listed for Transylvania County and their state classifications. Organisms that are listed as Endangered (E), Threatened (T), or Special Concern (SC) on the North Carolina Natural Heritage Program list of Rare Plant and Animal Species are afforded state protection under the State Endangered Species Act and the North Carolina Plant Protection and Conservation Act of 1979. However, the level of protection given to state-listed species does not apply to NCDOT activities.

Table 5. Federal Species of Concern in Transylvania County

Common Name	Scientific Name	State Status	Habitat present
Vertebrates			
Green salamander	*Aneides aeneus*	E	No
Rafinesque's big-eared bat*	*Corynorhinus rafinesquii*	SC	No
Hellbender	*Cryptobranchus alleganiensis*	SC	No
Southern Appalachian red crossbill	*Loxia curvirostra*	SR	No
Southern Appalachian woodrat*	*Neotoma floridana hematoreia*	SC	No
Southern Appalachian black-capped chickadee	*Parus atricapillus practicus*	SC	No
Southern Appalachian yellow-bellied sapsucker	*Sphyrapicus varius appalaciensis*	#	#
Appalachian cottontail	*Sylvilagus obscurus*	SR	No
Appalachian Bewick's wren*	*Thryomanes bewickii altus*	E	No
Southern Appalachian northern saw-whet owl	*Aegolius acadicus* pop 1	SC	No
Invertebrates			
French Broad crayfish	*Cambarus reburrus*	#	Yes
Oconee crayfish ostracod	*Cymocythere clavata*	SR	Yes
Margarita River skimmer	*Macromia margarita*	SR	Yes
Diana fritillary butterfly	*Speyeria diana*	SR	No
Transylvania crayfish ostracod	*Waltoncythere acuta*	SR	No
Vascular Plants			
Fraser fir	*Abies fraseri*	#	No
Alexander's rock aster	*Aster avitus*	SR-T	No
Smoky Mountain mannagrass	*Glyceria nubigena*	T	No
French Broad Heartleaf	*Hexastylis rhombiformis*	E	No
Butternut	*Juglans cinerea*	#	No
Fraser's loosetrife	*Lysimachia fraseri*	SR-T	No
Sweet pinesap	*Monotropsis odorata*	SR-T	No
Southern oconee-bells	*Shortia galacifolia* var. *galacifolia*	E-SC	No
Nonvascular Plants			
Gorge moss	*Bryocrumia vivcolor*	E	No
A liverwort	*Plagiochila sharpii*	SR-L	No
A liverwort	*Plagiochila sullivantii* var. *sullivantii*	SR-T	No
A liverwort	*Plagiochila virginica* var. *caroliniana*	SR-T	No

Sources: Amoroso, ed., 2002; LeGrand, Hall, and Finnegan, 2001
Key: T = Threatened, E = Endangered, SC = Special Concern, C = Candidate, SR = Significantly Rare
_T = fewer than 100 populations throughout the species' range, _L = species is endemic to NC
* = Historic record; the species was observed over 20 years ago, # = see explanation below in text.

Discrepancies exist between the USFWS list of FSC and the NC NHP list of protected species in Transylvania County. Several elements that appear on the USFWS list do not appear on the NC NHP list. According to John Finnegan, data systems manager with the NC NHP, there are no records for Southern Appalachian yellow-bellied sapsucker or oyster mussel for Transylvania County. NC NHP no longer tracks French Broad crayfish; while it is uncommon, it is not believed to be declining. NC NHP does not track Fraser fir or butternut. Smoky Mountain mannagrass appears on the NC NHP list, but does not appear on the USFWS list, probably because it occurs on the Transylvania / Haywood County line.

Although suitable habitat is present for some of the species included in Table 5, no FSC were observed during the site visit, and none are recorded at NHP as occurring within 2 miles (3.2 km) of the project area.

VI. CULTURAL RESOURCES

A. Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at Title 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and afford the Advisory Council a reasonable opportunity to comment on such undertakings.

B. Historic Architecture

On December 12, 2000, the State Historic Preservation Office (SHPO) reviewed the subject project. There are no known architectural or historic sites within the proposed project area. The SHPO concurs that the project is not likely to affect any resources of historical significance (see letter dated March 20, 2001).

C. Archaeology

An archaeological survey was conducted and a report was sent to the State Historic Preservation Office (SHPO). The State Historic Preservation Office (SHPO) reviewed the report and concurred that the project is not likely to affect any resources of archaeological significance (see letter dated June 26, 2003).

VII. GENERAL ENVIRONMENTAL EFFECTS

This project is expected to have an overall positive impact. Replacement of an inadequate bridge will result in safer traffic operations.

This project is considered to be a "Categorical Exclusion" due to its limited scope and insignificant environmental consequences.

This bridge replacement will not have a substantial adverse effect on the quality of the human or natural environment by implementing the environmental commitments listed on the Project Commitments Sheet (Green Sheet) of this document in addition to use of current NCDOT standards and specifications.

The project is not in conflict with any plan, existing land use, or zoning regulation. No change in land use is expected to result from construction of this project.

There are no hazardous waste impacts.

No adverse effect on families or communities is anticipated. Right-of-way acquisition will be limited. No relocatees are expected with implementation of the proposed alternative.

No adverse effect on public facilities or services is expected. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

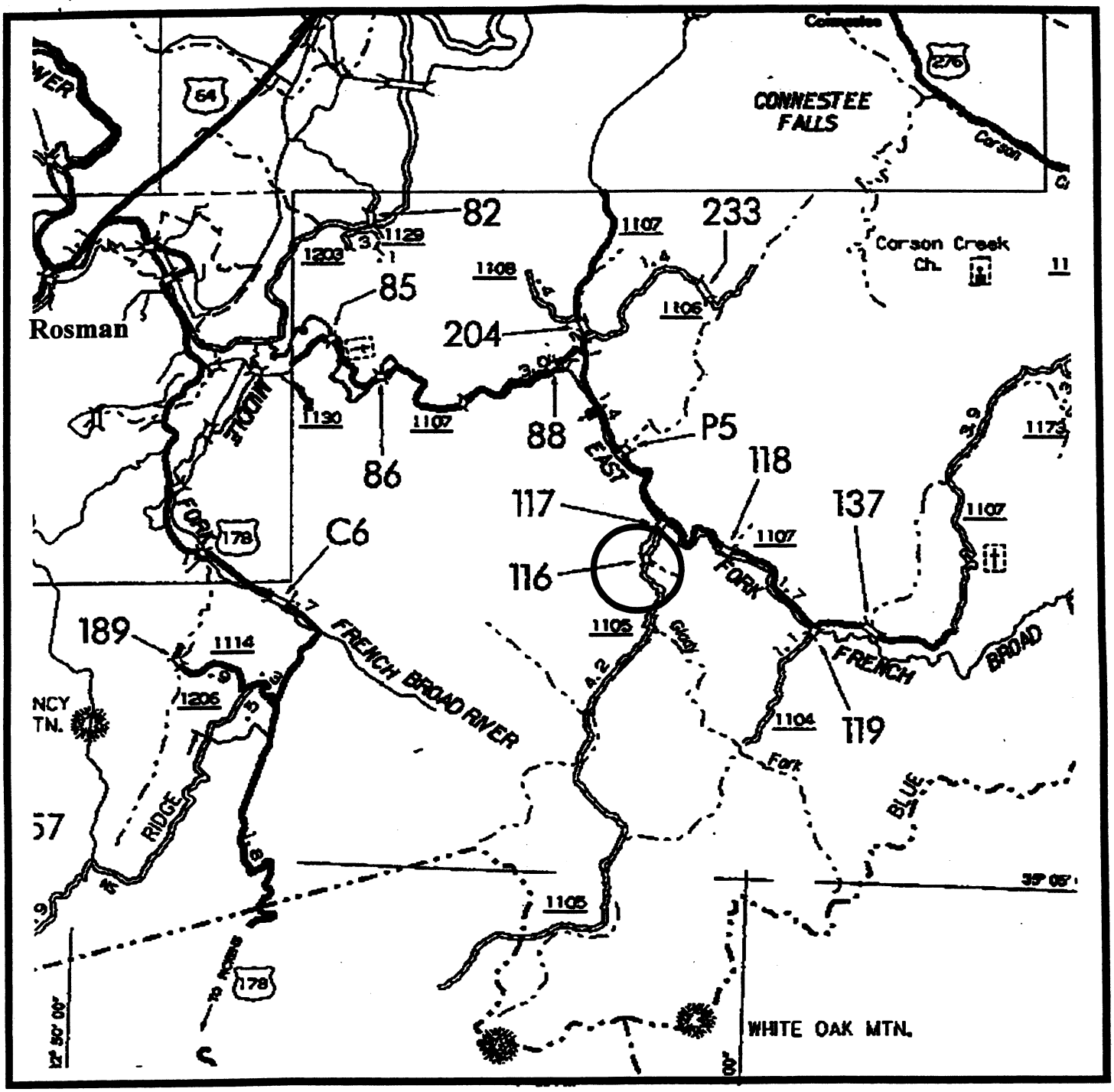
There are no publicly owned parks, recreational facilities, or wildlife and waterfowl refuges of national, state, or local significance in the vicinity of the project. This project will not impact any resource protected by Section 4(f) of the US Department of Transportation Act of 1966.

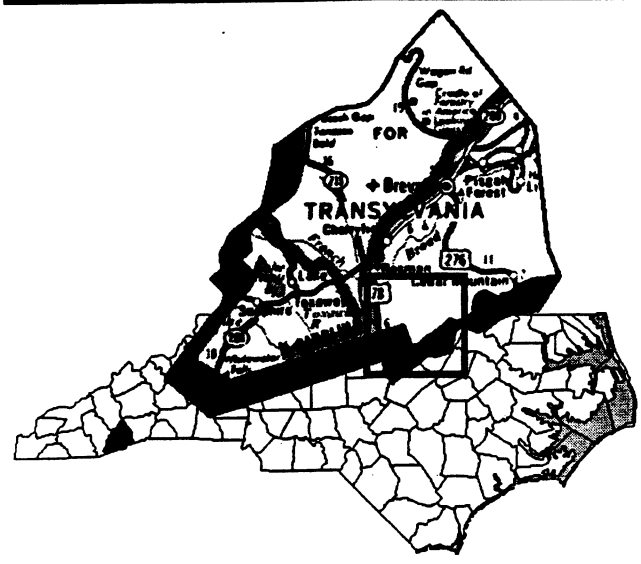
The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland of all land acquisition and construction projects. There are no soils classified as prime, unique, or having state or local importance in the vicinity of the project. Therefore, the project will not involve the direct conversion of farmland acreage within these classifications.

This project is an air quality "neutral" project, so it is not required to be included in the regional emissions analysis and a project level CO analysis is not required. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520. This evaluation completes the assessment requirements for air quality (1990 Clean Air Act Amendments and the National Environmental Policy Act) and no additional reports are required.

Noise levels could increase during construction but will be temporary. This evaluation completes the assessment requirements for highway traffic noise of Title 23, Code of Federal Regulation (CFR), Part 772 and no additional reports are required.

The proposed bridge replacement project will not raise the existing flood levels or have any significant adverse effect on the existing floodplain.



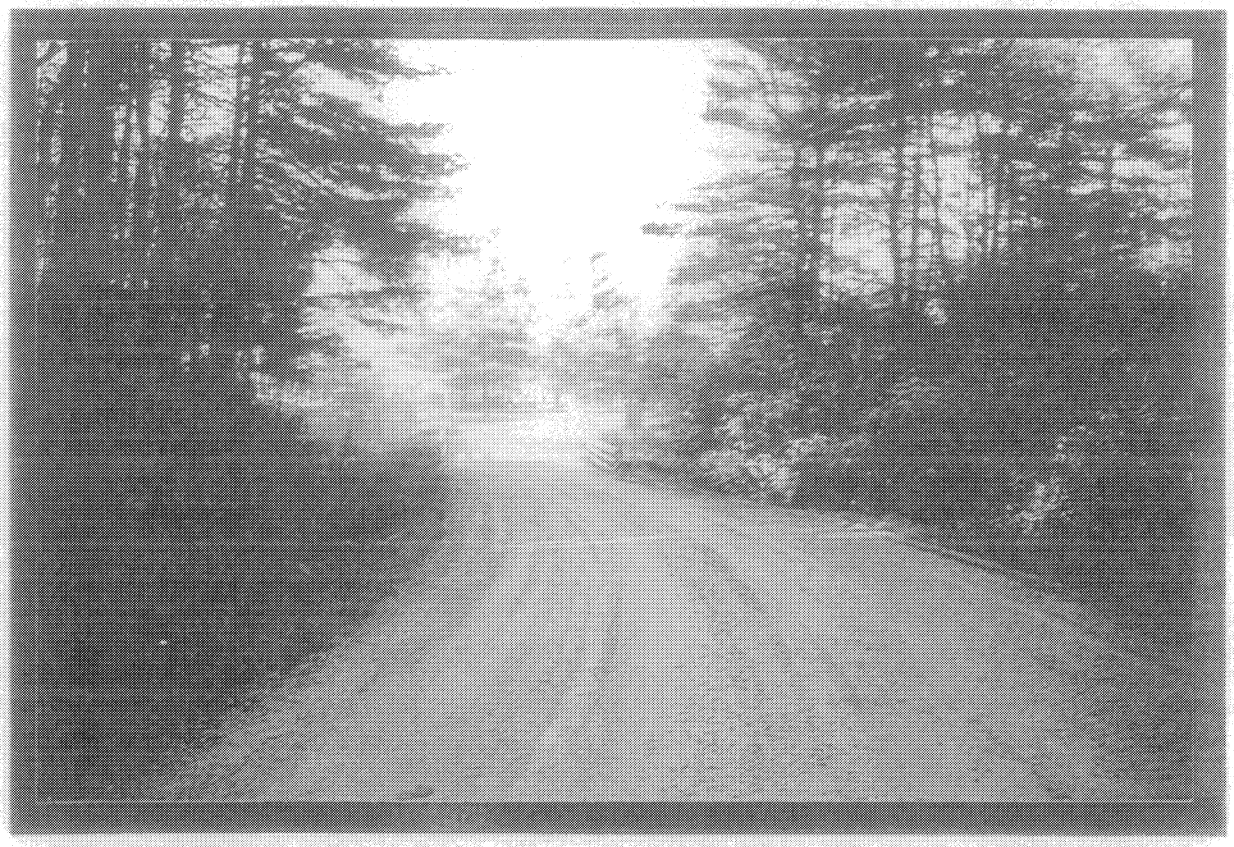


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS BRANCH

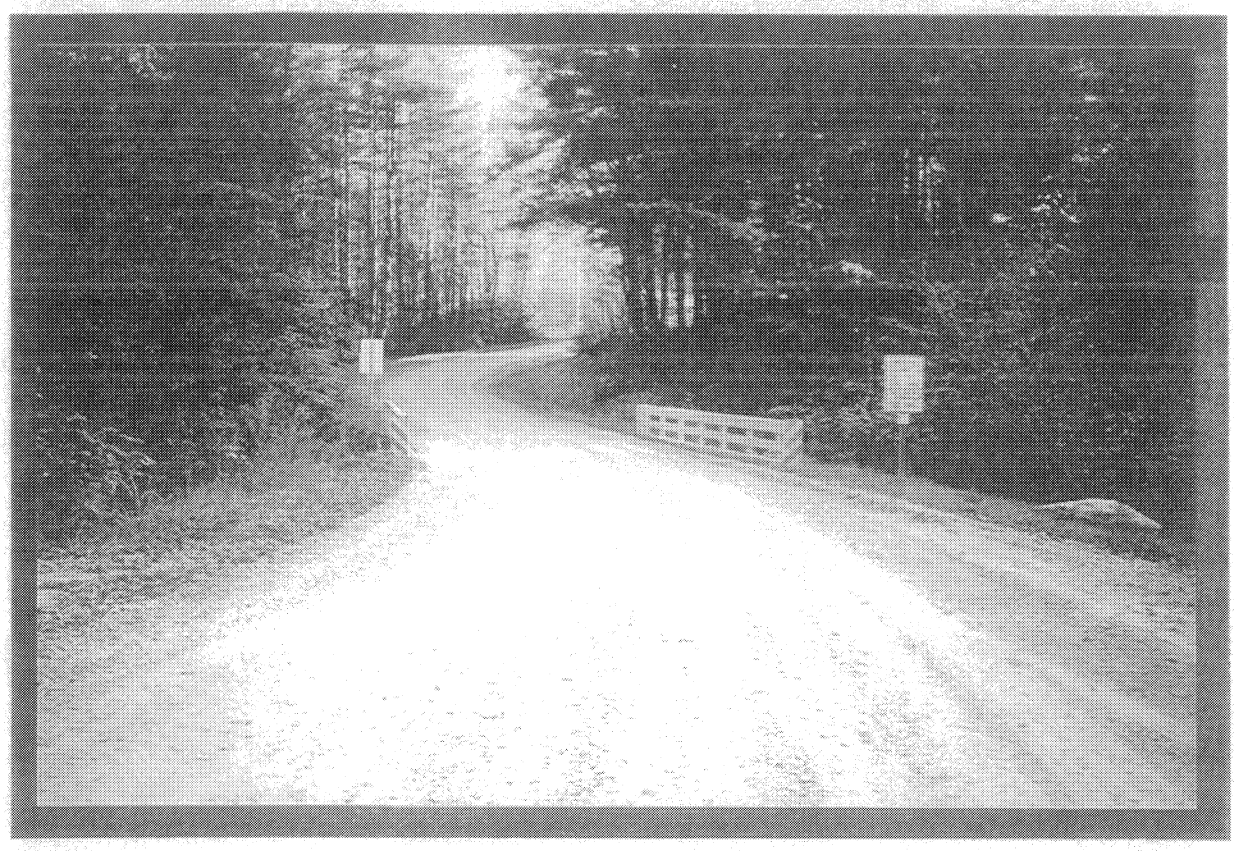
TRANSYLVANIA COUNTY
REPLACE BRIDGE NO. 116 ON SR 1105
OVER GLADY FORK CREEK
B-3914

Figure 1


Bridge No. 116
(RECOMMENDED)
Alternate 2
SR 1105 – Glady Fork Rd.
Alternate 1
Glady Fork Creek
North Carolina
Department of Transportation
Division of Highways
Project Development &
Environmental Analysis Branch
Transylvania County
Replace Bridge No. 116 on SR 1105
Over Glady Fork Creek
B-3914
Scale 1":100'
Figure 2



South Approach – Facing North

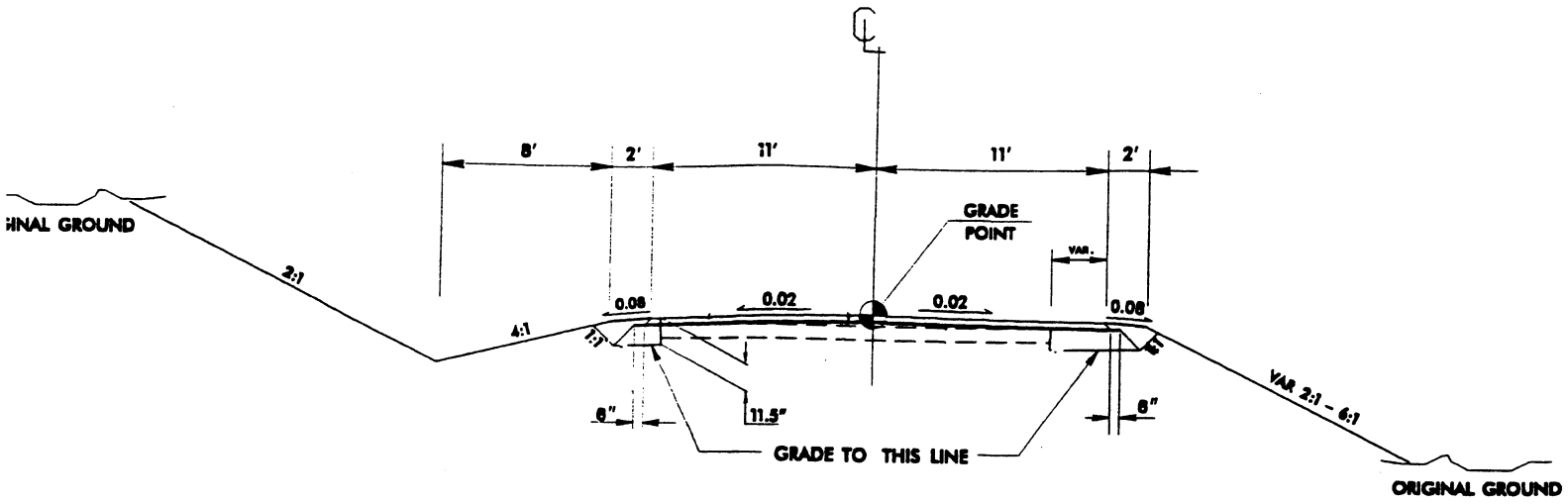


North Approach – Facing South

B-3914

FIGURE 3A

West Face of Bridge



TYPICAL SECTION
Approach Roadway

B-3914

FIGURE 4

North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

March 30, 2001

MEMORANDUM

To: William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch

From: David Brook
Deputy State Historic Preservation Officer

Re: Replacement of Bridge No. 116 on SR 1105 over Glady Fork Creek, TIP No. B-3914, Transylvania County, ER 01-7915

On January 22, 2001 our office requested an evaluation of the Lambert House, in conjunction with this project, to determine its eligibility for listing in the National Register of Historic Places. However, we have since noticed that the Lambert House is not within the above project's area of potential effect. Please disregard our January 22, 2001 letter. We apologize for any inconvenience this may have caused. Our comments on this project follow.

On December 12, 2000 April Montgomery of our staff met with North Carolina Department of Transportation (NCDOT) staff for a meeting of the minds concerning the above project. We reported our available information on historic architectural and archaeological surveys and resources along with our recommendations. NCDOT provided project area photographs and aerial photographs at the meeting.

Based upon our review of the photographs and the information discussed at the meeting, we offer our preliminary comments regarding this project.

In terms of historic architectural resources we are aware of no historic structures located within the area of potential effect. We recommend that no historic architectural survey be conducted for this project.

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547 • 715-4801
SURVEY & PLANNING	515 N. Blount St., Raleigh NC	4618 Mail Service Center, Raleigh NC 27699-4618	(919) 733-6545 • 715-4801

There are no known archaeological sites within the proposed project area. Based on our present knowledge of the area, it is unlikely that any archaeological resources which may be eligible for inclusion in the National Register of Historic Places, will be affected by the project construction. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

Having provided this information, we look forward to the receipt of either a Categorical Exclusion or Environmental Assessment, which indicates how NCDOT addressed our comments.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have any questions concerning the above comment, contact Renee Gledhill-Earley, Environmental Review Coordinator, at 919 733-4763.

North Carolina Department of Cultural Resources
State Historic Preservation Office
David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Division of Historical Resources
David J. Olson, Director

June 26, 2003

MEMORANDUM

TO: Matt Wilkerson, Archaeology Supervisor
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: David Brook RSH for David Brook

SUBJECT: Bridge No. 116 on SR 1105 over Glady Fork Creek, B-3914, Transylvania County, ER01-7915

Thank you for your letter of April 21, 2003, transmitting the archaeological survey report by Shane Peterson and Jesse Zinn for the above project.

During the course of the survey one archaeological site and one cemetery were identified within the project area. For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that 31TV805/805** is not eligible for listing in the National Register of Historic Places. 31TV478 was found to be located outside the current project area and was not evaluated. The report authors recommended that no further archaeological investigation be conducted in connection with this project, if Alternate 2 is selected. Additional evaluation of the Cassell cemetery is recommended, if Alternate 1 is selected. We concur with these recommendations.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Shane Peterson and Jesse Zinn, NCDOT

State of North Carolina
Department of Environment
and Natural Resources
Division of Water Quality

James B. Hunt, Jr., Governor
Bill Holman, Secretary
Kerr T. Stevens, Director

December 7, 2000

MEMORANDUM

To: William D. Gilmore, P.E., Manager
NCDOT, Project Development & Environmental Analysis

Through: John Dorney, NC Division of Water Quality

From: Cynthia F. Van Der Wiele

Subject: Scoping comments on the proposed replacement of Bridge No. 116 on SR 1105 over Glady Fork in Transylvania County, T.I.P. Project B-3914.

This memo is in reference to your correspondence dated October 20, 2000, in which you requested scoping comments for the above project. The DWQ index number for the stream is 6-6-7 and is classified as C Trout waters. The Division of Water Quality requests that NCDOT consider the following environmental issues for the proposed project:

A. DWQ prefers replacement of bridges with bridges, particularly in higher quality waters (i.e. trout streams, water supply watersheds, high quality and outstanding resource waters). However, if the new structure is to be a culvert, it should be countersunk to allow unimpeded fish and other aquatic organisms passage through the crossing. Please be aware that floodplain culverts are required.

B. The document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping.

C. There should be a discussion on mitigation plans for unavoidable impacts. If mitigation is required, it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. While the NCDWQ realizes that this may not always be practical, it should be noted that for projects requiring mitigation, appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

D. Since the impacted water is classified as trout waters, the DWQ requests that DOT strictly adhere to North Carolina regulations entitled, "Design Standards in Sensitive Watersheds" (15A NCAC 04B .0024) throughout design and construction of the project. This would apply for any area that drains to streams having WS (Water Supply), ORW (Outstanding Resource Water), HQW (High Quality Water), SA (Shellfish Water) or Tr (Trout Water) classifications. Please be aware that trout moratoriums set by the NC Wildlife Resource Commission will apply.

E. When practical, the DWQ requests that bridges be replaced on the existing location with road closure. If a detour proves necessary, remediation measures in accordance with the NCDWQ requirements for General 401 Certification 2726/Nationwide Permit No. 33 (Temporary Construction, Access and Dewatering) must be followed.

F. If applicable, DOT should not install the bridge bents in the creek, to the maximum extent practicable.

G. Wetland and stream impacts should be avoided (including sediment and erosion control structures/measures) to the maximum extent practical. If this is not possible, alternatives that minimize wetland impacts should be chosen. Mitigation for unavoidable impacts will be required by DWQ for impacts to wetlands in excess of one acre and/or to streams in excess of 150 linear feet.

H. Borrow/waste areas should not be located in wetlands. It is likely that compensatory mitigation will be required if wetlands are impacted by waste or borrow.

I. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3027/Nationwide Permit No. 6 for Survey Activities.

J. In accordance with the NCDWQ Wetlands Rules {15A NCAC 2H.0506(b)(6)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation becomes required, the mitigation plan should be designed to replace appropriate lost functions and values. In accordance with the NCDWQ Wetlands Rules {15A NCAC 2H.0506 (h)(3)}, the Wetland Restoration Program may be available for use as stream mitigation.

K. Sediment and erosion control measures should not be placed in wetlands.

L. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater should not be permitted to discharge directly into the creek. Instead, stormwater should be designed to drain to a properly designed stormwater detention facility/apparatus.

M. While the use of National Wetland Inventory (NWI) maps and soil surveys is a useful office tool, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

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 Cynthia Van Der Wiele at (919) 733.5715.

Pc: Steve Lund, USACE Asheville Field Office
Marella Buncick, USFWS
David Cox, NCWRC
File Copy
Central Files

North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

June 29, 2001

Ms. Robin C. Young, Project Planning Engineer
NCDOT, Planning and Environmental Branch
1548 Mail Service Center
Raleigh NC 27699-1548

SUBJECT: Scoping for B-3914, Bridge Replacement
SR 1105 - Glady Fork Road
Glady Fork Creek, Transylvania County

Dear Ms. Young:

Staff biologists familiar with habitat values of the project area have reviewed the scoping notice. These comments are provided in accordance with provisions of the Clean Water Act of 1977 (33 U.S.C. 466 et. seq.) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

The Division of Water Quality classifies Glady Fork Creek as C trout. We do not have records of endangered, threatened or other rare species from the vicinity of the project.

We request that this bridge be replaced with another spanning structure since Glady Fork Creek is a trout stream. Bridge supports should be placed outside of the channel if possible.

Transylvania County is a trout county; therefore, the NCWRC will review any US Army Corps of Engineers 404 permits associated with the project.

We expect to request the following conditions on the 404 permit for replacement of this bridge structure.

1. Replace the existing structure with another spanning structure.

2. Under no circumstances should rock, sand, or other materials be dredged from the wetted stream channel under authorization of this permit, except in the immediate vicinity of bridge abutments. Instream dredging has catastrophic effects on aquatic life, and disturbance of the natural form of the stream channel will likely cause downstream erosion problems, possibly affecting adjacent landowners.

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 733-3633 ext. 281 • Fax: (919) 715-7643

3. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags or rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.

4. If concrete is used during construction, adequate precautions must be taken to prevent direct contact between wet concrete and stream water. Uncured concrete affects water quality and is highly toxic to fish and other aquatic organisms. Water that has contacted uncured concrete should not be discharged to surface waters due to the potential for elevated pH.

5. Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control. Erosion control matting in conjunction with appropriate seeding should be used on disturbed streambanks and areas around bridge crossings instead of straw mulch.

6. Grading and backfilling in the vicinity of the bridge should be minimized, and tree and shrub growth should be retained if possible to ensure long term availability of shoreline cover for gamefish and wildlife. Backfill materials should be obtained from upland sites.

7. Construction in the stream channel and within the 25-foot buffer is prohibited during the trout-spawning period of October 15 to April 15 in order to protect the egg and fry stages from sedimentation.

8. Riprap placed for bank stabilization should be limited to the streambank below the high water mark, and vegetation should be used for stabilization above the high water elevation.

9. All mechanized equipment operated near surface waters should be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids or other toxic materials.

10. Any overwidened areas at the bridge site should be restored; and the width/depth ratio typical of the stream should be maintained through the bridge site.

Thank you for the opportunity to review and comment on this project. Pending availability of field staff, the NCWRC may inspect the work site during or after construction. If there are any questions regarding these comments, please contact me at (828) 452-2546.

Sincerely,

Owen F. Anderson
Mountain Region Coordinator
Habitat Conservation Program

cc: Ms. Cynthia Van Der Wiele, Highway Coordinator, Division of Water Quality
Ms. Marella Buncick, Highway Coordinator, USFWS