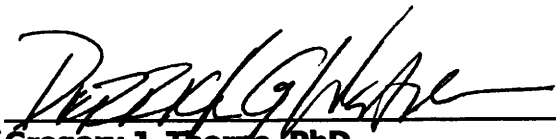


Alleghany County
Bridge No. 39 on SR 1193 (Pine Swamp Road)
over the Little River
Federal-Aid Project No. BRZ-1193 (6)
State Project No. 8.2700601
W.B.S. No. 33376.1.1
T.I.P. Project No. B-4008

CATEGORICAL EXCLUSION
UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

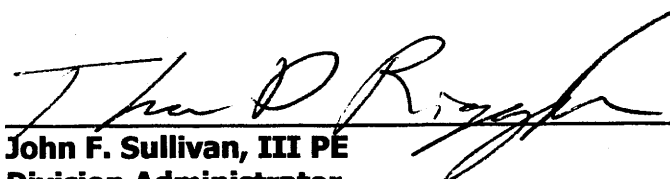
APPROVED:

5/29/05
DATE



for **Gregory J. Thorpe, PhD.**
Environmental Management Director
Project Development & Environmental Analysis Branch,
North Carolina Department of Transportation

5/25/05
DATE



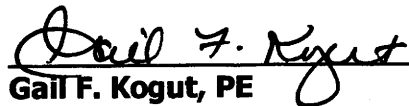
for **John F. Sullivan, III PE**
Division Administrator
Federal Highway Administration

**Alleghany County
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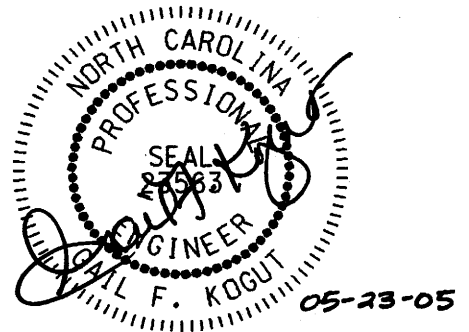
CATEGORICAL EXCLUSION

May 2005

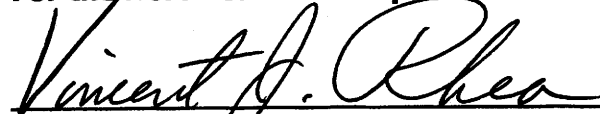
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For the North Carolina Department of Transportation:



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Project Development & Environmental Analysis Branch**

**Alleghany County
Bridge No. 39 on SR 1193 (Pine Swamp Road)
over the Little River
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PROJECT COMMITMENTS

In addition to the standard Nationwide Permit No. 23 and potentially No. 33 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for the Protection of Surface Waters, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Division 11

- 1.) The NCDOT will observe a moratorium on prohibiting in-stream work and land disturbance within the 25-foot trout buffer as recommended from October 15 to April 15 to protect the fry and egg stages of trout.

Alleghany County
Bridge No. 39 on SR 1193 (Pine Swamp Road)
over the Little River
Federal-Aid Project No. BRZ-1193 (6)
State Project No. 8.2700601
W.B.S. No. 33376.1.1
T.I.P. Project No. B-4008

INTRODUCTION: The replacement of Bridge No. 39 is included in the 2004-2010 North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and in the Federal-Aid Bridge Replacement 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

The NCDOT Bridge Maintenance Unit records indicated the bridge has a sufficiency rating of 14.4 out of a possible 100 for a new structure. The bridge is considered structurally deficient. The replacement of this inadequate structure will result in safer and more efficient traffic operations.

II. EXISTING CONDITIONS

Bridge No. 39 is located on SR 1193 (Pine Swamp Road) just south of NC 18 in Alleghany County over the Little River (Figure 2-1). SR 1193 is classified as Rural Local in the Statewide Functional Classification System.

Bridge No. 39 was constructed in 1960. The existing structure is a two-lane, two-span bridge with an overall length of 83.0 ft. (25.3m) and a clear roadway width of 19.1 ft. (5.8m). The bridge superstructure consists of a timber floor with a 5 inch (12.70cm) asphalt wearing surface supported on I-beams. The substructure consists of reinforced concrete abutments and an interior bent comprised of timber cap and timber posts with concrete sills. Bridge No. 39 currently has posted weight limits of 12 tons (10.8 metric tons) for single vehicle (SV) and 12 tons (10.8 metric tons) for truck-tractor semi-trailer (TTST). The posted speed limit on SR 1193 is 55 mph (90 km/h). The approach roadway for Bridge No. 39 is a two-lane 15.0 ft. (4.6m) wide road with two 3-foot (0.9m) grassed shoulders (Figure 2-1).

The creek bed to roadway crown point height is 12.0 ft. (3.6m) and the normal depth of Little River is 1.0 ft. (0.3m).

The Little River is classified as Hatchery Supported Mountain Trout Waters by the North Carolina Wildlife Resource Commission (NCWRC).

Aerial power lines run along the southwest side of the bridge and cross the northwest approach. Underground telephone lines along the northeast side of the bridge cross the Little River aerially.

The 2002 estimated average daily traffic (ADT) volume is 500 vehicles per day (vpd). The projected ADT is 800 vpd by the design year 2025. The percentages of truck traffic are 2% dual-tired vehicles and 1% TTST.

SR 1193 not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as needing bicycle accommodations. There is no indication that an unusual number of bicyclists use this roadway.

One accident was reported in the vicinity of the bridge during a recent three-year period. This accident involved two vehicles.

Two school buses cross Bridge No. 39 twice daily for a total of 4 trips per day.

Land use in the basin is forested, cultivated, or pastureland with scattered residential.

There are no survey markers in the project vicinity.

III. ALTERNATIVES

A. Project Description

The proposed structure will provide a 28-foot (8.5-meter) clear roadway width to allow for two 11-foot (3.4-meter) travel lanes and 3-foot (1.0-meter) shoulders on each side. The approach roadway will consist of two 11-foot (3.4-meter) travel lanes with 5-foot (1.5-meter) shoulders. Refer to Figure 3. The design speed will be 60 mph (95 km/hr) to match existing conditions.

The estimated structure requirements are based on the historic performances of the existing structure and field observations of the site. Based on field reconnaissance of the site and a preliminary hydraulic analysis, the existing structure can be replaced with a bridge. The existing roadway elevation would be maintained. Two alternatives are considered (See Figure 4A and 4B).

B. Build Alternatives

Alternative 1

Alternative 1 proposes to construct a three-span bridge just downstream from the existing location. Traffic would be maintained on the existing bridge during construction.

Alternative 2 (Preferred)

Alternative 2 proposes to construct a bridge at the existing location utilizing an off-site detour during construction. The detour route would utilize NC 18 to SR 1173 to SR 1172 to SR 1128 to SR 1129 to SR 1133. This detour is approximately 9.4 miles (15.1 km).

This detour includes one weight-posted one-lane bridge. (See Figure 5). Emergency services are located in Sparta, north-northeast of the project site. The Sparta-Alleghany Fire Department stated that there were acceptable alternate routes to the project site.

Assuming a 35 mph (55 km/hr) driving speed, the off-site detour complete circuit would add approximately sixteen minutes to the detour user's drive time. Assuming the bridge would not be in service for approximately six months, the detour delay would be close to the "unacceptable" range as defined in the *NCDOT Guidelines for Evaluation of Off-site Detours for Bridge Replacement Projects*. The typical detour user's delay is likely to be less than sixteen minutes since actual drive distance for a typical detour user would be less than the complete 9.4-mile (15.1km) detour circuit. Furthermore, the detour was considered to be satisfactory to the attendees at the Citizen's Informational Workshop. Relocating the bridge or constructing a temporary on-site detour bridge would have significant impacts to property and to environmental and community resources. Based on these overriding considerations, the detour delay may be considered "acceptable".

C. Alternatives Eliminated from Further Study

The "do-nothing" alternative will eventually necessitate closure and/or removal of the bridge effectively removing this section of SR 1193 from traffic service.

Investigation of the existing structure by the NCDOT Bridge Maintenance Unit indicates that rehabilitation of the old bridge is not feasible due to its age and deteriorated condition.

D. Preferred Alternative

Alternative 2, constructing the bridge at the existing location utilizing an off-site detour during construction, is the preferred alternative.

Although the bridge length for Alternative 1 is slightly longer than Alternative 2, the limits of construction for Alternative 1 are significantly greater. Alternative 1 will require vertical realignment of the Y-line including construction of retaining walls to avoid impacts to Waterfall Creek and cemetery on SR 1193. Therefore, the environmental impacts would be greater for Alternative 1. In addition, the construction costs for Alternative 1 will be greater than those of Alternative 2 due to the retaining walls, the two interior bents for the bridge, and the increased project length.

Alternative 2 is closer to the confluence of the two streams which according to AASHTO Highway Drainage Guidelines 3.3.1.1, is a complex hydrologic and hydraulic location and should be avoided wherever possible. However, this is the existing condition. The existing crossing location is adequate.

IV. ESTIMATED COSTS

The estimated costs, based on current 2004 prices, are shown in Table 1:

Table 1: Estimated Costs

	Alternative 1	Alternative 2 (Preferred)
Structure Removal (existing)	12,744	12,744
Structure (proposed)	231,000	210,000
Retaining Walls	25,600	0
Roadway Approaches	191,074	80,155
Miscellaneous and Mobilization	126,582	70,101
Engineering and Contingencies	88,000	52,000
ROW/Const. Easements/Utilities	*103,100	103,100
TOTAL	\$ 778,100	\$ 528,100

* The right-of-way cost was determined for Alternative 2 only. The right-of-way cost for Alternative 1 would be higher than shown since more properties would be impacted than in the proposed alternative (Alternative 2).

The total estimated cost of the project, as shown in the 2004-2010 Transportation Improvement Program, is \$810,000 including \$60,000 for right-of-way and \$600,000 for construction.

V. NATURAL RESOURCES

A Natural Resources Technical Report was prepared by MA Engineering Consultants, Inc. and is available at the North Carolina Department of Transportation (NCDOT) office.

Natural resources within the project study area were evaluated to provide: 1) an assessment of existing biotic resources; 2) an evaluation of potential impacts resulting from construction; and 3) a preliminary determination of permit needs.

A. Methodology

A general field survey was conducted within the project study area on July 22, 2003. Pedestrian surveys were undertaken to determine natural resource conditions and to document natural communities, wildlife, and the potential presence of protected species or their habitats.

Information regarding the project area and region was derived from a number of resources including: U.S. Geological Survey (USGS) Whitehead 7.5-minute quadrangle map (1968), Natural Resources Conservation Service Soil Survey Sheets of Alleghany County, North Carolina, North Carolina Department of Environmental and Natural Resources (NCDENR) Basinwide Information Management System, United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Mapping (1999),

USFWS list of protected species (February 5, 2003), North Carolina Center for Geographical Information and Analysis (NCCGIA) BasinPro GIS Million-Acre Edition Data (2002), North Carolina Natural Heritage Program (NCNHP) list of rare animal species, NCNHP County status database (2004), NCNHP list of rare plant species, NCDOT aerial photography of the project study area (1:100), and North Carolina Division of Water Quality (DWQ) water resource data.

B. Physiography and Soils

The project lies within the Blue Ridge Physiographic Province. This mountainous region is composed of rocks from over approximately 500 million to over one billion years old (North Carolina Geological Survey, 1991). The project study area is found within a metamorphic rock area classified as the Ashe Metamorphic Suite. It is composed of muscovite-biotite gneiss described as locally sulfidic, interlayered and gradational with mica schist, minor amphibolite and hornblende gneiss. In addition, a second geologic formation intrudes into the project site: Amphibolite. Amphibolite is described as equigranular, massive to well foliated, interlayered, rarely discordant metamorphosed intrusive and extrusive mafic rock which may include metasedimentary rock. Elevations in the project vicinity range from approximately 2,900 to 3,900 feet (880 to 1190 meters) above mean sea level (msl). The elevation in the project study area varies from approximately 2,900 to 3,200 feet (880 to 980 meters) above msl.

According to the general soil map for Alleghany County (USDA, 1973), the project study area is composed of the following soil series: Alluvial land, wet; Codorus complex; Tate loam; Chester loam; Fannin silt loam; and Watauga loam. There are no soils classified as hydric by the North Carolina Natural Resource Conservation Service within the project study area.

C. Water Resources

C.1. Water Impacted

The proposed project falls within the New River Basin, within the DWQ subbasin designated 05-07-03 and the USGS 8-digit Hydrologic Unit Code (HUC) 05050001. Waters within the project vicinity include the Little River [Stream Index No. 10-9-(1)] and Waterfalls Creek (Stream Index No. 10-9-4) (NCDENR, 2003). A perennial stream can be defined as a well-defined channel that contains water year round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. The Little River and Waterfalls Creek meet this definition.

C.2. Water Resources Characteristics

The Little River appears to be contained within a valley classified as Valley Type III. The plan-view is best described as low sinuosity. Based on the approximate channel length to valley length ratio through this portion of the valley, sinuosity was approximately 1.1. The Little River had a rapid flow rate and measured 27.0 feet (8.2 meters) in width upstream of its confluence with Waterfalls Creek. Stream length in the project study area is approximately 690 feet (210 meters). Average water depth recorded was 1.4 feet (0.4 meters). Water clarity was clear. Based on this preliminary characterization, the Little

River can be classified as a Rosgen Stream Classification Type C-channel (Rosgen, 1996).

Waterfalls Creek appears to be contained within a valley classified as Valley Type III. The plan-view of Waterfalls Creek is best described as moderate sinuosity. Based on the approximate channel length to valley length ratio through this portion of the valley, sinuosity was approximately 1.2. Stream length in the project study area is approximately 550 feet (168 meters). Stream width was approximately 21.0 feet (6.4 meters) upstream of the confluence with the Little River. Water depth averaged 1.3 feet (0.4 meters). This indicates a width to depth ratio greater than 12. Water clarity was clear. Based on this preliminary characterization, Waterfalls Creek can be classified a Rosgen Stream Classification Type C-channel (Rosgen, 1996).

Within the project study area, both Waterfalls Creek and the Little River have been classified "C; Tr". Class "C" waters are suitable for secondary recreation, fishing, wildlife, fish and aquatic life propagation and survival, and agriculture. "Tr" denotes trout waters, which is a supplemental classification to protect freshwaters for propagation of natural trout and survival of stocked trout.

No waters classified as Water Supplies (WS-I: undeveloped watershed, or WS-II: predominantly undeveloped watersheds), High Quality Waters (HQW), Outstanding Resource Waters (ORW) or designated as an impaired water body under Section 303(d) of the Clean Water Act occur within 1.0 mile (1.6 kilometers) of the project study area.

The Basinwide Monitoring Program, managed by the DWQ, is part of an ongoing ambient water quality monitoring program that addresses long-term trends in water quality. The program monitors ambient water quality by sampling at fixed sites for selected benthic macroinvertebrates, which are sensitive to water quality conditions. The DWQ has sampling stations on the Little River upstream from the project location on US 18 and downstream on SR 1128. The sampling sites are approximately 3.5 and 2.5 river miles (5600 and 4000 meters) upstream and downstream respectively. Sampling occurred at both locations in 1998 with bioclassification rating of "Excellent" and "Good" respectively.

Point sources, such as wastewater discharges, located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) program through the North Carolina Department of Environment and Natural Resources (NCDENR). No active NPDES permits are located in or directly upstream from the project study area (NCCGIA, 2001).

C.3. Anticipated Impacts to Water Resources

The proposed project is expected to affect both soils and topography. The topography is variable with moderate to abrupt changes in elevation. The proposed construction of a new bridge or associated road improvements will require the removal of soils and the placement of fill material.

The primary sources of water quality degradation in urban areas are stormwater runoff and construction. Construction of a new bridge and approaches may disturb the stream banks and expose the soil surface. This may cause water quality degradation from runoff and sedimentation. In addition, increased impervious areas can introduce other elements of degradation to water resources. These elements may include hydrocarbons, toxic substances, debris, and other pollutants. Anticipated impacts to water resources include: additional substrate destabilization, bank erosion, increased turbidity, altered flow rates, and possible temperature fluctuations within the stream channel caused by the removal of streamside vegetation.

NCDOT will ensure that preventative and control Best Management Practices (BMP's) are employed to prevent or reduce water pollution as described in the NCDOT handbook *Best Management Practices for the Protection of Surface Waters* (NCDOT 1997). The North Carolina Wildlife Resource Commission (NCWRC) classifies the Little River and Waterfalls Creek as Hatchery Supported Waters (NCWRC, 2003). Hatchery supported waters account for over half of the trout waters in North Carolina. These waters receive at least one stocking per year. Trout species stocked generally include all three species found in North Carolina (brook, brown and rainbow trout). Therefore, NCDOT will strictly adhere to the *Best Management Practices for Bridge Demolition and Removal*, Case 2 (NCDOT, 1999). In addition, NCDOT will coordinate with DWQ and strictly adhere to North Carolina regulation entitled, *Design Standards in Sensitive Watersheds* (15A NCAC 04B .0125) (NCDENR, 2001(b)) throughout design and construction of the project. Due to the potential for water quality impacts during construction, it is suggested that from October 15 until April 15 a moratorium on in-stream construction activities should be implemented to limit the effects on fishery resources.

C.4. Impacts Related to Bridge Demolition and Removal

BMP's for Bridge Demolition and Removal may be categorized as one of three cases: Case 1, Case 2, or Case 3. The replacement of Bridge No. 39 may classify as a Case 2 or Case 3. Case 2 categories allow no work at all in the water during moratorium periods. Case 3 categories have no special restrictions beyond those outlined in the *Best Management Practices for the Protection of Surface Waters* handbook. There are no trout or anadromous fish moratoriums applicable to Bridge No. 39. Moratoria on in-stream construction and stream crossing may be required if natural occurring populations of smallmouth bass or protected species hosts are known to exist. The NCWRC will evaluate each project based on current fisheries data and make recommendations to the USACE. Limiting in-stream activities and revegetating stream banks immediately following the completion of grading can further reduce impacts.

The bridge superstructure consists of a timber floor with a 5 inch (12.70cm) asphalt wearing surface supported on I-beams. The substructure consists of reinforced concrete abutments and an interior bent comprised of timber cap and timber posts with concrete sills. The bridge will be removed without dropping components into Waters of the United States.

D. Biotic Resource Impacts

This section describes the vegetation and associated wildlife within the project area that was observed during the field survey. The project area is composed of different vegetative communities based on topography, soils, hydrology, and disturbance regimes. Potential impacts affecting these communities are also discussed. Classification of plant communities is based on a system used by the NCNHP (Schafale and Weakley, 1990). If a community is modified or otherwise disturbed such that it does not fit into an NCNHP classification, it is given a name that best describes its current characteristics. Scientific nomenclature and common names (when applicable) are provided for each plant and animal species listed. Subsequent references to the same organism include only the common name.

D.1. Plant Communities

The predominant terrestrial communities found in the project study area are Montane Oak-Hickory Forest and Urban/Disturbed. Dominant floral components associated with these terrestrial areas are discussed below and presented in Figure 6.

Montane Oak-Hickory Forest

This community is located in the southeastern quadrant of the project study area, between Air Bellows Gap Road and Waterfalls Creek (Figure 1) The canopy layer includes white oak, American beech, white pine, yellow buckeye (*Aesculus octandra*), red maple (*Acer rubrum*), and sugar maple (*Acer saccharum*). Understory species included saplings of canopy species and tag alder (*Alnus serrulata*), rhododendron, wild sarsaparilla (*Aralia nudicaulis*), kudzu (*Pueraria montana*), Solomon's-seal (*Polygonatum biflorum*) and Turks cap lily (*Lillium superbum*). Elevations within this community range from approximately 2900 to 3000 feet msl (880 to 910 meters). Within the project study area, approximately 1.7 acres (0.7 hectares) of this community exist.

Urban/Disturbed Community

The Urban/Disturbed community includes the road shoulders, power line right-of-way, residential, urban, and agricultural areas. Many plant species are adapted to these disturbed and regularly maintained areas. Within the project study area, approximately 4.6 acres (1.8 hectare) of this community exist.

D.2. Wildlife

Wildlife associated with these vegetative community include ubiquitous mammals such as raccoon (*Procyon lotor*), white-tailed deer (*Odocoileus virginianus*), Virginia opossum (*Didelphis virginiana*), mink (*Mustela vison*), striped skunk (*Mephitis mephitis*), beaver (*Castor canadensis*), eastern cottontail (*Sylvilagus floridanus*), and gray squirrel (*Sciurus carolinensis*).

Other wildlife which may reside or forage in these communities include southern flying squirrel (*Glaucomys volans*), American goldfinch* (*Carduelis tristis*), American robin* (*Turdus americana*), Acadian flycatcher (*Epidonax virescens*), cedar waxwing* (*Bombycilla cedrorum*), downy woodpecker (*Picoides pubescens*), eastern screech-owl

(*Otus asio*), white-breasted nuthatch (*Sitta carolinensis*), northern cardinal (*Cardinalis cardinalis*), blue-gray gnatcatcher (*Polioptila caerulea*), Louisiana waterthrush (*Seiurus motacilla*), eastern box turtle (*Terrapene carolina carolina*), queen snake (*Regina septemvittata*), and pickerel frog (*Rana palustris*).

D.3. Aquatic Communities

Lotic systems in the project study area include Waterfalls Creek and the Little River. The Little River appears to be a moderate groundwater-moderate runoff driven medium size stream. It lies within a moderately confined to unconfined confined valley with a low gradient. Water clarity was clear and recorded water temperature was 62° F (17° C). Stream habitat was evaluated using methods and forms outlined in NCDENR's *Internal Technical Guide for Stream Work in North Carolina* (2001(a)). The Habitat Assessment Form: Mountain/Piedmont Streams was completed for a portion of the stream reach upstream of Bridge No. 39. A final score of 92 out of a possible 98 was recorded (Appendix A). The Habitat Assessment Form suggests a stable channel with good in-stream habitat, adequate pool and riffle variety and habitat, and well-vegetated banks and riparian zone.

Waterfalls Creek appears to be a moderate groundwater-moderate runoff driven medium size stream. In addition, it appears to have a moderately confined valley form with a low gradient. The channel appeared to be only slightly entrenched in the project study area. The banks were well vegetated with no sign of erosion. Water clarity was clear and recorded water temperature was 62° F (17° C). Stream habitat was evaluated using methods and forms outlined in NCDENR's *Internal Technical Guide for Stream Work in North Carolina*. The Habitat Assessment Form: Mountain/Piedmont Streams was completed for a portion of the stream reach upstream of Bridge No. 39. A final score of 93 out of a possible 98 was recorded (Appendix A). The Habitat Assessment Form suggests a stable channel with good in-stream habitat, adequate pool and riffle variety and habitat, and well-vegetated banks and riparian zone.

Wildlife observed included black fly, mayfly, and caddisfly larvae, water pennies, snail and fish. These stream systems should hold common fish species such as central stoneroller (*Campostoma anomalum*), rosieside dace (*Clinostomus funduloides*), New River shiner (*Notropis scabriceps*), rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), and brook trout (*Salvelinus fontinalis*).

D.4. Anticipated Impacts to Biotic Communities

Within the study area, Montane Oak/Hickory Forest covers approximately 0.55 acres (0.22 hectares) and urban/ disturbed lands communities occupy approximately 4.92 acres (1.99 hectares). The remaining acreage in the project area includes the road surface and the unvegetated stream channel. The proposed alternatives have the potential to encroach into these natural vegetative communities. Based on a preliminary analysis the total acreage that may be affected within each natural vegetative community is shown in Table 2.

Table 2: Area of Anticipated Impacts to Vegetative Communities

	Alternative 1	Alternative 2
Montane Oak/Hickory Forest	0.05 A (0.02 ha)	0.02 A (0.01 ha)
Urban/Disturbed	0.61 A (0.25 ha)	0.18 A (0.07 ha)
Total	0.66 A (0.27 ha)	0.20 A (0.08 ha)

Loss of wildlife is an unavoidable aspect of development. Temporary fluctuations in populations of animal species, which utilize these communities, are anticipated during the course of construction. Slow-moving, burrowing, and/or subterranean organisms will be directly impacted by construction activities, while mobile organisms will be displaced to adjacent communities.

Aquatic organisms are acutely sensitive to changes in their environment. Environmental impacts from construction activities may result in long term or irreversible effects. Impacts usually associated with in-stream construction include increased channelization and scouring of the streambed. In-stream construction alters the substrate and affects adjacent streamside vegetation. Such disturbances within the substrate lead to increased siltation, which can clog the gills and/or feeding mechanisms of benthic organisms, fish, and amphibian species. Siltation may also cover benthic macroinvertebrates with excessive amounts of sediment that inhibit their ability to respire. These organisms are slow to recover and usually do not, once the stream has been severely impacted.

The removal of streamside vegetation and placement of fill material during construction enhances erosion and possible sedimentation. Quick revegetation of these areas helps to reduce the impacts by supporting the underlying soils. Erosion and sedimentation may carry soils, toxic compounds, trash, and other materials into the aquatic communities at the construction site. As a result, sediment bars may form at and downstream of the site. Increased light penetration from the removal of streamside vegetation may increase water temperatures. Warmer water contains less oxygen, thus reducing aquatic life that depends on high oxygen concentrations.

E. Special Topic

E.1. "Waters of the United States": Jurisdictional Issues

Section 404 of the Clean Water Act requires regulation of discharges into "Waters of the United States." The U.S. Environmental Protection Agency (USEPA) is the principal administrative agency of the Clean Water Act; however, the U.S. Army Corps of Engineers (USACE) has the responsibility for implementation, permitting, and enforcement of the provisions of the Act. The USACE regulatory program is defined in 33 CFR 320-330.

Water bodies, including lakes, rivers, and streams, are subject to jurisdictional consideration under the Section 404 program. Wetlands are also identified as "Waters of the United States." Wetlands, defined in 33 CFR 328.3, are those areas that are inundated or saturated by surface water or groundwater at a frequency and duration

sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Any action that proposes to place fill into these areas falls under the jurisdiction of the USACE under Section 404 of the Clean Water Act (33 U.S.C. 1344).

Surface Waters

The NCDWQ defines a perennial stream as a clearly defined channel that contains water for the majority of the year. These channels usually have some or all of the following characteristics: distinctive streambed and bank, aquatic life, and groundwater flow or discharge. Since both Grassy Creek and UT1 appear on either the Taylorsville USGS 7.5-minute quadrangle map or the County Soil Survey map they can be classified as perennial streams. Detailed stream characteristics, including specific water-quality designations, are presented in Section C: Water Resources.

Jurisdictional Wetlands

There are no jurisdictional wetlands associated with the project study area.

E.2. Permits

In accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344), a permit is required from the USACE for projects of this type for the discharge of dredged or fill material into "Waters of the United States". The specific permit(s) will be determined once alternatives have been chosen and potential impacts have been calculated. A Nationwide Permit No. 23 (Approved Categorical Exclusion) is likely to be applicable for all impacts to Waters of the United States resulting from the proposed project. A Nationwide Permit No. 33 (Temporary Construction, Access or Dewatering) may be required if an on-site work bridge or causeway is needed during construction of Bridge No. 39. A Regional General Permit No. 198200031 may be required if the discharge of dredged or fill material in "Waters of the United States" is unavoidable.

A 401 Water Quality Certification, administered through the DWQ, will also be required. This certification is issued for any activity that may result in a discharge into waters for which a federal permit is required. Applicable General Certifications (GC) may include GC 3403, GC 3366, and GC 3404 for the matching USACE Nationwide Permit 23, Nationwide Permit 33, and Regional General Permit 198200031.

Impacts to the aquatic community of Little River may result from the replacement of Bridge No. 39. The removal of the substructure may create some disturbance in the streambed. Conditions in the stream may raise sediment concerns since the substrate contains silt; therefore, a turbidity curtain is recommended.

In order to protect the water quality and aquatic life in the area affected by this project, the NCDOT and all contractors will follow appropriate guidelines for bridge demolition and removal. These guidelines are presented in three NCDOT documents entitled: *Pre-Construction Guidelines for Bridge Demolition and Removal*, *Policy: Bridge Demolition and Removal in Waters of the United States*, and *Best Management Practices for Bridge Demolition and Removal*.

Moratoria on in-stream construction and stream crossing may be required if natural occurring populations of smallmouth bass or protected species hosts are known to exist. The NCWRC will evaluate each project based on current fisheries data and make recommendations to the USACE.

E.3. Buffer Rules

At the time of this report, the New River Basin was not subject to riparian buffer regulations.

E.4. Mitigation

The USACE has adopted, through the Council on Environmental Quality (CEQ), a mitigation policy which embraces the concepts of "no net loss of wetlands" and sequencing. The purpose of this policy is to restore and maintain the chemical, biological, and physical integrity of "Waters of the United States," specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include avoiding impacts, minimizing impacts, and compensating for impacts (40 CFR 1508.20). Avoidance, minimization, and compensatory mitigation must be considered sequentially.

Avoidance

Avoidance mitigation examines all appropriate and practicable possibilities of averting impacts to "Waters of the United States." According to a 1990 Memorandum of Agreement (MOA) between the USEPA and the USACE, in determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology, and logistics in light of overall project purposes. No jurisdictional wetlands will be impacted; however, some unavoidable impacts to surface waters may result from project construction.

Minimization

Minimization includes the examination of appropriate and practicable 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. Minimization typically focuses on decreasing the footprint of the proposed project through the reduction of median widths, right-of-way widths, fill slopes, and/or road shoulder widths. The following methods are suggested to minimize adverse impacts to "Waters of the United States":

1. Strictly enforce Best Management Practices (BMPs) to control sedimentation during project construction;
2. Minimize clearing and grubbing activity;
3. Decrease or eliminate discharges into the North Pacolet River's tributary;
4. Reestablish vegetation on exposed areas, employing judicious pesticide and herbicide management;
5. Minimize "in-stream" activity; and
6. Use responsible litter control practices.

Compensatory Mitigation

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. It is recognized that "no net loss of wetlands" functions and values may not be achieved in each and every permit action. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts, which remain after all appropriate, and practicable minimization has been required. Compensatory actions often include restoration, creation and enhancement of "Waters of the United States", specifically wetlands. Such action should be undertaken in areas adjacent to or contiguous to the discharge site.

Nationwide Permits usually do not require mitigation according to the MOA between the USEPA and the USACE. However, prior to the use of any nationwide permit within any of the 25 designated counties of North Carolina that contain trout waters, notification must be given to the Wilmington USACE District Engineer along with a written statement of compliance with all of the conditions of the applicable nationwide permit. This notification will include comments and recommendations from NCWRC. A plan to provide compensatory mitigation for all unavoidable adverse impacts to the mountain trout waters must be included in the information sent to the NCWRC.

F. Rare and Protected Species

Some populations of fauna and flora have been, or are, in the process of decline due to either natural forces or impacts from humans. Federal law (under the provisions of Section 7 of the Endangered Species Act of 1973, as amended) requires that any action likely to adversely affect a species classified as federally-protected be subject to review by the USFWS. Other species may receive additional protection under separate laws.

F.1. Federally Protected Species

Plants and animals with a federal designation 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 only one federally-protected species for Alleghany County as of the February 5, 2003 listing.

Bog turtle (*Clemmys muhlenbergii*)

Federal Status: Threatened (S/A)

State Status: Threatened

Date Listed: May 1, 1997

The **bog turtle** is North Carolina's smallest turtle, measuring 3 to 4 in (7 to 10 cm) in length. It has a dark brown carapace and a black plastron. The bright orange or yellow blotch on each side of the head and neck is a readily identifiable characteristic. The bog turtle inhabits damp grass fields, bogs, and marshes in the mountains and western Piedmont.

The bog turtle is shy and secretive, and will burrow rapidly in mud or debris when disturbed. The bog turtle forages on insects, worms, snails, amphibians, and seeds. In June or July, three to five eggs are laid in a shallow nest in moss or loose soil. The eggs hatch in about 55 days.

The bog turtle is listed as Threatened due to similarity of appearance [T (S/A)]. This is due to its similarity of appearance to another rare species that is listed for protection. T (S/A) species are not subject to Section 7 consultation and a biological conclusion for this species is not required.

Bog turtles inhabit damp grassy fields, bogs, and marshes. These areas generally have minimal woody material and a soft substrate. Suitable habitat as described did not exist within the project study area.

F.2. Federal Species of Concern

There are seventeen federal species of concern listed by the USFWS for Alleghany County (USFWS 2003). These species are not protected under the provisions of Section 7 of the Endangered Species Act. Federal species of concern species are defined as species under consideration for listing for which there is insufficient information to support listing as threatened or endangered (formerly C2 candidate species). The status of these species may be upgraded at any time, thus they are included here for consideration. A review of NCNHP data depicting known populations of these federal species of concern found no populations within a one mile (1.6 km) radius of the project study area. Protections afforded to species listed under state law are not applicable to this project. Table 3 lists the federal species of concern, their state status, and the existence of suitable habitat within the project area.

Table 3: Federal species of concern species for Alleghany County

Common Name	Scientific Name	Federal Status	State Status	Habitat Requirements	Available Habitat
Vertebrates					
Eastern small-footed myotis	<i>Myotis leibii</i>	FSC	SC	Roosts in hollow trees, caves and mines	No
Hellbender	<i>Cryptobranchus alleganiensis</i>	FSC	SC	Large and clear fast flowing streams, historic in Alleghany County	Yes
Kanawha minnow	<i>Phenacobius teretulus</i>	FSC	SC	New River Drainage	Yes
New England cottontail	<i>Sylvilagus transitionalis</i>	FSC	SR	Dense cover of montane woods and thickets	Yes
Invertebrates					
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC	SR	Rich woods and adjacent edges and openings. Host plants are violets	Yes

Table 3: Federal species of concern species for Alleghany County

Common Name	Scientific Name	Federal Status	State Status	Habitat Requirements	Available Habitat
Grayson crayfish ostracod	<i>Ascetocythere cosmata</i>	FSC*	SR	Symbiotic on crayfish in sub-surface waters of burrows	Yes
Green floater	<i>Lasmigona subviridis</i>	FSC	E	Tar, Neuse, and Cape Fear systems downstate; New and Watauga systems in mountains	No
Pygmy snaketail	<i>Ophiogomphus howei</i>	FSC	SR	Rivers	Yes
Regal fritillary butterfly	<i>Speyeria idalia</i>	FSC*	SR	Wet or dry meadows, bogs, open hilltops. Host plants are violets	Yes
Vascular Plants					
Carolina saxifrage	<i>Saxifraga caroliniana</i>	FSC	SR-T	High to middle elevation moist cliffs and rocks	No
Cuthbert's turtlehead	<i>Chelone cuthbertii</i>	FSC	SR-L	Bogs	No
"Fen" sedge ¹	<i>Carex sp.</i>	FSC	--	Unknown	--
Gray's lily	<i>Lilium grayi</i>	FSC	T-SC	Bogs, wet meadows, seeps, grassy balds, high elevation forests	No
Large-leaved grass-of-parnassus	<i>Parnasia grandifolia</i>	FSC	T	Fens and seeps over calcareous or mafic rocks	No
Sweet pinesap	<i>Monotropsis odorata</i>	FSC*	SR-T	Dry forests and bluffs	No
Tall larkspur	<i>Delphinium exaltatum</i>	FSC*	E-SC	Grassy balds, glades, woodlands mostly over mafic rock	No
Nonvascular Plants					
Keever's bristle-moss	<i>Orthotrichum keeverae</i>	FSC	E	On trees around low elevation granitic domes	No

NOTES:

FSC - Federal Species of Concern; A taxon, which may or may not be listed in the future SC - Special Concern

SR - Significantly rare species.

E - Endangered; Any species or higher taxon of plant whose continued existence as a viable component of the State's flora/fauna is determined to be in jeopardy.

T - Threatened; Any resident species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

-L - State range of the species is limited to North Carolina and adjacent states. These are species which may have 20-50 populations in North Carolina, but fewer than 50 populations rangewide.

-T - These species are rare throughout their ranges

1 - Denotes species not listed with NCNHP.

* - Denotes a Historic record; the species was last observed in the county more than 20 years ago

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 36 CFR Part 800. Section 106 requires that for federally funded, licensed, or permitted projects having an effect on properties listed in or eligible for the National Register of Historic Places, the Advisory Council on Historic Preservation be given the opportunity to comment.

B. Historic Architecture

In a memorandum dated October 22, 2003, the State Historic Preservation Officer (SHPO) conducted a search of their files and stated The Whitehead Mill surveyed property is of historical importance. SHPO requested an evaluation of the property. In the course of the survey of the property, it was discovered that the mill is not sufficiently intact to qualify for the National Register. In addition, the surrounding buildings are also not eligible. Therefore, no further compliance with Section 106 is required. A copy of the SHPO memorandums and concurrence form are included in the Appendix.

C. Archaeology

The State Historic Preservation Officer (SHPO), in a memorandum dated October 22, 2003, recommended that "no archaeological investigation be conducted in connection with this project." A copy of the SHPO memorandum is included in the Appendix.

VII. ENVIRONMENTAL EFFECTS

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

The project is a Federal "Categorical Exclusion" due to its limited scope and lack of significant environmental consequences.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of current NCDOT standards and specifications.

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

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

The studied route does not contain any bicycle accommodations nor is it a designated bicycle route; therefore no bicycle accommodations have been included as part of this project.

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

There are no publicly owned recreational facilities, or wildlife and waterfowl refuges of national, state, or local significance in the vicinity of the project.

This Categorical Exclusion has proceeded in accordance with the Executive Order 12898 requirement that each federal agency, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations. The proposed project will not directly impact minority or low-income residences, segment existing minority communities, or separate residential areas from nearby services such as schools.

The proposed project will not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

No geodetic monuments will be impacted during construction of this project.

The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impacts to prime and important farmland soils by all land acquisition and construction projects. Prime and important farmland soils are defined by the Natural Resources Conservation Service (NRCS). There are no prime or important farmlands in the immediate vicinity of the proposed bridge.

No adverse effects to air quality are expected to result from this project. The project is in an air quality "neutral" project, so it is not required to be included in the regional emissions analysis (if applicable), and a project level CO analysis is not required. Since the proposed project is located in an attainment area, 40 CFR Part 51 and 93 are not applicable. If vegetation or wood debris is disposed of by open burning, it 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 and the 1990 Clean Air Act and the National Environmental Policy Act. This evaluation completes the assessment requirements for air quality and no additional reports are required.

Ambient noise levels may increase during construction of this project; however, this increase will be only temporary and usually confined to daylight hours. There should be no notable change in traffic volumes after this project is complete. Therefore, this project will have no adverse effect on existing noise levels. Noise receptors in the project area will not be impacted by this project. This evaluation completes the assessment requirements for highway traffic noise set forth in 23 CFR Part 772. No additional reports are required.

An examination of North Carolina Department of Environment and Natural Resources (DENR), Division of Water Quality (DWQ), Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section records by the NCDOT Geotechnical Engineering Unit at the revealed no hazardous waste sites in the project area.

A field investigation and an examination of records of DENR's Division of Waste Management, Underground Storage Tank Section, revealed that no regulated underground storage tanks exist in the project study area. The residences along SR 1193 are served by underground home heating oil tanks.

Alleghany County is a participant in the National Flood Insurance Regular Program. This site on the Little River is not included in a detailed FEMA flood study. Attached is a copy of the Flood Insurance Rate Map, on which are shown the approximate limits of the 100-year flood plain in the vicinity of the project (Figure 7).

On the basis of the above discussion, it is concluded that no significant adverse environmental effects will result from implementation of the project.

VIII. PUBLIC INVOLVEMENT

Efforts were undertaken early in the planning process to contact local officials to involve them in the project development with scoping letters. A Citizens Informational Workshop was held at the conference room of the Town of Sparta Municipal Services Building on Thursday, December 2, 2004 where preliminary alternatives were reviewed and discussed with concerned citizens and local officials.

Nine local citizens attended the Citizens Informational Workshop. Many of the citizens were opposed to Alternative 1. The citizens agreed with the preferred alternative (Alternative 2) and had no objection to the proposed detour.

IX. AGENCY COMMENTS

Agency comments are summarized below. Letters from the commenting agencies are included in the Appendix.

1. United States Department of the Interior Fish & Wildlife Service (USFW)

Comment: "Our records indicate known locations of the threatened (due to similarity of appearance) bog turtle (Clemmys muhlenbergii) and a federal species of concern - gray's lily (Lillium grayi) near this project. Habitat assessments and surveys of suitable habitat should be conducted in the project area. If they occur in the project area they should be protected from impacts."

Response: Suitable habitat is not available for either the bog turtle or for gray's lily.

2. North Carolina Wildlife Resources Commission (NCWRC)

Comment: *"A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout."*

Response: A moratorium will be observed as noted in the special Project Commitments.

3. North Carolina Department of Environment & Natural Resources - Division of Water Quality (NCDENR - DWQ)

Comment: *"A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout."*

Response: A moratorium will be observed as noted in the special Project Commitments.

4. Alleghany County Schools

Comment: *"Our Transportation Director has . . . developed a bus reroute plan that will allow the bridge to be replaced without interrupting [service] . . . Alleghany County Schools only request is that we receive advance warning at least two months before bridge closing."*

Response: It is NCDOT's policy to inform emergency services and schools before road closure/construction that would result in interruption of traffic.

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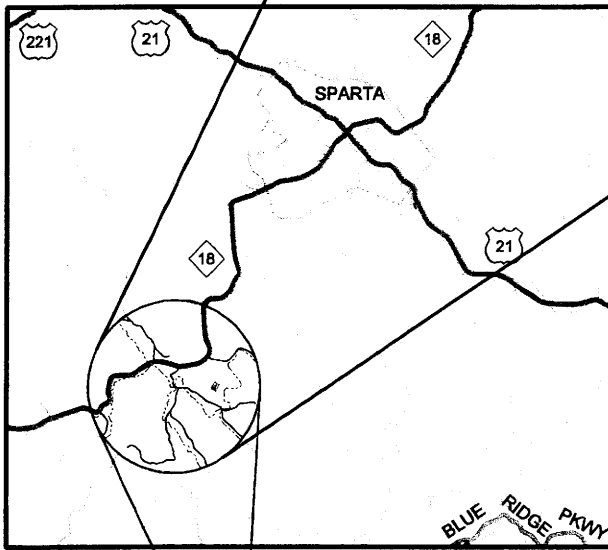
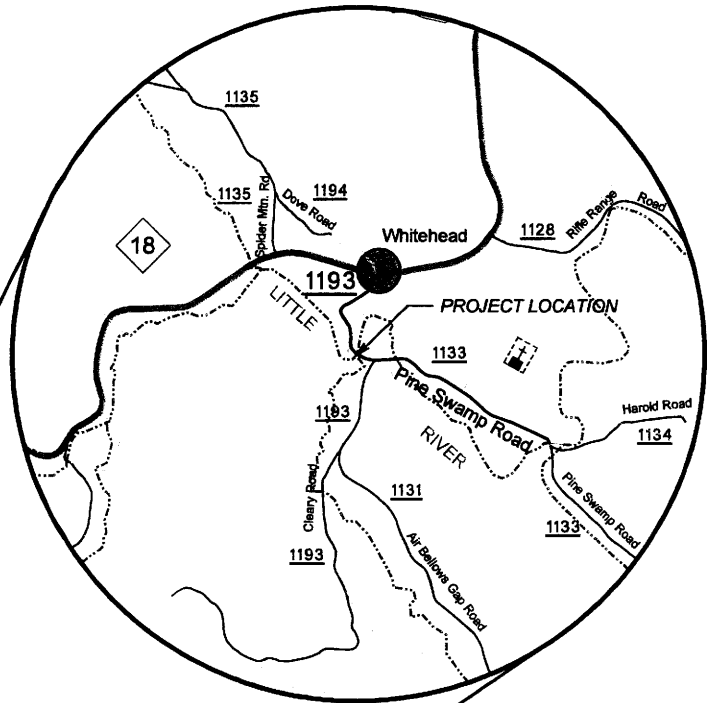
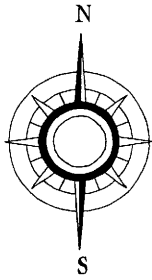
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FIGURES

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<i>Figure 2-4</i>	<i>Photographs</i>
<i>Figure 2-5</i>	<i>Photographs</i>
<i>Figure 3</i>	<i>Typical Section</i>
<i>Figure 4A</i>	<i>Plan View Alternative 1</i>
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<i>Figure 5</i>	<i>Off-site Detour</i>
<i>Figure 6</i>	<i>Natural Communities and Surface Waters</i>
<i>Figure 7</i>	<i>100-year Flood Plain</i>

0.25 0 0.25 0.5 MILES



1 0 1 2 MILES



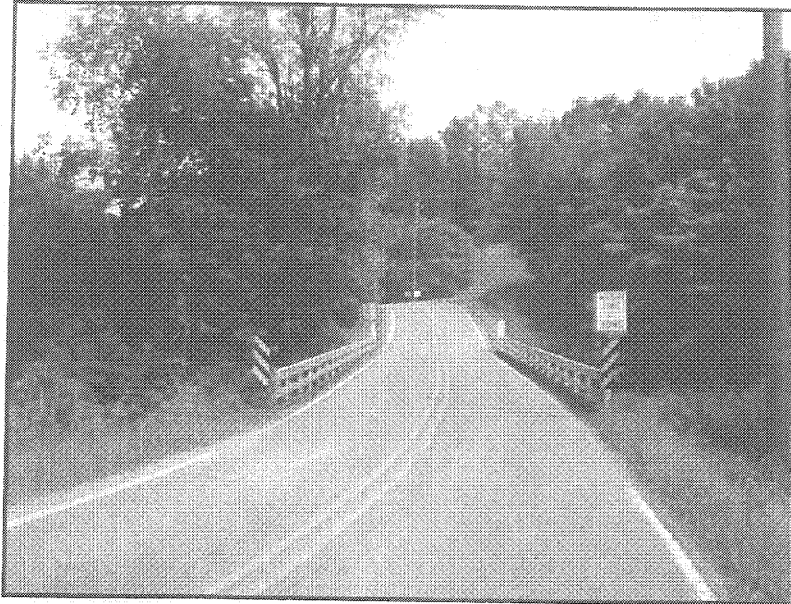
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ENVIRONMENTAL ANALYSIS BRANCH

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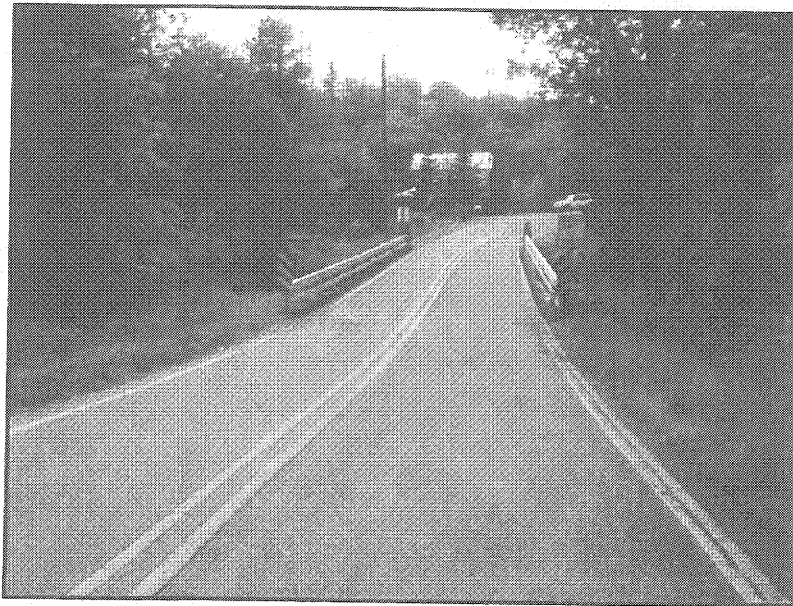
BRIDGE NO. 39 ON SR 1193
OVER LITTLE RIVER

VICINITY MAP

FIGURE 1



VIEW OF NORTH
WESTERN APPROACH



VIEW OF SOUTHEAST-
ERN APPROACH



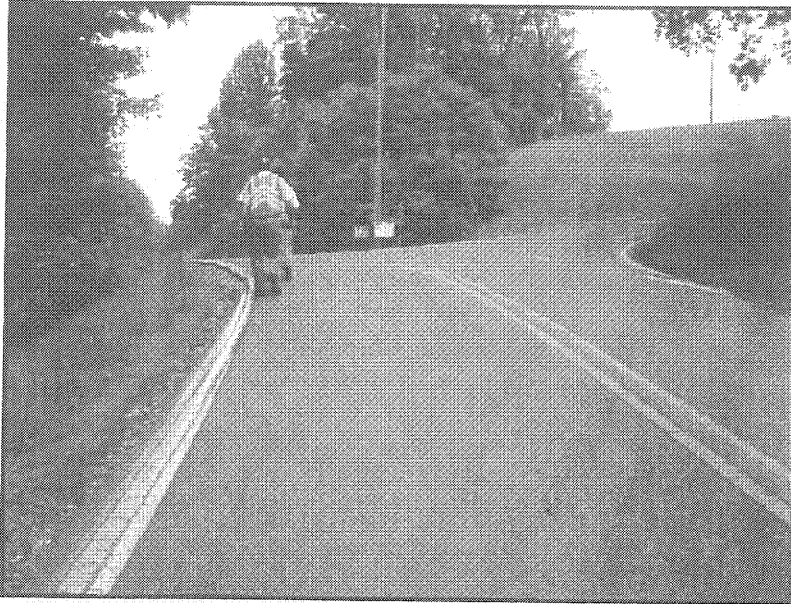
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ENVIRONMENTAL ANALYSIS

ALLEGHANY COUNTY TIP NO. B-4008

REPLACEMENT BRIDGE NO. 39 OVER
LITTLE RIVER ON SR 1193

PHOTOGRAPHS

Figure 2-1



VIEW OF INTERSECTION WITH SR1131)



VIEW DOWNSTREAM (LOOKING NORTH EAST)



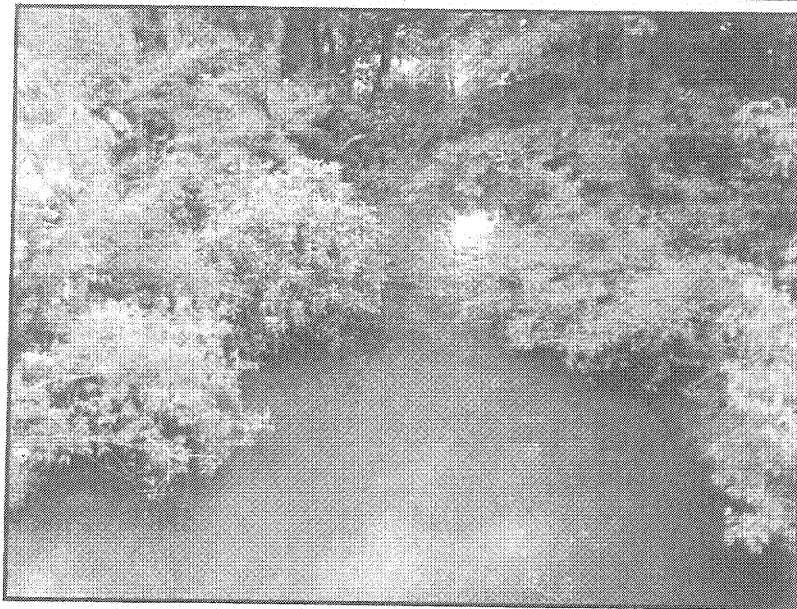
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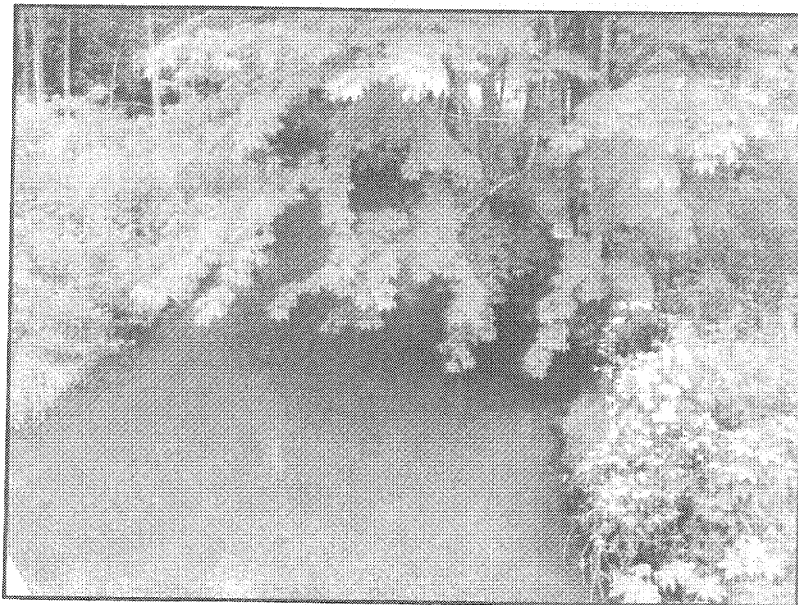
REPLACEMENT BRIDGE NO. 39 OVER
LITTLE RIVER ON SR 1193

PHOTOGRAPHS

Figure 2-2



VIEW UPSTREAM WA-
TERFALL CREEK
(LOOKING SOUTH-
EAST)



VIEW UPSTREAM LIT-
TLE RIVER(LOOKING
SOUTHWEST)



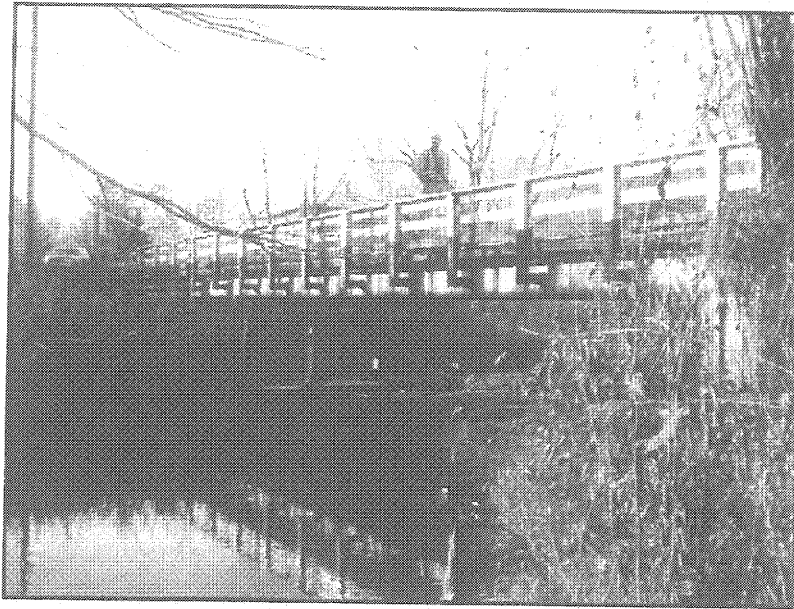
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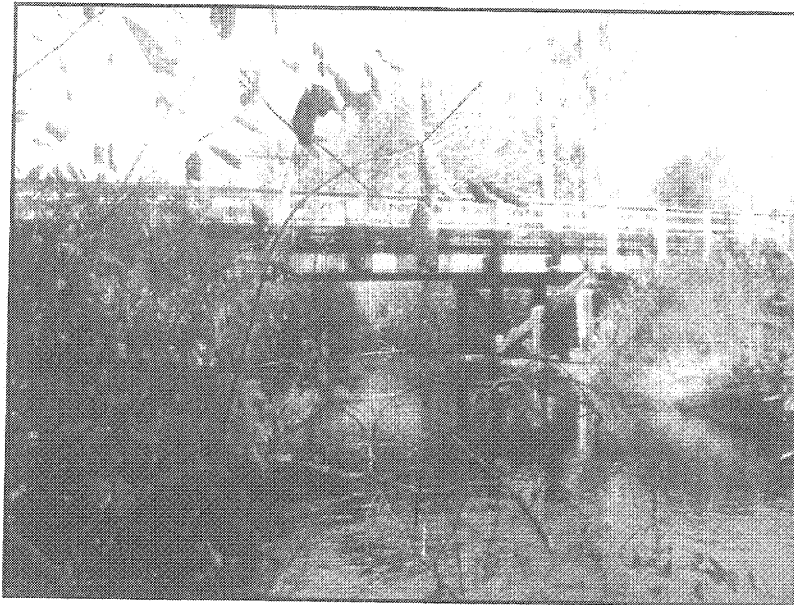
REPLACEMENT BRIDGE NO. 39 OVER
LITTLE RIVER ON SR 1193

PHOTOGRAPHS

Figure 2-3



VIEW OF UPSTREAM
FACE FROM WATER-
FALL CREEK



VIEW OF UPSTREAM
FACE FROM LITTLE
RIVER



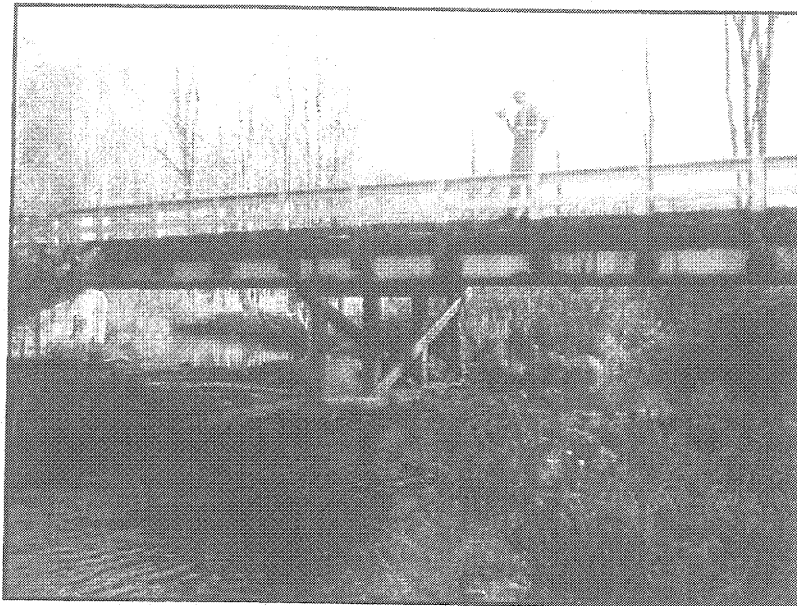
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ENVIRONMENTAL ANALYSIS

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REPLACEMENT BRIDGE NO. 39 OVER
LITTLE RIVER ON SR 1193

PHOTOGRAPHS

Figure 2-4



**VIEW OF DOWN-
STREAM FACE**



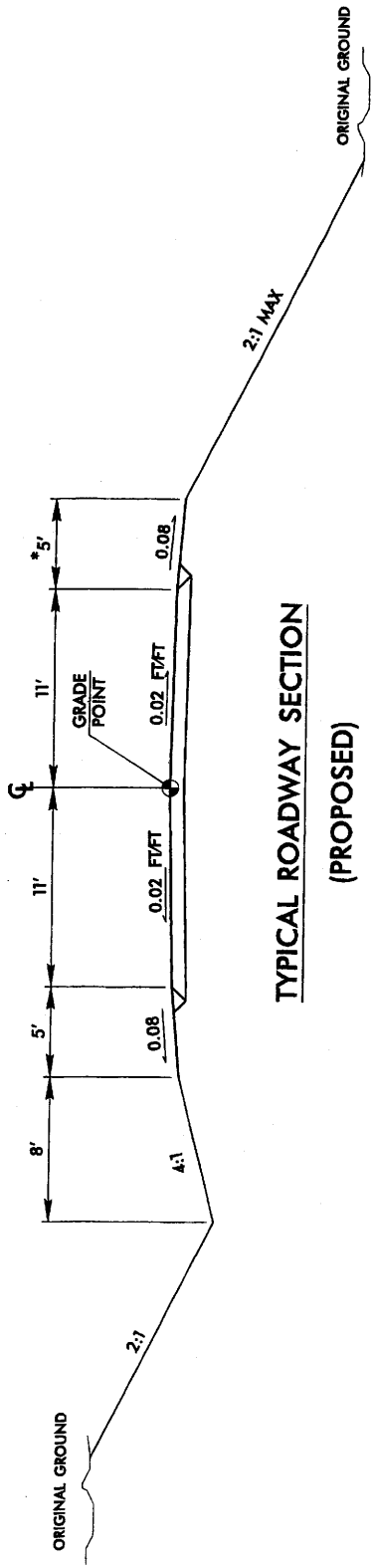
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PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS**

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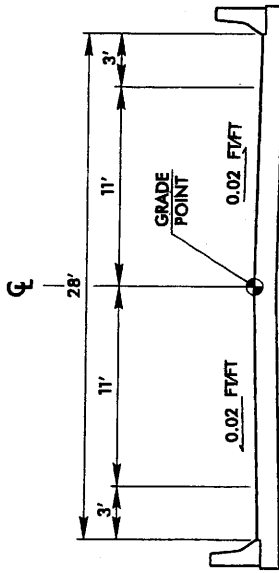
**REPLACEMENT BRIDGE NO. 39 OVER
LITTLE RIVER ON SR 1193**

PHOTOGRAPHS

Figure 2-5



**TYPICAL ROADWAY SECTION
(PROPOSED)**



TYPICAL SECTION ON BRIDGE

TRAFFIC DATA

ADT 2002 = 500
 ADT 2025 = 800
 DUAL 2%
 TTST 1%

FUNCTIONAL CLASSIFICATION: RURAL LOCAL

LOS = A



NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 PROJECT DEVELOPMENT &
 ENVIRONMENTAL ANALYSIS BRANCH

ALLEGHANY COUNTY TIP NO. B-4008

BRIDGE NO. 39 ON SR 1193
 OVER LITTLE RIVER

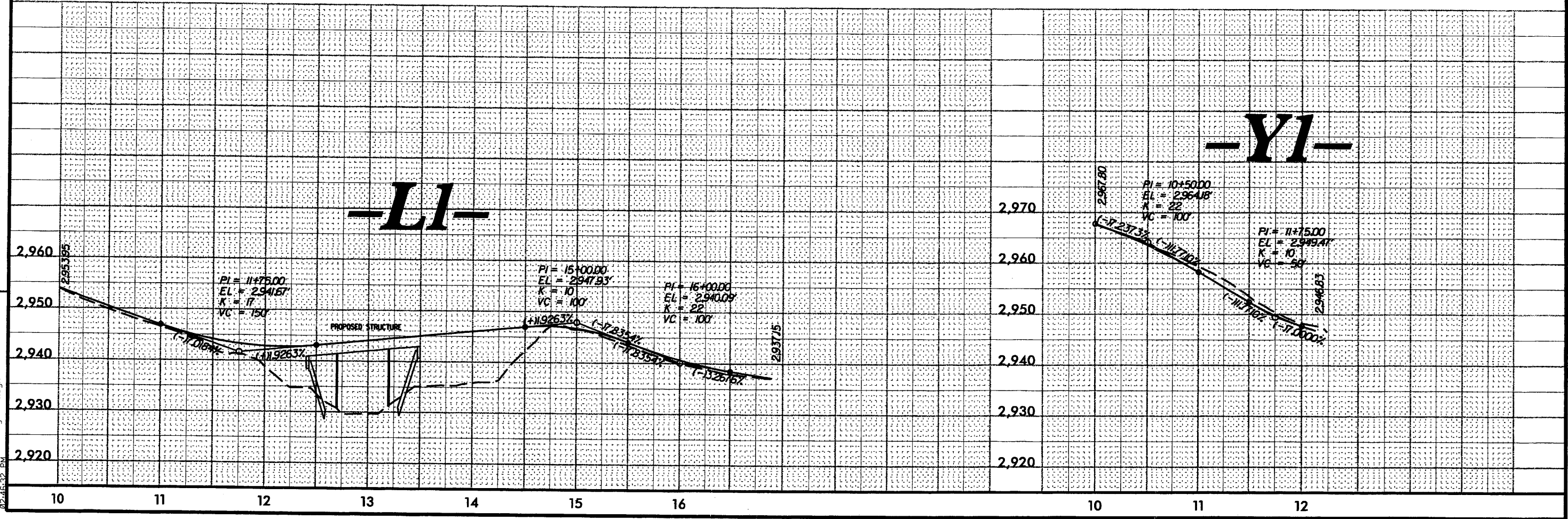
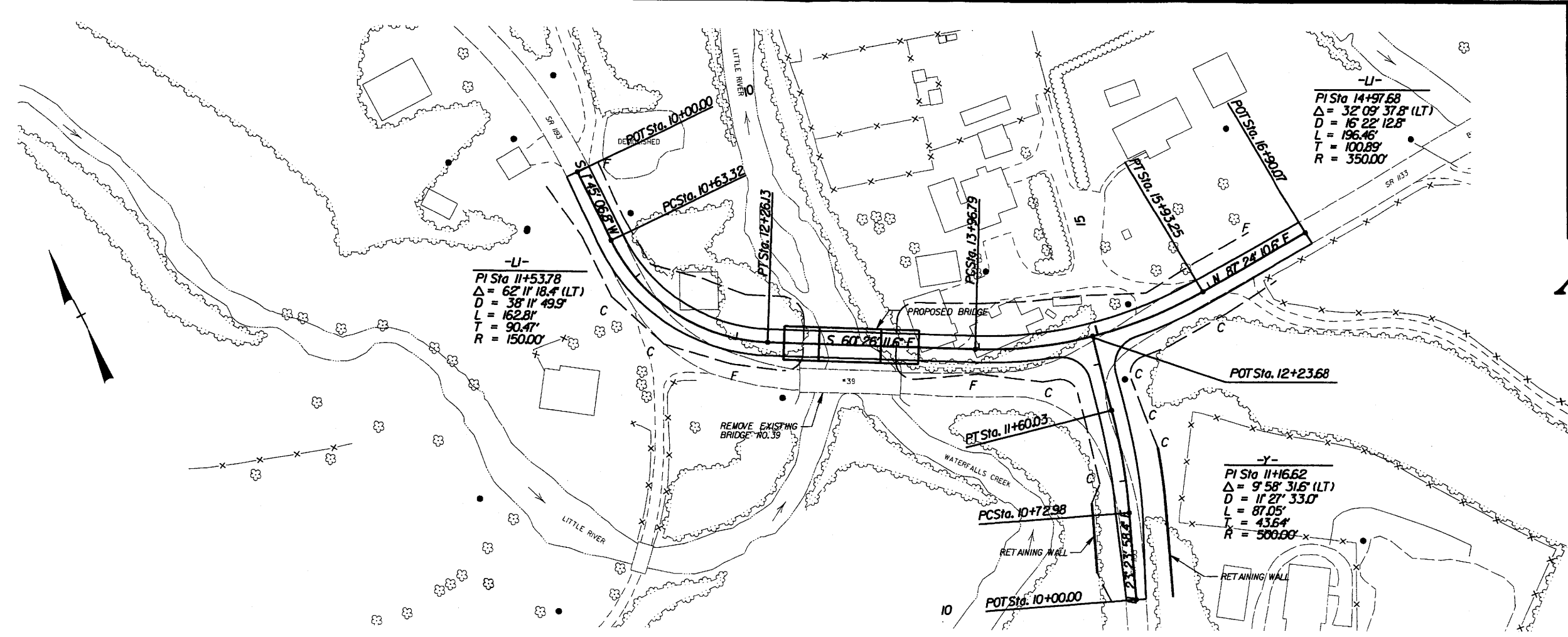
TYPICAL SECTION

FIGURE 3

8/17/99

PROJECT REFERENCE NO. B-4008	SHEET NO. 4A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION	
FUNCTIONAL PLANS DO NOT USE FOR CONSTRUCTION	
MA Engineering CONSULTANTS, INC. 596 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

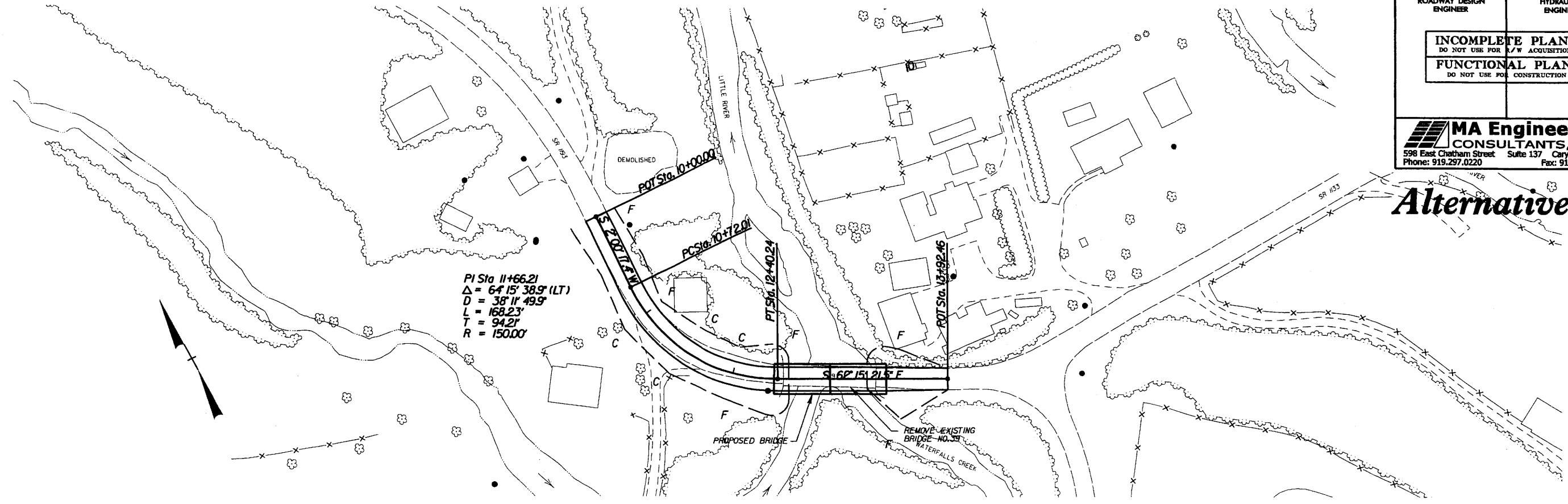
Alternative 1



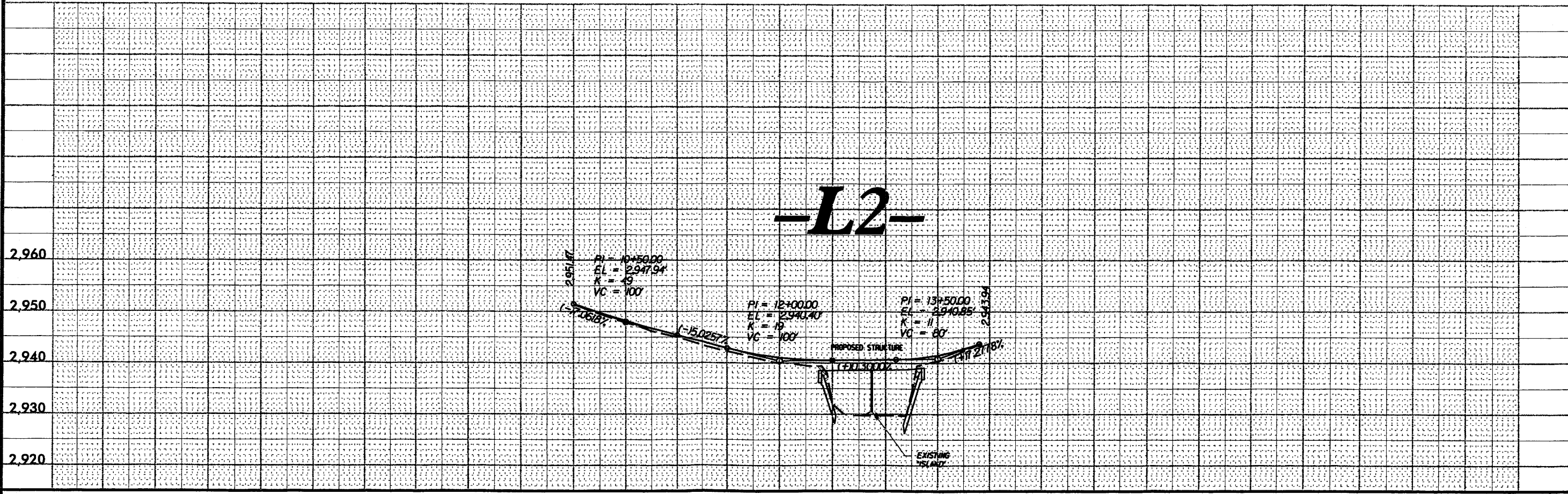
REVISIONS

95236005
04/08.rdy-PSH.dgn

Alternative 2

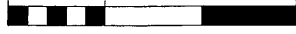


REVISIONS

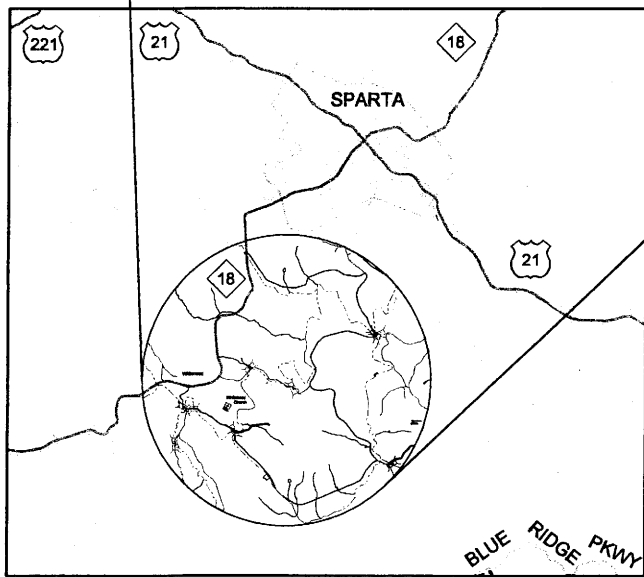
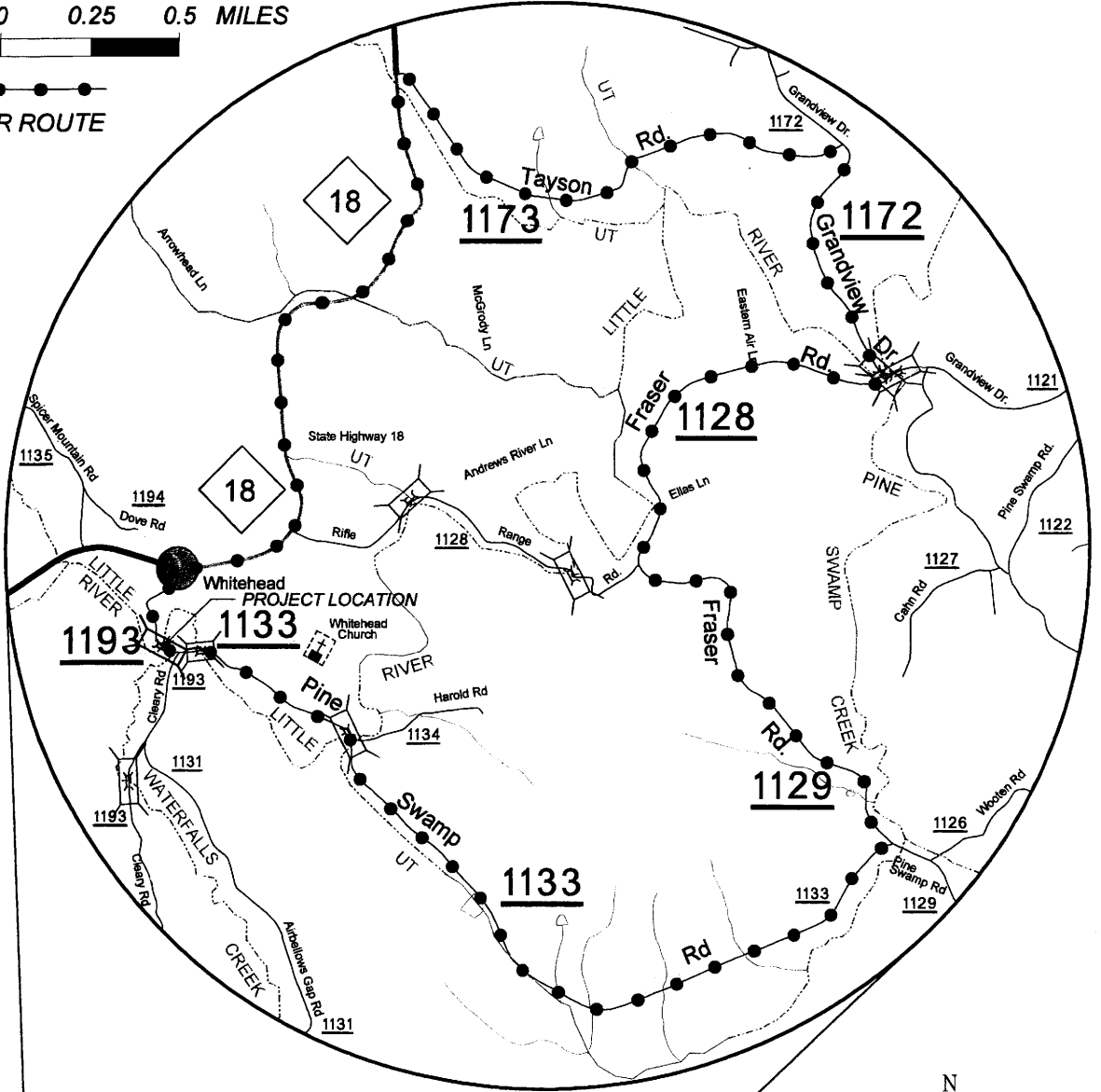


05/23/2005
R:\B4008\B4008.dwg - FSH2.dgn
2:46:26 PM

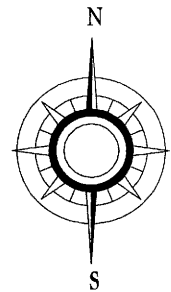
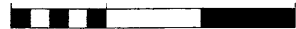
0.25 0 0.25 0.5 MILES



●●●●●
DETOUR ROUTE



1 0 1 2 MILES



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH**

ALLEGHANY COUNTY TIP NO. B-4008





**BRIDGE NO. 39 ON SR 1193
OVER LITTLE RIVER**

OFF-SITE DETOUR

FIGURE 5



LEGEND

-  Surface Water
-  Biotic Communities: Urban/ Disturbed
-  Biotic Communities: Montane Oak-Hickory Forest
-  Road and Bridge



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH**

ALLEGHANY COUNTY TIP NO. B-4008

**BRIDGE NO. 39 ON SR 1193
OVER LITTLE RIVER**

**NATURAL COMMUNITIES
AND SURFACE WATERS**

FIGURE 6



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS

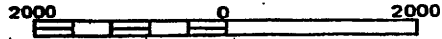
ALLEGHANY COUNTY TIP NO. B-4008

REPLACEMENT BRIDGE NO. 39 OVER
THE LITTLE RIVER ON SR 1193

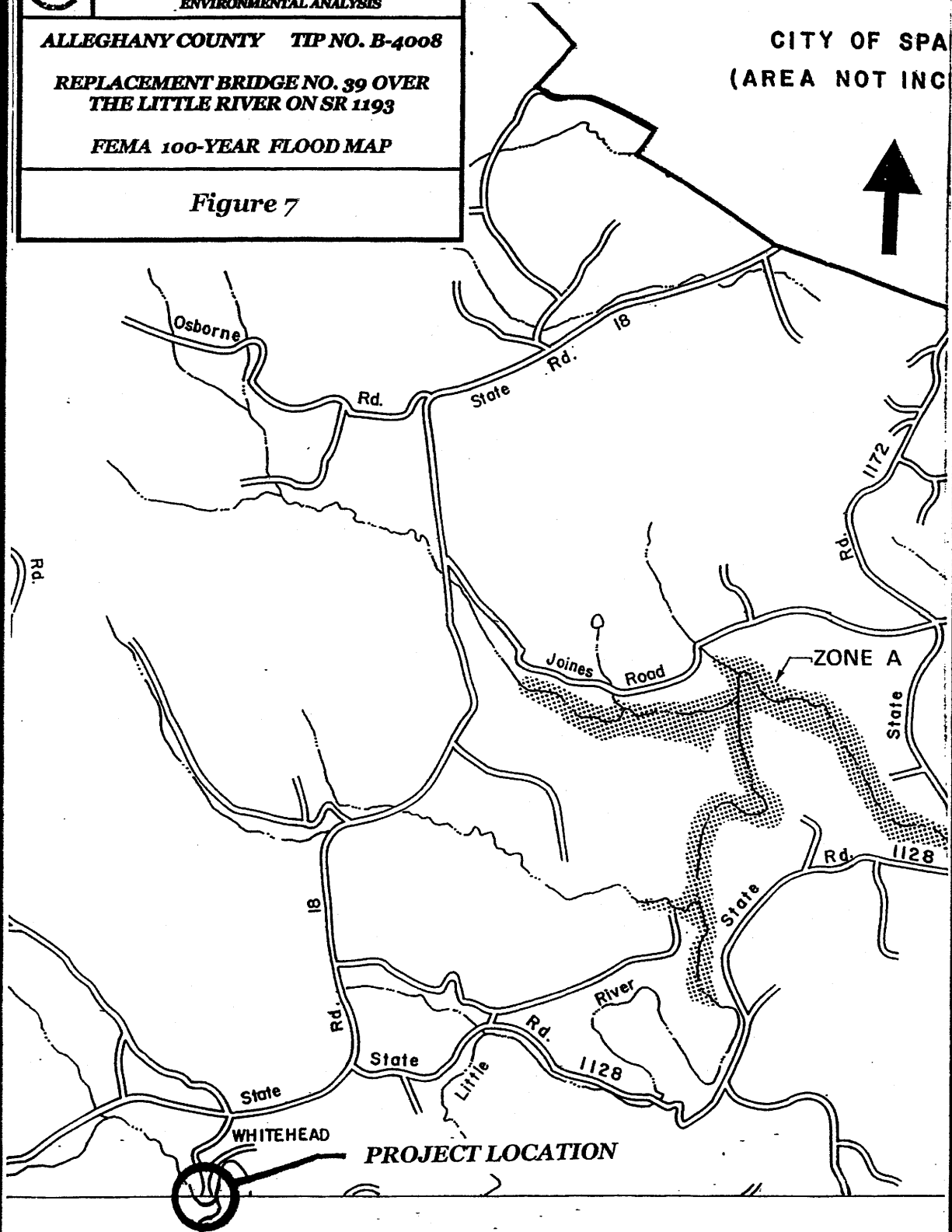
FEMA 100-YEAR FLOOD MAP

Figure 7

APPROXIMATE SCALE IN FEET



CITY OF SPA
(AREA NOT INC



APPENDIX

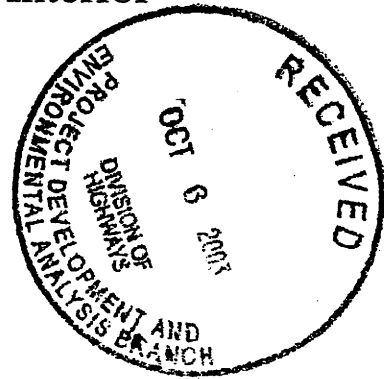


United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

October 3, 2003



Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: Proposed Bridge Replacement Projects in Alexander, Alleghany, Avery, Burke, Caldwell, McDowell, Watauga, and Wilkes Counties, North Carolina

We have reviewed the subject projects and are providing the following comments in accordance with the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e), and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

The information we received for these projects includes brief descriptions of the proposed alternatives, but not the structures that will replace the existing bridges, nor does it include any environmental information regarding the streams or whether habitat assessments or surveys for rare species have been conducted for any of these projects. Therefore, our comments are limited primarily to the known locations of listed species and federal species of concern. When the categorical exclusions are prepared and more information is available regarding environmental effects, we can offer more substantive comments.

Enclosed are species lists from the eight counties included in this package. These lists provide the names of species on the *Federal List of Endangered and Threatened Wildlife and Plants* and federal species of concern. Federal species of concern are not legally protected under the Act and are not subject to any of its provisions, including section 7, unless they are formally proposed or listed as endangered or threatened. We are including these species in our response to give you advance notification and to request your assistance in protecting them if any are found in the vicinity of your projects. Our records indicate the following:

McDowell County - Projects B-4190 (Log No. 4-2-03-449), B-4191 (Log No. 4-2-03-451), and B-4189 (Log No. 4-2-03-452); **Alexander County** - Project B-4005 (Log No. 4-2-03-453); and **Caldwell County** - Project B-4054 (Log No. 4-2-03-454). Our records for these counties and project areas indicate no known locations of listed species in the project areas. However, we recommend conducting habitat assessments and surveying any suitable habitat in the project areas for these species prior to any further planning or on-the-ground activities to ensure that no adverse impacts occur to them.

Avery County - Project B-3608 (Log No. 4-2-03-455) and **Wilkes County** - Project B-4325 (Log No. 4-2-03-456). Our records indicate known locations for the threatened (due to similarity of appearance) bog turtle (*Clemmys muhlenbergii*) near these projects. Habitat assessments and surveys of suitable habitat should be conducted in the project areas for this species. If the bog turtle occurs in the project areas, it should be protected from impacts.

Alleghany County - Project B-4008 (Log No. 4-2-03-457). Our records indicate known locations of the threatened (due to similarity of appearance) bog turtle (*Clemmys muhlenbergii*) and a federal species of concern--gray's lily (*Lillium grayi*)--near this project. Habitat assessments and surveys of suitable habitat should be conducted in the project area for these species. If they occur in the project area, they should be protected from impacts.

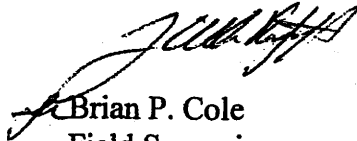
Watauga County - Project B-4315 (Log No. 4-2-03-458). Our records indicate known locations for the green floater mussel (*Lasmigona subviridis*) and Diana fritillary butterfly (*Speyeria diana*) (both of which are federal species of concern) near the project area. Habitat assessments and surveys of suitable habitat should be conducted in the project area for these species. If they occur in the project area, they should be protected from impacts.

Burke County - Project B-4042 (Log. No. 4-2-03-459). Our records indicate known locations of the brook floater mussel (*Alasmidonta varicosa*) (a federal species of concern) near the project area. Habitat assessments and surveys of suitable habitat should be conducted in the project area for this species and other native freshwater mussels. If native freshwater mussels are found to occur in the project area, they should be protected from impacts.

We are interested in the types of structures that will replace these existing bridges and would recommend spanning structures, preferably bridges, in all cases. In addition, off-site detours are preferable to temporary on-site crossings to reduce stream-bank disturbance. We look forward to reviewing the completed categorical exclusion documents.

If you have questions about these comments, please contact Ms. Marella Buncick of our staff at 828/258-3939, Ext. 237. In any future correspondence concerning these projects, please reference our log numbers assigned above to each project with our comments.

Sincerely,



Brian P. Cole
Field Supervisor

Enclosure

cc:

Mr. Steve Lund, U.S. Army Corps of Engineers, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, NC 28801-5006

Ms. Marla J. Chambers, Highway Projects Coordinator, North Carolina Wildlife Resources Commission, 12275 Swift Road, Oakboro, NC 28129

Ms. Cynthia Van Der Wiele, North Carolina Department of Environment and Natural Resources, Division of Water Quality, Wetlands Section, 1621 Mail Service Center, Raleigh, NC 27699-1621

**ENDANGERED, THREATENED, AND CANDIDATE SPECIES AND
FEDERAL SPECIES OF CONCERN, ALEXANDER, ALLEGHANY,
AVERY, BURKE, CALDWELL, McDOWELL, WATAUGA,
AND WILKES COUNTIES, NORTH CAROLINA**

This list was adapted from the North Carolina Natural Heritage Program's County Species List. It is a listing, for Alexander, Alleghany, Avery, Burke, Caldwell, McDowell, Watauga, and Wilkes Counties, of North Carolina's federally listed and proposed endangered, threatened, and candidate species and Federal species of concern (for a complete list of rare species in the state, please contact the North Carolina Natural Heritage Program). The information in this list is compiled from a variety of sources, including field surveys, museums and herbaria, literature, and personal communications. The North Carolina Natural Heritage Program's database is dynamic, with new records being added and old records being revised as new information is received. Please note that this list cannot be considered a definitive record of listed species and Federal species of concern, and it should not be considered a substitute for field surveys.

Critical habitat: Critical habitat is noted, with a description, for the counties where it is designated or proposed.

Aquatic species: Fishes and aquatic invertebrates are noted for counties where they are known to occur. However, projects may have effects on downstream aquatic systems in adjacent counties.

COMMON NAME	SCIENTIFIC NAME	STATUS
ALEXANDER COUNTY		
Vertebrates		
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) ¹
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	FSC*
Vascular Plants		
Torrey's mountain-mint	<i>Pycnanthemum torrei</i>	FSC*
Nonvascular Plants		
Keever's bristle-moss	<i>Orthotrichum keeverae</i>	FSC
ALLEGHANY COUNTY		
Vertebrates		
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) ¹
Hellbender	<i>Cryptobranchus alleganiensis</i>	FSC
Eastern small-footed myotis	<i>Myotis (=subulatus) leibii</i>	FSC
Kanawha minnow	<i>Phenacobius teretulus</i>	FSC
Invertebrates		
Grayson crayfish ostracod	<i>Ascetocythere cosmeta</i>	FSC
Pygmy snaketail	<i>Ophiogomphus howei</i>	FSC
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC
Regal fritillary butterfly	<i>Speyeria idalia</i>	FSC

COMMON NAME	SCIENTIFIC NAME	STATUS
Vascular Plants		
"Fen" sedge	<i>Carex</i> sp. 2	FSC
Cuthbert's turtlehead	<i>Chelone cuthbertii</i>	FSC
Tall larkspur	<i>Delphinium exaltatum</i>	FSC*
Gray's lily	<i>Lilium grayi</i>	FSC
Sweet pinesap	<i>Monotropsis odorata</i>	FSC*
Carolina saxifrage	<i>Saxifraga caroliniana</i>	FSC

Nonvascular Plants		
Keever's bristle-moss	<i>Orthotrichum keeverae</i>	FSC

EVERY COUNTY

Critical Habitat Designation: Spruce-fir moss spider, *Microhexura montivaga* -
Critical habitat designated (see the July 6, 2001, *Federal Register*, 66:35547-35566).

Vertebrates		
Southern Appalachian saw-whet owl	<i>Aegolius acadicus</i>	FSC
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) ¹
Virginia big-eared bat	<i>Corynorhinus townsendii virginianus</i>	Endangered
Hellbender	<i>Cryptobranchus alleganiensis</i>	FSC
Blotched chub	<i>Erimystax insignis</i>	FSC
Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	Endangered
Southern Appalachian red crossbill	<i>Loxia curvirostra</i>	FSC
Southern rock vole	<i>Microtus chrotorrhinus carolinensis</i>	FSC
Eastern small-footed bat	<i>Myotis leibii</i>	FSC
Alleghany woodrat	<i>Neotoma magister</i>	FSC
Southern Appalachian black-capped chickadee	<i>Poecile atricapillus praticus</i>	FSC
Southern water shrew	<i>Sorex palustris punctulatus</i>	FSC
Southern Appalachian yellow-bellied sapsucker	<i>Sphyrapicus varius appalaciensis</i>	FSC
Appalachian cottontail	<i>Sylvilagus obscurus</i>	FSC
Appalachian Bewick's wren	<i>Thryomanes bewickii altus</i>	FSC

Invertebrates		
Grayson crayfish ostracod	<i>Ascetocythere cosmeta</i>	FSC
Spruce-fir moss spider	<i>Microhexura montivaga</i>	Endangered
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC
Regal fritillary butterfly	<i>Speyeria idalia</i>	FSC

Vascular Plants		
Fraser fir	<i>Abies fraseri</i>	FSC
Mountain bittercress	<i>Cardamine clematitidis</i>	FSC
Cuthbert's turtlehead	<i>Chelone cuthbertii</i>	FSC
Tall larkspur	<i>Delphinium exaltatum</i>	FSC*
Bent avens	<i>Geum geniculatum</i>	FSC
Spreading avens	<i>Geum radiatum</i>	Endangered

COMMON NAME	SCIENTIFIC NAME	STATUS
Roan Mountain bluet	<i>Houstonia montana</i>	Endangered
Butternut	<i>Juglans cinerea</i>	FSC
Heller's blazing star	<i>Liatris helleri</i>	Threatened
Gray's lily	<i>Lilium grayi</i>	FSC
Bog bluegrass	<i>Poa paludigena</i>	FSC
Carolina saxifrage	<i>Saxifraga caroliniana</i>	FSC
Blue Ridge goldenrod	<i>Solidago spithamaea</i>	Threatened
Nonvascular Plants		
Rock gnome lichen	<i>Gymmoderma lineare</i>	Endangered
A liverwort	<i>Plagiochila sullivantii</i> var. <i>sullivantii</i>	FSC
A liverwort	<i>Plagiochila virginica</i> var. <i>caroliniana</i>	FSC
A liverwort	<i>Sphenolobopsis pearsonii</i>	FSC

BURKE COUNTY

Critical Habitat Designation: Mountain golden heather, *Hudsonia montana* - The area bounded by the following: on the west by the 2200' contour; on the east by the Linville Gorge Wilderness Boundary north from the intersection of the 2200' contour and the Shortoff Mountain Trail to where it intersects the 3400' contour at "The Chimneys"--then follow the 3400' contour north until it reintersects the Wilderness Boundary--then follow the Wilderness Boundary again northward until it intersects the 3200' contour extending west from its intersection with the Wilderness Boundary until it begins to turn south--at this point the Boundary extends due east until it intersects the 2200' contour.

Vertebrates

Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) ¹
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	FSC
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened (proposed for delisting)
Southern Appalachian woodrat	<i>Neotoma floridana haematorea</i>	FSC
Alleghany woodrat	<i>Neotoma magister</i>	FSC

Invertebrates

Brook floater	<i>Alasmidonta varicosa</i>	FSC
Edmund's snaketail dragonfly	<i>Ophiogomphus edmundo</i>	FSC*
Pygmy snaketail dragonfly	<i>Ophiogomphus howei</i>	FSC
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC

Vascular Plants

Cuthbert's turtlehead	<i>Chelone cuthbertii</i>	FSC
Spreading avens	<i>Geum radiatum</i>	Endangered
Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	Threatened
Mountain golden heather	<i>Hudsonia montana</i>	Threatened
Small whorled pogonia	<i>Isotria medeoloides</i>	Threatened
Butternut	<i>Juglans cinerea</i>	FSC
Heller's blazing star	<i>Liatris helleri</i>	Threatened
Sweet pinesap	<i>Monotropsis odorata</i>	FSC
Carolina saxifrage	<i>Saxifraga caroliniana</i>	FSC

COMMON NAME	SCIENTIFIC NAME	STATUS
Nonvascular Plants		
A liverwort	<i>Cephaloziella obtusilobula</i>	FSC*
A liverwort	<i>Plagiochila sullivanii</i> var. <i>spinigera</i>	FSC
A liverwort	<i>Plagiochila sullivanii</i> var. <i>sullivanii</i>	FSC
A liverwort	<i>Porella wataugensis</i>	FSC*
McDOWELL COUNTY		
Vertebrates		
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) ¹
Olive-sided flycatcher	<i>Contopus borealis</i>	FSC
Cerulean warbler	<i>Dendroica cerulea</i>	FSC
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened (proposed for delisting)
Southern Appalachian woodrat	<i>Neotoma floridana haematoreia</i>	FSC*
Alleghany woodrat	<i>Neotoma magister</i>	FSC
Invertebrates		
Bennett's Mill Cave water slater	<i>Caecidotea carolinensis</i>	FSC
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC
Vascular Plants		
Roan sedge	<i>Carex roanensis</i>	FSC
Cuthbert's turtlehead	<i>Chelone cuthbertii</i>	FSC
Tall larkspur	<i>Delphinium exaltatum</i>	FSC**
Mountain golden heather	<i>Hudsonia montana</i>	Threatened
Rocky shoal spider lily	<i>Hymenocallis coronaria</i>	FSC
Small whorled pogonia	<i>Isotria medeoloides</i>	Threatened
Butternut	<i>Juglans cinerea</i>	FSC
Gray's lily	<i>Lilium grayi</i>	FSC
Sweet pinesap	<i>Monotropis odorata</i>	FSC
Northern oconee-bells	<i>Shortia galacifolia</i> var. <i>brevistyla</i>	FSC
WATAUGA COUNTY		
Critical Habitat Designation: Spruce-fir moss spider, <i>Microhexura montivaga</i> - Critical habitat designated (see the July 6, 2001, <i>Federal Register</i> , 66:35547-35566).		
Vertebrates		
Southern Appalachian saw-whet owl	<i>Aegolius acadicus</i>	FSC
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) ¹
Hellbender	<i>Cryptobranchus alleganiensis</i>	FSC
Cerulean warbler	<i>Dendroica cerulea</i>	FSC
Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	Endangered
Southern Appalachian red crossbill	<i>Loxia curvirostra</i>	FSC
Alleghany woodrat	<i>Neotoma magister</i>	FSC*
Southern Appalachian black-capped chickadee	<i>Poecile atricapillus praticus</i>	FSC
Kanawha minnow	<i>Phenacobius teretulus</i>	FSC
Southern water shrew	<i>Sorex palustris punctulatus</i>	FSC*

COMMON NAME	SCIENTIFIC NAME	STATUS
Southern Appalachian yellow-bellied sapsucker	<i>Sphyrapicus varius appalaciensis</i>	FSC
Appalachian cottontail	<i>Sylvilagus obscurus</i>	FSC*
Invertebrates		
Green floater	<i>Lasmigona subviridis</i>	FSC
Spruce-fir moss spider	<i>Microhexura montivaga</i>	Endangered
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC
Vascular Plants		
Fraser fir	<i>Abies fraseri</i>	FSC
Mountain bittercress	<i>Cardamine clematitis</i>	FSC
Tall larkspur	<i>Delphinium exaltatum</i>	FSC
Glade spurge	<i>Euphorbia purpurea</i>	FSC**
Bent avens	<i>Geum geniculatum</i>	FSC
Spreading avens	<i>Geum radiatum</i>	Endangered
Roan Mountain bluet	<i>Houstonia montana</i>	Endangered
Butternut	<i>Juglans cinerea</i>	FSC
Heller's blazing star	<i>Liatris helleri</i>	Threatened
Gray's lily	<i>Lilium grayi</i>	FSC
Bog bluegrass	<i>Poa paludigena</i>	FSC*
Nonvascular Plants		
A liverwort	<i>Porella wataugensis</i>	FSC*
WILKES COUNTY		
Vertebrates		
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) ¹
Cerulean warbler	<i>Dendroica cerulea</i>	FSC
Invertebrates		
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC
Regal fritillary butterfly	<i>Speyeria idalia</i>	FSC
Vascular Plants		
Butternut	<i>Juglans cinerea</i>	FSC
Torrey's mountain-mint	<i>Pycnanthemum torrei</i>	FSC*
Nonvascular Plants		
Keever's bristle-moss	<i>Orthotrichum keeverae</i>	FSC

KEY:

Status

Endangered

Threatened

Definition

A taxon "in danger of extinction throughout all or a significant portion of its range."

A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."

•FSC

A Federal species of concern--a species that may or may not be listed in the future (formerly C2 candidate species or species under consideration for listing for which there is insufficient information to support listing).

T(S/A)

Threatened due to similarity of appearance (e.g., American alligator)--a species that is threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened and are not subject to Section 7 consultation.

Species with 1, 2, 3, or 4 asterisks behind them indicate historic, obscure, or incidental records.

*Historic record - the species was last observed in the county more than 50 years ago.

**Obscure record - the date and/or location of observation is uncertain.

***Incidental/migrant record - the species was observed outside of its normal range or habitat.

****Historic record - obscure and incidental record.

¹In the November 4, 1997, *Federal Register* (55822-55825), the northern population of the bog turtle (from New York south to Maryland) was listed as T (threatened), and the southern population (from Virginia south to Georgia) was listed as T(S/A) (threatened due to similarity of appearance). The T(S/A) designation bans the collection and interstate and international commercial trade of bog turtles from the southern population. The T(S/A) designation has no effect on land-management activities by private landowners in North Carolina, part of the southern population of the species. In addition to its official status as T(S/A), the U.S. Fish and Wildlife Service considers the southern population of the bog turtle as a Federal species of concern due to habitat loss.

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request	9/25/03
Name Of Project Replacement of Bridge No. 39 on SR 1193		Federal Agency Involved	FHWA-MCDOT
Proposed Land Use Roadway		County And State	Alleghany County, N.C.
PART II (To be completed by SCS)		Date Request Received By SCS	

Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply - do not complete additional parts of this form).		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crops None		Farmable Land In Govt. Jurisdiction Acres: %		Amount Of Farmland As Defined in FPPA Acres: %	
Name Of Land Evaluation System Used		Name Of Local Site Assessment System		Date Land Evaluation Returned By SCS 10/3/03	

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A	Site B	Site C	Site D

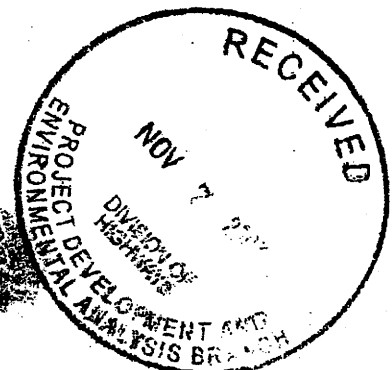
PART IV (To be completed by SCS) Land Evaluation Information				
1. Total Acres Prime And Unique Farmland	0			
2. Total Acres Statewide And Local Important Farmland	0			
3. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0			
4. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	0			

PART V (To be completed by SCS) Land Evaluation Criterion	Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	N/A
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PART VI (To be completed by Federal Agency)		Maximum Points			
Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS		160			
PART VII (To be completed by Federal Agency)					
Native Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or a local assessment)		160			
TOTAL POINTS (Total of above 2 lines)		260			

Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
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Reason For Selection:
 The bridge site and replacement area is not on prime farmland or state or locally important farmland - James Q. Wooten, District Conservationist



☒ North Carolina Wildlife Resources Commission ☒

Charles R. Fullwood, Executive Director

TO: Gregory J. Thorpe, Ph.D., Director
Project Development and Environmental Analysis Branch, NCDOT

FROM: Marla Chambers, Highway Projects Coordinator
Habitat Conservation Program, NCWRC *Marla Chambers*

DATE: November 5, 2003

SUBJECT: Scoping review of NCDOT's proposed bridge replacement projects B-4008, B-3608, B-4054, B-4315, B-4325, B-4189, B-4190, B-4191, B-4042, and B-4005 in Alexander, Alleghany, Avery, Caldwell, Burke, McDowell, Watauga, and Wilkes, Counties.

North Carolina Department of Transportation (NCDOT) has requested comments from the North Carolina Wildlife Resources Commission (NCWRC) regarding impacts to fish and wildlife resources resulting from the subject projects. Staff biologists have reviewed the information provided and have the following preliminary comments. 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).

Our standard recommendations for bridge replacement projects of this scope are as follows:

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.
2. Bridge deck drains should not discharge directly into the stream.
3. Live concrete should not be allowed to contact the water in or entering into the stream.
4. If possible, bridge supports (bents) should not be placed in the stream.

5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. 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'. If possible, when using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.
6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the stream underneath the bridge.
7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.
8. In streams that contain threatened or endangered species, Mr. Hal Bain with the NCDOT - ONE should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.
9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.
10. In areas with significant fisheries for sunfish, seasonal exclusions may also be recommended.
11. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.
12. 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.
13. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.
14. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.
15. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.

16. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

If corrugated metal pipe arches, reinforced concrete pipes, or concrete box culverts are used:

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream end to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, the base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.
2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.
3. Culverts or pipes should be situated along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. Tall fescue should not be used in riparian areas. If the area that is reclaimed

was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be used as wetland mitigation for the subject project or other projects in the watershed.

Project specific comments:

1. B-4005, Alexander Co., Bridge No.70 over Grassy Creek on SR 1331. Grassy Creek is Class C waters. Santee chub (*Cyprinella zanema*), state Significantly Rare (SR), and brook floater (*Alasmidonta varicosa*), Federal Species of Concern (FSC) and state Threatened (T), may be present downstream in the Lower Little River. No special concerns indicated at this time in the project vicinity. Standard requirements should apply.
2. B-4008, Alleghany Co., Bridge No. 39 over Little River on SR 1193. Little River is classified as C Trout and is Hatchery Supported (HS) Designated Public Mountain Trout Waters (DPMTW). The Kanawha minnow (*Phenacobius teretulus*), FSC and state Special Concern (SC); Kanawha darter (*Etheostoma kanawhae*), state SR; tonguetied minnow (*Exoglossum laurae*), state SR; and bog turtle (*Glyptemys muhlenbergii*), state T and federal Threatened due to Similarity of Appearance, may occur in the project area or downstream. A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds. The bridge should be replaced with another spanning structure.
3. B-3608, Avery Co., Bridge No. 44 over North Toe River on US 19E. The North Toe River is classified as WS-III Trout and is HS DPMTW with excellent rainbow and brown trout habitat. The blotched chub (*Erimystax insignis*), FSC and state SR, occurs in the project area. Appalachian elktoe (*Alasmidonta raveneliana*), federal and state Endangered (E), and wavy-rayed lampmussel (*Lampsilis fasciola*), state SC, occur in the North Toe River downstream of Spruce Pine, NC. A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds. The bridge should be replaced with another spanning structure.
4. B-4042, Burke Co., Bridge No. 274 over Canoe Creek on SR 1248. Canoe Creek is Class C water. No special concerns indicated. Standard requirements should apply.
5. B-4054, Caldwell Co., Bridge No. 334 over the Yadkin River on SR 1517 (Whisnant Road). The Yadkin River, although classified as C Trout, supports smallmouth bass in the project area. A moratorium prohibiting in-stream work is recommended from May 1 to July 15 to protect the egg & fry stages of smallmouth bass.
6. B-4189, McDowell Co., Bridge No. 49 over South Muddy Creek on NC 226. South Muddy Creek is Class C waters and is within the Muddy Creek drainage. Sediment and erosion control is a major concern, as a watershed restoration project is under way to reduce negative impacts to downstream resources, particularly in the Catawba River. Downstream of the project area, South Muddy Creek, Muddy Creek and the Catawba River have the WS-IV

classification. Catawba River resources of concern include brown and rainbow trout tailwater fisheries and state listed mussels, the notched rainbow (*Villosa constricta*), state SC, and the creeper (*Strophitus undulatus*), state T, which are present near the mouth of Muddy Creek. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds.

7. B-4190, McDowell Co., Bridge No. 37 over Hoppers Creek on NC 226. Hoppers Creek is Class C waters and is within the Muddy Creek drainage. Sediment and erosion control is a major concern, as a watershed restoration project is under way to reduce negative impacts to downstream resources, particularly in the Catawba River. Downstream of the project area, Hoppers Creek, South Muddy Creek, Muddy Creek and the Catawba River have the WS-IV classification. Catawba River resources of concern include brown and rainbow trout tailwater fisheries and state listed mussels, the notched rainbow (*Villosa constricta*), state SC, and the creeper (*Strophitus undulatus*), state T, which are present near the mouth of Muddy Creek. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds.
8. B-4191, McDowell Co., Bridge No. 82 over Jacktown Creek on NC 226. Jacktown Creek is Class C waters and is within the Muddy Creek drainage. Sediment and erosion control is a major concern, as a watershed restoration project is under way to reduce negative impacts to downstream resources, particularly in the Catawba River. Downstream of the project area, North Muddy Creek, Muddy Creek and the Catawba River have the WS-IV classification. Catawba River resources of concern include brown and rainbow trout tailwater fisheries and state listed mussels, the notched rainbow (*Villosa constricta*), state SC, and the creeper (*Strophitus undulatus*), state T, which are present near the mouth of Muddy Creek. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds.
9. B-4315, Watauga Co., Bridge No. 62 over Bairds Creek on NC 194. Bairds Creek is Class C waters and flows into the Watauga River, classified as B Trout HQW, not far from the project site. Trout may occur in the project area. The green floater (*Lasmigona subviridis*), FSC and state E, is present in the Watauga River downstream of the project. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds.
10. B-4325, Wilkes Co., Bridge No. 718 over Middle Fork Reddies River on SR 1580. Middle Fork Reddies River is classified WS-II Trout and is HS DPMTW from the project site upstream. Both trout and smallmouth bass are present. At this time, a moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is anticipated from October 15 to April 15 to protect the egg and fry stages of trout. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds. The bridge should be replaced with another spanning structure.

We request that NCDOT routinely minimize adverse impacts to fish and wildlife resources in the vicinity of bridge replacements. The NCDOT should install and maintain sedimentation control measures throughout the life of the project and prevent wet concrete from contacting water in or entering into these streams. Replacement of bridges with spanning structures of some type, as opposed to pipe or box culverts, is recommended in most cases.

Bridge Scopings: Alexander, Alleghany, Avery, 6
Burke, Caldwell, McDowell, Watauga, Wilkes Co.'s

November 5, 2003

Spanning structures allow wildlife passage along streambanks, reducing habitat fragmentation and vehicle related mortality at highway crossings.

If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (704) 485-2384. Thank you for the opportunity to review and comment on these projects.

cc: Cynthia Van Der Wiele, NC DWQ
Marella Buncick, USFWS
Sarah McRae, NC NHP



North Carolina Department of Environment and Natural Resources
Division of Parks and Recreation

Michael F. Easley, Governor

William G. Ross, Jr., Secretary

Dr. Philip K. McKnelly, Director

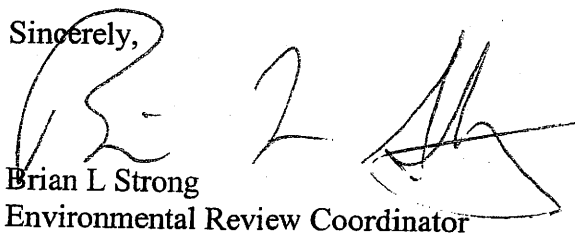
July 24, 2003

Gail F. Kogut
M A Engineering
598 E. Chatham Street, Suite 137
Cary, NC 27511

Dear Ms. Kogut:

I am responding to your letter dated July 15, 2003, regarding NCDOT Bridge Replacement Project, TIP No. B-4008, Alleghany County. The North Carolina Division of Parks and Recreation has prepared a Park Expansion Plan that includes several bog sites in Alleghany County. One of these sites is located next to the proposed bridge construction project. These sites, if purchased, will most likely be preserved as natural areas with limited activities such as wildlife viewing. The expected date for possible purchase of this area would be 5-7 years. No funding has been appropriated for the project. If you have further questions regarding this issue please contact me at (919) 715-8711.

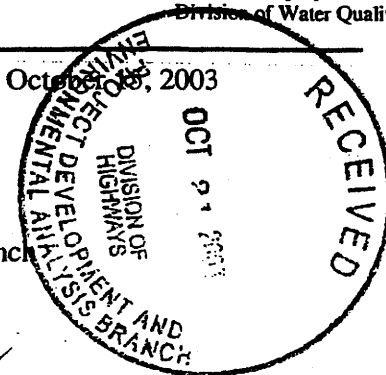
Sincerely,


Brian L Strong
Environmental Review Coordinator

AUG 4 2003



October 21, 2003



MEMORANDUM

TO: Gregory J. Thorpe, PhD, Director
NCDOT Project Development and Environmental Analysis Branch

FROM: Robert Ridings, Env. Tech., DWQ 401 Unit *R. Ridings*

THROUGH: John R. Dorney, Supervisor, DWQ 401 Unit *J. Dorney*

SUBJECT: Scoping Review of NCDOT's proposed bridge replacement projects: B-4008, B-3608, B-4054, B-4315, B-4325, B-4190, B-4189, B-4191, B-4042, and B-4005.

In reply to your correspondence dated August 18, 2003 (received August 28, 2003) to Cynthia Van der Wiele, in which you requested comments for the referenced projects, the NC Division of Water Quality has the following comments:

1. General Comments Regarding Bridge Replacement Projects

1. If corrugated metal pipe arches, reinforced concrete pipes, or concrete box culverts are used to replace the bridge, then DWQ recommends the use of Nationwide Permit No. 14 rather than Nationwide Permit 23.
2. Bridge demolition should be performed using Best Management Practices developed by NCDOT.
3. DWQ prefers spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.
4. Bridge deck drains should not discharge directly into the stream; stormwater should be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to NCDOT Best Management Practices for the Protection of Surface Waters
5. Live concrete should not be allowed to contact the water in or entering into the stream. Concrete is mostly made up of lime (calcium carbonate) and when in a dry or wet state (not hardened) calcium carbonate is very soluble in water and has a pH of approximately 12. In an unhardened state concrete or cement will change the pH of fresh water to very basic and will cause fish and other macroinvertebrate kills.
6. If possible, bridge supports (bents) should not be placed in the stream.
7. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. 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'. If possible, when using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to re-vegetate naturally and minimizes disturbed soil.



8. A clear bank (rip rap-free) area of at least 10 feet should remain on each side of the stream underneath the bridge.
9. Sedimentation and erosion control measures sufficient to protect water resources must be implemented prior to any ground disturbing activities. Structures should be *maintained regularly*, especially following rainfall events.
10. Bare soil should be stabilized through vegetation or other means as quickly as feasible to prevent sedimentation of water resources.
11. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.
12. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

II. General Comments if Replacing the Bridge with a Culvert

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream end to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, the base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.
2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.
3. Culverts or pipes should be situated along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. Tall fescue should not be used in riparian areas. If the area that is reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be used as wetland mitigation for the subject project or other projects in the watershed.

III. Project-Specific Comments

B-4008, Bridge 39, Little River, Alleghany County

The Little River is classified as C Trout. A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout. DWQ would prefer this bridge to be replaced with a bridge and the use of BMPs (particularly for sediment and erosion control) to be maximized.

B-3608, Bridge 44, North Toe River, Avery County

The North Toe River is classified as WS-IV Trout. A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout. DWQ would prefer this bridge to be replaced with a bridge and the use of BMPs (particularly for sediment and erosion control) to be maximized. There are 30-foot vegetated buffer requirements in WS waters in addition to the requirements to minimize storm water runoff and maximize use of BMPs. Refer to 15A NCAC 2B .0216(3)(b)(i)(F) and (G).

B-4054, Bridge 334, Yadkin River, Caldwell County

This part of the Yadkin River is classified as WS-IV Trout. A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout. DWQ would prefer this bridge to be replaced with a bridge and the use of BMPs (particularly for sediment and erosion control) to be maximized. There are 30-foot vegetated buffer requirements in WS waters in addition to the requirements to minimize storm water runoff and maximize use of BMPs. Refer to 15A NCAC 2B .0216(3)(b)(i)(F) and (G).

B-4315, Bridge 62, Bairds Creek, Watauga County

Bairds Creek is classified as C. DWQ does not have any special concerns. Please refer to general recommendations listed above.

B-4325, Bridge 718, Middle Fork Reddies River, Wilkes County

The Middle Fork of Reddies River is classified as WS-II, HQW, Trout. As this is a High Quality Water classification, DWQ would hope that a spanning structure is planned for this crossing. In addition, we would stress that NCDOT should use the highest possible BMPs for protecting this resource. There are 30-foot vegetated buffer requirements in WS waters in addition to the requirements to minimize storm water runoff and maximize use of BMPs. Refer to 15A NCAC 2B .0216(3)(b)(i)(F) and (G). A moratorium prohibiting in-stream work and land disturbance within the 25-foot trout buffer is recommended from October 15 to April 15 to protect the egg and fry stages of trout. DWQ would prefer this bridge to be replaced with a bridge and the use of BMPs (particularly for sediment and erosion control) to be maximized.

B-4190, Bridge 37, Hopper Creek, McDowell County

Hopper Creek is classified as C. DWQ does not have any special concerns. Please refer to general recommendations listed above.

B-4189, Bridge 49, South Muddy Creek, McDowell County

South Muddy Creek is classified as C. DWQ does not have any special concerns. Please refer to general recommendations listed above.

B-4191, Bridge 82, Jacktown Creek, McDowell County

Jacktown Creek is classified as C. DWQ does not have any special concerns. Please refer to general recommendations listed above.

B-4042, Bridge 274, Canoe Creek, Burke County

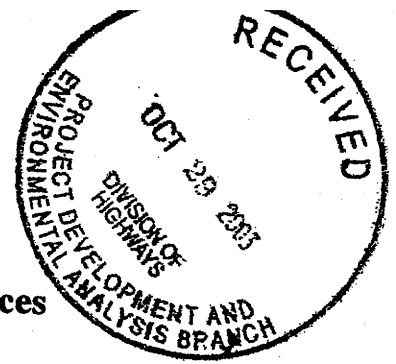
Canoe Creek is classified as WS-IV. There are 30-foot vegetated buffer requirements in WS waters in addition to the requirements to minimize storm water runoff and maximize use of BMPs. Refer to 15A NCAC 2B .0216(3)(b)(i)(F) and (G).

B-4005, Bridge 70, Grassy Creek, Alexander County

Grassy Creek is classified as C. DWQ does not have any special concerns. Please refer to general recommendations listed above.

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 Robert Ridings at (919) 733-9817 or Cynthia Van Der Wiele at (919) 733.5715.

pc: John Hendrix, USACE Asheville Field Office
File Copy



North Carolina Department of Cultural Resources
State Historic Preservation Office

David L. S. Brook, Administrator

Division of Historical Resources

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary
Office of Archives and History

October 22, 2003

MEMORANDUM

TO: Greg Thorpe, Ph.D., Director
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: David Brook *David Brook*

SUBJECT: Replace Bridge No. 39 on SR 1193 over Little River, B-4008, Alleghany County, ER03-2339

Thank you for your memorandum of August 18, 2003, concerning the above project.

We have conducted a search of our maps and files and located the following structure of historical or architectural importance within the general area of this project:

Whitehead Mill (AL-34) surveyed property.

We recommend that a Department of Transportation architectural historian identify and evaluate any structures over fifty years of age within the project area, and report the findings to us.

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

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, 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: Mary Pope Furr, NCDOT

www.hpo.dcr.state.nc.us

	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	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-6547 • 715-4801
SURVEY & PLANNING	515 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-6545 • 715-4801

CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES

Project Description: Replace Bridge #39 on Pine Swamp Road over the Little River.

On May 3, 2004, representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other

Reviewed the subject project at

- Scoping meeting
- Historic architectural resources photograph review session/consultation
- Other

All parties present agreed

- There are no properties over fifty years old within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are properties over fifty years old within the project's Area of Potential Effects (APE), but based on the historical information available and the photographs of each property, the properties identified as # 3 Whitehead Mill, # 4 house, # 2 house on the road are considered not eligible for the National Register and no further evaluation is necessary.
- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- All properties greater than 50 years of age located in the APE have been considered at this consultation, and based upon the above concurrence, all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.
- There are no historic properties affected by this project. (Attach any notes or documents as needed)

Signed:

Jennifer Cathy
Representative, NCDOT

5/3/04
Date

[Signature]
FHWA, for the Division Administrator, or other Federal Agency

5/3/04
Date

[Signature]
Representative, HPO

5/3/04
Date

[Signature]
State Historic Preservation Office

5/3/04
Date

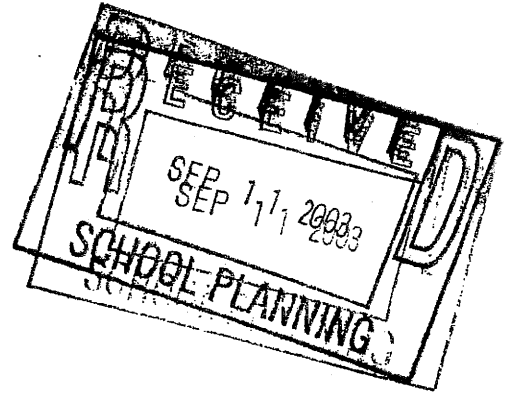
ALLEGHANY COUNTY SCHOOLS

Board of Education
Charles Joines, Chairperson
Steve Carpenter, Vice Chairperson
Sonia Joines
Clarence Crouse
Betsy Dillion

Duane J. Davis, Superintendent

September 5, 2003

J. David Edwards, Ed.D.
Section Chief, School Planning
Department of Public Instruction
Division of School Support
6322 Mail Service Center
Raleigh, NC 27699-6322



Dear Mr. Edwards:

In reply to your letter, Alleghany County Schools will need to reroute two buses that may be traversing Bridge #39 where SR 1193 crosses over the Little River. Our Transportation Director has studied the routes and has developed a bus reroute plan that will allow the bridge to be replaced without interrupting student opportunity to attend school.

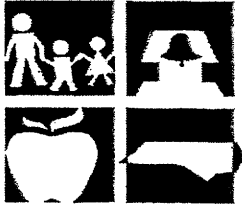
Alleghany County Schools' only request is that we receive advanced warning at least two months prior to the bridge closing.

Thank you for working with Alleghany County Schools to make the identified bridge replacement go as smoothly as possible.

Sincerely,

Duane J. Davis
Superintendent

Excellence in Education



Public Schools of North Carolina

NC Department of Public Instruction
School Planning, Division of School Support
6322 Mail Service Center
Raleigh, NC 27699-6322

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Www.schoolclearinghouse.org

September 11, 2003

MEMORANDUM

TO: Gregory J. Thorpe, P.E.
Department of Transportation

FROM: David Edwards, Section Chief, School Planning *de*

SUBJECT: Alleghany County, Bridge #39 on SR 1193 over Little River, Federal Aid Project No. BRZ-1193(6), State Project No. 8.2700601, TIP Project No. B-4008-4315

Enclosed is a response from Alleghany County Schools in regard to the Bridge Replacement Inquiry.

/ed
Enclosure