Montgomery County
SR 1310
Bridge No. 133 over Dumas Creek
Federal-Aid Project No. BRZ-1310(3)
State Project No. 8.2550601
T.I.P. No. B-4205

Categorical Exclusion
US Department of Transportation
Federal Highway Administration
and
NC Department of Transportation
Division of Highways

May 2003

Document Prepared by

Wilbur Smith Associates, Inc.

David L. Wilver, P.E.
Project Manager

for the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

L. Gail Grimes, P.E.
Assistant Branch Manager

John M. Penney, P.E.
Project Planning Engineer

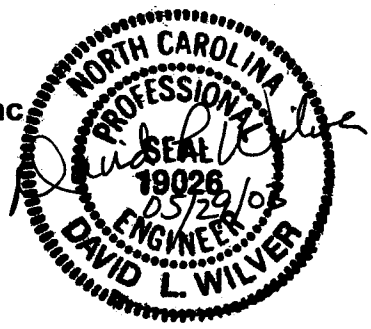
Montgomery County
SR 1310
Bridge No. 133 over Dumas Creek
Federal-Aid Project No. BRZ-1310(3)
State Project No. 8.2550601
T.I.P. No. B-4205

Categorical Exclusion
US Department of Transportation
Federal Highway Administration
and
NC Department of Transportation
Division of Highways

May 2003

Document Prepared by

Wilbur Smith Associates, Inc.



David L. Wilver, P.E.
Project Manager

for the
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

L. Gail Grimes, P.E.
Assistant Branch Manager

John M. Penney, P.E.
Project Planning Engineer

PROJECT COMMITMENTS

Montgomery County
SR 1310
Bridge No. 133 Over Dumas Creek;
Federal Aid Project No.: BRZ-1310(3)
State Project No.: 8.2550601
TIP No.: B-4205

In addition to the standard Nationwide Permit #33 and #23 Conditions, the General Nationwide Permit Conditions, Section 404 Individual Permit (IP) Special Conditions, Section 401 Water Quality Certification (WQC) Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for 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:

Commitments Developed Through Project Development and Design

All commitments developed during the project development and design phase have been incorporated into the design and were standard commitments. Current status, changes, or additions to the project commitments as shown in the environmental document for the project are printed in *italic* font.

PDEA
A systematic survey of all potentially suitable habitat for Schweinitz's sunflower was conducted by Environmental Services, Inc. biologists in July 2001. Since this survey was done outside of the flowering season for Schweinitz's sunflower, a re-survey will be conducted in the fall of 2004, during the flowering season, within the project limits to determine if any member of the species is present.

This commitment will be implemented prior to construction of the project.

Design Services/Roadside Environmental/Division 8 Construction
Project B-4205 in Montgomery County shall comply with the requirements for High Quality Waters with regards to stormwater management, sedimentation and erosion control and buffer requirements.

These standards will be used during design and will be implemented during construction of the project.

Design Services/Roadside Environmental/Division 8 Construction
Ensure that sediment and erosion control measures are not placed in wetlands.

This standard will be implemented during construction to the best ability of the Department in coordination with existing standards and laws.

Design Services/Roadside Environmental/Division 8 Construction
Due to the classification of Dumas and Bishop Creeks as High Quality Waters, NCDOT will adhere to the BMPs for "Protection of Surface Waters and Sedimentation Control Guidelines in Sensitive Watersheds" for the replacement of Bridge No. 133 in Montgomery County.

These standards will be used during design and will be implemented during construction of the project.

PROJECT COMMITMENTS

Design Services/ Division 8 Construction
Borrow/waste areas should avoid wetlands to the maximum extent practicable. Prior to the approval of any borrow/waste site in a wetland, the contractor must obtain all necessary permits.

This standard will be used during design and will be implemented during construction of the project.

Design Services/ Division 8 Construction
The Montgomery County 911 Director shall be notified a minimum of two (2) months (60 days) prior to road closure. This is to allow sufficient time for all affected emergency response agencies within the county to develop alternate routing contingency plans.

This commitment will be included in the bid packets and will be implemented prior to construction of the project.

Division 8 Construction
Disturbance of the stream channels must be limited to only what is necessary to perform the bridge demolition/removal and construction of the replacement structure and what is permitted. Heavy equipment must be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into the stream.

This environmental commitment will be implemented during construction of the project.

Division 8 Construction
All work shall be preformed during low flow conditions

This environmental commitment will be implemented during construction of the project.

Montgomery County
SR 1310
Bridge No. 133 over Dumas Creek
Federal-Aid Project No. BRZ-1310(3)
State Project No. 8.2550601
T.I.P. No. B-4205

Bridge No. 133 is included in the Draft 2004-2010 North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and in the Federal-Aid Bridge Replacement Program. The location of this bridge is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion."

I. PURPOSE AND NEED

NCDOT Bridge Maintenance Unit records indicated that Bridge No. 133 has a sufficiency rating of 18.6 out of a possible 100 for a new structure. The Bridge is considered functionally obsolete and structurally deficient.

Replacement of this inadequate structure will result in safer and more efficient traffic operations.

II. EXISTING CONDITIONS

This project involves the replacement of Bridge No. 133 on SR 1310 over Dumas Creek in Montgomery County (see Figure 1). Dumas Creek is in the Yadkin - Pee Dee River Basin. The area of the drainage basin for the creek at the subject location is 13.1 square miles (3392.9 hectares).

Existing Bridge No. 133 consists of four spans of approximately 17 feet (5.2 meters (m)) each with a total length of 68 feet (20.8 m). The bed to crown height is 16.5 feet (5.0 m) and the normal depth of flow is 1.4 feet (0.4 m). Construction consists of timber deck spans on steel I-Beams, concrete piers on concrete footings and timber abutments. Existing Bridge No. 133 is a narrow bridge with approximately 16 feet (4.9 m) of travel lane and a total of 17.2 feet (5.2 m) clear roadway width. The existing bridge is in a horizontal tangent and is skewed 90 degrees to the roadway. Vertical grade on the bridge is sloped slightly from west to east. The grade of the west approach falls toward the bridge with the sag located on the east approach approximately 5 feet (1.5 m) from the bridge. Both approaches are in sharp horizontal curves with poor sight distances (See Figure 3). There are no utilities attached to the bridge. An overhead utility line runs parallel to the downstream side of the bridge.

According to NCDOT's Bridge Maintenance Unit floodwater reached the low steel of the bridge during Hurricane Fran. A local resident who has lived near the bridge for approximately 30 years, Mr. Lowell Russell, reported that the water had overtopped the road once in 1977. The elevation of the storm was approximately 4 feet (1.2 m) over the bridge deck. There was no debris accumulation observed. There appeared to be minor scour around the footings. Bridge scour information for the existing bridge is not available, as it has not been assessed due to insufficient substructure data. The channel banks appear to be stable with trees and small bushes. There were no wetlands observed at the bridge site. There are no structures or utilities observed in the floodplain.

The 2001 average daily traffic volume is 400 vehicles per day (vpd). The projected traffic volume is expected to increase to 600 vpd by the year 2025.

One accident was reported in the vicinity of the bridge during the period from January 1, 1997 to December 31, 1999. Currently four (4) school buses (two (2) in AM and two (2) in PM) use this bridge daily.

III. ALTERNATIVES

A. Project Description

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 133 on SR 1310 over Dumas Creek in Montgomery County. The project study area is located approximately 1.5 miles (mi) (2.4 kilometers (km)) north of Troy, (Figure 1). The proposed replacement structure is a bridge approximately 100 feet (30 m) long which is based on a preliminary hydraulic analysis in conjunction with a field reconnaissance of the site. The minimum deck grade will be 0.3%. Deck drainage will not discharge directly into Dumas Creek. Any other use of deck drains will be determined during permitting. The length of the proposed bridge and the recommended roadway elevation may be adjusted (increased or decreased) to accommodate peak flow as determined in the final hydrologic study and hydraulic design.

The new structure will be designed such that the elevation upstream of the roadway is not encroached upon by the existing 100-year storm. The proposed replacement for Bridge No. 133 will be structure similar in waterway opening size, therefore, it is not anticipated that it will have any significant adverse impact on the existing floodplain and floodway.

B. Build Alternative (Figure 2)

The recommended alternative for replacing Bridge No. 133 is described below.

Alternative 3 (Preferred) includes replacement of the existing 68 ft (21 m) narrow structure with a new structure in the same location as the existing structure (See Figure 2). The proposed structure will consist of two 10 foot travel lanes and two 3 foot shoulders for a total clear roadway width of 26 feet (7.9 m). The new structure will be approximately 100 ft (31 m) in length and 29 ft (8.8 m) wide. The approach work will extend from approximately 300 ft (91 m) north to approximately 400 ft (122 m) south of the existing structure. Approach work includes widening traffic lanes, minor realignment, and grade alterations. The total project length is approximately 800 ft (244 m). Traffic will be maintained with an off-site detour on existing roads. The recommended detour is approximately eight (8) miles (12.9 kilometers (km)) long (See Figure 5). The detoured traffic will be routed from SR 1310 to SR 1317 to SR 1318 to SR 1329 and back to SR 1310 or conversely. NCDOT Division 8 staff and the Montgomery County 911 Director have reviewed and concurred with the proposed recommended off-site detour.

C. Alternatives Eliminated From Further Study

Alternative 1 includes replacement of the existing 68 feet (ft) (21 meter (m)) structure with a new structure located approximately 10 ft (3 m) downstream of the existing structure. The new structure will be approximately 100 ft (31 m) in length. The approach work will extend from approximately 500 ft (152 m) north to approximately 300 ft (91 m) south of the existing structure. Approach work includes widening traffic lanes, minor realignment, and grade alterations. Traffic will be maintained on the existing structure during construction. The total project length is approximately 900 ft (274 m).

Alternative 2 includes replacement of the existing 68 ft (21 m) structure with a new structure located approximately 10 ft (3 m) upstream of the existing structure. The new structure will be approximately 100 ft (31 m) in length. The approach work will extend from approximately 300 ft (91 m) north to approximately 400 ft (122 m) south of the existing structure. Approach work includes widening traffic lanes, minor realignment, and grade alterations. Traffic will be maintained on the existing structure during construction. The total project length is approximately 800 ft (244 m).

No Action Alternative The "do-nothing" alternative would eventually necessitate removal of the bridge effectively removing SR 1968 from traffic service. Investigation of the existing structure by the Bridge Maintenance Unit indicates the rehabilitation of the old bridge is not feasible due to its age and deteriorated condition.

D. Preferred Alternative

Alternative 3, is the preferred alternative. It proposes to replace the existing structure with a new bridge in the same location as the existing structure. Based on similar environmental (vegetation communities, wetland and stream) impacts, lower estimated costs and input from the Montgomery County 911 Director Alternative 3 was selected as

the preferred alternative. NCDOT Division 8 staff and the Montgomery County 911 Director, see attached letter, concurs with the preferred alternative and off-site detour.

IV. ESTIMTED COST

Table 1: Estimated Cost

	Alternate 1	Alternate 2	Alternate 3 (Preferred)
Structural Removal (Existing)	$9,800	$9,800	$9,800
Structural (Proposed)	$195,000	$195,000	$195,000
Detour and Approaches	$0	$0	$0
Roadway Approaches	$340,572	$350,244	$180,940
Miscellaneous and Mobilization	$183,978	$188,306	$114,260
Engineering and Contingencies	$120,650	$106,650	$75,000
ROW/Const. Easement/Utilities	$31,100	$31,400	$35,800
Total Project Cost	$881,100	$881,400	$610,800

V. NATURAL RESOURCES

A. Methodology

The purpose of this study is to provide an evaluation of natural resources in the project study area. Specifically, the tasks performed for this study include: 1) a delineation of jurisdictional wetlands and/or surface waters and preparation of a map depicting the jurisdictional areas based on Global Positioning System (GPS) data, 2) an assessment of natural resource features within the project study area including descriptions of vegetation, wildlife, protected species, streams, wetlands, and water quality; 3)evaluation of probable impacts resulting from construction and alternatives; and 4) a preliminary determination of permit needs.

The project study area is located on SR 1310 over Dumas Creek in Montgomery County, North Carolina (Figure 1). The bridge is located approximately one and a half (1.5) mile (2.4 km) south of the intersection SR 1316 and SR 1310. The project study area comprises an area approximately 2000 ft (610 m) in length centered on the existing bridge and 400 ft (122 m) in width centered on the centerline of SR 1310. The project study area consists of mesic mixed hardwood forest, successional forest, agricultural land, and maintained/disturbed land. The Uwharrie National Forest occupies the project study area west of SR 1310.

Materials and research data in support of this investigation have been derived from a number of sources including applicable United States Geological Survey (USGS) 7.5-minute quadrangle topographic mapping (Frog Pond, NC) (USGS 1981), U.S. Fish and Wildlife Service (FWS) National Wetlands Inventory mapping, the *Soil Survey of Stanly County, North Carolina* (United States Department of Agriculture 1989) as prepared by

the Natural Resources Conservation Service (NRCS), and recent aerial photography (scale 1:1200) furnished by Wilbur Smith Associates.

Jurisdictional wetlands were identified using the three parameter approach (hydrophytic vegetation, hydric soils, wetland hydrology) following U.S. Army Corps of Engineers (COE) delineation guidelines (DOA 1987). Jurisdictional areas were characterized according to a classification scheme established by Cowardin *et al.* (1979). Jurisdictional surface waters (*i.e.*, streams) were delineated pursuant to current COE and North Carolina Division of Water Quality (DWQ) protocol. All jurisdictional areas were mapped using Trimble™ GPS units and the collected data was differentially corrected and plotted in order to produce working maps and site plans (Figure 2).

Water quality information for area streams and tributaries was obtained from the *Yadkin-Pee Dee Basinwide North Carolina Department of Environment and Natural Resources (DENR) Water Quality Management Plan* (1998), and the North Carolina Division of Water Quality (DWQ). Quantitative sampling was not undertaken to support existing data. Benthic macroinvertebrates were collected using current DWQ protocol. Fish populations are typically sampled using a Smith-Root Inc., back-mounted electro-shocker. Fisheries sampling is conducted by ESI under North Carolina Wildlife Resources Commission (NCWRC) Permit # 0616.

Additional resources utilized for this natural systems investigation include the most recent list (March 7, 2002) of threatened and endangered species by county published by FWS. Records kept by the North Carolina Natural Heritage Program (NHP) were reviewed on June 4, 2001 and periodically updated to determine if there are any documented cases of listed species occurring within the project study area or within a three (3) mile (4.8 km) radius of the project study area (most recent update February 25, 2002). When appropriate, plant community descriptions were based on a classification system utilized by NHP and developed by Schafale and Weakley (1990). Community classifications were modified to better reflect field observations when community characteristics did not fit a Schafale and Weakley community type. Vascular plant names generally follow nomenclature found in Radford *et al.* (1968). Habitat used by terrestrial wildlife and aquatic organisms, as well as expected population distributions, were determined through field observations, evaluation of available habitat, and supportive documentation (Martof *et al.* 1980, Webster *et al.* 1985, Menhinick 1991, Hamel 1992, Rohde *et al.* 1994, Palmer and Braswell 1995).

B. Physiography and Soils

The project study area is located in the Piedmont physiographic province. The topography in the project study area is generally characterized as nearly level to gently sloping. Elevations in the project study area range from 450 ft to 500 ft (137 m to 152 m) above mean sea level (USGS 1994).

At the time of this report, Montgomery County had not yet published a soil survey and preliminary mapping is incomplete. Therefore, there is no data on the soil types in the project study area currently available.

C. Water Resources

1. Waters Impacted

The project study area is located within sub-basin 03-07-15 of the Yadkin-Pee Dee River Basin (DENR 1998) and is part of USGS hydrologic unit 03040103 (USGS 1974). Three stream channels are located in the project study area, Dumas Creek, an unnamed tributary to Dumas Creek, and Bishop Creek.

Dumas Creek originates in the Uwharrie National Forest approximately one and three tenths (1.3) mi (2.0 km) north of SR 1314 and flows in a southerly direction through the project study area to its confluence with Densons Creek, approximately two (2) mi (3.2 km) north of Troy, North Carolina. Dumas Creek, from its source to Densons Creek, has been assigned Stream Index Number (SIN) 13-25-20-8 by the DWQ (DENR 2002a). The unnamed tributary to Dumas Creek (UT 1) originates in the southeastern portion of the project study area and flows to the north to its confluence with Dumas Creek downstream of the existing bridge. UT 1 has not been designated a separate SIN. Bishop Creek originates approximately two (2) mi (3.2 km) southwest of NC 109 and flows in a northeast direction into Dumas Creek 100 ft (31 m) west (upstream) of the existing bridge. Bishop Creek, from its source to Dumas Creek, has been assigned SIN of 13-25-20-8-1 by the DWQ (DENR 2002a).

2. Water Resource Characteristic

A Best Usage Classification is assigned to waters of the State of North Carolina based on the existing or contemplated best usage of various streams or segments of streams in the basin. Dumas Creek and Bishop Creek have each been assigned a Best Usage Classification of **C HQW** (DEM 1993, DENR 2002a). The **C** designation indicates waters that support aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. Secondary recreation is any activity involving human body contact with water on an infrequent or incidental basis. The **HQW** designation indicates High Quality Waters, which are rated as excellent, based on biological and physical/chemical characteristics through division monitoring or special studies. UT 1 has not been assigned a separate Best Usage Classification and therefore it shares the Best Usage Classification of its receiving water, **C HQW.**

HQW's are located in the project study area; however, no Outstanding Resource Waters (**ORW**), **WS-I**, or **WS-II** Waters occur within three (3) mi (4.8 km) upstream or downstream of the project study area (DEM 1993, DENR 2002a). Neither Dumas

Creek, UT 1, nor Bishop Creek are designated as a North Carolina Natural and Scenic River, or as a national Wild and Scenic River.

The National Pollutant Discharge Elimination System (NPDES) regulates permits for projects involving the construction, alteration, and/or operation of any sewer system, treatment works or disposal system and certain stormwater runoff which would result in a discharge into surface waters (DPA 1991). There are no permitted point source dischargers located on Dumas Creek, Bishop Creek or their tributaries (DENR 2002b).

The Benthic Macroinvertebrate Ambient Network (BMAN) addresses long-term trends in water quality at monitoring sites by sampling for selected benthic macroinvertebrates (DEM 1989). This program has been replaced by the benthic macroinvertebrate monitoring program associated with the basinwide assessment for the Yadkin-Pee Dee River Basin (DENR 1998). DWQ assigns bioclassifications to streams and portions of streams based on species richness and overall biomass, which are considered reflections of water quality. The closest benthic monitoring station is on Densons Creek one and a half (1.5) mi (2.4 km) downstream from the project study area. This monitoring station is located at the conjunction of NC 134 and Densons Creek and received a bioclassification of Excellent in 1989 (DENR 1998, DENR 2002c).

Another measure of water quality being used by the DWQ is the North Carolina Index of Biotic Integrity (NCIBI), which assesses biological integrity using the structure and health of the fish community. Neither Dumas Creek, UT 1, nor Bishop Creek have been sampled to determine a NCIBI score as of the most recent basinwide assessment report (DENR 1998).

3. Potential Impacts to Water Resources

Dumas Creek is not designated as a Trout Water or an Anadromous Fish Spawning Area. There are no federally Threatened and Endangered species documented within three (3) mi (4.8 km) upstream or downstream of the project study area. However, **HQW**'s are located within the project study area. Due to the presence of HQW's this project is classified as a Case 1 by the Best management Practices (BMPs) for Bridge Demolition and Removal (NCDOT 1999). Case 1 bridge replacements limit in-water work to an absolute minimum, except for the removal of the portion of the substructure below the water. All work must be carefully coordinated with the responsible agency to protect the special resource water. All practical alternatives of removal which avoid dropping bridge components into the stream channel must be considered. If the removal contractor can demonstrate to the NCDOT Resident Engineer and the COE that there is no feasible avoidance

measure, then bridge components may be dropped into the stream, following guidelines to be set forth by the state. Based on the above referenced procedures associated with this classification no further agency coordination will be required.

4. Impacts Related to Bridge Demolition and Removal

Section 402-2 of NCDOT's Standard Specifications for Roads and Structures is labeled **Removal of Existing Structure**. This section outlines restrictions and Best Management Practices for Bridge Demolition and Removal (BMP-BDRs), as well as guidelines for calculating maximum potential fill in the creek resulting from demolition.

The superstructure consists of timber deck on I-beams. These components are slated for removal in a manner which will avoid dropping any components into Dumas Creek. Since there is no reinforced concrete in the superstructure there is no potential for temporary fill during demolition.

The substructure includes two rubble masonry (concrete) interior bents and one timber post and sill bent located within the stream channel. Although these components are slated for removal in a manner which will avoid dropping any component into Dumas Creek, the potential exists for temporary fill of up to 50 cubic yards (38 cubic meters).

Bridge components are slated for removal in a manner which will avoid dropping any bridge components into Dumas Creek. However, due to the presence of concrete in the substructure of the bridge, the potential exists for up to approximately 50 cubic yards (38 cubic meters) of temporary fill being excavated from Dumas Creek as a result of demolition activities.

During bridge removal procedures, NCDOT's BMP's will be utilized, including erosion control measures; therefore it is anticipated that removing the existing bents will result in no impact to surrounding surface waters.

Short-term impacts to water quality, such as sedimentation and turbidity, may result from construction-related activities. Best Management Practices can minimize impacts during construction, including implementation of stringent erosion and sedimentation control measures, and avoidance of using wetlands as staging areas. Additional measures which can be taken to minimize water quality impacts include avoiding the placement of live concrete directly into the stream channel and preventing heavy equipment operations from being conducted in the stream channel. Due to the classification of Dumas and Bishop Creeks as High Quality Waters, NCDOT will adhere to the BMP's for "Protection of Surface Waters and

Sedimentation Control Guidelines in Sensitive Watersheds" for the replacement of Bridge No. 133 in Montgomery County.

Other impacts to water quality, such as changes in water temperature as a result of increased exposure to sunlight due to the removal of stream-side vegetation or increased shade due to the construction of the bridges, and changes in stormwater flows due to changes in the amount of impervious surface adjacent to the stream channels, can be anticipated as a result of this project. However, due to the limited amount of overall change in the surrounding areas, impacts are expected to be temporary in nature.

No adverse long-term impacts to water resources are expected to result from the alternatives being considered. New location alternatives will result in limited clearing of some canopy along the stream bank, resulting in the potential for localized increase in sunlight and stream temperature. All alternatives for the proposed project include a channel spanning structure, which will allow for continuation of present stream flow within the existing channel, thereby protecting stream integrity.

D. BIOTIC RESOURCES

1. Existing Vegetation Patterns

Terrestrial distribution and composition of vegetation communities throughout the project study area reflect landscape-level variations in topography, soils, hydrology, and past and present land use practices. When appropriate, the vegetation community names have been adopted and modified from the NHP classification system (Schafale and Weakley 1990) and the descriptions written to reflect local variations within the project study area. Two natural communities were identified within the project study area: Mesic Mixed Hardwood Forest and successional forest. In addition to these natural communities, there are areas of maintained/disturbed land.

Mesic Mixed Hardwood Forest (Piedmont subtype) – Mesic mixed hardwood forests are located on lower slopes, steep north-facing slopes, ravines, and occasionally well drained small stream bottoms, on acidic soils. This is the dominant community type within the project study area. The canopy consists of tulip poplar (*Liriodendron tulipifera*), white oak (*Quercus alba*), white ash (*Fraxinus americana*), American beech (*Fagus grandifolia*), and red maple (*Acer rubrum*). The shrub layer consists of ironwood (*Carpinus caroliniana*) and lambkill (*Kalmia angustifolia*). The herb layer consists of mayapple (*Podophylum peltatum*), wild ginger (*Hexastylis arifolia*), and violets (*Viola spp.*).

Successional Forest – This plant community is located in recently disturbed areas that are not being maintained. This community most closely resembles mesic mixed

hardwood forest, but includes few mature trees and a greater dominance of early successional and species such as loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), and red maple. Other seedlings and saplings of species present in the surrounding mesic mixed hardwood forest community are also present. Herbaceous vegetation is limited in this community and includes poison ivy (*Toxicodendron radicans*), Japanese honeysuckle (*Lonicera japonica*), and violets.

Maintained/Disturbed Land – The maintained/disturbed land within the project study area include such areas as roadsides, residential areas, and dirt roads and driveways and are dominated by a mixture of ornamental and early successional species. Typical species observed in this community are fescue (*Festuca* sp.), broom sedge (*Andropogon virginicus*), bahia grass (*Paspalum notatum*), crab grass (*Digitaria sanguinalis*), dog fennel (*Eupatorium capillifolium*), violets, and golden rod (*Solidago* spp.). Shrubs typically include blackberry (*Rubus argutus*), Chinese privet (*Ligustrum sinense*), and autumn olive (*Elaeagnus umbellata*).

2. Potential Impacts to Vegetation Communities

Potential impacts to vegetation communities are estimated based on the acreage of each vegetation community present within the proposed construction limits provided by Wilbur Smith Associates. A summary of potential vegetation community impacts is presented in Table 2 in acres (ac) and hectares (ha).

Table 2. Potential Impacts to Vegetation Communities.

VEGETATION COMMUNITY	Potential Impacts Acres (hectares)					
	Alternative 1		Alternative 2		Alternative 3 (Preferred)	
	Impacts	Temporary Construction Impacts[a]	Impacts	Temporary. Construction Impacts[a]	Impacts	Temporary Construction Impacts[a]
Mesic Mixed Hardwood Forest	0.84 (0.34)	0.58 (0.23)	0.75 (0.30)	0.32 (0.13)	0.40 (0.16)	0.35 (0.14)
Successional Forest	0.05 (0.02)	0.11 (0.04)	0.47 (0.19)	0.11 (0.04)	0.40 (0.16)	0.13 (0.05)
Maintained/Disturbed Land	0.29 (0.12)	0.0	0.13 (0.05)	0.18 (0.07)	0.13 (0.05)	0.08 (0.03)
Total:	1.18 (0.48)	0.69 (0.27)	1.35 (0.54)	0.61 (0.24)	0.93 (0.37)	0.56 (0.22)
Total For Alternative[b]:	1.87 (0.75)		1.96 (0.78)		1.49 (0.59)	

[a] *Temporary construction impacts are based on the portion of the impacts not included in the construction limits for the permanent structure.*

[b] *Totals for natural communities do not include the open water area attributed to Dumas Creek or any impervious road surfaces.*

Potential impacts associated with a bridge replacement are generally limited to narrow strips adjacent to the existing bridge structure and roadway approach segments. Alternatives 1 and 2 call for the realignment of the bridge and improvements to the existing bridge approaches. Alternative 1 and Alternative 2 maintain traffic on the existing bridge during construction and Alternative 3 utilizes an off-site detour during construction. Alternative 1 concentrates construction downstream of the existing bridge thus avoiding impacts to the Uwharrie National Forest. Alternative 3 has the least amount of impacts to forested natural communities, with four tenths (0.40) of an acre (0.16 ha) and also has the least amount of overall impacts to vegetation communities, with 1.49 ac (0.59 ha).

3. Wildlife

The project study area was visually surveyed for signs of terrestrial and aquatic wildlife. Little evidence of wildlife was observed during the field effort. Forests along streams such as Dumas Creek provide cover and food and function as a migration corridor linking areas of more optimal habitats, such as the Uwharrie National Forest located upstream of the project study area. Other expected wildlife species are those adapted to ecotones between the maintained roadsides and adjacent natural forest.

a. Terrestrial

Bird species observed within or adjacent to the project study area include belted kingfisher (Megaceryle *alcyon*), acadian flycatcher (*Empidonax virescens*), Carolina wren (*Thryothorus ludovicianus*), red-eyed vireo (*Vireo olivaceus*), yellow-throated warbler (*Dendroica dominica*), northern cardinal (*Cardinalis cardinalis*), and American goldfinch (*Carduelis tristis*). Avian species expected to occur in the habitat types located within the project study area include such species as Carolina chickadee (*Parus carolinensis*), downy woodpecker (*Picoides pubescens*), white-breasted nuthatch (*Sitta carolinensis*), eastern bluebird (*Sialia sialis*), white-throated sparrow (*Zonotrichia albicollis*), and common grackle (*Quiscalus quiscula*).

No mammals or signs were observed within the project study area. Species expected to be found in and around the project study area include raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), woodchuck (*Marmota monax*), red fox (*Vulpes vulpes*), gray squirrel (*Sciurus carolinensis*), white-tailed deer (*Odocoileus virginianus*), and eastern cottontail (*Sylvilagus floridanus*).

Terrestrial reptiles observed within the project study area include green anole (*Anolis carolinensis*) and mole kingsnake (*Lampropeltis calligaster rhombomaculata*). Species expected to occur within the project study area

include eastern box turtle (*Terrapene carolina*), eastern garter snake (*Thamnophis sirtalis*), ringneck snake (*Diadophis punctatus*), and black rat snake (*Elaphe obsoleta*).

No terrestrial amphibians were observed within the project study area. Species expected to occur within the project study area include white-spotted slimy salamander (*Plethodon cylindraceus*), Fowler's toad (*Bufo woodhousei*), marbled salamander *(Ambystoma opacum*), spring peeper (*Pseudacris crucifer*), and northern cricket frog (*Acris crepitans*).

b. Aquatic

The aquatic habitat located within the project study area includes Dumas Creek, UT 1, and Bishop Creek. Limited kick-netting, seining, dip-netting, and visual observation of stream banks and channel within the project study area were conducted in Dumas Creek and Bishop Creek to document the resident aquatic wildlife populations.

Benthic invertebrate organisms collected within Dumas Creek were identified to at least Order, Family and species if possible (McCafferty 1998), and include Asiatic clams (*Corbicula fluminea*), eastern elliptio (*Elliptio complanata*), Carolina creekshell (*Villosa vaughaniana*), beetles (Coleoptera: Dytiscidae, Psepyenidae, Hydrophilidae), snails (Gastropoda), crayfish (Decapoda), clubtails (Odonata: Gomphidae), flies (Diptera: Chironomidae, Culicidae, Tipulidae, Athericidae, Dixidae), spiders (Arachnida), stoneflies (Plecoptera: Perlidae), sow bugs (Amphipoda), scuds (Isopoda), aquatic worms (Annelida: Oligochaeta), mayflies (Ephemeroptera: Heptageniidae, Caenidae, Siphlonuridae), and caddisflies (Trichoptera: Hydropsychidae, Odontoceridae, Limnephilidae).

Benthic invertebrate organisms collected within Bishop Creek were identified to at least Order and Family if possible and include snails (Gastropoda), common spinners (Trichoptera: Libellulidae), flies (Diptera: Tipulidae, Chironomidae), beetles (Coleoptera: Hydrophilidae, Elmidae, Dytiscidae), aquatic scuds (Isopoda), aquatic sow bugs (Amphipoda), and aquatic earthworms (Annelida: Oligochaeta).

Resident fish populations were sampled to represent Dumas Creek, UT 1 and Bishop Creek. The following species of fish were collected, identified and released: creek chub (*Semotilus* spp.), highfin shiner (*Notropis altipinnis*), redlip shiner (*Notropis chiliticus*), tessellated darter (*Etheostoma olmstedi*), rosyside dace (*Clinostomus funduloides*), and highback chub (*Hybopsis hypsinotus*).

No aquatic reptiles were observed within the project study area. Species expected to occur within the project study area include southern watersnake (*Nerodia fasciata*), brown water snake (*Nerodia taxispilota*), and snapping turtle (*Chelydra serpentina*).

No aquatic amphibians were observed within the project study area. Species expected to occur within the project study area include such species as bullfrog (*Rana catesbeiana*), green tree frog (*Hyla cinera*), southern leopard frog (*Rana utricularia*), and pickerel frog (*Rana palustris*).

4. Potential Impacts to Wildlife

Due to the lack of, or limited, infringement on natural communities, the proposed bridge replacement will not result in significant loss or displacement of known animal populations. Wildlife movement corridors are not expected to be significantly altered by the proposed project. Potential down-stream impacts to aquatic habitat will be avoided by bridging Dumas Creek to maintain regular flow and stream integrity. In addition, temporary impacts to downstream habitat from increased sediment during construction are expected to be reduced by limiting in-stream work to an absolute minimum, except for the removal of the portion of the sub-structure below the water. Best Management Practices (BMPs) for Bridge Demolition and Removal will be followed to minimize impacts due to anticipated bridge demolition. BMPs for the protection of surface waters should be strictly enforced to reduce impacts.

E. SPECIAL TOPICS

1. Waters of the United States

Surface waters within the embankments of Dumas Creek, UT 1, and Bishop Creek are subject to jurisdictional consideration under Section 404 of the Clean Water Act as "waters of the United States" (33 CFR 328.3). The waters in Dumas Creek within the project study area exhibit characteristics of riverine, lower perennial, unconsolidated bottom, cobble-gravel (R2UB1) waters (Cowardin *et al.* 1979). The waters within UT 1 within the project study area exhibit characteristics of riverine, upper perennial, unconsolidated bottom, cobble-gravel (R3UB1) waters (Cowardin *et al.* 1979). The waters in Bishop Creek within the project study area exhibit characteristics of riverine, lower perennial, unconsolidated bottom, cobble-gravel (R2UB1) waters (Cowardin *et al.* 1979).

Dumas Creek is a perennial stream with moderate flow over substrate consisting of cobble-gravel and sand. The main channel is approximately 25 ft (8 m) wide and has an average of five (5) ft (2 m) depth. A geomorphic characterization of the stream section within the project study area indicates that the delineated portion of Dumas Creek is a "C" type stream (Rosgen 1996). These stream types occur in broad, alluvial valleys with terraces and have variable sinuosity. "C" channels also

have well-developed floodplains and point bars in the meander bends. The "C" designation indicates that the stream is slightly entrenched with well-defined meandering channels (Rosgen 1996).

UT 1 is a small first order perennial stream located at the southern end of the project study area. This stream has a width of approximately three (3) ft (1 m) and an average depth of two (2) ft (0.6 m). A geomorphic characterization of the stream section within the project study area indicates that UT 1 is a "G" type stream (Rosgen 1996). These stream types occur in narrow valleys and are unstable, with grade control problems and high bank erosion rates. The "G" designation indicates that the stream is an entrenched "gully" with a low width/depth ratio on moderate gradients (Rosgen 1996).

Bishop Creek is a perennial stream, flows east into Dumas Creek, and consists of sand and gravel-cobble substrate. The main channel is approximately 15 ft (5 m) wide and an average of five (5) ft (2 m) deep. A geomorphic characterization of the stream section indicates that the delineated portion of Bishop Creek within the project study area is a "C" stream type (Rosgen 1996).

Wetlands subject to review under Section 404 of the Clean Water Act (33 U.S.C. 1344) are defined by the presence of three primary criteria: hydric soils, hydrophytic vegetation, and evidence of hydrology within 12 inches (31 centimeters (cm)) of the surface for a portion (12.5 percent) of the growing season (DOA 1987). Based on this three parameter approach, jurisdictional wetlands do not occur within the project study area.

2. Potential Impacts to Waters of the United States

Potential impacts to wetlands and open water areas are estimated based on the amount of each jurisdictional area within the proposed construction limits provided by Wilbur Smith Associates. All alternatives avoid impacts to Bishop Creek. Open water areas of Dumas Creek (R2UB1) are included in this table, although impacts are not expected due to the use of channel-spanning structures. During bridge removal procedures, NCDOT's BMP's will be utilized, including erosion control measures; therefore it is anticipated that removing the existing end bents will result in no impact to surrounding surface waters. A summary of potential jurisdictional impacts is presented in Table 3 in acres and hectares or linear feet and meters, as appropriate.

Table 3. Potential Impacts to Jurisdictional Areas.

JURISDICTIONAL AREAS	Potential Wetland Impacts Acres (hectares)					
	Alternative 1		Alternative 2		Alternative 3 (Preferred)	
	Impacts	Temporary Construction Impacts[a]	Impacts	Temporary Construction Impacts[a]	Impacts	Temporary Construction Impacts[a]
R2UB1 (Dumas Creek)	0.03 (0.01)	0.07 (0.03)	0.01 (<0.01)	0.05 (0.02)	0.02 (0.01)	0.05 (0.02)
R3UB1 (UT 1 Dumas Creek)	0.01 (<0.01)	<0.01 (<0.01)	0.0	<0.01 (<0.01)	0.0	<0.01
R2UB1 (Bishop Creek)	0.0	0.0	0.0	0.0	0.0	0.0
Total:	0.04 (0.02)	0.07 (0.03)	0.01 (<0.01)	0.05 (0.02)	0.02 (0.01)	0.05 (0.02)
Total Wetland Impacts.:	**0.11 (0.05)**		**0.06 (0.02)**		**0.07 (0.03)**	
	Potential Stream Impacts Linear feet (meters)					
Dumas Creek	32 (10)	110 (34)	32 (10)	100 (30)	32 (10)	100 (30)
UT 1 Dumas Creek	200 (61)	25 (7)	0	25 (7)	0	38 (12)
Bishop Creek	0	0	0	0	0	0
Total:	232 (71)	135 (41)	32 (10)	125 (37)	32 (10)	138 (42)
Total Stream Impacts:	**367 (112)**		**157 (47)**		**170 (52)**	

[a] *Temporary construction impacts are based on the portion of the impacts not included in the construction limits for the permanent structure.*

All three alternatives avoid impacts to Bishop Creek and call for the use of a channel spanning structure that would avoid impacts to Dumas Creek. Alternatives 2 and Alternatives 3 avoid potential impacts to UT 1 and have less than one tenth (0.1) acres (<0.01 ha) of temporary impacts associated with construction activities. Alternative 1 has the largest amount of potential impacts to jurisdictional areas, with 0.11 ac (0.05 ha) and 367 ft. (112 m) of impacts.

a. Permits

This project is being processed as a Categorical Exclusion (CE) under Federal Highway Administration (FHWA) guidelines. Nationwide Permit (NWP) #23 [33 CFR 330.5(a)(23)] has been issued by the U.S. Army Corps of Engineers (COE) for CEs due to expected minimal impact. North Carolina Division of Water Quality – (DWQ) has issued a General 401 Water Quality Certification for NWP #23. However, use of this permit will require written notice to DWQ. In the event that NWP #23 will not suffice, minor impacts attributed to bridging and associated approach improvements are expected to qualify under General Bridge Permit

031 issued by the Wilmington COE District. Notification to the Wilmington COE office is required if this general permit is utilized. NWP #33 may be required if temporary structures, work, and discharges, including cofferdams are necessary for this project and not covered within the CE.

4. Mitigation Evaluation

Avoidance – Due to the presence of surface waters within the project study area, avoidance of all impacts is not possible. The proposed alternative avoids impacts to wetlands. Wetland and stream impacts are previously discussed in Section IV.E.2.

Minimization – The alternatives presented were developed in part to demonstrate minimization of stream impacts. Impacts to the stream will be minimized during demolition by removing bridge components in a manner, which will avoid dropping any components into the creek channel. Bridge demolition impacts have been previously discussed in Section IV.C.4. Employing 2 to 1 slopes where practicable can further minimize wetland impacts.

Mitigation - Compensatory mitigation is not proposed for this project due to the limited nature of project impacts. However, utilization of BMPs is recommended in an effort to minimize impacts, including avoiding placing staging areas within the stream channel. Temporary impacts associated with the construction activities could be mitigated by replanting disturbed areas with native species and removal of any temporary fill material within the floodplain upon project completion.

F. PROTECTED SPECIES

1. Federal Protected Species

Species with the federal classification of Endangered (E) or Threatened (T), or officially proposed (P) for such listing, are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Federally protected species listed with ranges that extend into Montgomery County are presented in Table 4 (FWS list dated March 7, 2002).

Table 4. Federally Protected Species.

Common Name	Scientific Name	Status	Biological Conclusion
Eastern cougar	*Felis concolor couguar*	E	No Effect
Bald eagle	Haliaeetus leucocephalus	T[a]	No Effect
Red-cockaded woodpecker	Picoides borealis	E	No Effect
Smooth coneflower	Echinacea laevigata	E	No Effect
Schweinitz's sunflower	Helianthus schweinitzii	E	Not Likely to Adversely Effect

[a] *Officially proposed for delisting.*

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

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

Eastern Cougar - The eastern cougar is a possibly extinct eastern subspecies of the widespread mountain lion species. This species was possibly extirpated from North Carolina by the late 1800s although recent sporadic sightings have been reported from remote areas of the mountains and coastal plain (Lee 1987). Mountain lions are large, long-tailed cats; adult males may measure seven (7) to nine (9) ft (2 to 3 m) total length with females averaging 30 to 40 percent smaller (Handley 1991). Adult mountain lion tracks measure approximately four (4) inches (9 cm) (Lee 1987).

Recent specimens of mountain lion taken in North Carolina and elsewhere in mid-Atlantic states have proved to be individuals of other subspecies that have escaped or been released from captivity (Lee 1987, Handley 1991). The eastern cougar would require large tracts of relatively undisturbed habitat that support large populations of white-tailed deer (Webster *et al.* 1985).

Biological Conclusion: No Effect

The Uwharrie National Forest is located upstream of the project study area and may provide potentially suitable habitat for the eastern cougar. The project study area includes replacement of an existing structure in a similar location and does not further fragment or encroach upon potentially suitable habitat for this species. Use of a channel spanning structure would maintain any travel corridors that could potentially be used by this species. The eastern cougar is not known to occur in the Uwharrie National Forest and is currently considered to be extirpated from North Carolina. A review of NHP records revealed no documentation of this species occurring within three (3) mi (4.8 km) of the project study area.

Bald Eagle - The bald eagle is a large raptor with a wingspan greater than six (6) ft (2 m). Adult bald eagles are dark brown with white head and tail. Immature eagles are brown with whitish mottling on their tail, belly, and wing linings. Bald eagles typically feed on fish but may also take birds and small mammals. In the Carolinas, nesting season extends from December through May (Potter *et al.* 1980).

Bald eagles typically nest in tall, living trees in a conspicuous location near water and forage over large bodies of water with adjacent trees available for perching (Hamel 1992). Preventing disturbance activities within a primary zone extending 750 to 1500 ft (229 to 457 m) outward from a nest tree is considered critical for maintaining acceptable conditions for eagles (FWS 1987). FWS recommends avoiding any disturbance activities, including construction and tree-cutting, within this primary zone. Within a secondary zone extending from the primary zone boundary out to a distance of one (1) mi (1.6 km) from a nest tree, construction and land-clearing activities should be restricted to the non-nesting period. FWS also recommends avoiding alteration of natural shorelines where bald eagles forage, and avoiding significant land-clearing activities within 1500 ft (457 m) of roosting sites.

Biological Conclusion: No Effect
No large lakes or other large bodies of water, providing easy access to food, or snags for nesting are found within the project study area. Since no suitable nesting or foraging habitat for the bald eagle exists in the project study area, this project is not expected to affect the bald eagle. A review of NHP records revealed no documentation of this species occurring within three (3) mi (4.8 km) of the project study area.

Red-cockaded woodpecker (RCW) – This small woodpecker, seven (7) to nine (9) inches (19 to 23 cm) long, has a black head, prominent white cheek patch, and black-and-white barred back. Males often have red markings (cockades) behind the eye, but the cockades may be absent or difficult to see (Potter *et al.* 1980). Primary habitat consists of mature to over-mature southern pine forests dominated by loblolly, long-leaf (*Pinus palustris*), slash (*P. elliotii*), and pond (*P. serotina*) pines (Henry 1989). Primary nest sites for RCWs include open pine stands greater than 60 years of age with little or no mid-story development. Nest cavity trees tend to occur in clusters, which are referred to as colonies (FWS 1985). Foraging habitat is comprised of open pine or pine/mixed hardwood stands 30 years of age or older. Pine flatwoods or pine-dominated savannas which have been maintained by frequent natural fires serve as ideal nesting and foraging sites for this woodpecker. Development of a thick understory may result in abandonment of cavity trees. The woodpecker drills holes into the bark around the cavity entrance, resulting in a shiny, resinous buildup around the entrance that allows for easy detection of active nest trees (Henry 1989).

Biological Conclusion: No Effect

NHP records do not document any occurrences of the RCW within three (3) mi (4.8 km) of the project study area. The project study area does not contain potential nesting or foraging habitat for this species. No large contiguous pine stands greater than 60 years old that are suitable for nesting nor large contiguous pine stands greater than 30 years old suitable for foraging occur within the project study area. This project should not affect the RCW.

Smooth coneflower – This species is a stiffly erect, rarely branched perennial that grows up to five (5) ft (2 m) tall. Basal and stem leaves are large, glabrous, lanceolate to narrowly ovate blades reaching three (3) inches (8 cm) in length. This coneflower blooms from late May to July, producing solitary, purple, tubular or cone-shaped flowers (Kral 1983). This species occurs on calcareous, basic, or circumneutral soils on roadsides, clearcuts, power line rights-of-way where there is abundant light and little herbaceous competition (Gaddy 1991). Fire-maintained woodlands also appear to provide potential habitat for the coneflower.

Biological Conclusion: No Effect

Potentially suitable habitat for smooth coneflower is present within the project study area in clearcuts, successional forests, and roadsides. ESI biologists participated in a field seminar on survey techniques for smooth coneflower sponsored by the FWS in June 2001 prior to conducting this survey. A systematic survey of all suitable habitat was conducted by ESI biologists in June 2001 during the flowering season for this species. No individuals of smooth coneflower were identified during the field surveys. Smooth coneflower will not be affected by construction of the proposed project. A review of NHP records revealed no documentation of this species occurring within three (3) mi (4.8 km) of the project study area.

Schweinitz's Sunflower - Schweinitz's sunflower is an erect, unbranched, rhizomatous, perennial herb that grows to approximately six (6) ft (2 m) in height. The stem may be purple, usually pubescent, but sometimes nearly smooth. Leaves are sessile, opposite on the lower stem but alternate above; in shape they are lanceolate and average five (5) to 10 times as long as wide. The leaves are rather thick and stiff, with a few small serrations. The upper leaf surface is rough and the lower surface is usually pubescent with soft white hairs. Schweinitz's sunflower blooms from late August to frost; the yellow flower heads are about six tenths (0.6) of an inch (1.5 cm) in diameter. The current range of this species is within 60 mi (97 km) of Charlotte, North Carolina, occurring on upland interstream flats or gentle slopes, in soils that are thin or clayey in texture. The species needs open areas protected from shade or excessive competition, reminiscent of Piedmont prairies.

Disturbances such as fire maintenance or regular mowing help sustain preferred habitat (FWS 1994).

Biological Conclusion: Not Likely to Adversely Effect

Potentially suitable habitat for Schweinitz's sunflower is present within the project study area in clearcuts, successional forests, and roadsides. The NHP documented three (3) occurrences of Schweinitz's sunflower within three (3) mi (4.8 km) of the project study area. The closest occurrence is one (1) mi (1.6 km) from the project study area at the intersection of NC 134 and SR 1323 and was last seen in 1991. The second occurrence is two (2) mi (3.2 km) from the project study area at the intersection of SR 1310 and SR 1317 and was last seen in 1994. The third occurrence is three (3) mi (4.8 km) from the project study area at the intersection of NC 109 and SR 1134 and was last seen in 1998. A systematic survey of all potentially suitable habitat was conducted by ESI biologists in July 2001. Since this survey was conducted prior to the flowering season for Schweinitz's sunflower, all members of the genus *Helianthus* were identified using vegetative characteristics in the field. During this survey no members of the genus *Helianthus* were observed. Construction of the proposed project should not affect Schweinitz's sunflower. Based on the survey efforts, it appears unlikely that the Schweinitz's sunflower occurs in the project study area. However, because it has been recorded within three (3) miles of the project study area in the past, its presence cannot be totally ruled out. Therefore, a biological conclusion of "Not Likely to Adversely Effect" was given. The USFWS concurred with this finding in a letter dated May 21, 2003, see attached.

2. Federal Species of Concern

The March 7, 2002 FWS list also includes a category of species designated as "Federal species of concern" (FSC). The FSC designation provides no federal protection under the ESA for the species listed. The presence of potential suitable habitat (Amoroso 1999, LeGrand *et al.* 2001) within the project study area has been evaluated for the following FSC species listed for Montgomery County.

Table 5. Federal Species of Concern (FSC).

Common Name	Scientific Name	Potential Habitat	State Status[a]
Carolina darter	*Etheostoma collis collis*	Y	SC
Northern pine snake	*Pituophis melanoleucus melanoleucus*	N	SC
Brook floater	*Alasmidonta varicosa*	Y	T(PE)
Atlantic pigtoe	*Fusconaia masoni*	Y	T(PE)
Sandhills clubtail dragonfly	*Gomphus parvidens carolinus*	Y	SR
Savannah lilliput	*Toxolasma pullus*	Y	T(PE)
Carolina creekshell	*Villosa vaughaniana*	Y	SC(PE)
Georgia aster	*Aster georgianus*	Y	T
Ravine sedge	*Carex impresinervia*	N	C
Bog spicebush	*Lindera subcoriacea*	N	E
Yadkin River goldenrod	*Solidago plumosa*	Y	E

[a] ***E-Endangered***: *"Any species or higher taxon of plant whose continued existence as a viable component of the State's flora is determined to be in jeopardy" (GS 19B 106: 202.12) (Endangered species may not be removed from the wild except when a permit is obtained for research, propagation, or rescue which will enhance the survival of the species.*

T-Threatened: *"Any resident species of plant which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (GS 19B 106: 202.12) (Regulations are the same as for Endangered species).*

SC- Special Concern: *"Any species of plant in North Carolina which requires monitoring but which may be collected and sold under regulations adopted under the provisions of [the Plant Protection and Conservation Act]" (GS 19B 106: 202.12) (Special Concern species which are not also listed as Endangered or Threatened may be collected from the wild and sold under specific regulations. Propagated material only of Special Concern species which are also listed as Endangered or Threatened may be traded or sold under specific regulations*

C -Candidate: *"Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are also either rare throughout their ranges (fewer than 100 populations total) or disjunct in North Carolina from a main range in a different part of the country or world. Also included are species which may have 20-50 populations in North Carolina, but fewer than 50 populations rangewide. These are species which have the*

preponderance of their distribution in North Carolina and whose fate depends largely on their conservation here. Also included are many species known to have once occurred in North Carolina but with no known extant occurrences in the state (historical or extirpated species); if these species are relocated in the state, they are likely to be listed as Endangered or Threatened. If present land use trends continue, candidate species are likely to merit listing as Endangered or Threatened.

***SR- Significantly Rare**: "Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations rangewide and are declining.*

***W- Watch List**: "Any other species believed to be rare and of conservation concern in the sate but nor warranting active monitoring at this time (see the Watch List section in the Supplement for a more complete discussion).*

***P – Proposed**: "Any species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the legally mandated listing process.*

NHP records document three (3) FSC species as occurring within three (3) mi (4.8 m) of the project study area. The brook floater has been documented from Densons Creek approximately one and a half (1.5) mi (2.4 km) downstream of the project study area. The Carolina creekshell has been documented from Dumas Creek within the project study area approximately 100 ft (30 m) upstream of the existing bridge and from Densons Creek approximately two and a half (2.5) mi (4.0 km) downstream of the project study area. Georgia aster has been documented at the intersection of SR 1315 and Densons Creek approximately two and seven tenths (2.7) of a mile (4.3 km) north of the project study area.

According to NHP records the occurrences of Carolina creekshell and brook floater were last observed during the month of June 2000 and the occurrence of Georgia aster was last observed in August 1998. During the course of the stream survey ESI biologists documented Carolina creekshell approximately 100 ft (31 m) upstream of the existing bridge in Dumas Creek on August 2, 2001.

3. State Protected Species

Plant and animal species which are on the North Carolina state list as Endangered (E), Threatened (T), or Special Concern (SC), receive limited protection under the North Carolina Endangered Species Act (G.S. 113-331 *et seq.*) and the North Carolina Plant Protection Act of 1979 (G.S. 106-202 *et seq.*).

NHP records document state protected species occurring within three (3) mi (4.8 km) of the project study area. As well as the FSC species' brook floater, Carolina creekshell and Georgia aster listed above, the state protected smooth sunflower

(SR) (*Helianthus laevigatus*) is documented as occurring at three locations within three (3) mi (4.8 km) of the project study area. The first occurrence is at the intersection of SR 1315 and Densons Creek approximately two and seven tenths (2.7) of a mile (4.3 km) north of the project study area. The other two occurrences are located in the Uwharrie National Forest, one and one tenths (1.1) of a mile (1.8km) and one and nine tenths (1.9) of a mile (3.0 km), west of the project study area.

VI CULTURAL RESOURCES

A. Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historical Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at 36 CFR Part 800. Section 106 requires Federal Agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted projects) on properties listed in or eligible for the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The project was coordinated with the North Carolina State Historic Preservation Office (HPO) in accordance with the Advisory Council's regulations and FHWA's procedures.

B. Historic Architecture

A preliminary field survey of the Area of Potential Effects (APE) was conducted on March 28, 2002. All structures within the APE were photographed and submitted for review. In a meeting between NCDOT and HPO on June 21, 2002 a concurrence form was signed stating that there are no eligible properties within the APE. Compliance with Section 106 is complete and a copy of the concurrence is found in the Appendix.

C. Archaeology

Based on the November 5, 2001 memorandum from the HPO, see attached, denoting "therefore, recommended that no archaeological investigation be conducted in connection with this project." And a review by NCDOT Archaeological staff it was determined that the proposed project will not impact any archaeological sites that are eligible for NRHP.

VII ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact. Replacements 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 does not conflict with any plan, existing land use, or zoning regulation. No significant 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.

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

No North Carolina Geodetic Survey control monuments will be impacted during construction of this project.

The Farmland Protection Policy Act requires all federal agencies or the representatives to consider potential impacts to prime and important farmland soils be all land acquisition and construction projects. Prime and important farmland soils are defined by the Natural Resources Conservation Service (NRCS). Since there are no prime or important farmlands in the immediate vicinity of the proposed bridge the Farmland Protection Policy does not apply.

This project is an air quality "neutral" project, so it is not required to be included in the regional emission analysis (if applicable) and a project level CO analysis is not required.

This project is located in Montgomery County, which has been determined to be in compliance with the National Ambient Air Quality Standards. 40 CFR Part 51 is not applicable, because the proposed project is located in an attainment area. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

The traffic volumes will not increase or decrease because of this project. There are no receptors located in the immediate project area. The project's impact on noise and air quality will not be significant.

Any noise level increased during construction will be temporary. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina SIP for air quality in compliance with 15 NCAC 2D.0520.

This evaluation completes the assessment requirements for highway traffic noise (23 CFR Part 722) and for air quality (1990 CAAA and NEPA) and no additional reports are required.

As Examination of records at the North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section revealed no hazardous waste sites in the project area.

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 taken early in the planning process to contact local officials to involve them in the project development with a scoping letter. Additionally, seven (7) newsletters detailing the alternatives considered were mailed to citizens in the vicinity of the project. Newsletters were also mailed to local officials. No comments were received in response to the newsletter mailing.

IX. AGENCY COMMENTS

Comments were received from US Army Corps of Engineers, US Fish and Wildlife Service, US Coast Guard, NCDENR Division of Water Quality, North Carolina Department of Crime Control and Public Safety, State Historic Preservation Office, the Montgomery County Planning Department and the Montgomery County Sheriff's Office 911 Communications.

X. REFERENCES

Amoroso, J.L. 1999. Natural Heritage Program List of the Rare Plant Species of North Carolina. North Carolina Natural Heritage Program, Division of Parks and Recreation, N.C. Department of Environment, Health and Natural Resources, Raleigh. 85 pp.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. Fish and Wildlife Service, U.S. Department of the Interior, Washington, DC. 103 pp.

Department of the Army (DOA). 1987. Corps of Engineers Wetlands Delineation Manual. Tech. Rpt. Y-87-1. US Army Engineer Waterways Experiment Station, Vicksburg, MS. 100 pp.

Department of Environment and Natural Resources (DENR). 1998. Yadkin-Pee Dee River Basinwide Water Quality Management Plan. A-III-26.

Department of Environment and Natural Resources (DENR). 2002a. Water Quality Stream Classifications Downloaded from http://h2o.ehnr.state.nc.us/strmclass/alphaold/yad.txt on February 18, 2002.

Department of Environment and Natural Resources (DENR). 2002b. Active NPDES Permits. http://h2o.enr.state.nc.us/NPDES/documents/download.xls on February 18, 2002.

Department of Environment and Natural Resources (DENR). 2002c. Biological Assessment Unit. http://www.esb.enr.state.nc.us/BAUwww/benthosdata.pdf on February 18, 2002.

Division of Environmental Management (DEM). 1989. Benthic Macroinvertebrate Ambient Network (BMAN) Water Quality Review, 1983-1987. North Carolina Department of Environment, Health, and Natural Resources, Raleigh. 193 pp.

Division of Environmental Management (DEM). 1993. Classifications and Water Quality Standards Assigned to the Waters of the Yadkin Pee Dee River Basin. North Carolina Department of Environment, Health, and Natural Resources, Raleigh.

Division of Planning and Assessment (DPA). 1991. North Carolina Environmental Permit Directory. North Carolina Department of Environment, Health, and Natural Resources, Raleigh.

Hamel, P.B. 1992. Land Manager's Guide to the Birds of the South. The Nature Conservancy, Southeastern Region, Chapel Hill, NC. 437 pp.

LeGrand, H.E., Jr., S.P. Hall, and J.T. Finnegan. 2001. Natural Heritage Program List of the Rare Animal Species of North Carolina. North Carolina Natural Heritage Program, Division of Parks and Recreation, N.C. Department of Environment, Health and Natural Resources, Raleigh. 91 pp.

Martof, B.S., W.M. Palmer, J.R. Bailey, and J.R. Harrison III. 1980. Amphibians and Reptiles of the Carolinas and Virginia. The University of North Carolina Press, Chapel Hill, NC. 264 pp.

McCafferty, W. P. 1998. Aquatic Entomology. Jones and Bartlett Publishers, Sudbury, MA. 448pp.

Menhinick, E.F. 1991. The Freshwater Fishes of North Carolina. North Carolina Wildlife Resources Commission, Raleigh. 227 pp.

North Carolina Department of Transportation (NCDOT). 1999. Best Management Practices For Bridge Demolition and Removal. NCDOT, Raleigh. 3 pp.

Palmer, W.M. and A.L. Braswell. 1995. Reptiles of North Carolina. The University of North Carolina Press, Chapel Hill, NC. 412 pp.

Potter, E.F., J.F. Parnell, and R.P. Teulings. 1980. Birds of the Carolinas. The University of North Carolina Press, Chapel Hill, NC. 408 pp.

Radford, A. E., H.E. Ahles, and C.R. Bell. 1968. Manual of the Vascular Flora of The Carolinas. The University of North Carolina Press, Chapel Hill, NC. 1183 pp.

Rohde, F.C., R.G Arndt, D.G. Lindquist, and J.F. Parnell. 1994. Freshwater Fishes of the Carolinas, Virginia, Maryland, and Delaware. The University of North Carolina Press, Chapel Hill, NC. 222 pp.

Rosgen, D. 1996. Applied River Geomorphology. Printed Media Companies, Minneapolis, Minnesota.

Schafale, M.P. and A.S. Weakley. 1990. Classification of the Natural Communities of North Carolina: Third Approximation. Natural Heritage Program, Division of Parks and Recreation, N.C. Department of Environment, Health, and Natural Resources. Raleigh. 325 pp.

U.S. Department of Agriculture (USDA). 1989. Soil Survey of Stanly County, North Carolina. USDA Soil Conservation Service.

U.S. Fish and Wildlife Service (FWS). 1987. Habitat Management Guidelines for the Bald Eagle in the Southeast Region. U.S. Department of the Interior, Fish and Wildlife Service. 8 pp.

U.S. Fish and Wildlife Service. 1994. Schweinitz's Sunflower Recovery Plan. Atlanta, GA. 28 pp.

U.S. Fish and Wildlife Service. April 12, 2001. Updated County Species List.

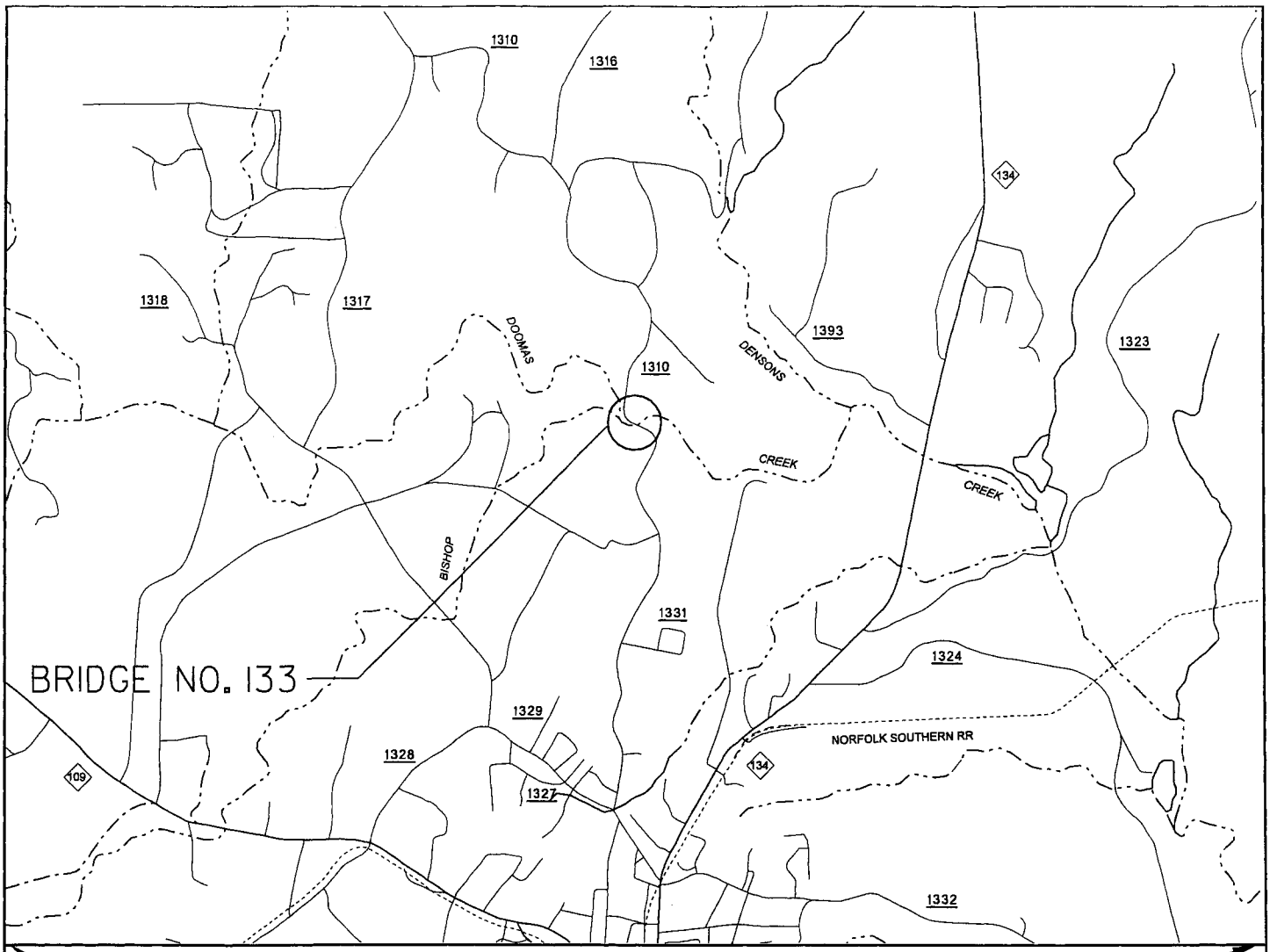
U.S. Geological Survey (USGS). 1974. Hydrologic Units Map, State of North Carolina.

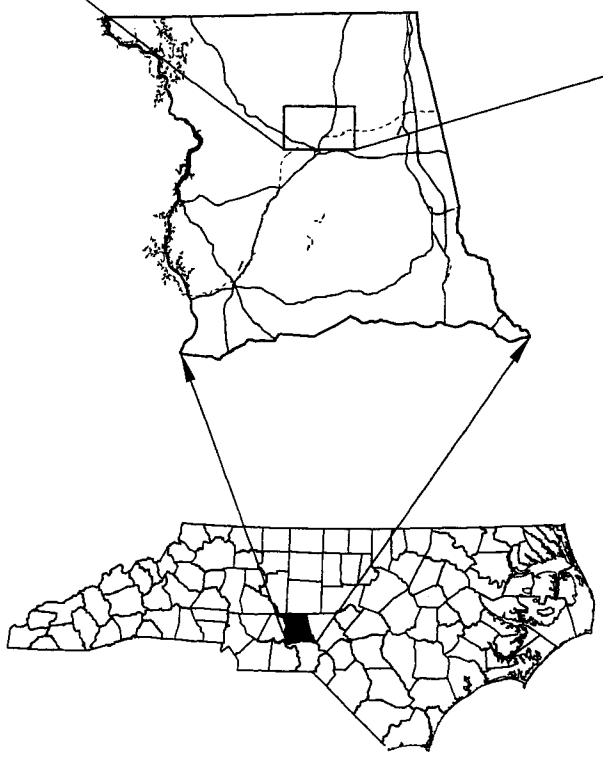
U.S. Geological Survey (USGS). 1981. Frog Pond, NC 7.5-minute series topographic quadrangle map, photorevised 1983.

Weakley, A. S. 1993. Guide to the Flora of the Carolinas and Virginia. Working Draft of November 1993. North Carolina Natural Heritage Program, Division of Parks and Recreation, Department of Environment, Health, and Natural Resources. 575 pp.

Webster, W.D., J.F. Parnell, and W.C. Biggs, Jr. 1985. Mammals of the Carolinas, Virginia, and Maryland. The University of North Carolina Press, Chapel Hill, NC. 255 pp.

FIGURES





N

MONTGOMERY COUNTY

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

BRIDGE NO. 133
SR 1310 OVER DOOMAS CREEK
MONTGOMERY COUNTY
B-4205

VICINITY MAP

FIGURE 1

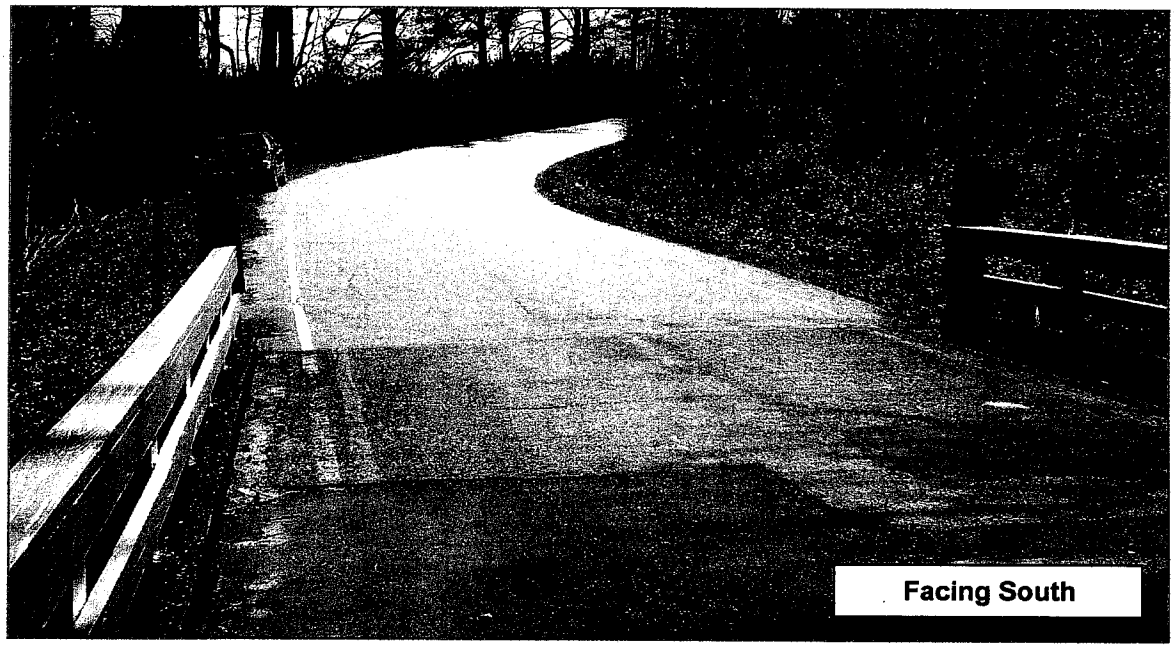
NORTH CAROLINA DEPARTMENT OF TRANSPORTATIO
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH

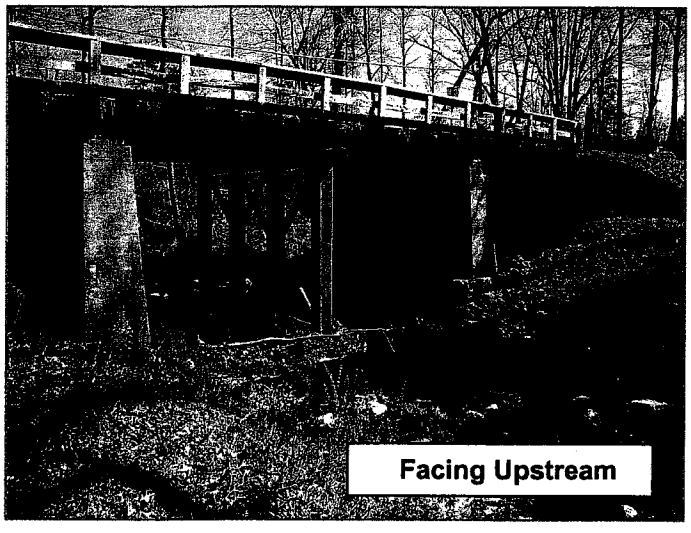
B-4205

MONTGOMERY COUNTY

BRIDGE #133 OVER DOOMAS CREEK

SEPTEMBER 2002	NOT TO SCALE	FIGURE 2

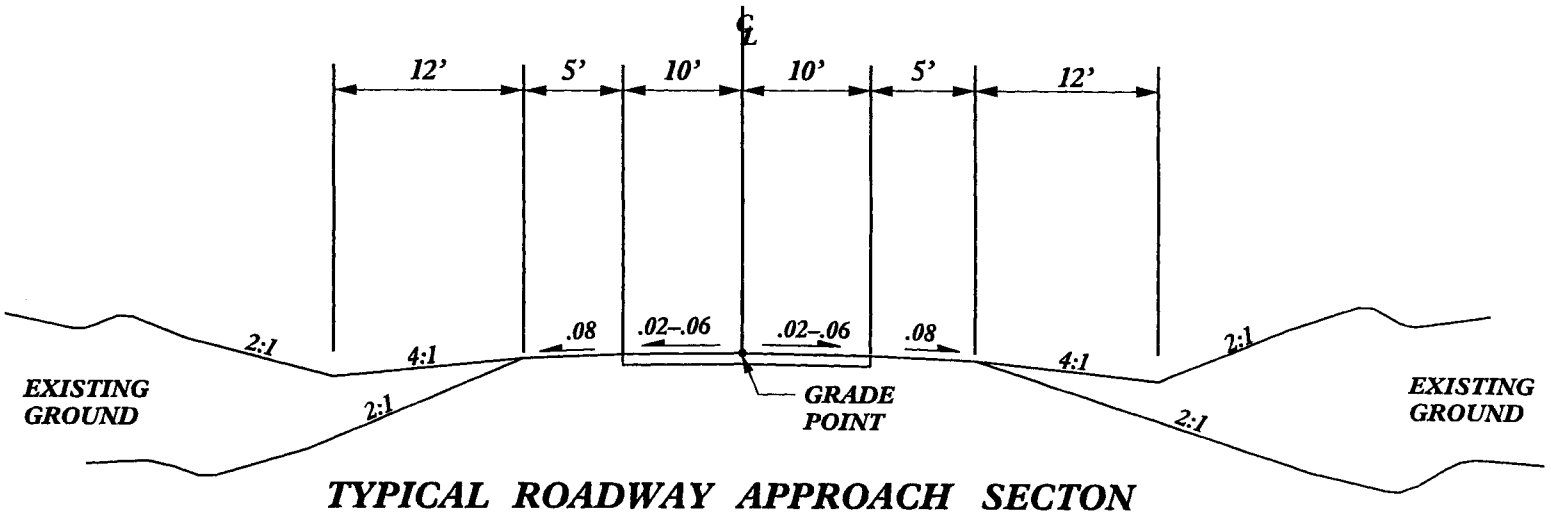




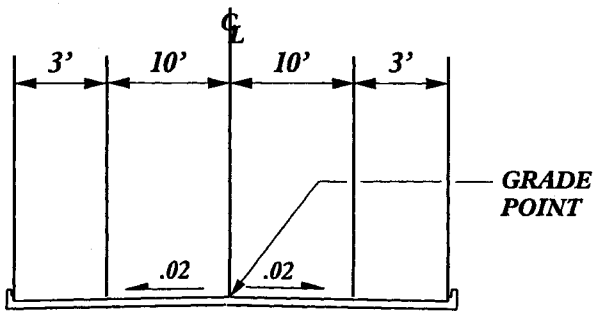
B-4205
Replacement of Bridge
Bridge No. 133
SR 1310 over
Doomas Creek
Montgomery County

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

FIGURE 3



TYPICAL ROADWAY APPROACH SECTON



TYPICAL BRIDGE SECTION

TRAFFIC DATA	
ADT 2001	400
ADT 2025	600
DUAL	2%
TTST	1%

FUNCTIONAL CLASSIFICATION: LOCAL (RURAL)

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

MONTGOMERY COUNTY

BRIDGE NO. 133 ON SR 1310
OVER DOOMAS CREEK

B-4205

FIGURE 4

APPENDIX

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

May 21, 2003

Michael Penny, PE
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Penny:

This letter is in response to your letter of May 13, 2003, which provided the U.S. Fish and Wildlife Service (Service) with the biological conclusion of the North Carolina Department of Transportation (NCDOT) that the replacement of Bridge No. 133 on SR 1310 over Dumas Creek in Montgomery County (TIP No. B-4205) is not likely to adversely affect the federally-endangered Schweinitz's sunflower (*Helianthus schweinitzii*). These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to the information you submitted, biologists from Environmental Services, Inc. surveyed the project area for Schweinitz's sunflower in July 2001. Since the survey was conducted outside the flowering season for the species, vegetative characteristics were used to search for the genus *Helianthus*. No members of the genus were found within the project area. The NCDOT has committed to resurvey the area during the flowering season in the fall of 2004, prior to project construction.

Based on the negative survey results and the commitment to resurvey in the fall of 2004, the Service concurs with your conclusion that the proposed bridge replacement is not likely to adversely affect the Schweinitz's sunflower. We believe that the requirements of section 7 (a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

John E. Ellis

for Garland B. Pardue, Ph.D.
Ecological Services Supervisor

cc: Richard Spencer, USACE, Wilmington, NC
David Franklin, USACE, Wilmington, NC
Beth Barnes, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmore, NC
Chris Militscher, USEPA, Raleigh, NC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

July 15, 2002

Mr. Mike Penny
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Penny:

This responds to your letter of October 3, 2001, requesting comments on nine bridge replacement projects. Five of these projects are within the area covered by this office. Our biologist working on projects of the North Carolina Department of Transportation (NCDOT) at that time, Tom McCartney, requested survey data on federally protected species from the consultant, Wilbur Smith Associates. The requested information was supplied to the Service in late March 2002 at Mr. McCartney's retirement. In the transition to a new NCDOT biologist, the new material was filed under the assumption that comments had been provided. The US Fish and Wildlife Service (Service) regrets the delay in providing these comments and appreciates your efforts to bring this oversight to our attention. This report provides scoping information in accordance with provisions of the Fish and Wildlife, Coordination Act (FWCA) (16 U.S.C. 661-667d) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). This report also serves as initial scoping comments to federal and state resource agencies for use in their permitting and/or certification processes for this project.

The bridges scheduled for replacement are:

1. B-3680, Moore County, Bridge No. 2 on US 15/501 over CSX Railroad;
2. B-3830, Columbus County, Bridge No. 363 and 364 on SR 1947 over Friar Swamp;
3. B-4093, Cumberland County, Bridge No. 81 on SR 1728 over Gum Log Creek
4. B-4205, Montgomery County, Bridge No. 133 on SR 1310 over Doomas Creek, and;
5. B-4273, Scotland/Hoke Counties, Bridge No. 47 on US 401 over the Lumber River

General Fish and Wildlife Habitat and Wetlands

For each project, we recommend the following conservation measures to avoid or minimize adverse environmental impacts to fish and wildlife resources:

1. Wetland impacts should be avoided and minimized to the maximum extent practical as outlined in Section 404 (b)(1) of the Clean Water Act Amendments of 1977. Areas

exhibiting high biodiversity or ecological value important to the watershed and region should be avoided. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons.

2. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along or adjacent to existing, roadways, utility corridors, or previously developed areas in order to minimize habitat fragmentation and encroachment. At the completion of construction, the entire detour area, including any previous detours from past construction activities, should be entirely removed and the impacted areas should be planted with appropriate, endemic vegetation, including trees if necessary;

3. If unavoidable wetland impacts are proposed, every effort should be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity, preferably via conservation easement, should be explored at the outset;

4. In waterways that may serve as travel corridors for fish, in-water work should be avoided during moratorium periods associated with migration, spawning, and sensitive pre-adult life stages. The general moratorium period for anadromous fish is February 15 - June 15;

5. Best Management Practices (BMP) for Protection of Surface Waters should be implemented; and,

6. Activities within designated riparian buffers should be avoided or minimized.

Federal Species of Concern and State Listed Species

Federal Species of Concern (FSC) are those plant and animal species for which the Service remains concerned, but further biological research and field study are needed to resolve the conservation status of these taxa. Although FSCs receive no statutory protection under the ESA, we would encourage the NCDOT to be alert to their potential presence, and to make every reasonable effort to conserve them if found. The North Carolina Natural Heritage Program should be contacted for information on species under state protection.

Federally Protected Species

The Natural Resources Technical Reports (NRTR) make determinations that a project will not affect a particular species, primarily plants, based on surveys in the recent past. If actual construction is several years away, the Service believes such determinations are premature and

that additional surveys will be required. It would be more appropriate to note that suitable habitat or the actual species was not found during preliminary surveys and such evidence provides early indications that the project is not likely to adversely affect the species.

Effect determinations for plants based on surveys within the project area may require work at a particular time of year for accurate identification. The biological conclusions of the NCDOT for plants should include the time of year that a survey was conducted, the person hours of surveying, and the approximate size of the area surveyed. Surveys should be done within two or three years of actual construction for those species inhabiting stable and/or climax communities. Plant species that utilize disturbed communities, e.g., Michaux sumac (*Rhus michauxii*) and Cooley's meadowrue (*Thalictrum cooleyi*), should be done within two years of actual construction if vegetation disturbing activities, e.g., regular mowing or timber harvesting, occur at the project site.

If surveys for a federally protected species should determine that a given project would adversely affect the species, a biological assessment (BA) may be prepared to fulfill the section 7(a)(2) requirement and in determining whether formal consultation with the Service is necessary. Please notify this office with the results of the surveys for the listed species that may occur in the project area. Please include survey methodologies and an analysis of the effects of the action, including consideration of direct, indirect, and cumulative effects.

Project Specific Comments

B-3680 (Moore County, Bridge No. 2 on US 15/501 over CSX Railroad)

The NRTR presents three design alternatives for the bridge replacement that vary in environmental impacts. Based on Table 2 (p. 8), the Service recommends Alternative 1 since it is the only alternative that would avoid all impacts to Piedmont alluvial forest and has the least amount of impacts on mixed mesic hardwood forest. Table 3 shows that impacts to jurisdictional wetlands for the Alternatives 1-3 are 1.10, 1.44, and 2.85 acres, respectively. However, these tabular data do not seem to correspond to the photographic presentation of the alternatives. These figures indicate that Alternative 2 would avoid most wetlands in the project area while Alternative 1 would cross a wetland just east of US 1. The Service recommends future design work seek to further minimize impacts to wetlands, especially forested wetlands which provide valuable wildlife habitat.

The NRTR accurately notes the four federally protected species for Moore County. The report states that habitat for the Cape Fear shiner (*Notropis mekistocholas*), red-cockaded woodpecker (RCW) (*Picoides borealis*), and American chaffseed (*Schwalbea americana*) do not exist in the project area. Surveys for Michaux sumac (*Rhus michauxii*) did not find the plant. Data on known locations of these species available to the Service indicate that they have not been found in the immediate vicinity of the project. Therefore, current data suggests that the project will not impact species protected by the ESA.

B-3830 (Columbus County, Bridge No. 363 and 364 on SR 1947 over Friar Swamp)

The NRTR for these two bridge replacements has not been released and design alternatives are still under consideration. The major issues for this project include impacts to wetlands, state-designed Outstanding Resource Water (ORW) that flow into Lake Waccamaw, and the Federally threatened Waccamaw silverside (WS) (*Menidia extensa*), a small (1.2 to 2.6 inches) fish endemic to the lake where it occurs in schools near the surface in open water. Furthermore, critical habitat has been designated for the WS that includes all of the lake up to the mean high water level that generally includes the lower reaches of stream flowing into the lake up to SR 1947. If a temporary detour bridge is required, this structure should be on the side of the existing structure away (north) from the lake. Such placement would avoid issues of adverse modification to critical habitat. Impacts can also be minimized by not installing "weep holes" or other structures on the bridge that would allow run-off or degrade water quality in the creek or lake. Overall, water run-off from structures should be minimized or avoided if at all possible. The NCDOT should use BMPs and effective sediment and erosion control measures to minimize debris and sediment entering the creek and lake. Finally, potential impacts would be minimized if construction is performed outside the WS spawning period of March through July.

The wetlands in the project enhance the water quality of Lake Waccamaw and provide high quality fish and wildlife habitat. Every effort should be made to minimize temporary impacts and avoid the permanent loss of such areas.

In addition to the WS, the other federally protected species in Columbus County include the RCW, shortnose sturgeon (*Acipenser brevirostrum*) (under the jurisdiction of the National Marine Fisheries Service), Cooley's meadowrue (*Thalictrum cooleyi*), and rough-leaved loosestrife (*Lysimachia asperulaefolia*). The NCDOT should determine project impacts on these species through either a thorough comparison of habitat requirements with conditions at the site or actual field surveys.

The Carolina pygmy sunfish (*Elassoma boehkei*), a FSC, has been reported near the project site. These small fish occur in heavy vegetated shallows of ponds, sloughs, and creeks. This FSC would benefit from all measures to preserve water quality and prevent the loss of vegetated wetlands.

B-4093 (Cumberland County, Bridge No. 81 on SR 1728 [Middle Road] over Gum Log Canal)

The NRTR states that two alternatives are under consideration for the project. Alternative 1 would construct the new bridge at the same location and use a temporary detour bridge. Alternative 2 would construct a new bridge approximately 20 feet upstream of the existing structure. Both alternatives would have the same permanent impacts, 0.02 acre, on jurisdictional wetlands. If Alternative 2 is implemented, the NCDOT should discuss the removal of the existing structure and the restoration of the waterway and associated wetlands at that site.

The Service does not concur with the preliminary determination that the project would have no effect on the small whorled pogonia (*Isotria medeoloides*), a Federally threatened perennial plant. This species is generally known from open, dry, deciduous woods with acid soil. The NRTR states that the species is characteristic of moist hardwood slopes and along stream bottoms "usually" in association with white pine. The Biological Conclusion (p. 14) is based on the absence of hardwood forests "dominated" by white pine. We do not believe that this plant requires woodlands with, or dominated by, white pine, but that white pine is often present in the forests containing the plant. The Service recommends that future conclusions be based on field surveys.

In general, the Service can accept the preliminary determination that the project would have no effect on the RCW, Saint Francis satyr (*Neonympha mitchellii francisci*), pondberry (*Lindera melissifolia*), rough-leaved loosestrife, Michaux's sumac, and American chaffseed. Records available to the Service indicate that none of the listed species of Cumberland County have been reported to occur near the project site.

Table 5 of the NRTR shows that two mussels designated as FSC have potential habitat within the project area. These are the Atlantic pigtoe (*Fusconaia masoni*) and yellow lampmussel (*Lampsilis cariosa*). The Service recommends that effective erosion and sedimentation control be used during all construction to minimize any impacts to these mussel species.

B-4205 (Montgomery County, Bridge No. 133 on SR 1310 [Lovejoy Road] over Dumas [Doomas] Creek)

Some documents for the project state that the bridge crosses Doomas Creek while other documents give the name as Dumas Creek. We will use the latter in our comments and future planning document should indicate the correct name.

The NRTR considers three alternatives, a new structure immediately downstream (Alternative 1), a new structure immediately upstream (Alternative 2), and replacement at the existing location with offsite detours on existing roads (Alternative 3). Table 2 (p. 12) presents impacts to jurisdictional water and wetlands. While there are only minor differences in impacts to wetlands, Alternative 1 has much greater permanent impacts to Dumas Creek (232 feet) versus the 32 feet for both Alternatives 2 and 3. The Service does not support Alternative 1 and would recommend Alternative 3.

The NRTR presents a biological conclusion for three federally listed animals and two plants. All conclusions are that the project would have no effects on these species. The conclusions for the three animals, the bald eagle (*Haliaeetus leucocephalus*), eastern cougar (*Felis concolor couguar*), and RCW were based on the absence of suitable habitat or, in the case of the cougar, the absence of recent evidence that the species exists in the area. The conclusions for the two plants, Schweintz's sunflower (*Helianthus schweinitzii*) and smooth coneflower (*Echinacea laevigata*) were based on field surveys which appear adequate. Occurrence data presently available to the Service indicate that the species most likely to occur near the project are

Schweintz's sunflower and Carolina creekshell (*Villosa vaughaniana*), a FSC. The NCDOT should carefully monitor the project area prior to construction to ensure that Schweintz's sunflower does not colonize the area.

Table 4 of the NRTR shows that two mussels designated as FSC have potential habitat within the project area. These are the Atlantic pigtoe (*Fusconaia masoni*), Brook floater (*Alasmidonta varicosa*), Savannah lilliput (*Toxolasma pullus*), and Carolina creekshell. The Service recommends that effective erosion and sedimentation control be used during all construction to minimize any impacts to these mussels species.

B-4273 (Scotland/Hoke Counties, Bridge No. 47 0n US 401 over the Lumber River)

The NRTR considers two alternatives: replacement at a new location, approximately 70 feet upstream of the existing structure (Alternative 1) and replacement at the same location (Alternative 2). Table 1 indicates that Alternative 2 would have less impacts on important plant communities such as cypress-gum swamp and coastal plains bottomland hardwoods. Table 2 shows that Alternative 2 would have less impacts (2.46 acres) on jurisdictional wetlands than Alternative 1 (4.45 acres). Based on these data, the Service considers Alternative 2 to be the least damaging to fish and wildlife habitat in the project area.

Table 3 accurately reflects the federally protected species known to occur in Scotland and Hoke Counties. The determinations that the project would have no effect on four species (RCW, Saint Francis' satyr, rough-leaved loosestrife, and American chaffseed) based on an absence of suitable habitat appear accurate. The systematic surveys for two plants with potential habitat, Canby's dropwort (*Oxypolis canbyi*) and Michaux's sumac, did not find these species and present sufficient evidence that the species do not occur in the project area in June 2001. Occurrence data available to the Service indicate that no Federally protected species have been reported in the project area.

The Service appreciates the opportunity to comment on these projects. Please continue to advise us of the progression of the planning process, including your official determination of the impacts of these bridge replacements. If you have any questions regarding these comments, please contact Howard Hall at 919-856-4520, Ext. 27.

Sincerely,

Garland B. Pardue, Ph.D.
Ecological Services Super-visor

cc: Ted Bisterfeld, USEPA, Atlanta, GA
David Timpy, USACE, Wilmington NC
John Hennessy, NCDWQ, Raleigh, NC
David Cox, NCWRC, Northside, NC

U.S. Department of Transportation
United States Coast Guard

Commander
United States Coast Guard (Aowb)
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: Aowb
Phone: (757)398-6227
FAX: (757) 398-6334

16590
May 22, 2002

Mr. Michael Penney
Project Development Engineer
North Carolina Department of Transportation
Project Development and Environmental Analysis
1549 Mail Service Center
Raleigh, North Carolina 27699-1549

Dear Mr. Penney:

This is in response to your letter dated May 14, 2002, regarding the replacement of Bridge No. 246 across Big Bear Creek in Stanly County, Bridge No. 99 across Long Creek in Stanly County, Bridge No. 81 across Gum Long Creek in Cumberland County, Bridge No. 133 across Doomas Creek in Montgomery County, Bridge No. 47 across Lumber River, in Scotland and Hoke Counties, and Bridge No. 33 across Brown Creek in Anson County, North Carolina.

Since Big Bear Creek, Long Creek, Gum Long Creek, Doomas Creek, Lumber River and Brown Creek are not subject to tidal influence, they are considered legally non-navigable for Bridge Administration purposes. Also, since these waterways are not susceptible for use by interstate or foreign commerce, they meet the criteria set forth in Section 107 of the Coast Guard Authorization Act of 1982. This section of the Act exempts such waterways from Coast Guard bridge permit requirements.

The fact that a Coast Guard permit is not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of the project.

If you should have any questions regarding this matter, please contact Ms. Linda Gilliam-Bonenberger, Bridge Management Specialist, at (757) 398-6227.

Sincerely,

ANN B. DEATON
Chief, Bridge Administration Section
By direction of the Commander
Fifth Coast Guard District

U.S. ARMY CORPS OF ENGINEERS
Wilmington District

Action ID: 200101371 **County:** Montgomery

Notification of Jurisdictional Determination

Requestor:
Mr. William D. Gilmore, P.E., Manager
Project Development & Environmental Analysis
1548 Mail Service Center
Raleigh, N.C. 27699-1548

Authorized Agent:
Josh Witherspoon
Environmental Services Inc.
524 New Hope Road
Raleigh, North Carolina 27610

Size and Location of Project (waterbody, Highway name/number, town, etc.): TIP Project No. B-4205, Bridge No. 133 on SR-1310 over Dumas Creek, Montgomery County, North Carolina.

Basis for Determination: Onsite field inspection of jurisdictional area.

On **October 9, 2001,** the undersigned inspected the Section 404 jurisdictional line as field delineated by the NCDOT and/or its representatives for the subject NCDOT project/corridor. The project site was inspected and the delineated jurisdictional line was found to accurately reflect the limits of Corps jurisdiction. The field delineated jurisdictional limits, as shown on the attached plan(s), can be relied on for project planning and impact assessment. This verification is valid for five (5) years from the date of this letter.

Any placement of dredged or fill material within the delineated jurisdictional limits will require Department of the Army authorization pursuant to Section 404 of the Clean Water Act, as amended (33 USC 1344). Any un-authorized placement of dredged or fill material within the delineated jurisdictional limits would be a violation of Section 301 of the Clean Water Act (33 USC 1311) and subject to enforcement action. If you have any questions regarding this verification or the Corps of Engineers' regulatory program, please contact Mr. Richard K. Spencer at 910-251-4172.

Project Manager Signature Richard K. Spencer

Date October 24, 2001 **Expiration Date** October 24, 2006

Attachments

Federal Aid # BRZ-1310(3) *TIP* # B-4205 *County*: Montgomery

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

Project Description: Replace Bridge No. 133 on SR 13103 over Doomas Creek

On 06/21/2002, representatives of the

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

Reviewed the subject project at

- [ ] Scoping meeting
- [x] 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.
- [x] 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.
- [x] 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 property identified as Bridge #133, Properties 132 is considered not eligible for the National Register and no further evaluation of it is necessary.
- [x] There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- [x] 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.
- [x] There are no historic properties affected by this project. (*Attach any notes or documents as needed*)

Signed: * Property #3 is outside the APE - see attached desi pla

Mary Pope Furr — 6.21.2002
Representative, NCDOT — Date

[signature] — 6/24/02
FHWA, for the Division Administrator, or other Federal Agency — Date

[signature] HPO — June 21, 02
Representative, HPO — Date

David Brook Dep — 6/21/02
State Historic Preservation Officer — Date

If a survey report is prepared, a final copy of this form and the attached list will be included.

Vance

North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

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

Division of Archives and History
Jeffrey J. Crow, Director

November 5, 2001

MEMORANDUM

TO: William D. Gilmore, Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook RSB for David Brook

SUBJECT: Bridge #133 on SR 1310 over Doomas Creek, TIP B-4205, Montgomery County, ER 02-7900

Thank you for your letter of September 26, 2001, 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:

Bridge #133 built in 1942

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, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

DB:kgc

cc: Mary Pope Furr, NCDOT

	Location	Mailing Address	Telephone/Fax
Administration	507 N. Blount St, Raleigh, NC	4617 Mail Service Center, Raleigh 27699-4617	(919) 733-4763 •733-8653
Restoration	515 N. Blount St, Raleigh , NC	4613 Mail Service Center, Raleigh 27699-4613	(919) 733-6547 •715-4801
Survey & Planning	515 N. Blount St, Raleigh, NC	4618 Mail Service Center, Raleigh 27699-4618	(919) 733-4763 •715-4801

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Gregory J. Thorpe, Ph.D.
Acting Director
Division of Water Quality

October 31, 2001

MEMORANDUM

To: Elmo Vance, NCDOT Project Development & Environmental Analysis Branch
Through: John Dorney, NC Division of Water Quality
From: Cynthia F. Van Der Wiele, NCDOT Coordinator

Subject: Scoping Comments for Bridge Replacement Projects: B-3908, B-3909, B-4009, B-4205, B-4276, B-3680.

This memo is in reference to your correspondence dated October 3, 2001, in which you requested scoping comments for the above projects. The Division of Water Quality (DWQ) requests that the following topics be addressed:

1. DWQ requests that best management practices (BMPs) for bridge demolition shall be adhered to, particularly on TIP Project B-4205 in Montgomery County, as Doomas Creek is listed as a High Quality Water (HQW).

2. Disturbance of the stream channels must be limited to only what is necessary to perform the bridge demolition and removal. Heavy equipment must be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into the stream.

3. Project B-4205 in Montgomery County shall comply with the requirements for High Quality Waters with regards to stormwater management, sedimentation and erosion control and buffer requirements.

4. Ensure that sediment & erosion control measures are not placed in wetlands.

5. Borrow/waste areas should avoid wetlands to the maximum extent practicable. Prior to the approval of any borrow/waste site in a wetland, the contractor must obtain a 401 certification from DWQ.

6. The information packet did not include information regarding the types of structures that will be replacing the deficient bridges. Two voice mail messages were left in regard to a request for more information (and not returned). DWQ prefers that the structures that will be replacing the deficient bridges will be bridges. All structures shall be installed in such a manner that the original stream profiles are not altered (i.e. the depth of the channel must not be reduced by a widening of the streambed). Existing stream dimensions are to be maintained above and below locations of culvert extensions.

7. All work shall be performed during low flow conditions.

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

9. Written concurrence of 401 Water Quality Certification may be required for these projects (e.g., applications requesting coverage under NW 14 or Regional General Permit 198200031). Please be aware that 401 certification may be denied if wetland or water impacts have not been avoided and minimized to the maximum extent practicable.

Thank you for requesting our input at this time. The DOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Cynthia Van Der Wiele at (919) 733.5715.

Pc: USACE Wilmington Field Office
USACE Asheville Field Office
Marella Buncick, USFWS Asheville Field Office
MaryEllen Haggard, NCWRC
File Copy

Elmo Vance

North Carolina Department of Crime Control and Public Safety
Division of Emergency Management

Michael F. Easley, Governor

Bryan E. Beatty, Secretary

October 19, 2001

Mr. William D. Gilmore, P.E.,
Manager of the Project Development and Environmental Analysis Branch
Division of Highways
1549 Mail Service Center
Raliegh, NC 27699-1549

OCT 22 2001

Subject: **RE: Bridge Replacement Projects**

Dear Mr. Gilmore:

Thank you for your letters dated September 26, 2001 regarding the review of nine bridge replacement projects. The North Carolina Division of Emergency Management has reviewed the proposed projects and would like to provide comments to the Department of Transportation.

My staff has reviewed the Flood Insurance Rate Maps (FIRMs) for your project areas. The majority of these projects are located in Special Flood Hazard Areas, also know as the 100-year floodplain. Please ensure that the proposed projects do not cause an increase in the Base Flood Elevation (BFE) in these areas and that they comply with Nation Flood Insurance Program guidelines.

Projects Located in Special Flood Hazard Areas (100-year floodplain)
- B-4009, Bridge No. 33 in Anson County - Zone A
- B-3830, Bridge No. 363 in Columbus County - Zone A
- B-4205, Bridge No. 133 in Montgomery County - Zone A
- B-4273, Bridge No. 37 in Scotland County - Zone A
- B-3908, Bridge No. 246 in Stanly County - Zone A
- B-3909, Bridge No. 99 in Stanly County - Zone A
- B-4276, Bridge No. 33 in Stanly County - Zone A5

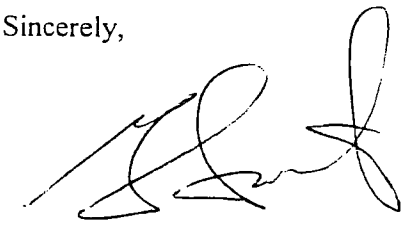
Projects Not Located in Special Flood Hazard Areas (100-year floodplain)
- B-4093, Bridge No. 81 in Cumberland County - Zone B (500-year floodplain)
- B-3680, Bridge No. 2 in Moore County - Zone X (500-year floodplain)

The Division of Emergency Management does not oversee the routing of Emergency Response Units on a day-to-day basis. However, utilizing off-site detour routes has the potential to increase response times of these units, especially if alternate routes are not available. Your agency should contact local emergency management officials or the local representatives responsible for roadways. NCEM would

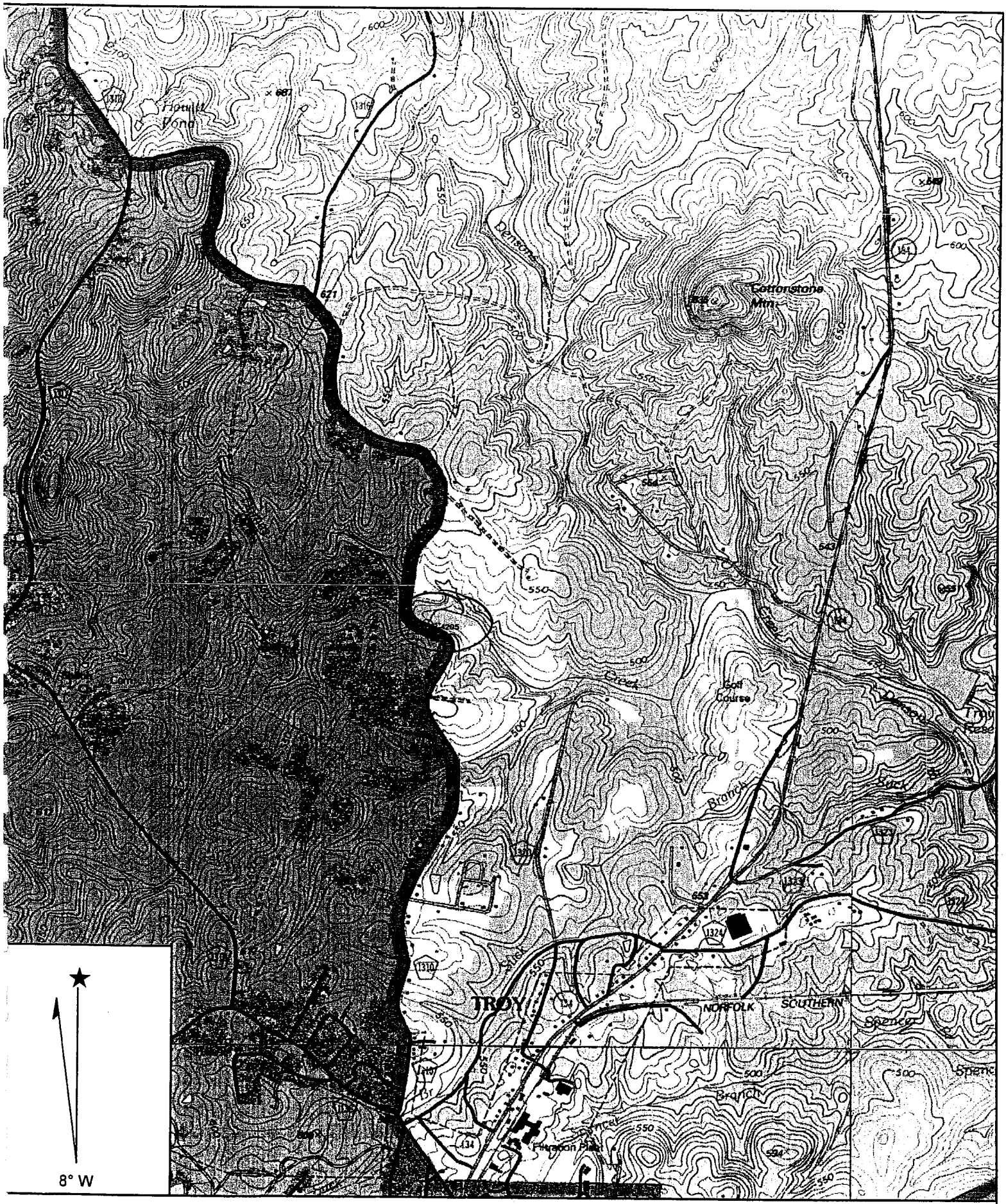
also like to advise that you pay close attention to roadways that have been identified as evacuation routes and the potential impacts your projects may have on evacuation travel.

If you have any further questions or need additional information, please do not hesitate to contact Steve Garrett at (919) 715-8000, extension 349.

Sincerely,

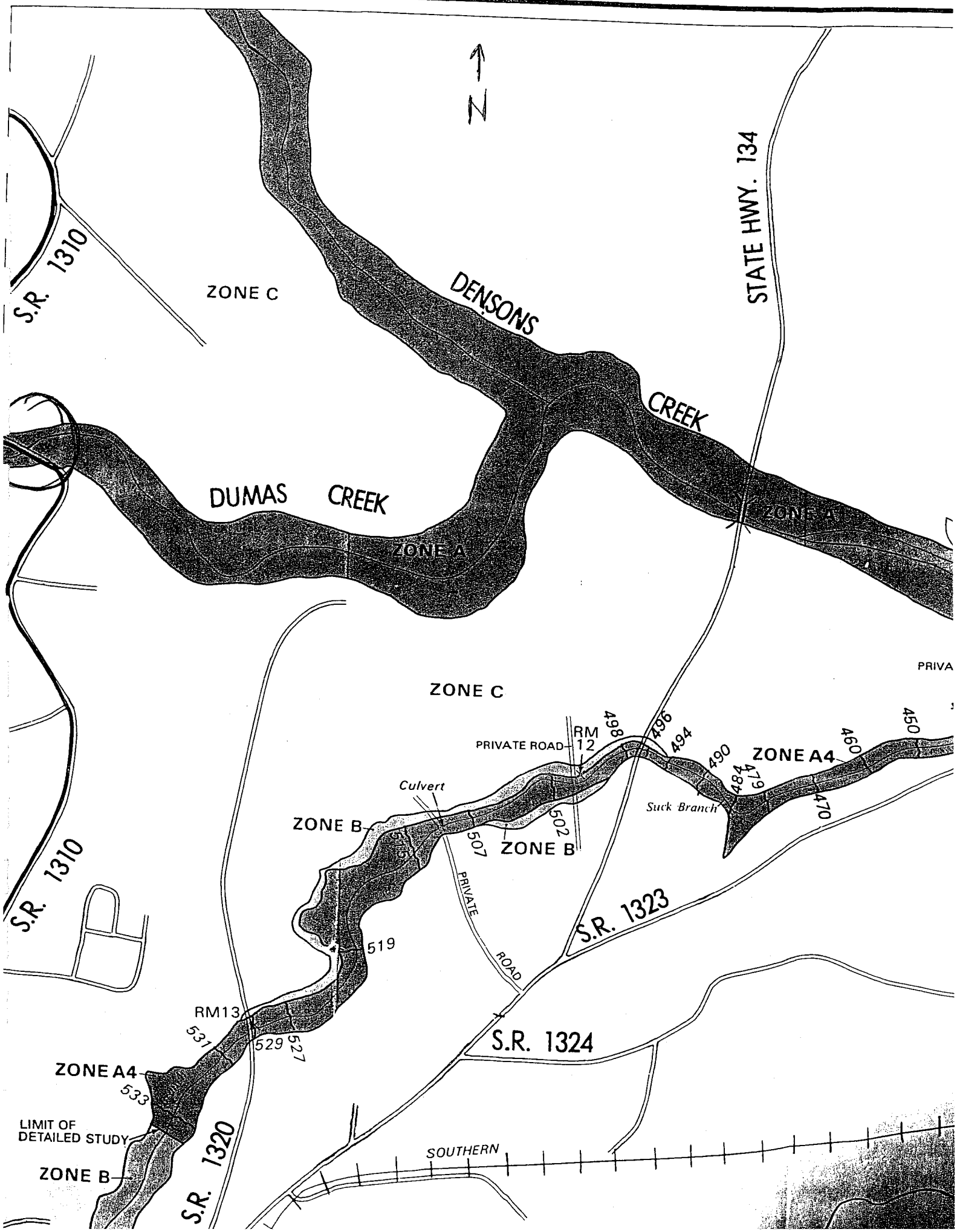


Gavin Smith, Ph.D.
Assistant Director, Hazard Mitigation
North Carolina Division of Emergency Management



Name: LOVEJOY
Date: 10/10/2001
Scale: 1 inch equals 2000 feet

Location: 17 600423 E 3917200 N
Caption: Montgomery County, B-4205
Bridge no. 133 on SR1310 over Dumas Creek. L=68ft, w=18.2ft, yr built 1942


N
S.R. 1310
ZONE C
DENSONS
CREEK
STATE HWY. 134
DUMAS CREEK
ZONE A
ZONE A
ZONE C
PRIVA
RM 12
PRIVATE ROAD
498
496
494
490
484
479
470
460
450
ZONE A4
Culvert
Suck Branch
ZONE B
502
507
ZONE B
S.R. 1310
PRIVATE ROAD
S.R. 1323
519
RM13
531
529
527
S.R. 1324
ZONE A4
533
LIMIT OF
DETAILED STUDY
ZONE B
S.R. 1320
SOUTHERN

to the FLOOD INSURANCE RATE MAP EFFECTIVE shown on this map to determine when actuarial rates apply to tures in the zones where elevations or depths have been lished.

etermine if flood insurance is available in this community, ct your insurance agent, or call the National Flood Insurance am at (800) 638-6620, or (800) 424-8872.

APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MONTGOMERY COUNTY, NORTH CAROLINA

(UNINCORPORATED AREAS)

PANEL 80 OF 175

COMMUNITY-PANEL NUMBER
370336 0080 B

EFFECTIVE DATE:
JUNE 1, 1981

federal emergency management agency
federal insurance administration

MONTGOMERY COUNTY SHERIFF'S OFFICE 911 COMMUNICATIONS

◇

Ron Adams♦ 911 Director ♦ 111 West Main St. ♦ Troy, North Carolina 27371
Phone 910-572-1313 ♦ Fax 910-572-1382

29 April 2003

Michael Penney, PE
NC Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27699-1548

SUBJECT: Replacement of Bridge No. 131 on SR 1310 over Doomas Creek in Montgomery County, TIP Project No. B-4205

Dear Mr. Penney,

Upon review of the vicinity map and proposed off-site detour you recently provided my office regarding bridge replacement project B-4205 in Montgomery County, I find the proposal acceptable. Please, however, provide me with the road closure date at least thirty days ahead of time. That will allow me sufficient time to alert all affected emergency response agencies within the county, enabling them to develop alternate routing contingency plans. I trust the project will not be allowed to languish once begun, so that the detour's duration and its impact on emergency responders may be kept to a minimum.

If I can be of any further service to you, please don't hesitate to contact me.

Sincerely,

Ron Adams

Ron Adams
911 Director
Montgomery County, NC

MONTGOMERY COUNTY SHERIFF'S OFFICE 911 COMMUNICATIONS

Ron Adams♦ 911 Director ♦ 111 West Main St. ♦ Troy, North Carolina 27371
Phone 910-572-1313 ♦ Fax 910-572-1382

10 October 2001

NC Department of Transportation
Research & Development
1549 Mail Service Center
Raleigh, NC 27669-1549

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

Subject: Montgomery County
B-4205, Bridge No. 133 on SR 1310 over Doomas Creek

Reference: Your letter to Mr. Brian Honeycutt, Montgomery County Planning Director, of 26 September, 2001.

Dear: Mr. Gilmore

Mr. Honeycutt has referred to me your solicitation for comment regarding potential impacts to Emergency Response Units relative to the above proposed bridge modification project. Only one of the alternatives being studied for this bridge project will significantly impact local Emergency Response: *Replace Existing Structure on Existing Location, utilize off-site detour.* Each of the other three alternatives will minimally impact such response.

Although SR 1310 is not densely populated north of this bridge, a significant number of residences are in place there. Both Fire and EMS responses for that area originate in Troy, south of the bridge, and use of even the most expeditious off-site detour route creates the potential for significantly longer response times. Although I cannot provide accurate measured mileage figures, I can safely estimate from our local maps that response units will have to travel at least an additional four miles, if not slightly more, to respond to emergencies just north of the bridge. That additional four miles, I might add, is over very narrow, winding, and hilly roads.

I have no idea whether or not such a change in response scenarios is within acceptable limits as defined by your agency for such proposals, but speaking on behalf of our local Emergency Response Units, I would much prefer implementation of one of the less invasive alternatives. Please don't hesitate to contact me with any further questions or comments you might have.

Sincerely,

Ron Adams

Ron Adams
911 Director
Montgomery County, NC

Elno Vance

Montgomery County Planning Department
PO Box 643 Troy, NC
Phone 910-571-0249
Fax 910-576-0043

October 10, 2001

NC Department of Transportation
Research & Development
1549 Mail Service Center
Raleigh, NC 27669-1549

Attn: William G. Gilmore, P.E. Manager
Project Development and
Environmental Analysis Branch

Subject: Montgomery County
B-4205, Bridge No. 133 on SR 1310 over Domas Creek

Reference: Letter to Brian Huneycutt, Montgomery County Planning Director, dated September 26, 2001.

Dear: Mr. Gilmore

I received your letter today in regard to the above noted project. At this time, the Montgomery County Planning Department has no permits or written approvals necessary in order to pursue the study, or begin work on the project.

Review of the proposed location has noted that this project is not located within a watershed district. You will however, need to contact the Land Quality division of the North Carolina Department of Environment and Natural Resources. There may be permits and erosion control measures required through this agency in order to construct any impoundment within the immediate proximity of this perennial stream. You may reach that department at (910) 486-1541.

If there are any further questions regarding this project, please feel free to contact me.

Sincerely,

Brian Huneycutt
Planning Director
Montgomery County, NC