

CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	B-4780
W.B.S. No.	38551.1.1
Federal Project No.	BRZ-1111(8)

A. Project Description:

The purpose of this project is to replace Montgomery County Bridge No. 22 on SR 1111 (Lilly's Bridge Road) over Richland Creek. The replacement structure will consist of a double barrel, 12-foot wide by 9-foot high reinforced concrete box culvert. The culvert size is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing grade.

The approach roadway will extend approximately 300 feet on both ends of the new box culvert. The approaches will be widened to include a 24-foot pavement width providing two 12-foot lanes. Six-foot shoulders (four-feet paved, two-feet turf) will be provided on each side. Shoulders will be nine-foot shoulders where guardrail is included. The roadway will be designed as a Rural Local Route using Subregional Tier guidelines with a 55 mile per hour design speed.

Traffic will be detoured off-site during construction (see Figure1).

B. Purpose and Need:

NCDOT Bridge Management Unit records indicate Bridge No. 22 has a sufficiency rating of 32.4 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to superstructure condition appraisal of 5 out of 9 and a substructure condition appraisal of 5 out of 9 according to Federal Highway Administration (FHWA) standards and therefore eligible for FHWA's Highway Bridge Program. The bridge also meets the criteria for functionally obsolete due to structural appraisal of 2 out of 9 and a deck geometry appraisal of 4 out of 9.

The superstructure and substructure of Bridge No. 22 have timber elements that are forty-nine years old. Timber components have a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. Rehabilitation of a timber structure is generally practical only when a few elements are damaged or prematurely deteriorated. However, past a certain degree of deterioration, most timber elements become impractical to maintain and upon eligibility are programmed for replacement. Timber components of Bridge No. 22 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities; therefore, the bridge is approaching the end of its useful life.

C. Proposed Improvements:

Circle one or more of the following Type II improvements which apply to the project:

1. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).
 - a. Restoring, Resurfacing, Rehabilitating, and Reconstructing pavement (3R and 4R improvements)
 - b. Widening roadway and shoulders without adding through lanes
 - c. Modernizing gore treatments
 - d. Constructing lane improvements (merge, auxiliary, and turn lanes)
 - e. Adding shoulder drains
 - f. Replacing and rehabilitating culverts, inlets, and drainage pipes, including safety treatments
 - g. Providing driveway pipes
 - h. Performing minor bridge widening (less than one through lane)
 - i. Slide Stabilization
 - j. Structural BMP's for water quality improvement
2. Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.
 - a. Installing ramp metering devices
 - b. Installing lights
 - c. Adding or upgrading guardrail
 - d. Installing safety barriers including Jersey type barriers and pier protection
 - e. Installing or replacing impact attenuators
 - f. Upgrading medians including adding or upgrading median barriers
 - g. Improving intersections including relocation and/or realignment
 - h. Making minor roadway realignment
 - i. Channelizing traffic
 - j. Performing clear zone safety improvements including removing hazards and flattening slopes
 - k. Implementing traffic aid systems, signals, and motorist aid
 - l. Installing bridge safety hardware including bridge rail retrofit
3. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings.
 - a. Rehabilitating, reconstructing, or replacing bridge approach slabs
 - b. Rehabilitating or replacing bridge decks
 - c. Rehabilitating bridges including painting (no red lead paint), scour repair, fender systems, and minor structural improvements
 - d. Replacing a bridge (structure and/or fill)
4. Transportation corridor fringe parking facilities.
5. Construction of new truck weigh stations or rest areas

6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.
7. Approvals for changes in access control.
8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.
9. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.
10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.
11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.
12. Acquisition of land for hardship or protective purposes, advance land acquisition loans under section 3(b) of the UMT Act. Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.
13. Acquisition and construction of wetland, stream and endangered species mitigation sites.
14. Remedial activities involving the removal, treatment or monitoring of soil or groundwater contamination pursuant to state or federal remediation guidelines.

D. Special Project Information:

The estimated costs, based on 2013 prices, are as follows:

Structure (Culvert)	\$ 151,000
Roadway Approaches	\$ 188,000
Structure Removal	\$ 25,000
Misc. & Mob.	\$ 89,000
Eng. & Contingencies	\$ 92,000
Total Construction Cost	\$ 545,000
Right-of-way Costs	\$ 35,000
Utility Costs	\$ 74,500
Total Project Cost	\$ 654,500

Estimated Traffic:

Current	-	1,310 vpd
Year 2030	-	2,000 vpd
TTST	-	3%
Dual	-	8%

Accidents: Traffic Engineering has evaluated a recent ten-year period and found nine accidents occurring near the project.

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

Pedestrian and Bicycle Accommodations: This portion of SR 1111 is along the state designated Sandhills bicycle route. To accommodate the bicycle traffic, a four-foot paved shoulder will be provided on both sides of the road.

Bridge Demolition: Bridge No. 22 is constructed entirely of timber and steel and should be possible to remove with no resulting debris in the water based on standard demolition practices.

Alternatives Discussion:

No Build – The no build alternative would result in eventually closing the road, which is unacceptable given the volume of traffic served by SR 1111.

Rehabilitation – The bridge was constructed in 1964 and the timber materials within the bridge are reaching the end of their useful life. Rehabilitation would require replacing the timber components, which would constitute effectively replacing the bridge.

Offsite Detour – Bridge No. 22 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The offsite detour for this project would include SR 1111, US 73, SR 1112, and SR 1111. The majority of traffic on the road is through traffic. The detour for the average road user would result in 7 minutes additional travel time (5.4 miles additional travel). Up to a six-month duration of construction is expected on this project.

Based on the Guidelines, the criteria above indicate that on the basis of delay alone, the detour is acceptable. NCDOT Division 8 has indicated the condition of all roads, bridges and intersections on the offsite detour are acceptable without improvement and concurs with the use of the detour.

Onsite Detour – An onsite detour was not evaluated due to the presence of an acceptable offsite detour.

Staged Construction – Staged construction was not considered because of the availability of an acceptable offsite detour.

New Alignment – Given that the alignment for SR 1111 is acceptable, a new alignment was not considered as an alternative.

Structure Type: The current structure is a bridge built in 1964 and has a drainage area of 2.9 square miles. The reason for building a bridge was not because a culvert would not work but because the design, materials and labor were not practical in the time when this structure was built. Based on the drainage area and design discharges, a 2 @ 12-foot wide by 9-foot high reinforced concrete box culvert was determined to be adequate from a hydraulics standpoint. The culvert will be designed such that the slope, low flow velocities and low flow channel designs are consistent with the existing stream. Because culverts generally cost less, require less maintenance throughout their service life and last longer than bridges, a culvert is the preferred structure type.

Hydraulics Concerns: The stream crossing is within the critical area for a hazardous spill basin. Due to the location of this road being parallel to NC 73, truck traffic would be low therefore no basins anticipated.

Federal Energy Regulation Commission (FERC). Lake Tillery is the storage reservoir for the Tillery Hydroelectric Plant, part of the Yadkin-Pee Dee River Hydroelectric Project. The bridge is at the tip of the FERC boundary. Per FERC regulations, “the licensees will determine if there is any project impact and if the licensees can allow the construction..., under which the licensees have delegated authority to allow certain activities without coming to the Commission for permission.” Progress Energy (Carolina Power and Light) which merged into Duke Energy Progress owns land on both sides of the bridge and is the “licensee”. Correspondence and communication with the licensee resulted in the determination that the project would have no impact and that the NCDOT be allowed to construct the bridge.

Other Agency Comments:

The **N.C. Wildlife Resource Commission** and **U.S. Fish & Wildlife Service** in standardized letters provided a request that they prefer any replacement structure to be a spanning structure.

Response: See discussion of Structure Type in previous section

The **US Environmental Protection Agency** indicated the preference for a replacement structure that spans the waterway.

Response: See discussion of Structure Type in previous section

Due to the presence within the project area of surface waters classified as Water Supply Critical Area, the **N.C. Division of Water Quality** provided a request that NCDOT strictly adhere to NC regulations entitled “Design Standards in Sensitive Watersheds” throughout design and construction of the project

Response: DOT will adhere to “Design Standards in Sensitive Watersheds”

Public Involvement:

A letter was sent by the Location & Surveys Unit to all property owners affected directly by this project. Property owners were invited to comment. No comments have been received to date. Accordingly, a Citizen's Information Workshop was determined unnecessary.

E. Threshold Criteria

The following evaluation of threshold criteria must be completed for Type II actions

<u>ECOLOGICAL</u>	<u>YES</u>	<u>NO</u>
(1) Will the project have a substantial impact on any unique or important natural resource?	<input type="checkbox"/>	<u>X</u>
(2) Does the project involve habitat where federally listed endangered or threatened species may occur?	<input checked="" type="checkbox"/>	_____
(3) Will the project affect anadromous fish?	<input type="checkbox"/>	<u>X</u>
(4) If the project involves wetlands, is the amount of permanent and/or temporary wetland taking less than one-tenth (1/10) of an acre and have all practicable measures to avoid and minimize wetland takings been evaluated?	<u>X</u>	<input type="checkbox"/>
(5) Will the project require the use of U. S. Forest Service lands?	<input type="checkbox"/>	<u>X</u>
(6) Will the quality of adjacent water resources be adversely impacted by proposed construction activities?	<input type="checkbox"/>	<u>X</u>
(7) Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)?	<input type="checkbox"/>	<u>X</u>
(8) Will the project require fill in waters of the United States in any of the designated mountain trout counties?	<input type="checkbox"/>	<u>X</u>
(9) Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?	<input type="checkbox"/>	<u>X</u>

PERMITS AND COORDINATION

	<u>YES</u>	<u>NO</u>
(10) If the project is located within a CAMA county, will the project significantly affect the coastal zone and / or any "Area of Environmental Concern" (AEC)?	<input type="checkbox"/>	<u>N/A</u>
(11) Does the project involve Coastal Barrier Resources Act resources?	<input type="checkbox"/>	<u>X</u>
(12) Will a U. S. Coast Guard permit be required?	<input type="checkbox"/>	<u>X</u>
(13) Could the project result in the modification of any existing regulatory floodway?	<input checked="" type="checkbox"/>	<u> </u>
(14) Will the project require any stream relocations or channel changes?	<input type="checkbox"/>	<u>X</u>

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES

	<u>YES</u>	<u>NO</u>
(15) Will the project induce substantial impacts to planned growth or land use for the area?	<input type="checkbox"/>	<u>X</u>
(16) Will the project require the relocation of any family or business?	<input type="checkbox"/>	<u>X</u>
(17) Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?	<input type="checkbox"/>	<u>X</u>
(18) If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	<u>X</u>	<input type="checkbox"/>
(19) Will the project involve any changes in access control?	<input type="checkbox"/>	<u>X</u>
(20) Will the project substantially alter the usefulness and / or land use of adjacent property?	<input type="checkbox"/>	<u>X</u>
(21) Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<u>X</u>
(22) Is the project included in an approved thoroughfare plan and / or Transportation Improvement Program (and is, therefore, in conformance with the Clean Air Act of 1990)?	<u>X</u>	<input type="checkbox"/>

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|------|---|--------------------------|--------------------------|
| (23) | Is the project anticipated to cause an increase in traffic volumes? | <input type="checkbox"/> | <u>X</u> |
| (24) | Will traffic be maintained during construction using existing roads , staged construction, or on-site detours? | <u>X</u> | <input type="checkbox"/> |
| (25) | If the project is a bridge replacement project, will the bridge be replaced at its existing location (along the existing facility) and will all construction proposed in association with the bridge replacement project be contained on the existing facility? | <u>X</u> | <input type="checkbox"/> |
| (26) | Is there substantial controversy on social, economic, or environmental grounds concerning the project? | <input type="checkbox"/> | <u>X</u> |
| (27) | Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project? | <u>X</u> | <input type="checkbox"/> |
| (28) | Will the project have an "effect" on structures / properties eligible for or listed on the National Register of Historic Places? | <input type="checkbox"/> | <u>X</u> |
| (29) | Will the project affect any archaeological remains which are important to history or pre-history? | <input type="checkbox"/> | <u>X</u> |
| (30) | Will the project require the use of Section 4(f) resources (public parks, recreation lands, wildlife and waterfowl refuges, historic sites, or historic bridges, as defined in Section 4(f) of the U. S. Department of Transportation Act of 1966)? | <input type="checkbox"/> | <u>X</u> |
| (31) | Will the project result in any conversion of assisted public recreation sites or facilities to non-recreation uses, as defined by Section 6(f) of the Land and Water Conservation Act of 1965, as amended? | <input type="checkbox"/> | <u>X</u> |
| (32) | Will the project involve construction in, across, or adjacent to a river designated as a component of or proposed for inclusion in the National System of Wild and Scenic Rivers? | <input type="checkbox"/> | <u>X</u> |

F. Additional Documentation Required for Unfavorable Responses in Part E

Response to Question 2:

The Natural Resources Technical Report (NRTR) listed two federally listed endangered or threatened species that have habitat present, Schweinitz's sunflower and Smooth coneflower.

Schweinitz's sunflower Biological Conclusion: No Effect

A plant-by-plant survey was performed within the NRTR project study area on October 1, 2008. The survey was conducted by North Carolina Department of

Transportation (NCDOT) biologists Sara Easterly, Jim Mason, Erica McLamb, and Deanna Riffey and took approximately 1.5 person hours to complete. No Schweinitz's sunflower individuals were observed, but habitat was present within the project study area in the form of forest edges and roadside beyond the mowed shoulder. In addition to the survey, a review of the North Carolina Natural Heritage Program (NCNHP) database (GIS shapefiles last updated August 28, 2008) revealed no known occurrences of this species within 1.0 mile of the project.

Smooth coneflower Biological Conclusion: No Effect

A plant-by-plant survey was performed within suitable habitat on June 16, 2009. Suitable habitat is present in the form of forest edges along roadsides beyond the mowed shoulder. The survey was conducted by North Carolina Department of Transportation (NCDOT) biologists Jim Hauser and Lindsey Riddick and took approximately 1.5 person hours to complete. No smooth coneflower individuals were observed. In addition to the survey, a review of the North Carolina Natural Heritage Program (NCNHP) database (GIS shapefiles last updated August 28, 2008) revealed no known occurrences of this species within 1.0 mile of the project.

Response to Question 13:

Montgomery County is a participant in the National Flood Insurance Regular Program, administered by the Federal Emergency Management Agency (FEMA). The Hydraulic Unit will coordinate with the Federal Emergency Management Agency (FEMA) to determine if a Conditional Letter of Map Revision (CLOMR) and a subsequent final Letter of Map Revision (LOMR) are required for the project. If required, the Division will submit sealed as-built construction plans to the Hydraulics Unit upon project completion certifying the project was built as shown on construction plans.

G. CE Approval

TIP Project No.	<u>B-4780</u>
W.B.S. No.	<u>38551.1.1</u>
Federal Project No.	<u>BRZ-1111(8)</u>

Project Description:

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The approach roadway will extend approximately 300 feet on both ends of the new box culvert. The approaches will be widened to include a 24-foot pavement width providing two 12-foot lanes. Six-foot shoulders (four-foot paved, two-foot turf) will be provided on each side. Shoulders will be nine-foot shoulders where guardrail is included. The roadway will be designed as a Rural Local Route using Subregional Tier guidelines with a 55 mile per hour design speed.

Traffic will be detoured off-site during construction (see Figure1).

Categorical Exclusion Action Classification:

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

Approved:

10-14-13 [Signature]
Date Bridge Project Development Engineer
Project Development & Environmental Analysis Unit

10-14-13 [Signature]
Date Project Engineer
Project Development & Environmental Analysis Unit

10/14/13 [Signature]
Date Project Planning Engineer
Project Development & Environmental Analysis Unit

10/15/13 [Signature]
Date John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

PROJECT COMMITMENTS

**Montgomery County
Bridge No. 22 on SR 1111
Over Richland Creek
Federal Aid Project No. BRZ-1111(8)
W.B.S. No. 38551.1.1
T.I.P. No. B-4780**

Roadway Design Unit

The bridge is located along a state bicycle route (Sandhills Section) a four-foot wide paved shoulders is needed on both sides of the road for at least one hundred feet on either side of the approach road.

Project Development and Environmental Analysis

As the design and project progresses, coordination is needed with Duke Energy to determine if the project will require any involvement or permit from the Federal Energy Regulation Commission (FERC). Per FERC regulations "the licensees will determine if there is any project impact and if the licensees can allow the construction..., under which the licensees have delegated authority to allow certain activities without coming to the Commission for permission".

Division Eight, Resident Engineer's Office

As requested by N.C. Division of Water Quality NCDOT will strictly adhere to NC regulations entitled "Design Standards in Sensitive Watersheds".

Division Eight, Resident Engineer's Office – Offsite Detour

Montgomery County Schools will be contacted at least one month prior to road closure to adequately reroute school buses.

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

Division Eight – As Built Construction Plans

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Hydraulics Unit – FEMA Coordination

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

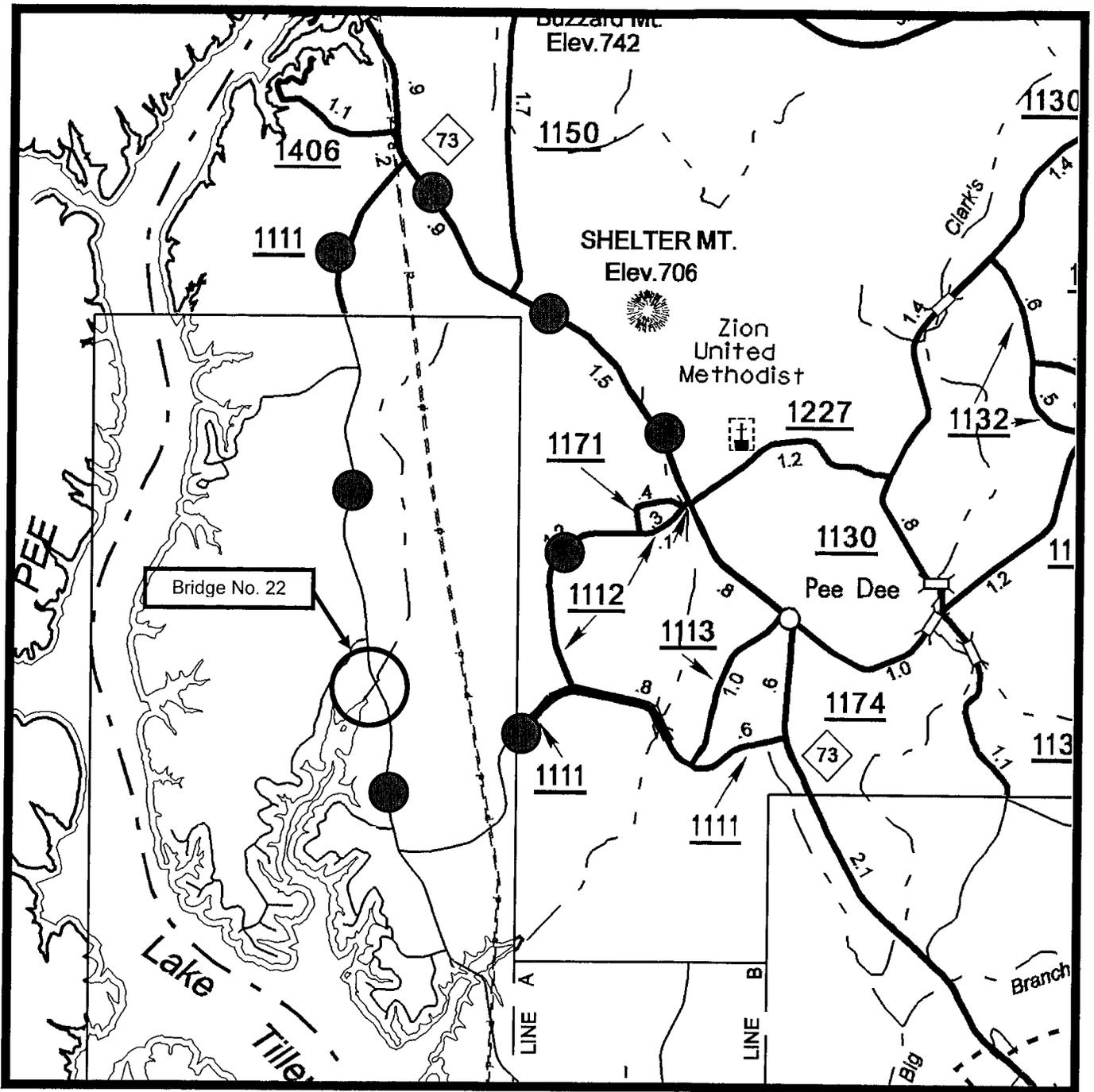
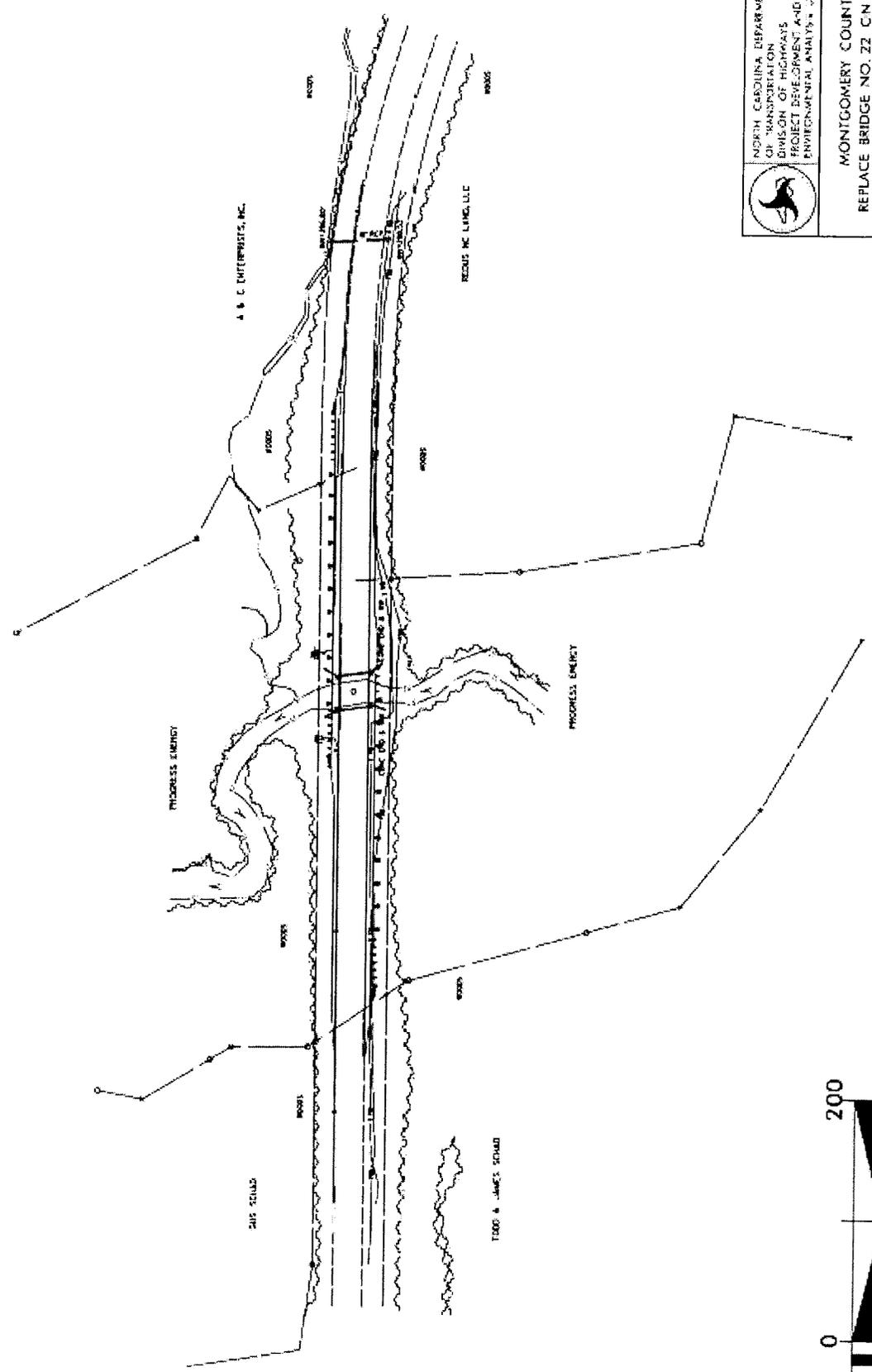


FIGURE 1

OFFSITE DETOUR

B-4780

Replace Bridge No. 22 on SR 1111 over Richland Creek
Montgomery County



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

MONTGOMERY COUNTY
REPLACE BRIDGE NO. 22 OVER RICHLAND CREEK
B-4780

FIGURE 2

