CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	B-4440
W.B.S. No.	38367.1.1
Federal Project No.	BRZ-1349(1)

A. <u>Project Description</u>:

The purpose of this project is to replace Bridge No. 163 on SR 1349 (Bridger Road) over Mulberry Branch in Brunswick County. Bridge No. 163 is 41 feet long. The replacement structure will be a bridge approximately 85 feet long providing 46 feet clear deck width. The bridge will include two 12-foot lanes and 10-9" foot offsets to accommodate bicycles and/or future sidewalks and bike safe rails. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The roadway will be designed as a Rural Local Route using Sub Regional Tier Guidelines with a 40 mile per hour design speed.

The eastern approach roadway will extend approximately 250 feet from the end of the new bridge. The approaches will be widened to include two 12-foot lanes and 4-foot paved shoulders. Beyond the paved shoulders an additional 4-foot grass shoulders will be provided on each side (7-foot shoulders where guardrail is included).

The western approach to the new bridge will extend approximately 154 feet and expands from two 12-foot lanes on the bridge to tie into a cross section including an auxiliary right turn lane and through lane in the westbound direction, a center turn lane and a through lane in the eastbound direction as shown in Figure 2. Four-foot paved shoulders will be included on each side with an addition 4-foot grassed shoulder (7-foot shoulders where guardrail is included)

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

B. <u>Purpose and Need</u>:

NCDOT Bridge Management Unit records indicate Bridge No. 163 has a sufficiency rating of 6 out of a possible 100 for a new structure.

The bridge is considered structurally deficient due to substructure condition appraisal of 3 out of 9 according to Federal Highway Administration (FHWA) standards. The bridge also meets the criteria for functionally obsolete due to deck geometry appraisal of 2 out of 9.

The substructure of Bridge No. 163 has timber elements that are sixty-two 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. 163 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.

Additional Bridge No. 163 carries 3,000 vehicles per day with 6,300 vehicles per day projected for the future. The substandard deck width is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations.

C. <u>Proposed Improvements</u>:

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
 - 1. 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
 - Rehabilitating or replacing bridge decks b.
 - Rehabilitating bridges including painting (no red lead paint), scour c.



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

D. Special Project Information:

The estimated costs, based on 2012 prices, are as follows:

Structure	\$ 319,000
Roadway Approaches	311,000
Structure Removal	26,000
Misc. & Mob.	51,000
Eng. & Contingencies	93,000
Total Construction Cost	\$ 800,000
Right-of-way Costs	66,000
Right-of-way Utility Costs	79,000
Total Project Cost	\$ 945,000

Estimated Traffic:

-	3000 vpd
-	6300 vpd
-	1%
-	6%
	- - -

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

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

Pedestrian and Bicycle Accommodations: The City of Shallotte has agreed that the bridge should allow enough shoulder width to provide for bicyclists and pedestrians. Although the location does not currently warrant sidewalks, a sidewalk can be retrofitted to the bridge in the future. The bridge will be fitted with bike safe rails and four foot paved shoulders

Bridge Demolition: Bridge No. 163 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 Bridgers Road.

Rehabilitation – The bridge was constructed in 1952 and the timber materials within the substructure of the bridge are reaching the end of their useful life. Replacement of the timber substructure would be complicated and expensive and would not address geometry problems on the existing bridges. Rehabilitation is not a prudent alternative.

Offsite Detour – Bridge No. 163 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. <u>NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects</u> 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 NC 130 (Whiteville Rd NW), Business 17 (Main St.) and SR 1349 (Mulberry St.). The majority of traffic on the road is through traffic. The detour for the average road user would result in 1.5 minutes additional travel time (.7 miles additional travel). Up to 12-month duration of construction is expected on this project.

Brunswick County Emergency Services along with Brunswick County Schools Transportation have indicated that the detour is acceptable. The NCDOT Division 3 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. Based on these facts and the delay being within the acceptable range on the <u>Guidelines</u> the offsite detour is the preferred alternative.

Onsite Detour and Staged Construction – Neither an onsite detour nor staged construction was evaluated due to the presence of an acceptable offsite detour.

New Alignment – Given that the alignment for Bridgers Road (SR 1349) is acceptable a new alignment was not considered as an alternative.

Other Agency Comments:

The N.C. Wildlife Resource Commission, the N.C. Division of Water Quality, the Army Corps of Engineers, and N.C. Marine Fisheries have indicated no special concerns for this project. The Division of Coastal Management did indicate that public trust waters are present but there were no special concerns as it related to bridge replacement.

Town of Shallotte

NCDOT and the Town of Shallotte have taken into consideration that the Thoroughfare Plan of 2002 called for a four lane cross section for Bridgers Road but that current development and traffic volume do not warrant more than a 2 lane cross section. The proposed cross section does include width enough to allow for bicycle and pedestrian accommodations. The Town is satisfied with the cross section. The Town did not feel as though public involvement would be necessary beyond the contacts made by NCDOT by Location & Surveys.

E. <u>Threshold Criteria</u>

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

ECOLOGICAL		YES	<u>NO</u>
(1)	Will the project have a substantial impact on any unique or important natural resource?		X
(2)	Does the project involve habitat where federally listed endangered or threatened species may occur?		_X
(3)	Will the project affect anadramous fish?		X
(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?	_X*	
(5)	Will the project require the use of U.S. Forest Service lands?		X
(6)	Will the quality of adjacent water resources be adversely impacted by proposed construction activities?		X
(7)	Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)?		X
(8)	Will the project require fill in waters of the United States in any of the designated mountain trout counties?		X
(9)	Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?		_X
PERM	IITS AND COORDINATION	YES	<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)?		X*
(11)	Does the project involve Coastal Barrier Resources Act resources?		_X
(12)	Will a U. S. Coast Guard permit be required?	x	
(13)	Could the project result in the modification of any existing regulatory floodway?	x	

(14)	Will the project require any stream relocations or channel changes?		X
<u>SOCI</u>	AL, 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?		X
(16)	Will the project require the relocation of any family or business?		X
(17)	Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?		_X
(18)	If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	X	
(19)	Will the project involve any changes in access control?		X
(20)	Will the project substantially alter the usefulness and/or land use of adjacent property?		_X
(21)	Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?		X
(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> </u>	
(23)	Is the project anticipated to cause an increase in traffic volumes?		<u> </u>
(24)	Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	X	
(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 according with the		
	and will all construction proposed in association with the bridge replacement project be contained on the existing facility?	X	
(26)	Is there substantial controversy on social, economic, or environmental grounds concerning the project?		X
(27)	Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	<u>X</u>	
(28)	Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?		X



F. Additional Documentation Required for Unfavorable Responses in Part E

Response to Question 4: While there is a large wetland system in the area, the total amount impacted based on current project footprint is 0.02 acres; well below the $1/10^{\text{th}}$ acre threshold.

Response to Question 10: This project contains an AEC – Public Trust Waters. The function of the Public trust waters will not be significantly affected since the new bridge will not reduce the horizontal and vertical navigable clearance.

- **Response to Question 12:** This project is at the edge of known tidal influence with no known commercial use and limited depth will likely receive either an Advanced Approval or an Exemption from the United States Coast Guard. The Natural Environment Section will pursue continued coordination with the USCG during the design and permitting processes.
- **Response to Question 13:** Brunswick County is a participant in the National Flood Insurance Regular Program. Mulberry Branch is included in a detailed flood study, having a regulated 100-year floodway. The Hydraulics 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.	B-4440
W.B.S. No.	38367.1.1
Federal Project No.	BRZ-1349(1)

Project Description:

The purpose of this project is to replace Bridge No. 163 on SR 1349 (Bridger Road) over Mulberry Branch in Brunswick County. Bridge No. 163 is 41 feet long. The replacement structure will be a bridge approximately 85 feet long providing 46 feet clear deck width. The bridge will include two 12-foot lanes and 10-9" foot offsets to accommodate bicycles and/or future sidewalks and bike safe rails. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

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

Categorical Exclusion Action Classification:

TYPE II(A) TYPE II(B)

Approved:

Bridge Project Development Engineer Project Development & Environmental Analysis Unit

Date

Project Engineer

Project Development & Environmental Analysis Unit

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

PROJECT COMMITMENTS:

Brunswick County Bridge No. 163 on SR 1349 Over Mulberry Swamp Federal Aid Project No. BRZ-1349(1) W.B.S. No. 38367.1.1 T.I.P. No. B-4440

Division Three Construction, Resident Engineer's Office – Offsite Detour

One month prior to construction the division will alert Brunswick County Schools Transportation and Brunswick County Emergency Services regarding the pending road closure.

Roadway Design/Structure Design – Space allowed for Bicycles and Future Sidewalks

Space will be allowed on both sides of the proposed bridge for bicycles and the addition of future sidewalks.

The bridge will be fitted with rails that are appropriate for bicycles at present and will be appropriate for pedestrians in the future.

Natural Environment Section – Anticipate USCG Advanced Approval

This project is at the edge of known tidal influence with no known commercial use and limited depth will likely receive either an Advanced Approval or an Exemption from the United States Coast Guard. The Natural Environment Section will pursue continue coordination with the USCG during the design and permitting processes.

Hydraulic Unit – FEMA Coordination

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

Division Construction-FEMA

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









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

BRUNSWICK COUNTY Replace Bridge No. 163 on SR 1349 over Mulberry Branch B-4440

Figure 1

Coastal Cinema

A.

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Biloors Rd. SR 13497 Lowes Home Improvement

111

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TIP PROJECT B-4440 END -L- POT STA 21+75.0

44444 F

SCALE



200

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

BRUNSWICK COUNTY REPLACE BRIDGE NO. 163 ON SR 1349 OVER MULBERRY SWAMP B-4440

FIGURE 2

			Proje	ct Tracking No. (Internal Use)
				10-01-0005
NO SURVEY	REQUIRED FORM			
PROJECT INF	ORMATION			
Project No:	B-4440	County:	Brunswick	
WBS No:	38367.1.1	Document:	CE	
F.A. No:	BRZ-1349(1)	Funding:	State	X Federal
Federal (USACE	E) Permit Required?	Yes 🗌 No Permit	t Type:	
	•			

Project Description:

Replace Bridge No. 163 over Mulberry Swamp on SR 1349 (Bridger Road)

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions: Review of HPO quad maps, historic designations roster, and indexes was undertaken on 14 January 2010. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects. The CRS also reviewed the Brunswick County GIS / tax administration records, accessed online on 14 January 2010, which showed no properties over 50 years of age within the APE for this project.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The Shallotte USGS Quadrangle Map (1990) shows no structures within the APE for this project. Brunswick County tax records list the three properties located within the APE for this project as Coastal Cinema, Lowe's Home Improvement Center, and a house constructed in 1996.

FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL NO SURVEY REQUIRED – HISTORIC ARCHITECTURE

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			Proj	ect Tracking No. (Internal Use)
				10-01-0005
NO SURVE	Y REQUIRED FORM			
PROJECT IN	FORMATION		<u>de</u>	
Project No:	B-4440	County:	Brunswick	
WBS No:	38367.1.1	Document;	CE	
F.A. No:	BRZ-1349(1)	Funding:	State	🛛 Federal
Federal (USACE) Permit Required? 🛛 🕅	Yes 🗌 No Permit	Type:	

Project Description:

NCDOT intends to replace the two-lane, 24-foot wide, Bridge No. 163 over Mulberry Swamp on SR 1349 (Bridger Road), because it has been determined to be structurally deficient. Currently the structure possesses 18-foot wide approach ways with 6-foot wide unstable shoulders. The proposed replacement would be on the existing alignment and largely within existing ROW. The APE for this project is estimated at 1.7 acres (roughly .7 hectares).

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

A review of the site maps and files at the Office of State Archaeology was undertaken on January 7, 2010. No previously recorded archaeological resources were recorded in the project vicinity; however, a number of similar areas close to the coat are believed to possess high probability for archaeological resources. It was determined that this project area should be subject to reconnaissance and possible intensive survey once a preliminary design was available. Reconnaissance investigations were carried out on September 8, 2010. No further investigation is required for the bridge replacement as currently proposed; thios project should be considered Section 106 and NCGS 121-12(a) compliant. Should the project plans change further review will be required.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The proposed replacement for Bridge No. 163 would be placed on the existing alignment and largely within existing ROW. Proposed cut/fill lines for the bridge approaches are located within areas already previously disturbed by nearby development, the power line easement, or the original construction of SR 1349. According to soil information recorded or Brunswick County, roughly two-thirds of the project area falls within mapped areas of Dorovan Muck soils.

SUPPORT DOCUMENTATION

See attached: Detail of the Shallote, NC (1990) 7.5-minute topographic map; Location map; copy of preliminary plans; project photos; NRCS Web Soil Survey information (http://websoilsurvey.nrcs.usda.gov/app/) for Brunswick County.

FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL NO SURVEY REQUIRED

ARCHAEOLOGY

HISTORIC ARCHITECTURE

(CIRCLE ONE)

09-29-10

NCDOT Cultural Resources Specialist No Survey Required "form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement NCDOT Archaeology & Historic Architecture Groups

Date