

NCDOT PROGRAMMATIC CATEGORICAL EXCLUSION (PCE)  
ACTION CLASSIFICATION FORM

TIP Project No.	<u>B-5417</u>
WBS Element	<u>45450.1.1</u>
Federal Project No.	<u>BRZ-0154(3)</u>

A. Project Description:

The purpose of this project is to replace Dare County Bridge No. 17 on South Dogwood Trail over Snow Goose Canal in the Town of Southern Shores (see **Figures 1 - 4**). Bridge No. 17 is 90 feet long (three 30-foot spans). The replacement structure will be a bridge approximately 110 feet long (two 30-foot spans and a 50-foot span) providing a minimum 30 feet clear deck width. The bridge will include two 11-foot lanes (one in each direction) and a five-foot multi-use (bicycle and pedestrian) path on one side. 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 approach roadway will extend approximately 130 feet from the north end of the new bridge and 120 feet from the south end of the new bridge, tying into the existing pavement. The west side of the roadway will be widened approximately 1.5 feet, and the east side of the roadway will be widened approximately 6.5 feet to accommodate the five-foot multi-use path. A five-foot full-depth paved asphalt shoulder will be provided on the east side of the roadway for a short distance near the bridge. The roadway will be designed as a Rural Local Route with a 30 mile per hour design speed. The typical section and preliminary roadway design are included in **Figures 5 and 6**. Traffic will be detoured off-site during construction (see **Figure 1**).

B. Purpose and Need:

NCDOT Bridge Management Unit records indicate Bridge No. 17 has a sufficiency rating of 35.09 (in 2012) out of a possible 100 for a new structure.

The bridge is considered functionally obsolete due to its structural condition (Item 67, appraisal of 3 out of 9) according to Federal Highway Administration (FHWA) standards and therefore eligible for FHWA's Highway Bridge Program.

The superstructure and substructure of Bridge No. 17 have timber elements that are forty-three years old. Timber components have a typical life expectancy between 40 and 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. 17 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.

Components of both the concrete superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed with maintenance activities. Several concrete components are showing spall with exposed rebar. The bridge is approaching the end of its useful life, and replacement of the bridge will result in safer traffic operations.

Bridge No. 17 carries approximately 400 vehicles per day (interpolated), with 7% trucks (500 vpd estimated in 2025). The actual average daily traffic volume likely is higher during the summer with large numbers of tourists visiting Southern Shores.

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C. Proposed Improvements –

**Circle one or more of the following Type I activities:**

1. Non-construction activities (program activities).
2. Approval of utility installations along or across a transportation facility.
3. Construction of bicycle and pedestrian lanes, paths, and facilities.
4. Activities included in the State's "highway safety plan" under 23 USC 402 (programs administered by the Division of Motor Vehicles).
5. Transfer of Federal lands pursuant to 23 USC 317 when the subsequent action is not a FHWA action.
6. The installation of noise barriers or alterations to existing publicly owned buildings to provide for noise reduction.
7. Landscaping.
8. Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices.
9. Emergency repairs under 23 USC 125 (Governor Declared Emergency).
10. Acquisition of scenic easements.
11. Determination of payback under 23 CFR Part 480 for property previously acquired with federal-aid participation.
12. Improvements to existing rest areas and truck weigh stations.
13. Ridesharing activities.
14. Bus and Rail car rehabilitation.
15. Alterations to facilities or vehicles in order to make them accessible for elderly and handicapped persons.
16. Program administration, technical assistance activities, and operating assistance to transit authorities to continue existing service or increase service to meet changes in routine demand.
17. The purchase of vehicles by the applicant where the use of these vehicles can be accommodated by existing facilities or by new facilities which themselves are within a CE.
18. Track and rail bed maintenance and improvements when carried out within the existing right of way.
19. Purchase and installation of operating or maintenance equipment to be located within the transit facility and with no significant impacts off the site.

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- 20. Promulgation of rules, regulations and directives.
- 21. Replacement of guardrail.

**Circle one or more of the following Type II activities:**

- 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.

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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:

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

**Bridge Demolition:** Bridge No. 17 is constructed of timber, concrete, and steel and should be possible to remove with no resulting debris in the water based on standard demolition practices.

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

Structure	\$ 660,000
Roadway	\$ 240,000
Detour Structure and Approaches	- 0 -
Structure Removal	\$ 60,000
<b>Total Construction Cost</b>	<b>\$ 960,000</b>
Eng. & Construction Observation	\$ 150,000
Construction Easement	\$ 1,000
Right-of-way Costs	- 0 -
Utility Relocation	\$ 100,000
Contingency (5%)	\$ 61,000
<b>Total Project Cost</b>	<b>\$ 1,272,000</b>

**Bicycle Designation:** This portion of South Dogwood Trail is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project.

**Alternatives Discussion:**

**No Build** – The No Build alternative would result in eventually closing the road which is unacceptable given the Town of Southern Shores’ commitment to maintain the bridge and preserve connectivity along South Dogwood Trail.

**Rehabilitation** – The existing bridge was constructed in 1970, 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. 17 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 use East Dogwood Trail and NC 12 (Ocean Boulevard). The maximum potential detour for drivers would result in 14 minutes of additional travel time (6.5 miles additional travel). A six-month construction duration is anticipated.

**Staged Construction/Onsite Detour** – Staged construction would require a temporary bridge beside the existing roadway alignment, an additional cost for the temporary bridge, and extra right-of-way. The existing bridge is not wide enough to phase construction. This option was not considered further due to potential residential

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impacts to adjacent properties and since an acceptable offsite detour is available.

**New Alignment** – A new alignment was not considered as an alternative on South Dogwood Trail due to potential residential impacts.

**Other Agency Comments:**

Scoping letter responses were received from the **North Carolina Department of Environment and Natural Resources (NCDENR)** (Natural Heritage Program, Division of Water Quality, Washington Regional Office, Division of Waste Management, and Division of Marine Fisheries), **North Carolina Wildlife Resources Commission (NCWRC)**, **North Carolina Department of Cultural Resources - State Historic Preservation Office**, **United States Environmental Protection Agency (USEPA)**, and the **United States Fish and Wildlife Service (USFWS)**. Copies of all scoping letter responses are attached.

The **NCWRC** and **NCDENR** recommend an in-water work moratorium of February 15 to September 30 due to the project's proximity to Jean Guite Creek, a designated Primary Nursery Area.

The **USEPA** requests that new pilings be kept out of the water to the extent practicable and that the new bridge design spans the width of the canal/waters of the US. (*Note: The proposed bridge design includes a 50-foot middle span, replacing the existing 30-foot middle span, to avoid new piers in the channel.*)

The **USFWS** notes that the North Carolina Natural Heritage Program database indicates that the federally endangered West Indian manatee has been observed near the project area. *Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters* (attached) will be implemented during construction.

**Public Involvement:**

Newsletters were mailed to property owners along South Dogwood Trail and the off-site detour route, and a public meeting notice was posted to the Town's website and news board. A workshop was held from 4:00 p.m. to 6:00 p.m. on Tuesday, June 4, 2013, at the Pitts Center at Town Hall. The proposed typical section and roadway designs were shown. One citizen attended. After discussion with Town Council members about a potential multi-use path along South Dogwood Trail to connect to the existing short section of sidewalk in front of Kitty Hawk Elementary School, it was decided that pedestrian and bicycle accommodations should be located on the east side of the roadway. Designs were revised after the workshop.

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E. Threshold Criteria

<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"/>	<u>          </u>
(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 Water Resources (OWR) 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>
 <u>PERMITS AND COORDINATION</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>  X  </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 checked="" type="checkbox"/>	<u>          </u>
(13) Will the project result in the modification of any existing regulatory floodway?	<input type="checkbox"/>	<u>  X  </u>
(14) Will the project require any stream relocations or channel changes?	<input type="checkbox"/>	<u>  X  </u>

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<u>SOCIAL, ECONOMIC, AND CULTURAL RESOURCES</u>	<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"/>	<input checked="" type="checkbox"/>
(16) Will the project require the relocation of any family or business?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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"/>	<input checked="" type="checkbox"/>
(18) If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(19) Will the project involve any changes in access control?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(20) Will the project substantially alter the usefulness and/or land use of adjacent property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(21) Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(23) Is the project anticipated to cause an increase in traffic volumes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(24) Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	<input checked="" type="checkbox"/>	<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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(26) Is there substantial controversy on social, economic, or environmental grounds concerning the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(27) Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	<input checked="" type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/>
(29) Will the project affect any archaeological remains which are important to history or pre-history?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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- (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)?    X
- (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?    X
- (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?    X

F. Additional Documentation Required for Unfavorable Responses in Part E  
(Discussion regarding all unfavorable responses in Part E should be provided below. Additional supporting documentation may be attached, as necessary.)

**Response to Question 2:** West Indian manatees are found in canals, sluggish rivers, estuarine habitats, salt-water bays, as well as a couple miles offshore in all coastal counties of North Carolina. Manatees typically inhabit waters with depths ranging from 5 to 20 feet. As the project area meets both criteria, it can be viewed as potential suitable habitat for the manatee. The USFWS has prepared precautionary measures for construction activities in waters used by manatee (*Guidelines for Avoiding Impacts to the West Indian Manatee*, June 2003, attached). According to USFWS, if these guidelines are implemented by the contractor during construction, the project should not have an adverse impact to manatee. Contractors working on the site will also actively survey for and avoid any manatee spotted nearby. Therefore, it is likely that this project will have 'No Effect' on the West Indian manatee.

**Response to Question 12:** A Section 9 permit is required by the U.S. Coast Guard for construction or modifications of all bridges spanning navigable waters. Since the project only covers a waterway suitable for small craft to navigate and is expected to have no adverse impacts on the environment, a request for an Advance Approval (AA) will be made in lieu of the Coast Guard Bridge Permit. The Coast Guard will advertise the project on public notice for 30 days. Based upon the comments received, it will be determined whether the project is exempt from Section 9 bridge permit requirements and can proceed as an AA project instead.

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G. PCE Approval

TIP Project No. B-5417  
WBS Element 45450.1.1  
Federal-Aid Project No. BRZ-0154(3)

Project Description:

The purpose of this project is to replace Dare County Bridge No. 17 on South Dogwood Trail over Snow Goose Canal in the Town of Southern Shores (see **Figures 1 - 4**). Bridge No. 17 is 90 feet long (three 30-foot spans). The replacement structure will be a bridge approximately 110 feet long (two 30-foot spans and a 50-foot span) providing a minimum 30 feet clear deck width. The bridge will include two 11-foot lanes (one in each direction) and a five-foot multi-use (bicycle and pedestrian) path on one side. 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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Categorical Exclusion Action Classification:

   TYPE II(A)    NO BOXES Checked  
  X TYPE II(B)    ANY BOX is Checked

Prepared By:

8/30/13 Meredith Van Duyn  
Date Meredith Van Duyn, P.E., Project Engineer  
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Prepared For: The Town of Southern Shores, North Carolina

9-4-13 Peter Rascoe  
Date Peter Rascoe, Town Manager

Reviewed:

9/18/13 William T. Gooding  
Date Project Dev. Section Head  
NCDOT - PDEA

Approved:

9/11/13 Reed  
Date Division Administrator  
Federal Highway Administration

**PROJECT COMMITMENTS:**

**Dare County  
Bridge No. 17 on South Dogwood Trail  
Over Snow Goose Canal  
Federal Aid Project No. BRZ-0154(3)  
WBS No. 45450.1.1  
TIP No. B-5417**

**Town of Southern Shores – Offsite Detour**

In order to have time to adequately reroute school buses, Dare County Schools [(252) 480-8888] and Kitty Hawk Elementary School [(252) 261-2313] will be contacted at least one month prior to road closure.

Dare County Emergency Management [(252) 475-5655] and the Town of Southern Shores Volunteer Fire Department [(252) 261-2272] and Police Department [(252) 261-3331] will be contacted at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

**Town of Southern Shores – Natural Resources**

The Town will adhere to *Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters* for this project.

An in-water work moratorium extends from February 15 to September 30 due to the project's proximity to Jean Guite Creek, a designated Primary Nursery Area.