

B-2500 Project Synopsis

Project Description and Purpose:

The NCDOT Design-Build Project, B-2500, is the replacement of the Herbert C. Bonner Bridge across Oregon Inlet from Bodie Island to Hatteras Island in Dare County. The Parallel Bridge Corridor with Phased Approach / Rodanthe Bridge Alternative has been chosen as the Preferred Alternative. This alternative proposes replacing the Bonner Bridge with a parallel bridge and maintaining existing NC 12 through the Pea Island National Wildlife Refuge by building bridges as needed in the existing NC 12 easement. Project B-2500 constitutes Phase I of this alternative, namely the replacement of the Bonner Bridge, with a bridge approximately 2.7 miles in length and a typical section consisting of two 12-foot travel lanes and two 8-foot shoulders.

Planning:

A Draft Environmental Impact Statement (DEIS) for the replacement of Bonner Bridge was approved in 1993. A Supplemental Draft Environmental Impact Statement (SDEIS) was completed in 2005 following the expansion of the project study area. A supplement to the 2005 SDEIS (SSDEIS) was prepared in 2007 in order to detail two additional alternatives for study. The FEIS was approved in September 2008 and a Record of Decision (ROD) is expected in December 2008. The Design-Build Team shall adhere to all commitments as finalized in the ROD. Copies of these documents will be made available to the short-listed Design-Build Teams and / or posted on the NCDOT Design-Build web page.

On August 27, 2007, representatives from NCDOT, the Federal Highway Administration (FHWA), the U.S. Army Corps of Engineers (USACE), and the North Carolina Department of Environment and Natural Resources (NCDENR) selected the Parallel Bridge Corridor with Phased Approach / Rodanthe Bridge Alternative as the Least Environmentally Damaging Practicable Alternative (LEDPA) for this project; NCDOT then adopted this as the Preferred Alternative for NEPA purposes. As part of the Section 404/NEPA Merger 01 process, a Concurrence Point 4A meeting is scheduled for November 2008 to discuss avoidance and minimization strategies for Phase I of the Preferred Alternative.

Description of Alternatives Studied:

The Final Environmental Impact Statement (FEIS) documented the analysis and comparison of seven alternatives within two corridors: the Pamlico Sound Bridge Corridor and the Parallel Bridge Corridor.

The two Pamlico Sound Bridge Corridor alternatives both involved building a new 17.5 mile bridge through Pamlico Sound, extending as far as 5 miles west of Hatteras Island, starting at the northern terminus of Bonner Bridge and connecting back into the existing NC 12 in Rodanthe. The two alternatives differed in the way they connected to NC 12 in Rodanthe. One bridge alternative curved into NC 12, and bridge traffic simply merged with NC 12. The other bridge alternative intersected with NC 12, and bridge users turned right at a 'T' intersection to continue on NC 12.

Five Parallel Bridge Corridor alternatives were studied:

- The **Nourishment Alternative** maintained NC 12 in its current location, through the Refuge and into Rodanthe, through the implementation of beach nourishment and dune enhancement.
- The **Road North/Bridge South Alternative** placed NC 12 on a bridge west of Hatteras Island, between northern Rodanthe and the southern part of the Refuge. In the northern part of the Refuge, NC 12 would be moved onto an at-grade road to the west of the forecast high erosion 2060 shoreline.

- The **All Bridge Alternative** included the same bridge as the Road North/Bridge South Alternative in northern Rodanthe and the southern part of the Refuge; but relocated NC 12 on a bridge to the west of the forecast high erosion 2060 shoreline through the northern section of the Refuge.
- The **two Phased Approach alternatives** both maintained NC 12 in its current location in the Refuge and northern Rodanthe by elevating NC 12 onto bridges in phases. However, the alternatives differed in the Rodanthe area. The Preferred Alternative (Phased Approach/ Rodanthe Bridge) assumed NC 12 was elevated into Rodanthe. The other alternative (Phased Approach/ Rodanthe Nourishment) assumed that NC 12 was maintained in its existing location in the Rodanthe area, through beach nourishment at the southern end of the Refuge and the northern part of Rodanthe.

The current advertisement is for the design and construction of Phase I of the Phased alternative. If the Record of Decision does not carry forward the Phased Approach as the preferred alternative, the Department will discontinue this advertisement.

Structure Scope of Work:

The Design-Build Team shall design and construct the new bridge in accordance with AASHTO LRFD Bridge Design Specifications. The bridge will include a series of navigational spans across Oregon Inlet. This navigation zone could be up to 5,000 feet long, with a vertical clearance of approximately 70 feet. Spans in the navigation zone would provide a minimum 200 feet of horizontal clearance. The Design Build Team shall design the bridge for vessel impact. The new bridge and all construction activities must be contained within the existing easement on Pea Island. The Design-Build Team shall also remove the existing bridge.

Roadway Scope of Work:

The Design-Build Team shall design and construct a two-lane facility that will tie into existing NC 12. NC 12 is designated as a major collector route by the Dare County and NCDOT Functional Classification Systems. NC 12 is also part of the National Highway System and is classified as an Intermodal Terminal Connector.

Hydraulic Scope of Work:

The Design-Build Team shall be responsible for all storm drainage design and construction. The Design-Build Team shall conduct the Merger 01 Concurrence Point 4B and 4C meetings. The Design-Build Team shall be responsible for development of the hydraulic plans and permit impact sheets for these meetings. The Design-Build Team shall be responsible for a detailed scour analysis based on conditions for a coastal environment.

Location & Surveys Scope of Work:

Full electronic surveys are completed and will be provided to the short-listed teams. Supplemental surveys shall be the responsibility of the Design-Build Team. Known existing utilities have been located and will be included with the survey data. All supplemental SUE work shall be the responsibility of the Design-Build Team.

Geotechnical Scope of Work:

Roadway and structure subsurface investigations will be provided to the short-listed Design-Build Teams. The Department may be willing to obtain an additional 5-10 borings for each short-listed team. If feasible, the additional requested subsurface information will be obtained and provided to all teams. The Design-Build Team shall be responsible for all recommendations, as well as supplemental structural and roadway investigations. All foundation designs and recommendations shall be the responsibility of the Design-Build Team. The Design-Build Team is responsible for preparing and completing a pre-design foundation load test program.

Environmental Scope of Work:

The Design-Build Team shall be responsible for preparing all documents necessary for the Department to obtain the environmental permits for this project. Permits will be needed from the US Coast Guard (Norfolk District Bridge Section), the USACE (Wilmington Field Office), the US Fish and Wildlife Service (USFWS), the NCDENR's Division of Coastal Management, the NCDENR's Division of Water Quality, and the National Park Service (NPS), Cape Hatteras National Seashore, Manteo.

Erosion Control Scope of Work:

All erosion control designs and implementation shall be the responsibility of the Design-Build Team. The Design-Build Team shall have an erosion control inspector on the project at all times during construction. NCDOT's Best Management Practices for Protection of Surface Waters shall be used by the Design-Build Team throughout the life of the project.

Traffic Control and Pavement Marking Scope of Work:

A list of parameters, such as lane closures, time restrictions and general guidelines, will be provided to the short-listed teams. The Design-Build Team shall be responsible for development and installation of the Traffic Control and Pavement Marking Plans. It is anticipated that two CCTVs may be included in this project.

Pavement Design Scope of Work

Final pavement designs will be provided to all short-listed teams.

Signing Scope of Work:

The design and installation of signs will be required and shall be the responsibility of the Design-Build Team.

Right of Way Acquisition Scope of Work:

Initial right of way and easement acquisitions will be acquired by the NCDOT. Any additional right of way or easement acquisitions shall be the responsibility of the Design-Build Team. No additional right of way or easement acquisitions may be pursued on Hatteras Island.

R/W Utilities, Conflicts and/or Construction Scope of Work:

The Design-Build Team shall be responsible for coordinating the construction / relocation of private utilities with the appropriate owners. The Department anticipates entering into agreements with Sprint Communications (telephone service), Cape Hatteras Electric Co-Op. Inc. (electric power service) and possibly Charter Communications (cable television service).

Public Involvement Scope of Work:

During the project's construction, the Design-Build Team shall coordinate with the Division 1 Office and the Construction Unit to inform the public of lane closures, construction schedule and progress, etc.

Construction Engineering Inspection (CEI) Scope of Work:

CEI is not part of this contract.