

Record of Decision

for

NC 12 Replacement of Herbert C. Bonner Bridge

(Bridge No. 11) over Oregon Inlet

Federal-Aid No. BRS-2358(15)

NCDOT Project Definition: 32635
TIP Project No. B-2500
Dare County, North Carolina

Federal Highway Administration
North Carolina Department of Transportation

December 2010

Table of Contents

1.0	DECISION.....	1
2.0	PROJECT HISTORY	3
2.1	1993 Draft Environmental Impact Statement	3
2.2	2005 Supplemental Draft Environmental Impact Statement	3
2.3	2007 Supplement to the 2005 Supplemental Draft Environmental Impact Statement.....	5
2.4	2008 Final Environmental Impact Statement	5
2.5	2010 Environmental Assessment	5
3.0	ALTERNATIVES CONSIDERED	6
3.1	Alternatives Studies.....	6
3.2	Basis for Selection of the Selected Alternative	7
3.3	Description of the Selected Alternative.....	10
3.3.1	Phase I.....	10
3.3.2	Later Phases (NC 12 Transportation Management Plan).....	12
3.4	Cost Estimate for the Selected Alternative.....	16
3.5	Summary of Impacts for the Selected Alternative.....	16
4.0	SECTION 4(F) STATEMENT	16
5.0	MEASURES TO MINIMIZE HARM	21
5.1	Project-Specific Commitments	21
5.2	Relocations	21
5.3	Cultural Resources	22
5.4	Noise Impacts	23
5.5	Wetland Impacts.....	23
5.6	Protected Species Impacts.....	23
5.7	Construction Impacts	24
5.8	Mitigation	24
6.0	MONITORING AND ENFORCEMENT PROGRAM.....	24
7.0	CORRECTIONS TO THE EA	26
8.0	RESPONSE TO COMMENTS ON THE EA.....	26
9.0	SECTION 106 PROGRAMMATIC AGREEMENT	27
10.0	NEXT STEPS	28
10.1	Phase I.....	28
10.2	Later Phases (NC 12 Transportation Management Plan).....	28

Table of Contents (concluded)

10.3 Permits and Approvals	29
10.3.1 Phase I	29
10.3.2 Later Phases (NC 12 Transportation Management Plan)	30
11.0 CONCLUSION	31
APPENDIX A PROJECT COMMITMENTS	A-1
APPENDIX B AGENCY, NON-GOVERNMENTAL ORGANIZATION, PUBLIC OFFICIAL, AND PUBLIC ORGANIZATION ENVIRONMENTAL ASSESSMENT COMMENT LETTERS	B-1
APPENDIX C RESPONSE TO COMMENTS ON THE ENVIRONMENTAL ASSESSMENT	C-1
APPENDIX D SECTION 106 PROGRAMMATIC AGREEMENT	D-1

List of Tables

Table 1. Summary Comparison of Impacts for All Phases of Selected Alternative.....	17
Table 2. Summary of Impacts for Phase I (Oregon Inlet Bridge) of Selected Alternative.....	20
Table 3. Project Mitigation Measures	25

List of Figures

Figure 1. Project Location Map.....	2
Figure 2. Selected Alternative	4
Figure 3. Bridge Typical Section.....	11

1.0 Decision

This document records the decision for the proposed NC 12 Replacement of the Herbert C. Bonner Bridge in Dare County, North Carolina. This project is included in the North Carolina Department of Transportation's (NCDOT) approved 2009-2015 *Statewide Transportation Improvement Program* (TIP) as well as the *2011 to 2020 Draft Statewide Transportation Improvement Program* as Project No. B-2500.

In accordance with the National Environmental Policy Act (NEPA) and the requirements set by the Council on Environmental Quality (CEQ) (40 CFR [Code of Federal Regulations] 1505.2), this Record of Decision (ROD) also summarizes the following:

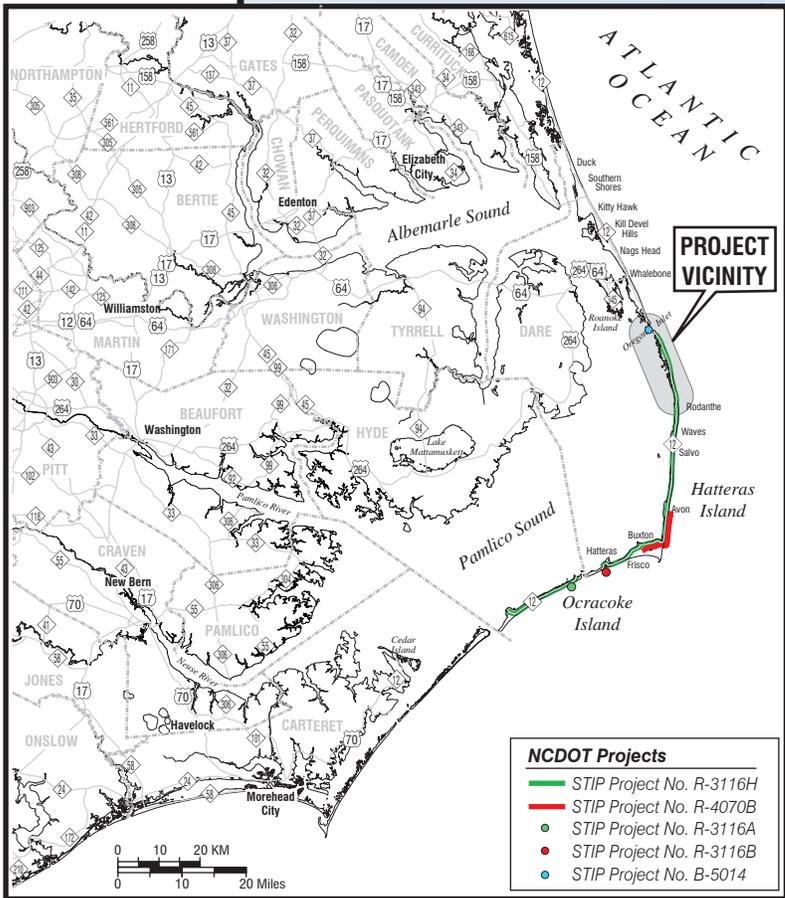
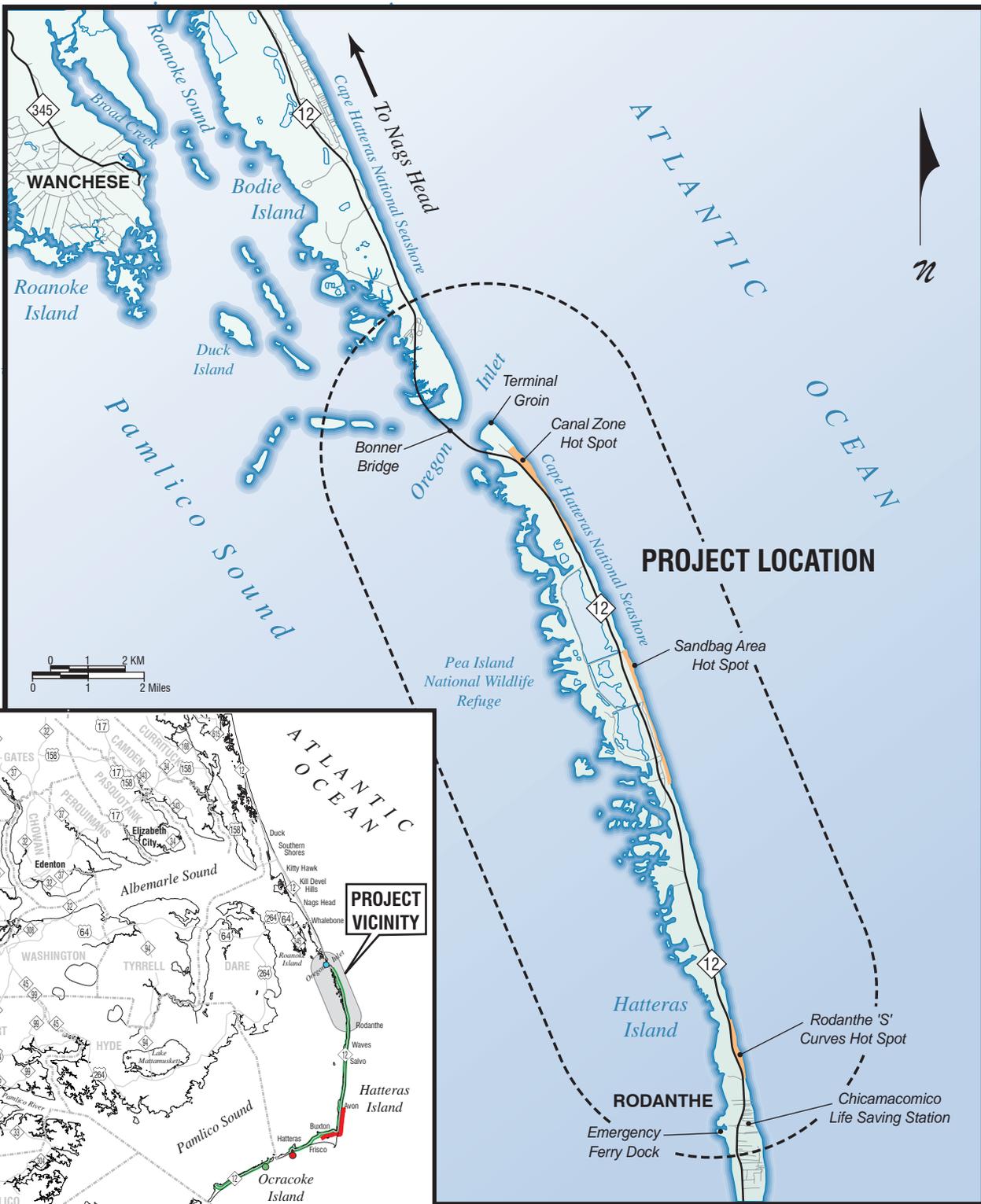
- Alternatives considered for the proposed project by NCDOT and the Federal Highway Administration (FHWA) and the basis for selection, description, cost estimates, and impacts of the Selected Alternative;
- The Section 4(f) statement;
- Measures adopted to avoid and minimize harm;
- Monitoring and enforcement programs for the implementation of mitigation measures;
- Public and agency comments on the May 2010 Environmental Assessment (EA); and
- The Section 106 Programmatic Agreement (PA).

Bonner Bridge, built in 1962, is approaching the end of its reasonable service life. Bonner Bridge is a part of NC 12 and provides the only highway connection between Hatteras Island and Bodie Island. The replacement structure will serve the same function. The project also includes NC 12 between the community of Rodanthe and Oregon Inlet, a section of roadway that is at risk because of shoreline erosion. This project will provide a long-term approach to minimizing that risk through 2060.

The project area is in Dare County in eastern North Carolina. The project area encompasses northern Hatteras Island, the southern end of Bodie Island, and regions of the Pamlico Sound (see Figure 1).

As documented in Section 1.2 of the 2008 Final Environmental Impact Statement (FEIS), the purposes of the proposed project are to:

- Provide a new means of access from Bodie Island to Hatteras Island for its residents, businesses, services, and tourists prior to the end of Bonner Bridge's service life.
- Provide a replacement crossing that takes into account natural channel migration expected through year 2050 and provides the flexibility to let the channel move.
- Provide a replacement crossing that will not be endangered by shoreline movement through year 2050.



PROJECT LOCATION MAP

Figure
1

The EA identifies the Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative as the Preferred Alternative for this project. This alternative is a mix and match of the Parallel Bridge Corridor alternatives assessed in the 2008 FEIS. It calls for Phase I (Oregon Inlet bridge) to be built as soon as possible, followed by construction of later phases whose details would be determined, reevaluated, and documented through interagency collaboration as project area conditions warrant.

In making this decision, NCDOT and FHWA considered the information, analysis, and public comments contained in the 2005 Supplemental Draft Environmental Impact Statement (SDEIS), the 2007 Supplement to the Supplemental Draft Environmental Impact Statement (SSDEIS), the 2008 FEIS, and the May 2010 EA for this project. A complete description of the anticipated impacts for the Preferred Alternative is included in the FEIS and the EA. These impacts also are summarized in Section 3.5 of this document. The Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative is selected for implementation and is therefore referred to as the Selected Alternative in the balance of this ROD. The Selected Alternative is shown on Figure 2; Phase I is represented in red, while the study area for later phases of the alternative is shown in yellow. The two areas combined make up the Selected Alternative.

2.0 Project History

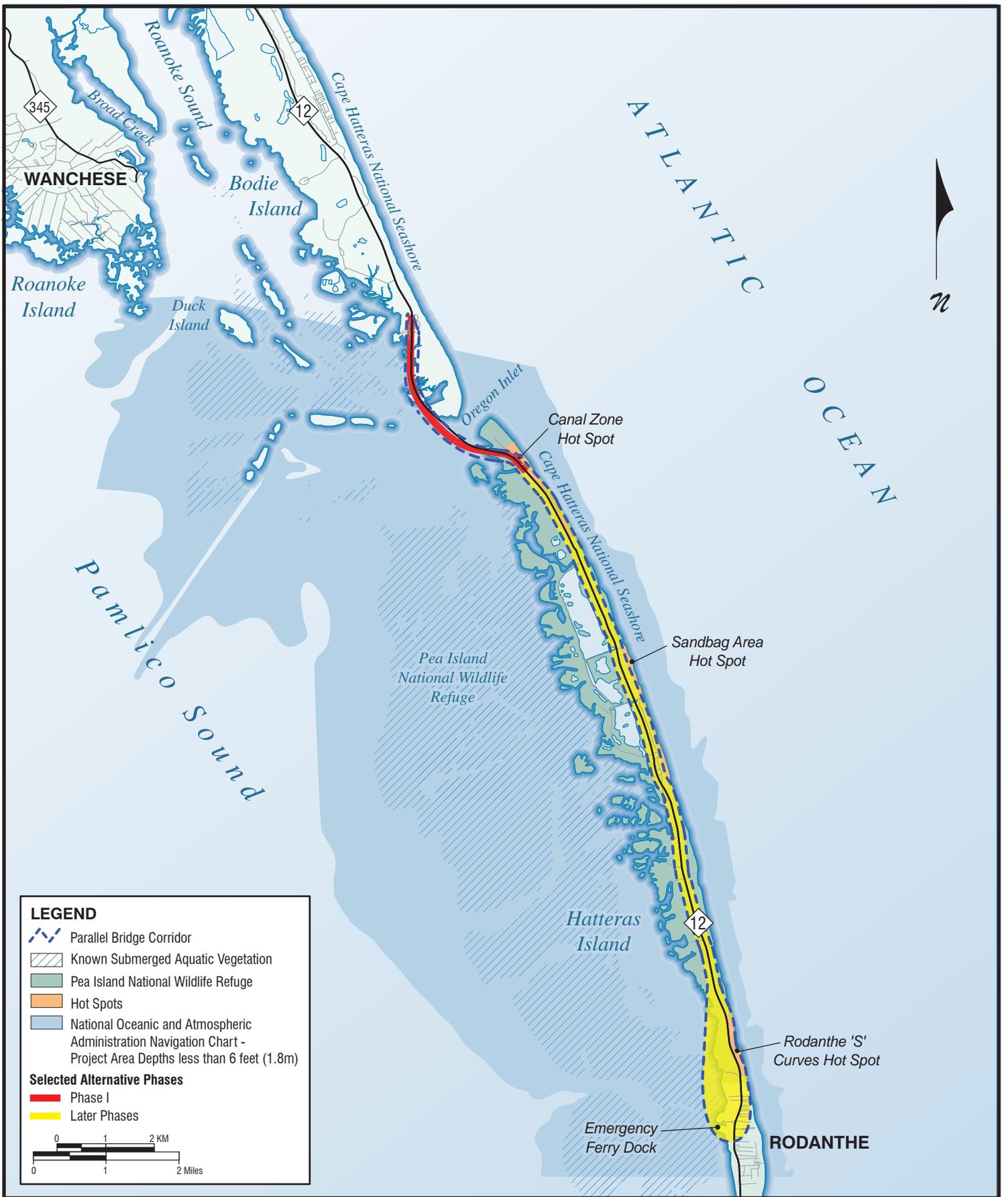
2.1 1993 Draft Environmental Impact Statement

In 1990, NCDOT began studying replacement alternatives for Bonner Bridge (TIP Project No. B-2500). The coordination for the project, including agency scoping, was initiated with a scoping letter to government agencies in May 1990 at the start of a Bonner Bridge replacement feasibility study. A Draft Environmental Impact Statement (DEIS) was released for review in November 1993. The DEIS assessed a single preferred alternative, the Parallel Bridge Corridor across Oregon Inlet. After the release of the DEIS, combined (corridor and design) Public Hearings were held in early 1994. Comments were received regarding the DEIS from the public and from federal, state, and local agencies.

A preliminary FEIS was prepared in 1996; however, it was never signed because formal consultation with the US Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act was not completed. Because it had been more than seven years since completion of the DEIS, a re-evaluation was conducted in 2001 to determine if the preliminary FEIS remained a valid assessment of project impacts. A decision was made in 2001 to prepare a Supplemental DEIS.

2.2 2005 Supplemental Draft Environmental Impact Statement

Work on the SDEIS began in 2002 with a new study of potential Bonner Bridge replacement alternatives. The study area was expanded south to encompass NC 12 south to Rodanthe because NC 12 had begun to be regularly threatened by shoreline erosion and overwash. Three areas on NC 12, or “hot spots” (shown on Figure 1), between Oregon Inlet and Rodanthe are especially vulnerable. The SDEIS was completed and signed in September 2005. The SDEIS assessed five alternatives in two corridors, the Pamlico Sound Bridge Corridor and the Parallel Bridge Corridor. The Parallel Bridge Corridor alternatives are described in Section 3.1 of this ROD. Two Public Hearings were held in November 2005.



SELECTED ALTERNATIVE

Figure
2

2.3 2007 Supplement to the 2005 Supplemental Draft Environmental Impact Statement

A proposal made during the comment period following the release of the SDEIS led to the development of two additional Parallel Bridge Corridor alternatives, which are described in Section 3.1 of this ROD. These alternatives were assessed in the Supplement to the SDEIS, which was signed on February 14, 2007. Two Public Hearings were held in March 2007.

2.4 2008 Final Environmental Impact Statement

The FEIS was signed on September 17, 2008. It identified the Parallel Bridge Corridor with Phased Approach/Rodanthe Bridge as the Preferred Alternative and addressed comments received on the SDEIS and SSDEIS.

2.5 2010 Environmental Assessment

Several modifications were made to the detailed study alternatives and the impact assessment since the release of the FEIS. These modifications were made to respond to comments on the FEIS and take into account factors related to the history of the creation and maintenance of NC 12 in the Cape Hatteras National Seashore (Seashore) and the Pea Island National Wildlife Refuge (Refuge). The purpose of the EA was to document these modifications and to determine whether there were any new, significant issues not addressed in the FEIS and whether a Supplemental FEIS was needed; the EA was prepared and signed on May 7, 2010. The EA included the following:

- The decision to add a new detailed study alternative (Parallel Bridge Corridor with NC 12 Transportation Management Plan) and select it as the Preferred Alternative;
- Refinements made to the detailed study alternatives since the release of the September 2008 FEIS;
- The elimination of the Pamlico Sound Bridge Corridor alternatives as detailed study alternatives;
- An assessment of impacts for the new detailed study alternative and an assessment of changes to several of the remaining detailed study alternatives at the community of Rodanthe and at the northern end of Hatteras Island; and
- New information obtained since the publication of the FEIS.

Two Public Hearings were held in July 2010. FHWA and NCDOT carefully reviewed the impact analysis included in the FEIS and the EA and all of the comments received on those documents and at the 2010 public hearings. Based on this review, FHWA determined that the changes identified in the EA do not result in any new significant impacts not previously identified; therefore, a Supplemental FEIS is not required.

3.0 Alternatives Considered

3.1 Alternatives Studies

Seven alternatives studies were completed over the course of the project, which ultimately yielded the eight alternatives evaluated in detail in the SDEIS (five alternatives), SSDEIS (two alternatives), the FEIS, and the EA (one alternative). Full descriptions of each study are presented in Chapter 2 of the FEIS and Chapter 2 of the EA.

The eight alternatives analyzed in detail in the FEIS and EA for the replacement of the Bonner Bridge are located within two replacement bridge corridors. The two corridors are: the Pamlico Sound Bridge Corridor and the Parallel Bridge Corridor with NC 12 Maintenance. The Pamlico Sound Bridge Corridor and its associated two alternatives were dropped as detailed study alternatives in the EA for reasons presented in Section 2.2 of the EA. The Parallel Bridge Corridor is shown on Figure 2. The alternatives associated with the Parallel Bridge Corridor are:

- With Nourishment.
- With Road North/Bridge South.
- With All Bridge.
- With Phased Approach/Rodanthe Bridge.
- With Phased Approach/Rodanthe Nourishment.
- With NC 12 Transportation Management Plan.

The Parallel Bridge Corridor contains a proposed Oregon Inlet bridge that would be up to 3.2 miles (5.1 kilometers) in length. The NC 12 Maintenance component would keep NC 12 open from the community of Rodanthe to the Oregon Inlet bridge's southern terminus, a distance of approximately 12.5 miles (20.1 kilometers). The NC 12 Maintenance component would pass through the Refuge, which has shared jurisdiction with the Seashore.

The Nourishment Alternative assumes that NC 12 would remain in its current location, and beach nourishment combined with dune enhancement would be used to maintain an adequate beach and dune system. The total length of beach requiring regular nourishment would be approximately 6.3 miles (10.1 kilometers). Nourishment would occur in four locations, likely repeated at four-year intervals through the design life of the project.

With the Road North/Bridge South Alternative, NC 12 would be placed on a bridge west of Hatteras Island beginning at a new intersection in Rodanthe (as revised in the EA) and continuing to a point approximately 2 miles (3.2 kilometers) north of the Refuge's southern boundary where the project would meet existing NC 12. NC 12 would then remain unchanged for 2.6 miles (4.2 kilometers). Beginning at a point approximately 1.3 miles (2.1 kilometers) south of the Refuge's ponds, NC 12 would be relocated as a road on the ground to a point 230 feet (70.1 meters) west of the forecast 2060 high erosion shoreline. This relocation would continue 7.1 miles (11.4 kilometers) north until the relocated NC 12 would meet the Oregon Inlet bridge. Three 10-foot-high (3-meter-high) dunes, totaling 2,100 feet (640 meters) in length would be built adjacent to

the relocated road, but not immediately. They would be built when needed as the shoreline erodes towards the relocated road. The first one is not expected to be needed until 2030.

The All Bridge Alternative would include the same bridge in the Rodanthe area (as revised in the EA) as the Road North/Bridge South Alternative. In the central and northern part of the Refuge, NC 12 would be constructed on a bridge to the west of the existing road. Two road segments would be included in this relocation, one near Oregon Inlet and one just north of the Refuge's ponds, where access from NC 12 to the Refuge would be provided. Access to the Refuge also would be available in a 1.8-mile (2.9-kilometer) section of NC 12 that would be left unchanged between the Rodanthe area bridge and the beginning of the next bridge section south of the ponds. The bridges associated with this alternative would span the five potential storm-related island breach locations, some of which extend outside the hot spot areas.

The Parallel Bridge Corridor with Phased Approach alternatives assume an Oregon Inlet bridge, as well as elevating portions of NC 12 through both the Refuge and northern Rodanthe within the existing NC 12 easement. The alternatives, as proposed in the FEIS and revised in the EA, would be built in four phases, with the first phase being the bridge across Oregon Inlet. Additional phases would be built as necessitated by coastal conditions. Two southern termini, defined by their different stabilization methods for NC 12 in Rodanthe, were considered: the Phased Approach/Rodanthe Bridge Alternative and the Phased Approach/Rodanthe Nourishment Alternative. With the Phased Approach/Rodanthe Bridge Alternative, the bridge in the existing NC 12 easement would begin in Rodanthe just north of Laura Lane (approximately 0.8 mile [1.3 kilometers] south of the Refuge boundary as reflected in the EA) and extend north to Oregon Inlet except for the 2.1-mile (3.4-kilometer) section of NC 12 in the southern half of the Refuge that would not be threatened by erosion prior to 2060. Access to properties adjacent to the bridge in Rodanthe would be provided by a one-lane, one-way frontage road on each side of the NC 12 bridge. The Phased Approach/Rodanthe Nourishment Alternative would be similar, except the southern end of the NC 12 bridge would begin 0.3 mile (0.5 kilometer) south of the Refuge/Rodanthe border. Beach nourishment would be used to protect NC 12 in Rodanthe.

The NC 12 Transportation Management Plan Alternative is a variation of the Parallel Bridge Corridor alternatives assessed in the FEIS. It calls for Phase I (Oregon Inlet bridge) to be built as soon as possible, followed by interagency and appropriate public coordination prior to the implementation of later phases as coastal conditions warrant. The details of the later phases will be determined, reevaluated, and documented through collaboration with the Merger Team and other stakeholders, including the public. The NC 12 Transportation Management Plan Alternative is described in more detail in Section 3.3.

The new Oregon Inlet bridge proposed in the Parallel Bridge Corridor would provide two 12-foot (3.6-meter) travel lanes and two 8-foot (2.4-meter) shoulders. The bridges associated with the Road North/Bridge South, the All Bridge, and the Phased Approach alternatives also would provide two 12-foot (3.6-meter) travel lanes and two 8-foot (2.4-meter) shoulders. The typical section of relocated roadway (for the Road North/Bridge South and All Bridge alternatives) would have two 12-foot (3.6-meter) travel lanes with 8-foot (2.4-meter) shoulders (4-foot [1.2-meter] paved).

3.2 Basis for Selection of the Selected Alternative

On August 27, 2007, senior representatives of NCDOT, FHWA, the US Army Corps of Engineers (USACE), and the North Carolina Department of Environment and Natural Resources (NCDENR), meeting as the Merger 01 Dispute Resolution Board for the NEPA/Section 404

Merger Process, identified the Parallel Bridge Corridor with Phased Approach/Rodanthe Bridge Alternative as the Least Environmentally Damaging Practicable Alternative (LEDPA) for this project (see Section 2.15 of the FEIS). Specifically, the representatives of these four agencies concurred that:

- The Pamlico Sound Bridge Corridor is not practicable based on cost estimates and thus is not the LEDPA;
- Phase I of the project should be to construct the replacement bridge within the Parallel Bridge Corridor as soon as possible, every effort should be made to place the new bridge terminus within the existing easement, and Phase I should be advanced through the Merger Process;
- Building Phase I alone would not meet the purpose and need of the project;
- Future phases present substantial challenges to obtaining permit approvals; and
- At the time of permit application for future phases, reasonable, practicable, and feasible alternatives will be considered and evaluated in pursuit of the LEDPA/Selected Alternative.

Although these agency representatives chose the Phased Approach/Rodanthe Bridge Alternative as the LEDPA, they recognized that the project area is complex and the shoreline is constantly changing. They noted that the ability to predict the effect of future storms on the project area is extremely difficult, and they agreed that the various alternatives may need to be reassessed in the future as the shoreline and other landscape features continue to change.

In their comments on the FEIS/Final Section 4(f) Evaluation, the US Department of Interior (USDO I) and the NC Department of Cultural Resources (NCD CR) noted several concerns with the presence of an elevated structure within the Pea Island National Wildlife Refuge. As discussed in Section 2.3.1 of the EA, FHWA and NCDOT discussed with the Merger Team the possibility of selecting other alternatives that would lessen the impacts of an elevated structure. During the May 21, 2009 Merger Team meeting (Section 3.3.3 of the EA), the US Environmental Protection Agency (USEPA) representative suggested that NCDOT move forward with an alternative that would include the construction of a replacement of Bonner Bridge immediately while not prescribing a solution for the remainder of the project at this time. For determining solutions for later phases of the project, it was recommended that an interagency, collaborative adaptive management strategy be developed. Following the meeting, FHWA and NCDOT developed a description of a new alternative, eventually titled the Parallel Bridge Corridor with NC 12 Transportation Management Plan, which embodied this concept. The description of the alternative was circulated to the Merger Team for review and was revised based on agency comment.

The Merger Team agreed that the concept of the NC 12 Transportation Management Plan Alternative (Selected) fit within the terms of the August 27, 2007, Concurrence Point 3 Agreement (LEDPA) in that:

- It would involve replacement of the Oregon Inlet bridge as Phase I; and
- Completion of Phase I alone would not meet the purpose and need of the project and represented a commitment by all parties to develop and implement the entire action from Rodanthe to Bodie Island.

The following observations were made at the May 21, 2009, meeting that led to the determination of this alternative as the LEDPA:

- The August 27, 2007, LEDPA agreement found that the Pamlico Sound Bridge Corridor is not practicable and that the Parallel Bridge Corridor includes several different alternatives that could be considered in the future when future conditions are better known.
- The August 27, 2007, LEDPA agreement, while identifying the Phased Approach/Rodanthe Bridge Alternative as the LEDPA, left open the opportunity to reconsider the features of phases beyond Phase I (new Oregon Inlet bridge) because it was felt that future coastal conditions were uncertain in the Refuge.
- The environmental impact of multiple Parallel Bridge Corridor alternatives has been evaluated and documented based on thorough research related to potential future coastal conditions in the project area.
- Despite thorough coastal studies prepared during the environmental impact assessment, it is not appropriate to determine the specifics of future phases of a Parallel Bridge Corridor Alternative at this time given there is a great deal of uncertainty in even the best models of future shoreline conditions.
- Phase I should be built now, and the specific features of the rest of the project should be examined in more detail at the time they are to be built, when future conditions are more known.
- An adaptive management plan should be developed to assist with cooperative decision-making for future decisions related to the project.
- State and federal environmental resource and regulatory agencies should be involved in future phase development.
- The regulatory challenges associated with finalizing future phases would likely remain when developing future phases.

All agencies in attendance at the May 21, 2009, Merger Team meeting agreed that NCDOT and FHWA could move forward with the Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative as the Preferred (now Selected) Alternative based on the August 27, 2007, Concurrence Point 3 Agreement (LEDPA). Based on discussions at the Merger Team meetings on May 21, 2009, and September 17, 2009, an amendment to the 2007 LEDPA agreement was prepared and signed by the Dispute Resolution Board on January 7, 2010 (see Appendix A of the EA). The LEDPA agreement amendment does not change the intent of the original LEDPA agreement “beyond the understanding that the Phased Approach/Rodanthe Bridge Alternative is no longer considered and identified in this ROD as the LEDPA.” The LEDPA agreement amendment stipulates that “Phase I of the project will be the construction of the replacement bridge over Oregon Inlet within the Parallel Bridge Corridor as soon as possible.” It also stipulates that any option considered for future phases of the project beyond Phase I “will be evaluated and selected with multi-agency input and concurrence as part of the Merger Process.”

The amendment agreement affirms that the Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative (Selected) is consistent with the original August 27, 2007, agreement. The amendment agreement states:

At this time, there is no formally prescribed alternative for the remaining phases of the project south of Oregon Inlet. One or more of a combination of options, drawing from the alternatives previously studied, as well as any other alternatives determined at the time to be reasonable, practicable and feasible, will be evaluated, designed, and finalized prior to the implementation of actions beyond Phase I. Any option will be evaluated and selected with multi-agency input and concurrence as part of the Merger Process. The agencies do agree that permits will not be granted for the remaining phases of work until their applicable laws and regulations have been satisfied.

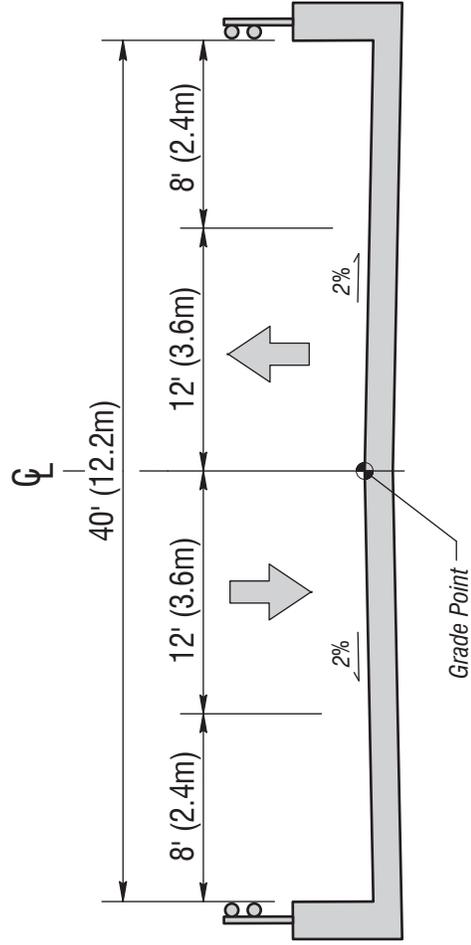
USDOJ raised objections to the amended LEDPA. Based on USDOJ comments, NCDOT and FHWA continued coordination with USDOJ to discuss and resolve concerns over the proposed action expressed in previous comments. Through a series of meetings and correspondence, FHWA and USDOJ agreed upon an approach that would advance the Selected Alternative. The approach and its stipulations were documented in an exchange of letters sent on December 17, 2010 (see Appendix B).

3.3 Description of the Selected Alternative

3.3.1 Phase I

Phase I of the NC 12 Transportation Management Plan Alternative (Selected), as described in Section 2.3.2.1 of the EA, will consist of the replacement of Bonner Bridge with an Oregon Inlet bridge parallel to and west of Bonner Bridge (see Figure 2). On the south side of Oregon Inlet within the Refuge, the bridge and its approach road will be constructed in a new easement to the west of the existing NC 12 easement; as noted in Table 2, approximately 3.2 acres (1.3 hectares) of new easement will be required within the Refuge. The bridge approach will leave the existing easement approximately 2,640 feet (804.7 meters) south of the point the bridge leaves Hatteras Island. When it leaves the island, the bridge will be approximately 212 feet (64.6 meters) west of Bonner Bridge. On the north side of Oregon Inlet, the bridge will re-enter the existing NC 12 easement within the Seashore approximately 2,700 feet (823.0 meters) north of where it enters Bodie Island. When it enters Bodie Island the bridge will be approximately 35 feet (10.7 meters) west of Bonner Bridge. Coordination with the Refuge and the Seashore to minimize adverse impacts to Refuge and Seashore resources will continue through final design.

The typical section for the Oregon Inlet bridge (see Figure 3) for the Selected Alternative will provide two 12-foot (3.6-meter) travel lanes and two 8-foot (2.4-meter) shoulders. The bridge will include a series of navigational spans across Oregon Inlet. Spans within the navigation zone will provide 200 feet (61 meters) of horizontal clearance. The main bridge structure for the new Oregon Inlet bridge will be designed in coordination with USACE and the US Coast Guard (USCG), including finalizing the location and length of the navigation zone. The length of the navigation zone is assumed at this time to be 3,300 feet (1,006 meters) in order to lower the Oregon Inlet bridge height as it enters Hatteras Island.



BRIDGE TYPICAL SECTION

All aspects of Phase I will be designed to conform to North Carolina highway specifications as approved by FHWA and NCDOT to ensure the safe construction and operation of the highway. In addition, other state and federal environmental resource and regulatory agencies will have an opportunity to review and comment on the final design prior to authorization of construction.

As discussed in Section 4.5.3.2 of the FEIS, NCDOT maintains catwalks on the southern end of Bonner Bridge. The catwalks provide access to the public to fish at Oregon Inlet. The type of access provided with the new Oregon Inlet bridge will be determined during the final design of Phase I; however, NCDOT is committed to restoring access to fishing at the northern end of Hatteras Island once construction of Phase I is complete. The existing catwalks will remain open to the public during construction as long as it is safely viable.

3.3.2 Later Phases (NC 12 Transportation Management Plan)

The Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative (Selected) does not specify a particular action at this time on Hatteras Island beyond the limits of Phase I because of the inherent uncertainty in predicting future conditions within the dynamic coastal barrier island environment. Instead, the alternative addresses the study and selection of future actions on Hatteras Island beyond the limits of Phase I through a comprehensive NC 12 Transportation Management Plan. The Transportation Management Plan will guide the implementation of future phases of the project through 2060. By actively monitoring the conditions and delaying decision-making as set forth in the NC 12 Transportation Management Plan, the environmental impacts beyond Phase I can be better quantified, minimized, and mitigated. This process is somewhat analogous to a tiered NEPA study, in that the entire end-to-end impacts have been studied but the detailed selection of a portion of the action is being delayed.

The Selected Alternative includes the following measures:

- NCDOT will fund and implement a coastal monitoring program on Hatteras Island within the project study area. The results of the monitoring program will be used to determine when planning of future phases of the project should begin.
- NCDOT will fund and implement a periodic Refuge habitat/NC 12 vulnerability forecasting study in consultation with USFWS. Through this program NCDOT and USFWS will work together to develop and assess alternative future scenarios including possible site-specific events and remedies.
- NCDOT and FHWA will utilize the results of the coastal monitoring program and the periodic Refuge habitat/NC 12 vulnerability forecasting study to determine when the environmental review for each phase should be initiated and what alternative actions should be studied in detail.
- The NEPA/Section 404 Merger Process will be utilized to study, select, and finalize future phases. It is anticipated that future phases will be subject to various permitting requirements. NCDOT will be required to obtain and comply with all applicable permits prior to beginning construction of future phases.

The NC 12 Transportation Management Plan incorporates the baseline coastal conditions identified in the FEIS (in Section 3.6.2, “Existing Coastal Conditions”), and then provides a detailed plan to closely monitor the coastal conditions for environmental changes over the next 50

years along with changes in associated road maintenance activities. Formal reports of the monitoring findings and updates to the forecasted shoreline predictions will be generated annually. Regular coordination with interested federal, state, and local agencies and the public will be conducted. When the coastal monitoring program identifies specified conditions at a location, then the NC 12 Transportation Management Plan provides for the initiation of an environmental review of a future phase of action at that location. The NC 12 Transportation Management Plan then describes the process for decision-making regarding the future phase actions.

Coastal Monitoring Program

The NC 12 Transportation Management Plan includes a comprehensive coastal monitoring program that NCDOT will begin implementing immediately upon issuance of this ROD. The coastal monitoring program is similar to but more refined than that proposed for the Phased Approach alternatives (see Section 2.10.2.5 of the FEIS). The coastal monitoring program will measure changes in the conditions on NC 12 and the surrounding environment, as compared to baseline coastal conditions, for the purpose of guiding NCDOT's planning for future phases of action through 2060.

As indicated above, the baseline coastal conditions for the NC 12 Transportation Management Plan are set forth in Section 3.6.2 of the FEIS, "Existing Coastal Conditions." In Section 3.6.3, the FEIS summarizes the predicted average and high erosion future shorelines in the project area for each decade through the year 2060 and assesses the potential likelihood, location, depth, and width of breaches that could open in the project area through the year 2060. Section 4.6.8.6 of the FEIS describes the five characteristic types of maintenance activities needed to keep NC 12 clear and open to traffic in detail and sets forth the baseline conditions for each maintenance activity. Based on past experience, the five characteristic types of maintenance activities are: road scraping, dune maintenance, dune rebuilding, sandbag-based dune and berm replenishment, and dune translation. The coastal monitoring program detailed below will be used to update the predicted shorelines and other coastal data discussed in the FEIS.

NCDOT will gather the following data within the project area on Hatteras Island:

- Geomorphological characteristics of the corridor, including the width and elevation of the island, dune height and vegetation, shoreline position, and nearshore bathymetry;
- Relative distance from NC 12 to critical geomorphological features, including the shoreline, dune, and estuarine shoreline for each section of the corridor;
- The extent and location of overwash occurrences for each section of the corridor;
- NC 12 roadway maintenance data, including the activities needed to maintain traffic and the manpower and cost involved, amount of time NC 12 is closed or reduced to one-lane traffic following storm events, etc.;
- Dredge disposal and beach nourishment projects undertaken by any party within the corridor or the adjacent nearshore area, including the volume of sand involved and the location and method of placement; and
- Data about major storm events.

The data gathered will be compared to the baseline conditions, and any changes noted will be tracked and assessed. The majority of the physical information will be collected utilizing NCDOT aerial photography, which will be generated biannually and immediately following storm events, as needed. This is consistent with current NCDOT practice; in recognition of the dynamic conditions within the project area, NCDOT has generated aerial photography biannually and following major storm events since 2002. Roadway maintenance data will be generated by NCDOT maintenance staff. Data regarding disposal or nourishment projects will be requested from the appropriate federal or state agencies overseeing those projects. Storm data will be compiled from agencies that track meteorological events, including the National Oceanic and Atmospheric Administration (NOAA), the National Hurricane Center, the State Climate Office, and other agencies as appropriate.

A report detailing the findings of the coastal monitoring program will be prepared on an annual basis. The erosion rates used to generate the baseline shoreline predictions also will be reassessed annually. NCDOT will provide a draft of each annual report to the Refuge manager for review. The draft report may be refined based on Refuge input. NCDOT will submit the final annual coastal monitoring reports to the Merger Team and will also post the reports on the internet for public review. An additional report that combines the monitoring findings with other geologic and biological datasets from other ongoing agency or university studies will be prepared every five years.

These efforts will be combined with the existing shoreline monitoring program that is underway as required by the existing terminal groin permit; any future monitoring efforts required as part of any new terminal groin permit also will be combined with the coastal monitoring. The coastal monitoring will be conducted by NCDOT staff (those with experience in aerial photography, coastal hydraulics, surveying, and roadway maintenance) and qualified coastal engineering consultants approved by NCDOT.

Refuge Habitat/NC 12 Vulnerability Forecasting Study

NCDOT will fund and implement a periodic Refuge habitat/NC 12 vulnerability forecasting study in consultation with USFWS. Through this program, NCDOT and USFWS will work together to develop and assess alternative future scenarios, including possible site-specific events and remedies. The purpose of the periodic Refuge habitat/NC 12 vulnerability forecasting study is to go beyond simply monitoring conditions and instead plan for potential events, such as storms, in order to minimize, to the extent possible, future threats to highway infrastructure and impacts to Refuge resources.

The periodic Refuge habitat/NC 12 vulnerability forecasting study will be conducted by a panel of coastal science experts whose credentials are acceptable to both NCDOT and USFWS. The first panel will be convened within six months after the initial coastal monitoring plan is finalized. The forecasts generated as part of this program will be re-visited every five years, within six months after the release of each five-year coastal monitoring report.

Environmental Review for Future Phases

The purpose of the environmental review is to determine, in coordination with all interested agencies and with an opportunity for public involvement, whether additional environmental study of a proposed future phase is needed prior to undertaking the future phase action. The environmental review will study the proposed action and the status of compliance with environmental laws that may be applicable to the proposed phase of action, including, but not limited to, Section 4(f), the National Historic Preservation Act, the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, the Coastal Area Management

Act (CAMA), the National Wildlife Refuge System Improvement Act of 1997, and the Clean Water Act. FHWA and NCDOT also will complete the appropriate NEPA documentation for each future phase of action in accordance with 23 CFR 771.129-130. Environmental conditions and the timing of each phase will be the primary factors in determining what type of NEPA documentation (a re-evaluation, a supplement, or a separate NEPA process) is the most appropriate.

The results of the coastal monitoring program, the updated shoreline erosion predictions, and the Refuge habitat/NC 12 vulnerability forecasting study will be used by NCDOT and FHWA, in consultation with representatives of the Refuge and the Merger Team, to determine: when an environmental review for each individual future phase of action will be initiated; the limits of the action area; potential actions that should be considered for the location; and measures to minimize and mitigate impacts. Based on previous NCDOT experience, findings that may warrant initiating an environmental review of a future phase include:

- An area with weak dunes (e.g., low dunes that lack vegetation) that potentially requires higher levels of storm-related NC 12 maintenance activity, proximity of the dune to NC 12, and the rate dunes may be advancing towards NC 12 (this recognizes that the frequency of dune maintenance is highest when a dune is less than 25 feet [7.6 meters] from the road);
- Significant increases in erosion rates over past trends;
- Significant increases in NC 12 storm-related maintenance frequency or activity over previous years;
- A determination that the distance between the active shoreline (mean high water) and NC 12 will be below the critical buffer distance of 230 feet (70.1 meters) within the next five years; or
- A determination that shoreline and dune conditions are such that the need for storm-related maintenance is likely to escalate significantly in the next five years.

As of the publication of this ROD, sections of the Canal Zone, Sandbag Area, and Rodanthe ‘S’ Curves hot spots (see Figure 2-7 of the EA) may already meet one or more of the listed criteria. The Rodanthe ‘S’ Curves Hot Spot was especially affected by a major storm event in November 2009 (Section 3.5.6 of the EA). The coastal monitoring program will provide the information needed to determine when future phases of action will be initiated in these areas.

Selection of Future Phases for Implementation

Once NCDOT and FHWA decide to initiate an environmental review of a later phase of the Selected Alternative in consultation with the Refuge, as described above, the study, selection, and finalizing of that phase will follow the provisions of the NEPA/Section 404 Merger Process that is currently utilized by NCDOT. Because the purpose and need (Concurrence Point 1) of the overall project will not change, NCDOT and FHWA will likely reconvene the Merger Team at Concurrence Point 2, the selection of detailed study alternatives. It is anticipated that future phases will be subject to various permitting requirements. NCDOT will be required to obtain and comply with all applicable permits prior to beginning construction of future phases.

3.4 Cost Estimate for the Selected Alternative

The estimated cost for construction of Phase I of the Selected Alternative and Bonner Bridge demolition ranges from \$265 to \$315 million (in 2006 dollars). The total estimated cost of the Selected Alternative through 2060 (including all construction, operation and maintenance, right-of-way, Bonner Bridge demolition, and wetland mitigation costs) ranges from approximately \$615 million to \$1.5 billion (in 2006 dollars) and is dependent upon what options are selected for future phases of the project. This range reflects a reasonable range of potential future phase approaches and construction costs (based on the remaining Parallel Bridge Corridor alternatives) as they are known at this time. Additional cost details are presented in Tables 2-7 and 2-8 of the EA.

3.5 Summary of Impacts for the Selected Alternative

The decision to select the NC 12 Transportation Management Plan Alternative for implementation was made after careful consideration of the advantages and disadvantages of all the alternatives. Table 1 provides a summary comparison of the impacts for all phases of the Selected Alternative, and Table 2 summarizes the impacts for Phase I (Oregon Inlet bridge) of the Selected Alternative. The FEIS and the EA document the detailed evaluation of the impacts of the Selected (Preferred) Alternative.

4.0 Section 4(f) Statement

Section 4(f) of the US Department of Transportation (USDOT) Act of 1966, as amended (49 *United States Code* [USC] 303), states that USDOT may not approve the use of land from a significant publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site, unless a determination is made that the project will have a *de minimis* impact or unless a determination is made that:

1. There is no feasible and prudent avoidance alternative, as defined in 23 CFR 774.17, to the use of land from the property; and
2. The action includes all possible planning, as defined in 23 CFR 774.17, to minimize harm to the property resulting from such use.

If analysis concludes that there is no feasible and prudent avoidance alternative, then USDOT may approve only the alternative that causes the least overall harm in light of the statute's preservation purpose.

All six of the Parallel Bridge Corridor alternatives, including the NC 12 Transportation Management Plan Alternative (Selected), would require a use of the Refuge. The Refuge qualifies as a Section 4(f) property as it is both a wildlife refuge and a historic site that is eligible for the National Register of Historic Places (NRHP). Phase I would use approximately 3.2 acres (1.3 hectares) of Refuge land. For future phases, all of the alternatives considered may have a use of Refuge lands (see Table 1).

All six of the Parallel Bridge Corridor alternatives, including the NC 12 Transportation Management Plan Alternative (Selected), would use approximately 6.3 acres (2.6 hectares) from

Table 1. Summary Comparison of Impacts for All Phases of Selected Alternative

	Nourishment	Road North/Bridge South	All Bridge	Phased Approach/ Rodanthe Bridge		Phased Approach/ Rodanthe Nourishment
				Road North/Bridge South	All Bridge	
NC 12 Transportation Management Plan Alternative (Selected)¹						
Community and Visual Impacts						
Residential Relocations	0	2	2	6	0	
Business Relocations	0	5	5	7	0	
Cemetery Impacts	None	Proposed right-of-way would cross cemetery, but no known gravesites would be affected.			None	
Anticipated Need for Refuge Compatibility Determination	Compatibility Determination expected (for all alternatives that use Refuge lands outside the existing NC 12 easement).			No Compatibility Determination required.	Compatibility Determination expected (for all alternatives that use Refuge lands outside the existing NC 12 easement).	
Economic Impact of a Breach in Hatteras Island	The economic impact (measured as a reduction in retail sales) of a breach open for three months would be \$5.7, \$46.3, and \$146.7 million in the off-peak, middle, and peak seasons, respectively. Jobs and tax revenue also would be lost.					
Rodanthe Community Cohesion and Accessibility	No impact.					
Noise Impact	2 residential receptors exceeding FHWA NAC	3 residential receptors exceeding FHWA NAC, and 3 residential business receptors with substantial noise increases		3 residential receptors exceeding FHWA NAC	2 residential receptors exceeding FHWA NAC	
Utilities Cost to Relocate (in millions)	\$12.1	\$15.0	\$17.4	\$17.4	\$17.4	\$17.4
Visual Impact	Sizable visual intrusion into the Phase I (Oregon Inlet) area because the bridge is higher and longer than the existing structure. No visual impacts in the Refuge or Rodanthe outside of the Phase I area.	Sizable visual intrusion into the Phase I (Oregon Inlet) area because the bridge is higher and longer than the existing structure. Panoramic views of Pamlico Sound from homes along shoreline in Rodanthe would be affected.	Sizable visual intrusion into the Phase I (Oregon Inlet) area because the bridge is higher and longer than the existing structure. Sizable visual intrusion into the landscape of the Refuge over the entire length of the alternative. Panoramic views of Pamlico Sound from homes along shoreline in Rodanthe would be affected.	Sizable visual intrusion into the Phase I (Oregon Inlet) area because the bridge is higher and longer than the existing structure. Sizable visual intrusion into the landscape of the Refuge over the entire length of the alternative. 0.8 mile (1.3 kilometers) of elevated structure would substantially affect views in Rodanthe.	Sizable visual intrusion into the Phase I (Oregon Inlet) area because the bridge is higher and longer than the existing structure. Sizable visual intrusion into the landscape of the Refuge over the entire length of the alternative. 0.3 mile (0.5 kilometer) of elevated structure would substantially affect views in Rodanthe near its border with the Refuge.	

Table 1 (continued). Summary Comparison of Impacts for All Phases of Selected Alternative

	Nourishment	Road North/Bridge South	All Bridge	Phased Approach/ Rodanthe Bridge	Phased Approach/ Rodanthe Nourishment
NC 12 Transportation Management Plan Alternative (Selected)¹					
Cultural Resource Impacts					
Section 4(f) Resources Affected					
<ul style="list-style-type: none"> (Former) Oregon Inlet US Coast Guard Station Seashore on Bodie Island 	No use.				
	Approximately 6.3 acres (2.6 hectares) affected; however, Section 4(f) is not applicable, as the impacts resulting from relocating NC 12 from its current alignment through the Seashore would not be considered a use as defined in 23 CFR 774.17.				
<ul style="list-style-type: none"> Seashore on Hatteras Island and Refuge 	3.2 acres (1.3 hectares) with Phase I, then 19.9 acres (8.1 hectares) used primarily for new dunes plus periodic nourishment of 6.3 miles (10.1 kilometers) of seashore.	93.2 acres (37.7 hectares) used primarily for new highway easement, including 3.2 acres (1.3 hectares) with Phase I.	92.2 acres (37.3 hectares) used primarily for new highway easement, including 3.2 acres (1.3 hectares) with Phase I.	3.2 acres (1.3 hectares) with Phase I, then no additional permanent use (constructive use within Refuge), future phases contained within existing highway easement.	3.2 acres (1.3 hectares) with Phase I, then minor amount used for periodic nourishment of 1,500 feet (457 meters) of seashore; generally contained within existing highway easement.
	No use.				
Parks and Recreation Impacts					
General Refuge Access	Little change in access. Refuge facilities protected from future beach erosion.	Paved road at grade through northern portion of Refuge would maintain existing unrestrained access to the Refuge areas with visitor facilities, but bridge in southern portion of Refuge would reduce access in that area.	Access focused on three points; direct access to some Refuge visitor facilities lost.	Access focused on two points; direct access to some Refuge visitor facilities lost.	
		No fishing catwalks; alternate access to be provided; beach fishing access maintained except at southern end.	No fishing catwalks; alternate access to be provided; beach fishing access limited to 3 locations.	No fishing catwalks; alternate access to be provided; beach fishing access limited to 2 locations.	
Coastal Conditions Impacts					
Need for Terminal Groin Retention	Retain.				
Potential for Breach and Need for Closing Breach to Maintain NC 12	Breaches in northern portions of the Refuge are not expected through 2060, but if they occur would need to be closed; area potentially affected by sound-side erosion at the northern end of Hatteras Island bridged.				

Table 1 (concluded). Summary Comparison of Impacts for All Phases of Selected Alternative

	Nourishment	Road North/Bridge South	All Bridge	Phased Approach/ Rodanthe Bridge	Phased Approach/ Rodanthe Nourishment
NC 12 Transportation Management Plan Alternative (Selected)¹					
Natural Resources Impacts					
Biotic Communities Fill and Pile Impacts, acres (hectares)					
• Submerged Aquatic Vegetation (SAV)	0.2 (0.1)	0.3 (0.1)	0.3 (0.1)	0.2 (0.1)	0.2 (0.1)
• Wetlands	2.4 (1.0)	50.8 (20.6)	9.7 (3.9)	1.7 (0.7)	1.5 (0.6)
• Uplands – Natural and Man Dominated	25.5 (10.3)	18.0 (7.3)	8.5 (3.4)	11.9 (4.8)	7.8 (3.2)
• Impoundments	0.0 (0.0)	23.0 (9.3)	0.1 (0.0)	0.0 (0.0)	0.0 (0.0)
• Aquatic Bottom	2.3 (0.9)	4.1 (1.7)	3.6 (1.5)	2.1 (0.9)	2.2 (0.9)
• Total	30.4 (12.3)	96.2 (39.0)	22.2 (8.9)	15.9 (6.5)	11.7 (4.8)
Allow for Natural Shoreline Movement once all phases are complete	No	Generally except for groin retention and some dunes.	Yes, except for groin retention.	Generally, except for groin retention and some nourishment.	
Protected Species Adversely Affected					
• Piping Plover and Critical Habitat		Likely disturbance to nesting on beach.			
• Leatherback Sea Turtle/ Green Sea Turtle/ Loggerhead Sea Turtle		Likely disturbance to nesting on beach; not likely to adversely affect in ocean.			
• Seabeach Amaranth	Beach nourishment could affect habitat.	Not likely to adversely affect.			Beach nourishment could affect habitat.

¹The impacts shown for the six Parallel Bridge Corridor alternatives reflect the range of reasonably foreseeable impacts associated with the Selected Alternative.

Table 2. Summary of Impacts for Phase I (Oregon Inlet Bridge) of Selected Alternative

	Impact
Visual Impact	Sizable visual intrusion into the Phase I (Oregon Inlet) area. Bridge is approximately 1,300 feet (396 meters) shorter than other Parallel Bridge Corridor alternatives and the same height as it enters the Refuge.
Cultural Resource Impacts	
Pea Island National Wildlife Refuge	Adverse Effect to the Refuge as a historic resource.
(Former) Oregon Inlet US Coast Guard Station	Adverse Effect
Parks and Recreation Impacts	
Refuge Access	
• General	Access maintained to Refuge facilities and the (former) Oregon Inlet US Coast Guard Station in vicinity of Oregon Inlet.
• Fishing Access	No fishing catwalks; alternate access possible.
NC 12 Easement in Refuge	
• New, acres (hectares)	3.2 (1.3) ¹
• Existing Returned, acres (hectares)	2.9 (1.2) ¹
Seashore Impact	The three alignments are the same in the Seashore on Bodie Island; no existing NPS facilities displaced.
NC 12 Easement in Seashore	
• New, acres (hectares)	6.3 (2.6)
• Existing Returned, acres (hectares)	6.3 (2.6)
Coastal Conditions Impacts	
Need for Terminal Groin Retention	Retain.
Sound-Side Erosion on North End of Hatteras Island that Could Cause a Breach	A deep breach near the terminal groin could be difficult to fill with sand.
Natural Resource Impacts	
Biotic Communities Fill and Pile Impacts, acres (hectares)	
• Submerged Aquatic Vegetation (SAV)	0.2 (0.1)
• Wetlands	0.9 (0.4)
• Uplands – Natural and Man Dominated	3.8 (1.5)
• Impoundments	0.0 (0.0)
• Aquatic Bottom	2.3 (0.9)
Total	7.3 (2.9)
Wetlands and SAV Shaded, acres (hectares)	
• Wetlands	2.0 (0.8)
• SAV	0.9 (0.4)
Protected Species Impacts	Likely disturbance to piping plover and sea turtles nesting on beach, but not likely to adversely affect in ocean. Not likely to adversely affect seabeach amaranth.

¹Area impacts are slightly different from those listed in the Revised Final Section 4(f) Evaluation (October 2009) as a result of minor changes made in the preliminary design of the Selected Alternative and new field surveys that revealed an increase in the area of open water west of Bonner Bridge as a result of shoreline erosion. Open water is not a part of the Refuge. These acreages are approximate and will be finalized during final design.

the Seashore, but Section 4(f) is not applicable to this impact because there exists a substantial history of joint planning and development for the co-existence of the Seashore and the roadway.

The Revised Final Section 4(f) Evaluation (Appendix B of the EA) identifies the location and characteristics of Section 4(f) properties in the project area, describes the applicability of Section 4(f) to these properties, discusses avoidance alternatives, presents a least overall harm analysis, addresses the measures taken to minimize harm, and reaches the conclusions noted above.

Based upon the Revised Final Section 4(f) Evaluation, FHWA has determined that there is no feasible and prudent alternative to the use of land from the Pea Island National Wildlife Refuge for the construction of Phase I of the project, that the Selected Alternative would cause the least overall harm, and that the Selected Alternative includes all possible planning to minimize harm to the property.

5.0 Measures to Minimize Harm

Measures to minimize harm associated with the Selected Alternative include both those that are incorporated in most transportation improvement projects, such as relocation services and wetland compensation, as well as 28 project-specific commitments. Additional measures to minimize harm may be developed during the environmental permit process for Phase I and as future phases of the Selected Alternative are finalized. Any additional measures to minimize harm for future phases will be documented in the appropriate NEPA documentation for each future phase of action, as determined by FHWA and NCDOT in accordance with 23 CFR 771.129-130 (see Section 3.3.2).

5.1 Project-Specific Commitments

The project-specific commitments are presented in Appendix A and also appeared at the beginning of the EA. Additional activities to minimize harm not included in the project-specific commitments are discussed in the following sections.

5.2 Relocations

Phase I of the Selected Alternative will involve no displacements. Improvements in Rodanthe with a future phase (likely Phase II) would displace anywhere from zero to six homes and zero to seven businesses; the number of displacements will depend on the option selected for implementation in Rodanthe. Opportunities to minimize displacements will be sought when final plans are developed in Rodanthe.

Current relocation studies indicate that impacts to minorities, large families, disabled persons, or others who would have special problems being relocated are not anticipated. No special relocation services will be necessary. The residential relocations will not cause a housing shortage. Based on coordination with Realtors in the project area, there is currently available adequate decent, safe, and sanitary housing. Suitable sites for relocating the displaced business are also currently available. NCDOT will provide relocation assistance to residences and businesses displaced during acquisition of right-of-way in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (Public Law 91-646), and the North Carolina Relocation Assistance Act (GS-133-5 through 133-18).

5.3 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470f) affords consideration of properties that are listed, or eligible for listing, on the NRHP. As discussed in Section 4.0, Section 4(f) of the USDOT Act of 1966, as amended (49 USC 303), protects publicly owned public parks, publicly owned recreation areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance from conversion to highway use using FHWA administered funds unless there is no alternative and unless all planning is done to minimize harm. In accordance with the requirements of Section 4(f), Section 106, and the NEPA, surveys were conducted to identify the cultural resources in the project area. There are four resources listed on or eligible for inclusion in the NRHP in the project's Area of Potential Effect: the Pea Island National Wildlife Refuge (determined eligible), the (former) Oregon Inlet US Coast Guard Station (NRHP-listed), the Chicamacomico Life Saving Station (NRHP-listed), and the Rodanthe Historic District (determined eligible).

The Selected Alternative will have the following effects on these historic cultural resources:

- Pea Island National Wildlife Refuge – Adverse Effect to the Refuge as a historic resource because of the elevation of the bridge as it enters the Refuge with Phase I. In addition, depending on the approach to future phases through the Refuge, there also would be an Adverse Effect to the Refuge as a historic resource as a result of the project leaving the existing NC 12 easement and affecting the area of the dikes and ponds created by the Civilian Conservation Corps (CCC) in the 1930s and/or adding additional bridges or dunes within the Refuge.
- (Former) Oregon Inlet US Coast Guard Station – Adverse Effect because of the greater height of the new Oregon Inlet bridge, which enters Hatteras Island at an elevation of approximately 33.5 feet (10.2 meters) at the top of the bridge deck, compared to the Bonner Bridge, which enters Hatteras Island at an elevation of approximately 15 feet (4.6 meters), as well as a potential new fishing pier, which would alter the historic view, function, and setting of the station.
- The Chicamacomico Life Saving Station and the associated Rodanthe Historic District – No Adverse Effect or No Effect (depending on the approach to the Rodanthe phase of the project) because of the change in the visual setting with a bridge and associated approach roads within view of the district. This finding is based on the modifications made to several of the Parallel Bridge Corridor alternatives, as described in Section 2.1 of the EA. All of the Parallel Bridge Corridor alternatives, which may be selected for implementation as part of the NC 12 Transportation Management Plan, have been designed such that there is no bridging within the boundaries of the Rodanthe Historic District.

In order to further minimize and mitigate impacts on these historic cultural resources, FHWA, the North Carolina State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and NCDOT participated in the Section 106 consultation process. In addition, the following agencies and organizations requested to be consulting parties so that they could also provide input into the Section 106 consultation process: Dare County, the North Carolina Aquarium Society, USFWS, NPS, and the Chicamacomico Historical Association (CHA). In order to complete Section 106 consultation, FHWA, SHPO, ACHP, and NCDOT, along with the consulting parties, developed a Programmatic Agreement (PA) stipulating measures that FHWA will ensure are carried out during the design and construction of the

Selected Alternative to mitigate adverse impacts to the historic cultural resources. Further information about the Section 106 consultation process and the PA is presented in Section 9.0.

5.4 Noise Impacts

The noise level and abatement analysis for the Selected Alternative indicates that FHWA's Noise Abatement Criteria (NAC) will not be approached or exceeded with Phase I. Depending upon the option selected for implementation under the NC 12 Transportation Management Plan in Rodanthe, the criteria would be approached or exceeded at two to three residences (see Table 1). Substantial increases in noise in Rodanthe would be at zero to three residences and up to one business. No reasonable or feasible opportunities exist to reduce noise levels at either of these residences. Opportunities to minimize noise impacts will be sought when final plans are developed in Rodanthe.

5.5 Wetland Impacts

Final avoidance and minimization measures associated with wetland, sub-aquatic vegetation (SAV), and Oregon Inlet impacts for Phase I of the Selected Alternative were discussed and agreed upon by the NEPA/Section 404 Merger Team at a Concurrence Point 2A/4A meeting held on November 13, 2008 (see Section 3.3.1 of the EA). Minimization of harm to natural resources as a result of the Selected Alternative is discussed below. A Concurrence Point 2A/4A meeting will be held prior to the completion of the final design for each remaining phase of the project.

Section 404 jurisdictional wetland impacts with Phase I of the Selected Alternative will be approximately 0.9 acre (0.4 hectare), including approximately 0.37 acre (0.15 hectare) of CAMA coastal wetlands. Depending upon the options selected for future phases, wetland impacts could be as high as 50.8 acres (20.6 hectares), and CAMA wetland impacts could be as high as 10.5 acres (4.3 hectares).

Efforts were made to avoid and minimize wetland impacts in developing each of the project alternatives. Jurisdictional wetland impacts will be further minimized to the extent practicable during final design. Compensatory mitigation will be provided for all unavoidable impacts to these valuable natural systems. A mitigation plan for wetland impacts will be developed by NCDOT during the Section 404/Section 401 permitting process; a preliminary list of wetland mitigation measures is included in Table 3. An initial meeting on wetland mitigation was held with the Merger Team on September 17, 2009.

Temporary wetland impacts will occur with both construction of the Selected Alternative as well as the demolition and removal of Bonner Bridge. The extent of the impact will depend on the access technique used. NCDOT will coordinate with environmental resource and regulatory agencies prior to bridge demolition and removal to determine the most practicable construction access methodology for the demolition of Bonner Bridge.

5.6 Protected Species Impacts

The Selected Alternative is likely to disturb nesting on the beach by the piping plover, primarily in critical habitat areas near Oregon Inlet. It also is likely to disturb nesting on the beach by the leatherback sea turtle, green sea turtle, and loggerhead sea turtle. It is not likely to adversely affect turtles in the ocean. If phases beyond Phase I of the Selected Alternative involve beach nourishment, the nourishment could affect seabeach amaranth habitat. Section 7 consultation was

completed, but would be reopened as the features of future phases are finalized, if needed. USFWS issued *Biological and Conference Opinions* (USFWS, 2008) related to the piping plover, loggerhead sea turtle, green sea turtle, and leatherback sea turtle, as well as critical habitat for wintering piping plovers. NCDOT agreed to implement several nondiscretionary measures that include the terms and conditions outlined in the *Biological and Conference Opinions* (USFWS, 2008) and are presented in the Project Commitments in Appendix A. NCDOT also coordinated with NOAA Fisheries as documented in Sections 4.7.9 and 8.11 of the FEIS and Section 3.6.3 of the EA.

5.7 Construction Impacts

Construction of the Selected Alternative and demolition and removal of Bonner Bridge will be governed by:

- NCDOT's *Standard Specifications for Roads and Structures* (NCDOT, July 2006, or as current at the time of construction); and
- American Association of State Highway and Transportation Officials' (AASHTO) *Standard Specifications for Highway Bridges* (AASHTO, 2002, or as current at the time of construction).

Mechanisms will be put in place to maintain traffic flow; minimize air quality, noise, and construction lighting impacts; manage waste disposal; protect surrounding natural resources; control erosion; and handle any accidental waste spills. Affected geodetic survey markers in the project area will be properly relocated.

5.8 Mitigation

Table 3 lists the current mitigation commitments proposed for impacts to historic properties, natural resources, and Section 4(f) properties. FHWA and NCDOT will finalize the specific jurisdictional wetland and SAV mitigation in coordination with USACE, NOAA, USFWS, NPS, and NCDENR and other agencies as appropriate. FHWA and NCDOT also are coordinating with NPS and USFWS on mitigation for impacts to the Seashore and Refuge.

The Section 106 stipulations include mitigation for the entire NC 12 Transportation Management Plan Alternative; under the Programmatic Agreement, additional mitigation may be required if it is determined that a future phase includes impacts not previously considered. The remaining mitigation measures are specifically for the construction of Phase I; additional mitigation is likely as future phases of the project are implemented.

6.0 Monitoring and Enforcement Program

Coordination will be maintained with regulatory and resource agencies during final design, permitting, right-of-way acquisition, and construction to ensure that avoidance, minimization, and compensatory mitigation measures will be initiated, as required by law and as agreed to in the Project Commitments (see Appendix A). NCDOT and FHWA will enforce pertinent specifications and contract provisions in accordance with the intent of the EA and the welfare of the public.

Table 3. Project Mitigation Measures

Resource	Mitigation Measure
Oregon Inlet Fishing Access	NCDOT will ensure that access to fishing at the north end of Hatteras Island is restored once construction of the new Oregon Inlet bridge is complete. The specific method of access will be determined during the final design of Phase I. The catwalks on the existing Bonner Bridge will remain open during construction as long as is safely feasible.
Section 404/401 Jurisdictional Resources (wetlands, SAV)	NCDOT is working with NCDENR-Division of Marine Fisheries (DMF) and the National Marine Fisheries Service (NMFS) on the use of bridge demolition material as an artificial reef.
	Once construction of Phase I is complete, the portion of the existing bridge currently within SAV habitat (adjacent to Bodie Island) will be removed in order to restore approximately 1.33 acres (0.54 hectare) of habitat.
	NCDOT proposes to create approximately 11 acres (4.5 hectares) of oyster reef habitat at a 2:1 ratio in an agency-approved location as mitigation for the remainder of SAV impacts.
	Wetland mitigation will be contained within the Seashore. Mitigation will include treatment of exotic species (<i>Phragmites australis</i>) within wetlands considered to have high conservation value by NPS. NPS has identified approximately 35 acres (14.2 hectares) adjacent to the Bodie Island Lighthouse Pond as the highest priority for treatment; NCDOT will treat the area for five years. This mitigation will be used to offset impacts for Phase I and for future phases as appropriate.
Section 106 Stipulations	<p>Parallel Bridge Corridor Minimization/Mitigation Measures</p> <ul style="list-style-type: none"> • Compile an ethnographical context of the men and women who lived and worked in the general project area during the late nineteenth and early twentieth centuries. Will focus on the area’s watermen, fishermen, Civilian Conservation Corps, members of gun or hunting clubs, and life saving station employees. Will produce a digital document which contains the recorded oral histories and documentary materials. • Context for tourism – NCDOT will work with USFWS, SHPO, the North Carolina Aquarium Society, CHA, and NPS to compile a context for the Coast Guard and Life Saving stations, wildlife refuges, and other state and federal “outposts” on North Carolina’s Outer Banks.
	<p>Pea Island National Wildlife Refuge</p> <ul style="list-style-type: none"> • Review and comment by SHPO, USFWS, and NPS on final design for bridge parapet and rail for NC 12 through the Refuge. • Work with the USFWS, NPS, SHPO and the NC Coastal Geological Cooperative on techniques to protect and maintain NC 12. • Provision of copies of previously produced project-related cultural resources technical reports to USFWS. • Provision and installation of signs to direct visitors to Refuge facilities. • Provision of exhibits and kiosks about the Refuge.

Table 3 (concluded). Project Mitigation Measures

Resource	Mitigation Measure
Section 106 Stipulations (concluded)	(former) Oregon Inlet US Coast Guard Station <ul style="list-style-type: none"> • Improvements to station access road and parking area if these areas are utilized for project construction staging. • Provision of road signs to direct visitors to the station. • Provision of exhibits and kiosks about the station.
	Rodanthe Historic District and Chicamacomico Life Saving Station <ul style="list-style-type: none"> • The undertaking will be designed in a manner that keeps subsequent phases of the project out of the limits of the Rodanthe Historic District (NRHP-eligible), which also includes the Chicamacomico Life Saving Station (NRHP-listed).
Cape Hatteras National Seashore Property	Relocate Oregon Inlet Fishing Center septic system (impacted by Phase I construction) to a location to be determined in coordination with NPS.
	Relocate Oregon Inlet Fishing Center RV dump station (impacted by Phase I construction) to a location to be determined in coordination with NPS.
Pea Island National Wildlife Refuge Property	Once construction of Phase I and demolition of the existing Bonner Bridge is complete, the portion of the existing NC 12 easement not needed for the replacement structure will be returned to USFWS.
	Work with the USFWS to maintain the piping plover habitat behind the terminal groin. These services will be available once the Phase I contract is let and would end five years following Phase I completion.

7.0 Corrections to the EA

Comments on the EA submitted by state and federal environmental resource and regulatory agencies included one that necessitated corrections be made to the EA. In response to a comment from USACE related to EA Section 3.5.6, November 2009 Rodanthe Storm Repair, the last sentence in the first paragraph in Section 3.5.6 (page 3-9) is replaced with the following (new material is in bold text):

NCDOT completed this effort in March 2010 **after the remnants of Tropical Storm Ida caused additional damage in 2009.**

8.0 Response to Comments on the EA

Appendix C presents responses to the comments on the EA received from the public, state and federal environmental resource and regulatory agencies, local agencies, and non-governmental organizations (NGOs). The written correspondence received from agencies, NGOs, public officials, and public organizations is included in Appendix B. Over 4,000 pieces of correspondence were received on the EA from the public, including 3,856 form letters and e-mails from the citizens group “Replace the Bridge Now” in support of the Selected Alternative.

Given the volume of this original correspondence, it is posted for online review on the Bonner Bridge repairs website (www.ncdot.org/projects/bonnerbridgerepairs) and the Outer Banks Task Force website (www.obtf.org) rather than published on paper. Public correspondence is posted in three separate folders: 1) public correspondence in support of the Selected Alternative; 2) other public correspondence; and 3) the transcripts from the two Public Hearings.

9.0 Section 106 Programmatic Agreement

As documented in Section 3.4 of the EA, FHWA, SHPO, ACHP, and NCDOT determined at a meeting on June 10, 2009, that Phase I of the Selected Alternative would have an Adverse Effect on the Refuge as a historic resource and the (former) Oregon Inlet US Coast Guard Station. In order to resolve these adverse effects in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, FHWA and NCDOT coordinated with SHPO and ACHP to complete the Section 106 consultation process. In addition, the following agencies and organizations requested to be consulting parties so that they could also provide input into the Section 106 consultation process: Dare County, the North Carolina Aquarium Society, USFWS, NPS, and CHA. They are listed in the final Programmatic Agreement (PA) as concurring parties.

As part of the preparation of the FEIS, an initial Section 106 Consultation Meeting was held on July 10, 2008, in Manteo, North Carolina, in order to discuss the adverse affects to historic properties and potential mitigation strategies with the consulting parties. At this meeting, the consulting parties also provided input on additional strategies to mitigate impacts of the project on the historic properties. Since the publication of the FEIS in September 2008, FHWA, NCDOT, ACHP, and SHPO, as well as other consulting agencies, participated in approximately nine meetings to discuss the project with respect to Section 106. These meetings were held to discuss the specifics of a Memorandum of Agreement (MOA) that detailed the action and appropriate mitigation. The MOA was revised in the later meetings as a PA that would resolve adverse effects for Phase I of the Parallel Bridge Corridor and set up a process for compliance with Section 106 prior to the implementation of later phases. The final PA was signed by the signatory agencies (FHWA, SHPO, ACHP, and NCDOT) on November 15, 2010; the PA is currently being circulated to the concurring parties for signature. A copy of the signed PA is included in Appendix D.

The PA lists eight principles that FHWA and NCDOT shall adhere to for replacement of the Bonner Bridge and development and implementation of future phases of the Selected Alternative. Several of these principles call for FHWA and NCDOT to continue coordinating with the other signatory agencies and concurring parties in the study and selection of future phases of the Selected Alternative.

The PA also includes 12 stipulations that FHWA will ensure are accomplished. They are summarized above as a part of Table 3. The full text of the 12 stipulations is included in the PA in Appendix D. The word “undertaking” in the stipulations refers to all phases of the proposed project.

10.0 Next Steps

10.1 Phase I

Following the issuance of this ROD, NCDOT intends to issue a Request for Proposals from qualified contractors. NCDOT will then select a contractor and award a design-build contract for the final design and construction of Phase I of the project. Final design will begin after the design-build contract has been awarded. The contract will include demolition of the existing Bonner Bridge and environmental mitigation and restoration work. A copy of the Project Commitments (Appendix A) will be included in the design-build contract to ensure that the selected contractor abides by all of the commitments. The design-build contract will also require the selected contractor to abide by all applicable environmental permit conditions and stipulations. Federal-aid highway funding for the project is expressly conditioned upon NCDOT's compliance with the terms and conditions of all USDOJ permits issued for the project.

The necessary permits and approvals, described in Section 10.3 below, will be finalized following the issuance of this ROD. Per the NEPA/Section 404 Merger Process, NCDOT also will convene the project's Merger Team at least twice during the final design process to discuss Concurrence Points 4B (30 Percent Hydraulic Review) and 4C (Permit Drawings Review).

Phase I construction is expected to last approximately 3.5 years. Phase I construction will not begin until all of the necessary permits have been obtained. The issuance of this ROD is expressly conditioned upon NCDOT including appropriate provisions in the design-build contract for Phase I preventing the design-builder from proceeding with construction, and upon NCDOT not issuing a notice to proceed with construction, until the necessary permits are issued. Further, NCDOT must obtain FHWA's concurrence to issue a notice to proceed with construction. FHWA will not concur in the issuance of a notice to proceed with construction, nor will Federal funds be authorized for construction, until the necessary permits are issued.

10.2 Later Phases (NC 12 Transportation Management Plan)

Immediately following the issuance of this ROD, NCDOT will implement and fund the coastal monitoring program component of the NC 12 Transportation Management Plan (see Section 3.3.2); the program will include detailed aerial photography, field surveys, and compilation of NCDOT maintenance activities and other agency dredge waste disposal or beach nourishment projects within the project area. Within 90 days of this ROD, NCDOT will generate an initial coastal conditions report based upon the latest data available. Subsequently, NCDOT will generate additional reports detailing the findings of the coastal monitoring program and a consolidated report that combines the monitoring findings with other geologic and biological datasets from other related studies, annually and every five years respectively as described in Section 3.3.2. In addition, within six months of the initial coastal monitoring report and every five years thereafter, NCDOT will implement and fund the Refuge habitat/NC 12 vulnerability forecasting component of the NC 12 Transportation Management Plan (see Section 3.3.2).

As discussed in Section 3.3.2, the findings of the coastal monitoring program and the Refuge habitat/NC 12 vulnerability forecasting study will guide NCDOT, in consultation with FHWA, the Refuge, and the Merger Team, in the planning for and implementation of future phases of the project. In addition, the study and selection of each future phase will be carried through the NEPA/Section 404 Merger Process.

10.3 Permits and Approvals

10.3.1 Phase I

Construction of Phase I will require the following permits and approvals. Federal funding for this project is expressly conditioned upon compliance with all permitting terms and conditions:

US Coast Guard Permit

A bridge permit would be required from the US Coast Guard. Under the authority of Section 9 of the Rivers and Harbors Act of 1899 and the General Bridge Act of 1946 (as well as other legislation), the US Coast Guard is responsible for approving the locations and plans for bridges and causeways over navigable waterways.

US Army Corps of Engineers Permits

Under Section 404 of the Clean Water Act, USACE is responsible for issuing permits for discharges of dredged or fill material in waters of the United States, including fill placed in connection with bridge and road construction and the disposal of construction debris. Table 2 summarizes the impacts to wetlands as a result of Phase I construction.

Under the authority of the Rivers and Harbors Act of 1899, a Section 10 permit also will be required for crossing the Oregon Inlet channel.

Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 regulates ocean dumping of dredged material. If this disposal methodology is used, this permit would be obtained. The Secretary of the Army can issue a permit after it has been determined that the dumping would not unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities.

US Fish and Wildlife Service Permits and Approvals

An easement for the landing of the new Oregon Inlet bridge on Hatteras Island (requiring approximately 3.2 acres [1.3 hectares] of Refuge property), temporary construction permits, and a permit to retain the existing terminal groin will be required for Phase I. The exact terms and conditions, as well as appropriate compensatory mitigation, will be determined during the permitting process. All restoration work for Phase I will be completed and accepted by USFWS prior to the final transfer of title for the new easement area to NCDOT.

Additional environmental documentation, including a compatibility determination, is necessary for the USFWS to satisfy its statutes and regulations prior to issuing the permits required for construction of Phase I. FHWA and NCDOT will cooperate with USFWS to meet its environmental documentation needs during the permitting process.

Coastal Area Management Act Permit

A CAMA permit is required from the NCDENR-Division of Coastal Management since the project involves construction along the oceanfront and in Areas of Environmental Concern (AEC).

NCDENR-Division of Water Quality Certification

A 401 Water Quality Certification (as mandated under Section 401 of the Clean Water Act) would be required from the NCDENR-Division of Water Quality. The 401 certification process is coordinated with the 404 and CAMA processes.

NCDENR-Division of Water Quality Stormwater Permit

A NCDENR-Division of Water Quality Stormwater Permit is required for development activities that require either a Sediment and Erosion Control Plan or a CAMA Major Development Permit.

National Park Service Special Use Permit

An NPS Special Use Permit for the landing of the new bridge on Bodie Island (requiring approximately 6.3 acres [2.6 hectares] of the Seashore) and construction permits will be required for Phase I. The permits will be issued by the Seashore Superintendent, who must conclude that the bridge would not impair park resources. The exact terms and conditions will be determined during the permitting process. All restoration work for Phase I will be completed, and accepted by NPS, prior to the final transfer of title for the new easement area to NCDOT.

Other Permitting/Approval Actions and Consultations

FHWA and NCDOT will continue to coordinate with the permitting agencies throughout the Phase I final design and permitting process and during construction. FHWA also will coordinate with USFWS and NMFS on any Section 7 Endangered Species Act concerns that arise during final design and construction; consultation under Section 7 will be re-initiated with either of these agencies if it becomes necessary. FHWA and NCDOT also will carry out the stipulations of the Section 106 National Historic Preservation Act Programmatic Agreement (Appendix D) and will coordinate with the other Signatory and Concurring Parties, as necessary, during the final design, permitting, and construction processes.

10.3.2 Later Phases (NC 12 Transportation Management Plan)

The NC 12 Transportation Management Plan will guide the study and implementation of future phases of action in the project area through 2060. Future phases of the project likely will require a similar list of agency permits and approvals as Phase I. The exact approvals and permits that will be needed will depend upon future shoreline conditions and on what action is selected for implementation. FHWA will not approve a future phase of the project for construction until all necessary permits have been obtained for that particular phase.

11.0 Conclusion

Based on the above information and after consideration of the input received from other agencies, organizations, and the public, FHWA has determined that the environmental studies completed for this project are in accordance with 23 CFR and 23 USC. Specifically, FHWA has determined that implementation of the Selected Alternative as described in this ROD is in the best overall public interest. FHWA has determined that there is no feasible and prudent alternative to the use of land from the Pea Island National Wildlife Refuge for the construction of Phase I of the project, that the Selected Alternative would cause the least overall harm, and that the Selected Alternative includes all possible planning to minimize harm to the property. In the EA, FHWA re-evaluated the impacts associated with the design modifications that occurred after the FEIS and also assessed the impacts associated with the Preferred Alternative. FHWA has determined that the modifications and changes assessed in the EA do not result in any new, significant impacts not previously identified; therefore, a Supplemental FEIS is not required. The Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative is hereby approved for implementation in accordance with the provisions of this ROD.

12/20/2010
Date



John F. Sullivan III, P.E., Division Administrator
Federal Highway Administration

Appendix A

Project Commitments

NC 12 Replacement of the Herbert C. Bonner Bridge

(Bridge No. 11) over Oregon Inlet

Federal-Aid No. BRS-2358(15)
NCDOT Project Definition: 32635
TIP Project No. B-2500
Dare County, North Carolina

Project Commitments

The following text lists the Project Commitments. Commitments revised or added since the May 2010 Environmental Assessment (EA) are noted.

Highway Design Branch and Technical Services Division

1. Navigation Span Location. One navigation zone would be built to serve boats passing through Oregon Inlet. The location of the zone would be determined in coordination with the US Army Corps of Engineers (USACE).
2. Bicycle Accommodations. The Cape Hatteras National Seashore (Seashore) management plan supports the use of bicycles along NC 12. All bridges associated with the detailed study alternatives (including the Preferred Alternative) would have 8-foot (2.4-meter) wide shoulders that would be safer for bicycle and pedestrian traffic than Bonner Bridge's 2-foot (0.6-meter) wide shoulders. In addition, a bicycle-safe bridge rail on the bridges also would provide increased safety for bicyclists. New roadway would have 4-foot (1.2-meter) paved shoulders, which would be safer for use by bicycle and pedestrian traffic than the existing NC 12's unpaved shoulders.

Highway Design Branch and Division 1

3. Use of Work Bridges. During construction of the project, steps taken to minimize turbidity (when possible and practicable) would include the use of work bridges (rather than barges, which would require dredging) for movement of construction equipment in shallow areas where submerged aquatic vegetation (SAV) is present. If SAV is in waters deep enough to float a barge without dredging, the use of a work bridge would not be necessary. Work bridges also would be used to carry construction equipment over intertidal marsh areas (black needlerush and smooth cordgrass). Dredging generally would only be used in depths less than 6 feet (1.8 meters) where SAV is not present. Work bridges will be used to cross SAVs. Neither dredging nor haul roads would be used in SAVs.
4. Sedimentation and Erosion Control. All waters in the project area are classified as SA waters (Class A salt waters) with a supplemental classification of High Quality Waters (HQW). The most stringent application of the Best Management Practices (BMPs) is expected where highway projects affect receiving waters of special designation, such as HQW. Also, impacts to adjacent areas of SAV and/or wetlands should be minimized. Therefore, sedimentation

and erosion control measures shall adhere to the Design Standards in Sensitive Watersheds [15A NCAC 04B.0124(b)-(e)]. Prior to construction, the design-build contractor will submit the proposed sediment and erosion control plans for each stage of construction to the North Carolina Department of Transportation (NCDOT) and permitting agencies for review.

5. Pile Placement. Bridge piles in open water would be jetted to the tip elevation (depth of the tip of the pile). Bridge piles over land would be jetted or driven. Potential damage to wetlands, SAV, and Oregon Inlet from jetting spoils will be minimized to the extent practicable.
6. Use of Bridge Demolition Debris for an Artificial Reef. NCDOT would work with the North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries (NCDENR-DMF) to accommodate this desire during demolition planning. Coordination also would be conducted with the National Marine Fisheries Service (NMFS) in association with their regulation of several protected species.
7. Oregon Inlet Fishing Access. NCDOT will ensure that access to fishing at the north end of Hatteras Island is restored once construction of the new Oregon Inlet bridge is complete. The catwalks on the existing Bonner Bridge will remain open during construction as long as is safely feasible.

Highway Design Branch, Project Development and Environmental Analysis Branch, and Division 1

8. Design Coordination. NCDOT would invite NPS and USFWS, as well as the other agencies represented on the project's National Environmental Policy Act/Section 404 of the Clean Water Act (NEPA/Section 404) Merger Team (a full list of agencies on the Merger Team is shown on page 8-6 of the FEIS), to participate in the development of project design and mitigation strategies as a part of the permit application process for each phase of the project.
9. Dredging. To avoid construction impacts to protected turtles, NCDOT's contractor would use pipeline or clamshell dredging. A hopper dredge would not be used for bridge construction or Bonner Bridge demolition.
10. Disposal of Dredged Material. Prior to construction, during the permit preparation process, FHWA and NCDOT would work with appropriate environmental resource and regulatory agencies to identify the characteristics of dredged material from bridge construction in open water and develop a disposal plan that would minimize harm to natural resources. The appropriate location for dredged material disposal would be determined based on the character of the materials dredged, the availability of disposal sites, and coastal conditions near the time of construction. In addition, as noted in Commitment 25c, the terms and conditions outlined in the *Biological and Conference Opinions* (USFWS, 2008) related to piping plovers specify that "all dredge spoil excavated for construction barge access must be used to augment either existing dredge-material islands or to create new dredge-material islands for use by foraging plovers. This must be accomplished as per the specifications of the North Carolina Wildlife Resources Commission."

11. Night-time Construction. Because construction activities could occur 24-hours-a-day, construction areas could be lit to daylight conditions at night. NCDOT would work with NCDENR-DMF, NMFS, NPS, and USFWS to determine other areas near project construction where night lighting would need to be avoided or limited. Night lighting also would not be used close to areas where people sleep, including the campground at the northern end of the project area and the Rodanthe area at the southern end. Night lighting also will meet the requirements specified to protect sea turtles contained within Commitment 26.a.
12. Manatee Protection. Construction contracts would require compliance with USFWS's Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters (June 2003).
13. Sea Turtle and Smalltooth Sawfish Protection. NCDOT will comply with NMFS's March 23, 2006, *Sea Turtle and Smalltooth Sawfish Construction Conditions* (NMFS, 2006) that restrict in-water construction-related activities when these protected species are observed in the project area. However, NMFS and NCDOT agree that bridge construction or demolition activities do not need to stop when a protected species is sighted in the proximity of construction if the construction activities are not in the water. The in-water moratorium prohibits pile installation and removal and activities associated with bridge construction and demolition when listed species are present in the water, but does not restrict terrestrial activity.
14. Terminal Groin Removal (revised). NCDOT would apply for a permit to retain the groin to protect the south end of the Oregon Inlet bridge. Construction will not be authorized by FHWA prior to issuance of the terminal groin permit.

NCDOT has applied for a permit to retain the terminal groin at Oregon Inlet and is continuing coordination with USFWS on this issue.
15. Archaeological Resources Discovered During Construction. If any historic archaeological resources (e.g., historic watercraft) are encountered in the area west of Bodie Island during construction, construction work affecting the resource will cease immediately until the resource can be identified and assessed for National Register of Historic Places eligibility.
16. Construction of Future Phases. In phasing the construction of the Parallel Bridge Corridor alternatives (including the Preferred Alternative), it is NCDOT's intent to place a high priority on the monitoring and need for implementation of improvements in the three potential hot spot areas. This intent recognizes the need to build in the Rodanthe 'S' Curves, Sandbag Area, and Canal Zone hot spots. Final phasing decisions will be developed through interagency collaboration and under the requirements of NEPA as project area conditions warrant.
17. Monitoring Program (revised). NCDOT considers the 2060 high erosion shoreline a reasonable assumption for current planning purposes, but also recognizes that decisions related to implementation of future phases and the specific location of future phases would likely need to evolve with actual geomorphological change relative to the NC 12 easement. With this in mind, NCDOT would implement a monitoring and vulnerability forecasting program on Hatteras Island in the project area, as described in Section 3.3.2 of this ROD.

18. Breach Response-Related Data Gathering Program. Recognizing the possibility that a breach could occur at the southern part of the Refuge prior to completion of Phase II and that four other locations exist in the project area that are geologically susceptible to a breach, NCDOT would conduct a breach response-related data gathering program focusing on the southern end of the Refuge.
19. Reduce the Potential Impacts from NC 12 Maintenance Prior to the Completion of Each Phase. Recognizing that storm-related NC 12 maintenance will occur before completion of future phases, particularly before the implementation of improvements in the three hot spot areas, NCDOT would continue to work with the Refuge to reduce potential impacts to the Refuge and NC 12 resulting from NC 12 storm-related maintenance.
20. Shortnose Sturgeon. Conservation measures to protect shortnose sturgeon would include no hopper dredging and measures to minimize habitat degradation. Such measures would include BMPs involving use, storage, and disposal of construction/demolition materials to minimize short-term turbidity or water quality degradation during over-water construction in Oregon Inlet and during periodic maintenance. Construction and demolition activities associated with Phase I of the project would be completed as quickly as possible in order to minimize deterring spawning sturgeon from entering Oregon Inlet. In addition, the project would incorporate BMPs to reduce habitat degradation from stormwater runoff pollution.

**Highway Design Branch, Project Development and Environmental Analysis Branch,
Division 1, Right-of-Way Branch, and Technical Services Division**

21. Utilities. Project development and construction activities would be coordinated with utility providers in the project area in order to prevent interruption of local utility services. The following utility providers currently serve the project area: Dare County (water service); Sprint Communications (telephone service); Charter Communications (cable television service); and Cape Hatteras Electric Membership Association (electric power service).

**Highway Design Branch, Project Development and Environmental Analysis Branch,
Division 1, and Geotechnical Unit**

22. Use of Explosives During Construction. The use of explosives during construction is not anticipated. If explosives were needed to remove Bonner Bridge's piles, NCDOT would coordinate with the appropriate environmental resource and regulatory agencies to develop a blasting program that would minimize adverse effects to the natural environment.

Project Development and Environmental Analysis Branch

23. Programmatic Agreement (revised). As per the requirements of Section 106 of the National Historic Preservation Act of 1966, FHWA, the North Carolina State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and NCDOT, along with the consulting parties (Dare County, the North Carolina Aquarium Society, USFWS, NPS, and the Chicamacomico Historical Association), developed a Programmatic Agreement (PA) stipulating measures that FHWA will ensure are carried out during the design and construction of the Selected Alternative to mitigate adverse impacts to the historic cultural resources. The final PA (see Appendix D) was signed by the signatory agencies on November 15, 2010. NCDOT would carry out the stipulations in this agreement.

24. Seabeach Amaranth. Since the favored habitat of the seabeach amaranth is highly ephemeral, a survey of the project area would be conducted for the habitat of this species at least one year prior to initiating bridge construction activities. It would occur as needed for each construction phase.

**Highway Design Branch, Project Development and Environmental Analysis Branch,
Division 1, and Bridge Management Unit**

25. Piping Plover. NCDOT will implement the following nondiscretionary measures that include the terms and conditions outlined in the *Biological and Conference Opinions* (USFWS, 2008):

- a. All construction equipment and personnel must avoid all bird closure areas within the Seashore and Refuge.

All future routine maintenance activities of bridge structures that would occur within or adjacent to current or future plover nesting areas must occur outside the nesting season (April 1 to July 15).

All future repair work on bridge structures that would occur within or adjacent to current or future plover nesting areas must occur outside the nesting season (April 1 to July 15) unless emergency or human safety considerations require otherwise. In this event, the area must be surveyed for nesting plovers and avoided to the extent possible.

- b. During the construction of Phases II, III and IV of the Phased Approach/Rodanthe Bridge Alternative (*if it is implemented under the NC 12 Transportation Management Plan [Selected]*), keep all construction equipment and activity within the existing right-of-way.

Do not moor any construction barges within 300 feet (91.4 meters) of the following islands: Green Island, Wells Island, Parnell Island, Island MN, Island C, the small unnamed island immediately east of Island C, Island D, and Island G (see Figure 1 in the *Biological and Conference Opinions* in Appendix E of the FEIS).

- c. All dredge spoil excavated for construction barge access must be used to augment either existing dredge-material islands or to create new dredge-material islands for use by foraging plovers. This must be accomplished as per the specifications of the North Carolina Wildlife Resources Commission. The point of contact is Sue Cameron at 910-325-3602. If the dredge material is used outside the current defined action area, the action area is assumed to be expanded to cover the beneficial placement of the material.
- d. To the maximum extent practical, while ensuring the safety of the traveling public, limit or avoid the use of road signs or other potential predator perches adjacent to plover nesting or foraging areas. Where signs or other structures are necessary, determine if alternative designs would be less conducive for perching on by avian predators (gulls, crows, grackles, hawks, etc.). For example, minimize or avoid the use of large cantilever signs in favor of smaller and shorter designs.

26. Sea Turtles (green sea turtle, leatherback sea turtle, and loggerhead sea turtle). NCDOT will implement the following nondiscretionary measures that include the terms and conditions outlined in the *Biological and Conference Opinions* (USFWS, 2008):

- a. All construction equipment and personnel must avoid all marked sea turtle nests.

Construction material and equipment staging areas must not be located seaward of the artificial dune.

All future routine maintenance activities of bridge structures that would occur within or adjacent to current or future sea turtle nesting habitat, and which would require vehicles or equipment on the beach or the use of night lighting (excluding navigation lights required by the US Coast Guard), must occur outside the nesting season (May 1 to November 15).

All future repair work of bridge structures that would occur within or adjacent to current or future sea turtle nesting habitat, and which would require vehicles or equipment on the beach or the use of night lighting (excluding navigation lights required by the US Coast Guard) must occur outside the nesting season (May 1 to November 15) unless emergency or human safety considerations require otherwise. In this event, the area must be surveyed for sea turtle nests and avoided to the extent possible.

- b. Provide an opportunity for USFWS or a USFWS designee to educate construction contractor managers, supervisors, foremen and other key personnel and resident NCDOT personnel with oversight duties (division engineer, resident engineer, division environmental officer, etc.) as to adverse effects of artificial lighting on nesting sea turtles and hatchlings, and to the importance of minimizing those effects.
- c. During turtle nesting season (May 1 to November 15), use the minimum number and the lowest wattage lights that are necessary for construction.

During turtle nesting season, portable construction lighting must be of the low-pressure sodium-vapor type.

During turtle nesting season, utilize directional shields on all portable construction lights, and avoid directly illuminating the turtle nesting beach at night.

During turtle nesting season, all portable construction lights must be mounted as low to the ground as possible.

During turtle nesting season, turn off all lights when not needed.

- d. For Phases II, III and IV if developed as defined by the Phased Approach/Rodanthe Bridge Alternative (*if it is implemented under the NC 12 Transportation Management Plan [Selected]*), on the ocean side, design the bridge structure in a manner which will shield the beach on the east side from direct light emanating from passenger vehicle headlights. For the small portion of Phase I over land on Hatteras Island, retrofit the bridge structure at the time that Phase II connects with Phase I. The specific design of the bridge will be developed in consultation with USFWS prior to re-evaluation of the environmental document for Phase II.

- e. Avoid retrofitting the bridges and approach roads with permanent light fixtures in the future (excluding navigation lights required by the US Coast Guard).

In addition, NCDOT does not anticipate the use of explosives during construction or demolition of the existing bridge. NCDOT's contractor will use pipeline or clamshell dredging, rather than a hopper dredge to minimize effects to sea turtles. No permanent light fixtures will be installed on the bridge or the approaches (with the exception of navigation lights as required by the US Coast Guard).

Photogrammetry Unit and Project Development and Environmental Analysis Branch

- 27. Submerged Aquatic Vegetation (SAV) Survey. The dynamic nature of the area around Oregon Inlet results in ephemeral habitats, particularly in shallow water and shoreline areas. Consequently, NCDOT would obtain new SAV information for use by the contractor in construction access planning. All surveys for SAV in the vicinity of Oregon Inlet will follow protocols endorsed by the National Oceanic and Atmospheric Administration (NOAA) Fisheries.

Project Development and Environmental Analysis Branch

- 28. Section 4(f) (new). If a later phase of the Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative (Selected) requires the use of a Section 4(f) property, then FHWA would complete an additional Section 4(f) analysis prior to FHWA's approval of the later phase. The 2009 Revised Final Section 4(f) Evaluation would be reviewed to verify the status of Section 4(f) resources, the effects(s) from the proposed response strategies on the Section 4(f) resource, "use" determinations, and, if necessary, a revised least overall harm analysis.

Appendix B

**Agency, Non-Governmental
Organization, Public Official,
and Public Organization
Environmental Assessment
Comment Letters**

B. Agency, Non-Governmental Organization,
Public Official, and Public Organization
Environmental Assessment Comment
Letters

AGENCY COMMENT LETTERS..... B-2

US Department of Agriculture, Natural Resources Conservation Service B-2

US Department of the Army, Wilmington District, Corps of Engineers..... B-2

**US Department of the Interior, Office of the Secretary (including Federal
 Highway Administration Response Letter)..... B-4**

US Environmental Protection Agency, Region 4..... B-9

North Carolina Department of Administration..... B-14

**North Carolina Department of Crime Control and Public Safety, Division of
 Emergency Management..... B-14**

North Carolina Department of Cultural Resources..... B-15

North Carolina Department of Environment and Natural Resources B-15

 Division of Coastal Management..... B-16

 Division of Environmental Health B-17

 Division of Water Quality..... B-18

 Washington Regional Field Office B-19

 Wildlife Resources Commission..... B-20

Dare County B-21

Town of Nags Head B-23

**NON-GOVERNMENTAL ORGANIZATION (NGO) COMMENT LETTER –
SOUTHERN ENVIRONMENTAL LAW CENTER B-24**

PUBLIC OFFICIAL COMMENT LETTERS B-32

Governor Beverly Perdue..... B-32

State Senator Marc Basnight..... B-33

State Representative Timothy Spear B-33

PUBLIC ORGANIZATION COMMENT LETTERS..... B-35

Outer Banks Association of Realtors..... B-35

Outer Banks Chamber of Commerce..... B-35

Outer Banks Home Builders Association..... B-39



Natural Resources Conservation Service
4407 Bland Road, Suite 117
Raleigh, North Carolina 27609

Michael J. Hinton, ASTC-Easements & WR
Fax: (919) 873-2103
Fax: (919) 873-2156
Email: mike.hinton@nrc.usda.gov



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889-1000

IN REPLY REFER TO

June 30, 2010

June 9, 2010

Mr. Gregory J. Thorpe
Manager
Project Development and Environmental Analysis Branch
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

RECEIVED
Division of Highways

JUN 14 2010

Project Development and
Environmental Analysis Branch

Dear Mr. Thorpe:

Thank you for the opportunity to provide comments on Federal Environmental Assessment for NC 12, Replacement of the Herbert C. Bonner Bridge (No. 11) over Oregon Inlet, Federal-Aid Project BRS-2358(15), WBS No. 32635, TIP Project No. B-2500, Dare County, North Carolina.

The Natural Resources Conservation Service does not have any comments at this time.

If you need additional information, please feel free to contact me at (919) 873-2103.

Sincerely,

Michael J. Hinton
Assistant State Conservationist for Easements & Water Resources

Regulatory Division

Subject: Action ID: 199303077

Dr. Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Please reference your May 11, 2010, correspondence requesting our review and comments concerning the Federal Environmental Assessment (EA) for the NC 12 Replacement of Herbert C. Bonner Bridge, TIP No. 2500, Dare County, North Carolina. The purpose of this Environmental Assessment is to identify and assess changes that have occurred since the approval of the Final Environmental Impact Statement/Final section 4(f) Evaluation (FEIS) on September 17, 2008 and to determine whether or not these changes would result in significant environmental impacts not evaluated in the FEIS, therefore, determining whether a Supplemental Final Environmental Impact Statement is needed. In response to your request we have the following comments:

1. Page 1-1, Section 1.1., **Purpose of the Environmental Assessment.** It appears the purposes identified in this section adequately document the changes for the proposed project since the release of the September 2008 Final Environmental Assessment. Based on the revisions contained in the EA there doesn't appear to be changes or circumstances which result in significant environmental impacts not evaluated in the FEIS therefore prompting the preparation of a Supplemental Final Impact Statement (SFEIS).

2. Page 2-20, Section 2.3.3.3 **Later Phases (NC 12 Transportation Management Plan), Environmental Review for Future Phases.** In the last paragraph it states "as of the publication of this EA, sections of the Canal Zone, Sandbag Area, and Rodanthe hot spot areas may already meet one or more of the listed criteria." The facts need to be stated in this section to clarify that these sections of NC 12 are or are not currently meeting one or more of the five listed criteria (criteria assumed to be included in the NC 12 Transportation Management Plan) which warrant initiating an environmental review of a future phase. It is recommended that if any of these sections are meeting the criteria, that NCDOT and FHWA immediately implement a plan of action based on this section of the EA and document it in the Record of Decision (ROD). Based

on information in section 4.6.8.6 of the FEIS, NCDOT would confine future NC 12 maintenance in the Refuge, including storm-related maintenance, to the existing NC 12 easement after the issuance of the ROD for the project. It also states NCDOT intends to place a high priority on the implementation of Phase II, which includes the three high spots mentioned above. Based on the FEIS, Phase II is to begin post 2015. It seems logical that if any of these areas are already meeting criterion which will be specified in the Transportation Management Plan, Phase II needs to start immediately after the issuance of the ROD. These issues need to be addressed in the NC 12 Transportation Management Plan.

3. Page 2-29 and 2-30, **Section 2.3.4 Basis for Selection of the Preferred Alternative.** This comment is in relationship to what is discussed in item 2 above. In this section it states "NCDOT and FHWA do not agree that decisions should be made for the entire corridor because of the extensive uncertainty inherent in the predictions of future coastal conditions." It also states, "Phase I should be built now, and the specific features of the rest of the project should be examined in more detail at the time they are to be built, when future conditions are more known." While we agree that Phase I should be built now and that the rest of the project should be examined in more detail later, is there enough information present now to make informed decisions concerning the three hot spot areas?

4. Page 2-33, Section 2.3.7, **Costs.** Since the costs were updated from those presented in the FEIS to account for the revision to the detailed study alternatives described in Section 2.1 of the EA, can the costs also be updated to 2010 dollars instead of 2006 dollars? During the review of this project, the total costs for the detailed study alternatives have increased substantially in a relatively short time frame. We feel it is important that the most accurate and up to date cost estimates be presented for this project since funding has been a major issue for this project.

5. Page 3-9, Section 3.5.6, **November 2009 Rodanthe Storm Repair.** Add the following language to the last sentence of the 1st paragraph - "after the remnants of Tropical Storm Ida in 2009. Also add that the majority of the approximately 200,000 cubic yards of sand placed on the beach face east of the sandbags washed away within 2 weeks of completion of the project.

6. Page 3-10, Section 3.7, **December 2009 Coordination Meeting with Council on Environmental Quality.** We are in agreement and support that FHWA and NCDOT should work with USFWS to develop a Partnership Agreement and include in the ROD.

As a major permitting and cooperating agency, we appreciate the opportunity to coordinate with you prior to the finalization of the ROD. The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at <http://per2.nwp.usace.army.mil/survey.html> to complete the survey online. If you have any questions regarding our comments, please do not hesitate to contact me at the Washington Regulatory Field Office, telephone (910) 251-4558.

Sincerely,


William J. Biddlecome
Regulatory Project Manager

Copies Furnished:

Renee Gledhill-Earley
North Carolina State Historic Preservation Office
4617 Mail Service Center
Raleigh, North Carolina 27699-4617

Mr. Doug Huggett
Division of Coastal Management
North Carolina Department of Environment,
And Natural Resources
400 Commerce Avenue
Raleigh, North Carolina 28557-3421

Mr. Ron Sechler
National Marine Fisheries Service
101 Pivers Island Road
Beaufort, North Carolina 28516

Mr. Pete Benjamin
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240



JUN 28 2010

9043.1
PEP/NRM

ER 10/460

Mr. Travis Wilson
Eastern Region Highway Project Coordinator
Habitat Conservation Program
1142 L-85 Service Road
Creedmoor, North Carolina 27522

Mr. Brian Wrenn
Water Quality Section
North Carolina Division of Environment
and Natural Resources
1650 Mail Service Center
Raleigh, North Carolina 27699-1650

Ms. Jennifer Derby, Chief
Wetlands Section-Region IV
Water Management Division
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303

Mr. Clarence Coleman, PE
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601-1418

Mr. Mike Murray
U.S. Department of Interior
National Park Service
Cape Hatteras National Seashore
1401 National Park Drive
Manteo, North Carolina 27954

Mr. Mike Bryant
U.S. Fish and Wildlife Service
Pea Island National Wildlife Refuge
P.O. Box 1969
Manteo, North Carolina 27954

Gregory J. Thorpe, Ph.D.
Manager, Project Development and
Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

This letter is in response to your request for comments on the Federal Environmental Assessment (EA) for **North Carolina Route 12 (NC 12) Replacement of the Herbert C. Bonner Bridge**, TIP Project No. B-2500, dated May 7, 2010. The Department of the Interior (Department) offers the following comments and recommendations for your consideration.

General Comments

The Department finds the EA deficient in a variety of categories. We do not believe it adequately addresses alternatives and environmental impacts as required by the National Environmental Policy Act of 1969 (NEPA) and fails to satisfy standards set forth in the Council of Environmental Quality (CEQ) implementing regulations (40 CFR 1500-1509). We do not believe the EA and Final Environmental Impact Statement (FEIS) on which it is based fully evaluated all reasonable and practical alternatives.

The described purpose of the EA (p. 1-1) is to document the decision to add a new detailed study alternative, the Parallel Bridge Corridor with NC-12 Transportation Management Plan (PB/TMP), to the September 2008 FEIS and select it as the new Preferred Alternative based on new information obtained since the publication of the FEIS. The findings contained in the EA and subsequent public review of the document are to determine whether or not these changes or circumstances would result in significant environmental impacts not evaluated in the FEIS; and whether a Supplemental Final Environmental Impact Statement (SFEIS) is needed. If the agency conclusion is that these changes or circumstances would result in

significant environmental impacts not evaluated in the FEIS, then a SFEIS will be prepared.

The new PB/TMP alternative calls for construction of a new bridge over Oregon Inlet (Phase I), followed by construction of later phases that would complete the project to its southern terminus at Rodanthe, and whose details would be determined as conditions warrant. The EA provides no additional information about these future phases, except to say that they may include bridging, road relocation, beach nourishment, and/or "new solutions" which may be identified in the future. Decisions regarding these future phases would be guided by the Transportation Management Plan (TMP). The TMP includes an outline for a monitoring program (the information from which would be used to determine when planning for the next phase should begin), and refers to a process for conducting future planning. The EA provides very little detail or analysis of these components of the PB/TMP alternative. As such, the new preferred alternative avoids resolving the most critical, complex, operationally significant, and environmentally sensitive portion of the project, which is the lack of a compatible and sustainable road corridor through Pea Island National Wildlife Refuge (the Refuge). As described in the EA, the "solution" to that most critical issue is a TMP that is yet to be developed and has not been adequately described or analyzed for its potential environmental impacts.

The description of the PB/TMP alternative provided in the EA is not materially different from that provided in the Revised Final Section 4(f) Evaluation previously prepared by the Federal Highway Administration (FHWA) and the North Carolina Department of Transportation (NCDOT). The EA provides no new information or analysis that alters the comments provided by the Department regarding the PB/TMP alternative in our letters of December 3, 2009, and April 21, 2010. It continues to be the Department's view that the analysis presented to date is insufficient to provide a reasonable understanding of the environmental consequences of the proposed action, or to support a determination that the preferred alternative is consistent with Federal law, including the National Wildlife Refuge System Improvement Act of 1997 (Refuge Improvement Act). Underlying this position is our firm belief, based upon our re-examination of the acquisition history of the Refuge, that NCDOT does not possess a right to relocate NC 12. But, if the road is to be relocated within the Refuge, NCDOT must still obtain a right-of-way from the U.S. Fish and Wildlife Service (FWS), in compliance with the National Wildlife Refuge System Administration Act, 16 U.S.C. § 668dd(d)(1)(B) and its implementing regulations in 50 CFR Part 29.

As the Department has previously stated, it is unlikely that any of the parallel bridge corridor alternatives described in the FEIS, or the PB/TMP alternative, or any combination thereof are likely to be found compatible with the purposes for which the Refuge was established. By eliminating the Pamlico Sound and other potential alternatives (such as ferries) from further consideration or analysis, the FHWA and NCDOT have confined the analysis to a narrow range of options, all of which would result in large-scale and long-term adverse impacts to the Refuge and its resources and, as such, could not be authorized pursuant to the Refuge Improvement Act.

2

The TMP is built on the assumptions that changes in conditions within the project area (such as shoreline position) will be detected by the monitoring program, that data collected will provide sufficient resolution to determine when certain (vaguely defined) thresholds are reached, and that change will happen slowly enough to allow several years of planning and construction of future project phases. The Department questions the validity of these assumptions. The EA identifies the proposed monitoring program in general terms and without sufficient detail to allow the reviewer to determine what exactly would be monitored, how data would be collected and analyzed, or how the results of data analysis would factor into decision-making. The EA also provides no detail with respect to how decisions regarding future phases would be made, other than to say that the existing merger process would be used for planning and coordination. It is impossible to discern, based on the information provided in the EA or FEIS, what might happen with respect to project implementation, when it might happen, or how much it might cost. Because the TMP is not adequately described, it is impossible to conclude that the environmental effects have been appropriately assessed.

Additionally, the Department is concerned about the likelihood that the PB/TMP could meet the stated project purposes. The FEIS states three project purposes: 1) provide a new means of access from Bodie Island to Hatteras Island for its residents, businesses, services and tourists prior to the end of the Bonner Bridge's service life; 2) provide a replacement crossing that takes into account natural channel migration expected through year 2050, and provides the flexibility to let the channel move; and 3) provide a replacement crossing that will not be endangered by shoreline movement through year 2050. We know from experience that the shoreline of Pea Island will not recede in the orderly and predictable way that would be required for the PB/TMP alternative to have a successful outcome. Instead, the shoreline will change rapidly in response to storm events. For any plan to meet the stated project purposes via phased implementation it must account for this reality – the PB/TMP alternative does not. Under the proposed PB/TMP alternative, planning would begin after a storm has severely damaged or destroyed NC 12. This is evidenced by the fact that a significant portion of NC 12 was destroyed last November, and yet to our knowledge no planning as been initiated with respect to this phase of the project. Once planning does commence, it would be coordinated through the same process that has failed to produce a workable solution thus far. Barring some "new solution," alternatives would be confined to a very few thus far considered - - none of which are likely to be compatible with the Refuge Improvement Act. There will likely be prolonged delays and significant disruption to the transportation system, and there may be considerable risk to the residents of Hatteras Island and the resources of the Refuge. Under this approach, access between Bodie Island and Hatteras Island will be subject to constant disruption and the transportation system will be under constant threat from shoreline movement through 2050. In summary, of the three stated project purposes, the PB/TMP Alternative cannot be reasonably expected to fulfill the two project purposes that address the need for a safe and reliable means of transportation between Bodie Island and Hatteras Island.

By selecting the PB/TMP as the Preferred Alternative, the NCDOT and FHWA are deferring decision-making and analysis of the most contentious, expensive, and

3

potentially environmentally damaging part of the project (NC 12) to some later date, without providing any clear sense that those future phases can be implemented in light of known logistical, financial and legal constraints. The Department is concerned that this is not an appropriate basis for Federal action. Specifically, we reiterate our previous concern that the NEPA documentation provided to date is not adequate to support decisions the Department must make regarding whether, or under what conditions, to issue necessary Departmental authorizations. Such decisions include issuance of permits for construction of Phase I and authorization of retention of the terminal groin. A letter dated March 22, 2010, from the Fish and Wildlife Service (FWS) Southeast Regional Director to the FHWA Division Administrator, stated that the analysis of impacts in all previous documents do not adequately address the effects of the terminal groin on the natural resources of the Refuge. Further, it stated that before the USFWS can evaluate a permit request for the terminal groin, we believe additional environmental evaluation, in the form of an EA and/or an EIS, is required to enable the USFWS to make a sound decision. Therefore, a decision by the FHWA to issue a Record of Decision based on the NEPA documentation prepared to date will leave many substantive issues unresolved, and will likely necessitate additional lengthy investigations and documentation prior to issuance of any Departmental authorizations. As such, the Department is concerned that the EA description and analysis for the new PB/TMP alternative is inadequate and an SFEIS is warranted.

Specific Comments

Bodie Island side of Oregon Inlet:

The EA indicates that the conceptual alignment at the Bodie Island terminus of the project for Phase I remains unchanged from that presented in the FEIS. National Park Service (NPS) concerns about the FEIS have been responded to in Appendix D of the EA. Response to Comments on the Final Environmental Impact Statement (pp. D-15 to D-18). Of those previously expressed concerns, NPS understands that impacts to the Oregon Inlet Fishing Center (OIFC) will be limited to the potential relocation of its septic field; minimal or no disruption of access (and associated economic impacts) is anticipated for the OIFC, Ramp 4 or the Oregon Inlet Campground; and NCDOT will continue to coordinate with NPS on these issues as the project moves into the final design and permitting stage. The NCDOT will investigate whether it is possible to reduce the impacts of Phase I to OIFC's use of the "crack" navigation channel. The NPS also understands that Ramp 4 and the Oregon Inlet Campground driveway will be connected to NC 12 at their current location. As a point of clarification, in its comments on the FEIS, NPS was concerned that the transport of construction materials would negatively impact the section of NC 12 from Whalebone Junction (the intersection with US-64/US-264 and mile 0.0) south to mile 5.28, which is maintained by the NPS (not NCDOT); however, we understand from the response to FEIS comments in the EA (p. D-16) that "virtually all materials used in the bridge construction will be transported to the site by barge and not over the area's highway system." We concur with that approach.

As stated previously, a number of proposed NCDOT actions will likely require NPS permit(s), including the following:

- construction staging;
- construction of a haul road, construction and use of a dredge channel for barging, or construction of a work bridge to facilitate construction of the north approach spans;
- relocation of the septic system and fields near the Oregon Inlet Fishing Center;
- relocation of the Ramp 4 beach access road on Bodie Island;
- dredging and disposition of dredge spoils, including on Green Island; and
- similar actions related subsequent phases relating to other NC 12 construction and maintenance components on NPS lands.

NPS will continue to work cooperatively with the FHWA and NCDOT to ensure the development of adequate plans and NEPA documentation for any and all impacts to NPS resources and values. In order for the NPS to issue any necessary Special Use Permit(s) to NCDOT to implement the proposed actions on Park lands, FHWA and NCDOT will need to provide NEPA documents that meet NPS requirements.

Pea Island Side of Oregon Inlet:

The description for the alignment of the bridge making landfall on the Refuge (Section 3.5) does not include all of the discussion that has occurred regarding that alignment. Representatives of the FWS informed all present at the referenced meetings that the compromise alignment could possibly be determined to be a minor modification provided that: 1) there is agreement that the southern boundary would constitute the southern boundary for the right-of-way and not the southern limit for construction; 2) an acceptable NEPA document would be prepared, and if the FWS finds the NCDOT/FHWA documentation to be unacceptable, then we would have to prepare a separate NEPA document; 3) an acceptable mitigation plan would be developed so as to result in no net loss in quantity or quality of Refuge land (old road bed or isolated segments of land would not be sufficient compensation from a qualitative perspective); 4) this process would not be initiated until the FWS receives an official request for a modification to the existing right-of-way with all relevant supportive information. To date there has not been a formal request for any right-of-way modification; therefore, the alignment that was discussed does not constitute any official agreement between the FWS and NCDOT or FHWA. All communications from FWS on this matter should be characterized as deliberative and pre-decisional. FWS cooperated in numerous meetings and site visits to review, develop, discuss, and explain potential options, but no decisions or agreements were made.

Section 4(f) Issues:

The EA refers to the October 2009 Revised Final Section 4(f) Evaluation (p. 3-2) and related comments and responses to comments found in Appendices F and G. Section 4(f) of the Department of Transportation Act of 1966 prevents a Federal project from using publicly owned land unless: 1) there is no prudent and feasible alternative to



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

JEC 17 2010



The Honorable Victor M. Mendez
Administrator
Federal Highway Administration
1200 New Jersey Avenue, SE.
Washington, DC 20590

Dear Mr. Mendez:

The Department of the Interior (Department) is pleased with the successful resolution of a series of discussions between our agencies concerning the replacement of the Herbert C. Bonner Bridge in Dare County, North Carolina and its impact on Pea Island National Wildlife Refuge. The Department has been actively involved in the development of this project over many years and has provided numerous comments on the environmental studies undertaken by the Federal Highway Administration (FHWA) and North Carolina Department of Transportation (NCDOT). The coordination and consultation that occurred this Fall led to an exchange of information that allowed each agency to better understand and respond to the other's mission and responsibilities. The purpose of this letter is to document the agreements that were reached.

The FHWA has agreed to incorporate several provisions into the relevant project documents that will ensure that the needs of the Department are met as Phase I moves forward into the design and construction stages, and as future project phases are developed and implemented through the year 2060. These are:

1. A statement in FHWA's Record of Decision (ROD) that Federal-aid highway funding for the project is conditioned upon compliance with the terms and conditions of all Department permits issued for the project;
2. An addition to the project's Transportation Management Plan of a program of periodic, site-specific forecasting studies to be undertaken by mutually agreed-upon coastal science experts; and
3. A statement in FHWA's ROD that all restoration work for Phase I must be completed, and accepted by the Department, prior to the final transfer of title for the new easement area to NCDOT.

The Department has reviewed the enclosed drafts of the above provisions provided by FHWA for inclusion in FHWA's ROD, and finds them to be acceptable.

As a result, the Department no longer objects to FHWA concluding its environmental study process with the selection of the Parallel Bridge with NC 12 Transportation Management Plan alternative as the bridge replacement alternative that will advance into the design stage. With the incorporation of appropriate permit conditions and mitigation, the details of which will be

using that land; and 2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use (49 U.S.C. § 303(c)).

In the September 2008 Final EIS and Section 4(f) Evaluation, the FHWA found that all alternatives would constitute a Section 4(f) "use" of Refuge lands and Park lands within Cape Hatteras National Seashore because the existing road would be relocated from its current alignment. The Department concurred with that finding. However, in a revised October 2009 Final Revised Section 4(f) Evaluation, the FHWA surprisingly reversed that determination and found that there is "no Section 4(f) use" of the protected property within the Refuge or Park. In light of your revised determination, we have reconsidered our initial concurrence that there would be a "Section 4(f) use" of the protected property within the Refuge or Park. The result of our re-examination of this issue is that the Department disagrees with your new conclusion that there is "no Section 4(f) use" of the protected property within the Refuge or Park. The Refuge and Park lands that will be impacted by the project are Section 4(f) properties as defined in 23 CFR 774.17 and the project would result in a "use" of those properties, as the FHWA determined in the Final EIS and Section 4(f) Evaluation. Our view on this subject is not changed by the information provided in the EA and supporting appendices.

Summary

In conclusion, we have worked in good faith with the NCDOT and the FHWA for over a decade in an effort to ensure the citizens of the county, state, and nation have dependable transportation along North Carolina's Outer Banks. Coastal and climate change experts are informing us that the barrier island system will be changing at an accelerating rate, and the changes will be largely storm driven. To meet the challenge of maintaining safe, efficient transportation on the Outer Banks in a changing climate, leadership and careful planning and decision-making is required now, not later. The Department remains committed to working with all parties to accommodate transportation needs within the confines and limits allowable by law, regulation, and policy governing use of refuge lands.

Thank you for providing us an opportunity to comment. If you need additional information about comments relevant to Cape Hatteras National Seashore, please contact Superintendent Mike Murray at (252) 473-2111, extension 148. For additional information regarding comments relevant to Pea Island NWR, please contact Mike Bryant at (252) 473-1131, extension 222.

Sincerely,

Willie R. Taylor
Director, Office of Environmental
Policy and Compliance

worked out over the coming months, the Department believes the Refuge will be protected consistent with existing law. The permit for the bridge landing will include provisions with respect to future work on the portion of NC 12 that falls within the Refuge. Any work on or realignment of NC 12 that falls outside of the NCDOT's right-of-way will be subject to the provisions of section 4(d) of the National Wildlife Refuge System Administration Act of 1966 and the regulations and guidance issued pursuant to it. The Department is confident that NCDOT is committed to designing Phase I and future phases of the project with the intent of staying within the right-of-way. If NCDOT needs to operate outside of the right-of-way, section 4(d) will apply.

The Department looks forward to continuing to work with FHWA and NCDOT on this project in the cooperative fashion of the previous few months. Together we believe we can move forward in a manner that recognizes all of our needs and responsibilities under the law.

Sincerely,


Jane Lyder
Deputy Assistant Secretary for
Fish and Wildlife and Parks



U.S. Department
of Transportation
**Federal Highway
Administration**

Office of the Administrator

1200 New Jersey Avenue, SE
Washington, D.C. 20590

December 17, 2010

In Reply Refer To:
HEPE

The Honorable Jane Lyder
Deputy Assistant Secretary for
Fish and Wildlife and Parks
Department of the Interior
Washington, DC 20240

The Honorable Rowan Gould
Acting Director, U.S. Fish & Wildlife Service
Department of the Interior
Washington, DC 20240

Dear Ms. Lyder and Mr. Gould:

I am pleased to acknowledge receipt of your letter concerning the replacement of the Herbert C. Bonner Bridge in Dare County, North Carolina. The Federal Highway Administration is in agreement with all of the terms outlined in your letter.

We believe this resolution is in the best overall public interest; it will maintain safe and efficient transportation for Outer Banks residents and visitors while ensuring the protection of vital resources and habitat within the Pea Island National Wildlife Refuge. In accordance with our agreement, we will send you a copy of our Record of Decision after it is finalized and issued.

We thank you for your attention to resolving the outstanding issues with this project and we look forward to the continued coordination between our Agencies as we proceed into the Department's permitting process.

Sincerely,



Victor M. Mendez
Administrator





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-4860

RECEIVED
Division of Highways

JUN 30 2010

Permit Action
Project Development and
Environmental Analysis Branch

Date: June 28, 2010

Dr. Gregory J. Thorpe, Ph.D.
Manager, Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

SUBJECT: Federal Environmental Assessment (EA) for B-2500, NC 12 Replacement
of Herbert C. Bonner Bridge over Oregon Inlet, Dare County, N.C.

Dear Dr. Thorpe:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject document, and is commenting in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) are proposing to replace the Herbert C. Bonner Bridge across Oregon Inlet in Dare County. The bridge is part of the NC 12 transportation corridor and provides the only highway connection between Hatteras Island and Bodie Island.

The purpose of the EA as described on Page 1-1 includes: the decision to add a new study alternative (i.e., Parallel Bridge Corridor with NC 12 Transportation Management Plan) and select it as the Preferred Alternative, the elimination of the Pamlico Sound Bridge Corridor alternatives as detailed study alternatives, an assessment of impacts for the new detailed study alternatives, refinements made to the detailed study alternatives, and new information since the publication of the 2008 Final Environmental Impact Statement (FEIS). Based upon the aforementioned significant issues, EPA believes that preparation of a Supplement FEIS might be appropriate. EPA understands that the NC 12 Transportation Management Plan beyond the Phase I replacement of Bonner Bridge has not yet been defined. NCDOT and FHWA are also proposing a coastal monitoring program, but the timing and details are also not addressed. EPA has provided detailed comments concerning this issue and other relevant project environmental impact issues identified in this EA in an attachment to this letter (See Attachment A).

EPA continues to have substantial environmental concerns for Phases II, III, and IV for the NC 12 corridor and recommend that very serious and objective consideration be given to non-highway transportation alternatives such as transition to a permanent ferry service be evaluated in the Supplemental FEIS for the long-term solutions for Hatteras Island. EPA has previously identified its environmental concerns for adding new and very costly infrastructure on fragile and dynamic barrier islands. For very similar reasons, EPA concurs with FHWA and NCDOT on the elimination of the Pamlico Sound Bridge Corridor alternatives previously developed during the NEPA process. EPA recommends that the Phased Approach/All Bridge and the Road North/Bridge South alternatives also be eliminated from further consideration in future phases due to the significant environmental impacts and potential permitting constraints.

There remain unresolved environmental issues for Phase I as well, including the development and approval of a detailed compensatory mitigation plan for the jurisdictional impacts to "Aquatic Resources of National Importance" (ARNI). NCDOT and FHWA's previous proposal of 'out-of-kind' and out of the same hydrologic cataloging unit (HUC) was not generally acceptable to any of the resource or permitting agencies. EPA has not been provided any compensatory mitigation proposal for Phase I jurisdictional impacts as was indicated during the last Merger informational meeting. EPA understands that there is a requirement to provide for mitigation in Dare County and that this issue has not been resolved.

Please feel free to contact Mr. Christopher A. Miitscher of my staff at 919-856-4206 should you have specific questions concerning these comments. Mr. Miitscher plans to continue to stay involved with the proposed project through the NEPA/Section 404 Merger process. Thank you for the opportunity to comment.

Sincerely,

Heinz J. Mueller, Chief
Region 4 NEPA Program Office

Cc: J. Sullivan, FHWA
S. McClendon, USACE
P. Benjamin, USFWS

Attachment A
B-2500 Bonner Bridge Environmental Assessment
Dare County
Detailed Review Comments

General Comments

EPA considers the Council on Environmental Quality (CEQ) requirements under 40 CFR Section 1506.1 potentially relevant to the transportation decision-makers for the proposed project. EPA has expressed its opinion at Merger team meetings that there is 'an allowance for segmentation' if an action is too speculative to allow productive evaluation in the current assessment and there has been a full analysis conducted for the entire project study area and an accurate assessment of a full range of alternatives. EPA was specifically referring to future phases beyond the replacement of the Herbert C. Bommer Bridge under Phase I. However, it is also important for transportation planners and decision-makers to fully understand that the proposed action will not limit the choice of reasonable alternatives and that the action has independent utility and can be independently justified. The EA should have highlighted these issues and discussed them in detail with supporting documentation. Page 2-13 of the EA iterates EPA's past position on this issue from the May 21, 2009, meeting. The NEPA requirements for tiering under 40 CFR Section 1508.28 are also issues to be considered and may be appropriate in documented cases where it helps the lead agency to focus on the issues that are ripe for decision and exclude from consideration issues already decided or not yet ripe. The potential impacts with the Road North/Bridge South, All Bridge, and Phased Approach/Rodanthe Bridge Alternatives are future phases beyond Phase I and are not believed to be ripe for decision. Furthermore, it is made very clear during Merger meetings and in the Review Board's decision that all alternatives would be considered for future phases beyond Phase I. From comments by the U.S. Army Corps of Engineers and others, EPA understood this to mean that even preliminary study alternatives that had been eliminated would be re-evaluated in a future NEPA document for future phases. The EA presents the same alternatives for future phases that were evaluated in the 2008 FEIS with slight bridge and alignment design modifications near Rodanthe.

FHWA and NCDOT have issued several Environmental Impact Statements for the proposed project beginning in 1993 with the DEIS. For purposes of consistency and full disclosure with the public and resource and permitting agencies, a Supplemental FEIS might be the appropriate NEPA documentation since the issuance of the 2008 FEIS. Future phases for the NC 12 corridor are still not very well defined under a proposed NC 12 Transportation Management Plan and this uncertainty should be evaluated fully and objectively in a Supplemental FEIS. Non-highway options should be included in future evaluations.

2009 Updates to Parallel Bridge Corridor Alternatives

Section 2.1 of the EA includes updates to the Parallel Bridge Corridor Alternatives. As stated on page 2-1, "*These alignment revisions can be incorporated into*

the Preferred Alternative (See Section 2.3) when a future phase is constructed in Rodanthe in the vicinity of these historic resources". From EPA's perspective, this continued evaluation for future phases of bridges on Hatteras Island is potentially pre-decisional and not consistent with the Merger Review Board's decision on the selection of the Least Environmentally Damaging Preferred Alternative (LEDPA).

Constructing another bridge and other highway infrastructure (i.e., interchange) in the vicinity of Rodanthe would limit future feasible alternatives following the completion of Phase I. With massive bridges on either end of the Pea Island National Wildlife Refuge (PINWR), the only 'reasonable' alternatives that NCDOT and FHWA would potentially consider along NC 12 would be additional bridges at the hot spots and locations where there were breaches formed or bridging the entire 17-mile NC 12 corridor under the Phased Approach/All Bridge alternative. The Phase II Rodanthe Bridge Alternative would commit potentially hundreds of millions of dollars into additional infrastructure south of PINWR and represent a continued transportation investment on a fragile and dynamic barrier island system. EPA has questioned the rationale for constructing additional bridges along the 'wave front' without a full analysis of how such structures would fair during storm events, what contingencies would be available should the bridge not be long enough following a major storm, what maintenance issues and costs might be associated with this alternative, etc.

Page 2-6 of the EA describes that additional homes have been built in the Rodanthe portion of the project study area and that relocations, both residential and business, have increased. For the Phased Approach/Rodanthe Bridge (PA/RB) alternative, 3 residential and 1 business relocations were presented in the 2008 FEIS. Residential relocations increased to 6 residential (double) and 7 business relocations (more than triple). In Table 2-1, both the PA/RB and Road North/Bridge South and All Bridge (RN/BS and AB) alternatives indicate an 'Adverse Effect' because the elevation of the bridge as it passes through the Refuge (PINWR). Refuge access in the southern portion of the Refuge would also be reduced under PA/RB, RN/BS and AB alternatives. For RN/BS and AB alternatives, jurisdictional wetland impacts would also be increased from 1.2 acres included in the 2008 FEIS to 2.0 acres (0.8 acres). Under protected species adversely affected under PA/RB, RN/BS and AB, Table 2-2 indicates "None likely". These potential 'future Phase' impacts are believed by EPA to be potentially significant and may need to be addressed in a Supplemental FEIS.

Preferred Alternative

Section 2.3 of the EA describes the Preferred Alternative, which is the Parallel Bridge Corridor with NC 12 Transportation Management Plan alternative. The EA states: "*Several aspects of this alternative, including the phasing and the coastal monitoring program, are similar to the Phased Approach/Rodanthe Bridge Alternative, which was selected as the Preferred Alternative in the FEIS". EPA does not concur with this statement. The Parallel Bridge Corridor with NC 12 Transportation Management Plan alternative would essentially allow for a re-evaluation of all reasonable and feasible alternatives, including preliminary study alternatives that were eliminated in earlier*

phases of the NEPA process. As stated under bullet item #2 on page 2-13, the alternative recognizes the completion of Phase I alone would not meet the purpose and need of the project and represented a commitment by all parties to develop and implement the entire action from Rodanthe to Bodie Island. Constructing a Phase II bridge at Rodanthe also does not meet the purpose and need of the project. EPA has also expressed substantial environmental concerns for constructing new bridges where the pilings and other support structures are in the surf wave zone. NCDOT and FHWA were to further investigate other examples in the U.S. (and potentially Worldwide) where bridges have been constructed in the surf wave zone. To date, NCDOT and FHWA have not reported similar bridge structures and have identified only those bridges that are in open water bays and oceans. These are very different coastal engineering settings and EPA continues to have environmental concerns for the construction of additional bridges along a barrier island.

Section 2.3.2 describes the characteristics of the new Preferred Alternative, Parallel Bridge Corridor with NC 12 Transportation Management Plan. For Phase I of the NC 12 Transportation Management Plan Alternative the wetland impact is described as 1.0 acre. The EA describes that impact is slightly higher than the Phased Approach alternatives (i.e., 0.6 acres) and slightly less than the RN/BS Alternative of 1.9 acres. Under the Table 2-3 Impacts between the FEIS and EA, 6.4 acres of new easement would be required within PINWR and 4.8 acres of existing right of way would be returned to PINWR under the RN/BS Alternative and 3.5 acres and 2.7 acres, respectively, for the NC 12 Transportation Management Plan. Under the category of Cultural Resource Impacts, there is an Adverse Effect to PINWR and an Adverse Effect to the former Oregon Inlet U.S. Coast Guard Station. Under the NC 12 Transportation Management Plan, 2.2 acres of aquatic bottom, 0.2 acres of Submerged Aquatic Vegetation (SAVs), and 3.1 acres of wetlands and SAV would be shaded by Phase I. Under the category of Protected Species Impacts in Table 2-4, both the FEIS and EA columns indicate that there will be likely disturbance to piping plover and sea turtles nesting on the beach, but not likely to affect in the ocean. EPA does not understand this biological assessment in the context of U.S. Fish and Wildlife Service (USFWS) designations of impact (affect) under the Endangered Species Act (ESA).

There is a footnote included in Table 2-6 that indicates that the NC 12 Transportation Management Plan Alternative (Preferred) includes impacts under all 5 Parallel Bridge Corridor Alternatives and that this reflects the range of reasonably foreseeable impacts associated with the Preferred Alternative. EPA does not concur and this analysis is inconsistent with the Merger Review Board decision and is potentially 'pre-decisional' for the future range of reasonable and foreseeable alternatives. There is no discussion concerning other potential alternatives such as the future transition and use to ferries. Several of these alternatives, including the All Bridge Alternative (17 miles of bridging), are not believed by EPA or other agencies to be reasonable alternatives and the likelihood of being permitted by other agencies or found to be compatible with the USFWS/PINWR is even more unlikely. EPA does concur with the statements made concerning the Merger Review Board amendment on Page 2-30 of the EA.

Under Table 2-6, the EA presents impact information for the Phase II, III and IV alternatives that were shown in the FEIS. Total SAV and wetland impacts are as follows: Nourishment Alternative (11.65 acres shading and 3.98 acres fill), RN/BS Alternative (23.23 acres shading and 78.22 acres fill), All Bridge (48.11 acres shading and 13.76 acres fill), Phased Approach/Rodanthe Bridge (14.84 acres shading and 3.01 acres fill) and Phased Approach/Rodanthe Nourishment (14.81 acres shading and 3.00 acres fill). NCDOT and FHWA present these alternatives under the NC 12 Transportation Management Plan Alternative (Preferred). The presentation of this information in the EA is not consistent with the statement on Page 2-28 concerning the new Preferred Alternative and that additional solutions (alternatives) need to be further explored and identified for future phases beyond Phase I.

The estimates contained in Tables 2-3 and 2-4 does not correlate to the impacts presented in Tables 2-5 and 2-6. For example, under NC 12 Transportation Management Plan, total open water and SAV impacts are shown as 8.77 acres of shading and 2.45 acres of fill and piles. Total wetland impacts are shown as 2.23 acres for shading and 1.02 acres for fill and piles. Total shading impacts are shown as 11.0 acres and total fill impacts are shown as 3.47 acres. Under Section 2.3.3.3, Jurisdictional Issues, impact changes are described as 'small and not significant'. The EA does not address the fact that these jurisdictional resources are considered by EPA to be "Aquatic Resources of National Importance", (ARNI), and that 'relatively' small increases in jurisdictional impacts are potentially significant.

It should be noted that the comment on Page 2-28 concerning the selection of the LEDPA as the Phased Approach/Rodanthe Bridge Alternative is misleading. The Merger Review Board comprises NCDOT, FHWA, USACE and NCDWQ management representatives. Not all of the Merger team agencies agreed with the selection of the LEDPA. EPA had substantial environmental concerns for selecting future phases of the proposed project beyond Phase I, the replacement of Bonner Bridge. These concerns were detailed in previous EIS comment letters. EPA does concur with the statements that are referenced on Page 2-29 made at the May 21, 2009, meeting.

Page 2-32 of the EA discusses the safety and related issues associated with the existing Bonner Bridge. The EA does not fully disclose the current efforts and the approximate \$40 million rehabilitation contract to extend the life of the existing Bonner Bridge or other routine or periodic maintenance. It is also important to note the two additional 'hot spots' along NC 12 on Hatteras Island near Buxton and Hatteras Village that are south of the Rodanthe terminus. The entire NC 12 corridor needs to be evaluated in future NEPA documents for future phases beyond Phase I. Page 2-32 cites 'paraphrased' comments made by Mr. Militischer of my staff at past Merger meetings. It is important to note that these are not direct quotes and should not be given any more weight than other comments that were made by other Merger team representatives, including FHWA, NCDOT, USACE, USFWS, etc.

EPA does not concur with the footnote statement at Tables 2-7 and 2-8, Pages 2-34 and 2-35. This may not be the range of reasonable alternatives for future phases and

their respective costs. As previously stated, the Phased Approach/All Bridge and Road North/Bridge South alternatives may not be 'permissible' due to the severity and magnitude of impacts, the lack of suitable mitigation, etc. EPA does not believe that these alternatives are reasonable considering the magnitude of impacts and should be dropped from further consideration for future phases of the proposed project. The EA also discusses potential breaches along Hatteras Island in the context of single events to be responded to on Pages 2-32 and 2-33. In all probability, there is a greater likelihood that a very severe storm event will cause multiple breaches along the NC 12 corridor. None of the described 'Phased Approach' Parallel Bridge Corridor (II, III, or IV) alternatives will address this potential outcome. There are numerous locations along this thin island that are not currently identified 'hot spots' that could be breached under the 'worst conditions'. EPA believes that modeling or performing detailed engineering and environmental analyses for unpredictable storm event conditions is not realistic. EPA further suggests greater consideration be given to developing a short-term 'contingency plan' for temporary ferry service until the NC 12 Transportation Management Plan can be fully evaluated and detailed in the future. The specific details of the coastal monitoring program also need to be further discussed in future NEPA documents and with the Merger team agencies (Referring to comment on Pages 3-4 and 3-5 of the EA).

EPA believes that shoreline and other landscape features will continue to change along the barrier islands, irrespective of potential impacts from sea level rise. The research studies that NCDOT and FHWA have cited only provide further evidence to the fact that barrier islands are dynamic features and are influenced by both 'normal shoreline erosion' factors, as well as unpredictable and periodic storm events. The barrier islands along North Carolina have already dramatically changed in the last 200 years and this change will only potentially accelerate due to global climate change effects. Planning efforts for future conditions need to recognize that engineered solutions to address these changes may not be reasonable and effective.

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4 RALEIGH OFFICE
310 New Bern Avenue
Raleigh, North Carolina 27601**

Date: July 23, 2010

Clarence W. Coleman, P.E.
Director of Preconstruction and Environment
USDOT/FHWA/North Carolina Division
310 New Bern Avenue, 4th Floor
Raleigh, North Carolina 27601

**SUBJECT: FHWA/NCDOT Response to EPA's Environmental Assessment Comments;
B-2500, NC 12/Bonner Bridge Replacement, Dare and Hyde Counties, N.C.**

Dear Mr. Coleman:

The U.S. Environmental Protection Agency (EPA) has reviewed your July 20, 2010, summary meeting minutes in reference to the response to the Environmental Assessment (EA) comment letter dated June 28, 2010, for the subject project. We appreciated the opportunity to further discuss our comments and your responses.

As discussed, the decision to prepare a Supplemental Final Environmental Impact Statement (SFEIS) rests solely with the transportation agencies. Our primary concern was regarding the use of the EA for purposes of carrying forward previous alternatives for future phases of the NC 12 project as the potential full range of reasonable alternatives. We now clearly understand that this was not the intention. As also outlined in the EA, the Merger team process will be re-convened at Concurrence Point 2. Detailed Study Alternatives for the future phases beyond Phase I (i.e., the replacement of Bonner Bridge).

EPA requests that the Federal Highway Administration (FHWA) and North Carolina Department of Transportation's (NCDOT) Record of Decision (ROD) for the project clearly makes the distinction between the Merger Review Board decision for Phase I and the plans to re-evaluate future phases under the NC 12 Transportation Management Plan. EPA also requests that the compensatory mitigation efforts by FHWA and NCDOT for Phase I jurisdictional impacts be updated in the ROD or provided to the Merger team agencies in advance of the ROD issuance.

Thank you again for providing the responses to the EA comments and I look forward to further coordination on this project. Please call me at (919) 856-4206 should you have any questions.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
SAM NUNN
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8060

October 5, 2010

Mr. Clarence Coleman, P.E.
Operations Chief
Federal Highway Administration
Terry Sanford Federal Courthouse
310 New Bern Avenue
Raleigh, North Carolina 27601

RE: Clarification of EPA's letter to NCDOT regarding the Federal Environmental Assessment (EA) for B-2500, NC 12 Replacement of Herbert C. Bonner Bridge over Oregon Inlet, Dare County, N.C.

Dear Mr. Coleman:

This letter is to clarify the U.S. Environmental Protection Agency's (EPA) June 28, 2010, comment letter on the referenced document, EPA's letter dated July 23, 2010, and the Federal Highway Administration (FHWA) memorandum dated August 6, 2010. As previously stated in the July 23rd letter from Mr. Miltischer of my staff, the decision to prepare a Supplemental Final Environmental Impact Statement (SFEIS) rests solely with the transportation agencies. As currently clarified in your memorandum of August 6th, the North Carolina Department of Transportation (NCDOT) and FHWA do not believe that a SFEIS is required for the Phase I Bonner Bridge Replacement of the NC 12 Transportation Management Plan (TMP) alternative.

In consideration of the response to EPA's comments and the commitments for further NEPA documentation for later phases (beyond Phase I), EPA concurs that a SFEIS does not appear to be necessary prior to the issuance of the Record of Decision (ROD). The impacts and issues have been reasonably identified and disclosed in previous NEPA documents and the administrative record with respect to the Phase I Bonner Bridge Replacement.

We will continue to coordinate on the proposed project, including the final plans for compensatory wetlands mitigation for Phase I. Please feel free to contact Mr. Christopher A. Miltischer of my staff at 919-856-4206 or at miltischer.chris@epa.gov.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office

cc: J. Sullivan, FHWA
G. Thorpe, NCDOT
P. Benjamin, USFWS
W. Biddlecome, USACE

Sincerely,

Christopher A. Miltischer, REM, CHMM
Merger Team Representative

For: Heinz J. Mueller, Chief
NEPA Program Office

cc: B. Smyre, NCDOT



North Carolina
Department of Administration

Beverly Heaves Perdue, Governor

Moses Carey, Jr., Secretary

June 23, 2010

Mr. Gregory Thorpe
N.C. Dept. of Transportation
Program Dev. & Env. Analysis
1548 Mail Service Center
Raleigh, NC 27699-1534

Re: SCH File # 10-E-4220-0407; EA; Proposal to replace the Herbert C. Bonner Bridge (Bridge No. 11) over Oregon Inlet, NC 12, in Dare County. TIP No. B-2500

Dear Mr. Thorpe:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are the comments made by agencies in the course of this review.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

Chrys Baggett (5761)

Ms. Chrys Baggett
State Environmental Review Clearinghouse

Attachments

cc: Region R

Telephone: (919)807-2425
Fax: (919)733-9571
State Center #51-01-00
e-mail: state.clearinghouse@doa.nc.gov

Location Address:
116 West Jones Street
Raleigh, North Carolina

An Equal Opportunity/Affirmative Action Employer

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: DARE

F02: HIGHWAYS AND ROADS

STATE NUMBER: 10-E-4220-0407
DATE RECEIVED: 05/14/2010
AGENCY RESPONSE: 06/09/2010
REVIEW CLOSED: 06/14/2010

CLEARINGHOUSE COORDINATOR
CC&PS - DIV OF EMERGENCY MANAGEMENT
FLOODPLAIN MANAGEMENT PROGRAM
MSC # 4719
RALEIGH NC



REVIEW DISTRIBUTION
ALBEMARLE REG PLANNING COMM
CC&PS - DIV OF EMERGENCY MANAGEMENT
DENR - COASTAL MGT
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

PROJECT INFORMATION

APPLICANT: N.C. Dept. of Transportation
TYPR: National Environmental Policy Act
Environmental Assessment

DESC: Proposal to replace the Herbert C. Bonner Bridge (Bridge No. 11) over Oregon Inlet, NC 12, in Dare County. TIP No. B-2500

CROSS-REFERENCE NUMBER: 94-E-4220-0426 06-E-4220-0185 07-E-4220-0283 09-E-4220-0078

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

John A. Stuber

DATE: 6/11/10

Please insert project agrees with the memo between MeDOT and Mr. Flood Mapping Program.

**NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW**

COUNTY: DARE
F02: HIGHWAYS AND ROADS

STATE NUMBER: 10-E-4220-0407
DATE RECEIVED: 05/14/2010
AGENCY RESPONSE: 06/09/2010
REVIEW CLOSED: 06/14/2010

MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF CULTURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC



cz 90-8304



REVIEW DISTRIBUTION

ALBEMARLE REG PLANNING COMM
CC4PS - DIV OF EMERGENCY MANAGEMENT
DENR - COASTAL MGT
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

PROJECT INFORMATION

APPLICANT: N.C. Dept. of Transportation
TYPE: National Environmental Policy Act
Environmental Assessment

DESC: Proposal to replace the Herbert C. Bonner Bridge (Bridge No. 11) over Oregon Inlet, NC 12, in Dare County. TIP No. B-2500

CROSS-REFERENCE NUMBER: 94-E-4220-0426 06-E-4220-0185 07-E-4220-0283 09-E-4220-0078

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY: Renee Gledhill-Earley DATE: 5-19-10



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Doc Freeman
Secretary

MEMORANDUM

TO: Valerie McMillan
State Clearinghouse

FROM: Melba McGee
Project Review Coordinator

RE: 10-0407 EA, Proposal to Replace the Herbert C. Bonner Bridge over Oregon Inlet, NC 12 in Dare County

DATE: June 18, 2010

The Department of Environment and Natural Resources has reviewed the Proposed project.

It is requested that the Department of Transportation continue to work with our agencies in order to adequately address project concerns. Addressing these concerns during the review process and/or during the NEPA Merger Process will avoid delays during the permit phase.

Thank you for the opportunity to comment on this project.

Attachments



1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4884 FAX: 919-715-3080 Internet: www.enr.state.nc.us
An Equal Opportunity/Affirmative Action Employer - 50% Recycled, 100% Post Consumer Paper



North Carolina Department of Environment and Natural Resources
 Division of Coastal Management
 James H. Gregson, Director

Michael F. Easley, Governor
 William G. Ross Jr., Secretary

June 16, 2010

Melba McCoc
 Environmental Coordinator
 N.C. Department of Environment and Natural Resources
 1601 Mail Service Center
 Raleigh, NC 27699-1601

RE: SCH NO. 10-0407, Environmental Assessment, Proposal to replace the Herbert C. Bonner Bridge (Bridge No. 11) over Oregon Inlet, NC 12, Dare County, T.I.P. No. B-2500.

Dear Ms. McGee:

The N.C. Division of Coastal Management (DCM) appreciates the opportunity to comment on the Environmental Assessment (EA) for the above referenced project.

A formal DCM review of the project to determine consistency with North Carolina's Coastal Management Program cannot occur until a Coastal Area Management Act (CAMA) major permit application is received. At that time, the CAMA major permit application will be circulated to the network of state agencies that comprise North Carolina's Coastal Management Program. The statutes, rules and policies of each of these agencies must be considered during the review of the CAMA permit application. This process will also include a consistency review by the DCM District Planner of the CAMA land use plan(s) in effect at the time of permit decision.

Due to the complexity of the project and the extent of environmental impacts that are proposed, The N.C. Department of Transportation (NCDOT) is urged to submit the CAMA major permit application for this project to DCM a minimum of one year prior to the anticipated construction let date. During the CAMA major permit application review process, DCM may have additional comments after examining the more detailed environmental information that will be provided with the permit application. DCM may also place conditions on any CAMA permit that is issued to avoid, minimize and/or mitigate environmental impacts. The comments provided in this letter shall not preclude DCM from requesting additional information throughout the CAMA major permit application review process, and following normal permitting procedures. Furthermore, nothing in this letter shall be interpreted as providing an opinion on the ultimate outcome of any CAMA permit decision. Such a decision can only be made following a complete multi-agency review of the final permit application. DCM will work closely with NCDOT, the Design-Build contractor, and the relevant state and federal agencies, to ensure that the final project design is consistent with the N.C. Coastal Management Program, including the N.C. Administrative Code (i.e. N.C. Coastal Resources Commission (CRC) rules).

400 Commerce Avenue, Morehead City, North Carolina 28557
 Phone: 252-808-2808 \ FAX: 252-247-3330 \ Internet: www.nccoastalmanagement.net
 An Equal Opportunity \ Affirmative Action Employer - 50% Recycled \ 10% Post Consumer Paper

This project is being carried through the NEPA/404 Merger Process, and DCM is a member of the NEPA/404 project team. It appears as though the information contained within the EA is consistent with the information that has been previously provided to DCM, and upon which we have commented, through the NEPA/404 Merger Process.

As stated in previous DCM letters about this project, the transportation link that the Herbert C. Bonner Bridge provides between Hatteras Island and Bodie Island is a critical component in the safety of the residents and visitors of Hatteras Island and Ocracoke Island, and the economic vitality of the Outer Banks. Given the importance of this transportation link and the advancing age of the existing Bonner Bridge, DCM continues to urge NCDOT to move expeditiously towards the development of a final project design that satisfies the transportation needs of the residents and visitors of Bodie, Hatteras and Ocracoke Islands, while also ensuring that coastal resources are adequately protected. DCM looks forward to working with the NEPA/404 project team to move this project forward in an expeditious, yet fiscally, socially and environmentally responsible manner.

Please contact me at (919) 733-2293 x238 or via e-mail at cathy.brittingham@ncdenr.gov if you have any questions or concerns, or require additional information.

Sincerely,

Cathy Brittingham

CC: Jim Gregson, DCM
 Ted Tyndall, DCM
 Frank Jennings, DCM
 Doug Huggett, DCM

DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Project Number 10-0407
County Dare

Inter-Agency Project Review Response

Project Name NCDOT/Dare County Type of Project _____

EA - Proposal to replace
Herbert C. Bonner Bridge
(Bridge No. 11) over Oregon
Inlet, NC 12, TIP No. B-2500

- The applicant should be advised that plans and specifications for all water system improvements must be approved by the Division of Environmental Health prior to the award of a contract or the initiation of construction (as required by 15A NCAC 18C .0300et. seq.). For information, contact the Public Water Supply Section, (919) 733-2321.
- This project will be classified as a non-community public water supply and must comply with state and federal drinking water monitoring requirements. For more information the applicant should contact the Public Water Supply Section, (919) 733-2321.
- If this project is constructed as proposed, we will recommend closure of _____ feet of adjacent waters to the harvest of shellfish. For information regarding the shellfish sanitation program, the applicant should contact the Shellfish Sanitation Section at (252) 726-6627.
- The soil disposal area(s) proposed for this project may produce a mosquito breeding problem. For information concerning appropriate mosquito control measures, the applicant should contact the Public Health Pest Management Section at (919) 733-6407.
- The applicant should be advised that prior to the removal or demolition of dilapidated structures, an extensive rodent control program may be necessary in order to prevent the migration of the rodents to adjacent areas. For information concerning rodent control, contact the local health department or the Public Health Pest Management Section at (919) 733-6407.
- The applicant should be advised to contact the local health department regarding their requirements for septic tank installations (as required under 15A NCAC 18A, 1900 et. seq.). For information concerning septic tank and other on-site waste disposal methods, contact the On-Site Wastewater Section at (919) 733-2895.
- The applicant should be advised to contact the local health department regarding the sanitary facilities required for this project.
- If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Environmental Health, Public Water Supply Section, Technical Services Branch, 1634 Mail Service Center, Raleigh, North Carolina 27699-1634, (919) 733-2321.

For Regional and Central Office comments, see the reverse side of this form.

Jim McRight _____ PWSS _____ 05/19/2010 _____
Reviewer _____ Section/Branch _____ Date _____

DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Project # 10-0407
County Dare

Inter-Agency Project Review Response

Project Name NCDOT/Dare County Type of Project _____

EA - Proposal to replace Herbert
C. Bonner Bridge (Bridge No. 11)
over Oregon Inlet, NC 12, TIP
No. B-2500.

Comments provided by:

- Regional Program Person
- Regional Supervisor for Public Water Supply Section
- Central Office program person

Name: Joey White Telephone #: (252) 948-3894 Date Rec'd: 05/21/2010
Joey C White Date Rev'd: 05/26/2010

Program within Division of Environmental Health:

- Public Water Supply
 - Other, Name of Program _____
- Response (check all applicable):
- No objection to project as proposed
 - No comment
 - Insufficient information to complete review
 - Comments attached
 - See comments below

- Relocation and/or replacement of potable water supply lines will require engineered plans and specifications to be submitted to the Public Water Supply Section for review and approval before construction. Final approval must be issued before placing the water mains into service.
- The Town of Nags Head owns and maintains water supply lines within the NCDOT ROW along Hwy 12 upon approach to the project area. Please contact the Town of Nags Head for assistance in determining precise locations of water mains such that construction does not affect utility piping or services to customers.

Return to:
Public Water Supply Section
Environmental Review Coordinator
for the
Division of Environmental Health



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Cileen H. Sullins
Director

Erinley Hayes Ferby
Secretary



Dee Freeman
Secretary

June 7, 2010

MEMORANDUM

To: Melba McGee, Environmental Coordinator, Office of Legislative and Intergovernmental Affairs

Through: Brian Wrenn

From: David Wainwright, Division of Water Quality, Central Office

Subject: Comments on the Environmental Assessment related to proposed replacement of the Bonner Bridge (Bridge No. 11 over Oregon Inlet) and improvements to NC 12, Dare County, Federal Aid Project No. BRS-2358(15), TIP B-2500 State Clearinghouse Project No. 10-0407.

This office has reviewed the referenced document dated May 2010. The NC Division of Water Quality (NCDWQ) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. The NCDWQ offers the following comments based on review of the aforementioned document:

1. This project is being planned as part of the 404/NEPA Merger Process. As a participating team member, NCDWQ will continue to work with the team.
2. Commitment 5 discusses pile placement and jettling and indicates that potential damage from spoil piles to wetlands, SAV, and Oregon Inlet will be minimized. The NCDOT is respectfully reminded that impacts from jettling will need to be estimated as accurately as possible when submitting an application for a 401 Water Quality Certification, and any impacts exceeding estimates will need to be submitted to the DWQ for permit modification. Mitigation may be required for impacts from jettling.

The DWQ has had discussions with the NCDOT regarding jettling within Oregon Inlet. However, the possibility of jettling within wetlands, as indicated in Commitment 5, has not been satisfactorily discussed. It is unclear to the DWQ why jettling may be required in wetland areas as these areas are easily accessible.

The NCDOT is also respectfully reminded that a satisfactory justification as to why jettling is required for the construction this project will need to be included in the 401 Water Quality Certification application. Additionally, the NCDOT will need to explain what measures will be taken to reduce all impacts from jettling including turbidity, sedimentation, discharge water run-off, the removal of spoil, etc.

Transportation Permitting Unit
1150 Miller Road Center Raleigh, North Carolina 27696-1550
Local: 919-733-2200 Fax: 919-733-2201
Phone: 919-733-1766 FAX: 919-733-9553
Internet: <http://ncdot.gov/staff/c2/eflowwladm.html>



in the Spirit of Opportunity - Affordable Science Employment

3. It is stated in Section 2.1 and shown in Table 2-1 that residential and business relocations increased between the FEIS and the EA for the Phased Approach/Rodanthe Bridge alternative. Residential relocations doubled from three (3) to six (6); business relocation increased from one (1) with two (2) partially affected to seven (7). Residential relocations doubled while business relocations increased seven-fold. This would seem to make them significant. It is concluded that the increases were not seen as significant because there is enough available housing and business locations, assistance will be provided, and owners would be paid fair-market value for the property. The DWQ does not agree that having locations available and providing services makes the relocations less significant. The DWQ does agree that, relatively speaking, the increase in relocations is not significant. This is not because housing or business locations are available and assistance would be paid but because, as stated in the first bullet in the text, the numbers are no higher than what has been considered with some of the other alternatives.
4. Section 2.1 discusses impacts to a cemetery located in Rodanthe. It is stated that no impacts to marked graves would occur; a study would be undertaken to identify any unmarked graves if necessary and those would then be avoided. It is unclear to the DWQ how it is known that unmarked graves could be avoided, unless impacts to the cemetery could be avoided altogether. Please clarify.
5. The document does not discuss mitigation in much detail. A very brief mention of mitigation is in Section 3.3.4 (September 17, 2009, Merger Meeting). Mitigation was discussed to some extent at that meeting. According to NCDOT, the land use plan for Dare County requires that some, if not all, mitigation for impacts to wetlands in Dare County take place in Dare County. The NPS has stated that any impacts occurring within the Pea Island National Wildlife Refuge should be mitigated for within the Refuge. Due to these constraints mitigation should be discussed in more detail than is presented in Section 3.3.4.
6. The DWQ agrees that no significant increase in impacts have occurred with the Parallel Bridge Corridor with NC 12 Management Plan alternative.

NCDWQ appreciates the opportunity to provide comments on your project. Should you have any questions or require any additional information, please contact David Wainwright at (919)715-3415.

cc: Bill Biddlecome, US Army Corps of Engineers, Washington Field Office
 Clarence Coleman, Federal Highway Administration
 Chris Miltscher, Environmental Protection Agency (electronic copy only)
 Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
 Cathy Brittingham, Division of Coastal Management
 Gary Ward, NCDWQ Washington Regional Office
 File Copy



North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

TO: Melba McGee
Office of Legislative and Intergovernmental Affairs, DENR

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: June 4, 2010

SUBJECT: North Carolina Department of Transportation (NCDOT) Environmental Assessment (EA) for the proposed replacement of Herbert C. Bonner Bridge, in Dare County, North Carolina. TIF No. B-2500 SCH Project No. 10-0407.

Staff biologists with the N. C. Wildlife Resources Commission have reviewed the subject EA and are familiar with habitat values in the project area. The purpose of this review was to assess project impacts to fish and wildlife resources. Our comments are provided in accordance with certain provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

NCDOT proposes to replace the Herbert C. Bonner Bridge across Oregon Inlet in conjunction with addressing problematic areas located on NC 12 from the southern terminus of the existing bridge to the community of Rodanthe. The EA reflects prior coordination as well as information provided during the NEPA/404 Merger planning process. New information contained in the document is a result of this coordination and represents explicatory and supplemental information to the September 17, 2008 Final Environmental Impact Statement.

The EA identifies a new preferred alternative; the Parallel Bridge Corridor with NC 12 Transportation Management Plan, this alternative serves to more accurately depict the future implementation of the phased approach. Therefore our comments in response to the FEIS and DEIS as they pertain to the impacts of the phased approach alternatives are still applicable to the newly preferred alternative identified in the EA.

With the exception of an alignment shift on the southern terminus of the Phase I bridge and an alignment shift on the southern bridge terminus at Rodanthe, impacts noted in the EA are

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • Fax: (919) 707-0028

B-2500

Page 2

June 4, 2010

consistent with those quantified in the FEIS. Increased impacts to natural resources as a result of these shifts represent minimal augmentations to the potential environmental impacts of the project as a whole.

This document does not provide any significant new information but more accurately presents supplemental information to the FEIS; therefore we would like to take the opportunity to reiterate our October 16, 2008 comments on the FEIS as well as our January 17, 2006 and March 16, 2007 SDEIS comments. At this time we anticipate continued participation in the 404/NEPA Merger process for this project. Thank you for the opportunity to comment. If we can be of any further assistance please call me at (919) 528-9886.

cc: Gary Jordan, USFWS, Raleigh
Brian Wrenn, DWQ, Raleigh
Bill Biddlecome, USACE, Raleigh
Chris Militscher, EPA
Cathy Brittingham, DCM

Comments by the County of Dare

Submitted June 21, 2010

on the

Environmental Assessment

dated May 7, 2010

Replacement of the Herbert C. Bonner Bridge
over Oregon Inlet in Dare County, North Carolina



INTRODUCTION

Replacement of the Herbert C. Bonner Bridge has been repeatedly delayed for environmental studies. The Environmental Assessment (EA), dated May 7, 2010, represents the latest in a long series of reviews. It identifies and assesses changes that have occurred since the approval of the previous Final Environmental Impact Statement Section 4(f) Evaluation on September 17, 2008.

The purpose of the latest EA, which is now open for public comment, is to determine whether yet another environmental study is needed in the future, or to proceed at this time with a Record of Decision (ROD) clearing the way for bridge replacement. If another environmental review is required, construction would be further delayed while a new "Supplemental" Final Environmental Impact Statement (SFEIS) is completed.

SUMMARY

The County of Dare strongly believes the Bonner Bridge needs immediate replacement as a matter of public safety and necessity. In the interest of replacing the bridge now, Dare County –

- Supports NCDOT's new Preferred Alternative outlined in the EA
- Concur with the elimination of the Pamlico Sound "Long Bridge" Alternative
- Favors the "Transportation Management Plan" for development of NC Highway 12
- Believes the EA does not have significant impacts requiring further study and delay
- Recommends immediate construction since a Supplemental FEIS is not necessary

Dare County – Supports NCDOT's New Preferred Alternative

We believe the new Preferred Alternative is a practical solution. The recommended "Parallel Bridge with Transportation Management Plan" alternative would benefit the public by replacing the Bonner Bridge now, while establishing a comprehensive method for handling development along NC Highway 12 to Rodanthe.

The NCDOT new Preferred Alternative achieves two objectives –

1. It immediately solves the most pressing problem now, which is the urgent need to replace the Bonner Bridge. This portion of the overall project focuses on a limited geographical area involving approximately 1.5 miles in length. This is the focal point of the project that demands immediate attention for the following reasons –
 - o Bonner Bridge is the lifeline between Hatteras Island and the remainder of Dare County. Bridge inspections have rated the Bonner Bridge at only 2 out of a top score of 100. In fact, the Structural Condition Assessment done December 21, 2006 said, "due to the advanced stages of deterioration, replacement of the Bonner Bridge within the next ten years remains a necessity." Any further delay in replacing the bridge only increases the risk to the general public.
 - o Bonner Bridge is vital for public safety as well as the economic, cultural, historic and social well being of our community.
 - o Without the Bonner Bridge, public access to Hatteras Island would be devastated with drastic consequences to residents, small business owners, property owners and millions of yearly visitors.
2. It addresses the development along NC Highway 12 in a way that is appropriate at the time, based on actual conditions. This portion of the Preferred Alternative, known as the Transportation Management Plan, represents the most sensible way to address this dynamic and unpredictable terrain encompassing a vast area of approximately 13 miles from the Bonner Bridge to Rodanthe.

Dare County supports the new Preferred Alternative because it would replace the Bonner Bridge immediately while developing NC Highway 12 in an appropriate way later. The uncertainty of predicting future conditions along NC Highway 12 should not be used, in any way, as justification to delay the immediate need for replacing the Bonner Bridge now.

Dare County – Concurs with the elimination of the “Long Bridge”

It is in the public interest that the Pamlico Sound Bridge Corridor Alternative, known as the “Long Bridge” be eliminated. This Alternative would have required the construction of a colossal 17-mile span running parallel to the Pea Island National Wildlife Refuge.

A bridge of such massive length would rank among the longest structures in the world. In view of the current National and State economy, securing funding in the foreseeable future for a 17-mile bridge is unrealistic.

Public safety would be further jeopardized by waiting until the funds may someday become available to cover the unprecedented costs of an expansive 17-mile bridge. Instead, a practical and affordable solution exists today by building a parallel bridge immediately as described in the NCDOT Preferred Alternative.

In view of the opposition expressed by environmental groups for a seven mile mid-county bridge in nearby Currituck, the anticipated objections and delays for a 17 mile “long bridge” replacement for the Bonner Bridge would have inevitably been lengthy and time consuming, had this option not been eliminated in the new Preferred Alternative.

Dare County supports the assessment in the Environmental Assessment (EA), where the revised Final Section 4(f) Evaluation determined that the Pamlico Sound Bridge Corridor Alternatives, known as the “Long Bridge” were not feasible and prudent avoidance alternatives to the use of a Section 401(F) property.

Dare County – Favors the “Transportation Management Plan”

After the primary goal of replacing the Bonner Bridge is achieved, the development of NC Highway 12 to Rodanthe can be better determined and resolved as outlined in the “Transportation Management Plan” of the NCDOT Preferred Alternative.

The Transportation Management Plan (TMP) does not specify a particular action at this time because of the inherent uncertainty in predicting future conditions. Instead, it addresses NC Highway 12 development through a comprehensive plan, whereby NCDOT would fund and implement a coastal monitoring program that actively monitors conditions in determining the best course of action for each phase of future development.

Dare County – Believes the EA does not need further study or delay

In the past 21 years, there have been numerous environmental impact studies pertaining to the Bonner Bridge. Time and again, various agencies have closely examined all the available options in detail. There has been a Draft Environmental Impact Statement, a Supplemental Draft Environmental Impact Statement, and even a Supplement to the Supplemental Draft Environmental Impact Statement before the Final Environmental Impact Statement was released September 17, 2008.

The latest Environmental Assessment (EA), dated May 7, 2010 by the Federal Highway Administration and the North Carolina Department of Transportation is another complete and thorough review.

The new Preferred Alternative is a mixing and matching of the other Parallel Bridge Corridor alternatives already assessed in the Final Environmental Impact Statement (FEIS) with only minor revisions. It does not result in new impacts not previously identified in the FEIS.

Dare County believes the range of environmental studies that have been done to date, have adequately researched and documented in detail the impacts to human and natural environments. Accordingly, a new Supplemental Final Environmental Impact Statement (SFEIS) is not needed.

Dare County - Recommends immediate construction of a new bridge

The most significant aspect of the new Preferred Alternative in the Environmental Assessment (EA) is the clarion call for immediate replacement of the Bonner Bridge.

The people have already waited far too long. There is no need to suffer through additional delays for more environmental studies. No appreciable new technology has been developed. No new knowledge has been added. There is no legitimate reason to delay the project any further.

As outlined in the Environmental Assessment, the Preferred Alternative represents a practical way to get the Bonner Bridge replaced now. The residents and visitors of Dare County deserve nothing less.

It is time for all the environmental studies to finally end. Dare County calls for the issuance of a Record of Decision (ROD) so construction can begin immediately on replacement of the Bonner Bridge.

Closing Note

The above comments reflect the general views of Dare County in support of the Preferred Alternative outlined in the Environmental Assessment.

Dare County may submit additional comments during the public hearings scheduled July 6, 2010 in Manteo, and July 8, 2010 in Buxton, and afterwards until the August 9, 2010 deadline.



Bob Oakes
Mayor

Wayne Gray
Mayor Pro Tem

Cliff Ogburn
Town Manager

Town of Nags Head

Post Office Box 99
Nags Head, North Carolina 27959
Telephone 252-441-5508
Fax 252-441-0776
www.townofnagshead.net

Doug Remaley
Commissioner

Anna Sadler
Commissioner

M. Renée Cahoon
Commissioner

June 8, 2010

Gregory J. Thorpe, Ph.D., Manager
Project Development and Environmental Analysis Branch
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

RE: Replacement of the Herbert C. Bonner Bridge

Dear Dr. Thorpe:

Thank you for forwarding a copy of the Environmental Assessment for the Replacement of the Herbert C. Bonner Bridge. We appreciate being included in this extremely important project. Because of Nags Head's proximity to the bridge, our residents and visitors rely on it for work and for play. In addition, as a Dare County municipality, our town relies on the bridge, and the tourism it conveys, for economic stability. As a result, it is our hope that the project move forward expeditiously, and in a manner that best serves the public as a whole.

As you know, the Herbert C. Bonner Bridge over Oregon Inlet is the only means of land access to Hatteras Island not only for residents but also for tourists, fishermen, and others who spend more than \$300 million a year in the area. With each passing day, the situation becomes more pressing for Dare County residents, landowners, entrepreneurs, and visitors. For example, the economic impact caused by a delay in construction resulting in interrupted traffic flow to Hatteras Island could be sizeable. In 2005, Hatteras Island accounted for 20% of taxable property values in Dare County with 8,320 taxable parcels valued at \$3.1 billion. Another 348 parcels are federally owned and tax exempt and include the Pea Island National Wildlife Refuge and Cape Hatteras National Seashore, areas where people come from all over the United States to enjoy pristine beaches, surfing, bird watching, and fishing. The result of restricted access to those areas would have a direct impact on Nags Head's, and by extension, Dare County's, economic viability.

Therefore, we wanted to thank you for the Environmental Assessment and express our sincere hope that this critically important project continues to move forward expeditiously.

Sincerely,


Robert O. Oakes, Jr.
Mayor

RECEIVED
Division of Highways

JUN 14 2010

Reconstr. Job
Project Development and
Environmental Analysis Branch

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450

200 WEST FRANKLIN STREET, SUITE 330
CHAPEL HILL, NC 27516-2559

Facsimile 919-929-9421

June 21, 2010

RECEIVED
Division of Highways

JUN 23 2010

Preconstruction
Project Development and
Environmental Analysis Branch

VIA ELECTRONIC MAIL AND FIRST CLASS MAIL

Dr. Gregory J. Thorpe, Ph.D.
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
gthorpe@ncdot.gov

John F. Sullivan III, P.E.
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, NC 27601
NorthCarolina.fhwa@fhwa.dot.gov

Re: Comments on Environmental Assessment
NCDOT TIP Project Number B-2500, Dare County, North Carolina
NC 12 Replacement of Herbert C. Bonner Bridge

Dear Dr. Thorpe and Mr. Sullivan:

We appreciate the opportunity to comment on the above-referenced Environmental Assessment ("EA"). The following comments are submitted on behalf of the Southern Environmental Law Center, Defenders of Wildlife, Environmental Defense Fund, National Parks Conservation Association, Audubon North Carolina, North Carolina Wildlife Federation, and Pamlico Tar River Foundation. We find the EA flawed in several aspects and do not agree that the new "preferred alternative" is a viable or legal alternative.

As discussed in more detail below, the EA is inadequate and the project cannot go forward as planned for the following reasons:

1. Issuance of an environmental assessment violates the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321-4347, because a supplemental final environmental impact statement is required instead.
2. The new preferred alternative and the EA violate NEPA by improperly segmenting the project and by engaging in improper reverse engineering.

3. The EA incorporate a Revised 4(f) Evaluation that is inadequate and does not satisfy the requirements of Section 4 of the Department of Transportation Act of 1966, because, among other things, the evaluation erroneously concludes that the new preferred alternative will not "use" Refuge lands based on a joint planning exception that does not apply.

4. The new preferred alternative likely will not be consistent with the principles of the Coastal Area Management Act, yet the EA fails to address the issue.

In addition to the discussion of these issues below, we adopt and reiterate the relevant portions of our comments on previous NEPA documents, including our December 9, 2005, comments on the Supplemental Draft Environmental Impact Statement and Draft Section 4(f) Evaluation; our October 27, 2008, comments on the Final Environmental Impact Statement and Section 4(f) Evaluation; and our November 13, 2009, comments on the Revised Final Section 4(f) Evaluation.

I. The new preferred alternative violates NEPA.

After the twenty or so years of study described in the EA during which the North Carolina Department of Transportation ("NCDOT") and Federal Highway Administration ("FHWA") examined various alternatives but could not identify a parallel bridge alternative that could pass legal muster, NCDOT and FHWA are now seeking to justify an alternative with a NEPA analysis that essentially ignores the significant impacts that were previously identified.

Prior NEPA documents such as the 2008 FEIS described various alternatives for replacing the aging Bonner Bridge over Oregon Inlet. These alternatives included a transportation corridor all the way to the midpoint of Hatteras Island south of Pea Island National Wildlife Refuge ("PINWR" or the "Refuge") in the vicinity of the town of Rodanthe. In recent years, NCDOT and FHWA have focused on alternatives that would replace the bridge with a new bridge that is parallel to and close to the current location and then would attempt to maintain a transportation corridor on land through PINWR. They have preferred these "Parallel Bridge Alternatives" over other, less environmentally damaging alternatives, including alternatives that bypass the Refuge with ferries or with a longer bridge through the Pamlico Sound (the "Pamlico Sound Bridge Alternatives").

Unable to develop any plan for maintaining a transportation corridor through PINWR that did not violate federal law and that satisfied all resource agencies, NCDOT and FHWA have now identified a new preferred alternative. This new alternative essentially ignores the problematic impacts of maintaining a transportation corridor through the Refuge by delaying until later all decisions related to it, and amounts to little more than sweeping the many problems associated with the Parallel Bridge Alternatives under the carpet. The new preferred alternative, the "Parallel Bridge Corridor with NC 12 Transportation Management Plan" or "PBC/TMP," consists of several phases. Phase I involves construction of a bridge over Oregon Inlet parallel to and near the current bridge, which would be 2.6 to 3.2 miles long, depending on the design selected. (EA Appendix C at C-1.) The remaining phases are referred to only vaguely as "Later Phases" and involve "monitoring the conditions and delaying the decision-making" to somehow maintain a transportation corridor through PINWR in a way or ways that are not identified or

analyzed in the EA. (EA at 2-17). The EA fails to specify how the corridor will be maintained, though it will surely involve some combination of bridging, beach nourishment, dune maintenance, moving NC 12 outside of its easement, and/or other activities that have already been found to affect Refuge lands adversely in prior NEPA documents, in what the agencies have called a “mix and match” approach. (EA Appendix B at B-6.) The EA leaves the decision on the mixing and matching (and evaluation of its impacts) for another day. In so doing, the new PBC/TMP violates NEPA.

A. The issuance of an environmental assessment, instead of a revised final environmental impact statement, violates NEPA.

The issuance of an EA that purports to describe the environmental impacts of the new preferred alternative, instead of issuing a revised or supplemental final environmental impact statement (“SFEIS”), violates NEPA. As described in our previous comments, the decision to issue an EA instead of an SFEIS appears to have been driven by a desire to truncate public review and comment on the new preferred alternative and its non-compliance with applicable laws. According to NCDOT status reports on the Bonner Bridge Replacement Project, NCDOT intended to issue an SFEIS as late as July 24, 2009, but by July 31, 2009, had begun considering issuing an EA instead. Handwritten notes by NCDOT staff dated July 21, 2009, reveal NCDOT’s “concern” about “allowing the public to comment on the ‘new’ alternative” and its apprehension that it would have to issue a draft SFEIS for comment before issuing the SFEIS and Record of Decision. (These notes were attached to our November 13, 2009 comments.)

Concerns over expediency, however, cannot justify a decision to issue an EA when an EIS is required. Federal regulations implementing NEPA list the circumstances in which an SFEIS will and will not be required, all of which relate to the substance and significance of new impacts or new information related to the proposed action. 23 C.F.R. § 771.130 (2010); 40 C.F.R. § 1502.9(b) (2009). The regulations do not sanction an agency’s issuing an EA in order to expedite a decision or exclude the public from the process – for instance, to avoid the time and effort to issue a draft SFEIS or to deter members of the public from commenting on a proposed action or alternative.¹ Doing so directly contravenes the explicitly stated purpose of NEPA: “NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” 40 C.F.R. § 1500.1(b) (2009) (emphasis added). Additionally, the stated policy of NEPA is that agencies will “[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.” 40 C.F.R. § 1500.2(d) (2009). The United States Supreme Court explained,

NEPA . . . serves two purposes. First, “it ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts.” Second, it “guarantees that the relevant information will be made available to the larger audience that may also

¹ See, e.g., *Western N.C. Alliance v. N.C. Dep’t of Transp.*, 312 F. Supp. 2d 765, 775 (W.D.N.C. 2003) (“NEPA does not allow Defendants to subdivide projects . . . simply to expedite the NEPA process or avoid addressing environmental impacts.”).

play a role in both the decisionmaking process and the implementation of that decision.”

U.S. Dep’t of Transp. v. Public Citizen, 541 U.S. 752, 768 (2004) (internal citations removed) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). The Court continued: “The ‘informational role’ . . . is to ‘give the public the assurance that the agency ‘has indeed considered environmental concerns in its decisionmaking process’, and, perhaps more significantly, provide a springboard for public comment’ in the agency decisionmaking process itself” *Id.* (internal citations removed) (quoting *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 US 87, 97 (1983)).

The issuance of the EA in the present case – as well as the fact that the “later phases” of the new preferred alternative are not defined – frustrates these purposes of NEPA. First, issuance of the EA discourages public involvement by failing to resolve the question of how the later phases will be accomplished and, therefore, preventing public examination of, and comment on, the details and impacts of the new proposed alternative. Moreover, the issuance of an EA will not “give the public assurance that the agency has considered environmental concerns,” because, in fact, it has not. Indeed, it cannot thoroughly consider environmental impacts of an action when it has not even defined the action with sufficient particularity to be able to identify those impacts.

Because the agencies in the present case elected to publish an EA and not a supplemental FEIS, the public was excluded from the process to a degree. Notice of a draft EIS, a final EIS, and any supplements to an EIS must be published in the Federal Register, with the public having an opportunity to comment. 40 C.F.R. §§ 1506.9, 1506.10, 1502.9(c)(4), 1503.1. Copies of an EIS must be sent to a laundry list of persons, including “[a]ny person, organization, or agency requesting the entire environmental impact statement” and “any person, organization, or agency which submitted substantive comments on the draft.” 40 C.F.R. § 1502.19. On their face, these same regulations do not apply to EAs. Thus, in the present case, the decision to issue an EA on the new alternative thwarted the public notice and comment requirements that would have applied if an SFEIS had been issued instead. For instance, the agencies published notice in the Federal Register for the FEIS (73 Fed. Reg. 55,842 (Sept. 26, 2008)), but not for the EA. The issuance of an EA instead of a supplemental EIS has accordingly discouraged public review of the new preferred alternative.

In addition, because NCDOT and FHWA previously concluded that the proposed project warrants an EIS, any significant new information or circumstances affecting the project or the selection of an alternative must also be reviewed in an SFEIS. As the U.S. Supreme Court explained, “[i]t would be incongruous with [NEPA’s] approach to environmental protection, and with the Act’s manifest concern with preventing uninformed action, for the blinders to adverse environmental effects, once unequivocally removed, to be restored prior to the completion of agency action” *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 371 (1989) (discussing requirement for SFEIS). This requirement is also contained in both the controlling regulations and the internal guidance of the FHWA. Any agency must “prepare supplements to either draft or final environmental impact statements” in two circumstances, first, if the “agency makes substantial changes in the proposed action that are relevant to environmental concerns” and, second, if there “are significant new circumstances or information relevant to environmental

concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c) (2009). The internal guidance states that “[w]henver there are changes, new information, or further developments on a project . . . a supplemental EIS is necessary.” Ali F. Sevin, Director, Office of Env’t Policy, FHWA, “FHWA Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, Section XII: Supplemental Environmental Impact Statements” (1987), available at <http://environment.fhwa.dot.gov/projdev/impTA6640.asp>.

In the present case, significant new information and circumstances that have arisen since the issuance of the FEIS in September 2008 justify the issuance of an SFEIS or RFEIS for public comment. As an example, there has been significant continuing progress in the scientific study of the effects of global climate change and sea level rise on coastal landscapes. The EA acknowledges one such development, the “North Carolina Sea-Level Rise Assessment Report,” prepared by the N.C. Coastal Resources Commission’s Science Panel on Coastal Hazards. (EA at 1-3. See also EA at 2-30 to 2-31.) The EA states that the report “recommended that a sea level rise of 1 meter (39 inches) by the year 2100 be adopted for policy development and planning purposes for the state. This recommendation is within the range of projected sea level rise considered in the FEIS. . . .” (Id.)

That statement is not accurate. Although the report does recommend using a one-meter rise for planning purposes, it actually predicts various sea-level-rise scenarios, stating that the “most likely scenario for 2100 A.D. is a rise of 0.4 meter to 1.4 meters (15 inches to 55 inches) above present” and that a two-meter rise is “possible.” “North Carolina Sea-Level Rise Assessment Report” at 11-12. In contrast, the FEIS discusses two scenarios, one in which sea level rises two millimeters (0.08 inches) per year (which equates to .18 mm (7.2 inches) by 2100, and the other in which sea level rises seven millimeters (.28 inches) per year (which equates to 0.63 meters (25.2 inches) by 2100. (FEIS at 3-58.) Thus, the FEIS assumes sea level rise levels that are much lower than the levels stated in the report. The EA fails to adequately consider this and other evidence of increasingly rapid sea level rise,² which the agencies should take into account, especially in light of President Obama’s directive to federal agencies to base decisions on sound science, including decisions related to mitigating the threat of climate change. Here, NCDOT and FHWA appear to have chosen overly optimistic estimates of sea level rise in order to avoid more stringent and accurate assessment of its effects.

Other items of new information and circumstances that post-date the 2008 FEIS and therefore were not evaluated or otherwise addressed in the FEIS include, but are not limited to, the following:

- The agencies have selected a new preferred alternative whose “later phases” include a “coastal monitoring program” and unidentified actions to manage NC 12 through PINWR. These actions could consist of the bridging, relocation of NC 12 outside of its easement into Refuge property, and beach nourishment actions that are part of the

² E.g., U.S. Global Change Research Program, “Global Climate Change Impacts in the United States” (June 2009); Rocky Mountain Climate Org. & Natural Res. Def. Council, “National Parks in Peril: The Threats of Climate Disruption” (Oct. 2009); Rob Young & Orrin Pilkey, “How High Will Sea Levels Rise: Get Ready for Seven Feet” (2008), available at: <http://222.e360.yale.edu/content/print.msp?id+2230>

Parallel Bridge Alternatives discussed in the 2008 FEIS, but could also consist of “new solutions” that could “be identified in the future.” The impacts of these “new solutions” have not previously been identified or evaluated. In other words, the agencies have selected a new preferred alternative that includes components not previously identified and studied in the FEIS. (EA at 2-18, 2-28.)

- The new preferred alternative will certainly require the re-permitting of the terminal groin, which will have significant biological impacts (as confirmed by the Fish and Wildlife Service (“FWS”) and, when one is convened in response to FWS requests, a panel a experts) that have never been evaluated in a NEPA document. (EA at v, 3-8.)
- Significant portions of the Refuge, including sections that will be impacted by the later phases of the project, have been designated as critical habitat for the federally threatened piping plover in October 2008. 73 Fed. Reg. 62,816 (Oct. 21, 2008).
- Old deeds have supposedly been unearthed in the Spring of 2009 and putatively give NCDOT the right to move the NC 12 right-of-way in the Refuge and in Cape Hatteras National Seashore. (EA at 2-11, Appendix B.)
- Various federal agencies and other stakeholders have identified federal laws that will be violated by both the old and the new preferred alternatives, in comments to the 2008 FEIS and the Revised 4(f) Evaluation and throughout 2009. (EA at 2-11, Appendix A at A-3 to A-10, Appendices E, F.)
- An analysis of options for funding a Pamlico Sound Bridge was performed in 2009. (EA 2-11, Appendix B at B-143 to B-167.)

There is ample case law, in addition to the regulations and guidance cited above, supporting the proposition that an SFEIS is required in light of such significant new developments. See *N.C. Alliance for Transp. Reform, Inc. v. U.S. Dep’t of Transp.*, 151 F. Supp. 2d 661, 699 (M.D.N.C. 2001) (requiring SFEIS for highway project in light of notification of violation of a federal law); *Portland Audubon Soc’y v. Lujan*, 795 F. Supp. 1489, 1500 (D. Or. 1992) (requiring SFEIS for sale of timber in light of new information on effects of sale on owl species); *Stop H-3 Ass’n v. Lewis*, 538 F. Supp. 149, 168 (D. Haw. 1982) (requiring SFEIS for proposed highway project where FEIS did not include information relevant to the highway design). Accordingly, issuance of the EA instead of an SFEIS violates NEPA.

B. The EA describes a new preferred alternative that constitutes illegal segmentation under NEPA.

For at least a decade, NCDOT and FHWA have treated the Bonner Bridge Replacement Project as including not only the construction of a new bridge from the southern end of Bodie Island over Oregon Inlet to Hatteras Island, but also the maintenance of a transportation corridor all the way to the mid-point of Hatteras Island at the town of Rodanthe. For the first time in years, though, NCDOT has now identified a new preferred alternative – PBC/TMP – which divides or segments the project, and the analysis of its impacts, into component parts. The EA identifies and addresses only the impacts of Phase I, which involves only construction of the portion of the project connecting the southern end of Bodie Island to the northern end of Hatteras Island via a new short bridge built parallel to the existing bridge. The remainder of the project – maintenance of the transportation corridor to the mid-point of Hatteras Island – is left to “later

phases.” These later phases will be completed using actions yet to be selected or even new actions yet to be identified and evaluated, and the impacts will be analyzed separately. This constitutes illegal segmentation in violation of NEPA.

It is well-settled that breaking a project “into small component parts” to avoid reviewing them together, as NCDOT and FHWA do in the EA, “is to engage in illegal ‘segmentation.’” New River Valley Greens v. U.S. Dep’t of Transp., No. 97-1978, 1998 U.S. App. LEXIS 22127, at *8-9 (4th Cir. Sep. 10, 1998) (quoting 40 C.F.R. § 1508.27(b)(7)). NCDOT and FHWA argue in the EA that their division of the project into “Phase I” and “later phases,” examining only the impacts of Phase I, and selecting it as the preferred alternative does not constitute segmentation. However, saying so does not make it so.

A hallmark of segmentation is an initial proposed action involving “such a large and irrevocable commitment of resources that it may virtually force a larger or related project to go forward notwithstanding the environmental consequences.” New River Valley Greens, 1998 U.S. App. LEXIS 22127, at *8-9. This conclusion is based in the regulations implementing NEPA. The EA cites 23 C.F.R. § 771.111(f) (2010), which provides:

(f) In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each EIS or finding of no significant impact (FONSI) shall:

- (1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
- (2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
- (3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Id. (emphasis added). Likewise, the CEQ Guidelines provide that “proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement,” including actions that “are interdependent parts of a larger action” and actions that “automatically trigger” other actions. 40 C.F.R. §§ 1502.4(a), 1508.25(a) (2009).

The new preferred alternative described in the EA violates the above principles. Building a replacement short bridge to the northern end of the Refuge is an “irrevocable commitment of resources” that will inevitably force later projects to go forward, even though their environmental consequences would prevent their approval if included as part of the original project. Among the later actions that will be forced by construction of the parallel bridge are some combination of actions to maintain NC 12 through PINWR and the re-permitting of the terminal groin to protect the new bridge. Indeed, to the extent that these actions taken in the “later phases” of PBC/TMP involve the bridging, beach nourishment, or road relocation that were part of the Parallel Bridge Alternatives already examined in the 2008 FEIS, they have already been found to have likely significant environmental impacts that render them incompatible with the Refuge and have precluded their approval. Yet, once the bridge is built in PBC/TMP Phase I, there will be no choice but to employ one of those methods to maintain the NC 12 transportation corridor

through PINWR. The agencies will be precluded from considering other less environmentally damaging alternatives at that time (including the no-action alternative, a Pamlico Sound Bridge alternative, ferries, etc.).

Even the EA acknowledges that “completion of Phase I alone,” that is, the replacement bridge, will “not meet the purpose and need of the project and represent[s] a commitment . . . to develop and implement the entire action from Rodanthe to Bodie Island.” (EA at 2-13, 2-29.) The EA further acknowledges that, after construction of a new bridge to the northern end of Hatteras Island, it is inevitable that storms, shoreline erosion, dune loss, breaches, and new inlet formation will threaten the transportation route to the mid-point of Hatteras Island, especially in several “hot spots” that have already been identified, and will require actions to be taken to sustain the NC 12 transportation route through PINWR. (EA at v. 2-18 to 2-20.) Indeed, it is the significance of the environmental impacts of each proposed alternative for maintaining that route that has prevented the selection of any one of them as the preferred alternative to date. Yet, the agencies’ inability to obtain consensus on a preferred alternative, from among the several environmentally damaging Parallel Bridge Alternatives, for the later phases of the project cannot justify the decision to segment the project and obtain approval for and proceed with Phase I, only to force the later selection of one or more of the previously rejected alternatives during later phases.

In addition, the segmentation of the project results in a skewed analysis of the environmental impacts of the preferred alternative. The EA claims that all environmental impacts, even those associated with the later phases, have been “evaluated and assessed” at some time or another. (EA at 2-32.) However, by segmenting the project, NCDOT and FHWA are able to present only the environmental impacts of Phase I of the new preferred alternative, which are misleadingly smaller than the impacts of all the necessary phases would be. This makes a true comparison among alternatives difficult, which in turn frustrates the purposes of NEPA. (See, e.g., Tables 2-3, 2-4, and 2-5 on pages 2-24 through 2-27 of the EA, which show the number of acres of wetlands, Refuge lands, submerged aquatic vegetation, etc. affected by the construction of the Parallel Bridge in Phase I of PBC/TMP, rather than the entire project.)

In sum, to treat the Bonner Bridge replacement project as anything but a single transportation route from the southern end of Bodie Island all the way to Rodanthe constitutes illegal segmentation. See, e.g., Western N.C. Alliance v. N.C. Dep’t of Transp., 312 F. Supp. 2d 765, 773-75 (W.D.N.C. 2003) (finding division of a transportation project into parts that had no independent utility or logical termini and that would force the undertaking of future actions, similar to the present project, resulted in segmentation and failure to assess cumulative impacts in violation of NEPA). See also Presidio Golf Club v. Nat’l Park Serv., 155 F.3d 1153, 1162-63 (9th Cir. 1998) (explaining that the purpose of NEPA “is to avoid the thoughtless setting in motion of a ‘chain of bureaucratic commitment that will become progressively harder to undo the longer it continues.’”); Eritofson v. Alexander, 772 F.2d 1225, 1241 n.10 (5th Cir. 1985) (“If proceeding with one project will, because of functional or economic dependence, foreclose options or irrevocably commit resources to future projects, the environmental consequences of the projects should be evaluated together.”); Fla. Wildlife Fed’n v. U.S. Army Corps of Eng’rs, 401 F. Supp. 2d 1298, 1318, 1321 (S.D. Fla. 2005) (finding illegal segmentation where the “inescapable conclusion from th[e] record is that” the project “was conceptualized as an

integrated whole, progressing in phases, and that” the first phase “was never intended to stand alone” and that the claim that the first phase had “independent utility” was “developed post-hoc as an avenue to limit and expedite permit review”).

C. The EA violates NEPA by engaging in reverse engineering.

The EA cites a financial analysis that was performed after NCDOT and FHWA had already labeled the Pamlico Sound Bridge alternative as not feasible, practicable, or “financially viable” in the 2008 FEIS (see FEIS xxix, 2-148, 5-45) to justify the elimination of the Pamlico Sound Bridge alternative. (EA at 2-11, Appendix B at B-20, B-143 to B-167.) We adopt the portion of our November 13, 2009, comments on the Revised Section 4(f) Evaluation regarding the impropriety of that reverse engineering and post-hoc justification.

D. Viable alternatives continue to be ignored in violation of NEPA.

NEPA directs agencies to prepare a “detailed statement” of alternatives to the proposed federal action. 42 U.S.C. § 4332(C)(iii) (2006). CEQ regulations require agencies to “rigorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R. § 1502.14(a). An “informed and meaningful consideration of alternatives . . . is an integral part of the statutory scheme.” *Friends of Se.’s Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998). Agencies must “[d]evote substantial treatment to each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits.” 40 C.F.R. § 1502.14(b). An agency must consider alternatives to the proposed action that may partially or completely meet the proposal’s goal and it must evaluate their comparative merits. *Natural Res. Def. Council v. Callaway*, 524 F.2d 79, 93 (2d Cir. 1975). Considering alternatives that only partly meet the project goals allows the decision maker to consider whether meeting part of the goal with less environmental impact may be worth the tradeoff with a preferred alternative that has greater environmental impact. *North Buckhead Civic Ass’n v. Skinner*, 903 F.2d 1533, 1542 (11th Cir. 1990).

In the present case, by prematurely dismissing potential alternatives such as the Pamlico Sound Bridge Alternatives and the use of ferries, NCDOT and FHWA have improperly confined their analysis to a narrow range of alternatives that may result in greater adverse environmental impacts, especially to PINWR, than the alternatives that were dismissed. In particular, NCDOT and FHWA have never adequately considered an alternative involving the use of ferries to transport people from the mainland or from Bodie Island to a stable portion of Hatteras Island. The 2008 FEIS noted that a “Ferry Alternative was not studied in detail” because of concerns regarding potential inability to handle heavy traffic volume and the need for dredging, without thoroughly exploring and substantiating those concerns. The EA fails to mention ferries at all.

In fact, a system of modern, high-speed, shallow-draft ferries and water taxis could serve high volumes of passengers even in fairly shallow waters, with little dredging.³ In

³ See, e.g., EA Appendix A at A-4 (recommendation by U.S. Fish & Wildlife Service to investigate high-speed ferry system); 2008 FEIS at 2-22 (describing high-speed, low-draft air-cushion ferries and Hoverspeed catamaran ferries); Stanley R. Riggs et al., “Eye of a human hurricane: Pea Island, Oregon Inlet, and Bodie Island, northern Outer Banks, North Carolina,” in *America’s Most Vulnerable Coastal*

addition, ferry service can be more reliable than a bridge. For instance, ferries conveyed people to Hatteras Island until 1962, when Bonner Bridge was completed. According to the 2008 FEIS, “from November 1990 to February 1991 after Bonner Bridge was damaged by a dredge and temporarily closed,” Hatteras Island continued to be reachable by ferry. (FEIS at 2-4.)

Likewise, in November 2009, when a nor’easter washed out portions of NC 12 in PINWR and rendered the NC 12 / Bonner Bridge route unusable, a ferry system again enabled people to travel between Hatteras Island and the mainland. Finally, numerous similar tourist destinations served by ferries demonstrate the potential feasibility of this alternative. The San Juan Islands, Channel Islands National Park, and Cumberland Island National Seashore are examples of popular U.S. tourist destinations reached by ferry. Likewise, Ocracoke and Bald Head Islands, Cape Lookout National Seashore, and Hammocks Beach State Park have all been connected to the mainland only by ferry boats for their entire histories, and yet remain among the most popular tourist destinations on the North Carolina coast. In light of the many advantages of ferries and the many examples of successful ferry systems, the rejection of ferries as an alternative without further analysis is unjustified.

Similarly, we adopt our discussion regarding the impropriety of dismissing the Pamlico Sound Bridge Alternatives from our prior comments.

II. The Revised Department of Transportation Act of 1966 Section 4(f) Evaluation is inadequate.

The agencies’ Revised Department of Transportation Act of 1966 Section 4(f) Evaluation is attached as Appendix B to the EA. It remains as flawed as when it was first issued in 2009, for the many reasons explained in our November 13, 2009, comments.

Because NCDOT and FHWA continue to insist erroneously that the Parallel Bridge Alternatives (including the new preferred alternative) fall into the “joint planning exception” to section 4(f) of the Department of Transportation Act of 1966, their analysis bears addressing once again. In addition to our prior comments, we note the following.

Section 4(f) prevents a federal project from “using” publicly owned land, for a transportation corridor for instance, unless “(1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.” 49 U.S.C. § 303(c) (2006). When there is no feasible and prudent avoidance alternative, “only the alternative that . . . [c]auses the least overall harm” may be approved. 23 C.F.R. §774.3(c)(1) (2010); see 49 U.S.C. § 303(c) (2006).

The 2008 FEIS acknowledged that all the Parallel Bridge Alternatives would “use” refuge and park lands because they would require some relocation of NC 12 outside of its current alignment. The Revised 4(f) Evaluation continues to concede that the Parallel Bridge Alternatives, including the new preferred alternative, will “use” Refuge lands, but only insofar as PINWR is a historic property and not as a refuge. (EA Appendix B at B-8, B-15.) The

Communities, 67 (J.T. Kelley et al. eds., Geological Society of America 2009); Stanley R. Riggs et al., “North Carolina’s Coast in Crisis: A Vision for the Future,” 2, 22-23 (Oct. 2008).

Revised 4(f) Evaluation erroneously concludes that section 4(f) does not apply to uses of the Refuge “as a refuge” because NC 12 was “concurrently and jointly planned” with the Refuge and therefore falls into the “joint planning exception” to Section 4(f). (EA Appendix B at B-12 to B-15.) That is simply not the case.

The relevant section of the regulation states as follows: “When a property is formally reserved for a future transportation facility before or at the same time a park, recreation area, or wildlife and waterfowl refuge is established and concurrent or joint planning or development of the transportation facility and the Section 4(f) resource occurs, then any resulting impacts of the transportation facility will not be considered a use as defined in § 774.17.” 23 C.F.R. §774.11(f) (2010) (emphasis added).

In the case of PINWR, the Revised 4(f) Evaluation attempts to justify application of the joint planning exception with a meandering narrative describing the development of roadways through PINWR. It misses the point, however, that the easement for NC 12 (or the predecessor dirt road described in the 4(f) Evaluation) was not “formally reserved” until 1954, some 16 years after the establishment of the Refuge, not before or at the same time, as required by the regulation. Moreover, there has been no concurrent or joint planning of the road and the Refuge since then; indeed, the events described by the 4(f) Evaluation show that, instead, each time the road has needed to be moved outside of its existing easement because of some storm event or erosion, the Refuge has required that NCDOT apply for a Special Use Permit. A careful review of the deeds, maps, and other documents that record the history of the establishment of PINWR and the NC 12 corridor through it supports the conclusion that the joint planning exception does not apply.

By its terms, the joint planning exception regulation applies only “when a property is formally reserved for a future transportation facility before or at the same time a park, recreation area, or wildlife and waterfowl refuge is established.” PINWR was established by Executive Order on April 8, 1938. (EA Appendix B at B-75 to B-89.) The regulatory exception therefore applies only if property for a road “was formally reserved” before or on April 8, 1938. The Revised 4(f) Evaluation cites a number of property deeds, maps, historical narratives, and North Carolina state law to support the claim that the joint planning exception applies. Few of these authorities are contemporaneous with the establishment of PINWR. Even those that are – a 1938 map, deeds transferring PINWR property to the Department of Interior, and historical accounts of PINWR – fail to support NCDOT’s claim that property was formally reserved “before or at the same time” that PINWR was established.

First, the Revised 4(f) Evaluation describes a 1938 map that depicts an “unimproved road” along the northeastern coast of what became PINWR up to a ferry crossing to Bodie Island. NCDOT intimates that the mapping of an “unimproved road” through PINWR lands may have operated as a formal reservation. Notably, the map shows that the “road” largely followed the beach, and was not located in the present-day NC 12 easement. The beach and other tidal and submerged lands would have been held by the State in public trust, and any public trust easement held by North Carolina was extinguished when the federal government later took fee simple title to the properties making up the island. “[T]he United States’ power of eminent domain is supreme to the State’s power to maintain tidal lands for the public trust.” *United States v. 11,037 Acres of Land*, 685 F. Supp. 214, 216 (N.D. Cal. 1988).

To the extent that the road crossed property that does not qualify as tidal and submerged public trust lands, the map does not indicate that the State exercised any ownership interest or control over it, much less formally reserved it. The map legend explains that it includes both “official roads” and “important suburban entrance roads not subject to public maintenance.”⁴ (EA Appendix B at B-13.) By all indications, the “unimproved road” depicted on the 1938 map falls into the latter category. A 1936 map of “state highways” in Dare County shows no road south of the Wright Memorial Bridge. A New York Times article published on May 28, 1939, a year after the establishment of the Refuge, remarked on the difficulty of traveling along a “two-rut gash in the sand” south from the Wright Memorial Bridge, and reported that “this beach road is not State maintained and is called a road only by courtesy and custom.”⁵

The Revised 4(f) Evaluation argues that the 1938 map of the “unimproved road” was published “in conjunction with the Federal Works Agency Public Roads Commission.” (EA Appendix B at B-13.) But no legal authority stands for the proposition that a federal agency’s collaboration in mapmaking can alone transfer a property interest. To the contrary, the law makes clear that the United States’ title to PINWR is absolute except to the extent that it expressly permits otherwise. “A condemnation action is a proceeding in rem, against the land. When a fee is condemned the taking wipes out all interest legal and equitable and vests complete title in the government.” *United States v. 3276.21 Acres of Land*, 194 F. Supp. 297, 300 (S.D. Cal. 1961). Thus even if the State sought to claim an easement across PINWR based on sand pathways or other crude travel routes, that claim was extinguished with the deeds transferring Refuge property to the federal government.

Next, the Revised 4(f) Evaluation cites deeds as supporting application of the joint planning exception. It asserts that the U.S. Secretary of Interior’s acquisition of the Refuge land by condemnation in 1938 “did not include existing public highways . . . across the island.” (EA Appendix B at B-13.) Assuming arguendo that such a “public highway” existed, no authority supports this assertion. The Evaluation cites two deeds, transferring the land of the Simpsons and the Byers to the Department of Interior.⁶ Together with a deed transferring the lands of the Chafees,⁷ these deeds memorialize the United States’ acquisition of all of the property within the “Pea Island Migratory Waterfowl Refuge.”⁸ None of these deeds, however, identify a public highway or public utility easement, nor refer to any possible reservation of one.

The three deeds generally describe the property to be transferred and the purposes of PINWR. They all state that “the time has now expired within which any party claiming any

⁴Map cited in EA as: North Carolina State Archives, “Dare County, North Carolina North Carolina Highway and Public Works Commission, 1938,” available at: http://dc.lib.unc.edu/dm4/item_viewer.php?CISOROOT=/ncmaps&CISOPTR=471.

⁵Nat’l Park Serv., *The Creation and Establishment of Cape Hatteras National Seashore: The Great Depression Through Mission 66 58 (2007)* (citing Robert Winfield, *Seashore Park Taking Form: The Outer Banks of North Carolina Being Developed by Government as Vast Ocean Playground*, N.Y. Times, May 28, 1939, at xx1); available at http://www.nps.gov/history/history/park_histories/index.html#f.

⁶Deed Book 21, Page 85 (Oct. 6, 1938); Deed Book 19, Page 453 (April 4, 1938).

⁷Deed Book 17, Page 620 (May 17, 1937).

⁸See Map entitled “NC 12 – Pea Island National Wildlife Refuge (From Rodanthe North Town Limits to Oregon Inlet,” (Jan. 27, 2009), obtained from N.C. Dep’t of Transp. (showing boundaries of property parcels).

interest may file answer or other pleadings herein.⁹ The two deeds cited in the Revised 4(f) Evaluation note that “the State of North Carolina, by an Act of its General Assembly, now Sec. 8059 (c) of the North Carolina Code of 1935, has given its consent to the acquisition.” The referenced state law, however, does not purport to reserve any easement or other interest in “such lands in North Carolina as in the opinion of the Federal Government may be needed for the establishment of one or more migratory bird sanctuaries or other wild life refuges.” N.C. Code of 1935, § 8509(c) (currently codified at N.C. Gen. Stat. § 104-10 (2009)). In sum, nothing in the three deeds supports a claim that North Carolina reserved, or was granted, an easement for NC 12 through PINWR.

Third, ample historical evidence suggests that federal officials meant for the plain meaning of these deeds to take effect against North Carolina. The historical accounts cited in the Revised 4(f) Evaluation indicate that, at the time PINWR was established in 1938, federal officials were not jointly and concurrently planning a road but rather were actively seeking to prevent road-building and related development activities in PINWR.

In a letter dated September 20, 1938, five months after the establishment of the Refuge, Arthur Demaray, then acting director of the National Park Service, wrote that State highway officials wanted to extend the road to Oregon Inlet, but “because of our objections . . . these plans have been deferred pending further study to determine whether such would be in accordance with our master development plans for this area.”¹⁰ The history of the Cape Hatteras National Seashore cited in the Revised 4(f) Evaluation also explains that in 1938, federal officials “hinted that road development [in the park] was probably inevitable, but that such roads should be resisted south of Oregon Inlet.”¹¹ In that same year, NPS officials issued the first Planning Prospectus for the proposed Cape Hatteras National Seashore, stating “the desire of the National Park Service that the section between Oregon Inlet and Hatteras Inlet remain in its natural condition without any roads so that future generations may see this and other undeveloped sections as they are in our day.”¹² As late as 1941, the National Park Service was still being asked to “accept a road . . . because so many people now had automobiles that boat service between the villages had become unprofitable and roads were needed, especially between Avon, Buxton, and Hatteras, which had twenty-five hundred residents.”¹³

⁹ Deed Book 21, Page 85 (Oct. 6, 1938); Deed Book 19, Page 453 (April 4, 1938); Deed Book 17, Page 620 (May 17, 1937).

¹⁰ Nat'l Park Serv., *The Creation and Establishment of Cape Hatteras National Seashore: The Great Depression Through Mission 66 57* (2007) (citing letter from A. E. Demaray, Acting Director, Nat'l Park Serv., to the Springfield Republican (Sept. 20, 1938), in Records Group 79, Records of the National Park Service, Central Classified Files, 1936-1952, Entry 81, Box 48, File Number 0-35 Proposed Monuments, Cape Hatteras National Seashore to Kill Devil Hills National Monument, Folder 2, Mid-Atlantic Records Center, NARA, Philadelphia).

¹¹ *Id.* (citing memorandum from A.E. Demaray, Associate Director, to Carl P. Russell, Regional Director (June 10, 1938) (emphasis added)).

¹² *Id.* at 207 (emphasis added).

¹³ *Id.* (citing memorandum from George L. Collins, Acting Chief, Land Planning Division, to Conrad L. Wirth, (Sept. 10, 1941), in Records Group 79, Records of the National Park Service, Central Classified Files, 1936-1952, Entry 81, Box 48, File Number 0-35 Proposed Monuments, Cape Hatteras National Seashore to Kill Devil Hills National Monument, Folder 4, Mid-Atlantic Records Center, NARA, Philadelphia) (emphasis added).

These historical accounts demonstrate that federal officials did not grant a formal reservation of right-of-way and actively opposed plans to build a road south of Oregon Inlet, before, during, and for a while after the creation of PINWR. Admittedly, the Revised 4(f) Evaluation does point out other accounts that support the general proposition that people drove motor vehicles on Hatteras Island prior to the establishment of PINWR. For example, the State began subsidizing a ferry between Bodie and Hatteras Island in 1934, and Civilian Conservation Corps crews on Hatteras Island built dikes and other improvements. (EA Appendix B at B-77.) But while these accounts may suggest that the State would have liked to have formally reserved right-of-way for a road through PINWR, they do not prove that it did.

More recent history also confirms that no property was formally reserved for a road through PINWR at the time of its establishment, nor did concurrent or joint planning or development of the road and Refuge occur. As we noted in our previous comments, PINWR was established for 16 years before DOI granted an easement, in 1954, specified by metes and bounds, for a 100-foot-wide NC 12 corridor. When NCDOT sought to move the alignment for NC 12 in 1964 and 1995 in response to erosion and storm events, it had to apply for a Special Use Permit from DOI. Planning and development of NC 12 has not been “concurrent or joint” with the planning of the Refuge, but rather subject to the approval of Refuge authorities.

Finally, the legislative history and purpose of the joint planning exception refute the claim that it applies in this present case. The “concurrent and joint planning” rule became final on March 12, 2008.¹⁴ The Federal Register notice for the rule quotes *Sierra Club v. U.S. Dep't of Transp.*, 948 F.2d 568 (9th Cir.1991) for the proposition that “Section 4(f) is not meant to force upon a community, wishing to establish a less than pristine park affected by a road, the choice between a pristine park and a road.”¹⁵ This hypothetical choice of a park with a road or no park at all has absolutely no application here.

The facts of *Sierra Club* underscore this distinction. In *Sierra Club*, State authorities had already purchased 55 percent of the right-of-way for a planned highway when the State Department of Parks and Recreation began negotiating to acquire land for a park. The State “deliberately excluded from the parcel of land that was to form the park . . . land that [the state] believed might be necessary for a bypass but that it had not yet acquired.” *Sierra Club*, 948 F.2d at 570. Upon further scrutiny of the evidence on remand, the lower court concluded that joint planning “resulted in the formation of a consensus that the park could appropriately be sited adjacent to the previously planned road.” *Sierra Club v. U.S. Dep't of Transp.*, 1994 U.S. Dist. LEXIS 10121, at *4 (N.D. Cal. July 12, 1994). The administrative record described “events which took place before [the park] came into existence and demonstrate that while the park was being planned, road adjacency was taken into account and deemed acceptable by DPR and the public.” *Id.*

The few other cases that have applied the “joint planning” exception to Section 4(f) have involved similarly unambiguous records of simultaneous transportation and park planning.

¹⁴ Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites, 73 Fed. Reg. 13,368 (Mar. 12, 2008).

¹⁵ *Id.* at 13,381 (quoting *Sierra Club v. U.S. Dep't of Transp.*, 948 F.2d 568, 574 (9th Cir. 1991)).

typically with the creation of a new park mitigating the impact of a transportation project. See Geer v. F.H.A., 975 F. Supp. 47, 71 (D. Mass. 1997) (rejecting Section 4(f) claim based on parkland that “will only come into existence because of the [challenged highway] project.”); Northern Crawfish Frog v. F.H.W.A., 858 F. Supp. 1503, 1513 (D. Kan. 1994) (plaintiffs stipulated that parkland and highway project “jointly planned”); Tahoe Tavern Prop. Owners Ass’n v. U.S. Forest Serv., 314 Fed. App’x 919, 920 (9th Cir. 2008) (applying 23 C.F.R. §774.11(i) where the Forest Service simultaneously began planning to use land for both recreation and transportation at the time it acquired the land). No decision suggests that public officials can satisfy this requirement with a revisionist historical account that is inconsistent with both contemporaneous and subsequent formal legal documentation.

For these reasons and those explained in our previous comments, we submit that no basis exists for applying the joint planning exception to the new preferred alternative.

III. The New Preferred Alternative will likely be inconsistent with the North Carolina Coastal Area Management Act.

Congress enacted the Coastal Zone Management Act to help coastal states preserve, protect, and develop the nation’s coastal areas. 16 U.S.C. § 1452 (2006). North Carolina’s Coastal Area Management Act (“CAMA”), N.C. Gen. Stat. §§ 113A-100 et seq. (2009), furthers those objectives. As CAMA’s implementing regulations explain:

(c) The 1974 Legislature found that “the coastal area, and in particular the estuaries, are among the most biologically productive regions of this state and of the nation,” but in recent years the area “has been subjected to increasing pressures which are the result of the often conflicting needs of society expanding in industrial development, in population, and in the recreational aspirations of its citizens.”

(d) “Unless these pressures are controlled by coordinated management,” the act states, “the very features of the coast which make it economically, aesthetically, and ecologically rich will be destroyed.”

15A N.C. Admin. Code 07H0102(c)-(d). The regulations go on to explain that, “[t]o prevent this destruction,” the Act calls for the identification of “types of areas – water as well as land – in which uncontrolled or incompatible development might result in irreversible damage,” with the goal being to “ensure the compatibility of development with the continued productivity and value of certain critical land and water areas.” 15A N.C. Admin. Code 07H.0102(e).

Under CAMA, the Coastal Resources Commission may designate “Areas of Environmental Concern,” or “AECs,” N.C. Gen. Stat. §§ 113A-110, 113 (2009). Development in an AEC requires a CAMA permit, and the Division of Coastal Management “shall deny an application for a permit upon finding . . . that the proposed development would contribute to cumulative effects that would be inconsistent” with the objectives of the Act, such as protecting against “significant adverse effect on the conservation of public and private water supplies,” and “significant adverse effect on wildlife or fresh water, estuarine or marine fisheries.” N.C. Gen. Stat. §§ 113A-120(a)(10); 113-229(c) (2009). Under federal regulations, before making a final

decision on an action such as the proposed Bonner Bridge replacement project, the federal agency must assess whether it is consistent with area land use plans and notify the North Carolina Division of Coastal Management. 15 C.F.R. §§ 930.36, 930.41 (2010).

In the present case, the 2008 FEIS acknowledges that CAMA “requires that any action affecting an [AEC] be consistent with the local land use plans.” (2008 FEIS at 4-5.) It also acknowledges that “all of the oceanfront lands in the project area are included in the Ocean Hazard System AEC” and that several of the Parallel Bridge Alternatives “may not be compatible with the principles of CAMA because they require the construction of permanent bridges in locations that are projected to eventually be on the beach and in the ocean.” (Id.) The 2008 FEIS also acknowledges that the various Parallel Bridge Alternatives would require variances to obtain a CAMA permit and “would also affect” other AECs, including “coastal wetlands.” (Id.) In addition, it acknowledges that the Parallel Bridge Alternatives “may not be compatible with the Pea Island National Wildlife Refuge Comprehensive Conservation Plan or the [National Park Service] Plans.” (2008 FEIS at 4-4.)

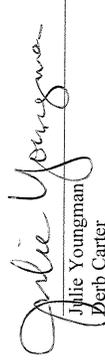
In marked contrast, the 2008 FEIS acknowledges that “the Pamlico Sound Bridge Corridor Alternatives would be compatible with the Dare County Land Use Plan and zoning, [CAMA], the Pea Island National Wildlife Refuge Comprehensive Conservation Plan, and National Park Service (NPS) Plans.” (Id. See also EA Appendix E at E-30 to E-37 (comments of NC DENR-Division of Coastal Management, pointing out likely difficulties with Parallel Bridge Alternatives under CAMA).)

Despite these admissions in the 2008 FEIS and the high likelihood that any of the Parallel Bridge Alternatives, including the new preferred alternative, would not be consistent with CAMA and would not receive a CAMA permit, the EA fails to acknowledge these concerns and, more importantly, fails to address them. The EA is thus flawed on this basis also.

Conclusion:

In conclusion, we recognize the pressing need to replace Bonner Bridge, and we support thorough evaluation of all appropriate alternatives (including ferries and the Pamlico Sound Bridge Alternatives) and the selection of an alternative that provides the most dependable and safest transportation to and from Hatteras Island, is environmentally sound, is economically reasonable over the long term, and does not violate federal law. We support the Pamlico Sound Bridge alternative and believe that it best satisfies these objectives.

Thank you for your consideration of our comments.



Julie Youngman
Debb Carter

Southern Environmental Law Center

On behalf of:

Julie Katcs
Refuge Associate, Federal Lands Program
Defenders of Wildlife

Sam Pearsall, Ph.D.
Southeastern Regional Manager, Land Water & Wildlife
Environmental Defense Fund

Don Barger
Southeast Regional Director
National Parks Conservation Association

Walker Golder
Deputy State Director
Audubon North Carolina

Tim Gestwicki
Executive Director
North Carolina Wildlife Federation

David A. Emmerling, Ed.D.
Executive Director
Pamlico Tar River Foundation



STATE OF NORTH CAROLINA
OFFICE OF THE GOVERNOR
20301 MAIL SERVICE CENTER • RALEIGH, NC 27699-0301

BEVERLY EAVES PERDUE
GOVERNOR

August 9, 2010

Secretary Eugene A. Conti
North Carolina Department of Transportation
1501 Mail Service Center
Raleigh, North Carolina 27699-1501

Dear Secretary Conti:

I am writing to express my continued support and assistance in moving forward with the replacement of the aging Herbert C. Bonner Bridge in Dare County, North Carolina. I pledge to continue to work with our State and Federal agencies, particularly the Department of Interior and U.S. Fish and Wildlife Service, to move this project forward as they have the most issues with advancing the project.

I understand the replacement of this bridge is vital to the citizens of Hatteras Island as it provides their only vehicular access to their communities. But it is also a vital link for the millions of visitors who travel this area of our coast each year. That makes replacing this bridge critical to the Dare County economy as well.

The safety of our citizens is a top priority to me. The citizens of Hatteras Island are frustrated, and they should be. We have studied this bridge for more than 20 years. The time for study is over, and I will continue to do all I can to impress this upon other agencies.

In May, the North Carolina Department of Transportation and the Federal Highway Administration released the Environmental Assessment which identifies the preferred alternative as the Parallel Bridge Corridor with NC 12 Transportation Management Plan. This plan, known as the "short bridge," could be built immediately and is the best use of our limited financial resources. Let me be clear that I support the "short bridge" as does the Environmental Protection Agency and the Army Corp of Engineers.

You have my continued support so that the replacement of the Bonner Bridge can begin.

Sincerely,

A handwritten signature in black ink that reads "Beverly Eaves Perdue".

Bev Perdue





NORTH CAROLINA GENERAL ASSEMBLY
 PRESIDENT PRO TEMPORE
 SENATOR MARC BASNIGHT
 RALEIGH 27601-2808

August 6, 2010

Drew Joyner
 Human Environment Unit Head
 1598 Mail Service Center
 Raleigh, NC 27699-1598

Mr. Joyner:

The people of North Carolina, Dare County, and especially Hatteras Island are tired. We are tired of fighting a federal government and activist environmental organizations who think they know our best interests. None of those who supposedly speak for us have ever had a loved one live on Hatteras Island. They do not know what it is like to have someone injured or dying and have to be transported from our community to reach life-saving services.

The Bonner Bridge is the only ingress/egress we have to this remote area. The people of Hatteras and Ocracoke Islands depend on this bridge to support not only their income, but also their way of life and health and safety. For someone living in Atlanta; Washington, D.C.; or even Mantoo to tell the people of Hatteras they do not deserve health care or economic opportunity flies in the face of everything our forefathers stood for and what our current troops defend. I am ashamed of our federal government not representing the interests of the people who live on Hatteras Island. Self-serving bureaucrats have ruined our sense of freedom and self determination, while at the same time imperiling the safety of those who not only have chosen to live, visit and retire on Hatteras Island, but also those who have lived here since before there even was a federal government.

I am appalled by the comments of our Department of Interior and especially the local leadership of the United States Fish and Wildlife Service. I am convinced these people do not represent the wishes of our residents and visitors, but focus on the demands of the vocal minority who help fund their so-called mission. I am writing to comment that the North Carolina Department of Transportation's plan of a parallel bridge is the only reasonable option for the continued safety and prosperity of the residents and visitors to Hatteras and Ocracoke Islands.

Sincerely,

Marc Basnight



North Carolina General Assembly
 House of Representatives

REPRESENTATIVE TIMOTHY L. SPEAR
 2ND DISTRICT

OFFICE ADDRESS: 402 LEGISLATIVE OFFICE BUILDING
 300 N. SALISBURY STREET
 RALEIGH, NC 27603-5925

TELEPHONE: (919) 715-3029

EMAIL: time@ncdogg.net

COMMITTEES:
 MARINE RESOURCES & AQUACULTURE, CHAIR
 APPROPRIATIONS
 APPROPRIATIONS SUB-JUSTICE & PUBLIC SAFETY,
 FINANCIAL INSTITUTIONS
 JUDICIARY II
 LOCAL GOVERNMENT II
 WILDLIFE RESOURCES

August 3, 2010

Drew Joyner
 Human Environment Unit Head
 NCDOT
 1598 Mail Service Center
 Raleigh, North Carolina 27699-1598

Dear Mr. Joyner,

This letter is written to give my full support for a new Oregon Inlet Bridge implementing the new NCDOT's Preferred Alternative Plan outlined in the Environmental Assessment (EA) dated May 7, 2010 replacing the current Bonner Bridge in Dare County.

The current Bonner Bridge received a rating of 2 out of 100 nearly five years ago from a NCDOT Bridge Inspection Report, noting the condition of the existing bridge as "poor". The original bridge was built in 1963 and was given a lifespan of 30 years. It is already seventeen years past replacement and we have not yet begun to build a new bridge. We know the consequences can be catastrophic. One only has to remember what occurred several years ago in Minnesota.

Much talk and planning has occurred in order to secure the best plan to construct a new bridge. At this point in time I believe most parties are in agreement that the 17 mile Pamlico Sound Long Bridge plan should be eliminated. The cost of such an endeavor in today's economic downturn is unrealistic at best. There are many other factors including environmental issues, but the cost alone is enough to abandon this plan.

The new preferred alternative bridge plan by the North Carolina Department of Transportation (NCDOT) is a sound plan that addresses the most major concerns. In my opinion, the latest EA for the plan will not need any additional study. In fact, the studies that have been done to date have researched the impact to the environment and to the



citizens of North Carolina and the results are certainly more than adequate. Additional studies would be redundant and a waste of taxpayers' money. Furthermore, the Transportation Management Plan proposes a sensible way to handle the development of NC Highway 12, a huge stumbling block with the original longer bridge plan.

Two important factors exist that supports the critical necessity for a vehicular way onto this pristine part of North Carolina's coastline. The first factor is safety.

The current Bonner Bridge is the only mode of vehicular transportation onto the Cape Hatteras Natural Seashore. The year-round population of Hatteras Island in 2000 was 4,001 with a seasonal population estimated at 50,000. The year-round population of Ocracoke Island is 800. By shutting down the bridge a traffic flow decrease by as much as 87 percent in peak time could be expected.

If a northeaster or a hurricane threatens this area it is crucial that evacuation can be made in a timely manner. The emergency ferry operations plan shows accommodation for 650 cars (round trip) a day, weather permitting. During the busy season total evacuation could not be met completely and even in the off-season it would be difficult to evacuate over 4,000 residents by ferry alone. When storms intensify Highway 12, the only major road on the Outer Banks, has been known to flood, making it impassable. That is why it is so important for the citizens to be able to evacuate quickly and a bridge helps move a maximum amount of people off the island. We must be able to use every mode of transportation in order to implement a safe and swift evacuation.

Sheriff Midgett for Dare County points out other essential safety issues such as crime control, emergency services and medical support that are critical and should receive serious consideration during the decision making process.

The second factor is economic. If the Bonner Bridge is closed, 95 percent of the Cape Hatteras National Seashore Recreational Area would be inaccessible to the public. Hatteras Island encompasses over 25 percent of the county's tourism revenues and those would decrease significantly. This would not only affect the local economy but also the rest of the state. Dare County is one of only a few counties in North Carolina that are donor counties – a county that contributes more to the state than it receives in funding from the state. In addition, in 2005 Hatteras Island accounted for 20 percent of taxable property values in Dare County, a value of \$3.1 billion. With interrupted traffic flow Hatteras Island would surely see a delay in construction and the area's economic viability would be impacted.

We have been fortunate that no real catastrophes have occurred to date but the poor condition of the Bonner Bridge puts everyone at risk. The current bridge sees a traffic flow of over 5,000 vehicles per day and during the summer months that can grow to around 10,000. It is past time to build this bridge – we cannot wait any longer. We do not need anymore studies and the Record of Decision (ROD) should be released as soon as the public comment period has expired.

The new Oregon Inlet Bridge proposed by NCDOT is a good plan and I am pleased to recommend immediate implementation. The citizens of this beautiful area of our state have been patient long enough. We must not forsake their safety or that of the many tourists that visit this area annually.

I give my full support for this project in conjunction with local support from the Dare County Commissioners. Please proceed to move this project forward without any further study or delay.

Sincerely,



Timothy L. Spear

TLS/lh



August 6, 2010

Dear Mr. Joyner,

The Outer Banks Association of REALTORS® represents over 1,000 REALTOR® and Affiliate - individual and company - members that interact with residents, vacation property owners and the thousands who visit the Cape Hatteras National Seashore Recreational Area.

The Outer Banks Association of REALTORS® fully supports the new Preferred Alternative as outlined in the Environmental Assessment from the North Carolina Department of Transportation. We support this practical solution that calls for the immediate (without further environmental studies and delays) replacement of the Bonner Bridge with a new parallel bridge. We also recognize the importance of eliminating the "Long Bridge" Alternative as it is impractical and unable to be funded.

We believe that replacing the Herbert C. Bonner Bridge is long overdue and critical. The bridge has exceeded its life expectancy over 17 years and is currently rated a "2" out of 100. Any further delay risks the loss of this vital transportation lifeline. Without the Bonner Bridge, public access to Hatteras Island would be devastated with drastic consequences to residents, small businesses, property owners and millions of yearly visitors. Replacing the Bonner Bridge is vital for public safety as well as the economic, cultural, historic and social well being of the region.

Kindest regards,

Genelle Carter

2010 President
Outer Banks Association of REALTORS®



The Outer Banks Chamber of Commerce
www.outerbankschamber.com
P.O. Box 1757 Kill Devil Hills, NC 27948
(252)441-8144, Voice
(252)441-0338, Fax
e-mail: chamber@outer-banks.com

Drew Joyner
Human Environment Unit Head
NCDOT
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Joyner:

The Outer Banks Chamber of Commerce, serving more than 1,000 members in Dare, Currituck and Hyde counties, writes to voice support for the current proposed alternative as the correct means to replace the Herbert C. Bonner Bridge, which spans Oregon Inlet in Dare County.

The residents and visitors to the Outer Banks deserve safe transportation routes that allow reasonable travel without destroying the economy or endangering lives. The Herbert C. Bonner Bridge project is the most-studied highway project in the state's history. While we currently seem to be engaged in a never-ending return to the proverbial drawing board to identify more alternatives or conduct more studies, each hour that passes puts disaster an hour closer. Our residents and visitors should be afforded a safe, reliable trip across the inlet. Our children should be able to travel to or from Hatteras Island so that they can go on field trips or to a routine doctor's visit without fear of becoming a victim of a catastrophic bridge failure. Our residents don't need to cross the bridge daily with trepidation.

While environmental protection is important, it also is imperative to remember that our human population is an equal part of this ecosystem, and the potential impacts to our lives and safety deserve no less than equal consideration to the current level of protection afforded our precious flora and fauna. The parallel bridge is the most efficient and most economically sensible replacement option. Further delay is tempting fate.

This 20-year-old saga has had many chapters -- surely none of us want to author a final chapter or participate in a study commission about a catastrophic and deadly bridge collapse that occurred while planners continued to "study" the problem.

Impacts on health and safety of Hatteras Island residents and visitors from the potential failure of the bridge are neither entirely unknown nor unanticipated.

According to the North Carolina Division of Marine Fisheries, during the same time frame as the project survey, Dare County ranked No. 1 in the number of Coastal Recreational Fishing Licenses sold with a total of 93,225 in calendar year 2007 and 82,635 in 2008.

The Fishery Resource Grant project report notes that after expenses, the for-hire captains, vessel owners and crew receive about \$26 million in income per year from for-hire fishing activities. From this income they pay annually about \$5.1 million in federal income tax, \$1.8 million in state income tax, \$3.9 million in federal/state PITCA tax, \$286,000 in local property tax on residences, and \$576,000 in local property tax on their vessels.

Charter vessel owners spend an estimated \$43.5 million per year on nonlabor items such as fuel, ice, bait, engine and boat repairs, dockage fees, etc. Head-boat owners spend an additional \$5.3 million per year. Including multiplier effects, these expenditures support an estimated \$85 million in sales in coastal North Carolina communities, \$30 million in wages and salaries, more than 1,000 jobs, and more than \$6 million in local/state and excise taxes.

Commercial fishing landings and value statistics reported by the North Carolina Division of Marine Fisheries show that of 71 million pounds of seafood valued at \$86.8 million landed in the state in 2008, 22.7 million pounds -- valued at \$23 million -- was brought to the docks in Dare County. And of the latter amount, 15.7 million pounds was landed in Wanchese, which is dependent on Oregon Inlet for access to the fishing grounds. In addition to the loss of income of fishermen and seafood dealers, losing these landings also would cost jobs in packing, shipping and in the availability of fresh-caught seafood in local restaurants. And the negative ripple effect would include such business as boat builders, truck sales, refrigeration dealers, packing suppliers and other support industries.

Utilities to support Hatteras Island are currently attached to the bottom of the bridge. Removal of these lines would require the generation of electricity on the island itself since there is no other reasonable alternative to supplying the island's need. Although there is an electric generation plant on the island, it could only meet the needs of the island during the shoulder months, when it is neither too hot nor too cold, and when it is primarily inhabited by residents and not the throngs of visitors who go there each summer. Cost to upgrade to a level that the island could produce all the power that is needed on a year-round basis would be extraordinarily high because it would either call for additional generators and fuel to power them or laying a submarine electrical cable across the floor of the sound.

Access to Pea Island National Wildlife Refuge would be diminished, if not completely lost, without the parallel bridge. The Eastern North Carolina National Wildlife Refuge Visitor Use Study of December 2006, principal author Hans Vogelson, ECU Department of Recreational and Leisure Studies, based on data collected from October 2004 to October 2005, reported that the area's refuges had a direct economic impact of \$166.6 million and an indirect impact of \$324.6 million. The majority of this impact was credited to the approximate 1 million visitors a year that go to Pea Island.

The alternative 17-mile sound bridge totally lacks the basis of environmental advantage since its construction would tear up at least a 17-mile swath of sound bottom which would reasonably be predicted to result in turbidity and destruction of aquatic vegetation, and put at risk federally listed species, including loggerhead turtles. At this time, there is such concern about the turtles

One of Dare County Sheriff Rodney Midgett's concerns related to the continued deterioration of the bridge is the possibility of imposing load limits or even one-way traffic on the current bridge because of its condition. In that event, his assessment is that the Sheriff's Office would not be able to provide adequate staffing to police the necessary restrictions on a 24-hour basis.

Emergency ferry service in the aftermath of a bridge failure would not be capable of handling the large amount of essential EMS, fire service and law enforcement traffic that would be needed. Hurricane and other evacuations would be severely hampered, which would pose another significant threat to public safety.

Since emergency ferry service would have to cease during severe weather conditions, public safety would be further compromised. During such times, residents and visitors would be helpless without any type of emergency transportation.

Sheriff Midgett has stated that any disruption of electrical service on Hatteras Island — which is fed to the island via a cable under the bridge — also would have a direct impact on crime and public safety and have life-threatening consequences for those with serious medical issues or who are dependent upon life support equipment.

In addition to safety concerns, to choose any other alternative will have devastating economic consequences for the county, the region and the state. Because of the complex issues involved, there is no reasonable method which will allow an estimated dollar amount to be assigned to the combined total of the related direct and indirect impacts if the other alternatives are chosen.

Following are examples of the anticipated impacts:

Removal of the bridge without replacing it at the same site will no doubt also mean the removal of the groin which currently keeps the inlet from migrating south, as it has historically. If the groin is removed and the location of the inlet shifts, associated dredging costs may well be found to be prohibitive, and efforts of maintaining a moving channel fruitless, thus eliminating the use of the inlet by recreational boats, charter boat fleet and the commercial fishing industry. If these boats are forced to go south to Hatteras Inlet, the extra time and expense will cause great hardship and a loss of fishing effort, and many small businesses will most probably be forced out of business due to rising cost.

According to a North Carolina Fishery Resource Grant project survey conducted in the 2007-08 year, during that time there were approximately 431,000 recreational fishermen — many from out of state — who return year after year to the coast to fish with a favorite for-hire captain. Dare County is the location for most of that activity.

The study project, Economic Impacts and Recreation Value of the North Carolina For-Hire Fishing Fleet, results led researchers to the conclusion that for-hire fishing passengers spend about \$380 million per year, including both on- and off-vessel spending, including fishing fees, lodging, restaurants, shopping, gas and other tourist-related activities. Recreational fishing supports about \$667.4 million in sales along the coast, about 10,000 jobs (including 1,445 for-hire fishing jobs), \$261.4 million in wages and salaries, and \$49.3 million in local/state sales and excise (such as fuel and cigarette) taxes.

that severe restrictions have been placed on fishing activities in that area to ensure elimination and/or reduce the number of interactions that could be harmful. There is no way that construction could avoid putting these species at risk. Runoff from such a bridge would add to pollution. Safety issues include but are not limited to adequate access for emergency vehicles traveling to and from the island.

Ferry service is neither an economically viable alternative nor is it in the best interest of health and safety of island residents and visitors.

North Carolina state law mandates that no area can be charged a toll for transportation unless a free route is available as an alternative. Ocracoke Island's only free transportation access is by ferry to Hatteras Island and traveling by NC 12. If ferry service was used as an alternative, the cost could not be recouped through tolls, because it also would become the only free access for Hatteras Island. At a time when inland legislators are suggesting that the ferry system is a financial burden, being told that the state would have to invest hundreds of millions of dollars for additional high speed ferries would most likely meet resistance.

Currently, the ferries traveling between Ocracoke Island and the mainland only operate on schedule approximately 85 percent of the time. It is reasonable to assume that this would be reflected in any ferry service of about equal length of time such as that from Dare County mainland to Hatteras Island. This is not acceptable, particularly when trying to evacuate up to 40,000 people off the island because of the expected arrival of a hurricane.

In events where evacuations from Ocracoke Island are called for, emergency officials there estimate that they need a 72-hour lead time to remove visitors, residents and personnel. This three-day lead is based on the fact that many leave the island by crossing to Hatteras Island and driving NC 12 to connect with one of the two highways heading west off the Outer Banks. If ferry transportation also was imposed on Hatteras Island to the mainland, it would add to the crush of cars trying to leave from that island and hamper efforts on Ocracoke and increase the lead time for both islands' populations.

Without the Bonner Bridge, the Dare County Sheriff stated that his office and other public service agencies would face serious challenges maintaining adequate staff readiness on a continuing basis. Many public safety employees rely upon the Bonner Bridge to report for duty because they do not live on Hatteras Island. Without the bridge, personnel levels could become compromised and further threaten public safety.

Dare County EMS Director WR "Skeeter" Sawyer is adamant that from an emergency medical stance, trying to rely on ferry service to provide emergency care and transport from Hatteras Island is unacceptable. From July 1, 2009 to June 28, 2010, ambulances transported 613 patients off the island by ground. The cost of transporting that number of patients off the island by air is not available, but Dare County does not charge for medical flights, so although there most probably would be an increase in use in that method in the event that the only route was via ferry, the increased cost would not be recouped in fees. According to Sawyer, if there was an accident and both ambulances left the island with patients, the island would be uncovered until another ambulance and crew could replace them, which would take a dangerous amount of time if depending on ferry service.

Dare County Schools Superintendent Sue Burgess states that depending on ferry service for transportation would seriously compromise services provided to Cape Hatteras Elementary School and Cape Hatteras Secondary School, which have a combined enrollment of about 600 students. The time, energy and money it would cost would mean missed opportunities to spend money in other ways that would actually enhance education.

Among the issues that would be problematic for the school system would be the transport and delivery of food commodities used for the schools' nutrition program. Using the ferry would take more time and increase the cost of manpower.

Staff that provide many of the services needed by the county's schools are based at the Central Office in Nags Head. Burgess said that sending bus mechanics or computer technicians to service equipment on Hatteras would bring its own set of problems and increased cost if those trips were made by ferry. And, as with all the agencies, if there was delay in riding the ferry back to the mainland, the school system might have to pay for lodging for stranded personnel.

According to Burgess, athletic programs also would be impacted. The travel time required to play other teams would discourage many schools from scheduling games at Cape Hatteras. And conversely, the time it would take students to go to away games would make such long days that they might not be scheduled due to negative impact on studies.

Depending on ferry service would further hamper the school district's ability to recruit teachers for Hatteras Island schools — an already difficult task. Living on Hatteras Island isn't appealing to everyone because of its isolation, said Burgess. If the island was further isolated by depending on ferry transportation, it would make it even more difficult to fill teaching positions on the island.

The school superintendent's concerns aren't speculative. Burgess was at the helm of the school district when Hurricane Isabel cut an inlet which separated Hatteras village from the remainder of the island. Students from Hatteras village were delivered to school in Buxton by boat for several weeks. Only emergency relief supplies and workers were allowed access to the village via ferry. The village had no electricity or other services until the breach was filled and services were restored about two months later.

Because of that experience, said Burgess, several families moved, which reduced the number of students and related state funding amounts. Although the schools remained opened and services are provided, loss of the students has made the schools more expensive on a per pupil basis. Loss of more students and related funding because of increased isolation would add to the local expense of maintaining these schools.

And there are other problems to consider. Transporting basic necessities such as food and medicine would no doubt add to the cost of these items on the island. Food Lion stores in Dare County have the highest prices in the state compared to the other stores owned by the corporation. This increase in price is because of the added transportation cost of delivering to the area. If delivery trucks have to spend hours on ferries and thus increase labor cost, there is no doubt that the added cost would be passed back to the consumers.

Delivery of enough fuel for both vehicles and for generators to use to provide electricity would bring its own challenges, especially in complying with US Coast Guard regulations, which govern the transporting of combustibles on ferries.

Gone are the days when the weekly mail boat visited Hatteras Island. With today's cutbacks in spending by the US Postal Service, there is no way to determine how mail delivery would be handled if mail trucks were dependent on ferry transportation.

Removing garbage from the island, particularly in the summer time when the population explodes, would be expensive as well as smelly.

Services provided by government agencies such as the health department, social services and those offered by nonprofit charities such as the Community Care Clinic would most likely face many of the same challenges described by the Sheriff, EMS director and school superintendent.

Knowing these facts, there is no reason to "study" the use of ferries — we already know that it is not an acceptable solution to our unacceptable problem.

The replacement of Bonner Bridge isn't just about tourism — it's about people trying to live their lives with dignity, support their families and have a few of the things the rest of the country takes for granted, such as a road to their homes.

Sincerely,



Paul Tine, Chairman
Outer Banks Chamber of Commerce
Board of Directors

Request For Addendum August 9, 2010

The Outer Banks Chamber of Commerce requests that the following addendum be added to our comments on the replacement of the Herbert C. Bonner Bridge that were submitted on Aug. 5. The following information was provided by Jim Kinghorn of Cape Hatteras Electric Cooperative at the Chamber's request.

Statement Concerning Electric Power to Hatteras and Ocracoke Islands and the Bonner Bridge

Introduction

In the event of a temporary or permanent loss of the Bonner Bridge across Oregon Inlet, Cape Hatteras Electric Cooperative will be severely hampered in continuing to achieve its mission of providing reliable and affordable electric power to the citizens and property owners on Hatteras and Ocracoke Islands.

The sole source of electric power to the islands is via a single set of 115,000 volt cables attached to the Bonner Bridge.

Temporary Bridge Failure

Should a failure of the bridge occur that results in damage to the power cables, all power would be immediately lost to the islands, resulting in hardship to customers of the Cooperative. This hardship would result from temporary measures necessary to restore power using on-island generation.

In addition to all other causes of economic hardship, electric power costs would dramatically increase for the duration of the damage until at least a temporary cable rerouting was accomplished. This rerouting would likely require eight weeks or more to complete after clearance was obtained to begin the rerouting.

Even though the Cooperative has available on-island oil-fueled diesel generators belonging to the North Carolina Electric Membership Corporation, the cost of operation of these generators would increase the cost per kilowatt-hour of electric service by an estimated 29 cents to an estimated cost of 41.5 cents per kilowatt-hour.

In addition to operating cost, the existing on-island stationary generators do not have the capacity to meet the electrical demand that would be anticipated after a failure of the bridge that impacted vehicular traffic, much less the peak electrical load under normal traffic access conditions. Meeting the anticipated electrical load after a bridge failure would necessitate bringing at least 10,000 kVA in large portable generators to the island for additional temporary power generation. The increased cost of operating large portable generators would be about 32 cents per KWH. For the portion of the emergency power generated by temporary generators, the cost would be \$44.5 cents per KWH.

The weighted average cost of retail power generated by the stationary and portable generators during an emergency is estimated to be 42.2 cents per KWH, or an average cost above current retail rates of 237 percent for the duration of the outage.

It is estimated that a week or more would be required to get temporary generators operational.

A temporary bridge failure of the type described would have a devastating economic impact on island residents and property owners from electrical cost and supply alone, before the impact for other problems was considered.

Permanent Loss of a Short Route Oregon Inlet Bridge

If the present Bonner Bridge should become permanently unavailable to provide an electrical cable route, the long term cost of electric service to the Islands would increase dramatically.

For the permanent bridge loss scenario, the lowest cost option to permanently provide an electrical supply from the mainland to Hatteras and Ocracoke Islands would be a submarine cable system from the south end of Nags Head to Rodanthe. The minimum cost of this submarine cable project was estimated in 2007 to be in the range of \$33,000,000 to \$35,000,000.

A project of this magnitude would result in a permanent rate increase to Cooperative rate-payers of approximately 26 percent.

If the permanent loss of the present bridge resulted from a sudden or catastrophic failure, construction of a submarine cable system would take a year or more to complete, assuming environmental permitting was completed in a timely manner. During the entire construction period, electrical costs would be as described for the temporary failure discussed above.

Outer Banks Home Builders Association
105 W. Airstrip Road
Kill Devil Hills, NC 27948
(252) 449-8232

August 6, 2010

Dear Mr. Joyner,

The Outer Banks Home Builders Association represents over 400 builder and affiliate - individual and company - members that interact with Outer Banks home owners, vacation property owners, property management personnel and the thousands of visitors to Cape Hatteras National Recreational Seashore.

The Outer Banks Home Builders Association fully supports the new Preferred Alternative as outlined in the Environmental Assessment from the North Carolina Department of Transportation. We support this practical solution that calls for the immediate (without further environmental studies and delays) replacement of the Bonner Bridge with a new parallel bridge. We also recognize the importance of eliminating the "Long Bridge" Alternative as it is impractical and unable to be funded.

We believe that replacing the Herbert C. Bonner Bridge is long overdue and critical. The bridge has exceeded its life expectancy over 17 years and is currently rated a "2" out of 100. Any further delay risks the loss of this vital transportation lifeline. Without the Bonner Bridge, public access to Hatteras Island would be devastated with drastic consequences to residents, small businesses, service personnel/trades people, property owners and millions of yearly visitors. Replacing the Bonner Bridge is vital for public safety as well as the economic, cultural, historic and social well being of the region.

Kindest regards,

Forrest Seal

2010 President

Appendix C

Response to Comments on the Environmental Assessment

C. Comments on the EA and Responses

This section summarizes and provides responses to comments on the EA received from the public, state and federal environmental resource and regulatory agencies, local agencies, and non-governmental organizations (NGOs). The written correspondence received from agencies, NGOs, public officials, and public organizations is included in Appendix B. The comments and responses are presented in the following sections:

C.1	Public Comments.....	C-1
C.1.1	Open House Workshops and Public Hearings	C-1
C.1.2	Summary of Total Comments Received	C-2
C.1.3	Public Comments in Support of the Proposed Project.....	C-3
C.1.4	Public Comments in Support of the Pamlico Sound Bridge Corridor Alternatives.....	C-6
C.1.5	Other Public Comments in Support or Opposition to a Particular Alternative	C-8
C.1.6	Other Comments	C-11
C.2	Government Agency Comments and Responses	C-15
C.2.1	Federal Agencies.....	C-15
C.2.2	State Agencies.....	C-34
C.2.3	Local Agencies	C-39
C.3	Non-Governmental Organization Comments and Responses—Southern Environmental Law Center—June 21, 2010.....	C-40

C.1 Public Comments

This section summarizes the comments on the EA submitted by the public. These comments come from oral testimony at the public hearings, e-mails, and letters. The public comments are posted for online review on the project website (www.ncdot.org/projects/bonnerbridgerepairs) and the Outer Banks Task Force website (www.obtf.org). The comments are posted on these websites in three separate folders, as follows: 1) comments in support of the Selected Alternative; 2) comments in opposition to the Selected Alternative; and 3) the transcripts from the two Public Hearings.

The following sections summarize the public hearings, the total number of comments received, and the common themes of the comments in support of and opposed to the proposed project or a particular alternative, as well as other miscellaneous comments.

C.1.1 Open House Workshops and Public Hearings

Three Open House Workshops and two Public Hearings were held from July 6 to July 8, 2010 as shown in Table C-1. The public comment period ended on August 9th, 32 days after the first public hearing.

Table C-1. Open House Workshops and Public Hearings

Date	Location	Time	Format
July 6, 2010	Dare County Administration Building, Manteo	4:00 - 6:30PM	Open House
		Beginning at 7:00 PM	Public Hearing
July 7, 2010	Rodanthe-Waves-Salvo Community Center, Rodanthe	3:00 – 7:00PM	Open House
July 8, 2010	Cape Hatteras Elementary School, Buxton	4:00 - 6:30PM	Open House
		Beginning at 7:00 PM	Public Hearing

C.1.2 Summary of Total Comments Received

A total of 4,062 comments were received, as shown in Table C-2. The total includes 3,856 form letters and e-mails received from the citizens group “Replace the Bridge Now” (RTBN).

Table C-2. Number of Comments

Comment Media	Total Comments Received
RTBN	
Form letters	3,288
E-mails	568
Total RTBN	3,856
Comment Forms and Letters	44
E-mails	129
Oral Commenters	33 ¹
Grand Total	4,062

¹Some oral commenters spoke more than once. This number reflects the number of persons who made comments.

Of the comments received in writing or orally, almost all either favored the Preferred Alternative (Parallel Bridge Corridor with NC 12 Transportation Management Plan) or said that the [Bonner] bridge should be replaced now. Nine comments were received favoring the Pamlico Sound Bridge Corridor. One comment was received both orally and in writing from the same person favoring a tunnel crossing of Oregon Inlet. Approximately 20 comments expressed concerns related to future phase work in Rodanthe, primarily about the effects of some of the alternatives on soundside views or recreational boating and an associated effect on the monetary and aesthetic value of vacation rental homes. Visual and recreational impact issues of all of the Detailed Study Alternatives are addressed in the FEIS and EA; the comments received did not reflect concerns with the specific changes made to these alternatives between the FEIS and EA. Other common themes included distress over the influence of outside environmental groups on the project’s decision-making process and overall progress, as well as a desire that public access to the Refuge be maintained.

C.1.3 Public Comments in Support of the Proposed Project

Replace the Bridge Now

The citizens group Replace the Bridge Now (RTBN) submitted a total of 3,856 form letters and e-mails explicitly in support of the Preferred Alternative identified in the EA. The form letters and e-mails contained the following statements in support of the Preferred Alternative:

1. Replacing Bonner Bridge is long overdue and further delays risk the loss of this vital transportation lifeline. Without the Bonner Bridge, public access to Hatteras Island would be devastated with drastic consequences to residents, small businesses, property owners, and visitors. Replacing the bridge is vital for public safety, as well as the economic, cultural, historic, and social well being of the region.
2. Endorsement of the new Preferred Alternative outlined in the EA, which is a practical solution that, first and foremost, calls for immediate replacement of the Bonner Bridge. This alternative has the support of the FHWA, EPA, and state and local officials.
3. Recommendation of the following key components outlined in the EA as part of the Preferred Alternative: replace the Bonner Bridge immediately with a new parallel bridge; eliminate the “Long Bridge” option, which is impractical and not fundable; use a Transportation Management Plan for development of NC 12; and begin immediate construction without further environmental studies and delays.

The form included space in which to provide supplementary comments; those comments are included as appropriate in the following sections.

Response: *No response is needed for these indications of support for the now Selected Alternative.*

Other Public Comments in Support of the Proposed Project

- Practicality
 - Build the Parallel Bridge now with no further study or delays. Further delays increase the likelihood of a bridge failure. Costs are going up, and enough money and time has been wasted on studies and repairs to the existing bridge. The Parallel Bridge is the only alternative that can be funded, and it can be built the quickest.
 - The Preferred Alternative, including a Transportation Management Plan for studying future phases, represents a good compromise of the various alternatives offered over the years.
 - The cost of bridge replacement in an emergency after a bridge failure would be higher than under a sensibly planned construction process.
 - NCDOT needs to begin construction of the Preferred Alternative in such a manner that it is capable of being constructed within the necessary timeframe to maintain full road access to Hatteras Island (i.e., before Bonner Bridge is closed or fails).

- Public Safety
 - Delaying replacement of the bridge is a public safety and welfare concern (for residents and visitors). A bridge failure could result in deaths and decreased access to medical care facilities and government emergency services for island residents. This shows negligence on the part of decision-makers because citizens rely on government to provide safe transportation; they have no way of assessing the condition of roads and bridges for themselves. If the bridge fails and lives are lost, the state will be held responsible. There was frequent mention of and concern about the very low bridge sufficiency rating and the bridge defects discussed in bridge inspection reports. (There were numerous comments that appeared to support the EA and the Preferred Alternative [because they favored replacing the bridge now without further delay], but that actually did not express an opinion on an alternative, just concern about replacing the bridge immediately, prior to it potentially collapsing.)
 - Numerous commenters expressed their fear of crossing the existing bridge because of its poor condition. Many commenters said they experience actual physical symptoms, such as increased heart rate and sweaty palms, every time they drive across the bridge. They also are anxious about the safety of their loved ones whenever they have to cross the bridge.
 - Additional delays in bridge replacement make a failure more likely because of the harsh, corrosive ocean environment where the bridge is located. In addition, this corrosion is hard for inspectors to detect.
 - Mothers and grandmothers are described as concerned about the safety of their children and grandchildren when they cross the bridge. This concern is within the context of a fear that the existing bridge will collapse with associated loss of life. (It is NCDOT’s understanding through local media reports that an organization called “Bridge Moms” has been formed. The organization has collected letters discussing the concerns about the potential loss of children’s lives in a bridge collapse if Bonner Bridge is not replaced now. The letters are being directed to First Lady Michelle Obama and to date have not been sent to NCDOT.)

- Economics
 - Build the Parallel Bridge now because negative publicity about the condition of the existing bridge is hurting rentals, as well as the overall economy, on Hatteras Island.
 - Delaying replacement of the bridge hurts the economic welfare of Hatteras Island residents. A bridge failure would cut off access to the island and drastically hurt the economy. The tax revenue generated for all levels of government from tourism and other island businesses, in particular recreational fishing, needs to be protected by providing the short bridge.
 - In these hard economic times, building the bridge will help spur the local economy by creating jobs and increasing the demand for housing.
 - The Preferred Alternative needs to be built with a properly designed navigation channel so that the USACE can continue to dredge and maintain the channel for safe operation by boaters. Proper maintenance of the channel for boaters is crucial to the local economy.

With the shrinking Federal dredging budget, the new bridge should make it as cost efficient as possible for dredging operations.

- Outside Influences
 - Do not allow special interest groups that do not even live in this area to delay the project any longer. Why do their interests take precedence over public safety and welfare issues? These groups seem to value their agenda without regard for human life. Their minority opinions need to be put into perspective. The country does not have the money to play special interest games. The emphasis is too focused on environmentalists and groups like Southern Environmental Law Center (SELC). They should not be able to control the lives of Hatteras Island citizens and millions of visitors – this is fundamentally wrong. They oppose almost every public project on the Outer Banks (for example, reasonable public beach access), and their efforts are already negatively affecting the local economy. Stand for the people, or we all lose.
 - The short bridge is needed to provide the millions of tourists that come to Hatteras Island every year with continued adequate access to the island. Special interest groups should not be able to deny Americans from having proper access to the National Park that they own on Hatteras Island.
 - Supporters of the Preferred Alternative need to stay involved in demanding that the project be built because the project has not yet met its final test. The environmentalists will probably take the project to court to be decided.
 - We need to get politics out of the way and get the bridge replaced. We need to elect people that will get this project completed.
- Effect on the Pea Island National Wildlife Refuge
 - The road was there long before the people granted their lands for the Refuge to be established, and maintaining/moving the road was not a problem until recently when environmental special interest groups and “out of touch” federal managers got involved.
 - People should come first over wildlife; animals will adapt. The Refuge is already managed in an unnatural manner.
 - The bridge replacement with the Preferred Alternative is just that, it is a replacement for what is already there. The Refuge is a healthy ecosystem that is home to numerous species of wildlife, and the road and Refuge have co-existed in harmony for decades.

***Response:** No response is needed for most of these reasons for support of the now Selected Alternative. The Selected Alternative will be built with a properly designed navigation channel so that USACE can continue to dredge and maintain the channel for safe operation by boaters. It is important to note, however, that NCDOT completed an in-depth structural condition assessment of the bridge in December 2006. It determined what kinds of repairs were needed and these repairs are being made. The assessment gave the bridge a sufficiency rating of four out of 100, but that does not mean the bridge is unsafe. It means that after studying a number of factors, including bridge inspection results, traffic volumes, and road widths, engineers used a standard formula to rate the bridge’s ability to remain in service.*

Based on those calculations, they consider the bridge “structurally deficient” and in need of replacement. The sufficiency rating for the Bonner Bridge results from three main factors:

- *Soil erosion has occurred over time around the original pilings on the south end of the bridge, and support pilings have been added;*
- *The bridge is not wide enough for the amount of traffic it carries; and*
- *Motorists would have to take a 100-mile (160.9-kilometer) detour if the bridge had to be taken out of service.*

The current bridge repair work will ensure that the bridge continues to serve as a viable transportation link to the Outer Banks until it is replaced. The work is expected to be completed in 2011.

Public Official and Public Organization Support

Letters of support for the Preferred Alternative in the EA were received from Governor Beverly Perdue, State Senator Marc Basnight, State Representative Timothy Spear, the Outer Banks Association of Realtors, the Outer Banks Home Builders Association, and the Outer Banks Chamber of Commerce. These letters are included in Appendix B. Elected public officials speaking in favor of the Preferred Alternative in the EA at the Public Hearings included Mayor Raymond Sturza of Kill Devil Hills, Dare County Sherriff Rodney Midgett, and Dare County Commissioners Warren Judge, Jack Shea, and Allen Burrus.

Response: *No response is needed for these indications of support for the now Selected Alternative.*

C.1.4 Public Comments in Support of the Pamlico Sound Bridge Corridor Alternatives

The following is a list of the reasons given by the nine commenters that support the “Long Bridge” (Pamlico Sound Bridge Corridor) and oppose the Preferred Alternative as described in the EA:

- The EA is inadequate because it does not address the long bridge. The long bridge is needed to provide a safe, dependable highway link to the island. NC 12 maintenance issues in the Refuge will continue, and NC 12 needs to be removed from the Refuge because of impacts on Refuge mission and wildlife. If the long bridge cannot be built, ferry service should be considered.
- The short bridge is short-sighted and a waste of money. A causeway should be built the entire length of Hatteras Island to remove the road from the Refuge. Stop spending money on maintaining NC 12 from overwash. Also remove NC 12 from the Refuge because of the threat of sea level rise.
- Science and ecology clearly favor the long bridge. Economics ultimately argues for an expanded ferry system. The short bridge would be a mistake. Only politics and greed favor the short bridge.

- The state would be smarter to choose the long bridge and not be swayed by the politics of Dare County and Marc Basnight. With the short bridge, NC 12 will continue to be severed in the Refuge. The state will continue to spend millions of dollars fixing this problem or building bridges across hot spots, but this will ultimately not work as sea level continues to rise. High speed ferries to the villages that were built on high ground, rather than along the beach front, will eventually be the only solution.
- The replacement bridge will eventually become a bridge to nowhere because of sea level rise, so no further taxpayer money should be spent on the replacement project. If funds are not available for the long bridge, ferry terminals should be built to serve the island that will remain.
- Replacing the Bonner Bridge with a bridge that has limited access from the south through the Refuge during storm conditions is not in the best interest of Hatteras Island residents. A stable evacuation route is needed. What is the formula for establishing the existing bridge rating of 3? Does not having an alternative route available impact the rating? What would the rating of the Parallel Bridge be if the hot spots are considered as blocking access from the south during a storm?
- A long bridge will reduce long-term maintenance costs, improve safety and reliability, and have less environmental impact to the Refuge than the short bridge.
- The long bridge is the only viable option. Building the short bridge will negatively affect the welfare, prosperity, and livelihood of all Hatteras Island residents and businesses. Hatteras Island is being sacrificed so the terminal groin can remain in place. Special interests that want jetties on both sides of the inlet are against the long bridge because the groin would be removed if a new Oregon Inlet bridge is not built. The state will not be able to maintain a safe road through the Refuge because of predicted oceanside beach erosion and sea level rise. If the state and county had stayed with their original decision to build the long bridge, it could have been well under way by now.
- The short bridge is short-sighted and expensive. If the short bridge is allowed to proceed by a court of law, the Refuge will become a construction zone for the foreseeable future, and then a wasteland until it is reclaimed by the ocean. Why did NCDOT in 2003 reverse itself on the long bridge being the Preferred Alternative? If NCDOT had stayed with that plan, the bridge would be almost finished by now. NCDOT needs to better explain why there is no money for the long bridge. If political pressure were applied, the money would be available. More money will be spent on litigation than would be spent on building the long bridge. Not enough information has been provided on the impacts to the Refuge from future phases. The public hearings avoided discussing plans for what will happen to the Refuge after Phase I is built. The future phases planned will make the Refuge a construction zone for the foreseeable future. Why not cross the sound from Stumpy Point?

Response: *The Selected Alternative will provide a long-term dependable transportation link because it includes long-term improvements to NC 12 from the Oregon Inlet bridge to Rodanthe. Important components of this alternative include a commitment to a monitoring and study program for implementing future phases in a timely manner and the flexibility offered by making final decisions about future phases at a time closer to their need. The near-term needs at the three hot spots along NC 12 in the project area are recognized, and NCDOT intends to begin planning for a permanent solution to these problem areas as a part of Phase II.*

Phase II studies are expected to begin in 2011. As indicated in the FEIS in Section 2.2.6, a ferry cannot adequately serve the travel demand to and from Hatteras Island. (Also see the response to SELC comment 13 on page C-51.) The potential impact of sea level rise was discussed in Section 4.6.6 of the FEIS. (Also see the response to SELC comment 6 on page C-43.) Other reasons for dropping the “long bridge” as a detailed study alternative, although it has been under study since 2002, are presented in Section 2.2 of the EA. Funding constraints are addressed in the same section of the EA, in Section 2.12.4 of the FEIS, and on pages B-20 and B-145 of EA Appendix B (the Revised Final Section 4(f) Evaluation). The potential impacts of future phases are reflected in the assessment of impacts for all the Parallel Bridge Corridor alternatives in Chapter 4 of the FEIS. A bridge beginning at Stumpy Point would be 16.7 miles (26.9 kilometers) long and, like the Pamlico Sound Bridge Corridor, would be cost prohibitive. It also would not provide a direct route to Hatteras Island from the rest of the Outer Banks. The travel distance from Whalebone to Rodanthe for users of the Cape Hatteras National Seashore (Seashore) and the Pea Island National Wildlife Refuge (Refuge) would increase by 56 percent (24 miles [38.6 kilometers] to 43 miles [69.2 kilometers]).

C.1.5 Other Public Comments in Support or Opposition to a Particular Alternative

- Opposition to the Pamlico Sound Bridge Corridor
 - Eliminate the long bridge – it is impractical and not able to be funded.
 - The long bridge would take too long to build considering that the existing bridge is unsafe. A replacement is needed as soon as possible.
 - The long bridge would discourage day trips to Hatteras Island, which would hurt the island’s economy.
 - The long bridge would be destructive to a unique recreation area for windsurfing and kite boarding, and would also destroy sunset views of many vacation homes and have environmental impacts to the sound.
 - The long bridge could cause problems related to people being afraid of long bridges.
 - The long bridge would have greater problems with freezing in the winter.
 - The long bridge would cause substantial impacts to the sound bottom, as well as result in increased turbidity (during construction) and runoff in the sound, thereby impacting plant and animal species in the sound.
 - With the long bridge, there is more bridge to be damaged in a storm in this vulnerable area. Also, how is a longer bridge better for the environment than a shorter bridge?
 - Hurricane evacuations would be a problem with either the long bridge or a ferry system.

Response: Reasons for dropping the Pamlico Sound Bridge Corridor as a detailed study alternative were presented in Section 2.2 of the EA. They included several of the reasons listed in the public comments.

- Opposition to the “Bridge South” portion of the Road North/Bridge South and All Bridge alternatives (the “Bridge South” alignment is described on page C-9 of EA Appendix C)
 - The Bridge South will destroy views and property values in Rodanthe, as well as take properties, so the Phased Approach or Beach Nourishment alternatives are preferable. Also, if the beach is not nourished, Rodanthe will be taken over by the ocean. Nobody will rent vacation homes in Rodanthe during construction of Bridge South because of construction period impacts.
 - The Bridge South will be expensive to build because of the shallow water depths in the sound along the proposed alignment. Also, the design of the Bridge South is poor (the 90-degree return of the bridge to NC 12 will negatively affect traffic flow).
 - The Bridge South would ruin windsurfing in the Rodanthe area, which is the northernmost access to the sound to the south of Oregon Inlet. The Mirlo Beach area has some of the best wind on the east coast for windsurfing and kiting, and people come from Virginia, Maryland, and around the world to windsurf in this area. It would negatively affect the local economy and beach house rentals (especially in the off season when it is most windy) if windsurfing is disrupted in this area. Keep NC 12 in the already designated public road area.
 - The Bridge South would make it impossible to rent homes along the sound in Rodanthe, so the area would experience complete economic collapse. If the road is placed in the sound, this should be considered a “taking” of property (in Rodanthe on the sound) for eminent domain. Compensation should be paid because sound-side houses will be essentially worthless. If not, many of these homes will end up in foreclosure, further compounding the condition of the battered real estate market. Keep NC 12 in its current location with either beach nourishment, or with bridges over the hot spots.

Response: The visual and recreational impacts of the Road North/Bridge South and All Bridge alternatives are acknowledged and discussed in Sections 4.3.1 and 4.5.4 of the FEIS and in Section 2.1 of the EA. Those impacts did not change substantially between the FEIS and the EA. In the development of future phases in Rodanthe, these two alternatives, along with the Nourishment Alternative, the Phased Approach/Rodanthe Bridge Alternative, and the Phased Approach/Rodanthe Nourishment Alternative, as well as any appropriate new alternatives based on agency and public input, will be considered in the selection of a final alternative. One challenge to selecting a final alternative is that the northern part of Rodanthe is expected to suffer the most severe future shoreline erosion and is considered the most likely location for a breach in Hatteras Island between now and 2060. All of the alternatives studied to date would provide adequate traffic flow.

- The Beach Nourishment Alternative in Rodanthe is preferred because of impacts of other alternatives to Rodanthe.

Response: Position acknowledged.

- Opposition to the Ferry Alternative

- Discussion of going back to a ferry system should be ended. It is not an adequate solution (for traffic capacity and public safety reasons, especially during an evacuation) and would damage the island's economy. Too much money has been invested on Hatteras Island in the last 50 years, including the construction of private residences and business and public infrastructure (such as schools), to depend on a ferry system for access. The ferry service would have to be free because of current State law, so it would not pay for itself.
- A ferry system would increase the cost of living on the island because all supplies would have to reach the island by ferry.
- A ferry system would have negative impacts on water birds that feed in the area.

Response: *The ferry alternative was dropped from consideration as a detailed study alternative in the original 1993 DEIS. Reasons why a ferry is not a viable alternative are reaffirmed in the response to SELC comment 13 on page C-51.*

- Why has a tunnel not been more seriously studied? The plans for the Chesapeake Bay Bridge Tunnel could easily be adapted for crossing Oregon Inlet.

Response: *The tunnel alternative was dropped from consideration as a detailed study alternative in the original 1993 DEIS. The reasons it is not viable are presented in Section 2.2.7 of the FEIS.*

- Urgency of Replacing Bonner Bridge

- Build any bridge, either long or short, just do it now. Any bridge will affect the environment, so it does not matter which one is built. If the environmental agencies are in favor of the long bridge because of impacts, maybe they can help fund it.
- Build any bridge, either long or short, just do it now. Wildlife and the current road are already co-existing, but choose an alternative to build now that best accounts for future shoreline erosion in order to limit future additional construction that wildlife has to adapt further.

Response: *NCDOT agrees that the Bonner Bridge should be replaced as soon as possible. The Selected Alternative accounts for future shoreline erosion. Future phasing strategies will take into consideration limiting the number of times additional construction will be needed.*

- Future Phases

- The short bridge is a good start, but is inadequate. Something needs to be done now to protect the rest of the road through the Refuge. Consider moving NC 12 to the west side of the island to protect it.
- The plan to build a Parallel Bridge across Oregon Inlet combined with a series of smaller bridges over the hot spots is the best solution because this would provide for the long-term sustainability of NC 12 and maintain access to the Refuge.

- The best solutions are the ones that keep NC 12 in its current location – beach nourishment or building bridges along the current route.

***Response:** The Selected Alternative includes a plan for finalizing and implementing future phases, including the potential to include additional alternatives, such as moving NC 12 to the west side of the island. Additional bridges over hot spots, nourishment, and building bridges along the current route of NC 12 all were assessed in Chapter 4 of the FEIS.*

C.1.6 Other Comments

Following is a list of other comments on various topics related to the project:

- Access to Recreation

- The proposed bridge should be designed to allow fishermen the same ability to fish from the bridge as they have now.
- Save part of the existing bridge, road, and parking lot for fishing access at the north end of the island (wiser use of funds than building a completely new fishing pier).
- Some supporters of the Preferred Alternative also stated that it is important to maintain road access to the portion of the Cape Hatteras National Seashore on Hatteras Island.
- No matter which alternative is chosen, public access should be maintained to the Refuge and its recreational activities (e.g., fishing, surfing, etc.). Access to the Refuge is critical to the area's economy.

***Response:** Project Commitment 7 in Appendix A of this ROD indicates NCDOT's commitment to retaining fishing access at Oregon Inlet; the nature of the fishing accommodations will be determined during the final design of Phase I. The Selected Alternative will provide for continued access to the Seashore and Refuge on Hatteras Island. The nature and extent of that access will depend on the alternative selected for implementation in future phases.*

- Displacements

- The chosen alternative should not relocate homes because there is enough undeveloped land to avoid home impacts.
- Loss of the Liberty Gas Station would hurt Rodanthe because it is the only gas and grocery store open year round.

***Response:** Efforts were made to minimize displacements in Rodanthe with the detailed study alternatives. Minimizing displacements will remain a consideration when future phases in Rodanthe are finalized.*

- Relationship of Refuge Needs and Transportation Needs
 - In 1993, it seemed certain that the Parallel Bridge would be chosen, but USFWS refused to entertain Section 7 consultation. In hindsight, the reason for the delay was the pending legislation for the “1996” Refuge Act which changed the law as to what could be built in the Refuge. Since then, complaints that the Parallel Bridge is not compatible with the Refuge have stymied all attempts to come up with a feasible replacement plan. To tell the communities that have built up around this highway and bridge that their safety must take a back seat to the Refuge is just one more example of resource protection gone wild.
 - The Refuge was not established by Congress as is required by the Constitution, but by Executive Order. Because the Refuge has never been vetted by Congress as required by law, it is an illegal entity, and so its status as a “refuge” should not be part of any decision regarding the replacement of Bonner Bridge.
 - The Midgett family submitted 46 pages of family interviews, photographs, and newspaper articles with detailed history of the Manteo to Hatteras Bus Line. This is intended as proof of long-term existence of public thoroughfare through the Refuge and as support for proceeding with the Preferred Alternative.
 - The US Department of the Interior’s (USDOI’s) comments on the EA say that future phases of the TMP have not been adequately described and that it is unlikely that any of the Parallel Bridge Corridor alternatives could be found compatible. This contradicts the previous USDOI recommendation that the replacement of the Bonner Bridge should be separated from the rest of the project and proceed as soon as possible.
 - A title search will reveal that USFWS does not own the Refuge, but rather the land belongs to the National Park Service as part of the Cape Hatteras National Seashore. As a result, USFWS should not have any say in the selection of a replacement bridge alternative.

***Response:** The positions of the commenters are noted. The first draft of the original unpublished FEIS was completed in 1998 after the 1997 Act was passed. The project was delayed at that time because the state did not have the funds to build the project. The Revised Final Section 4(f) Evaluation presented FHWA’s position on the relationship of NC 12 to the Refuge beginning on page 12 (page B-12 of the EA).*

- Project Delays
 - The replacement of Bonner Bridge has already been studied for a longer period of time than for any other bridge in the country, so it is unbelievable that there are still requests for further studies.
 - The State of North Carolina is in bad fiscal condition and will not be able to afford the short bridge if costs keep going up while the project is further delayed.
 - A 2006 study of the condition of the Bonner Bridge indicated that the bridge must be replaced by 2016 because of the advanced stages of deterioration, so time is running out.
 - People are concerned that it will take at least 2 years before construction can begin.

- Hopefully it will not take so long to make a decision on each future phase. We need a replacement bridge now, and we will need actions on future phases in a timely manner.
- It is a waste of time and money to keep moving sand at the hot spots. NCDOT should go ahead and start building bridges in these areas as well.

***Response:** NCDOT and FHWA agree that Bonner Bridge should be replaced as soon as possible and that future phases within the hot spots should be completed in a timely manner.*

- Bonner Bridge Safety and Risk of Collapse
 - The decision makers should be required to travel to the area and see the bridge, and then maybe something would be done because they would realize that they would not want their families crossing the bridge.
 - How can the State keep the existing bridge open if it is in as bad shape as has been reported. It should be closed and a ferry service put in place until something can be done about replacing the bridge, or it can be made safer for travel.
 - If the bridge is in such bad condition, should it already be closed, or at least have weight restrictions enacted? Divers that have examined the foundations state that they are in extremely poor condition (apparently there was even a video made by a diver recently to show the poor condition).
 - The continued deterioration of the existing bridge could lead to implementing load limits or one-way traffic restrictions, which would be a safety concern for island residents and visitors.
 - If the bridge collapses, even if no lives are lost in the collapse, they will be lost because of delays in transport to medical services that cannot be provided on the island.
 - If the existing bridge fails, power and phone lines to the island could be lost for an extended time (Cape Hatteras Electric Cooperative was one of the sources of this comment). This would be a major inconvenience, as well as possibly a public safety issue. The cost of electricity for island customers would increase dramatically while using temporary alternative methods (i.e., portable generators) to supply power. In addition, the costs would further increase if a submarine cable system across Oregon Inlet is required to supply permanent electricity to the island because a bridge across the inlet is no longer available to support the cables.
 - The state should set up a fund to compensate people if the bridge collapses and there is loss of life, similar to what Minnesota had to do.
 - The collapse of the Minneapolis bridge should have taught NCDOT a lesson about the danger of delaying a needed bridge replacement. The fact that there is no alternative road to the island means that a bridge failure would cause even greater impacts to residents, visitors, and businesses than in an area with alternative routes.
 - Keep the ferry ready in case there is an emergency before the new bridge is completed.

- If an emergency ferry was the only access to the island after a bridge failure, residents would be helpless whenever inclement weather shuts down the ferries.
- What would happen if the bridge collapsed during an evacuation before a storm and there is no other way off the island?
- The next study may very well be looking into why people were killed by a bridge that collapsed that should have been replaced many years ago.

Response: *The current bridge repair work will ensure that the bridge continues to serve as a viable transportation link to the Outer Banks until it is replaced. If needed, NCDOT currently has an emergency ferry service in place that would operate with limited service between Rodanthe on the Outer Banks and Stumpy Point on the mainland. (See the response above on page C-5 under “Other Public Comments in Support of the Proposed Project” related to the condition of Bonner Bridge and the current repair program.)*

- Project Funding

- Eliminate the Mid-Currituck Bridge and use funds and efforts to get Bonner Bridge replaced.
- Make Bonner Bridge replacement a toll road to cover building costs and ongoing expenses going forward.

Response: *Funding is in place for replacing Bonner Bridge. Funds do not need to be taken from the Mid-Currituck Bridge project, which would be funded by the issuance of revenue bonds if the project is approved. The challenges associated with using tolls for the Bonner Bridge Replacement Project are addressed in Appendix G of the Revised Final Section 4(f) Evaluation (beginning on page B-143 of EA Appendix B).*

- Use the old bridge as a groin or dump into the ocean as fish habitat.

Response: *NCDOT is currently working with the North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries (NCDENR-DMF) on the use of demolition material as an artificial reef, per Project Commitment 6 in Appendix A of this ROD.*

- The replacement bridge should have four lanes and a bicycle lane in each direction.

Response: *Four lanes are not needed to serve projected future traffic volumes. There are no plans to widen the rest of NC 12 to four lanes. The replacement bridge will have 8-foot (2.4-meter) wide shoulders and a bicycle safe rail to accommodate cyclists.*

- Not replacing the bridge over Oregon Inlet would also lead to removal of the terminal groin and the associated negative impacts that action would cause, including difficulty maintaining the navigation channel in the inlet and associated economic impacts to boaters that use the channel.

Response: The commenter's position is noted.

- The people of Hatteras Island are very concerned about the environment and know how to take care of the environment – they have been taking care of it and saving it for the rest of us for many years. They do not need environmentalists telling them how to take care of the environment, and that they cannot have the short bridge because it will damage the environment.

Response: The commenter's position is noted.

C.2 Government Agency Comments and Responses

This section responds to written comments on the EA submitted by state and federal environmental resource and regulatory agencies, as well as local agencies. Each substantive comment requiring a response is listed below, followed by a response. The comments in this section quote the correspondence received. The original correspondence is presented in Appendix B.

C.2.1 Federal Agencies

US Department of Agriculture, Natural Resources Conservation Service—June 9, 2010

1. **Comment:** The Natural Resources Conservation Service does not have any comments at this time.

Response: Acknowledged.

US Department of the Army, Wilmington District, Corps of Engineers—June 30, 2010

1. **Comment:** Page 1-1, Section 1.1, Purpose of the Environmental Assessment. It appears the purposes identified in this section adequately document the changes for the proposed project since the release of the September 2008 Final Environmental Assessment. Based on the revisions contained in the EA there doesn't appear to be changes or circumstances which result in significant environmental impacts not evaluated in the FEIS therefore prompting the preparation of a Supplemental Final Impact Statement (SFEIS).

Response: Position acknowledged. It should be noted that the September 2008 document was a Final Environmental Impact Statement, not a Final Environmental Assessment.

2. **Comment:** Page 2-20, Section 2.3.3.3 Later Phases (NC 12 Transportation Management Plan), Environmental Review for Future Phases. In the last paragraph it states “as of the publication of this EA, sections of the Canal Zone, Sandbag Area, and Rodanthe hot spot areas may already meet one or more of the listed criteria.” The facts need to be stated in this section to clarify that these sections of NC 12 are or are not currently meeting one or more of the five listed criteria (criteria assumed to be included in the NC 12 Transportation Management Plan) which warrant initiating an environmental review of a future phase. It is recommended that if any of these sections are meeting the criteria, that NCDOT and FHWA immediately implement a plan of action based on this section of the EA and document it in the Record of Decision (ROD). Based on information in section 4.6.8.6 of the FEIS, NCDOT

would confine future NC 12 maintenance in the Refuge, including storm-related maintenance, to the existing NC 12 easement, after the issuance of the ROD for the project. It also states NCDOT intends to place a high priority on the implementation of Phase II which includes the three high spots mentioned above. Based on the FEIS, Phase II is to begin post 2015. It seems logical that if any of these areas are already meeting criterion which will be specified in the Transportation Management Plan, Phase II needs to start immediately after the issuance of the ROD. These issues need to be addressed in the NC 12 Transportation Management Plan.

Response: *The near-term needs at the three hot spots along NC 12 in the project area are recognized, and NCDOT intends to begin planning for a permanent solution to these problem areas as a part of Phase II (expected to begin in 2011). The 230-foot critical buffer distance has already been exceeded in the Rodanthe hot spot area. The post 2015 date on page 2-124 of the FEIS refers to construction, indicating that construction of Phase II is likely to start shortly after Phase I is complete. The proposal in Section 4.6.8.6 of the FEIS to confine future NC 12 maintenance activities within the existing easement applied only to the Phased Approach Alternatives, which were developed with the requirement that all work within the Refuge must be confined within the existing easement. That requirement does not exist with the NC 12 Transportation Management Plan. However, as is noted in the Stipulations of the Section 106 Programmatic Agreement, NCDOT will work with USFWS to ensure maintenance activities are compatible with the Refuge's mission and purpose while ensuring reliable transportation along the NC 12 corridor.*

- 3. Comment:** Page 2-29 and 2-30, Section 2.3.4 Basis for Selection of the Preferred Alternative. This comment is in relationship to what is discussed in item 2 above. In this section it states "NCDOT and FHWA do not agree that decisions should be made for the entire corridor because of the extensive uncertainty inherent in the predictions of future coastal conditions." It also states, "Phase I should be built now, and the specific features of the rest of the project should be examined in more detail at the time they are to be built, when future conditions are more known." While we agree that Phase I should be built now and that the rest of the project should be examined in more detail later, is there enough information present now to make informed decisions concerning the three hot spot areas?

Response: *See the response to USACE comment 2 above.*

- 4. Comment:** Page 2-33, Section 2.3.7, Costs. Since the costs were updated from those presented in the FEIS to account for the revision to the detailed study alternatives described in Section 2.1 of the EA, can the costs also be updated to 2010 dollars instead of 2006 dollars? During the review of this project, the total costs for the detailed study alternatives have increased substantially in a relatively short time frame. We feel it is important that the most accurate and up to date cost estimates be presented for this project since funding has been a major issue for this project.

Response: *Adequate funds exist for the implementation of Phase I, the replacement of the Oregon Inlet bridge. To determine whether it was appropriate to update the construction cost estimates to 2010 dollars, NCDOT reviewed the composite construction index that reflects NCDOT's costs to construct highway projects. Between 2006 and 2009, the composite construction index increased approximately 1.9 percent; however, the structure index, which reflects the majority of the costs for this project, has decreased by 19.1 percent. Based on these trends, updating to 2010*

dollars would not substantially change the range of costs for the detailed study alternatives; therefore, the costs were not updated.

5. **Comment:** Page 3-9, Section 3.5.6, November 2009 Rodanthe Storm Repair. Add the following language to the last sentence of the 1st paragraph - “after the remnants of Tropical Storm Ida in 2009. Also add that the majority of the approximately 200,000 cubic yards of sand placed on the beach face east of the sandbags washed away within 2 weeks of completion of the project.

***Response:** Per the commenter’s request, the phrase “after the remnants of Tropical Storm Ida caused additional damage in 2009” was added to the end of the last sentence in EA Section 3.5.6 (see ROD Section 7.0, Corrections to the EA). In addition, the issue of whether or not the majority of the approximately 200,000 cubic yards of sand placed on the beach face east of the sandbags washed away within 2 weeks of completion of the project was further investigated. According to NCDOT Division 1 staff, there was a substantial amount of sand loss from the beach, but it is not possible to determine how much sand was lost, or that the majority of the sand was lost within two weeks, without having actual beach cross-sections to compare before and after conditions. In addition, it is arguable that much of the new sand that was placed actually just shifted into the surf zone below mean high water (MHW). It should be noted that the 200,000 cubic yards of sand was intended as beach habitat restoration and not as a long-term roadway protection measure. The work was required by USFWS as a condition of the Special Use Permit issued for the placement of sandbags along this section of NC 12.*

6. **Comment:** Page 3-10, Section 3.7, December 2009 Coordination Meeting with Council on Environmental Quality. We are in agreement and support that FHWA and NCDOT should work with USFWS to develop a Partnership Agreement and include in the ROD. As a major permitting and cooperating agency, we appreciate the opportunity to coordinate with you prior to the finalization of the ROD.

***Response:** Through a series of meetings and correspondence, FHWA and USDO I agreed upon an approach that would advance the Selected Alternative. The approach and its stipulations were documented in an exchange of letters sent on December 17, 2010 (see Appendix B).*

US Department of the Interior, Office of the Secretary—June 28, 2010

(USDO I submitted an additional letter on December 17, 2010 in order to clarify statements made in its June 28, 2010 letter. A copy of the December 17, 2010 letter and FHWA’s response are included in Appendix B.)

General Comments

1. **Comment:** The Department finds the EA deficient in a variety of categories. We do not believe it adequately addresses alternatives and environmental impacts as required by the National Environmental Policy Act of 1969 (NEPA) and fails to satisfy standards set forth in the Council of Environmental Quality (CEQ) implementing regulations (40 CFR 1500-1508). We do not believe the EA and Final Environmental Impact Statement (FEIS) on which it is based fully evaluated all reasonable and practical alternatives.

Response: *The FEIS and EA provide extensive analysis of each category of environmental impact and fully comply with NEPA requirements. The responses to the specific comments below provide further detail in addressing this general comment.*

2. **Comment:** The new PB/TMP alternative calls for construction of a new bridge over Oregon Inlet (Phase I), followed by construction of later phases that would complete the project to its southern terminus at Rodanthe, and whose details would be determined as conditions warrant. The EA provides no additional information about these future phases, except to say that they may include bridging, road relocation, beach nourishment, and/or “new solutions” which may be identified in the future. Decisions regarding these future phases would be guided by the Transportation Management Plan (TMP). The TMP includes an outline for a monitoring program (the information from which would be used to determine when planning for the next phase should begin), and refers to a process for conducting future planning. The EA provides very little detail or analysis of these components of the PB/TMP alternative. As such, the new preferred alternative avoids resolving the most critical, complex, operationally significant, and environmentally sensitive portion of the project, which is the lack of a compatible and sustainable road corridor through Pea Island National Wildlife Refuge (the Refuge). As described in the EA, the “solution” to that most critical issue is a TMP that is yet to be developed and has not been adequately described or analyzed for its potential environmental impacts.

Response: *The assessment of the other Parallel Bridge Corridor alternatives in the FEIS and EA reflects a reasonable range of impacts for the NC 12 Transportation Management Plan Alternative. This is stated on pages 2-32 and 4-1 of the EA. Other alternatives, if determined appropriate through the environmental review and by the Merger Team (on which both USFWS and NPS are members), can be analyzed in additional NEPA documentation for future phases.*

The NC 12 Transportation Management Plan Alternative is essentially a mixing and matching of various alternatives considered and evaluated through developmental studies leading up to the FEIS. The EA evaluated whether the change in the proposed action would result in significant environmental impacts not evaluated in the FEIS and whether new information or concerns and bearings on the proposed action or its impacts would result in significant impacts not evaluated in the FEIS.

FHWA and NCDOT analyzed significant environmental effects associated with alternatives that would be considered in the NC 12 Transportation Management Plan through the FEIS, which included substantial agency coordination.

The FEIS provided detailed analysis of the significance of impacts associated with alternatives offered by agencies and the public. Agency and public comment on the EA did not identify any new significant impacts that had not been previously considered.

The FEIS thoroughly evaluated the significance of environmental effects for many alternatives as offered by the agencies and the public. Information presented in the FEIS and supporting studies provides a reasonable understanding of likely effects forecasted up to 50 years in the future.

Through additional coordination with USDOJ, the monitoring program associated with the NC 12 Transportation Management Plan Alternative was modified to include initiation of studies by an expert panel to analyze data from the monitoring program in order to forecast changes to coastal conditions, landscape, and habitat in the Refuge. USFWS also shared a report conducted by Coastal Research Associates (CRA) that evaluated the effects of the terminal groin on the Refuge and Oregon Inlet. The conclusions of the report are very similar to the impact presented in the Bonner Bridge Replacement Project's environmental studies. Based on additional coordination with USDOJ and commitments added to the NC 12 Transportation Management Plan Alternative, this comment was resolved in a reasonable manner.

3. **Comment:** The description of the PB/TMP alternative provided in the EA is not materially different from that provided in the Revised Final Section 4(f) Evaluation previously prepared by the Federal Highway Administration (FHWA) and the North Carolina Department of Transportation (NCDOT). The EA provides no new information or analysis that alters the comments provided by the Department regarding the PB/TMP alternative in our letters of December 3, 2009, and April 21, 2010. It continues to be the Department's view that the analysis presented to date is insufficient to provide a reasonable understanding of the environmental consequences of the proposed action, or to support a determination that the preferred alternative is consistent with Federal law, including the National Wildlife Refuge System Improvement Act of 1997 (Refuge Improvement Act).

Underlying this position is our firm belief, based upon our re-examination of the acquisition history of the Refuge, that NCDOT does not possess a right to relocate NC 12. But, if the road is to be relocated within the Refuge, NCDOT must still obtain a right-of-way from the U.S. Fish and Wildlife Service (FWS), in compliance with the National Wildlife Refuge System Administration Act, 16 U.S.C. § 668dd(d)(1)(B) and its implementing regulations in 50 CFR Part 29.

***Response:** The FEIS and EA provide analysis of each category of environmental impact and fully comply with NEPA requirements. The assessment of the other Parallel Bridge Corridor alternatives in the FEIS and EA reflects a reasonable range of impacts for the NC 12 Transportation Management Plan Alternative as indicated on pages 2-32 and 4-1 of the EA.*

NCDOT and FHWA are in agreement with USDOJ's position that NCDOT does not possess a right to relocate NC 12 within the Refuge and must obtain approval from USFWS according to Section 4(d) of the National Wildlife Refuge System Improvement Act. NCDOT and FHWA provided similar responses to previous similar comments on page F-35 of the EA. Based on discussions with USDOJ, additional language in the NC 12 Transportation Management Plan Alternative was provided to clarify NCDOT and FHWA's intent and next steps.

4. **Comment:** As the Department has previously stated, it is unlikely that any of the parallel bridge corridor alternatives described in the FEIS, or the PB/TMP alternative, or any combination thereof are likely to be found compatible with the purposes for which the Refuge was established. By eliminating the Pamlico Sound and other potential alternatives (such as ferries) from further consideration or analysis, the FHWA and NCDOT have confined the analysis to a narrow range of options, all of which would result in large-scale and long-term adverse impacts to the Refuge and its resources and, as such, could not be authorized pursuant to the Refuge Improvement Act.

Response: All of the alternatives referenced in the comment have been thoroughly evaluated. The project has reached the decision point in the NEPA process where the selection of a preferred alternative and issuance of a ROD occurs. The NC 12 Transportation Management Plan Alternative allows for the re-evaluation of alternatives and finalization of future phases prior to their implementation. The scale of impacts and construction durations of the future phases is variable and will depend on which options are eventually implemented. As such, a reasonable range of impacts was presented in the EA.

The reconsideration of ferries was mentioned by other agency commenters. See the response to SELC comment 13 on page C-51. The Pamlico Sound Bridge Corridor was dropped as a detailed study alternative for reasons presented in Section 2.2 of the EA. The cost of either of the Pamlico Sound Bridge Corridor alternatives would be of an extraordinary magnitude based on the funding currently available and reasonably expected to be available in the future to NCDOT to operate, improve, and maintain its state highway system and was therefore found to be not practicable or prudent and feasible. Further, no other agency has offered to provide funding associated with this desired outcome for the Refuge. The Pamlico Sound Bridge Corridor also would have severe adverse impacts to the public's access to the Refuge.

5. **Comment:** The TMP is built on the assumptions that changes in conditions within the project area (such as shoreline position) will be detected by the monitoring program, that data collected will provide sufficient resolution to determine when certain (vaguely defined) thresholds are reached, and that change will happen slowly enough to allow several years of planning and construction of future project phases. The Department questions the validity of these assumptions. The EA identifies the proposed monitoring program in general terms and without sufficient detail to allow the reviewer to determine what exactly would be monitored, how data would be collected and analyzed, or how the results of data analysis would factor into decision-making. The EA also provides no detail with respect to how decisions regarding future phases would be made, other than to say that the existing merger process would be used for planning and coordination.

Response: The monitoring program was revised, including the addition of a vulnerability forecasting study, based on additional coordination with USDOJ.

6. **Comment:** It is impossible to discern, based on the information provided in the EA or FEIS, what might happen with respect to project implementation, when it might happen, or how much it might cost. Because the TMP is not adequately described, it is impossible to conclude that the environmental effects have been appropriately assessed.

Response: The assessment of the other Parallel Bridge Corridor alternatives in Chapter 4 of the FEIS and Section 2.3.3 of the EA reflect a reasonable range of impacts and costs for the NC 12 Transportation Management Plan Alternative. This was stated in the EA on pages 2-32 and 4-1. The precise impacts and costs of each phase will be assessed and considered (including a comparison of alternatives) as each phase is finalized, and the appropriate NEPA documentation will be completed prior to implementation.

7. **Comment:** The Department is concerned about the likelihood that the PB/TMP could meet the stated project purposes. The FEIS states three project purposes: 1) provide a new means

of access from Bodie Island to Hatteras Island for its residents, businesses, services and tourists prior to the end of the Bonner Bridge's service life; 2) provide a replacement crossing that takes into account natural channel migration expected through year 2050, and provides the flexibility to let the channel move; and 3) provide a replacement crossing that will not be endangered by shoreline movement through year 2050. We know from experience that the shoreline of Pea Island will not recede in the orderly and predictable way that would be required for the PB/TMP alternative to have a successful outcome. Instead, the shoreline will change rapidly in response to storm events. For any plan to meet the stated project purposes via phased implementation it must account for this reality—the PB/TMP alternative does not. Under the proposed PB/TMP alternative, planning would begin after a storm has severely damaged or destroyed NC 12. This is evidenced by the fact that a significant portion of NC 12 was destroyed last November, and yet to our knowledge no planning has been initiated with respect to this phase of the project. Once planning does commence, it would be coordinated through the same process that has failed to produce a workable solution thus far. Barring some "new solution," alternatives would be confined to a very few thus far considered—none of which are likely to be compatible with the Refuge Improvement Act. There will likely be prolonged delays and significant disruption to the transportation system, and there may be considerable risk to the residents of Hatteras Island and the resources of the Refuge. Under this approach, access between Bodie Island and Hatteras Island will be subject to constant disruption and the transportation system will be under constant threat from shoreline movement through 2050. In summary, of the three stated project purposes, the PB/TMP Alternative cannot be reasonably expected to fulfill the two project purposes that address the need for a safe and reliable means of transportation between Bodie Island and Hatteras Island.

***Response:** Section 2.3.5 of the EA presents why the alternative meets the project's purpose and need. The NC 12 Transportation Management Plan Alternative will provide a new means of access between Bodie and Hatteras Islands, will provide a replacement crossing that takes into account natural channel migration that is expected through the year 2050, and will provide a replacement crossing that will not be endangered by shoreline movement through the year 2050. The Purpose and Need listed in the FEIS is the same as the Purpose and Need in the 1993 DEIS, when the project study area only included Oregon Inlet.*

The near-term needs at the three hot spots along NC 12 in the project area are recognized, and NCDOT intends to begin planning for a permanent solution to these problem areas as a part of Phase II (expected to begin in 2011).

8. **Comment:** By selecting the PB/TMP as the Preferred Alternative, the NCDOT and FHWA are deferring decision-making and analysis of the most contentious, expensive, and potentially environmentally damaging part of the project (NC 12) to some later date, without providing any clear sense that those future phases can be implemented in light of known logistical, financial and legal constraints. The Department is concerned that this is not an appropriate basis for Federal action. Specifically, we reiterate our previous concern that the NEPA documentation provided to date is not adequate to support decisions the Department must make regarding whether, or under what conditions, to issue necessary Departmental authorizations. Such decisions include issuance of permits for construction of Phase I and authorization of retention of the terminal groin.

***Response:** As stated in Section 2.3.5 of the EA, although the Selected Alternative does not immediately prescribe preferred activities beyond Phase I, FHWA and*

NCDOT have evaluated and assessed environmental issues to maintain transportation along the Parallel Bridge Corridor for the entire project corridor. The impacts presented for the other Parallel Bridge Corridor alternatives reflect the reasonably foreseeable range of impacts for the NC 12 Transportation Management Plan Alternative (Selected). In addition, based on the projected shoreline conditions on this section of Hatteras Island, this project has logical termini, which encompass the bridge replacement over Oregon Inlet and the NC 12 roadway sections projected to be threatened in the future on northern Hatteras Island. The proposed project also does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements, as improvements are proposed south of the southern limits of this project. FHWA has continued coordination with USDO I, who indicated in their December 17, 2010 letter (Appendix B) that with the appropriate permit conditions and mitigation, the details of which will be worked out in the coming months, the Refuge will be protected consistent with existing law.

9. **Comment:** A letter dated March 22, 2010, from the Fish and Wildlife Service (FWS) Southeast Regional Director to the FHWA Division Administrator, stated that the analysis of impacts in all previous documents do not adequately address the effects of the terminal groin on the natural resources of the Refuge. Further, it stated that before USFWS can evaluate a permit request for the terminal groin, we believe additional environmental evaluation, in the form of an EA and/or an EIS, is required to enable the USFWS to make a sound decision. Therefore, a decision by the FHWA to issue a Record of Decision based on the NEPA documentation prepared to date will leave many substantive issues unresolved, and will likely necessitate additional lengthy investigations and documentation prior to issuance of any Departmental authorizations. As such, the Department is concerned that the EA description and analysis for the new PB/TMP alternative is inadequate and an SFEIS is warranted.

***Response:** USFWS shared a report conducted by Coastal Research Associates (CRA) that evaluated the effects of the terminal groin on the Refuge and Oregon Inlet. The conclusions of the report are very similar to the impact presented in the Bonner Bridge Replacement Project's environmental studies. At USFWS' request, NCDOT prepared a request for a new or amended special use permit for retaining the terminal groin and associated NEPA documentation needed by USFWS for its action.*

FHWA has continued coordination with USDO I, who indicated in their December 17, 2010 letter (Appendix B) that with the appropriate permit conditions and mitigation, the details of which will be worked out in the coming months, the Refuge will be protected consistent with existing law. The letter also indicates that USDO I no longer objects to FHWA concluding its environmental study process with the selection of the Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative as the Selected Alternative.

Specific Comments

Bodie Island Side of Oregon Inlet:

10. **Comment:** The EA indicates that the conceptual alignment at the Bodie Island terminus of the project for Phase I remains unchanged from that presented in the FEIS. National Park Service (NPS) concerns about the FEIS have been responded to in Appendix D of the EA: Response to Comments on the Final Environmental Impact Statement (pp. D-15 to D-18). Of

those previously expressed concerns, NPS understands that impacts to the Oregon Inlet Fishing Center (OIFC) will be limited to the potential relocation of its septic field; minimal or no disruption of access (and associated economic impacts) is anticipated for the OIFC, Ramp 4 or the Oregon Inlet Campground; and NCDOT will continue to coordinate with NPS on these issues as the project moves into the final design and permitting stage. The NCDOT will investigate whether it is possible to reduce the impacts of Phase I to OIFC's use of the "crack" navigation channel. The NPS also understands that Ramp 4 and the Oregon Inlet Campground driveway will be connected to NC 12 at their current location. As a point of clarification, in its comments on the FEIS, NPS was concerned that the transport of construction materials would negatively impact the section of NC 12 from Whalebone Junction (the intersection with US-64/US-264 and mile 0.0) south to mile 5.28, which is maintained by the NPS (not NCDOT); however, we understand from the response to FEIS comments in the EA (p. D-16) that "virtually all materials used in the bridge construction will be transported to the site by barge and not over the area's highway system." We concur with that approach.

Response: *Comment noted.*

11. **Comment:** As stated previously, a number of proposed NCDOT actions will likely require NPS permit(s), including the following:

- construction staging;
- construction of a haul road, construction and use of a dredge channel for barging, or construction of a work bridge to facilitate construction of the north approach spans;
- relocation of the septic system and fields near the Oregon Inlet Fishing Center;
- relocation of the Ramp 4 beach access road on Bodie Island;
- dredging and disposition of dredge spoils, including on Green Island; and
- similar actions related subsequent phases relating to other NC 12 construction and maintenance components on NPS lands.

NPS will continue to work cooperatively with the FHWA and NCDOT to ensure the development of adequate plans and NEPA documentation for any and all impacts to NPS resources and values. In order for the NPS to issue any necessary Special Use Permit(s) to NCDOT to implement the proposed actions on Park lands, FHWA and NCDOT will need to provide NEPA documents that meet NPS requirements.

Response: *As stated in the response to NPS comment 6 on the FEIS (see page D-17 of the EA), NCDOT will provide any information requested by NPS for the topics above that relate to Oregon Inlet bridge construction and Bonner Bridge demolition as a part of its coordination with NPS during the final design, right-of-way acquisition, and permit development of Phase I. NPS will continue to be a member of the NEPA/Section 404 Merger Team that will select future phases of the project for implementation, as discussed in Section 2.3.2.2 of the EA. NCDOT will continue to coordinate with NPS. Since the release of the EA, NCDOT met with NPS on August 10, 2010, to continue coordination on these issues. NCDOT is awaiting guidance from NPS on the specific permitting requirements for those issues pertaining to construction on Bodie Island.*

Pea Island Side of Oregon Inlet:

12. **Comment:** The description for the alignment of the bridge making landfall on the Refuge (Section 3.5) does not include all of the discussion that has occurred regarding that alignment. Representatives of the FWS informed all present at the referenced meetings that the compromise alignment could possibly be determined to be a minor modification provided that: 1) there is agreement that the southern boundary would constitute the southern boundary for the right-of-way and not the southern limit for construction; 2) an acceptable NEPA document would be prepared, and if the FWS finds the NCDOT/FHWA documentation to be unacceptable, then we would have to prepare a separate NEPA document; 3) an acceptable mitigation plan would be developed so as to result in no net loss in quantity or quality of Refuge land (old road bed or isolated segments of land would not be sufficient compensation from a qualitative perspective); 4) this process would not be initiated until the FWS receives an official request for a modification to the existing right-of-way with all relevant supportive information. To date there has not been a formal request for any right-of-way modification; therefore, the alignment that was discussed does not constitute any official agreement between the FWS and NCDOT or FHWA. All communications from FWS on this matter should be characterized as deliberative and pre-decisional. FWS cooperated in numerous meetings and site visits to review, develop, discuss, and explain potential options, but no decisions or agreements were made.

***Response:** The request for a compatibility determination (or a statement that a compatibility determination is not needed for Phase I) was made in June 2010. NCDOT received an initial response in July 2010; in it, USFWS requested additional information on the limits of the proposed new easement and proposed mitigation. A response to this letter was mailed in November 2010.*

Section 4(f) Issues:

13. **Comment:** The EA refers to the October 2009 Revised Final Section 4(f) Evaluation (p. 3-2) and related comments and responses to comments found in Appendices F and G. Section 4(f) of the Department of Transportation Act of 1966 prevents a Federal project from using publicly owned land unless: 1) there is no prudent and feasible alternative to using that land; and 2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use (49 U.S.C. § 303(c)).

In the September 2008 Final EIS and Section 4(f) Evaluation, the FHWA found that all alternatives would constitute a Section 4(f) “use” of Refuge lands and Park lands within Cape Hatteras National Seashore because the existing road would be relocated from its current alignment. The Department concurred with that finding. However, in a revised October 2009 Final Revised Section 4(f) Evaluation, the FHWA surprisingly reversed that determination and found that there is “no Section 4(f) use” of the protected property within the Refuge or Park. In light of your revised determination, we have reconsidered our initial concurrence that there would be a “Section 4(f) use” of the protected property within the Refuge or Park. The result of our re-examination of this issue is that the Department disagrees with your new conclusion that there is “no Section 4(f) use” of the protected property within the Refuge or Park. The Refuge and Park lands that will be impacted by the project are Section 4(f) properties as defined in 23 CFR 774.17 and the project would result in a “use” of those properties, as the FHWA determined in the Final EIS and Section 4(f)

Evaluation. Our view on this subject is not changed by the information provided in the EA and supporting appendices.

Response: *The USDOJ comment does not correctly interpret the Revised Final Section 4(f) Evaluation. The evaluation clearly showed that the Cape Hatteras National Seashore and the Pea Island National Wildlife Refuge are Section 4(f) properties (page B-7 of EA Appendix B). However, as stated on page B-12 of the EA, the impacts to the Seashore would not be considered a “use” as defined in 23 CFR 774.17 because of documentation of joint planning between the Seashore and the roadway. It does not mean that the project will not be designed to minimize impacts to the Seashore, just that FHWA is not required to make a specific Section 4(f) approval for use prior to project approval. The comment provides little information in contrast to the information presented in the evaluation.*

Contrary to this comment, FHWA did determine that a Section 4(f) approval would be required for the “use” of property in the Refuge. On pages B-12 to B-15 of EA Appendix B, the evaluation details the determination of use for the Refuge as a refuge versus the Refuge as an historic property. While the documentation of joint planning between the Refuge and the roadway mean that there is no “use” of the Refuge as a refuge, there is a “use” of the Refuge as an historic property. Therefore, the evaluation includes an analysis of impacts to the Refuge. The Record of Decision, supported by the EA and the Revised Final Section 4(f) Evaluation, documents FHWA’s approval of the use of the Refuge for the replacement of the bridge under the NC 12 Transportation Management Plan.

US Environmental Protection Agency, Region 4—June 28, 2010, amended on July 23, 2010 and October 5, 2010

(USEPA submitted additional comment letters on July 23, 2010 and October 5, 2010 in order to clarify statements made in the June 28, 2010 letter. Clarifications made in the July and October letters are noted following each original comment as appropriate.)

1. **Comment:** The purpose of the EA as described on Page 1-1 includes: the decision to add a new study alternative (i.e., Parallel Bridge Corridor with NC 12 Transportation Management Plan) and select it as the Preferred Alternative, the elimination of the Pamlico Sound Bridge Corridor alternatives as detailed study alternatives, an assessment of impacts for the new detailed study alternatives, refinements made to the detailed study alternatives, and new information since the publication of the 2008 Final Environmental Impact Statement (FEIS). Based upon the aforementioned significant issues, EPA believes that preparation of a Supplement FEIS might be appropriate. EPA understands that the NC 12 Transportation Management Plan beyond the Phase I replacement of Bonner Bridge has not yet been defined. NCDOT and FHWA are also proposing a coastal monitoring program, but the timing and details are also not addressed. EPA has provided detailed comments concerning this issue and other relevant project environmental impact issues identified in this EA in an attachment to this letter (See Attachment A).

July 23, 2010 amendment—EPA understands that the decision to prepare a Supplemental Final Environmental Impact Statement (SFEIS) rests solely with the transportation agencies. EPA’s primary concern in its June letter was regarding the use of the EA for purposes of carrying forward previous alternatives for future phases of the NC 12 project as the potential full range of reasonable alternatives. We now clearly understand that this was not the

intention. As also outlined in the EA, the Merger team process will be re-convened at Concurrence Point 2, Detailed Study Alternatives for the future phases beyond Phase I (i.e., the replacement of Bonner Bridge).

October 5, 2010 amendment—This letter is to clarify the U.S. Environmental Protection Agency's (EPA) June 28, 2010 comment letter on the referenced document, EPA's letter dated July 23, 2010, and the Federal Highway Administration (FHWA) memorandum dated August 6, 2010. As previously stated in the July 23rd letter from Mr. Militscher of my staff, the decision to prepare a Supplemental Final Environmental Impact Statement (SFEIS) rests solely with the transportation agencies. As currently clarified in your memorandum of August 6th, the North Carolina Department of Transportation (NCDOT) and FHWA do not believe that a SFEIS is required for the Phase I Bonner Bridge Replacement of the NC 12 Transportation Management Plan (TMP) alternative.

In consideration of the response to EPA's comments and the commitments for further NEPA documentation for later phases (beyond Phase I), EPA concurs that a SFEIS does not appear to be necessary prior to the issuance of the Record of Decision (ROD). The impacts and issues have been reasonably identified and disclosed in previous NEPA documents and the administrative record with respect to the Phase I Bonner Bridge Replacement.

***Response:** The position of the commenter is acknowledged. The commenter has accurately summarized NCDOT's intent to reconvene the Merger Team process at Concurrence Point 2 for future phases beyond Phase I. Other alternatives, if determined appropriate through the environmental review process and by the Merger Team, can be analyzed in additional NEPA documentation for future phases.*

2. **Comment:** EPA continues to have substantial environmental concerns for Phases II, III, and IV for the NC 12 corridor and recommend that very serious and objective consideration be given to non-highway transportation alternatives such as transition to a permanent ferry service. These should be evaluated in the Supplemental FEIS for the long-term solutions for Hatteras Island. EPA has previously identified its environmental concerns for adding new and very costly infrastructure on fragile and dynamic barrier islands. For very similar reasons, EPA concurs with FHWA and NCDOT on the elimination of the Pamlico Sound Bridge Corridor alternatives previously developed during the NEPA process. EPA recommends that the Phased Approach/All Bridge and the Road North/Bridge South alternatives also be eliminated from further consideration in future phases due to the significant environmental impacts and potential permitting constraints.

***Response:** As is discussed on page 2-30 of the EA, the LEDPA Amendment signed by the Dispute Resolution Board on January 7, 2010 states that:*

“At this time, there is no formally prescribed alternative for the remaining phases of the project south of Oregon Inlet. One or more of a combination of options, drawing from the alternatives previously studied, as well as any other alternatives determined at the time to be reasonable, practicable and feasible, will be evaluated, designed, and finalized prior to the implementation of actions beyond Phase I. Any option will be evaluated and selected with multi-agency input and concurrence as part of the Merger Process.”

This allows for alternatives not previously selected for detailed study, including a ferry service, to be studied in future phases of the project. However, as part of the evaluation of a ferry service, the environmental and capacity concerns discussed in Section 2.2.6 of the FEIS still apply and will have to be addressed.

FHWA and NCDOT believe it is premature to eliminate any of the Parallel Bridge Corridor alternatives from consideration as a part of future phases at this time. One of the objectives of the NC 12 Transportation Management Plan Alternative is to take into account future conditions and all alternatives should be on the table until future conditions are known.

In its October 5, 2010 letter, USEPA acknowledged that a Supplemental FEIS was not needed for the project prior to the issuance of a ROD. FHWA and NCDOT will determine what NEPA documentation is appropriate for future phases of the project.

3. **Comment:** There remain unresolved environmental issues for Phase I as well, including the development and approval of a detailed compensatory mitigation plan for the jurisdictional impacts to “Aquatic Resources of National Importance” (ARNI). NCDOT and FHWA’s previous proposal of ‘out-of-kind’ and out of the same hydrologic cataloguing unit (HUC) was not generally acceptable to any of the resource or permitting agencies. EPA has not been provided any compensatory mitigation proposal for Phase I jurisdictional impacts as was indicated during the last Merger informational meeting. EPA understands that there is a requirement to provide for mitigation in Dare County and that this issue has not been resolved.

***Response:** NCDOT acknowledges that the previous proposal of ‘out-of-kind’ and out of the same hydrologic cataloguing unit (HUC) was not generally acceptable to any of the resource or permitting agencies, as was discussed at the September 17, 2009, Merger Team meeting (page 3-5 of the EA). NCDOT will continue to coordinate with USEPA during the final design engineering to develop a detailed compensatory mitigation plan for jurisdictional impacts to ARNI. The compensatory mitigation plan will address all relevant agency mitigation requirements. These issues will be resolved prior to the start of construction during the permitting process, which includes Merger Team meetings for Concurrence Points 4B and 4C.*

General Comments

4. **Comment:** EPA considers the Council on Environmental Quality (CEQ) requirements under 40 CFR Section 1506.1 potentially relevant to the transportation decision-makers for the proposed project. EPA has expressed its opinion at Merger team meetings that there is ‘an allowance for segmentation’ if an action is too speculative to allow productive evaluation in the current assessment and there has been a full analysis conducted for the entire project study area and an accurate assessment of a full range of alternatives. EPA was specifically referring to future phases beyond the replacement of the Herbert C. Bonner Bridge under Phase I. However, it is also important for transportation planners and decision-makers to fully understand that the proposed action will not limit the choice of reasonable alternatives and that the action has independent utility and can be independently justified. The EA should have highlighted these issues and discussed them in detail with supporting documentations. Page 2-13 of the EA iterates EPA’s past position on this issue from the May 21, 2009, meeting. The NEPA requirements for tiering under 40 CFR Section 1508.28 are also issues to be considered and may be appropriate in documented cases where it helps the lead agency

to focus on the issues that are ripe for decision and exclude from consideration issues already decided or not yet ripe.

The potential impacts with the Road North/Bridge South, All Bridge, and Phased Approach/Rodanthe Bridge alternatives are future phases beyond Phase I and are not believed to be ripe for decision. Furthermore, it is made very clear during Merger meetings and in the Review Board's decision that all alternatives would be considered for future phases beyond Phase I. From comments by the U.S. Army Corps of Engineers and others, EPA understood this to mean that even preliminary study alternatives that had been eliminated would be re-evaluated in a future NEPA document for future phases. The EA presents the same alternatives for future phases that were evaluated in the 2008 FEIS with slight bridge and alignment design modifications near Rodanthe.

***Response:** Section 2.3.5 of the EA discusses whether the proposed alternative represents segmentation of the project. FHWA and NCDOT do not propose to segment the Bonner Bridge Replacement Project, but rather build the improvements expected to be needed in phases. The impacts presented for the Parallel Bridge Corridor alternatives consider the environmental consequences of the full project and reflect the reasonably foreseeable range of impacts for the various phases of the NC 12 Transportation Management Plan Alternative. Variations on these alternatives, and perhaps other alternatives, could be studied for future phases as warranted by future conditions, as is noted in the amended LEDPA agreement. Impacts of any new alternatives would be detailed in additional NEPA documentation prior to the implementation of each phase.*

5. **Comment:** July 23, 2010 addition—EPA requests that the FHWA and NCDOT Record of Decision (ROD) for the project clearly makes the distinction between the Merger Review Board decision for Phase I and the plans to re-evaluate future phases under the NC 12 Transportation Management Plan. EPA also requests that the compensatory mitigation efforts by FHWA and NCDOT for Phase I jurisdictional impacts be updated in the ROD or provided to the Merger team agencies in advance of the ROD issuance.

***Response:** The distinction between the Merger Team Phase I decision and plans to re-evaluate future phases is made in Section 3.2 of the EA. NCDOT will continue to coordinate with USEPA during the final design engineering to develop a detailed compensatory mitigation plan for jurisdictional impacts to ARNI; a summary of proposed project mitigation is included in Section 5.8 of this ROD. The compensatory mitigation plan will address all relevant agency mitigation requirements. These issues will be resolved prior to the start of construction during the permitting process, which includes Merger Team meetings for Concurrence Points 4B and 4C.*

6. **Comment:** FHWA and NCDOT have issued several Environmental Impact Statements for the proposed project beginning in 1993 with the DEIS. For purposes of consistency and full disclosure with the public and resource and permitting agencies, a Supplemental FEIS might be the appropriate NEPA documentation since the issuance of the 2008 FEIS. Future phases for the NC 12 corridor are still not very well defined under a proposed NC 12 Transportation Management Plan and this uncertainty should be evaluated fully and objectively in a Supplemental FEIS. Non-highway options should be included in future evaluations.

Response: *Position noted. This comment was in USEPA's June 28, 2010, comment letter and was amended in their July 23, 2010, letter, as addressed under USEPA comment 1 above.*

2009 Updates to Parallel Bridge Corridor Alternatives

7. **Comment:** Section 2.1 of the EA includes updates to the Parallel Bridge Corridor Alternatives. As stated on page 2-1, "These alignment revisions can be incorporated into the Preferred Alternative (See Section 2.3) when a future phase is constructed in Rodanthe in the vicinity of these historic resources". From EPA's perspective, this continued evaluation for future phases of bridges on Hatteras Island is potentially pre-decisional and not consistent with the Merger Review Board's decision on the selection of the Least Environmentally Damaging Preferred Alternative (LEDPA).

Response: *The commenter misinterpreted the statement; the analysis was not meant to indicate that bridges were being selected for later phases of the project, only that if bridges are selected, the designs would avoid impacts to historic resources like the modified designs assessed in the EA.*

8. **Comment:** Constructing another bridge and other highway infrastructure (i.e., Interchange) in the vicinity of Rodanthe would limit future feasible alternatives following the completion of Phase I. With massive bridges on either end of the Pea Island National Wildlife Refuge (PINWR), the only 'reasonable' alternatives that NCDOT and FHWA would potentially consider along NC 12 would be additional bridges at the hot spots and locations where there were breaches formed or bridging the entire 17-mile NC 12 corridor under the Phased Approach/All Bridge alternative. The Phase II Rodanthe Bridge Alternative would commit potentially hundreds of millions of dollars into additional infrastructure south of PINWR and represent a continued transportation investment on a fragile and dynamic barrier island system. EPA has questioned the rationale for constructing additional bridges along the 'wave front' without a full analysis of how such structures would fair during storm events, what contingencies would be available should the bridge not be long enough following a major storm, what maintenance issues and costs might be associated with this alternative, etc.

Response: *If a bridge is constructed in Rodanthe during a later phase (after coordination with the Merger Team and additional NEPA documentation), the bridge will be designed to meet AASHTO Wave Task Force guidelines, as discussed on page 2-103 of the FEIS. Long-term implications of each phasing decision on the options available to complete later phases will be considered as each phase is finalized.*

9. **Comment:** Page 2-6 of the EA describes that additional homes have been built in the Rodanthe portion of the project study area and that relocations, both residential and business, have increased. For the Phased Approach/Rodanthe Bridge (PA/RB) alternative, 3 residential and 1 business relocations were presented in the 2008 FEIS. Residential relocations increased to 6 residential (double) and 7 business relocations (more than triple). In Table 2-1, both the PA/RB and Road North/Bridge South and All Bridge (RN/BS and AB) alternatives indicate an 'Adverse Effect' because the elevation of the bridge as it passes through the Refuge (PINWR). Refuge access in the southern portion of the Refuge would also be reduced under PA/RB, RN/BS and AB alternatives. For RN/BS and AB alternatives, jurisdictional wetland impacts would also be increased from 1.2 acres included in the 2008 FEIS to 2.0 acres (0.8 acres). Under protected species adversely affected under PA/RB, RN/BS and AB, Table 2-2 indicates "None likely". These potential 'future Phase' impacts

are believed by EPA to be potentially significant and may need to be addressed in a Supplemental FEIS.

***Response:** The EA documents on pages 2-6 and 2-8 why the impacts described in the comment are comparable to those of other alternatives evaluated in the FEIS. FHWA and NCDOT will determine the appropriate NEPA documentation for future phases of the project. From the perspective of the need to prepare a Supplemental FEIS at the present time, this comment was in USEPA's June 28, 2010, comment letter and was amended in their July 23, 2010 and October 5, 2010 letters, as addressed under USEPA comment 1 above.*

Preferred Alternative

10. **Comment:** Section 2.3 of the EA describes the Preferred Alternative, which is the Parallel Bridge Corridor with NC 12 Transportation Management Plan alternative. The EA states: "Several aspects of this alternative, including the phasing and the coastal monitoring program, are similar to the Phased Approach/Rodanthe Bridge Alternative, which was selected as the Preferred Alternative in the FEIS". EPA does not concur with the statement. The Parallel Bridge Corridor with NC 12 Transportation Management Plan alternative would essentially allow for a re-evaluation of all reasonable and feasible alternatives, including preliminary study alternatives that were eliminated in earlier phases of the NEPA process. As stated under bullet item #2 on page 2-13, the alternative recognizes the completion of Phase I alone would not meet the purpose and need of the project and represented a commitment by all parties to develop and implement the entire action from Rodanthe to Bodie Island. Constructing a Phase II bridge at Rodanthe also does not meet the purpose and need of the project. EPA has also expressed substantial environmental concerns for constructing new bridges where the pilings and other support structures are in the surf wave zone. NCDOT and FHWA were to further investigate other examples in the U.S. (and potentially Worldwide) where bridges have been constructed in the surf wave zone. To date, NCDOT and FHWA have not reported similar bridge structures and have identified only those bridges that are in open water bays and oceans. These are very different coastal engineering settings and EPA continues to have environmental concerns for the construction of additional bridges along a barrier island.

***Response:** The feasibility of the Phased Approach was evaluated in an Accelerated Construction Technology Transfer workshop. Participants included structural engineers, coastal engineers, academia, contractors, and other experts. The consensus of workshop participants was that the Phased Approach, including a bridge at Rodanthe, was a feasible alternative. Therefore, this alternative will need to be given consideration in future phases under the NC 12 Transportation Management Plan.*

11. **Comment:** Section 2.3.2 describes the characteristics of the new Preferred Alternative, Parallel Bridge Corridor with NC 12 Transportation Management Plan. For Phase I of NC 12 Transportation Management Plan Alternative the wetland impact is described as 1.0 acre. The EA describes that this impact is slightly higher than the Phased Approach alternatives (i.e., 0.6 acres) and slightly less than the RN/BS Alternative of 1.9 acres. Under the Table 2-3 Impacts between the FEIS and EA, 6.4 acres of new easement would be required within PINWR and 4.8 acres of existing right of way would be returned to PINWR under the RN/BS Alternative and 3.5 acres and 2.7 acres, respectively, for the NC 12 Transportation Management Plan. Under the category of Cultural Resource Impacts, there is an Adverse

Effect to PINWR and an Adverse Effect to the former Oregon Inlet U.S. Coast Guard Station. Under the NC 12 Transportation Management Plan, 2.2 acres of aquatic bottom, 0.2 acres of Submerged Aquatic Vegetation (SAVs), and 3.1 acres of wetlands and SAV would be shaded by Phase I. Under the category of Protected Species Impacts in Table 2-4, both the FEIS and EA columns indicate that there will be likely disturbance to piping plover and sea turtles nesting on the beach, but not likely to affect in the ocean. EPA does not understand this biological assessment in the context of U.S. Fish and Wildlife Service (USFWS) designations of impact (affect) under the Endangered Species Act (ESA).

***Response:** The reason for the differentiation between the impacts to protected sea turtles species on land versus in the ocean is that USFWS has jurisdiction when they are on land, whereas NMFS has jurisdiction when they are in the ocean. However, this differentiation does not apply to piping plovers (i.e., impacts to plovers are considered on land only). This distinction was addressed on page 4-118 of the FEIS.*

12. **Comment:** There is a footnote included in Table 2-6 that indicates that the NC 12 Transportation Management Plan Alternative (Preferred) includes impacts under all 5 Parallel Bridge Corridor Alternatives and that this reflects the range of reasonably foreseeable impacts associated with the Preferred Alternative. EPA does not concur and this analysis is inconsistent with the Merger Review Board decision and is potentially ‘pre-decisional’ for the future range of reasonable and foreseeable alternatives. There is no discussion concerning other potential alternatives such as the future transition and use to ferries. Several of these alternatives, including the All Bridge Alternative (17 miles of bridging), are not believed by EPA or other agencies to be reasonable alternatives and the likelihood of being permitted by other agencies or found to be compatible with the USFWS/PINWR is even more unlikely. EPA does concur with the statements made concerning the Merger Review Board amendment on Page 2-30 of the EA.

***Response:** FHWA and NCDOT consider the aforementioned alternatives to reflect the likely range of potential impacts of future phases because they cover a range of alternative types and locations, including nourishment, road relocation, and bridging options along NC 12. The All Bridge Alternative includes 12.4 miles (20.0 kilometers) of bridging. As noted in the response to USEPA comment 2, the LEDPA Amendment signed by the Dispute Resolution Board allows for alternatives not previously selected for detailed study, including a ferry service, to be studied in future phases of the project. However, as part of the evaluation of a ferry service, the environmental and capacity concerns discussed in Section 2.2.6 of the FEIS will have to be addressed at the time future phases are under study.*

13. **Comment:** Under Table 2-6, the EA presents impact information for the Phase II, III and IV alternatives that were shown in the FEIS. Total SAV and wetland impacts are as follows: Nourishment Alternatives (11.65 acres shading and 3.98 acres fill), RN/BS Alternative (23.23 acres shading and 78.22 acres fill), All Bridge (48.11 acres shading and 13.76 acres fill), Phased Approach/Rodanthe Bridge (14.84 acres shading and 3.01 acres fill) and Phased Approach/Rodanthe Nourishment (14.81 acres shading and 3.00 acres fill). NCDOT and FHWA present these alternatives under the NC 12 Transportation Management Plan Alternative (Preferred). The presentation of this information in the EA is not consistent with the statement on Page 2-28 concerning the new Preferred Alternative and that additional solutions (alternatives) need to be further explored and identified for future phases beyond Phase I.

Response: See the response to USEPA comment 12 above.

14. **Comment:** The estimates contained in Tables 2-3 and 2-4 do not correlate to the impacts presented in Tables 2-5 and 2-6. For example, under NC 12 Transportation Management Plan, total open water and SAV impacts are shown as 8.77 acres of shading and 2.45 acres of fill and piles. Total wetland impacts are showing as 2.23 acres for shading and 1.02 acres for fill and piles. Total shading impacts are showing as 11.0 acres and total fill impacts are shown as 3.47 acres.

Response: Tables 2-3 (human environment impacts) and 2-4 (natural environment impacts) compare the FEIS and EA Phase I impacts for the alternatives that were modified in the EA. Table 2-5 provides detailed wetlands and waters impacts for Phase I of all of the Parallel Bridge Corridor alternatives, and Table 2-6 provides these detailed impacts for all phases of the Parallel Bridge Corridor alternatives. The impacts contained in Table 2-3 are not meant to correlate to the other three tables. The wetlands and waters impacts in Tables 2-4 and 2-5 are consistent, although more detail and greater accuracy (i.e., measured to two decimal points) is provided in Table 2-5. In addition, the wetlands and waters impacts in Tables 2-5 and 2-6 are consistent in cases where the Phase I impacts can be separated from the all phases' impacts in Table 2-6. For example, the SAV impacts for the Nourishment and Phased Approach alternatives are the same between the two tables because all of the SAV impacts occur in Phase I for these alternatives.

15. **Comment:** Under Section 2.3.3.3, Jurisdictional Issues, impact changes are described as 'small and not significant'. The EA does not address the fact that these jurisdictional resources are considered by EPA to be "Aquatic Resources of National Importance", (ARNI), and that 'relatively' small increases in jurisdictional impacts are potentially significant.

Response: The intent of the referenced text was to indicate that the increase in wetlands impacts was small and not significant because of the prevalence of wetlands in the area. The complete referenced sentence is "Given that wetlands and other waters dominate the project area as illustrated in Figure E-2 of the FEIS, these changes are small and not significant." If the relatively small amount of wetlands impacts was not considered significant in the FEIS, then a slight increase in the amount of impact also should not be considered significant.

16. **Comment:** It should be noted that the comment on Page 2-28 concerning the selection of the LEDPA as the Phased Approach/Rodanthe Bridge Alternative is misleading. The Merger Review Board comprises NCDOT, FHWA, USACE and NCDWQ management representatives. Not all of the Merger team agencies agreed with the selecting of the LEDPA. EPA had substantial environmental concerns for selecting future phases of the proposed project beyond Phase I, the replacement of Bonner Bridge. These concerns were detailed in previous EIS comment letters. EPA does concur with the statements that are referenced on Page 2-29 made at the May 21, 2009, meeting.

Response: The referenced EA statement could be misleading because it lists the agencies that comprise the Dispute Resolution Board, which are the same agencies as USEPA lists in their comment. The equivalent text in Section 3.2 of this ROD includes revisions that take this comment into consideration.

17. **Comment:** Page 2-32 of the EA discusses the safety and related issues associated with the existing Bonner Bridge. The EA does not fully disclose the current efforts and the approximate \$40 million rehabilitation contract to extend the life of the existing Bonner Bridge or other routine or periodic maintenance. It is also important to note the two additional ‘hot spots’ along NC 12 on Hatteras Island near Buxton and Hatteras Village that are south of the Rodanthe terminus. The entire NC 12 corridor needs to be evaluated in future NEPA documents for future phases beyond Phase I. Page 2-32 cites ‘paraphrased’ comments made by Mr. Militscher of my staff at past Merger meetings. It is important to note that these are not direct quotes and should not be given any more weight than other comments that were made by other Merger team representatives, including FHWA, NCDOT, USACE, USFWS, etc.

***Response:** The current rehabilitation project has an estimated contract cost of approximately \$15 million and includes repairs recommended as a result of the 2006 structural assessment. The project website has presented information on the rehabilitation since work has been underway. The rehabilitation project and the two hot spots mentioned have independent utility and, therefore, discussion in the FEIS and EA is not needed. It is agreed that the comments on page 2-32 of the EA are not direct quotes and have no more weight than other Merger Team agency member comments.*

18. **Comment:** EPA does not concur with the footnote statement at Tables 2-7 and 2-8, Pages 2-34 and 2-35. This may not be the range of reasonable alternatives for future phases and their respective costs. As previously stated, the Phased Approach/All Bridge and Road North/Bridge South alternatives may not be ‘permissible’ due to the severity and magnitude of impacts, the lack of suitable mitigation, etc.

***Response:** FHWA and NCDOT consider the various Parallel Bridge Corridor alternatives to reflect the likely range of potential impacts of future phases because they cover a range of alternative types and locations, including nourishment, road relocation, and bridging options along NC 12. FHWA and NCDOT believe it is premature to eliminate any of the Parallel Bridge Corridor alternatives from consideration as a part of future phases at this time.*

19. **Comment:** EPA does not believe that the Phased Approach/All Bridge and Road North/Bridge South alternatives may not be ‘permissible’ due to the severity and magnitude of impacts, the lack of suitable mitigation, etc. EPA does not believe that these alternatives are reasonable considering the magnitude of impacts and should be dropped from further consideration for future phases of the proposed project.

***Response:** Comment is acknowledged. FHWA and NCDOT believe it is premature to eliminate any of the Parallel Bridge Corridor alternatives from consideration as a part of future phases at this time.*

20. **Comment:** The EA also discusses potential breaches along Hatteras Island in the context of single events to be responded to on Pages 2-32 and 2-33. In all probability, there is a greater likelihood that a very severe storm event will cause multiple breaches along the NC 12 corridor. None of the described ‘Phased Approach’ Parallel Bridge Corridor (II, III, or IV) alternatives will address this potential outcome. There are numerous locations along this thin island that are not currently identified ‘hot spots’ that could be breached under the ‘worst conditions’. EPA believes that modeling or performing detailed engineering and

environmental analyses for unpredictable storm event conditions is not realistic. EPA further suggests greater consideration be given to developing a short-term ‘contingency plan’ for temporary ferry service until the NC 12 Transportation Management Plan can be fully evaluated and detailed in the future. The specific details of the coastal monitoring program also need to be further discussed in future NEPA documents and with the Merger team agencies (Referring to comment on Pages 3-4 and 3-5 of the EA).

Response: *The potential for breaches are discussed in Section 3.6.3.4 of the FEIS. As discussed in this section, it is not likely that multiple breaches would occur because, while five potential breach locations exist in the project area, there is only one location where it is considered likely to breach in the next 50 years. If it is implemented as part of later phases of the NC 12 Transportation Management Plan Alternative, the Phased Approach/Rodanthe Bridge Alternative would bridge all of the potential breach locations by the time Phase III is completed. Breach potential will continue to be a factor in future phase decision-making. NCDOT currently has an emergency ferry service in place that would operate with limited service between Rodanthe on the Outer Banks and Stumpy Point on the mainland.*

21. **Comment:** EPA believes that shoreline and other landscape features will continue to change along the barrier islands, irrespective of potential impacts from sea level rise. The research studies that NCDOT and FHWA have cited only provide further evidence to the fact that barrier islands are dynamic features and are influenced by both ‘normal shoreline erosion’ factors, as well as unpredictable and periodic storm events. The barrier islands along North Carolina have already dramatically changed in the last 200 years and this change will only potentially accelerate due to global climate change effects. Planning efforts for future conditions need to recognize that engineered solutions to address these changes may not be reasonable and effective.

Response: *The statement, “EPA believes that shoreline and other landscape features will continue to change along the barrier islands, irrespective of potential impacts from sea level rise” is true. The NC 12 Transportation Management Plan Alternative is intended to analyze and address future shoreline change, including consideration of non-engineered solutions if any exist.*

C.2.2 State Agencies

North Carolina Department of Crime Control and Public Safety, Division of Emergency Management—June 11, 2010

1. **Comment:** Please ensure project agrees with the MOA between NCDOT and NC Flood Mapping Program.

Response: *This would be done, if applicable. The project will not change the elevation of the storm surge; see Section 4.6.2 of the FEIS.*

North Carolina Department of Cultural Resources—May 19, 2010

1. **Comment:** No comment.

Response: *Acknowledged.*

North Carolina Department of Environment and Natural Resources—June 18, 2010

1. **Comment:** It is requested that the Department of Transportation continue to work with our agencies in order to adequately address project concerns. Addressing these comments during the review process and/or during the NEPA Merger Process will avoid delays during the permit phase.

Response: This is NCDOT's intention. Also, representatives of the NCDENR-Division of Water Quality (DWQ), NCDENR-DCM, NCDENR-DMF, and the NCDENR-Wildlife Resources Commission (WRC) are, and will continue to be, members of the project's Merger Team.

North Carolina Department of Environment and Natural Resources, Division of Coastal Management—June 16, 2010

1. **Comment:** A formal DCM review of the project to determine consistency with North Carolina's Coastal Management Program cannot occur until a Coastal Area Management Act (CAMA) major permit application is received. At that time, the CAMA major permits application will be circulated to the network of state agencies that comprise North Carolina's Coastal Management Program. The statutes, rules and policies of each of these agencies must be considered during the review of the CAMA permit application. This process will also include a consistency review by the DCM District Planner of the CAMA land use plan(s) in effect at the time of permit decision.

Response: CAMA requirements are understood and will be met.

2. **Comment:** Due to the complexity of the project and the extent of environmental impacts that are proposed. The N.C. Department of Transportation (NCDOT) is urged to submit the CAMA major permit application for this project to DCM a minimum of one year prior to the anticipated construction let date. During the CAMA major permit application review process, DCM may have additional comments after examining the more detailed environmental information that will be provided with the permit application. DCM may also place conditions on any CAMA permit that is issued to avoid, minimize and/or mitigate environmental impacts. The comments provided in this letter shall not preclude DCM from requesting additional information throughout the CAMA major permit application review process, and following normal permitting procedures. Furthermore, nothing in this letter shall be interpreted as providing an opinion on the ultimate outcome of any CAMA permit decision. Such a decision can only be made following a complete multi-agency review of the final permit application. DCM will work closely with NCDOT, the Design-Build contractor, and the relevant state and federal agencies, to ensure that the final project design is consistent with the N.C. Coastal Management Program, including the N.C. Administrative Code [i.e. N.C. Coastal Resources Commission (CRC) rules].

Response: This is the same comment as NCDENR-DCM comment 3 on the FEIS. The response is on page D-34 of the EA. Position and procedures are understood. The permitting process for Phase I of the project will begin once the design-build contract has been awarded.

3. **Comment:** This project is being carried through the NEPA/404 Merger Process, and DCM is a member of the NEPA/404 project team. It appears as though the information contained within the EA is consistent with the information that has been previously provided to DCM, and upon which we have commented, through the NEPA/404 Merger Process.

Response: Comment acknowledged.

4. **Comment:** As stated in Previous DCM letters about this project, the transportation link that the Herbert C. Bonner Bridge provides between Hatteras Island and Bodie Island is a critical component in the safety of the residents and visitors of Hatteras Island and Ocracoke Island, and the economic vitality of the Outer Banks. Given the importance of this transportation link and the advancing age of the existing Bonner Bridge, DCM continues to urge NCDOT to move expeditiously towards the development of final project design that satisfies the transportation needs of the residents and visitors of Bodie, Hatteras and Ocracoke Islands, while also ensuring that coastal resources are adequately protected. DCM looks forward to working with the NEPA/404 project team to move this project forward in an expeditious, yet fiscally, socially and environmentally responsible manner.

Response: Comment acknowledged.

North Carolina Department of Environment and Natural Resources, Division of Environmental Health—May 19, 2010

1. **Comment:** No objection to project as proposed.

Response: Acknowledged.

2. **Comment:** Relocation and/or replacement of potable water supply lines will require engineered plans and specifications to be submitted to the Public Water Supply Section for review and approval before construction. Final approval must be issued before placing the water mains into service.

Response: Requirements understood and will be met.

3. **Comment:** The Town of Nags Head owns and maintains water supply lines within the NCDOT ROW along Hwy 12 upon approach to the project area. Please contact the Town of Nags Head for assistance in determining precise locations of water mains such that construction does not affect utility piping or services to customers.

Response: The project is not within the Town of Nags Head.

North Carolina Department of Environment and Natural Resources, Division of Water Quality—June 7, 2010

1. **Comment:** Commitment 5 discusses pile placement and jetting and indicates that potential damage from spoil, piles to wetlands, SAV, and Oregon Inlet will be minimized. The NCDOT is respectfully reminded that impact from jetting will need to be estimated as accurately as possible when submitting an application for a 401 Water Quality Certification, and any impacts exceeding estimates will need to be submitted to the DWQ for permit modification. Mitigation may be required for impacts from jetting.

The DWQ has had discussions with the NCDOT regarding jetting within Oregon Inlet. However, the possibility of jetting within wetlands, as indicated in Commitment 5, has not been satisfactorily discussed. It is unclear to the DWQ why jetting may be required in wetland areas as these areas are easily accessible. The NCDOT is also respectfully reminded that a satisfactory justification as to why jetting is required for the construction this project will need to be included in the 401 Water Quality Certification application. Additionally, the

NCDOT will need to explain what measures will be taken to reduce all impacts from jetting including turbidity, sedimentation, discharge water run-off, be removal of spoil, etc.

Response: *A similar comment was made by the commenter on the FEIS. On page D-36 of the EA (NCDENR-DWQ comment 1) it was indicated that the Design-Build contract for the build alternative would require each prospective contractor to include their proposed means and methods for minimizing turbidity in their pre-bid Technical Proposal. The means and methods would then be evaluated as part of the contractor selection process. In addition, approaches to minimizing jetting impacts are discussed on pages 2-110 to 2-111 of the FEIS. Additionally, this issue was discussed at the November 10, 2008, Concurrence Point 4A Merger Team meeting for Phase I of the project (replacement of Bonner Bridge). It was agreed that NCDOT's Design-Build contractor would utilize construction techniques to minimize damage to wetlands/SAV/Oregon Inlet from jetting spoils.*

- Comment:** It is stated in Section 2.1 and shown in Table 2- 1 that residential and business relocations increased between the FEIS and the EA for the Phased Approach/Rodanthe Bridge alternative. Residential relocations doubled from three (3) to six (6); business relocation increased from one (1) with two (2) partially affected to seven (7). Residential relocations doubled while business relocations increased seven-fold. This would seem to make them significant. It is concluded that the increases were not seen as significant because there is enough available housing and business locations, assistance will be provided, and owners would be paid fair-market value for the property. The DWQ does not agree that having locations available and providing services makes the relocations less significant. The DWQ does agree that, relatively speaking, the increase in relocations is not significant. This is not because housing or business locations are available and assistance would be paid but because as stated in the first bullet in the text, the numbers are no higher than is that has been considered with some of the other alternatives.

Response: *It was not intended for the EA to imply that having locations available and providing services makes the relocations less significant. This was stated as one of two reasons that "the increase in the number of relocations does not represent a new significant impact" (EA page 2-6). The other reason, as noted by the commenter, being that the relocation impacts for the EA alternatives are within the range of impacts presented for the detailed study alternatives assessed in the FEIS.*

- Comment:** Section 2.1 discusses impacts to a cemetery located in Rodanthe. It is stated that no impacts to marked graves would occur; a study would be undertaken to identify any unmarked graves if necessary and those would then be avoided. It is unclear to the DWQ how it is known that unmarked graves could be avoided, unless impacts to the cemetery could be avoided altogether. Please clarify.

Response: *Surveys can and will be conducted to identify any unmarked graves.*

- Comment:** The document does not discuss mitigation in much detail. A very brief mention of mitigation is in Section 3.3.4 (September 17, 2009, Merger Meeting). Mitigation was discussed to some extent at that meeting. According to NCDOT, the land use plan for Dare County requires that some, if not all, mitigation for impacts to wetlands in Dare County take place in Dare County. The NPS has stated that any impacts occurring within the Pea Island National Wildlife Refuge should be mitigated within the Refuge. Due to these constraints mitigation should be discussed in more detail than is present in Section 3.3.4.

Response: As a result of the September 17, 2009, Merger Team meeting (see Section 3.3.4 of the EA), NCDOT has developed proposals for mitigating impacts to wetlands and SAVs within the Phase I area. A brief description is included in Section 5.8 of this ROD. A full mitigation plan is under development and will be submitted to the appropriate agencies for review. The compensatory mitigation plan will address the requirement to provide for mitigation in Dare County. These issues will be resolved prior to the start of construction during the permitting process, which includes Merger Team meetings for Concurrence Points 4B and 4C.

5. **Comment:** The DWQ agrees that no significant increase in impacts have occurred with the Parallel Bridge Corridor with NC 12 Management Plan alternative.

Response: Comment acknowledged.

North Carolina Department of Environment and Natural Resources, Washington Regional Field Office—June 9, 2010

1. **Comment:** Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.

Response: Comment acknowledged. This will be addressed during final design.

2. **Comment:** 401 Water Quality Certification is required. Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required.

Response: Comment acknowledged. These will be addressed during the final design/permitting stage, which will begin once the design-build contract is awarded.

North Carolina Department of Environment and Natural Resources, Wildlife Resources Commission—June 4, 2010

1. **Comment:** The EA identifies a new preferred alternative; the Parallel Bridge Corridor with NC 12 Transportation Management Plan, this alternative serves to more accurately depict the future implementation of the phased approach. Therefore our comments in response to the FEIS and DEIS as they pertain to the impacts of the phased approach alternatives are still applicable to the newly preferred alternative identified in the EA.

Response: Comment acknowledged. All agency comments on the DEIS and FEIS have been answered previously.

2. **Comment:** Increased impacts to natural resources as a result of two shifts (an alignment shift on the southern terminus of the Phase I bridge and an alignment shift on the southern bridge terminus at Rodanthe) represent minimal augmentations to the potential environmental impacts of the project as a whole.

Response: Position understood.

3. **Comment:** With the exception of an alignment shift on the southern terminus of the Phase I bridge and an alignment shift on the southern bridge terminus at Rodanthe, impacts noted in the EA are consistent with those quantified in the FEIS. Increased impacts to natural resources as a result of these shifts represent minimal augmentations to the potential

environmental impacts of the project as a whole. This document does not provide any significant new information but more accurately presents supplemental information to the FEIS; therefore we would like to take the opportunity to reiterate our October 16, 2008 comments on the FEIS as well as our January 17, 2006 and March 16, 2007 SDEIS comments.

***Response:** Understood. All agency comments on the DEIS and FEIS have been answered previously.*

C.2.3 Local Agencies

Dare County—June 21, 2010

1. **Comment:** The County of Dare strongly believes the Bonner Bridge needs immediate replacement as a matter of public safety and necessity. In the interest of replacing the bridge now, Dare County
 - Supports NCDOT's new Preferred Alternative outlined in the EA
 - Concurs with the elimination of the Pamlico Sound "Long Bridge" Alternative
 - Favors the "Transportation Management Plan" for development of NC Highway 12
 - Believes the EA does not have significant impacts requiring further study and delay
 - Recommends immediate construction since a Supplemental FEIS is not necessary

***Response:** The full letter presented in Appendix B of this ROD describes the reasons why Dare County is taking these positions. FHWA and NCDOT agree with these positions, which are reflected in the decision contained in this ROD.*

Town of Nags Head—June 8, 2010

1. **Comment:** Because of Nags Head's proximity to the bridge, our residents and visitors rely on it for work and for play. In addition, as a Dare County municipality, our town relies on the bridge, and the tourism it conveys, for economic stability. As a result, it is our hope that the project move forward expeditiously, and in a manner that best serves the public as a whole.

As you know, the Herbert C. Bonner Bridge over Oregon Inlet is the only means of land access to Hatteras Island not only for residents but also for tourists, fishermen, and others who spend more than \$300 million a year in the area. With each passing day, the situation becomes more pressing for Dare County residents, landowners, entrepreneurs, and visitors. For example, the economic impact caused by a delay in construction resulting in interrupted traffic flow to Hatteras Island could be sizeable. In 2005, Hatteras Island accounted for 20% of taxable property values in Dare County with 8,320 taxable parcels valued at \$3.1 billion. Another 348 parcels are federally owned and tax exempt and include the Pea Island National Wildlife Refuge and Cape Hatteras National Seashore, areas where people come from all over the United States to enjoy pristine beaches, surfing, bird watching, and fishing. The result of restricted access to those areas would have a direct impact on Nags Head's, and by extension, Dare County's, economic viability.

***Response:** Position and concerns acknowledged. It is the desire of FHWA and NCDOT to move the project forward expeditiously.*

C.3 Non-Governmental Organization Comments and Responses—Southern Environmental Law Center—June 21, 2010

This section responds to written comments on the EA submitted by non-governmental organizations (NGOs). The Southern Environmental Law Center (SELC) was the only NGO to comment on the EA. Each substantive comment requiring a response is listed below, followed by a response. The comments in this section quote the correspondence received. SELC's comments often include background material, such as the citation of particular laws, regulations, or legal cases, prior to specific substantive comments. When appropriate, that background material is not included below. The original correspondence containing both the background material and the specific substantive comments are presented in Appendix B.

1. **Comment:** We find the EA flawed in several aspects and do not agree that the new “preferred alternative” is a viable or legal alternative. As discussed in more detail below, the EA is inadequate and the project cannot go forward as planned for the following reasons:
 - a. Issuance of an environmental assessment violates the National Environmental Policy Act (“NEPA”), 42 U.S.C. §§ 4321-4347, because a supplemental final environmental impact statement is required instead.

***Response:** The purpose of the EA is addressed on EA page 1-1. The EA was prepared in accordance with 23 CFR 771.130(c). The EA was circulated for 30 days (with an additional 60-day comment period associated with the public hearings) to provide resource agencies and the public with the opportunity to review it. As indicated, the findings of the EA, combined with results of the agency and public review were used determine if a Supplemental Final Environmental Impact Statement needed to be prepared. It was concluded that the changes to the FEIS presented in the EA did not result in significant environmental impacts not evaluated in the FEIS. Thus, this ROD was issued.*

- b. The new preferred alternative and the EA violate NEPA by improperly segmenting the project and by engaging in improper reverse engineering.

***Response:** Similar comments by SELC were answered in the EA. The responses there apply to this comment as well. See Revised Final Section 4(f) Evaluation comment 9 and its response in the EA on page F-36. See Revised Final Section 4(f) Evaluation comment 10 and its response in the EA on page F-38. See FEIS comments 45 and 46 and the responses in the EA on pages D-57 and D-58. Responses to the more detailed comments 8 through 11 below on this issue provide more information.*

- c. The EA incorporates a Revised 4(f) Evaluation that is inadequate and does not satisfy the requirements of Section 4(f) of the Department of Transportation Act of 1966, because, among other things, the evaluation erroneously concludes that the new preferred alternative will not “use” Refuge lands based on a joint planning exception that does not apply.

***Response:** Contrary to this comment, FHWA did determine that a Section 4(f) approval would be required for the “use” of property in the Refuge. On pages B-12*

to B-15 of EA Appendix B, the Section 4(f) evaluation details the determination of use for the Refuge as a refuge versus the Refuge as an historic property. While the documentation of joint planning between the Refuge and the roadway mean that there is no “use” of the Refuge as a refuge, there is a “use” of the Refuge as an historic property. Therefore, the evaluation includes an analysis of impacts to the Refuge. This ROD, supported by the EA and the Revised Final Section 4(f) Evaluation, documents FHWA’s approval of the use of the Refuge for the replacement of the bridge under the NC 12 Transportation Management Plan.

- d. The new preferred alternative likely will not be consistent with the principles of the Coastal Area Management Act, yet the EA fails to address the issue.

Response: This concern is addressed on pages 4 and 5 of the FEIS, as indicated in the SELC letter. The potential that a variance might be required has been noted in multiple NCDENR-DCM comment letters and NCDOT recognizes that possible need. Also see the response to comment 16 below.

I. The new preferred alternative violates NEPA

2. **Comment:** Unable to develop any plan for maintaining a transportation corridor through PINWR that did not violate federal law and that satisfied all resource agencies, NCDOT and FHWA have now identified a new preferred alternative. This new alternative essentially ignores the problematic impacts of maintaining a transportation corridor through the Refuge by delaying until later all decisions related to it, and amounts to little more than sweeping the many problems associated with the Parallel Bridge Alternatives under the carpet. The new preferred alternative, the “Parallel Bridge Corridor with NC 12 Transportation Management Plan” or “PBC/TMP,” consists of several phases. Phase I involves construction of a bridge over Oregon Inlet parallel to and near the current bridge, which would be 2.6 to 3.2 miles long, depending on the design selected. (EA Appendix C at C-1.) The remaining phases are referred to only vaguely as “Later Phases” and involve “monitoring the conditions and delaying the decision-making” to somehow maintain a transportation corridor through PINWR in a way or ways that are not identified or analyzed in the EA. (EA at 2-17.)

Response: The problematic aspects of the Parallel Bridge Corridor alternatives are recognized and assessed in Chapter 4 of the FEIS and Section 2.3 of the EA, including all project phases. The monitoring program and phasing plan are designed to meet the challenges of NC 12’s coastal environment in a systematic and timely manner.

3. **Comment:** The EA fails to specify how the corridor will be maintained, though it will surely involve some combination of bridging, beach nourishment, dune maintenance, moving NC 12 outside of its easement, and/or other activities that have already been found to affect Refuge lands adversely in prior NEPA documents, in what the agencies have called a “mix and match” approach. (EA Appendix B at B-6.) The EA leaves the decision on the mixing and matching (and evaluation of its impacts) for another day. In so doing, the new PBC/TMP violates NEPA.

Response: A range of alternatives and potential impacts for all phases of the project are addressed in the FEIS, and the EA (in Section 2.3.4) documents the reasons why finalizing these decisions closer to implementation is an appropriate strategy. The EA augmented, but did not completely replace, the findings of the FEIS. FHWA and

NCDOT will determine what additional NEPA documentation is required for each subsequent phase. The outcomes of prior public involvement efforts and interagency coordination, as well as the results of the sea level rise expert panel, suggest that this is the most practicable approach to advancing the project.

A. The issuance of an environmental assessment, instead of a revised final environmental impact statement, violates NEPA.

4. **Comment:** The issuance of an EA that purports to describe the environmental impacts of the new preferred alternative, instead of issuing a revised or supplemental final environmental impact statement (“SFEIS”), violates NEPA. As described in our previous comments, the decision to issue an EA instead of an SFEIS appears to have been driven by a desire to truncate public review and comment on the new preferred alternative and its non-compliance with applicable laws. According to NCDOT status reports on the Bonner Bridge Replacement Project, NCDOT intended to issue an SFEIS as late as July 24, 2009, but by July 31, 2009, had begun considering issuing an EA instead. Handwritten notes by NCDOT staff dated July 21, 2009, reveal NCDOT’s “concern” about “allowing the public to comment on the ‘new’ alternative” and its apprehension that it would have to issue a draft SFEIS for comment before issuing the SFEIS and Record of Decision. (These notes were attached to our November 13, 2009 comments.)

***Response:** FHWA regulation 23 CFR 771.130(c) states that an EA can be used to determine the impacts of changes to a project. The EA can then be used to determine if a supplemental EIS is necessary. The purpose of the EA is indicated on page 1-1 of the EA. The EA was circulated for 30 days (with an additional 60-day comment period associated with the public hearings) to provide resource agencies and the public, including the commenter, with the opportunity to review it. The extent of the public hearing/open house program and of the comments received are described in Section C.1.1 of this ROD. NCDOT received 4,062 public comments. A similar comment (comment 7) was made by SELC in their comments on the Revised Final Section 4(f) Evaluation. The comment and response begin on page F-31 of the EA.*

5. **Comment:** Concerns over expediency, however, cannot justify a decision to issue an EA when an EIS is required. Federal regulations implementing NEPA list the circumstances in which an SFEIS will and will not be required, all of which relate to the substance and significance of new impacts or new information related to the proposed action. 23 C.F.R. §771.130 (2010); 40, C.F.R. § 1502.9(b) (2009). The regulations do not sanction an agency’s issuing an EA in order to expedite a decision or exclude the public from the process - for instance, to avoid the time and effort to issue a draft SFEIS or to deter members of the public from commenting on a proposed action or alternative. Doing so directly controverts the explicitly stated purpose of NEPA.

The issuance of the EA in the present case—as well as the fact that the “later phases” of the new preferred alternative are not defined—frustrates these purposes of NEPA. First, issuance of the EA discourages public involvement by failing to resolve the question of how the later phases will be accomplished and, therefore, preventing public examination of, and comment on, the details and impacts of the new proposed alternative. Moreover, the issuance of an EA will not “give the public assurance that the agency has considered environmental concerns,” because, in fact, it has not. Indeed, it cannot thoroughly consider environmental impacts of an action when it has not even defined the action with sufficient particularity to be able to identify those impacts.

Because the agencies in the present case elected to publish an EA and not a supplemental FEIS, the public was excluded from the process to a degree. Notice of a draft EIS, a final EIS, and any supplements to an EIS must be published in the Federal Register, with the public having an opportunity to comment. 40 C.F.R. §§ 1506.9, 1506.10, 1502.9(c)(4)1, 503.1. Copies of an EIS must be sent to a laundry list of persons, including “[a]ny person, organization, or agency requesting the entire environmental impact statement” and “any person, organization, or agency which submitted substantive comments on the draft.” 40 C.F.R. § 1502.19. On their face, these same regulations do not apply to EAs. Thus, in the present case, the decision to issue an EA on the new alternative thwarted the public notice and comment requirements that would have applied if an SFEIS had been issued instead. For instance, the agencies published notice in the Federal Register for the FEIS (73 Fed. Reg. 55,842 (Sept. 26, 2008)), but not for the EA. The issuance of an EA instead of a supplemental EIS has accordingly discouraged public review of the new preferred alternative.

In addition, because NCDOT and FHWA previously concluded that the proposed project warrants an EIS, any significant new information or circumstances affecting the project or the selection of an alternative must also be reviewed in an SFEIS. As the U.S. Supreme Court explained, “[i]t would be incongruous with [NEPA’S] approach to environmental protection, and with the Act’s manifest concern with preventing uninformed action, for the blinders to adverse environmental effects, once unequivocally removed, to be restored prior to the completion of agency action” Marsh v. Oregon Natural Res. Council, 490 U.S. 360, 371 (1989) (discussing requirement for SFEIS). This requirement is also contained in both the controlling regulations and the internal guidance of the FHWA. Any agency must “prepare supplements to either draft or final environmental impact statements” in two circumstances, first, if the “agency makes substantial changes in the proposed action that are relevant to environmental concerns” and, second, if there “are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c) (2009). The internal guidance states that “[w]henver there are changes, new information, or further developments on a project . . . a supplemental EIS is necessary.” Ali F. Sevin, Director, Office of Env’tl Policy, FHWA, “FHWA Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, Section XII: Supplemental Environmental Impact Statements” (1987), available at <http://environment.fhwa.dot.gov/projdev/impTA6640.asp>.

***Response:** An EA in the manner used for this project is appropriate. The conclusion of FHWA and NCDOT based on public and agency review of the EA is that the changes in the alternatives and their impacts made since the FEIS did not result in significant environmental impacts not previously evaluated in the FEIS, and therefore an SFEIS is not needed. A full document distribution (including those that received the FEIS) and agency and public review program was conducted for the EA. The public provided 4,062 comments during the public hearing comment period.*

6. **Comment:** In the present case, significant new information and circumstances that have arisen since the issuance of the FEIS in September 2008 justify the issuance of an SFEIS or RFEIS for public comment. As an example, there has been significant continuing progress in the scientific study of the effects of global climate change and sea level rise on coastal landscapes. The EA acknowledges one such development, the “North Carolina Sea-Level Rise Assessment Report,” prepared by the N.C. Coastal Resources Commission’s Science Panel on Coastal Hazards. (EA at 1-3. See also EA at 2-30 to 2-3 1.) The EA states that the report “recommended that a sea level rise of 1 meter (39 inches) by the year 2100 be adopted

for policy development and planning purposes for the state. This recommendation is within the range of projected sea level rise considered in the FEIS...” (Id.)

That statement is not accurate. Although the report does recommend using a one-meter rise for planning purposes, it actually predicts various sea-level-rise scenarios, stating that the “most likely scenario for 2100 A.D. is a rise of 0.4 meter to 1.4 meters (15 inches to 55 inches) above present” and that a two-meter rise is “possible.” “North Carolina Sea-Level Rise Assessment Report” at 11 - 12. In contrast, the FEIS discusses two scenarios, one in which sea level rises two millimeters (0.08 inches) per year (which equates to .18 mm (7.2 inches) by 2100, and the other in which sea level rises seven millimeters (.28 inches) per year (which equates to 0.63 meters (25.2 inches) by 2100. (FEIS at 3-58.) Thus, the FEIS assumes sea level rise levels that are much lower than the levels stated in the report. The EA fails to adequately consider this and other evidence of increasingly rapid sea level rise, which the agencies should take into account, especially in light of President Obama’s directive to federal agencies to base decisions on sound science, including decisions related to mitigating the threat of climate change. Here, NCDOT and FHWA appear to have chosen overly optimistic estimates of sea level rise in order to avoid more stringent and accurate assessment of its effects.

Response: SELC had comments related to sea level rise in their comments on the FEIS and Revised Final Section 4(f) Evaluation. The comments and NCDOT and FHWA’s responses are: comment 8 in the EA on page D-42, comment 32 in the EA on page D-53, and comment 8 in the Revised Final Section 4(f) Evaluation, 5th bullet, on page F-35.

Page 3-58 of the FEIS focused on two accelerated sea level rise scenarios: 1) present rate plus 2 millimeters (0.08 inches) per year and 2) present rate plus 7 millimeters (0.28 inches) per year. The published sea level rise rate is 4.27 millimeters (0.17 inches) per year at Duck, North Carolina. Adding this present rate in the study area (4.27) to each of the two additional rise scenarios (2 and 7) results in accelerated sea level rise rates of 6.27 millimeters (0.25 inches) per year and 11.27 millimeters (0.44 inches) per year, respectively. Considering a 50 year design life (from 2010 to 2060), the range of sea level rise for the two accelerated sea level rise scenarios would be from 12.3 to 22.2 inches (313.5 to 563.5 millimeters). The existing measured rate of sea level rise of 4.27 millimeters (0.17 inches) per year would result in a vertical rise of 213.5 millimeters (8.4 inches) by 2060.

The North Carolina Coastal Resources Commission’s (CRC) Sea Level Rise Assessment Report focused on the vertical rise by 2100 based on three scenarios: 1) present rate with no acceleration; 2) reaching 1 meter (3.3 feet) in 2100; and 3) reaching 1.4 meters (4.6 feet) in 2100. Scenarios 2 and 3 include an acceleration of sea level rise that is back calculated to fit the expected rise in 2100. Because of this, the rate is not constant and the projected vertical rise sea level is non-linear. The values computed for two years, 2060 and 2100, from that report are as follows:

	2060		2100	
	(millimeters)	(inches)	(millimeters)	(inches)
1	213.5	8.4	384.3	15.13
2	403.5	15.9	1,000.0	39.37
3	527.0	20.7	1,400.0	55.12

Therefore, in 2060 the vertical rise of sea level is estimated to be between 213.5 millimeters (8.4 inches) and 527.0 millimeters (20.7 inches) from the CRC report and between 213.5 millimeters (8.4 inches) and 563.5 millimeters (22.2 inches) from the FEIS. These two ranges are comparable for 2060. There are greater differences in the projections with time because of the nonlinearity of the CRC report assumption. The FEIS rate of the present rate plus 7 millimeters (0.28 inches) per year, which results in 1.1 meters [3.6 feet] vertical rise by 2100, most closely models the CRC report recommendation for planning purposes of 1 meter (3.3 feet) of sea level rise by 2100.

7. **Comment:** Other items of new information and circumstances that post-date the 2008 FEIS and therefore were not evaluated or otherwise addressed in the FEIS include, but are not limited to, the following:

- a. The agencies have selected a new preferred alternative whose “later phases” include a “coastal monitoring program” and unidentified actions to manage NC 12 through PINWR. These actions could consist of the bridging, relocation of NC 12 outside of its easement into Refuge property, and beach nourishment actions that are part of the Parallel Bridge Alternatives discussed in the 2008 FEIS, but could also consist of “new solutions” that could “be identified in the future.” The impacts of these “new solutions” have not previously been identified or evaluated. In other words, the agencies have selected a new preferred alternative that includes components not previously identified and studied in the FEIS. (EA at 2-18, 2-28.):

***Response:** The Parallel Bridge Corridor alternatives represent a range of approaches and locations and capture a range of potential impacts based on the characteristics of the project setting as it exists today and a projection of past trends to identify a reasonably foreseeable future. As indicated in Section 2.3.4 of the EA, the Selected Alternative was listed as preferred in the EA because “FHWA and NCDOT feel it is important to select an alternative that allows for further new analysis prior to the implementation of future phases.” This takes into account that prior to the implementation of each phase, circumstances might lead to a different decision than what would be made based on current information. Future circumstances that might be different from what can be projected today are by definition unknown. To attempt to guess and address such circumstances at this time would be to speculate on what is not reasonably foreseeable and not in keeping with the intent of the alternative. FHWA and NCDOT will determine what additional NEPA documentation is required for each subsequent phase.*

- b. The new preferred alternative will certainly require the re-permitting of the terminal groin, which will have significant biological impacts (as confirmed by the Fish and Wildlife Service (“FWS”) and, when one is convened in response to FWS requests, a panel of experts) that have never been evaluated in a NEPA document. (EA at v, 3-8.)

***Response:** USFWS hired Coastal Resource Associates (CRA) to conduct a review of the physical and ecological elements of the inlet/barrier island system that have or might have been altered by the construction of the terminal groin. USFWS shared the CRA 2010 report with NCDOT and FHWA. FHWA’s review of the report indicated that CRA’s implications, findings, and recommendations do not represent new information or circumstances relevant to environmental concerns and bearings*

on the proposed action nor would its impact result in significant environmental impacts not evaluated in the FEIS.

- c. Significant portions of the Refuge, including sections that will be impacted by the later phases of the project, have been designated as critical habitat for the federally threatened piping plover in October 2008. 73 Fed. Reg. 62,816 (Oct. 21, 2008).

Response: *The piping plover and its associated critical habitat, including the area designated in October 2008, are evaluated in detail in the FEIS in Sections 4.7.6.6, 4.7.7, 4.7.8, and 4.7.9 (pages 4-106 to 4-130). A similar comment was made by SELC in their comments on the Revised Final Section 4(f) Evaluation; see the response to comment 8, 3rd bullet, on page F-34 of the EA.*

- d. Old deeds have supposedly been unearthed in the Spring of 2009 and putatively give NCDOT the right to move the NC 12 right-of-way in the Refuge and in Cape Hatteras National Seashore. (EA at 2-11, Appendix B.)

Response: *The deeds were considered only in how Section 4(f) was applied to the Seashore and Refuge. They are not relevant to the assessment of impacts and its findings. The environmental impacts within the Seashore and Refuge are the same irrespective of the legal standing of the land. The deeds do not result in significant environmental impacts that were not evaluated in the FEIS.*

- e. Various federal agencies and other stakeholders have identified federal laws that will be violated by both the old and the new preferred alternatives, in comments to the 2008 FEIS and the Revised 4(f) Evaluation and throughout 2009. (EA at 2-11, Appendix A at A-3 to A-10, Appendices E, F.)

Response: *SELC had a similar comment in their comments on the Revised Final Section 4(f) Evaluation. It was answered under comment 8, 6th bullet, on page F-35 of the EA. USDOJ's Section 4(f) comments stated the Parallel Bridge Corridor alternatives may violate Section 4(f) because another alternative (Pamlico Sound Bridge Corridor) "would appear" to be feasible and prudent and would minimize harm to the Refuge. FHWA concluded that this was not the case because the Pamlico Sound Bridge Corridor alternatives are not feasible and prudent (see Appendix G of the Revised Final Section 4(f) Evaluation beginning on page B-143 of EA Appendix B). The State Historic Preservation Office (HPO) disagreed with FHWA in the FEIS finding that the Preferred Alternative would NOT constructively use historic properties. This was resolved in the Revised Final Section 4(f) Evaluation by revising the detailed study alternatives in Rodanthe so that they would have No Adverse Effect under Section 106 of the National Historic Preservation Act and a revised conclusion that indicated that the Parallel Bridge Corridor alternatives would be a constructive use of the Refuge. (See page 17 of the Revised Final Section 4(f) Evaluation on page B-17 of the EA). As summarized in Section 4.0 of this ROD, FHWA and NCDOT have concluded that the Parallel Bridge Corridor with NC 12 Transportation Management Plan Alternative is the alternative that causes the least overall harm, and it includes all possible measures to minimize harm. FHWA has concluded that the requirements for Section 4(f) for this project have been met.*

USDOJ indicated in its comments on the FEIS and EA that it is unlikely any of the Parallel Bridge Corridor alternatives could be found compatible with the mission

and purpose of the Refuge as is required by the National Wildlife Refuge System Improvement Act of 1997. FHWA and NCDOT have responded to each comment related to compatibility and are working with USDOJ to resolve any compatibility issues with Phase I of the project.

- f. An analysis of options for funding a Pamlico Sound Bridge was performed in 2009. (EA 2-11, Appendix B at B-143 to B-167.)

Response: *An initial funding analysis of the Pamlico Sound Bridge Corridor was completed in 2007 and was prepared in order to answer questions of regulatory agencies during meetings to select a LEDPA. The 2009 funding analysis, prepared as part of the Revised Final Section 4(f) Evaluation, did not result in any new findings; the Pamlico Sound Bridge Corridor had already been found not practicable in the FEIS from a financial perspective. The new financial analysis was prepared because the Pamlico Sound Bridge Corridor was not analyzed as an avoidance alternative in the FEIS. The analysis did not result in significant environmental impacts not previously evaluated in the FEIS. The material is in the project files.*

There is ample case law, in addition to the regulations and guidance cited above, supporting the proposition that an SFEIS is required in light of such significant new developments. See N.C. Alliance for Transp. Reform, Inc. v. U.S. Dept of Transp., 151 F. Supp. 2d 661, 699 (M.D.N.C. 2001) (requiring SFEIS for highway project in light of notification of violation of a federal law); Portland Audubon Soc’y. Lujan, 795 F. Supp. 1489, 1500 (D. Or. 1992) (requiring SFEIS for sale of timber in light of new information on effects of sale on owl species); Stop H-3 Ass’n v. Lewis, 538 F. Supp. 149, 168 (D. Haw. 1982) (requiring SFEIS for proposed highway project where FEIS did not include information relevant to the highway design). Accordingly, issuance of the EA instead of an SFEIS violates NEPA.

Response: *The conclusion of FHWA and NCDOT, based on public and agency review of the EA, is that the changes in the alternatives and their impacts made since the FEIS did not result in significant environmental impacts not previously evaluated in the FEIS; therefore an SFEIS is not needed. The determination that a SFEIS is not warranted was made per 23 CFR 771.130(c).*

B. The EA describes a new preferred alternative that constitutes illegal segmentation under NEPA.

8. **Comment:** For at least a decade, NCDOT and FHWA have treated the Bonner Bridge Replacement Project as including not only the construction of a new bridge from the southern end of Bodie Island over Oregon Inlet to Hatteras Island, but also the maintenance of a transportation corridor all the way to the mid-point of Hatteras Island at the town of Rodanthe. For the first time in years, though, NCDOT has now identified a new preferred alternative—PBC/TMP—which divides or segments the project, and the analysis of its impacts, into component parts. The EA identifies and addresses only the impacts of Phase I, which involves only construction of the portion of the project connecting the southern end of Bodie Island to the northern end of Hatteras Island via a new short bridge built parallel to the existing bridge. The remainder of the project - maintenance of the transportation corridor to the mid-point of Hatteras Island - is left to “later phases.” These later phases will be completed using actions yet to be selected or even new actions yet to be identified and evaluated, and the impacts will be analyzed separately. This constitutes illegal segmentation in violation of NEPA.

Response: *The SELC made a similar comment in its comments on the Revised Final Section 4(f) Evaluation (see comment 9 and the response beginning on page F-36 of the EA). The EA augmented, but did not replace, the FEIS. The impact assessment findings of the various Parallel Bridge Corridor alternatives contained in the FEIS apply to future phases of the NC 12 Transportation Management Plan Alternative. The EA documents the reasons why finalizing future phases closer to implementation is an appropriate strategy. Section 2.3.5 of the EA discusses why the NC 12 Transportation Management Plan Alternative does not represent segmentation of the project.*

9. **Comment:** It is well-settled that breaking a project “into small component parts” to avoid reviewing them together, as NCDOT and FHWA do in the EA, “is to engage in illegal ‘segmentation.’” New River Valley Greens v. U.S. Dep’t of Transp., No. 97-1978, 1998 U.S. App. LEXIS 22127, at *8-9 (4th Cir. Sep. 10, 1998) (quoting 40 C.F.R. 9 1508.27(b)(7)). NCDOT and FHWA argue in the EA that their division of the project into “Phase I” and “later phases,” examining only the impacts of Phase I, and selecting it as the preferred alternative does not constitute segmentation. However, saying so does not make it so.

A hallmark of segmentation is an initial proposed action involving “such a large and irretrievable commitment of resources that it may virtually force a larger or related project to go forward notwithstanding the environmental consequences.” New River Valley Greens, 1998 U.S. App, LEXIS 22127, at *8-9.

Building a replacement short bridge to the northern end of the Refuge is an “irretrievable commitment of resources” that will inevitably force later projects to go forward, even though their environmental consequences would prevent their approval if included as part of the original project. Among the later actions that will be forced by construction of the parallel bridge are some combination of actions to maintain NC 12 through PINWR and the re-permitting of the terminal groin to protect the new bridge. Indeed, to the extent that these actions taken in the “later phases” of PBC/TMP involve the bridging, beach nourishment, or road relocation that were part of the Parallel Bridge Alternatives already examined in the 2008 FEIS, they have already been found to have likely significant environmental impacts that render them incompatible with the Refuge and have precluded their approval. Yet, once the bridge is built in PBC/TMP Phase I, there will be no choice but to employ one of those methods to maintain the NC 12 transportation corridor through PINWR. The agencies will be precluded from considering other less environmentally damaging alternatives at that time (including the no-action alternative, a Pamlico Sound Bridge alternative, ferries, etc.).

Response: *The SELC made a similar comment in its comments on the Revised Final Section 4(f) Evaluation (see comment 9 and the response beginning on page F-36 of the EA). This comment adds the assertion that none of the detailed study alternatives could be built in their entirety (i.e., from north of Oregon Inlet to Rodanthe) today because their respective environmental consequences in the Refuge would prevent their approval. The Phased Approach/Rodanthe Bridge Alternative could be built since no refuge compatibility determination is required; all construction would take place within the existing NC 12 easement. The other alternatives referenced in the comment were fully evaluated in the FEIS and EA for their full length. FHWA and NCDOT are at the decision point in the NEPA process. Selection of a Preferred Alternative and the issuance of a ROD always ends the consideration of the No-Action Alternative and those alternatives not preferred or selected. Under the*

Selected Alternative, if future circumstances warrant, additional alternatives could be evaluated. (See also the response to USEPA comment 2 above.)

10. **Comment:** Even the EA acknowledges that “completion of Phase I alone,” that is, the replacement bridge, will “not meet the purpose and need of the project and represent[s] a commitment . . . to develop and implement the entire action from Rodanthe to Bodie Island.” (EA at 2-13, 2-29.) The EA further acknowledges that, after construction of a new bridge to the northern end of Hatteras Island, it is inevitable that storms, shoreline erosion, dune loss, breaches, and new inlet formation will threaten the transportation route to the mid-point of Hatteras Island, especially in several “hot spots” that have already been identified, and will require actions to be taken to sustain the NC 12 transportation route through PINWR. (EA at v, 2-18 to 2-20.) Indeed, it is the significance of the environmental impacts of each proposed alternative for maintaining that route that has prevented the selection of any one of them as the preferred alternative to date. Yet, the agencies’ inability to obtain consensus on a preferred alternative, from among the several environmentally damaging Parallel Bridge Alternatives, for the later phases of the project cannot justify the decision to segment the project and obtain approval for and proceed with Phase 1, only to force the later selection of one or more of the previously rejected alternatives during later phases.

In addition, the segmentation of the project results in a skewed analysis of the environmental impacts of the preferred alternative. The EA claims that all environmental impacts, even those associated with the later phases, have been “evaluated and assessed” at some time or another, (EA at 2-32.) However, by segmenting the project, NCDOT and FHWA are able to present only the environmental impacts of Phase I of the new preferred alternative, which are misleadingly smaller than the impacts of all the necessary phases would be. This makes a true comparison among alternatives difficult, which in turn frustrates the purposes of NEPA. (See, e.g., Tables 2-3, 2-4, and 2-5 on pages 2-24 through 2-27 of the EA, which show the number of acres of wetlands, Refuge lands, submerged aquatic vegetation, etc. affected by the construction of the Parallel Bridge in Phase I of PBC/TMP, rather than the entire project.)

In sum, to treat the Bonner Bridge replacement project as anything but a single transportation route from the southern end of Bodie Island all the way to Rodanthe constitutes illegal segmentation.

***Response:** The SELC made a similar comment in its comments on the Revised Final Section 4(f) Evaluation (see comment 9 and the response beginning on page F-36 of the EA). The SDEIS, SSDEIS, FEIS, EA, and ROD and the alternatives evaluated are examined from Bodie Island to Rodanthe as a single transportation route. Since Phase I will be built in the near-term, it seemed appropriate in the EA to present the specific impacts of Phase I, too. Since the EA augmented, but did not replace, the FEIS, its focus was on changes since the FEIS, including in the Rodanthe area, which is expected to be a part of Phase II. FHWA and NCDOT’s position on whether the selection of the NC 12 Transportation Management Plan Alternative would result in segmentation is presented in Section 2.3.5 of the EA.*

C. The EA violates NEPA by engaging in reverse engineering.

11. **Comment:** The EA cites a financial analysis that was performed after NCDOT and FHWA had already labeled the Pamlico Sound Bridge alternative as not feasible, practicable, or “financially viable” in the 2008 FEIS (see FEIS xxix, 2-148, 5-45) to justify the elimination of the Pamlico Sound Bridge alternative. (EA at 2-11, Appendix B at B-20, B-143 to B-167.)

We adopt the portion of our November 13, 2009, comments on the Revised Section 4(f) Evaluation regarding the impropriety of that reverse engineering and post hoc justification.

***Response:** As the comment notes, the SELC made a similar comment in its comments on the Revised Final Section 4(f) Evaluation (see comment 10 and the response beginning on page F-38 of the EA). An initial funding analysis of the Pamlico Sound Bridge Corridor was completed in 2007 and was prepared in order to answer questions of regulatory agencies during meetings to select a LEDPA. The 2009 funding analysis, prepared as part of the Revised Final Section 4(f) Evaluation, did not result in any new findings; the Pamlico Sound Bridge Corridor had already been found not practicable in the FEIS from a financial perspective. The new financial analysis was prepared because the Pamlico Sound Bridge Corridor was not analyzed as an avoidance alternative in the FEIS. The analysis did not result in significant environmental impacts not previously evaluated in the FEIS. The material is in the project files.*

D. Viable alternatives continue to be ignored in violation of NEPA.

12. **Comment:** NEPA directs agencies to prepare a “detailed statement” of alternatives to the proposed federal action. 42 U.S.C. § 4332(C)(iii) (2006). CEQ regulations require agencies to “[r]igorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R. § 1502.14(a). An “informed and meaningful consideration of alternatives . . . is an integral part of the statutory scheme.” Friends of Se.’s Future v. Morrison, 153 F.3d 1059, 1065 (9th Cir. 1998). Agencies must “[d]evote substantial treatment to each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits.” 40 C.F.R. § 1502.14(b). An agency must consider alternatives to the proposed action that may partially or completely meet the proposal’s goal and it must evaluate their comparative merits. Natural Res. Def. Council v. Callaway, 524 F.2d 79, 93 (2d Cir. 1975). Considering alternatives that only partly meet the project goals allows the decision maker to consider whether meeting part of the goal with less environmental impact may be worth the tradeoff with a preferred alternative that has greater environmental impact. North Buckhead Civic Ass’n v. Skinner, 903 F.2d 1533, 1542 (11th Cir. 1990).

In the present case, by prematurely dismissing potential alternatives such as the Pamlico Sound Bridge Alternatives and the use of ferries, NCDOT and FHWA have improperly confined their analysis to a narrow range of alternatives that may result in greater adverse environmental impacts, especially to PINWR, than the alternatives that were dismissed. In particular, NCDOT and FHWA have never adequately considered an alternative involving the use of ferries to transport people from the mainland or from Bodie Island to a stable portion of Hatteras Island. The 2008 FEIS noted that a “Ferry Alternative was not studied in detail” because of concerns regarding potential inability to handle heavy traffic volume and the need for dredging, without thoroughly exploring and substantiating those concerns. The EA fails to mention ferries at all.

***Response:** The EA only addresses changes and other new information that was gathered since the publication of the FEIS, consistent with 23 CFR 771.130(c) and (d) regulations. Since there were no changes to the Ferry Alternative, it was not evaluated in the EA (see the response to comment 13 below for discussion about the use of ferries). The detailed study alternatives were selected in a series of studies and consultations with environmental resource and regulatory agencies and the public, as documented in Sections 2.2 to 2.8 of the FEIS and Section 2.1 of the EA.*

The detailed study alternatives in the FEIS and EA were selected with the unanimous concurrence of state and federal environmental resource and regulatory agencies on the project's NEPA/Section 404 Merger Team (members listed in Section 8.3.1 of the FEIS). The DEIS, SDEIS, SSDEIS, FEIS, and EA addressed a reasonable range of alternatives which were evaluated and from which a Preferred Alternative was selected. The project is now at the decision point in the NEPA process – selecting a preferred alternative and issuing a ROD always ends the consideration of other alternatives. The NC 12 Transportation Management Plan Alternative (Selected) leaves open the consideration of additional alternatives as a part of finalizing future phases if conditions warrant, again in consultation with the NEPA/Section 404 Merger Team.

13. **Comment:** In fact, a system of modern, high-speed, shallow-draft ferries and water taxis could serve high volumes of passengers even in fairly shallow waters, with little dredging. In addition, ferry service can be more reliable than a bridge. For instance, ferries conveyed people to Hatteras Island until 1962 when Bonner Bridge was completed. According to the 2008 FEIS, “from November 1990 to February 1991 after Bonner Bridge was damaged by a dredge and temporarily closed,” Hatteras Island continued to be reachable by ferry. (FEIS at 2-4.) Likewise, in November 2009, when a nor’easter washed out portions of NC 12 in PINWR and rendered the NC 12 / Bonner Bridge route unusable, a ferry system again enabled people to travel between Hatteras Island and the mainland. Finally, numerous similar tourist destinations served by ferries demonstrate the potential feasibility of this alternative. The San Juan Islands, Channel Islands National Park, and Cumberland Island National Seashore are examples of popular U.S. tourist destinations reached by ferry. Likewise, Ocracoke and Bald Head Islands, Cape Lookout National Seashore, and Hammocks Beach State Park have all been connected to the mainland only by ferry boats for their entire histories, and yet remain among the most popular tourist destinations on the North Carolina coast. In light of the many advantages of ferries and the many examples of successful ferry systems, the rejection of ferries as an alternative without further analysis is unjustified.

***Response:** The Ferry Alternative was addressed in the 1993 DEIS, the 2005 Supplemental DEIS, and the 2008 FEIS. The current assessment of the Ferry Alternative discusses vehicle options, facility requirements, operating characteristics, environmental impact potential, and cost on pages 2-21 to 2-26 of the FEIS. In each of the three documents, the Ferry Alternative was addressed in sufficient detail to conclude that the use of ferries could not serve as a Bonner Bridge replacement alternative. The reasons for this conclusion found in the 2008 FEIS are:*

- It would result in a decrease in the present level of traffic service;*
- It would require extensive dredging in Pamlico Sound; and*
- It would be expensive.*

Even if issues related to extensive dredging could be overcome through shallow-draft vessels (the limitations of which are discussed on page 2-21 of the FEIS) and a funding mechanism could be developed, the primary limitation of a ferry is its inability to meet travel demand.

The Environmental Assessment does not discuss a ferry alternative because the purpose of the document was simply to document the new detailed study alternative

(the NC 12 Transportation Management Plan), the refinements to the existing detailed study alternatives, the elimination of the Pamlico Sound Corridor, and assess the impacts of these changes. As there was no change to the reasons documented in the FEIS for eliminating the ferry alternative, it was not included in the EA. The purpose of the EA was to supplement the FEIS, not to replace it.

The NCDOT Ferry Division has both River Class Vessels and Hatteras Class Vessels available; with a 40-vehicle capacity, River Class Vessels would be the most likely type used. Using the same capacity analysis and conditions listed in the FEIS, the use of the River Class Vessel would increase the total capacity with a typical ferry schedule from 4,500 vehicles per day (vpd) to 6,000 vpd. Further it would allow up to 480 vehicles per hour to be transported across the Oregon Inlet, with a maximum 24-hour service of 11,520. This change does not alter the conclusions in the FEIS, which states that the ferry capacity would be insufficient to meet the peak hour two-way volumes estimated for the 2002 peak season and would only meet the 2002 peak season weekday traffic demand if the ferries were in operation at all hours of the day and night and demand was spread evenly over a 24-hour period (see page 2-23 of the FEIS). Each River Class Vessel requires approximately 18 months to construct at an estimated cost of \$6.5 million.

Even if the issues related to the extensive dredging could be overcome through the use of another type of vessel, the alternative would still involve extensive impacts to Bodie and Hatteras Islands. As stated on page 2-23 of the FEIS, the original Bodie Island ferry terminal is now a part of the Oregon Inlet Marina complex; the use of this as a permanent ferry terminal would require expansion of the existing basin and navigational channel as well as the construction of a bulkhead, slips, ramps, and a main terminal building with support facilities. Taken together, these facilities would require as much as 52 acres (20.8 hectares) of land within the Seashore in the area of the marina and US Coast Guard Station. All of the bridging alternatives, including those within both the Parallel Bridge Corridor and Pamlico Sound Bridge Corridor, require the use of approximately 6 acres (2.4 hectares) of land within the Seashore.

In order to eliminate the need for maintaining NC 12 between Oregon Inlet and Rodanthe, the ferry alternative would need to include service between Bodie Island and Rodanthe, utilizing the current emergency ferry terminal. An expanded terminal would require a total of approximately 23 acres (9.2 hectares) of land, likely expanding the terminal into the adjacent National Register-eligible Rodanthe Historic District to the north or into wetlands that surround the terminal. By comparison, all of the detailed study alternatives have been designed to avoid any impacts to the Rodanthe Historic District.

The only other available ferry terminal on Hatteras Island is the existing terminal at Hatteras Inlet. If the Bodie Island-Hatteras Inlet route were utilized, then travelers wishing to go to Rodanthe would be required to take a 3 to 4 hour ferry trip from Bodie Island to Hatteras Inlet, then drive 29 miles (46.7 kilometers) north to Rodanthe, as compared to the current 15-mile trip.

The commenter cites several examples of tourist destinations currently served by ferries. The commenter suggests that because ferries are used in these locations that ferries therefore should be studied in detail as a reasonable alternative for the

replacement of Bonner Bridge. However, Channel Islands National Park, Cumberland Island National Seashore, Cape Lookout National Seashore, and Hammocks Beach State Park are all uninhabited national or state parks (except for Cumberland Island, which has approximately 40 residents); Ocracoke and Bald Head Islands have both been accessed only by boat, ferry or plane for their entire modern histories and they have substantially lower permanent and seasonal populations than Hatteras Island. The settings of these services are not in any way equivalent to that of Hatteras Island.

In terms of the number of vehicles carried, the closest equivalent to Hatteras Island of the examples given by the commenter is the San Juan Islands. This ferry service carried 832,000 vehicles in 2009. The existing NCDOT ferry service carries 1.1 million vehicles per year on seven routes. However, in 2002, Bonner Bridge carried 1.9 million vehicles (see Table 1-1 of the FEIS on page 1-12) and is projected to carry 3.5 million vehicles in 2025 (see Table 1-2 of the FEIS on page 1-15). To replace the Bonner Bridge with a ferry would require the state to first nearly triple and ultimately quadruple its existing service.

The San Juan service is one part of the Washington State Ferry Service, serving Puget Sound, which is the largest ferry system in the world in terms of the number of vehicles carried (over 10 million vehicles per year), including five routes that carry 1.7 to 2.1 million vehicles per year each. As of 2010, 20 ferries operate on Puget Sound. The largest vessels in this fleet carry up to 202 vehicles. Puget Sound has an average depth of 450 feet. In contrast, a typical NCDOT vessel carries 40 vehicles. Pamlico Sound rarely gets deeper than 15 feet except where channels are dredged. Thus, although the San Juan Island service, and the larger Washington State service that the San Juan service is a part of, offers equivalent annual vehicle transport volumes, it is accomplished with a much larger vessel designed to operate in a setting with much greater water depths than the situation in North Carolina and Pamlico Sound.

Thus, none of the examples of other ferry services offered by the commenter represent settings or levels of service that could lead to the conclusion that because ferries are operated at those locations, ferries are a reasonable alternative for the replacement of Bonner Bridge that merits detailed study.

14. **Comment:** Similarly, we adopt our discussion regarding the impropriety of dismissing the Pamlico Sound Bridge Alternatives from our prior comments.

Response: *The reasons the Pamlico Sound Bridge Corridor alternatives were dropped as detailed study alternatives and are no longer under consideration were presented in Section 2.2 of the EA. There was no new information gathered between the publication of the Revised Final Section 4(f) Evaluation and the EA; therefore, the findings that the alternative is not practicable under NEPA nor feasible and prudent under Section 4(f) have not changed.*

II. The Revised Department of Transportation Act of 1966 Section 4(f) Evaluation is inadequate.

15. **Comment:** The agencies' Revised Department of Transportation Act of 1966 Section 4(f) Evaluation is attached as Appendix B to the EA. It remains as flawed as when it was first issued in 2009, for the many reasons explained in our November 13, 2009, comments.

Because NCDOT and FHWA continue to insist erroneously that the Parallel Bridge Alternatives (including the new preferred alternative) fall into the "joint planning exception" to section 4(f) of the Department of Transportation Act of 1966, their analysis bears addressing once again. In addition to our prior comments, we note the following.

Section 4(f) prevents a federal project from "using" publicly owned land, for a transportation corridor for instance, unless "(1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use." 49 U.S.C. § 303(c) (2006). When there is no feasible and prudent avoidance alternative, "only the alternative that . . . [causes the least overall harm] may be approved. 23 C.F.R. §774.3(c)(1) (2010); see 49 U.S.C. § 303(c) (2006).

The 2008 FEIS acknowledged that all the Parallel Bridge Alternatives would "use" refuge and park lands because they would require some relocation of NC 12 outside of its current alignment. The Revised 4(f) Evaluation continues to concede that the Parallel Bridge Alternatives, including the new preferred alternative, will "use" Refuge lands, but only insofar as PINWR is a historic property and not as a refuge. (EA Appendix B at B-8, B-15.) The Revised 4(f) Evaluation erroneously concludes that section 4(f) does not apply to uses of the Refuge "as a refuge" because NC 12 was "concurrently and jointly planned" with the Refuge and therefore falls into the "joint planning exception" to Section 4(f). (EA Appendix B at B-12 to B- 15.) That is simply not the case.

The relevant section of the regulation states as follows: "When a property is formally reserved for a future transportation facility before or at the same time a park, recreation area, or wildlife and waterfowl refuge is established and concurrent or joint planning or development of the transportation facility and the Section 4(f) resource occurs, then any resulting impacts of the transportation facility will not be considered a use as defined in § 774.17." 23 C.F.R. §774.11(i) (2010) (emphasis added).

In the case of PINWR, the Revised 4(f) Evaluation attempts to justify application of the joint planning exception with a meandering narrative describing the development of roadways through PINWR. It misses the point, however, that the easement for NC 12 (or the predecessor dirt road described in the 4(f) Evaluation) was not "formally reserved" until 1954, some 16 years after the establishment of the Refuge, not before or at the same time, as required by the regulation. Moreover, there has been no concurrent or joint planning of the road and the Refuge since then; indeed, the events described by the 4(f) Evaluation show that, instead, each time the road has needed to be moved outside of its existing easement because of some storm event or erosion, the Refuge has required that NCDOT apply for a Special Use Permit. A careful review of the deeds, maps, and other documents that record the history of the establishment of PINWR and the NC 12 corridor through it supports the conclusion that the joint planning exception does not apply.

By its terms, the joint planning exception regulation applies only "when a property is formally reserved for a future transportation facility before or at the same time a park,

recreation area, or wildlife and waterfowl refuge is established.” PINWR was established by Executive Order on April 8, 1938. (EA Appendix B at B-75 to B-89.) The regulatory exception therefore applies only if property for a road “was formally reserved” before or on April 8, 1938. The Revised 4(f) Evaluation cites a number of property deeds, maps, historical narratives, and North Carolina state law to support the claim that the joint planning exception applies. Few of these authorities are contemporaneous with the establishment of PINWR. Even those that are - a 1938 map, deeds transferring PINWR property to the Department of Interior, and historical accounts of PINWR - fail to support NCDOT’s claim that property was formally reserved “before or at the same time” that PINWR was established.

First, the Revised 4(f) Evaluation describes a 1938 map that depicts an “unimproved road” along the northeastern coast of what became PINWR up to a ferry crossing to Bodie Island. NCDOT intimates that the mapping of an “unimproved road” through PINWR lands may have operated as a formal reservation. Notably, the map shows that the “road” largely followed the beach, and was not located in the present-day NC 12 easement. The beach and other tidal and submerged lands would have been held by the State in public trust, and any public trust easement held by North Carolina was extinguished when the federal government later took fee simple title to the properties making up the island. “[T]he United States’ power of eminent domain is supreme to the State’s power to maintain tidal lands for the public trust.” United States v. 1 1.037 Acres of Land, 685 F. Supp. 214,216 (N.D. Cal. 1988).

To the extent that the road crossed property that does not qualify as tidal and submerged public trust lands, the map does not indicate that the State exercised any ownership interest or control over it, much less formally reserved it. The map legend explains that it includes both “official roads” and “important suburban entrance roads not subject to public maintenance.” (EA Appendix B at B-13.) By all indications, the “unimproved road” depicted on the 1938 map falls into the latter category. A 1936 map of “state highways” in Dare County shows no road south of the Wright Memorial Bridge. A New York Times article published on May 28, 1939, a year after the establishment of the Refuge, remarked on the difficulty of traveling along a “two-rut gash in the sand” south from the Wright Memorial Bridge, and reported that “this beach road is not State maintained and is called a road only by courtesy and custom.”

The Revised 4(f) Evaluation argues that the 1938 map of the “unimproved road” was published “in conjunction with the Federal Works Agency Public Roads Commission.” (EA Appendix B at B-13.) But no legal authority stands for the proposition that a federal agency’s collaboration in mapmaking can alone transfer a property interest. To the contrary, the law makes clear that the United States’ title to PINWR is absolute except to the extent that it expressly permits otherwise. “A condemnation action is a proceeding in rem, against the land. When a fee is condemned the taking wipes out all interest legal and equitable and vests complete title in the government.” United States v. 3276.21 Acres of Land, 194 F. Supp. 297, 300 (S.D. Cal. 1961). Thus even if the State sought to claim an easement across PINWR based on sand pathways or other crude travel routes, that claim was extinguished with the deeds transferring Refuge property to the federal government.

Next, the Revised 4(f) Evaluation cites deeds as supporting application of the joint planning exception. It asserts that the U.S. Secretary of Interior’s acquisition of the Refuge land by condemnation in 1938 “did not include existing public highways . . . across the island.” (EA Appendix B at B-13.) Assuming arguendo that such a “public highway” existed, no authority supports this assertion. The Evaluation cites two deeds, transferring the land of the Simpsons and the Byers to the Department of Interior. Together with a deed transferring the lands of the Chafees, these deeds memorialize the United States’ acquisition of all of the property

within the “Pea Island Migratory Waterfowl refuge.” None of these deeds, however, identify a public highway or public utility easement, nor refer to any possible reservation of one.

The three deeds generally describe the property to be transferred and the purposes of PINWR. They all state that “the time has now expired within which any party claiming any interest may file answer or other pleadings herein.” The two deeds cited in the Revised 4(f) Evaluation note that “the State of North Carolina, by an Act of its General Assembly, now Sec. 8059 (c) of the North Carolina Code of 1935, has given its consent to the acquisition.” The referenced state law, however, does not purport to reserve any easement or other interest in “such lands in North Carolina as in the opinion of the Federal Government may be needed for the establishment of one or more migratory bird sanctuaries or other wild life refuges.” N.C. Code of 1935, § 8509(c) (currently codified at N.C. Gen. Stat. § 104-10 (2009)). In sum, nothing in the three deeds supports a claim that North Carolina reserved, or was granted, an easement for NC 12 through PINWR.

Third, ample historical evidence suggests that federal officials meant for the plain meaning of these deeds to take effect against North Carolina. The historical accounts cited in the Revised 4(f) Evaluation indicate that, at the time PINWR was established in 1938, federal officials were not jointly and concurrently planning a road but rather were actively seeking to prevent road-building and related development activities in PINWR.

In a letter dated September 20, 1938, five months after the establishment of the Refuge, Arthur Demaray, then acting director of the National Park Service, wrote that State highway officials wanted to extend the road to Oregon Inlet, but “because of our objections . . . these plans have been deferred pending further study to determine whether such would be in accordance with our master development plans for this area.” The history of the Cape Hatteras National Seashore cited in the Revised 4(f) Evaluation also explains that in 1938, federal officials “hinted that road development [in the park] was probably inevitable, but that such roads should be resisted south of Oregon Inlet.” In that same year, NPS officials issued the first Planning Prospectus for the proposed Cape Hatteras National Seashore, stating “the desire of the National Park Service that the section between Oregon Inlet and Hatteras Inlet remain in its natural condition without any roads so that future generations may see this and other undeveloped sections as they are in our day.” As late as 1941, the National Park Service was still being asked to “accept a road . . . because so many people now had automobiles that boat service between the villages had become unprofitable and roads were needed, especially between Avon, Buxton, and Hatteras, which had twenty-five hundred residents.”

These historical accounts demonstrate that federal officials did not grant a formal reservation of right-of-way and actively opposed plans to build a road south of Oregon Inlet, before, during, and for a while after the creation of PINWR. Admittedly, the Revised 4(f) Evaluation does point out other accounts that support the general proposition that people drove motor vehicles on Hatteras Island prior to the establishment of PINWR. For example, the State began subsidizing a ferry between Bodie and Hatteras Island in 1934, and Civilian Conservation Corps crews on Hatteras Island built dikes and other improvements. (EA Appendix B at B-77.) But while these accounts may suggest that the State would have liked to have formally reserved right-of-way for a road through PINWR, they do not prove that it did.

More recent history also confirms that no property was formally reserved for a road through PINWR at the time of its establishment, nor did concurrent or joint planning or development of the road and Refuge occur. As we noted in our previous comments, PINWR was

established for 16 years before DOI granted an easement, in 1954, specified by metes and bounds, for a 100-foot-wide NC 12 corridor. When NCDOT sought to move the alignment for NC 12 in 1964 and 1995 in response to erosion and storm events, it had to apply for a Special Use Permit from DOI. Planning and development of NC 12 has not been “concurrent or joint” with the planning of the Refuge, but rather subject to the approval of Refuge authorities.

Finally, the legislative history and purpose of the joint planning exception refute the claim that it applies in this present case. The “concurrent and joint planning” rule became final on March 12, 2008. The Federal Register notice for the rule quotes Sierra Club v. U.S. Dep’t of Transp., 948 F.2d 568 (9th Cir.1991) for the proposition that “Section 4(f) is not meant to force upon a community, wishing to establish a less than pristine park affected by a road, the choice between a pristine park and a road.” This hypothetical choice of a park with a road or no park at all has absolutely no application here.

The facts of Sierra Club underscore this distinction. In Sierra Club, State authorities had already purchased 55 percent of the right-of-way for a planned highway when the State Department of Parks and Recreation began negotiating to acquire land for a park. The State “deliberately excluded from the parcel of land that was to form the park . . . land that [the state] believed might be necessary for a bypass but that it had not yet acquired.” Sierra Club, 948 F.2d at 570. Upon further scrutiny of the evidence on remand, the lower court concluded that joint planning “resulted in the formation of a consensus that the park could appropriately be sited adjacent to the previously planned road.” Sierra Club v. U.S. Dep’t of Transp., 1994 U.S. Dist. LEXIS 10 12 1, at *4 (N.D. Cal. July 12, 1994). The administrative record described “events which took place before [the park] came into existence and demonstrate that while the park was being planned, road adjacency was taken into account and deemed acceptable by DPR and the public.” Id.

The few other cases that have applied the “joint planning” exception to Section 4(f) have involved similarly unambiguous records of simultaneous transportation and park planning, typically with the creation of a new park mitigating the impact of a transportation project. See Geer v. FHA, 975 F. Supp. 47, 71 (D. Mass. 1997) (rejecting Section 4(f) claim based on parkland that “will only come into existence because of the [challenged highway] project.”); Northern Crawfish Frog v. FHWA, 858 F. Supp. 1503, 1513 (D. Kan. 1994) (plaintiffs stipulated that parkland and highway project “jointly planned”); Tahoe Tavern Prop. Owners Ass’n v. U.S. Forest Serv., 314 Fed. App’x 919,920 (9th Cir. 2008) (applying 23 C.F.R. §774.11(i) where the Forest Service simultaneously began planning to use land for both recreation and transportation at the time it acquired the land). No decision suggests that public officials can satisfy this requirement with a revisionist historical account that is inconsistent with both contemporaneous and subsequent formal legal documentation.

For these reasons and those explained in our previous comments, we submit that no basis exists for applying the joint planning exception to the new preferred alternative.

Response: SELC submitted similar comments on the Revised Final Section 4(f) Evaluation; responses to these comments are presented on pages F-41 to F-46 of the EA. FHWA makes the determination on the applicability of joint planning; after review of the comments from SELC, the determination stands.

III. The New Preferred Alternative will likely be inconsistent with the North Carolina Coastal Area Management Act.

16. **Comment:** In the present case, the 2008 FEIS acknowledges that CAMA “requires that any action affecting an [AEC] be consistent with the local land use plans.” (2008 FEIS at 4-5.) It also acknowledges that “all of the oceanfront lands in the project area are included in the Ocean Hazard System AEC” and that several of the Parallel Bridge Alternatives “may not be compatible with the principles of CAMA because they require the construction of permanent bridges in locations that are projected to eventually be on the beach and in the ocean.” (*Id.*) The 2008 FEIS also acknowledges that the various Parallel Bridge Alternatives would require variances to obtain a CAMA permit and “would also affect” other AECs, including “coastal wetlands.” (*Id.*) In addition, it acknowledges that the Parallel Bridge Alternatives “may not be compatible with the Pea Island National Wildlife Refuge Comprehensive Conservation Plan or the [National Park Service] Plans.” (2008 FEIS at 4-4.)

In marked contrast, the 2008 FEIS acknowledges that “the Pamlico Sound Bridge Corridor Alternatives would be compatible with the Dare County Land Use Plan and zoning, [CAMA], the Pea Island National Wildlife Refuge Comprehensive Conservation Plan, and National Park Service (NPS) Plans.” (*Id.* See also EA Appendix E at E-30 to E-37 (comments of NC DENR-Division of Coastal Management, pointing out likely difficulties with Parallel Bridge Alternatives under CAMA).)

Despite these admissions in the 2008 FEIS and the high likelihood that any of the Parallel Bridge Alternatives, including the new preferred alternative, would not be consistent with CAMA and would not receive a CAMA permit, the EA fails to acknowledge these concerns and, more importantly, fails to address them. The EA is thus flawed on this basis also.

Response: The concerns presented are addressed on pages 4 to 5 of the FEIS as indicated in the comment. The potential that a variance might be required is acknowledged. With respect to whether or not the NC 12 Transportation Management Plan Alternative will likely be inconsistent with the CAMA, in their comment letter on the FEIS, the NCDENR-DCM stated the following: “Consistency Determination: The preferred alternative [Phased Approach/Rodanthe Bridge] is consistent with/not in conflict with the Dare County 2003 Land Use Plan certified by the North Carolina CRC on July 24, 2003.” The same comment letter states that “a formal DCM review of the project to determine consistency with the state’s Coastal Management Program cannot occur until a CAMA major permit application is received.”

Conclusion

17. **Comment:** In conclusion, we recognize the pressing need to replace Bonner Bridge, and we support thorough evaluation of all appropriate alternatives (including ferries and the Pamlico Sound Bridge Alternatives) and the selection of an alternative that provides the most dependable and safest transportation to and from Hatteras Island, is environmentally sound, is economically reasonable over the long term, and does not violate federal law. We support the Pamlico Sound Bridge alternative and believe that it best satisfies these objectives.

Response: Position noted.

Appendix D

Section 106 Programmatic Agreement

**PROGRAMMATIC AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER
AND
THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
FOR
THE REPLACEMENT OF HERBERT C. BONNER BRIDGE (BRIDGE NO. 11)
ON NC 12 OVER THE OREGON INLET
AND
IMPROVEMENTS TO NC 12 TO RODANTHE
DARE COUNTY, NORTH CAROLINA
TIP PROJECT B-2500
FEDERAL AID PROJECT BRS-2358(15)**

WHEREAS, the Herbert C. Bonner Bridge (Bridge No.11, Dare County), built over Oregon Inlet in 1962, is approaching the end of its reasonable service life and as part of NC 12 provides the only highway connection between Hatteras Island and Bodie Island; and

WHEREAS, NC 12 has been and continues to be subjected to washouts and disruptions due to storms and other natural events that are a part of the dynamic and ever-changing environment along North Carolina's Outer Banks; and

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the North Carolina Department of Transportation (NCDOT), has determined that replacement of Bonner Bridge is necessary and intends to proceed with construction of a parallel bridge across Oregon Inlet as soon as possible; and

WHEREAS, the Undertaking is described as the replacement of the Herbert C. Bonner Bridge across Oregon Inlet in Dare County (Phase I). Bonner Bridge is a part of NC 12 and provides the only highway connection between Hatteras Island and Bodie Island. The Undertaking also includes improvements to NC 12 between Oregon Inlet and the community of Rodanthe, an area that is at risk because of shoreline erosion and major storms. The Undertaking proposes to provide a long-term approach to minimizing that risk through 2060; and

WHEREAS, to address the unpredictability of natural events which could impact NC 12 in the future, the NCDOT and FHWA will develop, in consultation with the Interagency NEPA/Section 404 Merger Team, the NC 12 Transportation Management Plan (TMP). The NC 12 TMP will be a phased-decision making process that responds to and plans for the dynamic and changing environment in which the Undertaking and future steps to maintain NC 12 as a viable transportation corridor are thoroughly considered; and

WHEREAS, by signing this Programmatic Agreement, each Signatory or Concurring Party affirms that the provisions of the PA are an appropriate means to mitigate effects on historic properties in the event that the Undertaking obtains all required approvals and is implemented;

however, it does not necessarily signify that the party agrees with the NC12 TMP alternative; and

WHEREAS, the Undertaking anticipates retention of the terminal groin and revetment on Hatteras Island, which requires a permit from the U.S. Fish and Wildlife Service (USFWS) under the authority of the National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd-668ee); and pursuant to 50 CFR 29.21; and

WHEREAS, this PA does not abrogate the USFWS's rights, responsibilities, and obligations to manage Pea Island National Wildlife Refuge pursuant to the National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd-668ee) and other relevant authorities; and

WHEREAS, identification of historic properties within the Undertaking's Area of Potential Effects has been carried out in accordance with the Advisory Council on Historic Preservation's (ACHP) regulations (36 CFR Part 800) for implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the Undertaking will affect the National Register of Historic Places (NRHP)-listed (former) Oregon Inlet US Coast Guard Station and the Pea Island National Wildlife Refuge, a property determined or eligible for inclusion in the NRHP; and

WHEREAS, FHWA has prepared the FEIS and additional documentation that have identified phases of the Undertaking and effects on historic properties and submitted a notice of adverse effect to ACHP, which elected to participate in this consultation; and

WHEREAS, the FHWA has consulted with the North Carolina State Historic Preservation Officer (SHPO) and the ACHP to develop this PA pursuant to Section 14(b)(3) of 36 CFR Part 800; and

WHEREAS, NCDOT has participated in the consultation and been invited as a signatory to this PA; and

WHEREAS, , the USFWS, County of Dare, the Chicamacomico Historical Association (CHA), the North Carolina Aquariums (Aquariums), and the National Park Service (NPS) have participated in the consultation and been invited to concur in this PA;

NOW, THEREFORE, FHWA, the ACHP, the SHPO, and the NCDOT agree that the Undertaking and subsequent phases covered by the NC 12 TMP shall be administered in accordance with the following principles and stipulations to satisfy FHWA's Section 106 responsibilities for these actions.

PRINCIPLES

FHWA and NCDOT shall adhere to the following principles for replacement of the Bonner Bridge and development and implementation of the NC 12 TMP:

1. FHWA and NCDOT commit to plan, design, and implement the Undertaking in accordance with the best practices and measures available at the time to avoid and minimize impacts to historic properties.
2. The study and selection of future actions on Hatteras Island beyond the limits of Phase I would be undertaken in a decision-making framework between the cooperating agencies, including the SHPO. The decision-making framework will address transportation management through 2060 with a plan to monitor conditions on NC 12 and the affected environment, and modify management actions so as to minimize the adverse impacts to the Refuge resources while maintaining NC 12 as a viable transportation facility. Future construction actions within the project corridor would be evaluated in cooperation with the appropriate environmental regulatory and resource agencies in a process stipulated in the decision-making framework, and in accord with Section 106 of the National Historic Preservation Act. Section 2.3 of the Environmental Assessment discusses the NC 12 Transportation Management Plan (preferred alternative) and the decision-making framework for future actions. The NEPA/Section 404 Merger Team will coordinate, making decisions on future phases of the Undertaking. USFWS as well as the SHPO will continue to remain on the merger team throughout the development of future phases.
3. FHWA and NCDOT will seek, discuss, and consider the views of the consulting parties to this PA concerning design and construction options throughout the planning for any subsequent phases.
4. Given the potential for changes in the environment and historic properties, FHWA and NCDOT will, for any subsequent phases, identify and evaluate any properties that are or may be eligible for listing in the NRHP.
5. FHWA and NCDOT will take into account direct, indirect, and cumulative effects on historic properties pursuant to 36 CFR 800.5(a)(1) and will consider measures to improve existing conditions affecting historic properties.
6. As a matter of public policy and in accordance with FHWA guidance at the time, reasonableness of cost shall be considered when selecting measures to avoid, minimize, or mitigate adverse effects to historic properties. Cost should not be the only determining factor in mitigation decisions.
7. FHWA and NCDOT will minimize impacts associated with the Management of NC 12 on the natural habitat and the NRHP-eligible historic landscape of the Pea Island National Wildlife Refuge.
8. FHWA has an Emergency Relief Program that establishes protocols for coordination with NCDOT and other Federal and state agencies to deal with emergencies. FHWA and NCDOT will comply with 23 CFR 668 and 36 CFR 800.12, and other applicable environmental laws, when a disaster and/or emergency is declared by the appropriate authority.

STIPULATIONS

FHWA will ensure that the following measures are carried out:

I. Parallel Bridge Corridor Minimization/Mitigation Measures

In order to facilitate planning and streamline development of plans for the Undertaking, NCDOT shall, in consultation with the consulting parties, develop the following historic contexts to aid in historic planning for the parallel bridge corridor and possible heritage tourism initiatives.

A. Ethnographical Context

- 1) NCDOT will work with the USFWS, SHPO, and NPS to compile an ethnographical context of the men and women, who lived and worked in the general project area during the late nineteenth and early twentieth centuries. The context will focus on the area's watermen, fishermen, Civilian Conservation Corps, members of gun or hunting clubs, and life saving station employees. NCDOT will be responsible for the following tasks.
 - a. Gathering oral histories from surviving members of these groups or families.
 - b. Conducting primary and secondary research regarding the activities of these groups.
 - c. Compiling documentary materials and digitizing images.
- 2) NCDOT will produce a digital document which contains the recorded oral histories and documentary materials. NCDOT shall afford the USFWS, SHPO, and NPS an opportunity to review and comment on the draft digital document. If no comments are received from the USFWS, SHPO, and NPS within thirty (30) days of confirmed receipt, NCDOT can assume that the reviewing parties do not object to the document. Should any of these parties have questions about or comments on such plans and specifications, NCDOT shall consult with that party, and if necessary with several or all consulting parties to address such questions and comments. NCDOT shall deposit copies of the final documentation with USFWS, NPS, SHPO, and the Historic Architecture Group of NCDOT within three (3) years of the letting of the Phase I contract.

B. Context for Tourism

- 1) NCDOT will work with the USFWS, SHPO, Aquariums, CHA, and NPS to compile a context for the Coast Guard and Life Saving stations, wildlife refuges, and other state and federal "outposts" on North Carolina's Outer Banks.
- 2) NCDOT will produce a digital document which synthesizes the histories and documentary materials associated with the various sites.
- 3) In addition, NCDOT will prepare the artwork and text for a brochure that could be used by travelers and residents as a guidebook to locate and

- understand the significance of the various sites and their place in the history of the Outer Banks and the state.
- 4) NCDOT shall afford the USFWS, SHPO, Aquariums, CHA, and NPS an opportunity to review and comment on the draft brochure. If no comments are received from the USFWS, SHPO, Aquariums, CHA, and NPS within thirty (30) days of confirmed receipt, NCDOT can assume that the reviewing parties do not object to the brochure. Should any of these parties have questions about or comments on such plans and specifications, NCDOT shall consult with that party, and if necessary with several or all consulting parties to address such questions and comments.
 - 5) NCDOT shall deposit copies of the final documentation and brochure artwork and text with USFWS, SHPO, Aquariums, CHA, and NPS within three (3) years of the letting of the Phase I contract and will provide 50,000 brochures to tourism organizations such as Historic Albemarle, Coastal Guide, NC Northeast Commission, Outer Banks Visitors Bureau, and state visitor centers.

II. Pea Island National Wildlife Refuge

A. Bridge Design

Currently, the bridge rail is proposed as a 32-inch concrete parapet with 2-bar, metal rail atop the parapet. Prior to completion of the final design for the Undertaking's bridge structure within the Pea Island National Wildlife Refuge, NCDOT shall afford the SHPO, USFWS, and NPS an opportunity to review and comment on the plans and specifications for the parapet and bridge rail for NC 12. If no comments are received from the SHPO, USFWS, or NPS within thirty (30) days of confirmed receipt, NCDOT can assume that the reviewing parties do not object to the proposed design. Should any of these parties have questions about or comments on such plans and specifications, NCDOT shall consult with that party, and if necessary with several or all consulting parties to address such questions and comments.

B. Management of NC 12

NCDOT, in consultation with FWHA, USFWS, NPS, SHPO, and the North Carolina Coastal Geological Cooperative, will develop and implement sustainable techniques to protect NC 12 while ameliorating any adverse impacts to the Refuge and Pea Island.

C. Copies of Technical Reports

NCDOT will provide the USFWS and NPS with copies of the cultural resource technical reports previously produced by NCDOT to describe the historic architecture, historic landscape, terrestrial archaeology, and underwater archaeology investigations in the Undertaking's Area of Potential Effects. NCDOT will deliver this information to USFWS and NPS within six (6) months of the execution of the PA.

D. Signs

NCDOT will provide and install signs within the Refuge, at locations coordinated with the USFWS and NPS, to direct people to the visitor's center and points of historical interest, including prominent Civilian Conservation Corps installations, within three (3) years of the letting of the Phase I contract.

E. Exhibits and Kiosks

- 1) NCDOT will provide the USFWS and NPS with information about the historic significance and structural importance of Civilian Conservation Corps' work efforts in the Refuge for use in exhibits and kiosks that will be made available to visitors.
- 2) NCDOT will design and produce a custom kiosk at a location specified by the USFWS within three (3) years of the letting of the Phase I contract. The kiosk, like the signs mentioned in Stipulation C above, will be installed or built in a manner consistent with USFWS or the Refuge's Visitor Service Facility Standards. More specifically, NCDOT will research and design the interpretive panels; design the structure, provide funding for fabrication of the kiosk, and install the kiosk at the site. Prior to fabrication of the interpretive panels and kiosk structure NCDOT shall afford the SHPO, and USFWS an opportunity to review and comment on the panels and structure. If no comments are received from the SHPO or USFWS within 30 days of confirmed receipt, NCDOT can assume that the reviewing parties do not object to the proposed design. Should any of these parties have questions about or comments on such plans and specifications, NCDOT shall consult with that party, and if necessary with several or all consulting parties to address such questions and comments.
- 3) Once installed by NCDOT, it is the intention of USFWS to maintain the kiosks subject to the availability of appropriated funds.

III. (former) Oregon Inlet US Coast Guard Station

A. Parking Lot and Access Road

- 1) NCDOT will make improvements (clearing sand and paving) to the access road (SR 1257) and parking area, if NCDOT needs these areas for staging. If and when the (former) Oregon Inlet Coast Guard Station becomes a viable facility and is open to the public, NCDOT will maintain SR 1257 to the standards of the North Carolina Secondary Road System.
- 2) For the purposes of this PA, staging areas are defined as (1) the storage of equipment or materials that are needed for the construction/demolition of the bridge over the Oregon Inlet and (2) the placement of temporary offices or trailers.
- 3) NCDOT shall insure access to the (former) Oregon Inlet Coast Guard Station during construction of the Undertaking (Phase I).

B. Signs

NCDOT will provide and install roadside signs to direct visitors to the station from Northbound NC 12 and Southbound NC 12 within one (1) month of the replacement bridge over Oregon Inlet being open to traffic.

C. Exhibits and Kiosks

NCDOT will provide Aquariums with information about the historic significance and structural importance of the Station for use in exhibits and kiosks, which will be made available to visitors. NCDOT will design and produce a custom kiosk at a location specified by Aquariums within three (3) years of the letting of Phase 1 of the Undertaking.

- 1) More specifically, NCDOT will research and design the interpretive panels; design the structure, provide funding for fabrication of the kiosk, and install the kiosk at the site.
- 2) Prior to fabrication of the interpretive panels and kiosk structure NCDOT shall afford the SHPO and Aquariums an opportunity to review and comment on the panels and structure. If no comments are received from the SHPO or Aquariums within thirty (30) days of confirmed receipt, NCDOT can assume that the reviewing parties do not object to the proposed design. Should any of these parties have questions about or comments on such plans and specifications, NCDOT shall consult with that party, and if necessary with several or all consulting parties to address such questions and comments.
- 3) Once installed by NCDOT, Aquariums will maintain the kiosks.

IV. Rodanthe Historic District & Chicamacomico Life Saving Station

The Undertaking will be designed in a manner that keeps subsequent phases of the project out of the limits of the Rodanthe Historic District (NRHP-eligible), which also includes the Chicamacomico Life Saving Station (NRHP-listed). If proposed modifications to the Undertaking change the effects determinations (pursuant to Section 106 of the National Historic Preservation Act), FHWA will reinitiate consultation with the Signatories and Concurring Parties to this PA pursuant to Stipulation IX.

V. Context Sensitive Solutions

FHWA and NCDOT commit to utilizing the best practices and measures available at the time during the construction the Parallel Bridge and when implementing activities associated with Pea Island/NC 12 Transportation Management Plan to avoid and minimize all impacts to historic properties.

VI. Future Consultation

Although Undertaking-related decisions (e.g. identification of a preferred alternative) will be made within the framework of the Merger process, consultation regarding historic properties will be made within the framework of this PA and in accord with Section 106 of the National Historic

Preservation Act. The following situations require further consultation pursuant to this PA (and may require amendment of this PA):

- Change in the historic status of properties;
 - Determination of new historic properties;
 - Determination that properties are no longer historic;
- Identification of a new alternative;
- Change to an existing alternative that would result in a different “effects determination” for a historic property; or
- Selection of a new Preferred Alternative.

Minor Design Changes

If the NCDOT proposes any changes to the design of the Undertaking (such as a change in the Area of Potential Effect), NCDOT shall provide FHWA, SHPO, ACHP, and other consulting parties with information concerning the proposed changes, an assessment of how such changes may affect historic properties, and any measures proposed to conduct further investigations or modify specific mitigation measures contained in the PA. If after thirty (30) days of confirmed receipt of proposed changes and NCDOT’s recommendations, no comments are received by NCDOT, the NCDOT may assume the non-responding party has no objections. NCDOT shall ensure that all comments received within 30 days of confirmed receipt are considered and that objections are resolved in accordance with Stipulation VIII.

VII. Unanticipated Discovery

If additional historic properties are discovered or unanticipated effects on historic properties are found after FHWA approves the Undertaking and construction has commenced, FHWA will consult with the SHPO, the property owner, and any Indian tribe that may ascribe traditional cultural and religious significance to the properties in accordance with 36 CFR 800.13(b). If Native American human remains are discovered on federal lands, NCDOT and FHWA will contact the federal land managing agency so that it may comply with Native American Graves Protection and Repatriation Act (NAGPRA). Inadvertent or accidental discovery of human remains on non-federal lands will be handled in accordance with North Carolina General Statutes 65 and 70.

VIII. Dispute Resolution

Should any of the Signatory or Consulting Party(ies) object within (30) days after receipt to any plans or documentation provided for review pursuant to this PA, the FHWA shall consult with the objecting party(ies) to resolve the objection. If the FHWA or objecting party(ies) determines that the objection cannot be resolved, the FHWA will forward all documentation relevant to the dispute to the ACHP. Within thirty (30) days after receipt of all pertinent documentation, the ACHP will either:

- Provide the FHWA with recommendations which the FHWA will take into account in reaching a final decision regarding the dispute, or

- Notify the FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment.
- Any ACHP comment provided in response to such a request will be taken into account by the FHWA, in accordance with 36 CFR Section 800.7 (c) (4) with reference to the subject of the dispute.

Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute. FHWA's responsibility to carry out all of the actions under this PA that are not the subject of the dispute will remain unchanged.

IX. Amendments

Should any of the Signatory parties believe that any of the terms of this PA cannot be carried out or that an amendment to the terms must be made, that party(ies) shall immediately consult with the other party(ies) to develop an amendment. The amendment will be effective on the date a copy is signed by all of the original signatories. If the signatories cannot agree to appropriate terms to amend the PA, any signatory may terminate the agreement in accordance with Stipulation X, below. Environmental conditions will be monitored for any changes prior to permitting of subsequent phases and the NC 12 TMP may provide for any amendments that may result from environmental changes and need for permits at those times.

X. Termination

Any Signatory may terminate this PA by providing notice to the other party(ies), provided that the party(ies) will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this PA will require compliance with 36 CFR 800. This PA may be terminated by the execution of a subsequent PA that explicitly terminates or supersedes its terms.

If the USFWS does not issue a permit for the terminal groin, FHWA shall notify the parties to this PA that the Undertaking will not proceed as planned and that this PA is null and void. In the event that FHWA and NCDOT are unable to proceed with the Undertaking as currently proposed, FHWA shall reinitiate Section 106 consultation in accordance with 36 CFR Part 800 regarding other alternatives for the replacement of the Herbert C. Bonner Bridge.

XI. Duration

Unless terminated pursuant to Stipulation X above, this PA will be in effect until FHWA, in consultation with the other Signatory and Concurring Party(ies), determines that all of its terms have satisfactorily been fulfilled, which ever time comes first, or if NCDOT is unable or decides not to construct the Undertaking.

XII. Reporting

NCDOT will provide a status update on the implementation of the Undertaking as well as progress made on the Stipulations to the Signatories and Concurring Parties to this PA. This status update will occur on an annual basis--whether or not any activity occurred on the Undertaking. If important milestones have occurred on the Undertaking and/or implementation of the PA, NCDOT should provide the status updates at shorter intervals based on deliverable actions.

Execution of this PA by FHWA, ACHP, and SHPO, and implementation of its terms, evidence that FHWA has afforded the Council an opportunity to comment on the Undertaking, and that FHWA has taken into account the effects of the Undertaking on the historic properties.

SIGNATORIES:

By: Clarence W. Coleman, Jr.
for John F. Sullivan, III, Division Administrator
Federal Highway Administration, North Carolina

Date: 11/1/2010

By: Jeffrey J. Crow
Jeffrey J. Crow, Deputy Secretary
North Carolina State Historic Preservation Officer

Date: 11/3/2010

By: John M. Fowler
John M. Fowler, Executive Director
Advisory Council on Historic Preservation

Date: 11/15/10

By: Terry Gibson
Terry Gibson, State Highway Administrator
North Carolina Department of Transportation

Date: 11/3/2010

CONCURRING PARTY:

By: 

Bobby Outten, County Manager
Dare County, North Carolina County Manager

Date: 11/17/10

CONCURRING PARTIES:

By: 
David Griffin, Division Director
North Carolina Aquariums, (Former) Pea Island US Coast Guard Station

Date: 11/22/20

CONCURRING PARTY:

By: Ken Wenberg
Ken Wenberg, President
Chicamacomico Historical Association

Date: 11 / 2 / 10

CONCURRING PARTY:

By: _____
Cynthia Dohner, Regional Director
U. S. Fish and Wildlife Service, Southeast Region

Date: _____

CONCURRING PARTY:

By: _____
David Vela, Regional Director
National Park Service

Date: _____

