



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

September 14, 2006

N. C. Dept. of Environment and Natural Resources  
Division of Coastal Management  
Wilmington District  
127 Cardinal Drive Ext.  
Wilmington, NC 28405-3845

Attention: Jim Gregson  
District Manager

Subject: **Amended application for a CAMA Major Development Permit for the Second Bridge to Oak Island**, Brunswick County, WBS Number 34407.1.1, State Project No. 8.2231201, Federal Aid No. STP-1105(6), TIP R-2245, Work Center 34407.1.1, Brunswick County.

Reference: Letter from DCM Dated September 6, 2006 regarding additional information request.

Dear Mr. Gregson:

On August 30, 2006 the North Carolina Department of Transportation (NCDOT) submitted an application to construct a roadway on new location in Brunswick County, known as the second bridge to Oak Island. The NCDOT would like to amend the application to reflect the following changes. Revisions are marked in bold.

- On Page 2 of the permit application, Table 1 did not include temporary impacts.

Permanent Wetlands Impacts *	Temporary Wetlands	Permanent SW Impacts	Temporary SW Impacts
21.548 ac	<b>0.046 ac</b>	222ft (0.015 ac)	132ft (0.053 ac)

\*Includes fill, excavation, mechanized clearing, and wetland drawdown from moving existing ditches

- On Page 4, the permit application stated that the existing culvert under NC 211 would be extended. The permit application should have stated that the culvert would be **replaced** with a 10-foot by 8-foot RCBC.

- Table 3 in the permit application Site 2 was classified as a CAMA wetland, however this wetland should be classified as **Section 404 jurisdictional** wetland impacts.

Site	Tidal (CAMA) or Non-Riverine(NR) Wetland Impacts	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Cowardin et al. Description
1	Tidal CAMA	0	0	EIEM1
2	<b>Riverine</b>	0.026	0.027	EIEM1
4	Tidal CAMA	0	0.019	EIEM1
6	NR	1.522	0	PF01
7	NR	0*	0	PF04
8	NR	0.066	0	PF04
9	NR	0.106	0	PF04
10	NR	0.137	0	PF04
11	NR	1.407	0	PF04
12	NR	1.172	0	PF04
13	NR	0.07	0	PF04
14	NR	0.75	0	PF04
15	NR	0.01	0	PF04
16	NR	0.276	0	PF04
17	NR	0.365	0	PF04
18	NR	0.147	0	PF04
19	NR	1.161	0	PF04
20	NR	0.168	0	PF04
21	NR	2.773	0	PF04
22	NR	1.657	0	PF04
23	NR	0.182	0	PF04
24	NR	3.345	0	PF04
25	NR	2.908	0	PF04
26	NR	0	0	PF04
27	NR	0.025	0	PF04
28	NR	0	0	PF04
29	NR	0.805	0	PF04
30	NR	0.984	0	PF04
31	NR	0.088	0	PF04
32	NR	1.351	0	PF01
33	NR	0.047	0	PF01
35	NR	0*	0	PF04
36	NR	0*	0	PF04

\*Sites Deleted

- Table 4 on Page 6 showed no permanent impacts at Site 5, however the Table should have showed **0.022 acre** of impacts related to bridge construction.

**Table 4 – R-2245 Surface Water Impacts**

Site	Stream Name and Intermittent (I) or Perennial (P)	Structure/ Size Type	Permanent Impacts	Mitigation Required	Temporary Impacts	DWQ Index number	DWQ Class
3 & 4	Davis Canal (P)	Bridge	0.001ac	No	0.035ac	15-25	SA HQW
5	AIWW (P)	Bridge	<b>0.022ac</b>	NA	0 ac	15-25	SA HQW
11	UT to AIWW (I)	2 @ 60”RCP	207 ft	No	52 ft	15-25	SA HQW
34	UT to River Swamp (P)	Extend 10’x8’ RCBC	15 ft	30 ft	80 ft	15-25-1-6	C Sw

- The description for Sites 1 and 2 on Page 6 of the permit application describes the wetland as a CAMA jurisdictional wetland. However this wetland is not a CAMA jurisdictional wetland and should be classified as a **Section 404 jurisdictional wetland**.
- The description for Sites 3 and 4 on Page 6 of the permit application stated that the navigational clearance of the new bridge would be 14.7 feet, however the correct navigational clearance will be **14.2 feet**. The permit application also states that the bridge over Davis Canal would be constructed using drilled shafts, however the bridge will be constructed by using driven piles. The application also should have stated that the placement of Class II riprap on the fill slopes under the bridge will result in **no permanent** fill in wetlands. The driven piles will result in 0.001 acre of permanent fill within Davis Canal. Riprap will result in 0.029 acre of temporary fill in Davis Canal at Site 3 and 0.006 acre at Site 4. Riprap will also result in 0.019 acre of temporary fill in wetlands.
- The description for Site 5 states that bridge construction will result in 0.068 acres of permanent fill, however the application should have stated that permanent impact are **0.022 acre**. The permit application also stated that the bridge would be constructed from eight 5-foot diameter piers, however the bridge will be constructed from sixteen 6-foot diameter piers. The description of the modifications to the timber bulkhead has also changed. The existing bulkhead on the southern bank will be replaced due to interference with a bridge bent. A portion of the new bulkhead shifts toward AIWW a maximum of 10 feet and part of the bulkhead shifts away from the AIWW a maximum of 9 feet and will result in 0.012 acres of fill in the AIWW.
- On Page 9 of the permit application states that the existing pipe will be extended, however the existing 6-foot by 4-foot RCBC will be **replaced** with a 10-foot by 8-foot RCBC.
- On Page 10 of the permit application the language describing FEMA compliance should be revised to the following. The AIWW bridge has been designed to span the 100-year floodplain at the AIWW Canal. The Davis Canal Bridge has been designed to ensure there is no increase to the extent and level of the flood hazard risk.
- On Page 13 of the permit application, the statement is made that a new access point will be constructed following the bridge construction. However, the NCDOT is in the process of working with the City of Oak Island to **enhance two other existing public access points** instead of replacing the existing access points.
- On Page 15 of the permit application the special access designation on the roadway plans should read “No Revisions shall be made to the control of access without approval of NCDOT, FHWA USEPA and NCDENR per agreement and USACE per permit condition.
- On Page 18 the permit application states that 21.522 acres of 404 jurisdictional wetlands and 0.026 acre of CAMA jurisdictional wetlands would require mitigation. The application

should have stated **that 21.548 acres of 404 jurisdictional** wetlands would require mitigation.

In a letter dated September 6, 2006 NCDCM requested a narrative regarding improvements that will be conducted to Middleton Avenue on Oak Island. On Typical Section No 1 we will be resurfacing the road and widening the lanes from 20 to 24-foot lanes with 4-foot shoulders. On Typical Section No 2 we will be put in new pavement and widening the lanes from 20 to 24-foot lanes with 4-foot shoulders. On Typical Section No 3 we will have a variable widening between 6 and 27-feet with 4-foot shoulders. Typical Section No 4 will have new pavement.

Enclosed with this letter is the signed AEC Hazard Notice. A revised plan view has also been included that shows the first line of stable vegetation and the small and large structure erosion setback line.

Thank you for you assistance with this project. If you have any questions or need any additional information about this project, please contact Brett Feulner at (919) 715-1488.

Sincerely,



for

Gregory J. Thorpe, Ph.D., Environmental Management Director  
Project Development and Environmental Analysis Branch

GJT/bmf

cc w/ attachment

Mr. Steve Sollod, NCDCM

Mr. Scott McLendon, USACE, Wilmington

Mr. Dave Timpy, USACE, Wilmington

Dr. David Chang, P.E., Hydraulics

Mr. Jay Bennett, P.E., Roadway Design

Mr. Mark Staley, Roadside Environmental

Mr. Joseph Qubain, P.E., Planning Engineer

Mr. Majed Alghandour, Programming and TIP

Mr. Allen Pope, P.E., Division 3 Engineer

Mr. Mason Herndon, Division 3 Environmental Officer

Mr. Greg Perfetti, P.E., Structure Design

Mr. Art McMillan, P.E., Highway Design

Mr. Carl Goode, NCDOT- HEU

Mr. Todd Jones, NCDOT, External Audit Branch

Static Vegetation Line

**SITE 1**

NO IMPACTS

60 ft Setback

120 ft Setback

BEGIN CONSTRUCTION  
-Y1- STA.10+00.00

126

MAINTAIN DRAINAGE  
FROM EAST SIDE OF  
GARAGE TO NORTH SIDE

-Y2- POT Sta. 10+00.00

BEGIN CONSTRUCTION  
-Y2- STA.11+00.00

-Y3- POT Sta. 10+00.00

BEGIN CONSTRUCTION  
-Y3- STA.11+00.00

125

124

SOUTH MIDDLETON AVE. 20' BST

MAINTAIN SURFACE  
DRAINAGE

END CONSTRUCTION  
-Y2- STA.12+80.00

-Y2- POT Sta. 14+07.11

END CONSTRUCTION  
-Y1- STA.13+00.00

-Y1- POT Sta. 14+00.00

**SITE 2**  
FILL IN WETLANDS  
&  
TEMP. FILL IN WETLANDS

SCALE



NAD 83



North Carolina Department of Environment and Natural Resources  
Division of Coastal Management

Michael F. Easley, Governor

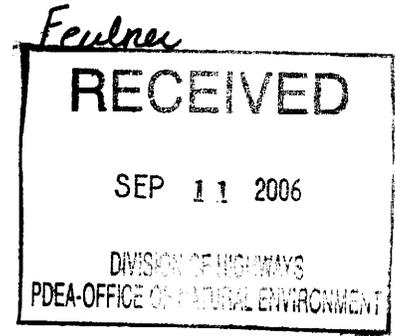
Charles S. Jones Director

William G. Ross Jr., Secretary

September 6, 2006

Mr. Brett Feulner  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Subject: CAMA Major Permit Application  
Second Bridge to Oak Island (R-2245)  
Brunswick County



The Division of Coastal Management hereby acknowledges receipt of your application for proposed development located between NCSR 1104 and NC Highway 211, Adjacent to the Atlantic Intracoastal Waterway and Big Davis Canal, between the Town of Oak Island and Midway, in Brunswick County. However, your application lacks information necessary for complete processing. The attached checklist indicates the deficiencies of your application. If you respond within three working days from the date of this fax or E-mail, or within five days from the receipt of this letter with the required additional information, processing of your application will promptly continue and will not be placed on hold. If you are not able to respond within three or five days, your application will not be accepted as complete for processing. Additional information may be required pending further review by the fifteen (15) review agencies. The attached checklist indicates the deficiencies of your application.

If you have any questions concerning this matter, please call me at my Wilmington Office at (910) 796-7266 or (910) 796-7215.

Sincerely,



Jim Gregson  
District Manager

cc: Wilmington Files  
Steve Sollod  
Doug Huggett

**CHECKLIST OF ADDITIONAL INFORMATION AND RECOMMENDATIONS FOR  
PROCESSING APPLICATION**

1. A revised plan view of the proposed development indicating the following additional features:
  - The first line of stable natural vegetation. (The Town of Oak Island uses a surveyed or static vegetation line which represents the first line of stable natural vegetation that existed prior to the onset of the large scale spoil deposition project that occurred in 2001) The coordinates of this line were e-mailed to you on September 5, 2006.
  - Small and large structure Erosion Setback Lines. In this portion of Oak Island the small structure setback is set at a distance of 60 feet from the first line stable natural vegetation (30 times the long-term average annual erosion rate of two feet per year). The large structure setback is set at a distance of 120 feet from the first line of stable natural vegetation (60 times the long term average annual erosion rate of two feet per year). The 60 feet and 120 feet measurements are landward of the pre-project vegetation line.
2. A signed AEC Hazard Notice (attached).
3. A revised project narrative or addendum to the project narrative describing in detail the proposed improvements to existing roads at Oak Island.

# AEC HAZARD NOTICE

Project Is In An:  Ocean Erodible Area  High Hazard Flood Area  Inlet Hazard Area

Date Lot Was Platted: \_\_\_\_\_

This notice is intended to make you, the applicant, aware of the special risks and conditions associated with development in this area, which is subject to natural hazards such as storms, erosion and currents. The rules of the Coastal Resources Commission require that you receive an AEC Hazard Notice and acknowledge that notice in writing before a permit for development can be issued.

The Commission's rules on building standards, oceanfront setbacks and dune alteration are designed to minimize, but not eliminate, property loss from hazards. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development.

The best available information, as accepted by the Coastal Resources Commission, indicates that the annual ocean erosion rate for the area where your property is located is 2 feet per year.

The rate was established by careful analysis of aerial photographs of the coastline taken over the past 50 years.

Studies also indicate that the shoreline could move as much as 325 feet landward in a major storm.

The flood waters in a major storm are predicted to be about 20 feet deep in this area.

Preferred oceanfront protection measures are beach nourishment and relocation of threatened structures. Hard erosion control structures such as bulkheads, seawalls, revetments, groins, jetties and breakwaters are prohibited. Temporary devices, including sand bags, may be allowed under certain conditions.

This structure shall be relocated or dismantled within two years of becoming imminently threatened.

The applicant must acknowledge this information and requirements by signing this notice in the below space. Without the proper signature, the application will not be complete.

E. L. Luck for Gregory J. Thorpe, PhD  
Applicant's Signature

9.14.06  
Date

**SPECIAL NOTE:** This hazard notice is required for development in areas subject to sudden and massive storms and erosion. Permits issued for development in this area expire on December 31 of the third year following the year in which the permit was issued. Shortly before work begins on the project site, the Local Permit Officer will determine the vegetation line and setback distance at your site. If the property has seen little change and the proposed development can still meet the setback requirement, the LPO will inform you that you may begin work. It is important that you check with the LPO before the permit expires for official approval to continue the work after the permit has expired. Generally, if foundation pilings have been placed and substantial progress is continuing, permit renewal may not be necessary. If substantial progress has not been made, the permit must be renewed and a new setback line established. It is unlawful to continue work after permit expiration without this approval.

For more information, contact:

Jim GREGSON  
Local Permit Officer

127 CARDINAL DRIVE  
Address

WILMINGTON, NC 28405  
Locality

910 796-7215  
Phone