

## Lewis, Derrick W

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**From:** Lewis, Derrick W  
**Sent:** Friday, March 05, 2010 8:34 AM  
**To:** Mcintyre, Ray; Avant, Al  
**Cc:** Lane, James D  
**Subject:** RE: R-2513

**Importance:** High

Ray

Here is the breakouts you requested. per Neil's recommendation for Alternative 1. Please note that I increased the right of way a little because of rounding between sections.

R-1513A

Construction \$ 8,300,000  
Right of Way \$ 4,000,000  
Total \$12,300,000

R-2513B

Construction \$14,200,000  
Right of Way \$ 5,000,000  
Total \$19,200,000

R-2513C

Construction \$ 9,800,000  
Right of Way \$ 2,000,000  
Total \$11,800,000

R-2513D

Construction \$17,500,000  
Right of way \$ 4,000,000  
Total \$21,500,000

R-2513E

Construction \$16,000,000  
Right of way \$ 4,000,000  
Total \$20,000,000

R-2513

Construction \$65,800,000  
Right of way \$19,000,000  
Total \$84,800,000

-----Original Message-----

**From:** Mcintyre, Ray  
**Sent:** Monday, March 01, 2010 8:02 AM  
**To:** Lewis, Derrick W  
**Subject:** RE: R-2513

This project is broken into segments. We need to get these in order to update it. Do you have those numbers?

-----Original Message-----

**From:** Lewis, Derrick W  
**Sent:** Wednesday, February 24, 2010 4:09 PM  
**To:** Leggett, Calvin W; Mcintyre, Ray; Avant, Al  
**Subject:** RE: R-2513

I have received the updated cost estimates for R-2513, US 17 from NC 43 in Craven County to SR 1127 in Beaufort County, a distance of approximately 15.5 miles.

The cost estimate of this project depends on if we accommodate the Strategic Highway Corridor recommendation of a Freeway on this section of US 17.

When PD&EA performed a Environmental Screening of this project in 2005, they considered two alternatives.

Alternative 1 is to widen US 17 to a four lane expressway along the existing alignment with all intersections at grade and partial control of access. The construction cost of this alternative is \$65,800,000 (2010 dollars) and PD&EA's right of way estimate in 2005 was \$17,850,000. This right of way costs is very close to the estimate of \$18,500,000 in the current TIP. Given the uncertainty of the right of way, I would suggest rounding the right of way estimate at \$19,000,000. Therefore, the total costs of the project if it were to remain a multilane widening with partial control of access would be \$84,300,000.

Alternative 2 is to widen some of existing US 17 but provide a freeway upgrade to the Vanceboro Bypass (R-2513C) and proposed 6 mile new location bypass of US 17 from the end of R-2513B to a point about 1.8 to 2 miles south of NC 102, a distance of approximately 9 miles. The remaining 6.5 miles of this project remain an expressway under this option. The estimated construction costs of this option is \$162,200,000 (2010) The estimated right of way costs of this option was \$21,125,000 (2005), rounded to \$22,000,000 for a total costs of \$184,200,000.

I will provide a copy of their 2005 Environmental Screening evaluation if you need it in your files.

Derrick Lewis  
Feasibility Studies Unit  
Program Development Branch.

-----Original Message-----

From: Leggett, Calvin W  
Sent: Monday, February 08, 2010 9:44 AM  
To: Lewis, Derrick W; McIntyre, Ray; Avant, Al  
Subject: RE: R-2513

Sounds wise. I would run construction numbers back through Doug Lane & see if he is still satisfied withthem.

-----Original Message-----

From: Lewis, Derrick W  
Sent: Friday, February 05, 2010 9:14 AM  
To: Leggett, Calvin W; McIntyre, Ray; Avant, Al  
Subject: R-2513

Gentlemen

We were investigating TIP R-2513, US 17 from SR 1438 to SR 1127 in Carteret and Beaufort Counties, and discovered that PD&EA performed an environmental screening in 2005 similar to the cursory evaluation we were undertaking.

Considering that their Environmental Screening report with costs estimates appears to be sufficient for our purposes, I plan on just compiling their data and transmitting this information to you as a quick one page memo.

Thoughts, Concerns

Derrick

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

April 4, 2005

Memorandum To: Robert Hanson, P.E.  
Project Development Eastern Manager  
Project Development & Environmental Analysis

From: Beth Smyre, Project Development Engineer *Beth Smyre*  
Project Development & Environmental Analysis

Subject: Widening of US 17 to a multi-lane facility, from  
SR 1438 (Spruill Town Road) to South of SR 1127  
(Possum Track Road), Craven and Beaufort  
Counties, WBS No. 35497, TIP Project R-2513

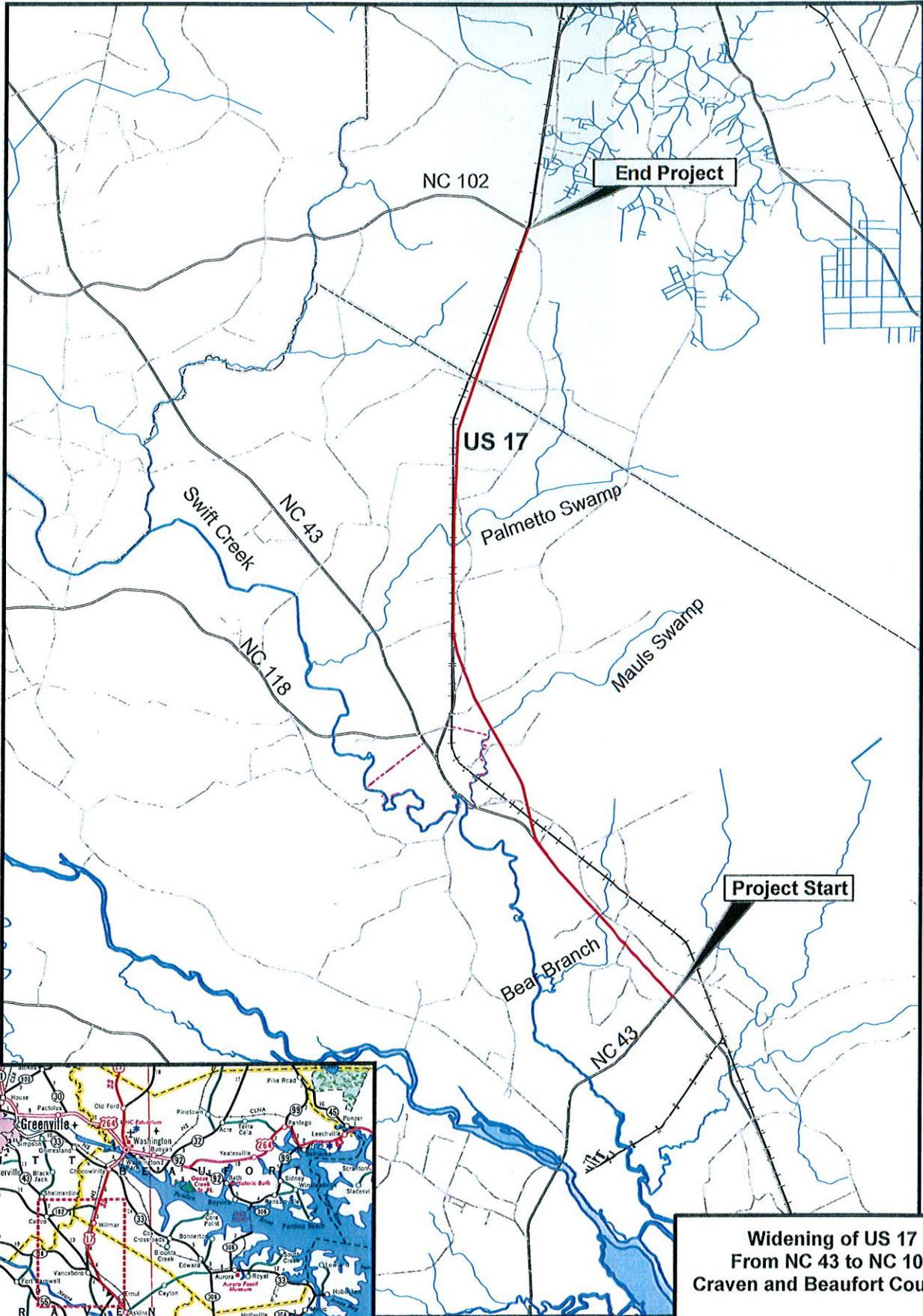
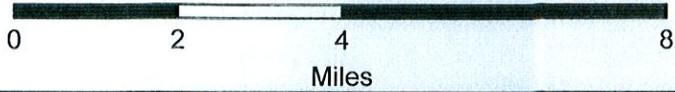
### R-2513 Environmental Screening

This report describes recommended improvements to US 17 in Craven and Beaufort Counties within the R-2513 project corridor. It includes a discussion of current conditions in the project vicinity as well as environmental features that could influence the final project design. The information in this report is not meant to replace a thorough feasibility study for the subject project, but is intended only as a preliminary screening of relevant environmental information.

#### I. General Description

TIP Project R-2513 proposes to widen US 17 from NC 43 in Craven County to NC 102 in Beaufort County (Figure 1). The project limits in this report have been adjusted from those listed in the 2004-2010 TIP, which shows the project extending from SR 1438 (Spruill Town Road) to South of SR 1127 (Possum Track Road). The project is bounded on the north by TIP Project R-2510, the Washington Bypass, and on the south by TIP Projects R-2301, the New Bern Bypass, and R-3403, which widens US 17 from Mills Street Bridgeton to NC 43. The project is currently on a post-year construction schedule.

The recommended cross-section for the project is a four-lane, divided, shoulder section. The typical section would include two 12-foot wide travel lanes in each direction, a 46-foot wide median, 2-foot wide paved inside shoulders, and 10-foot wide outside shoulders, of which 4 feet are paved. This cross-section recommendation is based on the proposed section for other US 17 projects.



**Widening of US 17  
From NC 43 to NC 102  
Craven and Beaufort Counties**

TIP Project R-2513

Figure 1: Vicinity Map

## II. Existing Conditions

### *Typical Section*

Existing US 17 is generally a two-lane roadway with 12-foot wide travel lanes and low, unpaved shoulders (Figure 2). US 17 bypasses Vanceboro, the single town within the project limits. There is no access control along the length of the project; all intersections, including the railroad crossing near the southern end of the Vanceboro Bypass, are at-grade.

**Figure 2.** US 17 Typical Section.



### *Land Use*

Within the project limits, US 17 is generally rural in nature and is characterized by woodlands, farmlands, and light density development. There are scattered residences and business along the existing roadway, mostly between the northern end of the existing Vanceboro Bypass and the Craven County line. Development is more limited along the existing bypass section. Specific noteworthy development includes the following (information presented is based on current aerial photography as well as that gathered during a site visit):

- Above-ground utility lines are located adjacent to the west side of US 17 in sections of Beaufort County and northern Craven County.
- A small mobile home park is located on the east side of US 17 approximately one mile south of NC 102.
- Six sections of concentrated development (homes and/or small businesses) are located between NC 102 and SR 1644 (Irene Road) in Craven County.

- Palmetto Church and an associated cemetery is located on the east side of US 17, approximately 2500 feet south of the SR 1641 intersection.
- A service station is located on the east side of US 17, approximately 1000 feet south of SR 1640. At this location, the Norfolk-Southern rail line is located immediately west of US 17.
- Between SR 1438 (Spruill Town Road) and NC 43, there are five sections of concentrated development that include multiple small residences.
- A rest area is located on the west side of US 17 approximately 2000 feet north of NC 43. (Note: TIP Project K-3800 proposes to relocate this rest area; the project's construction is to be scheduled concurrently with R-2513.)

### *Rail Facilities*

A Norfolk-Southern Railways rail line is located within the project study area. This rail line runs immediately west of US 17 between NC 102 and Vanceboro; the track then crosses US 17 at-grade near the southern end of the Vanceboro Bypass (Figure 3) and extends east out of the project study area. In some sections between NC 102 and the north end of the bypass, the rail line comes within less than 50 feet of US 17 (Figure 4). The line itself extends between Chocowinity and New Bern; up to four trains per day use this rail line at speeds ranging between 10 and 35 mph.

**Figure 3.** Rail crossing on US 17/ Vanceboro Bypass.



**Figure 4.** Rail line adjacent to US 17. US 17 is the road just behind the rail crossing.



#### *Traffic Data*

US 17, within the project termini, is designated as a principal arterial on the North Carolina Statewide Functional Classification System. The US 17 corridor between Wilmington and the North Carolina/ Virginia State Line has also been identified by NCDOT as a Strategic Corridor. Current year (2003) traffic data for the project limits shows an AADT range between 6300 vpd immediately north of the NC 102 intersection and 10,000 vpd south of the Vanceboro Bypass. The higher traffic volumes at the southern end of the project are likely due to the fact that NC 43 merges with US 17 in Vanceboro and continues on US 17 through the end of the project.

### **III. Proposed Alternatives**

The current project description for R-2513 involves widening US 17 entirely on its existing location. However, due to the density of development as well as the close proximity of the rail line on the northern section of the project, an alternative that bypasses this section of US 17 may need to be considered during the planning process. In addition to the widening entirely on existing location alternative, a second alternative that includes moving a section of US 17 onto new location is examined.

#### *Alternative 1: Widen on Existing Location*

This alternative would widen US 17 on existing location for the entire length of the project. The estimate included in Table 1 is based on the following assumptions:

- A typical section of 4 travel lanes with a 46 foot median;
- Partial access control; and
- All intersections are at-grade crossings, including the railroad crossing on the existing Vanceboro Bypass.

**Table 1. Project Costs- Widen on Existing Alternative**

	<b>2004-2010 TIP Cost</b>	<b>Estimated Cost</b>
<b>Construction</b>	\$ 63,100,000	\$ 53,100,000
<b>Right-of-Way</b>	\$ 18,600,000	\$ 17,850,000
<b>Total</b>	\$ 81,700,000	\$ 70,950,000

According to preliminary right-of-way estimates, the widen on existing alternative would involve approximately 87 residential and 20 business relocations.

*Alternative 2: Widen and New Location Combination*

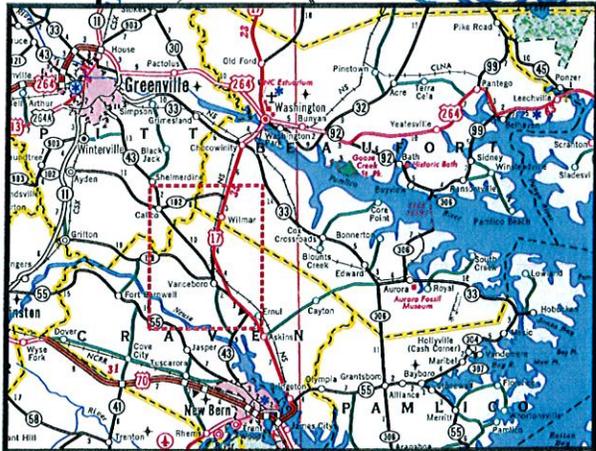
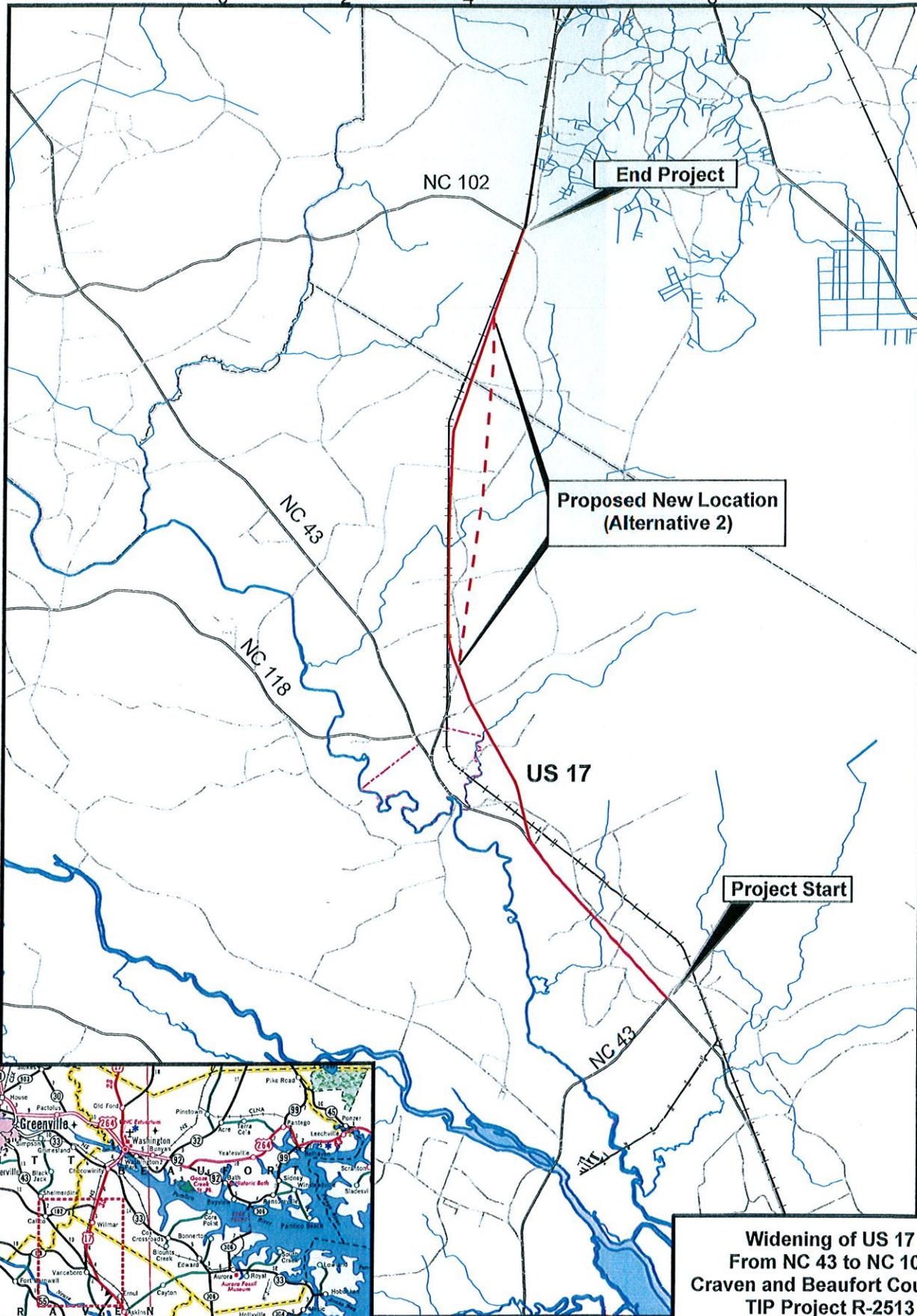
This alternative widens part of US 17 on existing location but also proposes to incorporate a new location bypass on part of the project; the bypass would extend between the Vanceboro Bypass/SR 1641 intersection and approximately 1.8 miles south of NC 102 in Beaufort County (Figure 5). The new bypass would be located east of existing US 17; its purpose is to reduce the number of relocations between the Vanceboro Bypass and NC 102. The estimate for this alternative included in Table 2 is based on the following assumptions:

- A typical section of 4 travel lanes with a 46 foot median;
- The existing Vanceboro Bypass (R-2513B) would be upgraded to Freeway standards;
- The proposed new bypass (R-2513C) would be constructed at Freeway standards;
- Interchanges are located at both ends of the existing Vanceboro Bypass;
- A grade separation at the rail line crossing on the Vanceboro Bypass; and
- The remaining sections at the ends of the project are under partial access control.

**Table 2. Project Costs- Widen and New Location Alternative**

	<b>2004-2010 TIP Cost</b>	<b>Estimated Cost</b>
<b>Construction</b>	\$ 63,100,000	\$ 114,300,000
<b>Right-of-Way</b>	\$ 18,600,000	\$ 21,125,000
<b>Total</b>	\$ 81,700,000	\$ 135,425,000

Miles



**Widening of US 17  
From NC 43 to NC 102  
Craven and Beaufort Counties  
TIP Project R-2513**

**Figure 5: Proposed Bypass  
Alternative**

According to preliminary right-of-way estimates, this alternative would involve approximately 79 residential and 19 business relocations. The minimal reduction in the number of relocations as compared to the widening alternative is likely due to the assumption of full access control on sections B and C.

#### **IV. Environmental Concerns**

A review of relevant GIS wetland and stream data was conducted for a 1000-foot study corridor centered on the existing US 17 alignment<sup>1</sup> (Figure 6). There are three named streams located within the project corridor: Palmetto Swamp, Mauls Swamp, and Bear Branch. Multiple unnamed tributaries also fall within the project corridor. Most of the streams within the corridor are perennial, and all have a DWQ Best Usage Classification of C Sw NSW. There are approximately 23,908 linear feet of streams.

A review of NC Division of Coastal Management wetland GIS data was used to evaluate wetlands within the project study corridor. There are 17 types of wetlands found within the 1000-foot study corridor, accounting for approximately 296 acres of wetlands.

As of January 29, 2003, the U.S. Fish and Wildlife Service lists eight federally protected species and 18 Federal Species of Concern for Beaufort and Craven Counties. A review of the N.C. Natural Heritage database of rare species and unique habitats conducted on February 24, 2005, revealed no federally threatened or endangered species, rare species, or unique habitats within one mile of the study corridor.

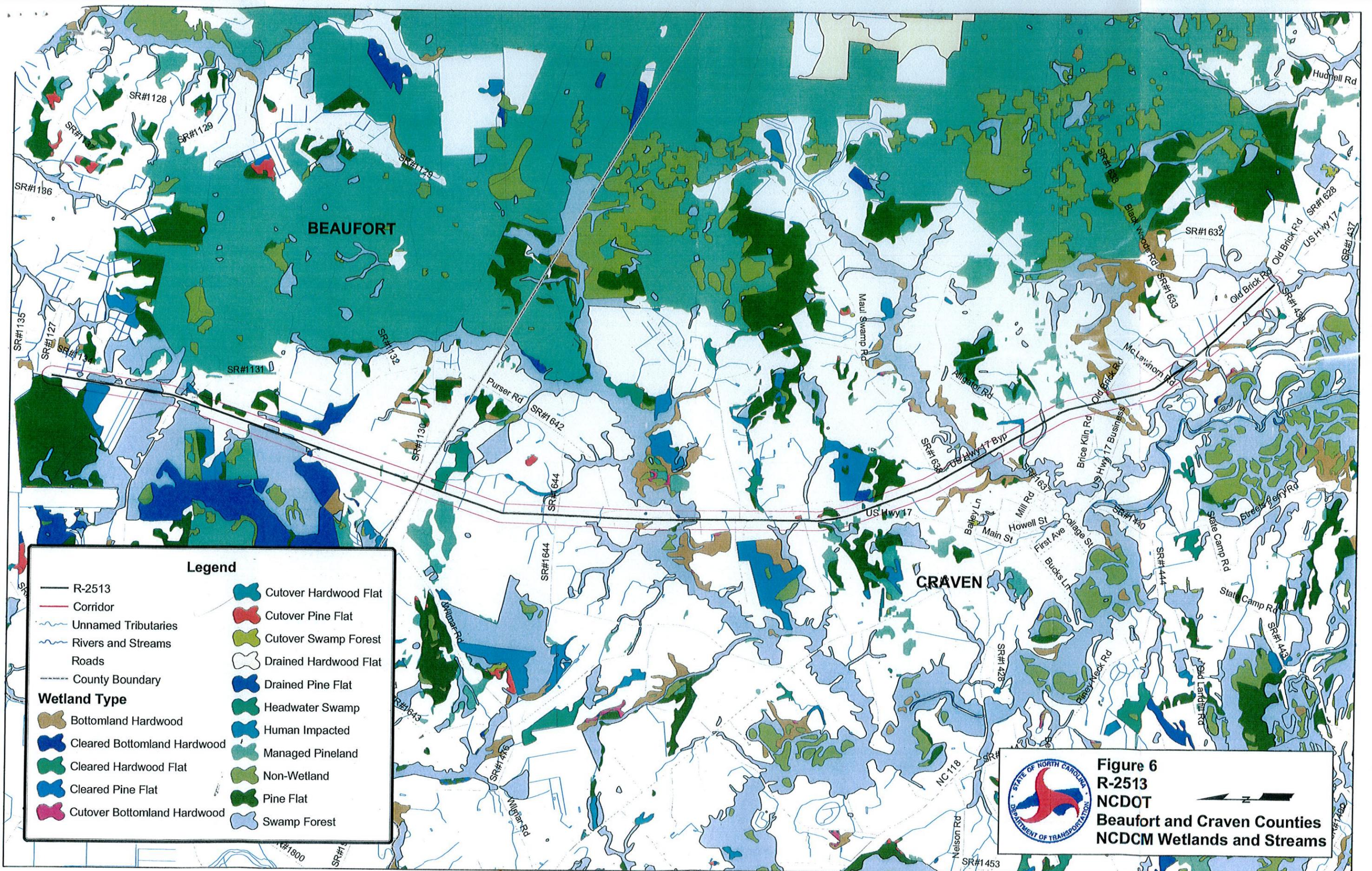
A review of historic property data for Beaufort and Craven Counties reveals only one eligible historic property along the project corridor. The Wilmar Firetower is located on the west side of US 17, just south of SR 1130 and the Craven County line. However, county-wide surveys for potential historic architectural resources have not been conducted since the 1980's; therefore, further reviews of the project corridor should be conducted to determine if any additional properties could be considered National Register-eligible.

Attachment

Cc: Charles Cox, P.E., PDEA

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<sup>1</sup> The study corridor used in the GIS review is based on the TIP project limits (SR 1438 [Spruill Town Road] to South of SR 1127 [Possum Track Road]), not on the revised limits described in Section I.



**Legend**

— R-2513	Cutover Hardwood Flat
— Corridor	Cutover Pine Flat
Unnamed Tributaries	Cutover Swamp Forest
Rivers and Streams	Drained Hardwood Flat
— Roads	Drained Pine Flat
--- County Boundary	Headwater Swamp
<b>Wetland Type</b>	Human Impacted
Bottomland Hardwood	Managed Pineland
Cleared Bottomland Hardwood	Non-Wetland
Cleared Hardwood Flat	Pine Flat
Cleared Pine Flat	Swamp Forest
Cutover Bottomland Hardwood	

**Figure 6**  
**R-2513**  
**NCDOT**  
**Beaufort and Craven Counties**  
**NCDOT Wetlands and Streams**

