ADMINISTRATIVE ACTION
STATE FINAL ENVIRONMENTAL IMPACT STATEMENT

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

US 17 Improvements
From SR 1330 / SR 1439 south of Belgrade to the New Bern Bypass at the Jones / Craven County line
Onslow and Jones Counties

Project No. 34442
T.I.P. No. R-2514 B, C & D

Submitted Pursuant to the North Carolina Environmental
Policy Act G.S. 113A-1 through 113A-10

Cooperating Agencies
U.S. Army Corps of Engineers
U.S. Forest Service

6/23/11
Date

FOR Gregory J. Thorpe, Ph.D., Manager
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The proposed action consists of improving US 17 from SR 1330 / SR 1439 south of Belgrade to the Jones / Craven County Line south of New Bern in Jones and Onslow Counties. This statement documents the need for improvements to the US 17 corridor and evaluates alternatives with respect to costs, social and economic effects, and human and natural environmental impacts.

Comments on this State Final Environmental Impact Statement are due by _____, and should be sent to Dr. Gregory Thorpe at the above address.

ADMINISTRATIVE ACTION
STATE FINAL ENVIRONMENTAL IMPACT STATEMENT

US 17 IMPROVEMENTS
FROM SR 1330 / SR 1439 SOUTH OF BELGRADE TO THE NEW BERN BYPASS AT THE JONES / CRAVEN COUNTY LINE
ONSLOW AND JONES COUNTIES

Project No. 34442
T.I.P. No. R-2514 B, C & D

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PROJECT COMMITMENTS
US 17 IMPROVEMENTS
FROM SR 1330/1439 SOUTH OF BELGRADE
TO THE NEW BERN BYPASS AT THE JONES/CRAVEN COUNTY LINE
Onslow and Jones Counties

TIP No. R-2514 B, C & D

Project Development and Environmental Analysis Branch

- After consultation with the North Carolina State Historic Preservation Office, it was determined that the project will have an adverse effect on Archaeological Site 31JN128, which has been recommended as eligible for the National Register of Historic Places per Criterion D. The site falls partially within the corridor and should be avoided by construction activities if possible. Subsequently, the NCDOT has prepared a Notification of Adverse Effects as required by the Council in 36CFR800.6(a)(1). The USACE submitted this documentation to the Advisory Council on March 3, 2011. The Advisory Council responded on March 23, 2011 that their participation in consultation to resolve adverse effects is not needed. As Archaeological Site 31JN128 will not be avoided by construction activities, data recovery excavations will be required once right-of-way has been acquired and prior to construction.

Division 2, Division 3, and Construction Unit

- The Trent River is a designated anadromous fish spawning area. An in-stream work moratorium will be in place from February 15th to June 15th.

- The White Oak is a designated inland primary nursery area. An in-stream work moratorium will be in place from February 15th to September 30th.

Hydraulic Unit, Division 2, Division 3, and Construction Unit

- Neuse River Basin Buffer rules apply to the northern two-thirds of the project from north of Maysville to the New Bern Bypass.

- The Hydraulics Unit shall coordinate with the NC Floodplain Mapping Program, which administers FEMA's National Flood Insurance Program for the state, for approval of a Conditional Letter of Map Revision and subsequent Final Letter of Map Revision for each new crossing of a FEMA-regulated stream.

- The project involves construction activities on or adjacent to FEMA-regulated streams; therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that drainage structures and roadway embankments that are located within the 100-year floodplain were built as shown in the construction plans.

Division 2, Division 3, and Roadway Design Unit

- NCDOT will construct a wildlife underpass in Alternative 3 to provide wildlife passage across US 17 from the Hofmann Forest to the Croatan National Forest. Dual bridges 60 foot toe of slop to toe of slop with a 10-foot vertical clearance are proposed, coupled with fencing parallel to US 17 to help channel animals to the underpass.

- As a result of extensive coordination with community members and local officials in Goshen, US 17 should be designed to pass under the local cross-street: SR 1337/Goshen Road. Current designs for Alternative 4D incorporate this element.

INTRODUCTION / PROJECT HISTORY

This document was prepared in accordance with the requirements of the North Carolina State Environmental Policy Act (SEPA G.S. 113A, Article 1). This is an informational document intended for use by both decision-makers and the public. As such, it represents a disclosure of relevant environmental information concerning the proposed action.

The North Carolina Department of Transportation proposes to improve US 17 from SR 1330/SR 1439 south of Belgrade in rural Onslow County to the New Bern Bypass at the Jones / Craven County Line south of New Bern. The proposed project is approximately 16 miles long and is generally located between Jacksonville and New Bern in coastal North Carolina. The existing two-lane facility winds through the Belgrade Community and the towns of Maysville and Pollocksville.

History of the Existing Facility

US 17 is one of the oldest transportation routes in the United States. A historical marker was placed on US 17 near Belgrade in 1949 stating that this section of US 17 was part of the first post road in 1738. Today, US 17 begins in Fort Myers, Florida and runs to Winchester, Virginia. From South Carolina, US 17 enters North Carolina near Calabash in Brunswick County and proceeds into Virginia near the Dismal Swamp in Camden County.

US 17 found its beginnings in North Carolina sometime around 1928. North of Wilmington it followed the same general route through the same cities that it follows today. However, south of Wilmington it followed today's US 76 west into South Carolina. The current alignment south of Wilmington was constructed between 1932 and 1939 and was originally part of US 117.

A bypass of Edenton was constructed in 1979, as well as the widening of US 17 from Hertford to north of Elizabeth City. Some widening of US 17 in the Wilmington and Williamston areas was undertaken. In the early 1980s, US 17 was widened from Elizabeth City to the Virginia State Line.

With the enactment of the North Carolina Highway Trust Fund in July 1989, US 17 was designated an Intrastate Highway. This project is part of the Governor's Transportation Plan for the 21st century and the 1996 Highway Bond Program. US 17 is also listed as a key economic development highway for the state.

US 17 is the primary north-south corridor east of I-95 serving the coastal region of the state. The route is designated as a hurricane evacuation route for North Carolina beaches from Virginia to

South Carolina and is a Strategic Highway Corridor (SHC) route serving the Cherry Point Marine Corps Air Station and Camp LeJeune Marine Corps Base in Onslow County. The SHC initiative represents a timely effort to protect and maximize the mobility and connectivity on a core set of highway corridors throughout North Carolina, while promoting environmental stewardship through maximizing the use of existing facilities to the extent possible, and fostering economic prosperity through the quick and efficient movement of people and goods. Each Corridor represents an opportunity for NCDOT, partnering agencies, and other stakeholders to consider a long-term vision, consistency in decision-making, land use partnerships, and overarching design and operational changes.

NC 58 is designated as a hurricane evacuation route and shares an 8 mile portion of US 17 between Maysville and Pollocksville. US 17 is used during military mobilizations, weather-related emergencies and for peak season summer beach traffic.

Chronology of the Proposed Facility

The current environmental study began in 1995 and has included extensive coordination with federal, state, and local resource agencies, elected officials, and members of the communities. Efforts included in this stage of the project are documented in the 2004 State Draft Environmental Impact Statement (SDEIS), which was approved August 31, 2004, and circulated for public and agency comments. In the SDEIS, a screening evaluation was conducted on the 23 Preliminary Alternatives in Segments 2, 3 and 4 in order to identify those alternatives to be carried forward for detailed study. Based on a comparison of impacts, the 23 alternatives in the SDEIS were narrowed down to 13 alternatives for further study, including Alternatives 2, 2A, 2B, 2C, 3, 4A, 4B, 4D, 4E, 4G, 4H, 4I and 4ID. For this SFEIS, these 13 corridors from the SDEIS were carried forward as preliminary corridors for further analysis. The No-Build Alternative and 13 build alternative segments that generated 32 project-wide combinations of the various build alternatives.

The North Carolina Department of Transportation (NCDOT) scheduled two informational workshops, one pre-hearing workshop, and one corridor public hearing in August 2005. At these meetings NCDOT and project team representatives were available to answer questions and receive comments about the proposed alignments and the findings of the SDEIS. A wide range of comments were received, although many focused on issues related to existing traffic patterns and potential effects on housing and communities. Many participants also requested copies of the presentation materials. Written comments were accepted from the public for a period of 30 days after the Corridor Public Hearing. At the end of the 30-day comment period NCDOT scheduled a post-hearing meeting with the project team where comments from the workshops and the Public Hearing were reviewed to determine which alternatives to carry forward for detailed design

studies.

On August 24, 2006, the Merger Process Team held an informational meeting to review the overall project status and the Merger Process status, and to establish the approach to evaluate the corridor selection data. At this meeting, the team split the project to facilitate the merger process. The 'southern' portion was designated from Belgrade to Chadwick (R-2514B and part of R-2514C) including the Maysville Bypass. The 'northern' portion of the project was designated from Chadwick to New Bern (R-2514D and part of R-2514C) including the Pollocksville Bypass.

In March of 2007, during an agency meeting to review bridging recommendations for the northern portion of the project, the US Army Corps of Engineers (USACE) observed wetlands and streams that were not shown on the environmental mapping for the initial USACE Jurisdictional Determination. Therefore, the USACE rendered a decision on March 7, 2007 that the jurisdictional delineation for the entire project would need to be reevaluated and verified with USACE prior to any further discussion on corridor selection. During the summer, field work and documentation were completed and submitted to USACE and the North Carolina Division of Water Quality (NCDWQ).

The Merger Process Team held a concurrence meeting on May 22, 2008 to discuss elimination of alternatives for the entire project from Belgrade to New Bern. The team concurred on elimination of Alternatives 2, 2B, 4A, 4B, 4G, 4H, 4I, and 4ID from further consideration during the meeting. The team also concurred on carrying forward Alternatives 2A and 2C for the Maysville Bypass, Alternative 3, and Alternatives 4D and 4E for the Pollocksville Bypass. This was followed up with another Merger Process Team concurrence meeting on June 19, 2008 where the team concurred on Alternative 4D for the Pollocksville Bypass. However, during a separate meeting June 19, 2008 on corridor selection for the Maysville Bypass, the majority of the team supported Alternative 2C rather than Alternative 2A because Alternative 2C would impact fewer wetland areas and would cost less than Alternative 2A.

Since the team was unable to concur on corridor selection for the Maysville Bypass, the decision was elevated to the Merger Management Team. During this process, NCDOT presented a new option on Alternative 2A to minimize the differences in jurisdictional impacts between Alternative 2A and Alternative 2C. NCDOT proposed to purchase right-of-way for the Alternative 2A interchanges during this project, but to delay construction of the interchanges until a future project. The Merger Management Team recommended that NCDOT present the new option to the Merger Process Team for consideration.

The Merger Process Team held a concurrence meeting in October 2008 to continue discussion on corridor selection for the Maysville Bypass. NCDOT presented the new option on Alternative 2A to minimize jurisdictional impacts. The team decided to conduct a field meeting to observe the

potential impacts to Belgrade from Alternative 2C and potential high-quality wetlands impacts from Alternative 2A. A Concurrence Point 3 (CP3) field review and concurrence meeting were held in December 2008. The majority of the team reiterated its support for Alternative 2C (widen through Belgrade and bypass Maysville). The team was unable to concur on the Maysville Bypass. Based on the comments received at this meeting, NCDOT revised the design of Alternative 2C from partially-controlled access to limited access control. The revised design of Alternative 2C was presented to the Merger Process Team in April 2009. The team concurred on the revised Alternative 2C during the meeting.

A corridor announcement newsletter was prepared and distributed in May of 2009. NCDOT started receiving comments in June 2009. Many citizens in the Belgrade and Maysville area were opposed to Alternative 2C, which resulted in two petitions totaling over 700 signatures, plus numerous calls, emails, and letters. NCDOT responded by scheduling a public hearing in December 2009. The hearing was well attended by the local community. Following this meeting, NCDOT and USACE met to discuss the public meeting comments. USACE requested that NCDOT verify the number of expected relocations for Alternatives 2C and 2A. This data was collected during a field visit in February 2010. In May 2010, the Merger Process Team conducted a CP3 Concurrence Meeting for the Maysville Bypass. During this meeting the team compared impacts associated with Alternative 2C and Alternative 2A without interchanges, and concurred with the selection of Alternative 2A as the Preferred Alternate.

Agency representatives based their decision on each alternative's ability to meet the project's purpose and need, environmental consequences, opportunities available to mitigate impacts, cost, public and agency comment on the findings of the SDEIS, and other findings presented in this SFEIS.

EXECUTIVE SUMMARY

S.1 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

( ) State Draft Environmental Impact Statement

(X) State Final Environmental Impact Statement

S.2 Contacts

The following person may be contacted for additional information concerning this State Final Environmental Impact Statement (SFEIS):

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S.3 Proposed Action

S.3.1 Description of the Proposed Action

NCDOT proposes to improve a 16-mile portion of US 17 between Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) south of Belgrade and the New Bern Bypass near the Jones / Craven County line, south of New Bern (See **Figure 1-1**). Proposed improvements include a combination of widening on the existing alignment and constructing new segments west of the existing route. The proposed facility would widen US 17 to a divided four-lane, facility with Bypasses of Maysville and Pollocksville on new location.

The proposed action is identified as project numbers R-2514 B, C, & D in the North Carolina Department of Transportation *2011-2020 Draft State Transportation Improvement Program* (TIP). An Environmental Assessment (EA) was approved in August 1999 for TIP Project No. R-2514A (the southern section from Jacksonville to SR 1330 / SR 1439) and a Finding Of No Significant Impact (FONSI) was approved in August 2000; this section of the corridor has already been constructed.

The project extends through the coastal region of Onslow and Jones Counties between the cities of Jacksonville and New Bern. The Belgrade Community and the towns of Maysville and Pollocksville are located along this section of US 17, along with a number of small rural communities.

US 17 is designated as an Intrastate Corridor and a key economic development highway by the 1989 Highway Trust Fund Act. It is designated as a NC Strategic Highway Corridor to serve high-speed passenger and freight movements. US 17 is also part of the Strategic Highway Network (STRAHNET) serving Cherry Point Marine Corps Air Station and Camp LeJeune Marine Corps Base in Jacksonville. This route is also designated as a hurricane evacuation route by the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management.

Existing and projected traffic volumes, the lack of access control, narrow pavement widths, and substandard design features along existing US 17 diminish the roadway's ability to adequately function as part of these highway systems.

S.3.2 Purpose of the Proposed Action

The primary purposes of the proposed action are to:

- Improve capability of US 17 to meet its mandated objectives as part of the Intrastate System, the North Carolina Strategic Highway Corridors System, and the Federal Strategic Highway Corridor Network
- Improve traffic flow along the US 17 corridor in the project study area
- Relieve congestion on US 17 in Onslow and Jones County, thereby improving safety and reducing the number of crashes

S.4 Detailed Study Alternatives

A screening evaluation was conducted to identify alternatives that could fulfill the purpose of and need for improving US 17 between Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) south of Belgrade and the US 17 New Bern Bypass at the Jones / Craven County line, south of New Bern. Four types of alternatives were considered:

- No-Build Alternative
- Transportation Management Alternative
- Mass Transit Alternative
- Build Alternative

Alternatives that would not fulfill the purpose of and need for the project, that have excessive undesirable impacts, or that were considered impracticable were eliminated from further consideration. Based on the initial screening evaluation, only the Build Alternative was determined to meet the goals of the proposed project.

The alternatives considered for this project were established as a result of many preliminary studies and extensive public input. For planning purposes, the study alternatives were corridors which allowed flexibility during design for the avoidance of important man-made and natural features.

The State Draft Environmental Impact Statement (SDEIS) evaluated numerous preliminary corridor alternatives: seven alternatives from Belgrade to Maysville, three alternatives following the existing corridor from Maysville to south of Pollocksville, and 13 alternatives around Pollocksville to New Bern. These corridors were screened against known features (businesses, churches, cemeteries, schools, residential communities, parks, historic architectural properties, community facilities, streams and wetlands) and community opinions to identify alternatives for detailed study. Following this screening, three detailed study alternatives from Belgrade to Maysville, one detailed study alternative following the existing corridor from Maysville to south of Pollocksville, and eight detailed study alternatives around Pollocksville to New Bern were identified in the SDEIS. These alternatives are shown in **Figure 2-2** in the report. Federal, state, and local government agencies provided input on the alternatives through the Section 404 / NEPA Merger Process. Local officials, community groups and organizations, and area residents were given opportunities to comment on the preliminary and detailed study alternatives during various public events:

- Citizen Informational Workshops in October 1995, February 1997, and November 2000
- Small group meetings and door-to-door surveys in March / April 2000 and November / December 2000 and 2006
- Two public meetings in November 2000, in Maysville and Pollocksville
- Three open houses and formal public hearings in August 2005 and December 2009

This SFEIS evaluates five total alternatives which advanced beyond the SDEIS for additional study:

- Alternative 2A, a western bypass of Belgrade and Maysville
- Alternative 2C, which passes through Belgrade on the existing US 17 alignment and bypasses Maysville to the west
- Alternative 3, following the existing US 17 alignment from north of Maysville to south of Pollocksville

- Alternative 4D, a western bypass of Pollocksville
- Alternative 4E, a western bypass of Pollocksville which avoids historic plantation areas

These alternatives are shown in **Figure 2-3** in this report.

S.5 Preferred Alternative

NCDOT identified the Preferred Alternative as Alternative 2A-3-4D. This alternative was also selected as the Least Environmentally Damaging Practicable Alternative (LEDPA) by the Section 404 / NEPA Interagency Merger Process Team.

Alternative 2A begins as a four-lane divided roadway with a 46-foot median at the intersection of Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) and follows existing US 17 north for approximately 0.5 mile. The alternative then diverges from existing US 17 and continues north on new location west of Belgrade and Maysville. Detailed Study Alternative 2A crosses White Oak River Road (SR 1331) approximately 0.7 mile west of US 17 and crosses Fourth Street / White Oak River Road (SR 1116) approximately 0.5 mile west of US 17. Detailed Study Alternative 2A rejoins existing US 17 approximately one mile north of Fourth Street / White Oak River Road.

Alternative 3 follows the existing US 17 alignment, beginning as a four-lane divided facility with a 46-foot median, approximately one mile north of Fourth Street / White Oak River Road (SR 1116) and following existing US 17 to approximately 0.6 mile south of Lee's Chapel Road (SR 1114). The widening takes place to the east of existing US 17.

Alternative 4D begins approximately 0.6 miles south of Lee's Chapel Road (SR 1114) and consists of a four-lane divided roadway with a 46-foot wide median. Detailed Study Alternative 4D follows existing US 17 for approximately 0.3 miles before diverging to a new location. The alternative crosses Lee's Chapel Road approximately 0.1 miles west of US 17, crosses Riggs Town Road (SR 1112) approximately 0.4 miles west of US 17, crosses NC 58 approximately 0.4 miles west of US 17, and crosses Goshen Road (SR 1337) approximately 0.6 miles west of US 17. Just north of Goshen Road, the alternative crosses Goshen Branch and the Trent River approximately one river mile west (upstream) of the existing US 17 bridge. Detailed Study Alternative 4D continues north crossing Oak Grove Road (SR 1121) approximately 0.75 mile west of US 17 and then follows the eastern edge of the Progress Energy power line easement through the Foscue and Simmons Plantation to cross Wise Fork Road (SR 1002) approximately 0.5 miles west of US 17. Detailed Study Alternative 4D crosses Simmons Loop Road (SR 1330) in two locations, approximately 0.25 miles west of US 17, before joining with the New Bern Bypass (TIP Project No. R-2301). Alternative 4D forms a western bypass of the Hatchville, Pollocksville, Murphytown, and Deep

Gully communities. It passes through the middle of the Oak Grove Community and the middle of the Ten Mile Fork Community.

Estimated costs for the preferred alternative are presented in **Table S-1** below.

Table S-1: Preliminary Cost Estimates

Alternative	Construction	Utility	Right-of-Way	Total
Alternative 2A	$ 56,000,000	$ 200,000	$ 4,900,000	$ 61,100,000
Alternative 3	$ 24,000,000	$ 2,000,000	$ 4,800,000	$ 30,800,000
Alternative 4D	$ 101,000,000	$ 2,500,000	$ 9,400,000	$ 112,900,000
Total	**$ 181,000,000**	**$ 4,700,000**	**$ 19,100,000**	**$ 204,800,000**

S.6 Summary of Environmental Impacts

The following is a summary of the primary environmental consequences associated with the preferred Alternatives discussed in this SFEIS. **Table S-2** at the end of this summary provides impact information for the Preferred Alternative in tabular form. Impact categories are presented in the same order as topics discussed in Chapter 4 of this SFEIS.

Relocations

For the Preferred Alternative (2A-3-4D), there would be 46 residential displacements. Searches for rental and for-sale properties listed in the area in 2011 showed that ample replacement housing existed in the study area; a number of new residential developments are also planned and have been recently constructed in the vicinity. Last resort housing will be considered and administered in accordance with federal and state laws, as applicable.

Community Features & Cohesion

No churches, schools, libraries, community centers, police / fire stations, or other public facilities would be directly impacted by the Preferred Alternative. Alternative 2A (Preferred) would require the relocation of at least one small cemetery along Fourth Street / White Oak River Road (SR 1116). Additional unmarked cemeteries could also be encountered. Maysville Elementary School, up to four churches, and several homes lie near the proposed alignment and could experience increased proximity impacts (e.g. noise and visual), particularly during construction.

No public parks will be impacted. Because the project is entirely state-funded, Section 4(f) does not apply. Alternatives 2A and 3 would impact portions of the Croatan National Forest along existing US 17 north of Maysville.

The presence of a new transportation facility can have both positive and negative impacts on the cohesion of a community or neighborhood. In general, positive effects can include shorter travel

times and more convenient access between homes, stores and businesses. A new roadway can also create a wall or barrier between residential areas and their shopping centers, recreation areas, and schools. At a neighborhood level, a new bypass can create a wall or barrier between individual homes previously connected by a local street system.

Alternatives were developed to avoid passing through more-densely-developed areas: through neighborhoods and city centers.

- Alternative 2A (Preferred) reduces community impacts when compared to Alternative 2C by bypassing Belgrade to the west. Impacts to the communities of Maysville and Belgrade were minimized by avoiding more-densely-developed areas along US 17 in both of these communities.
- Alternative 3 would widen existing US 17 north of Maysville through the Chadwick Community. Residents are concerned that they would be unable to cross US 17 on foot safely to visit relatives and friends or to check their mailboxes. Many of the residents interviewed stated that it is difficult to cross US 17 now.
- Alternative 4D would improve cohesion / connectivity within communities along the existing US 17 alignment (Hatchville, Pollocksville) by reducing the traffic volume using the route. However, linear development would create barriers in Oak Grove, Goshen, and Ten Mile Fork and separate populations from attractions in Pollocksville.

Two local petitions were received in support of Alternative 2A, totaling almost 800 signatures. Alternative 2A was favored by the majority of attendees at the December 2009 Public Hearing in Maysville, and by the Jones County Board of Commissioners, the Maysville Board of Commissioners, and the Down East Rural Transportation Planning Organization.

The Goshen Road Environmental Action Team (GREAT) was formed in 1997 to protect farmlands in Goshen from development. Project team members coordinated with GREAT throughout the project; GREAT leaders selected Alternative 4D as a viable compromise among the alternatives considered.

Environmental Justice

Several African-American communities are located within the project study area including Chadwick, Hatchville, Garnet Heights, Goshen and Murphytown. The Town of Maysville is predominantly an African-American town with a 59 percent minority population. An estimated 18 percent of the Jones County population falls below the federal poverty limit, compared to 14.6 percent of the state's population.

An estimated 34 minority households would be displaced by the proposed project. Only one household with an annual income below $15,000 would be displaced by the Preferred

Alternative. Because of the ample supply of available DSS replacement housing in the area, disproportionate and adverse impacts to minority or low income social groups are not anticipated. Relocations are generally scattered along the proposed route, minimizing impacts within developed community clusters.

Several measures have been taken to avoid or minimize impacts to the minority / low-income communities identified in the study. Alternatives were identified to avoid developed areas that would lead to potential environmental justice community issues: particularly through Chadwick, Garnet Heights, Goshen, and Murphytown. The project team worked with community members and GREAT to develop alternatives which would be sensitive to the needs of all area residents.

Economic Impacts

The proposed action would provide improved mobility to and through Onslow, Jones, and Craven Counties, thereby creating more efficient commuting and transport of goods and services between the business centers of Jacksonville and New Bern. Throughout the study process, local citizens have stated that the lack of economic development to the area is directly related to the condition of US 17 and the need to upgrade the existing roadway. The US 17 improvement project is perceived as a key to development in the area.

Short-term employment opportunities during construction and increased retail activity due to construction personnel should combine to provide positive economic impacts. On a long-term basis, improvements to the corridor are anticipated to stimulate employment opportunities for area residents due to (1) projected modest commercial growth in the study area and (2) increased mobility, which creates a larger accessible area for employment opportunities.

Commuters to Jacksonville and New Bern would experience reduced travel times, moving workers, shoppers, and commodities within, through, and from the area in a safer, more economical and more efficient manner. The project is likely to increase the pace of development in the study area, but most of the development would eventually occur regardless of the project.

Land Use and Transportation Planning

The project is consistent with land use guidance and long-range transportation plans within Jones and Onslow Counties. The project is included in the Statewide Transportation Improvement Program, and is listed as a priority by the Down East Rural Transportation Planning Organization and the Military Growth Task Force for North Carolina's Eastern Region.

Noise Impacts

The Preferred Alternative would result in an increase in traffic noise for some community facilities and residences. However, it should be noted that newly projected 2035 traffic volumes are substantially reduced from previous 2025 projected volumes discussed in the SDEIS, upon

which the noise projections are based. This is due primarily to improvements along NC 24 from I-40, which draw traffic away from US 17 by providing an improved connection to coastal areas. Because of the reduced traffic projections, noise impacts are anticipated to be lower than those discussed in the analysis, which was based on the higher 2025 volumes. There were 62 impacted receptors along Alternative 2A (Preferred), 52 impacted receptors along Alternative 3 (Preferred), and 119 impacted receptors along Alternative 4D (Preferred).

All sensitive receptors in the project area were evaluated and, in those cases where noise impacts were identified, noise mitigation measures were considered. Abatement measures, such as noise walls, earth berms, and depressed roadway segments, are intended to reflect or absorb highway noise to reduce noise to acceptable levels. These measures can be expensive to develop and are generally considered acceptable if they effectively reduce noise levels and construction costs less than $35,000 per effectively screened receptor. Noise barriers were evaluated but were not found to meet both the reasonableness and feasibility criteria established by NCDOT.

Air Quality Impacts

Jones and Onslow Counties are currently designated as attainment areas for each of the six air pollutants regulated by the United States Environmental Protection Agency. No concentrations of carbon monoxide, nitrogen oxides, ozone, lead, sulfur dioxide, or particulate matter were found to exceed the standards set forth by the National Ambient Air Quality Standards. Therefore, this project is not anticipated to create any adverse effects on the air quality in Jones or Onslow Counties. Because Mobile Source Air Toxics (MSATs) are proportional to vehicle miles traveled, the No-Build and Preferred Alternative would have the same potential for MSAT effects; the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited.

Prime, Important, and Unique Farmlands

In accordance with the Farmland Protection Policy Act and State Executive Order Number 96, an assessment was undertaken of the potential impacts of land acquisition and roadway construction activities in prime, unique and local or statewide important farmland soils as defined by the US Natural Resource Conservation Service (NRCS).

Coordination with the NRCS was initiated by submittal of Form AD-1006, *Farmland Conversion Impact Rating*. As required by law, alternatives receiving a total score of less than 160 on the form were given a minimal level of protection, and sites receiving a total score of 160 or more were given increasingly higher levels of consideration for protection. The Preferred Alternative received a total site assessment score less than 160 points. Therefore, in accordance with the Farmland Protection Policy Act, no further coordination or mitigation for farmland loss is required for the project.

Based on a 1,000-foot wide initial corridor footprint used for new location alignments and a 500-foot wide corridor along existing alignments for this study, Alternative 2A would impact 187.5 acres in the corridor and received a farmland conversion impact rating of 83 points. Alternative 3 would impact 201.0 acres based on the corridor width and scored 3.5 points. Alternative 4D would impact 989.9 acres based on corridor width and scored 64 points.

Utility Impacts

Major existing utilities within the study area include electrical transmission lines, telephone lines, fiber optic cables, natural gas lines, water mains, and sanitary sewer lines. Any relocation or adjustment of these lines would be coordinated with Onslow County, Jones County, the town of Maysville, the Town of Pollocksville, and/or the private utility service provider. Private water wells and septic systems could also be impacted.

Alternative 4D (Preferred) would cross the Progress Energy electrical transmission line north of Pollocksville and would require the relocation of an electrical substation just north of Wise Fork Road (SR 1002). Alternative 4D could also require relocation of a natural gas transmission line along US 17 and NC 58. Relocations would be fully coordinated with the utility service provider to avoid disruptions in service.

Visual Impacts

The majority of Alternatives 2A (Preferred) and 4D (Preferred) will be built on new alignment. West of the existing US 17 alignment, the new bypasses will largely be screened from view by stretches of mature forest. Visual quality for travelers on these alternatives would be altered when compared to the visual environment along portions of the developed existing US 17 roadway. Consistent with other rural portions of the existing US 17 corridor, the new bypasses will pass largely through undeveloped lands: crop fields, forest, and wetlands. Views of preserved homes in historic communities will be lost to motorists using the bypasses.

Widening along the existing alignment in Alternative 3 (Preferred) will remove some structures currently lining the roadway; however, this will not have a major impact on the viewshed from the route. The width of right-of-way and scale of paved areas will be noticeably increased, changing the appearance of the corridor for residents viewing the highway.

Measures incorporated into the project that minimize visual impacts include avoiding dense residential areas, minimizing cut and fill slopes by following existing groundlines where possible, and implementing a landscape plan for areas within the roadway right of way. The landscaping plan would be designed to integrate landscaping into the project design to promote visual continuity and to blend it into the natural landscape as much as possible. Future development adjacent to the proposed roadway could implement measures to reduce visual impacts such as buffer areas and screening landscaping.

Hazardous Materials and Waste Sites

Approximately 31 potential hazardous material sites and/or underground storage tanks were identified within the study area during a field reconnaissance survey. These sites range from junk yards to gas stations containing underground storage tanks.

Alternative 2A (Preferred) contains one known site; the Alternative 3 and 4D corridors do not contain known hazmats based on field inspection or records searches. Improvements to the existing roadway could be expected to expose more of these types of sites.

Floodplains

The Preferred Alternative crosses the 100-year floodplain of the White Oak and Trent Rivers. Alternative 2A crosses 3,530 total linear feet of floodplains, bridging 1,260 feet (36 percent) of the total distance. Alternative 4D crosses 5,770 linear feet of floodplains, bridging 1,560 feet (27 percent) of the total distance.

Managed Lands

The Preferred Alternative would impact 32.4 acres of the Croatan National Forest. Portions of the USFS red-cockaded woodpecker cluster 134 fall within this right-of-way; no red-cockaded woodpecker activity was observed during repeated field visits. A colony of spring-flowering goldenrod also grows along the existing right-of-way, within the footprint for Alternative 3.

Cultural Resources

Three properties located in the project study area are listed in the National Register of Historic Places: Bryan-Bell Farm (Oakview Plantation), Foscue & Simmons Plantation, and the Bryan Lavender House (which falls within the larger NR-eligible Pollocksville Historic District). In addition to these previously listed properties, four properties and two districts were determined eligible for the National Register. The districts are the Maysville Historic District and the Pollocksville Historic District. The additional properties determined eligible are the Ten Mile Fork Gas Station / Store north of Pollocksville, the J. Nathan Foscue Farm south of Pollocksville, the Henderson-Provost House / Store, and the Zinnie Eubanks House / Store both located in Belgrade. None of these sites would be adversely affected by any of the remaining Detailed Study Alternatives.

Based on research, field investigations, shovel testing, and limited test excavations, 27 archaeological sites were identified in or near the study area. One of these sites near the southern end of Alternative 4D is eligible for the National Register, dating to the late 18th / early 19th century. This site falls partially within the study corridor and should be subjected to data recovery excavation.

Soils and Topography

Six primary soil types make up 70 percent of the area within the Preferred Alternative corridor: loamy sands, sandy loams, and silt loams. The suitability of these soils as roadfill ranges from fair to poor. This is an indication that the roadbed may need to be replaced with a more suitable soil. These soils generally have a high risk of corrosion for both uncoated steel and concrete. The shrink / swell potential of these soils ranges from low to high. The expected soil limitations can be overcome through proper engineering design. It is anticipated that extensive areas of fill will be required to construct the Preferred Alternative. Cut areas will likely be minimal.

Protected Species

Fifteen species classified by the US Department of the Interior Fish and Wildlife Service as threatened or endangered are listed for Onslow and Jones Counties. The Red-cockaded woodpecker (*Picoides borealis*) is the only species for which suitable habitat exists within the study area. Aerial surveys of all potential foraging and nesting habitat within the project study area were conducted in August 2000. In 2008, pine stands within 0.5 miles of the study area were surveyed. Several areas were identified as suitable foraging habitat with the potential to include older trees suitable for nesting, but no red-cockaded woodpecker cavities were observed. No active colonies were identified within 0.5 miles of the proposed project. No nesting cavities were found. The Biological Conclusion for this species is "Not Likely to Adversely Effect."

Water Resources

The Preferred Alternative would result in 3,403 linear feet of stream impacts. Primary streams affected include the White Oak River, the Trent River, and their tributaries. Alternative 3 has no stream crossings. Alternatives 2A and 4D have two structures over stream crossings each. For smaller features, a box culvert will suffice.

Streams within the Preferred Alternative may be temporarily and locally impacted by road construction. Potential short-term water quality impacts include temporary increases in sedimentation and turbidity levels. An increase in impervious road surface area will result in increased runoff with the potential for carrying higher pollutant loads. Adherence to the NCDOT's *Best Management Practices for Protection of Surface Waters* during design and construction of the proposed project are expected to minimize impacts.

Most areas outside of the town limits are served by private water wells. Wells within the Preferred Alternative's right-of-way would be surveyed prior to project construction. NCDOT would purchase these wells, and cap and abandon them in accordance with State standards. Any subsurface contamination would be reported to the regional office of the NC Department of Environment and Natural Resources. It is anticipated that the proposed improvements would not have an adverse impact on the quality of the groundwater.

Jurisdictional Issues

Section 404 of the Clean Water Act requires regulation of discharges into "Waters of the United States." Although the principal administrative agency of the CWA is the US Environmental Protection Agency, the US Army Corps of Engineers (USACE) has major responsibility for implementation, permitting, and enforcement of provisions of the Act.

Jurisdictional wetlands within the project study area were delineated and evaluated based on criteria established in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (DOA 1987) and the 2010 *(v. 2) Atlantic and Gulf Coastal Plain Supplement*. The USACE requires the presence of three parameters (hydrophytic vegetation, hydric soils, and evidence of hydrology) in support of a jurisdictional determination. Four types of wetlands were identified: palustrine forested, palustrine scrub-shrub, palustrine emergent and palustrine unconsolidated bottom. The Preferred Alternative would result in 70.5 acres of impacts, of which 5.7 acres are high-quality wetlands.

Construction Impacts

Construction may cause temporary adverse impacts to the local environment, including impacts to air quality, water quality, noise, and biotic communities. Construction impacts are generally short-term in nature and can be controlled, minimized, or mitigated through the use of Best Management Practices and standard NCDOT procedures.

Indirect and Cumulative Impacts

The proposed improvements to US 17 from north of Jacksonville to south of New Bern are not likely to induce extensive development within the study area. This assumption is based on several facts: (1) the area is not currently served by water and sewer; (2) the area is not on a long-range plan to receive water and sewer and county regulations stipulate that new development should be directed towards compact, targeted growth areas near existing towns; (3) the area is predominantly in forest and agricultural use; and (4) the Onslow County Citizens Comprehensive Plan advocates preservation of true open space, productive farms, woodlands, and important natural areas and discourages the "leapfrogging" of housing developments into the countryside that would destroy the rural character of the area, break up farmland, and make the provision of urban services costly to homebuyers and taxpayers alike.

It is expected that complementary land development, such as highway-oriented businesses (gas stations, rest stops, motels) will develop at a small scale near the site of the proposed interchange and at the intersection of NC 58 and US 17.

It is possible that encroachment-alteration effects associated with the improvement of US 17 will affect notable features located within the study area, primarily the Foscue Plantation, Neuse and White Oak River basins, and the spring-flowering goldenrod site north of Maysville on the boundary of the Croatan National Forest. However, as very little development activity has taken

place or is expected to occur within the foreseeable future, the environmental impacts are not of a cumulative nature. Impacts can be minimized by the adherence to Neuse Riparian Area Rules, the use of best management practices, and if necessary the replanting of spring-flowering goldenrod.

Table S-2: Impacts Summary Table

Impact	Alternative 2A	Alternative 3	Alternative 4D
Relocations	9 homes	10 homes	27 homes
	1 cemetery (4 gravesites)		
Environmental Justice	Avoids population centers	Avoids population centers	Avoids population centers
Economics	Perceived as key to economic development in region	Perceived as key to economic development in region	Perceived as key to economic development in region
	Short-term employment opportunities	Short-term employment opportunities	Short-term employment opportunities
	Modest commercial growth	Modest commercial growth	Modest commercial growth
	Increased mobility / decreased travel times	Increased mobility / decreased travel times	Increased mobility / decreased travel times
Land Use & Transportation Plans	Consistent with local plans	Consistent with local plans	Consistent with local plans
Noise	62 impacted receptors	52 impacted receptors	119 impacted receptors
Air Quality	No Adverse Effect with respect to NAAQS	No Adverse Effect with respect to NAAQS	No Adverse Effect with respect to NAAQS
Farmland	187.5 acres with NRCS score of 83 points	201 acres with NRCS score of 3.5 points	989.9 acres with NRCS score of 64 points
Utilities			Progress Energy electric transmission line
			Natural gas line
Visual	Screened by forest	Increased right-of-way and paved highway width	Screened by forest
Hazardous Materials	1 known UST		
Floodplains	3,530 feet within floodplain, including 1,260 feet bridged		5,770 feet within floodplain, including 1,560 feet bridged
Managed Lands	2.7 acres in Croatan NF	32.4 acres in Croatan NF	
Cultural Resources	No Effect (2 properties + 1 district)	No Adverse Effect (1 property)	No Effect (1 property + 1 district); No Adverse Effect (2 properties); 1 known archaeological site to avoid or recover data
Protected Species	Not Likely to Adversely Effect Red-cockaded woodpecker	Not Likely to Adversely Effect Red-cockaded woodpecker	Not Likely to Adversely Effect Red-cockaded woodpecker
	No Effect on other listed species	No Effect on other listed species	No Effect on other listed species

Table S-2: Impacts Summary Table

Impact	Alternative 2A	Alternative 3	Alternative 4D
Streams	1,565 linear feet	157 linear feet	1,681 linear feet
Jurisdictional Wetlands	22.4 acres	23.5 acres	24.5 acres
Indirect / Cumulative Effects	Minimal	Minimal	Minimal

S.7 Actions Required by Other Agencies

A number of actions will be required from other agencies before the project can be completed:

- Section 404 permit from the US Army Corps of Engineers
- Section 401 Water Quality Certification from the NC Department of Environment and Natural Resources, Division of Water Quality, which also addresses the Neuse River Riparian Area Rule that applies to the northern portion of the project area
- A CAMA Major Development Permit from the NC Department of Environment and Natural Resources, Division of Coastal Management

S.8 Section 4(f)

Because this project is entirely state funded, Section 4(f) does not apply.

S.9 Agency and Public Coordination

This project has a long history of agency and public involvement. It should be noted that a great deal of public involvement was included in the earlier project phases (which culminated in the publication of the State Draft Environmental Impact Statement in 2004). Thirteen alternatives were carried forward for detail study from the SDEIS and these were reduced to five alternatives by the Section 404 / NEPA Merger Process Team. Additional agency and public input was sought in conjunction with those new revisions.

The Section 404 / NEPA Interagency Merger Process was developed in 1997 to provide resource agencies with an early opportunity to be involved in major project decisions at key points in the planning process. It was amended in 2001 as the Merger 01 Process, which includes the following coordination points: Purpose and Need / Definition of Study Area; Detailed Study Alternatives Carried Forward; Bridging Decisions / Alignment Review; Least Environmentally Damaging Practicable Alternative; Avoidance and Minimization; 30% Hydraulic Design Review; and Permit Drawing Review. The Interagency Merger Team met eighteen times between August 2006 and April 2011 to work through the concurrence points. Details are discussed in Chapter 8 of this SFEIS; concurrence forms are included as Appendix A.

A variety of coordination points were offered for municipal officials, local residents, and the general public. Following the extensive outreach efforts described in the 2004 SDEIS, the following outreach efforts were included in the project:

- NCDOT held Pre-Hearing Open Houses on August 9, 2005 in Pollocksville and on August 11, 2005 in Maysville. NCDOT held a Pre-Hearing Open House and a Formal Corridor Public Hearing on August 16, 2005 in Pollocksville. Approximately 238 individuals attended these three events and 11 individuals spoke at the formal hearing. NCDOT received a total of 47 comments with a majority supporting Alternative 2A for the Maysville Bypass and Alternative 4D for the Pollocksville Bypass.
- NCDOT received and responded to the comments and questions from the public prior to, during, and since the hearings via personal discussions, telephone calls, faxes, emails, and letters.
- NCDOT staff met with the Jones County Manager in June 2006 to discuss the status of the project, to receive input, and to coordinate on the Pollocksville Bypass and the Goshen Community.
- NCDOT staff met individually and in small group meetings with the residents and leaders of the Goshen community during June and July of 2006 regarding the alternatives under consideration for the Pollocksville Bypass, including Alternative 4H which would have a direct impact on the Goshen Community. NCDOT staff continued discussions with the community via phone calls and correspondence from July 2006 through September 2008, at which point Alternative 4H was eliminated from further consideration.
- A corridor announcement newsletter was prepared and distributed in May of 2009. NCDOT started receiving comments in June 2009. Many citizens in the Belgrade and Maysville area were opposed to Alternative 2C and submitted to NCDOT two petitions totaling over 700 signatures, numerous calls, emails, and letters. NCDOT responded by scheduling a public hearing in December 2009. The hearing was well attended by the local community. As a result of this input, the Merger Process Team revisited corridor selection and revised the LEDPA to include Alternative 2A in May 2010. This was announced to the public with a press release dated June 21, 2010 and a newsletter.

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CHAPTER 1 PURPOSE AND NEED

1.1 INTRODUCTION

This report is organized as follows:

- Chapter 1 presents the purpose and need for this project.
- Chapter 2 documents the selection of all transportation alternatives considered, the alternatives considered for closer review, and the Preferred Alternative selection.
- Chapter 3 details the current or existing social, economic and environmental conditions within the study area.
- Chapter 4 describes the conceivable social, economic and environmental effects of the alternatives chosen for detailed study, and, specifically, the impacts of the Preferred Alternative.
- Chapter 5 documents Section 4(f) and Section 6(f) resources.
- Chapter 6 consists of a list of preparers of this document.
- Chapter 7 lists the cooperating agencies on this study as well as the distribution list.
- Chapter 8 details the coordination and public involvement associated with this State Final Environmental Impact Statement (SFEIS).

The purpose and need discussion establishes the nature of the surface transportation-related problems and issues for the study area. This led to the development of transportation improvement alternatives and the means by which they were evaluated, which in turn helped decision-makers select the Preferred Alternative that meets the purpose and need within the US 17 study area.

1.2 PROPOSED ACTION

The North Carolina Department of Transportation proposes to improve US 17 from Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) south of Belgrade in rural Onslow County to the New Bern Bypass at the Jones / Craven County Line south of New Bern. The proposed project is approximately 16 miles long and is roughly located between Jacksonville and New Bern. The existing two-lane facility winds through the Belgrade Community and the Towns of Maysville and Pollocksville. **Figure 1-1** is a map showing the location of the project in relation to the state and the project area.

1.3 SUMMARY OF NEED FOR PROPOSED ACTION

The need to improve US 17 is demonstrated by the following summary of existing and projected conditions. Detailed discussions of the existing and projected conditions and the needs for the proposed action are presented in the following sections.

- **Capacity Constraints**

Daily traffic volumes along US 17 range from 9,000 to 12,600 vehicles per day in 2009; all of the 15 major intersections within the study area operated at a level of service (LOS) of C or better. Only one of these intersections is currently signalized, the US 17 / Eighth Street (NC 58) intersection in Maysville which operates at a LOS B. From 2009 to 2035, traffic volumes in the US 17 corridor are expected to increase around 65 percent according to the December 2010 forecasts prepared for the project, increasing to 15,000 to 20,800 vehicles per day. Without any improvements, LOS in 2035 are projected to be LOS E or F at seven analyzed intersections during the AM and/or PM peak hours.

Level of Service

The LOS is defined with letter designations from A to F. LOS A is the best operating conditions along a roadway or at an intersection and LOS F is the worst. In urban areas, LOS D is generally considered acceptable, while in rural areas LOS C is considered acceptable. LOS E and F conditions cause significant travel delay, increase the potential for crashes, and contribute substantially to the inefficient operation of motor vehicles.

In developed areas the roadway is lined with residential and commercial uses accessed via numerous driveways; there is no access control along existing US 17 in the project area, which reduces the carrying capacity of the roadway.

- **High Crash Rates**

Between April 1, 2006 and March 31, 2009, 205 crashes were reported along the studied portion of US 17, including six fatalities, and 102 injury crashes. The crash rate for the 16-mile stretch of US 17 was 128.72 crashes per 100 million vehicle miles during the three year analysis period, which is slightly higher than the state average crash rate of 126.40 crashes per 100 million vehicles miles[1]. Comparisons against critical crash rates (statewide factors on similar routes, statistically adjusted to eliminate the element of chance) indicates that nighttime and fatality crashes are occurring at higher frequencies than can be attributed to random occurrence. The crash rate in the study area is indicative of a congested roadway with design deficiencies and little or no access control.

[1] Based on 2005-2007 statewide averages published by NCDOT

- **Inability to Adequately Function as Part of the NC Intrastate System and Diminished Ability to Function as Part of the Strategic Highway Corridor Network**

US 17 from the North Carolina / Virginia State Line to the North Carolina / South Carolina State Line is designated as part of the North Carolina Intrastate System (NC General Statute [GS] 136-179). The Intrastate System was created to provide high-speed, safe regional travel service. Existing and projected traffic volumes, lack of access control, narrow pavement widths, substandard design along existing US 17, and land use conditions in eastern Jones and Onslow Counties diminish the roadway's ability to function as a part of the intrastate corridor.

The Intrastate Highway System

The purpose of the Intrastate Highway Systems is to "provide high-speed, safe travel service throughout the State. It connects major population centers both inside and outside the State and provides a safe, convenient, through-travel for motorists. It is designed to support statewide growth and development objectives and to connect to major highways of adjoining states. All segments of the routes in the Intrastate System shall have at least four travel lanes and, when warranted, shall have vertical separation or interchanges at crossings, more than four travel lanes, or bypasses." (GS 136-178).

The US 17 corridor is also designated as part of the Strategic Highway Corridor Network (STRAHNET). Existing and projected traffic volumes, lack of access control, narrow pavement widths, and substandard design along existing US 17 diminish the roadway's ability to adequately function as part of the STRAHNET.

STRAHNET

Title 23, Part 470, Section 107 (23CFR470.107) defines the federal-aid highway systems, which include the interstate system and the national highway system. A subset of the national highway system is the Strategic Highway Corridor Network (STRAHNET). As defined in 23CFR470.107 (b)(3), the "STRAHNET includes highways which are important to the United States strategic defense policy and which provide defense access, continuity, and emergency capabilities for the movement of personnel, materials, and equipment in both peace time and war time."

- **North Carolina Strategic Highway Corridors Plan**

The section of US 17 within the project area provides a vital connection between two of the largest cities in southeastern North Carolina, Jacksonville and New Bern. The rural character of the roadway, one travel lane in each direction with uncontrolled access, makes this corridor vulnerable to breakdown if crashes occur. The existing cross section and alignment also imposes limitations on the rate of speed at which passengers and freight can move.

Strategic Highway Corridor #52

The entire US 17 corridor between South Carolina and Virginia is included in the North Carolina Strategic Highway Corridors System. The Strategic Highway Corridors System is a subset of the Intrastate System that defines the most important roads in the state. Strategic corridors are a distinct set of existing roadways that exemplify the long-term potential to serve passenger and freight movement in a high-speed manner and that, with some level of improvement, would substantially increase the mobility and connectivity of travel to destinations within and just outside North Carolina.

Predicted traffic increases on this segment of US 17 will further deteriorate its ability to meet the objectives of the Strategic Highway Corridors Plan.

1.4 PURPOSE OF THE PROPOSED ACTION

The primary purposes of the proposed action are to:

- **Improve the capability of US 17 to meet its mandated objectives as part of the North Carolina Intrastate System, the North Carolina Strategic Highway Corridors System, and the Federal Strategic Highway Corridor Network.**

Needs Addressed: Operational and safety deficiencies related to the existing roadway geometry, projected traffic, and projected land use conditions along existing US 17 between Belgrade and New Bern diminish this segment's ability to function as a North Carolina Intrastate Corridor, a North Carolina Strategic Highway Corridor, and a Federal Strategic Highway Corridor.

- **Improve traffic flow along the US 17 corridor in the project study area.**

Needs Addressed: Projected increases in traffic volumes along existing US 17 will result in travel delays, increase the potential for crashes, and contribute to the inefficient operation of motor vehicles.

- **Relieve congestion on US 17 in Onslow and Jones County, thereby improving safety and reducing the number of crashes.**

Needs Addressed: Crash rates along the existing segment of US 17 between Belgrade and New Bern exceed the statewide crash rates in the categories for fatal, non-fatal injury, and nighttime crashes and exceed the critical crash rates in the fatal and night categories.

1.5 PROJECT DESCRIPTION

1.5.1 Project Setting

US 17 is the primary north-south corridor east of I-95 serving the coastal region of the state. As shown in **Figure 1-1**, the proposed project is located in the eastern portions of Jones and Onslow Counties between the city of Jacksonville in Onslow County and the town of New Bern in adjacent Craven County.

US 17 throughout the project area is classified as a Rural Principal Arterial in the Highway Functional Classification System. The entirety of the route is designated as a hurricane evacuation route for North Carolina beaches from Virginia to South Carolina and is a STRAHNET route serving the Cherry Point Marine Corps Air Station and Camp Lejeune Marine Corps Base in Onslow County. NC 58 is also designated as a hurricane evacuation route and shares an eight mile portion of US 17 between Maysville and Pollocksville. US 17 is used heavily during military mobilizations, weather-related emergencies, and the peak season for summer beach traffic.

The project study area extends for approximately 16 miles along existing US 17 from just north of Deppe Loop Road (SR 1330) / Springhill Road (SR 1439), south of Belgrade / Maysville to the proposed New Bern Bypass near the Jones / Craven County line, south of New Bern. The major portion of the project area lies in rural unincorporated Onslow and Jones Counties.

The corridor is largely rural, lined with agricultural fields and mature forest stands. Mixed residential / commercial land use exists along US 17 and within the community of Belgrade in Onslow County and the towns of Maysville and Pollocksville in Jones County. US 17 is Main Street through the Maysville and Pollocksville town limits. These and other rural communities in the area serve as bedroom communities for the larger cities of Jacksonville and New Bern, located at either end of the project corridor.

The Hofmann State Forest is located on both sides of US 17 south and west of the study area and the Croatan National Forest borders the eastern edge of US 17 between Maysville and Pollocksville.

The White Oak River and Trent River, along with their tributaries, flow through the study area. The Trent River is a tributary to the Neuse River, and the White Oak River flows directly into Bogue Sound and the Atlantic Ocean.

1.5.2 History of Project

US 17 is one of the oldest transportation routes in the United States. A historical marker was placed on US 17 near Belgrade, North Carolina in 1949 stating that this section of US 17 was part of the first post road in 1738. The marker (C-28) reads: “FIRST POST ROAD – The road from New England to Charleston, over which mail was first carried regularly in North Carolina, 1738-39, passed near this spot.”

US 17 found its beginnings in North Carolina sometime around 1928. North of Wilmington it followed the same general route through the same cities that it follows today. However, south of

Wilmington it followed today's US 76 west into South Carolina.

The current alignment south of Wilmington was constructed between 1932 and 1939 and was originally part of US 117.

Today, US 17 begins in Fort Myers, Florida and runs to Winchester, Virginia. From South Carolina, US 17 enters North Carolina near Calabash in Brunswick County and exits into Virginia near the Dismal Swamp in Camden County.

In the late 1960s, the Coastal Plains Regional Commission commissioned a study to address both the regional transportation needs and the potential economic impacts of improving the transportation system in the coastal plains between Savannah, Georgia and Norfolk, Virginia. The first study, *Coastal Plains Regional Transportation Study,* was completed in July 1969, and the second study, *A Study of the Potential Economic Impact of Proposed Developmental Freeways in the Coastal Plains Region,* was completed in April 1970.

The purpose of the first study was "to develop a basis for determining transportation projects which would have, in conjunction with other projects, the most beneficial impact on the economy of the Region." This study recommended "a complete transportation system for the Coastal Plains Region," which included an extensive highway system plan. The study placed the highest priority on two multilane, controlled-access freeway corridors. The first corridor, known as the Central Georgia Corridor, extended from the vicinity of Augusta past Macon and terminated near Columbus. The second corridor, known as the Coastal Corridor, extended from the vicinity of Savannah, Georgia past Charleston, Georgetown, and Myrtle Beach, South Carolina and Wilmington, Jacksonville, New Bern, and Elizabeth City, North Carolina before connecting with the Norfolk, Virginia area. The Coastal Corridor, which is served by US 17, was identified as being "the key to the full realization of the tremendous potential of the tourism industry in the coastal area."

The purpose of the second study was to examine the economic characteristics of the two corridors and assess their economic impacts on the area surrounding them. The study found that the 1970 highway system in the Coastal Corridor "was inadequate for the present traffic load." The effect of this "low-grade corridor highway system [was to] increase accident rates, discourage the development of tourism, cause manpower and training programs to endure low participation rates, and impede industrialization." The study also found that, although "some increase in tourism and industrialization" was taking place, it was "occurring mainly in the urban areas along the western part of the Coastal Corridor" and not in the area east of US 17.

A bypass of Edenton was constructed in 1979, as well as the widening of US 17 from Hertford to

north of Elizabeth City. Some widening of US 17 in the Wilmington and Williamston areas was undertaken. In the early 1980s, US 17 was widened from Elizabeth City to the Virginia State Line.

With the enactment of the North Carolina Highway Trust Fund in July 1989, US 17 was designated as part of the Intrastate Highway System. This proposed project was included as part of the Governor's Transportation Plan for the 21st century and the 1996 Highway Bond Program. US 17 is also listed as a key economic development highway for the state.

The current US 17 environmental study began in 1995 and has included extensive coordination with federal, state, and local resource agencies, elected officials, and members of the communities. Efforts included in this stage of the project are documented in the 2004 State Draft Environmental Impact Statement (SDEIS), which was approved August 31, 2004, and circulated for public and agency comments. The SDEIS evaluated the no-build alternative and 13 build alternative segments that generated 32 project-wide combinations of the various build alternatives.

As part of the alternatives evaluation process, a number of agency coordination and public involvement activities were held since the publication of the SDEIS. Open houses, formal hearings, and other public comment opportunities occurred in 2005, 2006, and 2009. The Section 404 / NEPA Interagency Merger Process Team met 18 times during 2006-2011 to discuss alternatives, impacts, and other issues. Meetings included concurrence points, field surveys, and reviews of various work products. Key coordination points are listed below:

- August 24, 2006 informational kick-off meeting
- November 1, 2006 field visit to develop bridging recommendations for the southern portion
- February 22, 2007 review of bridging recommendations, concurrence for segment 3, and discussion on Maysville Bypass Alternatives
- March 6, 2007 field visit to develop bridging recommendations for the northern portion, followed by a request that wetlands and streams be field-delineated (completed by early 2008)
- April 12, 2007 discussion of potential alternatives for a Pollocksville Bypass
- May 22, 2008 review of bridging recommendations and evaluation of alternatives to limit the alternatives being carried forward for the Maysville and Pollocksville Bypasses
- June 19, 2008 concurrence for Pollocksville Bypass Alternative and continuing discussion on the Maysville Bypass
- July 2008 through May 2010 continuing discussions on Maysville Bypass Alternatives and alternative adjustments to minimize impacts

- May 25, 2010 concurrence for Maysville Bypass Alternative
- April 12, 2011 concurrence for Avoidance and Minimization for Section B

Chapter 8 of this State Final Environmental Impact Statement (SFEIS) contains a description of the agency coordination and public involvement activities undertaken as part of the project.

1.6 SYSTEM LINKAGE

1.6.1 Existing Road Network

US 17 is classified as a Principal Arterial in the Statewide Functional Classification System. The existing roadway consists primarily of a two-lane facility which expands to a three-lane, curb and gutter roadway through the towns of Maysville and Pollocksville. On-street parking is provided on both shoulders along the curb and gutter sections in both towns. Sidewalks are provided in isolated sections along the west side of US 17 in Maysville and along the east side of US 17 at the Trent River Bridge in Pollocksville.

Table 1-1 contains a list of the typical sections, right-of-way widths, and posted speed limits which currently exist along US 17 through the study area.

TABLE 1-1: EXISTING ROADWAY, RIGHT-OF-WAY WIDTHS AND SPEED LIMITS

Roadway Segment	Typical Section	R.O.W. Width	Posted Speed Limit
South of Belgrade / Maysville	2-lane	100 ft	45 - 55 mph
Through Maysville	3-lane with parking	60 ft	25 mph
Between Maysville and Pollocksville	2-lane	100 ft	45 - 55 mph
Through Pollocksville	3-lane with parking	60 ft	35 mph
North of Pollocksville	2-lane	100 ft	45 mph

The geometric conditions within the study area on US 17 (such as horizontal curves, clear recovery zone, pavement superelevation, shoulder widths, and bridge geometry) do not meet current North Carolina Department of Transportation design standards for the posted speed limits. The proposed US 17 improvements will incorporate current standards and correct any existing roadway design deficiencies. This will ultimately provide a safer roadway facility.

Jones County is served by US routes 17, 70, and 258 and North Carolina (NC) routes 41 and 58. Onslow County is served by US routes 17 and 258 and NC routes 24, 50, 111, 172, and 210. US 258 connects Jacksonville to Kinston from the south and on to Virginia in the north. US 70

traverses the northern portion of Jones County connecting the Port of Morehead City to the east with I-95 and the State Capital in Raleigh to the west. Neither of these routes is located within the project study area.

NC 58 is the only North Carolina route which passes through the study area. This highway extends from Warrenton to Atlantic Beach and is a major access route to the Bogue Banks beach areas. NC 58 also serves as a hurricane evacuation route for eastern Jones County, northern Onslow County, and the Emerald Isle area of Carteret County. Traveling in an easterly direction from Trenton, NC 58 enters the study area just south of Pollocksville where it joins with US 17. NC 58 shares the US 17 corridor south to Maysville where it diverges in a southeasterly direction towards the coast.

The study area also contains numerous secondary routes (SR) which primarily provide access to local residents. However, there are two exceptions, Belgrade-Swansboro Road (SR 1434) and Ten Mile Fork Road (SR 1002). Belgrade-Swansboro Road, which begins in Belgrade, generally parallels NC 58 and travels in a southeasterly direction providing access to Swansboro and the beach area. Ten Mile Fork Road begins at US 70 in Wyse Fork south of Kinston and travels in a southeasterly direction to US 17 at Ten Mile Fork just south of New Bern.

No interchanges or control of access are provided on US 17 within the project area. A traffic signal currently exists at the US 17 / NC 58 intersection in Maysville. All other intersections within the project study area are stop-sign-controlled. **Table 1-2** lists the major roads which intersect with US 17 in the study area, the existing intersection configuration and type of traffic control. The list begins in the southern portion of the study area and progresses north.

TABLE 1-2: EXISTING INTERSECTIONS

Cross Street	Intersection Configuration	Traffic Control
Deppe Loop Road (SR 1330) / Springhill Road (SR 1439)	+	Sign
White Oak River Road (SR 1331) / Belgrade Ext. (SR 1440)	+	Sign
Belgrade-Swansboro Road (SR 1434)	Y	Sign
NC 58 (Eighth St) - Maysville	+	Signal
Fourth Street / White Oak River Road (SR 1116)	+	Sign
Lee's Chapel Road (SR 1114)	T	Sign
Riggs Town Road (SR 1112)	T	Sign
Raven Wood Farm (SR 1108)	T	Sign
NC 58 (Banks Extension Rd) - Pollocksville	T	Sign
Island Creek Road (SR 1004)	T	Sign
Goshen Road (SR 1337)	+	Sign
Oak Grove Loop (SR 1336)	Y	Sign

TABLE 1-2: EXISTING INTERSECTIONS

Cross Street	Intersection Configuration	Traffic Control
Wise Fork Road (SR 1002)	Y	Sign
Simmons Loop Road (SR 1330) , 2 locations	T	Sign

Legend: + = 4-way Intersection, T = 3-way Intersection, Y = 3-way Intersection

1.6.2 Modal Interrelationships

1.6.2.1 Railroads

No rail service is located within the project study area. The Seaboard Coast Line Railroad previously operated freight rail service through the area. However, in 1984 the railroad company abandoned the right-of-way and removed the rail lines. The railroad right-of-way which generally followed the alignment of US 17 reverted to the adjacent, underlying fee property owners.

Freight service is provided by Southern Railway, a subsidiary of Norfolk Southern Corporation in New Bern, approximately 10 miles north of the project corridor.

1.6.2.2 Airports

The Oak Grove Marine Corps Outlying Field is located approximately two miles northwest of Pollocksville. It is an active airport but is restricted to private use. The nearest airport that provides commercial service is the Craven Regional Airport (EWN) located approximately 11 miles east of the northern edge of the study area in New Bern.

Onslow and Jones Counties are part of the North Carolina Eastern Region established by the North Carolina General Assembly to promote economic development in eastern North Carolina. A key component of this plan is the North Carolina Global TransPark (GTP), an intermodal manufacturing complex located in Kinston approximately 25 miles from the study area. The GTP includes the Kinston Regional Jetport and Spirit Aero Systems, Inc., an Aircraft Manufacturing Facility. The Global TransPark has Foreign Trade Zone status.

1.6.2.3 Transit

Craven Area Rural Transportation System (CARTS) provides fixed-route, subscription, and dial-a-ride transportation service for all residents of Jones County and neighboring Craven and Pamlico Counties. Onslow United Transit Services Incorporated (OUTS) provides subscription

and dial-a-ride transportation services for elderly and disabled residents of Onslow County.

Greyhound Lines Incorporated provides scheduled intercity bus service to Jacksonville.

1.6.2.4 Shipping Ports

The State Port of Morehead City is located approximately 43 miles east of the study area. The port has a channel depth of 45 feet. This port has foreign trade zones and specializes in bulk, breakbulk, and specialty cargos.

1.6.2.5 Bicycle Routes

The North Carolina Department of Transportation Bicycle Program created a system of Bicycling Highways throughout the state. North Carolina Bike Route 3 (Ports of Call) travels along the coast of eastern North Carolina and enters the study area at two locations. Bike Route 3 travels northward through Onslow County beginning on NC 210 on Topsail Island and joins NC 172 just west of Sneads Ferry. It continues along NC 172 to SR 1432 in Hubert, along SR 1432 to SR 1434 in Silverdale, and along SR 1434 to US 17 in Belgrade. It then follows US 17 into Jones County through Belgrade to SR 1116 (White Oak River Road) in Maysville. NC Bike Route 3 continues along SR 1116 to NC 58 before connecting with US 17 again just south of Pollocksville. The route follows US 17 a short distance to SR 1004 (Beaufort Road) and travels along SR 1004 through the Croatan National Forest to New Bern in Craven County.

The Bear Island Route Map D-4 of Bike Route 3 indicates that US 17 from SR 1434 to SR 1116 through Belgrade and Maysville has a high volume of traffic during the summer months. Map D-4 calls this section a hazardous area for bikers.

1.6.3 Commuting Patterns

Commuting patterns in Jones County are a result of the county's dependence on employment in other counties, especially Craven County. In the year 2000, 3,092 residents commuted outside of Jones County while 819 workers living outside the county commuted to Jones County. Of the 3,092 residents commuting outside of the county, 1,318 were commuting to Craven County.[2]

Commuting patterns for the year 2000 in Onslow County consisted of 9,620 residents commuting into other counties, with the majority commuting to Craven and Carteret Counties. A total of 6,537 workers living outside the county commuted into Onslow County. Of the 9,620

[2] County-To-County Worker Flow Files website: *http://www.census.gov/population/www/cen2000/commuting/index.html*, accessed 08/3/2009

residents commuting to jobs outside the county, 1,410 commuted to Craven County and 1,222 commuted to Carteret County.[3]

1.7 LAND USE PLANNING

1.7.1 Population Trends

The following sections contain information about population demographics and recent trends within the study area. Additional information about the human environment is presented in Chapter 2.

1.7.1.1 Onslow County

Up until 1930, Onslow and Jones Counties had populations of similar size. This changed as the Camp Lejeune Marine Corps Base was constructed and staffed during the 1930's and 1940's in Onslow County. After 1930, Onslow County's population experienced continuous, rapid growth. The County developed its beach communities and associated tourist industry. From 1930 to 1990, Onslow County's population increased 880 percent. By 1990, Onslow County ranked 10th among North Carolina's 100 counties in total population according to the North Carolina Department of Commerce. The county population increased another ten percent between 1990 and 2000 then by another 15 percent from 2000 through 2009.

The "Grow the Force" initiative of the US Marine Corps has led to an increase in military jobs at eastern North Carolina bases: Camp Lejeune Marine Corps Base and the New River Marine Corps Air Station in Jacksonville and Cherry Point Marine Corps Air Station in New Bern. Between 2006 and 2011, an estimated 11,500 military jobs were to be added at these three bases. Service members would bring with them an estimated 13,500 dependents and induce a direct growth impact equaling around 15,000 additional persons. This was expected to result in a regional population increase of 40,000 new residents.[4] As of July 2009, the majority of the military personnel had already relocated to the area.

The North Carolina State Demographics Unit currently estimates that the population of Onslow County will grow at an annual rate of approximately 5 percent through 2030.

[3] County-To-County Worker Flow Files website *http://www.census.gov/population/www/cen2000/commuting/index.html*, accessed 08/3/2009

[4] 2009 *Regional Growth Management Plan,* Military Growth Task Force of North Carolina's Eastern Region

1.7.1.2 Jones County

Jones County's population changes were quite different from Onslow County and other surrounding counties, as well as the state overall. Since 1930, Jones County has experienced a mixture of modest growth followed by sustained population losses.

From 1930 to 1960, the County's population grew from 10,428 to 11,005; however, from 1960 to 2000 it decreased from 11,005 to 10,381. US Census data shows that for the period from 1990 to 2000 Jones County's population increased by 11.3 percent, while the population of North Carolina grew by 21.3 percent. Census projections show minor decreases over the past decade, with a 2009 estimated county population of 10,071. Out of the 100 counties in North Carolina, Jones County ranks 95th in total population.

The 2001 Jones County Strategic Plan identifies limited infrastructure, an unskilled workforce, and an over-dependence on agriculture as critical problems stifling economic and community development. Instead, the county serves as a bedroom community for nearby activity centers in New Bern.

The North Carolina State Demographics Unit currently estimates that the population of Jones County will drop slightly (less than ½ percent per year) through 2030.

1.7.2 Land Use Planning and Zoning

Each of the municipalities within the study area and Onslow County has plans or maps for the orderly development of land within their jurisdictions. In 2009, Onslow County adopted its most recent update to its *CAMA Core Land Use Plan*, in accordance with the North Carolina Coastal Area Management Act (CAMA). This plan outlines strategies and recommendations for how future growth and development should occur in Onslow County. Belgrade's land use map in the Onslow County CAMA Plan shows residential and commercial development along US 17. The towns of Maysville and Pollocksville also exercise traditional zoning controls. Maysville's zoning ordinance covers one mile beyond the town limits, while Pollocksville's zoning is limited to the town limits. Pollocksville is planning to extend zoning into its extraterritorial jurisdiction.

Jones County does not currently have a land use plan but is in the process of creating one, anticipated to be completed by 2012.

1.7.3 Economic Development Plans

US 17 is the primary north-south corridor between I-95 and the Atlantic Ocean and provides

access to numerous port cities and beach communities along the coast. Onslow County has several miles of beachfront and is able to benefit economically from the beach and tourist traffic. Jones County, on the other hand, has no beachfront and is unable to experience the primary economic benefits of the tourist traffic. In most cases, Jones County has experienced only the burdens of the tourist traffic, congestion, and crashes.

Onslow and Jones Counties are part of North Carolina's Eastern Region established by the General Assembly to promote economic development within thirteen mid-eastern North Carolina counties. The East Carolina Council published a *Comprehensive Economic Development Strategy* in 2007 to promote sustainable economic development in their nine-county region, which includes both Jones and Onslow. The plan identifies the distance to interstate and controlled-access highways as an obstacle to attracting new businesses and tourists to the area. One of the components of the development plan for the region is the North Carolina Global TransPark complex located in Kinston. Improved access to US 17 could help entice new industries looking to take advantage of the local labor force to locate in the TransPark.

To improve water and sewer service in Onslow County to accommodate the influx of Marines and their families to the area, a service agreement was initiated between the Onslow County Water and Sewer Authority (ONWASA) and the Marine Corps Base, Camp Lejeune. As a result, the $18 million Piney Green Project began construction in January 2008 and was completed in 2009. This project allows Onslow County to use excess water and wastewater treatment capacity available at Camp Lejeune. It consisted of 6.6 miles of wastewater force main with 3.5 million gallons of wastewater per day capacity, treated at the French Creek facility on Camp Lejeune. This project also included 3 miles of new water mains which supply up to 2 million gallons of drinking water per day to the surrounding area (Onslow County Online website: *http://www.co.onslow.nc.us* accessed 08/03/09). Additional ONWASA water line improvement projects are under development for the Piney Green Road and Hunter's Creek area.

1.8 TRANSPORTATION PLANNING

1.8.1 Draft Ten Year Work Program

This project is included in the 2011-2020 Draft Ten Year Work Program as project number R-2514. R-2514A has been constructed from North of Jacksonville to South of Belgrade. R-2514 B is scheduled for right-of-way acquisition to begin in Fiscal Year (FY) 2014 with construction scheduled to begin in FY 2019. R-2514 C is scheduled for right-of-way acquisition to begin in FY 2013 with construction scheduled to begin in FY 2015, and R-2514 D is scheduled for right-of-way acquisition to begin in FY 2013 with construction scheduled to begin in FY 2015.

The Draft Ten Year Work Program also includes several projects for improving other sections of US 17 through North Carolina. These projects will upgrade the US 17 corridor by (1) implementing system upgrades to existing four-lane sections, (2) widening two-lane sections to four-lane sections with access management measures, and (3) construction four-lane freeways where practical.

These projects include:

- R-2633 A&B – US 17 Wilmington Bypass under construction – new location freeway
- R-3300 – US 17 Hampstead Bypass in planning stages – new location freeway
- U-4007 – US 17 Improvements in Jacksonville under construction – system improvements to a very congested section of US 17
- R-2301 – US 17 New Bern Bypass under construction – new location freeway *(Project R-2514 B, C, & D will connect to this project)*
- R-2510 – US 17 Washington Bypass under construction – part new location freeway, part widening to four lanes with access management measures
- R-2511 – US 17 Improvements from Washington Bypass to Williamstown in planning stages – widening to four lanes with access management measures

1.8.2 Transportation Plans

The cities of Jacksonville and New Bern have adopted Thoroughfare Plans (Jacksonville in 1994 and New Bern in 1992), as has Jones County (1999). However, Onslow County does not have a Thoroughfare Plan. **Figure 1-2** shows the Jones County Thoroughfare Plan. The Jones County thoroughfare planning area includes the northern portion of the US 17 study area from the Onslow County line north to the Craven County line.

The Jones County Thoroughfare Plans recognizes the need to accommodate long-term increases in traffic volumes. The Plan states that as traffic volumes grow, especially on the major thoroughfares crossing US 17, the level of service on the existing roadway network will decline and the delays will increase.

Improvements to existing major thoroughfares included in the *Jones County Thoroughfare Plan* are as follows:

- US 17 - Widen to a four-lane divided facility, with bypasses of Maysville and Pollocksville on new location. (TIP Project No. R-2514)
- US 70 Bypass of Kinston - Construct a four-lane divided freeway on new location. (TIP Project No. R-2553)
- US 258 - Widen to a four-lane divided facility.

The remaining recommendations included in the *Jones County Thoroughfare Plan* consisted of minor widening of NC routes to improve safety and capacity.

1.9 TRAFFIC OPERATIONS ANALYSES

1.9.1 Existing Roadway Characteristics

US 17 is a two-lane highway for most of the project area with the exception of short segments with two-way left-turn lanes and parking on shoulders through the town limits of Maysville and Pollocksville. **Figure 1-3** shows photographs of existing US 17 within the study area. There is no control of access on US 17. Access is provided at numerous locations through signalized intersections, unsignalized intersections, residential driveways, and commercial driveways.

1.9.2 Existing No-Build Traffic Conditions

1.9.2.1 Existing Traffic Volumes

Estimated average daily traffic (ADT) volumes in 2009 for US 17 and major intersecting roads are shown on **Figure 1-4**, based on the August 2010 traffic forecast prepared for the project. The existing ADT volumes along US 17 are 9,000 to 11,700 vehicles per day (vpd) south of Maysville; 10,600 to 11,300 vpd between Maysville and Pollocksville; and 12,600 vpd north of Ten Mile Fork. During the evening peak hour, about 60 percent of the traffic travels north on US 17, away from Jacksonville. About 16 percent of the average daily traffic are trucks.

1.9.2.2 Existing Levels of Service

The effectiveness of a roadway to accommodate traffic demand is measured in terms of level of service (LOS). Level of service is a qualitative measure which describes the ability of a facility to carry traffic and how these conditions are perceived by individual users. It is based on factors of speed, travel time, comfort, maneuverability, interruptions, convenience, and safety. Levels of Service range from "A" to "F", with "A" representing free flow (ideal condition) and "F" representing forced or breakdown flow (undesirable condition). **Table 1-3** defines the ranges of LOS.

It is the policy of the North Carolina Department of Transportation to design highways to accommodate the design year peak hour traffic volumes at LOS C or better.

Although US 17 is predominantly a rural highway, numerous side roads intersect the route throughout its length. These intersections generally control the capacity and level of service

experienced by the motoring public.

TABLE 1-3: LEVEL OF SERVICE DEFINITIONS

Level of Service A describes free-flow operations. Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed at this level.

Level of Service B represents reasonably free flow, and free-flow speeds are maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

Level of Service C provides for flow with speeds at or near the free flow speed of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service will be substantial. Queues may be expected to form behind any significant blockage.

Level of Service D is the level at which speeds begin to decline slightly with increasing flows, and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

Level of Service E describes operation at capacity. Operations at this level are volatile, because there are virtually no usable gaps in the traffic stream. Vehicles are closely spaced, leaving little room to maneuver within the traffic stream at speeds that still exceed 49 mph. Any disruption of the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown with extensive queuing. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is poor.

Level of Service F describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points. Breakdowns occur for a number of reasons:

- Traffic incidents can cause a temporary reduction in the capacity of a short segment, so that the number of vehicles arriving at the point is greater than the number of vehicles that can move through it.
- Points of recurring congestion, such as merge or weaving segments and lane drops, experience very high demand in which the number of vehicles arriving is greater than the number of vehicles discharged.

LOS F operations within a queue are the result of a breakdown or bottleneck at a downstream point. LOS F is also used to describe conditions at the point of the breakdown or bottleneck and the queue discharge flow that occurs at speeds lower than the lowest speed for LOS E, as well as the operations within the queue that forms upstream.

SOURCE: Highway Capacity Manual, Transportation Research Board, 2000.

Table 1-4 indicates the existing LOS for US 17 intersections in the study area, summarizing the analysis completed for the 2009 *Updated Capacity Analysis Report*. Of the fifteen intersections analyzed, all operated at a LOS of B or better during the AM or PM peak hour in 2009.

1.9.3 2035 No-Build Traffic Projections

The 2035 average daily traffic volumes forecast for US 17 and major intersections assuming no improvements to US 17 are shown in **Figure 1-4**. These projections are demand-based, which assumes adjacent TIP projects and associated build-out adjacent to the corridor has happened. The projected design year ADT volumes for the No-Build alternative are 16,600 vehicles per day (vpd) at the south of Maysville in Onslow County; 19,500 vpd within the Maysville town limits; and 20,800 vpd north at Ten Mile Fork near the Jones / Craven County Line. During the evening peak hour, about 60 percent of the traffic travels north on US 17 away from Jacksonville. About 16 percent of the 2035 average daily traffic are trucks.

Although traffic volumes increase between 2009 and 2035, currently projected 2035 traffic volumes are noticeably lower than projections included in the 2004 SDEIS. This is due primarily to recent improvements along NC 24 from I-40 to the coast, which draws traffic away from US 17.

1.9.4 2035 No-Build Capacity Analysis

Seven of the fifteen intersections analyzed would operate at LOS E or F during the AM or PM peak hours by the year 2035. **Table 1-4** shows the intersection LOS for each intersecting roadway.

TABLE 1-4: INTERSECTION LEVELS OF SERVICE

Intersection	Intersection Level-of-Service (LOS) (AM / PM Peak)	
	2009	2035
US 17 - SR 1330 / 1439 (Deppe Loop Road / Springhill Road	EB: B / B WB: C / C	EB: B / C WB: E / E
US 17 - SR 1331 / 1440 (White Oak River Road / Belgrade Extension)	EB: C / C WB: C / C	EB: F / F WB: F / F
US 17 - SR 1434 (Belgrade – Swansboro Road)	C / C	D / D
US 17 - NC 58 (Eighth St.) Maysville	B / B	D / E
US 17 - SR 1116 (Fourth St./White Oak Road) Maysville	EB: B / B WB: A / A	EB: D / C WB: E / C
US 17 - SR 1114 (Lee's Chapel Road) Ravenswood	C / C	D / D
US 17 - SR 1112 (Riggstown Road) Ravenswood	C / C	E / E
US 17 - SR 1108 (Raven Wood Farm) Ravenswood	B / B	C / D

TABLE 1-4: INTERSECTION LEVELS OF SERVICE

Intersection	Intersection Level-of-Service (LOS) (AM / PM Peak)	
	2009	2035
US 17 - NC 58, Hatchville	B / B	C / C
US 17 - SR 1004 (Island Creek Road) Pollocksville	B / B	C / C
US 17 - SR 1337 (Goshen Road) Pollocksville	EB: B / B WB: A / A	EB: C / C WB: A / A
US 17 - SR 1336 (Oak Grove Loop Road) South, Murphy Town	B / B	C / B
US 17 - SR 1336 / SR 1121 (Oak Grove Loop Road) Murphy Town	A / A	A / A
US 17 - SR 1336 (Oak Grove Loop Road) North, Murphy Town	C / C	D / D
US 17 - SR 1002 (Wise Ford Road)	C / C	F / F
US 17 - SR 1330 (Simmons Loop Road)	C / C	E / E

EB: Eastbound
WB: Westbound

1.10 CRASH ANALYSIS

Traffic crashes are often the visible result of deficiencies in the capacity and safety characteristics of a transportation facility. They contribute to delays, time-consuming congestion, and driver frustration, which can result in even more crashes. Thus, an examination of crash data often reveals a need to provide a more efficient and safer facility. There are several criteria to measure the relative safety of a roadway segment. These criteria are based on traffic crash statistics for the facility and may be compared with average statistics encompassing a large group of similar facilities. **Table 1-5** lists the traffic crashes by type for a three-year period along the 16-mile stretch of existing US 17 under study. The list encompasses all reported crashes from April 1, 2006 to March 31, 2009.

TABLE 1-5: 2006–2009 ACCIDENT DATA

Accident Type	Number	% of Total
Angle	5	2
Backing Up	1	0.4
Collision – Animal	37	14.8
Collision – Fixed Object	88	35.2
Collision – Movable Object	5	2
Collision – Parked Motor Vehicle	3	1.2
Collision – Pedestrian	1	0.4
Head on Collision	5	2

TABLE 1-5: 2006–2009 ACCIDENT DATA

Accident Type	Number	% of Total
Left Turn – Different Roads	8	3.2
Left Turn – Same Roadway	11	4.4
Other Collision – With Vehicle	2	0.8
Other Non – Collision	3	1.2
Overturned / Rolled Over	8	3.2
Pedal Bicyclist	3	1.2
Rear End – Turning	6	2.4
Rear End – Slow Stopping	52	20.8
Sideswipe – Opposite Director	6	2.4
Sideswipe – Same Direction	6	2.4
TOTAL	**250**	**100.00%**

The traffic reports indicate that 250 crashes were reported along this section of US 17. A review of these crashes showed that there were six fatal crashes and 102 crashes that caused non-fatal injuries. Rear-end collisions (slowing or stopping) accounted for 20.8 percent. These types of crashes are representative of congested conditions resulting from drivers following too closely. They are common in stop and go conditions and on roadways with little or no control of access and high traffic volumes. Another prevalent type of crash resulted from encounters with animals. Although most of these types of crashes are hard to control, inadequate sight distance and excessive speed generally make this situation worse. Over 54 percent of the crashes occurred during the day and 81 percent of the crashes occurred during dry conditions.

Crash Rates – the number of crashes per 100 million vehicle miles (ACC / 100MVM) – for the project area compared to three-year statewide averages for similar type roadways are illustrated in **Chart 1-1** and listed in **Table 1-6**. During the three-year period, crashes occurred at a rate of 128.72 MVM along the 16-mile stretch of US 17 under study. A comparison to the statewide averages in each category for the project area shows the US 17 crash rates are higher than the Statewide Averages in all categories except wet conditions. Critical crash rates are crash rates that have been statistically adjusted, based on other roads with similar characteristics to remove the elements of chance and randomness.

This is a check to determine if the "rate at a particular location is significantly higher than a predetermined average rate for locations of similar characteristics, based on Poisson's distribution."[5] Comparing the crash rates along US 17 to the critical crash rates by crash types in **Table 1-6**, fatality and night time crashes are occurring at rates along US 17 that are at a higher rate than can be attributed to random occurrences.

[5] Khisty, C. Jostin and B. Kent Lall. Transportation Engineering, An Introduction. 2nd ed. 1998.

CHART 1-1: Existing US 17 Crash Rates vs. Statewide Crash Rates

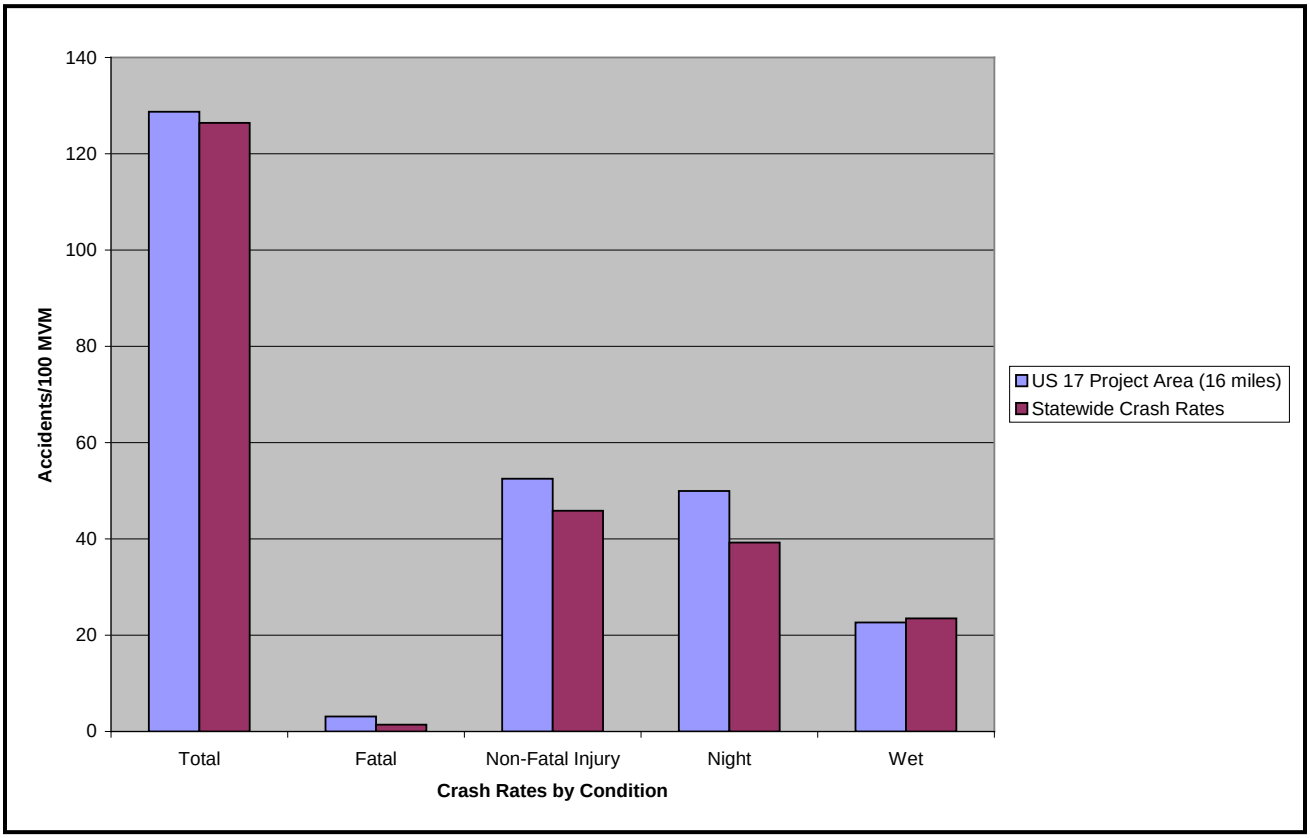


TABLE 1-6: EXISTING US 17 CRASH RATES VERSUS STATEWIDE RATES

Crash Type	US 17 Project Area Rates Per 100 MVM	Statewide Crash Rates for US Routes, 2006-2009	Critical Crash Rates (95% Confidence)
Total	128.72	126.40	139.4
Fatal	3.09	1.41	3.07
Non-fatal Injury	52.52	45.87	54.12
Night	49.94	39.26	46.91
Wet	22.65	23.51	29.49

Source: ***NCDOT Traffic Engineering Branch; Traffic Safety Systems Management Unit: Crash Rates for April 2006-March 2009.***

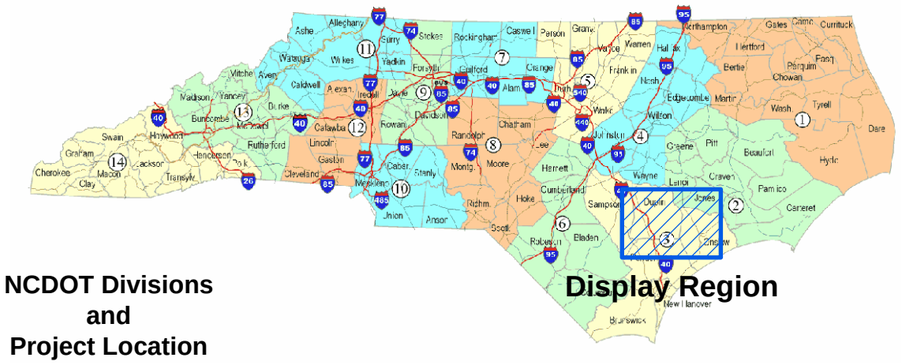
MVM: Million Vehicle Miles

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 25 50 100 150 200 Miles

NCDOT Divisions and Project Location



T.I.P. R-2514 B,C & D

JONES COUNTY

ONSLOW COUNTY

CROATAN NATIONAL FOREST

OAK GROVE AIRFIELD

PROJECT STUDY AREA

JONES
DUPLIN
ONSLOW
PAMLICO
CRAVEN
CARTERET

Jones County
Onslow County

New Bern
River Bend
Pollocksville
Arrapahoe
Minnesott Beach
Havelock
Richlands
Maysville
Jacksonville
Newport
Peletier

41 43 70 17 58 24 258 111 53 101

5/18/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

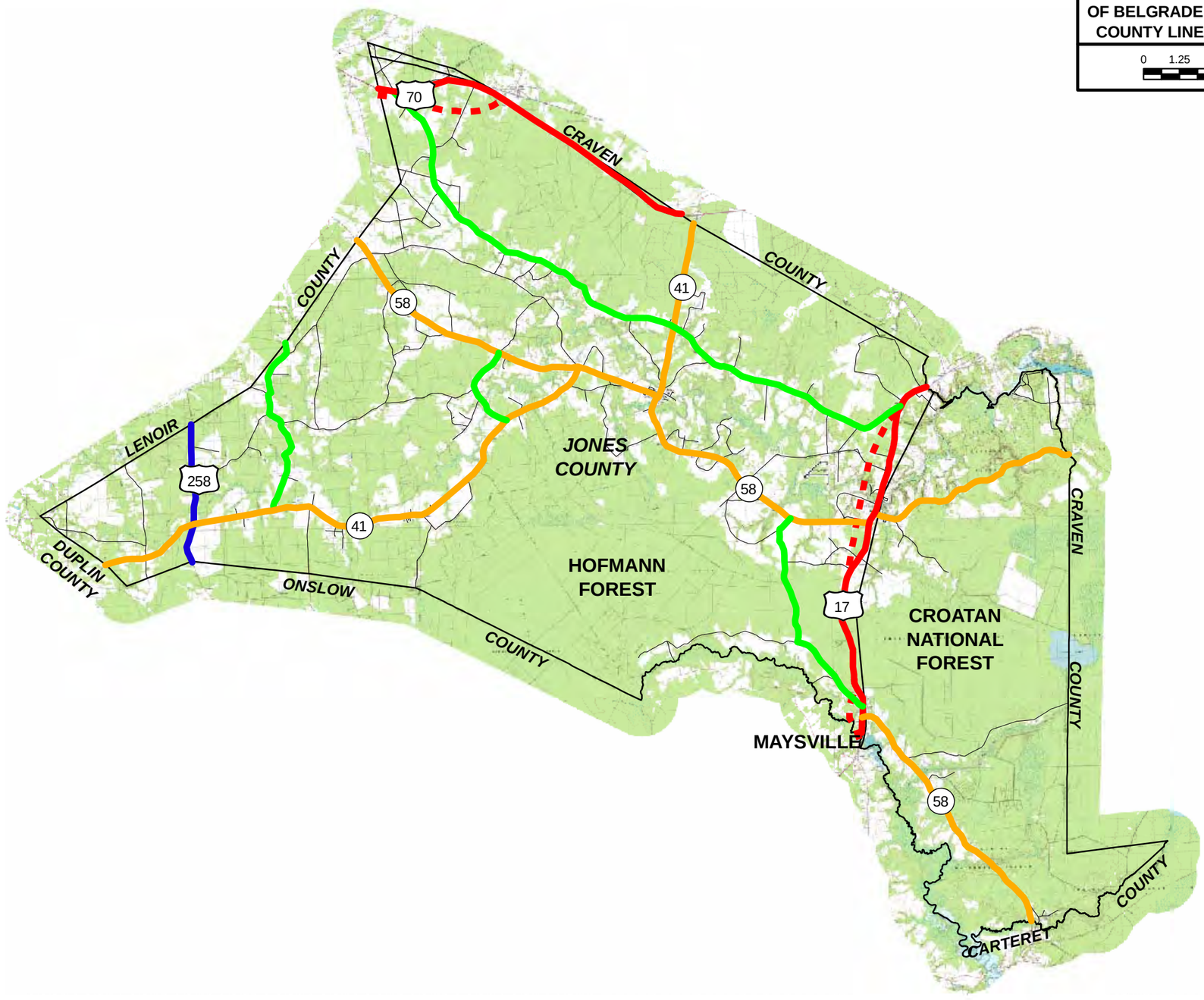
Map of Project Area

Figure 1-1

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1.25 2.5 5 7.5 10
Miles



- 17 US Route
- 58 State Route
- Principal Arterial
  - Existing
  - Proposed
- Minor Arterial
  - Existing
  - Proposed
- Major Collector
  - Existing
  - Proposed
- Minor Collector
  - Existing
  - Proposed

11/11/2010

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Jones County Thoroughfare Plan

Figure 1-2

Figure 1-3: Photos of US 17

US 17 in Maysville, facing south

US 17 at Raven Wood Farm (SR 1108), facing north

US 17 in north Maysville, facing north

Rural segment along US 17 near Belgrade

US 17 at Belgrade-Swansboro Road (SR 1434) in Belgrade, facing south

US 17 at Pollock Street in Pollocksville, facing south

US 17 intersection with NC 58 in Hatchville, facing north

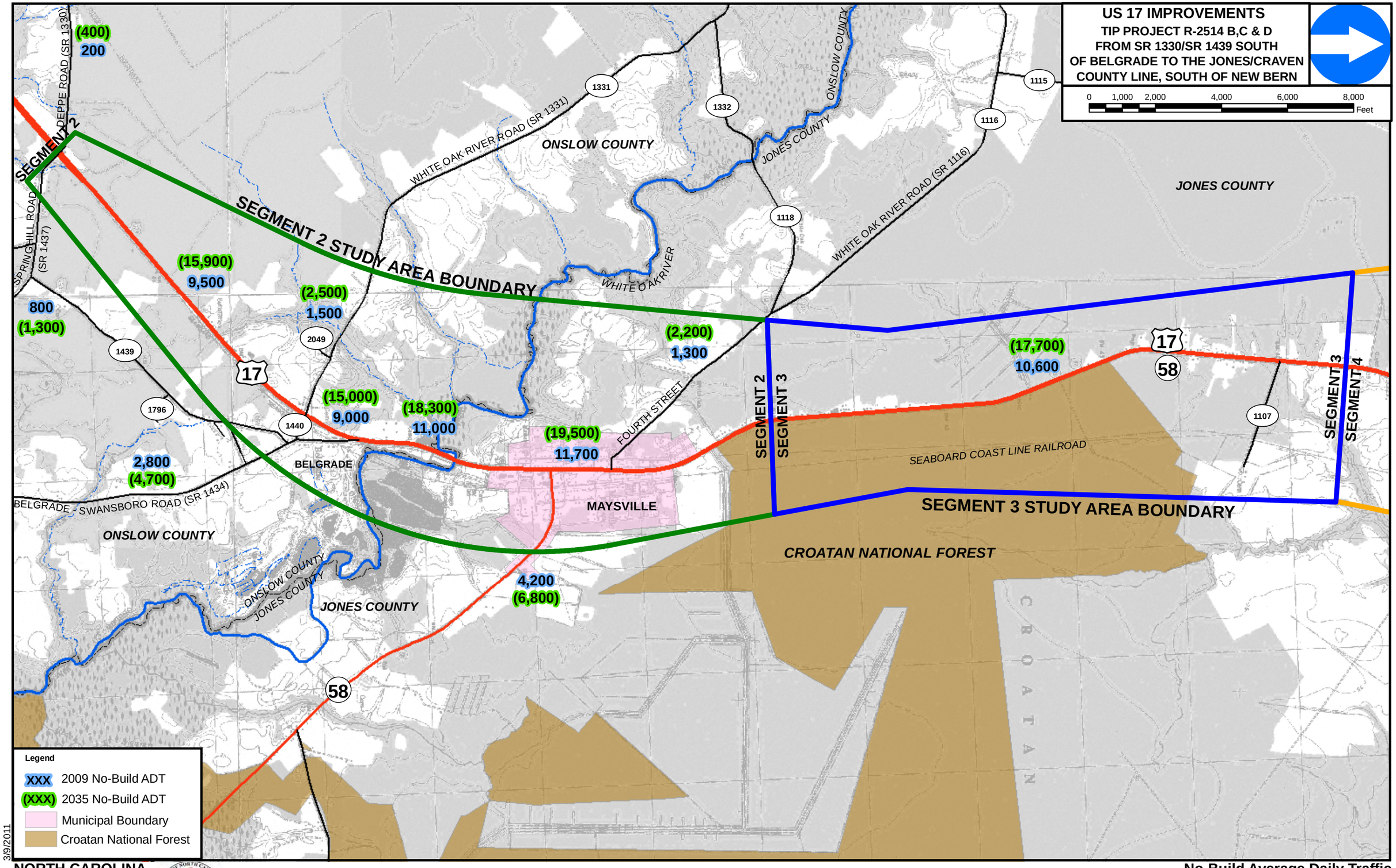
US 17 at White Oak River Road (SR 1331) in Belgrade, facing north

US 17 in Pollocksville at Hines St, facing north

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet



Legend

- XXX 2009 No-Build ADT
- (XXX) 2035 No-Build ADT
- Municipal Boundary
- Croatan National Forest

3/9/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

No-Build Average Daily Traffic

Figure 1-4
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

SEGMENT 3
SEGMENT 4

(500) 300
(17,700) 10,600
(17,800) 10,700
(600) 400
(3,500) 2,100
(18,100) 11,000
(18,600) 11,300
(800) 500
(17,500) 10,600
(17,700) 10,700
(1,100) 700
(17,200) 10,400
(4,000) 2,400
(400) 200
(20,800) 12,600
100 (300)
2,100 (3,500)
10,200 (17,000)
12,600 (20,800)

1114 1112 1113 58 1176 1332 1333 1121 1002 1337 1338 1330 1335 1108 1109 1166 1118 1110 1004 1224

LEES CHAPEL ROAD (SR 1114)
RIGGS TOWN ROAD (SR 1112)
RAVEN WOOD ROAD (SR 1108)
GOSHEN ROAD (SR 1337)
OAK GROVE ROAD (SR 1121)
BANKS ROAD (SR 1333)
SIMMONS LANE (SR 1335)
WISE FORK ROAD (SR 1002)
SIMMONS LOOP ROAD (SR 1330)
ISLAND CREEK ROAD
SCOTT CREEK

OAK GROVE AIRFIELD
OAK GROVE
RAVENSWOOD
POLLOCKSVILLE
TEN MILE FORK
JONES CORNER
JONES COUNTY
CROATAN NATIONAL FOREST

GOSHEN BRANCH
TRENT RIVER
MILL CREEK
SEABOARD COAST LINE RAILROAD

17 58

SEGMENT 4 STUDY AREA BOUNDARY

Legend

- XXX 2009 No-Build ADT
- (XXX) 2035 No-Build ADT
- Municipal Boundary
- Croatan National Forest

3/9/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

No-Build Average Daily Traffic

Figure 1-4
Sheet 2 of 2

CHAPTER 2 ALTERNATIVES CONSIDERED

This section discusses alternatives considered for the proposed action. These alternatives include the No-Build Alternative, the Transportation System Management (TSM) Alternative, Travel Demand Management (TDM) Alternatives, Mass Transit Alternatives, and Build Alternatives. Each alternative is assessed with respect to its ability to meet the purpose of and need for the proposed project.

2.1 NO-BUILD ALTERNATIVE

The No-Build Alternative would make no improvements to existing US 17 from south of Belgrade to south of New Bern through year 2035, with the exception of regular maintenance such as patching, resurfacing, regrading shoulders, and maintaining ditches.

The No-Build Alternative would incur neither right-of-way nor construction costs. There would be no short-term disruptions in traffic service or inconvenience to travelers along the existing roadway due to construction. There would be no impacts to streams, wetlands, or cultural resources, nor would there be any residential or business relocations. Therefore, the No-Build Alternative satisfies the requirements of the US Army Corps of Engineers (USACE) No-Action Alternative, an alternative which results in no construction requiring a USACE permit.

However, the No-Build Alternative would not meet the stated purposes of the proposed project, as discussed in Chapter 1. US 17 is designated as part of the North Carolina Intrastate System and is designated as a Strategic Highway Corridor. The No-Build Alternative would not improve traffic flow or reliever congestion on US 17. Therefore, the No-Build Alternative is not consistent with the state's long-range transportation goals for the US 17 corridor and eastern North Carolina.

In accordance with the State Environmental Policy Act (SEPA) (GS 113A, Article 1), the No-Build Alternative provides a baseline condition with which to compare the improvements and consequences associated with the Detailed Study Alternatives.

2.2 TRANSPORTATION SYSTEM MANAGEMENT (TSM)

The Transportation System Management (TSM) Alternative consists of adding low-cost transportation improvements to increase the capacity of an existing facility. TSM strategies typically involve minor roadway improvements that improve the operational characteristics of a facility while minimizing capital outlay and inconvenience to motorists. There are two main types of TSM minor roadway improvements: operational and physical.

The TSM roadway improvements typically are effective in solving site-specific capacity and safety problems in urban areas. These types of improvements will not address the long-term inability of existing US 17 to serve as an Intrastate Highway or a Strategic Highway Corridor.

2.2.1. Operational Improvements

Examples of operational improvements include traffic law enforcement, turn prohibitions, access control, speed restrictions, signal coordination, and adjustments to signal timing or phasing. Operational TSM strategies considered for the project are discussed below.

Turn Prohibitions or Turning Lanes. US 17 is a two-lane facility. A median would prohibit left-turning movements, but additional right of way would be required to construct the median and relocate one of the driving lanes. Limiting left turns would do little to improve the capacity of the existing roadway.

Speed Restrictions and Law Enforcement. Operational measures such as speed restrictions and increased law enforcement are often useful in addressing some safety issues. The existing speed limit along most of US 17 is 55 miles per hour. The lack of signalized intersections and the essentially straight alignment of the highway allow drivers to achieve speeds in excess of the speed limit. During peak hours, speed is controlled by the heavy volumes of traffic. Restrictions on speed would not improve capacity along US 17.

Traffic Signals. Only one intersection along US 17 is currently signalized. Traffic volumes at cross streets are not high enough to warrant signalization. Signalizing other minor street intersections along US 17 would not substantially disperse the side-street traffic or reduce congestion.

2.2.2. Physical Improvements

Examples of physical improvements include adding turn lanes, realigning intersections, improving warning / informational signs, and improving intersection geometry. Physical improvement TSM strategies considered for the project are discussed below.

Intersection Geometric Improvements. There are no locations where the existing pavement can be restriped to provide additional lanes of sufficient length to provide substantial benefits for improved traffic flow.

Improved Signage. New and improved warning or informational signs would not be effective at solving the problems along existing US 17. Crash patterns for US 17 are indicative of

congested conditions rather than motorist unfamiliarity with the highway or prevailing conditions. Additional signs are unlikely to address this accident trend.

2.3 TRAVEL DEMAND MANAGEMENT (TDM) ALTERNATIVES

Travel Demand Management (TDM) strategies include staggered work hours, ridesharing, and telecommuting. Due to the rural nature of the project area and the low population and population densities especially in Jones County (population density of 21 persons per square mile), the TDM Alternatives stated below would not significantly improve travel in the surrounding area to meet the purpose of and need for this project.

2.3.1. Ridesharing

Ridesharing, such as carpools and vanpools, is generally viewed as more convenient than bus transit with regard to access, door-to-door times, and comfort. Van service is provided by Craven County and is discussed more in Section 2.4. No data is available on the amount of ridesharing practiced along US 17. However, this strategy would not improve the route's capability to meet its mandated objectives as part of the Intrastate System, the North Carolina Strategic Highway Corridor System, or the federal STRAHNET.

2.3.2. Flexible Work Schedule

Staggered work hours, flex-time, or modified workweeks can be implemented by large employers served by a corridor who experience congestion at the entrances or exits to their businesses. Although US 17 does provide access to some large businesses beyond the limits of the study area, it is not expected that such adjustments to work schedules would substantially reduce peak hour traffic volumes within the study area. A majority of the commuters using US 17 are commuting to employment centers in Jacksonville or New Bern, beyond the limits of the study area.

2.3.3. Telecommuting

The trend in telecommuting among workers throughout the country is continuing to grow. Workers are allowed to work from home to reduce travel and provide more flexibility. Telecommuting is available where telephone and internet infrastructure has been updated to accommodate increased bandwidth of high speed internet connections. No data is available on the amount of telecommuting that occurs in the study area. However, this strategy would not improve the route's capability to meet its mandated objectives as part of the Intrastate System, the North Carolina Strategic Highway Corridor System, or the federal STRAHNET.

2.4 MASS TRANSIT ALTERNATIVES

Mass transit alternatives consist of bus and/or train service and are useful in high population density areas. As of 2009, Onslow County has a population density of 226 people per square mile and Jones County has a population density of 21 people per square mile. Due to the low population and population densities in the study area and the diversity of origins and destinations, an affordable mass transit alternative would not provide enough available passenger capacity and level of service to satisfy travel demand and, therefore, not meet the purpose of and need for the project.

2.4.1. Bus Alternatives

Craven Area Rural Transportation System (CARTS) provides a deviated fixed-route, subscription, and dial-a-ride transportation service for residents of Jones County. Onslow United Transit Services Incorporated (OUTS) provides subscription and dial-a-ride transportation services for certain authorized residents of Onslow County. Although these limited transit services are available, a fixed-route service in the study area would not be a practical alternative due to the rural project setting and low population densities.

2.4.2. Rail Alternatives

An abandoned railroad corridor is located east of and adjacent to US 17 through much of the study area. The rail lines were dismantled in 1984 and the right-of-way reverted to the adjacent, underlying fee property owners. Due to the lack of infrastructure and low population densities, it is not anticipated that passenger rail service will be available to commuters in the foreseeable future.

2.4.3. Express Lane Alternatives

Express lanes, carpool lanes, commuter lanes, transit lanes, or high-occupancy vehicle lanes (HOV lanes) are lanes reserved for vehicles with multiple passengers. These lanes are restricted from use by single occupant vehicles and trucks to make it easier for carpooling commuters to travel to and from work in large metropolitan areas. Because US 17 is primarily a two-lane facility, conversion to express lanes is not a practical strategy and would not address the purpose of or need for the project.

2.5 BUILD ALTERNATIVES

The Build Alternatives consist of improving US 17 from south of Belgrade to south of New Bern. Widening the existing facility was considered where practicable. New location bypasses were considered in the vicinities of Belgrade, Maysville, Pollocksville, and the communities north of Pollocksville.

2.5.1. Logical Termini

The proposed project would connect two multilane, divided roadways. The project's southern terminus is the northern terminus of STIP Project No. R-2514A, which widened US 17 to a four-lane divided facility with partial control of access from north of Jacksonville to Deppe Loop Road (SR 1330) / Springhill Road (SR 1439). The project's northern terminus is the southern terminus of STIP Project No. R-2301, the New Bern Bypass, a four-lane divided freeway under construction on new location with full-control of access. The US 17 project is of sufficient length (16 miles) to address environmental matters on a broad scope. A detailed discussion of the impacts of this project is included in Chapter 4 of this SFEIS.

The project would have independent utility, even if no additional transportation improvements were made in the area. Independent of other projects, the proposed project would improve mobility in central Onslow and Jones Counties by completing a four-lane connection between Jacksonville and New Bern, as well as improving safety and level of service along US 17. The proposed project would also facilitate the highway's ability to function as part of the North Carolina Intrastate System, the Federal Strategic Highway Corridor Network, and the North Carolina Strategic Highway Corridor System.

The proposed project would not restrict consideration of alternatives for other reasonably foreseeable transportation improvements contained in the 2011-2020 *Draft State Transportation Improvement Program* or long-range projects identified on the Jones County Thoroughfare Plan.

2.5.2. Design Features

2.5.2.1. Design Criteria

Design criteria for the Build Alternatives are listed in **Table 2-1**. The design criteria were developed in accordance with the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy of Geometric Design of Highways and Streets* (2004) and the NCDOT *Roadway Design Standards Manual.*

The design features and typical roadway cross-sections are determined by the type of facility required to fulfill the purposes of the project.

Table 2-1: DESIGN CRITERIA

Criteria	US 17 New Location Alternatives	US 17 Improve Existing Roadway	Ramps	Loops	Intersecting and Service Roads
Classification	Freeway	Expressway (Principal Arterial)	Ramp	Loop	Local
Terrain Type	Level	Level	Level	Level	Level
Design Speed (mph)	70	60	35-60	30	30-50
Anticipated Posted Speed (mph)	55-65	55	30-55	25	25-45
Proposed ROW Width (ft)	250	200	Variable	Variable	N/A
Control of Access	Full and Partial	Partial	Full	Full	None
Rumble Strips (Y/N)	Y	N	N	N	N
Typical Section Type	4 -Lane Divided	4 -Lane Divided	N/A	N/A	2-Lane
Lane Width (ft)	12	12	16	16	10-12
Sidewalks (Y/N)	N	N	N	N	N
Bicycle Lanes (Y/N)	N	N	N	N	N
Median Width (ft)	46	46	N/A	N/A	N/A
Median Protection (Guardrail/Barrier)	Guiderail and Guardrail	N/A	N/A	N/A	N/A
SHOULDER WIDTH					
Median/Inside (ft)	6	6	12	Curb & Gutter	N/A
Outside w/o Guardrail (ft)	12	12	14	14	4-6
Outside w/ Guardrail (ft)	15	13	17	17	7-9
PAVED SHOULDER					
Full Depth Paved Shoulders (FDPS) (ft)	10 (4)	10 (4)	4	4	N/A
Median Total (Inside)/ Full depth paved shoulder (FDPS) (ft)	4	4	4	Curb & Gutter with 10’ Berm	N/A
GRADE					
Maximum (percent)	3%	3%	5%	10%	6%
Minimum (percent)	0.3%	0.3%	0.3%	0.3%	0.3%
K VALUE					
Sag	181	136	Variable	Variable	37-96
Crest	247	151	Variable	Variable	19-84
HORIZ. ALIGN.					
Maximum Superelevation	.08	.06	.08	.08	.06

Table 2-1: DESIGN CRITERIA

Criteria	US 17 New Location Alternatives	US 17 Improve Existing Roadway	Ramps	Loops	Intersecting and Service Roads
Minimum Radius (ft)	1,810	1,330	314-1200	250	231-833
Spiral (Y/N)	Y	Y	Y	Y	N
CROSS SLOPES					
Pavement	.025	.025	.020	.020	.020
Paved Shoulder (FDPS / Partial DPS)	.025 / .04	.025/.04	.020	.020	N/A
Turf Shoulder	.08	.08	.08	.08	.08
Median Ditch	6:1	6:1	N/A	N/A	N/A
Ditch Typical	F-1 A	F-1 A	F-1 A	F-1 A	Arterial F-1 C
Clear Zone (ft)	30	30	30	18	Varies 10-28

** Standards per AASHTO guidance and 2002 NCDOT standards*

2.5.2.2. Typical Sections

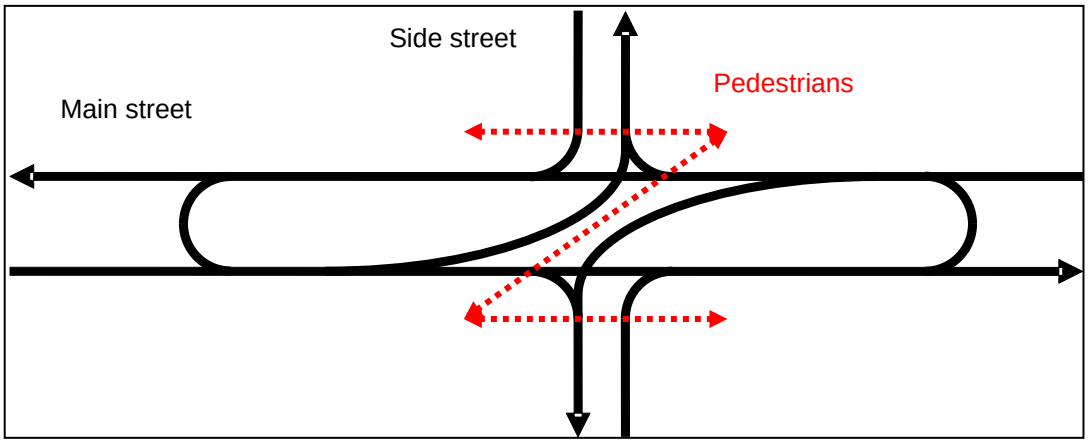
Three typical sections were used in the analysis of SDEIS preliminary study alternatives. **Figure 2-1A** shows the remaining two typical sections. For areas where the Build Alternative would be on new location, the roadway typical section would be a four-lane roadway divided by a 46-foot median. Right-of-way widths would average approximately 250 feet for new location sections and 200 feet for widening along the existing alignment.

2.5.2.3. Superstreet Design

Superstreet designs were incorporated into alternative designs at all major intersections to provide improved safety and traffic operational efficiency. A superstreet works by directing left-turn and through movements from the sidestreet approaches to make a right-turn onto the mainline. After drivers turn right onto the main street, they must make a u-turn maneuver at a one-way median opening generally 800 to 1,000 feet downstream to continue to their desired destination across the street or further upstream from where they originated. Left, through, and right-turn movements are allowed from the main street.

Superstreet intersection configurations are generally better suited to higher volume major roads in suburban and rural areas, especially at intersections with relatively low through traffic volumes on the cross street. At this type of intersection, left turns from the main road are similar to conventional intersections. Typically, left turns onto the side streets are made from left-turn lanes on the main road. Generally, pedestrians cross the main street diagonally at a superstreet intersection, going from one corner to the diagonally opposite corner. **Figure 2-1B** shows a detailed diagram of a superstreet intersection. A conceptual illustration is below.

SUPERSTREET DESIGN CONCEPT



A number of documented safety studies suggest that superstreet intersections offer significant safety advantages over conventional arterials for specific situations. A study by North Carolina State University researchers indicates superstreet intersections experience an average of 46 percent fewer reported crashes and 63 percent fewer injury collisions than conventional intersections. Research also showed a 20 percent reduction in travel times compared to conventional intersections.[1] This configuration can improve throughput at signalized intersections because only two signal phases are required.

2.5.3. Evaluation of Preliminary Alternatives

The primary objective of the environmental screening process is to compare and evaluate alternatives, and to eliminate those with fatal or prohibitive flaws and those that have substantially more impacts.

Preliminary Alternatives were developed within the project area through an iterative process. First, land suitability maps were created highlighting human and natural features that make one particular area unsuitable or less desirable than another area for roadway construction. Such features included homes, businesses, churches, cemeteries, schools, residential neighborhoods, parks, historic architectural properties, community facilities, streams, wetlands, and protected watershed areas.

For analysis purposes, US 17 within the project study area was originally divided into five

[1] Joseph Hummer et al. "Operational Effects of Signalized Superstreets in North Carolina." North Carolina State University. Presented: Jan. 24, 2011, at the Transportation Research Board Annual Meeting in Washington, D.C.

segments when the current environmental study began in 1995:

- **Segment 1** - Kellum Loop Road (SR 1327) / Halltown Road (SR 1410) to Deppe Loop Road (SR 1330) / Springhill Road (SR 1439). This segment has since been constructed as NCDOT project R-2514A.
- **Segment 2** - Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) to 0.2 miles north of the Maysville town limits.
- **Segment 3** - North of the Maysville town limits to 0.4 miles south of Lee's Chapel Road (SR 1114).
- **Segment 4** - South of Lee's Chapel Road (SR 1114) to north of the Pollocksville town limits.
- **Segment 5** - North of the Pollocksville town limits to the proposed New Bern Bypass near the Jones / Craven County Line.

Only the alternatives which widened along the existing alignment were evaluated for Segments 1, 3 and 5. For Segments 2 and 4, widening alternatives on the existing alignment and alternatives on new location were both evaluated. Widening alternatives were represented by study corridors approximately 500 feet in width; alternatives on new location were represented by study corridors approximately 1,000 feet in width.

Segment 1 began at the end of the four-lane divided section north of Jacksonville, traversed the Hofmann State Forest, and ended just south of the Community of Belgrade. Because of the potential impact of new location alternatives to the State Forest, only widening alternatives were evaluated for this segment, as indicated above. Based on the limited alternatives available and the minimal environmental impacts associated with these alternatives, NCDOT decided to conduct an independent study for Segment 1 in order to advance right-of-way and construction phases. An environmental assessment was approved on August 31, 1999 for STIP Project No. R-2514A (Segment 1), and a Finding of No Significant Impact (FONSI) was approved on August 25, 2000. Construction of STIP Project No. R-2514A began in October 2004 and was completed in November 2007.

The preliminary alternatives for Segments 2, 3, 4, and 5 were presented during the second citizen's informational workshop in February 1997. Residents in the vicinity of Murphytown, Ten Mile Fork, and Deep Gully, rural residential communities north of Pollocksville, expressed great concern with the proposed widening of US 17 in Segment 5. Septic systems in this area are generally located between the existing US 17 roadway and the homes. The water table in much of Jones County is high and the land is slow to perk. It was deemed unlikely that homeowners in this vicinity would be issued permits to relocate septic fields impacted by the widening alternative. Therefore, many of the residents would be required to relocate. The Town of

Pollocksville, Jones County, and local residents requested that NCDOT evaluate new location alternatives through Segment 5 to reduce this potential impact. In response to this request, Segment 5 was combined with Segment 4 and several preliminary alternatives on new location were developed within the section previously designated as Segment 5. Segment 4 was revised to extend from south of Lee's Chapel Road (SR 1114) to the New Bern Bypass near the Jones / Craven County Line and the Segment 5 designation was eliminated. The segments used to describe alternatives in the SDEIS are as follows:

- **Segment 2** – 4.8 miles from Deppe Loop Road (SR 1330) / Springhill Road (SR 1439), south of Belgrade / Maysville, through the towns of Belgrade and Maysville to north of the Maysville town limits.
- **Segment 3** – 3.4 miles from the end of Segment 2, north of Maysville, to just south of Lee's Chapel Road (SR 1114) south of Pollocksville.
- **Segment 4** – 7.9 miles from the end of Segment 3, south of Lee's Chapel Road (SR 1114), through Pollocksville to the Jones / Craven County line.

These segments still correspond to the alternatives presented in this SFEIS and were also used in impact discussions during Section 404 / NEPA Interagency Merger Process Team meetings.

Discussions regarding project alternatives were part of the Merger Process. The Section 404 / NEPA Interagency Merger Process is a process to streamline the project development and permitting processes, agreed to by the USACE, North Carolina Department of Natural Resources (NCDENR), FHWA, and NCDOT and supported by other stakeholder agencies and local units of government. To this effect, the Merger Process provides a forum for appropriate agency representatives to discuss and reach consensus on ways to facilitate meeting the regulatory requirements for Section 404 of the Clean Water Act during the NEPA / State Environmental Policy Act (SEPA) decision-making phase of transportation projects. The process required that the Merger Team reach concurrence at primary phases of project development: 1) defining the purpose of and need for that action and defining the study area; 2) defining the alternatives to be studied in detail in the environmental document; 2a) identifying the bridge locations and approximate lengths; 3) selection of the least environmentally damaging practicable alternative (LEDPA); 4a) implementing measures to avoid and minimize impacts to the natural and human environments; 4b) review of the development of the drainage design; and 4c) review of the completed permit drawings. Once consensus is achieved on each concurrence point, the project proceeds to the next stage.

Since the development of the SDEIS, multiple Merger Process Team meetings for this project were held on the following concurrence points (CP):

Date	Team Meeting
August 24, 2006	Informational Meeting, project was split into southern portion Belgrade to Chadwick and northern portion Chadwick to New Bern Bypass
November 1, 2006	Bridging Decision CP2A Field Meeting, southern portion
February 22, 2007	Bridging Decision CP2A Concurrence Meeting, southern portion
February 22, 2007	Corridor Selection CP3 Concurrence Meeting, southern portion
March 6, 2007	CP2A Bridging Decision Field Meeting, northern portion
April 12, 2007	CP2 Revisited Detailed Study Alternatives Concurrence Meeting
May 22, 2008	CP2 Revisited Detailed Study Alternatives Concurrence Meeting, entire project
May 22, 2008	CP2A Bridging Decisions Concurrence Meeting, Northern Portion
June 19, 2008	CP3 Corridor Selection Concurrence Meeting (Pollocksville Bypass)
June 19, 2008	CP3 Revisited Corridor Selection Concurrence Meeting (Maysville Bypass)
July 30, 2008	Merger Management Team Corridor Selection Elevation Meeting (Maysville Bypass)
September 18, 2008	Merger Management Team Corridor Selection Elevation Meeting (Maysville Bypass)
October 16, 2008	CP3 Revisited Corridor Selection Concurrence Meeting (Maysville Bypass)
December 12, 2008	CP3 Corridor Selection Field Meeting (Maysville Bypass)
December 16, 2008	CP3 Revisited Corridor Selection Concurrence Meeting (Maysville Bypass)
April 16, 2009	CP3 Revisited Corridor Selection Concurrence Meeting (Maysville Bypass)
April 16, 2009	CP4A Avoidance & Minimization Concurrence Meeting (Pollocksville Bypass)
September 17, 2009	CP4A Avoidance & Minimization Concurrence Meeting (Maysville Bypass)
May 25, 2010	CP3 Corridor Selection Revisited Corridor Selection Concurrence Meeting (Maysville Bypass)
April 12, 2011	CP4A Avoidance & Minimization Concurrence Meeting (Maysville Bypass)

To date, the Merger Process Team has reached concurrence on Concurrence Point 1 (Purpose and Need), Concurrence Point 2 (Detailed Study Alternatives), Concurrence Point 2a (Bridging Decisions), and Concurrence Point 3 [Least Environmentally Damaging Practicable Alternative (LEDPA)]. The Section 404 / NEPA Interagency Merger Process Team agreement is dated May 22, 2008 for concurrence on the detailed study alternatives in the document. The agreement dated May 22, 2010 documents concurrence on bridging alternatives. The agreement is dated June 19, 2008, which documents that Alternative 3 and Alternative 4D were selected by the Merger Process Team for the LEDPA; the May 25, 2010 agreement documents concurrence for Alternative 2A as the LEDPA. Concurrence agreements are presented chronologically in Appendix A.

In the 2004 SDEIS, a screening evaluation was conducted on the 23 Preliminary Alternatives in Segments 2, 3, and 4 in order to identify alternatives to be carried forward for detailed study. Based on a comparison of impacts, the 23 alternatives in the SDEIS were narrowed down to 13 Alternatives for further study, including Alternatives 2, 2A, 2B, 2C, 3, 4A, 4B, 4D, 4E, 4G, 4H, 4I, and 4ID. Those 13 corridors from the 2004 SDEIS were carried forward as preliminary corridors for further analysis as presented in this SFEIS.

2.5.3.1. Description of Alternatives carried forward from SDEIS

Preliminary engineering designs were developed within the corridor of each of the SDEIS Detailed Study Alternatives shown in **Figure 2-2**. Alternatives 2, 3, and 4A improve the existing roadway in Segments 2, 3, and 4, respectively. Study Alternatives 2A, 2B, and 2C in Segment 2 and Alternatives 4B, 4D, 4E, 4G, 4H, 4I, and 4ID in Segment 4 are new location alternatives. An interchange is proposed at the northern terminus of the project with the New Bern Bypass (STIP Project R-2301) near the Jones / Craven County line and at US 58 north of Pollocksville.

Alternative 2 begins as a four-lane divided roadway with a 46-foot median at the Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) intersection south of Belgrade and follows existing US 17 to the White Oak River Road (SR 1331) / Belgrade Extension Road (SR 1440) intersection in Belgrade. Detailed Study Alternative 2 then transitions to a five-lane curb and gutter section and continues along existing US 17 to the northern town limits of Maysville. At that point, Detailed Study Alternative 2 transitions back into a four-lane roadway with a 46-foot median for approximately 0.34 miles to the terminus of Segment 2 at approximately one mile north of Fourth Street (SR 1116).

Alternative 2A begins as a four-lane divided roadway with a 46-foot median at the intersection with Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) and follows existing US 17 north for approximately 0.5 mile. The alternative then diverges from existing US 17 and continues north on new location west of Belgrade and Maysville. Detailed Study Alternative 2A crosses White Oak River Road (SR 1331) approximately 0.7 mile west of US 17 and crosses Fourth Street (SR 1116) approximately 0.5 mile west of US 17. Detailed Study Alternative 2A rejoins existing US 17 at the terminus of Segment 2 approximately one mile north of Fourth Street.

Alternative 2B begins as a four-lane divided facility with a 46-foot median at the Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) intersection and follows existing US 17 to approximately 0.25 mile north of the White Oak River Road (SR 1331) intersection through Belgrade. Detailed Study Alternative 2B then turns east onto new location crossing the White Oak River south of Maysville and NC 58 approximately 0.4 mile east of existing US 17. Detailed Study Alternative 2B crosses a small corner of the Croatan National Forest before rejoining existing US 17 just north of the Maysville town limits.

Alternative 2C begins as a four-lane divided facility with a 46-foot median at the Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) intersection and follows existing US 17 to approximately 0.59 mile north of the White Oak River Road (SR 1331) intersection in Belgrade. Detailed Study Alternative 2C then turns west onto new location and uses the same corridor as Detailed Study Alternative 2A moving north from approximately 0.4 mile south of Fourth Street

/ White Oak River Road (SR 1116) in Maysville. The alternative crosses Fourth Street / White Oak River Road approximately 0.5 mile west of US 17 and rejoins existing US 17 just north of the Maysville town limits, approximately 300 feet from the terminus of Segment 2.

Alternative 3 follows the existing US 17 alignment, beginning as a four-lane divided facility with a 46-foot median approximately one mile north of Fourth Street (SR 1116) and following existing US 17 to approximately 0.61 mile south of Lee's Chapel Road (SR 1114). The widening takes place on the east side of existing US 17.

Alternative 4A begins as a four-lane divided facility with a 46-foot median approximately 0.61 mile south of Lee's Chapel Road (SR 1114) and follows existing US 17 to approximately 0.3 mile north of Raven Wood Farm (SR 1108). The alternative then diverges from existing US 17 and continues east of Pollocksville along the abandoned Seaboard Coast Line Railroad bed. Detailed Study Alternative 4A crosses Island Creek Road (SR 1004) approximately 0.2 mile east of US 17. At this intersection, Detailed Study Alternative 4A transitions to a five-lane shoulder section and proceeds north across the Trent River before rejoining existing US 17 about 0.6 mile north of Goshen Road (SR 1337). Detailed Study Alternative 4A continues along existing US 17 as a five-lane shoulder section to the New Bern Bypass (currently under construction) near the Jones / Craven County line.

Alternative 4B consists of a four-lane divided roadway with a 46-foot median beginning approximately 0.61 mile south of Lee's Chapel Road (SR 1114). The alternative follows existing US 17 to approximately 0.3 mile north of Raven Wood Farm (SR 1108) then shifts east onto the abandoned Seaboard Coast Line Railroad bed to approximately 800 feet north of the Trent River. Detailed Study Alternative 4B then turns west and crosses US 17 approximately 0.23 miles south of the Jones / Craven County line and continues north on new location to join with the New Bern Bypass (STIP Project R-2301) at the Jones / Craven County Line.

Alternative 4D begins approximately 0.61 miles south of Lee's Chapel Road (SR 1114) and consists of a four-lane divided roadway with a 46-foot wide median. Detailed Study Alternative 4D follows existing US 17 for approximately 0.27 miles before diverging to a new location. The alternative crosses Lee's Chapel Road approximately 0.1 miles west of US 17, crosses Riggs Town Road (SR 1112) approximately 0.4 mile west of US 17, crosses NC 58 approximately 0.4 mile west of US 17, and crosses Goshen Road (SR 1337) approximately 0.6 mile west of US 17. Just north of Goshen Road, the alternative crosses Goshen Branch and the Trent River approximately one river mile west (upstream) of the existing US 17 bridge. Detailed Study Alternative 4D continues north, crossing Oak Grove Road (SR 1121) approximately 0.75 mile west of US 17, and then follows the eastern edge of the Progress Energy power line easement through the Foscue and Simmons Plantation (a National Register of Historic Places property) to

cross Wise Fork Road (SR 1002) approximately 0.5 mile west of US 17. Detailed Study Alternative 4D crosses Simmons Loop Road (SR 1330) in two locations approximately 0.25 mile west of US 17 before connecting with the New Bern Bypass (STIP Project R-2301) at Deep Gully near the Jones / Craven County line.

Alternative 4E consists of a four-lane divided roadway with a 46-foot median beginning approximately 0.61 mile south of Lee's Chapel Road (SR 1114). The alternative uses the same corridor as Detailed Study Alternative 4D to just north of the Trent River. Detailed Study Alternative 4E then swings west to avoid the National Register listed Foscue and Simmons Plantation and continues in a northerly direction to cross Oak Grove Road (SR 1121) approximately 0.8 mile west of US 17. The alternative then turns east and crosses Wise Fork Road (SR 1002) approximately 1.3 miles west of US 17. Detailed Study Alternative 4E rejoins Detailed Study Alternative 4D south of Deep Gully and joins with the New Bern Bypass near the Jones / Craven County Line.

Alternative 4G consists of a four-lane divided roadway with a 46-foot median beginning approximately 0.61 mile south of Lee's Chapel Road (SR 1114). The alternative uses the same corridor as Detailed Study Alternatives 4D and 4E to just north of the Trent River. Detail Study Alternative 4G then shifts east to cross Oak Grove Road (SR 1121) approximately 0.3 mile west of US 17 and crosses US 17 approximately 1.4 miles north of the Trent River in Pollocksville. Detailed Study Alternative 4G joins Detailed Study Alternative 4B along the abandoned railroad bed just south of the Foscue and Simmons Plantation and continues north on new location to connect with the New Bern Bypass near the Jones / Craven County Line.

Alternative 4H consists of a four-lane divided roadway with a 46-foot median beginning approximately 0.61 mile south of Lee's Chapel Road (SR 1114). The alternative proceeds north using the same corridor as Detailed Study Alternative 4D to just south of NC 58. Detailed Study Alternative 4H then shifts west across the eastern portion of the Bryan-Bell Farm / Oakview Plantation (a National Register of Historic Places property) and the western portion of the Goshen Community, then travels west of the Foscue and Simmons Plantation (a National Register of Historic Places property). The alternative crosses NC 58 approximately 0.7 mile west of US 17 and continues in a northwesterly direction to cross Goshen Road (SR 1337) approximately 1.3 mile west of US 17. Detailed Study Alternative 4H crosses the Trent River approximately 1.75 river miles west (upstream) of the existing US 17 bridge and crosses Oak Grove Road (SR 1121) approximately 1.2 miles west of US 17. Detailed Study Alternative 4H joins Detailed Study Alternative 4E near Wise Fork Road (SR 1002) and continues north to connect with the New Bern Bypass near the Jones / Craven County Line.

Alternative 4I consists of a four-lane divided roadway with a 46-foot median beginning approximately 0.61 mile south of Lee's Chapel Road (SR 1114). The alternative proceeds north along the same corridor as Detailed Study Alternative 4B to 0.4 mile north of the Trent River where it crosses to the west side of existing US 17. Detailed Study Alternative 4I continues west, avoiding the Foscue and Simmons Plantation (a National Register of Historic Places property), crosses Oak Grove Road (SR 1121) approximately 0.5 mile west of US 17, and crosses Wise Fork Road (SR 1002) approximately 1.4 miles west of US 17. Detail Study Alternative 4I then curves sharply east, joining Detailed Study Alternative 4E, and continues north to join with the New Bern Bypass at the Jones / Craven County Line.

Alternative 4ID consists of a four-lane divided roadway with a 46-foot median approximately 0.61 mile south of Lee's Chapel Road (SR 1114). The alternative follows portions of the same corridors as Detailed Study Alternative 4I and 4D. Detailed Study Alternative 4ID crosses Oak Grove Road (SR 1121) approximately 0.5 mile west of US 17 before diverging from Detailed Study Alternative 4I and joining Detailed Study Alternative 4D at the eastern edge of the Progress Energy power line easement. Detailed Study Alternative 4ID uses the same corridor as Detailed Study Alternative 4D to the New Bern Bypass (STIP Project No. R-2301) interchange at Deep Gully near the Jones / Craven County line.

2.5.3.2. Impacts Based on Functional Design

A comparison matrix of the 13 SDEIS Study Alternatives is shown in **Table 2-2**. This table presents impacts based on the 1,000-foot wide corridors (on new alignment) and 500-foot wide corridors (on existing alignment) presented in the SDEIS.

Table 2-2: PRELIMINARY ALTERNATIVES EVALUATION MATRIX

	Detailed Study Alternatives												
Evaluation Factors	**2**	**2A**	**2B**	**2C**	**3**	**4A**	**4B**	**4D**	**4E**	**4G**	**4H**	**4I**	**4ID**
Length	4.7	4.4	5.1	2.7	3.4	7.9	8.1	13.36	13.8	13.5	14	14.6	13.8
Socioeconomic Factors													
Cemeteries	0	1	0	2	0	0	0	0	0	1	0	2	0
Historic Properties	1	0	0	0	1	2	2	1	0	1	1	1	1
Relocations	9	6	17	17	12	30	18	11	7	16	10	11	15
Natural Resources													
Stream Crossings	2	2	2	2	0	1	1	2	2	2	1	1	1
National Forest Lands (Acres)	5.48	1.7	10.9	1.7	24.6	0	0	0	0	0	0	0	0
Floodplains (Acres)	0.7	22.2	3.2	30.6	0	12.36	21.2	59.3	59.3	81.6	106.3	12.9	12.9
Wetlands (Acres)	3.2	35.6	21.5	24.9	4.4	7.8	3.5	46.4	52.6	28.3	41.4	30.5	25.9
Potential Contaminated Sites	13	0	1	0	0	0	3	0	0	0	0	2	2

This matrix includes estimates of impacts based on the total corridor width. Impact estimates were refined as studies progressed.

2.5.3.3. SDEIS Corridors Eliminated from Further Study

Based on the results of the screening evaluation and consideration of comments received through public involvement and agency coordination, eight SDEIS alternatives were eliminated from consideration, as discussed below. They include Alternatives 2, 2B, 4A, 4B, 4G, 4H, 4I, and 4ID.

Alternative 2 was dismissed from further consideration because of its impacts to businesses and historic properties within Maysville and Belgrade. The Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

Alternative 2B was dismissed from further consideration because of the community impacts resulting from the high number of residential and business relocations required in Belgrade and due to wetland impacts. The Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

Alternative 4A was dismissed from further consideration because of the community impacts resulting from the high number of residential and business relocations required in Pollocksville, Murphytown, and Ten Mile Fork. It also would lead to adverse impacts associated with multiple historic properties and districts. The Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

Alternative 4B was dismissed from further consideration because of its impact on the community of Pollocksville. It requires numerous business and residential relocations and would lead to adverse impacts on the Pollocksville Historic District and the Foscue and Simmons Plantation (a National Register of Historic Places property). The Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

Alternative 4G was dismissed from further consideration due to the high number of residential relocations and its impacts on the communities of Goshen, Hatchville, and Oak Grove. It would also lead to an adverse impact on the historic Foscue and Simmons Plantation. The Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

Alternative 4H was dismissed from further consideration because of its impacts on wetlands, historic resources, and the community of Goshen. The Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

Alternative 4I was dismissed from further consideration because of its impacts on the Pollocksville Historic District and on the communities of Oak Grove and Pollocksville. The

Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

Alternative 4ID was dismissed from further consideration because of its impacts to historic resources and the communities of Pollocksville and Oak Grove. The Merger Process Team concurred with the elimination of this alternative at the May 2008 meeting.

2.5.3.4. SFEIS Corridors Carried Forward for Detailed Study

Five alternatives were selected for detailed study in this SFEIS: Alternatives 2A, 2C, 3, 4D, and 4E. These alternatives are discussed in the following section.

2.5.4. Description of Detailed Study Alternatives

Preliminary engineering designs were developed within the corridor of each Detailed Study Alternative. **Figure 2-3** shows the Detailed Study Alternatives presented in this document. The preliminary designs take into consideration engineering design constraints (topography, interchange alignment, design criteria, maintenance of traffic issues, etc.) and the locations of environmentally-sensitive features such as residences, businesses, farms, neighborhoods, community facilities, streams, wetlands, and historic properties.

The designs include the main roadway as well as modifications to major intersecting streets. These designs are the basis for the impact analyses contained in Chapter 4 of this SFEIS.

Detailed Study Alternative 3 improves the existing roadway in Segment 3. Detailed Study Alternatives 2A and 2C in Segment 2 and Alternatives 4D and 4E in Segment 4 are new location alternatives. An interchange is proposed at the northern terminus of the project with the New Bern bypass (STIP Project R-2301) near the Jones / Craven County line and at NC 58.

Detailed Study Alternative 2A forms a western bypass of Belgrade and Maysville in Segment 2. Alternative 2A impacts wetland areas in the White Oak River Basin, but minimizes impacts to the Belgrade Community and the Town of Maysville.

Detailed Study Alternative 2C follows the existing US 17 alignment through Belgrade and bypasses Maysville to the west. Detailed Study Alternative 2C minimizes wetland impacts, but impacts the developed areas within Belgrade.

Detailed Study Alternative 3 follows the existing US 17 alignment, widening to the east of existing US 17. Detailed Study Alternative 3 minimizes impacts to the Chadwick Community.

Detailed Study Alternative 4D forms a western bypass of Hatchville, Pollocksville, Murphytown, and Deep Gully in Segment 4. It passes through the middle of the Oak Grove Community and the middle of the Ten Mile Fork Community, and would have impacts on these communities.

Detailed Study Alternative 4E forms a western bypass of Hatchville, Pollocksville, Murphytown, and Deep Gully in Segment 4. It passes through the western edge of the Oak Grove Community and the western edge of the Ten Mile Fork Community. Detailed Study Alternative 4E has slightly more impacts to wetlands and on the communities of Goshen, Hatchville, and Oak Grove.

Estimated impacts resulting from each of these five Detailed Study Alternatives are discussed in more detail in Chapter 4.

2.6 SELECTION OF THE PREFERRED ALTERNATIVE

Since the publication of the SDEIS in 2004, the corridor selection process has been challenged by numerous human and natural environment resources existing on both the Pollocksville Bypass and the Maysville Bypass sections of the project. NCDOT held Pre-Hearing Open Houses in August 2005 in Pollocksville and Maysville, as well as a Formal Corridor Public Hearing on August 16, 2005 in Pollocksville. Approximately 238 individuals attended these three events and 11 individuals spoke at the formal hearing. NCDOT received a total of 47 comments with a majority of support for Alternative 2A for the Maysville Bypass and Alternative 4D for the Pollocksville Bypass.

On August 24, 2006, the Merger Process Team held an informational meeting to discuss the overall project status, the Merger Process status, and the approach to evaluate the corridor selection data. At this meeting, the team split the project to facilitate the merger process. The 'southern' portion was designated from Belgrade to Chadwick (STIP Project No. R-2514B and part of R-2514C) including the Maysville Bypass. The 'northern' portion of the project was designated from Chadwick to New Bern (STIP Project No. R-2514D and part of R-2514C) including the Pollocksville Bypass.

On February 22, 2007, the Merger Process Team held a concurrence meeting to discuss bridging options and corridor selection. Discussion focused on the southern portion of the project. Bridging recommendations were based on November 2006 field observations. NCDOT recommended that Alternatives 2A and 3 move forward because they resulted in the fewest relocations. The team concurred on bridging decisions, the elimination of Alternatives 2 and 2B, and moving forward with Alternative 3. Because the team was unable to concur on the

Maysville Bypass between Alternative 2A and 2C, the dispute resolution process was initiated.

On March 6, 2007, during a CP2A Bridging Decision Field Meeting for the northern portion of the project, the USACE observed wetlands and streams that were not shown on the environmental mapping for the initial USACE Jurisdictional Determination. Therefore, the USACE rendered a decision on March 7, 2007 that the jurisdictional delineation for the entire project would need to be reevaluated and verified with USACE prior to any further discussion on corridor selection. During the summer, field work and documentation were completed and submitted to USACE and the North Carolina Division of Water Quality (NCDWQ). The USACE issued a Notification of Preliminary Jurisdictional Determination on February 11, 2008.

The Merger Process Team held a concurrence meeting on May 22, 2008 to discuss elimination of alternatives for the entire project from Belgrade to New Bern. The team concurred on elimination of Alternatives 2, 2B, 4A, 4B, 4G, 4H, 4I, and 4ID from further consideration during the meeting. The team also concurred on carrying forward Alternatives 2A and 2C for the Maysville Bypass, Alternative 3, and Alternatives 4D and 4E for the Pollocksville Bypass. This was followed up with another Merger Process Team concurrence meeting on June 19, 2008 where the team concurred on Alternative 4D for the Pollocksville Bypass. However, during a separate meeting on June 19, 2008 to reconsider corridor selection for the Maysville Bypass, the majority of the team supported Alternative 2C rather than Alternative 2A because Alternative 2C would impact fewer wetland areas and would cost less than Alternative 2A. However, Alternative 2A would lead to fewer impacts within the community of Belgrade.

Since the team was unable to concur on corridor selection for the Maysville Bypass, the decision was elevated to the Merger Management Team. During this process, NCDOT presented a new option for Alternative 2A to minimize the differences in jurisdictional impacts between Alternative 2A and Alternative 2C. NCDOT proposed to purchase right-of-way for the fully directional, grade-separated Alternative 2A interchanges at either end of the Maysville Bypass during this project, but to delay construction of the interchanges until a future project. The Merger Management Team recommended that NCDOT present the new option to the Merger Process Team for consideration.

The Merger Process Team held a concurrence meeting in October 2008 to continue discussion on corridor selection for the Maysville Bypass. NCDOT presented the new option on Alternative 2A to minimize jurisdictional impacts. In its new form, the fully directional, grade-separated interchanges proposed at either end of the Maysville Bypass were reduced to superstreet-style, at-grade intersections. The team tabled their discussion and decided to conduct a field meeting to observe and validate the potential community impacts to Belgrade from Alternative 2C and potential high-quality wetland impacts from Alternative 2A. A Concurrence Point 3 field review

and concurrence meeting were held in December 2008. The majority of the team reiterated its support for Alternative 2C (widen through Belgrade and bypass Maysville). The team was unable to concur on corridor selection for the Maysville Bypass. Based on the comments received at this meeting, NCDOT revised the design of Alternative 2C from partial control of access to limited control of access. The revised design of Alternative 2C was presented to the Merger Process Team in April 2009 and the team concurred on the revised Alternative 2C as the least environmentally damaging practicable alternative.

A corridor announcement newsletter was prepared and distributed in May of 2009. NCDOT started receiving comments in June 2009. Many citizens in the Belgrade and Maysville area were opposed to Alternative 2C, which resulted in two petitions totaling over 700 signatures, plus numerous calls, emails, and letters. NCDOT responded by scheduling a public hearing in December 2009. The hearing was well attended by the local community. Following this meeting, NCDOT and USACE met to discuss the public meeting comments. USACE requested that NCDOT verify the number of expected relocations for Alternatives 2C and 2A. This data was collected during a field visit in February 2010. In May 2010 the Merger Process Team reconsidered the corridor selection process during a Concurrence Point 3 Meeting for the Maysville Bypass. During this meeting the team compared impacts associated with Alternative 2C and Alternative 2A (with superstreet intersections instead of fully directional interchanges), and concurred with the selection of Alternative 2A as the least environmentally damaging practicable alternative.

Agency representatives based their decision on each alternative's ability to meet the project's purpose and need, environmental consequences, opportunities available to mitigate impacts, cost, public and agency comments on the findings of the SDEIS, and other findings presented in this SFEIS.

"NCDOT identified and recommended Alternate 2A-3-4D as the Preferred Alternative for the following reasons:

- Alternate 2A, a western bypass of the Community of Belgrade and the Town of Maysville, received the highest level of support from the citizens and their municipal and state officials, and avoids impacts to the Belgrade Community and the Maysville Historic District.

- Alternate 3, widen on the east side of existing US 17 from just north of Maysville to just north of the Community of Chadwick, minimizes impacts to Chadwick.

- Alternate 4D, a western bypass of Pollocksville, received the highest level of support from the public, avoids impacts to the Goshen Community, the Bryan Lavender House,

and the Pollocksville Historic District, minimizes impacts to the Foscue Plantation by paralleling the existing high-voltage power transmission easement, minimizes impacts to the Bryan Bell Farm (Oakview Plantation), is accepted by the Goshen Community, the Foscue Family, and the Bell Family, minimizes impacts to the Trent River Basin, and costs less than Alternate 4E."

Alternative 2A-3-4D was selected as the Least Environmentally Damaging Practicable Alternative during the May 2010 Merger Process Team meeting. Alternative 2A received the highest level of support from the citizens and their municipal and state officials, and avoids impacts to the Belgrade Community and the Maysville Historic District. Alternative 3 minimizes impacts within the Chadwick Community by widening on the east side of the existing alignment. Alternative 4D received the highest level of support from the public, minimizes impacts to the Goshen Community, the Bryan Lavender House, and the Pollocksville Historic District, minimizes impacts to the Foscue and Simmons Plantation by paralleling the existing high-voltage power easement, minimizes impacts to the Trent River Basin, and costs less than Alternative 4E. These impacts and others are discussed further in Chapter 4.

2.7 TRAFFIC OPERATION ANALYSIS

A technical memorandum entitled *Updated Capacity Analysis Report, Improving US 17 from SR 1330 (Deppe Loop Road) to Craven County Line, December 2010,* was prepared for the project and is incorporated by reference. This analysis served as an update from the 2002 study completed by Wilbur Smith Associates. The previous report studied the year 2000 existing conditions as well as the 2025 future conditions, both with and without the proposed US 17 Alternatives. The previous study identified the need for the US 17 Improvements by the 2025 future year due to the heavy projected intersection delay (LOS F for all study area intersections during the 2025 No-Build condition).

Traffic volumes presented in the 2004 SDEIS were developed by NCDOT's Transportation Planning Branch for all 13 detailed study alternatives. For the December 2010 capacity update, traffic was developed by NCDOT for the Preferred Alternative only, discussed in Section 2.6. When the 2002 Average Daily Traffic (ADT) volumes are compared with the updated forecasts developed by NCDOT, a substantial drop in traffic along US 17 is evident. As an example, the 2025 Build ADT (developed in the 2002 traffic projections) for the Maysville Bypass was 23,100 vehicles per day (vpd), while the recently updated forecast is 11,400 vpd in 2035. Similarly, a 2025 ADT of 29,100 vpd was projected for the Pollocksville Bypass, compared to the recently updated forecast of 13,500 vpd in 2035. This represents a decrease in forecasted traffic volume of approximately 50% from the old 2025 projections to the updated 2035 volumes. One of the reasons for such a dramatic reduction in future traffic projections is the

improvement of NC 24 from I-40 to the coast, which gives travelers another route to Emerald Isle, thus reducing the demand on US 17.

Based on the analysis included in the updated report, the current roadway designs developed for US 17 Bypass should be adequate for the future 2035 traffic as forecasted by NCDOT. Some delays may be experienced for some of the side street movements; however, with the implementation of the superstreet design, delays should be minimal and very little signal control will be needed.

Although 2035 projected traffic volumes are less than the future year volumes presented in the SDEIS, the 2035 No-Build capacity analysis identified operational deficiencies as seven of the fifteen intersections would operate at LOS E or F by year 2035, as discussed in Section 1.9.4.

The sections below summarize the findings contained in the technical memorandum for the Preferred Alternative 2A-3-4D.

2.7.1. 2035 Build Traffic Projections

The project traffic forecasts were developed by NCDOT's Transportation Planning Branch (dated December 2010) for the following conditions:

- 2009 No-Build Alternative
- 2035 No-Build Alternative
- 2009 Build Alternative 2A-3-4D
- 2015 Future Build Alternative 2A-3-4D
- 2035 Future Build Alternative 2A-3-4D

The forecasts included Annual Average Daily Traffic (AADT), peak hour factors, directional distribution percentages, truck percentages, and turning movement estimates for key intersections within the study area. Projected design year 2035 ADT volumes for the proposed project and the surrounding roadway network are shown in **Figure 2-4** for Alternatives 2A, 3, and 4D.

A review of the 2035 traffic volumes shown on **Figure 2-4** shows that the proposed Maysville Bypass in Alternative 2A would carry 11,400 vpd, Alternative 3 would carry 17,700 vpd, and Alternative 4D is expected to carry traffic volumes that range from 12,600 to 13,500 vpd.

Table 2-3 shows the 2035 ADT and diversion onto the proposed US 17 Bypass.

Table 2-3: DIVERSION OF TRAFFIC FROM EXISTING US 17 UNDER THE NEW LOCATION BUILD ALTERNATIVE

Segment of Existing US 17	Detailed Study Alternative 2035 ADT on US 17	
	No-Build	Remaining US 17 Volume (Build 2A-3-4D)
Deppe Loop Rd (SR 1330) to Belgrade Ext. (SR 1440)	15,900	4,900
Belgrade Ext. (SR 1440) to Belgrade-Swansboro Rd (SR 1434)	15,000	4,000
Belgrade-Swansboro Rd (SR 1434) to NC 58 (Eighth St)	18,300	7,300
NC 58 (Eighth St) to Fourth St / White Oak River Rd (SR 1116)	19,500	8,500
Fourth St / White Oak River Rd (SR 1116) to end Segment 2	17,700	6,700
Begin Segment 4 to Lee's Chapel Rd (SR 1114)	18,100	5,700
Lee's Chapel Rd (SR 1114) to Raven Wood Farm (SR 1108)	17,800	5,800
Raven Wood Farm (SR 1108) to NC 58 in Pollocksville	18,100	5,800
NC 58 in Pollocksville to Island Creek Rd (SR 1004)	18,600	5,800
Island Creek Rd (SR 1004) to Goshen Road (SR 1337)	17,500	4,700
Goshen Road (SR 1337) to Oak Grove Loop (SR 1336) south	17,700	4,900
Oak Grove Loop north to Oak Grove Loop south	17,000	4,200
Oak Grove Loop (SR 1337) north to Wise Fork Rd (SR 1002)	17,200	4,400
Wise Fork Rd (SR 1002) to Jones / Craven Line	20,800	8,000

2.7.2. 2035 Build Capacity Analyses

All intersections were analyzed using the methods outlined in the *Highway Capacity Manual* and Synchro version 7.0 software.

The *Highway Capacity Manual* defines capacity as "the maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform section of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions, usually expressed as vehicles per hour or persons per hour."

For signalized intersections, service levels are defined for each approach and for the intersection as a whole. The unsignalized intersection analysis method in the *Highway Capacity Manual* assigns level of service (LOS) values for each movement that yields the right-of-way, but not to the overall intersection. This movement is generally a secondary movement from a minor street. At two-way, stop sign-controlled intersections, the primary traffic on the main roadway is virtually uninterrupted. Therefore, the overall LOS is usually much better than what is represented by the results of the minor street movements. Generally, LOS D is acceptable for signalized intersections in suburban areas during peak periods.

Analysts used Synchro 7.0 software to calculate the LOS and delay for each intersection using methods outlined in the *Highway Capacity Manual*.

2.7.2.1. Roadway Sections

The 2035 No-Build ADT volumes on existing US 17 would be 16,600 vpd south of Maysville; 19,900 vpd through Maysville; 18,100 between Maysville and Pollocksville; 18,600 vpd through Pollocksville and 21,500 vpd north of Pollocksville, as shown on **Figure 1-4**.

Recommended Alternative 2A will create a new US 17 bypass alignment west of Belgrade and Maysville. A bypass would provide two travel lanes per direction and increased access control. The existing US 17 alignment (US 17 Business) remains as is, providing two to three travel lanes between the intersections with White Oak River Road (SR 1331) and the northern tie-in with the Bypass. Improvements at key intersections are discussed in Section 2.7.2.2. The average daily traffic volume for the Maysville Bypass in Alternative 2A is projected to carry 11,400 vpd in 2035, with existing US 17 Business through Belgrade and Maysville carrying up to 8,500 vpd.

Recommended Alternative 3 widens the existing US 17 alignment. This segment is projected to carry 17,700 vpd in the 2035 Build scenario.

Recommended Alternative 4D will create a new US 17 Bypass from south of Ravenswood to the New Bern Bypass with two travel lanes per direction, turning lanes at key intersections, and increased access control. The existing US 17 alignment (US 17 Business) remains as is, providing two to three travel lanes. Improvements at key intersections are discussed in Section 2.7.2.2. The Pollocksville Bypass in Preferred Alternative 4D is projected to carry up to 13,500 vpd in 2035. Existing US 17 Business through the Town of Pollocksville is projected to carry 5,800 vpd, increasing to 8,000 vpd south of the New Bern Bypass.

2.7.2.2. Intersections / Interchanges

Within **Alternative 2A**, there are no intersections proposed for the US 17 Bypass except at the access points at either end, tying into US 17 Business. The southern US 17 Business / US 17 Bypass intersection occurs south of White Oak River Road (SR 1331); the northern intersection to access the new Maysville Bypass is provided on the north side of Maysville, north of A Street (referred to as Maysville Bypass North intersection). This intersection uses the superstreet configuration, with stop-sign control and restricted turning movements from cross streets. Access to local properties is provided at White Oak River Road and at Fourth Street (SR 1116) via frontage roads, but no connection to the bypass is planned.

Within **Alternative 4D**, there are three intersections along the newly created US 17 Bypass.

- An intersection between US 17 Bypass and Lee's Chapel Road (SR 1114) is provided using the superstreet configuration, with stop-sign control and restricted turning movements from cross streets. This intersection also provides access to US 17 Business for areas south of Pollocksville.

- A half-clover interchange will provide access to NC 58 and Pollocksville from the Bypass. Approximately 1,100 feet of separation is provided between the two northbound and southbound ramp intersections, which are stop-sign controlled.

- A trumpet interchange will provide a connection between US 17 Business and US 17 Bypass at the northern project terminus, just south of the connection to the New Bern Bypass. Ramps will be stop-sign controlled.

Table 2-4 shows the level of service at the 15 existing intersections along US 17, plus the new intersections created along the US 17 bypasses for each remaining alternative. Level of service (LOS) is reported by approach or for the entire intersection; LOS for individual turning movements may be greater than shown below. Additional details are available in the December 2010 *Updated Capacity Analysis Report* developed for the project. **Figure 2-5** shows the lane configuration for existing and planned intersections along US 17 and the US 17 Bypass in the Preferred Alternative 2A-3-4D.

Table 2-4: 2035 BUILD INTERSECTION LEVELS OF SERVICE

Intersection	**Level of Service** *(AM / PM Peak)* **Alt 2A-3-4D**
US 17 / Deppe Loop Rd (SR 1330) / Springhill Rd (SR 1439)	EB: B / B WB: E / E
US 17 / Maysville Bypass South (2A)	B / C
US 17 / White Oak River Rd (SR 1331) / Belgrade Ext (SR 1440)	EB: B / B WB: B / B
US 17 / Belgrade-Swansboro Rd (SR 1434)	B / B
US 17 / NC 58 (Eighth St)	A / B
US 17 / Fourth St (SR 1116)	EB: C / B WB: D / C
US 17 / Maysville Bypass North	F / F
US 17 / Lee's Chapel Rd (SR 1114)	B / B
Pollocksville Bypass / Lee's Chapel Rd (SR 1114)	NB: C / B SB: B / C
US 17 / Riggs Town Rd (SR 1112)	B / B

Table 2-4: 2035 BUILD INTERSECTION LEVELS OF SERVICE

Intersection	Level of Service *(AM / PM Peak)* Alt 2A-3-4D
US 17 / Raven Wood Farm (SR 1008)	B / B
US 17 / NC 58 at Pollocksville	B / B
Pollocksville Bypass / NC 58	NB Ramp: A / A SB Ramp: A / A
US 17 / Island Creek Rd (SR 1004)	B / B
US 17 / Goshen Rd (SR 1337)	EB: A / A WB: A / A
Oak Grove Loop (SR 1336) South / Oak Grove Rd (SR 1121)	A / A
US 17 / Oak Grove Loop (SR 1336) North	B / B
US 17 / Wise Fork Rd (SR 1002)	B / B
US 17 / Simmons Loop Rd (SR 1330)	B / B
Pollocksville Bypass North terminus	D / D

The capacity analyses for the adjacent intersections for the 2035 Build condition indicate that nearly all existing intersections will operate at LOS C or better during the morning and afternoon peak hours with the exception of the westbound movements at the US 17 / Deppe Loop Rd (SR 1330) / Belgrade-Swansboro Rd (SR 1439) intersection. The new US 17 / Maysville Bypass South intersection and US 17 / Pollocksville Bypass North intersections would function at LOS F and D, respectively. The US 17 / Maysville Bypass South intersection was analyzed as an unsignalized intersection; preliminary investigations indicate it would operate at a LOS B or better if signalized. Analyses show slight improvement in overall delay when compared to the 2035 No-Build condition. Decreases in delay at existing intersections are expected to occur as a result of shifting traffic from US 17 Business onto the new US 17 Bypass segments.

Traffic analysis for the 2035 Build condition predicts few delays along US 17 Business or the new segments of US 17 Bypass. All the proposed intersections are expected to operate with minimal to moderate delay, with the exception of the southbound left turn movement at the Maysville Bypass north and the westbound left turn movement at the at the northern project terminus. Traffic along US 17 Bypass segments is projected to experience virtually no delays.

Future signalization may be required at the White Oak River Road (SR 1331) / Belgrade Extension (SR 1440) intersection, the Maysville Bypass North intersection, and the US 17 Business / US 17 Bypass intersection at the northern project terminus. Other roadway improvements are recommended for implementation prior to 2035 and have been included in the latest designs, including:

- Northbound and southbound left turn lanes along US 17 Bypass at the Maysville Bypass south intersection, plus a storage bay for southbound u-turns
- Northbound and southbound left turn lanes along US 17 Bypass at the Maysville Bypass north intersection, plus a storage bay for southbound u-turns
- Acceleration lane along US 17 Bypass for motorists making a westbound right at the Maysville Bypass north intersection, which should operate as a yield movement
- Northbound and southbound left turn lanes along US 17 Bypass at the Lee's Chapel Road (SR 1114) intersection, plus storage bays for u-turns
- Northbound left turn lane on the northbound ramp and an eastbound left turn lane on NC 58 at the US 17 Bypass northbound ramps intersection with NC 58
- Southbound left turn lane on the southbound ramp and an eastbound left turn lane on NC 58 at the US 17 Bypass southbound ramps intersection with NC 58
- Westbound left turn lane on US 17 Business and southbound left turn lane along US 17 Bypass at the northern project terminus.

2.8 TRAFFIC SAFETY

The construction of any of the Detailed Study Alternatives on new alignments would substantially reduce the amount of traffic on existing US 17 and minimize the number of potentially dangerous conflicts between high-speed through-traffic and slower-moving traffic accessing local destinations. In turn, this reduction in traffic volumes and conflicts would reduce the total number of accidents occurring on both the developed and rural sections of the existing roadway. The types of accidents associated with traffic congestion which are most likely to be reduced include 'angle,' 'right turn,' and 'rear-end.'

This reduction in crashes on existing US 17 would be expected to incur economic benefits. Reduction in traffic volumes and conflicts would reduce the total number of crashes occurring on both the developed and rural sections of the existing roadway, thereby potentially reducing property damage and injury severity.

Safety features on the new US 17 Bypass would help limit the severity of high speed crashes. The new location roadway would be a four-lane, divided facility designed to accommodate high-speed traffic. Conflicts between high-speed vehicles traveling in opposite directions would be minimized by a 46-foot divided median. The median acts as a positive division, providing a safer facility through the physical separation of opposing traffic. Therefore, the new location alternatives (including segments of US 17 Bypass in Alternatives 2A and 4D) would be safer at higher speeds than existing US 17 and would carry a greater volume of traffic.

A five-lane section was considered as an alternative for the existing facility. However, this type of facility does not provide for separation of opposing traffic movements or a reduction in the conflicts between opposing high-speed traffic, as would be provided with a median-divided facility. Merging and diverging would be a problem on a five-lane facility as vehicles weave in and out of the center lane to access both driveways and cross streets.

A number of documented safety studies suggest that superstreet intersections offer significant safety advantages over conventional arterials for specific situations. Good evidence comes from Florida, where research shows that a right turn followed by a u-turn is much safer than a direct left turn out of a side street.[2] In addition, research in North Carolina found very few collisions caused by u-turns on main streets with medians.[3] The best evidence is from Michigan, where studies have shown lower collision rates on Michigan's signalized arterials for median u-turns (closely related to superstreets) as compared to conventional design.

2.9 COSTS

The estimated right-of-way and construction cost of the Preferred Alternative, 2A-3-4D, is shown in **Table 2-5**. Right-of-way costs include land acquisition and relocations. The construction costs include mobilization, clearing and grubbing, earthwork, drainage, pavement removal, subgrade, stabilization, pavement, guardrail, erosion control, pavement marking, signing, major culverts and bridges. These costs are estimates and are subject to change.

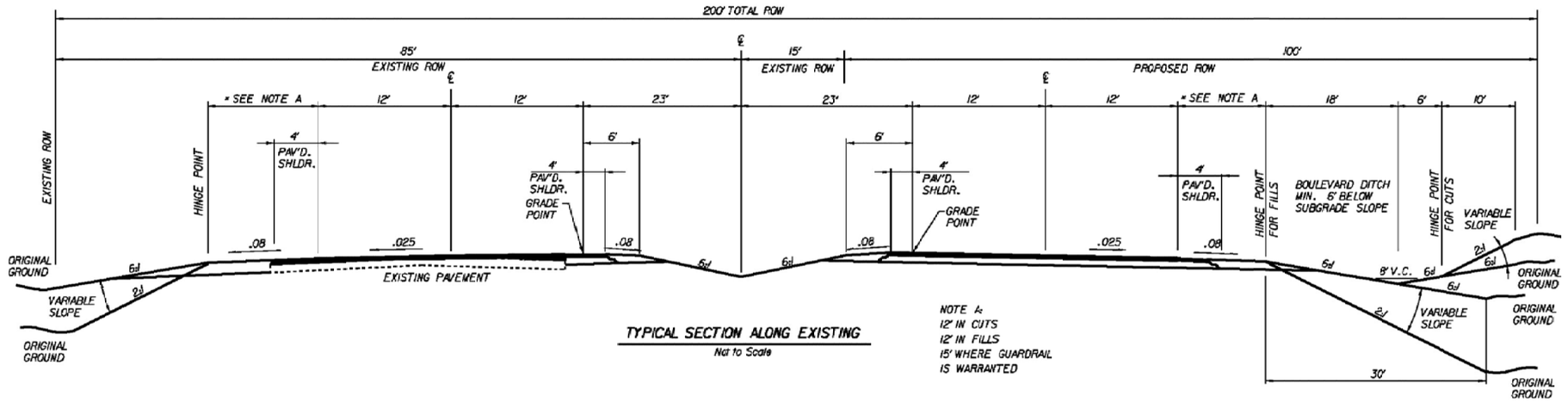
Table 2-5: PRELIMINARY COST ESTIMATES

DETAILED STUDY ALTERNATIVES	CONSTRUCTION COSTS	UTILITY COST	RIGHT-OF-WAY COSTS	TOTAL
Alternative 2A	$ 56,000,000	$ 200,000	$ 4,900,000	$ 61,100,000
Alternative 3	$ 24,000,000	$ 2,000,000	$ 4,800,000*	$ 30,800,000
Alternative 4D	$ 101,000,000	$ 2,500,000	$ 9,400,000	$ 112,900,000
Total 2A-3-4D	$ 181,000,000	$ 4,700,000	$ 19,100,000	$ 204,800,000

* Estimate included 185 ft right-of-way with partial access control, full access control on superstreet bulbouts, and 5 acres for wildlife buffer near proposed wildlife crossing

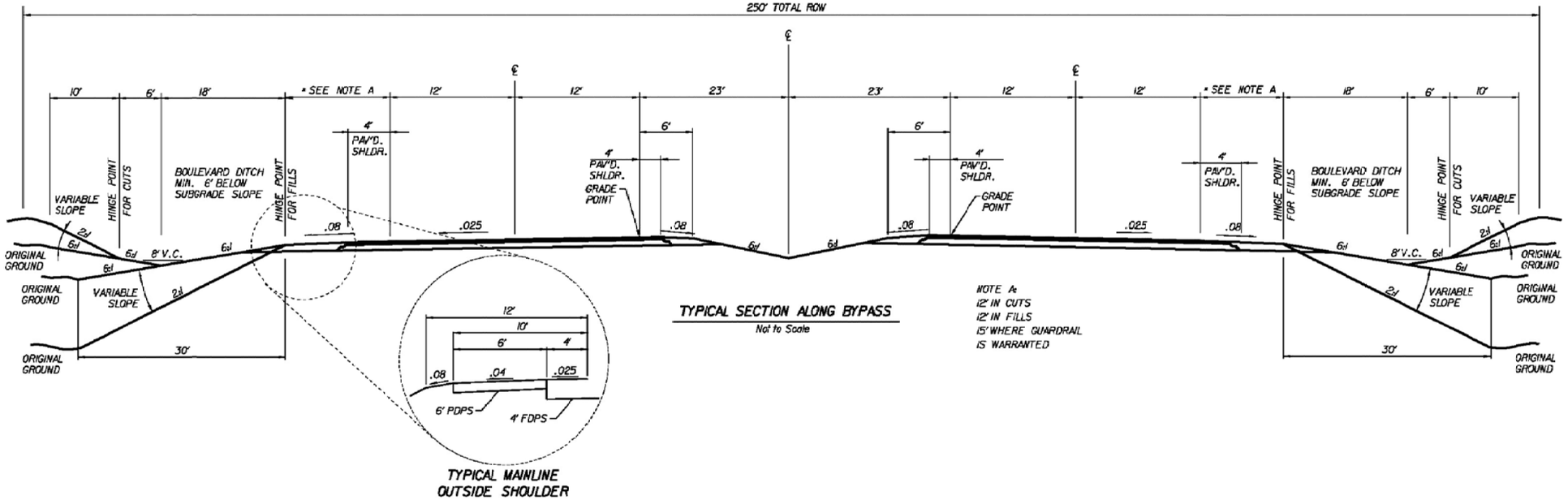
[2] Bared, J.G., and E. Kaisar, "Advantages of Offset T-Intersections With Guidelines", Proceedings of the Conference, Traffic Safety on Three Continents, Moscow, Russia, September 2001.
[3] Hummer, J.E., B.J. Schroeder, J. Moon, and R. Jagannathan, "Recent Superstreet Implementation and Research," Third Urban Streets Symposium, Transportation Research Board, Seattle, WA, June 2007.

US 17 IMPROVEMENTS
TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN



TYPICAL SECTION ALONG EXISTING
Not to Scale

NOTE A:
12' IN CUTS
12' IN FILLS
15' WHERE GUARDRAIL IS WARRANTED



TYPICAL SECTION ALONG BYPASS
Not to Scale

NOTE A:
12' IN CUTS
12' IN FILLS
15' WHERE GUARDRAIL IS WARRANTED

TYPICAL MAINLINE OUTSIDE SHOULDER

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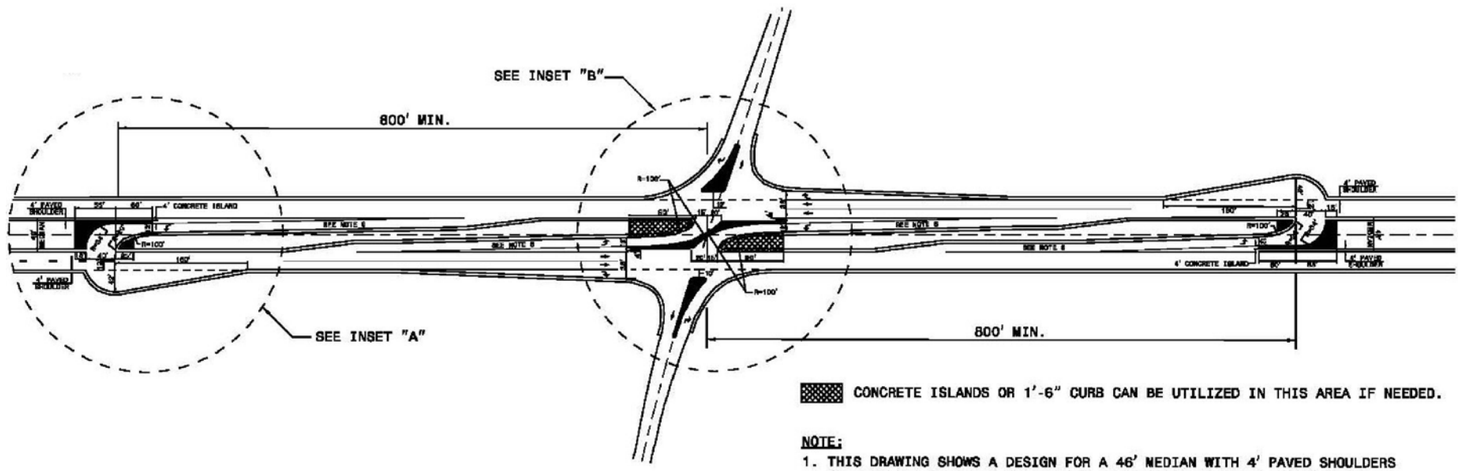
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Typical Sections

Figure 2-1A

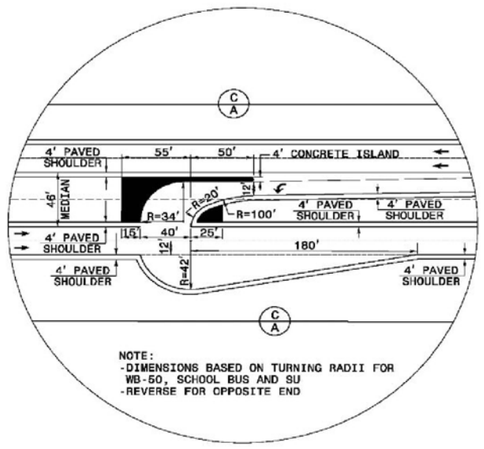
DIRECTIONAL CROSSOVER WITH MEDIAN U-TURNS



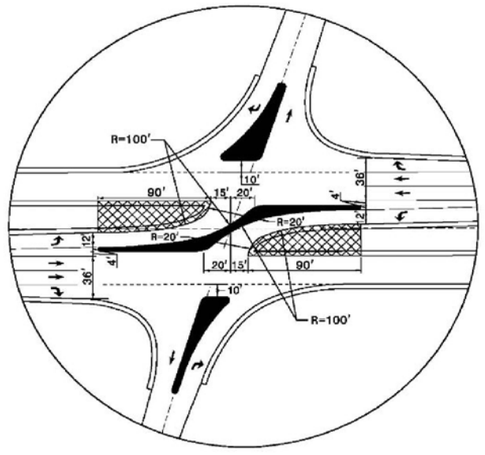
PLAN

▒ CONCRETE ISLANDS OR 1'-6" CURB CAN BE UTILIZED IN THIS AREA IF NEEDED.

NOTE:
1. THIS DRAWING SHOWS A DESIGN FOR A 46' MEDIAN WITH 4' PAVED SHOULDERS (MEDIAN AND OUTSIDE) ASSUMING A 55 MPH POSTED SPEED. WHEN OTHER MEDIAN WIDTHS, PAVED SHOULDERS, AND POSTED SPEEDS ARE USED, ENGINEERING JUDGEMENT SHOULD BE USED TO ESTABLISH APPROPRIATE GEOMETRY.
2. AT -Y- LINES ONLY PASSENGER CAR U-TURNS ARE ACCOMMODATED.
3. DESIGN BULB OUTS TO ACCOMODATE WB-50. IN AREAS WHERE THERE ARE R/W OR ENVIRONMENTAL CONSTRAINTS, BULB OUT DIMENSIONS MAY BE REDUCED.
4. ALL DIMENSIONS ARE SUBJECT TO FIELD CONDITIONS.
5. FULL CONTROL OF ACCESS SHOULD BE OBTAINED THROUGHOUT LIMITS OF THE BULB OUT ON BOTH SIDES OF ROADWAY.
6. USE 575' MINIMUM LENGTH FOR ALL LEFT TURN LANES (INCLUDES TAPER AND FULL STORAGE LENGTH).



INSET "A"



INSET "B"

11/11/2010

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

SEGMENT 2
SEGMENT 2 BOUNDARY
ALT. 2A
ALT. 2B
ALT. 2C
ALT. 2
ALT. 3
SEGMENT 3
SEGMENT 3 BOUNDARY
SEGMENT 4

DEPPE ROAD (SR 1330)
SPRINGHILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
WHITE OAK RIVER ROAD (SR 1116)
BELGRADE - SWANSBORO ROAD (SR 1434)
FOURTH STREET
SEABOARD COAST LINE RAILROAD

1331 1332 1115 1116 1118 2049 1439 1796 1107
17 58

ONSLOW COUNTY
JONES COUNTY
ONSLOW COUNTY
JONES COUNTY
ONSLOW COUNTY
JONES COUNTY
WHITE OAK RIVER
MAYSVILLE
BELGRADE
CROATAN NATIONAL FOREST
CROATAN

Legend
- Municipal Boundaries
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SDEIS Preliminary Study Alternatives

Figure 2-2
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

SEGMENT 3
SEGMENT 4
SEGMENT 4 BOUNDARY

ALT. 4 (D, E, G, H)
ALT. 4 (A, B, I, ID)
ALT. 4H
ALT. 4 (D, E, G)
ALT. 4
ALT. 4 (A, B, I, ID)
ALT. 4 (I, ID)
ALT. 4E
ALT. 4D
ALT. 4ID
ALT. 4I
ALT. 4 (E, H)
ALT. 4 (D, ID)
ALT. 4G
ALT. 4A
ALT. 4B
ALT. 4 (B, G)
ALT. 4 (B, G)
ALT. 4 (D, E, H, I, ID)

LEES CHAPEL ROAD (SR 1114)
RIGGS TOWN ROAD (SR 1112)
RAVEN WOOD ROAD (SR 1108)
SEABOARD COAST LINE RAILROAD
GOSHEN BRANCH
GOSHEN ROAD (SR 1337)
ISLAND CREEK ROAD
MILL CREEK
TRENT RIVER
OAK GROVE ROAD (SR 1121)
SIMMONS LANE (SR 1335)
WISE FORK ROAD (SR 1002)
SIMMONS LOOP ROAD (SR 1330)
BANKS ROAD (SR 1333)
SCOTT CREEK
SEABOARD COAST LINE RAILROAD
TRENT RIVER

RAVENSWOOD
POLLOCKSVILLE
OAK GROVE AIRFIELD
OAK GROVE
TEN MILE FORK
JONES CORNER
JONES COUNTY
CROATAN NATIONAL FOREST

1114 1112 1113 58 1176 1332 1333 1337 1338 1121 1002 1330 1335 1108 1109 1166 1118 1110 1004 1224

17 58 17

Legend
- Municipal Boundaries
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SDEIS Preliminary Study Alternatives

Figure 2-2
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,050 2,100 4,200 6,300 8,400 Feet

DEPPE ROAD (SR 1330)
SPRING HILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
WHITE OAK RIVER ROAD (SR 1116)
BELGRADE - SWANSBORO ROAD (SR 1434)
FOURTH STREET
SEABOARD COAST LINE RAILROAD
WHITE OAK RIVER
ONSLOW COUNTY
JONES COUNTY
CROATAN NATIONAL FOREST
BELGRADE
MAYSVILLE

17 1331 1332 1115 1116 1118 1439 1796 1107 58

SEGMENT 2 BOUNDARY

SEGMENT 3 BOUNDARY

STRUCTURE S4A
CONSTRUCT BRIDGE
100' (TRIBUTARY WHITE OAK RIVER)

STRUCTURE S4C
CONSTRUCT BRIDGE
1160' (WHITE OAK RIVER)

STRUCTURE S8
CONSTRUCT BRIDGE
560' (WHITE OAK RIVER)

CONSTRUCT BRIDGE
110' WILDLIFE CROSSING

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Municipal Boundaries
- Croatan National Forest

5/26/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SFEIS Detailed Study Alternatives

Figure 2-3
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

OAK GROVE AIRFIELD
OAK GROVE
RAVENSWOOD
POLLOCKSVILLE
JONES COUNTY
JONES CORNER
TEN MILE FORK
CROATAN NATIONAL FOREST
SEGMENT 4 BOUNDARY
STRUCTURE S8A CONSTRUCT BRIDGE 380' (GOSHEN BRANCH)
STRUCTURE S8B CONSTRUCT BRIDGE 1180' (TRENT RIVER)
LEES CHAPEL ROAD (SR 1114)
RIGGS TOWN ROAD (SR 1112)
RAVEN WOOD ROAD (SR 1108)
SEABOARD COAST LINE RAILROAD
GOSHEN ROAD (SR 1337)
GOSHEN BRANCH
TRENT RIVER
OAK GROVE ROAD (SR 1121)
SIMMONS LANE (SR 1335)
BANKS ROAD (SR 1333)
WISE FORK ROAD (SR 1002)
SIMMONS LOOP ROAD (SR 1330)
ISLAND CREEK ROAD
MILL CREEK
SCOTT CREEK
1114 1112 1113 1176 1332 1333 1337 1121 1002 1330 1335 1108 1109 1166 1118 1110 1004 1224
58 17

Legend

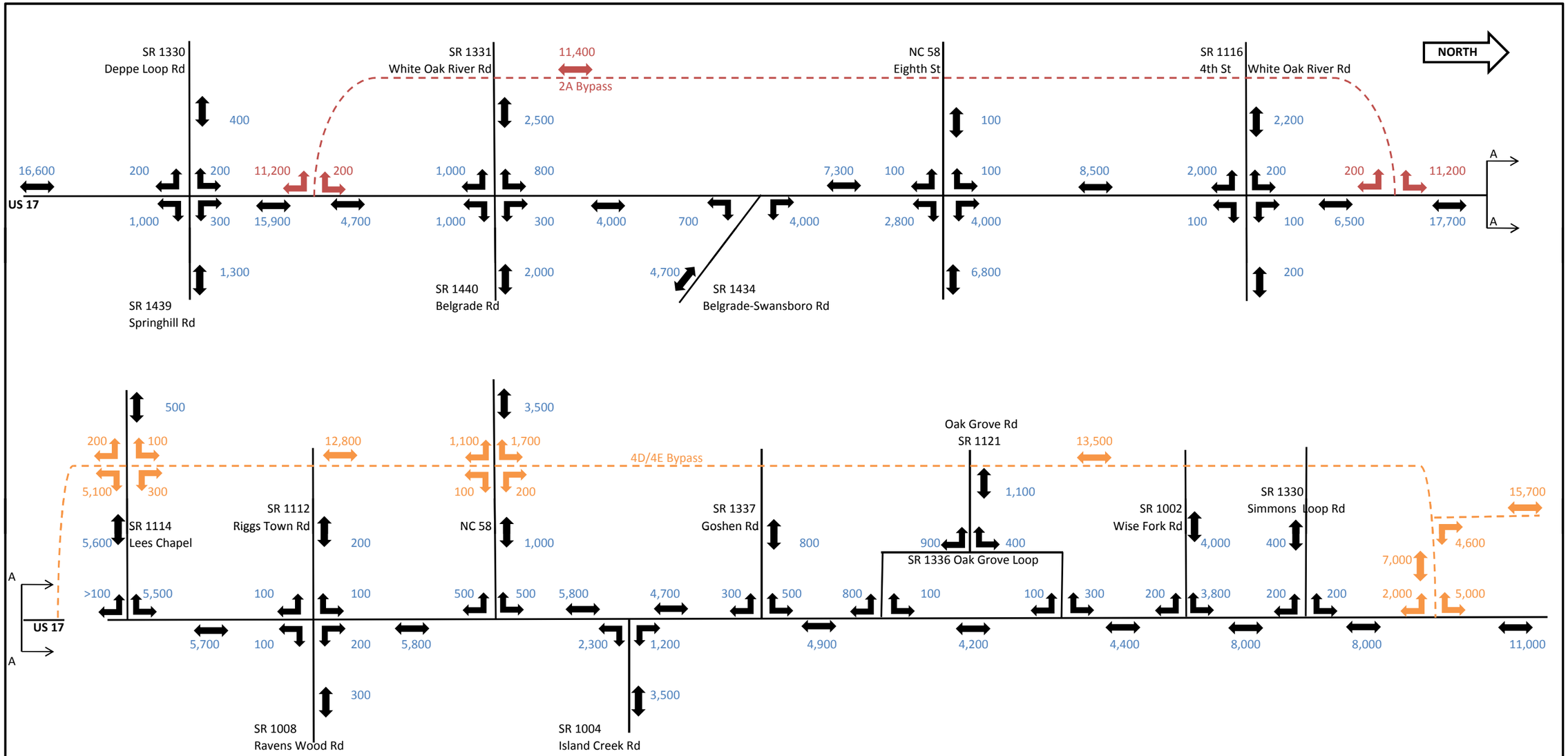
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Municipal Boundaries
- Croatan National Forest

5/26/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SFEIS Detailed Study Alternatives

Figure 2-3
Sheet 2 of 2



2035 Build Average Daily Traffic

000 Vehicles per day for US 17 & existing cross streets

000 Vehicles per day projected for Alternative 2A

000 Vehicles per day projected for Alternative 4D/4E

Figure 2-4A

2035 Build Average Daily Traffic

Alt 2A - 3 - 4D/4E

NORTH

SR 1330
Deppe Loop Rd

SR 1331
White Oak River Rd

NC 58
Eighth St

SR 1116
4th St
White Oak River Rd

2C Bypass

US 17

16,600 | 200 | 200 | 15,900 | 1,000 | 800 | 18,400 | 11,200 | 200 | 7,400 | 100 | 100 | 8,400 | 1,900 | 200 | 200 | 11,200 | 17,700

400 | 1,000 | 300

2,500 | 1,700 | 4,400

11,400 | 200 | 2,900 | 3,900 | 6,800

2,100 | 100 | 100 | 6,700 | 200

1,300
SR 1439
Springhill Rd

6,800
SR 1440
Belgrade Rd

A — A

4D/4E Bypass

500 | 200 | 100 | 5,100 | 300

12,800 | 5,700 | 100 | 100 | 200 | 5,800

3,500 | 1,100 | 1,700 | 100 | 200

SR 1114
Lees Chapel
5,600 | >100 | 5,500

SR 1112
Riggs Town Rd
200 | 100 | 300
SR 1008
Ravens Wood Rd

NC 58
1,000 | 500 | 500 | 5,800 | 2,300

SR 1004
Island Creek Road
4,700 | 1,200 | 3,500

SR 1337
Goshen Rd
300 | 500 | 800 | 4,900

Oak Grove Rd
SR 1121
13,500 | 1,100 | 900 | 400 | 4,200
SR 1336 Oak Grove Loop

SR 1002
Wise Fork Rd
300 | 200 | 4,000 | 4,400

SR 1330
Simmons Loop Rd
400 | 200 | 3,800 | 8,000

15,700 | 4,600 | 7,000 | 2,000 | 5,000 | 200 | 8,000 | 11,000

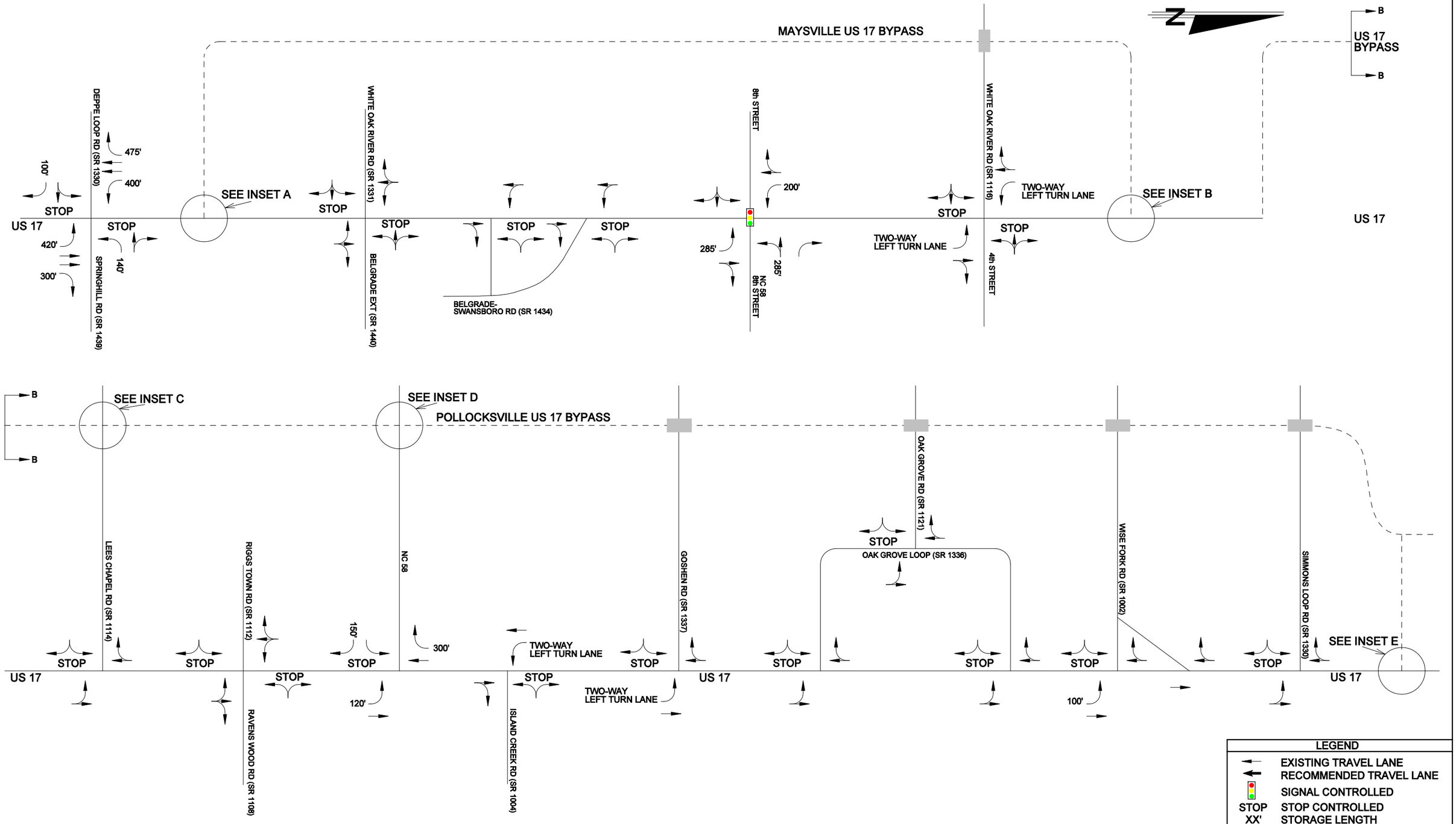
2035 Build Average Daily Traffic

XXX Vehicles per day for US 17 & existing cross streets

XXX Vehicles per day projected for Alternative 2C

XXX Vehicles per day projected for Alternative 4D/4E

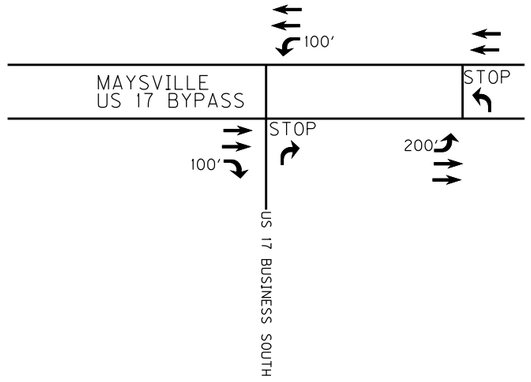
Figure 2-4B
2035 Build Average Daily Traffic
Alt 2C - 3 - 4D/4E



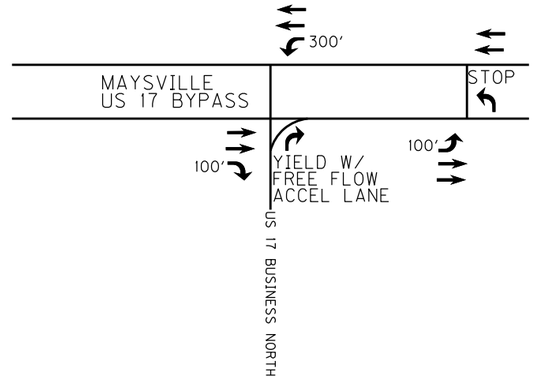
RECOMMENDED 2035 FUTURE LANE CONFIGURATIONS AND TRAFFIC CONTROL
EXISTING US 17 BUSINESS

FIGURE 2-5
SHEET 1 OF 2

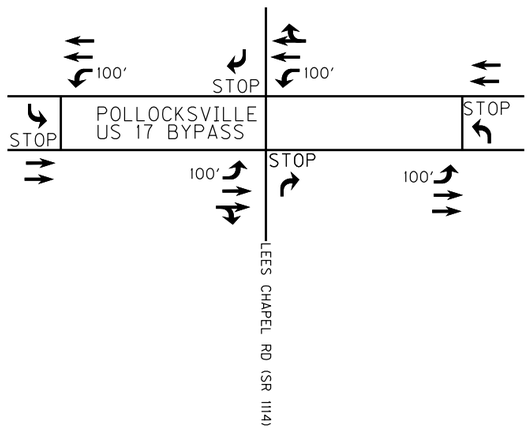
INSET A



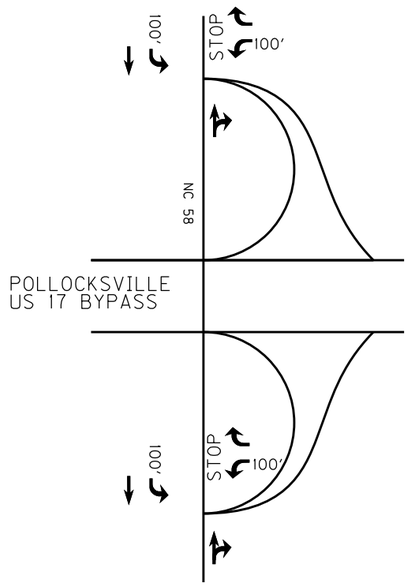
INSET B



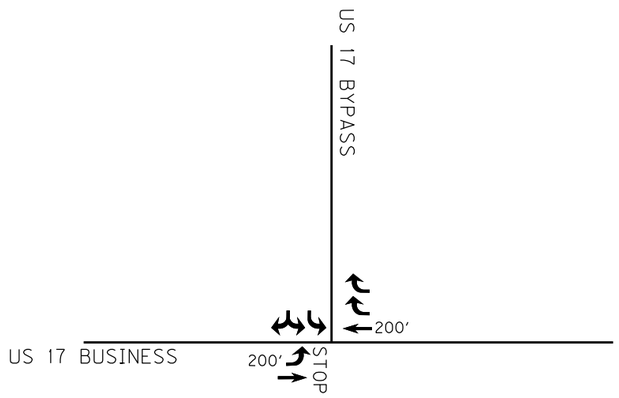
INSET C



INSET D



INSET E



LEGEND

←	EXISTING TRAVEL LANE
←	RECOMMENDED TRAVEL LANE
STOP	STOP CONTROLLED
XX'	STORAGE LENGTH

RECOMMENDED 2035 FUTURE LANE CONFIGURATIONS AND TRAFFIC CONTROL
PROPOSED US 17 BYPASS

FIGURE 2-5
SHEET 2 OF 2

CHAPTER 3 EXISTING ENVIRONMENT

This chapter describes the existing human, physical, and natural environments within the study area for the proposed project. This section is the basis for the assessment of the potential impacts of each of the remaining five Detailed Study Alternatives.

3.1 HUMAN ENVIRONMENT

The following sections discuss aspects of the human environment in the study area: population demographics, economic characteristics, community facilities, and cohesive community groups in the area.

3.1.1 Population Characteristics

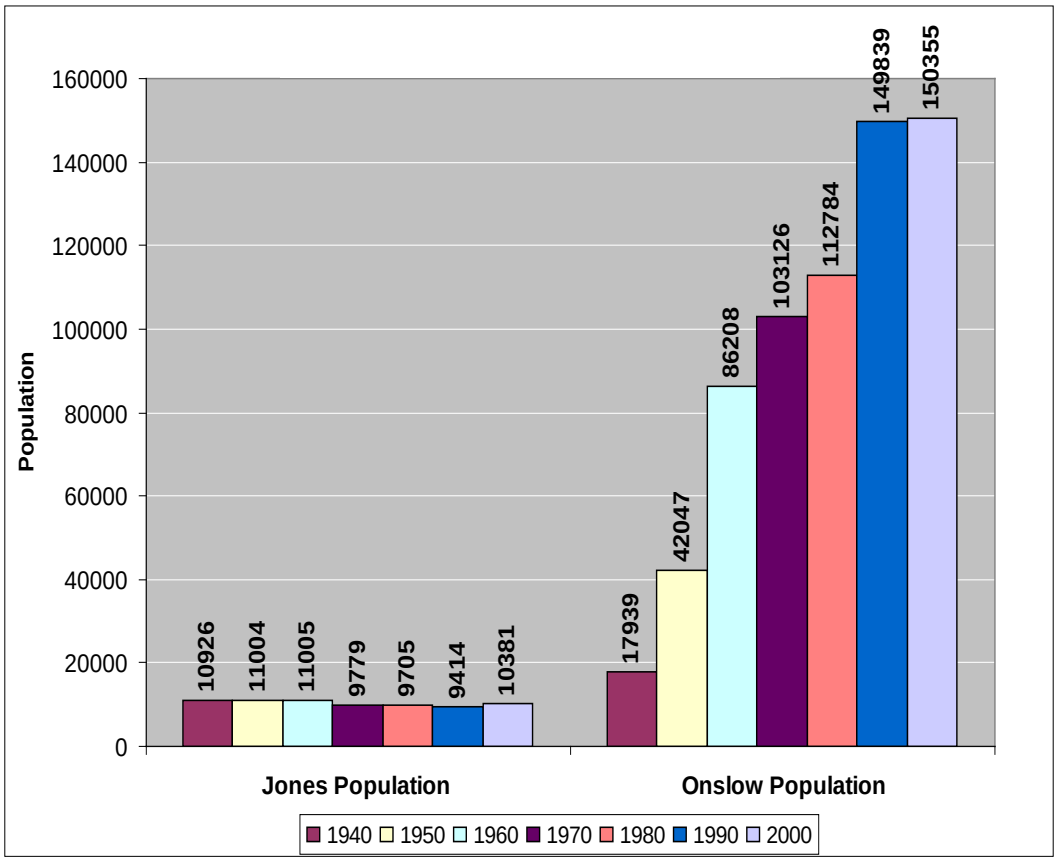
Demographic information from the US Bureau of Census and the North Carolina Department of Commerce was combined to provide a general overview of the common characteristics of Onslow and Jones Counties and the immediate project area. Demographic characteristics such as age, race, and median income are presented below.

The US Bureau of Census has divided each county into small, statistical subdivisions called Census Tracts. The 2000 Census divided Onslow County into twenty-six census tracts and Jones County into three census tracts. The project area is located in Census Tract 1.03 in Onslow County and Census Tracts 9801 and 9802 in Jones County. **Figure 3-1** shows the Census Tract boundaries. The majority of the project area in Jones County is located in Census Tract 9801. The towns of Maysville and Pollocksville, and the communities of Chadwick, Garnet Heights, Murphytown, Oak Grove, Goshen, and Hatchville are located totally within Census Tract 9801.

The communities of Ten Mile Fork and Deep Gully are located in both Census Tracts 9801 and 9802. Census Tracts 9801 and 9802 are divided by Wise Fork Road (SR 1002) and US 17 north of Wise Fork Road. The Ten Mile Fork Community south of Wise Fork Road and the Deep Gully Community east of US 17 are within 9801. The Ten Mile Fork Community north of Wise Fork Road and the Deep Gully Community west of US 17 are within 9802.

Historic population data for Jones and Onslow Counties is presented in **Chart 3-1**. According to the 2009 census estimate, Onslow County has a population of 173,064 and Jones County has a population of 10,071.

CHART 3-1: JONES AND ONSLOW COUNTY HISTORIC POPULATION



Source: North Carolina Office of State Planning; US Bureau of Census

The population of Jones County experienced small increases between the years 1940 and 1960. However, by 1970 the number of persons calling Jones County home had decreased sharply: approximately 11 percent. Between 1970 and 1990, the population continued to decline. The County experienced a 10 percent increase between 1990 and 2000 that could be partially attributed to the residential development occurring along the Trent River.

Onslow County experienced rapid growth from 1940 through 1990, due in large part to expansions at Camp Lejeune. Since 1990, this growth has slowed. The recent "Grow the Force" initiative of the US Marine Corps has led to an increase in military jobs at eastern North Carolina bases: Camp Lejeune Marine Corps Base and the New River Marine Corps Air Station in Jacksonville (Onslow County) and Cherry Point Marine Corps Air Station in Havelock (Craven County). Between 2006 and 2011, an estimated 11,500 military jobs will be added at these three bases. Service members will bring with them an estimated 13,500 dependents and induce a direct growth impact equaling around 15,000 additional persons. This will result in a regional population increase of 40,000 new residents.[1]

[1] 2009 *Regional Growth Management Plan,* Military Growth Task Force of North Carolina's Eastern Region

The North Carolina State Demographics Unit predicts that the population of Onslow and Jones Counties will grow approximately 1.8 percent and 0.2 percent per year, respectively, between 2005 and 2030. The State's population is expected to increase approximately 1.4 percent per year during this same period.[2]

On a more local scale, Census Tract 9801 had a total of 4,089 persons in 2000, or 39.4 percent of Jones County's population and Census Tract 9802 had a total of 2,855 persons, or 27.5 percent of the county population. Census Tract 1.03, which includes Belgrade, had 4,028 persons, or 2.7 percent of Onslow County's population.

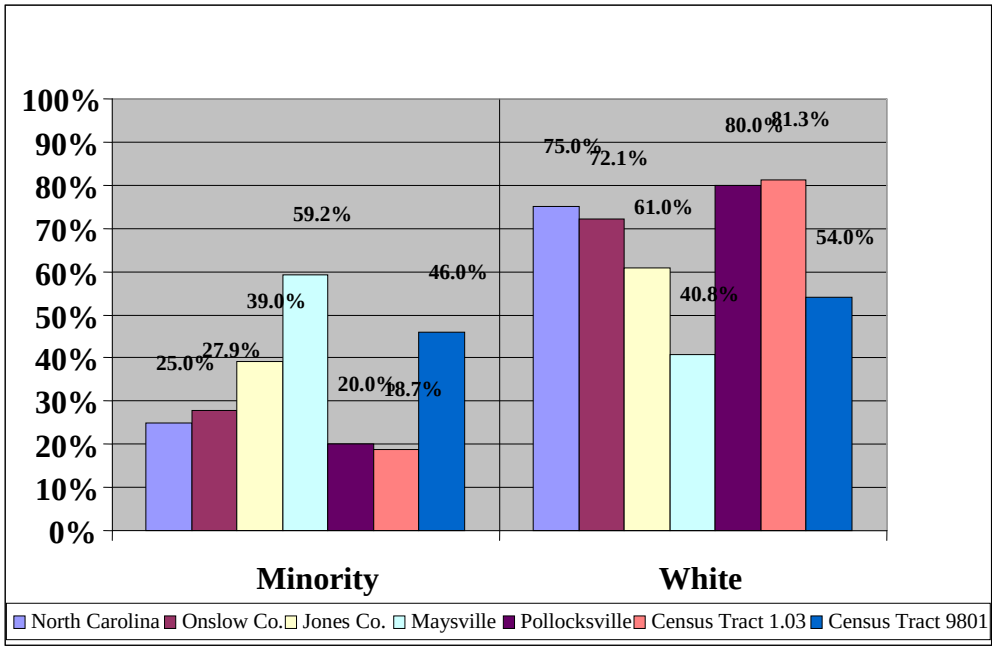
Onslow County consists of a total land area of 766.82 square miles and had a year 2009 population density of 226 persons per square mile. Jones County consists of 471.88 square miles and had a year 2009 population density of 21 persons per square mile. The State average in 2009 was 193 persons per square mile. Of the 100 counties in North Carolina, Onslow County ranked 11th in total population and Jones County ranked 96th, according to 2009 US Census data. Of the 655 towns and cities in the state of North Carolina, Maysville ranked 389th and Pollocksville ranked 581st in 2009.

3.1.1.1 Racial and Ethnic Distribution and Trends

According to the 2008 US census estimate, 23.2 percent of Onslow County's population and 34.9 percent of Jones County's population consisted of minorities, predominantly African-Americans. For the same period, the State's population consisted of 26.1 percent minorities. Year 2006 data from the North Carolina Rural Economic Development Center shows that Maysville has a large minority population with 59.2 percent of its population identifying themselves as African-American or another minority group, while Pollocksville has a predominantly white population (80 percent). Based on 2000 Census data, Census Tract 1.03 is 18.7 percent minority, which is a lower percentage than Onslow County's overall minority percentage. In comparison, Census Tracts 9801 and 9802 have a larger percentage of minority population (46 percent) than Jones County's overall minority percentage and almost twice that of the State's minority percentage. **Chart 3-2** shows a comparison of race within the project area.

[2] North Carolina State Data Center through the Office of State Budget and Management website *http://www.osbm.state.nc.us/ncosbm/facts_and_figures/state_data_center.shtm*, accessed May 2010

CHART 3-2: COMPARISON OF RACE



The 2008 estimated Hispanic populations in Onslow County and Jones County were 11,782 and 405, respectively. This population group experienced substantial growth between 1990 and 2000. In Onslow County, the Hispanic population grew 35.6 percent for the period; in Jones County the Hispanic population grew 432 percent. Year 2000 Census data shows that the Hispanic population in Census Tract 1.03 consisted of 124 persons or 3.1 percent. In Census Tracts 9801 and 9802, the Hispanic population consisted of 82 people (2 percent) and 81 people (2.8 percent), respectively.

Individuals with limited English proficiency, i.e., individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English, live in the area of the proposed project. Year 2000 Census data reports one linguistically isolated household in the study area, occurring in block group 1 of tract 1.03; a linguistically isolated household is one in which all members 14 years old and over have at least some difficultly with English (no member 14 years old or older speaks only English or speaks English "very well"). **Table 3-1** shows the number of persons who speak English less than very well, according to the 2000 Census. As shown, limited English proficiency (LEP) percentages for block groups in the study area range from 0 to 3.7 percent. The data indicates that there are no language groups within the study area in which more than 5 percent of the population or 1,000 persons speak English less than "very well." Therefore, demographic assessment does not indicate the presence of LEP language groups that exceed the Department of Justice's Safe Harbor threshold. However, NCDOT will include notice of Right of Language Access for future meetings for this project. Thus, the requirements of Executive Order 13166 appear to be satisfied.

TABLE 3-1: PRIMARY LANGUAGE GROUP OF PERSONS WHO SPEAK ENGLISH "LESS THAN VERY WELL" (2000 CENSUS)

Area	Total Population	Spanish	Indo-European	Asian/Pacific	Other	Total LEP
Jones Co.	9,758	149 (1.5%)	16 (0.2%)	16 (0.2%)	0 (0.0%)	181 (1.9%)
T9801 BG1	1,627	31 (1.9%)	7 (0.4%)	16 (1.0%)	0 (0.0%)	54 (3.3%)
T9801 BG2	1,475	12 (0.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	12 (0.8%)
T9801 BG3	747	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
T9802 BG1	1,726	41 (2.3%)	5 (0.3%)	0 (0.0%)	0 (0.0%)	46 (2.6%)
Onslow Co.	137,170	2,436 (1.8%)	419 (0.3%)	776 (0.6%)	37 (0.0%)	3,668 (2.7%)
T1.03 BB1	1,623	60 (3.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	60 (3.7%)
Total Study Area BGs	**7,234**	**144 (2.0%)**	**12 (0.2%)**	**16 (0.2%)**	**0 (0.0%)**	**172 (2.4%)**
Statewide	7,513,165	218,792 (2.9%)	32,041 (0.4%)	39,065 (0.5%)	7,960 (0.1%)	297,858 (4.0%)

3.1.1.2 Age Characteristics

According to 2009 estimates from the NC State Data Center, the median age of the population in the state of North Carolina is 36.9 years old, while the median age of residents within Onslow County is 26 years old. Onslow County has a higher percentage of younger persons (18 to 39 year olds) than older persons (40 to 64 year olds). The 20 to 24 year olds represent the largest age group, approximately 15.4 percent of the population. This is primarily due to the presence of Camp Lejeune Marine Corps Base.

Jones County, on the other hand, has a median age of 42 years old and has a higher older age population than younger age population. The 45 to 49 years old demographic represents the largest age group, approximately 8.3 percent of the population. Based on the data, it appears that people are leaving the area after completing high school to find work or pursue higher education elsewhere. Persons over 65 years in age make up 18.5 percent of the population in Jones County.

3.1.1.3 Gender Characteristics

According to 2005 Census estimates, the State's gender make-up in 2008 was 49.0 percent male and 51.0 percent female. By comparison, Onslow County consists of 54.4 percent males and 45.6 percent females, and Jones County has 48.1 percent males and 51.9 percent females. This difference as compared to the State average is probably due to the large male population at Camp Lejeune Marine Base.

3.1.2 Economic Characteristics

According to the NC Department of Commerce, Jones County had a per capita income in 2009 of $18,904 and a median income of $42,614 per family. The median family income is expected to increase to $45,846 by the year 2014. An estimated 18.0 percent of the county population is living in poverty based on 2008 Census estimates. This compares to 12.1 percent of the county population living in poverty in 1990 and 12.9 percent in 2000. High poverty rates and a lack of economic and community development were identified in the 2001 *Jones County Strategic Plan* as critical problems facing Jones County. The lack of jobs or a highly skilled workforce inhibit economic development and were identified as factors leading to high poverty rates. This leads to a stagnant or declining tax base, which prevents local governments from making critical infrastructure investments to attract new industry and development.

For Onslow County, the Department of Commerce reports a 2009 per capita income of $19,495 and a median family income of $48,835. The median family income is projected to increase to $53,441 by 2014. An estimated 14.8 percent of the Onslow County population lives in poverty. This compares to a 20.2 percent poverty rate in 1990 and a 16.9 percent rate in 2000. Because Belgrade is not an incorporated area, no economic data specific to the community is available. However, it is reasonable to assume that Belgrade exhibits economic characteristics below those of Onslow County based on its size, its proximity to Jones County, its rural nature, and its limited employment opportunities. Visual inspection during a September 2010 field visit supports this finding.

These county statistics compare to a statewide 2009 per capita income of $25,989 and a median family income of $51,418. In 2008, approximately 14.6 percent of the state's population lived in poverty.

The numbers of persons living below poverty level by Census Tract in 1990 and 2000 are listed in **Table 3-2**. Between 1990 and 2000, Onslow and Jones Counties experienced a decrease in the percentage of their respective populations that were living in poverty. According to the 1990 Census, 22 percent of the population within the study area in Jones County was living at or below the poverty threshold at that time. This percentage decreased to 18 percent by 2000. In 1990, 13 percent of the population within the study area in Onslow County was living at or below the poverty level. This percentage decreased to 11 percent in 2000.

Based on 2000 data, the highest percentage of individuals living in poverty (28.2 percent) was located in Census Tract 9801 in Jones County, which includes the communities of Ten Mile Fork and Deep Gully. The lowest concentrations of individuals below poverty level were in Census Tract 1.03 in Onslow County.

Table 3-2: PERSONS LIVING BELOW POVERTY LEVEL BY CENSUS AREA – 1990 AND 2000

Census Tract	County	1990 Population			2000 Population		
		Population*	Below Poverty Level	Percent	Population*	Below Poverty Level	Percent
1.03	Onslow	12,200	1,624	13.3%	17,299	2,031	11.7%
9801	Jones	3,741	688	18.3%	2,611	737	28.2%
9802	Jones	2,611	711	27.2%	2,855	516	18.0%
Project Area Total		18,552	3023	16.3%	22,765	3,284	14.4%
Statewide		8,079,712	829,858	13.0%	7,805,328	958,667	12.3%

Source: US Census, 1990 and 2000 (Summary Tape File 3, Table P87)

**Population from which poverty status is determined. It does not include institutionalized persons, so it does not equal the total population in each area.*

The NC Department of Commerce annually ranks each of the 100 counties in the state based on economic wellness and assigns one of three tiered rankings. For year 2010, Jones County is ranked a Tier 1 county, which means it is one of the 40 most economically distressed counties in the state. Onslow County is currently ranked as Tier 3, one of the 19 most prosperous counties, but has been identified as Tier 2 for previous years.

3.1.2.1 Employment

The 2008 employment characteristics for Onslow County, Jones County, Maysville, and Pollocksville were compiled from available data sources. Information for Onslow County is available through the 2006-2008 American Community Survey published by the US Census Bureau, and 2008 information for Jones County is available through the North Carolina Rural Economic Development Center. Employment data for Maysville and Pollocksville is taken from the 2000 Census.

Onslow County had a year 2008 total labor force of 89,442, which consisted of 54,595 civilian laborers (61 percent of the labor force) and 34,488 military employees (39 percent of labor force). According to the US Bureau for Labor Statistics, the 2008 unemployment rate for Onslow County was 5.7 percent, increasing to 8.4 percent in 2009. In Jones County, the labor force in 2008 was composed of 4,707 total laborers. Jones County's year 2008 unemployment rate was at 6.5 percent, increasing to 10.2 percent in 2009. As of 2000, the Town of Maysville had a labor force of 376 with an unemployment rate of 10.1 percent, and Pollocksville had a labor force of 106 with no reported unemployment. North Carolina had an average unemployment rate of 3.9 percent in 2000, compared to 6.2 percent in 2008 and 10.6 percent in 2009. The United States had an average unemployment rate of 4.4 percent in 2000, 5.8 percent

in 2008, and 9.3 percent in 2009. Therefore, North Carolina and Jones County had higher rates in 2009 than the US, while Onslow County's unemployment rate was lower.

With no major employment centers in the study area, home-to-work based commuter trips to Jacksonville or New Bern lead to non-uniform use of the region's roadway network since diverse origins, destinations, and trip purposes create different demands on the transportation system at different times of day. Due to the lack of available transit services, the majority of area residents must travel via personal automobiles. High average trip lengths result from long commuting distances, low density land uses, and dispersed growth. Journey-to-work Census data from 2000 indicates that 1,318 Jones County residents work in Craven County (13 percent of the total Jones County population) and 632 work in Onslow County (6 percent), compared to 1,175 (11 percent) who work within Jones County itself. An estimated 1,410 residents in Onslow County commute through Jones County to work in Craven County, or approximately one percent of the population of Onslow County. US 17 serves as the primary connection between employment centers in these counties.

A list of the workforce by industry sectors for Onslow and Jones Counties is presented in **Table 3-3**. Within much of the rural project area, crop production is one of the primary economic engines.

TABLE 3-3: WORKFORCE BY INDUSTRY
(SECOND QUARTER 2007) ONSLOW AND JONES COUNTIES

Industry Group	Onslow	Jones
Agriculture, Forestry, Fishing, Hunting, Mining, Utilities	231	171
Construction	3,278	133
Manufacturing	923	42
Wholesale Trade	503	28
Retail Trade	7,085	203
Transportation and Warehousing	738	31
Information	529	5
Financial, Insurance, Real Estate	1,635	18
Professional, Technical, & Management	1,704	34
Educational, Health and Social Services	3,588	310
Art, Entertainment, Recreation, Accommodations and Food Service	6,686	43
Public Administration/Government	12,806	553
Other	4,976	56

Source: North Carolina Department of Commerce

3.1.3 Community Facilities and Services

3.1.3.1 Schools

Onslow County has 42 schools, including 17 elementary schools, seven middle schools, seven high schools, three parochial schools, and eight schools in the Camp Lejeune School System. Jones County has four elementary schools, one middle school, and one high school. Two elementary schools are located within the study area, Maysville Elementary School and Pollocksville Elementary School, both in Jones County. Community resources, including schools, located within the study area are shown in **Figure 3-2**. Maysville Elementary School, located off Sixth Street west of US 17 in Maysville, has 11 teachers on staff. Pollocksville Elementary School, located off Trent Street west of US 17 in Pollocksville, has 14 teachers on staff.

An endowment of North Carolina State University owns and manages the Hofmann Forest, a research and educational facility located between Jacksonville and Maysville on the west side of US 17.

The larger region also offers higher education at nearby community colleges, including Coastal Carolina Community College in Jacksonville, Lenoir Community College in Trenton, and Craven Community College in New Bern. Four-year degree courses are offered at the University of North Carolina at Wilmington and East Carolina University in Greenville, both about an hour's drive from the study area.

3.1.3.2 Churches and Cemeteries

Twenty churches of various religious denominations and sizes are located within the study area. Churches located within the study area are shown in **Figure 3-2** and are listed below:

Segment 2

1. First Missionary Baptist Church of Belgrade
2. Belgrade Methodist Church
3. Memorial Baptist Church (Maysville)
4. Maysville United Methodist Church
5. First Baptist Church of Maysville
6. Mt. Olive Christian Church (Maysville)
7. Maysville Church of Christ
8. First Missionary Baptist Church (Maysville)
9. St. Luke AME Zion Church (Maysville)

10. White Oak Trinity Independent Baptist Church (Maysville)
11. White Oak Missionary Baptist Church (north of Maysville)

Segment 4

12. Lee's Chapel Road (north of Chadwick)
13. Zion Chapel Baptist Church (south of Hatchville)
14. New Life Community Church (Hatchville)
15. St. Phillip's Missionary Baptist Church (Hatchville)
16. St. Matthew's United Church of Christ (Garnet Heights / Pollocksville)
17. Pollocksville Methodist Church
18. Pollocksville Presbyterian Church
19. Pollocksville First Baptist Church

At least 13 cemeteries are located throughout the study area. These range in size from small family plots to larger public and church cemeteries. However, in rural settings such as this, small family plots which may be unmarked, overgrown, or deteriorated may be scattered throughout the study area.

3.1.3.3 Fire Protection, Police and EMS Services

Volunteer fire and rescue squads serve the towns of Maysville, Belgrade, and Pollocksville. Also, a volunteer fire department is located in Rhems, approximately one-half mile north of the study area.

Maysville and Pollocksville each have a police station, co-located with the fire stations. The Maysville police / fire department is accessed directly from US 17; the Pollocksville police / fire department is off Second Street. The Jones County and Onslow County Sheriff's Departments dispatch officers to cover the study area, also. Four State Troopers from the Kinston District are assigned to Jones County. Emergency service facilities located within the study area are shown in **Figure 3-2**.

The Eastern Carolina Council of Governments administers the Emergency Medical Services (EMS) for Region P. Both Onslow and Jones Counties are part of the Region P EMS Advisory Council. Onslow County Emergency Services offers Emergency 911, Emergency Management, Emergency Medical Services and Fire Protection services to the County.

The nearest hospitals to the project area are Onslow Memorial Hospital in Jacksonville and Craven Regional Medical Center in New Bern.

3.1.3.4 Housing Units

As shown in **Table 3-4,** over 25 percent of the housing units within the census tracts included in the study area have been constructed since 1990. Census Tract 1.03 in Onslow County experienced the highest growth in residential development, approximately 29 percent. Census Tract's 9801 and 9802 had a smaller percent increase in housing units, 16.6 and 17.5 respectively. Year 2008 US Census estimates predict that the number of housing units in Onslow County has increased by 20 percent from 2000 to 2008, while the number of housing units in Jones County has increased by 2 percent during the same period.

Table 3-4: HOUSING UNITS WITHIN THE STUDY AREA

Census Tract	County	Total Units	1990-2000	
			Units Built*	Percent Of Total
1.03	Onslow	7521	2178	*28.9%*
9801	Jones	1846	307	*16.6%*
9802	Jones	1233	216	*17.5%*
Study Area Total		10,600	2701	*25.4%*

** Number taken by deducting the 1990 Census total from that of the 2000 Census total.*
Source: US Bureau of Census, 1990 and 2000

As of July 2009, the majority of the 11,500 new military personnel drawn to the area by the Marine Corps' Grow the Force initiative had already relocated within the region, with many dependents and induced growth residents to follow. The rapid influx did not allow the communities enough time to expand to accommodate incoming residents. As a result, growth is expected to continue over coming years until development can satisfy the increased housing demand.

The *Regional Growth Management Plan* predicts that an estimated 200 new homes throughout Jones County will be required to meet the demand due to military expansion. In order to absorb the increased population, numerous residential developments have been recently completed or are planned within the US 17 study area. A review of the study area in September 2010 confirmed that numerous new residential developments have been constructed or are under construction, particularly in the Maysville-Belgrade area. Other developments are anticipated to occur within a 20-year planning horizon but plans have not yet been submitted for approval beyond the sites listed below.

<u>Segment 2</u>

- At the White Oak River Plantation, 5 miles west of Maysville along Fourth Street / White Oak River Road (SR 1116), 40 homes have been constructed and additional lots are available for purchase.

- Two neighborhoods are planned along Fourth Street immediately west of Maysville. Thirteen homes have been constructed along Indigo Drive; an additional 25 homes are planned for an adjacent street.
- Along Clints Mill Road off Belgrade-Swansboro Road (SR 1434), approximately 24 single-family homes have been constructed within the last two years.
- A row of 20+ new single-family homes have recently been constructed along Mattocks Drive in Maysville.
- The newly-annexed Carolina South neighborhood will be located on the southern side of Maysville; 200 homes have been approved for construction.
- A proposal has been submitted to construct a 92-home subdivision off US 17, half a mile south of Belgrade.

Segment 4

- Approximately 10 homes have been constructed in the new River Tides Community, four miles north of Pollocksville.

3.1.3.5 Parks and Recreational Facilities

The Croatan National Forest, one of four National Forests in North Carolina, is located partially within the study area. Hunting, fishing, camping, hiking, and picnicking opportunities are offered throughout the forest. The Forest is bounded by the White Oak River to the southwest, US 17 to the west, the Trent River and Neuse River to the north, and by NC 24 and the Newport River to the south. Today, the Forest incorporates approximately 160,000 acres.

Several public and private recreational facilities exist within the study area.

- A private campground and fishing facility, White Oak River Campground and Fishing Lakes, is located on both sides of US 17 along the White Oak River in Belgrade. A gravel road under the existing bridge over US 17 is provided for access to a fishing area. The campground also provides canoe rentals and playground equipment for visitors.
- A public park is located in Maysville bounded by Foy Street, NC 58 (Eighth Street), and Bynum Avenue, which offers playground equipment, a basketball court, a baseball field, and covered shelters.
- A community center off Eighth Street in Maysville provides an indoor meeting space for community events.
- The Belgrade Park and Recreational Area lies along Springhill Road (SR 1439) south of Belgrade and provides a covered picnic shelter, a basketball court, and open fields for recreation.
- Pollocksville recently constructed a recreational area along the Trent River just east of US 17. The project includes rehabilitation of the relocated Railroad Depot into a new

Town Hall, a new public access regional boat launch facility, and a waterfront public park with a covered picnic shelter and a fishing dock.

- A community center in Pollocksville at the corner of Foy and Second Streets provides an indoor meeting space for community events.

Both elementary schools within the study area also include baseball fields and small playgrounds, which are available for public use after school hours. Several area churches also provide playground equipment or outdoor recreational spaces. City parks and recreational facilities located within the study area are shown in **Figure 3-2**.

3.1.4 Community Cohesion

Cohesion is defined by the Federal Highway Administration as "those behavioral or perceptual relationships that are shared among residents of a community that cause the community to be identifiable as a discrete, distinctive geographic entity." Residential development in the study area primarily consists of isolated farms and groups of homes, many of which are owned and occupied by different branches of the same family. These rural "neighborhoods" are very cohesive and make up a vital part of the communities located throughout the study area.

A community impact assessment was conducted for the project study area between 1999 and 2001, with an update performed in 2010. The reports, entitled *Community Impact Assessment, January 2002*, and *Community Impact Assessment, 2011 Update*, are on file at NCDOT and incorporated by reference. The 2002 report provides details about each of the 11 communities located in the study area. One community is located in Onslow County; two towns and eight communities are located in Jones County. The location of the towns and communities within the project study area are shown in **Figure 3-3** and are briefly described below. The 2010 report focuses on Segment 2 of the project, providing a detailed description of community demographics and resources in Maysville and Belgrade; it also describes community impacts resulting from construction of either Alternative 2A or 2C.

3.1.4.1 Neighborhoods

Belgrade is a small, racially-mixed community located along both sides of US 17 and is the only community in the study area located in Onslow County. The majority of the older portion of this community is located east of US 17 within a triangle defined by US 17, Belgrade-Swansboro Road (SR 1434), and Belgrade Extension Road (SR 1440). The community's three oldest surviving structures are located near the intersection of Belgrade-Swansboro Road and Belgrade Extension Road. Two of these structures, the Henderson Provost House and the Zinnie Eubanks House / Store, were determined as eligible for the National Register of Historic Places. The

third, the Belgrade United Methodist Church, while it is not eligible for the National Register, is one of only two churches within the community. The majority of development is located west and south of Belgrade-Swansboro Road and US 17 because of the physical constraints imposed by the Martin Marietta Aggregates Quarry, the former Seaboard Coast Line Railroad, and the wetlands associated with the White Oak River.

The area known as Belgrade was settled in the early 1700s by farmers who immigrated mainly from England. One of the first families to move into the area and establish a plantation was the Bell Family. It is from this family that the community took its name. Bell's Grade referred to the steep grade that led to and from the Bell Plantation. Over time, the name was changed to Belgrade.

The paving of US 17 in 1925 and the construction of Camp Lejeune near Jacksonville in the late 1930s and early 1940s improved farm-to-market accessibility. While these events ignited a population explosion in Onslow County that continues to this day, Belgrade has experienced very little of this population growth. The continued growth of Jacksonville and the eventual abandonment of the rail line in 1980 caused job opportunities in Belgrade to decrease. Since the railroad was removed, no real growth has occurred in Belgrade until the past few years. Many residents either moved to Jacksonville or currently commute to work in Jacksonville. Today, Belgrade remains a small community surrounded by farmland and forests. However, numerous residential developments are planned and under development in and around Belgrade to house some of the new residents attracted to Onslow and Jones Counties by recent military expansions at area bases. Its largest employer is Martin Marietta Aggregates, located east of US 17. This quarry has been in operation for more than 60 years.

Maysville is a small, racially-mixed town of just under 1,000 residents and is the largest town in Jones County. It is located along both sides of US 17, which is the town's main street, for approximately 1.2 miles. It is bounded on the north by the Croatan National Forest and on the south by the White Oak River. As a result, the town has expanded east and west. Part of this expansion has occurred along NC 58, the main roadway to Emerald Isle and other Onslow County beaches. Much of the town is eligible for the National Register of Historic Places as a historic district.

The area known as Maysville was settled in the early 1700s by European immigrant farmers. Initially the area was known as Cross Roads because it was located at the crossing of the post road (now US 17) and the Stella to Trenton road (now NC 58). Stella was the location of a landing on the White Oak River located approximately midway between Maysville and the Atlantic Ocean. Barges operating on the White Oak River brought goods from Wilmington and New Bern upstream to Stella and returned loaded with forestry products and other commodities.

In 1875, a post office was opened and in the 1880s, the community became a town. During this time, timbering, and farming were the major industries.

The construction of Camp Lejeune in the 1940s and the influx of service personnel to Onslow County dramatically altered the economic prosperity and growth of Maysville. Many of the Maysville residents moved to Onslow County to be closer to Camp Lejeune and the growing City of Jacksonville. This movement caused Maysville to lose population for the first time since 1900. Although Maysville's population declined between 1930 and 1940, many of the residences and businesses still lining US 17 were built during that decade. By 1940, Maysville had two automobile dealerships, a drug store, a hardware store, a hotel and service stations / garages that were located along three to four blocks of US 17. While Maysville's population rebounded between 1940 and 1950, that was the last decade in the twentieth century that Maysville experienced double-digit growth. The end of rail service to the area and the abandonment of the railroad in the 1980s were partially responsible for this plateauing.

Although the increased popularity of Emerald Isle and other Onslow County beaches has drawn traffic through Maysville on NC 58, this has not been enough to spur growth. Numerous residential developments are planned and under development in and around Maysville to house some of the new residents attracted to Onslow and Jones Counties by recent military expansions at area bases. The town limits were recently expanded due to the annexation of the Carolina South neighborhood south of the existing town.

Chadwick is an African-American community located between Maysville and Pollocksville along both sides of US 17. On the eastern side of US 17, the community extends for approximately 0.5 miles and is bounded on the north, east, and south by the J. Nathan Foscue Plantation, a property determined eligible for the National Register of Historic Places. On the western side of US 17, the community extends for approximately 1.3 miles and is bounded on the west and south by a large pulp and paper company forestland and on the north by the Lee's Chapel Community, a white community surrounding Lee's Chapel Methodist Church. All 60 homes within the Chadwick Community have direct driveway access to US 17; there are no businesses, churches, or other manmade community features. Many of the residential structures are within 50 to 100 feet of US 17.

According to current Chadwick residents, the land that the Chadwick Community encompasses was formerly owned by Jim Simmons. His ownership of the land was probably the result of a pre-Civil War union between an ancestor and a member of the Foscue Family, the most prominent land holders in the area. Like those before him, Simmons logged the land. However, after World War II, he subdivided the land into long narrow strips and sold off the property. Weyerhaeuser, a large pulp and paper company, bought multiple sections to cultivate trees. Today Weyerhaeuser still owns sections of land in the Chadwick Community. Other sections

were purchased by individuals to build homes. The individuals who purchased land and built homes were African-Americans from Onslow or Craven Counties. Many of the homes were built in the late 1950s and early 1960s. While there has been some turnover in property as residents aged or moved away, most of those living in Chadwick today are the original homeowners or their descendants. The community became known as Chadwick in the early 1950s. It was named after C.B. Chadwick, Sr., one of the first African-American residents of the area. Mr. Chadwick initiated, organized, and conducted community meetings up until his death in the early 1990s.

Hatchville is a small, African-American community located approximately 0.4 miles southwest of Pollocksville along both sides of NC 58. The community is bounded on the east by US 17 and on the west by Goshen Lane (SR 1338). NC 58 serves as the primary route for heavy trucks and automobile traffic between Trenton and US 17. It is also a hurricane evacuation route and a major access route to Emerald Isle and its beaches. NC 58 is a two-lane road with parallel parking and curb and gutter on both sides through the Hatchville community. There are three cross streets within Hatchville, an unnamed dirt road and two paved streets, Gardener Street and Brown Street. These are all dead end streets located on the south side of NC 58. There are approximately 60 homes, two churches, and two businesses that make up the community today.

According to local residents, Hatchville was named after I.P. Hatch, an undertaker. He was bequeathed the land by a former client and reportedly wanted to use the land as a cemetery. Because the soil conditions were found to be unsuitable for burial purposes, he subdivided the land into residential lots and sold it to minorities at a low cost.

Garnet Heights is a small, African-American community located approximately 0.35 miles southeast of Pollocksville and US 17 along the south side of Island Creek Road (SR 1004). Six houses are located north of Island Creek Road, and although they are located within the town limits of Pollocksville, are considered a part of Garnet Heights. The remaining portion of the Garnet Heights Community is located south of Island Creek Road and is not within the town limits of Pollocksville. The community includes a total of approximately 50 homes and one church. Floodplains and wetlands of Mill Creek, a tributary of the Trent River, surround Garnet Heights on the north and east.

A search of the deed records at the Jones County Courthouse uncovered a plat of the area that was dated January 15, 1916 and listed the original developer as J. Peance. J. Peance hired Newbury Realty and Auction Company to subdivide the land. The plat referred to the subdivision as "Garnet Heights," which is still the name of the neighborhood. Current residents do not know the origin of the name, but the small community is on a high spot in the middle of a flood plain, thus "Heights" is appropriate. The land was divided into 224 lots that measured 25 feet by 100 feet each. This allowed potential buyers to purchase multiple lots to accommodate

the size of home they wanted to build. The plat also showed four extra large lots designated for churches along the southern boundary of the community on a street named accordingly, Church Street. The street is now called Church Hill. At one time the neighborhood was home to three minority churches; however, none of these churches still stand. St. Matthew United Church of Christ, located on Larry Street, is the only active church in the Garnet Heights Community. The subdivision was designed on a grid system with five streets running east to west and three streets running north to south. The three streets running north to south, York, Hagar, and Larry, are paved and have residences along both sides. Only two streets running east to west are paved and actively used. These two streets are Church Hill, the subdivision's southern boundary, and Beaufort Street, the subdivision's northern boundary. The other three streets are grassed. In its prime, the Garnet Heights Community had three neighborhood businesses, a dry cleaner / laundry, a grocery store, and a candy shop. None of those businesses exist today.

Goshen is a small, African-American community, located approximately 0.6 miles west of Pollocksville and US 17 along both sides of Goshen Road (SR 1337). Goshen Road turns into Pollock Street within the town limits of Pollocksville and intersects with US 17 south of the Trent River. The Goshen Community is surrounded by Goshen Branch, a tributary of the Trent River, on the north; the Bryan-Bell Farm / Oakview Plantation, a National Register historic property, on the south and west; and Pollocksville on the east.

The name Goshen was selected for its Biblical context by a former slave; it represents how the landowners felt about the land: residents dedicated their lives to preserving the land for their children and generations to come. While only a small portion of the "Goshen" land was given to freedmen, over time the community grew as other minority families purchased more acreage. This land, upon which they built a new life for themselves and their families, was the first property that was truly theirs.

The community includes approximately 70 homes, a baseball field, a bar / clubhouse, an American Legion Building, a wastewater treatment plant, and a cemetery, the Goshen Cemetery, which is one of two cemeteries for blacks in the Pollocksville area. This area is very sacred to the residents and is seen as a symbol of their long-term ties to the land. Goshen was originally accessed by a dirt road that was an old Indian trail. The trail followed the Trent River and Goshen Branch from Pollocksville to where it crosses the Branch near the cemetery. In 1952, the road was realigned and paved as an extension of Pollock Street and named Goshen Road.

In the early 1990s, the Town of Pollocksville built a wastewater treatment plant in the middle of the Goshen Community. The land needed for the plant was owned by several of the founding families of the community who did not want a wastewater treatment plant in Goshen. When the residents resisted selling, the local officials condemned the land, took it, and started planning the wastewater treatment plant. The residents sued and the courts agreed that the actions of the local

officials were wrong. However, because the process was so far along, the judge allowed the project to continue, but ruled the residents were to be paid additional money for the land. An organized opposition group – the Goshen Road Environmental Action Team (GREAT) – was formed to protect the area from unwanted development.

Pollocksville is a small, predominantly white-populated town located on both sides of US 17 along the southern bank of the Trent River. US 17 is the town's main street; many businesses and old homes line the highway along both sides. The town is bounded to the north by the Trent River, to the east by Mill Creek, by Fourth Street on the west, and by Island Creek Road (SR 1004) and Hines Street to the south. The abandoned Seaboard Coast Line Railroad is located approximately one block east of US 17. The majority of the town, and most of its public facilities, are located west of the abandoned railroad. Much of the town is eligible for the National Register of Historic Places as a Historic District. The Bryan Lavender House (National Register of Historic Places) and the Trent River Plantation (National Register Study List) are located within the historic district boundaries.

Pollocksville is the oldest town in Jones County. As early as 1779, it existed as a settlement on the southern shore of the Trent River. In its early days, Pollocksville was a steamboat landing. The steamboats carried goods inland from the Atlantic Ocean and returned loaded with cotton, lumber, and naval stores. This trade not only stimulated the area's economy, but it also sparked inland cultural development. Pollocksville's location, at this transportation crossroads, was responsible for its growth. There were cotton warehouses, turpentine distilleries, and loading docks for naval stores along the Trent River. By the mid-1800s, Pollocksville had an academy, a Methodist church, two general merchandise stores, a water-powered sawmill and gristmill, and a turpentine plant. Until the coming of the railroad, the Trent River remained the area's main means of transportation. In 1893, the New Bern to Wilmington rail line was located a block east of US 17. The railroad improved accessibility, helped boost land values, and made lumbering an important local industry. When cotton was devastated by the boll weevil, tobacco took over as the predominant crop in the area. While Pollocksville did not experience dramatic growth, it steadily developed as a farming community and processing center for the region's wood and agricultural products.

By 1910, Pollocksville had a population of 200. Most of these residents built houses along US 17 and the adjoining streets south of the Trent River. In addition to houses, a small commercial area began to develop along US 17. It consisted of a bank, a drugstore, eight general stores, a hotel, and a physician's office. A separate industrial area developed along the railroad near the Trent River. It contained five cotton gins, two gristmills, and a sawmill. Because of its size, Pollocksville soon built a public school west of US 17.

By the 1920s, road improvements and the increased use of motor vehicles began to alter the patterns of growth and communication throughout the region. By 1925, US 17 was paved and had become part of the Ocean Highway, and by the end of the 1920s, NC 58 was complete in Jones County. NC 58 linked Pollocksville with Trenton, the county seat. Since the 1920s, the area has experienced only modest growth.

Today, Pollocksville has fewer than 270 residents, although new residential construction has occurred along the northern banks of the Trent River. Trent Acres is located east of US 17 and Hughes Plantation is located west of US 17. Both of these subdivisions have riverfront lots and both received flood damage associated with Hurricane Floyd in 1999.

Murphytown is a small, African-American community located along both sides of US 17 approximately one mile north of the town of Pollocksville. An old segment of US 17, now called Oak Grove Loop (SR 1336), represents the northern and southern limits of Murphytown. There are no cross streets within the Murphytown Community. Many of the 35 homes and two businesses making up the community have driveway access to US 17, with many of the homes within 50 to 100 feet of the highway. The Jones-Onslow Electrical Membership Cooperative's Pollocksville substation is located between US 17 and Oak Grove Loop. It appears that there was at least one service station in the community in the past, but it is now abandoned. The Murphy Family Cemetery (containing 26 plots) is located in the northern portion of Murphytown on the eastern side of US 17. A small (six plot) cemetery for the Melton / Banks families is located in a field west of Oak Grove Loop and north of Oak Grove Road.

Murphytown was named for Mr. Killis Murphy, an African-American man who bought the land along and between existing US 17 and the original US 17 alignment. Because of Mr. Murphy's influence on the development of the area, the original US 17 roadway was locally known as Killis Murphy Road after the present US 17 was built. Most of those living in Murphytown are either direct descendents of Killis Murphy or have married members of the Murphy family.

Oak Grove is a racially-mixed community located along both sides of Oak Grove Road, west of Murphytown. Oak Grove Road (SR 1121) intersects Oak Grove Loop in the center of the Murphytown community and extends west for approximately 0.9 miles west of US 17. There are approximately 60 homes that make up the community today, but no businesses, churches, or other manmade community features.

The Oak Grove Community was also developed by Mr. Killis Murphy. He purchased the land from the Duvall Plantation and subdivided it into small residential lots. These lots were sold to various African-American families. Some of the current residents are children of those original families, as the property has been handed down from one generation to the next. There are, however, some new residents with no historic ties to the area.

Ten Mile Fork / Deep Gully is a small, mostly white community beginning approximately 3.2 miles north of Pollocksville and continuing to the Jones / Craven County line. This community is located along both sides of Wise Fork Road (SR 1002) and on both sides of US 17 between the intersection of US 17 and Wise Fork Road and the Jones / Craven County line. The community's nearly 60 residences are situated on large lots within 50 to 100 feet of the highway. A furniture refinishing business is located in the old Ten Mile Fork Gas Station / Store, which is eligible for the National Register of Historic Places.

Little is known about the history of the Ten Mile Fork / Deep Gully Community. Investigations at local libraries, research at government offices, and interviews with residents revealed little information. The Ten Mile Fork Community is named for Ten Mile Fork Road (the local name for Wise Fork Road) which derived its name from its ten mile distance south of New Bern. A gas station / store is located in the fork of the roads and was determined eligible for the National Register of Historic Places. The gas station / store is believed to be circa 1920, indicating that the Ten Mile Fork Community was established prior to this time. Homes appear to range from 20 to 40 years old.

3.1.5 Environmental Justice

Executive order 12898 requires all federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs on minority and low-income populations. The general purpose is to foster non-discrimination in federal programs and to provide minority and low-income communities greater opportunities for public participation.

The following definitions were used in this project:

- Minority – according to the US Census Bureau, minority populations are those groups that include African-Americans, American Indians, Asians, Pacific Islanders, Hispanics, Eskimos, Aleuts, and other races. Anyone not identified in the 2000 Census as "white alone" is considered to be a minority.
- Low-Income – persons whose income meets the US Census Bureau's poverty guidelines. To determine poverty status, an individual family's income is compared against the poverty threshold appropriate for the family size and composition.

Multiple techniques were employed to define potential clusters of environmental justice populations. As a starting point, demographic information was collected from available sources: the US Census Bureau, the NC State Data Center, the NC Center for Rural Development, and others. Population characteristics for small geographic areas (towns, block groups, tracts) were compared against characteristics for larger areas (counties, state). This allowed analysts to identify potential minority and low-income concentrations within the study area. A hands-on

knowledge of the study area complemented statistical analysis techniques. Field surveys were conducted of the rural communities at various times. Analysts spent time collecting input from community members; hundreds of area residents were interviewed, local officials were contacted; and many one-on-one conversations occurred at project meetings to understand local perspectives on communities and potential environmental justice issues.

Demographic information presented in Section 3.1 illustrates that concentrations of potential environmental justice groups (minority and low income populations) exist within the study area. At 39 percent of its population, Jones County exhibits a proportionally larger minority population than the state as a whole (26 percent). Year 2000 Census estimates for individual tracts within Jones County report higher levels at 46 percent. The North Carolina Rural Economic Development Center estimates the 2006 minority concentration within Maysville at 59 percent. Of the 11 communities covered in the 2002 *Community Impact Assessment,* five are identified as predominantly African-American: Chadwick, Hatchville, Garnet Heights, Goshen, and Murphytown. While both Jones and Onslow Counties exhibit 2009 per capita income levels below the statewide average ($18,904 and $19,495, respectively, compared to $25,989 statewide), limited data is available for smaller geographic subareas. As of 2008, the portion of the Jones County population living below the federal poverty threshold (18 percent) is greater than the statewide average (14.6 percent).

As described in the 2002 *Community Impact Assessment* and in Chapter 8 of this SFEIS, extensive coordination was undertaken as part of the project. Planners conducted one-on-one interviews with hundreds of residents, several small-group meetings, two multi-community meetings, one citizen informational meeting, and a public meeting to gather data for the community impact assessment. Since then, NCDOT has held various informational workshops and open houses in local communities and hosted a formal public hearing in August 2005. Presentations and informational handouts were distributed through local elementary schools. Additional comments and questions were submitted by community members by phone, email, and mailed letters.

Additional coordination was completed with the Goshen Road Environmental Action Team (GREAT), which formed in 1997 to protect land within the Goshen community. Farmland within Goshen was utilized for the Pollocksville Wastewater Treatment Plant; GREAT formed to prevent a similar impact from the US 17 highway project. NCDOT met and corresponded with GREAT leadership, local officials, and community members throughout the alternatives development process.

3.2 LAND USE AND TRANSPORTATION PLANNING

Land use and transportation planning guidance for Onslow County is described in the county's January 2010 *Comprehensive Plan*. Neither Jones County nor its communities maintain individual land use or transportation plans. The study area falls within the jurisdiction of the Down East Rural Planning Organization (RPO). A review of available guidance is presented in the following sections.

3.2.1 Land Use Plans

Onslow County adopted its most recent *Coastal Area Management Act* (*CAMA) Comprehensive Plan* in 2010, which outlines development principles for the county. Jones County does not currently have a land use plan, but is in the process of creating one, anticipated to be completed by 2012.

3.2.1.1 Existing Land Use

The major portion of the project study area lies in the rural, unincorporated region of Jones and Onslow Counties. Population centers in the study area include the Community of Belgrade and the Towns of Maysville and Pollocksville. Land uses in the area consist primarily of agriculture, forestry, low-density residential, and limited commercial development. Much of the study area is adjacent to the Croatan National Forest and surrounded by private commercial forestlands. Residential properties generally consist of single-family frame or brick residences or mobile homes with outbuildings such as barns and sheds.

The Community of Belgrade falls within the jurisdiction of Onslow County, which identifies its existing and future planned land uses in the 2010 *CAMA Comprehensive Plan.* The majority of the area in and around Belgrade is zoned as single family residential and agricultural residential, as shown in **Figure 3-4**. Scattered commercial and mobile home park uses also exist. The largest employer in the study area, the Martin Marietta stone and aggregate quarry, is located east of US 17 at the Belgrade-Swansboro Road intersection.

The towns of Maysville and Pollocksville are laid out on a grid system of streets that form large residential blocks on the east and west sides of US 17, which serves as Main Street for the towns. Most of the commercial development is adjacent to US 17, or in close proximity, and is oriented to serve the local population and passing beach travelers. Several restaurants, antique shops, and convenience stores are located along US 17 in Maysville. **Figures 3-5** and **3-6** show Maysville's and Pollocksville's existing land uses. Other rural communities in Jones County do not have land use plans in place at this time.

3.2.1.2 Zoning Characteristics

Within Jones County, the towns of Maysville and Pollocksville exercise traditional zoning controls. Maysville's zoning ordinance covers one mile beyond the town limits, while Pollocksville's zoning is limited to the town limits. Per the 2001 *Jones County Strategic Plan,* Pollocksville is planning to extend zoning to its extraterritorial jurisdiction and is currently still pursuing this extension based on recent coordination.

Onslow County maintains zoning regulations for the county beyond the limits of Jacksonville, Swansboro, and Camp Lejeune, as documented in the *Comprehensive Plan*.

3.2.1.3 Future Land Use

Onslow County adopted the *Onslow County Comprehensive Plan (CAMA Core Land Use Plan)* in January 2010. The plan stipulates that "transportation planning shall be employed to promote a hierarchical, functional transportation system, to prioritize needed improvements, and to promote the proper arrangement of land patterns by controlling the location of streets..." The majority of land around US 17 in Onslow County is designated for conservation, agriculture, and forestry, with an area of medium-density residential development around Belgrade. The future land use map in the *CAMA Comprehensive Plan* includes a cluster of medium-density residential developments in and around Belgrade, sufficiently removed from the White Oak River to minimize environmental impacts. Planned residential developments are discussed further in Section 3.1.3.4.

Currently, Jones County does not have a Comprehensive or Growth Management Plan, but utilizes a 2001 Strategic Plan titled *Jones County Comprehensive Strategic Plan* to address land use issues and concerns. This plan lists critical economic development strategies to promote future development in Jones County. One of the critical priority goals was to complete the four-laning of US 17 from the Craven to Onslow County line. A countywide land use plan is anticipated to be completed in 2012.

3.2.2 Transportation Plans

The *State Transportation Improvement Program* (STIP) identifies the proposed US 17 project as TIP Project No. R-2514. This project is part of an overall plan to upgrade US 17 to a modern, high speed, multilane facility through eastern North Carolina connecting Virginia and South Carolina.

Other regional planning documents identify the US 17 improvement project as a regional

priority. The 2001 *Jones County Strategic Plan* identifies completing the widening of US 17 to four lanes between Craven and Onslow Counties as a critical priority for economic development; the location of the bypass is of vital importance to promote future growth and development in both Maysville and Pollocksville. The Down East Rural Transportation Planning Organization (RPO) ranks segments 2, 3, and 4 of the US 17 project as priorities 2, 3, and 4 respectively in their *STIP 2011-2017 Highway Projects Rankings*. In the 2009 *Regional Growth Management Plan*, widening US 17 between Jacksonville and New Bern to reduce crash rates and ensure strategic mobility is identified as the highest priority community action of the Commanding General of the Marine Corps Installations East.

3.2.3 Coastal Management Plans

The Coastal Area Management Act (CAMA) requires that certain counties develop a local land use plan that follows guidelines established by the Coastal Resources Commission; Onslow County falls within the area required to maintain a CAMA Plan. The 2010 Comprehensive Plan includes recommendations to "encourage the long-term management and wise use of [the county's] natural resources including, particularly, ocean and estuarine area resources, surface and ground water systems, wetland and floodplain ecosystems, and other important natural areas." A CAMA Major Development Permit will be required prior to construction of the improved US 17 corridor.

3.3 PHYSICAL ENVIRONMENT CHARACTERISTICS

The following sections discuss aspects of the natural environment in the study area: noise, air quality, farmlands, utility services, the visual environment, hazardous materials, mineral resources, floodplains, and protected lands.

3.3.1 Noise Characteristics

A noise technical memorandum was prepared in May 2001 for the project and is incorporated by reference. The findings of the study are presented in this section of the SFEIS.

The Noise Control Act of 1972 authorized the USEPA to regulate major sources of noise, such as transportation vehicles and construction equipment. The Federal Aid Highway Act of 1970 mandated the FHWA to develop standards for mitigating highways noise. The FHWA implemented regulations which require that all traffic noise impacts be identified, all potential mitigation measures be examined, and all reasonable and feasible noise mitigation measures be

incorporated into the planning and design of highway projects. The regulations include criteria at

which noise abatement must be considered.

3.3.1.1 Characteristics of Noise

Noise is defined as unwanted sound, particularly sounds without agreeable musical qualities. Sound is emitted from many sources including motor vehicles, airplanes, railroads, power generation plants, and factories. Motor vehicle noise, or traffic noise, usually is a composite of noise from engine exhaust, drive trains, and tire-roadway interaction. The sounds generated by vehicular traffic constitute noise to people, and can disrupt normal activities when they reach a certain level.

The magnitude of a noise is typically described by its sound pressure. Sound pressures described in decibels are called sound pressure levels and are often defined in terms of frequency-weighted scales (A, B, C, and D). The A-weighted scale is used almost exclusively to describe traffic noise because this scale correlates well to the subjective response of people to various sound levels. For example, A-weighting takes into account the fact that humans are more sensitive to higher frequency sounds than lower frequency sounds. Sound levels measured using A-weighted decibel scales are often expressed as 'dBA.'

Traffic noise levels are typically reported as an hourly equivalent sound level [Leq(n)] in A-weighted decibels [dba Leq(n)] The hourly average sound level [Leq(h)], or equivalent sound level, is the level of constant sound that in an hour would contain the same acoustic energy as the time-varying sound. In other words, the fluctuating sound levels of traffic noise are represented in terms of steady noise levels with the same energy content.

3.3.1.2 Existing Noise Levels

In order to evaluate possible noise impacts in the study area, existing background noise levels were measured. Noise measurement sites were selected to represent sensitive land uses in communities within the study area. The analysis was performed in accordance with the procedures outlined in Title 23 Code of Federal Regulations (CFR), Part 772, US Department of Transportation, Procedures for Noise Abatement of Highway Traffic Noise and Construction Noise.

Existing noise levels were taken at 31 locations along the US 17 corridor as part of the 2004 noise analysis. The locations of these noise measurements are shown in **Figure 3-7**. **Table 3-5** summarizes the existing noise levels measured at the selected sites. Noise levels were measured for continuous 20-minute periods. Noise levels at the 19 monitoring sites away from roadway traffic ranged from 40.9 to 58.4 dBA Leq except for one site, No. 26, which measured 70.9 dBA. This reading was found to be aberrant and will not be used in the analysis. The Leq noise levels

as measured at 50 feet from roadways ranged from 48.4 dBA Leq to 69.5 dBA Leq. Section 4.1.3.1 in Chapter 4 examines future noise levels and project impacts.

TABLE 3-5: YEAR 2000 NOISE LEVEL MEASUREMENTS

Site #	Location	Description	Measured Avg. Noise Level (dBA Leq*)
1	US 17 north of SR 1002	50 ft from road – measurement of traffic noise on US 17 north of Trent Road	67.0
2	US 17 south of SR 1002	50 ft from road – measurement of traffic noise on US 17 south of Trent Road	69.5
3	US 17 in Pollocksville	50 ft from road – measurement of traffic noise on US 17	63.9
4	US 17 south of NC 58	50 ft from road – measurement of traffic noise on US 17	68.0
5	US 17 south of SR 1114	50 ft from road – measurement of traffic noise on US 17 south Lee's Chapel Rd.	68.4
6	US 17 in Maysville	50 ft from road – measurement of traffic noise on US 17	65.6
7	SR 1330	Measurement of background noise levels away from traffic	46.4
8	US 17 in Belgrade	50 ft from road – measurement of traffic noise on US 17	68.3
9	SR 1331	50 ft from road – measurement of traffic noise on White Oak River Road	55.6
10	SR 1116	50 ft from road – measurement of traffic noise on White Oak River Road	53.5
11	NC 58	50 ft from road – measurement of traffic noise on NC 58	60.3
12	SR 1337	50 ft from road – measurement of traffic noise on Goshen Road	48.4
13	SR 1004	50 ft from road – measurement of traffic noise on Beaufort Road	54.7
14	Maysville Elem. School	Measurement of background noise levels away from traffic	46.0
15	White Oak River	Measurement of background noise levels away from traffic	58.4
16	Belgrade	Measurement of background noise levels away from traffic	53.8
17	Maysville	Measurement of background noise levels away from traffic	46.3
18	Maysville	Measurement of background noise levels away from traffic	50.4
19	Goshen Branch	Measurement of background noise levels away from traffic	52.1

TABLE 3-5: YEAR 2000 NOISE LEVEL MEASUREMENTS

Site #	Location	Description	Measured Avg. Noise Level (dBA Leq*)
20	Pollocksville	Measurement of background noise levels away from traffic	51.1
21	Hughes Plantation (SR 1345)	Measurement of background noise levels away from traffic	45.3
22	East of US 17	Measurement of background noise levels away from traffic	40.9
23	East of US 17	Measurement of background noise levels away from traffic	42.6
24	Trent Farm Road	Measurement of background noise levels away from traffic	41.9
25	SR 1337	Measurement of background noise levels away from traffic	42.3
26	SR 1337	Measurement of background noise levels away from traffic	70.9
27	Trent River	Measurement of background noise levels away from traffic	48.5
28	SR 1121	Measurement of background noise levels away from traffic	56.7
29	SR 1121	Measurement of background noise levels away from traffic	52.5
30	SR 1121	Measurement of background noise levels away from traffic	52.5
31	SR 1335	Measurement of background noise levels away from traffic	54.4

Note: All measurements taken with a Metrosonics dB Sound Lever Analyzer calibrated before and after the survey. Measurement periods were 20 minutes each.

3.3.2 Air Quality

An Air Quality technical memorandum was prepared in October 2001 for this report. An updated technical memorandum was prepared in 2011; both are incorporated by reference. The US Environmental Protection Agency (USEPA) and the North Carolina Department of the Environment and Natural Resources (NCDENR) share responsibility for protecting air quality in the state. Air quality is defined according to criteria established by the USEPA in the 1990 Clean Air Act (CAA), these criteria, designated as the National Ambient Air Quality Standards (NAAQS), were established for six air pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}), and ozone (O_3). The NAAQS for these pollutants are presented in **Table 3-6**. They represent levels of air pollutants and exposure periods that pose no significant threat to human health or welfare. North Carolina has adopted these air quality standards.

All areas within North Carolina are designated as either attainment, non-attainment, or unclassifiable with respect to each of the six pollutants under the NAAQS. Areas that have pollutant concentrations below the NAAQS are designated as attainment. Conversely, areas where the NAAQS are exceeded are designated as non-attainment. In non-attainment areas, a State Implementation Plan (SIP) is developed to bring the area into compliance with the NAAQS. Areas where available data is insufficient for classification are designated as unclassifiable. The project is located in Jones and Onslow Counties, which have been determined to comply with the NAAQS. The proposed project is located in an attainment area; therefore 40 CFR Parts 51 and 93 are not applicable.

In 2006 and 2008, USEPA proposed new standards for ozone and particulate matter. As shown in **Table 3-6**, the new ozone standard is an 8-hour standard of 0.075 parts per million (ppm), and the new particulate matter standard is for particulates less than 2.5 micrometers in diameter for an annual average and a 24-hour average.

The primary standards are set at a limit intended to protect the public health with an adequate margin of safety, considering long-term exposures for the most sensitive groups in the general populations (i.e. senior citizens, children, and people with breathing difficulties). The secondary standards are set at a limit intended to protect the public welfare from known or anticipated adverse effects (i.e. effects to aesthetics, architecture, crops, etc.) (1990 Clean Air Act (CAA), Section 109).

TABLE 3-6: NATIONAL AMBIENT AIR QUALITY STANDARDS

Criteria Pollutant	Averaging Time	Standard	Standard Type
Carbon Monoxide	8-hour Average	9 ppm	Primary
	1-hour Average	35 ppm	Primary
Nitrogen Dioxide	Annual Arithmetic Mean	0.053 ppm	Primary and Secondary
Ozone	1-hour Average	0.12 ppm	Primary and Secondary
	8-hour Average	0.075 ppm	Primary and Secondary
Lead	Quarterly Average	1.5 µg/m^3	Primary and Secondary
Particulate < 10 micrometers (PM-10)	Annual Arithmetic Mean	50 µg/m^3	Primary and Secondary
	24-hour Average	150 µg/m^3	Primary and Secondary
Particulate < 2.5 micrometers (PM-2.5)	Annual Arithmetic Mean	15 µg/m^3	Primary and Secondary
	24-hour Average	35 µg/m^3	Primary and Secondary
Sulfur Dioxide	Annual Arithmetic Mean	0.03 ppm	Primary
	24-hour Average	0.14 ppm	Primary
	3-hour Average	0.50 ppm	Secondary

Source: US EPA Website: http://www.epa.gov/oar/oaqps/greenbk/

Motor Vehicles are known to emit carbon monoxide (CO), nitrogen oxide (NO), hydrocarbons (HC), sulfur dioxide (SO_2), particulate matter, and lead (Pb), listed in decreasing order of the

amount of emission given off. The methods used to measure the effect of a project on the ambient air quality depend on the location of the project and the pollutants to be considered. The air quality impact of highway projects in rural areas can be assessed using simplified procedures. Projects in urban non-attainment areas can require very detailed analysis. The US 17 project area is located in rural attainment area, thus, a more complex urban analysis is not required. Results of the air quality analysis are presented in Section 4.1.3.2 in Chapter 4; a summary of key pollutants is presented below.

3.3.2.1 Carbon Monoxide

Carbon monoxide is the primary pollutant emitted by automobiles. Automobiles are considered to be the primary source of CO pollution in the project area. Therefore, the focus of the 2001 air quality analysis was on carbon monoxide levels.

Two sources are needed to determine CO levels at a particular point near a highway: local and background. The local CO source is emitted from cars operating on roads near the receptor (within 325 feet). The background source is due to CO emissions from cars operating on roads farther than 325 feet away from the receptor. The one-hour background source used is an area-wide average of 1.8 parts per million (ppm), developed by the NCDENR Division of Air Quality (DAQ). The eight-hour background source used is 1.1 ppm, determined by multiplying the one-hour background source CO concentration by the persistence factor of 0.60 (NCDENR DAQ, 1995: pg. 54). The local CO concentrations were determined using line-source computer modeling. Results of CO modeling are discussed in Chapter 4.

3.3.2.2 Hydrocarbons and Nitrogen Oxides

Automobiles are generally regarded as considerable sources of nitrogen oxides (NOs) and hydrocarbons (HCs). Nitrogen oxides and hydrocarbons are carried into the atmosphere where they react with sunlight to form nitrogen dioxide (NO_2) and ozone (O_3). The photochemical reactions that form O_3 and NO_2 require several hours to occur. For this reason, the peak levels of O_3 generally occur six to 13 miles downwind of the source of HC emissions. Urban areas as a whole are regarded as sources of HCs rather than individual streets and highways. There are no large urban areas within at least 10 miles of the study area. Jones and Onslow counties are in attainment for O_3 and NO_2.

3.3.2.3 Particulate Matter and Sulfur Dioxide

Automobiles are not generally regarded as significant sources of particulate matter and SO_2. Nationwide, highway sources account for less than seven percent of particulate matter emissions and less than two percent of SO_2 emissions. Particulate matter and SO_2 emissions are

predominantly the result of non-highway sources (i.e. industrial, commercial, and agricultural). Air quality standards for particulate matter and SO_2 are being met in Jones and Onslow Counties.

3.3.2.4 Lead

Automobiles without catalytic converters emit lead (Pb) as a result of burning gasoline containing tetraethyl lead. However, the CAA of 1990 made the sale, supply, or transport of leaded gasoline or lead additives unlawful after December 31, 1995. Air quality standards for Pb are being met in Jones and Onslow Counties.

3.3.2.5 Mobile Source Air Toxics (MSATs)

In addition to the six criteria air pollutants for which there are NAAQS, the EPA also regulates air toxics. Most air toxics originate from man-made sources, including on-road sources, non-road mobile sources (e.g. airplanes), area sources (e.g. dry cleaners), and stationary sources (e.g. factories). Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The six main MSATs are benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-hutadiene. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. Exposure to air toxics in sufficient concentrations and sufficient durations may increase the risk of cancer and respiratory health concerns, although exposure relationships have not yet been determined by the USEPA. Currently, the USEPA has not proposed to establish ambient standards for these pollutants so there are no non-attainment areas for air toxics.

Chapter 4 of this SFEIS includes a basic, qualitative analysis of likely MSAT emission impacts for the US 17 improvement project. Available technical tools are not sophisticated enough to enable prediction of project-specific health impacts due to emission changes associated with specific alternatives.

3.3.3 Farmlands

The Farmland Protection Act of 1981 (7 CFR Part 658) requires NCDOT to consider the impact of their activities on prime, unique, and statewide and locally-important farmland soils, as defined by the US Department of Agriculture Natural Resource Conservation Service (NCRS) (Public Law 97-98, Subtitle 1, Section 1540). Soils in the study area considered to be prime or of statewide importance are listed in **Table 3-7** and mapped in **Figure 3-8.**

TABLE 3-7: IMPORTANT FARMLAND SOILS

Designation	Map Unit Name	% Slope
Jones Co. Prime		
CrB	Craven very fine sandy loam	1-4
ExA	Exum very fine sandy loam	0-2
GoA	Goldsboro loamy sand	0-2
EnB	Enon sandy loam	1-5
Jo	Johns fine sandy loam	(where drained)
KaA	Kalmia loamy sand	0-3
NoB	Norfold loamy sand	1-4
On	Onslow find sandy loam	(where drained)
Onslow Co. Prime		
CrB	Craven very fine sandy loam	1-4
GoA	Goldsboro loamy sand	0-2
Gt	Grifton fine sandy loam	(where drained)
Ly	Lynchburg fine sandy loam	(where drained)
Md	Masontown mucky fine sandy loam	(where drained)
NoA	Norfold loamy fine sand	0-2
NoB	Norfold loamy sand	2-6
On	Onslow find sandy loam	(where drained)
Pn	Pantego mucky loam	(where drained)
Ra	Rains fine sandy loam	(where drained)
To	Torhunta fine sandy loam	(where drained)
Statewide & Local		
AuB	Autryville loamy fine sand	0-4
Ba	Bayboo loam	(where drained)
CrC	Craven very fine sandy loam	4-8
Gr	Grantham loam	(where drained)
Gt	Grifton fine sandy loam	(where drained)
KeA	Kenansville loamy fine sand	0-3
La	Leaf silt loam	(where drained)
Ly	Lynchburg fine sandy loam	(where drained)
MaC	Marvyn loamy sand	6-15
Me	Meggett loam	(where drained)
Na	Nahunta loam	(where drained)
Pa	Pactolus loamy fine sand	(where drained)
Pn	Pantego loam	(where drained)
Ra	Rains fine sandy loam	(where drained)
Sx	Stockade fine sandy loam	(where drained)
To	Torhunta fine sandy loam	(where drained)
Wo	Woodingtin fine sandy loam	(where drained)

Prime Farmland Soils are defined as soils that are best suited to food, feed, forage, fiber, and

oilseed crops. These soils produce the highest yields with minimal expenditure of energy and economic resources and farming these soils results in the least damage to the environment. In general, prime soils have slopes between zero and eight percent and are not flooded or saturated with water for extended periods of time. Large areas within the study area contain soil types identified prime farmland soils.

Unique Farmland Soils are generally soils that have a special set of properties that are unique for producing certain high-value crops meet the requirements for unique farmland. In North Carolina, soils on which blueberries are produced meet these requirements. In this listing, drained phases of the Leon, Lynn Haven, and Murville series are the only soils in this category. None of these soil series are found within the study area; however, a pocket of Murville fine sand is located west of Maysville and just south of the White Oak River.

State and Locally-Important Farmland Soils are defined by the appropriate state or local government agency as soils important in the agriculture of an individual county. These definitions are based on measures of the soil's capacity to support productive farm activity, not of current cultivation. Some areas within the study area contain soil types identified prime farmland soils, as shown in **Figure 3-8**.

As of the 2007 Census of Agriculture, 69,078 acres of land were used for farms within Jones County, with an average farm size of 434 acres. In 2008, Jones County farmers received a total of $104 million in cash receipts, the 30th highest county in the state. Onslow County has 55,211 acres of land used for farming, with an average farm size of 138 acres. In 2008, Onslow County farmers received a total of $108 million in cash receipts, the 28th highest county in the state.

According to the 2007 USDA Census of Agriculture, corn is the major crop grown in both counties. See Appendix D for Farmland Conversion Impact Rating Forms. Coordination with the National Resource Conservation Service to identify prime, unique, and statewide importance farmlands potentially impacted by the project is discussed in Section 4.1.3.3 in the next chapter.

3.3.4 Utilities

Electrical Power Electric power is supplied throughout the study area by Progress Energy. The power is distributed by Progress Energy inside the town limits of Maysville and Pollocksville and by the Jones-Onslow Electric Membership Corporation in the surrounding areas (See **Figure 3-9**). Three sub-stations are located within the project study area. One is located just south of Belgrade on the west side of US 17, one is located across the three-way intersection of Oak Grove Road (SR 1121) and Oak Grove Loop (SR 1336) while the other is located just west of the Wise Fork Road (SR 1002) / US 17 intersection. The first two sub-stations are distribution to

distribution services where Progress Energy provides power to the Jones-Onslow Electrical Membership Cooperation. The third is a Progress Energy sub-station located on a high-voltage transmission line carrying 230,000 volts service west of US 17. Overhead service lines are scattered throughout the study area providing electrical service to residences and businesses.

Water and Sewer Service The Town of Belgrade is supplied with county water via a six-inch water line that follows Belgrade-Swansboro Road (SR 1434). Water pipes follow alongside other highways in the study area as well, including US 17, Deppe Loop Road (SR 1330), and White Oak River Road (SR 1331). The remainder of the study area within Onslow County is served by private water wells. Individual septic systems or private disposal companies provides sanitary sewer service to the area.

The Towns of Maysville and Pollocksville provide municipal water within the town limits and to adjacent areas outside of the towns. Water service to properties along US 17 is provided by a six-inch water main located along the eastern side of US 17. Jones County provides water to the remainder of the study area. Water is drawn from aquifers through numerous wells located in Jones County. Pollocksville has two wells, one located on Trent Street and the other located near the Pollocksville Elementary School. Pollocksville has a water tower located on Trent Street near the abandoned railroad bed. There is a ten-inch water main along the abandoned railroad bed from Trent Street to the north side of the Trent River for fire service.

A six-inch water main serves properties along NC 58 in Pollocksville and Maysville, Fourth Street / White Oak River Road (SR 1116), Lee's Chapel Road (SR 1114), Riggs Town Road (SR 1112), Island Creek Road (SR 1004), Goshen Road (SR 1337), Oak Grove Road (SR 1121), Wise Fork Road (SR 1002), and Simmons Loop Road (SR 1330). A 250,000-gallon storage tank was constructed in the southwestern corner of US 17 and Lee's Chapel Road (SR 1114). This storage tank is supplied by a ten-inch main from Trenton.

Wastewater treatment plants located in Maysville and west of Pollocksville provide sewer service to town residences and businesses. The Maysville wastewater treatment plant is located just north of the White Oak River and east of US 17. The Town of Pollocksville's wastewater treatment plant is located in the Goshen Community west of Pollocksville on Goshen Road (SR 1337). The plant treats approximately 108,000 gallons per day and has been in operation since the early 1990's.

The rural areas of Jones County are serviced by individual septic systems or private disposal companies. All of the residences along US 17 north and south of Pollocksville, in the Chadwick, Murphytown, Ten Mile Fork, and Deep Gully Communities have individual septic systems with most located in the front yards adjacent to US 17.

Natural Gas Eastern North Carolina Natural Gas Corporation is the only natural gas supplier within the study area. The main line is 12 inches in diameter and is located along the Progress Energy right of way line approximately 1.1 miles west of and parallel to existing US 17. Two six-inch service lines extend from the main line easterly along NC 58 toward the Town of Pollocksville for approximately 1.2 miles to US 17. The service line then runs northeasterly adjacent to the west side of US 17 for approximately 0.87 miles, through downtown Pollocksville to the Trent River.

Propane gas delivery service is also available in the study area by Jenkins Gas and Oil Company located on US 17 in Pollocksville.

3.3.5 Visual Quality

The project area is mostly rural with scattered residences, businesses, forests, and cultivated land. The landscape's visual character is shaped by manmade and natural features including rural residences, neighborhoods, and subdivisions; commercial and industrial development; wooded forests (both managed and unmanaged); agricultural lands; and rivers and streams. Small towns and communities also dot the landscape.

3.3.6 Hazardous Materials

The Resource Conservation and Recovery Act of 1976 defines hazardous materials as "solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or in serious irreversible, or incapacitating reversible illnesses." Hazardous materials also "pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed."

Hazardous material sites are regulated by the Resource Conservation Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Hazardous materials are generally defined as material or a combination of materials that present a potential hazard to human health or the environment. These materials may be solid, liquid, or gas and are characterized as flammable, explosive, corrosive, radioactive, reactive, toxic, and infectious. Potential hazardous material sites include dumps, landfills, salvage yards, industrial sites, pits, and lagoons. Above and below-ground storage tanks are common hazardous material sites. Older tanks often deteriorate and contaminate surrounding soil and groundwater.

A field reconnaissance was performed in January of 1994 to identify potential hazardous material sites. The survey identified 28 potential underground storage tanks (USTs) and/or

hazardous material sites. Of these, seven were still operational at the time of the survey. Three additional abandoned sites were identified June 22, 1995 following an additional field inspection. **Table 3-8** gives a brief description of each property. The locations of the properties are shown on **Figure 3-10**. In October 2010, a database records check identified 17 reported hazmat sites which could be located with GIS tools and 39 orphan sites surrounding the project area; the 2010 records search is presented in Appendix E.

Many of these sites appear to be quite old; therefore, little information is available about the status of the properties. Prior to 1988, NCDENR did not require that underground storage tanks be removed and closed out when taken out of operation. Therefore, it can only be assumed that tanks remain on many of the abandoned properties within the project study area.

TABLE 3-8: POTENTIAL HAZARDOUS MATERIAL SITES AND USTS

Site #	Name	Location	Description
3*	Johnson Trucking Co.	US 17, Jacksonville, NC	Abandoned gas pump 81 ft from US 17 centerline.
4	Parker's Grocery	7357 US 17, Belgrade, NC	Contains evidence of UST removal approximately 60 ft from US 17 centerline.
5	Belgrade Thrift Shop	7398 US 17, Belgrade, NC	UST containing fuel 45 ft from US 17 centerline.
6	Belgrade Café	7540 US 17, Belgrade, NC	Three vent pipes approximately 86 feet from US 17 centerline. Tanks may still be in place.
7	Abandoned Site	7533 US 17, Belgrade, NC	Contains evidence of UST removal and 5 USTs still present approximately 63 ft from US 17 centerline.
8	Belgrade Fire Department	US 1 7, North Belgrade, NC	Evidence of UST removal. No tank removal closure report available.
9	Belgrade Auto Parts and Garage	US 17, North Belgrade, NC	No evidence of past or present USTs but the possibility of soil contamination exists due to the nature of the business.
10	Byrd's Grocery	1101 US 17, Maysville, NC	According to present owner tanks removed 35 years ago by A. J. Ballard Co., New Bern, NC
11	Maysville 76 (Facility ID # 0-025980)	US 17-55 & 8th St., Maysville, NC	Three (3) gasoline USTs (4000, 3000 & 3000 gallon) and one (1) diesel UST (3000 gallon).Pump island located approximately 60 ft from US 17 centerline.
12	Antique Store	608 Main St. (US 17), Maysville, NC	Pump island located 27 feet from US 17 centerline.
13	Joe's Country Store	406 Main St, Maysville, NC	Four USTs located 50 feet from US 17 centerline.
14	Ley's Truck Stop (Facility ID # 0-001696)	US 17 & 3rd St., Maysville, NC	Two (2) gasoline USTs, one (1) kerosene UST, four (4) diesel USTs and one (1) UST with unknown contents. The site is located approximately 50 feet from US 17 centerline.
15	Abandoned Site	West side of US 17 between Maysville and SR 1107	Abandoned pump island located approximately 54 feet from US 17 centerline.

TABLE 3-8: POTENTIAL HAZARDOUS MATERIAL SITES AND USTS

Site #	Name	Location	Description
16	Mallard Food Shop #18 (Facility ID # 0-002257)	610 US 17, Pollocksville, NC	Three (3) gasoline USTs, two (2) diesel USTs and one (1) kerosene UST. Site appears to be under remediation and there is evidence of removal of a monitoring well.
17	Rhem's BP	300 US 17 (US 58 & US 17), Pollocksville, NC	Six (6) USTs located approximately 101 ft from the US 17 centerline. Monitoring wells are in place at this site.
18	Fred's Grocery	290 US 17, Pollocksville, NC	Three (3) USTs located approximately 95 ft from US 17 centerline.
19	Bell's Service Station (Facility ID # 0-013409	US 17 & SR 1004 Pollocksville, NC	Two (2) gasoline USTs, one (1) diesel UST and one (1) waste oil UST. Tanks are located 75 ft from US 17 centerline.
20	Pollocksville Service Station	504 US 17, Pollocksville, NC	Seven (7) USTs, the closest being approximately 57 ft from US 17 centerline. There is also an oil change pit located on the north side.
21	Parker Motor Co.	206 Main St., Pollocksville, NC	Four (4) fill caps are located approximately 24 ft from the US 17 centerline.
22	Crow's Video/Trent TV	202 & 204 Main St. Pollocksville, NC	Existing dispenser and fill cap approximately 38 ft from US 17 centerline. A kerosene pump is also located at this site.
23	Trent Service Center	121 Main St., Pollocksville, NC	Two (2) USTs located approximately 75 feet from US 17 centerline.
24	Abandoned Site (Demolished Building)	US 17 & SR 1336	Previous gas station with a concrete pad, pump island, two (2) fill caps and probably two (2) USTs located approximately 50 feet from US 17 centerline.
25	Abandoned Site (Old Building)	US 17 & SR 1336	Two (2) vent pipes and an existing pump island located 50 feet from US 17 centerline.
26	Abandoned Site (Old Country Store)	US 17	Two (2) USTs and a pump island located approximately 65 ft from US 17 centerline. The tanks are oriented 35 feet up gradient from a nearby creek.
27	Abandoned Site (Old Building)	US 17 & SR 1002	Existing pump island located approximately 44 ft from US 17 centerline.
28	Abandoned Site	399 Main St.	Existing pump island with two (2) fill caps containing a visible liquid located approximately 57 ft from US 17 centerline.
29	Abandoned Site	US 17 Pollocksville, NC	Two (2) pump islands exist.
30	Abandoned Site (Demolished Building)	US 17 & SR 1440 Belgrade, NC	Existing pump island.
31	Abandoned Site (Old Gas Station)	US 17 & Deppe Loop Rd., Jacksonville, NC	Existing pump island.

**Sites 1 & 2 are presented in the R2514A Environmental Assessment*

A survey of Onslow, Jones and Craven Counties revealed that there were no regulated or

unregulated landfills or dump sites within the project study area. However, an abandoned dump site was located along the White Oak River west of Maysville. This dump site contained old appliances, tires, and metal debris, which may require additional investigation. Numerous small private / personal dump sites were identified also.

3.3.7 Mineral Resources

There are more than 300 kinds of rocks and minerals known to occur in North Carolina. This is commonly reported to be the largest number found in any single state. Between 40 and 50 varieties of minerals and rocks have been mined in the state, but none are concentrated in sufficient amounts to be of economic importance. North Carolina does not contain outstanding deposits of coal, oil, iron ore, gold, copper, or diamonds, but it does contain mineral resources that are important to its economic development. North Carolina is the chief producer of pegmatite minerals that consist largely of feldspar, kaolin, mica, and quartz. For many years, the Piedmont and Mountain sections of the state were the chief sources of minerals, but in recent years newly discovered deposits of phosphate and increased uses of limestone are making the Coastal Plain more important. Mines and quarries in the Coastal Plain typically produce clay, sand, gravel, greensand, phosphate, shell limestone, marl, ilmenite sand, peat, and some granite. Groundwater is also an important mineral resource found in the Coastal Plain, as well as in most other parts of the state.

Martin Marietta Aggregates has an operational stone quarry in Belgrade mining limestone deposits of the Belgrade Formation. The Barrus Construction Company operates a sand and gravel quarry south of Belgrade, east of the abandoned railroad bed and US 17 near Deppe.

3.3.8 Floodplains / Floodways

The Federal Emergency Management Administration (FEMA), in cooperation with federal, state, and local governments, has developed floodway boundaries and Flood Insurance Rate Maps (FIRM) for Onslow and Jones Counties. As part of the National Flood Insurance Program (NFIP), FEMA determines floodway boundaries as a tool for floodplain management.

The floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of the stream and the adjacent floodplain area that needs to be kept free of encroachment so the 100-year flood can be carried without increasing the level and extent of flood elevations. The 100-year flood is defined as an event that is equaled on the average of once every one hundred years. The area between the floodway boundary and the 100-year floodplain boundary is known as the floodway fringe or the 100-year floodplain. Streams for which detailed hydrological studies have not been conducted do not have defined floodways, so only the 100-year floodplain

boundaries are estimated and mapped. **Figure 3-11** shows the floodplains and floodways in the study area.

3.3.9 Managed Lands

The following sections describe protected lands near the study area: wild and scenic rivers, state / national forests, and gamelands / preservation areas. **Figure 3-12** identifies key resources in the region.

3.3.9.1 Wild and Scenic Rivers

There are no listed Wild and Scenic Rivers in the study area; however, one river is identified as potentially eligible. The two primary rivers in the area are the White Oak River and the Trent River.

White Oak River: The White Oak River runs along the county boundary between Jones and Onslow Counties. It is a blackwater river approximately 40 miles in length and empties into the Atlantic Ocean at Onslow Bay. The White Oak River forms the western boundary of the Croatan National Forest. It is listed by the National Park Service as potentially eligible for listing as a Wild and Scenic River. Based on 1982 and 1993 National Park Service studies, portions of the river are considered potentially eligible based on scenery, recreational opportunities, and wildlife.

Trent River: The Trent River crosses through the study area just north of SR 1337 (Goshen Road) in Pollocksville, winding generally west to east along the boundary of the Croatan National Forest to the Neuse River. The Trent River is approximately 100 miles in length and provides recreational opportunities for boating, fishing, and wildlife viewing. Although the Trent River is not a national Wild and Scenic River, the NC Department of Natural Resources classifies the Trent River and its tributaries (Goshen Branch, Mill Creek, Scott Creek, Deep Gully, and 15 unnamed tributaries) as managed and monitored at the state level, as discussed in Section 3.5.3.

3.3.9.2 State / National Forests

Hofmann State Forest: Hofmann State Forest is an 80,000-acre state forest that is owned and managed by the Endowment Fund of North Carolina State University. The forest lies west and southwest of the project area.

Croatan National Forest: The Croatan National Forest is a 160,000-acre national forest located between New Bern and Maysville, east of US 17, that extends to NC 24 near the Intracoastal

Waterway. The forest features coastal / inland swamp habitat with recreational opportunities for hiking, boating, camping, swimming, wildlife viewing and more. The forest lies along the eastern side of the existing US 17 alignment for a large portion of the study area.

3.3.9.3 Gamelands and Preservation Areas

The North Carolina Natural Heritage Program (NHP) maintains a list of significant "natural heritage areas" throughout the state that identify sites which represent the best collections of natural diversity, with occurrences of rare plant and animal species, rare or high quality natural communities, and special animal habitats. Not all areas are protected, but inclusion in the list indicates a site deserves priority for protection. The following sites are listed in or near the project area:

The **Croatan National Forest** is classified as a nationally-significant megasite and runs along the eastern side of US 17 north and east of Maysville. Portions of the forest are designated as protected areas for various species, including the red-cockaded woodpecker and black bears.

The **Maysville Goldenrod Roadsides** is a population of spring-flowering goldenrod that grows along US 17 in roadside ditches. This colony is one of the largest and most productive colonies in North Carolina and has been identified by the NHP as nationally significant. Annual roadside mowing of this species (after flowering and fruiting) may contribute to its success by mimicking natural disturbance by periodic fires. Spring-flowering goldenrod has been documented along the western shoulder of US 17 south of Belgrade, also.

Mill Creek Outcrops is a privately-owned area located immediately east of the study area. The Mill Creek Outcrops natural area is characterized by the presence of marl outcrops and Carolina spleenwort and contains a rare natural plant community identified by the NHP as nationally significant.

The **Trent River Aquatic Habitat** is a public waterway crossing the study area north of Pollocksville.

Other natural heritage areas beyond the boundaries of the study area are Catfish Lake (9,700 acres located within the Croatan National Forest), Island Creek Natural Area (280 acres located east of the US 17 corridor along SR 1004), the Cherry Point Oak Grove Swamps (180 acres along the Trent River, immediately west of the study area), Deep Gully (70 acres immediately northeast of the corridor), and the White Oak Marshes (3,800 acres southeast of the corridor).

In addition, the Onslow Bight extends from Cape Fear to Cape Lookout and approximately 30 miles inland, containing a unique area of saltwater marshes, barrier islands, riverine wetlands,

and other coastal ecosystems. The area includes Cape Lejeune and the Croatan National Forest that provide unique habitats for a collection of rare plant and animal species. In 2002, the Onslow Bight Conservation Forum was formed to increase protection, promote appropriate land management, create habitat corridors, and encourage local involvement to preserve the area.

3.4 CULTURAL RESOURCES

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR Part 800), and implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified as 36 CFR Part 800. Section 106 requires federal agencies to take into account the effect of their undertakings (federally-funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council a reasonable opportunity to comment on such undertakings. Districts, sites, buildings, structures, and objects associated with American history, architecture, archaeology, engineering, or culture are considered eligible for the NRHP if they possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

Criterion A: *Resources that are associated with events that have made a significant contribution to the broad pattern of our history; or*

Criterion B*: Resources that are associated with the lives of persons significant in our past; or*

Criterion C*: Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*

Criterion D*: Resources that have yielded or may be likely to yield information important in prehistory or history.*

The following sections summarize the cultural resources identified within the project study area.

3.4.1 Historic Architectural Resources

The investigation of the architectural resources was conducted in two phases. Phase I included a survey to identify significant or potentially-significant architectural resources as defined by the criteria of the National Register of Historic Places. Field reconnaissance surveys were conducted of all properties located within the study area. The results are found in the *Phase I Architectural Reconnaissance Survey, US 17 Widening, Jones and Onslow Counties, North Carolina Department of Transportation, TIP No. R-2514, June 20, 1995*, incorporated by reference.

Phase II included an intensive survey within the area of potential effects (A.P.E.) to identify all significant architectural resources which were built prior to 1946, as defined by the criteria of the National Register of Historic Places. Every property 50 years of age or older was photographed, mapped, and evaluated. Those considered worthy of further analysis were evaluated in the Phase II report. This analysis included interviews with knowledgeable individuals and organizations, as well as an examination of published local histories, architectural surveys, newspaper files, and other pertinent primary and secondary documents. The results are found in the *Phase II (Intensive Level) Architectural Survey and Evaluations of Eligibility for US 17 Widening, Onslow and Jones Counties, North Carolina Department of Transportation, TIP Number R-2514, May 3, 1999, and Addendum, August 17, 2000,* incorporated by reference.

A total of 117 properties were identified and evaluated. Of these, three properties are listed in the National Register of Historic Places; two districts and four properties were determined eligible for listing in the National Register (NR). Structures listed in the NR of Historic Places or structures more than 50 years of age require environmental documentation; therefore, the properties and districts listed as eligible are not subject to this environmental documentation. A list of the properties and districts are shown in **Figure 3-13** and listed below:

Properties Listed in the National Register

- Foscue and Simmons Plantations includes (Foscue Plantation House and Amos L. Simmons Jr. House)
- Bryan-Bell Farm (Oakview Plantation)

Districts Eligible for the National Register

- Pollocksville Historic District (including the Bryan Lavender House and the Trent River Plantation)
- Maysville Historic District

Properties Eligible for the National Register

- Ten Mile Fork Gas Station / Store
- J. Nathan Foscue Farm
- Henderson-Provost House / Store
- Zinnie Eubanks House / Store

Foscue and Simmons Plantations – The Foscue and Simmons Plantations are located on both sides of US 17, approximately 2.2 miles north of Pollocksville in Jones County. The Foscue House is located east of US 17 and the Amos L. Simmons Jr. House is located west of US 17, just north of the Foscue House. A foundation and conservation easement with the North Carolina Coastal Land Trust was established on November 24, 1999 to protect the property. The

Foundation is run by James E. Foscue.

The Foscue House is a substantial and well-preserved Federal-style dwelling, representing an excellent example of the urban, side hall houses built in New Bern during the eighteenth and early nineteenth centuries. The house is a rare survivor from the turn of the nineteenth century with a tall, rectangular form with a pedimented, side gable roof; massive, interior end chimneys; a corbelled, brick cornice; and a full, raised basement. A two-story, frame rear ell, sheathed in weatherboard siding, has been added to the house. The Foscue Plantation House was built by a local prominent planter, Simon Foscue (born 1780), soon after his marriage to Christiana Rhem in 1801. The house faced the colonial post road (King's Highway) and had extensive river frontage along the Trent River, providing river access to New Bern and the Neuse River. The Plantation grew to over 1,000 acres by 1850 which included 200 acres improved and 800 acres unimproved. Farming and naval store production were the primary products of the plantation. The Foscue family cemetery occupies a tree-shaded parcel, approximately 130 feet south of the house and just north of an unpaved farm lane that leads east from US 17 towards the Trent River.

The Amos L. Simmons, Jr. House (ca. 1870) is a blend of Greek Revival and Italianate features. This one-story, frame dwelling has a cubic form with low, standing seam, metal hip roof, a bracketed cornice, a symmetrical, five-bay façade, and corner pilasters. Although abandoned, the house survives substantially intact. In addition to the dwelling, the tract contains an early twentieth century, center passage, frame barn and another outbuilding, possibly a corncrib. Both structures are abandoned and in ruinous condition. The farm grew to 600 acres by 1880. Some of the former agriculture fields are now woodlands and a portion of the original tract is subdivided.

The Foscue House retains its exterior integrity and, with the exception of the rear ell, is largely unchanged since its 1971 listing in the National Register. In 1998, the National Register nomination was amended to incorporate the surrounding farmland and woodland, as well as the Amos L. Simmons, Jr. House. The 1998 amendment was redesignated as the Foscue and Simmons Plantation and was listed under Criterion A for agriculture and social history as well as Criterion C for architecture. The expanded boundary encompasses 1,379 acres bounded by the Trent River to the east and southeast, Duck Creek to the north, and an unnamed creek to the south. On the western side of US 17, the National Register boundary conforms to the tax parcel.

Bryan-Bell Farm – Oakview Plantation - This property was listed in the National Register of Historic Places on November 20, 1989 under Criterion A for agriculture and C for architecture. The farm is a 2,251-acre tract of land that straddles NC 58 approximately two miles west of Pollocksville in Jones County. It is bordered on the north by the meanderings of the Trent River, on the south by Little Hell and Bender Branches, on the east by Goshen Branch, and on the west by Mill Run.

Centered on the property just south of NC 58 is the ca. 1840 Neo-Classical Revival-style house. An array of farm outbuildings dating from the 1840s to the late 1940s is located around the house. Along NC 58 and within the farm's boundaries are six groups of structures that contain traditional farmhouses and farm buildings from the mid-nineteenth century to World War II. A nineteenth century burial ground is located in the woods south of the house.

Pollocksville Historic District - The Pollocksville Historic District includes commercial, residential, ecclesiastical, and governmental buildings dating from the early nineteenth century to the present. The town has a grid system of tree-lined streets, with US 17 designated as Main Street through town. Pollocksville exemplifies the small river towns of eastern North Carolina which developed during the pre-railroad and pre-automobile era as a distribution center for agricultural products and naval stores. Located at the crossing of a colonial post road (now Main Street and US 17) over the Trent River, the community emerged as an important market town during the early national and antebellum periods. Along Main Street, commercial buildings, churches, and fashionable residences date from the early nineteenth to the mid-twentieth century. An African-American neighborhood is located on Hudson Street on the east side of Pollocksville, which is bounded by the former Seaboard Coast Line railroad.

Also found on Main Street are some of the oldest and most stylish dwellings of Pollocksville, including the well-preserved **Bryan Lavender House** and the **Trent River Plantation.** The boundaries of the Pollocksville Historic District encompass approximately 95 acres and include both resources.

In August 1995, the Pollocksville Historic District was determined eligible for the National Register of Historic Places under Criterion A for both community planning / development and ethnic heritage (African-American). The historic district is also deemed eligible under Criterion C for architecture.

Maysville Historic District - The Maysville Historic District includes houses and commercial buildings dating from the late nineteenth century to World War II. The town has a grid system of streets that form large, tree-shaded residential blocks on the east and west side of Main Street (US 17). The district contains one intact early twentieth-century church, Holy Innocents Catholic Church (ca. 1910). Maysville experienced small-scale commercial and industrial growth with the advent of the railroad in 1893. Although early commercial buildings remain intact, many are now closed or vacant, and the railroad era industrial properties are no longer extant. The boundaries encompass approximately 16 blocks.

In August 1995, the Maysville Historic District was determined eligible for the National Register under Criterion A for community planning and development and Criterion C for architecture.

Ten Mile Fork Gas Station / Store - This gas station / store (ca. 1925) occupies a triangular tract at the junction of US 17 and Wise Fork Road (SR 1002) in a crossroads community known as Ten Mile Fork. The structure consists of a small, frame building with a cross hip, standing seam, metal roof, a front gable, and a pump canopy. A shed (ca. 1925) also exists in the rear. The property is typical of the crossroad stores and gas stations built between World War I and World War II throughout rural America, which are now quite rare. The boundaries encompass 0.62 acres of the current 5.6 acre tax parcel.

In August 1995, this gas station / store was determined eligible for the National Register of Historic Places under Criterion A for commerce and Criterion C for architecture.

J. Nathan Foscue Farm - The farm (ca. 1880) comprises a sizable, low-lying, agricultural tract on the east side of US 17 between Pollocksville and Maysville. A long, unpaved lane leads straight from US 17 to the farmhouse, which is sited approximately 0.6 miles from the highway. The house is a two-story, frame, cubic dwelling with a high hip roof and weatherboard siding. A host of early twentieth century outbuildings remain intact, including a chicken coop, three tobacco barns, harness shed, pack house / grading room, grape arbor, and a shed-roof garage. The brick-walled Foscue Family Cemetery stands behind the house. A group of modern, metal corncribs and a modern, frame equipment shed complete the farm complex. A landscape of fields and woodlands surround the farm buildings. The boundaries encompass the existing 520-acre tract.

This farmhouse was determined eligible for the National Register of Historic Places under Criterion A for agriculture and Criterion C for architecture.

Henderson-Provost House / Store - The house (ca. 1910) occupies a small lot at the junction of Belgrade Extension Road (SR 1440) and Belgrade-Swansboro Road (SR 1434), approximately 0.1 mile east of US 17, in the Community of Belgrade. This two-story, single pile dwelling has a two-story, front ell (which housed a store and post office), a one-story, rear ell, and a two-tiered porch. The house, with the store section, has an intersecting gable roof, with full return gables, a decorative center gable, vinyl siding, and an infilled pier foundation. The main block of the house has a hall-parlor plan and the interior remains largely intact. The boundaries encompass the existing 0.74 acre tract.

This house / store was determined eligible for the National Register of Historic Places under Criterion A for commerce and Criterion C for architecture.

Zinnie Eubanks House / Store - The house / store (ca. 1912) is located at the eastern edge of the crossroads of Belgrade Extension Road (SR 1440) and Belgrade-Swansboro Road (SR 1434) in the Community of Belgrade. The house / store survives largely intact and consists of a

substantial, two-story, frame, L-shaped building which retains its original weatherboarding, standing seam metal roof, and two-over-two light, wooden sash windows. The property continued to operate as a grocery store in the first floor of the forward projecting wing until the early 1970s when the property was acquired for purely residential use. The boundaries encompass the existing 1.1 acres tract.

This house / store was determined eligible for the National Register of Historic Places under Criterion A for commerce and Criterion C for architecture.

3.4.2 Archaeological Resources

A preliminary archaeological background investigation and field survey was conducted in 1995 based on the preliminary corridors as shown in Chapter 2, **Figure 2-2**. Three archaeological sites, which were originally recorded during the 1970s, were noted within the study area: Site No. 31ON164, Site No. 31ON165, and Site Number 31JN20. All three archaeological sites represent prehistoric lithic scatters within plowed fields.

Background research indicated that US 17 from Belgrade to Deep Gully is in the vicinity of the colonial post road which linked New Bern, Pollocksville, and Swansboro. Seven colonial period sites have been identified along US 17 in the Rocky Run area. Several of these sites were determined eligible for the NRHP. It is anticipated that the project area north of Belgrade in the vicinity of US 17 may contain a similar density of sites dating as early as the colonial period. In addition, the areas adjacent to Deep Gulley, Scott Creek, the Trent River, the White Oak River, and Starkey's Creek are expected to yield many prehistoric archaeological resources.

In 2009, additional archaeological field work was performed in the study area, as documented in the report *Archaeological Survey and Evaluation of the US 17 Improvements from Jacksonville to New Bern, Jones and Onslow Counties, North Carolina, January 2010* and supplemented with an archaeological investigation and evaluation of Alternative 2A, *Archeological Survey and Evaluation of Alternate 2A of the US 17 Improvements from Jacksonville to New Bern, Jones and Onslow Counties, North Carolina, November 2010*. These efforts included background research, pedestrian investigations, shovel testing, and limited test excavations at one site to determine NR eligibility. A total of 34 archaeological sites were documented within the study area as part of the 2009 and 2010 investigations, including one site (31JN128**) recommended as eligible for the NRHP. Site 31JN128** dates to the late 18th / early 19th century and falls only partially within the study corridor; it is recommended that this site be avoided by construction activities or subjected to data recovery excavation.

3.5 NATURAL ENVIRONMENT CHARACTERISTICS

This section describes the natural resources found within the study area. A more detailed report is on file at the North Carolina Department of Transportation entitled, *Natural Systems Report, North of Jacksonville to South of New Bern, Onslow and Jones Counties, North Carolina, August 2001*. A 2003 *Wetlands Report* and 2007 *Reverification of Jurisdictional Area and Neuse River Buffer Impacts Evaluation* also contain additional information about the natural environment and are incorporated by reference.

3.5.1 Soils / Topography / Geology

Soils in the study area are classified by the US Department of Agriculture Natural Resources Conservation Service into general soil map units, comprised of one or more detailed soil map units. The general soil map unit is named for the major detailed soil map units but also consists of several different minor soils. Detailed soil units may be included in more than one general soil unit, but in different patterns. The soils in any one general soil map unit may differ in slope, depth, drainage, and other characteristics that affect land use.

Soil development is dependent upon biotic and abiotic factors, which include past geologic activities, nature of parent material, environmental, and human influences, plant and animal activity, age of sediments, climate, and topographic position. The project study area contains three general soil associations. General soil associations incorporate areas with a distinctive pattern of soils, relief, and drainage (USDA 1992). The types of general soil associations identified across the project area are floodplains, stream terraces, and uplands.

Floodplain associations across the project area are located within the floodplains of the White Oak River, Trent River, creeks, and tributaries of large creeks. The White Oak River Floodplain is dominated by Muckalee-Dorovan Association in Onslow County and Muckalee Association in Jones County. The Trent River and major tributary floodplains are also dominated by Muckalee association with Alpin-Kenansville associations dominating the excessively drained and well drained stream terraces.

The upland associations can be differentiated into two types: those characterized by nearly-level, poorly-drained and very-poorly-drained soils; and those characterized by nearly-level-to-sloping, well-drained to somewhat-poorly-drained soils. Nearly-level-to-sloping, well-drained to somewhat-poorly-drained soil associations within the project area include the Norfolk-Goldsboro-Onslow Association in Onslow County between Starkeys Creek and the White Oak River, the Rains-Goldsboro-Lynchburg Association in Jones County west of US 17 between the White Oak River and Mill Creek, and the Leaf-Lenoir-Craven Association in Jones County

abutting the stream terraces associated with the Trent River and Mill Creek. Nearly-level and very-poorly-drained soil associations within the project area include the Pantego-Torhunta association in Jones County east of US 17 between the White Oak River and Mill Creek.

Each general soil association contains one or more mapping units occupying a unique natural landscape position. Map units are named for the major soil or soils within the unit, but may have minor inclusions of other soils. A report entitled *Natural Systems Report, US 17, North of Jacksonville to South of New Bern, Onslow and Jones Counties, North Carolina,* August 2001 provides soils mapping and brief summaries of the characteristics of the soils found within the project area.

Hydric soil mapping units within the project corridor include the Bayboro, Grantham, Leaf, Muckalee, Pantego, and Rains series (USDA 1991). Non-hydric soil mapping units that may have hydric inclusions include the Alpin, Autryville, Craven, Goldsboro, Johns, Lenoir, Lynchburg, Marvyn, Nahunta, Norfolk, Onslow, Pactolus, and Stallings. Other non-hydric soil mapping units within the project area include the Exum, Kalmia, Kenansville, and Suffolk series.

The climate of the study area is mild, with 0-degree Fahrenheit (° F) temperatures rare, and snowfall infrequent. Temperatures of 100° F occur in June through September. The county's average temperature in January is 44° F and the average July temperature is 79° F. The average rainfall is 56 inches.[3]

The topography in the study area is characterized as rather flat with low, gently-rolling hills. Somewhat steeper slopes are found along the edges of stream and river floodplains. Elevations within the project area range from 44 feet above mean sea level near Deppe to near sea level along the Trent River.

The study area is located in the Coastal Plain Physiographic Province of North Carolina. The area is underlain by Tertiary sediments of two formations, the River Bend Formation and the Belgrade Formation (NCGS 1985). The Belgrade Formation, which generally includes the area between Belgrade and Pollocksville, is described as consisting of oyster-shell mounds in tan or orange sand matrix, indurated locally. The remainder of the study area is underlain by the River Bend Formation, which is described as consisting of limestone calcarenite overlain and intercalated with indurate, sandy, molluscan-mold limestone.

[3] Jones County Economic Development Commission Website, *http://www.co.jones.nc.us/Industry.htm /*, accessed 5/25/10

3.5.2 Biotic Communities and Wildlife

Background research on soils, water resources, wetlands, protected species, and other area natural features was conducted in support of natural resource investigations. Information sources used in this investigation of the study area included:

- US Geological Survey (USGS) 7.5-minute quadrangle maps: Kellum, NC (1977), Stella, NC (1984; photorevised 1994), Maysville, NC (1984; photorevised 1994), and Pollocksville (1950; photorevised 1994).
- US Fish and Wildlife Service (USFWS) National Wetland Inventory Maps of the same quadrangles listed above.
- Natural Resources Conservation Service (NRCS), soil surveys for Craven County (USDA 1989), Jones County (USDA 1981), and Onslow County (USDA 1992).
- Aerial photograph mosaic (1:5000) and county tax maps (1:4800).

Water resource information was obtained from the following source:

- NC Department of Environment and Natural Resources, Division of Water Quality (NCDWQ) website (link from http://h2o.enr.state.nc.us/)

Information concerning the occurrence of federal and state protected species in the study area was gathered from the following sources:

- US Fish and Wildlife Service (USFWS) website list of Onslow County and Jones County Endangered Species, Threatened Species, and Federal Species of Concern (http://nc-es.fws.gov/es/countyfr.html)
- NC Natural Heritage Program (NCNHP) database of rare species and unique habitats.

Plant community patterns were identified from available mapping sources and verified in the field. Primary components of each community were examined and the species composition of each was recorded. Plant community descriptions are based on the classification system developed by Schafale and Weakley (1990). When appropriate, community classifications were modified to reflect existing field conditions. Vascular plant names follow nomenclature found in Radford *et al.* (1968).

Wildlife distribution and habitat use were determined through field observation, evaluation of habitat-type distributions, and a review of supporting literature (Martof *et al.* 1980; Potter *et al.* 1980; Lee *et al.* 1982; Webster *et al.* 1985; Menhinick 1991; Hamel 1992; Rohde *et al.* 1994; Palmer and Braswell 1995). Techniques used to document terrestrial fauna include visual observations, identification of bird and frog calls and songs, and identification of tracks and scat. Dip nets, seines, and electro-shocking techniques were used to document aquatic life.

3.5.2.1 Terrestrial Communities and Wildlife

Distribution and composition of plant communities throughout the project area reflect variations in topography, soils, hydrology, and past or present land use practices. Natural land disturbances such as fire, hurricanes, or tornadoes result in uneven-aged stands or a patchy mosaic within even-aged communities. Logging, farming, selective cutting, and natural succession after farming have resulted in the present landscape. Nine terrestrial plant communities were identified within the study area. Each of the communities is described below.

Pine Woodlands - Areas designated as pine woodlands are characterized by a predominance (greater than 80 percent cover) of pines in the canopy. Pine woodlands within the project area are a combination of natural communities and silvicultural stands and are common throughout the project vicinity. Stands of loblolly pine (*Pinus taeda*) are prevalent in interstream areas. Many pine stands are silvicultural plantings managed for timber or pulpwood production while others are natural pine woodland communities or seral stages resulting from old-field succession or timber management. Pond pine (*P. serotina*) is present in limited areas of the study area and longleaf pine (*P. palustris*) is present mostly in urban settings.

Species composition within pine woodland communities varies with the age of the stand. In young stands (5-10 years), the canopy is mostly closed and excludes many other species. Hardwood saplings may become established as the stands age: Common species within project area pine woodlands include sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), and water oak (*Quercus nigra*). Shrub and herbaceous development depends on hydrologic conditions, with species such as flowering dogwood (*Cornus florida*), horse sugar (*Symplocos tinctoria*), wax myrtle (*Myrica cerifera*), and bracken fern (*Pteridium aquilinum*) common in upland areas; and red bay (*Persea palustris*), sweet bay (*Magnolia virginiana*), titi (*Cyrilla racemiflora*), sweet pepperbush (*Clethra alnifolia*), and giant cane (*Arundinaria gigantea*) prevalent in areas with prolonged surface saturation. Vines such as Japanese honeysuckle (*Lonicera japonica*), greenbriers (*Smilax laurifolia* and *S. rotundifolia*), and blackberry (*Rubus* spp.) are sometimes common in disturbed areas.

Pine / Mixed Hardwood Forest - This community is characterized by the co-dominance of pines and hardwoods in the canopy. Pines, especially loblolly pines, represent between 20 and 80 percent of canopy dominance, with the remainder of the canopy typically dominated by a mix of hardwood species such as water oak (*Q. nigra*), sweet gum, red maple, mockernut hickory (*Carya tomentosa*), southern red oak (*Q. falcata*) or tulip poplar (*Liriodendron tulipifera*). Pine / hardwood ratios vary considerably from site to site depending on age of the community and previous land management practices. Understory / shrub composition for much of this community resembles that of pine woodlands with a mixture of horse sugar, American holly (*Ilex opaca*), wax myrtle, dogwood, and young canopy saplings predominating. Cane,

greenbriers, ferns, honeysuckle, poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), cranefly orchid (*Tipularia discolor*), partridge berry (*Mitchella repens*), and other herbs occur sporadically throughout herbaceous layers depending upon the degree of disturbance and hydrologic conditions.

Mesic Mixed Hardwood Forest - Mesic mixed hardwood forests are found on the Trent River levees and along stream channels and mesic slopes bordering intermittent tributaries. These areas are usually associated with gentle to moderate slopes adjacent to stream floodplains and/or in floodplain areas of deeply cut intermittent streams. The community is dominated by various oaks, tulip poplar, red maple, sweetgum, water oak, and an occasional sycamore (*Platanus occidentalis*) or American beech (*Fagus grandifolia*). Pines may be present, but represent less than 20 percent of the canopy total. The understory varies in density and includes saplings of the canopy species, dogwood, sassafras (*Sassafras albidum*), and wax myrtle. Groundcover consists of vines such as honeysuckle, greenbrier, poison ivy, and yellow jessamine (*Gelsemium sempervirens*) as well as herbaceous species. Due to slopes along natural drainage areas, these communities may contain seepages which support various sedges (*Carex* spp. and *Cyperus* spp.), cinnamon fern (*Osmunda cinnamomea*), and netted chain fern (*Woodwardia areolata*).

Bottomland Hardwood Forest - Bottomland hardwood forest cover characterizes the floodplains along the Trent and White Oak Rivers. These systems are subject to seasonal inundation and support a diverse mixture of canopy species. Along the Trent and White Oak River channels, an intermittent fringe of bald cypress (*Taxodium distichum*) is present. However, the Bottomland Hardwood Forest Community is dominated by broad-leaved deciduous species. Canopy trees include swamp tupelo (*Nyssa biflora*), willow oak (*Q. phellos*), swamp chestnut oak (*Q. michauxii*), laurel oak (*Q. laurifolia*), water oak, shagbark hickory (*C. ovata*), red maple, and sweet gum. The understory typically consists of overstory tree species along with species such as sweet bay and red bay. Shrubs include titi, highbush blueberry (*Vaccinium corymbosum*), and ink-berry (*Ilex glabra*). Rattan-vine (*Berchemia scandens*) and other woody vines are common in this community.

Small Stream Swamp - Small stream swamps are found along the floodplains of the smaller steams within the project area. The canopy contains bald cypress and a mix of broad-leaved deciduous species including swamp tupelo, red maple, water oak, green ash (*Fraxinus pennsylvanica*), and sweetgum. Understory species include ironwood (*Carpinus caroliniana*), sweet bay, red bay, and red maple. Shrubs are variable and include privet (*Ligustrum sinense*), doghobble (*Leucothoe axillaris*) and Virginia willow (*Itea virginica*). Vines such as greenbriers (*Smilax* spp.) are common, but herbs are typically sparse. Herbaceous species include giant cane, cinnamon fern, Virginia chain fern (*Woodwardia virginiana*), royal fern (*Osmunda regalis*), and various sedge species.

Cypress-Gum Swamp - Cypress-gum swamp is found within the floodplains of the White Oak and Trent Rivers, and in depressional areas of several project area stream headwaters. Cypress-gum communities generally experience more prolonged flooding than bottomland hardwood communities. The semi-permanent flooding results in the dominance by bald cypress and swamp tupelo, although bald cypress may be lacking due to past forestry operations. Other species such as green ash, willow oak, water oak, and red maple may be present as sub-dominants. Understory species include sweet bay, slippery elm (*Ulmus rubra*), possum-haw (*Viburnum nudum*), privet, and sweet pepper-bush. Vines include greenbriers, rattan-vine, and climbing hydrangea (*Decumaria barbara*). Groundcover is sparse, usually concentrated on hummocks, and includes royal fern, cinnamon fern, Virginia chain fern, netted chain fern, and lizard tail (*Saururus cernuus*). Peatmoss (*Sphagnum* sp.) is prevalent throughout the shallow flooded portions of this community.

Successional Land - This community type includes fallow fields and cut-over forest land with one to several years of natural or planted growth. Successional land community is differentiated from other forest communities by the dominance of the herbaceous or shrubby strata rather than dominance of the tree stratum. Most of the successional areas within the project area occur as the result of clear-cut timber operations. However, succession from abandoned farm operations is also evident.

Species composition varies depending on soil type and available moisture. Early successional areas in upland or ditched areas are characterized by a number of opportunistic herbs such as broomsedge (*Andropogon virginicus*), aster (*Aster pilosus*), goldenrods (*Solidago* spp.), ragweed (*Ambrosia artemisiifolia*), dogfennel (*Eupatorium capillifolium*), honeysuckle, blackberry, and various grass species. Early successional areas subject to prolonged surface saturation or periodic inundation may be dominated by various hydrophytic species including black willow (*Salix nigra*), wax myrtle, groundsel tree (*Baccharis halimifolia*), titi, soft rush (*Juncus effusus*), cattails (*Typha* spp.), and sedges. Later successional stages in a range of hydrologic conditions exhibit an increase in loblolly pine, red maple, and sweetgum saplings. Cut-over forests typically show similar early successional herbaceous vegetation species, but exhibit rapid regrowth from stumps of hardwood species.

Agricultural Land - Agricultural land is used for the cultivation of row crops and field crops as well as grazing pasture. Farming is one of the main enterprises of both Onslow and Jones Counties and a large portion of the project area is agricultural land. The primary crops noted within the project area include corn (*Zea mays*), cotton (*Gossypium* sp.), soybean (*Glycine max*), and peanuts (*Arachis* sp.). Very little of the land is dedicated to pasture.

Urban / Disturbed Land – Urban / disturbed areas occupy a large percentage of land along the existing US 17 highway. This category includes areas with disturbed vegetation and/or soils

with man-made structures including buildings, roadways, parking lots, maintained yards, and areas where other human related activities dominate. Wide maintained roadside rights-of-way, powerline corridors, maintained road frontages, private homesites, residential communities, and commercial / industrial complexes are included in this category. Ornamental trees, shrubs, and grasses intermix with native mature pines, hardwoods, and occasionally invasive weeds in the landscape.

3.5.2.2 Terrestrial Wildlife

Most of the project area is rural in nature and provides a mosaic of plant communities that provide suitable habitat for a diversity of animals. Clearing and conversion of large tracts of woodland for agricultural, commercial and residential uses has eliminated cover and protection for some species of wildlife, but has increased habitat for others. However, extensive forested areas remain present in the project area, especially in the vicinity of the Croatan National Forest, Hofmann State Forest, and along the White Oak River floodplain. These forested areas provide habitat for large forest interior species. Woodland strips along the river floodplain and small tributary provide travel corridors for expansion. Agricultural fields not only provide food for wildlife, but also create edge habitat favored by many species.

Most of the mammals documented within the project area are large and medium-sized species that have wide habitat tolerances. These species include gray squirrel (*Sciurus carolinensis*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and white-tailed deer (*Odocoileus virginianus*). A notable mammal identified from tracks along Goshen Swamp is the striped skunk (*Mephitis mephitis*), which is uncommon in eastern North Carolina. Beaver (*Castor canandensis*) activity was evident in several streams in the project area. Black bear (*Ursus americanus*) and river otter (*Lutra canadensis*) are reported by local residents (personal communications) to occur occasionally within the project area. Other medium-sized mammals with wide habitat tolerances expected to occur within the project area include eastern cottontail (*Sylvilagus floridanus*), gray fox (*Urocyon cinereoargenteus*), and bobcat (*Felis rufus*). As part of this project, a wildlife crossing is being constructed to facilitate animal movement. Its location is illustrated in Figure 3-12.

No quantitative surveys were conducted to document the small mammal populations within the project area. The forested communities in the project area are expected to provide habitat for small mammals including insectivores such as southeastern shrew (*Sorex longirostris*) and northern short-tailed shrew (*Blarina brevidcauda*), and rodents such as cotton mouse (*Peromyscus gossypinus*) and golden mouse (*Ochrotomys nuttalli*). Early successional habitats, fallow agricultural fields, and weedy disturbed areas are expected to provide habitat for different insectivores, such as least shrew (*Cryptotis parva*) and eastern mole (*Scalopus aquaticus*), and rodents such as hispid cotton rat (*Sigmodon hispidus*) and eastern harvest mouse

(*Reithrodontomys humulis*).

The birds found in the study area are typical of rural Coastal Plain areas of North Carolina. Bird sightings within the area include a combination of permanent residents, summer breeders or visitors, winter visitors and migratory transients. Some birds are habitat-specific, whereas others have more general habitat requirements.

Common resident bird species observed year-round throughout the project area include species commonly occurring throughout eastern North Carolina. Commonly-encountered birds include species such as mourning dove (*Zenaida macroura*), northern cardinal (*Cardinalis cardinalis*), northern mockingbird (*Mimus polyglottos*), American robin (*Turdus migratorius*), Carolina wren (*Thryothorus ludovicianus*), Carolina chickadee (*Parus carolinensis*), and blue jay (*Cyanocitta cristata*). Pine warbler (*Dendroica pinus*) is a common resident within the extensive pine woodlands of the project area. Resident water birds documented within the project area include wood duck (*Aix sponsa*) and great blue heron (*Ardea herodias*). Resident raptors documented within the project area include great horned owl (*Bubo virginianus*) and red-shouldered hawk (*Buteo lineatus*).

Summer resident bird species documented within the project area include many migratory species that winter in the Neotropics. Many of these Neotropical migrants are area-sensitive species requiring mature forest interiors for breeding. Bottomland forests along the White Oak and Trent Rivers and larger tributaries provide suitable habitat for area-sensitive species including Acadian flycatcher (*Empidonax virescens*), yellow-throated vireo (*Vireo flavifrons*), prothonotary warbler (*Wilsonia citrina*), northern parula (*Parula americana*), and wood thrush (*Hylocichla mustelina*). Red-eyed vireo (*Vireo olivaceus*) is a common summer resident documented in a variety of forested communties. White-eyed vireo (*Vireo griseus*), yellow-breasted chat (*Icteria virens*), and indigo bunting (*Passerina cyanea*) are common summer residents found in shrubby successional habitats and along woodland edges.

Common winter resident bird species documented within the project area include several species of sparrows and finches (Fringillidae), kinglets (*Regulus spp.*), and yellow-rumped warblers (*Dendroica coronata*). Wintering sparrows are especially common in agricultural fields, fallow fields, and other early successional habitats.

Common reptiles documented within the project area include green anole (*Anolis carolinensis*) and eastern box turtle (*Terrapene carolina*), which are species occupying a range of habitats. Relatively few reptiles were documented during field work; however, undocumented species expected to be common in the project area include black racer (*Coluber constrictor*), rat snake (*Elaphe obsoleta*), and cottonmouth (*Agkistrodon piscivorus*). Commonly encountered terrestrial or arboreal amphibians include southern toad (*Bufo terrestris*), green tree frog (*Hyla*

cinerea), and spring peeper (*Pseudacris crucifer*). Small ponds, semi-permanently inundated floodplain wetlands, and ephemeral pools located throughout the project area are expected to provide suitable breeding habitat for an array of other amphibians, as well as turtle and water snakes (*Nerodia*).

A discussion on protected species is included in Section 3.5.4.3.

3.5.2.3 Aquatic Communities and Wildlife

Aquatic habitats within the project area include habitats ranging from ephemeral waters present in intermittent, channelized first order streams to permanent, deep-water riverine habitat within the Trent River. Non-riverine aquatic habitats include ponds and borrow pits with varying temporal hydrology as well as ephemeral pools present within plant communities.

The diversity of streams within the project study area provide habitat for a variety of aquatic species. Large streams and rivers with good water quality and a diversity of aquatic habitats, such as the Trent and White Oak Rivers, are expected to support a more diverse assemblage of fish and other aquatic organisms than smaller tributaries.

Limited sampling with seines and dip nets documented a number of fish species inhabiting project area streams. Sampling efforts were focused on perennial streams including the White Oak River, Starkey's Creek, Scott's Creek, Goshen Branch, and unnamed tributaries of the Trent River and Northeast Creek. Eastern mosquitofish (*Gambusia holbrooki*) and blue-spotted sunfish (*Enneacanthus gloriosus*) were common in most of the project area perennial streams sampled. Eastern mosquitofish were also noted in waters of intermittent streams and agricultural field ditches. Fish documented in larger streams and floodplain backwaters include golden shiner (*Notemigonus crysoleucas*), brown bullhead (*Ameiurus nebulosus*), eastern mud minnow (*Umbra pygmaea*), pirate perch (*Aphredoderus sayanus*), flier (*Centrarchus macropterus*), bluegill, (*Lepomis macrochirus*), warmouth (*L. gularis*), and swamp darter (*Etheostoma fusiforme*).

The prevalence of woody debris within most of the project area perennial stream channels limited the efficacy of using a seine for documenting larger and more mobile fish species. The sampling techniques utilized in this preliminary study were also of limited value in documenting the aquatic fauna of larger and deeper project area streams such as the Trent River and Mill Creek. Research indicates that the larger streams within the project area would be expected to support populations of game fish such as chain and redfin pickerel (*Esox niger* and *E. americanus*), largemouth bass (*Micropterus salmoides*), and several sunfish species including red breast sunfish (*Lepomis auritus*), redear sunfish (*L. microlophus*), and pumpkinseed (*L. gibbosus*), as well as bluegill and warmouth (Fish, 1968). These are common fish typically found in freshwater rivers and streams in the coastal plain.

Coastal plain streams are often utilized by anadromous fish species, which are fish such as striped bass (*Morone saxatilis*), shad (*Alosa* spp.), and sturgeon (*Acipenser* spp.) that spend their adult lives in the ocean but return to freshwater habitats to reproduce. Spawning habitats of anadromous species are typically located upstream of tidal influence and saltwater intrusion. Spawning conditions are rather specific for each species depending on water velocity, water depth, bottom composition, temperature, pH, turbidity, and water hardness. Telemetry data shows that, although striped bass may be present year-round within the Trent River; no striped bass spawning occurs in the Trent River or other project area streams (Brad Hammers, NCWRC, personal communication). No big shad runs are recorded for any of the project area streams (Brad Hammers, NCWRC, personal communication), although American shad (*Alosa sapidissima*) and alewife (*A. pseudoharengus*) have been documented in the Trent, White Oak and New Rivers; hickory shad (*A. mediocris*) and blueback herring (*A. aestivalis*) have been documented from the Trent River (Menhinick 1991). Neither Atlantic sturgeon (*Acipenser oxyrhychus*) nor shortnose sturgeon (*A. brevirostrum*) appears to have been documented from project area streams (Menhinick 1991). The Trent River and its tributaries are designated as Anadromous Fish Spawning Areas.

Streams within the project area provide riparian and benthic habitat for a variety of amphibians and aquatic reptiles. Ephemeral pools, swamps, and other flooded wetlands provide additional aquatic habitat, especially for breeding amphibians. Common amphibians and reptiles encountered throughout the project area include southern leopard frog (*Rana sphenocephala*), green frog (*Rana clamitans*), and eastern mud turtle (*Kinosternon subrubrum*).

Several species of conspicuous aquatic macroinvertebrate species were observed during stream surveys or other field work. Mollusks documented from project area streams include pointed campeloma (*Campeloma decisum*) (an aquatic snail), fingernail clams (*Sphaerium striatinum* and *S. occidentale*), and freshwater mussels (*Elliptio* spp.). Crustaceans observed in project area streams include grass shrimp (Palaemonidae) and crayfish (Cambaridae). Aquatic insects and insect larvae are common in project area streams.

3.5.3 Water Resources

A *Natural System Report, August 2001* and *Hydraulics Report, October, 1997 and Addendum No. 1, March 2000* were prepared for this study and are on file at the North Carolina Department of Transportation. These reports provide additional detail on the water resources identified in the study area.

Best Usage Classifications. The NC Department of Environment and Natural Resources (NCDENR), Division of Water Quality (DWQ) classifies stream segments according to their

highest supportable use. Unless otherwise stated, unnamed tributaries with no designated best usage classification share the classification of their respective receiving waters.

The White Oak River and associated tributaries all carry best use classifications of C within the study area. Class C waters are freshwaters protected for secondary recreation, fishing, aquatic life (including propagation and survival), and wildlife.

The Trent River and associated tributaries all carry best use classifications of C Sw NSW within the project area. The Sw supplemental classification refers to swamp waters, which is defined as waters having low velocities and other natural characteristics, which are different from adjacent streams. The NSW supplemental designation refers to Nutrient Sensitive Waters, which are waters subject to growths of microscopic or macroscopic vegetation and, as such, require limitations on nutrient inputs.

NPDES Dischargers. The National Pollutant Discharge Elimination System (NPDES) program regulates the issuance of permits for the construction, alteration, and/or operation of sewer systems, treatment works or disposal systems, and certain stormwater runoff location that would discharge into surface waters (DPA 1991).

There are no dischargers with permitted flows greater than 0.5 million gallons per day on the White Oak River or its tributaries, nor are there any on the Trent River or its tributaries. Based on a 2010 federal and state records check, there is one registered NPDES site in the project area; the Maysville Wastewater Treatment Plant is permitted for a 180,000 gallons per day discharge.

Water Quality Monitoring. One measure of water quality used by the NCDENR is monitoring of benthic macroinvertebrates. These are organisms that live in and on the bottom substrates of rivers and streams. These organisms are primarily aquatic insect larvae. The use of macrobenthos data has proven to be a reliable monitoring tool, as macrobenthos are sensitive to subtle changes in water quality (NCDENR 1997). Benthic Macroinvertebrate Ambient Networks (BMAN) are provided in the sections below.

There are no BMAN stations on the White Oak River or its tributaries upstream or within five miles downstream of US 17. However, an unrated saline BMAN station is located on the White Oak River near Stella, approximately 9.3 miles downstream from the existing US 17 bridge in Belgrade.

The only benthic macroinvertebrate sampling station located within the project area is located on the Trent River at US 17. This site was sampled in 1995 but has not been given a bioclassification rating due to DWQ's need to develop suitable criteria for slow-flowing, swamp-like systems in the Coastal Plain (NCDENR 1996). No other BMAN stations are located on the

Trent River or its tributaries within five miles upstream or downstream from the project area. However, a BMAN station is located near Trenton on the Trent River approximately 19.9 miles upstream from the existing US 17 bridge. Agricultural land use is identified as the primary nonpoint source impact causing water quality degradation in the Trent River system (NCDENR 1996).

3.5.3.1 Groundwater

Groundwater provides the primary source of drinking water for half of the residents in the state; the study area is underlain by several aquifers which provide groundwater for public use. Large groundwater withdrawals associated with urban development have led to salt water intrusion and slower recharge rates in the Castle Hayne Aquifer. Because of this, a large portion of the coastal plain area – including the study area – has been designated as a capacity use area by the NC Department of Environment and Natural Resources. The 15-County Central Coastal Plain Capacity Use Area requires that entities withdrawing over 100,000 gallons of groundwater per day be permitted. There are numerous permit holders throughout Jones and Onslow Counties.

A number of public and private water wells throughout the study area provide water for area residents. The Community of Belgrade and the Towns of Maysville and Pollocksville draw water from groundwater wells. The remainder of the study area is served by private wells.

3.5.3.2 Surface Waters

The study area is crisscrossed by several surface water streams. Most notable of these are the Trent River, which crosses US 17 within Pollocksville, and the White Oak River, which divides Jones County from Onslow County. There are also small farm ponds and wetlands in the vicinity.

3.5.3.2.1 Streams

Watersheds and Watercourses - Streams within the project area belong to two coastal drainage areas: the White Oak River (USGS # 03020301) and the Trent River (USGS # 03020204). The White Oak River System is a minor drainage area discharging into the Atlantic Ocean, and the Trent River is a sub-basin of the Neuse River. **Figure 3-11** depicts the major stream crossing locations.

White Oak River Drainage System - The White Oak River flows from west to east through the study area, roughly parallel to NC 58 south of Belgrade. A major unnamed tributary of the White Oak River extends west of Belgrade, north of White Oak River Road (SR 1331).

Trent River Drainage System - The Trent River and two associated unnamed tributaries, Goshen Branch, Scott Creek and an associated unnamed tributary, and Deep Gully are the major streams within the northern portion of the project area. The Trent River flows west to east through Pollocksville and then north towards New Bern. The US Army Corps of Engineers maintains a navigable channel within the Trent River that is 50 feet wide and 4 feet deep at low water. Goshen Branch is located west of Pollocksville and Scott Creek crosses US 17 north of Pollocksville. Deep Gully crosses US 17 at the northern limits of the study area and forms the Jones / Craven County line.

3.5.3.2.2 Ponds

A few small farm ponds or borrow pits are located in interstream settings within the project area. Water quality within these isolated water bodies is largely influenced by nutrient loading and sedimentation from agricultural and residential runoff. Larger lentic surface water bodies within the study area are found along the White Oak River and include quarry pits east of US 17 and ponds at a campground facility east of US 17.

3.5.4 Jurisdictional Issues

Section 404 of the Clean Water Act (CWA) requires regulation of discharges into "waters of the United States." Although the principal administrative agency of the CWA is the US EPA, the USACE has major responsibility for implementation, permitting, and enforcement of provisions of the Act. The USACE regulatory program is defined in 33 CFR 320-330.

Water bodies such as rivers, lakes, and streams are subject to jurisdictional consideration under the Section 404 Program. However, by regulation, wetlands are also considered "waters of the United States." Wetlands are described as:

> Those areas that are inundated or saturated by groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. [33 CFR 328.3(b) (1986)]

The USACE requires the presence of three parameters (hydrophytic vegetation, hydric soils, and evidence of hydrology) in support of a jurisdictional determination.

3.5.4.1 Wetlands

Jurisdictional wetlands in the study area were initially identified based on aerial photography. A

preliminary determination of the jurisdictional status of vegetated areas was completed to aid in alternatives planning. Wetlands and surface waters within the study area were then field delineated in 2000. The jurisdictional delineation was reviewed and approved by the USACE during on-site visits in May and August 2000. Wetland values and functions for 70 representative areas were evaluated; wetlands were also classified based on the source of their dominant hydrologic influence and were characterized as either riverine or nonriverine.

For the purposes of this assessment, it was assumed that former wetlands which appear to be actively cultivated or utilized for the production of farm commodities are "prior converted" (PC) croplands and not subject to jurisdictional consideration under Section 404 of the CWA. Federal guidance outlined in the *Interagency Statement of Principles Concerning Federal Wetlands Programs on Agricultural Lands* (1993) indicates that the Natural Resources Conservation Service will be responsible for the jurisdictional determinations on farmlands. PC cropland has been defined as wetlands that were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before December 23, 1985, to the extent they no longer exhibit important wetland values. There are no large areas of croplands on hydric soils in the study area; hydric soils are generally limited to minor inclusions located on depressions and along the drainage of agricultural fields.

Jurisdictional wetlands in the study area are palustrine in nature as defined in Cowardin *et al*. (1979), and as identified on National Wetland Inventory (NWI) mapping. Some of these systems are defined as palustrine but are hydrologically riverine influenced. The wetland systems vary in vegetative composition, depending on hydrological regime and site specific disturbances. All wetlands within the project study area have been disturbed and altered to some extent so special modifiers denoting particular disturbance factors were not utilized in this classification scheme, except where necessary to differentiate communities. Four wetland types were identified, palustrine forested, palustrine scrub-shrub, palustrine emergent, and palustrine unconsolidated bottom. Each of these community types is discussed below.

Palustrine forested (PFO) - Four palustrine forested wetlands types are present in the project area: needle-leaved evergreen communities located primarily in interstream flat systems; mixed, needle-leaved, evergreen / broad-leaved deciduous communities (PFO4/1) primarily located in interstream flat systems; deciduous hardwood communities (PFO1) primarily located in interstream flat systems and floodplain areas of the White Oak River; and deciduous communities (PFO6) primarily located within the floodplain of the Trent River.

Palustrine scrub-shrub (PSS) - Wetland scrub-shrub communities within the project area typically are dominated by deciduous vegetation. These hardwood shrub wetlands exist primarily in recently-timbered floodplains or depressional areas. Hydrologic regimes exhibited in these areas range from seasonally-flooded to semipermanently-flooded. Greenbrier,

blackberry, and other opportunistic species are a common component. Since these areas are quickly revegetated, they can still receive and process upland runoff and stream floodwaters and thus exhibit high values for sediment stabilization, sediment / toxicant retention, nutrient removal / transformation, and flood flow alteration. However, wildlife values in general are considered low due to the density of the shrub vegetation and the lack of canopy and understory structure.

Palustrine emergent (PEM) - These systems typically have persistent vegetation and are found in low landscape depressions or partially-excavated areas where woody shrubs and trees cannot establish or are kept from establishing by routine maintenance or disturbance. Hydrologic regimes exhibited in these systems range from seasonally-flooded to semipermanently-flooded. Within the study area, this emergent community has low wetland functional value due its limited size. Functional wetland characteristics such as sediment stabilization, sediment / toxicant retention, nutrient removal / transformation, and flood flow alteration have largely been negated by the nature of the community (i.e. disturbed and small size). Although this wetland type may provide occasional habitat for passerine birds and breeding habitat for some amphibians, wildlife habitat value is considered minimal.

Palustrine unconsolidated bottom (PUBH) - Areas identified as palustrine, unconsolidated bottom wetlands within the study area are typically excavated borrow pits with permanent flooding. These small areas provide few wetland functions because of their size, limited distribution, and lack of continuity with other wetland communities.

Two methods were used to assess wetland value and function for 70 representative wetlands within the project study area.

The first system used for the wetland analysis was the *Guidance for Rating the Values of Wetlands in North Carolina: Fourth Version* (NCDENR 1995). The procedure rates wetland value according to six attributes: water storage, bank / shoreline stabilization, pollutant removal, wildlife habitat, aquatic life value, and recreational / educational value. Attributes are weighted to enhance the results in favor of water quality value. Pollutant removal is weighted to be the most important wetland attribute, while water storage, bank / shoreline stabilization, and aquatic life are given equal weight as secondary attributes. Wildlife habitat and recreation / education are given minimal credit. Scores range from 0 to 100; higher scores indicate higher wetland values.

The second system used for the analysis was designed to assess wetland functional attributes based on hydrologic, biogeochemical, plant habitat, and animal habitat factors. The hydrologic factor is based on dynamic surface water storage, long-term surface water storage, and energy dissipation. The biogeochemical factor is based on the ability to cycle nutrients, remove elements and compounds, retain inorganic particulates, and export organic carbon. The plant

habitat factor is based on the ability to maintain characteristic plant communities and the ability to maintain characteristic detrital biomass. The animal habitat factor is based on the spatial habitat structure and the ability to maintain interspersion and connectivity. Models have been developed using data collected for determining a functional score from 25 environmental variables. The functional score calculated for each factor is analyzed and summed to determine the overall wetland functional score. Potential scores range from 0 to 41; higher scores indicate greater wetland function.

In order to fully assess the wetland systems in the project study area, the results from both the NC Division of Water Quality (DWQ) and wetland functional attributes methods were utilized to assign a rank of High, Medium, or Low Quality to each wetland in the project area. Wetland rankings were assigned based on a combination of the DWQ and functional values, size, location, and best professional judgment. For this level of analysis, 224 individual wetlands were identified which would potentially be impacted by one or more of the Preliminary Alternatives discussed in the State Draft Environmental Impact Statement. These represent 49 riverine and 175 nonriverine wetlands, ranked as 30 High quality, 69 Medium quality, and 125 Low quality wetlands.

During a March 2007 Merger Process Team Field Meeting, USACE observed wetlands and streams that were not shown on the August 2000 Jurisdictional Determination. Therefore, the USACE requested that jurisdictional delineations for the entire project be redelineated and reverified with the USACE again prior to any further coordination on alternative selection. During the summer of 2007, field work and documentation were completed for features falling within the proposed right-of-way limits for Alternatives 2A, 2C, 3, 4D, and 4E. The information was submitted to the USACE and the DWQ. The USACE issued a Notice of Preliminary Jurisdictional Determination in November 2009.

For this level of analysis, 25 new wetlands were identified in addition to those listed previously. A number of the original 224 wetlands identified as impacted previously were avoided in this subsequent analysis because the range of alternatives under consideration was reduced. Overall, 132 wetlands were identified which would potentially be impacted by one or more of Alternatives 2A, 2C, 3, 4D, and 4E. DWQ ratings for the wetlands identified in this jurisdictional delineation ranged from 12 to 88 points. Identified jurisdictional ponds, wetlands, and streams are shown in **Figure 3-14**. Specific impacts are discussed in Chapter 4.

3.5.4.2 Buffer Areas

Buffer areas are 50-foot wide setbacks along all navigable waterways and coastal shorelines, required along tributaries of the Neuse River, according to the Neuse River Basin Buffer Rules administered by the NC Division of Water Quality. The shoreline buffer protects water quality

by serving as a vegetated area to filter runoff from impervious developed areas (houses, parking lots, etc.). The Trent River and its tributaries are protected by these buffers, as shown in **Figure 3-11**.

Features within the Neuse River Drainage Basin portion of the project study corridors that are mapped as either a blue-line stream channel or open water feature on the most recent version of either the USGS topographic quadrangle or the county soil survey are also subject to the Neuse Riparian Buffer Rules unless review by DWQ confirms these features are not present in the field.

3.5.4.3 Protected Species

Species with the federal classification of Endangered (E) or Threatened (T) are protected under the Endangered Species Act (ESA) of 1973 (16 USC 1531 *et seq*.). **Table 3-9** presents the federal protected species listed for Onslow and Jones Counties. Descriptions of these federal protected species along with habitat requirements are presented following the table.

TABLE 3-9: FEDERAL LISTED ENDANGERED (E) OR THREATENED (T) SPECIES THAT MAY OCCUR IN ONSLOW (O) OR JONES (J) COUNTIES (31 JAN 2008 LIST)

Species	Status		Potential Habitat	County Listed
	Fed	State		
Red-cockaded woodpecker (*Picoides borealis*)	E	E	Yes	O & J
Eastern cougar (*Puma concolor couguar*)	E	E	No	O*[b]
Golden sedge (*Carex lutea*)	E	E	No	O
Rough-leaved loosestrife (*Lysimachia asperulaefolia*)	E	E	No	O
Cooley's meadowrue (*Thalictrum cooleyi*)	E	E	No	O
Leatherback sea turtle (*Dermochelys coriacea*)	E	E	No	O
Green sea turtle (*Chelonia mydas*)	T	T	No	O
Loggerhead sea turtle (*Caretta caretta*)	T	T	No	O
Piping plover (*Charadrius melodus*)	T	T	No	O
Seabeach amaranth (*Amaranthus pumilus*)	T	T	No	O
American alligator (*Alligator mississippiensis*)	T(S/A)[a]	T	Yes	O & J
Shortnose Sturgeon (A*cipenser brevirostrum)*	E	E	No	O*
West Indian manatee (*Trichechus manatus)*	E	E	No	O
Pondberry (*Lindera melissifolia)*	E	E	No	O
Sensitive Joint vetch (*Aeschynomene virginica)*	T	E	No	[b]

[a] *T(S/A) – Threatened due to similarity of appearance, not subject to Section 7 consultation*

[b] *listed within Croatan National Forest USFS records but not by USFWS*

* *Historic Record*

It should be noted that the bald eagle (*Haliaeetus leucocephalus*) which was listed as threatened in the 2004 SDEIS has since been delisted.

Red-cockaded Woodpecker (RCW) - The RCW is identified by a black head, prominent white cheek patch, and black-and-white barred back. Males often have red markings (cockades) behind the eye, but this feature may be difficult to see. RCWs typically are found in association with a clan, which is a cooperative breeding group consisting of a breeding pair and one or more male offspring fledged in the previous one to three years (Hooper *et al*. 1980).

Red-cockaded woodpeckers are endemic to pine forests of the southeastern United States. In North Carolina, RCWs are most prevalent in the Sandhills and Coastal Plain (Hamel 1992). Primary RCW habitat consists of mature to over-mature southern pine forests. Traditionally, pine flatwoods or pine-dominated savannas, which have been maintained by frequent fires serve as ideal nesting and foraging sites for the RCWs. Nesting and roosting cavities are constructed in the heartwood of living pines, which are generally older than 60 years and often infected with red-heart fungus (*Fomes pini*). The fungus weakens the inner heartwood, making excavation easier. Cavities are usually located 20 to 50 feet above ground and below live branches. Most cavity trees tend to be clustered such that a colony can typically be encompassed by a circle 1500 feet in diameter, although some cavity trees occupied by a clan may be as much as 0.5 mile apart (Hooper *et al*. 1980).

RCW foraging areas typically are centered on colony sites and range in size from 100 acres to 1000 acres, depending on the quality of habitat (Hooper *et al*. 1980). RCWs typically forage in pine stands aged 30 years or older within 0.5 mi of the colony site (Henry 1989). Stands dominated by pines larger than nine inches diameter at breast height (dbh) are considered to provide good foraging habitat, but RCWs will forage in stands dominated by pines four to nine inches dbh (Hooper *et al*. 1980). Extreme impacts to foraging habitat can lead to reduced productivity and/or abandonment of the colony site. Minor habitat changes within the foraging range may have little or no impact to RCW behavior patterns.

There are no documented cases of RCW activity in the project area, but RCW cavity trees were documented within 1.8 miles of the study area in Croatan National Forest (NHP records). Due to the proximity of these documented sites and the presence of forest stands containing pines within the project corridor, pine stands located within 0.5 miles of the study area were evaluated in the summer and fall of 2008 in order to identify the presence of potential foraging and/or nesting habitat for RCW. Much of the forested areas characterized were either small or included a dense subcanopy and therefore were not considered suitable foraging habitat for RCW. Several areas were identified as suitable foraging habitat with the potential for the inclusion of older trees suitable for nesting. Pedestrian transects were conducted in these areas to identify RCW cavities. No RCW cavities were observed within the study area or within 0.5 mile of the study area. Per November 2009 correspondence, the USFWS has determined no further analysis of impacts to RCW or Cluster #134 are necessary given the current design proposal.

Eastern Cougar - The eastern cougar is a possibly extinct eastern subspecies of the widespread mountain lion species. This species was possibly extirpated from North Carolina by the late 1800's although recent sporadic sightings have been reported from remote areas of the mountains and coastal plain (Lee 1987). Mountain lions are large, long-tailed cats; adult males may measure seven to nine feet in length with females averaging 30 to 40 percent smaller (Handley 1991). (Lee 1987).

Recent specimens of mountain lion taken in North Carolina and elsewhere in mid-Atlantic states have proved to be individuals of other subspecies that have escaped or been released from captivity (Lee 1987, Handley 1991). The eastern cougar would require large tracts of relatively undisturbed habitat that support large populations of white-tailed deer (Webster *et al.* 1985).

Golden Sedge – The golden sedge is a perennial member of the sedge family known only from North Carolina. Fertile stems may reach one meter or more in height. The yellow-green leaves are grass-like and up to 11 inches in length. Each stem typically produces two to four flowering spikes.

Suitable habitat for this species does not exist within the Onslow County portions of the study area. The golden sedge is a very rare endemic of the Atlantic Coastal Plain which grows in sandy soils overlaying calcareous deposits of coquina limestone, where the soil pH, is unusually high for this region. The perennial prefers the ecotone between pine savanna and adjacent wet hardwood or hardwood / conifer forest. Most plants occur in the partially shaded savanna / swamp where occasional to frequent fires favor an herbaceous ground layer and suppress shrub dominance. Soils supporting the species are very wet to periodically shallowly inundated. Other occurrences can occur on disturbed areas, such as roadside drainage ditches or power line rights-of-way, where mowing and/or very wet conditions suppress woody plants. Poorly viable populations may occur in significantly disturbed areas where ditching activities that lower the water table and/or some evidence of fire suppression threatens the species. Tulip poplar, pond cypress, red maple, wax myrtle, colic root, and Cooley's meadowrue are a few of its associate species.

Rough-leaved Loosestrife - The rough-leaved loosestrife is a rhizomatous perennial herb that often reaches the height of two feet. Plants are dormant in the winter, with the first leaves appearing in late March or early April. The triangular leaves typically occur in whorls of three or four. Leaves are typically sessile broadest at the base and have three prominent principal veins (Godfrey and Wooten 1981). Five-lobed yellow flowers, approximately 0.6 inch across, are produced on a loose terminal raceme one to four inches long (Godfrey and Wooten 1981). Rough-leaved loosestrife is reported to flower from late May to June (USFWS 1995).

Cooley's Meadowrue - Cooley's meadowrue is a rhizomatous, perennial herb with a smooth stem; the three-foot high plant is normally erect in full sun but lax in the shade. Leaves are ternately divided; the leaflets, less than one inch long, are narrow with untoothed margins. The small, petal-less, unisexual flowers appear on an open panicle in June and the fruits mature in August and September.

Cooley's meadowrue is endemic to the southeastern Coastal Plain, but presently is thought to survive only at eleven sites in North Carolina and one site in Florida (USFWS 1994). Cooley's meadowrue historically occurred in moist bogs and savannas where fire maintained the habitat at early secondary successional stages. Some form of disturbance is usually needed to sustain the open quality of the meadowrue's habitat. Consequently, Cooley's meadowrue is sometimes found along utility corridors, roadside margins, maintained areas, or other savanna-like maintained habitats. Cooley's meadowrue is threatened by fire suppression and land disturbing practices such as silviculture or agriculture (USFWS 1994).

Sea Turtles - Three marine turtles are listed for Onslow County, the leatherback sea turtle, green sea turtle, and loggerhead sea turtle. The loggerhead sea turtle is the most common sea turtle on the coast of the North Carolina and is most numerous from late April to October. This species averages 31 to 47 inches in length and weighs from 170 to 500 pounds (Martof *et al*. 1980). The loggerhead is basically temperate or subtropical in nature and is primarily oceanic, but it may also stray into freshwater bays, sounds, and large rivers. Nesting habitat for loggerhead sea turtles consists of ocean beaches. Both the green sea turtle and leatherback sea turtle typically nest on sandy beaches in tropical areas. The green sea turtle is most commonly found in the Caribbean where they breed, although individuals, usually immatures, are occasionally found along the North Carolina coast. Although primarily tropical in nature, the range of the leatherback sea turtle may extend to Nova Scotia and Newfoundland (Martof *et al*. 1980). The leatherback sometimes moves into shallow bays, estuaries, and even river mouths. The green sea turtle reaches a length of 30 to 60 inches and weight of 220 to 650 pounds and has a smooth, heart-shaped shell (Martof *et al*. 1980). The leatherback sea turtle is distinguished by its larger size (46 to 70 inches in length and weighs 650 to 1,500 pounds) and a ridged shell of soft, leathery skin. Green sea turtles are omnivorous, primarily eating jellyfish and seaweeds. The leatherback sea turtle also feeds extensively on jellyfish, although the diet includes other sea animals and seaweed. These marine species utilize barrier beaches for nesting and occasionally feed in estuarine waters.

Piping Plover - Piping plovers are small shorebirds that occur along beaches above the high tide line, sand flats at the ends of sand spits and barrier islands, gently sloping foredunes, blowout areas behind primary dunes, and washover areas cut into or between dunes (Dyer *et al*. 1987). Nests are typically found on open, wide-sandy stretches of beach similar to those associated with inlets and capes.

Seabeach Amaranth - This species is an annual herb that grows on barrier island beaches. Primary habitat for seabeach amaranth consists of bare sand, especially on overwash flats at accreting ends of islands, and lower foredunes and upper strands of non-eroding beaches (USFWS 1993).

American Alligator - The American alligator is listed as threatened based on the similarity in appearance to other federally-listed crocodilians; however, no other crocodilians are native to North Carolina. American alligators can be found in a variety of freshwater to estuarine aquatic habitats including swamp forests, marshes, large streams and canals, ponds, and lakes. Potential habitat for American alligator exists within the project area.

Shortnose Sturgeon – The shortnose sturgeon occurs in most major river systems of the United States, preferring the nearshore marine, estuarine, and riverine habitat of large stream systems. It is an anadromous species that migrates to faster-moving freshwater areas to spawn in the spring, but spends most of its life within close proximity to the river's mouth. Suitable habitat for this species does not exist within the Onslow County portions of the study area.

West Indian Manatee - Manatees have been observed in all of North Carolina coastal counties in canals, sluggish rivers, estuarine habitats, salt water bays, and as far off shore as 3.7 miles. They utilize freshwater and marine habitats at shallow depths of five to 20 feet. Suitable habitat for this species does not exist within the Onslow County portions of the study area.

Pondberry - Pondberry, also called Southern spicebush, is a medium-sized perennial shrub that grows in swampy depressions in lowland forests. Pondberry occurs in seasonally-flooded wetlands, sandy sinks, pond margins, and swampy depressions. This deciduous, aromatic shrub occurs in bottomland hardwood forests with perched water tables along inland areas of the southeastern United States. In the Coastal Plain of the Carolinas, the species occurs at the margins of limestone sinks and ponds and in undrained, shallow depressions of longleaf pine and pond pine forests. Suitable habitat does not exist within the study area.

Sensitive Joint Vetch - Sensitive joint-vetch is an annual plant in the bean family native to the eastern United States. Plants typically attain heights of one to two meters in a single growing season, although they can grow as tall as 2.4 meters. The stems are single, sometimes branching near the top and with stiff or bristly hairs. Plants produce yellow, irregular flowers streaked with red from July through September. Fruits follow shortly after the first signs of flowering in July, producing a loment with four to ten single-seed segments scalloped along one side that turn dark brown when ripe. Suitable habitat for this species does not exist within the study area. The riverine wetland systems present within the study area are not subject to wind driven or lunar driven tides. Sensitive joint-vetch grows in the mildly brackish intertidal zone where plants are flooded twice daily. This legume prefers the marsh edge at an elevation near the upper limit of

tidal fluctuation, but can also be found in swamps and on river banks. Sensitive joint-vetch normally occurs in areas with high plant diversity where annual species predominate and can grow in sand, mud, gravel, or peat substrates.

3.5.4.4 Federal Species of Concern and State-Listed Species

The January 2003 list also includes a category of species designated as "Federal Species of Concern" (FSC). The FSC designation provides no federal protection under the ESA. **Table 3-10** provides a listing of all FSC listed as occurring in either Jones or Onslow Counties, plus their status at the state level.

TABLE 3-10: FEDERAL SPECIES OF CONCERN (FSC) LISTED FOR ONSLOW (O) OR JONES (J) COUNTIES, NORTH CAROLINA (JULY 2010 LIST)

Scientific Name	Common Name	State Status	County Listed
Agrotis buchholzi	Buchholz's Dart Moth	Unavailable	Onslow
Agrotis carolina	A Dart Moth	Rare	Onslow
Aimophila aestivalis	Bachman's Sparrow	Special Concern	Jones & Onslow
Allium sp. 1	Savanna Onion	Rare/Limited	Onslow
Ammodramus henslowii susurrans	Eastern Henslow's Sparrow	Special Concern	Onslow
Anguilla rostrata	American Eel	unavailable	Jones & Onslow
Asplenium heteroresiliens	Carolina Spleenwort	Endangered	Jones & Onslow
Atrytone arogos arogos	Arogos Skipper	Rare	Croatan National Forest
Calopogon multiflorus	Many-Flower Grass-Pink	Endangered	Onslow
Campylopus carolinae	Savanna Campylopus	Rare/Throughout	Croatan National Forest
Corynorhinus rafinesquii	Rafinesque's Big-Eared Bat	Threatened**	Croatan National Forest
Dendroica virens waynei	Black-Throated Green Warbler	Rare	Jones
Dionaea muscipula	Venus Flytrap	Special Concern	Onslow
Fusconaia masoni	Atlantic Pigtoe	Endangered**	Croatan National Forest
Hemipachnobia subporphyrea	Venus Flytrap Cutworm Moth	Rare	Croatan National Forest
Heterodon simus	Southern Hognose Snake	Special Concern	Jones & Onslow
Isoetes microvela	Thin-Wall Quillwort	Endangered	Jones & Onslow
Kalmia cuneata	White Wicky	Rare/Limited	Croatan National Forest
Lasmigona subviridis	Green Floater	Endangered	Croatan National Forest
Laterallus jamaicensis	Black Rail	Special Concern	Onslow
Litsea aestivalis	Pondspice	Rare/Throughout	Onslow
Lobelia boykinii	Boykin's Lobelia	Threatened	Onslow
Lythrurus matutinus	Pinewoods Shiner	Rare	Croatan National Forest
Macbridea caroliniana	Carolina Bogmint	Threatened	Jones*
Minuartia godfreyi	Godfrey's Sandwort	Endangered	Jones*
Myotis austroriparius	Southeastern Myotis	Special Concern	Croatan National Forest
Myriophyllum laxum	Loose Water-Milfoil	Threatened	Onslow
Notropis bifrenatus	Bridle Shiner	Endangered	Jones*

TABLE 3-10: FEDERAL SPECIES OF CONCERN (FSC) LISTED FOR ONSLOW (O) OR JONES (J) COUNTIES, NORTH CAROLINA (JULY 2010 LIST)

Scientific Name	Common Name	State Status	County Listed
Noturus furiosus	Carolina Madtom	Threatened	Jones*
Ophisaurus mimicus	Mimic Glass Lizard	Special Concern	Onslow
Oxypolis denticulata	Piedmont Cowbane	unavailable	Croatan National Forest
Parnassia caroliniana	Carolina Grass-Of-Parnassus	Endangered	Onslow
Passerina ciris ciris	Eastern Painted Bunting	Special Concern	Onslow
Plantago sparsiflora	Pineland Plantain	Endangered	Onslow
Procambarus medialis	Tar River Crayfish	unavailable	Croatan National Forest
Procambarus plumimanus	Croatan Crayfish	Rare	Jones & Onslow
Pyreferra ceromatica	Annointed Sallow Moth	Rare	Croatan National Forest
Pyxidanthera brevifolia	Sandhills Pyxie-Moss	Endangered	Jones
Rana capito	Carolina Gopher Frog	Threatened	Jones & Onslow
Rhexia aristosa	Awned Meadow-Beauty	Threatened	Onslow
Rhynchospora decurrens	Swamp Forest Beaksedge	Rare/Peripheral	Onslow
Rhynchospora pleiantha	Coastal Beaksedge	Threatened	Onslow
Rhynchospora thornei	Thorne's Beaksedge	Endangered	Onslow
Sagittaria weatherbiana	Grassleaf Arrowhead	Rare/Throughout	Onslow
Scleria sp. 1	Smooth-Seeded Hairy Nutrush	Rare/Limited	Onslow
Solidago pulchra	Carolina Goldenrod	undetermined	Jones & Onslow
Solidago verna	Spring-Flowering Goldenrod	Threatened	Jones & Onslow
Solidago villosicarpa	Coastal Goldenrod	Endangered	Onslow
Spartiniphaga carterae	Carter's Spartiniphaga	Rare	Croatan National Forest
Thalictrum macrostylum	Small-Leaved Meadowrue	Rare/Limited	Jones
Tofieldia glabra	Carolina Asphodel	undetermined	Onslow
Toxolasma pullus	Savannah Lilliput	Endangered**	Croatan National Forest
Trillium pusillum var. pusillum	Carolina Least Trillium	Endangered	Onslow
Triodopsis soelneri	Cape Fear Threetooth	Threatened	Onslow

** Historic Listing*

*** Proposed Threatened or Endangered*

According to NHP records, two FSC species have been documented in the project area, Carolina gopher frog and spring-flowering goldenrod. Details of these occurrences are provided below.

State Protected Species - Species of mammals, birds, reptiles, amphibians, and plants with the North Carolina status of Endangered (E), Threatened (T), and Special Concern (SC) receive limited protection under the North Carolina Endangered Species Act (G.S. 113-331 *et seq.*) and the North Carolina Plant Protection Act of 1979 (G.S. 106-202.12 *et seq.*).

Two state-Candidate species (not officially listed or proposed for listing) have been found within the project area, both in the southern portion of the study area: Florida yellow-eyed grass (*Xyris difformis* var. *floridana*) reported along US 17 at Starkey's Creek; and Hooker's milkwort (*Polygala hookeri*) reported along US 17 just south of Belgrade.

A review of the NHP records indicates that few state-listed species have been documented from the project area. Breeding of the Carolina gopher frog (SC) was documented in 1954 at an old borrow pit on the east side of US 17 approximately 1.8 mile north Maysville.

A colony of spring-flowering goldenrod (E/PT) is located approximately 0.8 mile north of Maysville adjacent to US 17 and extends approximately 1.5 miles. This colony is one of the largest and most productive colonies in North Carolina. Annual roadside mowing of this species (after flowering and fruiting) may contribute to its success by mimicking natural disturbance by periodic fires. Spring-flowering goldenrod has been documented along the western shoulder of US 17 south of Belgrade, also. NCDOT is actively coordinating with USFS to mitigate potential impacts to these colonies of spring-flowering goldenrod as a result of this project.

State-listed species found within the project vicinity include Carolina spleenwort (E) found along Deep Gully east of US 17 and along the east side of Mill Creek east of Pollocksville. Venus flytrap (C-SC) has been documented within one mile east of the project area, east of US 17.

Besides the Carolina gopher frog and spring-flowering goldenrod records, only four other state-protected species have been documented within the project area: the eastern lamp mussel (*Lampsilis radiata*) documented from the Trent River at US 17; the Neuse River waterdog (*Necturus lewisi*) documented in Mill Creek north of Island Creek Road (SR 1004); the Carolina Spleenwort; and the Venus Flytrap.

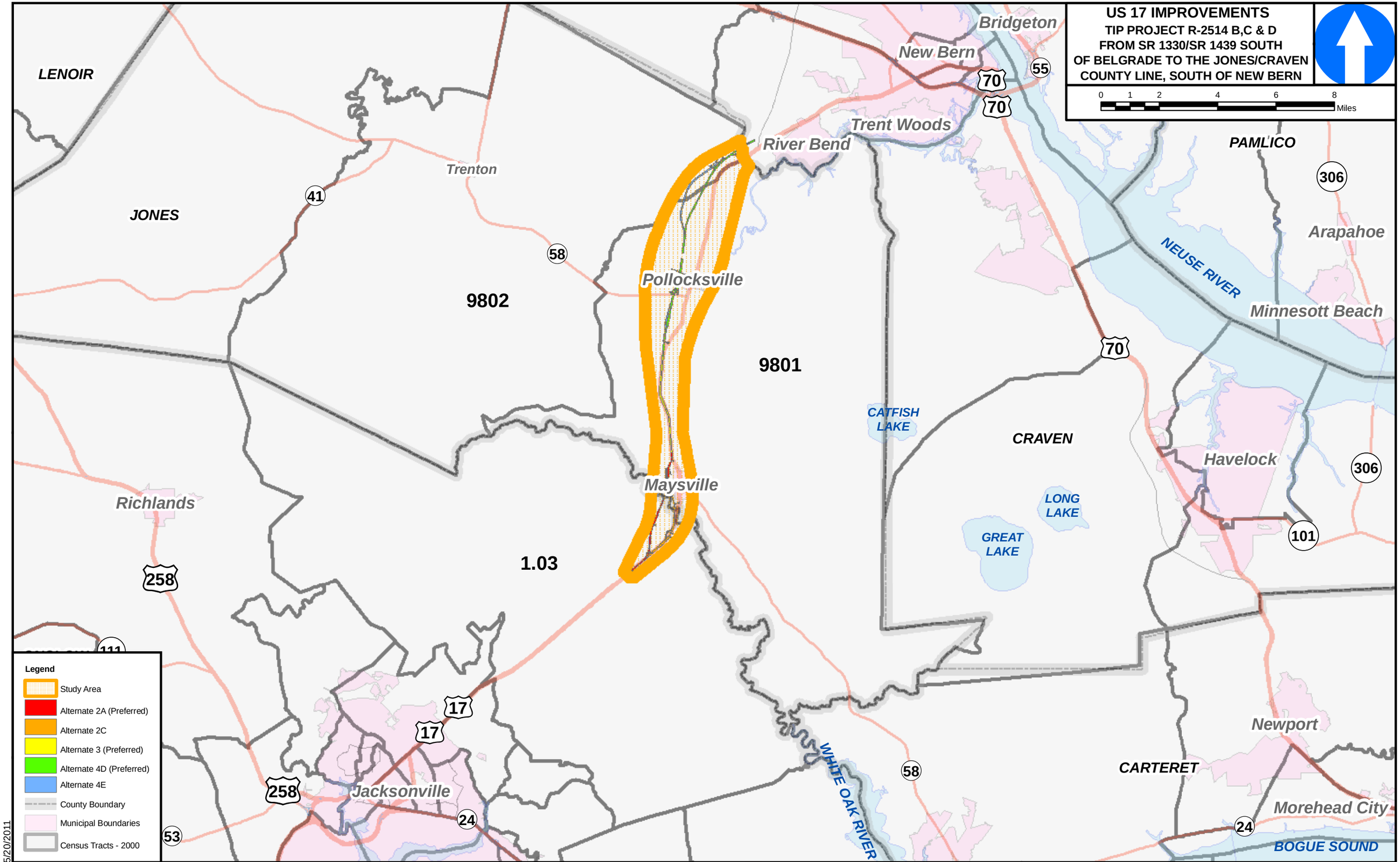
3.5.4.5 Areas of Environmental Concern

A site designated as the Maysville Goldenrod Roadsides is the only rare and unique natural area identified by the NHP within the project area. This site is located in a narrow strip along US 17 beginning approximately 0.5 mile north of Maysville and extending approximately 0.2 mile northward. This site, which is essentially confined to existing maintained NCDOT right-of-way, contains one of the two largest known populations of spring-flowering goldenrod (*Solidago verna*) (LeGrand *et al*. 1992), which is listed as a State Endangered Species and a FSC. This site also contains a historic record for the State special concern and FSC Carolina gopher frog (*Rana capito capito*).

The White Oak River is classified as a public trust area of environmental concern and a public trust shoreline area of environmental concern. This designation comes from the statewide importance of the area's natural resources, which may be easily destroyed by erosion or flooding. Because of these classifications, the project will require a CAMA Major Development Permit.

Two other rare and unique natural areas occur within the project vicinity: Deep Gully and Mill Creek Outcrops (LeGrand *et al.* 1992), located approximately 0.2 mile west of the Deep Gully

natural area, which is characterized by steep slopes covered by a relatively undisturbed, mature hardwood forest containing a high diversity of canopy species. Another significant characteristic is the presence of marl outcrops which provide habitat for the State Endangered Carolina spleenwort (*Asplenium heteroresiliens*). The Mill Creek Outcrops natural area is located approximately 0.8 mile east of the study area. The Mill Creek Outcrops natural area is characterized by the presence of marl outcrops and Carolina spleenwort and contains a rare natural plant community represented as the Coastal Plain subtype of Basic Mesic Forest (Schafale and Weakley 1990). These two sites are considered to be of regional significance in terms of rareness or uniqueness.



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Census Tracts

Figure 3-1

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

DEPPE ROAD (SR 1330)
SPRINGHILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
1331
1332
ONSLOW COUNTY
JONES COUNTY
ONSLOW COUNTY
1115
1116
1118
WHITE OAK RIVER ROAD (SR 1116)
JONES COUNTY
WHITE OAK RIVER
17
SEGMENT 2 BOUNDARY
1439
1796
BELGRADE
FOURTH STREET
MAYSVILLE
17
58
SEGMENT 3 BOUNDARY
BELGRADE - SWANSBORO ROAD (SR 1434)
ONSLOW COUNTY
CROATAN NATIONAL FOREST
ONSLOW COUNTY
JONES COUNTY
JONES COUNTY
58

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Hurricane Evacuation Routes
- Municipal Boundaries
- Croatan National Forest
- New and Planned Developments
- Cemetery
- Church
- Community Center
- Fire Department/EMS
- Police
- Medical Facility
- Library
- Park
- Camp Ground
- Post Office
- School

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Community Resources

Figure 3-2
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

OAK GROVE AIRFIELD
OAK GROVE
RAVENSWOOD
POLLOCKSVILLE
JONES COUNTY
CROATAN NATIONAL FOREST
SEGMENT 4 BOUNDARY
LEE'S CHAPEL ROAD (SR 1114)
RIGGSTOWN ROAD (SR 1112)
RAVEN WOOD ROAD (SR 1108)
GOSHEN ROAD (SR 1337)
GOSHEN BRANCH
ISLAND CREEK ROAD
OAK GROVE ROAD (SR 1121)
BANKS ROAD (SR 1333)
SIMMONS LANE (SR 1335)
WISE FORK ROAD (SR 1002)
SIMMONS LOOP ROAD (SR 1330)
SEABOARD COAST LINE RAILROAD
TRENT RIVER
MILL CREEK
SCOTT CREEK
1114 1112 1113 1176 1332 1333 1337 1121 1002 1330 1335 1108 1109 1166 1118 1110 1004 1224
58 17

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Hurricane Evacuation Routes
- Municipal Boundaries
- Croatan National Forest
- New and Planned Developments
- Cemetery
- Church
- Community Center
- Fire Department/EMS
- Police
- Medical Facility
- Library
- Park
- Camp Ground
- Post Office
- School

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Community Resources

Figure 3-2
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

DEPPE ROAD (SR 1330)
SPRING HILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
ONSLOW COUNTY
JONES COUNTY
WHITE OAK RIVER ROAD (SR 1116)
WHITE OAK RIVER
FOURTH STREET
SEABOARD COAST LINE RAILROAD
BELGRADE - SWANSBORO ROAD (SR 1434)
BELGRADE
MAYSVILLE
CROATAN NATIONAL FOREST
CROATAN

17 1331 1332 1115 1116 1118 1439 1796 58

SEGMENT 2 BOUNDARY

SEGMENT 3 BOUNDARY

Community of Belgrade

Community of Chadwick

Community of Maysville

Legend

- Community Locations
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

5/25/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Community Locations

Figure 3-3
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

Community of Chadwick
LEE'S CHAPEL ROAD (SR 1114)
RIGGSTOWN ROAD (SR 1112)
RAVENSWOOD
RAVEN WOOD ROAD (SR 1108)
SEABOARD COAST LINE RAILROAD
Community of Hatchville
POLLOCKSVILLE
Community of Goshen
GOSHEN ROAD (SR 1337)
TRENT RIVER
Community of Pollocksville
Community of Oak Grove
OAK GROVE ROAD (SR 1121)
OAK GROVE AIRFIELD
SIMMONS LANE (SR 1335)
BANKS ROAD (SR 1338)
WISE FORK ROAD (SR 1002)
SIMMONS LOOP ROAD (SR 1330)
MILL CREEK
JONES COUNTY
Community of Garnet Heights
Community of Murphytown
SEGMENT 4 BOUNDARY
SCOTT CREEK
Community of Ten Mile Fork
Community of Deep Gully
CROATAN NATIONAL FOREST
1114 1112 1113 58 1176 1332 1333 1337 1121 1002 1330 1335 17 1108 1109 1166 1118 1110 1004 1224

Legend

- Community Locations
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

5/25/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Community Locations

Figure 3-3
Sheet 2 of 2

TIP PROJECT R-2514 B,C & D

FROM SR 1330/SR 1439 SOUTH OF BELGRADE TO THE JONES/CRAVEN COUNTY LINE, SOUTH OF NEW BERN

0 250 500 1,000 1,500 2,000 Feet

SPRING HILL ROAD (SR 1439)

WHITE OAK RIVER ROAD (SR 1331)

BELGRADE-SWANSBORO ROAD (SR 1414)

BELGRADE

17

Legend

- Commercial
- Industrial
- Mobile Home Park
- Office and Institutional
- Residential Agriculture
- Single Family Residential
- Utilities

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Belgrade Land Use

Figure 3-4

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 625 1,250 2,500 3,750 5,000
Feet

17
1331
2050
2049
WHITE OAK RIVER ROAD (SR 1331)
WHITE OAK RIVER
1118
1116
WHITE OAK RIVER ROAD (SR 1116)
17
58
BELGRADE
1439
2322
1440
1441
1434
BELGRADE - SWANSBORO ROAD (SR 1434)
MAYSVILLE
CROATAN NATIONAL FOREST
ONSLOW COUNTY
ONSLOW COUNTY
JONES COUNTY
58
JONES COUNTY
1105

Legend

- Agricultural
- Business
- Church
- Double-Wide Mobile Home
- Industrial
- Institutional
- Multi-Family
- Recreational
- Residential
- Roadways
- Single-Wide Mobile Home
- Vacant Lot
- Croatan National Forest

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Maysville Land Use

Figure 3-5

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 250 500 1,000 1,500 2,000 Feet

R-6

R-8

C1

CV

C1

C1

R-6

I

R-8

POLLOCKSVILLE

GOSHEN ROAD (SR 1337)

TRENT RIVER

SEABOARD COAST LINE RAILROAD

ISLAND CREEK ROAD (SR 1004)

17

58

Legend

- Residential (R-6)
- Residential (R-8)
- Commercial (C1)
- Commercial (CV)
- Industrial (I)
- Croatan National Forest

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Pollocksville Land Use

Figure 3-6

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

SEGMENT 2 BOUNDARY

SEGMENT 3 BOUNDARY

DEPPE ROAD (SR 1330)
SPRINGHILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
ONSLOW COUNTY
JONES COUNTY
WHITE OAK RIVER ROAD (SR 1116)
WHITE OAK RIVER
FOURTH STREET
MAYSVILLE
BELGRADE
BELGRADE - SWANSBORO ROAD (SR 1434)
SEABOARD COAST LINE RAILROAD
CROATAN NATIONAL FOREST
CROATAN

17 58 1439 1796 1331 1332 1115 1116 1118 1107

Legend

- Noise Receptor Location
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Noise Receptor Locations

Figure 3-7
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

Legend

- Noise Receptor Location
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

5/25/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Noise Receptor Locations

Figure 3-7
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

DEPPE ROAD (SR 1330)
SPRINGHILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
ONSLOW COUNTY
JONES COUNTY
WHITE OAK RIVER ROAD (SR 1116)
WHITE OAK RIVER
FOURTH STREET
MAYSVILLE
BELGRADE
BELGRADE - SWANSBORO ROAD (SR 1434)
SEABOARD COAST LINE RAILROAD
CROATAN NATIONAL FOREST
CROATAN

17 1331 1332 1115 1116 1118 1439 1796 1107 58

SEGMENT 2 BOUNDARY

SEGMENT 3 BOUNDARY

Legend

- Prime Farmland Soils
- Unique Farmland Soils
- Farmland Soils of Statewide Importance
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Prime and Unique Farmland Soils

Figure 3-8
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

OAK GROVE AIRFIELD
OAK GROVE
RAVENSWOOD
POLLOCKSVILLE
JONES COUNTY
CROATAN NATIONAL FOREST
SEGMENT 4 BOUNDARY
LEE'S CHAPEL ROAD (SR 1114)
RIGGSTOWN ROAD (SR 1112)
RAVEN WOOD ROAD (SR 1108)
SEABOARD COAST LINE RAILROAD
GOSHEN BRANCH
GOSHEN ROAD (SR 1337)
TRENT RIVER
ISLAND CREEK ROAD
MILL CREEK
OAK GROVE ROAD (SR 1121)
BANKS ROAD (SR 1333)
SIMMONS LANE (SR 1335)
WISE FORK ROAD (SR 1002)
SIMMONS LOOP ROAD (SR 1330)
SCOTT CREEK
1114 1112 1113 58 1176 1332 1333 1337 1121 1002 1330 17 58 1108 1109 1166 1335 1118 1110 1004 1224

Legend

- Prime Farmland Soils
- Unique Farmland Soils
- Farmland Soils of Statewide Importance
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

5/20/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Prime and Unique Farmland Soils

Figure 3-8
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

SEGMENT 2 BOUNDARY

SEGMENT 3 BOUNDARY

Jones & Onslow Electric Membership Cooperative Substation

Telephone Tower

Water Tower

Sewage Treatment Plant

DEPPE ROAD (SR 1330)

SPRINGHILL ROAD (SR 1437)

WHITE OAK RIVER ROAD (SR 1331)

WHITE OAK RIVER

WHITE OAK RIVER ROAD (SR 1116)

FOURTH STREET

BELGRADE - SWANSBORO ROAD (SR 1434)

SEABOARD COAST LINE RAILROAD

ONSLOW COUNTY

JONES COUNTY

BELGRADE

MAYSVILLE

CROATAN NATIONAL FOREST

CROATAN

1331 1332 1115 1116 1118 1439 1796 1107

17 58

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Water Distribution System - Facility
- Public Water Supply Water Sources
- Water Distribution System - Pipes
- Sanitary Sewer Systems - Pumps
- Sanitary Sewer Systems - Facility
- Sanitary Sewer Systems - Pipes
- Tower
- Electrical Structure
- Sewage Structure
- Telephone Structure
- Water Structure
- Croatan National Forest

5/25/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Utilities

Figure 3-9
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

Jones County Water Supply Tank

Sewage Treatment Plant

Water Tower

Sanitary Sewer Pump Station

CP&L Substation

Jones & Onslow Electric Membership Cooperative Substation

SEGMENT 4 BOUNDARY

RAVENSWOOD

POLLOCKSVILLE

OAK GROVE AIRFIELD

OAK GROVE

JONES COUNTY

CROATAN NATIONAL FOREST

LEES CHAPEL ROAD (SR 1114)

RIGGSTOWN ROAD (SR 1112)

RAVEN WOOD ROAD (SR 1108)

SEABOARD COAST LINE RAILROAD

GOSHEN BRANCH

GOSHEN ROAD (SR 1337)

TRENT RIVER

OAK GROVE ROAD (SR 1121)

SIMMONS LANE (SR 1335)

BANKS ROAD (SR 1333)

WISE FORK ROAD (SR 1002)

SIMMONS LOOP ROAD (SR 1330)

MILL CREEK

SCOTT CREEK

1114 1112 1113 1337 1176 1332 1333 1121 1002 1330 1335 1108 1109 1166 1118 1110 1004 1224

58 17

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Water Distribution System - Facility
- Public Water Supply Water Sources
- Water Distribution System - Pipes
- Sanitary Sewer Systems - Pumps
- Sanitary Sewer Systems - Facility
- Sanitary Sewer Systems - Pipes
- Electrical Structure
- Sewage Structure
- Telephone Structure
- Water Structure
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

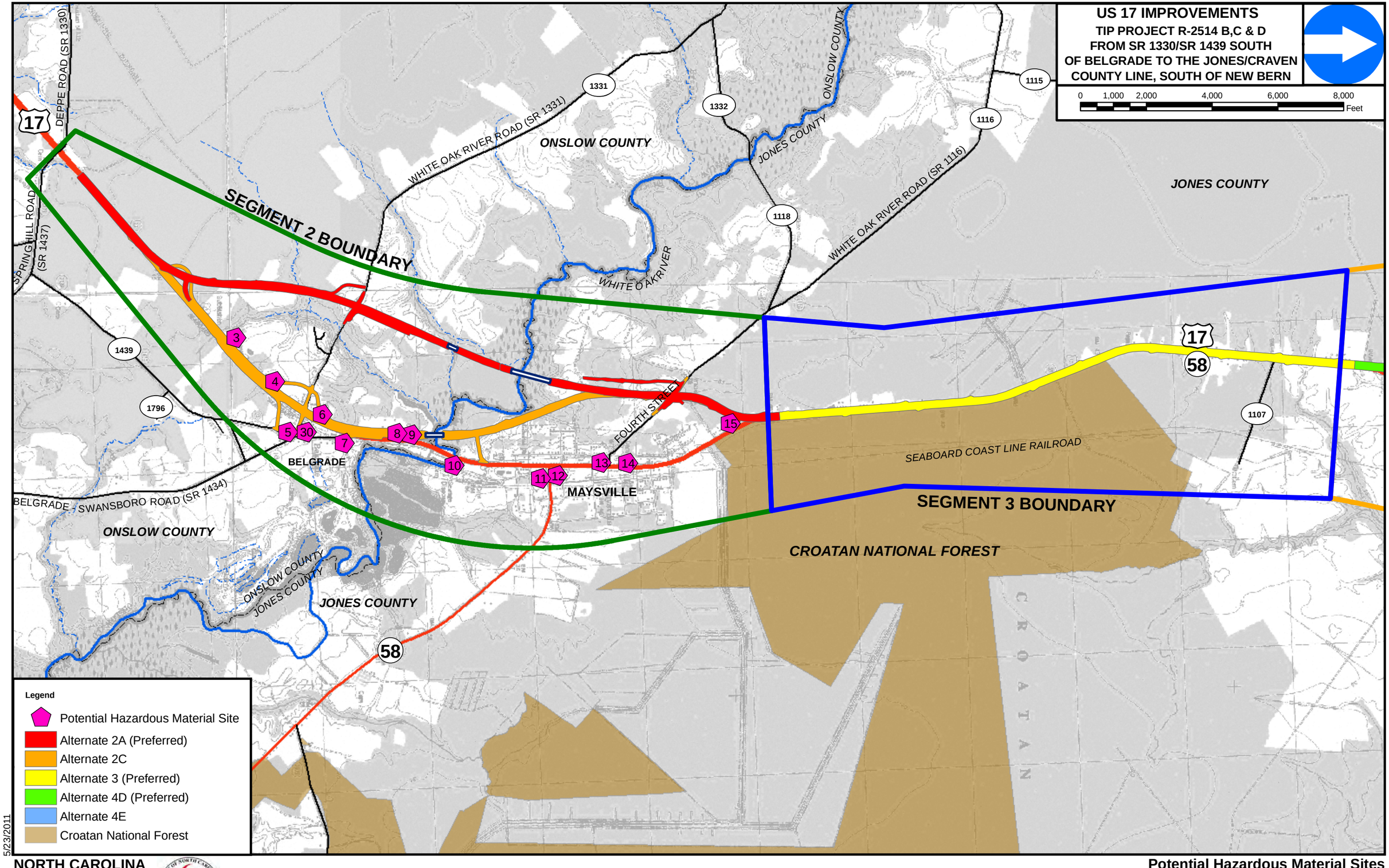
Utilities

Figure 3-9
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet



Legend

- Potential Hazardous Material Site
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Potential Hazardous Material Sites

Figure 3-10
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

OAK GROVE AIRFIELD
OAK GROVE
RAVENSWOOD
POLLOCKSVILLE
JONES COUNTY
CROATAN NATIONAL FOREST
SEGMENT 4 BOUNDARY
LEE'S CHAPEL ROAD (SR 1114)
RIGGSTOWN ROAD (SR 1112)
RAVEN WOOD ROAD (SR 1108)
GOSHEN BRANCH
GOSHEN ROAD (SR 1337)
ISLAND CREEK ROAD
OAK GROVE ROAD (SR 1121)
BANKS ROAD (SR 1333)
SIMMONS LANE (SR 1335)
WISE FORK ROAD (SR 1002)
SIMMONS LOOP ROAD (SR 1330)
SCOTT CREEK
MILL CREEK
TRENT RIVER
SEABOARD COAST LINE RAILROAD
1114 1112 1113 1176 1332 1333 1337 1121 1002 1330 1335 1108 1109 1166 1118 1110 1004 1224
58 17

Legend

- Potential Hazardous Material Site
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Potential Hazardous Material Sites

Figure 3-10
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

DEPPE ROAD (SR 1330)
SPRINGHILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
WHITE OAK RIVER ROAD (SR 1116)
BELGRADE - SWANSBORO ROAD (SR 1434)
FOURTH STREET
SEABOARD COAST LINE RAILROAD
WHITE OAK RIVER
ONSLOW COUNTY
JONES COUNTY
BELGRADE
MAYSVILLE
CROATAN NATIONAL FOREST
CROATAN

17 58 1331 1332 1115 1116 1118 1439 1796 1107

SEGMENT 2 BOUNDARY

STRUCTURE S4A
CONSTRUCT BRIDGE
100' (TRIBUTARY WHITE
OAK RIVER)

STRUCTURE S4C
CONSTRUCT BRIDGE
1160' (WHITE OAK RIVER)

STRUCTURE S8
CONSTRUCT BRIDGE
560' (WHITE OAK RIVER)

SEGMENT 3 BOUNDARY

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Stream/Creek
- River
- Croatan National Forest
- Neuse Basin Protection Zone

FMIS Flood Zones

- Area Inundated by 100-Year Flooding
- Area Inundated by 500-Year Flooding

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Water Resources

Figure 3-11
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

STRUCTURE S8A
CONSTRUCT BRIDGE
380' (GOSHEN BRANCH)

STRUCTURE S8B
CONSTRUCT BRIDGE
1180' (TRENT RIVER)

SEGMENT 4 BOUNDARY

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Stream/Creek
- River
- Croatan National Forest
- Neuse Basin Protection Zone

FMIS Flood Zones

- Area Inundated by 100-Year Flooding
- Area Inundated by 500-Year Flooding

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Water Resources

Figure 3-11
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 0.25 0.5 1 1.5 2 Miles

HOFMANN FOREST

HOFMANN FOREST

CROATAN NATIONAL FOREST

SEGMENT 2 BOUNDARY

SEGMENT 3 BOUNDARY

SEGMENT 4 BOUNDARY

Maysville Goldenrod Roadsides

White Oak River Marshes and Swamps

Cherry Point Oak Grove Swamps

Mill Creek Outcrops

Trent River Aquatic Habitat

Deep Gully

Island Creek Natural Area

Catfish Lake/Catfish Lake South Wilderness

Catfish Lake Impoundment Bay Rims

Gibson Branch

Mundine Branch

Beaverdam Branch

Mill Run

Little Hell Creek

Long Branch

Goshen Branch

Bachelor Creek

Scott Creek

Brick Kiln Branch

Mirey Branch

White Oak River

Black Swamp Creek

West Branch Trent River

Mill Creek

Skinners Branch

Raccoon Creek

West Prong

Muddy Cove

Island Creek

Long Branch

1330 1331 1332 1115 1120 1119 1116 1114 1121 1329 1002 1438 1437 1439 2049 1118 1113 1112 1176 1332 1333 1796 1441 1440 1107 1338 1337 1334 1434 1108 1339 1344 1335 1330 1109 1357 1336 1111 1110 1367 1224 1102 1103 1004 1307 1340

58 17

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Significant Natural Heritage Areas
- Land Managed for Conservation and Open Space

3/24/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Managed Lands

Figure 3-12

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

DEPPE ROAD (SR 1330)
SPRING HILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
ONSLOW COUNTY
JONES COUNTY
WHITE OAK RIVER ROAD (SR 1116)
WHITE OAK RIVER
SEGMENT 2 BOUNDARY
FOURTH STREET
SEABOARD COAST LINE RAILROAD
BELGRADE
MAYSVILLE
BELGRADE - SWANSBORO ROAD (SR 1434)
SEGMENT 3 BOUNDARY
CROATAN NATIONAL FOREST
CROATAN

1331 1332 1115 1116 1118 1439 1796 1107 17 58

Henderson-Provost House
Zinnie Eubanks House/Store
Maysville Historic District
J. Nathan Foscue Farm

Legend

- Historic Properties and Districts
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D Preferred)
- Alternate 4E
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Historic Properties and Districts

Figure 3-13
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

Bryan Bell Farm (Oakview Plantation)

Trent River Plantation

Amos J. Simmons Jr. House

Pollocksville Historic District

Bryan Lavender House

Foscue Plantation House

Ten Mile Fork Store

SEGMENT 4 BOUNDARY

OAK GROVE AIRFIELD

OAK GROVE

RAVENSWOOD

POLLOCKSVILLE

JONES COUNTY

CROATAN NATIONAL FOREST

LEE'S CHAPEL ROAD (SR 1114)

RIGGSTOWN ROAD (SR 1112)

RAVEN WOOD ROAD (SR 1108)

GOSHEN BRANCH

GOSHEN ROAD (SR 1337)

OAK GROVE ROAD (SR 1121)

BANKS ROAD (SR 1333)

WISE FORK ROAD (SR 1002)

SIMMONS LANE (SR 1335)

SIMMONS LOOP ROAD (SR 1330)

ISLAND CREEK ROAD

MILL CREEK

TRENT RIVER

SCOTT CREEK

SEABOARD COAST LINE RAILROAD

1114 1112 1113 1176 1332 1333 1337 1121 1002 1330 1335 1108 1109 1166 1118 1110 1004 1224

58 17

Legend

- Historic Properties and Districts
- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Historic Properties and Districts

Figure 3-13
Sheet 2 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH OF BELGRADE TO THE JONES/CRAVEN COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

DEPPE ROAD (SR 1330)
SPRINGHILL ROAD (SR 1437)
WHITE OAK RIVER ROAD (SR 1331)
WHITE OAK RIVER ROAD (SR 1116)
BELGRADE - SWANSBORO ROAD (SR 1434)
FOURTH STREET
SEABOARD COAST LINE RAILROAD
WHITE OAK RIVER
ONSLOW COUNTY
JONES COUNTY
MAYSVILLE
BELGRADE
CROATAN NATIONAL FOREST
SEGMENT 2 BOUNDARY
SEGMENT 3 BOUNDARY
17
58
1439
1796
1331
1332
1115
1116
1118
1107
G2A

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (Preferred)
- Alternate 4E
- Jurisdictional Stream Impact
- Jurisdictional Wetland Impact
- Jurisdictional Pond Impact
- NWI Wetlands
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Wetlands Inventory

Figure 3-14
Sheet 1 of 2

US 17 IMPROVEMENTS

TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

0 1,000 2,000 4,000 6,000 8,000 Feet

Legend

- Alternate 2A (Preferred)
- Alternate 2C
- Alternate 3 (Preferred)
- Alternate 4D (preferred)
- Alternate 4E
- Jurisdictional Stream Impact
- Jurisdictional Wetland Impact
- Jurisdictional Pond Impact
- NWI Wetlands
- Croatan National Forest

5/23/2011

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Wetlands Inventory

Figure 3-14
Sheet 2 of 2

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

This chapter describes the environmental consequences associated with the Detailed Study Alternatives carried forward for further study in Section 2.5.4 of this SFEIS: 2A, 2C, 3, 4D, and 4E. Preliminary design plans were prepared for each Detailed Study Alternative to assess and compare the impacts of each alignment. Coordination and comments received from environmental resource and regulatory agencies and the public provided insight into the development of the preliminary design plans.

4.1 DIRECT IMPACTS

4.1.1 Impacts to the Human Environment

4.1.1.1 Community

Potential types of adverse impacts to community cohesion include separation of neighborhoods, isolation of portions of neighborhoods, or separation of residents from community facilities. The actual quantification of these impacts is difficult. Therefore, during the 2002 Community Impact Assessment and various public meetings, residents were provided the opportunity to review the Detailed Study Alternatives and determine from their viewpoint which alternatives would cause the least impacts to their communities. Analytical data based on physical displacements is also presented in this section.

The 2004 SDEIS and *Community Impact Assessment Report, January 2002*, include more details related to the interviews and meetings held within each community during the project planning process. However, during subsequent design iterations, avoidance and minimization techniques were used that could alter impacts discussed in the *2002 Community Impact Assessment* somewhat.

The No-Build Alternative would not directly impact the cohesion of the communities already separated by US 17. However, the increased traffic would have a negative impact on safety in these communities for pedestrians and cyclists crossing US 17.

Below is a list of community impacts associated with the Detailed Study Alternatives.

- **Detailed Study Alternative 2A** (Preferred) would bypass Belgrade and Maysville to the west. Impacts to the communities of Maysville and Belgrade were minimized by avoiding more densely developed areas along US 17 in both of these communities. Two

local petitions were received in support of this alternative, one with 739 signatures from a property owner in Belgrade and one with 43 signatures from a property owner in Maysville. This alternative was favored by the majority of participants at the December 2009 Public Hearing in Maysville, and by the Jones County Board of Commissioners, the Maysville Board of Commissioners, and the Down East Rural Transportation Planning Organization.

- **Detailed Study Alternative 2C** would follow the existing US 17 alignment through Belgrade before turning west to avoid Maysville. Although this alternative avoided impacts to the Maysville Historic District and the high-quality wetlands in the White Oak River Basin west of Maysville, this alternative would have directly impacted homes and businesses on US 17 in the Community of Belgrade. This alternative generated substantial community opposition amongst residents of Maysville, Belgrade, and Jones County.

- **Detailed Study Alternative 3** (Preferred) would widen existing US 17 north of Maysville through the Chadwick Community. Residents are concerned that they would be unable to cross US 17 on foot safely to visit relatives and friends or to check their mailboxes. Many of the residents stated that it is difficult to walk across US 17 now.

- **Detailed Study Alternative 4D** (Preferred) would bypass Pollocksville and existing US 17 to the west and tie into the New Bern Bypass at the Jones / Craven County line west of US 17. This alternative would not have any direct impacts to the Goshen community. However, an interchange would be constructed on NC 58 just west of Hatchville. The interchange at NC 58 would reduce the amount of traffic through Hatchville by diverting travelers to the new roadway prior to entering the community.

  The Goshen Road Environmental Action Team (GREAT) was formed in 1997, with the help of the United Church of Christ Commission for Racial Justice. Farmland from the Goshen Community was utilized by Pollocksville for construction of the town's wastewater treatment facility. The residents of Goshen objected to providing more land from their community for the improvements to US 17; the community assembled a petition signed by 133 residents who opposed alternatives west of the existing US 17 alignment which would have adversely impacted the community. Alternative 4D would have created a barrier between Goshen and developments in Pollocksville. NCDOT met with members of the Goshen community in the summer of 2006 to discuss alternatives in the vicinity of Goshen. Graphics showing proposed grade separation options at Goshen Road and US 17, the Schematic Corridor Plan, the Public Hearing Map, and preliminary plans of various alternatives were displayed. An overview of the project status, next steps

in the process, and issues related to corridor selection in the vicinity of the Goshen Community were presented to the group. The Alternative 4D alignment, which is between the Goshen Community and the Town of Pollocksville, was selected by community leaders as a viable route.

The Oak Grove Community would experience a direct impact from Alternative 4D as it crosses Oak Grove Road (SR 1121). The intersection created would separate some residents to the west from the rest of the community, located primarily east of the bypass.

The Ten Mile Fork Community, along Wise Fork Road (SR 1002) would be impacted by a new intersection on Wise Fork Road by separating some of the residents to the west from the rest of the community, located primarily to the east.

- **Detailed Study Alternative 4E** would bypass Pollocksville and US 17 to the west and tie into the New Bern Bypass at the Jones / Craven County line west of US 17. For the northernmost end of the project, Alternative 4E lies further west than Alternative 4D, also bypassing the communities of Oak Grove, Ten Mile Fork, and Deep Gully. Intersections would be created at NC 58 west of Hatchville and Goshen Road (SR 1337) between Goshen and Pollocksville.

  The interchange at NC 58 would reduce the amount of traffic through Hatchville by diverting travelers to the new roadway prior to entering the community.

  Alternative 4E follows the same alignment as 4D between the Goshen Community and Pollocksville and causes similar impacts in Goshen. This alternative was eliminated from consideration by the Merger Process Team due to its relatively greater environmental impacts when compared to Alternative 4D.

Construction of any of the Build Alternatives would change the access to properties adjacent to existing US 17 and intersecting highways. The superstreet concept places limitations on direct turns, which would have minor adverse effects on access for properties near major intersections.

4.1.1.2 Relocations

It is the policy of the NCDOT to ensure that comparable replacement housing will be available prior to construction of state projects. Furthermore, the NCDOT has the following three programs to minimize the inconvenience of relocation:

- Relocation Assistance
- Relocation Moving Payments

- Relocation Replacement Housing Payments or Rent Supplement

With the Relocation Assistance Program, experienced NCDOT staff will be available to assist displacees with information such as availability and prices of homes, apartments, or businesses for sale or rent, as well as financing or other housing programs. The Relocation Moving Payments Program, in general, provides for payment of actual moving expenses encountered in relocation. Where displacement will force an owner or tenant to purchase or rent property of higher cost or lose a favorable financing arrangement (in cases of ownership), the Relocation Replacement Housing Payments or Rent Supplement Program will compensate up to $22,500 to owners who are eligible and qualify and up to $5,250 to tenants who are eligible and qualify.

The relocation program for the proposed action will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (GS 133-5 through 133-18). The program is designed to provide assistance to displaced persons in relocating to a replacement site in which to live or do business. At least one relocation officer is assigned to each highway project for this purpose.

The relocation officer will determine the needs of displaced families, individuals, businesses, non-profit organizations, and farm operations for relocation assistance advisory service without regard to race, color, religion, sex, or national origin. The NCDOT will schedule its work to allow ample time prior to displacement for negotiations and possession of replacement housing that meets decent, safe, and sanitary standards. The displacees have 90 days to vacate after NCDOT makes the offer of relocation benefits. Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement property will be within the financial means of the families and individuals displaced, and the property location will be reasonably accessible to their places of employment. The relocation officer will also assist owners of displaced businesses, non-profit organizations, and farm operations in searching for and moving to replacement property.

All tenant and owner residential occupants who may be displaced will receive an explanation regarding all available options, such as (1) purchase of replacement housing, (2) rental of replacement housing, either private or public, or (3) moving existing owner-occupant housing to another site (if possible). The relocation officer will also supply information concerning other state or federal programs offering assistance to displaced persons and will provide other advisory services as needed in order to minimize hardships to displaced persons in adjusting to a new location.

The Moving Expense Payments Program is designed to compensate the displacee for the costs of moving personal property from homes, businesses, non-profit organizations, and farm operations acquired for a highway project. Under the Replacement Program for Owners, NCDOT will

participate in reasonable incidental purchase payments for replacement dwellings such as attorney's fees, surveys, appraisals, and other closing costs and, if applicable, make a payment for any increased interest expenses for replacement dwellings. Reimbursement to owner-occupants for replacement housing payments, increased interest payments, and incidental purchase expenses may not exceed $22,500.00 (combined total), except under the Last Resort Housing provision.

A displaced tenant may be eligible to receive a payment, not to exceed $5,250, to rent a replacement dwelling or to make a down payment, including incidental expenses, on the purchase of a replacement dwelling. The down payment is based upon what the state determines is required when the rent supplement exceeds $5,250.

It is a policy of the state that no person will be displaced by the NCDOT's state construction projects unless and until comparable replacement housing has been offered or provided for each displacee within a reasonable period of time prior to displacement. No relocation payment received will be considered as income for the purposes of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law.

Last Resort Housing is a program used when comparable replacement housing is not available, or when it is unavailable within the displacee's financial means and the replacement payment exceeds the state legal limitation. The purpose of the program is to allow broad latitude in methods of implementation by the state so that decent, safe, and sanitary replacement housing can be provided.

Residential Impacts. Detailed information was provided initially in the NCDOT *Relocation Report (2003).* At the request of the Merger Process Team in 2008, a field survey of the four detailed study alternatives on new alignment (2A, 2C, 4D, and 4E) was conducted later using GPS technology to more precisely define relocation impacts. All existing homes and businesses were identified within a 25-foot buffer on each side of the detailed alignments, which had been refined since the initial relocations assessment in 2003. Field data was compared against the latest aerial photography. A third level of analysis was completed by the NCDOT in the spring of 2010, which included an engineering level property impact for Alternatives 2C and 2A. Most recent estimates are for the Preferred Alternative and were prepared by NCDOT in January 2011. Results of the most recent data collection effort for each Detailed Study Alternative are shown in **Table 4-1**.

Based on the latest designs and field survey data, an estimated 37 to 58 families would be subject to relocation by the project overall. The Preferred Alternative would include 39 owner-occupied residential relocations and 7 tenant families in rental properties.

TABLE 4-1: ESTIMATED RESIDENTIAL RELOCATIONS

Detail Study Alternative	Residential	Estimate
Alternative 2A	9	January 2011
Alternative 2C	21	May 2010
Alternative 3	10	January 2011
Alternative 4D	27	January 2011
Alternative 4E	18	June 2008

Table 4-2 presents the relocations aggregated by the value of the dwelling for owner-occupied and rental properties. These estimates are based on the *2011 Relocation Reports* provided by NCDOT.

TABLE 4-2: AVAILABLE REPLACEMENT HOUSING

Owner-Occupied Properties, by value	**Number of Displacements**		
	Alt 2A	**Alt 3**	**Alt 4D**
Less than $20,000	1	0	0
$20,000 - $40,000	1	3	8
$40,000 - $70,000	3	5	8
$70,000 - $100,000	3	1	1
Over $100,000	1	1	3
TOTAL	9	10	20
Rental Properties, by monthly rent	**Number of Displacements**		
	Alt 2A	**Alt 3**	**Alt 4D**
Less than $150	0	0	4
$150 - $250	0	0	3
$250 - $400	0	0	0
$400 - $600	0	0	0
Over $600	0	0	0
TOTAL	0	0	7

In order to determine whether ample replacement housing would be available in the area, multiple listing services, realtors, and classified advertisements were consulted for information. Over 850 decent, safe, and sanitary (DSS) dwellings were available for purchase within the study area as of January 2011, in addition to an estimated 85 rental units. **Table 4-3** shows available housing by price range for each segment.

TABLE 4-3: AVAILABLE REPLACEMENT HOUSING

For-Sale Housing Cost	DSS Dwellings Available		
	Alt 2A	Alt 3	Alt 4D
Less than $20,000	0	0	0
$20,000 - $40,000	3	0	11
$40,000 - $70,000	6	32	32
$70,000 - $100,000	8	64	64
Over $100,000	15	765	765
TOTAL	32	861	872
Monthly Rental Housing Cost	**DSS Dwellings Available**		
	Alt 2A	**Alt 3**	**Alt 4D**
Less than $150	-	-	16
$150 - $250	-	-	22
$250 - $400	-	-	31
$400 - $600	-	-	10
Over $600	-	-	6
TOTAL	-	-	85

Alternative 2A would displace one household from a dwelling valued at less than $20,000. Implementation of the Last Resort Housing program could be necessary for this price range. Sufficient DSS housing is currently available within the area for all other owner-occupied and rental housing cost brackets. In addition, several new residential developments are planned and under construction in the project area. Developments are concentrated in Segment 2 around Belgrade and Maysville.

Based on 2011 findings, 34 residential dwellings are inhabited by minority families which would be displaced by the Preferred Alternative. This represents 87 percent of the total residential relocations.

It was determined that Last Resort Housing should be used if necessary for this project. As discussed above, there would likely be sufficient DSS dwellings overall to accommodate any anticipated residential relocations required for the project. However, the price distribution of available housing might necessitate implementation of Last Resort Housing. Public housing is available within Onslow and Jones Counties; however, it is anticipated that public housing will not be needed. It is also anticipated that the number of relocations will not disproportionately affect families with special needs: for example, disabled or elderly individuals. There are no other roadway projects planned in the immediate vicinity that would conceivably affect housing availability.

Business Relocations. Data collection activities followed the same four-step methodology outlined in the preceding section:

- Detailed information was collected in 2003 and is shown in the NCDOT Relocation Report (2003).
- At the request of the Merger Process Team in 2008, a field survey of the four detailed study alternatives on new alignment (2A, 2C, 4D, and 4E) was conducted using GPS technology to more precisely define relocation impacts. All existing homes and businesses were identified within a 25-foot buffer on each side of the detailed alignments, which had been refined since the initial relocations assessment in 2003. Field data was compared against the latest aerial photography.
- A third level of analysis was completed by the NCDOT in the spring of 2010 and included an engineering level property impact for Alternatives 2C and 2A.
- Estimates for the Preferred Alternative were updated in January 2011. Results of this data collection effort are summarized in the NCDOT *Relocation Report (2011),* which is included in Appendix C.

No business relocations are expected to result from the Preferred Alternative, based on the latest *2011 Relocation Report*.

Non-Profit Organization Relocations. No non-profit organizations were identified in the Relocation Reports as being subject to relocation by any of the Detailed Study Alternatives.

4.1.1.3 Community Facilities and Services

The Detailed Study Alternatives improve the intercommunity connectivity for many of the communities in Segments 2 and 4 by creating a bypass west of the existing US 17 alignment. By drawing approximately 68 percent of the projected traffic out of town to the bypass, residents of Belgrade, Maysville, Hatchville, Pollocksville, and Murphytown will be able to access locations on either side of US 17 more safely. Conversely, residents of Oak Grove and Ten Mile Fork will have higher volumes of traffic bisecting their communities once the Pollocksville bypass creates a new transportation link.

4.1.1.3.1 Schools

Two elementary schools are located in the project study area. None of the Detailed Study Alternatives would directly impact area schools. Bypasses in Segments 2 and 4 would reduce traffic volumes through the towns of Maysville and Pollocksville, thereby allowing safer travel for school buses, children walking to school, and school-related traffic on existing US 17. However, Alternative 2A (Preferred) and 2C have the potential to increase the noise levels experienced at the Maysville Elementary School. No changes to school access would occur.

4.1.1.3.2 Churches and Cemeteries

None of the Detailed Study Alternatives displace any churches. Several churches lie adjacent to the Detail Study Alternative corridors: Belgrade Methodist Church (2C), White Oak Trinity Independent Baptist Church on Fourth Street / White Oak River Road (2A and 2C), Lee's Chapel Methodist Church on Lee's Chapel Road (4D and 4E), and New Life Community Church on NC 58 near Pollocksville (4D and 4E). These locations may experience increased noise or visual impacts, particularly during construction.

In Segment 2, Alternative 2A (Preferred) will require the relocation of at least one small cemetery. Alternative 2C will require the relocation of at least two cemeteries. Alternatives 2A and 2C would impact a small family plot located just south of Fourth Street / White Oak River Road (SR 1116). The plot contains four graves dating to the 1950s-1970s and is surrounded by a small block wall. Field review in 2010 revealed the entire area is overgrown with vegetation. Alternative 2C would also impact a cemetery with 30 to 50 gravesites located just west of US 17 at the White Oak River Road (SR 1331) intersection in Belgrade. A historic marker also stands between the cemetery and existing roadway. No other known burial sites have been identified along the proposed alternatives. However, because of the rural setting, it is possible that additional small family plots also exist which may be unmarked, overgrown, or deteriorated. All graves impacted by the proposed project would be relocated in compliance with Article 106 of Chapter 65 of the North Carolina General Statutes.

4.1.1.3.3 Parks and Recreation Facilities

The No-Build Alternative would not have any direct impacts to the parks and recreational facilities in the project area. Likewise, the Detailed Study Alternatives would not have direct impacts on existing community parks or recreational facilities. Diverting long distance trips to the new western bypasses would improve pedestrian safety at several of these resources.

Croatan National Forest. The Croatan National Forest would be impacted by the proposed US 17 improvement project. Based on the proposed disturbed limits, Alternative 2A (Preferred) or 2C would require 2.7 acres of forest lands for right-of-way.

In consultation with the US Forest Service, Alternative 3 (Preferred) would be widened to the east of existing US 17 to minimize impacts to the Community of Chadwick. By widening to the east, the alternative would avoid impacts to 21 residences. However, this does increase the amount of Croatan National Forest right-of-way required to 32.4 acres.

In Segment 4, Alternatives 4D (Preferred) and 4E would not require any Croatan National Forest lands for conversion to transportation uses.

Since the majority of the Forest is wooded, especially in the vicinity of this project, the clearing of a 100-foot wide strip of trees along the existing road would have a limited effect on the use of the land. To further minimize harm, the clearing of trees would be limited to the proposed right-of-way.

Because a portion of the project is located within the Croatan National Forest boundaries on US Forest Service (USFS) property, a special use permit is required to grant a construction easement from the USFS for any project that has the potential to affect USFS property. NCDOT will continue to coordinate these efforts with the USFS.

As part of the coordination process with the USFS, NCDOT considered potential impacts to the USFS list of Proposed, Endangered, Threatened, and Sensitive (PETS) species. The official list of PETS species has been obtained from the USFS and the *2009 PETS Species Evaluation Report* is incorporated by reference. Impacts to these species are discussed in Section 4.1.5.4.4 of this chapter.

4.1.1.3.4 Police, Fire, and Emergency Services

Fire Stations. The No-Build Alternative would not have any direct impacts to the fire departments and emergency service providers in the project area; however, the increased traffic on existing US 17 would contribute to slower response times for fire departments and emergency service providers in the project area.

Construction of Alternative 2C through Belgrade would displace the existing Belgrade Fire Department, located along existing US 17. None of the other Build Alternatives are expected to directly impact police, fire, or emergency service facilities in the study area. The reduced traffic volumes on US 17 should have a positive impact on emergency service response times once the bypasses are open to traffic. Access to Belgrade-Swansboro Road (SR 1434) would be altered by Alternative 2C; following construction, access would be provided via White Oak River Road (SR 1331), which would increase the travel distance to Belgrade-Swansboro Road by 0.8 miles.

Other Community Services and Facilities. A community center, the American Legion Post, located near the Town of Pollocksville would be in close proximity to Alternative 4D (Preferred) and 4E. However, the structure would not be impacted. Design plans portray the proposed roadway to the east of the building. None of the other following types of facilities are located within the footprint of the remaining Detailed Study Alternatives:

daycare facilities, medical facilities, social services agencies, post offices, government facilities, public libraries, police stations. Therefore, impacts to these facilities are not anticipated.

4.1.1.4 Environmental Justice

Executive Order 12898: *Federal Actions to Address in Minority and Low-Income Populations* requires all federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs on minority or low-income populations. The general purpose is to foster non-discrimination in the federal programs and to provide minority and low-income communities great opportunities for public participation in, and access to public information regarding human health and environmental issues. Minority/low-income areas are identified in the screening process to ensure that these communities have access to both concise and clear information sufficient to effectively participate in the public involvement process.

Executive Order 12898 requires federal agencies and any program or activity receiving federal financial assistance to achieve environmental justice by identifying and addressing disproportionately high and adverse human health and environmental effects, including the interrelated social and economic effects of their programs, policies, and activities on minority populations and low-income populations. A disproportionately high and adverse effect on minority and low-income populations means an adverse effect that is predominantly borne by a minority population and/or a low-income population, or will be suffered by the minority population and/or low income population, and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Executive Order 12898 reaffirms the principles of Title VI of the Civil Rights Act of 1964 and related statutes, the National Environmental Policy Act, and other federal environmental laws, emphasizing the incorporation of those provisions with the environmental and transportation decision-making processes. Each federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination on the grounds of race, color, or national origin, under any program or activity receiving federal financial assistance.

For the US 17 improvement project, NCDOT has ensured that no person is excluded from participation in, denied the benefit of, or subjected to discrimination on the grounds of race, color, or national origin, under any program or activity.

Relocations. Relocations are discussed in greater detail in Section 4.1.1.2.

The study area is located within three census tracts across two counties. The year 2000 minority

population of the two census tracts in Jones County is 46 percent, which is substantially higher than the State's 26 percent minority population rate. As of 2006, 59 percent of the population of Maysville is African-American. Hispanic persons compose approximately 3 percent of the study area population; therefore, English proficiency is not a significant issue for the project.

An estimated 34 minority households would be displaced by the proposed project. Because of the ample supply of available DSS replacement housing in the area, disproportionate and adverse impacts to minority social groups are not anticipated. Relocations are generally scattered along the proposed route, minimizing impacts within developed community clusters.

Jones County had 18 percent of its households below the poverty level in 2008, while the State had 14.6 percent of households below the poverty level. Only one household that was identified as being below the poverty level would be displaced by the Preferred Alternative.

Measures to Avoid/Minimize Impacts to minority/Low-Income Communities. Several measures have been taken to avoid / minimize impacts to the minority/low-income communities identified in the study.

Chadwick Community – The existing US 17 alignment is being widened east of the community to minimize impacts.

Garnet Heights Community – All of the proposed alignments are located to the west of the Garnet Heights Community.

Goshen Community – Avoidance of cumulative impacts to this community was a concern due to the fact that farmland from the Goshen Community was utilized by Pollocksville for construction of the town's wastewater treatment facility. Alternatives 4D and 4E were added to the study to address the potential impacts to the Goshen Community. The alignment of these alternatives, between the Goshen Community and the Town of Pollocksville, was selected by community leaders as a viable route.

Murphytown – All of the proposed alignments are located west of the Murphytown Community.

The Detailed Study Alternative alignments were located to avoid passing through the centers of neighborhoods and subdivisions and to minimize relocations where possible.

Public Involvement Opportunities. This US 17 Improvements Project has implemented a successful public involvement plan, including meetings with individual families, small-group meetings, newsletters, press releases, radio and television coverage, citizens' informational

workshops, corridor public hearings, and design public meetings. The public involvement plan ensured that the public was not excluded from participation in, denied the benefits of, or subjected to discrimination from this proposed action. Efforts to include the residents of communities within the study area in the decision-making process for this project are discussed in Chapter 8: Agency Coordination and Public Involvement.

4.1.1.5 Economic

A major new highway facility can have both positive and negative impacts on the economy of the area. Economic effects resulting from construction of the project could include effects related to the trucking and tourism industry, employment, business growth and relocations, and property/tax values.

Employment opportunities during construction and increased retail activity due to construction personnel should combine to provide local, short-term, positive economic impacts. It is reasonable to assume that some portion of the labor and/or materials for construction of the project would be obtained within Jones or Onslow Counties. On a long-term basis, improvements to the corridor are anticipated to stimulate employment opportunities for area residents due to (1) projected modest commercial growth in the study area and (2) increased mobility, which creates a larger accessible area for employment opportunities.

Commuters to Jacksonville and New Bern would benefit from the improved facility by reduced travel times. The facility would assist in the movement of workers, shoppers, and commodities within, through, and from the area in a safer, more economical, and more efficient manner. The US 17 connection between Jacksonville and New Bern is also an important asset for mobility for regional military installations.

Employment, tax revenue, and business growth are elements of the local economy which will be impacted by the construction of the proposed action. Onslow and Jones Counties and the rural communities along US 17, including Belgrade, Maysville, and Pollocksville, could suffer some temporary loss of local tax base due to the acquisition of right-of-way. There is a substantial amount of land available for future development, although sewer service is limited. The project is likely to increase the pace of development in the study area. Little commercial development is anticipated, and any future businesses are likely to be concentrated around interchanges and intersections along the new bypass.

Potential development along bypass routes could result in some adverse impacts to existing businesses in the areas that are being bypassed. The growth of existing businesses as well as future business development in existing commercial areas (mainly the communities of Belgrade, Maysville, and Pollocksville) could be slowed by removing the through traffic, thereby reducing

business exposure. However, most small businesses in the study area rely on local customers, primarily serving local demands for goods and services. Larger retail centers in Jacksonville and New Bern address the regional needs of long distance/commuter traffic by providing a greater variety of travel-dependent businesses (hotels, gas stations, restaurants, etc).

In the long-term, some existing businesses may relocate along new bypass routes to attract and serve the non-local customers. Some closings of locally owned and operated businesses are possible, although it may not be wholly attributed to this project.

Alternative 2A (Preferred) and 2C would remove commuter traffic from the Town of Maysville. However, existing NC 58 through town would continue to accommodate beach travelers' access.

The Mayor and citizens of Pollocksville were opposed to any alternative which passed through or near the Town. They feared the charm and character of the Town would be destroyed by widening the existing roadway or constructing a new roadway along the abandoned railroad bed. The Town supports alternatives that bypass to the west of Town, including both 4D (Preferred) and 4E.

The US 17 improvement project is perceived as key to development in the area, as discussed in Section 3.2.2.

4.1.2 Land Use and Transportation Planning

4.1.2.1 Land Use Plans

This section addresses the proposed alternatives' general consistency with local land use plans and policies. Discussions on development trends and potential indirect and cumulative impacts as they relate to land use are included in Section 4.2 of this chapter, Indirect and Cumulative Effects.

The Coastal Area Management Act (CAMA) was established in 1974 to manage and protect coastal areas and water resources in eastern North Carolina. The plan supports any transportation upgrades by the NCDOT to improve access to Jones, Onslow, and Craven Counties. Therefore, the remaining Detailed Study Alternatives are consistent with CAMA initiatives, although a permit will be required for this project.

Community of Belgrade. Belgrade does not have its own Growth Management Plan; however, Onslow County maintains a Comprehensive Plan. The *2010 Onslow County Comprehensive Plan* supports the US 17 improvement project as a regional priority. The Detailed Study Alternatives are consistent with this guidance. Because of its impacts to homes and businesses

within the community of Belgrade, Alternative 2C did not receive the same level of public support as Alternative 2A (Preferred) from area residents. However, Alternative 2C has fewer impacts to wetlands, one of the ecological resources identified for protection under CAMA guidance.

Jones County. The *Jones County Strategic Plan* lists widening US 17 to four lanes from the Craven County line to Onslow County as a critical priority to future development in Jones County. The *Jones County Strategic Plan* advocates the establishment of new industrial/commercial sites, as well as the construction of residential housing units in Pollocksville. The Detailed Study Alternatives are consistent with this guidance.

Town of Maysville. Alternatives 2A (Preferred) and 2C are consistent with the Town of Maysville's requirement to promote the potential for future growth and development, as discussed in the *Jones County Strategic Plan*. No other formal guidance exists for the Town of Maysville at this time.

Town of Pollocksville. The *Jones County Strategic Plan* advocates the establishment of new industrial / commercial sites as well as the construction of residential housing units in Pollocksville. Additionally, the Board of Commissioners of the Town of Pollocksville supported any Detailed Study Alternatives not located within the town limits. A bypass located outside of the town limits would minimize impacts on residences, businesses, and land within the town limits. A new bypass outside the town limits would also permit growth for the Town; the *Jones County Strategic Plan* documents Pollocksville's intention to expand the town's planning and zoning jurisdiction to include the new bypass corridor. Therefore, Alternatives 4D (Preferred) and 4E are consistent with local land use plans and goals expressed by the Board of Commissioners for the Town of Pollocksville.

4.1.2.2 Transportation Plans

4.1.2.2.1 Compatibility with Highway Plans

The proposed project is consistent with the state and local transportation plans for the area. The project is included in NCDOT's *Draft 2011-2020 Statewide Transportation Improvement Program (STIP)* as Project Number R-2514 (Parts B, C, and D). The project proposes to improve approximately 15 miles of US 17 between Deppe Loop Road (SR 1330) / Springhill Road (SR 1439) south of Belgrade and the New Bern Bypass (STIP Project No. R-2301, which is currently under construction near the Jones / Craven County line, south of New Bern).

The project is also listed in the Down East Rural Transportation Planning Organization's *STIP 2011-2017 Highway Projects Rankings*. Segments 2, 3, and 4 of the project are ranked as priorities 2, 3, and 4 respectively.

The *2009 Regional Growth Management Plan* produced by the Military Growth Task Force of North Carolina's Eastern Region identifies the US 17 improvement project as the top priority action for the region.

4.1.2.2.2 Compatibility with Transit Plans

Currently, there is only one existing transit route or plan within the study area corridors. The Craven Area Rural Transportation System (CARTS) provides service to the elderly and/or disabled residents of Craven, Jones, and Pamlico counties. There are currently no scheduled routes that pass through the study alternatives corridors. The remaining Detailed Study Alternatives are expected to have no effect on any planned transit facilities or existing transit plans.

4.1.2.2.3 Compatibility with Bicycle/Pedestrian Plans

Currently, there are no existing bicycle and/or pedestrian plans within the study area corridors, although a portion of the existing US 17 route in Belgrade, Maysville, and south of Pollocksville is designated as a bicycle highway by the NCDOT Bicycle Program. No specific guidance exists at a local or regional level regarding bicycle or pedestrian plans. However, the 2007 Eastern Carolina Council *Comprehensive Economic Development Strategy* does identify providing transportation options – including cycling and walking – as a method to promote the region as a retirement destination. Study area residents interviewed during the development of the 2002 Community Impact Assessment said that they walk or bike along or across US 17 to visit neighbors, go to work, or access other destinations within the communities. Numerous pedestrians traveling along or across US 17 in Maysville were observed during a September 2010 field visit.

Routing a number of trips from US 17 Business to the proposed bypass would have a positive impact on bicycle or pedestrian safety. By 2035, approximately 68 percent of the traffic using US 17 in the No-Build Alternative would be routed to the bypasses.

4.1.2.2.4 Compatibility with Other Plans (Port and Air)

Currently, there are no existing seaport or airport plans within the study area corridors. Detailed Study Alternatives 2A (Preferred), 2C, 3 (Preferred), 4D (Preferred), and 4E will have no direct effect on any planned or existing seaports or airports.

4.1.3 Physical Environment

4.1.3.1 Noise

A noise analysis was conducted to determine if noise levels generated along the Detailed Study Alternatives would exceed criteria established by the Federal Highway Administration (FHWA) and adopted by the NCDOT Traffic Noise Abatement Policy. Detailed results of the noise analysis are presented in the *Technical Memorandum on Traffic Noise, (WSA, March 2004),* incorporated by reference. The following text provides a summary of the analysis methodology, results, and abatement measures considered for the project.

4.1.3.1.1 Noise Impact Criteria

The FHWA has developed noise abatement criteria (NAC) and procedures for use in the planning and design of highways in order to determine the compatibility of the highways with existing land uses. These criteria and procedures are set forth in Title 23 of the Code of Federal Regulations, Part 772 (23 CFR 772), *US Department of Transportation, FHWA, Procedures for Abatement of Highway Traffic Noise and Construction Noise*. A summary of the FHWA noise abatement criteria for various land uses is presented in **Table 4-4**. The land uses are grouped in Activity Categories. Land uses along the proposed project are Categories B, C, or D activities.

TABLE 4-4: NOISE ABATEMENT CRITERIA

Activity Category	Leq (h)*	L10 (h)*	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Land for which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose and need.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	-	-	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

** Either L10(h) or Leq(h) may be used on a project., but not both*

The sensitivity of an area to additional noise is a function of land use and background noise level. Some types of land use are more sensitive to noise than others, especially those associated with rest, relaxation, concentration, and communication. Examples of noise

sensitive areas include residences, schools, churches, hospitals, libraries, public assembly halls, lodgings, and parks. Land use types that are less sensitive to noise include commercial, industrial, and agricultural uses.

4.1.3.1.2 Analysis Methodology

The FHWA TNM computer model version 2.5 was used to predict noise levels for the 2025 No-Build and Detailed Study Alternatives scenarios.

The analysis was based on a conceptual centerline within each of the Detailed Study Alternatives, using the proposed typical roadway section. The traffic volumes used in the future noise level calculations were the predicted peak-hour volumes for year 2025 or level of service C, whichever is lower. This would represent the worst case noise condition. The TNM model was run to determine the maximum distances from the proposed project to the 66 dBA_{Leq} and 71 dBA_{Leq} noise contours. Terrain features between the roadway and receptors were not included in the model.

The newly projected 2035 traffic volumes are substantially reduced from previous 2025 projected volumes discussed in the SDEIS. This is due primarily to improvements along NC 24 from I-40 to the coast, which draws traffic away from US 17 by providing an improved connection to coastal areas. Because of the reduced traffic projections, noise impacts are anticipated to be lower than those discussed in this analysis, which is based on the higher 2025 volumes.

The modeling was performed in order to determine the number of receptors which would be exposed to noise impacts. Traffic noise impacts occur when either (a) the predicted traffic noise levels approach or exceed the FHWA Noise Abatement Criteria for the applicable Activity Category shown in **Table 4-4**, or (b) when the predicted traffic noise levels substantially exceed the existing noise levels (23 CFR 772). Noise abatement measures must be considered for receptors impacted under either case. The NCDOT *Traffic Noise Abatement Policy (2004)* states that noise levels within one decibel of the FHWA NAC are considered as 'approaching' the criteria. A substantial increase impact is defined by the NCDOT as follows:

- If the existing noise level is less than or equal to 50 dBA_{Leq}, an increase of 15 dBA or more is considered substantial.
- If the existing noise level is greater than 50 dBA_{Leq}, an increase of 10 dBA or more is considered substantial.

4.1.3.1.3 Analysis Results

Table 4-5 lists the impact due to substantial noise level increase and the number of receptors in each activity category predicted to approach or exceed the FHWA NAC by year 2025. A complete list of the traffic noise exposures predicted at receptor locations along the detailed study corridors and the crossroads are listed in the Technical Memorandum on Traffic Noise on file at the NCDOT.

TABLE 4-5: SUMMARY OF NOISE LEVEL IMPACTS

	Activity Category B		**Activity Category C**		
Segment Alternative	No. Receptors Impacted based on FHWA NAC	No. Receptors Impacted due to Substantial Noise Level Increase	No. Receptors Impacted based on FHWA NAC	No. Receptors Impacted due to Substantial Noise Level Increase	Total Receptors Impacted*
Segment 2					
No Build	111	0	33	0	144
Alternative 2A	55	11	0	0	62
Alternative 2C	109	33	3	0	131
Segment 3					
No Build	60	0	1	0	61
Alternative 3	51	0	1	0	52
Segment 4					
No Build	182	0	21	0	203
Alternative 4D	79	53	1	0	119
Alternative 4E	79	52	2	0	120

**Some Receptors are impacted based on both substantial increase and FHWA NAC.*

The traffic noise impacts of the No-Build Alternative were also considered. The effect of background traffic growth on noise levels along the existing roadways would result in future noise levels higher than the existing conditions.

4.1.3.1.4 Noise Abatement Measures

Noise abatement measures are considered when predicted noise levels approach or exceed the FHWA noise abatement criteria or when predicted noise levels would substantially exceed existing noise levels.

Abatement measures, such as noise walls, earth berms, and depressed roadway segments, are intended to reflect or absorb highway traffic noise to reduce noise to acceptable levels. These measures can be very expensive to develop and are generally considered reasonable only if (1) they effectively reduce the noise level (5 dBA_{Leq} or more reduction), and (2) they cost less than $35,000 per effectively protected receptor to construct.

Noise Walls. This measure involves construction of solid mass barriers to effectively diffract, absorb, and reflect highway traffic noise. A noise barrier must be high enough and long enough to shield the receptor from significant sections of the highway in order to provide sufficient noise reduction. Access openings in the barrier severely reduce the noise reduction provided by the barrier. It then becomes economically unreasonable to construct a barrier for a small noise reduction. Safety at access openings (driveways, crossing streets, etc.) due to restricted sight distance is also a concern. Furthermore, to provide a sufficient reduction, a barrier's length would normally be eight times the distance from the barrier to the receptor. For example, a receptor located 50 feet from the barrier would normally require a barrier 400 feet long. An access opening of 40 feet (10 percent of the area) would limit its noise reduction to approximately four dBA.[1]

Alternatives that follow the existing US 17 roadway (segment 3) would have to allow access to adjacent properties. This would limit the ability of noise barriers to provide noise mitigation. Alternatives on new location (segments 2 and 4) are controlled access roadways located in mostly undeveloped areas. **Table 4-6** lists each wall evaluated along with its location, length, height, cost, and receptors studied and benefited. **Figure 3-7** shows the location of noise walls that were considered along the Detailed Study Alternatives.

TABLE 4-6: NOISE WALL EVALUATION

Wall	Location	Length Ft	Height Ft	Total Cost* $	Receptors Studied	Receptors Benefitted	Cost per Receptor Benefitted $
B	Alt 2A, 2C	804	16	$201,000	15	5	$40,200
C	Alt 2C	1624	9	$214,000	17	9	$23,800
F	Alt 2C	1050	18	$282,000	7	1	$282,000
G	Alt 2C	3031	13	$626,800	22	19	$33,000
K	Alt 4D, 4E	1129	13	$227,100	17	0	No benefitted receptors
L	Alt 4D, 4E	1614	23	$567,500	7	0	No benefitted receptors
M	Alt 4D, 4E	994	17	$256,800	5	5	$51,360
N	Alt 4D, 4E	3274	21	$1,074,000	20	18	$59,700
O	Alt 4D, 4E	2520	12	$450,200	19	9	$50,100
P	Alt 4D	2060	17	$534,000	17	9	$59,300
Q	Alt 4D	1568	18	$438,000	5	2	$219,000
R	Alt 4E	3842	17	$1,010,000	10	9	$112,200

* Costs developed and presented in 2004 dollars

[1] *Fundamentals and Abatement of Highway Traffic Noise*, Report No. FHWA-HHI-HEV-73-7976-1, USDOT, Chapter 5, Section 3.2, page 5-27

Segment 2. Four noise walls were evaluated along the remaining Detailed Study Alternatives in Segment 2. Two were found to be reasonable based on criteria for cost per benefited receptor.

Wall C is located along the east side of Alternative 2C extending from south of Belgrade Extension (SR 1440) to the right-of-way for Belgrade-Swansboro Road (SR 1434). This wall is divided into two sections to allow for an access opening at Belgrade Extension. Receptors representing one church, six mobile homes, and ten single-family frame dwellings were used in the evaluation of this barrier wall. An average noise level reduction of seven dBA would be realized at nine receptors. This represents a cost of $23,800 per receptor (in 2004 dollars). This barrier wall is considered reasonable and feasible based on NCDOT cost criteria. However, since Wall C is located along a section of existing US 17 that will be widened, it should not be considered reasonable or feasible due to the presence of driveways and businesses. Noise walls are normally recommended only on new location sections of projects with full control of access.

Wall G is located along the eastern side of Alternative 2C south of Fourth Street / White Oak River Road (SR 1116), between the proposed alignment and Maysville. Twenty-two receptors were studied, with 19 of them receiving an average noise reduction of six dBA. At a cost of approximately $627,000, the cost per benefitted receptor is nearly $33,000 (in 2004 dollars), just within NCDOT's reasonableness threshold. Therefore, consideration should be given to constructing a noise wall at this location if Alternative 2C is advanced for further project development activities.

Segment 3. The Detailed Study Alternative for Segment 3 follows existing US 17. This area is comprised of scattered rural residences with one identified business receptor. Driveway access is permitted for all residences along this segment. Noise mitigation in the form of solid barrier walls is not considered feasible in Segment 3 due to the need for access openings. Therefore, noise barrier walls are not recommended.

Segment 4. Eight noise walls were evaluated along the remaining Detailed Study Alternatives in Segment 4. None were found to be reasonable based on criteria for cost per benefited receptor. Projected 2035 traffic volumes are substantially reduced from previous 2025 projected volumes used in the noise analysis. Because of the reduced traffic projections, noise impacts are anticipated to be lower than those discussed in this analysis, which was based on the higher 2025 volumes. However, since none of the noise walls which were considered reasonable lie along the Preferred Alternative (2A-3-4D), the noise analysis was not repeated with the updated traffic volumes.

Additional noise abatement measures can include:

- Traffic management measure (e.g., traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations);
- Roadway alignment selection;
- Landscaping (also for aesthetic purposes);
- Acquisition of real property or interests therein to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise; and
- Noise insulation of public use or nonprofit institutional structures.

The above listing is not intended to be all-encompassing. Rather, it is intended to indicate some of the factors considered in determining the feasibility and reasonableness of proposed abatement measures.

Traffic Systems Management Measures. Traffic system management measures that limit vehicle type, speed, volume, and time of operations are often effective noise abatement measures. As discussed in Chapter 2, these types of measures are not considered appropriate for this project due to their effect on the capacity and level of service of the proposed alternatives and the fact that they would not meet the purpose of and need for the proposed project.

Earthen Berms. Earthen berms may be effective in reducing noise impacts in many areas, especially where parallel barriers may be necessary to protect impacted areas on both sides of the proposed roadway. Earthen berms generally provide more noise attenuation for less cost than other barrier materials, but are limited by right-of-way and other engineering considerations.

Abatement of impacts along existing US 17 is not feasible because driveway access would be required in the barrier, degrading its effectiveness. Barriers also often block signage that advertises commercial property. There are impacts to residences along many of the US 17 crossroads under the No-Build Alternative. A noise barrier along the existing route could not be built high enough and long enough to decrease the noise levels by more than five decibels and still be reasonable in terms of cost and location. A wall high enough to be effective could not be built far enough away from the receptors to avoid a dominant visual effect on receptors nearest to the wall. All other receptors impacted by the No-Build Alternative are isolated. As stated in the NCDOT's Noise Abatement Guidelines, it is not cost effective to provide noise barriers for isolated receptors.

Roadway Alignment Selection. Roadway alignment selection involves the horizontal or vertical orientation of the proposed improvements in such a way to minimize noise impacts

and costs. The selection of roadway alignments for noise abatement purposes must consider the balance between noise impacts and other engineering and environmental parameters. For noise abatement, horizontal alignment selection is primarily a matter of locating the roadway at a sufficient distance from noise sensitive areas.

Changes in vertical alignment can be effective in limiting noise impacts of certain roadway facilities. Depressing or raising the highway elevations can create cut and fill slopes which may block the line of sight from a receiver to a road and provide shielding from traffic noise.

Landscaping. Studies have shown that a 200-foot width of dense vegetation can reduce noise levels by ten dBA_{Leq}. However, it is often impractical to plant this quantity of vegetation to achieve such reductions.

4.1.3.1.5 Information on Noise for Local Officials

It is the policy of NCDOT that the type of material used in construction of any noise abatement measure is an engineering decision based on economics, effectiveness, and, to a limited degree, visual impact. Visual impact considerations will assure that the proposed barrier meets a basic aesthetic level and a basic durability level such that excessive deterioration or corrosion will not occur.

It is also a part of this policy to have traditional highway resources pay for the required noise abatement. Should a local jurisdiction request that a material be used for the noise barrier that is more costly than that proposed by NCDOT, the requesting body must assume 100 percent of the additional cost.

If a local jurisdiction insists on the provision of a noise abatement measure deemed feasible but not reasonable by NCDOT, a noise barrier may be installed, provided the locality is willing to assume 100 percent of the cost of the abatement measure, including but not limited to preliminary engineering, construction, and maintenance, and provided that NCDOT's material, design and construction specifications are met.

In an effort to prevent future noise impacts on currently undeveloped lands, NCDOT will use the following criteria:

- The "Date of Public Knowledge" of the location and potential noise impacts of a proposed highway project will be the approval date of the final environmental document, e.g., Categorical Exclusion (CE), State or Federal Finding of No Significant Impact (FONSI) or State or Federal Record of Decision (ROD). After

this date, State governments are no longer responsible for providing noise abatement measures for new development for which building permits are issued within the noise impact area of the proposed highway project.

- For development occurring after this public knowledge date, it is the responsibility of the local governing bodies to ensure that noise compatible designs are utilized.
- The date for determining when undeveloped land is "…planned, designed and programmed…" for development will be the issuance of a building permit for an individual site.

The extent of the 71 and 66 dBA_{Leq} noise level contours from the Detailed Study Alternatives varies depending on the predicted traffic volumes. **Table 4-7** shows the contour distances based on the 2025 traffic projections. This information should assist local authorities in exercising land use control over the remaining undeveloped lands adjacent to the roadway within the local jurisdiction. For example, with the proper information on noise, the local authorities can prevent development of incompatible activities and land uses with the predicted noise level of an adjacent highway.

TABLE 4-7: NOISE LEVEL CONTOUR DISTANCES
2025 BUILD TRAFFIC CONDITIONS

Segment Alternative	Distance to Noise Level Contour		
	57dBA	67dBA	72dBA
Segment 2			
Detailed Study Alternative 2A and 2C			
Beginning to End	623 ft	164 ft	82 ft
Segment 3			
Detailed Study Alternative 3			
Beginning to End	656 ft	196 ft	98 ft
Segment 4			
Detailed Study Alternative 4D and 4E			
Beginning to NC 58	656 ft	196 ft	98 ft
NC 58 to End	755 ft	245 ft	115 ft

Note: All distances measured from center of near lane and are based on 2004 traffic estimates which are greater than updated estimates.

Noise levels in 2025 for the receptors in the vicinity of US 17 and the crossroads are typically higher for the No-Build Alternative than for the Detailed Study Alternatives, with impacts due to noise levels approaching or exceeding the NAC for the applicable Activity Category of the receptor. At locations where the highway follows new alignment, the 2025 build alternatives experience substantial increase in noise levels when compared to the existing condition. However, new forecasts have been done since the 2025 traffic projections were made, and traffic is now expected to increase less dramatically than

originally projected; therefore, noise impacts are likely to be less marked than those defined by this analysis, which is based on the previous higher traffic projections.

4.1.3.2 Air Quality

An air quality analysis evaluating microscale air quality effects (focusing on carbon monoxide) was conducted for this project and is documented in *Technical Memorandum on Air Quality US 17 Widening from north of Jacksonville to south of New Bern, (WSA, October 16, 2001)*, incorporated by reference.

4.1.3.2.1 State Implementation Plan Consistency

Both the Clean Air Act and SAFETEA-LU require conformity between a proposed transportation system and the State Implementation Plan (SIP). The transportation conformity regulations are intended to ensure that a state does not undertake transportation projects, programs, or plans that are inconsistent with the state's obligation to meet and maintain the NAAQS. Metropolitan Planning Organizations (MPOs) must show that expected emissions from their transportation system are within the mobile source emission budgets in the applicable SIP. Transportation projects must come from conforming transportation plans/programs, and conforming transportation plans/programs must come from conforming SIPs.

The project is located in Onslow and Jones Counties, which have been determined to be in compliance with the NAAQS. 40 CFR Parts 51 and 93 are not applicable, because the proposed project is located in an attainment area. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

4.1.3.2.2 Qualitative Mobile Source Air Toxics (MSATs) Analysis

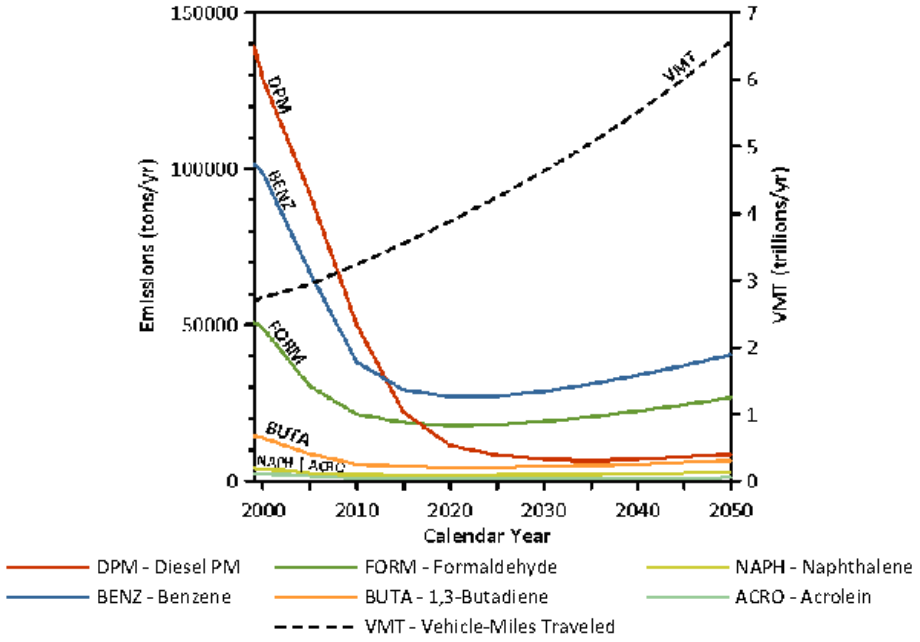
Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making.

Nonetheless, air toxics concerns continue to be raised on highway projects. Even as the science emerges, there is an expectation to address MSAT impacts in environmental documents. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT

emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field.

The 2007 EPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (vehicle-miles travelled, VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSATs is projected from 1999 to 2050, as shown in **Figure 4-1**.

FIGURE 4-1: NATIONAL VEHICULAR MSAT EMISSION TRENDS, 1990-2050



Note:
(1) Annual emissions of polycyclic organic matter are projected to be 561 tons/yr for 1999, decreasing to 373 tons/yr for 2050.
(2) Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.
Source: U.S. Environmental Protection Agency. MOBILE6.2 Model run 20 August 2009.

On February 3, 2006, the FHWA released *Interim Guidance on Air Toxic Analysis in NEPA Documents*. The purpose of this guidance is to advise on when and how to analyze MSATs in the NEPA process for highways. This guidance is interim, because MSAT science is still evolving. As the science progresses, FHWA will update the guidance.

The FHWA has developed a tiered approach for analyzing MSATs in NEPA documents. Depending on the specific project circumstances, FHWA has identified three levels of analysis:

- No analysis for projects with no potential for meaningful MSAT effects;
- Qualitative analysis for projects with low potential MSAT effects; or
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The design year traffic projections on US 17 are projected to be between 11, 400 and 13,500 vehicles per day in 2035. These volumes are substantially lower than the FHWA criterion. As a result, the project is considered to be a "Project with Low Potential MSAT Effects." Therefore, a qualitative assessment of MSAT impacts on air quality was prepared in 2011, and is summarized below.

For all Detailed Study Alternatives, the amount of MSATs emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. The Build VMT for the proposed project is expected to be slightly higher than that for the No-Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

The improvements to US 17 will have the effect of moving some traffic closer to nearby homes, churches, and businesses; therefore, there may be localized areas where ambient concentrations of MSATs could be higher under the Build Alternative than the No-Build Alternative. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In sum, higher MSAT emission rates would occur under the Build scenario than under the No-Build scenario due to increased VMT. There could be slightly elevated but unquantifiable changes in MSATs to residents and others in localized areas where VMT increases, which may be important particularly to any members of sensitive populations. Conversely, lower MSAT emissions would be expected along the existing roadway network including the existing US 17 due to reduced VMT.

Also, regardless of the alternative chosen, emissions will likely be lower than present levels

in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from year 2000 to year 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations. On a regional basis, the EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

Because MSAT science is still evolving, the available technical tools do not enable prediction of project-specific health impacts from emission changes associated with alternatives evaluated in the SFEIS. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22) regarding incomplete or unavailable information.

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects."[2] Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile source Air Toxic Analysis in NEPA Documents*. Among the adverse health effects linked to MSAT compounds at high

[2] *www.epa.gov/ncea/iris/index.html*

exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations[3] or in the future as vehicle emissions substantially decrease.[4]

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the EPA's MOBILE6.2 model, the California EPA's Emfac2007 model, and the EPA's Draft MOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of EPA's guideline CAL3QHC model was conducted in an NCHRP study,[5] which documents poor model performance at ten sites across the country - three where intensive monitoring was conducted plus an additional seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with National Ambient Air Quality Standards for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI.[6] As a

[3] *http://pubs.healtheffects.org/view.php?id=282*
[4] *http://pubs.healtheffects.org/view.php?id=306*
[5] *www.epa.gov/scram001/dispersion_alt.htm#hyroad*
[6] *http://pubs.healtheffects.org/view.php?id=282*

result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA[7] and the HEI[8] have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

4.1.3.3 Farmland

Impacts to prime, unique, and local or statewide important farmlands were assessed in accordance with the Federal Farmland Protection Policy Act (FPPA) and State Executive Order Number 96. The project was coordinated with the US Department of Agriculture (USDA) and Natural Resources Conservation Service (NRCS). Farmland Conversion Impact Rating Forms

[7] *http://www.epa.gov/risk/basicinformation.htm#g*
[8] *http://pubs.healtheffects.org/getfile.php?u=395*

are presented in Appendix D.

The NRCS assigns ratings to farmlands to determine the level of impacts to the prime, important, and unique farmlands. The rating form is comprised of two parts: the Relative Value of Farmland and the Total Corridor Assessment. The first part is qualitatively determined by the NCRS and rated on a scale of 0 to 100 points. The Total Corridor Assessment is based on the other land uses and resources within the project area and is rated on a scale of 0 to 160 points. The two ratings are added together for a total possible score of 260 points. NRCS guidance for corridor projects specifies that (1) the lowest rated alternative will be chosen unless there are other prohibitive factors; and (2) where the chosen alternative's total score is greater than 160, documentation shall discuss what factors prohibited choosing the lowest impacting alternative and what minimization measures will be employed (e.g. reducing the radii or intersections, reducing the footprint of interchanges, narrowing the typical section and/or right-of-way and restoring impacted soils within temporary construction easements to farmable conditions).

Based on a 1,000-foot wide initial corridor footprint used along new location alignments and 500-foot along existing location alignments for this study, Alternative 2A (Preferred) would impact 187.5 acres in the corridor and received a farmland conversion impact rating of 83 points. Alternative 2C would impact 125.9 acres in the corridor and received a farmland conversion impact rating of 62 points. Alternative 3 (Preferred) would impact 201.0 acres based on the corridor width and scored 3.5 points. Alternative 4D (Preferred) would impact 989.9 acres based on corridor width and scored 64 points. Alternative 4E would impact 1,024.5 acres in the corridor and scored 69 points. Therefore, in accordance with the Farmland Protection Policy Act, special consideration for farmland loss relative to the FPPA is not required for the project.

4.1.3.4 Utilities

Major existing utilities within the study area include electrical transmission lines, natural gas lines, water mains, and sanitary sewer lines. All utility providers will be contacted and coordinated prior to construction in order to minimize interruptions in their service.

Electrical Power – All the Detailed Study Alternatives will impact low voltage lines providing service to individual households and businesses. These lines will be relocated or reconfigured where conflicts arise.

Alternative 4D (Preferred) will cross the Progress Energy electrical transmission line north of Pollocksville. If these lines require adjustment or pole relocation, NCDOT will work with the electrical companies to coordinate the appropriate adjustments prior to construction. Alternative 4D also would relocate the electrical substation located just north of Wise Fork Road (SR 1002).

Water and Sewer Service – Adjustment or relocation of existing water and wastewater lines may be required at several locations along the Detailed Study Alternatives. In rural areas, water wells and septic systems may require relocation.

Jones County operates a water tower west of US 17 and south of Lee's Chapel Road (SR 1114). This tower is located within the corridors of Alternatives 4D (Preferred) and 4E; however, no impacts to the water tower are anticipated.

Areas where existing water and wastewater lines may require adjustment or relocation include:

- Along existing US 17 in Segment 3
- Fourth Street / White Oak River Road (SR 1116) for Alternative 2A (Preferred) or 2C
- NC 58 and State Routes west of US 17 for Alternative 4D (Preferred) or 4E
- Goshen Road (SR 1337) for Alternative 4D (Preferred) or 4E

The NCDOT will coordinate all necessary adjustments with the appropriate town or county having jurisdiction.

Communication – Both underground fiber optic and overhead telephone service could be impacted by all of the Detailed Study Alternatives. The existing underground service along US 17 will require relocation for Alternatives 2C and 3 (Preferred). Service impacts will be coordinated with the appropriate service provider. A disruption in service is not anticipated.

Other Utilities – Propane gas service would not be impacted. Cable services could be impacted by the proposed project. Service impacts will be coordinated with the appropriate service provider to minimize disruption in service.

Eastern North Carolina Natural Gas has a natural gas transmission line in the Progress Energy easement west of US 17, along US 17, and along NC 58 within the town limits of Pollocksville. Adjustments to this line may be required for Alternative 4D (Preferred). Any adjustments will be coordinated through Eastern North Carolina Natural Gas.

4.1.3.5 Visual

The visual character of the US 17 corridor is a typical rural corridor for this portion of the state: largely forested, flat terrain interspersed with agricultural fields, scattered homes, and a few small businesses. Within developed areas of Maysville and Pollocksville, historic churches and small businesses stand alongside historic homes, mobile homes, and a collection of vinyl siding structures. Structures range in upkeep from well-maintained to substandard. In Belgrade, strip

businesses line US 17 to the north; a quarry to the east and two large storage silos stand adjacent to the roadway. Clusters of mobile homes, cemeteries, and individual siding-clad houses are typical for the remaining developed portions of the route. Mature trees adjacent to the roadway greatly limit visibility.

The visual experience of any corridor depends a great deal on the observer. It is a combination of the resources actually seen and the viewer's response. A variety of physical conditions can affect the viewer's perception, going beyond merely seeing an object. For example, as the distance between an object and the observer increases, the ability to see details of that object decreases.

To help describe the perceived views of the new facility, viewer groups can be divided into categories by their location, their awareness of their surroundings, and their expectations.

- The location of the viewer has a great effect on the perception. At the most basic level, two distinct groups observe the highway: motorists using the facility and viewers in other locations looking towards the road.
- The awareness of the viewer (i.e.. how receptive someone is to the visual experience) is influenced by a variety of factors. Sensitivity and personal preferences impact awareness. Activities influence how receptive a viewer is; for instance, someone driving in heavy traffic or through a construction zone will pay less attention to visual elements of the surroundings than a driver touring the area to observe scenery. Dramatic changes can increase awareness, such as entering a city, cresting a hill, or the sudden appearance of a large feature.
- Local goals and values indirectly modify viewer experiences by shading expectations. Viewers may be particularly sensitive to visual resources if a landscape is culturally significant or contains a unique feature, for example, the collection of historic architecture in the Maysville or Pollocksville Historic Districts.

Drivers generally have a narrowed field of visual perception as they concentrate on driving tasks. All individual views from the roadway are relatively short duration due to the movement of the viewer. As speed increases, the breadth of lateral vision decreases and the observer tends to focus more directly before them, along the line of travel.

Principal groups that have views from US 17 are local residents, commuter traffic, and tourists. Tourists and vehicle passengers have the highest viewer sensitivity (i.e., they are more attuned to their visual surroundings) but low view frequency. Local traffic is considered moderately sensitive; because they view the area more frequently, they are more sensitive to changes. Commuters view the surroundings frequently, making them generally indifferent to the view after so many repetitions. For this reason, commuter traffic is considered to have a low

sensitivity to the visual experience.

The majority of Alternatives 2A (Preferred), 4D (Preferred), and 4E plus a portion of Alternative 2C are on new alignment. West of the existing US 17 alignment, the new bypasses will largely be screened from view by stretches of forest. Visual quality for travelers on these alternatives would be altered when compared to the visual environment along portions of the developed existing US 17 roadway. Consistent with other rural portions of the existing US 17 corridor, the new bypasses will pass largely through undeveloped lands: crop fields, forest, and wetlands. Views of preserved homes in historic communities will be lost to motorists using the bypasses.

Widening along the existing alignment in Alternatives 2C or 3 (Preferred) will remove some structures currently lining the roadway; however, it will not have a major impact on the viewshed from the route. The width of right-of-way and scale of paved areas will be noticeably increased, changing the appearance of the corridor for residents viewing the highway.

For some residents along Fourth Street / White Oak River Road (SR 1331), White Oak River Road (SR 1116), Riggs Town Road (SR1112), Eight Street (NC 58), Goshen Road (SR 1337), Oak Grove Road (SR 1121), Wise Fork Road (SR 1002), and Simmons Loop Road (SR 1330), the proximity of the new bypasses will have a negative impact on the serenity of their existing rural homes. For residents within communities along existing US 17, less traffic will travel along the existing roadway; however, there will be minimal impacts to the viewshed. Western bypasses of Maysville and Pollocksville will be largely screened from the view of most residents due to existing vegetation.

Measures incorporated into the project that minimize visual impacts include avoiding dense residential areas, minimizing cut and fill slopes by following existing groundlines where possible, and implementing a landscaping plan for areas within the roadway right of way. The landscaping plan would be designed to integrate landscaping into the project design to promote visual continuity and to blend it into the natural landscape as much as possible. Future development adjacent to the proposed roadway could implement measures to reduce visual impacts such as buffer areas and screening landscaping.

It is the policy of NCDOT to incorporate aesthetic features into the roadway design. The NCDOT will attempt to minimize vegetation losses throughout the roadway design process to create an aesthetically pleasing and functional roadway that minimizes visual impacts.

Short-term visual impacts during construction are likely to occur, more noticeably for segments along the existing US 17 route. Visual impacts during construction would affect a greater number of people for a longer period of time under Alternative 2C or 3 (Preferred). Construction would take longer because traffic flow would still need to be maintained along the existing

roadway. The construction activities would be visible to more people for a longer period of time as they travel US 17. Major portions of Alternatives 2A, 4D (Preferred) and 4E would lie on new location and would not be as visible from existing roadways or community centers.

4.1.3.6 Hazardous Materials

An assessment was made of the potential impacts of the proposed project on known hazardous material sites and underground storage tanks (UST) based on field observations and searches of State and Federal databases. These findings are of a preliminary nature and are not intended to replace more detailed studies such as subsurface soil or groundwater investigations at appropriate locations. Other potentially hazardous materials sites and USTs may exist within the corridors for Detailed Study Alternatives due to illegal dumping, lack of compliance with regulatory reporting, and limited regulatory data.

The Detailed Study Alternatives contain zero to four known hazmat sites based on 1994 field investigations. In Segment 2, Alternative 2A (Preferred) contains one known site and Alternative 2C contains four known sites. No potential hazmat locations were associated with Alternative 3 (Preferred), 4D (Preferred), or 4E corridors based on the 1994 field inspection. A 2010 database search did not reveal any previously unknown sites within the Detailed Study Alternatives.

If any of the potential hazardous materials sites and USTs cannot be avoided by the Preferred Alternative, further assessments of the properties may be necessary. These assessments should evaluate the properties for specific types and amounts of hazardous materials and will include right-of-way acquisition recommendations. Based on current knowledge, it is not expected that conditions at any of these sites would preclude construction of any of the Detailed Study Alternatives.

4.1.3.7 Floodplain / Floodway

As discussed in the *Hydraulics Report* and *Addendum 1 (WSA, October 1997, March 2000)*, a floodplain evaluation was conducted for the project in accordance with Executive Order 11988 Floodplain Management and 23 CFR Part 650, Subpart A Location and Hydraulic Design of Encroachments on Floodplains.

Both Onslow and Jones Counties participate in the National Flood Insurance Program, administered by the Federal emergency Management Agency (FEMA). Based on the most current information available from the NC Floodplain Mapping Program (FMP), some stream crossings on this project have a designated flood hazard zone. The established limits of the 100-year floodplains and floodways from the Flood Insurance Rate Maps (FIRM) are reflected on

Figure 3-11. The Hydraulics Unit will coordinate with FMP, the delegated state agency for administering FEMA's National Flood Insurance Program, for approval of a Conditional Letter of Map Revisions and subsequent final Letter of Map Revisions for each new crossing of a FEMA-regulated stream. This project involves construction activities on or adjacent to FEMA-regulated streams; therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

The floodplains in the study area were identified using FEMA's FIRM for Onslow and Jones Counties. Maps were published for Onslow County in July 1987 and Jones County in August 1988.

Table 4-8 provides information regarding the length of the 100-year floodplains spanned by each Detailed Study Alternative. Alternatives 2A (Preferred) and 2C cross the 100-year floodplain of the White Oak River while Alternatives 4D (Preferred) and 4E cross the 100-year floodplain of the Trent River. No floodway areas are depicted on the FIRM Map.

TABLE 4-8: APPROX LENGTH OF ENCROACHMENT FOR FLOODPLAIN CROSSING

Detailed Study Alternative	Length of Encroachment	Bridged Length	Total Floodplain Crossing Length
Alternative 2A	2,750 ft	1,260 ft	3,530 ft
Alternative 2C	2,610 ft	560 ft	3,170 ft
Alternative 4D	4,150 ft	1,560 ft	5,710 ft
Alternative 4E	4,150 ft	1,560 ft	5,770 ft

Major drainage structures proposed for the project would cross the 100-year floodplains at or near perpendicular angles, resulting in transverse floodplain encroachments that minimize the length of floodplain traversed. As a result, minor impacts are anticipated within the 100-year floodplains. As discussed in Section 4.1.5.3.3, all structures are sized, to ensure that no increases to the extent and level of flood hazard risk would result from encroachments.

4.1.3.8 Managed Lands

4.1.3.8.1 Wild and Scenic Rivers

There are no Wild and Scenic Rivers in the project area; the White Oak River is listed in the Nationwide Rivers Inventory as potentially eligible as a Wild and Scenic River. No impacts to Wild and Scenic Rivers will result from construction of any alternative. NCDOT Best Management Practices will be followed during construction to minimize impacts to water resources.

4.1.3.8.2 State / National Forests

Hofmann State Forest: Alternative 2A (Preferred), Alternative 2C, and Alternative 3 (Preferred) are not expected to impact the Hofmann State Forest since their alignments lie east of the forest lands.

Croatan National Forest: Alternatives 2A (Preferred), 2C, and 3 (Preferred) would impact 2.7, 2.7, and 32.4 acres of Croatan National Forest property, respectively. Segment 4 does not impact forest lands because all construction occurs west of the existing US 17 alignment. A portion of the USFS Red-cockaded woodpecker cluster 134 falls within the right-of-way footprint for Alternative 3. No red-cockaded woodpecker activity was observed within this territory during repeated visits during summer and fall 2008. A colony of spring-flowering goldenrod grows along existing US 17 and also falls within the right-of-way footprint for Alternative 3. Alternative 3 may impact individuals of the species and result in a loss of occupied habitat. Approximately 0.91 acres of the 1.21 acres of the roadside habitat occupied by spring-flowering goldenrod would potentially be directly impacted. Spring-flowering goldenrod is known from 36 occurrences on NFS lands and there are a total of 321 acres of occupied habitat on NFS lands within the Croatan National Forest.

Other impacts to species are discussed in Section 4.1.5.4.4 of this chapter.

4.1.3.8.3 Gamelands and Preservation Areas

Besides impacts to the Croatan National Forest and goldenrod roadside population discussed above, no other impacts to Natural Heritage Areas are anticipated to occur from construction of any of the Detailed Study Alternatives.

4.1.4 Cultural Resources

4.1.4.1 Historic Architectural Resources

Section 106 of the National Historic Preservation Act (36 CFR Part 800), as amended, requires agencies to consider the effects of their actions on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment if the action will result in an adverse effect on a property listed in or eligible for the National Register.

The potential effect of the proposed project on historic architectural resources was evaluated in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. According to the criteria for Effect and Adverse Effect developed by the Advisory Council on

Historic Preservation (36 CFR Section 800.9), potential effect is determined based upon the following:

- **No Effect:** There would be no effect, neither adverse or beneficial, on potential cultural resources;
- **No Adverse Effect:** There would be an effect, but it is determined that the effect would not compromise those characteristics which qualify the property for listing on the National Register; and
- **Adverse Effect:** There would be an effect that would compromise the integrity of the cultural resource.

As described in Section 3.4.1, eight historic resources are located within the project study area, six individual historic resources and two historic districts. Three properties within the Area of Potential Effects (APE) are listed on the National Register of Historic Places (NRHP): Foscue and Simmons Plantation, Bryan Lavender House (also part of Pollocksville Historic District), and Bryan-Bell Farm (Oakview Plantation).

In addition to these previously listed properties, four properties and two districts were determined eligible for the NRHP. The districts are the Maysville Historic District and the Pollocksville Historic District. The additional properties determined eligible are the Ten Mile Fork Gas Station / Store north of Pollocksville, the J. Nathan Foscue Farm south of Pollocksville, the Henderson-Provost House and Store in Belgrade, and the Zinnie Eubanks House and Store in Belgrade.

Determinations of effect for historic properties are listed in **Table 4-9**. NCDOT and the NC Historic Preservation Office (HPO) concurred with these determinations of effect and a copy of the correspondence related to Section 106 coordination is provided in Appendix A.

TABLE 4-9: DETERMINATIONS OF EFFECTS TO HISTORIC RESOURCES

Historic Resource	Segment	Finding
Foscue and Simmons Plantation	4	4D: NAE 4E: NE
Bryan-Bell Farm	4	4D: NAE 4E: NAE
Pollocksville Historic District (includes Bryan Lavender House)	4	4D: NE 4E: NE
Maysville Historic District	2	2A: NE 2C: NE
Ten Mile Fork Gas Station/Store	4	4D: NE 4E: NE

TABLE 4-9: DETERMINATIONS OF EFFECTS TO HISTORIC RESOURCES

Historic Resource	Segment	Finding
J. Nathan Foscue Farm	3	NAE
Henderson-Provost House	2	2A: NE 2C: NAE*
Zinnie Eubanks House / Store	2	2A: NE 2C: NAE

AE – Adverse Effect, NE – No Effect, NAE – No Adverse Effect

* - NAE with commitment

4.1.4.1.1 No-Build

No historic resources would be affected under the No-Build Alternative. This alternative would not change the present setting.

4.1.4.1.2 Segment 2 through Maysville and Belgrade

Three historic resources are located within the Segment 2 study limits: The Henderson-Provost House and Store, the Zinnie Eubanks House and Store, and the Maysville Historic District.

Maysville Historic District (NR Eligible) - Alternatives 2A (Preferred) and 2C would have no effect on the historic district due to the fact that both bypass the district to the west.

Henderson-Provost House and Store (NR Eligible) - Alternative 2A (Preferred) would have no effect on the property because it bypasses Belgrade and the Henderson-Provost property to the west. Alternative 2C would have no adverse effect on the Henderson-Provost property based on NCDOT's commitment to prohibit construction activities within the historic boundary.

Zinnie Eubanks House and Store (NR Eligible) - Alternative 2A (Preferred) would have no effect on the property because it bypasses Belgrade and the Zinnie Eubanks property to the west. Alternative 2C would have no adverse effect on the property because no construction occurs within the historic boundary and access is preserved.

4.1.4.1.3 Segment 3 between Maysville and Pollocksville

One historic property is located within the Segment 3 study limits, the J. Nathan Foscue Farm. The property will be impacted by Alternative 3 (Preferred). Alternative 3 consists of

an eastern widening of the existing alignment of US 17 to minimize impacts to the Chadwick Community due to the number of residents living on the west side of US 17.

J. Nathan Foscue Farm (NR Eligible) - Alternative 3 (Preferred) would have no adverse effect on the property. Approximately 100 feet of new right-of-way would be required along US 17, but this would not impact the standing structures and would have minimal impacts on farming operations.

As stated earlier in the description of this property, the house is located approximately 0.6 miles east of US 17 down a long unpaved lane and has been unoccupied since 1994. The area between the highway and the house has primarily been used as timberland and has recently been timbered. Since the house is located such a distance from the existing highway, Alternative 3 would minimize the impacts to the historic property and to the Community of Chadwick. This is supported by the Board of the Jones County Historical Society as stated in a letter included in Appendix A. The Board appreciates NCDOT's concern for this historically-important property; however, the Board states that the Foscue homestead is located so far back from the highway that it would not be adversely affected by the selection of Alternative 3. The Board would prefer to see this action taken than to see many families displaced in order to leave the entire plantation intact.

As stated in Chapter 2, an avoidance alternative was investigated for this property; however, it would have caused excessive relocation impacts in the Community of Chadwick, so the avoidance alternative was removed from the detailed study list.

4.1.4.1.4 Segment 4 from Pollocksville to Craven County Line

Four historic resources are located within the Segment 4 study limits. The Bryan-Bell Farm / Oakview Plantation, Pollocksville Historic District (which includes the NRHP-listed Bryan Lavender House and the Trent River Plantation, identified in the NRHP study list), the Foscue and Simmons Plantation, and the Ten Mile Fork Gas Station / Store are located within Segment 4. Two of the historic properties are large plantations, the Bryan-Bell Farm / Oakview Plantation at 2,251 acres and the Foscue and Simmons Plantation at 1,379 acres, which makes it extremely difficult to avoid all historic resources.

As discussed in the SDEIS, eight Detailed Study Alternatives were evaluated in Segment 4. The bypass alternatives were developed to avoid and minimize impacts to the historic properties and minority communities. Detailed Study Alternative 4E was the only true avoidance alternative of all historic resources, but it was not selected as the Least Environmentally Damaging Practicable/Preferred Alternative because of its associated impacts on wetlands.

Pollocksville Historic District (NR Eligible) - The Pollocksville Historic District includes the **Bryan Lavender House (NR Listed)** and the **Trent River Plantation (NR Study List).** Alternatives 4D (Preferred) and 4E have been determined to have no effect on the historic district because they bypass Pollocksville to the west.

Four avoidance alternatives were developed to the west of town. Eastern avoidance alternatives were investigated; however, these alternatives would have required extensive channel changes to Mill Creek, which is located just east of the abandoned railroad bed, wetland impacts, or an additional bridge crossing the Trent River.

The widening of the existing alignment through the historic district was considered but not carried forward for detailed study due to the excessive impacts to the properties along US 17 in Pollocksville. The town has been very vocal and strongly opposes any alternative through town or the eastern edge of town. The town states that any alternative which touches any part of the present town limits threatens the very existence of the town and would create a traffic hazard affecting the safety of those who would continue to live in what was left of the town. The town has gone on record to strongly support any of the western bypasses. This is documented in letters from the Mayor of Pollocksville included in Appendix A.

Bryan-Bell Farm/Oakview Plantation (NR Listed) - Alternatives 4D (Preferred) and 4E are located just east of the property boundary and will have no adverse effect on the historic property.

Foscue and Simmons Plantation (NR Listed) - Alternative 4D (Preferred) follows the Progress Energy easement approximately 0.7 miles west of the Foscue house. This alternative would require approximately 25.3 acres of right-of-way from the property. This alignment is close to the western limits of the historic property and the Foscue family has indicated to NCDOT that this alternative would be acceptable to minimize impacts to the property. The Historic Preservation Office considers Alternative 4D to have no adverse effect on the Foscue and Simmons Plantation since it results in no impact to standing structures and minimal impacts on farming operations.

Alternative 4E would have no effect on the Foscue and Simmons Plantation property because no construction activities would occur within or adjacent to the historic boundary.

Ten Mile Fork Gas Station / Store (NR Eligible) - Alternatives 4D (Preferred) and 4E would have no effect on the Ten Mile Fork Gas Station property because no construction activities would occur within or adjacent to the historic boundary.

4.1.4.1.5 Measures to Minimize Impacts

All alternatives developed in each corridor segment have been sited horizontally and vertically to minimize impacts to historic resources while considering other environmental issues such as wetlands, streams, minority neighborhoods, and communities. Additional minimization can be obtained by increasing roadway side slopes during design along adjacent historic properties. Also, appropriate landscaping plans can be developed to provide visual screening and buffer areas to soften potential effects from the proposed alternative improvements.

Close coordination with all review agencies, including the North Carolina Historic Preservation Office, has been conducted during development of all alternatives in Segments 2, 3, and 4. Three Citizens Informational Workshops and numerous individual small group meetings were conducted to gather comments on the segment alternatives. Where practical, alternatives were adjusted to incorporate citizen's comments.

4.1.4.2 Archaeological Resources

A total of 34 archaeological sites were documented within the study area as part of the 2009 and 2010 investigations, including one NRHP-eligible site (31JN128**). At least one cemetery within the project corridor will be relocated according to the relevant state regulations and guidelines. At least two cemeteries will be avoided by the corridor; it is recommended that these should also be avoided by all proposed construction activities, including staging areas and construction fill removal. Cemeteries are shown on **Figure 3-2**. The site recommended eligible for the National Register is only partially located within the project corridor. However, it is recommended that the entire site be subjected to data recovery excavation. No additional work is recommended for the other sites documented during the 2009 and 2010 archaeological investigations.

4.1.5 Natural Environment

4.1.5.1 Soils / Topographical / Geological

Soils - The properties of soils, including shrink-swell potential, erosion hazard, risk of corrosion, and suitability as roadfill, can affect the engineering design of a roadway. **Table 4-10** lists the acreages of each soil type within the right-of-way limits of the Detailed Study Alternatives. Twenty-three different soil types are present in the corridor footprints. Six different soil types make up seventy percent of the area, including Craven very fine sandy loam (CrB), Goldsboro loamy sand (GoA), Leaf silt loam (La), Lenoir loam (Le), Norfolk loamy sand (NoB) and Rains fine sandy loam (Ra).

TABLE 4-10: ACREAGES OF SOIL TYPE WITHIN THE RIGHT-OF-WAY LIMITS OF THE DETAILED STUDY ALTERNATIVES

Soil Type	Alt 2A	Alt 2C	Alt 3	Alt 4D	Alt 4E
Ba				0.6 (0.2%)	8.7 (3%)
CrB	2.8 (2%)	2.7 (1%)	0.3 (0.3%)	44.1 (14%)	31.0 (10%)
CrC				2.8 (1%)	1.8 (0.6%)
ExA				11.2 (4%)	11.2 (4%)
GoA	27.4 (19%)	45.6 (25%)		6.5 (2%)	7.4 (2%)
Gr				13.3 (4%)	17.6 (6%)
KaA				4.0 (1%)	
KeA				20.5 (7%)	24.9 (8%)
La			35.0 (33%)	70.3 (23%)	81.6 (27%)
Le			6.9 (7%)	93.8 (30%)	79.1 (26%)
Ly	15.0 (10%)	12.5 (7%)			
MaC	0.2 (0.1%)	11.3 (6%)			
Mk	9.3 (6%)	7.9 (4%)		0.7 (0.2%)	
Na	2.5 (2%)			18.7 (6%)	19.2 (6%)
NoA	7.6 (5%)				
NoB	33.8 (23%)	25.7 (14%)			
On		6.9 (4%)			
Pa	9.7 (7%)	3.8 (2%)		6.4 (2%)	6.4 (2%)
Pn	17.5 (12%)	17.2 (10%)	5.1 (5%)		
Ra	20.1 (14%)	26.6 (15%)	57.5 (55%)	14.2 (5%)	14.9 (5%)
St		16.0 (9%)			
SuD				1.5 (0.5%)	1.4 (0.4%)
w		1.4 (0.1%)			
TOTAL	**145.9**	**180.0**	**104.8**	**308.6**	**305.3**

The six primary soils within the Detailed Study Alternatives have similar properties. The suitability of these soils as roadfill ranges from fair to poor. This is an indication that the roadbed may need to be undercut to, first, remove several inches of the soil, and then, replace it with a more suitable soil. These soils generally have a high risk of corrosion for both uncoated steel and concrete. The shrink/swell potential of these soils ranges from low to high. In soils of high shrink / swell potential, surcharging the roadbed may be required. To surcharge the roadbed, fill material would be brought in and laid on top of the roadbed for an extended period of time. The fill material would cause the soil underneath to consolidate. Then the fill material would be removed and paving could begin.

The expected soil limitations can be overcome through proper engineering design, including the incorporation of techniques such as soil modification, appropriate choice of fill material, use of non-corrosive subgrade materials, and design of drainage structures capable of conveying

estimated peak flows. Decisions regarding soil limitations and methods to overcome them would be determined during final design.

Topography – The effect of any of the Detailed Study Alternatives (including the Preferred Alternative) on study area topography would vary with the amount of earthwork required. The existing topography of the study area is typical of the Coastal Plain Physiographic Region of North Carolina, with relatively low relief. It is anticipated that extensive areas of fill will be required to construct the Preferred Alternative. Cut areas will likely be minimal. The low-lying watercourse areas would be bridged to allow continual movement to maintain water flow.

Geology – The proposed project should have minor impacts on the geology of the study area.

4.1.5.2 Biotic Community and Wildlife

4.1.5.2.1 Terrestrial Community and Wildlife

Project construction activities in or near terrestrial resources have the potential to impact the biological functions of these resources. This section quantifies and qualifies potential impacts to the natural communities within the corridors for the Detailed Study Alternatives. Temporary and permanent impacts are considered here, along with recommendations to avoid or minimize those impacts.

Natural upland plant communities within the study area include Pine Woodland, Pine/Mixed Hardwood Forest, Mesic Mixed Hardwood Forest, Bottomland Hardwood Forest, Small Stream Swamp, and Cypress-Gum Swamp. In addition, there are a variety of open and disturbed habitats, including Agricultural/Pasture Land, Successional/Clear Cut Lands, and

Urban/Disturbed Lands. Detailed descriptions of these communities are included in Section 3.5.2 and in the *Natural Systems Report* (*Environmental Services, Inc, August 2001*).

Impacts to plant communities were calculated based on the extent of the right-of-way limits. Alternative 2A (Preferred) would include 43 acres of impacted forest lands, or approximately 31 percent of the total right-of-way. Alternative 2C would include 44 acres of forest lands, or approximately 32 percent of the total right-of-way. In this segment, impacts are primarily to pine / mixed hardwood forest and cypress-gum swamp. Alternative 3 (Preferred) would impact 27 acres of forest land, or approximately 27 percent of the total right-of-way. In Segment 3, impacts are primarily to pine / mixed hardwood forest. Alternative 4D (Preferred) would impact 134 acres of forest land, or approximately 49 percent of the total right-of-way. Alternative 4E would impact 135 acres of forest land, or approximately 48 percent of the total right-of-way. In this segment, impacts are primarily to

pine woodlands and pine / mixed hardwood forest. Detailed acreages for each of the terrestrial communities described in Section 3.5.2.1 are presented in **Table 4-11** below.

TABLE 4-11: TERRESTRIAL PLANT COMMUNITY IMPACTS (ACRES)

Community	Alt 2A	Alt 2C	Alt 3	Alt 4D	Alt 4E
Pine Woodlands	5	6	< 1	52	64
Pine/Mixed Hardwood Forest	18	25	27	62	52
Mesic Mixed Hardwood Forest	4	1	0	12	11
Bottomland Hardwood Forest	2	< 1	0	0	0
Small Stream Swamp	0	0	0	1	0
Cypress-Gum Swamp	14	11	0	7	8
Successional Land	21	3	11	49	51
Agricultural Land	41	21	4	71	83
Urban/Disturbed	32	69	59	22	14
Total Forested	43	44	27	134	135
TOTAL (based on 2004 right-of-way limits)	**137**	**136**	**101**	**276**	**283**

4.1.5.2.2 Terrestrial Wildlife

Section 3.5.2 of this SFEIS and the *Natural Systems Report (Environmental Services, Inc, August 2001*) provide a discussion of wildlife commonly occurring within the study area.

The Detailed Study Alternatives sections limited to just the widening of the existing US 17 highway will impact less undisturbed habitat than the segments proposed as new location. Although some loss of urban disturbed habitat and forested ecotonal areas adjacent to existing road shoulders would result, these are of limited value to wildlife. Areas that require construction on new location will impact a variety of communities, including areas containing mature forest. Much of the forested habitat within new location alternatives is already fragmented and construction activities will be limited to right-of-way limits, but additional fragmentation and loss of forested habitat will occur, particularly at riparian crossings. Loss of forested habitat will have a greater impact to terrestrial wildlife, including the loss of potential nesting and foraging areas and displacement of wildlife populations. Forested areas generally represent the most valuable areas in terms of wildlife habitat. Of the Detailed Study Alternatives under consideration, Detailed Study Alternative 3 would have the least impacts on wildlife because it is located primarily along the existing US 17 roadway and has the least amount of forested habitat. Detailed Study Alternative 4E would have the most impacts on forested habitat. Impacts to wildlife could include habitat fragmentation, loss of potential nesting and foraging areas, and displacement of wildlife population.

Animal Passage Measures – Along new location sections of the Detailed Study Alternatives, movement between habitats on one side of the road to the other would become more dangerous for many large and medium-sized mammals such as deer, raccoon, rabbit, and opossum. Smaller mammals such as mice and squirrels, as well as reptiles and amphibians, are expected to suffer increased mortality due to land clearing and traffic operations. In theory, there are several techniques available to facilitate wildlife passage, depending upon the area in question and availability of funds for such measures.

Merger Process Team discussions concerning the major stream crossings (White Oak River, Trent River, and Deep Gully) included suggestions for lengthening of the bridges at these sites in order to accommodate wildlife passage as well as to span wetland areas. **Table 4-12** in Section 4.5.3.3 shows the lengths agreed upon by the Merger Process Team. Higher vertical clearances were also investigated in order to accommodate passage of a wider variety of species.

Alteration of Highway 17 to 4 lanes along the western boundary of the Croatan will create a discrete barrier to wildlife movements and plant and animal dispersal to the west, based on many years of research on disturbances and fragmentation effects on wildlife and natural communities. To promote the establishment of landscape corridors and buffers, between and adjacent to existing public and private conservation lands to enhance long-term wildlife population viability and genetic exchange and to ensure land management flexibility NCDOT has committed to construct a wildlife underpass in Alternative 3 to provide wildlife passage across US 17 from the Hofmann Forest to the Croatan National Forest. The location is shown in **Figure 3-12**. Dual bridges 120 feet long and 38 feet wide with a 10-foot vertical clearance are proposed, coupled with fencing parallel to US 17 to help channel animals to the underpass.

Signing is used routinely by NCDOT to alert motorists of crossings for certain types of species (e.g., deer, red fox, and black bear) and will be considered on this project if appropriate species and areas of frequent migration are identified. Connectivity zones are generally identified in these cases through observations by biologists familiar with the area in question. Fencing in Segment 3 may somewhat assist in channelizing animals toward bridges, wildlife underpasses, or culverts to find areas of safe passage.

4.1.5.2.3 Aquatic Community and Wildlife

Aquatic habitats present in the project study area are described in detail in Section 3.5.2.

Resident aquatic species may be temporarily displaced during construction. However, impacts are expected to be minor and temporary. Bridges are proposed over the White Oak

River and Trent River and would be designed to avoid or minimize placement of structure foundations within these waters. Erosion control measures minimize sedimentation during construction and protect water quality for aquatic organisms.

Other impacts to aquatic species that could occur as a result of the project include changes in water temperature and changes in stormwater flow. Removal of stream-side vegetation during construction could increase exposure to sunlight in places, which would increase water temperature. Other locations where bridges are constructed could experience a decrease in water temperature as a result of shading. Increases in impervious surfaces could lead to higher stormwater flows in stream channels. These impacts are expected to be minor and temporary in nature due to the limited amount of direct overall change in the surrounding areas and the commitment to implement NCDOT's Best Management Practices for Protection of Surface Waters during construction. Section 4.1.6.7 discusses construction moratoriums due to Anadromous Fish Spawning Habitat and Primary Nursery Area designations.

4.1.5.3 Water Resources

4.1.5.3.1 Groundwater: Wells

The proposed project (including the Preferred Alternative) is expected to produce minimal impacts to groundwater resources. Much of the study area population relies on groundwater withdrawals for drinking water, either from municipal supplies or private wells. Private wells not immediately involved in the project right-of-way are not likely to sustain serious impact. Best Management Practices should be followed to control erosion and reduce water quality impacts to protect groundwater quality.

4.1.5.3.2 Surface Water Quality

4.1.5.3.2.1 Streams

Streams within the project study area belong to two coastal drainages: the White Oak and Trent Rivers. The White Oak River and 16 unnamed tributaries to the White Oak River all carry a best use classification of C within the project study area. Class C waters are freshwaters protected for secondary recreation, fishing, aquatic life (including propagation and survival), and wildlife.

The Trent River, Goshen Branch, Mill Creek, Scott Creek, Deep Gully, and 15 unnamed tributaries to these streams within the Trent River Drainage System all carry best use classifications of C Sw NSW within those sections crossed by the Detailed

Study Alternatives. Class C waters are freshwaters protected for secondary recreation, fishing, aquatic life (including propagation and survival), and wildlife. The Sw supplemental classification refers to swamp waters, which are waters that have low velocities and other natural characteristics that are different from adjacent streams. The NSW supplemental designation refers to Nutrient Sensitive Waters, which are waters subject to growths of microscopic or macroscopic vegetation and, as such, require limitations on nutrient inputs.

There are no dischargers with permitted flows >0.5 MGD on the Trent River or its tributaries. Mill Creek and its associated tributaries have been rated as supporting overall use ratings; while the Trent River and all other associated tributaries within the project corridor have been rated as only partially supporting overall use ratings.[9] Agricultural land use is identified as the primary nonpoint source impact causing water quality degradation in the Trent River system.

4.1.5.3.2.2 Ponds

Fourteen small farm ponds and flooded borrow pits are located in interstream settings within the project study area. Water quality within these isolated water bodies is largely influenced by nutrient loading and sedimentation from agricultural and residential runoff. Larger lentic surface water bodies within the project study area are found along the White Oak River in Segment 2 and include quarry pits east of US 17 and ponds at a campground facility east of US 17.

4.1.5.3.3 Major Drainage Structures

As a part of the Section 404 / NEPA Merger Process Concurrence Point 2A (Bridging) and discussions relating to avoidance and minimization of impacts (Concurrence Point 4A), the Merger Process Team agreed to increase bridging of several areas of the project beyond the required hydraulic design length, as shown in **Table 4-12**. These decisions fulfill one or more objectives: to decrease wetland impacts to high-quality wetlands, as determined by Division of Water Quality wetland rating scores; to open up floodplain crossings; to improve hydrology; and/or to provide wildlife passage areas. A copy of the signed Section 404/NEPA Merger Process meeting Concurrence Point 2A form is in Appendix A.

A detailed description of the hydraulic analysis is presented in the *Hydraulics Report (Wilbur Smith Associates, October 1997, addenda March 2000).*

[9] North Carolina Department of Environment and Natural Resources, Division of Water Quality. 2009. Basinwide Water Quality Plan, Neuse River Basin. Raleigh, North Carolina. http://h2o.enr.state.nc.us/basinwide/Neuse/2008/documents/NRBasinwidePlan-Final.pdf

Table 4-12: MAJOR DRAINAGE STRUCTURES

Stream Name	Stream ID	Alt	Associated Wetlands	Hydraulic Requirements	Merger Team Recommendation
Tributary to White Oak River	W-1	2C	4, 5, 6	Two 8x4 RCBC	Two 8x4 RCBC
	W-2	2A/2C	4, 5, 6	Two 8x4 RCBC	Two 8x4 RCBC
	W-9	2A	45	Two 7x5 RCBC	100 ft Bridge
	N/A	2A	42	N/A	Culvert/Pipe
White Oak River	W-8	2A	46	135 ft Bridge	1,160 ft Bridge
	W-14	2C	35, P5	150 ft Bridge	560 ft Bridge
Goshen Branch	T-15	4D/4E	130, 131	N/A	380 ft Bridge
Trent River	T-16	4D/4E	132, 135	290 ft Bridge	1,180 ft Bridge
Deep Gully	D-1	4D/4E	217	Two 8x4 RCBC	420 ft Bridge

RCBC = reinforced concrete box culvert, span by rise, dimensions given in feet

4.1.5.3.4 Surface Water

The length of impacted ponds, perennial, and intermittent stream channels for each alternative are presented in **Table 4-13**. The impacts were calculated based on the length of each stream within the proposed construction limits plus 25 feet on either side for construction staging activities. The *Natural Systems Report (ESI, August 2001)* and the *Wetland and Stream Delineation Reevaluation and Neuse River Riparian Buffer Reassessment (ESI, October 3, 2007)* include additional details about each stream. The evolution of stream impacts as the Detailed Study Alternatives were refined is discussed in the following section alongside wetland impacts.

Perennial streams are those meeting the criteria set forth by the NCDENR Division of Water Quality (DWQ). Perennial streams are considered to possess the consistent hydrology to support aquatic populations. Important streams are classified based on guidance from the US Army Corps of Engineers (USACE). The USACE is responsible for making the final importance decision. Compensatory mitigation is required for important stream channel impacts greater than 150 linear feet.

TABLE 4-13: FINAL JURISDICTIONAL STREAM IMPACTS*

		Detailed Study Alternatives				
		2A	**2C**	**3**	**4D**	**4E**
Streams (Linear Feet)	Perennial	503	0	0	297	297
	Intermittent	1,062	2,531	157	1,384	1,140
	Total	1,565	2,531	157	1,681	1,437
Open Water (Acres)	Ponds	0	2.39	0.03	0	0
	Rivers/Streams-R2	0	0	0.04	0.12	0
	Total	0	2.39	0.07	0.12	0

** Impacts as of May 2010 Merger Process Team meeting*

Streams crossed by the Detailed Study Alternatives may be temporarily and locally impacted by road construction. Potential short-term impacts include temporarily increased sedimentation and turbidity levels. Long-term impacts to streams as a result of road construction are expected to be negligible, but an increase in impervious road surface area will result in increased runoff with the potential for carrying higher pollutant loads. Turbidity curtains and silt screens can be used along stream channels adjacent to active construction. Adherence to the NCDOT's current *Best Management Practices for Protection of Surface Waters* during design and construction of the proposed project are expected to minimize impacts.

Stream Mitigation. It is recommended that unavoidable stream impacts be confined as much as possible to the entrenched channels (G types) to minimize potential riparian wetland impacts and consequential needs for mitigation.

Temporary construction impacts due to erosion and sedimentation would be minimized through implementation of a stringent erosion control schedule and use of best management practices. The contractor would be required to follow contract specifications pertaining to erosion control measures (as outlined in 23 CFR Part 650, Subpart B and Article 107-13) entitled *Control of Erosion, Siltation, and Pollution* (NCDOT, Specification for Roads and Structures). These measures include the following:

- Use of dikes, berms, silt basins, and other containment measures to control runoff during construction. Regular maintenance and inspection of these structures is recommended to ensure effectiveness;
- Elimination of construction staging areas in floodplains or adjacent to streams and tributaries to help reduce the potential for petroleum contamination or discharges of other hazardous materials into receiving waters;
- Rapid reseeding of disturbed sites to help alleviate sediment loading and reduce runoff. Increased runoff from new highway surfaces can be partially mitigated by providing for grassed road shoulders and limited use of ditching;
- Careful management and use of herbicides, pesticides, de-icing compounds, or other chemical constituents to minimize potential negative impacts on water quality; and
- Avoidance of direct discharges into streams whenever feasible. Runoff effluent should be allowed to filter through roadside vegetation in order to remove contaminants and to minimize runoff velocities.

The need for stream relocations is not anticipated. Should such actions be required, as determined during final design, coordination with the US Fish and Wildlife Service and the NC Wildlife Resources Commission would be completed in accordance with mandates expressed in the Fish and Wildlife Coordination Act [72 Stat. 563, as amended, 16 USC 661 et seq. (1976)].

4.1.5.4 Jurisdictional Issues

The Jurisdictional Delineation associated with this project was reviewed and approved by the US Army Corps of Engineers, as described in Section 3.5.4.1 in Chapter 3. The *Natural Systems Report* (ESI, August 2001) and the *Wetland and Stream Delineation Reevaluation and Neuse River Riparian Buffer Reassessment* (ESI, October 3, 2007) include additional details about each stream and wetland.

Figures 3-11 and **3-14** show the jurisdictional wetlands, streams and ponds delineated within the Detailed Study Alternatives. **Table 4-14** provides a detailed listing of total impacts to jurisdictional wetlands based upon the estimated construction limits for each Detailed Study Alternative. Further details regarding wetland types and impacts are contained in SFEIS Section 3.5.4.1, the *Natural Systems Report* (ESI, August 2001) and the *Wetland and Stream Delineation Reevaluation and Neuse River Riparian Buffer Reassessmen*t (ESI, Oct 3, 2007).

TABLE 4-14: FINAL JURISDICTIONAL WETLAND IMPACTS* (ACRES)

Wetland (DWQ Rating)	Detailed Study Alternative				
	2A	2C	3	4D	4E
Wetland 2 (38)	0.50	1.84			
Wetland 4 (41)		1.11			
Wetland 5 (41)		0.52			
Wetland 6 (45)		0.37			
Wetland 7 (45)		0.06			
Wetland 8 (47)		0.04			
Wetland 9 (48)		0.02			
Wetland 11 (74)		0.02			
Wetland 22 (31)	0.11				
Wetland 24 (31)	0.15				
Wetland 26 (33)	3.01				
Wetland 27 (21)	3.56	0.02			
Wetland 29 (35)		0.15			
Wetland 30 (36)	1.26				
Wetland 31 (41)	0.15				
Wetland 32 (42)	0.19	0.05			
Wetland 35 (26)		2.82			
Wetland 40 (filled)		0.19			
Wetland 42 (80)	0.19				
Wetland 44 (58)	0.59				
Wetland 45 (71)	3.26				

TABLE 4-14: FINAL JURISDICTIONAL WETLAND IMPACTS* (ACRES)					
Wetland (DWQ Rating)	**Detailed Study Alternative**				
	2A	**2C**	**3**	**4D**	**4E**
Wetland 46 (80)	0.07				
Wetland 48 (28)	0.01	0.01			
Wetland 49 (47)	7.01	6.80			
Wetland 65 (33)	1.13	1.15	0.04		
Wetland 67 (22)			0.08		
Wetland 68 (33)	0.05	0.06	10.22		
Wetland 69 (22)			0.23		
Wetland 70 (22)			0.11		
Wetland 71 (17)			0.04		
Wetland 72 (17)			0.15		
Wetland 74 (17)			0.46		
Wetland 75 (36)			2.90		
Wetland 76 (21)			0.93		
Wetland 77 (25)			0.08		
Wetland 78 (28)			0.01		
Wetland 79 (29)			0.82		
Wetland 80 (29)			0.43		
Wetland 82 (36)			0.21		
Wetland 83 (36)			0.43		
Wetland 84 (35)			0.64		
Wetland 85 (31)			0.06		
Wetland 86 (31)			0.07		
Wetland 88 (30)			3.74		
Wetland 89 (24)			0.07		
Wetland 90 (24)			0.18		
Wetland 91 (27)			0.12		
Wetland 92 (12)			0.31		
Wetland 93 (22)			1.15		
Wetland 94 (53)			0.02		
Wetland 98 (35)				0.17	
Wetland 100 (35)				1.69	1.00
Wetland 114 (43)				1.80	1.80
Wetland 166 (22)				0.68	0.57
Wetland 167 (38)				1.93	2.24
Wetland 172 (38)					0.12
Wetland 173 (38)					0.54

TABLE 4-14: FINAL JURISDICTIONAL WETLAND IMPACTS* (ACRES)					
Wetland	**Detailed Study Alternative**				
(DWQ Rating)	**2A**	**2A**	**2A**	**2A**	**2A**
Wetland 175 (34)				0.02	
Wetland 176 (38)					2.66
Wetland 177 (38)				0.24	
Wetland 181 (55)				0.73	
Wetland 182 (38)				0.45	
Wetland 183 (16)				0.03	
Wetland 184 (55)				1.21	
Wetland 186 (45)				0.49	
Wetland 189 (28)					0.51
Wetland 196 (28)				0.03	
Wetland 200 (40)					0.45
Wetland 201 (36)				1.87	
Wetland 202 (22)				7.62	13.31
Wetland 211 (60)				1.66	1.66
Wetland 224 (74)				0.51	0.51
Wetland 225 (21)				0.33	0.33
Wetland 226 (21)				1.37	1.53
Wetland 227 (21)				2.29	2.29
Wetland 229 (17)				0.05	
Wetland 231 (51)			0.01		
Wetland 240 (47)		0.36			
Wetland 241 (25)	0.98	0.98			
Wetland 242 (25)	0.19	0.19			
Wetland 245 (29)	0.03				
Wetland 246 (34)				0.01	
Wetland 249 (32)				0.23	0.23
Total	22.44	16.76	23.51	25.43	29.75

**Final impacts as of the May 2010 Concurrence Point Meeting*

4.1.5.4.1 Wetlands and Surface Water Impacts

Impacts to jurisdictional streams and wetland areas as a result of this project will be unavoidable during construction and improvement operations. Avoidance and minimization of impacts to wetlands and surface other waters was an iterative process. Recommendations made by Merger Process Team members during a series of concurrence meetings held from 2006 through 2010 (see Chapter 8) resulted in substantial design revisions and reductions in

wetlands takings for all of the detailed study alternatives. At the request of the USACE, an update of streams and wetlands was conducted in 2008, which also affected the size, location, and quality of affected jurisdictional resources.

After selection of the Preferred Alternative 4D in June 2008, additional Merger Process Team meetings were held for Section 4 to discuss formal avoidance / minimization measures (Concurrence Point 4A) based on more detailed design plans for Preferred Alternative 4D. The Merger Team concurred that jurisdictional impacts have been avoided and minimized to the maximum extent possible through the use of horizontal alignment shifts, vertical alignment adjustments, a 46-foot median width, perpendicular stream crossings, bridges over Goshen Branch and the Trent River, 3-to-1 slopes in wetlands, equalizer pipes between bisected wetland features, and an alignment paralleling the existing power transmission easement in the north portion of the project.

For Segments 2 and 3, alignments were adjusted to reduce impacts to human communities, historic resources, wetlands, and other environmentally sensitive factors. Most noticeably, in 2009, a proposed interchange was removed from Alternative 2A and frontage roads were added along Alternative 2C to preserve access to nearby properties. Alternatives 2A and 2C were redesigned employing the superstreet principle to minimize impacts to high quality wetlands. Some stream and wetland impacts increased during the 2008 and 2009 refinements to the Preferred Alternatives. Such increases were the result of the following:

- USACE update of streams and wetlands was conducted in 2008, which affected the size, location, and quality of affected jurisdictional resources.
- Increases in roadway footprint due to the addition of service roads, guardrail, and other design element not incorporated at earlier levels of design.
- Changes in horizontal alignment implemented to minimize the stream and/or wetland impacts along nearby sections of the project.

4.1.5.4.2 Wetland Mitigation

Mitigation has been defined in the National Environmental Policy Act (NEPA) regulations to include efforts that avoid, minimize, rectify, reduce, eliminate, or compensate for adverse impacts to the environment [40 CRF 1508.20 9a-e)]. Mitigation for unavoidable wetland impacts is recommended in accordance with Section 404 (b) (1) Guidelines of the CWA (40 CFR 2300, FHWA step-down procedures (23 CFR 777.1 et seq.), mitigation policy mandates articulated in the USACE/EPA Memorandum of Agreement (MOA: Page and Wilcher 1990), Executive Order 11990 [42 FR 26961 (1977)], and USFWS mitigation policy directives (46 FR 7644-7663 (1981)].

Section 404 9b) (1) Guidelines, the USACE/EPA MOA, and Executive Order 11990 stress avoidance and minimization as primary considerations for protection of wetlands. Practicable alternatives analysis must be fully evaluated before compensatory mitigation can be discussed.

Impacts to high quality wetlands (those with DWQ scores of 60 or greater) would occur under Detailed Study Alternatives 2A (Preferred), 2C, 4D (Preferred), and 4E. Alternative 2A would impact 3.52 acres of high quality wetlands, which represents the greatest amount of high quality wetland impacts in any remaining alternative. Alternative 2C would impact 0.02 acres of high quality wetlands, while Alternatives 4D or 4E would impact 2.17 acres.

In addition to the direct impacts within the construction limits, other adverse impacts to wetlands and aquatic sites associated with project construction could include direct or indirect hydrologic impacts resulting from the alteration of drainage patterns. The concentration of overland flow into pipes and the potential increases in stormwater runoff could lead to downstream channel incision and consequent wetland hydrology alterations. In addition to permanent alterations, temporary adverse impacts also may occur, such as temporary pond dewatering and stream diversion during the construction of bridges and culverts, and temporary clearing and filling associated with underground utility relocation and construction access.

During the development of the Detailed Study Alternatives, efforts were made to avoid and minimize impacts to wetlands and streams wherever practicable. Where stream crossings were unavoidable, they were located, within design constraints, as perpendicular as possible. Avoidance and minimization efforts for each impacted wetland area are described below.

Avoidance. Due to the extent of wetlands and surface waters within the study area, avoidance of wetland and surface water impacts is not possible. Each project segment contains jurisdictional wetlands, which will be subject to impact. Some individual wetland impacts can be avoided by utilizing different combinations of alternatives; however, this would increase impacts on other resources.

Best-fit widening on the widening sections of the project included attempts to balance avoidance of wetlands with minimizing relocations and the avoidance of impacts to cultural resources and community facilities. Wetlands and surface waters were avoided to the extent possible through a series of office and agency field meetings. Alignment shifts were suggested by the agencies and implemented as feasible to further avoid wetland areas and minimize fragmentation of larger systems and impacts to high quality wetlands.

Minimization. The five alternatives presented for detailed study were selected from a larger pool of alternatives originally presented by NCDOT in the mid 1990's in order to demonstrate minimization of wetland and stream impacts. Wetland determinations within these detailed study alternative corridors were utilized to further minimize wetland and stream impacts associated with design and construction of the proposed project. Bridging of the larger wetland systems and associated floodplains was also used at some locations to further reduce impacts (see **Table 4-12**).

Minimization was carried into the selection of the Least Environmentally Damaging Practicable / Preferred Alternative as well. The Preferred Alternative in each segment was selected in part due to its lower impacts on wetlands. Further design refinements may include the following avoidance/minimization measures:

- Horizontal alignment shifts
- Perpendicular stream crossings
- Use of steeper side slopes for fill areas in wetlands
- Increases in bridge lengths beyond hydraulic requirements
- Reduction of median widths along bypasses

The avoidance and minimization efforts made as part of the Concurrence Point 4A Merger Team Process were deemed acceptable and were formally concurred with by the Merger Process Team members.

Compensatory Mitigation. Compensatory mitigation is recommended and will be required for all unavoidable jurisdictional impacts. Final compensatory mitigation requirements are left to the discretion of the USACE and DWQ. In accordance with 15A NCAC 2 H .0500, mitigation may be required by DWQ for projects involving at least one acre of impacts to freshwater wetlands or 150 linear feet of total impacts to perennial streams.

Opportunities appear to be limited for compensatory wetland and stream mitigation within the project vicinity. Further evaluation will be required to determine if any stream sites in the project area can feasibly be used for mitigation without causing hydrologic trespass (flooding) problems for adjacent fields or residential areas.

In accordance with the Memorandum of Understanding between the USACE, NCDOT, and the United States Forest Service, the long-term management of the Croatan Wetland Mitigation Bank (CWMB) will include land uses and practices that are consistent with the mitigation objectives of wetland restoration, enhancement, and preservation incorporating the restoration of natural vegetation community structure. This includes restoring hydrologic function and sustaining aquatic systems; restoration, enhancement, and

providing red-cockaded woodpecker habitat linkage; enhancing black bear habitat; providing un-fragmented hardwood wetlands for interior neo-tropical migratory bird habitat; and restoring hardwood on suitable sites. Therefore, the CWMB will provide off-site mitigation for impacts to the Neuse River Basin, if necessary, to satisfy federal CWA compensatory mitigation requirements for this project.

If on-site opportunities are not sufficient to mitigate for potential wetland impacts, or are not available for mitigation, off-site compensatory wetland mitigation not covered by the CWMB would be accomplished through coordination with the Ecosystems Enhancement Program.

4.1.5.4.3 Section 404/401 Permits

A Section 404 Permit from the US Army Corps of Engineers will be required for discharge of dredged or fill materials into wetland areas as a result of highway construction. Wetland and stream impacts will be considered cumulatively for permit purposes.

An Individual Permit is required for impacts on greater than 0.5 acres of Waters of the United States or cumulative loss or degradation of greater than 300 total linear feet of perennial streambed or intermittent streambed that exhibits important aquatic functions (67^{FR}2000, 2080; January 15, 2002 and Wilmington District Final Regional Conditions, effective May 17, 2002). All jurisdictional impacts to wetlands and perennial streambeds or important intermittent streambeds that result from activities authorized under an individual permit require compensatory mitigation.

In addition to a Section 404 Permit, this project will require a Section 401 Water Quality Certification. Section 401 of the Clean Water Act (33 U.S.C. 1341) requires each state to certify that state water quality standards will not be violated for activities which involve issuance of a federal permit or license or which require discharges to Waters of the United States. The USACE cannot issue a Section 404 permit (individual or nationwide) until a 401 Water Quality Certification is issued. Therefore, NCDOT must satisfy the requirements of the DWQ for the 401 Certification as part of the permit process for the Individual Permit.

4.1.5.4.4 Buffer Areas

The Coastal Area Management Act establishes 30-foot and 50-foot required setbacks along navigable waterways and coastal shorelines, including the Trent River and its tributaries. Portions of the project study area are located within the Neuse River Drainage Basin. Features within the Neuse River Drainage Basin portion of the project study corridors that are mapped as either a blue-line stream channel or open water feature on the most recent

version of either the USGS topographic quadrangle or the county soil survey are subject to the Neuse Riparian Buffer Rules unless review by DWQ confirms these features are not present in the field. Waterways subject to this protection are shown in **Figure 3-11 Sheet 2.**

Bridging of major stream crossings should satisfy this requirement, although a CAMA permit will still be necessary.

4.1.5.4.5 Protected Species

Species with federal status of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of the Endangered Species Act (ESA) of 1973 as amended. In North Carolina, protection of plant species falls under NC GS 106-202.12 to 106-202.19 of 1979. Wildlife protection falls under NC GS 113-331 to 113-337 of 1987. Any activity permitted, funded, or conducted by a federal agency that may affect a listed species or designated critical habitat requires consultation with the US Fish and Wildlife Service. The result of the consultation is a written biological opinion of whether the proposed action is likely to result in jeopardy to a listed species or adverse modification of designated critical habitat. Formal consultation is required if the federal action agency renders a "may affect, likely to adversely affect" determination for a species. In that case, the Service prepares a written biological opinion of whether the proposed action is likely to jeopardize to continued existence of a listed species or adversely modify designated critical habitat. If the federal action agency renders a "may affect, not likely to adversely affect" determination, informal consultation may be concluded if the Service concurs with the determination.

Species with state designations of Endangered, Threatened, or Special Concern are granted protection by the State Endangered Species Act and the State of North Carolina Plant Protection and Conservation Act of 1979. Legal protection under North Carolina state law regulates the possession, propagation, or sale of protected species. North Carolina listed species do not have the legal protection with respect to road location decisions afforded federal Endangered or Threatened species.

Table 4-15 presents the federal protected species listed for Onslow and Jones Counties (31 January 2008 FWS list). Descriptions of these federally protected species along with habitat requirements and biological conclusions for this project are presented following the table.

TABLE 4-15: FEDERALLY-LISTED ENDANGERED (E) OR THREATENED (T) SPECIES

Onslow (O) or Jones (J) Counties (31 January 2008 FWS list)

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion	County Listed
Alligator mississippiensis	American alligator	T (S/A)	Yes	Not Required	O, J
Puma concolor couguar	Eastern cougar	E	No	No Effect	CNF
Chelonia mydas	Green sea turtle	T	No	No Effect	O
Dermochelys coriacea	Leatherback sea turtle	E	No	No Effect	O
Caretta caretta	Loggerhead sea turtle	T	No	No Effect	O
Charadrius melodus	Piping plover	T	No	No Effect	O
Picoides borealis	Red-cockaded woodpecker	E	Yes	MA-NLA	O, J
Acipenser brevirostrum	Shortnose sturgeon	E	No	No Effect	O *
Trichechus manatus	West Indian manatee	E	No	No Effect	O
Aeschynomene virginica	Sensitive joint-vetch	T	No	No Effect	CNF
Amaranthus pumilus	Seabeach amaranth	T	No	No Effect	O
Carex lutea	Golden sedge	E	No	No Effect	O
Lindera melissifolia	Pondberry	E	No	No Effect	O
Lysimachia asperulaefolia	Rough-leaved loosestrife	E	No	No Effect	O
Thalictrum cooleyi	Cooley's meadowrue	E	No	No Effect	O

E – Endangered
T – Threatened
T (S/A) – Threatened due to similarity of appearance
MA-NLA – May Affect – Not Likely to Adversely Affect
** - Historic record (the species was last observed in the county more than 50 years ago)*
CNF – Listed within Croatan National Forest USFS records but not by USFWS

American alligator – Threatened due to similarity of appearance

BIOLOGICAL CONCLUSION: NOT REQUIRED

Species listed as threatened due to similarity of appearance do not require Section 7 consultation with the USFWS. Potentially suitable habitat for the American alligator is present in the study area. Construction activities may temporarily displace any American alligators in the study area; however, no long-term impact to the American alligator is anticipated as a result of this project. A review of NCNHP records, updated May 4, 2008, indicates no known American alligator occurrence within 1.0 mile of the study area.

Eastern Cougar – Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the Onslow County portions of the study area. The study area includes the edges of more expansive forest areas that include

portions of the Croatan National Forest and private timberlands. While these expansive forests could provide potentially suitable foraging habitat for the eastern cougar, the study area is not in a remote wilderness area. The forested areas of the study area are mostly in timber management and interspersed with urban areas, roadside development, and farms, all areas of intense human presence and activity. In addition, the loss of forested areas within the study area will not create additional fragmentation of the more expansive forest areas to the east and west or significantly reduce the size of these areas. A review of NCNHP records, updated May 4, 2008, indicates no known eastern cougar occurrence within 1.0 mile of the study area.

Green Sea Turtle - Threatened

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the study area. The study area does not include oceanic, estuarine, or ocean beach habitats that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known green sea turtle occurrence within 1.0 mile of the study area.

Leatherback Sea Turtle –Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the study area. The study area does not include any oceanic, estuarine, or ocean beach habitats that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known leatherback sea turtle occurrence within 1.0 mile of the study area.

Loggerhead Sea Turtle – Threatened

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the study area. The study area does not include any oceanic, estuarine, or ocean beach habitats that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known loggerhead sea turtle occurrence within 1.0 mile of the study area.

Piping Plover – Threatened

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the study area. The study area does not include ocean beach or other open sand habitats that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known piping plover occurrence within 1.0 mile of the study area.

Red-cockaded woodpecker - Endangered

BIOLOGICAL CONCLUSION: MAY EFFECT-NOT LIKELY TO ADVERSELY EFFECT

Pine stands located within 0.5 miles of the study area were reevaluated in the summer and fall of 2008 in order to identify the presence of potential foraging and/or nesting habitat for RCW. The results of the stand characterization are presented in *2009 Federally Protected Species Report* for the project. Much of the forested areas characterized were either small or included a dense subcanopy and, therefore, were not considered suitable foraging habitat for RCW. Several areas were identified as suitable foraging habitat with the potential for the inclusion of older trees suitable for nesting. Pedestrian transects were conducted in these areas to identify RCW cavities. No RCW cavities were observed within the study area or within 0.5 mile of the study area.

A review of NCNHP records, updated May 4, 2008, indicates no known RCW occurrence within 1.0 mile of the study area. Records available from the US Forest Service (USFS) indicate that a portion of RCW Territory 134 within the Croatan National Forest is located within the study area. This territory does not include any active RCW cavities. The portions of this territory affected by the proposed project include young pines and/or a dense subcanopy with scattered older pines. This area was visited repeatedly in order to document RCW activity. No RCW activity was observed within RCW Territory 134. Correspondence with USFWS indicates no further analysis of impacts to RCW or cluster 134 are necessary given the current design proposal.

Shortnose Sturgeon – Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the Onslow County portions of the study area. Rivers and streams crossed by the study area within Onslow County do not provide suitable habitat for this species. The largest stream within Onslow County within the study area is the White Oak River, which is approximately 6 to 20 feet wide, 1 to 5 feet deep, and of low velocity within the study area which is too narrow, shallow, and sluggish to be utilized by the shortnose sturgeon. A review of NCNHP records, updated May 4, 2008, indicates no known shortnose sturgeon occurrence within 1.0 mile of the study area.

West Indian Manatee – Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the Onslow and Craven County portions of the study area. Rivers and streams crossed by the study area within Onslow and Craven Counties do not provide suitable habitat for this species. The largest streams within the study area are the White Oak River and Deep Gully, both of which are too narrow and shallow to be utilized by the West Indian manatee. A review of NCNHP records, updated May 4, 2008, indicates no known West Indian manatee occurrence within 1.0 mile of the study area.

Sensitive Joint vetch – Threatened

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the study area. The riverine wetland systems present within the study area are not subject to wind driven or lunar driven tides. A review of NCNHP records, updated May 4, 2008, indicates no known sensitive joint vetch occurrence within 1.0 mile of the study area.

Seabeach amaranth - Threatened

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the study area. The study area does not include ocean beach or other open sand habitats that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known seabeach amaranth occurrence within 1.0 mile of the study area.

Golden sedge - Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the Onslow County portions of the study area. The soil series occurring at known sites, Grifton fine sandy loam, is not present in the study area. The areas mapped as Muckalee series soils, another circumneutral soil, occur in stream floodplains and other forested riverine swamp systems and do not support the vegetation assemblage or hydrology that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known golden sedge occurrence within 1.0 mile of the study area.

Pondberry (southern spicebush) - Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for pondberry does not exist within the study area. The study area does not contain any limestone sinks or small depression pocosin habitat that North Carolina populations of this species inhabit. A review of NCNHP records, updated May 4, 2008, indicates no known pondberry occurrence within 1.0 mile of the study area.

Rough-leaved loosestrife - Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the Onslow County portions of the study area. The areas mapped as Kalmia series soils occur in areas currently managed as residential landscapes or agricultural land and do not support the ecotonal areas between longleaf pine and pond pine pocosin communities that provide suitable habitat for rough-leaved loosestrife. A review of NCNHP records, updated May 4, 2008, indicates no known rough-leaved loosestrife occurrence within 1.0 mile of the study area.

Cooley's meadowrue - Endangered

BIOLOGICAL CONCLUSION: NO EFFECT

Suitable habitat for this species does not exist within the Onslow County portions of the study area. The areas mapped as Muckalee series soils occur in stream floodplains and other forested riverine swamp systems and do not support the vegetation assemblage or hydrology that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known Cooley's meadowrue occurrence within 1.0 mile of the study area.

Federal Species of Concern – State and federal records also include a category of species designated as "Federal Species of Concern" (FSC). The FSC designation provides no federal protection under the ESA for the species listed. **Table 3-9** in chapter 3 presented a list of FSC species in Jones or Onslow Counties. According to NHP records, two FSC species have been documented in the project study area, Carolina gopher frog and spring-flowering goldenrod.

The spring-flowering goldenrod occurs in the highway ditch shoulder community along US 17 throughout segment 3 of the study area. The proposed action may impact individuals of the species and result in the loss of occupied habitat for the species. Approximately 0.91 of the 1.21 acres of habitat occupied by this species will be directly affected as a result of the project. NCDOT is actively coordinating with USFS to mitigate the potential impacts to these colonies of spring-flowering goldenrod as a result of this project.

In addition, the Carolina gopher frog occurs in the hydric hardwood forest community and represents a historic observation last seen in 1954. The occurrence likely represents an observation in or near one of the nearby areas mapped as borrow area. Surveys were not conducted for Carolina gopher frog. The proposed action has the potential to impact individuals of the species and result in the loss of occupied habitat for the species if it still occurs in the vicinity.

Records indicate that a portion of red-cockaded woodpecker territory falls within the study area. Approximately 12.71 acres of a future recruitment area will be potentially directly affected by the proposed project. This territory does not include any active or inactive red-cockaded woodpecker cavities, but is planned for future artificial cavity provisioning and habitat management by USFS. Per November 2009 correspondence, USFWS has determined no further analysis of impacts to RCW or cluster #134 are necessary given the current proposed design; however, a complete determination of effects conducted by USFS cannot be concluded until the SFEIS is completed.

Other FSC species documented within the project study area vicinity of 0.5 miles include

Carolina spleenwort and an additional record of spring-flowering goldenrod. In addition, Venus flytrap has been documented within 3.5 miles southwest of the project study area east of Segment 2.

4.1.6 Construction

Construction may cause temporary adverse impacts to the local environment, including impacts to air quality, water quality, noise, and biotic communities. Construction impacts are generally short-term in nature and can be controlled, minimized, or mitigated through the use of Best Management Practices and standard NCDOT procedures. Construction details cannot be fully defined until design advances past the conceptual stage; many complex factors will influence actual construction impacts. Detailed design plans include construction methods, phasing plans, staging areas, and other information pertinent to defining construction impacts. At this stage, it is only possible to speculate how resources might be affected.

Potential construction-related impacts for the Detailed Study Alternatives are briefly summarized below. Construction along Alternative 3 is expected to last longer than construction along any of the new location Detailed Study Alternatives (Alternatives 2A, 2C, 4D, and 4E) due to the requirement for maintaining traffic flow along existing US 17 while working in the Alternative 3 corridor.

4.1.6.1 Energy

Construction of the Detailed Study Alternatives is expected to save energy when compared to the No-Build Alternative. Construction would initially consume energy and resources that would not be affected if the project were not built: namely, the energy and fuel needed to power construction equipment and transport workers to the job site. Operation of the new facility would compensate for the energy used during construction by increasing efficiency of the regional transportation network. Faster travel speeds and full access control along bypass portions of the new route would result in decreased delay for motorists and increased operational efficiency.

4.1.6.2 Lighting

Roadway illumination does not exist along US 17 currently and is not planned as part of the proposed action. Temporary lighting may be required during select construction activities, which could have a short-term, adverse impact on nearby residents and wildlife populations. Aside from individual residences, no particularly light-sensitive receptors were identified along the Alternative corridors. Dense vegetation along the proposed route will help screen any excess illumination.

4.1.6.3 Visual

Visual impacts associated with the project include the introduction of construction materials and equipment into the rural landscape. Discordant elements will be apparent to drivers traveling through the corridor and to residents living in the area. For portions of the Detailed Study Alternatives on new alignment, construction equipment will be located in primarily undeveloped areas screened by existing vegetation, minimizing visual impacts for most observers. Portions of Alternatives 2A and 3 lie along the existing US 17 corridor, so construction equipment, materials, and maintenance of traffic markers will be more visible than in other sections.

While construction-related visual impacts are largely unavoidable, they are temporary in duration.

4.1.6.4 Noise

Heavy construction equipment generates noise and vibration. Although the Detailed Study Alternatives traverse primarily low-density residential areas, neighboring communities would be temporarily impacted. The duration and level of noise differs with each phase of construction. Typically, early activities like ground clearing and excavation generate the highest noise levels. Noise generated by construction equipment (including trucks, graders, bulldozers, concrete mixers, and portable generators) can reach noise levels of 67 dBA to 98 dBA at a distance of 50 feet.

NCDOT specifications require the contractor to limit noise levels to 80 dBA_{Leq} in noise-sensitive areas adjacent to the project. NCDOT may also monitor construction noise and require abatement where limits are exceeded. NCDOT also can limit work that produces objectionable noise during normal sleeping hours.

4.1.6.5 Air Quality

Temporary degradation of the air quality in the project area would result from the construction of any of the Detailed Study Alternatives. Initial clearing and grubbing would produce dust and exhaust emissions. Exhaust from diesel-powered equipment, increased congestion on roadway segments under construction, and dust from clearing and grading operations also contribute to local air quality levels during construction. Open burning, if allowed, would also contribute to local air pollution. The contractor would be responsible for controlling dust at the project site and at areas affected by the construction, including unpaved secondary roads, haul roads, access roads, disposal sites, borrowed material sources, and production sites. Dust control measures may include the following activities:

- Minimizing exposed earth surface
- Temporary and permanent seeding and mulching
- Watering work and haul areas during dry periods
- Covering, shielding, or stabilizing material stockpiles
- Using covered haul trucks

Air quality impacts will be temporary and dispersed over a relatively large area. Best Management Practices and standard specifications established by NCDOT provide compliance requirements to limit impacts. Emissions from construction equipment are regulated and any burning of cleared materials would be conducted in accordance with applicable state and local laws, regulations and ordinances and the regulations of the North Carolina State Improvement Program for air quality, in compliance with 15 NCAC 2D.0520. Care should be taken to ensure burning occurs under constant supervision, at the greatest practical distance from homes, and not when weather conditions could create hazards.

4.1.6.6 Utilities

The proposed project would require some adjustment, relocation, or modification to existing utilities. Any disruption to utility service during construction would be minimized by phased adjustments to the utility line. All modifications, adjustments, or relocations will be coordinated with the affected utility company.

4.1.6.7 Water Quality

NCDOT has Standard Specifications that require proper handling and use of construction materials. The contractor would be responsible for taking every reasonable precaution throughout construction of the project to prevent pollution of any body of water. Pollutants such as chemicals, fuels, lubricants, bitumens, raw sewage, and other harmful wastes shall not be discharged into any body of water. The contractor shall also be responsible for preventing soil erosion and stream siltation. Contractors shall not ford streams with mechanical equipment unless construction is required in the stream bed, for example, stream rerouting, channel improvements, and culvert construction.

In addition, stream moratoriums exist within the project area, prohibiting construction activities in stream channels during certain dates. The Trent River is designated as an Anadromous Fish Spawning Area, prohibiting in-stream work in the Trent River from February 15 through June 15. Tributaries to the Trent River, Mill Run (north of US 17) and Mill Creek (south of US 17) are also designated as Anadromous Fish Spawning Areas and are subject to the same restriction.

The White Oak River is designated as an Inland Primary Nursery Area, prohibiting in-stream work in the White Oak River from February 15 through September 30.

4.1.6.8 Erosion Control

Erosion and sedimentation caused by construction activities could affect drainage patterns and water quality. In accordance with the *North Carolina Sedimentation Pollution Control Act* (15A NCAC 4B.0001-.0027), an erosion and sedimentation control plan must be prepared for land-disturbing activities that cover one or more acres to protect against runoff from a ten-year storm.

Prior to construction, an erosion and sedimentation plan would be developed for the Preferred Alternative in accordance with the NC DENR publication *Erosion and Sediment Control Planning* and *Design and NCDOT's Best Management Practices for Protection of Surface Waters*. These Best Management Practices include but are not limited to the following activities:

- Using berms, dikes, silt barriers, and catch basins
- Vegetating or covering disturbed areas
- Conforming with proper clean-up practices

4.1.6.9 Borrow and Disposal Sites

Excavated materials shall not be stockpiled or disposed of adjacent to or in areas where stormwater runoff may cause erosion of the material into surface waters. If material storage in these areas is unavoidable, the contractor must implement measures to prevent runoff. Contractors also must provide sanitary facilities for employees during project construction.

4.1.6.10 Wildlife and Habitats

Construction, staging, and stockpiling operations may result in the temporary disruption of the resident wildlife population. The clearing of habitats, human activity, and noise from construction operations may result in the displacement of mobile wildlife. Non-mobile species would be lost as habitat is converted to construction areas.

Impacts to biotic communities would be minimized as much as possible by restricting land clearing and construction operations to within the project's right-of-way. NCDOT encourages contractors to locate off-site staging and stockpiling to disrupt the least amount of natural habitat area. These areas should be revegetated once construction activities are complete, thus replacing habitat for some species.

Disruption to biotic communities due to construction would be least for the construction of Alternative 3 because this alternative is primarily located along existing US 17.

4.1.6.11 Traffic Maintenance and Detour Accessibility

Maintenance of traffic and sequencing of construction would be planned and scheduled so as to minimize traffic delays within the project corridor. Maintenance and protection of traffic in conjunction with construction activities associated with this project would be prepared in accordance with the latest edition of the *Manual of Uniform Traffic Control Devices* and roadway standards of NCDOT. Signs would be used as appropriate to provide notice of road closures and other pertinent information to the traveling public. Advance notice through the local news media would be given to alert the public of traffic restrictions and construction-related activities.

Alternatives 2A (Preferred), 2C, 4D (Preferred), and 4E include construction of both at-grade intersections and overpasses at existing highways. Alternatives 4D (Preferred) and 4E terminate at an interchange with the New Bern Bypass near the Craven County Line. Temporary road closures with off-site detours would be used while structures are being built and approaches are improved. Service roads would be provided as needed to preserve access to properties and local roads.

Construction of Alternative 3 (Preferred) and the southern portion of Alternative 2C would create the most disruption to traffic patterns in terms of inconvenience and length of construction. Traffic flow along existing US 17 would be maintained while construction in the corridor is occurring. Traffic detours, lane switches, and delays due to construction would be greater than those that would occur when constructing on new location. As part of the design process, maintenance of traffic plans will be established to establish safe work zones and to ensure that access is preserved for all adjacent properties while delays are minimized for motorists.

Truck traffic in the project area will likely increase during construction. Access to construction staging areas and the construction sites may require temporary access roadways. The traffic plan developed during the final engineering design phase will define designated truck routes and parking areas for construction vehicles.

4.1.6.12 Bridge Demolition

No bridge demolition activities are associated with the Preferred Alternative.

4.1.7 Irretrievable and Irreversible Commitment of Resources

Construction of any of the Detailed Study Alternatives would require certain irreversible and irretrievable commitments of natural resources, manpower, materials, and fiscal resources. Lands within the right-of-way would be converted from their present use to transportation use. Use of these lands is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials, such as cement, aggregate, and bituminous material, would be expended to build the proposed project. Additionally, large amounts of labor and natural resources would be used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse effect upon continued availability of these resources. Any construction would also require a substantial one-time expenditure of State funds that is not retrievable.

Construction of the proposed US 17 improvement project would increase the utility of a critical regional transportation system. The facility will provide safer, more efficient travel in and across Jones and Onslow Counties. Widening will allow the corridor to function as a part of the Intrastate System, the Strategic Highway Corridor Network (STRAHNET), and the North Carolina Strategic Highway Corridor System. Additionally, the facility serves as a hurricane evacuation route and the increased efficiency will benefit evacuees in the event of hurricanes.

The irretrievable commitment of resources caused by the proposed project would be balanced by the anticipated benefits to the communities and region. The project is consistent with the state and local goals of improving transportation service in the region.

4.1.8 Relationship Between Long-Term and Short-Term Uses / Benefits

The most disruptive local short-term impacts associated with the proposed project would occur during land acquisition and project construction. The short-term use of the environment and of human, socioeconomic, cultural, and natural resources contributes to the long-term productivity of the study area. Most short-term, construction-related impacts would occur within or in close proximity to the proposed right-of-way.

Existing homes, farms, and businesses within the selected alternative's right-of-way would be displaced. However, adequate replacement housing, land, and space are available for homeowners, tenants, and business owners within the study area (see Section A.4.1.2).

Improved access within the study area would help improve the potential to attract long-term residential and business growth.

Construction activities would create short-term air quality impacts, such as dust due to earthwork, road improvements, and exhaust from construction vehicles. Short-term noise impacts would be unavoidable due to use of heavy equipment. Air and noise abatement measures would be incorporated to minimize these short-term impacts during construction.

Short-term and long-term visual impacts would occur in the vicinity of the construction corridor. NCDOT mitigation measures, such as reducing slope cuts outside necessary road widths, reducing vegetation removal, leaving in place native vegetation screens, and minimizing alteration of scenic ridge lines and slopes would be used to reduce long-term visual impacts.

Implementation of the NCDOT *Best Management Practices for Protection of Surface Waters*, as described in Section A.4.5.3, would minimize potential water quality impacts. In addition, the NCDOT will continue to consult with the appropriate Federal and State environmental resource and regulatory agencies to identify measures to minimize these impacts.

A short-term impact of construction would be the removal of biotic communities and wildlife within the proposed right-of-way and construction staging areas. Notably, a spring-flowering goldenrod community covers 1.21 acres of roadside ditch environment in Alternative 3. Recovery rates of local wildlife populations are expected to be relatively fast and no effect on long-term productivity is expected.

The local, short-term impacts and use of resources by the proposed action would be consistent with the maintenance and enhancement of long-term productivity. Construction of the proposed improvements would improve a vital link to the long-range transportation system for the region. The project is consistent with the long-range transportation goals and objectives of the NCDOT *Transportation Improvement Program* and guidance provided by other regional planning bodies. It is anticipated that the roadway would enhance long-term access opportunities in Jones and Onslow Counties and would support local and regional commitments to transportation improvement and economic viability. Benefits of the proposed project would include decreased congestion on existing US 17, improved roadway safety on existing US 17, improved regional connectivity between Jacksonville and New Bern, and improved high speed regional travel along the US 17 intrastate and STRAHNET corridor.

4.2 INDIRECT AND CUMULATIVE EFFECTS

s part of the project planning process, the potential indirect and cumulative effects of the proposed project were evaluated. This included looking at the effects from the proposed

improvement of US 17, as well as identifying any other major actions in the US 17 project area. Other potential major actions include proposed new developments, land use plans, pending or planned utility extensions, other roadway projects shown in the NCDOT TIP (see Section 1.8.1), and any other planned transportation projects, such as transit, rail service and airports. These effects are summarized in the 2004 *US 17 Indirect and Cumulative Impact Analysis*, the 2001 *Natural Systems Report*, and the 2010 *Indirect and Cumulative Effects Report*, incorporated by reference.

Improving US 17 from north of Jacksonville to south of New Bern in itself is not likely to induce extensive development within the project study area. While the urbanized area of Jacksonville is located south of the project site, it is not likely that this widening project would spur "path of development" growth in the Onslow County portion of the project. This presumption is based on several facts:

- The area is not currently served by water and sewer.
- The area is not on a long-range plan to receive water and sewer; county regulations stipulate that new development should be directed towards compact, targeted growth areas near existing towns.
- The area is predominantly in forest and agricultural use. The Croatan National Forest is located east of US 17 and this land is not readily available for development. Also, the soils in the area are more suited for agricultural uses.
- The Onslow County Citizens Comprehensive Plan advocates preservation of true open space, productive farms, woodlands, and important natural areas and discourages the "leapfrogging" of housing developments into the countryside, thus, destroying the rural character of the area, breaking up farmland, and making the provision of urban services costly to homebuyers and taxpayers alike.

Complementary land development, such as highway-oriented businesses (gas stations, rest stops, motels, etc.) are likely to develop near the site of the proposed US 17 Bypass interchange with NC 58. However, accessibility to the transportation facility is but one of the factors that influences growth and development. The presence of water and sewer, local political and economic conditions, location attractiveness, consumer preferences, and the rate and path of urbanization in the region all play a role in development.

Intersection of NC 58 and US 17 – The potential for project induced growth / complementary land development at this location is the greatest of all in the study area as this site is already served by water and sewer, has soils that can support development, and Jones County and the Town of Pollocksville operate under a pro-business climate that encourages commercial growth in the area.

Proposed Interchange Location on US 17 Business (Connection to New Bern Bypass) – While this site is located within close proximity to the increasingly urbanized area of New Bern in Craven County, the lack of water and sewer service in the area and soils that are not suitable for septic systems are development-limiting factors. Conditions are not currently favorable for development at this location and there is no indication that the area will experience "path of development" growth from New Bern.

Past Projects -- Several residential developments have been completed recently in the Future Land Use Study Area, primarily in the Belgrade/Maysville area. These include:

- White Oak River Plantation, 40 homes and additional lots for sale (5 miles west of Maysville)
- Williams Branch, 38 homes in two neighborhoods off White Oak River Drive (0.3 miles west of Maysville)
- River Tides Community, 10 homes (4 miles north of Pollocksville)
- Mills Farm, 40 homes off Belgrade-Swansboro Road

The only commercial property that has recently been developed is the new industrial park on Hughes Farm Road off US 17, approximately 0.2 miles north o Pollocksville. The park has three parcels under contract plus four parcels available. A small number of other businesses have opened in the past few years, including a Dollar General and a small country store in Maysville.

The only recent transportation infrastructure project is Project R-2514A, which widened US 17 from two to four lanes between SR 1327/SR 1410 (Kellum Loop Road) and SR 1330/SR 1439 (Deppe Loop Road/Spring Hill Road). The northern terminus of Project R-2514A is the southern terminus for Project R-2514 B, C, and D discussed in this SFEIS. The Onslow Water and Sewer Authority has recently expanded its two water treatment plans in Onslow County.

Current Project – Project R-2514 B, C, and D will wide 4.2 miles of US 17 on existing location and construct 11.5 miles on new location bypasses around Maysville/Belgrade and Pollocksville. This project is expected to reduce travel time, change access and exposure along the existing and new routes, and may result in a small number of new businesses along US 17.

Future Projects – Several residential projects are underway within the study area. These include:

- Carolina South, with 200 planned homes in an area recently annexed to Maysville
- Spring Hill, proposed to build 92 homes (0.5 miles south of Belgrade)
- Mills Farm, with 40 additional homes proposed southeast of Maysville
- Craven 30 North, a mixed use development with 1,102 homes and over 800,000 square feet for commercial, industrial, and civic use

Based on input from local planners, other potential residential development projects are reasonable and foreseeable within the 20 year planning horizon, but no plans have been submitted for approval. Likely future projects include 1,000 acres on Ravenwood Lane and a retirement community on Quarry Lakes in Jones County. Future commercial developments are anticipated by local planners (including tenants for the Hughes Farm Road Industrial Park), but no plans have been submitted for approval.

Two additional roadway projects are underway or planned near the study area. Project R-2301A, the New Bern Bypass, begins at the northern terminus of Project R-2514 B, C, and D and ends at US 70 west of New Bern. Construction is underway and scheduled for completion by fiscal year 2012. Project R-4463, the NC 43 Connecter, is located to the northeast and will connect US 17 and NC 43/NC 55. The section from US 70 to NC 43/NC 55 is under construction and right-of-

way acquisition for the section from US 17 to US 70 is scheduled for fiscal year 2015. Two bridge replacement projects (B-4737 and B-4085) are also scheduled to occur in Craven County.

In addition, Pollocksville is planning to construct a sewer force main across the river. Plans are underway to connect ONWASA's water supply system to a water treatment plant at Camp Lejeune by 2015, and a connection to the Marine Corps Air Station water treatment plant is planned for 2013. Craven County plans to upgrade its existing water treatment plant and dig another well, both scheduled for 2012.

Notable Environmental Resources – Streams in the study area include the White Oak River and Trent River, as well as many smaller streams and unnamed tributaries. This project is within the Neuse and White Oak River Basins. All streams in the Neuse River Basin are designated as Nutrient Sensitive Waters, and as part of the Neuse River Basin, NCDWQ buffer rules apply. The *Neuse River Basinwide Water Quality Plan* states that since the water quality is heavily influenced by agriculture in the watershed, there is considerable need for additional agriculture best management practices. Although there are no ORW or HWQ in the area, both are present in the White Oak River Basin downstream of this project before the White Oak River flows into the Bogue Sound. The study area also contains substantial wetland and floodplain areas.

Effects on Environmental Resources – There are approximately 200,000 acres of land in the future land use study area described in the 2010 *Indirect and Cumulative Effects Report*. Of this, approximately 15,000 acres (8 percent) is currently developed. Of the 185,000 acres of undeveloped area, approximately 138,000 acres (69 percent of the total) is considered constrained – protected by wetlands, ponds, and stream buffers. The remaining 47,000 acres (23 percent of the total) of land is classified as undeveloped/unconstrained, which includes active farmland, forested areas, open space, and large parcels with single structures.

Undeveloped/unconstrained areas generally represent land within the future land use study area that could be developed in the future. The *CAMA Land Use Plan* serves as the land use plan for Onslow and Craven Counties, which also have Flood Damage Prevention Ordinances and Subdivision Ordinances. Jones County has a Subdivision Ordinance. NCDWR Central Coastal Plan Capacity Use Area Rules apply for all three counties. Portions of the future land use study area are designated as NPDES Phase II areas, and Onslow and Craven Counties have Coastal State SW programs. New developments may be required to obtain a NPDES permit, a NPDES Phase II Stormwater permit, a Section 404 permit from the USACE, a Section 401 Water Quality Certification from NCDWQ, and/or a DCM major permit. With these regulations, the combination of past, current, and future projects is expected to have a minor impact on notable environmental resources in the future land use study area.

Cumulative Effects Summary – Several residential development have been constructed recently, and other infrastructure and development projects are approved or under construction. This project will contribute to cumulative effects to environmental resources in the study area. Travel time will be decreased further with the combination of Project R-2514A, the New Bern Bypass, and this project (Project R-2415 B, C, and D). The New Bern Bypass is a four-lane highway that will direct westbound traffic away from River Bend and Trent Woods.

Direct natural environmental effects by NCDOT projects will be addressed by avoidance, minimization, or mitigation, consistent with programmatic agreements with the natural resource agencies during the Merger and Permitting processes. All developments will be required to follow local, state, and federal guidelines and permitting regulations.

4.2.1 Human Environment

Construction of the Preferred Alternative will have two primary effects on the existing human environment: (1) reduced exposure for businesses and (2) improved pedestrian connectivity within bypassed towns. Indirect effects related to land use changes are discussed in the following section.

While the project will not affect access along Segment 3, it will provide new access at three at-grade intersections and two interchanges along new location bypasses with limited local access. These parallel routes will reduce the level of exposure to properties along existing US 17 in Belgrade, Maysville, and Pollocksville. Further, by opening new areas for commercial development, additional competition between businesses is introduced to attract customers in a small-scale market. Long term, this may have a negative effect on the vitality of existing businesses.

The diversion of a large portion of through traffic to new bypass routes will promote safety and

cohesion within these same communities, reducing the effect of US 17 as a north-south barrier between portions of the towns. According to interviews conducted for the 2002 Community Impact Assessment, reducing high speed traffic traveling through the small, rural communities was perceived by many residents as a benefit of the project, improving quality of life.

4.2.2 Land Use and Transportation Planning

4.2.2.1 Land Use

The study area has experienced slow but steady growth, due primarily to demand from military growth in Craven and Onslow Counties. The influx of new residents due to military expansion in Onslow and Craven Counties increases demand for housing located in the region, preferably with convenient access to area bases. Constraints from sewer availability and land prices have hindered the attraction of the area. Previous development has been largely residential with a small number of new businesses opening either to support the residents or drawn by the relatively good access and limited financial incentives offered by local governments.

Future growth is expected to continue regardless of the US 17 project, but it will likely occur with greater intensity as a result of the new bypasses around Maysville and Pollocksville. Local planners anticipate limited future commercial development at the intersections of US 17 with the bypass around Maysville (such as a gas station or convenience store), small commercial nodes at the intersections and interchanges along the Pollocksville bypass (especially at the interchange with NC 58), and additional commercial development along existing US 17 north of Pollocksville. Streams, ponds, wetlands, and protected lands (e.g., Croatan National Forest, large historic plantation properties) constrain the amount of land available for development.

New development occurring because of the project is likely to be a combination of residential neighborhoods and highway-oriented commercial properties, which would be more likely to have larger parking lots than the predominantly residential development anticipated without the project. There is currently a low-to-moderate attraction for development in this area, but local planners expect this project to increase the draw because of improved travel time. The new location bypasses and road widening are not expected to increase the pressure for development outside of regulated areas beyond pressures anticipated without this project.
Future growth in the No-Build Scenario would likely continue to occur in rural areas of Jones and Onslow Counties, but any additional development under the Detailed Study Alternatives would be concentrated along the US 17 bypass corridors.

4.2.3 Physical Environment

4.2.3.1 Noise

Construction of any of the Detailed Study Alternatives is not anticipated to induce additional vehicle trips to or through the project area.

4.2.3.2 Air Quality

Construction of any of the Detailed Study Alternatives is not anticipated to induce additional vehicle trips to or through the project area. No indirect effects to air quality are expected to result from the project. Cumulatively, multiple new residential developments are under construction or planned within the project area. This will lead to increased traffic volumes; however, the rural nature of the area and distance to an urban center suggest air quality conformance will not become an issue in the foreseeable future.

4.2.3.3 Managed Lands

4.2.3.3.1 Wild and Scenic Rivers

There are no Wild and Scenic Rivers in the study area; no cumulative or indirect effects to Wild and Scenic Rivers are anticipated.

4.2.3.3.2 State / National Forests

Sections of the Detailed Study Alternatives in Segments 2 and 3 will require strip takings along the western boundary of the Croatan National Forest. Because the takings are limited to a narrow strip along the existing right-of-way and the forest lands are protected for further development, no additional cumulative or indirect effects to protected state or national forests are anticipated.

4.2.3.3.3 Gamelands and Preservation Areas

Aside from the spring flowering goldenrod community in Segment 3 (a direct impact), no indirect or cumulative effects to gamelands or preservation areas are anticipated.

4.2.4 Cultural Resources

4.2.4.1 Historic Architecture

Providing a four-lane connection between Jacksonville and New Bern is expected to increase the intensity of development throughout the study area corridor. New development is likely to be primarily residential, with some highway-oriented commercial developments. Cumulatively, area development may lead to changes in noise levels or viewsheds for historic architectural resources. Interviews with local residents in 2002 suggest many community members have resided in the area for generations and cherish their cultural heritage, tying them to the area's history.

4.2.4.2 Archaeological Resources

The US 17 project will result in an adverse effect on Site 31JN128** , a historic archaeological site recommended as eligible for the NRHP per Criterion D for its potential to yield significant information pertaining to Middling Planters and Farm Sites for Jones County during the Federal and Antebellum periods, especially related to site structure and floodways. NCDOT and the State Historic Preservation Office concurred with this determination. Site 31JN128** is partially located within the project corridor. However, it is recommended that the entire site be avoided by construction activities or be subjected to data recovery efforts prior to construction.

4.2.5 Natural Environment

4.2.5.1 Biotic Community and Wildlife

As noted in the NCDOT's 2001 *Guidance for Assessing Indirect and Cumulative Impacts for Transportation Projects in North Carolina*, transportation projects can alter the behavior and functioning of the natural environment. Indirect and cumulative effects of actions can have important consequences for ecological systems, including:

- Habitat fragmentation from physical alteration of the environment
- Lethal, sublethal, and reproduction effects from pollution
- Degradation of habitat from pollution
- Disruption of ecosystem functioning from direct mortality effects
- Disruption of natural processes from altered energy flows.

Sections of the Detailed Study Alternatives on new alignment pass through forested portions of the study area. This will result in minor losses of habitat and additional fragmentation of

existing habitats, which has the potential to negatively impact biological diversity. Bridging wetlands and streams greatly reduces fragmentation and reduces potential wildlife highway mortality rates by providing riparian corridors for wildlife use. NCDOT has agreed to construct a wildlife underpass within Segment 3 to further reduce these effects. Viewed alongside other likely developments, additional losses of forest and field habitat are likely to occur. However, likely losses compose only a small fraction of the total forest/field habitat in the region.

4.2.6 Jurisdictional Issues

Jurisdictional issues are discussed in Section A.4.5.4 of this chapter. No additional indirect or cumulative effects to streams, wetlands, or protected species are anticipated to occur as a result of the Detailed Study Alternatives.

CHAPTER 5 SECTIONS 4(f) AND 6(f)

This chapter examines how the project impacts Section 4(f) and Section 6(f) resources in the study area.

5.1 SECTION 4(f)

Section 4(f) of the US Department of Transportation Act protects publicly owned parks, recreation areas, wildlife or waterfowl refuges, and historic sites. By law, the US Department of Transportation may convert a Section 4(f) property to a transportation use only if there is no prudent and feasible alternative and the project includes all possible planning to minimize harm to the resource.

Because the US 17 improvement project is entirely state funded, Section 4(f) does not apply.

5.2 SECTION 6(f)

Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) concerns transportation projects that impact outdoor recreational properties purchased or developed with LWCFA funding. The Maysville Recreational Park received LWCFA funding for acquisition and development in 1989 and is the only Section 6(f) resource in the study area.

No Section 6(f) resources lie within the footprint of the Preferred Alternative.

CHAPTER 6 LIST OF PREPARERS

This State Final Environmental Impact Statement was prepared by Wilbur Smith Associates in cooperation with the North Carolina Department of Transportation. The following personnel were instrumental in the preparation of this document.

North Carolina Department of Transportation

NEIL LASSITER, PE
DIVISION ENGINEER
Division Engineer for Division 2 assigned to oversee coordination for the Division. Mr. Lassiter has 28 years of experience in engineering. He is a registered professional engineer in North Carolina.

JAMES SPEER, PE
PROJECT ENGINEER ROADWAY DESIGN UNIT
Engineer assigned to oversee coordination of roadway design elements of proposed action. 32 years of experience in engineering. He is a registered professional engineer in North Carolina.

ROBERT HANSON, PE
EASTERN PROJECT DEVELOPMENT UNIT HEAD
Mr. Hanson is the Eastern Project Development Unit Head of NCDOT's Project Development and Environmental Analysis Branch. He has 24 years of transportation engineering and project management experience. He is a registered professional engineer in North Carolina.

BRIAN YAMAMOTO, PE
PROJECT ENGINEER– EASTERN REGION
Mr. Yamamoto is a Highway Planning Engineer responsible for the coordination of consulting engineering firms engaged in the development of planning/environmental studies. He has 22 years of experience in engineering and planning. He is a registered professional engineer in North Carolina.

MARK PIERCE, PE
EASTERN PROJECT PLANNING ENGINEER
Mr. Pierce is a project development engineer for NCDOT's Project Development and Environmental Analysis Branch. He is responsible for coordination and documentation of planning for this project. He has over 30 years experience in civil and environmental engineering. He is a registered professional engineer in North Carolina and Virginia.

Wilbur Smith Associates

WESLEY O. STAFFORD, P.E., AICP
PROJECT MANAGER
Mr. Stafford has over 22 years of experience managing complex projects and preparing environmental documentation including; Environmental Assessments, Environmental Impact Statements, and Categorical Exclusions for the Department. Mr. Stafford's role included project management and report preparation.

DAVID L. WILVER, P.E.
SENIOR ENGINEER
Mr. Wilver has over 30 years of experience in the preparation of environmental documents, noise analyses, roadway, railway, and hydraulic design for the Department. Mr. Wilver had a major role in the establishment of alternatives, evaluations of social and environmental impacts, report preparation, and functional and preliminary designs.

JASON M. (MATT) PICKENS, E.I.
TRANSPORTATION ENGINEERING DESIGNER
Mr. Pickens is a transportation engineering designer with more than five years of experience with traffic counts, traffic surveys, traffic impact studies, corridor studies, parking studies, access management studies, traffic signal design, CADD, and report preparation. He was instrumental in completing the traffic analysis for the project.

RAJIT RAMKUMAR, P.E.
TRANSPORTATION ENGINEER
Mr. Ramkumar is a transportation engineer with seven years of experience. His expertise includes traffic engineering, traffic simulation models, transit planning, GIS, air quality analysis, noise analysis, and environmental studies. His role included report preparation, traffic analysis, noise analysis, and air quality analysis for the project.

J. CHRIS RANKIN
GIS SPECIALIST
Mr. Rankin has eleven years of experience as a Civil Engineering Designer/GIS Specialist. He has managed and worked on a wide range of environmental and natural resource projects including; environmental impact studies; watershed analysis and characterizations; cultural resource inventory and management; traffic and safety studies; and environmental mitigation. Additionally, he has conducted demographic, origin and destination, and quality of life analysis and generated supporting graphics and documentation for several International Projects including USAID Nablus to Jenin Highway in the West Bank of Israel, Dubai to Fujairah Freeway for the U.A.E. Ministry of Transportation, and Transportation base mapping for the Kingdom of Saudi

Arabia. Mr. Rankin's role has been using GIs to calculate impacts and developing exhibits.

SAMANTHA WRIGHT, P.E.
PROJECT ENGINEER
As a Transportation Engineer and Project Manager with Wilbur Smith Associates (WSA), Ms. Wright has participated in a variety of engineering projects including urban and rural highway planning studies, countywide planning studies, corridor feasibility studies, environmental studies and bridge projects. Ms. Wright received her Master of Science in Civil Engineering from the University of Kentucky and she has 13 years of experience with WSA. Ms. Wright has assisted with final document development and composition.

REBECCA THOMPSON, P.E.
TRANSPORTATION PLANNER
Ms. Thompson is a transportation planner with six years of experience. Her specialties include NEPA process documentation, public involvement, transportation planning, and traffic safety analyses. Past projects include corridor master plans, highway alternatives studies, traffic impact assessments, and environmental documents (EIS and EA/FONSI). Ms. Thompson has assisted with final document development and composition.

Environmental Services Inc.

KEVIN W. MARKHAM
SENIOR PROJECT MANAGER.
Mr. Markham has 21 years experience in environmental documentation, coordination with resource agencies, permit preparation and document preparation. Specialties include coastal ecosystem evaluations, wetland jurisdictional determinations, mitigation planning, wildlife surveys, and threatened and endangered species issues.

MATTHEW K. SMITH
SENIOR SCIENTIST
Mr. Smith has 14 years experience. Specialties include rare species surveys, plant community mapping, wetlands assessment, and mitigation planning.

CHAPTER 7

LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT

Federal Agencies

Environmental Protection Agency

Regional Offices

U.S. Forest Service
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
Department of Housing and Urban Development
Federal Emergency Management Agency
General Services Administration
National Oceanic and Atmospheric Administration - Fisheries

State Agencies

North Carolina Department of Commerce – Travel and Tourism Division
North Carolina Department of Environment and Natural Resources
North Carolina Department of Cultural Resources
North Carolina Department of Public Instruction
North Carolina Wildlife Resources Commission
North Carolina Department of Economic and Community Development
State Environmental Review Clearinghouse

Local Governments

Town of Maysville
Town of Pollocksville
City of Jacksonville
City of New Bern
Onslow County Manager
Jones County Manager
Craven County Manager
Down East Rural Planning Organization

Local Agencies

Jones County Planning Department
Onslow County Planning Department
Craven County Planning Department

CHAPTER 8 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

This section provides a summary of the agency coordination and public involvement process that were carried out as a part of the preparation of this study.

This project has a long history of agency and public involvement. It should be noted that a great deal of public involvement was included in the earlier project phases (which culminated in the publication of the original State Draft Environmental Impact Statement in 2004). Thirteen alternatives were carried forward for detailed study from the SDEIS and these were quickly reduced to five alternatives by the Section 404/NEPA Merger Process Team. During the process of selecting the preferred alternatives, the Army Corps of Engineers requested an update to the jurisdictional wetlands and the Merger Team suggested changes to existing alignments and control of access resulting in additional studies. Additional agency and public input was sought in conjunction with those new revisions.

The coordination and public involvement activities described in detail in this chapter are the most recent activities associated with the alternatives developed after 2004 as a response to agency concerns. For the purposes of this chapter, the term "current' is used to define those coordination and public involvement activities starting in 2004, with the development of the State Final Environmental Impact Statement.

8.1 AGENCY COORDINATION

8.1.1 SDEIS Coordination

On May 23, 1995, a scoping letter was sent to state and local agencies to solicit comments on the proposed project.

The following is a list of federal, state and local agencies contacted for comments regarding this project.

* U.S. Department of the Army Corps of Engineers;
* U.S. Department of Commerce, National Oceanic and Atmospheric Administration - Fisheries
* U.S. Department of Agriculture, Forest Service;
* U.S. Department of the Interior, Fish and Wildlife Service;
* N.C. Department of Transportation, Rail Division;
* N.C. Department of Cultural Resources;
* N.C. Department of Environment and Natural Resources, Division of Land Resources;

* N.C. Department of Environment and Natural Resources, Division of Environmental Management;
* N.C. Department of Environment and Natural Resources, Division of Forest Resources;
* N.C. Department of Environment and Natural Resources, Division of Parks and Recreation;
* N.C. Department of Environment and Natural Resources, Division of Water Quality;
* N.C. Wildlife Resources Commission; Town of Maysville; Onslow County Manager; and the Jones County Manager.

The * indicates input received from agency. Copies of the agency correspondence letters are included in **Appendix A of this document**.

An Interagency Advisory Committee or Steering Committee was formed to provide guidance and oversight during the study process. This committee consisted of the following agencies:

- North Carolina Department of Transportation
  - Project Development and Environmental Analysis Branch
  - Statewide Planning Branch
  - Roadway Design Unit, Highway Design Branch
  - Divisions 2 and 3
- United States Army Corps of Engineers
- United States Department of the Interior, Fish and Wildlife Service
- United States Environmental Protection Agency
- United States Department of Agriculture Forest Service
- North Carolina Dept. of Cultural Resources; Division of Archives and History
- North Carolina Department of Environment and Natural Resources
  - Division of Air Quality
  - Parks and Recreation, Natural Heritage Program
  - Division of Water Quality
  - Wildlife Resources Commission
- North Carolina Department of Commerce
- North Carolina Historic Preservation Office
- Onslow County
- Jones County
- Town of Maysville
- Town of Pollocksville
- City of Jacksonville
- City of New Bern
- Wilbur Smith Associates

- Environmental Services, Inc.

The committee met three times over the course of the study to discuss the alternatives under consideration. During these meetings, modifications or additions to the alternatives were made while some alternatives were eliminated as a result of their overall impacts. The first steering committee meeting was held on September 26, 1995; the second on January 19, 1996; and the third on December 18, 1997.

Prior to the Citizens Informational Workshops, a public officials meeting was held to provide officials an update on the project and to allow an opportunity for input into the study process

In 1999, NCDOT and natural resource agencies partnered to work together in a spirit of cooperation so that NCDOT can fulfill its responsibilities in providing successful compensatory mitigation for transportation projects. Agencies involved in the partnering process include the NCDOT, US Army Corps of Engineers, US Fish and Wildlife Service, US Environmental Protection Agency, North Carolina Division of Water Quality, North Carolina Wildlife Resources Commission, and the State Historic Preservation Office. The planning process generally involves four steps or concurrence points. This process was started between Concurrence Point No. 1 – Purpose and Need and Concurrence Point No. 2 – Alternatives Carried Forward. The first partnering meeting was held on December 16, 1999. Due to the complexity of this project, the team had difficulty reaching Concurrence Point No. 2 to select the alternatives to be carried forward for detailed study. Two additional meetings were held on June 20, 2001, and August 22, 2001.

8.1.2 SFEIS Agency Coordination

During the preparation of this report, agencies and organizations were contacted for information, and/or to obtain input concerning the effect of project alternatives on the local jurisdictions. The following agencies and organizations provided information during the course of this study (note: some agencies have changed names during the course of the study)

<u>Federal Agencies</u>

U.S. Department of the Army Corps of Engineers;
U.S. Department of Commerce, National Oceanic and Atmospheric Administration - Fisheries;
U.S. Department of Agriculture, Forest Service;
U.S. Department of the Interior, Fish and Wildlife Service;

State Agencies

N.C. Department of Transportation, Rail Division;
N.C. Department of Cultural Resources;
N.C. Department of Environment and Natural Resources, Division of Land Resources;
N.C. Department of Environment and Natural Resources, Division of Environmental Management;
N.C. Department of Environment and Natural Resources, Division of Forest Resources;
N.C. Department of Environment and Natural Resources, Division of Parks and Recreation;
N.C. Department of Environment and Natural Resources, Division of Water Quality;
N.C. Department of Environment and Natural Resources, Division of Coastal Managment;
N.C. Department of Environment and Natural Resources, Division of Marine Fisheries;
N.C. Wildlife Resources Commission.

Local Agencies

Down East Rural Planning Organization;
Town of Pollocksville;
Town of Maysville;
The Goshen Community;
Onslow County Manager; and the
Jones County Manager.

8.1.3 Section 404/NEPA Interagency Merger Process

The Section 404/NEPA Interagency Merger Process was developed in 1997 to provide resource agencies with an early opportunity to be involved in major project decisions at key points in the planning process. It was amended in 2001 as the Merger 01 Process to include additional coordination points. The amended process includes the following decision points:

- Concurrence Point 1 — Purpose and Need and Study Area Defined
- Concurrence Point 2 — Detailed Study Alternatives Carried Forward
- Concurrence Point 2A — Bridging Decisions and Alignment Review
- Concurrence Point 3 — LEDPA (Least Environmentally Damaging Practicable Alternative)
- Concurrence Point 4 — A. Avoidance and Minimization
  B. 30% Hydraulic Design Review
  C. Permit Drawing Review

Meetings are held with the resource agencies at theses critical junctures to present information to the agencies, to discuss and address agency concerns relating to that concurrence point, and to

(ultimately) gain agency agreement on the proposals made in regards to that concurrence point. In the current process, agencies all agree to the decisions made by signing an agreement.

The following agencies/organizations have been involved in the Section 404/NEPA Interagency Merger Process Team meetings for this project (i.e. the Merger Process Team):

- US Army Corps of Engineers *
- US Environmental Protection Agency
- US Fish and Wildlife Service
- US Forest Service
- U.S. Department of Commerce, National Oceanic and Atmospheric Administration - Fisheries
- NC Department of Transportation *
- NC Department of Environment and Natural Resources, Division of Water Quality *
- NC Wildlife Resources Commission
- NC Department of Cultural Resources (State Historic Preservation Office)
- NC Division of Coastal Management
- NC Division of Marine Fisheries
- Down East Rural Planning Organization

  ** Co-chairs of the Merger Process Team*

The following is a chronology of the corridor selection process beginning with the State Draft Environmental Impact Statement, and regulatory compliance and decision-making through the Section 404 / NEPA Interagency Merger Process.

Since the earlier portions of this project predated the Merger Process, some concurrence issues were addressed through more informal meetings that were not "officially" designated concurrence meetings, and did not include written agreement.

The concurrence and precursor meetings held to date are summarized below.

Purpose and Need (Concurrence Point 1) – Concurrence Point 1 was not addressed in a formalized way (i.e., the project start predated the concurrence process, and the project was inserted into the concurrence process relevant to the then ongoing phase of the study Alternatives).

Alternatives (Concurrence Point 2) – Alternatives were developed as a result of several agency and public meetings held in 1995, 1996 and 1997.

State Draft Environmental Impact Statement (August 2004) - The State Draft Environmental Impact Statement was approved on August 31, 2004 and distributed to state and federal environmental agencies and to the public on December 16, 2004. The approved document evaluated the No-Build Alternative and 13 build alternative segments that generated 32 project-wide combinations of the various build alternates.

The Section 404/NEPA Interagency Merger Process Team and the Merger Management Team held seventeen meetings regarding corridor selection for the Maysville and Pollocksville Bypasses during the period from August 24, 2006 through May 25, 2010. Summaries of the meetings and related events are provided, as follow.

Informational Meeting (August 24, 2006) - The Merger Process Team held a successful informational meeting on August 24, 2006 to review the overall project status and the Merger Process status, and to establish the approach to evaluation of the corridor selection data. The team agreed to split the project to facilitate the merger process. The southern portion of the project was designated from Belgrade to Chadwick (R-25148 and part of R-2514C) including the Maysville Bypass. The northern portion of the project was designated from Chadwick to New Bern (R-2514D and part of R-2514C) including the Pollocksville Bypass.

CP2A Field Meeting (November 1, 2006) - The Merger Process Team conducted a successful field meeting on November 1, 2006 to document field observations and bridging recommendations for the southern portion of the project from Belgrade to Chadwick including the Maysville Bypass.

CP2A Concurrence Meeting (2/22/2007) - The Merger Process Team held a concurrence meeting on February 22, 2007 to discuss bridging decisions based upon the November 1, 2006 field observations and recommendations for the southern of the project from Belgrade to Chadwick. The team concurred on bridging decisions during the meeting on February 22, 2007.

CP3 Concurrence Meeting (2/22/2007) - The Merger Process Team held a concurrence meeting on February 22, 2007 to discuss corridor selection for the southern portion of the project from Belgrade to Chadwick including the Maysville Bypass. NCDOT recommended Alternate 2A for the Maysville Bypass because it bypassed Belgrade and Maysville, generated the fewest number of relocations, received the highest level of public support, and would provide the highest level of access control, thus satisfying the Strategic Highway Corridor Plan. NCDOT also recommended widening on the east side of existing US 17 from just north of Maysville to just north of Chadwick for Alternate 3 to minimize relocations in Chadwick. The team concurred on Alternate 3 and concurred on eliminating Alternates 2 and 2B from further consideration. However, the team was unable to concur on the Maysville Bypass because the majority of the team supported Alternate 2C (widen through Belgrade and a bypass of Maysville) rather than

Alternate 2A, because Alternate 2C would impact fewer wetland areas and would cost less than Alternate 2A. Therefore, the Dispute Resolution (Elevation) Process was initiated during the meeting on February 22, 2007 to resolve corridor selection for the Maysville Bypass.

CP2A Field Meeting (3/6/2007) - The Merger Process Team conducted a field meeting on March 6, 2007 to document field observations and bridging recommendations for the northern portion of the project from Chadwick to New Bern including the Pollocksville Bypass.

Request for Redelineation of Jurisdictional Areas for Entire Project (3/7/2007) - USACE observed wetlands and streams during the March 6, 2007 CP2A Northern Field Meeting that were not shown on the environmental mapping for the August 2000 USACE Jurisdictional Determination. USACE also questioned whether a particular pine stand should have been considered a jurisdictional area and observed apparent changes in land use and drainage patterns. Therefore, USACE rendered a decision on March 7, 2007 that the jurisdictional delineation for the entire project would need to be reevaluated and reverified with USACE prior to any further discussions on corridor selection.

CP2 Revisited Concurrence Meeting (4/12/2007) - The Merger Process Team held a concurrence meeting on April 12, 2007 to discuss elimination of particular alternates for the Pollocksville Bypass. NCDOT recommended elimination of Alternates 4A, 4B, 4G, 4H, 4I, and 4ID from further consideration. The team was unable to concur and requested additional information on why those alternates should be eliminated.

Jurisdictional Delineations & Neuse River Buffer Assessments (June 2007 - February 2008) - Environmental Services, Inc. (ESI) conducted field delineations for USACE Jurisdictional Areas and assessments for the Neuse River Riparian Buffers during June, July, and August 2007 for Alternates 2A, 2C, 3, 4D, and 4E. USACE conducted field verifications from August 27 through 30, 2007. The N.C. Division of Water Quality (NCDWQ) and ESI conducted a field review for the Neuse River Buffer Rules on August 27, 2007. The documentation for both studies was submitted to USACE and NCDWQ and included in the October 3, 2007 report entitled, “Wetland and Stream Delineation Reevaluation and Neuse River Riparian Buffer Reassessment." NCDWQ issued a letter on September 14, 2007 documenting the applicability of the Neuse River Buffer Rules. USACE issued a Notification of Preliminary Jurisdictional Determination on February 11, 2008. The Preliminary Jurisdictional Determination will expire on February 11, 2013. ESI completed the Rapanos Forms for the selected corridor and submitted them to USACE for review and comment. USACE issued a Final Jurisdictional Determination on November 11, 2009.

CP2 Revisited Concurrence Meeting (5/22/2008) -The Merger Process Team held a concurrence meeting on May 22, 2008 to discuss elimination of alternates for the entire project from Belgrade

to New Bern. The team concurred on elimination of Alternates 2, 2B, 4A, 48, 4G, 4H, and 4I from further consideration during the meeting on May 22, 2008. The team also concurred on carrying forward Alternates 2A and 2C for the Maysville Bypass, Alternate 3 (widen existing between Maysville and Pollocksville), and Alternates 4D and 4E for the Pollocksville Bypass.

CP2A Concurrence Meeting (5/22/2008) - The Merger Process Team held a concurrence meeting on May 22, 2008 to discuss bridging decisions based upon the March 6, 2007 field observations and recommendations for the northern portion of the project from Chadwick to New Bern including the Pollocksville Bypass. The team concurred on bridging decisions during the meeting on May 22, 2008.

CP3 Concurrence Meeting (6/19/2008) - The Merger Process Team held a concurrence meeting on June 19, 2008 to discuss corridor selection for the Pollocksville Bypass. The team concurred on Alternate 4D for the Pollocksville Bypass during the June 19, 2008 meeting.

CP3 Revisited Concurrence Meeting (6/19/2008) - The Merger Process Team held a concurrence meeting on June 19, 2008 to continue discussions on corridor selection for the Maysville Bypass. Again, the majority of the team supported Alternate 2C rather than Alternate 2A because Alternate 2C would impact fewer wetland areas and would cost less than Alternate 2A. Therefore, the team was unable to concur on corridor selection for the Maysville Bypass.

MMT Elevation Meeting (7/30/2008) - The Merger Management Team held an Elevation Meeting on July 30, 2008 to discuss corridor selection for the Maysville Bypass (Alternate 2A versus Alternate 2C). The team was unable to resolve the decision and decided to confer with staff from each of their respective agencies prior to making a decision.

MMT Elevation Meeting (9/18/2008) - The Merger Management Team held an Elevation Meeting on September 18, 2008 to continue discussions on corridor selection for the Maysville Bypass. NCDOT presented a new option on Alternate 2A to minimize the differences in jurisdictional impacts between Alternate 2A and Alternate 2C. NCDOT proposed to purchase right of way for the Alternate 2A interchanges during this project but to delay construction of the interchanges until a future project. The Merger Management Team decided not to render a decision and recommended that NCDOT present the new option to the Merger Process Team for consideration.

CP3 Revisited Meeting (10/16/2008) - The Merger Process Team held a concurrence meeting on October 16, 2008 to continue discussions on corridor selection for the Maysville Bypass. NCDOT presented the new option on Alternate 2A and the intent to minimize the differences in jurisdictional impacts between Alternate 2A and Alternate 2C. NCDOT proposed to purchase right of way for the Alternate 2A interchanges during this project, but to delay construction of

the interchanges until a future project. The team was unable to reach a decision on the Maysville Bypass and decided to conduct a field meeting to observe the potential impacts to Belgrade from Alternate 2C and potential impacts to the high-quality wetlands from Alternate 2A.

CP3 Field Meeting (12/12/2008) - The Merger Process Team conducted a successful field meeting on December 12, 2008 to observe and document potential impacts from the two Maysville Bypass alternates to Belgrade by Alternate 2C and to the high-quality wetlands associated with the White Oak River by Alternate 2A.

CP3 Revisited Concurrence Meeting (12/16/2008) - The Merger Process Team held a concurrence meeting on December 16, 2008 to continue discussions on corridor selection for the Maysville Bypass based upon the December 12, 2008 field observations. A majority of the team reiterated its support for Alternate 2C (widen through Belgrade and bypass Maysville) rather than direct impacts to the high-quality wetlands on Alternate 2A. Therefore, the team was unable to concur on the Maysville Bypass.

NCDOT Upgrade Alternate 2C to Limited Control of Access (January 2009) - Based upon comments received during the December 16, 2008 CP3 Revisited Meeting for the Maysville Bypass, NCDOT decided to study upgrading from partial control of access to limited control of access to determine whether Alternate 2C could be redesigned to better satisfy the Strategic Highway Corridor Plan for US 17. NCDOT staff concluded that upgrading Alternate 2C to limited control of access would provide an acceptable level of access control. Therefore, NCDOT decided to approach the Merger Process Team regarding concurrence on the revised Alternate 2C for the Maysville Bypass.

CP3 Revisited Concurrence Meeting (4/16/2009) -The Merger Process Team held a concurrence meeting on April 16, 2009 to continue discussions on corridor selection for the Maysville Bypass. NCDOT presented the preliminary design for the revised Alternate 2C with limited control of access during the meeting. Although the stream impacts increased, the team concurred on the revised Alternate 2C with limited control of access for the Maysville Bypass during the April 16, 2009 meeting.

CP4A Concurrence Meeting (9/17/09) – The Merger Process Team held a Concurrence Meeting on September 17, 2009 for the Maysville Bypass. NCDOT presented avoidance and minimization measures for the proposed Alternate 2C with limited control of access during the meeting. Stream and wetland impacts were reduced with the revised design. The Merger Process Team signed the concurrence form.

Corridor Selection by the Section 404 / NEPA Interagency Merger Process - The Merger Process Team and the Merger Management Team held field meetings, concurrence meetings, and

elevation meetings for corridor selection on February 22, 2007; June 19, 2008; July 30, 2008; September 18, 2008; October 16, 2008; December 12, 2008; December 16, 2008; and April 16, 2009. The team reached unanimous concurrence for Alternate 4D as the selected corridor for the Pollocksville Bypass on June 19, 2008 and unanimous concurrence for Alternate 2C as the selected corridor for the Maysville Bypass on April 16, 2009.

Corridor Announcement Newsletter May of 2009 – Once the distribution of the newsletter was complete, NCDOT started receiving comments in June 2009. Many citizens in the Belgrade and Maysville area were opposed to Alternative 2C, which resulted in two petitions totaling over 700 signatures, plus numerous calls, emails, and letters.

Public Hearing December 1, 2009 – Due to the volume of feedback received in response to the corridor selection announcement, NCDOT held a public hearing in December 2009. The hearing was well attended by the local community. Following this meeting, NCDOT and USACE met to discuss the public meeting comments. USACE requested that NCDOT verify the number of expected relocations for Alternatives 2C and 2A. This data was collected during a field visit in February 2010.

CP3 Revisited Concurrence Meeting May 25, 2010 - The Merger Process Team conducted a CP3 Concurrence Meeting for the Maysville Bypass. During this meeting the team compared impacts associated with Alternative 2C and Alternative 2A without interchanges, and concurred with the selection of Alternative 2A as the preferred alternate.

Agency representatives based their decision on each alternatives' ability to meet the project's purpose and need, environmental consequences, opportunities available to mitigate impacts, cost, public and agency comment on the findings of the SDEIS, and other findings presented in this SFEIS.

The Preferred Alterative includes the following sections:

- Alternate 2A: Construct the Belgrade and Maysville Western Bypass on new location from the intersection of SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road) to the tie-in with existing US 17 approximately one mile north of SR 1116 (White Oak River Road)
- Alternate 3: Widen existing US 17 from just north of Maysville to just north of Chadwick
- Alternate 4D: Construct the Pollocksville Western Bypass on new location from just north of Chadwick to the new tie-in with R-2301A (US 17 New Bern Bypass) near the Jones/Craven County Line.

CP4A Concurrence Meeting 4/12/11) – The Merger Process Team held a Concurrence Meeting on April 12, 2011 to discuss Avoidance & Minimization for Alternate 2A of the Maysville Bypass. The Team changed the LEDPA to Alternate 2A on May 25, 2010. The jurisdictional impacts for Section B have been avoided and minimized to the maximum extent practicable based on preliminary design plans dated April 4, 2011 that were presented during this meeting utilizing horizontal alignment shifts, vertical adjustments, a 46-foot median width, perpendicular stream crossing, using 3-to-1 slopes in wetlands, locating service roads and turnarounds in non-jurisdictional areas, elimination of proposed interchanges at the northern and southern termini, and bridging the White Oak River and a tributary of the White Oak River. The Merger Process Team signed the concurrence form.

The concurrence forms are presented in Appendix A.

8.1.4 Agency Comments on the State Draft Environmental Impact Statement

Agency: United States Environmental Protection Agency, Region 4

Letter Date: February 22, 2005

Comments/Responses:

Comment: "The noise wall evaluation was conducted using the 1999 NCDOT Noise Policy of $25,000 per benefited receptor. This evaluation needs to be updated using the Noise Policy and the 'sliding-scale' threshold of $35,000 per benefited receptor."

Response: This revision was made in the SFEIS.

Comment: "EPA was unable to identify the qualifying criteria for determining the quality characteristics of the wetland systems (i.e., Low, medium and high). It would also be helpful to acknowledge if the U.S. Army Corps of Engineers (USACE) has concurred with these determinations."

Response: "USACE observed wetlands and streams during a March 6, 2007 Northern Field meeting that were not shown on the environmental mapping for the August 2000 USACE jurisdictional Determination. USACE also questioned whether a particular pine stand should have been considered a jurisdictional area, and observed apparent changes in land use and drainage patterns. Therefore, USACE rendered a decision on March 7, 2007 that the jurisdictional delineation for the entire project would need to be reevaluated and reverified with USACE prior to any further discussions on corridor selection. This work was performed and the

ratings are presented in this document and USACE issued a Notice of Preliminary Jurisdictional Determination on February 11, 2008. ESI completed the Rapanos Forms for the selected corridor and submitted them to USACE for review and comment. USACE issued a Final Jurisdictional Determination on November 11, 2009.

Comment: "NCDOT should identify more rigorous avoidance/minimization measures prior to the Merger concurrence point 3 (LEDPA) meeting. EPA would recommend a combined concurrence point 2A/3 meeting in order to accurately weigh the alternatives in terms of wetland/stream impacts, costs from bridging and other environmental considerations."

Response: Since the SDEIS, NCDOT has conducted numerous meetings with federal (including USEPA) and state resource agency representatives to discuss avoidance and minimization measures for the project. A CP2A field meeting held on March 6, 2007 resulted in reverification of jurisdictional features and an update of the Jurisdictional Determination. Once this was completed, a CP2 revisited meeting was held which eliminated Alternatives 2, 2B, 4A, 4B, 4H, 4I and 4ID from further consideration on May 22, 2008. Also, on this data, a CP2A meeting was held and bridging decisions were concurred upon for the northern portion of the project from Chadwick to New Bern. Additional meetings were held on the following dates:

- June 19, 2008 (CP3 Northern, CP3 Revisited, Maysville Bypass)
- October 16, 2008 (New option presented for Alternate 2A to minimize jurisdictional impacts between Alternate 2A and Alternate 2C.)
- December 12, 2008 (Field Meeting, Maysville Bypass)
- December 16, 2008 (CP3 Revisited, Maysville Bypass)
- April 16, 2009 (CP3 Revisited, Maysville Bypass)
- September 20, 2009 (CP4A, Pollocksville Bypass)
- May 25, 2010 (CP3, Maysville Bypass)
- April 12, 2011 (CP4A, Maysville Bypass)

Design efforts implemented as part of Concurrence 4A include the following avoidance/minimization measures:

- Horizontal alignment shifts.
- Perpendicular stream crossings.
- Use of 3:1 side slopes in wetlands

- Increase in bridge lengths beyond hydraulic requirements.

Comment: "EPA would request that NCDOT coordinate with the U.S. Fish and Wildlife Service on any specific requirements under the Migratory Bird Treaty Act of 1918."

Response: Comment noted.

Comment: "The DEIS does not address the Special Use Permit required by the U.S. Forest Service for the construction easement. Furthermore, the U.S. Forest Service's required evaluation for Proposed, Endangered, Threatened or Sensitive (PETS) Species will be conducted by NCDOT prior to finalizing the Record of Decision."

Response: An updated PETS Species Report was completed October 2009. It is on file with NCDOT.

Comment: "EPA would request that NCDOT demonstrate the technical details of sharp reverse curves to EPA and other Merger Team agencies at the next concurrence meeting and provide a rationale as why this "best-fit" alternative is not feasible. This design alternative would also avoid additional impacts to the Chadwick Community."

Response: The currently proposed alternative 3 transitions from "widening to the right" to "symmetrical widening" at the forest property using 70 mph curves; one curve is to the left followed by one curve to the right with a tangent of 6/10 of a mile in between. The wording of "reverse curves" should have been "reversing curves". This was presented to EPA during a February 22, 2007 CP3 meeting.

Comment: "Page 4-68 includes the statement that the Spring-flowering Goldenrod will be replanted, if necessary. NCDOT should provide more detailed information regarding this activity."

Response: Updated to the PETS Survey did reveal that the Spring-flowering Goldenrod occurs in the highway ditch shoulder community along US 17 throughout segment 3 of the study area. The proposed action may impact individuals of the species and result in the loss of occupied habitat for the species. Approximately 0.91 of the 1.21 acres of habitat within the right-of-way will be directly affected. There is a total of 13 acres of habitat occupied by this occurrence of spring-flowering goldenrod.

Spring-flowering goldenrod generates readily from collected seeds and mitigation for unavoidable impacts to this species may be conducted in conjunction with the proposal for the US 70 Havelock Bypass (R-1015).

The US 70 Havelock Bypass mitigation plan includes a combination of relocation of affected populations to unaffected suitable habitat or collecting seeds or propagules from affected populations to use in establishing new populations in unaffected suitable habitat. NCDOT is proposing to collect seeds from the areas to be affected and distributing the seeds into an area of the CNF where the species does not currently occur but where there is appropriate habitat. Appropriate habitat is proposed in the Recommended mitigation plan for Solidago verna in Craven Co., North Carolina; Havelock Bypass, R-1015.[1], prepared by Dr. John Stucky for NCDOT in 2006. Potential relocation sites for other PETS plant species have not been specifically identified.

Comment: "NCDOT should provide the specific impact numbers to prime and important farmlands in an Impact/Evaluation Summary Table as was done for other environmental indicators. (e.g., Table 4-17)."

Response: According to the ratings shown on Farmland Conversion Impact Rating forms in Appendix C there are no prime or important farmlands along the project corridor.

Agency: United States Department of the Interior – Fish & Wildlife Service

Letter Date: January 6, 2005

Comments/Responses:

Comment: "All alternatives for the three segments will impact a significant amount of fish & wildlife habitat. It is understood that mitigation requirements would be met through the Ecosystem Enhancement Program."

Response: Mitigation requirement will be met through the Ecosystem Enhancement Program, or through the Croatan Wetland Mitigation Bank where applicable.

Comment: "All alternatives impact a significant amount of forest land."

Response: Impacts to forested land are duly noted, and were taken into consideration during the selection of the LEDPA.

Comment: "The selected alternative in Segment 2 should be carefully aligned to minimize impacts to the Croatan National Forest. The SDEIS does not state how impacts to the National Forest would be compensated for. This issue should be addressed."

Response: Impacts to the Croatan National Forest were considered when choosing the LEDPA alternative in Segment 2. Alternative 2A (LEDPA) minimizes impacts to the National Forest.

Comment: "Mistake in Table 2-2. Alternative 4 shown as retained, Alternative 4A is eliminated. These two are reversed in the table."

Response: Comment noted, - both alternatives have been eliminated and are not part of the LEDPA.

Comment: The explanation of the ESA Section 7 Process requires clarification on page 4-61.

Response: Notes provided by the Fish & Wildlife Service in their response have been included in the SFEIS to address the ESA Section 7 Process.

Comment: "The service recommends that the NCDOT commit to implementing the Service's "Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in NC Waters."

Response: Suitable habitat for this species does not exist within the Onslow and Craven County portions of the study area. Rivers and streams crossed by the study area within Onslow and Craven Counties do not provide suitable habitat for this species. The largest streams within the study area are the White Oak River and Deep Gully, both of which are too narrow and shallow to be utilized by the West Indian manatee. A review of NCNHP records, updated May 4, 2008, indicates no known West Indian manatee occurrence within 1.0 mile of the study area.

Comment: "The SDEIS states that the project may affect, but is not likely to adversely affect ther red cockaded woodpecker (RCW), bald eagle and rough-leaved loosestrife. The SDEIS also states that the project will have no effect on the eastern cougar, golden sedge, Cooley's meadowrue, leatherback sea turtle, green sea turtle, loggerhead sea turtle, piping plover and seabeach amaranth. The American alligator is listed threaten due to similarity of appearance and does not require consultation."

Response: Comment noted.

Comment: "Paragraph about the RCW on page 4-62 is confusing. The service is unable to concur with the "may affect, not likely to affect" determination at this time. The service will reconsider this decision when more current survey results are provided."

Response: A Federally-Protected Species Update was completed for this SFEIS and is included in Section 3.5.4.3.

Comment: "The Service does not concur with the determination that the project may affect, but is not likely to adversely affect the bald eagle."

Response: A Federally-Protected Species Update was completed in March 2009 for this SFEIS and the Bald Eagle is no longer included on the endangered or threatened species list.

Comment: "The Service does not concur with the determination that the project may affect, but is not likely to adversely affect the rough-leaved loosestrife."

Response: A Federally-Protected Species Update was completed for this SFEIS and addresses rough-leaved loosestrife. Suitable habitat for this species does not exist within the Onslow County portions of the study area. The areas mapped as Kalmia series soils occur in areas currently managed as residential landscapes or agricultural land and do not support the ecotonal areas between longleaf pine and pond pine pocosin communities that provide suitable habitat for rough-leaved loosestrife. A review of NCNHP records, updated May 4, 2008, indicates no known rough-leaved loosestrife occurrence within 1.0 mile of the study area.

Comment: "The Service does not concur with the determination that the project will have no effect on golden sedge."

Response: A Federally-Protected Species Update was completed for this SFEIS and addresses golden sedge. Suitable habitat for this species does not exist within the Onslow County portions of the study area. The soil series occurring at known sites, Grifton fine sandy loam, is not present in the study area. The areas mapped as Muckalee series soils, another circumneutral soil, occur in stream floodplains and other forested riverine swamp systems and do not support the vegetation assemblage or hydrology that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known golden sedge occurrence within 1.0 mile of the study area.

Comment: "The Service does not concur with the determination that the project will have no effect on Cooley's meadowrue."

Response: A Federally-Protected Species Update was completed for this SFEIS and addresses Cooley's meadowrue. Suitable habitat for this species does not exist within the Onslow County portions of the study area. The areas mapped as Muckalee series soils occur in stream floodplains and other forested riverine swamp systems and do not support the vegetation assemblage or hydrology that provide suitable habitat for this species. A review of NCNHP records, updated May 4, 2008, indicates no known Cooley's meadowrue occurrence within 1.0 mile of the study area.

Comment: "Due to the lack of habitat, the Service concurs that the project will have no effect on the leatherback sea turtle, green sea turtle, loggerhead sea turtle, piping plover and seabeach amaranth. Due to the lack of credible evidence for its current existence in Jones and Onslow Counties, the Service concurs that the project will have no effect on the eastern cougar."

Comment: "Statements regarding the Service's authority require clarification on page 4-76."

Response: Comment noted.

Response: Comment noted. The Fish and Wildlife Coordination Act provides the authority for the Service to provide comments to the US Army Corps of Engineers on how impacts to fish and wildlife resources and habitat can be minimized. The ESA requires that no federally authorized, funded or permitted activity jeopardize the existence of federally threatened or endangered species or adversely modify designated critical habitat.

Agency: North Carolina Coastal Land Trust

Letter Date: July 18, 2005

Comments/Responses:

Comment: "Agency holds a conservative easement of over 648.8 acres of the Foscue Plantation. Oppose Alternatives 4B & 4G, which would go through Foscue Plantation near the Old Seaboard Line Railroad bed having a great impact on the conservation values of the plantation easement. Urge the DOT to drop Alts. 4B & 4G which would cut off the historic main house from the remaining portions of

the property along the Trent River."

Response: Alternatives 4B and 4G were eliminated from consideration. Alternative 4D was selected as the preferred alternative and the least environmentally damaging practicable alternate.

Agency: North Carolina Department of Environmental and Natural Resources

Letter Date: February 28, 2005

Comments/Responses:

Comment: "Recommends that DOT work directly with the Divisions of: Environmental Health, Water Quality, Forestry, Marine Fisheries & Natural Heritage Program before submitting FEIS for state review. Agencies should be notified of future merger meetings."

Response: Comment noted.

Agency: NCDENR - Division of Water Quality

Letter Date: February 18, 2005

Comments/Responses:

Comment A: "NCDWQ will continue to work with the Merger Process Team on project planning."

Response: Comment noted.

Comment B: "Future documentation should include a map of the entire project showing associated impacts to all resources for all alternatives."

Response: Maps are included in this document that present impacts to resources for the Alternatives.

Comment C: "Q: Where is the existing crossing over the Trent River in relation to the alternatives presented?"

Response: The existing crossing is shown on the map with the proposed alternatives in this

SFEIS.

Comment D: "Q: What is the status of the abandoned Railroad bed on Foscue Plantation?"

Response: The alignment that was being considered that used the abandoned Railroad bed has been eliminated from consideration.

Comment E: "Q: Do wetlands & streams on this project have ratings & descriptions associated with each one? Is there a Natural Resources Tech Report to answer this?"

Response: Yes, the wetlands and streams do have ratings & descriptions. This information was updated in a document dated October 7, 2007 and is titled Wetland and Stream Delineation Reevaluation and Neuse River Riparian Buffer Reassessment. Environmental Services, Inc worked directly with the US Army Corps of Engineers and the NC Division of Water Quality on the reverification of jurisdictional features and the Neuse River Buffer Assessment.

Comments F, G & H: "Based on the impacts described in the document, wetlands mitigation will be required for this project. It should be completed in accordance with NCDWQ Wetland Rules." "In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions & values." "Include specifics for both onsite & offsite mitigation plans, as part of the 401 Water Quality Certification Application Process. Present conceptual (if not finalized) mitigation plan with environmental documentation."

Response: The ICI/On-Site Mitigation Group within the NCDOT Natural Environment Unit will be managing and mailing recommendations for mitigation measures.

Comment I: "Future documentation should include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.

Response: The SFEIS includes an itemized listing of the proposed wetland and stream impacts with corresponding mapping.

Comment J: "Future documentation should address protected riparian buffer impacts for all alternatives within the Neuse River Basin."

Response: The SFEIS addresses protected riparian buffer impacts for all alternatives within the Neuse River Basin.

Comment K: "Q: Have all proposed delineations of wetlands & streams for all alternatives been verified by the USACE?"

Response: Yes, the proposed delineations of wetlands & streams have been verified by the USACE. A Notification of Jurisdictional Determination was issued on November 17, 2009.

Comment L: "An Analysis of cumulative & secondary impacts anticipated as a result of this project is required, which should conform to the NCDWQ Policy on the assessments of secondary & cumulative impacts dated 4/10/04."

Response: The cumulative & secondary impacts were updated for Alternatives 2A and 2C as part of the SFEIS development. A report entitled Community Impact Assessment Update 2011 For US 17 Improvement Segment 2 (TIP Project Number R-2514 B) Jones and Onslow Counties, North Carolina documenting the results is on file with NCDOT.

Comment M: "All impacts should be included in the final impact calculations, and as part of the 401 Water Quality Certification Application."

Response: NCDOT will include Final Impact Calculations in the application for the 401 Water Quality Certification.

Comment N: "DWQ prefers bridges to culverts. If culverts are required, they should be countersunk to allow passage of fish & other aquatic organisms."

Response: NCDOT typically designs culverts to allow the invert to be buried by 12 inches to allow for passage of fish and other aquatic organisms.

Comment O: "Sediment & erosion control measures should not be placed in wetlands."

Response: Comment noted.

Comment P: "Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in these areas could precipitate compensatory mitigation."

Response: Comment noted.

Comment Q: "401 Water Quality Certification application needs to specifically address the proposed methods for stormwater management."

Response: NCDOT will include stormwater management methods in the application for the 401 Water Quality Certification.

Comment R: "Individual Permit application to USACE & corresponding 401 Water Quality Certification may be required."

Response: Comment noted.

Agency: NCDENR - Natural Heritage Program

Letter Date: February 3, 2005

Comments/Responses:

Comment: "The Eastern Lampmussel was found in the Trent River at Hwy 17 in 1993. Care should be taken to avoid impacts to the Aquatic Habitat and Eastern Lampmussel in the Trent River Aquatic Habitat. If impacts are anticipated, the US Fish & Wildlife Service & the Wildlife Resources Commission should be consulted."

Response: NCDOT will coordinate with U.S. Fish and Wildlife Service and the N.C. Wildlife Resources Commission prior to initiating project construction if impacts to the Trent River Aquatic Habitat are anticipated. The proposed crossing of the Trent River will be designed so as to minimize potential impacts to the Trent River Aquatic Habitat to the greatest extent practicable. In addition, BMP's for the protection of aquatic resources will be adhered to in the design and construction of the Trent River crossing.

Comment: "Care should be taken to avoid impacts to the Deep Gully site, which contains two rare plant species, Spleenwort and Bluff Oak, which are expected to be located away from the road"

Response: Proposed impacts to the Deep Gully site will be minimized to the greatest extent practicable. NCDOT will avoid placing staging areas in the vicinity of the Deep Gully site.

Comment: "Special planning and care needed to minimize disturbance to the plants & soil within the Maysville Goldenrod Roadsides Site. If impacts are anticipated, the US Fish & Wildlife Service & the NC Plant Conservation Program should be consulted."

Response: Potential impacts to individuals of spring-flowering goldenrod within the Maysville Goldenrod Roadside sites. Approximately 0.91 acre, within the right-of-way, of the 13 acres of total habitat occupied by this occurrence of spring-flowering goldenrod will be potentially directly affected as a result of this project. This occurrence is estimated to include over 1,000 individual plants.

Spring-flowering goldenrod generates readily from collected seeds and mitigation for unavoidable impacts to this species may be conducted in conjunction with the proposal for the US 70 Havelock Bypass (R-1015).

The US 70 Havelock Bypass mitigation plan includes a combination of relocation of affected populations to unaffected suitable habitat or collecting seeds or propagules from affected populations to use in establishing new populations in unaffected suitable habitat. NCDOT is proposing to collect seeds from the areas to be affected and distributing the seeds into an area of the CNF where the species does not currently occur but where there is appropriate habitat. Appropriate habitat is proposed in the Recommended mitigation plan for Solidago verna in Craven Co., North Carolina; Havelock Bypass, R-1015.[1], prepared by Dr. John Stucky for NCDOT in 2006. Potential relocation sites for other PETS plant species have not been specifically identified.

Comment: "If suitable Spring-flowering Goldenrod habitat exists within the project area, a survey should be conducted if suitable habitat still exists within the project area."

Response: Updates to the PETS Survey did reveal that the spring-flowering goldenrod occurs in the highway ditch shoulder community along US 17 throughout segment 3 of the study area. The proposed action may impact individuals of the species and result in the loss of occupied habitat for the species. Approximately 0.91 of the 1.21 acres of habitat occupied by this species within the right-of-way will be directly affected as a result of the project.

Spring-flowering goldenrod generates readily from collected seeds and mitigation for unavoidable impacts to this species may be conducted in conjunction with the proposal for the US 70 Havelock Bypass (R-1015).

The US 70 Havelock Bypass mitigation plan includes a combination of relocation of affected populations to unaffected suitable habitat or collecting seeds or propagules from affected populations to use in establishing new populations in unaffected suitable habitat. NCDOT is proposing to collect seeds from the areas to be affected and distributing the seeds into an area of the CNF where the species

does not currently occur but where there is appropriate habitat. Appropriate habitat is proposed in the Recommended mitigation plan for *Solidago verna* in Craven Co., North Carolina; Havelock Bypass, R-1015.[1] prepared by Dr. John Stucky for NCDOT in 2006. Potential relocation sites for other PETS plant species have not been specifically identified.

Comment: "A population of the globally endangered species Quillwort is located within the project area, near White Oak River at Belgrade at the US 17 Campground on the east side of US 17. This site could be impacted by construction for the project unless the new bridge over the creek have a large span, are built away from the Quillwort, or unless there is no sedimentation or other disturbance to the population from construction on-site."

Response: Alternative 2A which is west of this site was chosen as the LEDPA. No impacts are anticipated near the location of the Quillwort.

Comment: "A survey for the species Hooker's Milkwort should be conducted if suitable habitat still exists within the project area if suitable habitat still exists."

Response: Updates to both the Federally Protected Species report and the PETS Survey did not reveal that suitable habitat still exists.

Comment: "A survey for the species Carolina Gopher Frog should be conducted if suitable habitat still exists within the project area."

Response: A PETS Species update was completed and noted that based on an historic record (1954), the proposed action has the potential to impact individuals and potentially occupied habitat for Carolina gopher frog. With five additional occurrences of this species present in other locations within the Croatan national Forest the potential loss of this historic occurrence which has not been relocated should not result in a loss of viability for this species on the Croatan National Forest.

Comment: "It is strongly recommended that the NCDOT conduct biological surveys along the project corridor."

Response: Surveys were completed for both the PETS Species Evaluation and for the Federal Protected Species Update.

Agency: North Carolina Wildlife Resources Commission

Letter Date: February 3, 2005

Comments/Responses:

Comment: "At this time, we concur with the DEIS. Will continue to assess the impacts associated with remaining alternatives in preparation for the selection of the LEDPA."

Response: Comment noted.

Agency: NCDENR - Division of Marine Fisheries

Letter Date: January 21, 2005

Comments/Responses:

Comment: "Would like to see additional information included in the DEIS about the use of the proper size and position of culverts to insure that fish passage will not be prevented due to effects of increased current velocities, erosion around culvert entrances, vibrations from traffic & improper placement. The NCDMF also recommends an in-water moratorium from March to September in order to protect these fish."

Response: NCDOT typically designs culverts to allow the invert to be buried by 12 inches to allow for passage of fish and other aquatic organisms. The designated in-water moratoriums have been included as project commitments in this SFEIS. The Trent River is a designated anadromous fish spawning area. An in-stream work moratorium will be in place from February 15th to June 15th. The White Oak is a designated inland primary nursery area. An in-stream work moratorium will be in place from February 15th to September 30th.

Agency: NCDENR – Division of Forest Resources

Letter Date: (No Date)

Comments/Responses:

Comment: "NCDFR supports the selection of Alternatives 2, 3 & 4A since they impact the

fewest forested acres. We have no issue with the selection of Alternative 4E to minimize impacts. However, given the high number of relocations and impacts to historic resources associated with Alternative 4A we have no issue with selection of Alternative 4E to minimize impacts. We encourage NCDOT to minimize & avoid impacts to forestland whenever possible during ROW planning."

Response: Comment noted.

Agency: NCDENR - Division of Environmental Health

Letter Date: January 10, 2005

Comments/Responses:

Comment: "If existing water lines will be relocated, plans must be submitted to the Division of Environmental Health, Public Water Supply Section, Technical Services Branch, 1634 Mail Service Center, Raleigh, NC 27699-1634."

Response: Comment noted.

Comment: "Plans must be submitted to Public Water Supply Plan Review Section for approval prior to any modifications or relocation of potable water distribution lines within the project boundary."

Response: Comment noted.

Comment: "Alternative 2 has the potential to impact Maysville's water supply well, treatment facility & elevated storage tank, especially through construction traffic and associated ground vibration on the west side of the project boundary."

Response: Alternate 2 was eliminated from consideration.

Comment: "Alternatives 4(A, B, I & ID) will encompass Pollocksville's water supply No. 1, treatment facility, storage tank, & 10-inch water main, requiring complete relocation."

Response: All of these alternatives were eliminated from consideration and Alternate 4D was selected for the LEDPA.

Agency: NCDENR – Washington Regional Office and Wilmington Regional Office

Letter Date: February 8, 2005

Comments/Responses:

Comment: "Open Burning must be in compliance with 15A NCAC 2D 1900."

Response: Comment noted.

Comment: "Demolition or renovations of structures containing asbestos materials must be in compliance with 15 A NCAC 2D.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-733-0820.

Response: Comment noted.

Comment: "Sedimentation Pollution Control Act of 1973 must be addressed with respect to the referenced Local Ordinance and the NCDOT Memorandum of Understanding."

Response: Comment noted.

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 noted.

Comment: "Abandonment of wells must be in accordance with Title 15A. Subchapter 2C.0100."

Response: Comment noted.

Comment: "Notification of proper regional office is requested if USTs are discovered during any excavation operation."

Response: Comment noted.

8.2 PUBLIC INVOLVEMENT

Public involvement consisted of establishing a toll-free phone line for questions and answers, preparing newsletters, and holding Citizen Informational Workshops and small group meetings within the communities. Newsletters were distributed during the study process to inform the public of the status of the project and to advertise for workshops. The mailing list was developed by NCDOT's Public Involvement Group. Copies of the newsletters are included in **Appendix A**.

A complete copy of the *Community Impact Assessment, January 2002* is on file with the Project Development and Environmental Analysis Branch of NCDOT. An update of this document titled *Community Impact Assessment for US 17 Improvements Segment 2 (TIP Project Number R-2514B) Jones and Onslow Counties, January 2011* was completed in 2010 for Segment 2 Alternatives 2A and 2C and is also on file with the Project Development and Environmental Analysis Branch of NCDOT.

Public Hearings. Once the SDEIS was completed and distributed NCDOT held Pre-Hearing Open House Workshops in Pollocksville on August 9 (Pollocksville), 11 (Maysville), and 16 (Pollocksville), 2005 and conducted a Formal Corridor Public Hearing in Pollocksville on August 16, 2005. Estimated Attendance from the Public was 238 people from the sign-in sheets. NCDOT and Wilbur Smith Assoc. staffed the hearings with approximately 25 people over the course of the 3 meetings. There were 11 speakers during the hearing; some of them spoke twice. These meetings were held to allow the public to review and comment on the proposed alternatives. A corridor announcement newsletter was prepared and distributed in May of 2009. NCDOT started receiving comments in June 2009. Many citizens in the Belgrade and Maysville area were opposed to Alternative 2C, which resulted in two petitions totaling over 700 signatures, plus numerous calls, emails, and letters. NCDOT responded by scheduling a public hearing in December 2009. The hearing was well attended by the local community. Following this meeting, NCDOT and USACE met to discuss the public meeting comments. USACE requested that NCDOT verify the number of expected relocations for Alternatives 2C and 2A. This data was collected during a field visit in February 2010. In May 2010 the Merger Process Team conducted a CP3 concurrence meeting for the Maysville Bypass. During this meeting, the team compared impacts associated with Alternative 2C and Alternative 2A without interchanges, and concurred with the selection of Alternative 2A as the preferred alternate.

A public hearing for this project may be held following approval of the Record of Decision. The public hearing will provide more detailed information about the proposed improvements. Additional comments will be solicited from the public. A determination will be made at the time of the hearing regarding Limited English Proficiency (LEP). This determines if language assistance is needed based on language populations in the DSA.

Citizen Informational Workshops. Three Citizen Informational Workshops were held to present proposed alternatives, solicit comments, and answer questions. The first Citizens Informational Workshop was held on October 3, 1995 at the Maysville Elementary School. Approximately 160 people attended the workshop. The second Citizens Informational Workshop was held on February 24, 1997 at the Jones County Civic Center near Trenton. Approximately 180 people attended. The third workshop was held on November 28, 2000 at the Maysville Elementary School. Approximately 82 people attended this workshop.

The majority of the people in attendance at the three Citizen Informational Workshops were concerned with the alternatives in the areas of Belgrade, Maysville and Pollocksville. The main concerns discussed at this meeting were the displacement of the elderly.

Small Group Meetings. While much of the information found in this document could be obtained from existing databases and other sources, such as the US Census, information relative to the community residents could be obtained only by sitting down and talking with people. During the course of preparing the *Community Impact Assessment, January 2002*, citizens from the Belgrade, Maysville, Chadwick, Hatchville, Garnet Heights, Goshen, Pollocksville, Oak Grove, Murphytown, Ten Mile Fork and Deep Gully communities contributed information describing the history of these communities. Numerous small group meetings were held at local churches and in neighborhoods to gather information. Door-to-door surveys were also conducted in these communities. This approach allowed the study team to itemize the physical structures located in each community and learn the feelings and desires of approximately 208 citizens living in those communities.

In March and April of 2000, sixty-seven (67) project area residents were interviewed. These interviews were conducted with 18 residents of the Chadwick community, 12 residents of the Garnet Heights community, 18 residents of the Hatchville community, 17 residents of the Goshen community and two residents of the Murphytown/Oak Grove communities. These interviews took place at the residents' homes, in their front yards, on their front porches, in their gardens, under their carports, in their back yards under the clothes line and in their living rooms.

Other interviews took place at two multi-community meetings. The meetings were open to the residents of the Chadwick, Hatchville, Garnet Heights and Goshen communities, and were held to communicate information about the project and the interview process. Two Murphytown/ Oak Grove community residents, who were relatives of members in these communities, also attended. The first meeting was held on March 20, 2000 from 7:00 p.m. to 9:30 p.m. at St. Phillip Missionary Baptist Church in the Hatchville community and had 26 attendees. The second meeting was held on April 17, 2000 from 7:30 p.m. to 9:00 p.m. at St. Matthew United Church of Christ in the Garnet Heights community and had 27 attendees.

Both of these meetings were coordinated through a local community group, the Goshen Road Environmental Action Team (GREAT). GREAT was formed in response to the town of Pollocksville's plans to locate a sewage treatment plant outside of the town limits inside the Goshen Community. The town obtained property through the use of its powers of eminent domain and relocated several Goshen residents. GREAT has circulated a petition opposing the alternatives that impact the Goshen community and has enlisted the help of the United Church of Christ's Commission on Racial Justice.

In November and December 2000, 141 project area residents were interviewed to better understand the local community perspectives on the project. These interviews were conducted with 30 residents of the Belgrade Community, 57 residents of the Town of Maysville, five residents of Chadwick, one resident of Hatchville, one resident of Goshen, 27 residents of the Town of Pollocksville, 11 residents of the Murphytown/Oak Grove communities and nine residents of the Ten Mile Fork/Deep Gully Community. These interviews were conducted on Election Day outside the voting precincts at the Belgrade Fire Station, the Maysville Fire Station and the Pollocksville Fire Station. The interviews were collected from 7:00 a.m. to 6:00 p.m. on November 7, 2000 at each location.
A Public Meeting was held on the evening of November 9, 2000 at the Pollocksville Presbyterian Church. Additional interviews were gathered at a local grocery store, Taylor's IGA in Maysville, on the afternoon of November 29, 2000.

The study team also prepared presentations and provided information at two Parent/Teacher Organization (PTO) meetings at the local elementary schools. The Maysville Elementary School PTO meeting was held on November 30, 2000; and the Pollocksville Elementary School PTA meeting held on December 11, 2000.

A public meeting for this project may be held following approval of the record of decision. The public hearing will provide more detailed information about the proposed improvements. Additional comments will be solicited from the public.

NCDOT met with members of the Goshen community in the summer of 2006 to discuss alternatives in the vicinity of Goshen. Graphics showing proposed grade separation options at Goshen Road and US 17, the Schematic Corridor Plan, the Public Hearing Map, and preliminary plans of various alternatives were displayed. An overview of the project status, next steps in the process, and issues related to corridor selection in the vicinity of the Goshen Community were presented to the group. The Alternative 4D alignment, which is between the Goshen Community and the Town of Pollocksville, was selected by community leaders as a viable route.

A complete copy of the *Community Impact Assessment, January 2002* is on file with the Project Development and Environmental Analysis Branch of NCDOT. An update of this document titled

Community Impact Assessment for US 17 Improvements Segment 2 (TIP Project Number R-2514B) Jones and Onslow Counties, January 2011 was completed in 2010 for Segment 2 Alternatives 2A and 2C and is also on file with the Project Development and Environmental Analysis Branch of NCDOT.

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U.S. Fish and Wildlife Service. Eastern Cougar (Puma concolor couguar). http://www.fws.gov/nc-es/mammal/cougar.html. (Accessed January 4, 2008)

U.S. Fish and Wildlife Service. Green Sea Turtles in North Carolina. http://www.fws.gov/nc-es/reptile/greensea.html . (Accessed January 4, 2008)

U.S. Fish and Wildlife Service. Leatherback Sea Turtles in North Carolina. http://www.fws.gov/nc-es/reptile/leather.html. (Accessed January 4, 2008)

U.S. Fish and Wildlife Service. Loggerhead Sea Turtles in North Carolina. http://www.fws.gov/nc-es/reptile/logger.html . (Accessed January 4, 2008)

U.S. Fish and Wildlife Service. Piping plover (Charadrius melodus). http://www.fws.gov/nc-es/birds/pipiplov.html. (Accessed January 4, 2008)

U.S. Fish and Wildlife Service. Pondberry (Southern Spicebush) in North Carolina. http://www.fws.gov/nc-es/plant/pondberry.html (Accessed: January 4, 2008)

U.S. Fish and Wildlife Service. Red-cockaded Woodpecker in North Carolina. http://www.fws.gov/nc-es/birds/rcwood.html. (Accessed January 4, 2008)

U.S. Fish and Wildlife Service. Rough-leaved Loosestrife (Lysimachia asperulifolia). http://www.fws.gov/nc-es/plant/rllooses.html . (Accessed January 4, 2008)

U.S. Fish and Wildlife Service. Shortnose Sturgeon in North Carolina. http://www.fws.gov/nc-es/fish/shortst.html. (Accessed 01/04/08)

U.S. Fish and Wildlife Service. Seabeach Amaranth (Amaranthus pumilus). http://www.fws.gov/nc-es/plant/seabeachamaranth.html. (Accessed 01/04/08)

U.S. Fish and Wildlife Service. Sensitive Joint-vetch in North Carolina. http://www.fws.gov/nc-es/plant/sensjointv.html. (Accessed 01/04/08)

U.S. Fish and Wildlife Service. West Indian Manatees in North Carolina. http://www.fws.gov/nc-es/mammal/manatee.html. (Accessed 01/04/08)

Project Technical Memorandums

January 2011 *Community Impact Assessment for US 17 Improvement Segment 2 (TIP Project Number R-2514B) Jones and Onslow Counties, North Carolina*, Prepared by Wilbur Smith Associates

October 2010 *EDR DataMap Environmental Atlas US 17 Improvements Jones County, NC*

October 2010 *EDR DataMap Environmental Atlas US 17 Improvements Onslow County, NC*

August 2010 *Updated Capacity Analysis Report For Improving US 17 from SR 1330 (Deppe*

Loop Road) to Craven County Line NCDOT TIP Project R-2514 Onslow and Jones County, North Carolina, Prepared by Wilbur Smith Associates

November 2010 *Archaeological Survey and Evaluation of Alternative 2A of the US 17 Improvements from Jacksonville to New Bern, Jones and Onslow Counties, North Carolina Final Report,* Prepared by Environmental Science Inc.

September 2010 *Indirect and Cumulative Effects Report US 17 Improvements From SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road) to the New Bern Bypass near the Jones/Craven County Line Onslow, Jones, and Craven Counties,* Prepared by Kimley-Horn & Associates, Inc.

January 2010 *Archaeological Survey and Evaluation of the US 17 Improvements from Jacksonville to New Bern, Jones and Onslow Counties, North Carolina Final Report,* Prepared by Environmental Science Inc.

March 2009 *Federally Protected Species Update US 17 From South of Belgrade to the Jones – Craven County Line Onslow, Jones, and Craven Counties, North Carolina,* Prepared by Environmental Science Inc.

October 2007 *Wetland and Stream Delineation Reevaluation and Neuse River Riparian Buffer Reassessment. US 17 Belgrade to New Bern,* Prepared by Environmental Science Inc.

January 2002 *Community Impact Assessment for 17 Widening from North of Jacksonville to South of New Bern,* Prepared by Wilbur Smith Associates

October 2001 *Technical Memorandum on Air Qualtiy 17 Widening from North of Jacksonville to South of New Bern,* Prepared by Wilbur Smith Associates

August 2001 *Natural Systems Report US 17 South of Belgrade to South of New Bern,* Prepared by Environmental Services, Inc.

May 2001 *Technical Memoradum on Traffic Noise for 17 Widening from North of Jacksonville to South of New Bern,* Prepared by Wilbur Smith Associates

January 2001 *Traffic Report US 17 Widening from North of Jacksonville to South of New Bern,* Prepared by Wilbur Smith Associates

November 1999 *An Archaeological Suvery for 17 Widening from North of Jacksonville to South of New Bern,* Prepared by New South Associates

May 1999 *Phase II (Intense Level) Architectural Survey and Evaluations of Eligibility for 17 Widening from North of Jacksonville to South of New Bern,* Prepared by Mattson, Alexander and Associates, Inc.

October 1997 *Hydraulics Report 17 Widening from North of Jacksonville to South of New Bern,* Prepared by Wilbur Smith Associates

Appendix A
Coordination and Public Involvement

SECTION A.1
Signed Concurrence Forms

Section 404/NEPA Merger Project Team Meeting Agreement Concurrence Point No. 2 - Alternatives to be studied in detail in the NEPA document.

Project No./TIP No./Name/Description:

Federal Project Number: NHF-17(7)
State Project Number: 8.T190301
TIP Number: R-2514
TIP Description: US 17 widening from North of Jacksonville to South of New Bern. Jones & Onslow Counties

Alternatives to be studied in detail in the NEPA document:

Alternatives 2, 2a, 2b, 2e, 3a, 3b, 3c, 4a, 4b, 4d, 4e, 4g, 4h, and 4i

The Project Team has concurred on this date of 8-23-2001 with the "alternatives to be studied in detail" in the NEPA document as stated above.

USACE BY LETTER

NCDOT

USEPA

USFWS

NCDWQ 2/23/04

NCWRC BY LETTER

SHPO

FHWA

NMFS

NCDMF

NFS BY LETTER

NCDCM

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

REVISIT OF CONCURRENCE POINT 2: DETAILED STUDY ALTERNATIVES CARRIED FORWARD BELGRADE TO NEW BERN

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description : The North Carolina Department of Transportation proposes a combination of widening, bypasses of Belgrade, Maysville, and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Alternatives to be Eliminated : **2, 2B, 4A, 4B, 4G, 4H, and 4I**

Alternatives to be Carried Forward : **2A, 2C, 3, 4D, and 4E**

The Merger Process Team met on May 22, 2008 and concurs with the alternatives listed above to be eliminated and those to be carried forward in the corridor selection process for the proposed improvements to US 17 from Belgrade to New Bern.

USACE William Wescott, P.W.S. 5-22-08 (Date)

USEPA Christopher Militscher 5-22-08 (Date)

NMFS Ron Sechler 7/6/08 (Date)

NCWRC Travis Wilson 5-22-2008 (Date)

NCDMF Trish Murphey BY TELEPHONE 8/5/08 (Date)

NCDOT Mark Pierce, P.E. 5/22/08 (Date)

USFWS Gary Jordan 5/29/2008 (Date)

USFS Karen Compton BY LETTER 6/2/08 (Date)

NCDWQ David Wainwright 5/22/08 (Date)

NCDCM Steve Sollod 5/22/08 (Date)

NCDCR Renee Gledhill-Earley 5.22.08 (Date)

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

CONCURRENCE POINT 2A: BRIDGING DECISIONS & ALIGNMENT REVIEW BELGRADE TO NEW BERN (SECTIONS B, C, & D)

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description: The North Carolina Department of Transportation proposes a combination of widening, bypasses of Belgrade, Maysville, and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Alignment Review: The Merger Process Team met on February 22, 2007 and on May 22, 2008 and concurs with the corridor alignments under consideration for the proposed improvements to US 17 from Belgrade to New Bern (Sections B, C, and D).

Bridging Decisions: The Merger Process Team met on February 22, 2007 and on May 22, 2008 to discuss the preliminary hydraulics design for the major crossings for the proposed improvements to US 17 from Belgrade to New Bern (Sections B, C, and D). The Team concurs with the proposed bridging decisions presented in the following table.

Alt.	Structure No.	Stream or River	Hydraulically-Required Structure	Field-Recommended Structure
2A	S3	UT1 to White Oak River	2 @ 8' x 4' Culvert	2 @ 8' x 4' Culvert
	S4A	UT5 to White Oak River	7' x 5' Culvert	100-ft Bridge
	S4B	UT to White Oak River	< 72-inch Pipe	Culvert
	S4C	White Oak River	135-ft Bridge	1160-ft Bridge
2C	S7	UT1 to White Oak River	2 @ 8' X 4' Culvert	2 @ 8' X 4' Culvert
	S8	White Oak River	150-ft Bridge	560-ft Bridge
4D	S8A	Goshen Branch	None	380-ft Bridge
	S8B	Trent River	290-ft Bridge	1180-ft Bridge
	S15	Deep Gully	2 @ 8' x 6' Culvert	420-ft Bridge
4E	S9A	Goshen Branch	None	380-ft Bridge
	S9B	Trent River	290-ft Bridge	1180-ft Bridge
	S17	Deep Gully	2 @ 8' x 6' Culvert	420-ft Bridge

USACE _____ 5-22-08
William Wescott, P.W.S. Date

USEPA _____ 5/22/08
Christopher Militscher Date

NMFS BY TELEPHONE 10/16/08
Ron Sechler Date

NCWRC _____ 5-22-08
Travis Wilson Date

NCDMF BY TELEPHONE 8/5/08
Trish Murphey Date

NCDOT _____ 5/22/08
Mark Pierce, P.E. Date

USFWS _____ 5/24/2008
Gary Jordan Date

USFS BY LETTER 6/2/08
Karen Compton Date

NCDWQ _____ 5/27/08
David Wainwright Date

NCDCM _____ 5/22/08
Steve Sollod Date

NCDCR _____ 5.22.08
Renee Gledhill-Earley Date
Peter B. Sandbeck

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

CONCURRENCE POINT 3 : CORRIDOR SELECTION
NORTH OF MAYSVILLE TO NEW BERN

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description : The North Carolina Department of Transportation proposes a combination of widening, bypasses of Belgrade, Maysville, and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Corridor Selection : Alternate 3 to widen existing US 17 from Maysville to Chadwick
Alternate 4D from Chadwick to New Bern (Pollocksville Bypass)

The Merger Process Team met on June 19, 2008 and concurs with the corridor selections listed above for the proposed improvements to US 17 from north of Maysville to New Bern.

USACE William Wescott, P.W.S. 6/19/08
William Wescott, P.W.S. — Date

USFWS Gary Jordan 6/19/2008
Gary Jordan — Date

USEPA 6/19/08
Christopher Militscher — Date

USFS BY LETTER 6/25/08
Karen Compton — Date

NMFS BY TELEPHONE 10/16/08
Ron Sechler — Date

NCDWQ 6/19/08
David Wainwright — Date

NCWRC 6-19-08
Travis Wilson — Date

NCDCM 6/19/08
Steve Sollod — Date

NCDMF BY TELEPHONE 8/5/08
Trish Murphey — Date

NCDCR Renee Gledhill-Earley 6/19/08
Renee Gledhill-Earley — Date

NCDOT Mark A. Pierce 6/19/08
Mark Pierce, P.E. — Date

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

CONCURRENCE POINT 3 : CORRIDOR SELECTION
BELGRADE TO NORTH OF MAYSVILLE (SECTION B)

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description : The North Carolina Department of Transportation proposes a combination of widening, bypasses of Belgrade, Maysville, and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Corridor Selection : Alternate 2C

The Merger Process Team met on April 16, 2009 and concurs with Alternate 2C for the proposed improvements to US 17 from Belgrade to north of Maysville including the Maysville Bypass.

USACE William Wescott 4/16/2009
William Wescott, P.W.S. Date

USEPA 4/16/09
Christopher Militscher, REM, CHMM Date

NMFS Ron Sechler 5/14/09 EM
Ron Sechler Date

NCWRC 4-16-09
Travis Wilson Date

NCDMF BY E-MAIL 5/4/09
Trish Murphey Date

NCDOT Mark A. Pierce 4/16/2009
Mark Pierce, P.E. Date

USFWS Gary Jordan 4/16/2009
Gary Jordan Date

USFS BY LETTER 5/4/2009
Karen Compton Date

NCDWQ 4/16/09
David Wainwright Date

NCDCM 4/16/09
Steve Sollod Date

NCDCR Renee Gledhill-Earley 4/16/09
Renee Gledhill-Earley Date

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

CONCURRENCE POINT 4A : AVOIDANCE & MINIMIZATION SOUTH OF NC 58 TO NEW BERN (SECTION D)

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description : The North Carolina Department of Transportation proposes a combination of widening, bypasses of Belgrade, Maysville, and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Avoidance & Minimization : The jurisdictional impacts for Section D have been avoided and minimized to the maximum extent practicable based on preliminary design plans presented during the April 16, 2009 CP4A Concurrence Meeting by utilizing horizontal alignment shifts, vertical adjustments, a 46-foot median width, perpendicular stream crossings, bridging Goshen Branch and the Trent River, using 3-to-1 slopes in wetlands, using equalizer pipes between bisected wetland features, and paralleling the existing power transmission easement in the northern portion of the project.

The Merger Process Team met on April 16, 2009 and concurs with the avoidance and minimization measures for the proposed improvements to Section D of this project.

USACE _____ William Wescott, P.W.S. 4/16/2009 Date

USEPA _____ Christopher Militscher, REM, CHMM 4/16/09 Date

NMFS _____ Ron Sechler 5/4/09 EM Date

NCWRC _____ Travis Wilson 4-16-09 Date

NCDMF BY E-MAIL 5/4/09 Trish Murphey Date

NCDOT _____ Mark Pierce, P.E. 4/16/2009 Date

USFWS _____ Gary Jordan 4/16/2009 Date

USFS BY LETTER 5/4/09 Karen Compton Date

NCDWQ _____ David Wainwright 4/16/09 Date

NCDCM _____ Steve Sollod 4/16/09 Date

NCDCR _____ Renee Gledhill-Earley 4-16-09 Date

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

CONCURRENCE POINT 4A: AVOIDANCE & MINIMIZATION
BELGRADE TO MAYSVILLE (SECTION B)

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description: The North Carolina Department of Transportation proposes a combination of widening, bypasses of Maysville and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Avoidance & Minimization: The jurisdictional impacts for Section B have been avoided and minimized to the maximum extent practicable based on preliminary design plans presented during the September 17, 2009 CP4A Concurrence Meeting by utilizing horizontal alignment shifts, vertical adjustments, a 46-foot median width, perpendicular stream crossings, using 3-to-1 slopes in wetlands, locating service roads and turnarounds in non-jurisdictional areas, utilization of existing US 17 as a service road, elimination of proposed interchanges at the northern and southern termini, and bridging the White Oak River.

The Merger Process Team met on September 17, 2009 and concurs with the avoidance and minimization measures for the proposed improvements to Section B of this project.

USACE for William Wescott, P.W.S. 9/17/09 Date

USEPA Christopher Militscher, REM, CHMM 9/17/09 Date

NOAA Ron Sechler 9/17/09 Date

NCWRC Travis Wilson 9-17-09 Date

NCDMF By E-mail Trish Murphey 9/21/09 Date

NCDOT Mark A. Pierce Mark Pierce, P.E. 9/17/09 Date

USFWS Gary Jordan 9/22/2009 Date

USFS By Letter Karen Compton 9/21/09 Date

NCDWQ David Wainwright 9/17/09 Date

NCDCM Steve Sollod 9/17/09 Date

NCDCR By E-mail Renee Gledhill-Earley 9/18/09 Date

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

CONCURRENCE POINT 3 REVISITED: CORRIDOR SELECTION BELGRADE TO NORTH OF MAYSVILLE (SECTION B)

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description : The North Carolina Department of Transportation proposes a combination of widening, bypasses of Belgrade, Maysville, and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Corridor Selection : Alternate 2A

The Merger Process Team met on May 25, 2010 and concurs with Alternate 2A for the proposed improvements to US 17 from Belgrade to north of Maysville including the Maysville Bypass. This agreement supersedes the previous corridor selection agreement dated April 16, 2009.

USACE 5/25/2010
Thomas Steffens 05/25/2010 Date

USEPA NOT CONCUR 5/25/2010
Christopher Militscher, REM, CHMM Date

NOAA (ABSTAIN BY E-MAIL) 6/4/2010
Ron Sechler Date

NCWRC Abstain 5-25-2010
Travis Wilson Date

NCDMF (ABSTAIN BY E-MAIL) 6/2/2010
Trish Murphey Date

NCDOT Mark A. Pierce 5/25/2010
Mark Pierce, P.E. Date

USFWS Abstain D.N.F. 5/25/2010
Gary Jordan Date

USFS (BY LETTER) 6/4/2010
Karen Compton Date

NCDWQ 5/25/10
David Wainwright Date

NCDCM 5/25/10
Steve Sollod Date

NCDCR 5.25.10
Renee Gledhill-Earley Date

US 17

SECTION 404 / NEPA MERGER PROCESS CONCURRENCE AGREEMENT

CONCURRENCE POINT 4A : AVOIDANCE & MINIMIZATION BELGRADE TO MAYSVILLE (SECTION B)

US 17, NCDOT Divisions 2 & 3, Onslow & Jones Counties

TIP Project No. R-2514BCD

TIP Description : The North Carolina Department of Transportation proposes a combination of widening, bypasses of Belgrade, Maysville, and Pollocksville on new location, and other improvements to the existing US 17 roadway from multilanes north of Jacksonville (R-2514A) to multilanes south of New Bern (R-2301, the New Bern Bypass) to create a four-lane divided facility.

Avoidance & Minimization : The jurisdictional impacts for Section B have been avoided and minimized to the maximum extent practicable based on preliminary design plans dated April 4, 2011 that were presented during the April 12, 2011 CP4A Concurrence Meeting by utilizing horizontal alignment shifts, vertical adjustments, a 46-foot median width, perpendicular stream crossings, using 3-to-1 slopes in wetlands, locating service roads and turnarounds in non-jurisdictional areas, elimination of proposed interchanges at the northern and southern termini, and bridging the White Oak River and a tributary of the White Oak River.

Concurrence is conditionally based; NCDOT to investigate southern radius in flattening curve to avoid Wetlands 2, 27, 30, 31, and 32. NCDOT would commit to design change if research indicates positive reduction in impacts. Otherwise, original design stands.

The Merger Process Team met on April 12, 2011 and concurs with the avoidance and minimization measures for the proposed improvements to Section B of this project.

USACE _____ 04/12/11
Tom Steffens — Date

USEPA _____ 4/12/11
Christopher Militscher, REM, CHMM — Date

NOAA _____
Ron Sechler — Date

NCWRC _____ 4-12-11
Travis Wilson — Date

NCDMF BY E-MAIL 4/14/2011
Jessi Baker — Date

NCDOT Mark A. Pierce 4/12/2011
Mark Pierce, P.E. — Date

USFWS _____ 4/12/2011
Gary Jordan — Date

USFS _____
Karen Compton — Date

NCDWQ _____ 4/12/11
David Wainwright — Date

NCDCM _____ 4/12/11
Steve Sollod — Date

NCDCR _____ 4-12-11
Renee Gledhill-Earley — Date

SECTION A.2
Agency Comments

U.S. Department of Homeland Security
United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: (obr)
Phone: (757) 398-6422
Fax: (757) 398-6334
Email: bbrazier@lantd5.uscg.mil

16593
31 MAR 04

Mr. John Conforti
Department of Transportation
PDEA Branch
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Conforti:

We reviewed the information forwarded by fax on March 23, 2004, for the proposed construction of a bridge over White Oak River in Maysville, Jones/Onslow County, North Carolina.

Since White Oak River is subject to tidal influence, it is considered legally navigable for Bridge Administration purposes. This waterway also meets the criteria for advanced approval waterways outlined in Title 33, Code of Federal Regulations, Section 115.70. Advance approval waterways are those that are navigable in law, but not actually navigated by other than small boats. The Commandant of the Coast Guard has given his advance approval to the construction of bridges across such waterways. Your letter confirmed such conditions for this site. Therefore, an individual permit will not be required for this project.

If you have any questions regarding this matter, please contact Mr. Bill H. Brazier, at the phone number or address shown above.

Sincerely,

Waverly W. Gregory, Jr.

WAVERLY W. GREGORY, JR.
Chief, Bridge Administration Branch
By direction of the Commander
Fifth Coast Guard District

Copy: Mr. Doug Rice, Wilbur Smith Associates

REVISED APRIL 19, 1995

Jones County

Birds
Red-cockaded woodpecker (Picoides borealis) - E

There are species which, although not now listed or officially proposed for listing as endangered or threatened, are under status review by the Service. These "Candidate"(C1 and C2) species are not legally protected under the Act, and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as threatened or endangered. We are providing the below list of candidate species which may occur within the project area for the purpose of giving you advance notification. These species may be listed in the future, at which time they will be protected under the Act. In the meantime, we would appreciate anything you might do for them.

Amphibians
Carolina crawfish frog (Rana areolata capito) - C2

Crustaceans
Croatan crayfish (Procambarus plumimanus) - C2

Plants
Carolina goldenrod (Solidago pulchra) - C2
Chapman's sedge (Carex chapmanii) - C2
Godfrey's sandwort (Minuartia godfreyi) - C2*
Spring-flowering goldenrod (Solidago verna) - C2
Venus flytrap (Dionaea muscipula) - C2
Wagner's spleenwort (Asplenium heteroresiliens) - C2
Wireleaf dropseed (Sporobolus teretifolius) - C2*

*Indicates no specimen in at least 20 years from this county.

REVISED APRIL 19, 1995
2 PAGES

Onslow County

Mammals
Eastern cougar (Felis concolor couguar) - E

Birds
Red-cockaded woodpecker (Picoides borealis) - E
Piping plover (Charadrius melodus) - T

Reptiles
Green sea turtle (Chelonia mydas) - T
Kemp's Ridley sea turtle (Lepidochelys kempi) - E
Leatherback sea turtle (Dermochelys coriacea) - E
Loggerhead sea turtle (Caretta caretta) - T

Plants
Cooley's meadowrue (Thalictrum cooleyi) - E
Rough-leaved loosestrife (Lysimachia asperulaefolia) - E
Seabeach amaranth (Amaranthus pumilus) - T

Sea turtles when "in the water" and the shortnose sturgeon are under the jurisdiction of the National Marine Fisheries Service and should be contacted concerning your agency's responsibilities under Section 7 of the Endangered Species Act. Their address is:

National Marine Fisheries Service
U.S. Department of Commerce
9450 Koger Boulevard
Duval Building
St. Petersburg, Florida 33702

There are species which, although not now listed or officially proposed for listing as endangered or threatened, are under status review by the Service. These "Candidate"(C1 and C2) species are not legally protected under the Act, and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as threatened or endangered. We are providing the below list of candidate species which may occur within the project area for the purpose of giving you advance notification. These species may be listed in the future, at which time they will be protected under the Act. In the meantime, we would appreciate anything you might do for them.

Crustaceans
Croatan crayfish (Procambarus plumimanus) - C2

Birds
Henslow's sparrow (Ammodramus henslowii) - C2

Amphibians
Carolina gopher frog (Rana capito capito) - C2

Reptiles
Southern hognose snake (Heterdon simus) - C2

REVISED APRIL 19, 1995

Plants

Awned meadow-beauty (Rhexia aristosa) - C2
Boykins lobelia (Lobelia boykinii) - C2
Carolina goldenrod (Solidago pulchra - C 2
Carolina grass-of-parnassus (Parnassia caroliniana) - C2
Chapmans's sedge (Carex chapmanii) - C2
Hirst's panic grass (Dichanthelium sp. [Panicum hirstii] - C2
Loose watermilfoil (Myriophyllum laxum) - C2
Pondspice (Litsea aestivalis) - C2
Savanna cowbane (Oxypolis ternata) - C2
Smooth bog-asphodel (Tofieldia glabra) - C2*
Spring-flowering goldenrod (Solidago verna) - C2
Thorne's beakrush (Rhynchospora thornei) - C2
Venus flytrap (Dionaea muscipula) - C2
Wagner's spleenwort (Asplenium heteroresiliens) - C2
Wireleaf dropseed (Sporobolus teretifolius) - C2

*Indicates no specimen in at least 20 years from this county.

Doug Hart
HART

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive C enter Drive North
St. Petersburg, Florida 33702

June 8, 1995

Mr. H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
N.C. Department of Transportation
P. O. Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Vick:

This responds to your letter dated May 23, 1995, requesting input into the development by the North Carolina Department of Transportation (NCDOT) of an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the proposed widening of US 17 from north of SR 1327 in Jacksonville to SR 1330 in New Bern in Onslow, and Jones Counties, North Carolina. The proposed 22- mile-long road improvement involves work in wetlands and construction of bridges across the White Oak and Trent Rivers in Onslow and Jones Counties, respectively.

The White Oak and the Trent Rivers and their associated wetlands are important for the continued production of fishery resources for which the National Marine Fisheries Service is responsible. These riverine systems provide spawning and nursery habitat for anadromous fishery resources including American shad (Alosa sapidissima), hickory shad (Alosa mediocris), blueback herring (Alosa aestivalis), and alewife (Alosa pseudoharengus). Wetlands in the project area support fishery resources by providing a source of organic detritus that is an important component of the aquatic food chain. They also perform water quality functions such as reduction of excessive nutrient levels, removal of suspended sediment, storm water retention, and ground water recharge. These water quality benefits are valuable in maintaining the biological productivity of the White Oak and Trent Rivers and ultimately benefit water quality in the estuaries into which they flow. Accordingly, we recommend that the EA and FONSI prepared for this project address the following information needs and fishery related issues.

1. The EA should describe the alternative highway and bridge alignments and designs considered. This should include a discussion of how each alternative will avoid and minimize direct and indirect losses of wetlands that support fisheries.

2. The EA should describe the location, acreage, and types of wetlands, including open water areas, potentially impacted by the proposed work.

3. The EA should describe the fishery resources found in the project area and provide an assessment of the impacts of the project on these resources.

4. Bridge construction often requires filling for temporary access roads and/or other measures for construction access. The EA should address the impacts on wetlands and fishery habitat of any temporary construction related wetland losses.

5. The proposed highway improvements may stimulate additional residential and commercial growth in the project area. The EA should address secondary development and its impact on project area waters and wetlands.

6. The EA should demonstrate compliance with the Section 404(b)(1) Guidelines pursuant to the Clean Water Act by avoidance and minimization of wetland impacts wherever possible by the use of bridging, reduction of median widths, and using steep side slopes.

7. If wetland losses are unavoidable, the EA should provide a mitigation plan to compensate for these losses consistent with the mitigation Memorandum of Agreement between the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. Unless compensation for wetland losses is incorporated as a part of the project, we will likely recommend against federal authorization of the project.

We appreciate the opportunity to provide these comments.

Sincerely,

for Andreas Mager, Jr.
Assistant Regional Director
Habitat Conservation Division

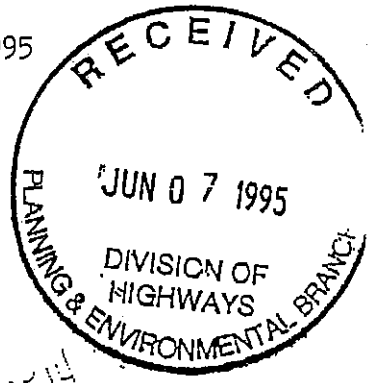
cc: FWS, ATLA, GA
FWS, Raleigh, NC
EPA, ATLA, GA
NCDEHNR, Raleigh, NC
NCDEHNR, Morehead City, NC
F/SE02

United States Department of Agriculture
Forest Service
National Forests in North Carolina
United States Federal Courthouse Building
100 Otis Street
P.O. Box 2750
Asheville, NC 28802

Gaines

File Code: 2730

Date: June 5, 1995



R-2514

H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
State of North Carolina
Department of Transportation
Box 25201
Raleigh, NC 27611-5201

Dear Mr. Vick:

Thank you for your letter dated May 23 requesting comments on State Project No. 8.T190301. This project will impact National Forest System lands from the intersection of SR 1116 and US 17 North for about 5 miles.

Your environmental document will need to include a sensitive species inventory and cultural resources inventory. If the inventory shows impact the mitigation and protection measures need to be approved.

Also, there will be a requirement for access points to National Forest land along with portal sign and information signs.

The local contact for more definitive information will be District Ranger Lauren Hillman, Croatan Ranger District, 141 East Fisher Avenue, New Bern, NC 28560 (919) 638-5628. If you have any other questions, please contact Kathy Hart, Asheville, NC, (704) 257-4228.

Sincerely,

Mary A. Noel

MARY A. NOEL
Recreation and Lands Staff Officer

cc: District Ranger, Croatan

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Land Resources

es G. Martin, Governor
lam W. Cobey, Jr., Secretary

Charles H. Gardner
Director

PROJECT REVIEW COMMENTS

Project Number: 95-0871 County: ONS

Project Name: 4.5.17 Widening - Project #8.T190301 - TIP.#R-2514

Geodetic Survey

___ This project will impact 22 geodetic survey markers. N.C. Geodetic Survey should be contacted prior to construction at P.O. Box 27687, Raleigh, N.C. 27611 (919) 733-3836. Intentional destruction of a geodetic monument is a violation of N.C. General Statute 102-4.

___ This project will have no impact on geodetic survey markers.

___ Other (comments attached)

For more information contact the Geodetic Survey office at (919) 733-3836.

C. H. Gardner
Reviewer

6-12-95
Date

Erosion and Sedimentation Control

___ No comment

X This project will require approval of an erosion and sedimentation control plan prior to beginning any land-disturbing activity if more than one (1) acre will be disturbed.

X * This appears to be notification of DOT's intent to prepare environmental documents. scp
If an environmental document is required to satisfy Environmental Policy Act (SEPA) requirements, the document must be submitted as part of the erosion and sedimentation control plan.

X If any portion of the project is located within a High Quality Water Zone (HQW), as classified by the Division of Environmental Management, increased design standards for sediment and erosion control will apply.

X The erosion and sedimentation control plan required for this project should be prepared by the Department of Transportation under the erosion control program delegation to the Division of Highways from the North Carolina Sedimentation Control Commission.

___ Other (comments attached)

For more information contact the Land Quality Section at (919) 733-4574.

Reviewer

6/12/95
Date

DIVISION OF PARKS AND RECREATION

June 19, 1995

Memorandum

TO: Melba McGee

FROM: Stephen Hall SH

SUBJECT: Scoping -- US 17 Improvements, Jacksonville to New Bern, Onslow County

REFERENCE: 95-0871

The Natural Heritage Program database contains records for several rare plants from the vicinity of this project. The most significant is a very large population -- a thousand plants or more -- of spring-flowering goldenrod (*Solidago verna*), which is a candidate for federal listing and state listed as Endangered. This population is located along the roadside rights-of-way on both sides of US 17, from about 1 mile north of the junction of NC 58 to about one mile south of SR 1107. This entire strip, which also contains a record for gopher frog (*Rana capito*), another candidate for federal listing and state listed as Special Concern, has been identified as a Priority Natural Area by the Natural Heritage Program.

Spring-flowering goldenrod has also been observed along US 17 south of Maysville, as have two additional species of rare plants: Florida yellow-eyed grass (*Xyris difformis* var. *floridanum*) and Hooker's milkwort (*Polygala hookeri*), both of which are candidates for state listing. Given the significance of the mowed rights-of-way along this section of US 17, we strongly recommend that a survey be conducted for these and other rare species of plants that may occur in this area. Alignments for the widening should be selected that avoid damage to these species as much as possible, particularly the large population of the goldenrod. We further recommend that the NC Plant Conservation Program be consulted in order to determine whether transplantation or other forms of mitigation would be desirable.

In addition to the rare plants, two species of rare aquatic animals have been recorded from the Trent River near the US 17 bridge crossing: eastern lampmussel (*Lampsilis radiata*) and Neuse River waterdog (*Necturus lewisi*), both of which are state listed as Special Concern. In order to protect populations of these species and other aquatic organisms, we recommend that all best management practices for the control of erosion and sedimentation be followed, particularly in the vicinity of the Trent River and its tributaries.

North Carolina Wildlife Resources Commission

512 N. Salisbury Street, Raleigh, North Carolina 27604-1188, 919-733-3391
Charles R. Fullwood, Executive Director

MEMORANDUM

TO: Melba McGee
Office of Legislative and Intergovernmental Affairs

FROM: David Cox, Highway Project Coordinator
Habitat Conservation Program David Cox

DATE: June 21, 1995

SUBJECT: Request for information from the N. C. Department of Transportation (NCDOT) regarding fish and wildlife concerns for US 17 widening, from Jacksonville to New Bern, Onslow and Jones counties, North Carolina. TIP No. R-2514, SCH Project No. 95-0871.

This memorandum responds to a request from Mr. H. Franklin Vick of the NCDOT for our concerns regarding impacts on fish and wildlife resources resulting from the subject project. Staff biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the proposed improvements, and our comments are provided in accordance with 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 widen existing US 17 from Jacksonville to New Bern to a four-lane, median-divided roadway with widening through or bypasses around Pollocksville, Maysville, and Belgrade. The cross-section for widening through the towns would be a five-lane, curb and gutter section. If bypasses were built, the cross-section would be a four-lane, median-divided freeway with full control of access. Limited control of access would be maintained throughout the widening potions of the project.

We feel that every effort should be made to use as much of the existing alignment as possible. The up-grade of existing roadways reduces wildlife habitat fragmentation, reduces wetland impacts and eliminates the need for new wetland and stream crossings. We are especially concerned about the fragmentation of large tracts of land on or adjacent to the Croatan National Forest, Hoffman Forest, and the White Oak River. Maintenance of large, contiguous tracts of forested land is critical to species such as black bear and wild turkey.

In addition to the specific recommendations or concerns mentioned above, to aid in document preparation, our general informational needs are outlined below:

1. Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with:

   The Natural Heritage Program
   N. C. Division of Parks and Recreation
   P. O. Box 27687
   Raleigh, N. C. 27611
   (919) 733-7795

   and,

   NCDA Plant Conservation Program
   P. O. Box 27647
   Raleigh, N. C. 27611
   (919) 733-3610

2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities.

3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.

4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.

5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).

6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.

7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.

8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.

9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects

should be included in the environmental document, and all project sponsors should be identified.

Thank you for the opportunity to provide input in the early planning stages for this project. If we can further assist your office, please me at (919) 528-9886.

cc: Bobby Maddrey, District 2 Wildlife Biologist
Brad Hammers, District 2 Fisheries Biologist
Randy Wilson, Nongame/Endangered Species Program Mgr.
Howard Hall, U.S. Fish and Wildlife Service, Raleigh

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Forest Resources

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary

Griffiths Forestry Center
2411 Old US 70 West
Clayton, North Carolina 27520
June 22, 1995

MEMORANDUM

TO: Melba McGee, Office of Legislative Affairs

FROM: Don H. Robbins, Staff Forester DHR

SUBJECT: DOT EA Scoping for Proposed Improvements to US 17 from Jacksonville to New Bern in Onslow and Jones Counties

OJECT: #95-0871 and TIP # R-2514

DUE DATE: 6-23-95

We have reviewed the above subject scoping notice and have the following comments. We are very much concerned with this project because of --

1. Heavy impacts to woodland from the widening and two proposed bypasses.

2. Heavy impacts to the Hoffmann Forest from the widening. The Hoffmann Forest is a valuable Forestry Research Forest with numerous research plots by the forestry community including N.C. State University, N.C. Forest Service, etc. This forest is also intensively managed.

3. If the widening was done on the west side of US 17 on the Hoffmann Forest, it would impact the following--

   a. Our leased Deppe Fire Tower, residence house and office complex.

   b. Hoffmann Forest Headquarters Complex.

   c. Second generation pine plantation which has historic significance with 4x4, 6x6 and 8x8 foot spacings for study effect purposes. The original plantation was planted during 1936.

4. If widening must be done through the Hoffmann Forest, we would prefer that all widening be done on the east side where there is an old drag line canal and railroad bed. This would cause the least impact to the forest.

5. Since woodland is involved here, the EA should also address the following -

   a. The total forest land acreage by types that would be taken out of forest production as a result of new right-of-way purchases and all construction activities.

b. The productivity of the forest soils as indicated by the soil series that would be involved within the proposed project.

c. The impact upon existing greenways within the area of the proposed project.

d. The provisions that the contractor will take to sell any merchantable timber that is to be removed. This practice is encouraged to minimize the need for piling and burning during construction. If any burning is needed, the contractor should comply with all laws and regulations pertaining to debris burning. Also burning would need to be done in such a way so as not to cause any smoke management problems or to allow the fire to escape, because organic type soils are involved here. Onslow County is a very high fire occurrence county and organic type soil fires are difficult to control.

e. The provisions that the contractor will take during the construction phase to prevent erosion, sedimentation and construction damage to forest land outside the right-of-way and construction limits. Trees outside the construction limits should be protected from construction activities to avoid:

1. Skinning of tree trunks by machinery.

2. Soil compaction and root exposure or injury by heavy equipment.

3. Adding layers of fill dirt over the root systems of trees, a practice that impairs root aeration.

4. Accidental spilling of petroleum products or other damaging substances over the root systems of trees.

We would hope that the project would have the least impact to forest and related resources in that area and the Hoffmann Forest.

pc: Derryl Walden, Dan Smith, John Shepherd, Warren Boyette - CO
Ralph Cullom - D4
Anthony Berg - Jones County
Donald Edwards - Onslow County
Butch Blanchard - Whiteville
File

North Carolina Department of Cultural Resources

James B. Hunt, Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
William S. Price, Jr., Director

June 23, 1995

MEMORANDUM

TO: H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
Division of Highways
Department of Transportation

FROM: David Brook
Deputy State Historic Preservation Officer

SUBJECT: Widening of US 17 from Jacksonville to New Bern, Jones, and Onslow Counties, R-2514, Federal Aid Project NHF-17(7), State Project 8.T190301, 95-E-4220-0871

We have received information concerning the above project from the State Clearinghouse.

We have conducted a search of our maps and files and have located the following structures of historical or architectural importance within the general area of the project:

Jones County

Bryan Lavendar House (#2). East side of US 17, 0.15 mile south of Trent River Bridge, Pollocksville. Listed in the National Register of Historic Places on April 25, 1985.

Foscue Plantation House (#9). East side of US 17, 1.5 mile south of junction with SR 1002, Pollocksville vicinity. Listed in the National Register on November 19, 1971.

Bryan-Bell Farm. South side of NC 58, 1.05 mile east of junction with SR 1119, Pollocksville vicinity. Listed in the National Register on December 21, 1989.

Trent River Plantation. West side of US 17, adjacent to Pollocksville line. Placed on the state study list on October 11, 1984.

John Simmons House. East side of US 17, 0.4 mile south of junction with SR 1114, down a 0.15 mile lane, Pollocksville vicinity.

Pollocksville Baptist Church. East side of US 17, just south of junction with Ray Street, Pollocksville.

Lee's Chapel Methodist Church. Southwest corner of US 17 and SR 1112, Pollocksville vicinity.

Onslow County

Nelson Deppe House (ON 115). South side of junction of US 17 and SR 1436, Deppe.

Winders Service Station (ON 582). West corner of junction of US 17 and SR 1330, Deppe.

Russell House (ON 469). East side of junction of US 17 and SR 1436, Deppe.

Steven Parker House (ON 597). North side of US 17, 0.2 mile southwest of junction with SR 1331, Belgrade.

Dolph Henderson Store (ON 592). Northeast corner of junction of US 17 and SR 1331, Belgrade.

We understand that Mattson, Alexander & Associates has been hired to conduct a historic architectural resources survey for this project. We look forward to eviewing the results of the survey once the fieldwork is complete.

There are no recorded archaeological sites in the immediate vicinity of the proposed project. However, portions of the project have a high probability for containing prehistoric and historic sites, particularly near Starkey's Creek, Northeast Creek, and the White and Trent Rivers. We; therefore, recommend that a historic background research be conducted for the project area to identify known or potential historic site areas, followed by on-site survey. The specific areas to be surveyed should be defined in consultation between the North Carolina Department of Transportation archaeologist and our office.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

DB:slw

cc: State Clearinghouse
N. Graf
B. Church
T. Padgett

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Environmental Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
A. Preston Howard, Jr., P.E., Director

DEHNR

June 27, 1995

MEMORANDUM

TO: Melba McGee, Legislative & Intergovernmental Affairs

FROM: Monica Swihart, Water Quality Planning

SUBJECT: Project Review #95-0871; Scoping Comments - NC DOT Proposed Improvements to US 17 from Just North of Jacksonville to Just South of New Bern, TIP No. R-2514

The Water Quality Section of the Division of Environmental Management requests that the following topics be discussed in the environmental documents prepared on the subject project:

A. Identify the streams potentially impacted by the project. The stream classifications should be current.

B. Identify the linear feet of stream channelizations/ relocations. If the original stream banks were vegetated, it is requested that the channelized/relocated stream banks be revegetated.

C. Number of stream crossings.

D. Will permanent spill catch basins be utilized? DEM requests that these catch basins be placed at all water supply stream crossings. Identify the responsible party for maintenance.

E. Identify the stormwater controls (permanent and temporary) to be employed.

F. Please ensure that sediment and erosion and control measures are not placed in wetlands.

G. Wetland Impacts

1) Identify the federal manual used for identifying and delineating jurisdictional wetlands.
2) Have wetlands been avoided as much as possible?
3) Have wetland impacts been minimized?
4) Discuss wetland impacts by plant communities affected.
5) Discuss the quality of wetlands impacted.
6) Summarize the total wetland impacts.
7) List the 401 General Certification numbers requested from DEM.

P.O. Box 29535, Raleigh, North Carolina 27626-0535 Telephone 919-733-7015 FAX 919-733-2496

H. Will borrow locations be in wetlands? Borrow/waste areas should avoid wetlands to the maximum extent practicable. Prior to approval of any borrow/waste site in a wetland, the contractor shall obtain a 401 Certification from DEM.

I. Did NCDOT utilize the existing road alignments as much as possible? Why not (if applicable)?

J. To what extent can traffic congestion management techniques alleviate the traffic problems in the study area?

K. Please provide a conceptual mitigation plan to help the environmental review. The mitigation plan may state the following:

1. Compensatory mitigation will be considered only after wetland impacts have been avoided and minimized to the maximum extent possible.
2. On-site, in-kind mitigation is the preferred method of mitigation. In-kind mitigation within the same watershed is preferred over out-of-kind mitigation.
3. Mitigation should be in the following order: restoration, creation, enhancement, and lastly banking.

Please note that a 401 Water Quality Certification cannot be issued until the conditions of NCAC 15A: 01C.0402 (Limitations on Actions During NCEPA Process) are met. This regulation prevents DEM from issuing the 401 Certification until a FONSI or Record of Decision (ROD) has been issued by the Department requiring the document. If the 401 Certification application is submitted for review prior to issuance of the FONSI or ROD, it is recommended that the applicant state that the 401 will not be issued until the applicant informs DEM that the FONSI or ROD has been signed by the Department.

Written concurrence of 401 Water Quality Certification may be required for this project. Applications requesting coverage under our General Certification 14 or General Permit 31 will require written concurrence. Please be aware that 401 Certification may be denied if wetland impacts have not been avoided and minimized to the maximum extent practicable.

10967.mem
cc: Eric Galamb

State of North Carolina
Department of Environment,
Health and Natural Resources
Legislative Affairs

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
Henry Lancaster, Director

MEMORANDUM

TO: Chrys Baggett
State Clearinghouse

FROM: Melba McGee
Project Review Coordinator

RE: 95-0871 - Scoping, Improvements, Jacksonville to New Bern, Onslow County

ATE: June 27, 1995

The Department of Environment, Health, and Natural Resources has reviewed the proposed scoping notice. The attached comments list and describe information that is necessary for our divisions to evaluate the potential environmental impacts of the project. More specific comments will be provided during the environmental review.

Thank you for the opportunity to respond. The applicant is encouraged to notify our commenting divisions if additional assistance is needed.

attachments

RECEIVED
JUN 28 1995
N.C. STATE CLEARINGHOUSE

Jackson R-2514

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

June 27, 1995

Mr. H. Franklin Vick
North Carolina Department of Transportation
Division of Highways
P.O. Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Vick:

This is in response to your May 23, 1995 letter requesting U.S. Fish and Wildlife Service (Service) comments on the proposed widening of US 17 from Jacksonville to New Bern in Onslow and Jones Counties, North Carolina. These comments are provided in accordance with the provisions of the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667d) and Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

The attached page identifies the Federally-listed endangered (E) and candidate (C) species that are known to occur in Onslow and Jones Counties. Candidate species refers to any species being considered by the Service for listing as endangered or threatened but not yet the subject of a proposed rule. These species are not legally protected under the Act or subject to its provisions, including Section 7, until formally proposed or listed as threatened or endangered. Although candidate species have no legal status and are accorded no protection under the Act, their inclusion will alert you of potential proposals or listing. Therefore, it would be prudent for you to avoid any adverse impacts to candidate species or their habitat.

The Federally-listed red-cockaded woodpecker (Picoides borealis) is known to occur in Onslow and Jones Counties. If construction plans include removing pine trees greater than or equal to 30 years of age in pine or pine/hardwood habitat, surveys should be conducted for active red-cockaded woodpecker cavity trees in appropriate habitat within a one-half mile radius of the project boundaries. If red-cockaded woodpeckers are observed within the project area or active cavity trees are found, you should contact this office for further information.

Two Federally-listed endangered plant species are known to occur in Onslow County, rough-leaved loosestrife (Lysimachia asperulaefolia) and Cooley's meadowrue (Thalictrum cooleyi). Both species are dependent upon some form of disturbance to maintain an open quality of habitat. These disturbed areas provide little competition for light by other plant species. The rough-leaved loosestrife is known to occur in the ecotone between pocosins and uplands, on poorly drained soils, on moist to seasonally saturated soils and on shallow organic soils overlaying sand. Cooley's meadowrue is known to occur in moist to wet bogs and savannas and savanna-like openings on circumneutral soils.

If potential habitat exists for the above listed species, and the results of surveys indicate that Federally-listed species are located within the project area, the project has the potential to adversely affect Federally-listed species, and you should contact this office for further consultation.

The Service's review and comment on the endangered species section of any environmental document could be expedited if it contained the following information:

1. A review of the literature and other information;

2. A description of any listed species or critical habitat that may be affected by the action;

3. An analysis of the "effect of the action", as defined by CFR 402.02, on the species and habitat including consideration of direct, indirect, cumulative effects, and the results of related studies;

4. A description of the manner in which the action may affect any species or critical habitat;

5. Summary of evaluation criteria used as a measure of potential effects; and

6. Determination statement based on evaluation criteria.

The Service is particularly concerned about potential impacts the proposed project may have on stream ecosystems and associated wetlands within the study corridor. At least 2 stream and/or wetland crossings are present in the study corridor. Special care should be exercised in the design and implementation of all stream crossing structures.

The Service's review of any environmental document would be greatly facilitated if it contained the following information:

1. A description of the fishery and wildlife resources within existing and required additional right-of-way and any areas, such as borrow areas, which may be affected directly or indirectly by the proposed project.

2. A list and acreage of the wetland types which will be impacted. Wetland types should follow the wetland classification scheme of the National Wetlands Inventory. This list should also give the acreage of each wetland type to be affected by the project as determined by the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

3. Engineering techniques which will be employed for designing and constructing any wetland crossings and/or relocated stream channels along with the linear feet of any water courses to be relocated.

4. The cover types of upland areas and the acreage of each type which would be impacted by the proposed project.

5. Mitigation measures which will be employed to avoid, eliminate, reduce, or compensate for habitat value losses associated with the project. These measures should include plans for replacing unavoidable wetland losses.

6. The environmental impacts which are likely to occur after construction as a direct result of the proposed project (secondary impacts) and an assessment of the extent to which the proposed project will add to similar environmental impacts produced by other, completed projects in the area (cumulative impacts).

The Service appreciates the opportunity to comment on this project. Please continue to advise us of the progress of this project, including your official determination of the impacts of this project. If our office can supply any additional information or clarification, please contact Kate Looney, the biologist reviewing this project, at 919-856-4520 (ext. 16).

Sincerely,

L.K. Mike Gantt
Supervisor

Fisheries

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

REPLY TO
ATTENTION OF

July 7, 1995

Special Studies and
Flood Plain Services Section

Mr. H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
North Carolina Division of Highways
Post Office Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Vick:

This is in response to your letter of May 23, 1995, requesting our comments on "US 17, Widening from Jacksonville to New Bern, Onslow and Jones Counties, TIP No. R-2514, State Project No. 8.T190301, Federal Aid Project NHF-17(7)" (Regulatory Branch Action I.D. No. 199503519).

Our comments involve impacts to flood plains and jurisdictional resources, which include waters, wetlands, and U.S. Army Corps of Engineers projects. Enclosed are our comments on these issues.

We appreciate the opportunity to comment on this project. If we can be of further assistance, please contact us.

Sincerely,

William R. Dawson, P.E.
Chief, Engineering and
Planning Division

Enclosure

U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT COMMENTS ON:

"US 17, Widening from Jacksonville to New Bern, Onslow and Jones Counties, TIP No. R-2514, State Project No. 8.T190301, Federal Aid Project NHF-17(7)" (Regulatory Branch Action I.D. No. 199503519)

1. FLOOD PLAINS: POC - Bobby L. Willis, Special Studies and Flood Plain Services Section, at (910) 251-4728

The proposed project is located in Onslow County, Jones County, and within the jurisdiction of the towns of Pollocksville and Maysville, all of which participate in the National Flood Insurance Program. From a review of the July 1987 Onslow County Flood Insurance Rate Map (FIRM), the roadway crosses the approximate study streams of Starkeys Creek and White Oak River, at the Jones County line. Based on the August 1988 Jones County, North Carolina and Incorporated Areas FIRM, the road crosses the approximately-mapped White Oak River and the Trent River in Pollocksville. The Trent River is shown as a detailed stream with an apparent 100-year wind tide elevation of 9 feet above mean sea level. The proposed western bypass alternative around Pollocksville may also impact Goshen Branch, an approximate stream. Also from the Jones County FIRM, the road passes through the town of Maysville, but does not cross any identified flood hazard area. We suggest that you coordinate with the counties and town of Pollocksville for compliance with their flood plain ordinances.

2. WATERS AND WETLANDS: POC - Mr. Scott McLendon, Wilmington Field Office, Regulatory Branch, at (910) 251-4725

According to information provided in your letter, the North Carolina Department of Transportation (NCDOT) proposes to widen existing US Highway 17 from SR 1327 in Jacksonville to SR 1330 in New Bern, in Onslow and Jones Counties. The proposed improvements call for widening the existing 2 and 3 lane facility to a four lane divided roadway with possible bypasses around Pollocksville and Maysville.

As with any project of this magnitude, we are concerned about the permanent and temporary impacts to waters and wetlands. As the Corps of Engineers may adopt the final Environmental Assessment to satisfy NEPA requirements for the Department of the Army permit decision, the following information should be incorporated into the final document:

a. The number and location of possible stream relocations.

b. Amount and location of wetland impacts associated with each of the proposed alternatives including impacts associated with widening either the east or west side of the existing facility.

U.S. ARMY CORPS OF ENGINEERS, WILMINGTON [redacted] MMENTS ON: (continued)

"US 17, Widening from Jacksonville to New [redacted] and Jones Counties, TIP No. R-2514, State Project No. 8.T190301, Fede[redacted]ect NHF-17(7)" (Regulatory Branch Action I.D. No. 199503519)

c. A description of the type of wet[redacted]hat will be impacted by each of the proposed alternatives.

d. A reproduction of the appropriate [redacted] survey map with an overlay of the proposed alternatives.

e. A discussion of how each of the [redacted] were selected, and what avoidance and minimization measures were [redacted] to arrive at the selection of a preferred alternative.

f. Proposed wetland crossing types, [redacted] bridge lengths over the Trent and White Oak Rivers.

g. Potential impacts to endangered s[redacted] and historic resources.

As you are aware, Department of the A[redacted] authorization, pursuant to Section 404 of the Clean Water Act of 197[redacted], will be required for the discharge of excavated or fill material in [redacted] United States or any adjacent and/or isolated wetlands in conju[redacted] with your proposed project. Under our mitigation policy, impacts to wetlands [redacted] be avoided or minimized. We will then consider compensatory mitigation [redacted] impacts. It is necessary for you to have taken all appropriate and [redacted] steps to avoid and minimize wetland losses and these avoidance and mi[redacted] techniques should be documented in the draft document.

If you have any questions or comments, [redacted] may be reached at the above telephone number.

3. **U.S. Army Corps of Engineers Projects: [redacted] Howard Varnam, Navigation Branch, at (910) 251-4441**

The highway and railroad bed, a possib[redacted] route, cross the Trent River at Pollocksville, which has a constructed [redacted] that provides for a channel, 50 feet wide and 4 feet deep at low water. [redacted] any bridge modification or addition provided a navigation opening at [redacted] the existing opening, there should not be any adverse impact to the na[redacted]ect.

Grimes

North Carolina Department of Cultural Resources

James B. Hunt, Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
William S. Price, Jr., Director

LS 9/20/95
JS 9/21/95
DLW 9/20/95

August 28, 1995

Nicholas L. Graf
Division Administrator
Federal Highway Administration
Department of Transportation
310 New Bern Avenue
Raleigh, N.C. 27601-1442

Re: US 17 from north of Jacksonville to south of New Bern, Jones and Onslow Counties, R-2514, Federal Aid NHF-17(7), State Project 8.T190301

Dear Mr. Graf:

On August 24, 1995, Claudia Brown and Debbie Bevin of our staff met with representatives of the North Carolina Department of Transportation for a historic architectural resources photograph review session. At that meeting, we reviewed representative photographs from the Maysville and Pollocksville Historic Districts.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following properties are eligible for listing in the National Register of Historic Places:

Maysville Historic District, east and west sides of US 17

Pollocksville Historic District, east and west sides of US 17

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

Sincerely,

Renee Gledhill-Earley

for David Brook
Deputy State Historic Preservation Officer

DB:slw

cc: H. F. Vick
B. Church

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.
GOVERNOR

RAIL DIVISION
P.O. BOX 25201, RALEIGH, N.C. 27611-5201

GARLAND B. GARRETT JR.
SECRETARY

September 29, 1995

Memorandum To: Jim Buck, P.E.
Planning and Environmental Branch

From: Paul Worley
Corridor Programs Section Chief

Subject: Abandoned Rail Corridor Between New Bern and Kellum; Jones, Onslow Counties

The above-described rail corridor was abandoned by Seaboard Coast Line Railroad (now CSX Transportation) in 1984. Most of the right of way was held in easement, and reverted to the adjacent, underlying fee property owners when the tracks were removed.

Please let me know if I can be of further assistance.

PW/

RAILROAD'S COPY

Form CTB 201-Sheet 1
Revised Jan. 1981 34034
RE-44662
17TE09211 23
3.61-649

THIS AGREEMENT, Made and entered into this 23rd day of September, 1981, by and between the SEABOARD COAST LINE RAILROAD COMPANY, a Virginia corporation, hereinafter referred to as Lessor, and the TOWN OF MAYSVILLE, a municipal corporation under the laws of the State of North Carolina, hereinafter referred to as Lessee:

WITNESSETH: That the Lessor, for and in consideration of the rents or sums of money hereinafter agreed to be paid by Lessee and of the covenants and agreements upon the part of Lessee to be kept and performed as hereinafter expressed, hereby leases and demises unto Lessee, for beautification purposes, certain land of Lessor, hereinafter referred to as "premises", located at Maysville, North Carolina, described as follows:

KS✓
TS✓

Those certain strips of land on the extreme easterly portion of Lessor's right of way as particularly shown outlined in red on print of Lessor's Drawing No. 100A-110, dated August 17, 1981, attached hereto and made a part hereof; the West line of said strips of land being parallel or concentric with and 12 feet East of the center line of Lessor's main track.

The lease hereby granted shall become effective November 1, 1981, and shall continue in effect until terminated by thirty (30) days' written notice from either party hereto to the other; it being expressly understood and agreed that either party may terminate this lease by giving such notice to the other with or without cause and regardless of performance or non-performance of any covenants or agreements contained herein and regardless of rental having been paid in advance for any annual, semi-annual or other period, and without regard to any loss or damage incurred by either party as a result of such termination or cancellation.

And Lessee hereby covenants and agrees in consideration thereof:

1. Lessee will yield and pay unto Lessor the ANNUAL rent or sum of FIVE DOLLARS ($5.00), plus sales tax if applicable, payable at the beginning of each and every YEAR or fractional part thereof during the continuance of this agreement.

2. Lessee shall bear all costs and expense in connection with beautifying or otherwise improving said premises and shall keep said premises in a condition satisfactory to the Division Engineer of Lessor; it being expressly understood and agreed that only grass shall be allowed to be planted and grown on said premises; it being expressly understood and agreed that parking on said premises shall be strictly prohibited.

3. Lessee will not use said premises for any other purpose other than that specified herein and will not assign this lease or any rights hereunder, nor suffer or permit any other person or corporation to use any part of said premises without the consent in writing of Lessor.

4. Upon termination of this agreement, Lessee hereby agrees to vacate the use of said premises and restore same to the satisfaction of said Division Engineer; the expense incident thereto shall be borne by Lessee.

5(a). Lessee shall and does hereby assume, and agrees to indemnify and hold harmless Lessor, its successors and assigns, from and against all loss, costs, expenses, including attorneys' fees, claims, suits and judgments whatsoever in connection with injury to or death of any person or persons or loss of or damage to property caused by or in any way connected with the use of said premises by Lessee or Lessee's invitees, howsoever caused.

(b). Any provision herein to the contrary notwithstanding, Lessee agrees to indemnify and hold harmless Lessor from all claims, costs and expenses (including attorneys' fees) as a consequence of any incident resulting in the pollution of air, water, land and/or ground water arising from or in connection with the grant of this lease or any supplements thereto regardless of the location or proximity of such pollution to the demised premises; and for any claim or liability arising under federal or state law dealing with the pollution of air, water, land and/or ground water.

(c). All obligations of the Lessee under this agreement to release, indemnify and hold harmless the Lessor shall also extend to officers, agents and employees of the Lessor, and to companies and other legal entities that control, are controlled by, are subsidiaries of, or are affiliated with, the Lessor, their respective officers, agents and employees.

It is understood and agreed that this agreement shall not be binding until it has been authorized or ratified by a proper ordinance or resolution of the Town Council of the Town of Maysville, North Carolina, a certified copy of which ordinance or resolution is attached hereto and made part of this agreement.

IN WITNESS WHEREOF the parties hereto have executed this lease in duplicate the day and year first above written.

Witnesses for Lessor:

SEABOARD COAST LINE RAILROAD COMPANY

By _____ (L.S.)
J. H. Arnold - Asst. Vice President-Operns.

Witnesses for Lessee:

TOWN OF MAYSVILLE, NORTH CAROLINA

By _____ (L.S.)
Mayor

Attest _____ (SEAL)
Clerk

Form CTB 201-Sheet 3
Revised Jan. 1981

34034

Extracts from minutes of meeting of the Town Council of the Town of Maysville, North Carolina, held on the 29 day of June, 1981

RESOLUTION

Be it resolved by the Town Council in regular meeting assembled that the Mayor of said Town be, and he hereby is, authorized to enter into an agreement with the SEABOARD COAST LINE RAILROAD COMPANY, and to sign same on behalf of said Town whereby said Railroad Company leases and demises unto said Town, for beautification purposes, certain land owned by said Railroad Company at Maysville, North Carolina, which agreement is dated September 23, 1981, a copy of which agreement is filed with the Town Council.

I certify the above to be a true and correct copy.

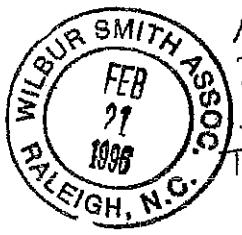
Pauline H. Meadows
Clerk

TOWN OF POLLOCKSVILLE

P. O. BOX 97 919-224-9831
POLLOCKSVILLE, N. C. 28573

February 20, 1996

Mr. Jim Buck, P.E.
Project Planning Engineer
NC Department of Transportation
Division of Highways
PO Box 25201
Raleigh, NC 27611-5201



KS
TS
DW
TD

Dear Mr. Buck:

At the February 13, 1996 meeting of the Board of Commissioners of the Town of Pollocksville, the Board discussed the US 17 Widening Project currently under consideration by the Board of Transportation. By a unanimous vote, the Board wishes to convey its support for Alternative 4C, the location of a 4-lane Highway 17 to the west of the Pollocksville Town limits. We agree with the findings of Wilbur Smith Associates that this Alternative minimizes impacts on residences, businesses, and land in and around the Town of Pollocksville, permitting the Town to grow, and yet allowing the Town to retain the charm which has become its trademark.

The Board wishes to go on record strongly supporting Alternative 4C, and strongly opposing any alternative which either follows the existing Highway 17 through the center of Town, or follows an path on the eastern edge of the Town. Any alternative which touches any part of the present city limits threatens the very existence of the Town. The Town has just installed a new $3.2 million wastewater collection and treatment system; there is tremendous potential for growth in the area. Any widening of Highway 17 through the city limits of Pollocksville would mark the beginning of the end for the Town of Pollocksville as an incorporated municipality. It would become a real traffic hazard for those people who would continue to live in what is left of the Town. It would also defeat the very purpose for which an expansion of Highway 17 is even considered - the rapid and safe movement of a large quantity of vehicular traffic. The citizens of the Town are opposed to any such alternative, and have indicated their support for the western by-pass route suggested by Alternative 4C.

The Town appreciates the opportunity to be involved with the project from its inception several years, and will continue to support the concept of the 4-laning of Highway 17 from Virginia to South Carolina. We trust the above statement establishes the Town's position as to its preferences for the

final location of the new highway. If you have questions or desire additional information, please do not hesitate to contact me.

Yours very truly,

TOWN OF POLLOCKSVILLE

James V. Bender, Jr., Mayor

JVBJr/gb

Additional copies to: Mr. Terry Snow
Wilbur Smith Associates
PO Box 2478
Raleigh, NC 27602

Mr. Robert L. Mattocks II
NC Board of Transportation
c/o Jenkins Gas & Oil Company
PO Box 156
Pollocksville, NC 28573

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Environmental Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
A. Preston Howard, Jr., P.E., Director

DEHNR

April 26, 1996

MEMORANDUM

TO: Frank Vick
NC DOT

THROUGH: John Dorney

FROM: Eric Galamb

SUBJECT: US 17 Site Inspection
Jones & Onslow Counties
TIP No. R-2514

On March 5, 1996, several resource agencies made a site inspection of segments 2 and 4 for TIP No. R-2514. Present were Ms. Katherine Doak (USFWS), Mr. Mike Bell (COE), Mr. David Cox (WRC) and myself.

The towns of Belgrade and Maysville are present in segment 2 of the alignment. The National Wetland Inventory (NWI) maps (and hydric soils on the Jones county soil survey) show few wetlands present in the vicinity of Belgrade. The businesses and residences in Belgrade are set back from the road. This is also the case in Maysville, however, the buildings encroach more than in Belgrade. The total impacts for upgrading the existing alignment in segment 2 is 21 relocations and 0.07 acres of wetland impact. Segments 2A and 2C would be on new location and would impact wetlands associated with the White Oak River. These cypress dominated wetlands are performing significant functions, namely, water storage, pollutant removal, and aquatic life habitat. The White Oak River at this location is supporting its uses and removal of high quality wetlands and their functions would likely result in water quality impacts. Upgrading of the existing US 17 would impact

Environmental Sciences Branch • 4401 Reedy Creek Road • Raleigh, North Carolina 27607
Telephone 919-733-9960 FAX # 733-9959

fewer acres of lower quality wetlands. Therefore, due to social and environmental impacts, DEM recommends that segment 2 be the preferred alternative.

Maps of segments 2A and 2C show the project using a road that leads into a cemetery. The aerial map provided by DOT for the site visit shows that DOT does not plan on using this existing road. DEM believes that using this existing crossing is a minimization effort that DOT should seriously consider.

The town of Pollocksville is located in Segment 4. In a September 26, 1995 meeting, I asked that a modified 4B-2 alignment be studied to utilize the abandoned railroad bed east of Pollocksville. The consultant modified 4B-2 to avoid the historic district but did not investigate the location I had requested. At a meeting on February 14, 1996, we were informed that the historic district may not be extensive as originally thought. The historic structures apparently have been relocated. Therefore, DEM believes that the railroad corridor may be upgraded with minimal effect on the historic district and wetlands. DEM requests that the modified 4B-2 alignment be the preferred alternative.

Please contact Eric Galamb at 733-1786 if you have any questions.

cc: Katherine Doak
Mike Bell
David Cox

BUCK

North Carolina Department of Cultural Resources

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

May 15, 1996

Nicholas L. Graf
Division Administrator
Federal Highway Administration
Department of Transportation
310 New Bern Avenue
Raleigh, N.C. 27601-1442

Re: Widening US 17 from north of Jacksonville to south of New Bern, Jones and Onslow Counties, Federal Aid Project NHF-17(7), State Project 8.T190301, R-2514, ER 96-8827

Dear Mr. Graf:

Thank you for your letter of April 24, 1996, concerning the above project.

We concur with your proposal to conduct an archaeological survey on the preferred alternative prior to completion of the final project environmental document. However, we recommend that upon identification of the preferred alternative(s) for the bypasses we consult on the extent and type of survey appropriate to the project area(s).

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

Sincerely,

David Brook

David Brook
Deputy State Historic Preservation Officer

DB:slw

cc: H. F. Vick

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

REPLY TO
ATTENTION OF

January 29, 1997

Regulatory Branch

Action ID No. 199503519

Mr. H. Franklin Vick, P. E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Vick:

Please reference your January 17, 1997, correspondence requesting comments and concurrence on the reasonable and feasible alternatives selected for study in the Environmental Assessment (EA) regarding the proposed widening of US Highway 17 from north of Jacksonville to south of New Bern, in Onslow and Jones Counties, North Carolina (State Project No. 8.T190301, TIP Project No. R-2514). This correspondence also referenced the December 18, 1996, Steering Committee Meeting concerning the subject project.

Based upon our review of the file, as well as information gathered during onsite investigations and my staff's attendance at two previous steering committee meetings, we concur with your selection of alternatives listed on Pages Nos. (4) and (5) and illustrated in Figures Nos. (2) and (3) of the subject correspondence. Our decision to concur with your selection of alternatives is not only based on the magnitude of impacts to wetlands and other public interest factors, but also on the relative quality of those wetlands with respect to water quality and habitat functions. As your planning process continues, please be reminded that avoidance and minimization of impacts to waters and wetlands should be undertaken to the maximum extent practicable.

This concurrence is also contingent upon the purpose and need for the project. The subject correspondence states the primary purpose and need for the project is to upgrade US 17 to a modern, high speed, multi-lane facility. We are concerned that this stated purpose and need for the project is too narrowly defined,

and may serve to preclude the consideration of less damaging alternatives. We believe the basic purpose and need for the project is improved level of service (LOS), with associated accident reduction and economic development. This can be achieved with the alternatives we have now concurred with.

As a cooperating agency, we appreciate the opportunity to coordinate with your staff prior to the finalization of the EA. If you have any questions regarding our comments or regarding correspondence associated with this project, please do not hesitate to contact Mr. Michael F. Bell, of my staff, at the Washington Regulatory Field Office, Regulatory Project Manager/NCDOT Coordinator, at telephone (919) 975-1616 (X-26), or Mr. Scott Mclendon, of the Wilmington Regulatory Field Office, Regulatory Project Manager/NCDOT Coordinator, at telephone (910) 251-4725.

Sincerely,

Michael D. Smith, P.W.S.
Chief, North Section
Regulatory Branch

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Environmental Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
A. Preston Howard, Jr., P.E., Director

DEHNR

Division of Water Quality

February 7, 1997

Mr. H. Franklin Vick
NCDOT
P.O. Box 25201
Raleigh, NC 27611-5201

Dear Mr. Vick:

Subject: US 17 Widening from North of Jacksonville to South of New Bern
Onslow and Jones Counties
TIP No. R-2514

The Division of Water Quality (DWQ) has participated in numerous Steering Committee meetings for the US 17 Widening project in Onslow and Jones Counties. The last meeting for this project was on December 18, 1996. Several alternatives were dropped and others modified. DWQ has reviewed the minutes and agree with their accuracy.

A January 17, 1997 letter from DOT requested our concurrence with the reasonable and feasible alternatives to be studied in the Environmental Assessment (EA). DWQ concurs with the reasonable and feasible alternatives presented in the January 14, 1997 document. This document presented a revised alternatives evaluation matrix. DWQ recommends the following segments be presented as the preferred alternative in the EA: Segment 1, 2 (with 4(f) mitigation for the trees), 3, and 4A. DWQ believes that these segments will provide the necessary improvements to US 17 while minimizing the social, historical resources, and environmental impacts.

Thank you for the opportunity to provide comments on the subject project. Should you wish to discuss this further, please contact Mr. Eric Galamb at 733-1786.

Sincerely,

John R. Dorney
Biological Supervisor

us17concur

cc: Mike Bell, Washington COE
Scott McLendon, Wilmington COE
Jim Buck, NCDOT

Environmental Sciences Branch • 4401 Reedy Creek Road • Raleigh, North Carolina 27607
Telephone 919-733-9960 FAX # 733-9959

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

February 7, 1997

Mr. H. Franklin Vick
Manager, Planning and Environmental Branch
Division of Highways
N. C. Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Vick:

This responds to your letter of January 17, 1997, requesting comments from the U.S. Fish and Wildlife Service (Service) on the reasonable and feasible alternatives for the US 17 Widening, (TIP No. R-2514), Onslow and Jones County, North Carolina. This report is provided in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

Our records on this project indicate that the North Carolina Department of Transportation (NCDOT) proposes to upgrade the existing US 17 highway to a high speed, multi-lane facility from SR 1327, north of Jacksonville in Onslow County, to SR 1130, south of New Bern in Jones County. The project corridor is approximately 22 miles long. The project would widen the existing US 17 in rural areas with possible bypasses of the Towns of Belgrade, Maysville, and Pollocksville.

The most recent alternatives are contained in the memorandum drafted by Wilbur Smith Associates. This memorandum, dated January 14, 1997, gives the minutes of the steering committee meeting held on December 18, 1996, which was attended by a Service biologist. This document appears to give an accurate account of the discussions at that meeting and the alternatives which would be carried forward for detailed study. These alternatives are summarized in the "Revised Alternatives Evaluation Matrix." The matrix shows that the original five segments have been reduced to four. Segments one and three each have a single alternative. Segments two and four have four (2, 2A, 2B, and 2C) and three (4A, 4B, and 4C) alternatives, respectively. The Service concurs that revised alternatives are reasonable and feasible and should form the basis for further study and evaluation.

The Service believes that highway construction on new location may adversely affect fish and wildlife resources through the direct loss of habitat and the fragmentation of adjacent habitats. Therefore, we recommend that the NCDOT carefully consider the use of existing corridors when seeking to expand traffic capacity along an existing route. Bypasses of smaller towns should make the shortest possible loop around developed areas. Bypasses on new location should have full control of access in order to minimize secondary development along the corridor.

The Service appreciates the opportunity to comment on this project. Please continue to advise us of the progress made in the planning process, including your official determination of the impacts of this project. If you have any questions regarding these comments, please contact Howard Hall at 919-856-4520, ext. 27.

Sincerely,

John M. Hefner
Supervisor

FWS/R4:HHall:2/7/97:WP:A:jonr2514.297

Grimes

North Carolina Wildlife Resources Commission

512 N. Salisbury Street, Raleigh, North Carolina 27604-1188, 919-733-3391
Charles R. Fullwood, Executive Director

MEMORANDUM

TO: Mr. H. Franklin Vick, Manager
Planning and Environmental Branch, NCDOT

FROM: Franklin T. McBride, Manager
Habitat Conservation Program

DATE: February 10, 1997

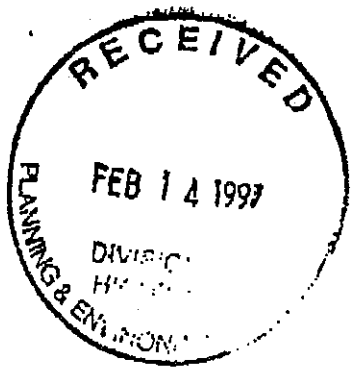
SUBJECT: Reasonable and Feasible Alternatives for US 17 improvements from north of Jacksonville to south of New Bern, Jones and Craven counties, North Carolina. TIP No. R-2514.

We have reviewed the information sent to us regarding the subject project, including the minutes of the December 18, 1996 Steering Committee Meeting. Although we were unable to attend the December meeting, we have been involved in previous meetings and site visits to evaluate possible alternatives for these improvements.

We concur that alternatives included in the January 14, 1997 "Reasonable and Feasible Alternatives" Report should be further studied and evaluated in the environmental document. Alternatives which we have recommended in previous meetings have been included.

Thank you for the opportunity to review and comment in the early stages of this project. If we can further assist your office, please contact, David Cox, Highway Project Coordinator, at (919) 528-9886.

cc: Melba McGee, Office of Intergovernmental and Legislative Affairs, DEHNR
Howard Hall, U.S. Fish and Wildlife Service, Raleigh
Mike Bell, USACOE, Washington



JONES COUNTY HISTORICAL SOCIETY
POST OFFICE BOX 430
POLLOCKSVILLE, NORTH CAROLINA 28573
Telephone (919) 224-1307 Facsimile (919) 224-1020

March 1, 1997

Mr. Terry M. Snow, P.E.
Wilbur Smith Associates
P.O. Box 2478
Raleigh, North Carolina 27601

Dear Mr. Snow:

The Board of the Jones County Historical Society greatly appreciates the concern the North Carolina Department of Transportation has demonstrated for the historically-important properties located along the proposed routes for the widening of US 17 in Jones County (R-2514). Your careful planning is to be commended.

As concerned as it is with preserving all historically-significant areas in the county, the Board does not believe that situating the new US 17 across part of the J. Manley Foscue Plantation, which is located approximately one-half mile south of the present intersection of US 17 and Ravenswood Road, would diminish the importance of that particular property. The Foscue homestead is located well back from the highway and would not be adversely effected by placing the highway on land at the front of the plantation. The Board would certainly prefer to see this action taken than to see many families displaced in order to leave the entire plantation intact. If the widened highway were to threaten the Foscue homestead in any way, you would hear loud voices of protest from the Historical Society Board. But as the possible intrusion onto the Foscue plantation has been explained, the Board must endorse the proposal, especially as it will eliminate the necessity of disrupting the lives of our neighbors who currently live in that area.

If you have any questions about the Historical Society's stand on this question, I shall be happy to discuss it with you. Again, thanks for your respect for our historical properties.

With all good wishes for your continued success with this project, I am

Sincerely yours,

Thomas J. Farnham
President

cc: Bob Mattocks, Board of Transportation

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

REPLY TO
ATTENTION OF

May 13, 1997

Regulatory Branch

SUBJECT: Action ID No. 199502242, TIP Project R-2576;
Action ID No. 199301143, TIP Project R-2510;
Action ID No. 199503519, TIP Project R-2514;
Action ID No. 199300910, TIP Project R-2301

Mr. H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
Division of Highways
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Vick:

This correspondence is in regard to our May 6, 1997, meeting, held at your offices at the request of the Federal Highway Administration (FHWA), to discuss four proposed highway projects located in my area of regulatory responsibility. The purpose of this meeting was to provide your staff and the FHWA staff an opportunity to up-date Mr. Michael Bell, Project Manager/NCDOT Coordinator, of my Washington Regulatory Field Office and myself on the status of the proposed Mid-Currituck Bridge, the proposed Washington Bypass, the proposed upgrade of US-17 (from Jacksonville to New Bern), and the proposed New Bern Bypass.

The first portion of the meeting concerned the purpose and need for the Mid-Currituck Bridge Project. A revised purpose and need statement dated April 29, 1997, was submitted for discussion. This revision states that the primary purpose of the proposed project is to reduce travel time and distance between Currituck County's Outer Banks and it's mainland with a subsequent reduction of the associated road user costs. Secondary purposes are to reduce the potential for future traffic congestion on US-158 and NC-12, to effectively provide better access to public facilities, and to increase the storm evacuation capacity of the road system.

Mr. Bell and I emphasized that, due to the recent receipt of this revision, we had not had time to conduct a complete review.

However, our cursory review indicated that the revision did not satisfy our concerns regarding hurricane evacuation and traffic congestion reduction as valid purpose and needs for the project. Our initial review of the statement concluded that the proposed bridge, without further improvements to NC-12, will further congest this roadway which would subsequently hinder hurricane evacuation by allowing more traffic on the island. FHWA and your staff agreed with this summation and a determination was made to remove hurricane evacuation and potential for traffic congestion as a purpose and needs for the project. The next step in the permit process is for NCDOT to provide a new revised purpose and need chapter to the interagency review team for possible concurrence.

The Washington Bypass project was discussed in great detail. Mr. Bell reiterated our position (contained in our January 6, 1997, letter to you), which stated that we are very concerned that alternatives that would avoid or minimize high quality swamp forest destruction have been dropped without my staff's review or input. The stated purpose and need for the project is to construct a multi-lane US-17 Washington Bypass. As you are aware, requirements contained in the National Environmental Policy Act (NEPA) specify that a preferred alternative cannot serve as the purpose and need for the same project. To allow this would preclude adequate review of the remaining alternatives.

We believe the basic purpose and need for this project is improved level of service (LOS), accident reduction, and economic development. We previously agreed, on May 6, 1997, that economic development would be dropped as a purpose and need for the project, leaving improved LOS and accident reduction as the purpose and need to be reviewed. Mr. Bell restated that the purpose and need for the project can be realized by either the "Upgrade Existing Roadway Alternative", the "Outer Loop Alternative", or the amended "Concerned Citizens Corridor". You, your staff and FHWA agreed to provide the following information to aid in our review of alternatives:

1) A description of the methodology, field notes and maps associated with the wetland determinations for all the alternatives including the "Outer Loop" and "Concerned Citizens Alternatives". Based on review of aerial photos, these alternatives appear to have less wetland impacts than the three alternatives that have been selected.

2) The City of Washington Thoroughfare Plan with the LOS for the Highway 264 interchange with the US-264 Bypass. A US-264 Bypass would alleviate congestion at the interchange with US-17 by utilizing the "Upgrade Existing Alternative".

3) The DEIS states that the LOS is acceptable using successful signal timing in the towns of Washington and Chocowinity. This LOS should be demonstrated on Table 1.4., in comparison with the other alternatives. A copy of the traffic signal timing report should accompany this requested information.

4) Traffic accident comparisons should be demonstrated with the "Upgrade Existing Corridor" and the "Outer Corridors".

5) Location and the exact number of relocations in the towns of Washington and Chocowinity and surrounding areas with the "Upgrade Existing Alternative" and the "WRC #1 Corridor".

6) Updated cost comparisons between all the alternatives; to include the bridging wetlands alternatives. The cost of "Upgrade Existing Alternative" was not included in the original comparison and, at this time, it should be.

7) Cost comparison of bridging the "Outer Corridors" and amended "Concerned Citizens Alternatives".

8) Discussion of the associated impacts after your staff completes their study of the functional designs of all of the alternatives.

9) Comparison data and design for the amended "Concerned Citizens Corridor".

10) Each bypass alternative would divert a different percentage of traffic away from the towns of Washington and Chocowinity. The monetary loss and/or projected business closure in Washington and Chocowinity associated with all of the above mentioned alternatives must be presented for our review. This information should be presented in a matrix format for the comparison of those alternatives.

Additionally, as discussed at the meeting, the least environmentally damaging alternatives must be adequately addressed, compared, and submitted for review. NCDOT and FHWA should carefully consider dropping the most environmentally

damaging alternatives that were chosen at this early stage of project design since these alternatives appear to be in non-compliance with the 404(b)(1) Guidelines. Your staff and the FHWA staff agreed to supply the above information and to submit a revised purpose and need statement at the next interagency review meeting to be scheduled on June 19, 1997.

The next segment of the meeting was devoted to recent progress made on the R-2514 project. A new segmented alternative located to the South of US-17 and to the East of Pollacksville was provided for review. It was the consensus of those present that this segment would be included as an alternative to be reviewed with those alternatives already designated in your January 17, 1997, correspondence and in our concurrence letter to you dated January 29, 1997.

Your staff and the FHWA staff also updated us on the status of the New Bern Bypass. Work is continuing on the functional designs for the project to include bridging all swamp forest and adjacent floodplains at the Swift Creek and Neuse River crossings. You have also agreed to provide designs for utilizing the existing NC-43 crossings, mitigation progress reports and wetland delineations at the June 19, 19997 interagency review meeting.

As a cooperating agency, we appreciated the opportunity to coordinate with your staff and with the FHWA staff on all four of the proposed transportation projects. If you have any questions regarding this letter, please do not hesitate to contact me or Mr. Bell at telephone (919) 975-1616, extension 26.

Sincerely,

Michael D. Smith, P.W.S.
Chief, North Section
Regulatory Branch

Copies Furnished

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City of Washington,City Manager
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Washington, North Carolina 27889

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Division of Coastal Management
North Carolina Department of
Environment, Health and
Natural Resources
Post Office Box 27687
Raleigh, North Carolina 27611

Mr. Larry Hardy
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

US Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636

Mr. Thomas Welborn, Chief
Wetlands Regulatory Section -
Raleigh IV
Wetlands, Oceans and Watersheds
Branch
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Atlanta Federal Center
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Supervisor Permits Section
Planning and Environmental Branch
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Raleigh, North Carolina 27611

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Mr. David Cox
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Commission
Habitat Conservation Program
1142 I-85 Service Road
Creedmoor, North Carolina 27522

Mr. Terry Moore, Manager
Division of Coastal Management
North Carolina Department of
Environment, Health, and
Natural Resources
1424 Carolina Avenue
Washington, North Carolina 27889

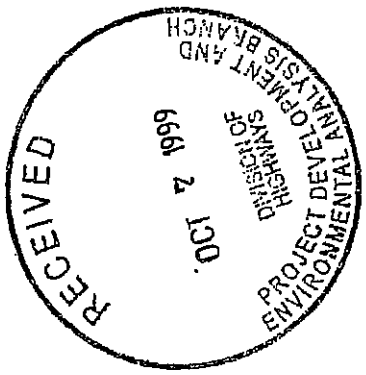
North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director



October 5, 1999

MEMORANDUM

TO: William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook
Deputy State Historic Preservation Officer

RE: US 17 Widening, TIP No. R-2514, Onslow and Jones Counties, ER 00-7445

Thank you for your letter of August 25, 1999, transmitting the survey report by Mattson, Alexander & Associates, concerning the above project.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following properties are eligible for the National Register of Historic Places under the criterion cited:

Gas Station/Store (Property No. 13) - This property is eligible for listing in the National Register under Criterion A for commerce as it illustrates the type of commercial building erected in great numbers throughout rural America after World War I.

This property is also eligible for listing in the National Register under Criterion C for architecture as a well preserved example of a rural crossroads store and gas station; an increasingly rare property type.

J. Nathan Foscue Farm - The J. Nathan Foscue Farm is eligible for listing in the National Register under Criterion A for agriculture as a rare remaining example of the large, agricultural operations that persisted after the Civil War in Jones County.

The J. Nathan Foscue Farm is also eligible for listing in the National Register under Criterion C for architecture as a well preserved example of post-Civil War rural domestic architecture in Jones County.

Henderson-Provost House (ON-595) - For purposes of listing in the National Register we would prefer that this property be referred to as the Henderson-Provost House/Store.

This property is eligible for listing in the National register under Criterion A for commerce as it represents a rare building type, combining residence and store, in Onslow County. This property is also eligible for listing in the National Register under Criterion C for architecture as a well preserved example of substantial houses that appeared in the late nineteenth and early twentieth centuries in Onslow County.

Hoffmann Fores/Deppe Lookout Tower - This property is eligible for the National Register under Criterion A for education, industry and conservation. The Hoffman Forest, the largest university research forest in the world, reflects the expansion of scientific research in forestry and forest management in the early to mid-twentieth century.

This property is also eligible for listing in the National Register under Criterion B for its associations with Professor J.V. Hoffman who established the forestry program at North Carolina State University in 1929 and later created several research forests to support the scientific research of the university.

The following property was determined not eligible for listing in the National Register of Historic Places:

Lee's Chapel United Methodist Church

Until additional information for the properties listed below is provided, we are unable to make a determination of their eligibility for the National Register:

Nelson Deppe House (ON 115)

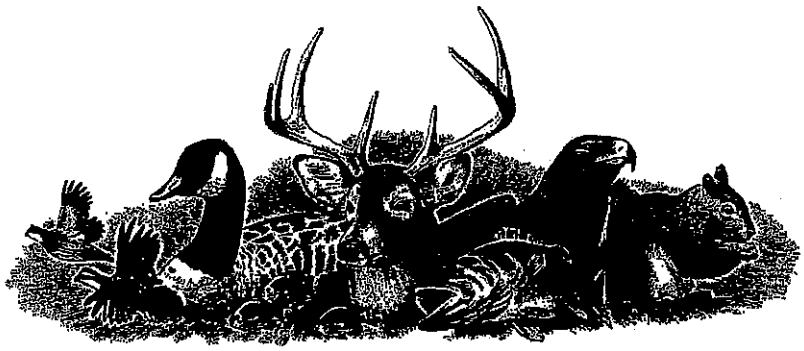
In addition, the Amos L. Simmons, Jr. House should be listed on page 37 of the report as Properties Listed in the National Register due to the fact that the property is already listed in the Register as part of the Foscue and Simmons Plantations nomination which was accepted by the keeper of the Register on October 7, 1998.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

DB:ldb

cc: B. Church



North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

MEMORANDUM

TO: John Conforti, PD & EA, NCDOT

FROM: Franklin T. McBride, Supervisor
Habitat Conservation Program

DATE: August 27, 2001

SUBJECT: Concurrence Point # 2 for the US 17 widening, from north of Jacksonville to south of New Bern, Jones and Onslow counties, North Carolina. TIP No. R-2514

Staff biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the information provided by the NCDOT. Our comments are provided in accordance with certain provisions of the Clean Water Act of 1977 (33 U.S.C. 466 et seq.), the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d) and the National Environmental Policy Act (42 U.S.C. 4332(2)(c)).

We agree the alternatives that have been studied by NCDOT to this point all meet the Purpose and Need of the project and can be studied in the environmental document. We do not support taking all these alternatives to public hearing; however, we will not formally object to them being taken. NCDOT should be aware that several of these alternatives will have significant impacts on high quality wetlands along the Trent River and its tributaries. These wetlands provide important spawning, rearing, and foraging habitats for several species of resident and andaromous fish. In the past, NCDOT has had difficulty finding suitable wetland mitigation for this type of system. Therefore, we feel that it is imperative that NCDOT avoid impacts to these systems.

We want the record to clearly indicate that alternatives 4D, 4E, 4G, 4H and 4I have the greatest potential to impact these systems. In addition to having greater wetland and natural system impacts these alternatives impact minority communities, residences, Section 4f properties, and have higher construction costs. In not objecting to these alternatives to be carried into the environmental document, we have in no way indicated that they are reasonable or feasible. Unless new information is presented that indicates otherwise, we are unlikely to select one of these alternatives as the Least Environmentally Damaging Practicable Alternative or comment favorably on a '404' permit application.

Thank you for the opportunity to participate on the NEPA/404 Project Team for this project. If new information becomes available, which modifies the information

included in this report, our position may change. If we can be of any further assistance please call David Cox, Highway Coordinator, at (919) 528-9886.

cc: Mike Bell, USACOE, Washington
Tom McCartney, USFWS, Raleigh
John Hennessy, DWQ, Raleigh

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

IN REPLY REFER TO

September 12, 2001

Regulatory Division

Subject: Action ID. 199503519

Mr. William D. Gilmore, P.E., Manager
North Carolina Department of Transportation
Project Development & Environmental Analysis Branch
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Gilmore:

Please reference the project team meeting held on August 22, 2001, where concurrence was requested on the alternatives to be studied in the Draft Environmental Impact Statement (DEIS) for the Improvements of US 17, from North of Jacksonville to South of New Bern, in Onslow and Jones Counties, North Carolina (TIP R-2514, State Project No. 8.T190301, Federal Project No. NHF-17(7). The following individuals project comprised the project team: Mr. Michael Bell, Regulatory Project Manager/North Carolina Department of Transportation (NCDOT) Coordinator, Mr. Brian Yamamoto of your staff, Ms. Cathey Brittingham of the North Carolina Division of Coastal Management, Mr. Ron Sechler of the National Marine Fisheries Service, Mr. Ted Bisterfeld from the Environmental Protection Agency, Mr. David Cox of the North Carolina Wildlife Resources Commission, Mr. Tom McCartney of the U.S. Fish and Wildlife Service, Mr. John Hennessy of the North Carolina Division of Water Quality, Mr. James Monaghan of the North Carolina Division Marine Fisheries, Ms. Renee Gledhill-Early of the North Carolina Department of Cultural Resources, and Ms. Emily Lawton of the Federal Highway Administration (FHWA).

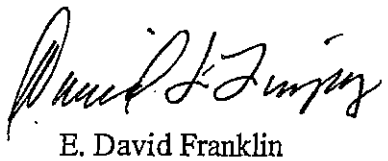
According to previous correspondence and meeting minutes, Alternatives 2, 2A, 2B, 2C, 3, 4A, 4B, and 4C were selected as reasonable and feasible alternatives in January 1997. Additional Alternatives 4D, 4E, 4G, 4H and 4I were added for study by NCDOT and FHWA during the December 16, 1999, project team meeting. The additional alternatives were added to possibly minimize or avoid impacts to an historic property. The project team eliminated Alternative 4C from the Trent River to the north end of the project and widen 4C to the South of the Trent River to include the abandoned railroad bed. The team also agreed to widen Alternative 4B to include the abandoned railroad bed within the historical limits of the Foscue Plantation. The eight alternatives at the Pollacksville section of the project (alternatives 4) were studied in detail.

During the August 22, 2001, team meeting NCDOT presented comparative information on all eight alternatives at the Pollacksville section. As discussed in the meeting, the Trent River and its associated tributaries contain high quality wetlands within the project area. Alternatives 4D, 4E, 4G, 4H and 4I have by far the greatest impacts on these systems. In addition to having significant environmental impacts, these alternatives impact more minority communities, residences, and double construction costs. Of the eight alternatives only 4I avoids historic properties. Alternatives 4A and 4B greatly minimize these impacts and still meet the purpose and need for the project.

NCDOT has requested that the project team concur to study these alternatives in the DEIS. Although we have serious concerns regarding the impacts associated with a number of the identified alternatives, we have no objection to them being carried forward and fully analyzed in the DEIS.

We appreciate the opportunity to coordinate with you at this early stage of project design. If you have any questions, please do not hesitate to contact Mr. Bell at the Washington Regulatory Field Office, telephone (252) 975-1616, extension 26.

Sincerely,



E. David Franklin
Chief, NCDOT Team

Copies Furnished:

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State Historic Preservation Officer
Department of Cultural Resources
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Raleigh, North Carolina 27601

Ms. Cathey Brittingham
Division of Coastal Management
1638 Mail Service Center
Raleigh, North Carolina 27699-1638

National Marine Fisheries Service
Habitat Conservation Service
Pivers Island
Beaufort, North Carolina 28516

Mr. Tom McCartney
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
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Mr. William L. Cox, Chief
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Wetlands Section
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Raleigh, North Carolina 27699-1650

Mr. Nicholas L. Graf
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

Ms. Katie West
DENR-Division of Marine Fisheries
943 Washington Square Mall
Washington, North Carolina 27889

United States Department of Agriculture
Forest Service
National Forests in North Carolina
160A Zillicoa Street
P.O. Box 2750
Asheville, NC 28802

File Code: 2730

Date: March 23, 2003

Mr. John Conforti
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Conforti:

The U.S. Forest Service has reviewed the alternatives to be studied in detail for Concurrence Point No. 2 for the improvements to US 17 in Jones and Onslow Counties, North Carolina (Federal Project No. NHF-17(7), TIP No, R2514).

We concur with the selection of alternatives to be studied in the environmental analysis, specifically Alternative 3 that involves National Forest System lands on the Croatan National Forest. As we move forward, the environmental document must comply with our standards and address the management prescriptions in the Croatan Land and Resource Management Plan (enclosed). In part, this requires that the analysis directly address the biological, cultural and social resources outlined in the plan and the effects of the project.

Please ensure that Ray Johns is listed as our primary representative to the Merger Team along with Dennis Foster and we kept are informed of all future meetings. Mr. Johns can be reached at 828-257-4859 if you need additional information.

Sincerely,

Mary A Noel

for JOHN F. RAMEY
Forest Supervisor

Enclosure

Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director
Division of Water Quality
Coleen H. Sullins, Deputy Director
Division of Water Quality

February 23, 2004

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

Re: Concurrence Point 2 for the widening of US 17 from North of Jacksonville to Maysville, TIP R-2514, State Project No. 8.T190301, Federal Project No. NHF-17(7).

Dear Dr. Thorpe:

Staff with the NC Division of Water Quality have reviewed all available information provided by NCDOT on the referenced project. Our comments below are provided in accordance with specified provisions of the Clean Water Act of 1977 (33 U.S.C 466 et seq.), the National Environmental Policy Act (42 U.S.C 4332(2)(C)), the North Carolina Wetlands Rules (15A NCAC 2H .0500), and the Neuse River Riparian Buffers Rules (15A NCAC 2B .0233).

The NC Division of Water Quality has been a participating member of the project 404/Merger Team for the referenced project. As such, we have given approval to the project's Purpose and Need. In addition in January 1977 we agreed with the Team's selection of Alternatives 2, 2A, 2B, 2C, 3, 4A, 4B, AND 4C. On August 22, 2001, we reviewed the anticipated impacts of Alternatives 4D, 4E, 4G, 4H, and 4I. And, as part of the Merger Team, we agreed to allow the inclusion of Alternatives 4D, 4E, 4G, 4H, and 4I for additional study. However, we have concerns about the environmental impacts associated with these alternatives. Alternatives 4D, 4E, 4G, 4H, and 4I have, by far, the greatest impacts to protected environmental resources. In addition to having very high impacts to protected natural resources, these alternatives also have significant impacts to minority communities, residences, other Section 4(f) properties, as well as much higher construction costs. Although we have very serious concerns about the impacts associated with these alternatives, we agreed with the Team, and at the request of NCDOT, that they be studied in greater detail and included in the Draft Environmental Impact Statement. Our agreement does not, however, indicate that we believe alternatives 4D, 4E, 4G, 4H, 4I are necessarily reasonable, feasible, or prudent.

The NC Division of Water Quality will continue to provide our input on this project as its planning continues. We thank you for the opportunity to participate at this early stage of planning. If you have any question, or require any additional information, please contact me at 919-733-5694.

Sincerely,

John E. Hennessy
Supervisor, NCDWQ
Transportation Permitting Unit

Cc: Mike Bell, Washington Field Office, Corps of Engineers
David Cox, NC Wildlife Resources Commission
Travis Wilson, NC Wildlife Resources Commission
Gary Jordan, US Fish & Wildlife Resources Commission
John Conforti, NC Department of Transportation
Cathy Brittingham, NC Division of Coastal Management

C:\ncdot\R-2514\Concurrence Point 2.doc

Federal Aid # **NHF-17(7)** *TIP #* **R-2514 B,C&D** *County*: **Jones/Onslow**

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: US 17 Improvements: SR 1330/SR 1439 south of Belgrade to the Jones/Craven county line south of New Bern

On June 14, 2004, representatives of the

- [x] North Carolina Department of Transportation (NCDOT)
- [x] Federal Highway Administration (FHWA)
- [x] North Carolina State Historic Preservation Office (HPO)
- [ ] Other

Reviewed the subject project and agreed

- [x] There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- [x] There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- [x] There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- [x] There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Mary Pope Furr — 7-19-2004
Representative, NCDOT — Date

Michael C. Dawson — 7/19/04
FHWA, for the Division Administrator, or other Federal Agency — Date

Renee Gledhill-Earley — 7-19-04
Representative, HPO — Date

David Brook — 7-19-04
State Historic Preservation Officer — Date

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Henderson-Provost House/Store (DE) – No effect for Alternative 2A
Zinnie Eubanks House/Store (DE) – No effect for Alternative 2A
Maysville Historic District (DE) – No effect for Alternatives 2A & 2C
J. Nathan Foscue Farm (DE) – No effect for Alternatives
Byran-Bell Farm (NR) – No effect for Alternatives
Pollocksville Historic District (DE) --
Foscue and Simmons Plantations (NR) – No effect for Alternatives 4E, 4H & 4I
Ten Mile Fork Gas/Store (DE) – No effect for Alternatives 4B, 4D, 4E, 4G, 4H, 4I & 4ID

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

Henderson-Provost House/Store (DE) – No adverse effect with environmental commitments for Alternatives 2, 2B & 2C
Zinnie Eubanks House/Store (DE) – No adverse effect for Alternatives 2, 2B & 2C
Maysville Historic District (DE) – **Adverse effect for Alternative 2**; No adverse effect with environmental commitments for Alternative 2B
J. Nathan Foscue Farm (DE) – **Adverse effect for Alternative 3**
Byran-Bell Farm (NR) – **Adverse effect for Alternative 4H**; No adverse effect for Alternatives 4D, 4E & 4G
Pollocksville (DE) – No adverse effect with environmental commitments for Alternatives 4A, 4B, 4I & 4ID
Foscue and Simmons Plantations (NR) – **Adverse effect for Alternatives 4A, 4B, 4G, 4D & 4ID ** (HPO considers the Alternatives 4D & 4ID to have fewer adverse impacts to this property than the other three alternatives)**
Ten Mile Fork Gas/Store (DE) – No adverse effect for Alternative 4A

Reason(s) why the effect is not adverse (if applicable).
Henderson-Provost House/Store (DE) -- NCDOT shall hold the back line of the ditch along this property and no construction will take place beyond this line
Maysville Historic District (DE) – NCDOT shall hold the back line of the ditch within the historic district and no construction will take place beyond this line
Pollocksville (DE) – NCDOT shall limit construction to within the existing railroad right-of-way

Initialed: NCDOT MPA FHWA MCD HPO _____

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

RECEIVED
BY MSP DATE 11/24/2009
R-2514

Action Id. SAW 2008-00528 County: Jones & Craven U.S.G.S. Quad: Stella

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property Owner/Agent: North Carolina Department of Transportation
Address: attn: Mark Pierce
1548 Mail Service Center
Raleigh, North Carolina 27699-1548
Telephone No.: 919-733-3141

Property description:
Size (acres) ____ Nearest Town Pollocksville & Maysville
Nearest Waterway Trent River & White Oak River River Basin Neuse & White Oak
USGS HUC 03020106 & 03010204 Coordinates N 34.8746 W -77.2445
Location description Proposed US 17 highway project is approximately 16 miles long from Belgrade to the Jones/Craven County line (R-2514B). Alternatives 2C, 3 and 4D.

Indicate Which of the Following Apply:

A. Preliminary Determination

_ Based on preliminary information, there may be waters of the U.S. on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).

B. Approved Determination

X There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X There are waters of the U.S. including wetlands on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

X The waters of the U.S. including wetland on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

_ The wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on _____. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Morehead City, NC, at (252) 808-2808 to determine their requirements.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: NCDOT	File Number: SAW 2008-00528	Date: 11/17/2009
Attached is: Wetland Verification		See Section below
☐ INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
☐ PROFFERED PERMIT (Standard Permit or Letter of permission)		B
☐ PERMIT DENIAL		C
☒ APPROVED JURISDICTIONAL DETERMINATION		D
☐ PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

March 4, 2010

MEMORANDUM

TO: Matt Wilkerson
Office of Human Environment
NCDOT Division of Highways

FROM: Peter Sandbeck PBS for Peter Sandbeck

SUBJECT: Archaeological Survey and Evaluation of the US 17 Improvements from Jacksonville to New Bern, R-2514B, C, D, Jones and Onslow Counties, GS 94-0013

Thank you for your letter of February 11, 2010. We have reviewed the archaeological report for the project referenced above and offer the following comments.

Twenty nine sites were recorded as a result of the survey. These sites included 31ON1762 - 31ON1765 and 31JN122 - 31JN146. Of the 29 sites, four cemeteries were recorded by the survey (31ON1765, 31JN125, 31JN137, and 31JN143). Sites 31ON1765 and 31JN125 were recommended as ineligible for the National Register of Historic Places (NRHP). Sites 31JN137 and 31JN143 were not assessed due to their location outside of the project corridor. In total, 26 sites were recommended as ineligible for the NRHP. No further work was recommended for these sites. We concur with these recommendations.

One site, 31JN128, was recommended eligible for the NRHP under Criterion D. We concur with this recommendation. We recommend that NCDOT develop and implement a mitigation plan for site 31JN128.

The report is well-researched, very well-written and meets our office's guidelines and those of the Secretary of the Interior. There are no specific concerns and/or corrections which need to be addressed in regards to this report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Mark Pierce, NCDOT

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

January 19, 2011

MEMORANDUM

TO: Matt Wilkerson
Office of Human Environment
NCDOT Division of Highways

FROM: Peter Sandbeck RSE for Peter Sandbeck

SUBJECT: Archaeological Survey and Evaluation of Alternative 2A of the US 17 Improvements from Jacksonville to New Bern, R-2514B, C, D, Jones and Onslow Counties, GS 94-0013

Thank you for your letter of November 18, 2010. We have reviewed the archaeological report for the project referenced above and offer the following comments.

Four sites were recorded as a result of the survey. These sites included 31ON1812, 31ON1813, 31ON1814, and 31JN148. In addition, one previously recorded site, 31JN124, was revisited and evaluated. All of these sites were recommended as ineligible for the National Register of Historic Places. No further work was recommended for these sites. We concur with these recommendations.

The report meets our office's guidelines and those of the Secretary of the Interior. There are no specific concerns or corrections which need to be addressed in regards to this report. The present version of the document can be considered as the final report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Mark Pierce, PDEA

SECTION A.3
Agency Comments on DEIS

FILE COPY

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

January 6, 2005

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

Dear Dr. Thorpe:

This letter is in response to your December 16, 2004 letter which requested comments from the U.S. Fish and Wildlife Service (Service) on the State Draft Environmental Impact Statement (SDEIS) for US 17 improvements from SR 1330 / SR 1439 south of Belgrade to the Jones/Craven County line south of New Bern, Jones and Onslow Counties, North Carolina (TIP No. R-2514 B,C,D). These comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). It is understood that this project is completely state-funded. However, section 7 of the ESA is applicable due to the federal nexus of the required Department of the Army Section 404 permit.

According to the SDEIS, the project is divided into three segments – Segments 2, 3 and 4. Segment 1 was addressed in a previous Environmental Assessment as TIP No. R-2514A. This SDEIS currently addresses multiple alternatives for Segments 2 and 4, and a single alternative for Segment 3. Additional alternatives for each of the three segments had been previously dropped from consideration.

All alternatives for the three segments will impact a significant amount of fish and wildlife habitat. Wetland impacts for all alternatives for Segments 2, 3 and 4 are 14.3 – 35.8 acres, 21.1 acres and 3.9 – 52.7 acres, respectively. Stream impacts for Segments 2, 3 and 4 are 169 – 2851 linear feet, 150 linear feet and 538 – 2014 linear feet, respectively. It is understood that mitigation requirements would be met through the Ecosystem Enhancement Program.

These numbers came from pg. 4-58 of SDEIS. They do not match up with Table 4-12 in SDEIS.

In addition to wetland impacts, all alternatives impact a significant amount of forest land. Forest clearing negatively affects wildlife through direct loss of habitat and through fragmentation of remaining habitat. Habitat fragmentation is often more deleterious to forest interior species than the direct loss of habitat. Fragmentation effects extend well beyond the boundaries of the project footprint. Loss of forested habitat also can have negative effects on water quality of streams, thus impacting aquatic species.

Segments 2 and 3 will take acreage from the Croatan National Forest. While Segment 3 involves widening the existing US 17 and thus limits the means of avoidance and minimization, the

selected alternative in Segment 2 should be carefully aligned to minimize impacts to the Croatan National Forest. The SDEIS does not state how impacts to the National Forest would be compensated for. This issue should be addressed.

There appears to be a mistake in Table 2-2, in that Alternative 4 is shown as being retained while Alternative 4A is shown as being eliminated from further study. The text reveals that these two are reversed in the table. Also, though a moot point, Table 2-2 shows the discarded Alternative 4 as having 13.6 acres of impact to the Croatan National Forest. From viewing the maps of the alternatives, we do not see how there are any impacts to the National Forest for this alternative.

The explanation of the ESA section 7 process requires clarification on page 4-61. Formal consultation is required if the federal action agency renders a "may affect, likely to adversely affect" determination for a species. In that case, the Service prepares a written biological opinion of whether the proposed action is likely to jeopardize to continued existence of a listed species or adversely modify designated critical habitat. If the federal action agency renders a "may affect, not likely to adversely affect" determination, informal consultation may be concluded if the Service concurs with the determination.

There are thirteen federally threatened or endangered species listed for Jones and Onslow Counties: West Indian manatee (*Trichechus manatus*), red-cockaded woodpecker (*Picoides borealis*), bald eagle (*Haliaeetus leucocephalus*), eastern cougar (*Puma concolor couguar*), golden sedge (*Carex lutea*), rough-leaved loosestrife (*Lysimachia asperulaefolia*), Cooley's meadowrue (*Thalictrum cooleyi*), leatherback sea turtle (*Dermochelys coriacea*), green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), piping plover (*Charadrius melodus*), seabeach amaranth (*Amaranthus pumilus*) and American alligator (*Alligator mississippiensis*). The SDEIS fails to address the West Indian manatee. The Service recommends that the North Carolina Department of Transportation (NCDOT) commit to implementing the Service's "Guidelines For Avoiding Impacts To The West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters". These guidelines can be found at http://nc-es.fws.gov/mammal/manatee_guidelines.pdf .

The SDEIS states that the project may affect, but is not likely to adversely affect the red-cockaded woodpecker (RCW), bald eagle and rough-leaved loosestrife. The SDEIS also states that the project will have no effect on the eastern cougar, golden sedge, Cooley's meadowrue, leatherback sea turtle, green sea turtle, loggerhead sea turtle, piping plover and seabeach amaranth. The American alligator is listed threatened due to similarity of appearance and does not require consultation.

On page 3-57 it is stated "...RCW cavity trees were documented within 1.8 miles (2.9 km) of the study area in Croatan National Forest..." In an apparent contradiction, it is stated on page 4-62 "NHP records indicated that no active RCW colonies have been documented within two (2) miles (3.22 km) of the project study area." Overall, the paragraph about the RCW on page 4-62 is confusing. Furthermore, it does not state the results of the survey. Was foraging or nesting habitat present? If nesting habitat occurs within ½ mile of the alternative boundaries, new surveys will be required since the last survey is now almost five years old. The Service is unable to concur with the "may affect, not likely to adversely affect" determination at this time. The Service will reconsider this decision when more current survey results are provided.

The Service does concur with the determination that the project may affect, but is not likely to adversely affect the bald eagle. Please note, however, contrary to what is stated on page 4-62, bald eagles do not restrict their nest building only to live trees. Tree height and location are the primary considerations.

The Service does not concur with the determination that the project may affect, but is not likely to adversely affect the rough-leaved loosestrife. No survey information was provided. Surveys for this species should be recent (within last five years) and conducted during the optimal time frame (mid May – June).

The Service does not concur with the determination that the project will have no effect on golden sedge. The potential for the occurrence of golden sedge should not be dismissed on soil type alone since there are only a small number of known populations of this species. Yet to be discovered populations may exist in other soil types. Also, no survey data was provided for this species. The optimal survey window for this species is mid April – mid June.

The Service does not concur with the determination that the project will have no effect on Cooley's meadowrue. No survey information was provided. The optimal survey window for this species is mid June – early July. The Service will reconsider our decision not to concur with the determinations for the three plant species if sufficient and recent enough survey information is provided.

Due to lack of habitat, the Service concurs that the project will have no effect on the leatherback sea turtle, green sea turtle, loggerhead sea turtle, piping plover and seabeach amaranth. Due to the lack of credible evidence for its current existence in Jones and Onslow Counties, the Service concurs that the project will have no effect on the eastern cougar.

Statements regarding the Service's authority require clarification on page 4-76. The Fish and Wildlife Coordination Act provides the authority for the Service to provide comments to the US Army Corps of Engineers on how impacts to fish and wildlife resources and habitats can be minimized. The ESA requires that no federally authorized, funded or permitted activity jeopardize the existence of federally threatened or endangered species or adversely modify designated critical habitat.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,

Pete Benjamin
Ecological Services Supervisor

cc: Chris Militscher, USEPA, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Nicole Thomson, NCDWQ, Raleigh, NC
Mike Bell, USACE, Washington, NC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

January 6, 2005

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Project Development and Environmental Analysis
North Carolina Department of Transportation
1548 Mail Service Center
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According to the SDEIS, the project is divided into three segments – Segments 2, 3 and 4. Segment 1 was addressed in a previous Environmental Assessment as TIP No. R-2514A. This SDEIS currently addresses multiple alternatives for Segments 2 and 4, and a single alternative for Segment 3. Additional alternatives for each of the three segments had been previously dropped from consideration.

All alternatives for the three segments will impact a significant amount of fish and wildlife habitat. Wetland impacts for all alternatives for Segments 2, 3 and 4 are 14.3 – 35.8 acres, 21.1 acres and 3.9 – 52.7 acres, respectively. Stream impacts for Segments 2, 3 and 4 are 169 – 2851 linear feet, 150 linear feet and 538 – 2014 linear feet, respectively. It is understood that mitigation requirements would be met through the Ecosystem Enhancement Program.

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Sincerely,

Pete Benjamin
Ecological Services Supervisor

cc: Chris Militscher, USEPA, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Nicole Thomson, NCDWQ, Raleigh, NC
Mike Bell, USACE, Washington, NC

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Project Number
05-0191
County
Onslow/Jones

Inter-Agency Project Review Response

Project Name NC DOT Type of Project

Proposes to improve a 16 mile portion of US 17 ~~between SR 1330, SR~~ 1439 south of New Bern Bypass near the Jones/Craven County line.

Comments provided by:

☐ Regional Program Person

☒ Regional Supervisor for Public Water Supply Section

☐ Central Office program person

Name: Debra Benoy-Wilmington RO Date: 01-10-05

Telephone number: _____

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

See back

Return to:

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

DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Project # 05-0191
County Onslow/Jones

Inter-Agency Project Review Response

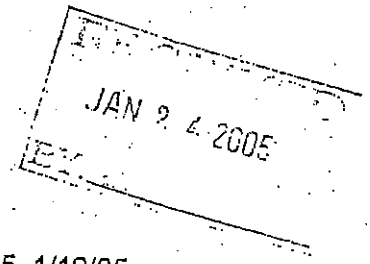
Project Name: NC DOT Type of Project: Propose to improve a 16 mile portion of US 17 between SR 1330, SR 1439 south of New Bern bypass near the Jones/Craven County line.

Comments provided by:

[ ] Regional Program Person

[X] Regional Supervisor for Public Water Supply Section

[ ] Central Office program person

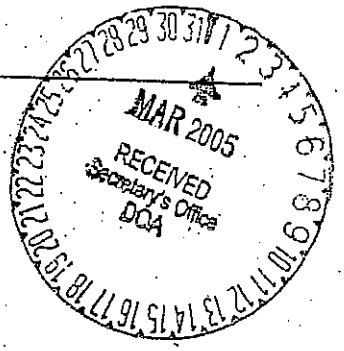


Name: Fred Hill - Washington Telephone #: (252) 946-6481 Date: ~~1/19/05~~ 1/19/05

Program within Division of Environmental Health:

[X] Public Water Supply

[ ] Other, Name of Program



Response (check all applicable):

[X] No objection to project as proposed

[ ] No comment

[ ] Insufficient information to complete review

[ ] Comments attached

[X] See comments below

Potable water distribution lines exist within the project boundary. Engineering plans and specifications must be submitted to the Public Water Supply Plan Review Section for approval prior to any modifications or relocation. Please coordinate with the appropriate public water supply system, including Onslow County Water, the Town of Maysville, the Town of Pollocksville, and Jones County Water.

Project Alternative 2 has the potential to impact Maysville's water supply well, treatment facility and elevated storage tank, especially through construction traffic and associated ground vibration on the west side of the project boundary.

Project Alternatives 4(A,B,I, & ID) will encompass Pollocksville's water supply well No. 1, treatment facility, elevated storage tank, and a recently constructed 10" water main, requiring complete relocation.

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

State of North Carolina
CDENR Department of Environment and Natural Resources

Reviewing Office: WaRO

Project Number: 05-0191 Due Date: 2/8/05

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

After review of this project it has been determined that the DENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of this form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (Statutory Time Limit)
☐	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
☐	NPDES-permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection preapplication conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90 - 120 days (N/A)
☐	Water Use Permit	Preapplication technical conference usually necessary	30 days (N/A)
☐	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
☐	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Preapplication conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
☐	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100, 2Q.0300, 2H.0600)	N/A	60 days
☑	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
☑	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 2D.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-733-0820.		
☐	Complex Source Permit required under 15 A NCAC 2D.0800		
☐	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) at least 30 days before beginning activity. A fee of $50 for the first acre or any part of an acre.		20 days (30 days)
☐	The Sedimentation Pollution Control Act of 1973 must be addressed with respect to the referenced Local Ordinance.		30 days
☑	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.		
☐	Mining Permit	On-site inspection usual. Surety bond filed with DENR. Bond amount varies with type mine and number of acres of affected land. Any are mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
☐	North Carolina Burning permit	On-site inspection by N.C. Division of Forest Resources if permit exceeds 4 days	1 day (N/A)
☐	Special Ground Clearance Burning Permit-22 counties in coastal N.C. with organic soils.	On-site inspection by N.C. Division of Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
☐	Oil Refining Facilities	N/A	90 - 120 days

NCDENR State of North Carolina
Department of Environment and Natural Resources

Reviewing Office: WIRO

Project Number: 05-0191 Due Date: 2/8/05

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

After review of this project it has been determined that the DENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of this form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

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☐	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
☐	NPDES-permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection preapplication conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90 - 120 days (N/A)
☐	Water Use Permit	Preapplication technical conference usually necessary	30 days (N/A)
☐	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
☐	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Preapplication conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
☐	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100, 2Q.0300, 2H.0600)	N/A	60 days
☑	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
☐	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 2D.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-733-0820.		
☐	Complex Source Permit required under 15 A NCAC 2D.0800		
☐	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) at least 30 days before beginning activity. A fee of $50 for the first acre or any part of an acre.		20 days (30 days)
☒	The Sedimentation Pollution Control Act of 1973 must be addressed with respect to the referenced Local Ordinance. D.O.T. M.O.U.		30 days
☐	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.		
☐	Mining Permit	On-site inspection usual. Surety bond filed with DENR. Bond amount varies with type mine and number of acres of affected land. Any are mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
☐	North Carolina Burning permit	On-site inspection by N.C. Division of Forest Resources if permit exceeds 4 days	1 day (N/A)
☐	Special Ground Clearance Burning Permit-22 counties in coastal N.C. with organic soils.	On-site inspection by N.C. Division of Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
☐	Oil Refining Facilities	N/A	90 - 120 days (N/A)

NCDENR

North Carolina Department of Environment and Natural Resources

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

Division of Marine Fisheries

Preston P. Pate Jr., Director

Memo

To: Melba McGee
Environmental Coordinator

From: Patricia L. Murphey
Marine Biologist Supervisor

Thru: Mike Marshall
Central District Manager

Date: 1/14/2005

Re: US 17 Improvements, Onslow and Jones Counties, Project #8.T190301

The NC Division of Marine Fisheries (NCDMF) has reviewed the Draft Environmental Impact Statement (DEIS) for US 17 improvements and would like to comment about the potential impact of the any of the proposed alternatives that include crossing any perennial streams and potential impacts on various anadromous fish that may utilize them. These streams may be habitat for adult, egg, and larval stages of river herring, alewife hickory shad and/or American eel. The NCDMF would like to see additional information included in the DEIS about the use of proper size and position of culverts to insure that fish passage will not be prevented due to effects of increased current velocities, erosion around culvert entrances, vibrations from traffic, and improper placement (Street et al. 2004). The use of culverts in streams or rivers used by river herring must be avoided and NCDMF prefers bridging in these areas. The NCDMF also recommends an in-water moratorium from March to September in order to protect these fish.

3441 Arendell Street, P.O. Box 769, Morehead City, North Carolina 28557
Phone: 252 726-7021 \ FAX: 252 726-6062 \ Internet: www.ncdmf.net

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Marine Fisheries
Michael F. Easley, Governor
William G. Ross Jr., Secretary
Preston P. Pate Jr., Director

MEMORANDUM

TO: Melba McGee
Office of Legislative and Intergovernmental Affairs

FROM: Mike Street

DATE: January 21, 2005

SUBJECT: US 17 Improvements / Project No. 8.T190301
Onslow and Jones Counties

Attached is the Divisions' reply for the above referenced project. If you have any questions, please do not hesitate to contact me.

MS/sw

3441 Arendell Street, P.O. Box 769, Morehead City, North Carolina 28557
Phone: 252 726-7021 \ FAX: 252 727-5127 \ Internet: www.ncdmf.net

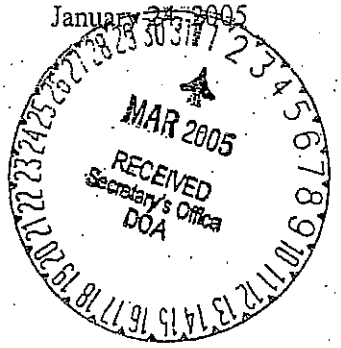
North Carolina
Department of Environment and
Natural Resources

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

North Carolina
Division of Forest Resources

Stanford M. Adams, Director
2411 Old US 70 West
Clayton, NC 27520

January 24, 2005



MEMORANDUM

TO: Melba McGee, Office of Legislative Affairs

FROM: Bill Pickens, NC Division Forest Resources

SUBJECT: DOT DEIS for US 17 Improvements and New Location from Belgrade to South of New Bern, Onslow and Jones Counties

PROJECT #: 05-0191 and TIP # R2514 B,C,& D

The North Carolina Division of Forest Resources has reviewed the referenced DEIS and submit the following comments concerning impacts to forest resources.

1. The proposed project has direct impacts to forest resources by the permanent loss of 77 to 217 acres of forested lands due to ROW construction.

2. After consideration of direct impacts to forest resources the NCDFR supports the selection of Alternative 2, Alternative 3, and Alternative 4A as the preferred alternative since they impact the fewest forested acres. However, given the high number of relocations and impact to historic resources associated with alternative 4A we have no issue with selection alternative 4E to minimize those impacts.

3. We encourage NCDOT to minimize and avoid impacts to forestland whenever possible during ROW planning.

NCDFR appreciates the opportunity to comment on the proposed project and looks forward to future correspondence in regard to this and future projects. I can be contacted at 919-553-6178 x 233 or by email at bill.pickens@ncmail.net..

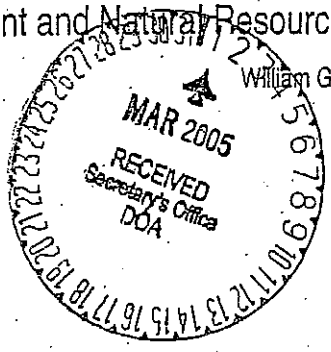
cc: Barry New

NCDENR

North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary



February 3, 2005

Dr. Gregory J. Thorpe
N.C. Department of Transportation
Project Development and Environmental Analysis
1548 MSC
Raleigh, NC 27699-1548

Subject: Proposed US 17 Improvements from SR 1330/1439 South of Belgrade to the Jones/Craven County Line South of New Bern; Onslow and Jones Counties; State Project No. 8.T190301; State Clearinghouse Project No. 05-0191

Dear Dr. Thorpe:

The Natural Heritage Program has records of three (3) priority natural areas and five (5) records of rare species in the vicinity of the project:

Priority Natural Areas:

- Trent River Aquatic Habitat
- Deep Gully
- Maysville Goldenrod Roadsides

Rare Species:

- Eastern Lampmussel (*Lampsilis radiata radiata*), State Threatened and Federal Species of Concern
- Spring-flowering Goldenrod (*Solidago verna*), State Threatened and Federal Species of Concern
- a quillwort (*Isoetes microvela*), State Significantly Rare and Federal Species of Concern
- Hooker's Milkwort (*Polygala hookeri*), State Significantly Rare
- Carolina Gopher Frog (*Rana capito*), State Threatened and Federal Species of Concern

The Trent River Aquatic Habitat is a state significant natural area containing at least eight rare aquatic animals, including one rare amphibian, two rare fishes, several rare mollusks, and a rare crayfish. In particular, the Eastern Lampmussel was found in the Trent River at Highway 17 in 1993. Care should be taken to avoid impacts to the Aquatic Habitat and Eastern Lampmussel. If impacts are anticipated, the US Fish and Wildlife Service and the Wildlife Resources Commission should be consulted.

The Deep Gully site is a ravine which contains an outcrop of Castle Hayne limestone with a Coastal Plain Marl Outcrop community. Two rare plant species are present within the site, but are expected to be located away from the road: Carolina spleenwort (*Asplenium heteroresiliens*) and bluff oak (*Quercus austrina*). Care should be taken to avoid impacts to this natural area.

The Maysville Goldenrod Roadsides Site is located on both sides of Highway 17/58, 1/2 to 3 miles north of Maysville. Spring-flowering Goldenrod occurs both sides of US 17, between SR 1107 and SR 1116. The roadsides support one of the largest populations of Spring-flowering Goldenrod known. The population exists within mowed roadsides near the

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Phone: 919-715-8700 \ FAX: 919-715-3085 \ Internet www.ncnhp.org

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edge of forests, generally in low or slightly damp ground. Although the population has been damaged in the past by NC Department of Transportation mowing during the growing season, it continues to persist. Special planning and care will be needed to minimize disturbance to the plants and soil. If impacts are anticipated, the US Fish and Wildlife Service and the NC Plant Conservation Program should be consulted.

An additional historical record of Spring-flowering Goldenrod was reported in 1948 from 3.5 miles southwest of Maysville along US 17. Although this is a historical record, a survey for the species should be conducted if suitable habitat still exists within the project area.

The quillwort is a very recently (1998) described species with very few known locations; it is globally endangered (G1 NatureServe rank). The population in the project area is near the White Oak River at Belgrade: at 17 Family Campground on east side of US 17 just south of bridge, along both sides of river. This site could be impacted by construction for the project, unless the new bridges over the creek have a large span, are built away from the quillwort, or unless there is no sedimentation or other disturbance to the population from construction on-site. This species is endemic to North Carolina, with only 3 small populations known to exist globally. One of the known populations is within another NC Department of Transportation project area (the proposed improvement of SR 1500 from NC 211 to US 17 Bypass in Brunswick County). Thus, two of the three global populations of this species are threatened by NC Department of Transportation projects.

Hooker's Milkwort was last seen along US 17 in 1948, in a grass-sedge savanna, 2.5 miles south of Maysville. Although this is a historical record, a survey for the species should be conducted if suitable habitat still exists within the project area.

The Carolina Gopher Frog was last seen along US 17 in 1954, 2.4 road miles north of the junction of NC 58, on the east side of the road. Although this is a historical record, a survey for the species should be conducted if suitable habitat still exists within the project area.

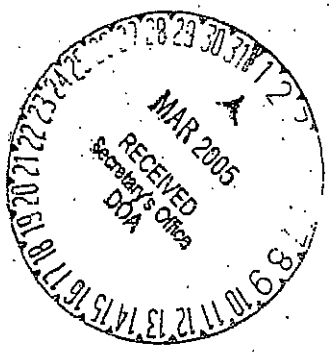
Because of the likelihood that three of the five above species are still present in the study area, we strongly recommend that the NC Department of Transportation conduct biological surveys in 2005 along the project corridor. In particular, our Program is concerned about the fate of the quillwort population, as only three sites in the world are known for this plant – 2 sites in Brunswick County and along the White Oak River in Jones/Onslow counties.

You may wish to check the Natural Heritage Program database website at <www.ncsparks.net/nhp/search.html> for a listing of rare plants and animals and significant natural communities in the county and on the topographic quad map. Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.

Sincerely,

Misty Franklin

Misty Franklin, Botanist
Natural Heritage Program



cc: Karen Lynch, NC Department of Transportation
Mary Frazer, NC Department of Transportation
Dale Suiter, US Fish and Wildlife Service, Raleigh Field Office
Rob Evans, NC Plant Conservation Program
Bennett Wynne, NC Wildlife Resources Commission
Richard LeBlond, NC Natural Heritage Program

MAF/maf

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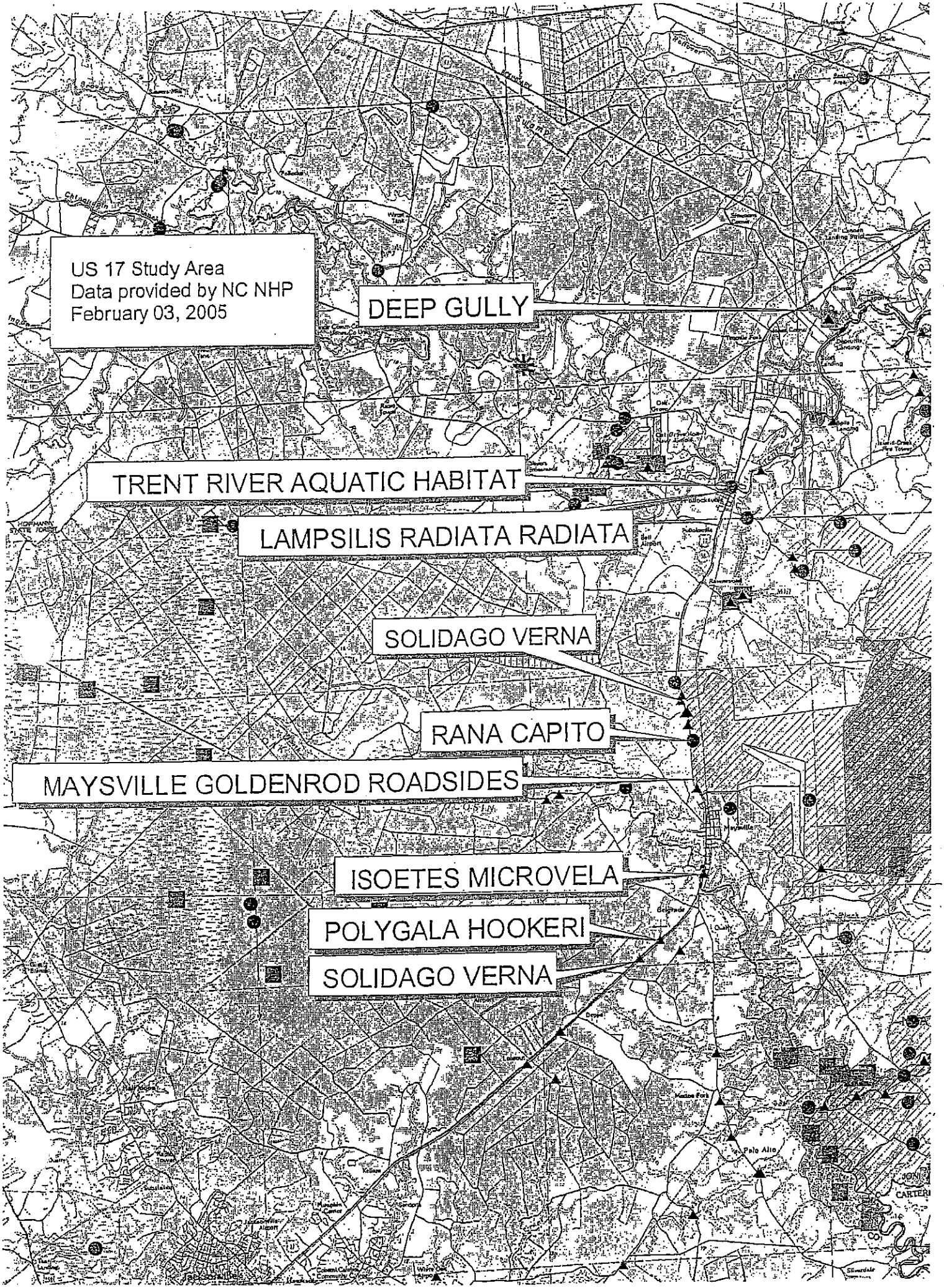
US 17 Study Area
Data provided by NC NHP
February 03, 2005
DEEP GULLY
TRENT RIVER AQUATIC HABITAT
LAMPSILIS RADIATA RADIATA
SOLIDAGO VERNA
RANA CAPITO
MAYSVILLE GOLDENROD ROADSIDES
ISOETES MICROVELA
POLYGALA HOOKERI
SOLIDAGO VERNA

North Carolina Wildlife Resources Commission

Richard B. Hamilton, Executive Director

MEMORANDUM

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

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: February 3, 2005

SUBJECT: North Carolina Department of Transportation (NCDOT) State Draft Environmental Impact Statement (DEIS) for the proposed US 17 improvements in Jones and Onslow Counties, North Carolina. TIP No. R-2514 B, C, D. SCH Project No. 05-0191.

Staff biologists with the N. C. Wildlife Resources Commission have reviewed the subject DEIS 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 construct improvements to US 17 from SR 1330/SR 1439 south of Belgrade to the Jones/Craven County line south of New Bern. Thirteen segment alternatives were studied in detail ranging from 15.67 to 17.51 miles in length, impacting 1836 to 5924 liner feet of jurisdictional streams and 39.26 to 109.60 acres of jurisdictional wetlands.

The high quality resources associated with the White Oak River, Trent River, and their tributaries remain a concern. These systems provide important spawning, rearing and foraging habitats for both resident and anadromous fish. Bridging decisions have reduced impacts to these systems, however further minimization efforts should be assessed during concurrence point 4a once the Merger Team has selected a LEDPA.

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 733-3633 • Fax: (919) 715-7643

We have reviewed the data provided in the DEIS. At this time we concur with the DEIS for this project. We will continue to assess the impacts associated with the remaining alternatives in preparation for the selection of the LEDPA. 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, U.S. Fish and Wildlife Service, Raleigh
John Hennessy, DWQ, Raleigh
Bill Biddlecome, USACE, Raleigh

Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director
Division of Water Quality

February 18, 2005

MEMORANDUM

To: Melba McGee

Through: John Hennessy

From: Nicole Thomson

Subject: Comments on the Draft Environmental Impact Statement related to proposed US 17 Improvments from SR 1330/SR 1439 south of Belgrade to the Jones/Craven County line south of New Bern, Onslow and Jones Counties, State Project No. 8.T190301, Federal Aid Project No. STP-53(2), TIP R-2514 B, C & D, DENR Project Number 05-00191.

This office has reviewed the referenced document. The Division of Water Quality (DWQ) 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 and streams. The DWQ offers the following comments based on review of the aforementioned document:

A) This project is being planned as part of the 404/NEPA Merger Process. As a participating team member, the NCDWQ will continue to work with the team with the planning of this project.

B) Future documentation should include a map showing the entire project with the associated impacts to all resources for all alternatives.

C) Where is the existing crossing over the Trent River in relation to the alternatives presented?

D) What is the status of the abandoned Railroad bed on the Foscue Plantation?

E) Do the wetlands and streams on this project have ratings and descriptions associated with each one? Is there a Natural Resources Technical Report to answer this?

F) After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. Based on the impacts described in the document, wetland mitigation will be required for this project. Should the impacts to jurisdictional wetlands exceed 1.0 acres, mitigation will be required in accordance with NCDWQ Wetland Rules {15A NCAC 2H.0506(h)(2)}.

G) In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(b)(6)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506 (h)(3)}, the NC Ecosystem Enhancement Program may be available for use as stream mitigation.

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
2321 Crabtree Boulevard, Suite 250, Raleigh, North Carolina 27604
Phone: 919-733-1786 / FAX 919-733-6893 / Internet: http://h2o.enr.state.nc.us/ncwetlands

H) As part of the 401 Water Quality Certification Application process, NC DOT is respectfully reminded to include specifics for both onsite and offsite mitigation plans. If mitigation is required, it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. While NCDWQ realizes that this may not always be practical, it should be noted that for projects requiring mitigation, appropriate mitigation plans will be required in conjunction with the issuance of a 401 Water Quality Certification. We understand that NC DOT will request compensatory mitigation through the NC Ecosystem Enhancement Program for offsite mitigation.

I) Future documentation, including the 401 Water Quality Certification Application, should continue to include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.

J) Future documentation needs to address protected riparian buffer impacts for all alternatives within the Neuse River Basin.

K) Have all the proposed delineations of wetlands and streams for all alternatives been verified by the US Army Corps of Engineers?

L) An analysis of cumulative and secondary impacts anticipated as a result of this project is required. The type and detail of analysis should conform to the NC Division of Water Quality Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.

M) NC DOT is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.

N) Where streams must be crossed, the DWQ prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, DOT should not install the bridge bents in the creek, to the maximum extent practicable.

O) Sediment and erosion control measures should not be placed in wetlands.

P) Borrow/waste areas should avoid wetlands to the maximum extent practicable. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.

Q) The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater should not be permitted to discharge directly into streams or surface waters.

R) Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require an Individual Permit application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the NCDOT and written concurrence from the NCDWQ. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate.

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

cc: Mr. Dave Timpy, US Army Corps of Engineers, Wilmington Field Office
Mr. Bill Biddlecome, US Army Corps of Engineers, Washington Field Office
Mr. Gary Jordan, USFWS
Mr. Travis Wilson, NCWRC
Mr. Ken Averitte, NCDWQ Wilmington Regional Office
Central Files
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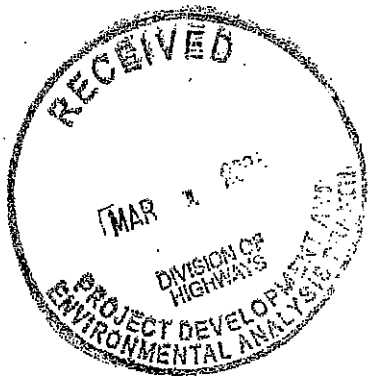
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960



February 22, 2005

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

Subject: US 17 Improvements, from SR 1330/SR 1439 south of Belgrade to the Jones/Craven County line, Onslow and Jones Counties, State Draft Environmental Impact Statement; TIP R-2514 B, C and D, State Project No. 8.T190301

Dear Dr. Thorpe:

The U.S. Environmental Protection Agency Region 4 (EPA) has reviewed the subject document, and is commenting in accordance with Section 309 of the Clean Air Act. The North Carolina Department of Transportation (NCDOT) is proposing to construct an improved four-lane freeway with a 46-foot median from SR 1330/SR 1439 south of Belgrade to the Jones/Craven County line in Onslow and Jones Counties for an approximate distance of 15 to17 miles. The current roadway is primarily a two-lane, sub-standard U.S. highway.

The R-2514 B, C and D project is part of the overall improvements to the US 17 corridor between South Carolina and Virginia. R-2514 A was a segmented portion of the R-2514 project which was processed as a Environmental Assessment and Finding of No Significant Impact (EA/FNSI). The R-2514 A project is currently under design and was a 'pipeline' Merger process project. EPA has recently commented on this segment regarding avoidance and minimization measures. To the north at the Jones/Craven County line, the R-2514 B, C and D project would connect to another US 17 Transportation Improvement Program (TIP) project, R-2301, which is also under detailed design.

The R-2514 B, C and D project is currently in the Merger process and EPA has been involved in past coordination on this proposed project. According to EPA Merger tracking records, EPA concurred on Detailed Study Alternatives on August 21, 2001. We believe that Purpose and Need (P/N) pre-dated EPA's early involvement in the Merger process. Nevertheless, EPA has no outstanding concerns regarding the proposed project's overall P/N.

EPA offers the following comments on the State Draft Environmental Impact Statement (DEIS):

Alternatives:

The R-2514 B, C and D project is divided into 3 segmented alternative sections. The segment '2 Alternatives' correspond to the B segment between SR 1330/SR 1449 to north of Maysville. This approximate 4.5 mile section includes Alternatives 2 (improve existing through Maysville), 2A, 2B and 2C. Alternatives 2A, 2B and 2C are on new location. Alternatives 2A and 2C run north of Maysville and Alternative 2B runs south of Maysville. The C segment of the proposed project corresponds to Alternative 3 which includes widening existing US 17 for approximately 3.4 miles between Maysville and before the intersection of SR 1114 (Lee's Chapel Road) and south of Pollocksville. Preliminary study alternatives for this segment of widening were eliminated in previous Merger meetings and the remaining widening alternative is to the south of existing U.S. 17 Highway. The D segment of the project corresponds to segment '4 Alternatives', which is just south of SR 1114 through Pollocksville to the Jones/Craven County line for an approximate distance of 7.9 miles. The Detailed Study Alternatives for this section of the project include Alternatives 4A, 4B, 4D, 4E, 4G, 4H, 4I and 4ID. These various new location alternatives were selected to be carried forward for detailed study in order to avoid potential impacts to historic properties, environmental justice (EJ) communities, and high quality natural resources.

It is EPA's understanding that all of the Detailed Study Alternatives presented in the State DEIS generally meet the P/N for the proposed project. EPA understands that the primary purpose of the project is to improve traffic flow along the US 17 corridor, relieve congestion on US 17 and thereby improving safety and the number of crashes, and to improve the capability of US 17 as a Strategic Highway Corridor, etc. From EPA's review of the State DEIS, NCDOT has not identified any of the Detailed Study Alternatives that critically differ in their ability to meet the main purposes for the project with specific emphasis regarding traffic congestion and the diversion of traffic to new location alternatives.

NCDOT has provided Design Year 2025 Traffic projections and shows average daily traffic (ADT) volumes for the various alternatives. Based upon NCDOT's Diversion of Traffic analysis (Table 2-3), it appears that all of the alternatives for segment 2 and segment 4 substantially improve highway capacity (i.e., between 59 and 76% within Segment 2 and between 72 and 88 % within Segment 4). Regarding intersection Level of Service (LOS), all of the alternatives may require some improvements to signalization at intersections in order to improve or maintain projected LOS in AM/PM peak periods. From Table 2-4A, it appears that less intersection improvements will be required for Alternative 2 than for Alternatives 2A, 2B and 2C. From Table 2-4B, it appears that Alternatives 4A and 4B require the least number of intersection improvements, Alternatives 4D, 4E, 4F and 4G a moderate number of intersection improvements and Alternatives 4I and 4ID the most intersection improvements.

Environmental Consequences

* *Relocations:* Alternatives 2, 2A, 2B and 2C have potentially 5,6, 13, and 11 residential and 4, 0, 4 and 6 business relocations, respectively. Alternative 3 has 11 residential and 1 business relocation. Relocations for Segment 4 alternatives range between 7 and 29 residential relocations

and 0 to 3 business relocations. For both the improve existing (widening) and new location alternatives, none of the Detailed Study Alternatives represent unreasonable relocation amounts to residence and businesses considering the miles of planned highway improvements. EPA has noted that the relocation impact numbers appear comparatively low for Alternative 2 for widening through Maysville. Overall, these relocation impact numbers are consistent with other TIP projects for other sections of the US 17 corridor.

* *EJ Communities* - NCDOT has identified a number of potential EJ communities within the project study area, including Belgrade, Maysville, Garnet Heights, Chadwick, Murphytown, Ten Mile Fork, Hatchville, Goshen, Oak Grove and Pollocksville. Overall, the minority population of 2 census tracts in Jones County is 46 %. Furthermore, Jones County had a 23.6 % level of households below the poverty rate compared to a Statewide percentage of 16.9%. Maysville has been demographically identified as an African-American town with 59.2 % minority population. From direct relocation impacts, Alternative 2B displaces a total of 13 residential homes with 5 being minorities, Alternative 3 displaces 11 total with 9 being minorities, Alternative 4A displaces 29 total with 20 being minorities and Alternative 4H displaces 10 total with 5 being minorities (from Table 4-1). Alternative 3 traverses the minority community of Chadwick. Most of the Detailed Study Alternatives would impact minority and low-income populations to the same degree (DEIS, page 4-16). However, Alternative 4A appears to place an unreasonable level of relocation impacts on minority residents; and therefore, other alternatives for Segment 4 with lower impacts should be considered. For Segment 3, other preliminary study alternatives where dropped due to the potential greater impact of relocations on minority residences (e.g. 21 additional relocations). The DEIS does not provide specific data on the direct noise impacts to minority or low income communities.

* *Noise Receptor Impacts*: The summary of noise receptor impacts is included in Table 4-6 and elsewhere in the DEIS. This table is a very good example of identifying and presenting impacts and consistent with NCDOT/Federal Highway Administration NEPA document streamlining efforts. Impacts for the Alternative 2 segments range between 62 and 177 receptors with 144 receptors impacted by a No-build alternative. Alternative 3 has 52 impacted receptors with 61 receptors impacted by a No-build alternative. Impacts for the Alternative 4 segments range from 77 (Alternative 4H) to 183 impacted receptors (Alternative 4A) with 203 receptors impacted from a No-build alternative. A detailed noise wall evaluation was provided in the DEIS from pages 4-36 to 4-42. However, the noise wall evaluation was conducted using the 1999 NCDOT Noise Policy of $25,000 per benefitted receptor. This evaluation needs to be updated using the current NCDOT Noise Policy and the 'sliding-scale' threshold of $35,000 per benefitted receptor. This new amount could change the results presented in Table 4-7 (e.g., Wall G) and ultimately the number of impacted receptors and the project cost. Currently, Wall E (Alternative 2B), Wall H (Alternatives 4A, 4B, 4I and 4ID) and Wall J (Alternatives 4A, 4B, 4I and 4ID) are considered to be reasonable and feasible.

* *Historic Properties*: It appears that a great detail of the DEIS has addressed the numerous historic properties present within the project study area, including 2 eligible historic districts (i.e., Maysville and Pollocksville). There are also 4 properties listed in the National Register and 4 properties eligible for the National Register. The only Alternatives which do not effect eligible or

listed historic properties include Alternatives 2A, 2B, 2C and 4E.

* *Wetlands and Stream Impacts*: Wetland impacts for the Alternative 2 segments range between 14.3 and 35.8 acres (i.e., Alternative 2 - 14.3 acres, 2A - 33.3 acres, 2B - 35.8 acres & 2C - 22.9 acres). Stream impacts for the Alternative 2 segments range between 169 and 2,851 linear feet (i.e., Alternative 2 - 169 l.ft., 2A - 2,066 l.ft., 2B - 2,357 l.ft. & 2C - 2,851 l.ft.). Alternative 3 impacts 21.0 acres of wetlands and 150 linear feet of streams. Wetland impacts for the Alternative 4 segments range between 3.9 and 52.7 acres. Stream impacts for the Alternative 4 segments range between 547 and 2,014 linear feet. The Table S-1 Evaluation Matrix provides wetland impacts in a low, medium and high quality breakdown for all of the detailed study alternatives. The table indicates that Alternative 4G has the greatest impact to high quality wetlands (i.e., 7.7 acres) and that this impact is nearly twice the other Alternative 4 segments for high quality resources. Furthermore, Alternative 4G has 1,505 linear feet of stream impacts as well.

EPA was unable to identify the qualifying criteria for determining the quality characteristics of the wetland systems (i.e., Low, medium and high). It would also be helpful to acknowledge if the U.S. Army Corps of Engineers (USACE) has concurred with these determinations.

Total impacts to wetlands and streams depending upon the selected Alternative 2 and 4 segments could be substantial: 109. 5 acres of wetlands and 5,015 linear feet of streams.

The DEIS identifies Mitigation Evaluation including Avoidance and Minimization, Compensatory Mitigation and Section 404/401 Permitting on pages 4-58 to 4-60. NCDOT has identified the bridge spannings of the wetlands at the White Oak River and Trent River as two measures for avoidance/minimization. However, the DEIS does not specifically recommend other avoidance/minimization measures to be used on this project including 3:1 side slopes in wetland areas and reducing the median width at stream crossings. Also, there may be opportunities for additional avoidance/minimization by bridging high quality wetland systems. NCDOT should identify more rigorous avoidance/minimization measures prior to the Merger concurrence point 3 (LEDPA) meeting. Because this project is a 'pipeline' project, Merger concurrence point 2A has not been scheduled or achieved. EPA would recommend a combined concurrence point 2A/3 meeting in order to accurately weigh the alternatives in terms of wetland/stream impacts, costs from bridging and other environmental considerations.

* *Terrestrial Forest Impacts*: Impacts to terrestrial forests for the Alternative 2 segments range between 16 and 55 acres (Table 4-14 of the DEIS). Alternative 2 segments range in impact to Croatan National Forest between 1.7 and 10.9 acres. Alternative 2A would impact 14 acres of Cypress-Gum Swamp. Alternative 2B would impact 10 acres of Bottomland Hardwoods and has the greatest overall impact to terrestrial forests at 55 acres. Alternative 3 would impact 27 acres of terrestrial forests with most of the impacts (i.e., 24.6 acres) being to Croatan National Forest. Most of the impact would be to Pine/Mixed forest. Alternative 4 segments would impact between 34 and 135 acres. None of the impacts would be to Croatan National Forest. Alternatives 4D, 4E and 4G would impact 7, 8, & 7 acres of Cypress-Gum Swamp. Alternatives 4E, 4D, 4H and

4I all have impacts greater than 120 acres to terrestrial forests.

Because terrestrial forest impacts on this project are relatively substantial, EPA would request that NCDOT coordinate with the U.S. Fish and Wildlife Service on any specific requirements under the Migratory Bird Treaty Act of 1918, as amended (Title 50 of the Code of Federal Regulations, Volume 1, Parts 1 to 199). Most of the terrestrial bird species identified on pages 3-50 and 3-51 of the DEIS are listed migratory birds and would need to be assessed for protection during clearing and grubbing and construction activities.

* *Croatan National Forest*: Section 4.9 of the DEIS addresses required permits and actions. However, this section of the DEIS does not address the Special Use Permit required by the U.S. Forest Service for the construction easement (Page 4-5). Furthermore, the U.S. Forest Service's required evaluation for Proposed, Endangered, Threatened an Sensitive (PETS) species is planned to be performed by NCDOT prior to finalizing the EIS. This evaluation should be planned as soon as possible and coordinated with other Merger team agencies that have regulatory interests in the outcome of the evaluation (e.g., U.S. Fish and Wildlife Service, N.C. Wildlife Resources Commission, etc.). Potential impacts to PETS should already be identified and all relevant information provided to Merger team agencies as early in the NEPA/404 Merger process as possible.

EPA is concerned for the proposed impacts to Croatan National Forest. A minimization alternative along Alternative 3 was preliminarily evaluated by NCDOT and discussed generally on page 4-4. EPA would request that NCDOT demonstrate the technical details of sharp reverse curves to EPA and other Merger team agencies at the next concurrence meeting and provide a rationale as why this 'best-fit' alternative is not feasible. This design alternative would also avoid additional impacts to the Chadwick Community.

* *Rare and Unique Natural Areas*: The DEIS has identified the designated Maysville Goldenrod Roadsides Natural Heritage Program (NHP) site approximately 0.5 miles north of Maysville. EPA could not find the NHP site located on any of the DEIS maps. This site is confined to the NCDOT right of way for an approximate distance of 0.2 miles. It contains one of the two largest known populations of Spring-flowering Goldenrod (*Solidago verna*) which is a State listed Endangered species and a Federal Species of Concern (FSC). The site also contains a historic record for the State Special Concern and FSC Carolina Gopher Frog (*Rana capito capito*). EPA is assuming this NHP site is located along a portion of the Alternative 3 segment. NCDOT has not identified which alternative would potentially impact this site. EPA is requesting that future avoidance/minimization plans incorporate this site into NCDOT's design features for the new or improved roadway. Page 4-68 includes the statement that the Spring-flowering Goldenrod will be replanted, if necessary. NCDOT should provide more detailed information regarding this activity.

* *Prime Farmlands*: Impacts to prime and important farmlands are identified in Section 4.2.6 of the DEIS. Impacts for Alternative 2 segments range between 38 acres for Alternative 2 and 119 acres for Alternative 2A. Impacts for the Alternative 3 segment are 43 acres. Impacts for Alternative 4 segments range between 56 acres for Alternative 4A and 80 acres for Alternative 4G. NCDOT should provide the specific impact numbers to prime and important farmlands in an

Impact/Evaluation Summary Table as was done for other environmental indicators .(e.g., Table 4-17).

* *Hazardous Material Sites*: The DEIS identifies 31 total sites with Alternative 4A with 6 potential sites and Alternative 2 with potentially 5 sites. The remainder of the alternatives range between 0 and 4 hazardous material sites. None of these sites have been identified as CERCLA or RCRA sites. Most of the 31 hazardous material sites (from Table 3-6) appear to be Underground Ground Storage Tank (UST) related sites which were abandoned or are currently in use.

* *Indirect and Cumulative Impacts*: EPA acknowledges that there is a potential low level of growth projected for the project study area and that the new roadway will not drastically alter regional growth and development patterns. EPA generally agrees with NCDOT's indirect and cumulative impact analysis on pages 4-65 to 4-68.

Summary

EPA recognizes that NCDOT is proceeding with this Merger project without Federal-aid funding from the Federal Highway Administration. EPA is requesting additional or revised information regarding wetland quality rankings, updated noise abatement analysis, other direct impacts to EJ communities, prime and important farmlands and specific avoidance/minimization measures to wetlands and streams as well as including potential efforts to minimize impacts to Croatan National Forest and the Maysville NHP site. EPA is also encouraging NCDOT to engage the U.S. Forest Service in the Merger process.

EPA is not providing formal ratings for this State DEIS. However, EPA has identified that Alternatives 4A and 4G would have significant and unbalanced impacts to the human and natural environment, respectively. Alternative 4A would have an unreasonably high relocation impact to EJ communities. Alternative 4G would have the greatest impact to Cypress-gum Swamp/high quality wetlands. NCDOT has not identified a preferred alternative in the DEIS. EPA plans to stay actively involved in this Merger process project and will be seeking input from other Merger team agencies on their specific preferences and concerns for the Detailed Study Alternatives.

If you have any questions concerning EPA's comments, please contact Mr. Ted Bisterfeld at (404) 562-9621 or Mr. Christopher Militscher of my staff at (919) 856-4206.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

cc: K. Jolly, USACE Wilmington District
P. Benjamin, USFWS Raleigh Field Office

NCDENR
North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

MEMORANDUM

TO: Chrys Baggett
State Clearinghouse

FROM: Melba McGee
Environmental Review Coordinator

RE: 05-0191 DEIS Proposed US 17 Improvements to the Jones County

DATE: February 28, 2005

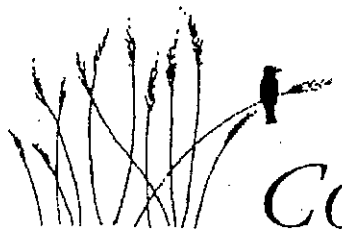
The Department of Environment and Natural Resources has reviewed the proposed DEIS.

In order to avoid delays in the review of the FEIS, it is recommended that the Department of Transportation work directly with the Divisions of Environmental Health, Water Quality, Forestry, Marine Fisheries and our Natural Heritage Program prior to submitting the FEIS for state review. If additional coordination is needed to resolve their concerns, it is also recommended that these agencies be notified of any future merger meetings.

Thank you for the opportunity to respond.

Attachments

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4984 \ FAX: 919-715-3060 \ Internet: www.enr.state.nc.us/ENR/



NORTH CAROLINA

Coastal Land Trust

July 2, 2002

Mr. Roger Sheats, Deputy Secretary
NC Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501

COPY

RE: Foscue Plantation Conservation Easement

Dear Roger:

Dave Henderson from your office has been diligently working with Bruce Watkins of the Coastal Land Trust in an effort to identify and evaluate alternative sites (four, I believe). We very much appreciate the Department's willingness to examine alternatives to the proposed storm water project at Foy Creek.

I am writing to make certain that you are aware of another conservation easement held by the North Carolina Coastal Land Trust on land that also lies in the route of the U.S.17 project. We refer to the land as the "Foscue Plantation" tract. A copy of the conservation easement is enclosed. Mr. James E. Foscue (father of the current owner) advised me in February 2000 that he had informed Mr. David McCoy from DOT of the existence of the conservation easement to the Coastal Land Trust.

I understand from Mr. Jim Foscue, the owner, that he has had a very cordial conversation with you and you have a meeting with him later this month.

I hope that, once again, DOT will be reponsive to the issues raised by the historic and other conservation resources protected at Foscue Plantation. The first two pages of the conservation easement identify all the conservation resources of Foscue Plantation. It is really extraordinary for one tract of land to feature so many different natural, historic, and cultural resources. You are probably already aware of the fact that the historic plantation house and the surrounding lands are listed on the National Register of Historic places, a designation that brings with it a significant measure of protection with regard to federal projects.

The Coastal Land Trust joins the owners of Foscue Plantation in urging your consideration of alternative routes for the U.S. 17 project.

Main Office
3806-B Park Avenue • Wilmington, NC 28403 • (910) 790-4524 • Fax (910) 790-0392 • nccoast@wilmington.net
www.coastallandtrust.org

New Bern Office
220 South Front Street • P.O. Box 15451 • New Bern, NC 28561 • (252) 634-1927 • Fax (252) 514-0051 • jlallen@cc[illegible]ect.com

I know of no other conservation easements held by the Coastal Land Trust in areas identified for future DOT projects.

Best regards,

Camilla M. Herlevich

Camilla M. Herlevich
Executive Director

CMH:cmg

Enclosures

cc: Mr. Jim Foscue
David Ward, Esquire
Mr. Myrick Howard, Preservation, NC

NORTH CAROLINA
COASTAL LAND TRUST

July 18, 2005

Mr. John Conforti
N.C. Department of Transportation
Project Development and Environmental
Analysis
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Conforti:

Thank you for sending us a copy of the Draft Environmental Impact Statement (Draft EIS) for the U.S. 17 Highway improvements (T.I.P. 4-2514 B, C & D). However, I am distressed to learn that the deadline for comments was February 15, 2005. The Coastal Land Trust is on record as having an interest in this highway project; moreover, Janice Allen, our Director of Land Protection has called repeatedly to ask the status of this plan. We therefore hope that you will accept our comments, even though they are late, since we did not receive the plan until the deadline had passed. Please put us on the mailing list to receive a copy of any subsequent notices regarding this project, and a copy of the Final EIS once completed.

As noted in the Draft EIS, the North Carolina Coastal Land Trust holds a conservation easement over 648.8 acres of the Foscue Plantation in Jones County. This conservation easement has numerous conservation values including scenic, historic, significant wildlife habitat and water quality values. Over three years ago, the Coastal Land Trust expressed concern to the North Carolina Department of Transportation about any proposed routes that bisect the heart of the Foscue Plantation, which we consider to be the land to the east of present U.S. Highway 17 (see 7/2/2002 letter to Mr. Roger Sheats.). Thus, we oppose Alternatives 4B and 4G as identified in the Draft EIS which would go through the Foscue Plantation near the old Seaboard Line Railroad bed. We understand the Federal Highway Administration must attempt to avoid any historic Section 4F property if possible and we appreciate that this is a difficult task in the overall project area considering the number of historic sites. However, we urge the Department of Transportation to drop Alternatives 4B and 4G which essentially cut off the historic main house from the remaining portion of the property along the Trent River. In our opinion, these alternatives would have the greatest impact on the conservation values of the Foscue Plantation easement.

131 Racine Drive • Suite 101 • Wilmington, NC 28403
(910) 790-4524 • Fax (910) 790-0392
info@coastallandtrust.org • www.coastallandtrust.org

Thank you for your consideration. The Coastal Land Trust assumes that the owners of the Foscue Plantation properties have received copies of the Draft EIS well in advance of the deadline; if you have not, I am certain they would appreciate receiving a copy of same at your earliest convenience.

Sincerely,

Camilla M. Herlevich

Camilla M. Herlevich
Executive Director

Encl: as noted
cc: Mr. Gregory Thorpe, Ph.D., w/encl
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
Mr. James Foscue, w/encl
Ms. Janice Allen, w/o encl

199503519

POLLOCKSVILLE
NORTH CAROLINA

P.O. Box 97, Pollocksville, NC 28573
252-224-9831 • Fax 252-224-0423

August 17, 2005

MSP 2/22/07
R-2514

Mr. William Wescott
Washington Regulatory Field Office
Corps of Engineers
PO Box 1000
Washington, NC 27889

Dear Mr. Wescott:

In accordance with the Public Notice dated August 15, 2005, the Town of Pollocksville is pleased to offer comments in reference to the proposed improvements to US Highway 17 (T.I.P. No. R-2514 B, C., & D). For over 10 years now, the Town has been actively involved in the numerous discussions over these proposed improvements. The State Draft Environmental Impact Statement for this project includes many statements from the Town about its wishes for the preferred route in the Pollocksville area. We have written letters stating our position, and we have made oral presentations at the various community information workshops and public hearings. At the juncture, we now feel it important that we share these comments with the Corps of Engineers as it evaluates the above-referenced project.

The Town of Pollocksville **OBJECTS AND OPPOSES** in the strongest language possible any proposals for the US Highway 17 Bypass which encroach upon or pass through any part of the corporate limits of the Town. Any route which goes through the Town is not a "bypass"; it is a "pass-through". Therefore, alternatives 4-A; 4-B; 4-I; and 4-ID are all unacceptable and the Town opposes them in their entirety. At the August 9, 2005 meeting of the Town's Board of Commissioners, this opposition was once again affirmed. There are many reasons for the Town's opposition, most of which have been previously stated and are listed in various places throughout the Draft E.I.S. Let me restate those:

* All four routes which track on the eastern side of the Town effectively divide the town. We will have a four-lane or five-lane high-speed road splitting the Town. The "at-grade" intersection would heighten this division, preventing rapid response by emergency personnel, and creating additional traffic and safety hazards.
* A major tract of lane, which is zoned for industrial/commercial development, as well as an adjacent tract of farm land, also appropriate for residential and/or commercial development will be lost.
* The Pollocksville Historic District will be adversely impacted. The newly-completed restoration of the historic c.1893 train depot will be threatened, as well as the recently completed restoration of the Trent River waterfront.
* The Town's water and sewer facilities will be aversely affected. The location of the eastern routes threaten the Town's main water supply well and treatment facilities, and would be in direct opposition to the Town's Wellhead Protection Plan. A sewer pumping station on the eastern edge of the Town limits would be isolated.
* Residents living along the abandoned railroad bed would be aversely affected. They would be subjected to noise. The residents on the Town's eastern limits would be effectively separated from the rest of the Town, as well as those living in Garnet Heights, who benefit from the Town's water and sewer enterprise system. There are certainly environmental justice issues for these residents. In fact, the location of the route through any part of the Town's corporate limits present environmental justice issues for all of the residents of the Town of Pollocksville.
* The eastern routes through the Town impact significant areas of wetlands, including the Trent River and the Mill Creek tributary.
* In essence, the placement of the so-called bypass **THROUGH** the Town of Pollocksville would mark the beginning of the end of Pollocksville as a Town. Economic activity would be stymied; traffic problems will be increased through town instead of abated; the Town's public utility system will be compromised and environmentally threatened; and eventually, the Town will die!!! There will be no one left to pay taxes and financially support the Town's infrastructure.

Since the early beginnings of the discussions on the Pollocksville Bypass, the Town has opposed any route along the Town's eastern borders. The engineers, Wilbur Smith and Associates, have advised against such a route. Various Department of Transportation officials have stated that an eastern route is outside the scope and purpose of a bypass, and that DOT would not construct such a road through a Town. The Town of Pollocksville agrees with the assessments of both the engineers and the DOT.

The Town of Pollocksville has gone on record as strongly endorsing any alternate route which tracks west of the Town limits. While the town offers no opinion on any of the western alternative, the Town does encourage a decision which will create minimum impact on the people. We would suggest the consideration be given to the intersection of US 17 and NC 58 on any of the western routes. This intersection should not be an "at-grade" intersection, but instead should be "grade-separated".

The Town appreciates the opportunity to comment on this most important highway project. Should you have questions or desire additional information, please do not hesitate to contact the Town.

With all good wishes,

Sincerely,

James V. Bender, Jr., Mayor
Town of Pollocksville

MSP 2/22/07
R-2514

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

August 30, 2005

William Wescott
U.S. Army Corps of Engineers
P.O. Box 1000
Washington, NC 27889

Dear Mr. Wescott:

This letter is in response to your request for comments on Public Notice (PN) ID No. 199503519, dated August 15, 2005. The North Carolina Department of Transportation (NCDOT) has applied for a Department of the Army (DA) permit to work within jurisdictional waters of the United States for construction of improvements to US 17 (TIP No. R-2514 B,C & D) in Jones and Onslow Counties, North Carolina. These comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

The U.S. Fish and Wildlife Service (Service) will be participating in the combined NEPA/404 Merger Process for this project. At this time the Service does not have a preferred alignment. We foresee providing substantial input later in the Merger Process. We provided comments to NCDOT on the State Draft Environmental Impact Statement via a letter dated January 6, 2005. Those comments are still valid, and an annotated copy of that letter is enclosed. Please note that NCDOT has yet to address the section 7 issues we raised in our January 6, 2005 letter to them.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,

Pete Benjamin
Ecological Services Supervisor

Enclosure: January 6, 2005 letter from Service to NCDOT

cc: Chris Militscher, USEPA, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Christian Breen, NCDWQ, Raleigh, NC

MSP 2/22/07
R-2514

NCDENR

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 1, 2005

RECEIVED
SEP 0 8 2005
REGULATORY BRANCH

Mr. William Wescott
U.S. Army Corps Of Engineers
Washington Regulatory Field Office
P.O. Box 1000
Washington, NC 27889

RE: Action ID No. 199503519. TIP No. R-2514 B, C, & D. Improvements to US 17, beginning north of NCSRs 1330 and 1439 south of Belgrade and extending through Onslow and Jones Counties northward to the Jones/Craven County line south of New Bern, North Carolina.

Dear Mr. Wescott:

The N.C. Division of Coastal Management (DCM) appreciates the opportunity to comment on the U.S. Army Corps of Engineers (USACE) Public Notice, dated August 15, 2005, for the above referenced project. This project is being carried through the NEPA/404 Merger Process, and DCM is a member of the NEPA/404 merger project team. The NEPA/404 project team has not yet selected a Least Environmentally Damaging Practicable Alternative (LEDPA).

The proposed project will impact public trust Areas of Environmental Concern (AECs) under the Coastal Area Management Act (CAMA) with the crossing of the White Oak River in Onslow County. This AEC will be impacted regardless of the alternative selected. Therefore, a CAMA major development permit will be required for the project. A formal DCM review of the project to determine consistency with the state's Coastal Management Program will not occur until a complete CAMA major permit application is received. At that time, the CAMA major permit application will be circulated to the state agencies that have a regulatory interest in the proposed project for review and comment. DCM will also publish a public notice to solicit comment from any interested parties.

Please contact me at (919) 733-2293 Ext. 230 or via e-mail at *steve.sollod@ncmail.net* if you have any questions or concerns, or require additional information. Thank you for your consideration of the North Carolina Coastal Management Program.

Sincerely,

Steven D. Sollod
Transportation Project Coordinator

1638 Mail Service Center, Raleigh, North Carolina 27699-1638
Phone: 919-733-2293 \ FAX: 919-733-1495 \ Internet: www.nccoastalmanagement.net

199503519

RECEIVED

SEP 2 0 2005

REGULATORY BRANCH

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

September 13, 2005

MSP 2/22/07
R-2514

MEMORANDUM

TO: William Wescott
Washington Regulatory Field Office
US Army Corps of Engineers

FROM: Peter Sandbeck for Peter Sandbeck

SUBJECT: Corps Action ID # 199503519, US Highway 17, TIP R-2514 B, C & D, Jones and Onslow Counties, GS 94-0013

We have received the public notice concerning the above-cited project and offer the following comments.

We have been consulting with the North Carolina Department of Transportation (NCDOT) concerning this project since 1993 and archaeological investigations have been undertaken with regard to segment A. The remaining segments of the project (B, C & D) are the subject of this public notice. The NCDOT has committed to consulting with us and conducting necessary archaeological surveys and evaluations for these remaining segments once a preferred corridor has been selected. We recommend that you condition any permit issued by your agency to include this stipulation.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Greg Thorpe, NCDOT
Matt Wilkerson, NCDOT

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-4763/733-8653
RESTORATION	515 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-6547/715-4801
SURVEY & PLANNING	515 N. Blount Street, Raleigh, NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-6545/715-4801

MSP 2/22/07
R-2514

Wescott, William G SAW

From: Ron Sechler [ron.sechler@noaa.gov]
Sent: Tuesday, October 11, 2005 1:03 PM
To: Wescott, William G SAW
Subject: NCDOT R-2514 B,C,D Action ID No. 199503519

William
The NMFS is reviewing Action ID No. 199503519 describing highway improvement to US 17 in Jones and Onslow Counties. Due to our current staffing situration we were unable to provide comments by the indicated due date. We will provide our recommendation regarding selection of the LEPDA no later than October 18, 2005.

Sincerely,

Ron Sechler
Fishery Biologist
National Marine Fisheries Service
Habitat Conservation Division
101 Pivers Island Road
Beaufort, North Carolina 28516

Phone: 252-728-5090
Fax: 252-728-8728
Email: ron.sechler@noaa.gov

SECTION A.4
Newsletters

US 17 JACKSONVILLE TO NEW BERN
NEWSLETTER

TIP No. R-2514
August 31, 1995

This is the first in a series of information newsletters prepared as a part of the study to improve US 17 between Jacksonville and New Bern. Proposed improvements include widening existing US 17 to a multi-lane roadway with bypasses around Maysville and Pollocksville. Economic, social and environmental aspects of the study area will be analyzed to identify an alternative with the least overall negative impacts to the natural and human environments.

Your Cooperation is needed

Study team members are currently performing field studies throughout the project area. The North Carolina Department of Transportation (NCDOT) asks for your cooperation by permitting personnel to enter property owned or controlled by you in order to complete the required field work.

An Environmental Assessment (EA) will be prepared to summarize and compare the results of the engineering, environmental, social and economic evaluations. The EA is scheduled for publication in mid 1996. Following distribution of the EA, a Combined Public Hearing will be held to provide citizens an opportunity to discuss the results of the study and review the Hearing Map. The Combined Public Hearing is tentatively scheduled for the spring of 1997.

Citizen Informational Workshop

DATE: Tuesday, October 3, 1995
TIME: 5:00 p.m. - 8:00 p.m.
LOCATION: Maysville Elementary School Cafeteria.

Project Description

The North Carolina Department of Transportation proposes to improve US 17 from north of SR 1327 in Jacksonville to SR 1330 in New Bern in Onslow and Jones Counties. The total project length is about 22 miles.

The following alternatives will be evaluated:

(1) "Do-Nothing" Alternative.

(2) Build Alternative:
A four-lane divided roadway is proposed from north of SR 1327 in Jacksonville to south of Belgrade. From south of Belgrade to north of Maysville, the following two alternates will be investigated:

* widen existing US 17 to a five-lane roadway with curbs and gutters through Belgrade and Maysville, and
* construct a four-lane divided bypass on new location around Belgrade and Maysville.

From north of Maysville to SR 1112 south of Pollocksville, US 17 is proposed to be widened to a four-lane divided roadway. The following alternatives will be investigated in the vicinity of Pollocksville, from SR 1112 to south of SR 1121:

* widen existing US 17 to a five-lane roadway with curbs and gutters through Pollocksville,
* construct a four-lane divided roadway through Pollocksville using the abandoned railroad bed east of US 17, and
* construct a four-lane divided western bypass on new location around Pollocksville.

From south of SR 1121 to SR 1330 in New Bern, US 17 is proposed to be widened to a four-lane divided facility.

The Planning Process

The environmental planning process is divided into six phases. The US 17 widening project is currently in Phase 2:

Phase 1
Data Collection
Inventory of Planning Issues
Document Community Concerns
Transportation Needs Study

Phase 2
Preliminary Alternatives Identification
Initial Field Studies
Refinement
First Citizens Informational Workshop
Selection of Alternative(s) for Detailed Study

Phase 3
Preliminary Design
Detailed Field Studies
Environmental Analysis
Technical Reports
Second Citizens Informational Workshop

Phase 4
Environmental Assessment (EA)
Combined Public Hearing

Phase 5
Review Comments of the EA
Review Public Hearing Transcript

Phase 6
Finding of No Significant Impact (FONSI)

US 17 HOTLINE

Call the toll free hotline

1-800-813-0323

Terry Snow, P.E. or David Wilver, P.E. can answer your questions between 8:00 a.m. and 5:00 p.m.

Current Project Activities

Phase 1 of the planning process is complete and Phase 2 is underway. The initial field studies identifying wetlands, cultural resource sites, hazardous materials/waste locations, plant and wildlife communities and existing noise levels are in progress. The first citizens workshop is scheduled for Tuesday, October 3, 1995, from 5:00 p.m. until 8:00 p.m. at the Maysville Elementary School Cafeteria.

Following the workshop, the alternative(s) for detailed study will be selected and Phase 3 of the planning process will begin.

Evaluation Factors

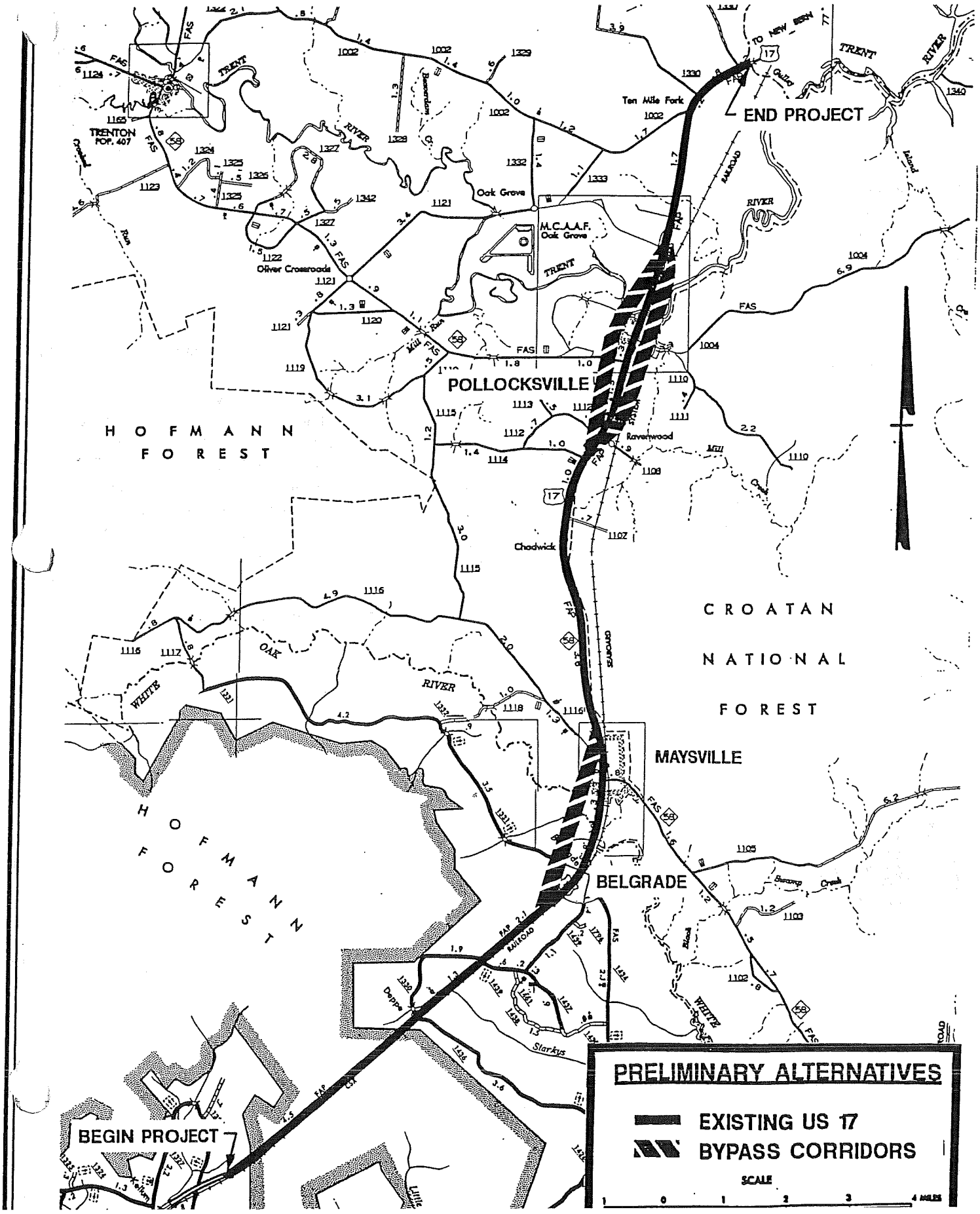
The planning and environmental study will identify and evaluate two alternatives, the Build Alternative and the "No-Build" or "Do-Nothing" Alternative. The Build Alternative evaluation will be based on investigations of four major areas:

- **Environmental**: wetlands, floodplains, water quality, water resources, hazardous materials, farmlands, noise, air quality and protected plant and animal species.
- **Social**: neighborhoods, community facilities, recreational areas, cultural resources, relocation of residences, businesses and non-profit organizations.
- **Engineering**: safety, traffic, constructability, construction costs, bridges and culverts and maintenance of traffic during construction.
- **Economic**: local or regional economy, land use planning, land development, established business districts, highway-related businesses and employment.

The Study team would like to receive your comments as part of our evaluation. The alternative(s) for detailed study will be selected following the first Citizens Informational Workshop.

Right-of-Way and Construction

The NCDOT 1996-2002 Transportation Improvement Program (TIP) schedule indicates that right-of-way acquisition will begin in fiscal year 1997 with construction beginning in fiscal year 2001.


END PROJECT
TRENTON
POP. 407
Oak Grove
M.C.A.A.F.
Oak Grove
Oliver Crossroads
POLLOCKSVILLE
Ten Mile Fork
Ravenwood
Chadwick
HOFMANN
FOREST
CROATAN
NATIONAL
FOREST
MAYSVILLE
BELGRADE
BEGIN PROJECT
TRENT
RIVER
WHITE OAK
Dixon
Starkys
Swamp
Creek
PRELIMINARY ALTERNATIVES
EXISTING US 17
BYPASS CORRIDORS
SCALE
0 1 2 3 4 MILES

You CAN Be Involved!

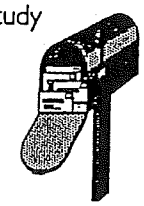
The Public Involvement Program provides interested citizens the opportunity to participate in the planning process and understand the overall study process and schedule. Some of these public involvement activities include:

☞ **Arranging a small group meeting for your neighborhood or organization.** The study team will be available through-out the study process to meet and discuss the project in informal question and answer sessions with neighborhood groups and civic organizations. For details, call the US 17 Study Hotline at **1-800-813-0323.**

☞ **Adding your name to the mailing list.** If you would like to receive future newsletters or meeting notices and have not already requested to be on the mailing list, call the US 17 Hotline at **1-800-813-0323** or write to the address below.

☞ **Calling or writing the study team.** The toll-free project hotline provides direct contact between citizens and the study team. Verbal comments will continue to be documented and considered during the study. Call the project hotline at **1-800-813-0323**. You also may write to the US 17 Study or directly to NCDOT at the following addresses:

Write:



US 17 Jacksonville to New Bern Widening Study
5 West Hargett Street, Suite 910
Raleigh, NC 27601-1311

or

Mr. H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

US 17 Jacksonville to New Bern Widening Study

The first Citizen Informational Workshop for the US 17 Study and Environmental Assessment will be held on Tuesday, October 3, 1995, from 5:00 p.m. until 8:00 p.m. at the Maysville Elementary School Cafeteria. The purpose of the workshop is to provide citizens the opportunity to review and comment on the preliminary alternative(s). Members of the Study team will be available to discuss the project and answer questions.

US 17 Jacksonville to New Bern Widening Study
5 West Hargett Street
Suite 910
Raleigh, NC 27601-1311

Take a Look...

On the inside of this newsletter is a map of the US 17 project area showing the preliminary alternative corridors.

US 17 JACKSONVILLE TO NEW BERN
NEWSLETTER

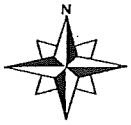
TIP No. R-2514
July 22, 1996

This is the second in a series of information newsletters prepared as a part of the study to improve US 17 between Jacksonville and New Bern. Proposed improvements include widening existing US 17 to a multi-lane roadway with potential bypasses around Maysville and Pollocksville. Economic, social and environmental aspects of the study area will be analyzed to identify the alternative with the least overall negative impacts to the natural and human environments.

Your Cooperation is needed

Study Team members are currently developing roadway design plans and conducting field studies throughout the project area. The North Carolina Department of Transportation (NCDOT) asks for your cooperation by permitting personnel to enter property owned or controlled by you in order to complete the required field work.





An Environmental Assessment (EA) will be prepared to document the results of the engineering, environmental, social and economic evaluations. The EA is scheduled for publication in October 1997. Following distribution of the EA, a combined public hearing will be held to provide citizens an opportunity to discuss the results of the study and review the hearing map. The combined public hearing is tentatively scheduled for the fall of 1997.

US 17 HOTLINE

Call the toll free hotline

1-800-813-0323

Terry Snow, P.E.; David Wilver, P.E.; or Tre' Dugal can answer your questions between 8:00 a.m. and 5:00 p.m.

Project Description

The North Carolina Department of Transportation proposes to improve US 17 from north of SR 1327 in Jacksonville to SR 1330 in New Bern in Onslow and Jones Counties. The total project length is about 22 miles.

The following alternatives are being evaluated:

(1) "Do-Nothing" Alternative.

(2) Build Alternative:

The project is divided into five segments. These segments are shown in Figures 1.1 and 1.2 and are discussed below.:

Segment 1 - A four-lane divided roadway is proposed from north of SR 1327 in Jacksonville to south of Belgrade. The proposed widening will occur to the east of existing US 17.

Segment 2 - The following alternates will be investigated in the vicinity of Belgrade and Maysville:

Alternate 2 - widen existing US 17 to a five-lane roadway with curbs and gutters through Belgrade and Maysville;

Alternate 2A - construct a four-lane divided western bypass on new location around Belgrade and Maysville;

Alternate 2B-1 - construct a four-lane divided roadway through Belgrade and Maysville on the abandoned railroad bed east of US17;

Alternate 2B-2 - construct a four-lane divided eastern bypass on the abandoned railroad bed through Belgrade, and on new location around Maysville; and

Alternate 2C - construct a four-lane divided western bypass on new location around Maysville only.

Segment 3 - From north of Maysville to SR 1112 south of Pollocksville, US 17 is proposed to be widened to a four-lane divided roadway. The proposed widening will occur to the east.

Segment 4 - The following alternatives will be investigated in the vicinity of Pollocksville, from near SR 1112 to south of SR 1121:

Alternative 4B - construct a four-lane divided eastern bypass on new location around Pollocksville;

Alternative 4B - Modified - construct a four-lane divided roadway through Pollocksville using the abandoned railroad bed east of US 17; and

Alternative 4C - construct a four-lane divided western bypass on new location around Pollocksville.

Segment 5 - From south of SR 1121 to SR 1330 in New Bern, US 17 is proposed to be widened to a four-lane divided facility. The proposed widening will occur along the east and west sides of US 17 in order to minimize impacts.

The Planning Process

The environmental planning process is divided into six phases. Phase 3 of the project is under way:

Phase 1
Data Collection
Inventory of Planning Issues
Document Community Concerns
Transportation Needs Study

Phase 2
Study Alternatives Identification
Initial Field Studies
Refinement
First Citizens Informational Workshop

Phase 3
Roadway Design Plans
Detailed Field Studies
Environmental Analysis
Technical Reports
Second Citizens Informational Workshop

Phase 4
Environmental Assessment (EA)
Combined Public Hearing

Phase 5
Review Comments of the EA
Review Public Hearing Transcript
Select Preferred Alternatives in Maysville and Pollocksville

Phase 6
Finding of No Significant Impact (FONSI)

Current Project Activities

Phases 1 and 2 of the planning process are complete and Phase 3 is underway. Roadway design plans are being developed for each alternative under study. These alternatives will be evaluated to determine the alternative with the least overall impact.

Evaluation Factors

The planning and environmental study will evaluate each alternative based on investigations of four major areas:

- **Environmental**: wetlands, floodplains, water quality, water resources, hazardous materials, farmlands, noise, air quality and protected plant and animal species.
- **Social**: neighborhoods, community facilities, recreational areas, cultural resources, relocation of residences, businesses and non-profit organizations.
- **Engineering**: safety, traffic, constructability, construction costs, bridges and culverts and maintenance of traffic during construction.
- **Economic**: local or regional economy, land use plans, land development, established business districts, highway-related businesses and employment.

The Study Team would like to receive your comments as part of our evaluation.

Right-of-Way and Construction

The NCDOT 1997-2003 Transportation Improvement Program (TIP) indicates that right-of-way acquisition will begin in fiscal year 1999 with construction beginning in fiscal year 2001.

The First Citizens Informational Workshop

The First Citizens Informational Workshop was held on October 3, 1995, at the Maysville Elementary School. The purpose was to inform citizens of the progress on the study and to request public input. Approximately 155 citizens attended and over fifty written comments were received. The following is a summary of the general concerns of the citizens:

- The majority of the citizens from the Belgrade/Mays area expressed support for the project and for the western bypass alternative (Alternative 2A). Also, due to the high volume of summer beach travelers, some citizens requested an interchange at NC 58 be considered.

- The Pollocksville citizens, on the other hand, were generally opposed to the corridors presented for the Pollocksville Bypass. The majority of opposition came from residents of the Hughes Plantation. Most of the citizens agreed the bypass is needed, but would prefer the bypass be located further west along the existing CP&L power line easement. Farmers and landowners along the bypass alternatives presented were also concerned that their farms would be bisected.

As a result of the information received at the workshop, the Study Team adjusted the alternatives for the Pollocksville Bypass to address the concerns.

Commonly Asked Questions

The following section is dedicated to some of the most commonly asked questions:

Q. Will I be contacted if my property is to be taken?

A. Yes. A NCDOT right-of-way agent will contact you in order to obtain information about your property. The right-of-way agent will explain and advise you on how the project will affect your property. In some cases, only a portion of your property may be affected.

Q. How much will I be paid for my property and how will it be valued?

A. The NCDOT has qualified fee appraisers who are experienced in making impartial appraisals of your property. If only a portion is to be acquired, you will be compensated for the differences between the fair market value of the entire property before acquisition, and the fair market value of the remaining property after acquisition. If the entire property is to be acquired, your compensation will be full market value for the property.

Q. When will the road be built?

A. The project is currently in the planning stages. Right-of-way acquisition is scheduled to begin in fiscal year 1999 with construction beginning in fiscal year 2001.

Q. Should I purchase a home within the area or renovate my home?

A. As with all roadway improvement projects, during the planning stage numerous alternatives are being studied. A determination of the preferred alignment will not be made until the Environmental Assessment is complete and a combined public hearing is held. You will have to make a determination based on your own needs.

Q. What will the speed limit be for the bypasses, the rural sections of US 17 and the through town routes?

A. The bypasses and rural sections will be posted at 55 mph and the through town routes will be posted at 35 mph.

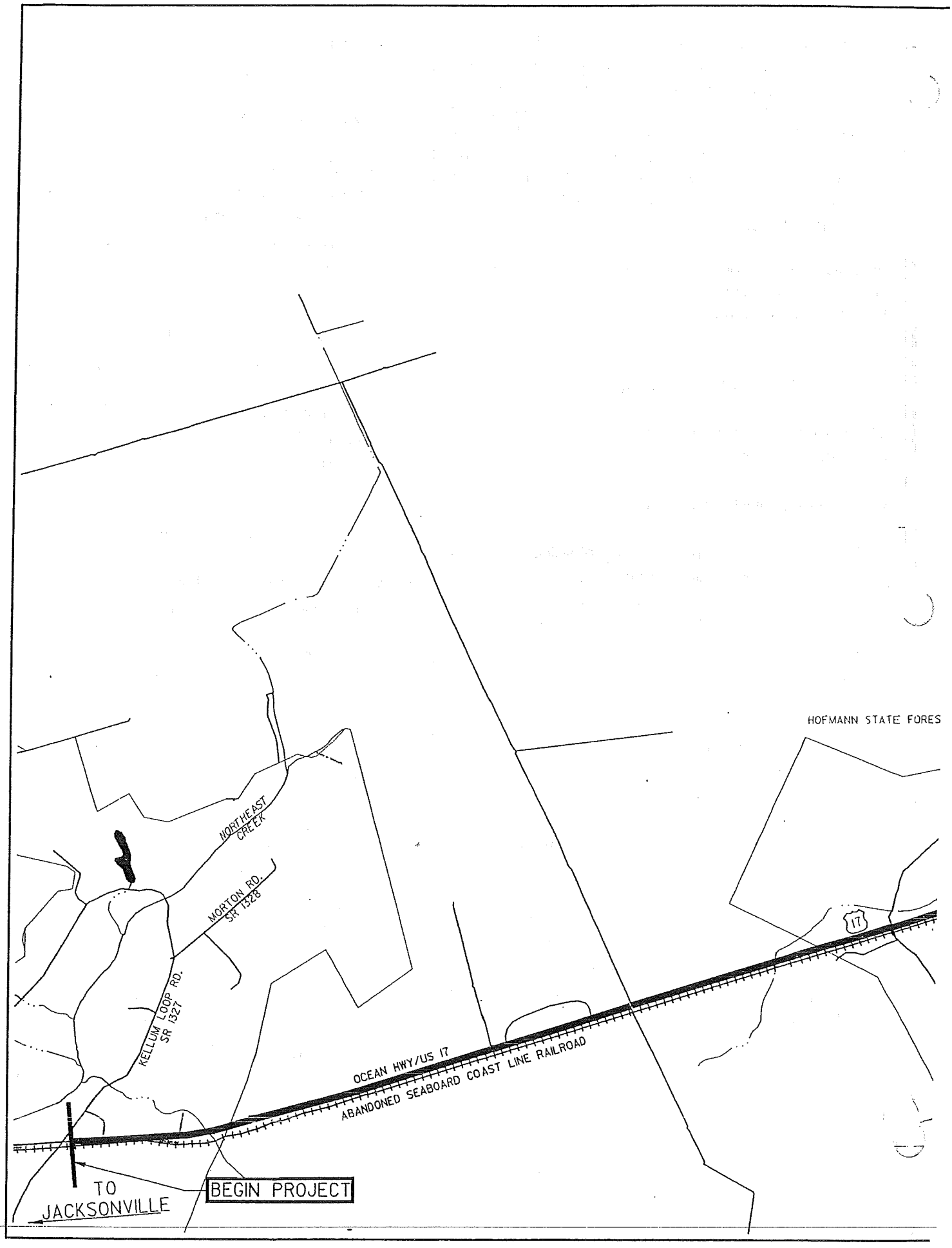
Q. Will my driveway still connect to US 17?

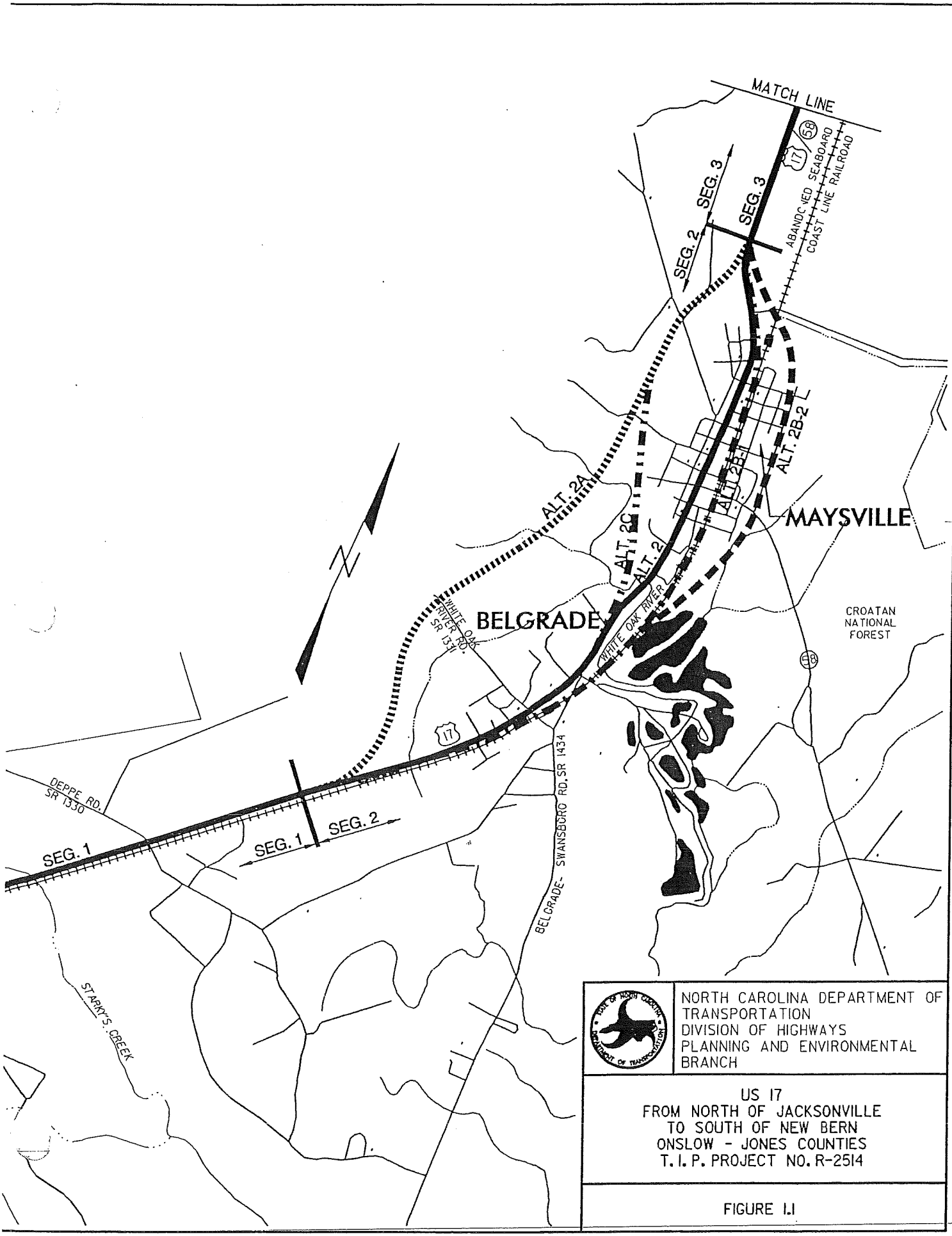
A. Yes. Access to US 17 along its current alignment will be maintained; however, the bypasses will operate as controlled access facilities. Controlled access means access will only be permitted at designated points, for example, an intersection with State and secondary roads.

Q. Will my opinion mean anything?

A. Yes. Your input into the planning process of this important roadway project is used to help determine which alternative has the least overall impacts to the communities social, economic and cultural environment.

As always, your questions and comments are greatly appreciated. The NCDOT publishes a right-of-way acquisition brochure with answers to frequently asked questions. Brochures will be available at the Citizens Informational Workshop, however, if you would like a copy of the brochure mailed to you, please call the hotline.


HOFMANN STATE FORES
NORTHEAST CREEK
MORTON RD. SR 1328
KELLUM LOOP RD. SR 1327
17
OCEAN HWY/US 17
ABANDONED SEABOARD COAST LINE RAILROAD
TO JACKSONVILLE
BEGIN PROJECT

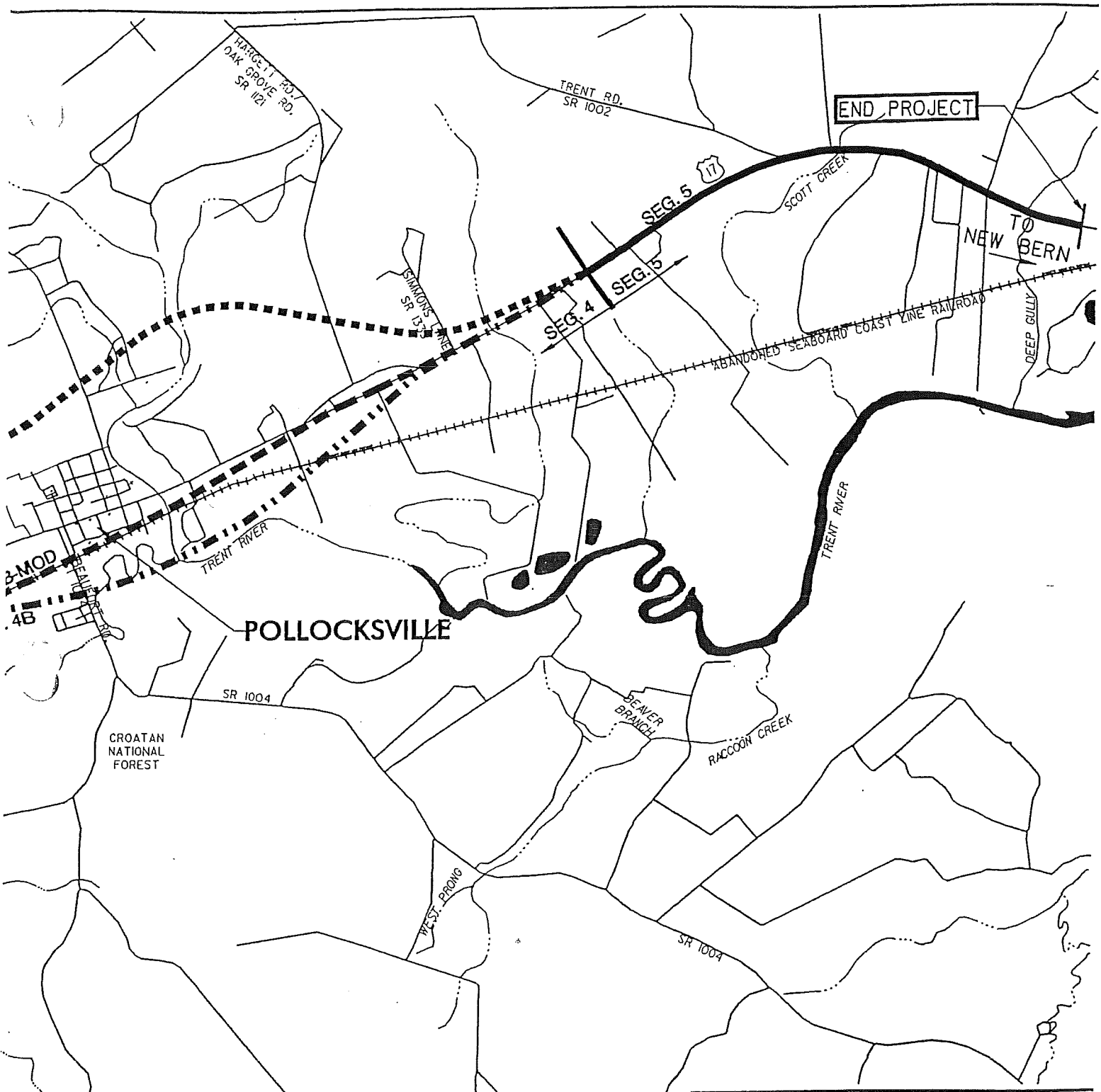


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND ENVIRONMENTAL BRANCH

US 17
FROM NORTH OF JACKSONVILLE
TO SOUTH OF NEW BERN
ONSLOW - JONES COUNTIES
T. I. P. PROJECT NO. R-2514

FIGURE 1.1

N
ALT. 4C
SEG. 3
SEG. 4
SEG. 3
RIGGSTOWN RD
SR 1112
RAVENWOOD RD
SR 1108
WILL CREEK
US 17 / NC 58
ABANDONED SEABOARD COAST LINE RAILROAD
MATCH LINE



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND ENVIRONMENTAL BRANCH

US 17
FROM NORTH OF JACKSONVILLE
TO SOUTH OF NEW BERN
ONSLOW - JONES COUNTIES
T. I. P. PROJECT NO. R-2514

FIGURE 1.2

You CAN Be Involved!

The Public Involvement Program provides interested citizens the opportunity to participate in the planning process and understand the overall study process and schedule. Some of these public involvement activities include:

☞ **Arranging a small group meeting for your neighborhood or organization.** The Study Team will be available through-out the study process to meet and discuss the project in informal question and answer sessions with neighborhood groups and civic organizations. For details, call the US 17 Study Hotline at **1-800-813-0323**.

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Write:

US 17 Jacksonville to New Bern Widening Study
5 West Hargett Street, Suite 910
Raleigh, NC 27601-1311

or

Mr. H. Franklin Vick, P.E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

US 17 Jacksonville to New Bern Widening Study

The second citizen informational workshop for the US 17 study and Environmental Assessment is tentatively scheduled for fall 1996. The purpose of the workshop is to provide citizens the opportunity to review and comment on the roadway design plans. Members of the Study Team will be available to discuss the project and answer questions.

US 17 Jacksonville to New Bern Widening Study
5 West Hargett Street
Suite 910
Raleigh, NC 27601-1311

Take a Look...

On the inside of this newsletter are maps of the US 17 project area showing the preliminary alternative corridors.

US 17 JACKSONVILLE TO NEW BERN NEWSLETTER

TIP No. R-2514
November 24, 1998

This is the third in a series of information newsletters prepared as a part of the planning process for improving US 17 between Jacksonville and New Bern. The Proposed improvements include widening existing US 17 to a multi-lane roadway with bypasses around Belgrade, Maysville and Pollocksville.

Project Status

Early in the study process, the study team developed "suitability mapping" for the study area. Suitability mapping is the process of collecting available information for the study area regarding existing and planned business and residential development, community facilities, parks and recreational areas, known historical and archeological sites, natural habitat areas, floodplains, farmlands, wetlands, and threatened and endangered species. The data is mapped and preliminary alternatives are identified that avoid or minimize impacts to the human and natural environment to the fullest extent practicable.

In the July, 1996 newsletter, the preliminary alternatives for the US 17 project were presented. Based on comments received on these alternatives from property owners and citizens, local officials and state and federal environmental agencies, the alternatives to be evaluated in detail in the environmental documents were selected. The alternatives selected for detailed study are shown in Figures 1 & 2.

One of the historical properties identified on the suitability mapping was the Foscue Plantation House. The Foscue Plantation House is located north of Pollocksville, on the east side of US 17, 1.5 miles south of the junction of SR 1002 in Jones County. The house was listed in the National Register of Historic Places in 1971. The nomination included only the house and its immediate setting. In October 1998, the National Register nomination was revised to include the house and 1379 acres of adjoining land. This expansion of the historic property associated with Foscue Plantation House resulted in all the alternatives selected for detailed evaluation having an impact on a National Register Historic Site.

Federal Law prohibits the U. S. Department of Transportation taking of land from a property listed in or eligible for the National Register unless it can be demonstrated there is no prudent and feasible alternative to taking the lands and all possible measures to minimize harm to the property are included.

During the coming months, the North Carolina Department of Transportation and the U. S. Department of Transportation Federal Highway Administration will be working with state and federal environmental agencies and the Foscue Family to identify additional alternatives. These new alternatives will include 1) alternatives that avoid lands associated with the Foscue Plantation House and 2) alternatives through lands associated with the Foscue Plantation House that minimize harm to the historic aspects of the property.

Right-of-Way and Construction

The NCDOT Draft 2000-2006 Transportation Improvement Program (TIP) indicates that right-of-way acquisition will begin in fiscal year 2002 with construction beginning in fiscal year 2004.

As always, your questions and comments are greatly appreciated.

US 17 HOTLINE

Call the toll free hotline

1-800-813-0323

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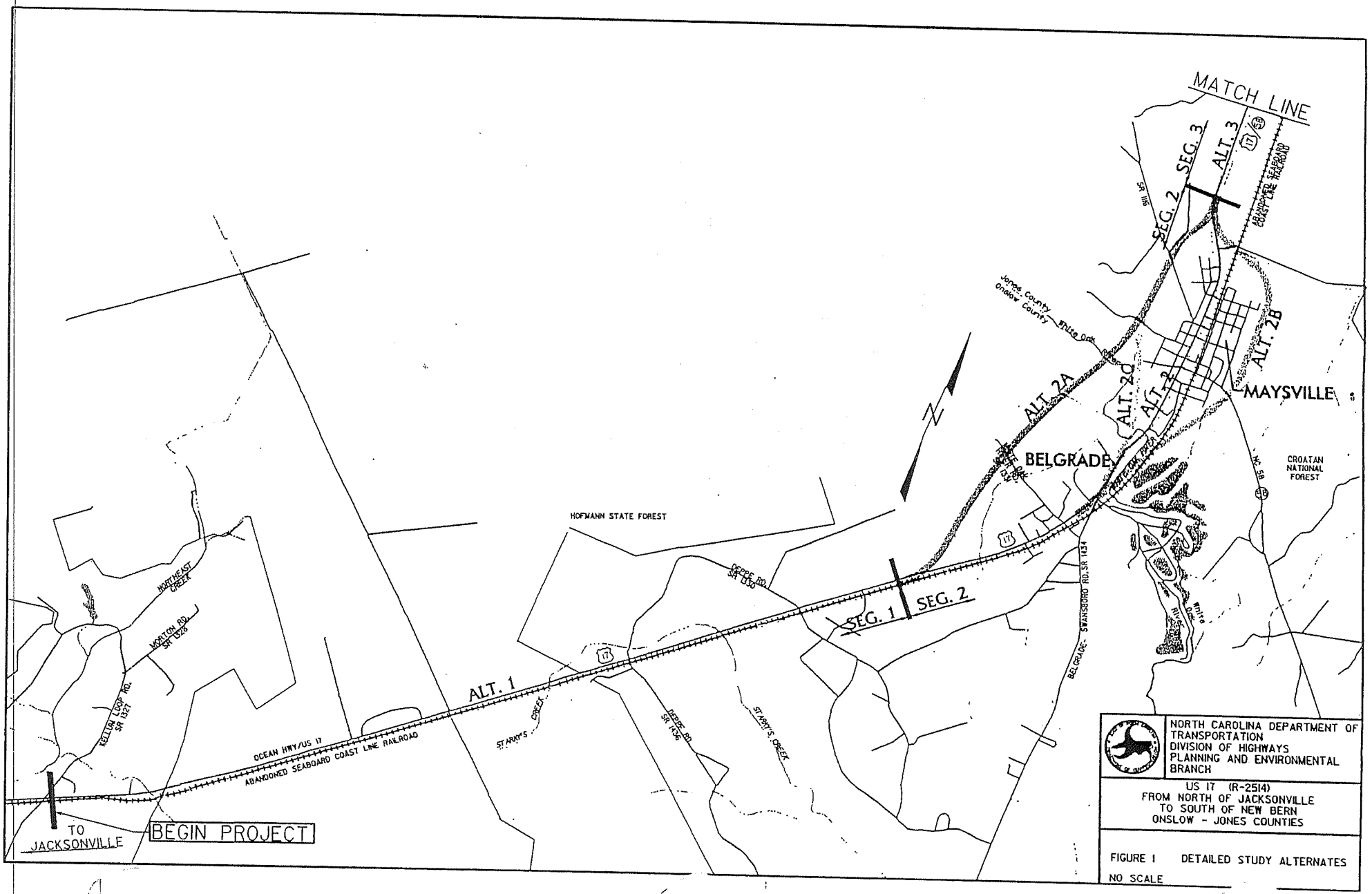
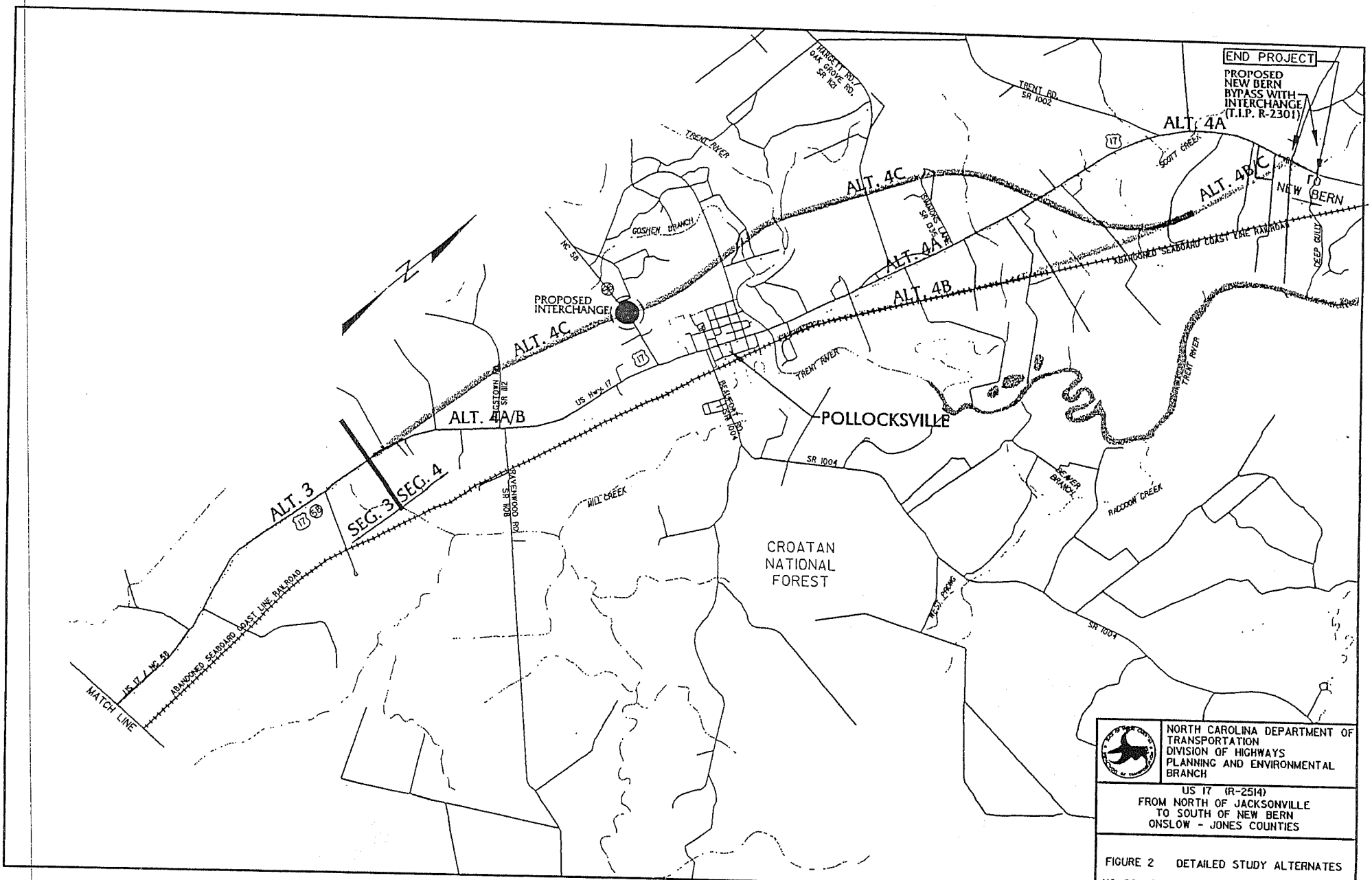

MATCH LINE
SEG. 3
ALT. 3
SEG. 2
ALT. 2B
ALT. 2A
ALT. 2C
MAYSVILLE
BELGRADE
CROATAN NATIONAL FOREST
HOFMANN STATE FOREST
SEG. 1
SEG. 2
ALT. 1
BEGIN PROJECT
TO JACKSONVILLE
OCEAN HWY/US 17
ABANDONED SEABOARD COAST LINE RAILROAD
NORTHEAST CREEK
MORTON RD. SR 1528
KELLUM LOOP RD. SR 1527
DEEPE RD. SR 1530
DEEPE RD. SR 1436
ST. ARMY'S CREEK
BELGRADE - SWANSBORO RD. SR 1434
WHITE OAK RIVER
Jones County
Onslow County
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND ENVIRONMENTAL BRANCH
US 17 (R-2514)
FROM NORTH OF JACKSONVILLE
TO SOUTH OF NEW BERN
ONSLOW - JONES COUNTIES
FIGURE 1 DETAILED STUDY ALTERNATES
NO SCALE


END PROJECT
PROPOSED NEW BERN BYPASS WITH INTERCHANGE (T.I.P. R-2301)
TO NEW BERN
ALT. 4A
ALT. 4B
ALT. 4C
ALT. 4A/B
PROPOSED INTERCHANGE
POLLOCKSVILLE
CROATAN NATIONAL FOREST
ALT. 3
SEG. 3
SEG. 4
MATCH LINE
US 17 / NC 58
ABANDONED SEABOARD COAST LINE RAILROAD
US Hwy 17
SR 1004
SR 1008
TRENT RIVER
SCOTT CREEK
GOSHEN BRANCH
MILL CREEK
RACCOON CREEK
BEAVER BRANCH
WEST PRONG
DEEP GULLY
TRENT RD SR 1002
HARVEY RD / OAK GROVE RD SR 1101
RAVENWOOD RD
BEAUFORT RD SR 1004
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND ENVIRONMENTAL BRANCH
US 17 (R-2514)
FROM NORTH OF JACKSONVILLE
TO SOUTH OF NEW BERN
ONSLOW - JONES COUNTIES
FIGURE 2 DETAILED STUDY ALTERNATES
NO SCALE

You CAN Be Involved!

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☛ **Arranging a small group meeting for your neighborhood or organization.** The Study Team will be available through-out the study process to meet and discuss the project in informal question and answer sessions with neighborhood groups and civic organizations. For details, call the US 17 Study Hotline at **1-800-813-0323.**

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☛ **Calling or writing the study team.** The toll-project hotline provides direct contact betw citizens and the Study Team. Verbal comments will continue to be documented and considered during the study. Call the project hotline at **1-800-813-0323.** You also may write to the US 17 Study or directly to NCDOT at the following addresses:

Write:

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601-1742

or

Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall
Suite 1450
Raleigh, NC 27601-1742

STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION *

US 17 JACKSONVILLE TO NEW BERN NEWSLETTER

TIP No. R-2514
December 13, 1999

This is the fourth in a series of information newsletters prepared as a part of the study to improve US 17 between Jacksonville and New Bern. Proposed Improvements include widening existing US 17 to a multi-lane roadway with potential bypasses around Belgrade, Maysville and Pollocksville.

Current Project Activities

The NCDOT has adopted the 2000-2006 Transportation Improvement Plan, or TIP, which includes this project (R-2514). The TIP calls for right-of-way acquisition to begin in fiscal year 2002 with construction beginning in fiscal year 2004. Right-of-way acquisition and construction will begin on the segment south of Belgrade first. For more information on all planned transportation projects, visit the DOT's web site at *http://www.dot.state.nc.us/*

Widening From North of Jacksonville to South of Belgrade

The segment south of Belgrade has been separated from the remainder of the project because of the minimal impacts. This segment is proposed to be widened to the east along the abandoned railroad right-of-way from SR 1327 (Kellum Loop Road)/SR 1410 (Halltown Road) north of Jacksonville to SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road) south of Belgrade. An Environmental Assessment for this segment has been approved and circulated for review. A formal public hearing will be held in the near future. Check your local newspaper for advertisement of hearing.

The hearing will provide additional information on the proposed project and allow local citizens a chance to provide any comments concerning the project.

Field personnel will be staking out the corridors and gathering environmental data during the next few months from south of Belgrade to north of Pollocksville. If you have any questions or concerns about someone being on your property, please feel free to contact us.

Improvements From South of Belgrade to Jones-Craven County Line

As stated in the last Newsletter, additional alternatives are being studied in the Pollocksville area. These alternatives avoid or minimize impacts to sensitive social and cultural resources, and will be evaluated with the other alternatives previously presented.

All alternatives will be presented to the Federal Highway Administration (FHWA), U.S. Army Corp of Engineers (COE), the State Historic Preservation Office (SHPO) and the other federal and state agencies that form the NEPA/404 Merger Project Team to discuss minimization and avoidance alternatives. The study will evaluate each alternative based on environmental, social, engineering and economic factors.

Anyone interested in forming a neighborhood group and having the Study Team meet with them to discuss this project may contact the US 17 Hotline.

Once the alternatives are studied, presented to the NEPA/404 Merger Project Team, and concurred upon, public workshops will be held to receive additional public input. The Study Team is open to any and all suggestions and would like to receive your comments as part of our evaluation so feel free to call or write us at any time.

As always, your questions and comments are greatly appreciated. The NCDOT publishes a right-of-way acquisition brochure with answers to frequently asked questions. Brochures will be available at the upcoming Public Hearing on the portion of the project South of Belgrade, however, if you would like a copy of the brochure mailed to you, please call the hotline.

US 17 HOTLINE
Call the toll free hotline

1-800-813-0323

Tre' Dugal, P.E. or David Wilver, P.E. can answer your questions between 8:00 a.m. and 5:00 p.m.

You CAN Be Involved!

The Public Involvement Program provides interested citizens the opportunity to participate in the planning process and understand the overall study process and schedule. Some of these public involvement activities include:

☞ **Arranging a small group meeting for your neighborhood or organization.** The Study Team will be available through-out the study process to meet and discuss the project in informal question and answer sessions with neighborhood groups and civic organizations. For details, call the US 17 Study Hotline at **1-800-813-0323.**

☞ **Adding your name to the mailing list.** If you would like to receive future newsletters or meeting notices and have not already requested to be on the mailing list, call the US 17 Hotline at **1-800-813-0323** or write to the address below.

☞ **Calling or writing the study team.** The toll-free project hotline provides direct contact between citizens and the Study Team. Verbal comments will continue to be documented and considered during the study. Call the project hotline at **1-800-813-0323.** You also may write to the US 17 Study or directly to NCDOT at the following addresses:

Write:

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601-1742

or

Mr. William D. Gilmore, P.E., Manager
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

US 17 Jacksonville to New Bern Widening Study

A citizen informational workshop for the US 17 study is tentatively scheduled for the Spring of 2000. The purpose of the workshop is to provide citizens the opportunity to review and comment on the study alternatives. Members of the Study Team will be available to discuss the project and answer questions.

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall
Suite 1450
Raleigh, NC 27601-1742

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

US 17 JACKSONVILLE TO NEW BERN
NEWSLETTER

TIP No. R-2514
November 14, 2000

This is the fifth in a series of informational newsletters prepared as a part of the study to improve US 17 between Jacksonville and New Bern.

NCDOT has prepared its Draft 2002-2008 Transportation Improvement Plan (TIP), which includes this project. The TIP calls for right-of-way acquisition to begin in fiscal year 2002 with construction beginning in fiscal year 2004. Right-of-way acquisition and construction will begin on the segment south of Belgrade first. For more information on all planned transportation projects, visit the DOT's web site at *http://www.dot.state.nc.us/*

Current Project Activities

Field personnel have spent the past five months staking and delineating an approximately 1000-foot corridor for each of the alternatives. The proposed right-of-way required is approximately 250 feet with additional area as needed for interchanges. The wider corridors are needed to allow for flexibility in minimizing impacts.

We are currently developing preliminary design plans for each of the alternatives to determine which one will have the least overall impacts to homes, businesses, communities, streams, wetlands and historic properties. The preliminary designs will then be presented to the Project Team, and upon concurrence, a public hearing will be held to receive additional public input.

Widening From North of Jacksonville to South of Belgrade

The segment south of Belgrade has been separated from the remainder of the project because of minimal impacts and logical termini. An Environmental Assessment for this segment has been approved and circulated for review and comments.

A formal public hearing was held on June 27, 2000 and a Finding of No Significant Impact (FONSI) was signed on August 25, 2000. The right-of-way plans are currently being prepared and are scheduled for completion in January, 2001. Purchase of land for right-of-way is anticipated to begin in October 2001.

Community Involvement

As some of you know, this past spring, the Study Team was involved in gathering some community specific information on four communities. These communities included Chadwick, Hatchville, Garnett Heights and Goshen. The one-on-one survey information was compiled and used to prepare a Community Impact Assessment Report. The report covers individual and community related issues as related to the existing highway and the proposed alternatives. This concept of gathering information from the citizens is very informative and gets to the issues of the communities involved in the highway planning process.

The Study Team has recently been conducting additional community assessments in the communities of Belgrade, Maysville, Pollocksville, Murphytown/Oak Grove and the Ten Mile Fork area to expand on the original report issued this past summer.

If you live in any of these communities and would like to participate in a one-on-one survey to assist us in gathering additional information, please contact us using the US 17 HOTLINE. If you would like to form a small group and host a meeting, please contact us on the hotline.

US 17 Jacksonville to New Bern Widening Study

A citizen informational workshop for the US 17 study has been scheduled for Tuesday, November 28, 2000 from 4:00 p.m. to 7:00 p.m. at the Maysville Elementary School. The purpose of the workshop is to provide citizens the opportunity to review and comment on the study alternatives. Members of the Study Team will be available to discuss the project and answer questions.

You CAN Be Involved!

The Public Involvement Program provides interested citizens the opportunity to participate in the planning process and understand the overall study process and schedule. Some of these public involvement activities include:

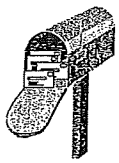
☞ **Arranging a small group meeting for your neighborhood or organization.** The Study Team will be available through-out the study process to meet and discuss the project in informal question and answer sessions with neighborhood groups and civic organizations. For details, call the US 17 Study Hotline at **1-800-813-0323**.

☞ **Adding your name to the mailing list.** If you would like to receive future newsletters or meeting notices and have not already requested to be on the mailing list, call the US 17 Hotline at **1-800-813-0323** or write to the address below.

☞ **Calling or writing the study team.** The toll-free project hotline provides direct contact between citizens and the Study Team. Verbal comments will continue to be documented and considered during the study. Call the project hotline at **1-800-813-0323**. You also may write to the US 17 Study or directly to NCDOT at the following addresses:

Write:

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601-1742



or

Mr. John Conforti., Project Manager
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

US 17 HOTLINE
1-800-813-0323

Tre' Dugal, P.E. or David Wilver, P.E. can answer your questions between 8:00 a.m. and 5:00 p.m.

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall
Suite 1450
Raleigh, NC 27601-1742

STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION *

Citizens Informational Workshop
Thursday, November 28, 2000, 4-7 p.m.
Maysville Elementary School

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

US 17 CORRIDOR NEWS

PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS

US 17 Corridor Public Hearing Scheduled for August

The N.C. Department of Transportation (NCDOT) is conducting planning studies of a 16-mile portion of US 17 from SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road), south of Belgrade to the Jones/Craven County line, south of New Bern. The proposed project would widen current portions of existing US 17, as well as move some portions of the road to a new location.

- **Tuesday, August 9, 2005:**
  Citizens Informational Workshop – 4:00 p.m. to 8:00 p.m.
  Pollocksville Elementary School Multi-Purpose Room, 300 Trent Street, Pollocksville
- **Thursday, August 11, 2005:**
  Citizens Informational Workshop – 4:00 p.m. to 8:00 p.m.
  Maysville Elementary School Gymtorium, 814 Sixth Street, Maysville
- **Tuesday, August 16, 2005:**
  Pre-Hearing Workshop – 4:00 p.m. to 6:00 p.m.
  Pollocksville Elementary School Multi-Purpose Room, 300 Trent Street, Pollocksville
- **Tuesday, August 16, 2005:**
  Corridor Public Hearing – 7:00 p.m.
  Pollocksville Elementary School Multi-Purpose Room, 300 Trent Street, Pollocksville

A Draft Environmental Impact Statement (DEIS) was completed as part of the project and is available for your review at the following locations: Pollocksville Town Hall located at 103 Main Street, Pollocksville; Maysville Town Hall Located at 404 Main Street, Maysville; and the NCDOT Resident Engineer's Office Located at 209 S. Glenburnie Road, New Bern.

In August, NCDOT will hold two Citizens Informational Workshops, one Pre-Hearing Workshop, and one Corridor Public Hearing regarding the project at the times and places listed to the left.

NCDOT and project team representatives will be available during the hours listed to answer questions and receive comments about the proposed project as well as the 13 Detailed Study Alternatives. The Citizens Informational Workshops are an opportunity for you to meet with the project team, ask questions, review the alternatives and provide comments.

The Corridor Public Hearing is an occasion for you to provide comments and aid NCDOT in the selection of an alternative. Please note that written comments will be accepted up to 30 days after the Corridor Public Hearing.

www.ncdot.org

How Can I Get Involved?

Public participation is an important part of the planning process. As the project progresses there will be opportunities for you to give NCDOT your input and comments, and ask questions. Keep your eye out for subsequent project newsletters and newspaper notices advertising workshops and meetings. You are also welcome to contact the US 17 Study Hotline at 1-800-813-0323 and the project team to request a group meeting or obtain additional information.

NCDOT invites you to attend the Corridor Public Hearing on August 16th, 2005, 7:00 p.m. at the Pollocksville Elementary School to review the proposed alternatives shown on the map. If you are not able to attend the meeting, comments will be accepted until September 16, 2005. If you or someone that you know might like to be on the project mailing list, please call, write, or email us (see contact information on page eight).

For more information about the history and documentation of US 17, Right of Way and general information about NCDOT, visit our website at:
www.ncdot.org

Why is this Project Necessary?

US 17 was identified as part of the Intra-state System, Strategic Highway Corridor Network, and the North Carolina Strategic Corridor System. Further information about these plans is available at the NCDOT web site (www.ncdot.org) or from the project team. In order to address the current and projected traffic conditions and land-use plans from SR 1330/SR 1439 south of Belgrade to the Jones/Craven County line south of New Bern, improvements need to be made so that US 17 can be fully integrated into the plans and help the community meet its future transportation and economic needs.

How Does the Process Work?

Over the past several months, NCDOT evaluated many options for improving US 17 from SR 1330/SR 1439 south of Belgrade to the Jones/Craven County line, south of New Bern, which included improving a portion of existing US 17.

First rounds of evaluations were conducted looking at 23 alternatives. Each alternative was evaluated using aerial photography, field studies, and existing data. These alternatives were compared based on engineering design issues along with human and natural environment impacts.

Based on these evaluations NCDOT selected 13 preliminary corridors for more detailed studies. The results of these studies are summarized in the Draft Environmental Impact Statement (DEIS). These corridors are known as the Detailed Study Alternatives and are currently being provided to the public for review and comment prior to the selection of a preferred alternative. These alternatives are shown on the enclosed map.

What Can I Expect?

The steps to complete planning, design, right of way, and construction projects take several years. NCDOT will continue to analyze the alternatives and solicit your comments at various stages of the process. Your input will be an integral part of the selection of the preferred alternative.

What is the Project Timeline?

This planning process can be divided into eight steps, as indicated below. The US 17 project is at Step 5.

Step 1
- Data collection
- Inventory of planning issues
- Definition of study area
- Preliminary corridor development

Step 2
- First Citizens Informational Workshop
- Documentation and evaluation of community concerns
- Field studies
- Identification of preliminary corridors
- Second Citizens Informational Workshop
- Selection of alternatives for detailed study

Step 3
- Engineering studies
- Detailed field studies
- Environmental analyses

Step 4
- Draft EIS
- Citizens Informational Workshop

Step 5
- Citizens Informational Workshops
- Pre-Hearing Workshop
- Corridor Public Hearing

Step 6
- Review comments on draft environmental document
- Review Public Hearing transcript and comments
- Select preferred alternative

Step 7
- Refine the design of the preferred alternative
- Quantify impacts
- Minimize impacts
- Final EIS

Step 8
- Design Public Hearing

What is the Right of Way Plan?

Right of way acquisition is tentatively scheduled for 2009. Some land will be needed for construction of this project. NDCOT Right of Way Agents will be available at the Citizens Informational Workshops and the Corridor Public Hearing to provide you with more information about the Right of Way process.

Traffic Stop Glossary

North Carolina State Environmental Policy Act (SEPA), requires the preparation of an Environmental Impact Statement (EIS) for publicly funded projects that have the potential to positively or negatively impact the environment. An EIS is also required under the National Environmental Policy Act (NEPA) for projects that receive federal funds. NEPA is a federal law enacted in 1970 that requires the Federal Government to consider the environmental impacts of, and alternatives to, major proposed actions in its decision-making processes. The act is the basic national charter for the protection of the environment. It requires the preparation of an EIS for every major federal action that may significantly positively or negatively affect the quality of the human or natural environment.

Right of Way, land purchased by NCDOT for roadway construction projects. Rights of Way are purchased prior to construction of a project.

Controlled Access (COA), this is also referred to as Access Control. COA is the access of the public into (ingress) and out of (egress) properties abutting a roadway.

There are four COA types:

Full COA, preference is given to through traffic by providing connections to a road only via ramps at interchanges. No private driveway connections allowed.

Limited COA, connections to a road provided only via ramps at interchanges (major crossings) and (minor crossings and service roads). Nor private driveway connections allowed.

Partial COA, connections to a road provided via ramps at interchanges, and private driveways. Private driveway connections are normally defined as a maximum of one connection per parcel. One connection is defined as one into (ingress) and one (out of) egress point. The use of shared or consolidated connections is highly encouraged. Connections may be restricted or prohibited if alternate access is available through other adjacent public roadways.

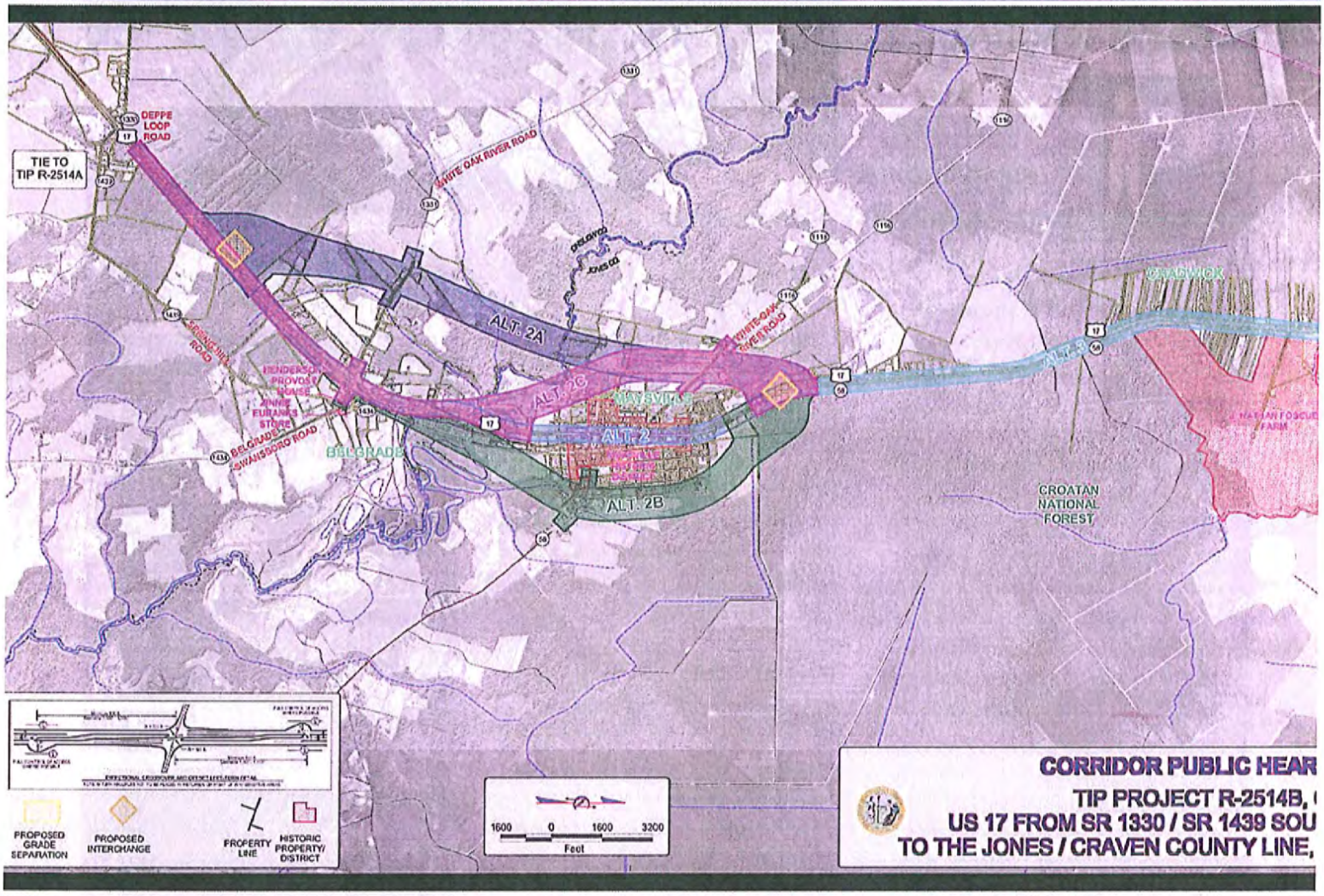
No COA, connections to a road provided via ramps at interchanges, and private driveways. Normally, private driveway connections are defined as one connection per parcel. Additional connections may be considered if they are justified and if such connections do not negatively impact traffic operations and public safety.

Project Map

The Corridor Public Hearing Map can be downloaded from the web in PDF format at www.ncdot.org. Or attend one of the scheduled Citizens Informational Workshops and/or Corridor Public Hearing listed on the front page to view a detailed map of the study.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

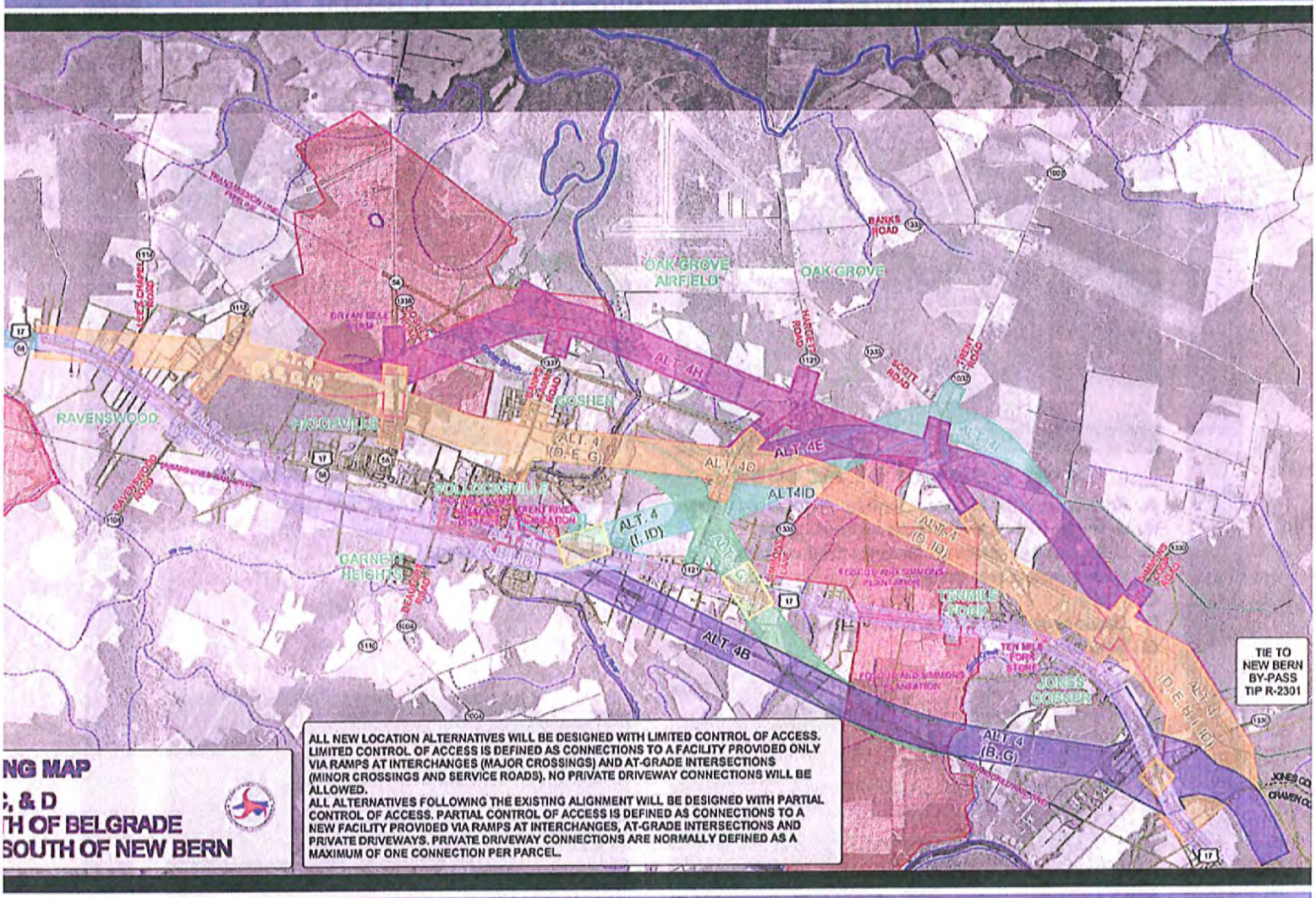
US 17 CORRIDOR PU



During this developmental stage of the project, the public's active role in the location and design features help shape the design of these proposed roadways before construction begins.

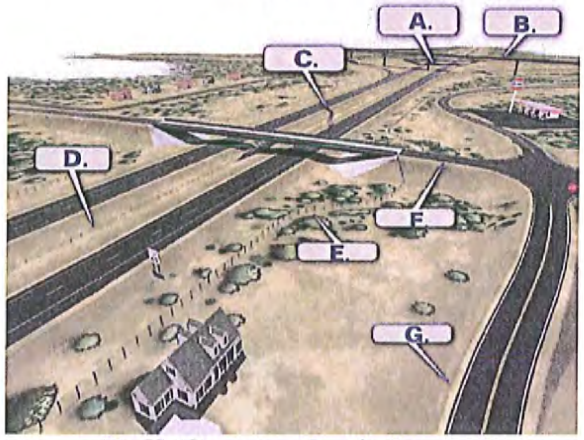
BLIC HEARING MAP

PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS



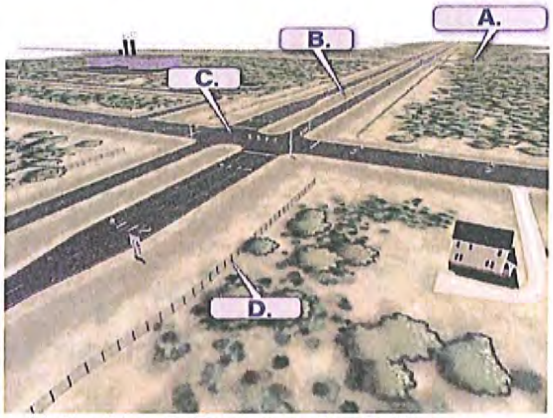
The US 17 Corridor project currently has three sections with a total of 13 alternatives.

These four renderings illustrate the types of Control of Access. The images are for illustrative purposes and the actual placement of design elements may vary according to NCDOT, federal, and community guidelines.



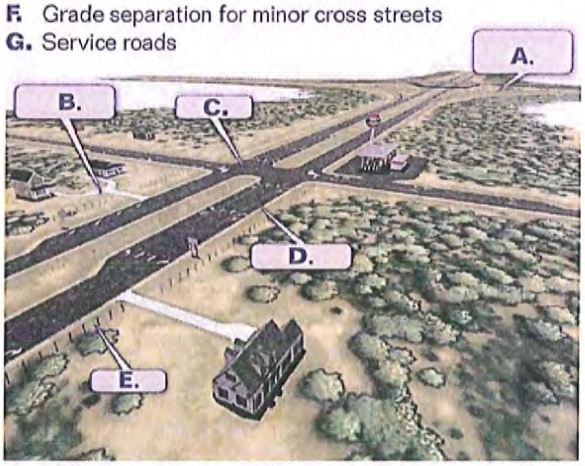
Full Control of Access

A. Access provided at interchange for major cross streets
B. Example: High-speed directional interchange
C. U-Turn median openings for authorized vehicles
D. Wide medians with guiderail
E. Fence
F. Grade separation for minor cross streets
G. Service roads



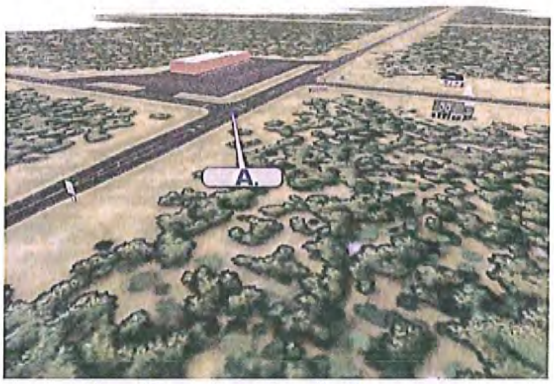
Limited Control of Access

A. Access provided at public streets only
B. Use of medians
C. Use of traffic signals
D. Fence



Partial Control of Access

A. Access provided at interchange for major cross streets and at-grade intersections for minor cross streets
B. Driveways allowed but access is right-in/right-out only shared driveway preferred.
C. No traffic signals at intersections
D. Use of acceleration and deceleration lanes
E. Fence



No Control of Access

A. Center turn lane

PROJECT SAMPLES

Citizens Informational Workshops, Pre-Hearing Workshops, and Public Hearings are ways for you to obtain more information about the project and right of way acquisition, especially property owners who are directly impacted by the proposed right of way.

Public Hearing Officers will be available to explain the US 17 Corridor Map in detail and provide answers to many design, right of way, environmental, and relocation questions. They will also respond to telephone calls and letters voicing concerns about the project. In some circumstances, personal meetings are arranged with property owners to provide Information and receive comments.

This exchange of ideas and information is critical in order to effectively incorporate the needs of the community into the final design of the project.

If you have questions regarding the Citizens Informational Workshops, Pre-Hearing Workshop and/or the Corridor Public Hearing please contact Ed Lewis, Human Environment Unit, at 1583 Mail Service Center, Raleigh, NC 27699 -1583, Phone (919) 715-1593, or email elewis@dot.state.nc.us.

North Carolina
Department of Transportation
Project Development and
Environmental Analysys
1548 Mail Service Center
Raleigh, NC 27699-1548

Share Input and Get Involved

The Public Involvement Program provides interested citizens the opportunity to participate in the planning process and understand the overall study process and schedule. Questions and comments regarding the US 17 project (R-2514) may be directed to:

US 17 Improvements
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601 –1742
1-800-813-0323
wstafford@wilbursmith.com
or
Mr. John Conforti, REM
Project Development Engineer
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center Raleigh, NC 27699 – 1548
(919) 733-7844 Ext 208
jgconforti@dot.state.nc.us

NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in the Citizens Informational Workshops, Pre-Hearing Workshop and/or the Corridor Public Hearing to comply with the Americans with Disabilities Act. If you have questions regarding the workshops or hearing please contact Mr. Ed Lewis, Human Environment Unit, at 1583 Mail Service Center, Raleigh, NC 27699 -1583, Phone (919) 715-1593, or email elewis@dot.state.nc.us.

Please contact Mr. Lewis as early as possible so that arrangements can be made.

An Environmental Impact Statement (EIS) was completed as part of the project and is available for your review at the following locations:

Pollocksville Town Hall
located at 103 Main Street, Pollocksville

Maysville Town Hall
Located at 404 Main Street, Maysville

The NCDOT Resident Engineer's Office
Located at 209 S. Glenburnie Road, New Bern

www.ncdot.org

IMPROVEMENTS IN ONSLOW AND JONES COUNTIES

NCDOT PROJECT NEWS

US 17 - State Transportation Improvement Program

Project No. R-2514 B,C, and D

The North Carolina Department of Transportation is conducting preliminary road design studies of a 16 mile portion of US 17 from SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road), south of Belgrade, to the Jones/Craven County line, south of New Bern. The proposed project would widen current portions of existing US 17, as well as move some portions of the existing road to a new location.

What Is The Status Of The Project?

The State Draft Environmental Impact Statement (SDEIS) was signed on August 31, 2004. The SDEIS divided the 16 mile project into three segments and identified a total of 13 different alternatives (See Figure 1). The environmental impacts of each alternative were also identified in the SDEIS.

The North Carolina Department of Transportation (NCDOT) scheduled two informational workshops, one pre-hearing workshop, and one corridor public hearing in August 2005. At these meetings NCDOT and project team representatives were available to answer questions and receive comments about the proposed alignments and the findings of the SDEIS. A wide range of comments were received, although many focused on issues related to existing traffic patterns and potential effects on housing and communities. Many participants also requested copies of the presentation materials. Written comments were accepted from the public for a period of 30 days after the Corridor Public Hearing.

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What Is The Next Step?

Continued from page 3

Due to the complexity of the project, particularly the northern section, NCDOT is breaking the LEDPA decisions for preferred alternatives into two sections. The first decision would be made by the end of 2006 for the alternatives in the southern portion of the project area. This is from the south of Maysville to just south of SR 1114 (Lee's Chapel Road), shown as Segment 2 and Segment 3 in Figure 1. For the remaining northern portion of the project around Pollocksville (Segment 4), a LEDPA determination is expected in early 2007. Once the preferred alternative is identified, detailed studies will continue to minimize impacts as much as possible. Breaking the project into sections like this will allow the project to move forward at a faster pace. The US 17 Project is at Step 6, described on page 3.

How Can I Get Involved?

Public participation is an important part of the planning process for US 17. As the project progresses there will be opportunities for you to give NCDOT your input and ask questions. Keep your eye out for subsequent project newsletters and newspaper notices advertising workshops and meetings. You are also welcome to contact the US 17 Study Hotline at 1-800-813-0323 to request a group meeting or obtain additional information.

CONTACT US

The Public Involvement program provides interested citizens the opportunity to gain information about the project and participate in the planning process. Questions and comments regarding the project can be directed to:

Mark Pierce, PE
Project Development and
Environmental Analysis Branch
1548 Mail Service Center (MAIL)
Raleigh, NC 27699-1548
mspierce@dot.state.nc.us
(919) 733-7844 x 214

www.ncdot.org

R-2154 - US 17 IMPROVEMENTS NEWSLETTER

North Carolina Department of Transportation
Project Development and
Environmental Analysis Branch
1548 Mail Service Center
Raleigh, NC 27699-1548

Continued from page 1

At the end of the 30-day comment period NCDOT scheduled a post-hearing meeting with the project team where comments from the workshops and the public hearing were reviewed to determine which alternatives to carry forward for detailed design studies.

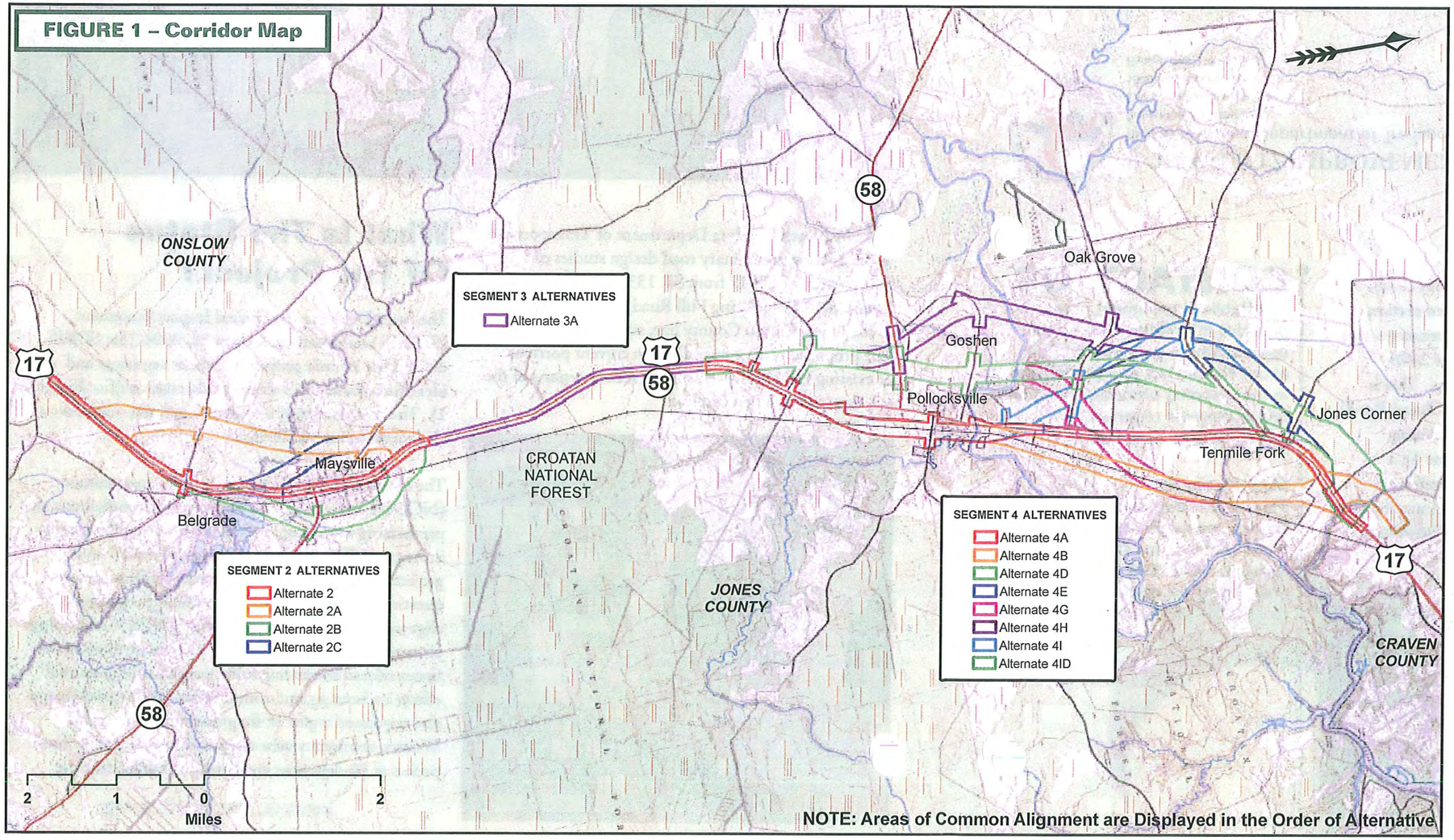
Public involvement is considered critical to the future success of the project and the selection of the appropriate alignment. Subsequently, NCDOT has spent substantial time evaluating the public involvement process and comments received to date. This, along with a change in status of US 17 to a Strategic Highway Corridor (SHC) in September of 2004, has resulted in a delay of the selection of alternatives for detailed design studies that were originally expected to be completed by the start of 2006.

The SHC initiative seeks to identify, protect, and maximize the use of highway corridors that play a critical role in regional or statewide mobility. To meet the SHC requirements for US 17 it is proposed that the design be modified from a partial controlled access facility to a fully controlled access facility where possible. The current design allows driveways and cross streets to intersect directly with the proposed road. The revised design will require interchanges for major cross streets such as a U.S. Highway or a high volume local road. For minor cross streets such as local neighborhood roads, a bridge will cross over the highway, but won't provide direct access to the highway. In order to access the highway, drivers will need to travel to a major cross street and use the interchange there. The changes to the design are currently being made.

What Is The Next Step?

This project is a high priority for NCDOT to complete and the next step, following the Section 404/NEPA Merger 01 Process, is a field meeting to determine bridge lengths, then to select the least environmentally damaging practicable alternative (LEDPA).

FIGURE 1 – Corridor Map



Steps for strategic decisions in the NEPA project development and permitting process

1. Purpose and Need and Study Area Defined
2. Detailed Study Alternatives Carried Forward
2 A. Bridging Decisions and Alignment Review
3. LEPDA Preferred Alternative Selection
4 A. Avoidance and Minimization
4 B. 30 Percent Hydraulic Review
4 C. Permit Drawings Review

The overall planning process can be divided into eight steps, as indicated in the chart below. The US 17 Project is at Step 6.

Step 1
- Data collection
- Inventory of planning issues
- Definition of study area
- Preliminary corridor development

Step 2
- First citizens informational workshop
- Documentation and evaluation of community concerns
- Field studies
- Identification of preliminary corridors
- Second citizens informational workshop
- Selection of alternatives for detailed study

Step 3
- Engineering studies
- Detailed field studies
- Environmental analyses

Step 4
- Draft EIS
- Third citizens informational workshop

Step 5
- Informational workshops and corridor public hearing

Step 6
- Review comments on draft environmental document
- Review public hearing transcript and comments
- Select LEDPA Segments 2 & 3, by the end of 2006, LEDPA Segment 4 by early 2007

Step 7
- Refine the design of the preferred alternative
- Quantify impacts
- Minimize impacts
- Final EIS

Step 8
- Design public hearing

IMPROVEMENTS IN ONSLOW AND JONES COUNTIES

NCDOT PROJECT NEWS

US 17 - State Transportation Improvement Program

Project No. R-2514 B,C, and D

Project Description

The North Carolina Department of Transportation is conducting preliminary road design studies of a 16-mile portion of US 17 from SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road), south of Belgrade, to the Jones/Craven County line, south of New Bern.

The proposed project would widen current portions of existing US 17, as well as relocate some portions of the existing road to a new location.

What Has Happened Since the Last Newsletter ?

The North Carolina Department of Transportation (NCDOT) conducted two informational workshops, one pre-hearing workshop, and one corridor public hearing in August 2005. At these meetings NCDOT and project team representatives were available to answer questions and receive comments about the proposed alignments and the findings of the SDEIS. A wide range of comments were received; many focused on issues related to existing traffic patterns and potential effects on housing and communities. Many participants requested copies of the presentation materials. Written comments were accepted from the public for a period of 30 days after the Corridor Public Hearing.

At the end of the 30-day comment period NCDOT scheduled a post-hearing meeting with the project team where comments from the workshops and the public hearing were reviewed to determine which alternatives to carry forward for detailed design studies.

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www.ncdot.org

R-2514 - US 17 IMPROVEMENTS NEWSLETTER
North Carolina Department of Transportation
Project Development and Environmental Analysis Branch
1548 Mail Service Center
Raleigh, NC 27699-1548

Announcement of Corridor Selection !

We revised the US 17 Highway Design Plans to meet the standards of the Strategic Highway Corridor Program. Our environmental studies were updated to evaluate the impacts of the design changes implemented. We presented our updated studies and project impacts during the field and office meetings with other state and federal agencies. The multi-agency team reached final concurrence on the Preferred Alternative on April 16, 2009. The Preferred Alternative, which is comprised of Alternates 2C, 3, and 4D, is described as follows:

Alternative 2C - Widen existing US 17 from the recently-completed R-2514A (US 17 from north of Jacksonville to south of Belgrade) through Belgrade to the south of Maysville and construct the Maysville Bypass on new location from just south of Maysville to just north of Maysville.

Alternate 3 - Widen existing US 17 from just north of Maysville to just north of Chadwick.

Alternate 4D - Construct the Pollocksville Bypass on new location from just north of Chadwick to the proposed tie-in with R-2301A (US 17 New Bern Bypass) near the Jones/craven County Line.

Contact Us

The public Involvement program provides interested citizens the opportunity to gain information about the project & participate in the planning process. Questions & comments can be directed to:

Mark Pierce, PE
Proj. Dev & Env. Analysis Branch
1548 Mail Service Ctr. (MAIL)
Raleigh, NC 27699-1548
mspierce@ncdot.gov
(919) 733 -7844 x 214

or

Wes Stafford, PE, AICP
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wstafford@wilbursmith.com
(919) 755-0583

Continued from page 1

Public involvement is considered critical to the future success of the project and the selection of the appropriate alignment. Subsequently, NCDOT has invested substantial time evaluating the public involvement process and comments received to date. This, along with a change in status of US 17 to a Strategic Highway Corridor (SHC) in September of 2004, has resulted in a delay of the selection of alternatives for detailed design studies that were originally expected to be completed by the start of 2006.

The SHC initiative seeks to identify, protect, and maximize the use of highway corridors that play a critical role in regional or statewide mobility. To meet the SHC requirements for US 17, the design was modified from a partial control of access facility to a full control of access facility where possible. The revised design requires interchanges for major cross streets such as a U.S. highway or a high-volume local road. For minor cross streets such as local neighborhood roads, a bridge will cross over the highway but won't provide direct access to the highway. In order to access the highway, drivers will need to travel to a major cross street and use interchange there.

Additional field work was required to update the Human and Natural Environment Studies. The updated studies were presented to the other State and Federal Agencies during the Corridor Selection Progress. The Preferred Alternative was selected as described on Page 4 and depicted in Figure 1.

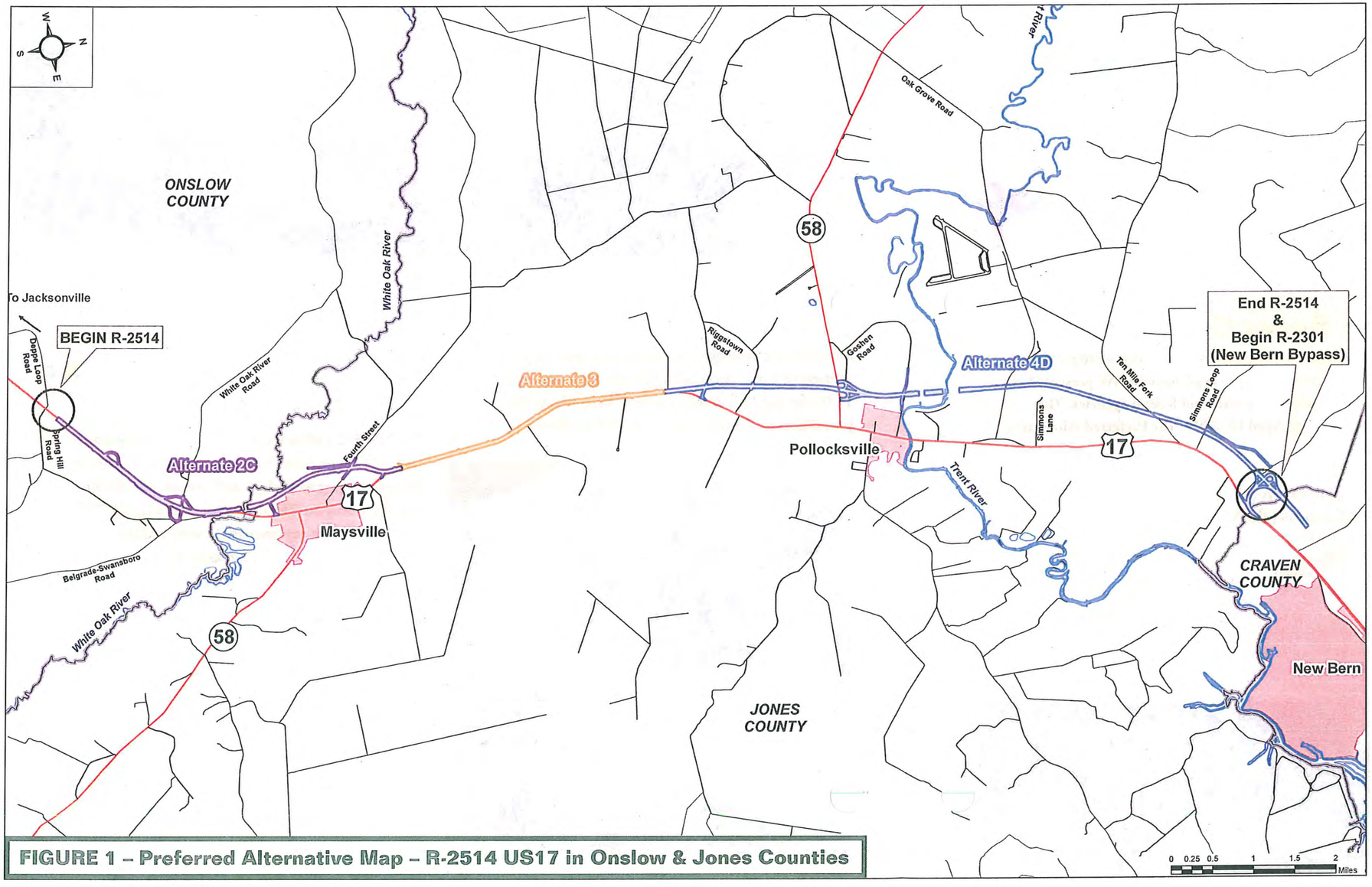


FIGURE 1 – Preferred Alternative Map – R-2514 US17 in Onslow & Jones Counties

Steps for strategic decisions in the project development and permitting process:

1) Purpose and Need and Study Area Defined
2) Detailed Study Alternatives Carried Forward
2A) Bridging Decisions and Alignment Review
3) Preferred Alternative Selection
4A) Avoidance and Minimization
4B) 30 Percent Hydraulic Review
4C) Permit Drawings Review

The overall planning process can be divided into nine steps, as indicated in the chart below.

THE US 17 PROJECT IS NOW AT STEP 7

Step 1
- Data collection
- Inventory of planning issues
- Definition of study area
- Preliminary corridor development

Step 2
- First Citizens' Informational Workshop
- Documentation and evaluation of community concerns
- Field studies
- Identification of preliminary corridors
- Second Citizens' Informational Workshop
- Selection of alternatives for detailed study

Step 3
- Engineering studies
- Detailed field studies
- Environmental analyses

Step 4
- Draft State Environmental Impact Statement
- Third Citizens' Informational Workshop

Step 5
- Informational Workshops and Corridor Public Hearing

Step 6
- Review comments on draft environmental document
- Review public hearing transcript and comments
- Select a Preferred Alternative for Segments 2, 3, and 4

Step 7
- Refine the design of the Preferred Alternative
- Quantify impacts
- Minimize impacts
- State Final Environmental Impact Statement

Step 8
- State Record of Decision

Step 9
- Design Public Hearing

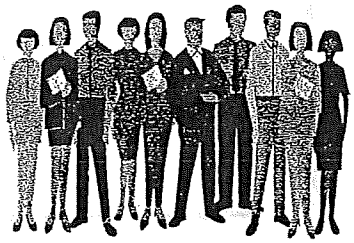
SECTION A.5
Citizens Workshops

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
INVITES YOU TO ATTEND

CITIZENS INFORMATIONAL WORKSHOP

WIDENING OF US 17 FROM JACKSONVILLE TO NEW BERN

Project 8.T190301 **R-2514** **Jones and Onslow Counties**



DATE: **February 24, 1997**
TIME: **5 PM to 8 PM**
PLACE: **Jones County Civic Center** in **Trenton, NC**

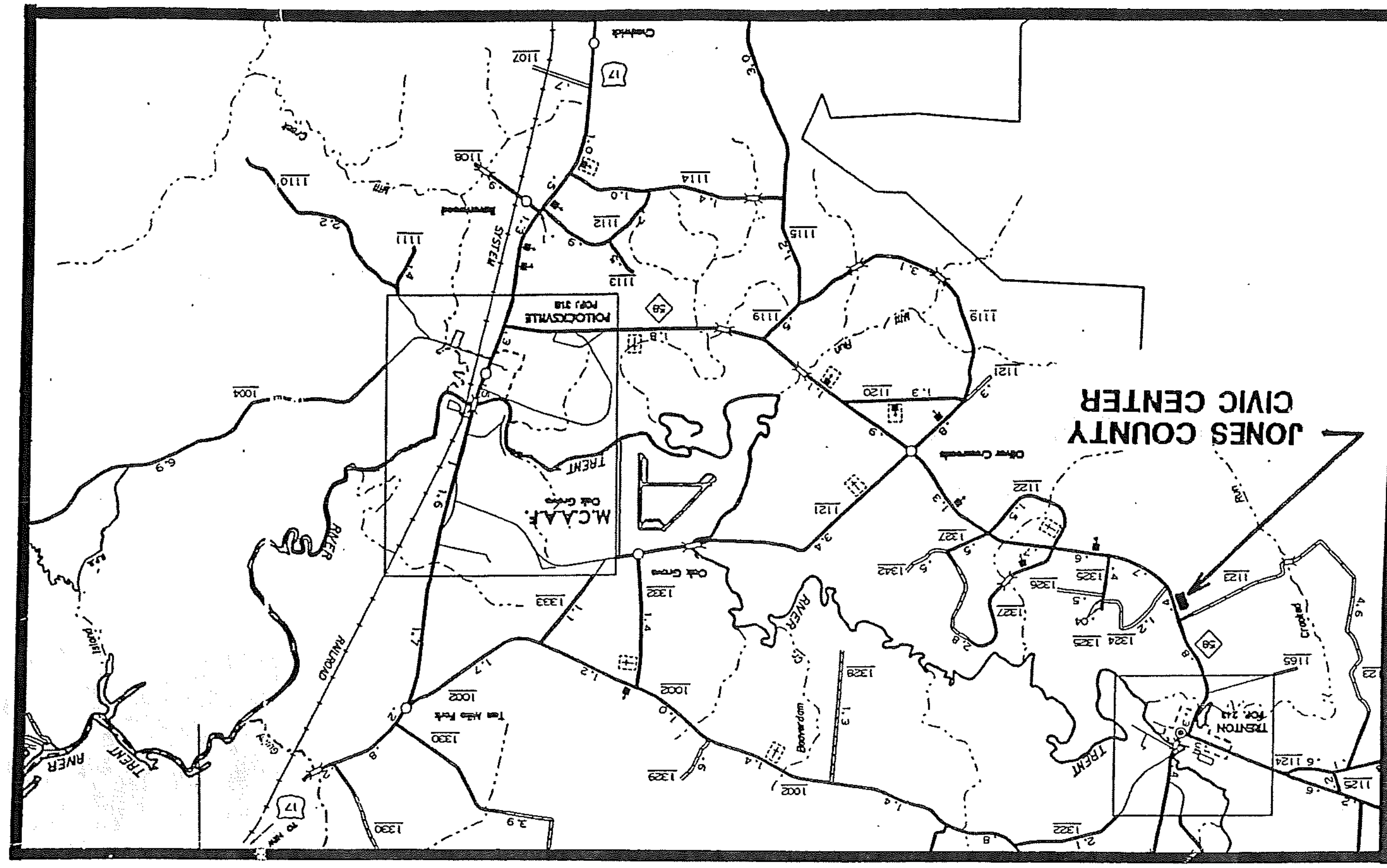
- This workshop is to present information, answer questions, and receive comments regarding the proposed widening of US 17 from Jacksonville to New Bern, including possible bypasses of Maysville and Pollocksville. Information received from the Citizens will be used in the development of the environmental document.

- Interested individuals may attend this informal workshop anytime during the hours of 5pm and 8pm. NC Department of Transportation representatives will be present to answer questions and receive comments relative to the proposed project. There will be no formal presentation.

- Anyone desiring additional information may contact Mr. Jim Buck, P.E., at (919) 733-3141 or Mr. Terry Snow, P.E. at 1-800-813-0323.

- NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in this workshop to comply with the American with Disabilities Act. To receive special services, please contact Mr. Buck at the above phone number or fax (919) 733-9794 as early as possible so that arrangements can be made.

Directions: ***From Pollocksville, travel north on NC 58. The Jones County Civic Center is located on the left, approximately 3.5 miles north of Oliver Crossroads. Please see map on other side.***



02/05/97 NC RTR 276

US 17 Jacksonville to New Bern Widening Study
5 West Hargett Street
Suite 910
Raleigh, NC 27601-1311

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Deb

RETURNED TO SENDER

UNDELIVERABLE AS ADDRESSED FORWARDING ORDER EXPIRED

02/05/97 NC RTR

not in phone book

William & Ruth Bland
4109 Edwards Way
New Bern, NC 28563

Take a Look...

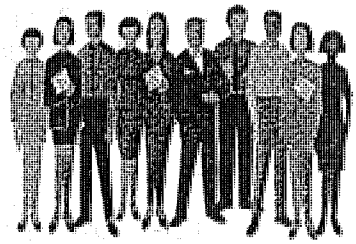
On the inside of this notice is information regarding the **Citizens Informational Workshop** for the Widening of US 17 from Jacksonville to New Bern

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
INVITES YOU TO ATTEND

CITIZENS INFORMATIONAL WORKSHOP

WIDENING OF US 17 FROM JACKSONVILLE TO NEW BERN

Project 8.T190301 **R-2514** **Jones and Onslow Counties**



DATE: **February 24, 1997**
TIME: **5 PM to 8 PM**
PLACE: **Jones County Civic Center in Trenton, NC**

- This workshop is to present information, answer questions, and receive comments regarding the proposed widening of US 17 from Jacksonville to New Bern, including possible bypasses of Maysville and Pollocksville. Information received from the Citizens will be used in the development of the environmental document.

- Interested individuals may attend this informal workshop anytime during the hours of 5pm and 8pm. NC Department of Transportation representatives will be present to answer questions and receive comments relative to the proposed project. There will be no formal presentation.

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Directions: ***From Pollocksville, travel north on NC 58. The Jones County Civic Center is located on the left, approximately 3.5 miles north of Oliver Crossroads. Please see map on other side.***

NOTICE OF CITIZENS INFORMATIONAL WORKSHOP ON THE WIDENING OF US 17 FROM JACKSONVILLE TO NEW BERN

Project 8.T190301 R-2514 Jones and Onslow Counties

The North Carolina Department of Transportation will hold the above Citizens Informational Workshop on February 24, 1997 between the hours of 5 PM and 8 PM in the Jones County Civic Center in Trenton, NC.

Interested individuals may attend this informal workshop at their convenience during the above stated hours. Department of Transportation representatives will be present to answer questions and receive comments relative to the proposed project. There will be no formal session held.

The purpose of this workshop is to present information, answer questions, and receive comments regarding this project. Information received from the public will be used for the environmental document being developed for this project. Under this project it is proposed to widen US 17 to a multilane facility from Jacksonville to New Bern to include possible bypasses of Maysville and Pollocksville.

Anyone desiring additional information may contact Mr. Jim Buck, P.E., P.O. Box 25201, Raleigh, NC 27611 or phone.(919) 733-3141.

NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in this workshop to comply with the American Disabilities Act. To receive special services, please contact Mr. Buck at the above address or phone number or fax (919) 733-9794 as early as possible so that arrangements can be made.

CITIZENS INFORMATIONAL WORKSHOP NO. 2

US 17 Widening from north of Jacksonville to south of New Bern
Onslow and Jones County, North Carolina

State Project No. 8.T190301, TIP No. R-2514
Federal-Aid Project No. NHF-17(7)

February 24, 1997

PROJECT DESCRIPTION

The North Carolina Department of Transportation is proposing to widen existing US 17 to a high speed, multi-lane facility between SR 1327, north of Jacksonville, and SR 1130, south of New Bern (See **Figures 1** and **2**). The project corridor extends for approximately 35 kilometers (22 miles) through the coastal counties of Onslow and Jones and includes the towns of Belgrade, Maysville and Pollocksville. Improvements are planned to widen US 17 along the existing alignment with possible bypasses of Belgrade, Maysville and Pollocksville. The widening will provide for a four-lane divided roadway along the existing alignment and bypass alignments. A five-lane section, with curbs and gutters, is proposed for the existing alignment through Belgrade and Maysville and a five-lane shoulder section is proposed through Pollocksville and north of Pollocksville along the existing alignment.

PURPOSE AND NEED

The primary purpose of the proposed improvements for this project is to upgrade US 17 to a modern, high speed, multi-lane facility through eastern North Carolina connecting Virginia and South Carolina. US 17 serves as a north-south alternative to I-95. This project, along with companion projects (Jacksonville Bypass and New Bern Bypass), will provide an improved high speed, multi-lane highway through eastern North Carolina.

Traffic studies show that the present daily traffic volumes, which range from 3,200 to 5,200 vehicles per day, are expected to increase to volumes ranging from 5,900 to 9,700 vehicles per day by year 2020. Improvement to US 17 will be needed to improve capacity, traffic flow and safety. The addition of travel lanes, left-turn storage lanes at intersections, and improvements to major intersections will combine to reduce the number of traffic accidents and improve the safety of the motoring public through the corridor.

The region and the State will realize economic benefits as a result of the proposed project. Improved access to the area will attract increased tourism, invite new industry with its related support services, and foster new development in both business and residential sections.

US 17 also serves as a military access route and hurricane evacuation route. US 17 is a Strategic Highway Network (STRAHNET) Route serving Cherry Point Marine Corps Air Station and Camp LeJeune Marine Corps Base. A portion of this project includes NC 58, a designated hurricane evacuation route. A high speed, multi-lane roadway would facilitate progressive vehicular movements during military mobilizations and weather-related emergencies.

ALTERNATIVES

The project study area was divided into four distinct corridor segments for the purpose of developing comparative alignment alternatives. The following is a description of each segment:

Segment 1 extends for approximately 10.3 kilometers (6.4 miles) from the project beginning to a point south of Belgrade. This segment crosses through the Hofmann State Forest from near the project beginning to the SR 1434 intersection near Starkey's Creek. An abandoned railroad bed parallels the segment alignment along the east side for the entire length. The area along this segment is mainly rural with scattered residences. A four-lane divided section with a 14 meter (46 feet) grass median is proposed. The widening will take place along the eastern side of US 17 thereby utilizing the existing two lanes on US 17 as part of the section.

Segment 2 is approximately 6.8 kilometers (4.2 miles) in length. It extends from the end of Segment 1 and passes through Belgrade and Maysville to a point north of the Maysville town limits. The area contains residential neighborhoods, businesses, and commercial properties in Belgrade and Maysville. A five-lane section with curbs and gutters is proposed along the existing highway through the towns. A western bypass alternate around Belgrade and Maysville is proposed along with a western and eastern alternate of Maysville only. The area is mainly rural and contains farmlands and forests with scattered residences mostly located near crossings of secondary roads. A four-lane divided section with a 14 meter (46 feet) grass median is proposed for the bypass corridors.

Segment 3 extends approximately 5.4 kilometers (3.4 miles) along existing US 17 from north of the Maysville town limits to a point south of the SR 1114 intersection, south of Pollocksville. The area is mainly rural with scattered residences bordering along US 17. The Croatan National Forest borders this segment along the east side for its entire length. The proposed alignment will be widened along both sides of US 17 to avoid impacts to historic properties. Existing portions of US 17 will be utilized as part of the proposed alternate. A four-lane divided section with a 14 meter (46 feet) grass median is proposed for this alternative.

Segment 4 has a length of approximately 12.6 kilometers (7.8 miles). It extends from the end of Segment 3 and passes through Pollocksville tying with the proposed New Bern Bypass near the Jones/Craven County line. Pollocksville contains residential neighborhoods and businesses which border along US 17. The area north of Pollocksville is mainly rural with scattered residences and a few businesses bordering along US 17. The bypass corridors pass through mostly rural areas consisting of farmlands and forests with scattered residences. This corridor consists of three alternates. A five-lane shoulder section is proposed along the abandoned railroad bed through Pollocksville and along the existing alignment north of Pollocksville. A four-lane divided section bypassing Pollocksville to the east is proposed along the abandoned railroad bed providing full control of access north of the Trent River. The third alternate is a western bypass of Pollocksville with an eastern bypass of existing US 17 north of Pollocksville. This section is a four-lane divided, fully controlled access facility with interchanges at NC 58 and existing US 17 north of Pollocksville. The four-lane divided section will consist of a 14 meter (46 foot) grass median.

EVALUATION FACTORS

The planning and environmental study will identify and evaluate two alternatives: the Build Alternative and the "No-Build" or "Do-Nothing" Alternative. The Build Alternative evaluation will be based on investigations of four major areas:

Environmental: wetlands, floodplains, water quality, water resources, hazardous materials, farmlands, noise, air quality and protected plant and animal species.

Social: neighborhoods, community facilities, recreational areas, cultural resources, relocation of residences, businesses and non-profit organizations.

Engineering: safety, traffic, constructability, construction costs, bridges and culverts and maintenance of traffic during construction.

Economic: local or regional economy, land use planning, land development, established business districts, highway-related businesses and employment.

The Study team would like to receive your comments as part of our evaluation. These alternatives will be studied in detail and included in the Environmental Assessment.

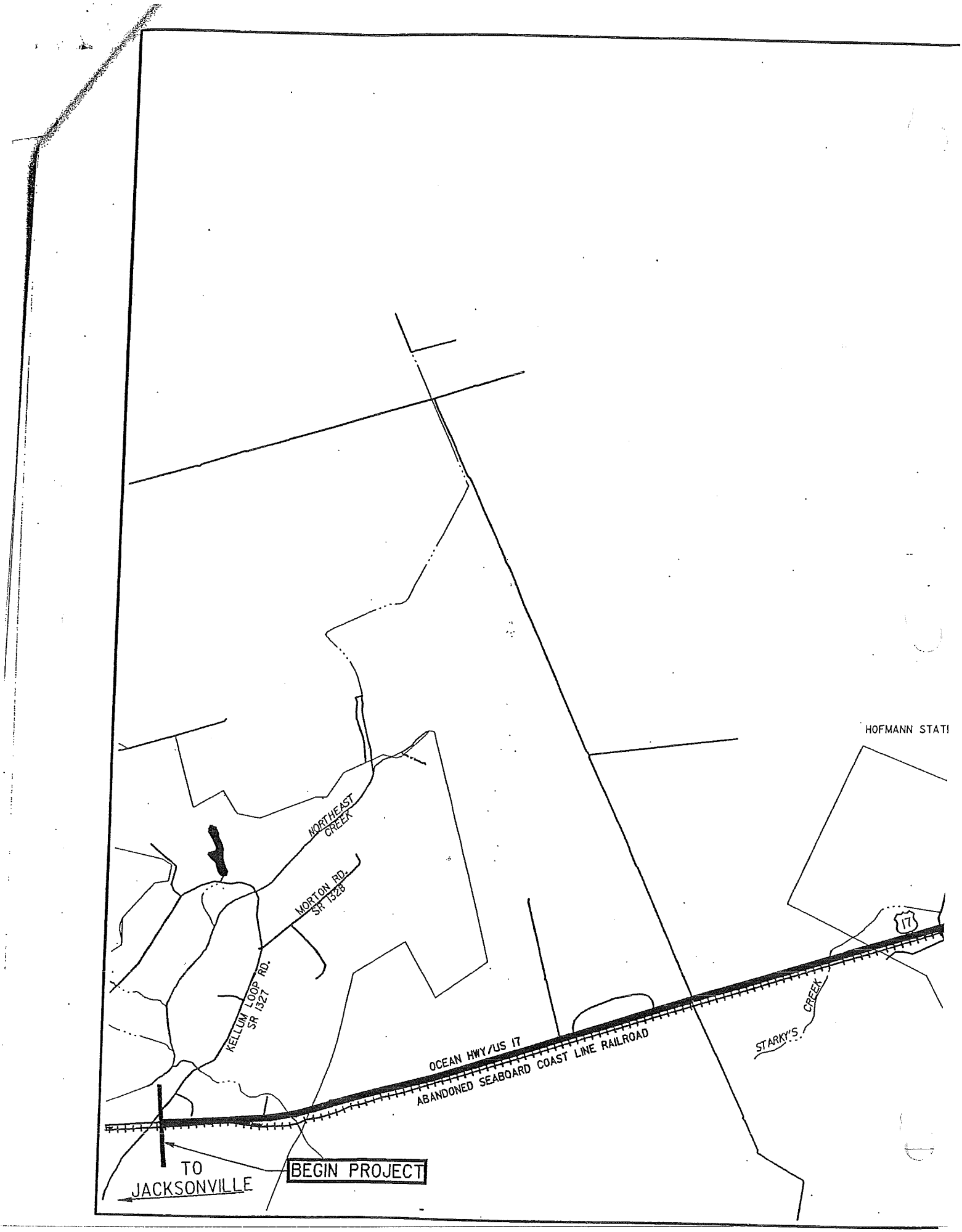
RIGHT-OF-WAY AND CONSTRUCTION

The *North Carolina Department of Transportation (NCDOT) 1997-2003 Transportation Improvement Program (TIP)* schedule indicates that right-of-way acquisition will begin in fiscal year 1999 with construction beginning in fiscal year 2001.

WRITTEN COMMENTS

Written comments will be accepted until March 15, 1997. You may use the comment form included in this booklet and leave it with a Study team representative at this workshop, or sent written comments to:

Terry M. Snow, P.E.
Wilbur Smith Associates
5 West Hargett Street, Suite 910
Raleigh, NC 27601


HOFMANN STATI
NORTHEAST CREEK
MORTON RD. SR 1328
KELLUM LOOP RD. SR 1327
17
OCEAN HWY/US 17
ABANDONED SEABOARD COAST LINE RAILROAD
STARKY'S CREEK
TO JACKSONVILLE
BEGIN PROJECT

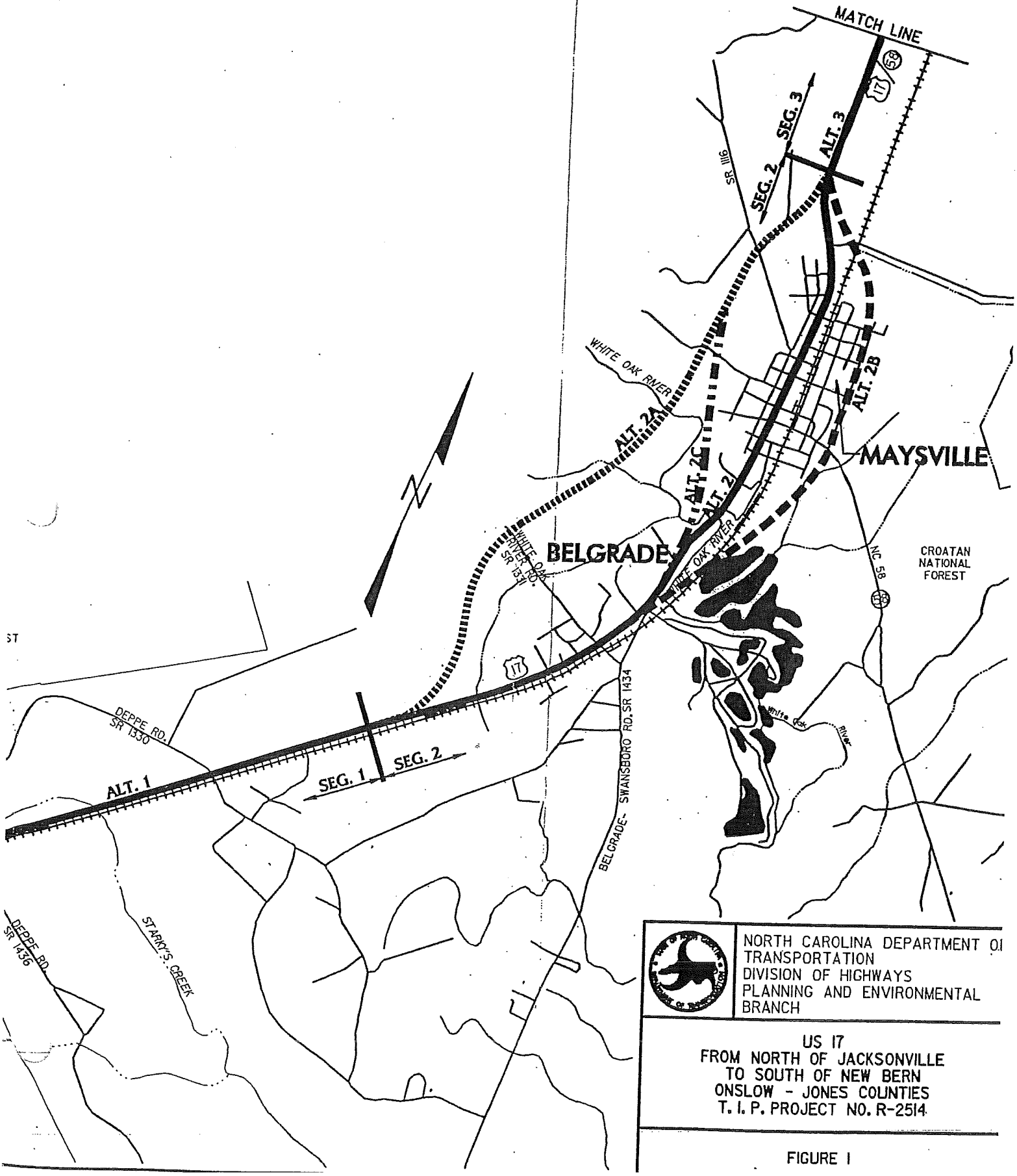
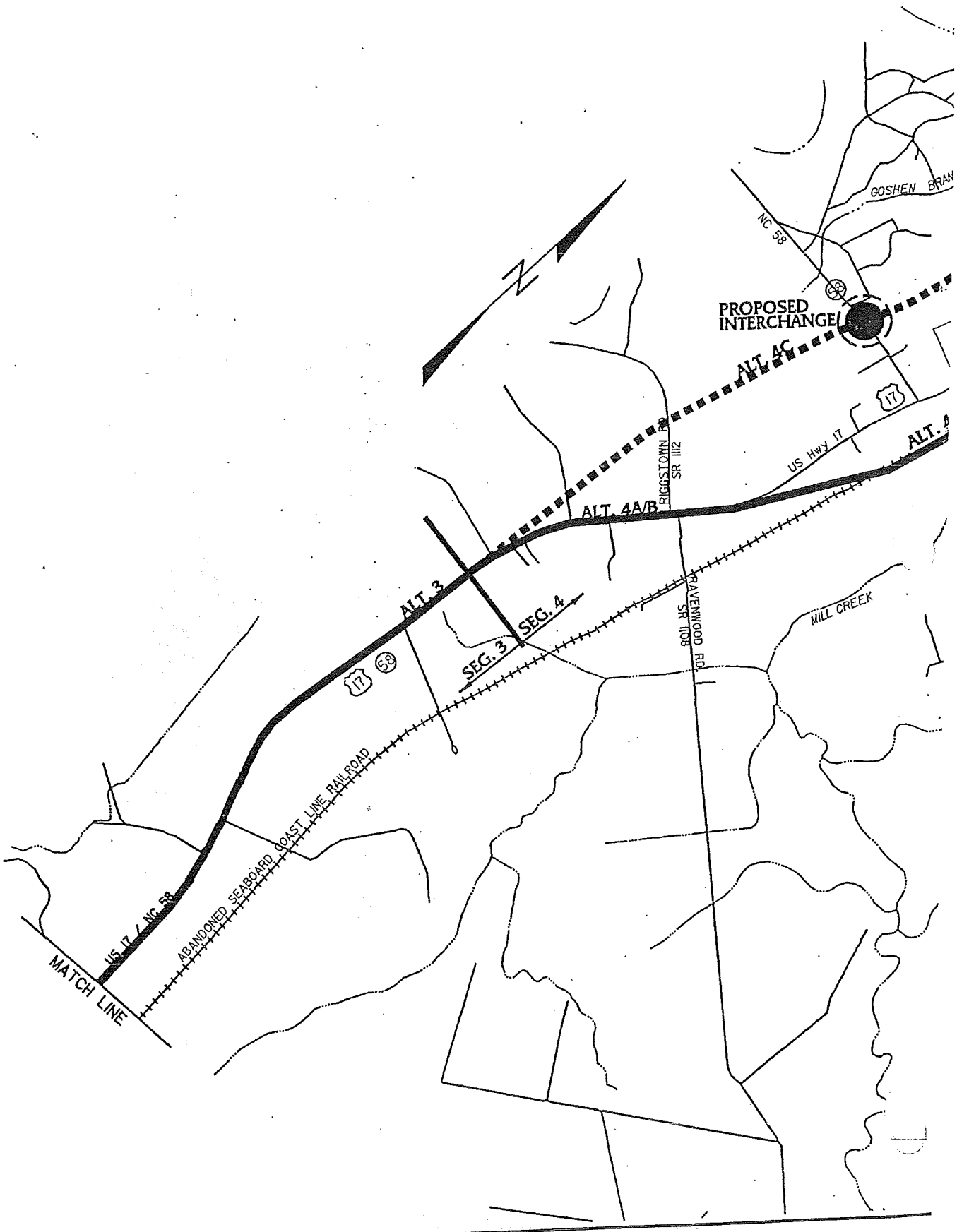
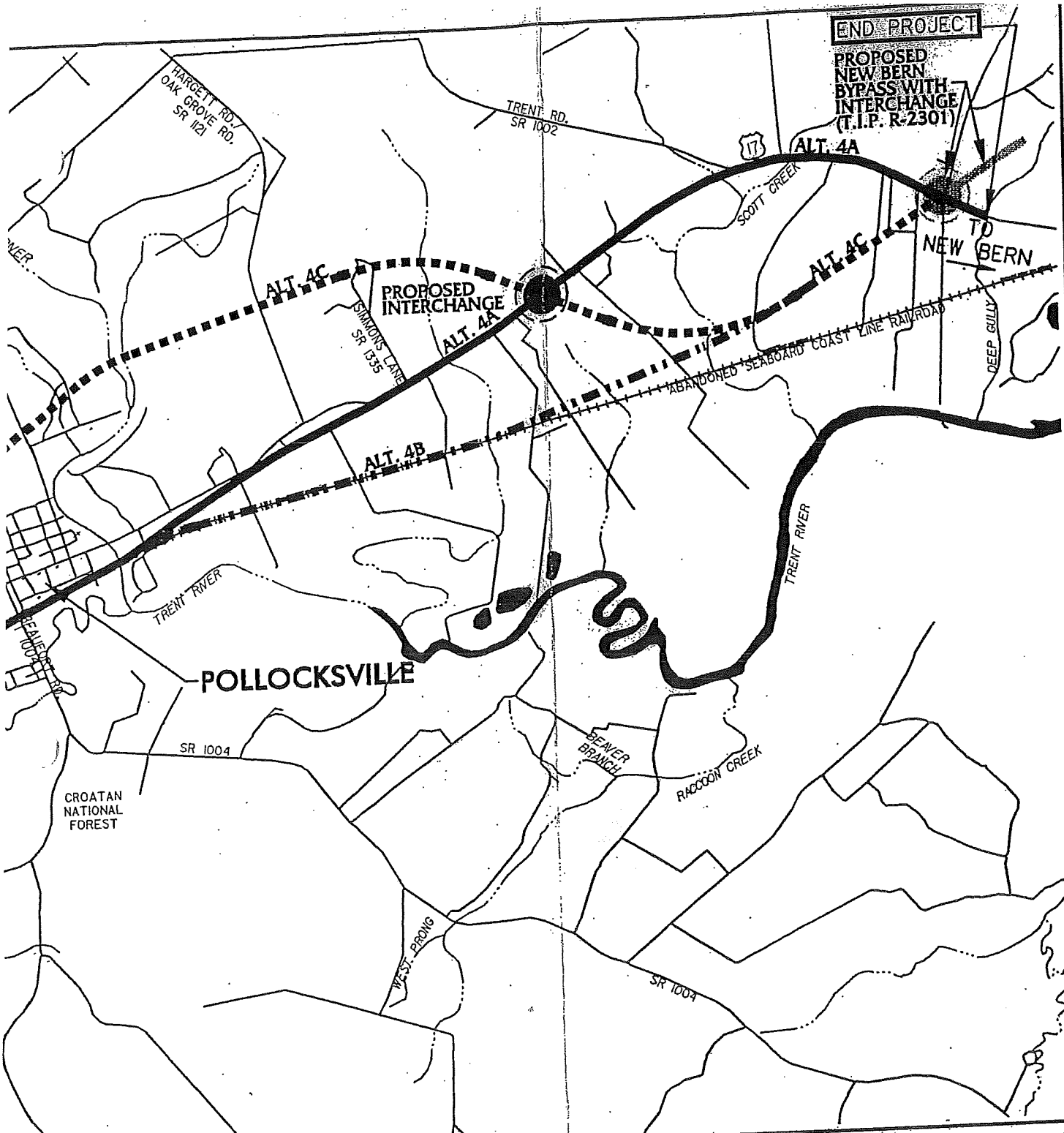

MATCH LINE
17
58
SR 1116
SEG. 2
SEG. 3
ALT. 3
WHITE OAK RIVER
ALT. 2A
ALT. 2B
ALT. 2C
MAYSVILLE
BELGRADE
WHITE OAK RIVER RD. SR 1434
CROATAN NATIONAL FOREST
NC 58
DEPPE RD. SR 1330
ALT. 1
SEG. 1
SEG. 2
BELGRADE- SWANSBORO RD. SR 1434
White Oak River
DEPPE RD. SR 1436
STARKEY'S CREEK
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND ENVIRONMENTAL BRANCH
US 17
FROM NORTH OF JACKSONVILLE
TO SOUTH OF NEW BERN
ONSLOW - JONES COUNTIES
T. I. P. PROJECT NO. R-2514

FIGURE 1


GOSHEN BRAN
NC 58
PROPOSED INTERCHANGE
ALT. 4C
US Hwy 17
ALT.
ALT. 4A/B
RIGGSTOWN RD
SR 1112
ALT. 3
SEG. 4
SEG. 3
RAVENWOOD RD
SR 1108
MILL CREEK
ABANDONED SEABOARD COAST LINE RAILROAD
US 17 / NC 58
MATCH LINE



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND ENVIRONMENTAL BRANCH

US 17
FROM NORTH OF JACKSONVILLE
TO SOUTH OF NEW BERN
ONSLOW - JONES COUNTIES
T. I. P. PROJECT NO. R-2514

FIGURE 2

GOSHEN ROAD ENVIRONMENTAL ACTION TEAM
SMALL GROUP WORKSHOP

US 17 Widening from north of Jacksonville to south of New Bern
Onslow and Jones County, North Carolina

State Project No. 8.T190301, TIP No. R-2514
Federal-Aid Project No. NHF-17(7)

April 13, 1999

PURPOSE OF MEETING

The purpose of this meeting is to present alternatives being considered for US 17 in the vicinity of Pollocksville and specifically how it relates to the communities of Goshen, Hatchfield and Garnett Heights. We want this meeting to be helpful and informative to the citizens of these neighborhoods. We plan to answer any questions and concerns of the potential alignments and solicit information on other possible alternatives.

PROJECT DESCRIPTION

As you know, the North Carolina Department of Transportation is proposing to widen existing US 17 to a high speed, multi-lane facility between SR 1327, north of Jacksonville, and SR 1130, south of New Bern. The project corridor extends for approximately 35 kilometers (22 miles) through Onslow and Jones Counties and includes the towns of Belgrade, Maysville and Pollocksville. Improvements are planned to widen US 17 along the existing alignment with possible bypasses of Belgrade, Maysville and Pollocksville. The widening will provide for a four-lane divided roadway along the existing alignment and bypass alignments. A five-lane section, with curbs and gutters, is proposed for the existing alignment through Belgrade and Maysville and a five-lane shoulder section is proposed through Pollocksville and north of Pollocksville along the existing alignment.

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EVALUATION FACTORS

The planning and environmental study will identify and evaluate two sets of alternatives: the Build Alternatives and the "No-Build" or "Do-Nothing" Alternative. The Build Alternatives evaluation will be based on investigations of four major areas:

Environmental: wetlands, floodplains, water quality, water resources, hazardous materials, farmlands, noise, air quality and protected plant and animal species.

Social: neighborhoods, community facilities, recreational areas, cultural resources, relocation of residences, businesses and non-profit organizations.

Engineering: safety, traffic, constructability, construction costs, bridges and culverts and maintenance of traffic during construction.

Economic: local or regional economy, land use planning, land development, established business districts, highway-related businesses and employment.

The Study team would like to receive your comments as part of our evaluation. These alternatives will be studied in detail and included in a Draft Environmental Document.

RIGHT-OF-WAY AND CONSTRUCTION

The *Draft North Carolina Department of Transportation (NCDOT) 2000-2006 Transportation Improvement Program (TIP)* schedule indicates that right-of-way acquisition will occur between fiscal years 2002 and 2004 with construction beginning in fiscal year 2004.

WRITTEN COMMENTS

Written comments will be accepted today or until May 25, 1999. You may use the comment form included in this handout and leave it with a Study team representative at this workshop, or send written comments to:

Tre' Dugal, P.E.
Wilbur Smith Associates
P.O. Box 2478
Raleigh, NC 27602-2478

US 17 JACKSONVILLE TO NEW BERN

TIP NUMBER R-2514

COMMUNITY ASSESSMENT MEETING

March 20, 2000

Current Project Activities

The Project Development and Environmental Analysis Branch of the North Carolina Department of Transportation (NCDOT) is preparing an Environmental Impact Statement for the improvements to US 17 between Jacksonville and New Bern. The proposed improvements are included in the 2000-2006 North Carolina Transportation Improvement Program (TIP) as TIP Project Number R-2514. Right of way acquisition is scheduled to begin in Fiscal Year 2002, and construction is scheduled to begin in Fiscal Year 2004. For more information on all planned transportation projects, visit the NCDOT's web site at *http://www.dot.state.nc.us/*

Community Assessment

As part of the planning process, the NCDOT is requesting additional information about communities in the area to help us evaluate the alternatives under consideration for the improvements to US 17. Individuals from Wilbur Smith Associates, who have been contracted by the NCDOT to develop the Environmental Impact Statement, will be performing on-site interviews with citizens in your area. We would like for you to participate. Our representatives would like to personally meet with you to discuss each of the alternatives in your area. Your comments and concerns will be documented and included as part of the Environmental Impact Statement.

Our representatives will be in the Goshen, Garnett Heights and Hatchfield communities through Wednesday, March 22, 2000 gathering information. We would like for you to participate in the survey so we can get to know you and your community better. Your opinions and suggestions concerning this project are very important in our evaluation process.

If you would like to volunteer as a community leader to represent your area or if you have any questions related to this project, please contact us at the US 17 Hotline Number (**1-800-813-0323**). Your assistance and participation is greatly appreciated.

Environmental Services, Inc. (ESI) will be gathering environmental data during the next few months in the corridors from south of Belgrade to north of Pollocksville. The ground stakes you may have observed are being used by ESI for guidance. If you have any questions or concerns about someone being on your property, please feel free to contact us.

Improvements From South of Belgrade to Jones-Craven County Line

As stated in the last Newsletter (December, 1999), additional alternatives are being considered in the Pollocksville area. These alternatives avoid or minimize impacts to sensitive social and cultural resources, and will be evaluated with the other alternatives previously presented.

All alternatives will be presented to the Federal Highway Administration (FHWA), U.S. Army Corp of Engineers (COE), the State Historic Preservation Office (SHPO) and the other federal and state agencies that form the NEPA/404 Merger Project Team to discuss minimization and avoidance alternatives. The alternatives will be evaluated based on environmental, social, engineering and economic factors.

Once the alternatives are evaluated, presented to the NEPA/404 Merger Project Team, and concurred upon, a public informational workshop will be held to receive additional public input. ***The next public informational workshop is tentatively scheduled for August 17, 2000 so mark your calendars to attend. Please sign up on our mailing list so we can inform you of any schedule changes that may occur.*** The Study Team is open to any and all suggestions and would like to receive your comments as part of our evaluation, so feel free to call or write us at any time.

Call the toll free hotline at **1-800-813-0323** between 8:00 a.m. and 5:00 p.m. or write:

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601-1742

or

Mr. William D. Gilmore, P.E., Manager
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

US 17 JACKSONVILLE TO NEW BERN

TIP NUMBER R-2514

COMMUNITY ASSESSMENT MEETING

April 17, 2000

Current Project Activities

The Project Development and Environmental Analysis Branch of the North Carolina Department of Transportation (NCDOT) is preparing an Environmental Impact Statement for the improvements to US 17 between Jacksonville and New Bern. The proposed improvements are included in the 2000-2006 North Carolina Transportation Improvement Program (TIP) as TIP Project Number R-2514. Right of way acquisition is scheduled to begin in Fiscal Year 2002, and construction is scheduled to begin in Fiscal Year 2004. For more information on all planned transportation projects, visit the NCDOT's web site at *http://www.dot.state.nc.us/*

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Our representatives will be in the Goshen, Garnet Heights and Hatchville communities through Wednesday, April 19, 2000 gathering information. We would like for you to participate in the survey so we can get to know you and your community better. Your opinions and suggestions concerning this project are very important in our evaluation process.

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Call the toll free hotline at **1-800-813-0323** between 8:00 a.m. and 5:00 p.m. or write:

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601-1742

or

Mr. William D. Gilmore, P.E., Manager
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

US 17 JACKSONVILLE TO NEW BERN

TIP NUMBER R-2514

COMMUNITY ASSESSMENT MEETING

October 30, 2000

Current Project Activities

The Project Development and Environmental Analysis Branch of the North Carolina Department of Transportation (NCDOT) is preparing an Environmental Impact Statement for the improvements to US 17 between Jacksonville and New Bern. The proposed improvements are included in the Draft 2002-2008 North Carolina Transportation Improvement Program (TIP) as TIP Project Number R-2514. Right of way acquisition is scheduled to begin in Fiscal Year 2002, and construction is scheduled to begin in Fiscal Year 2004. For more information on all planned transportation projects, visit the NCDOT's web site at *http://www.dot.state.nc.us/*

Community Assessment

As part of the planning process, the NCDOT is requesting additional information about communities in the area to help us evaluate the alternatives under consideration for the improvements to US 17. Individuals from Wilbur Smith Associates, who have been contracted by the NCDOT to develop the Environmental Impact Statement, will be performing on-site interviews with citizens in your area. We would like for you to participate. Our representatives would like to personally meet with you to discuss each of the alternatives in your area. Your comments and concerns will be documented and included as part of the Environmental Impact Statement.

Our representatives will be in the Pollocksville area during the week of November 6, 2000 gathering information. The three communities that we are interested in are the town of Pollocksville, Murphytown/Oak Grove and the Tenmile Fork area (existing US 17 north of Murphytown).

A meeting will be held on Thursday, November 9, 2000 at the Fellowship Hall of the Pollocksville Presbyterian Church at 7:00 pm.

This will be an informal meeting to show you the alternatives that are currently being developing in the area, and to ask you questions related to your community and your use of US 17.

We would like for you to participate in the survey so we can get to know you and your community better so if you can't make the meeting to answer the survey, we can set up a time during the week to meet with you. Your opinions and suggestions concerning this project are very important in our evaluation process. Just call the hotline to set up a time that would be convenient to meet with you during the week of November 6th.

Improvements From South of Belgrade To Jones-Craven County Line

As stated in the last Newsletter (December, 1999), additional alternatives are being considered in the Pollocksville area. These alternatives avoid or minimize impacts to sensitive social and cultural resources, and will be evaluated with the other alternatives previously presented.

All alternatives will be presented to the Federal Highway Administration (FHWA), U.S. Army Corp of Engineers (COE), the State Historic Preservation Office (SHPO) and the other federal and state agencies that form the NEPA/404 Merger Project Team to discuss minimization and avoidance alternatives. The alternatives will be evaluated based on environmental, social, engineering and economic factors.

Once the alternatives are evaluated, presented to the NEPA/404 Merger Project Team, and concurred upon, a public informational workshop will be held to receive additional public input. ***The next public informational workshop is tentatively scheduled for November or December 2000. Please sign up on our mailing list so we can inform you of any schedule changes that may occur.*** The Study Team is open to any and all suggestions and would like to receive your comments as part of our evaluation, so feel free to call or write us at any time.

Call the toll free hotline at **1-800-813-0323** between 8:00 a.m. and 5:00 p.m. or write:

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601-1742

or

Mr. William D. Gilmore, P.E., Manager
Project Development & Environmental
Analysis Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

You CAN Be Involved!

The Public Involvement Program provides interested citizens the opportunity to participate in the planning process and understand the overall study process and schedule. Some of these public involvement activities include:

☞ **Arranging a small group meeting for your neighborhood or organization.** The Study Team will be available through-out the study process to meet and discuss the project in informal question and answer sessions with neighborhood groups and civic organizations. For details, call the US 17 Study Hotline at **1-800-813-0323**.

☞ **Adding your name to the mailing list.** If you would like to receive future newsletters or meeting notices and have not already requested to be on the mailing list, call the US 17 Hotline at **1-800-813-0323** or write to the address below.

☞ **Calling or writing the study team.** The toll-free project hotline provides direct contact between citizens and the Study Team. Verbal comments will continue to be documented and considered during the study. Call the project hotline at **1-800-813-0323**. You also may write to the US 17 Study or directly to NCDOT at the following addresses:

Write:

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall, Suite 1450
Raleigh, NC 27601-1742

or

Mr. William D. Gilmore, P.E., Manager
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
PO Box 25201
Raleigh, NC 27611

US 17 Jacksonville to New Bern Widening Study

A citizen informational workshop for the US 17 study is tentatively scheduled for the winter of 2000. The purpose of the workshop is to provide citizens the opportunity to review and comment on the study alternatives. Members of the Study Team will be available to discuss the project and answer questions.

US 17 Jacksonville to New Bern Widening Study
333 Fayetteville Street Mall
Suite 1450
Raleigh, NC 27601-1742

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

NOTICE OF PRE-HEARING WORKSHOPS AND FORMAL CORRIDOR PUBLIC HEARING FOR THE PROPOSED TRANSPORTATION IMPROVEMENTS TO US 17 FROM SR 1330/SR 1439, SOUTH OF BELGRADE, TO THE JONES/CRAVEN COUNTY LINE, SOUTH OF NEW BERN

WBS No. 34442.1.1 R-2514B,C, & D Onslow/Jones Counties

The North Carolina Department of Transportation (NCDOT) will hold pre-hearing workshops and corridor public hearing at the following times and places:

- **Tuesday, August 9, 2005: Pre-Hearing Open House - 4:00 p.m. to 8:00 p.m. Pollocksville Elementary School Multi-Purpose Room, 300 Trent Street, Pollocksville**
- **Thursday, August 11, 2005: Pre-Hearing Open House - 4:00 p.m. to 8:00 p.m. Maysville Elementary School Gymtorium, 814 Sixth Street, Maysville**
- **Tuesday, August 16, 2005: Pre-Hearing Open House - 4:00 p.m. to 6:00 p.m. Pollocksville Elementary School Multi-Purpose Room, 300 Trent Street, Pollocksville**

Department of Transportation representatives will be available in an informal setting during the hours indicated above to answer questions and receive comments relative to the proposed project. The opportunity to submit written comments or questions also will be provided. Interested citizens may attend at any time during the above mentioned hours on the days indicated above.

The formal public hearing will be held on Tuesday, August 16, 2005 at the Pollocksville Elementary School Multi-Purpose room. A formal presentation will begin at 7:00 p.m. The presentation will consist of an explanation of the proposed location, right of way and relocation requirements/procedures. The hearing will be open to those present for statements, questions and/or comments. Additional comments may be submitted for a period of thirty (30) days following the hearing to: Ed Lewis, Human Environment Unit at 1583 Mail Service Center, Raleigh, NC 27699-1583.

This project proposes to improve a 16 mile portion of US 17 between SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road), south of Belgrade and the New Bern Bypass near the Jones/Craven County line, south of New Bern. Thirteen (13) detailed study alternatives will be presented for public comments. These comments will be used as part of the process to select alternatives. The project is also designated as part of the NC Strategic Corridor system and is a hurricane evacuation route.

A map setting forth the location of the project and a copy of the environmental document - Environmental Impact Statement (EIS) - are available for public review at the Pollocksville Town Hall located at 103 Main Street, Pollocksville; Maysville Town Hall located at 404 Main Street, Maysville; and at the NCDOT Resident Engineer's Office located at 209 S. Glenburnie Road, New Bern.

Anyone desiring additional information may contact Ed Lewis, Human Environment Unit at 1583 Mail Service Center, Raleigh, NC 27699-1583, phone (919) 715-1593, or email elewis@dot.state.nc.us.

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this workshop. Anyone requiring special services should contact Mr. Lewis at the contact information above as early as possible so that arrangements can be made.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

US 17 Transportation Improvements
From SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road) south of Belgrade to Jones/Craven County Line

WBS Number 34442.1.1
TIP PROJECT R-2514 BCD

Onslow and Jones Counties

Corridor Public Hearing

Informal Open House 4:00 p.m. – 8:00 p.m.
Tuesday, August 9, 2005
Pollocksville Elementary School Multi-Purpose Room
300 Trent Street, Pollocksville

Thursday, August 11, 2005
Maysville Elementary School Gymtorium
814 Sixth Street, Maysville

Tuesday, August 16, 2005
Pollocksville Elementary School Multi-Purpose Room
300 Trent Street, Pollocksville

Formal Presentation 7:00 p.m.
Tuesday, August 16, 2005
Pollocksville Elementary School Multi-Purpose Room
300 Trent Street, Pollocksville

August 9, 11 and 16, 2005

PURPOSE OF PROJECT

This project proposes to improve US 17 to meet objectives as part of the Intrastate System, Strategic Highway Corridor Network (a national highway system), and North Carolina Strategic Corridor System. It also will improve traffic flow along the US 17 corridor in the project study area, improve safety, and reduce traffic accidents.

PURPOSE OF PUBLIC HEARING

Today's hearing is an important step in the North Carolina Department of Transportation's (NCDOT) procedure for making you, the public, a part of the project development process. The purpose of the hearing is to obtain public input on the location of the proposed project. The project area extends through the coastal region of Onslow and Jones Counties between the cities of Jacksonville and New Bern. The Belgrade community and the towns of Maysville and Pollocksville are located along this section of US 17. (See Vicinity Map)

Planning and environmental studies on the highway project are provided in the environmental report –Draft Environmental Impact Statement (DEIS). Copies of this report and today's hearing map setting forth the location have been available for public review at the Pollocksville Town Hall located at 103 Main Street, Pollocksville; Maysville Town Hall located at 404 Main Street, Maysville; and at the NCDOT Resident Engineer's Office located at 209 S. Glenburnie Road, New Bern.

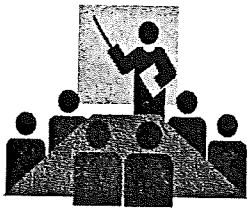
YOUR PARTICIPATION

Now that the opportunity is here, you are encouraged to participate by making your comments and/or questions a part of the public record. This may be done by having them recorded at the Formal Public Hearing (August 16, 2005) or by writing them on the attached comment sheet. Several representatives of the North Carolina Department of Transportation are present. They will be happy to talk with you, explain the design to you and answer your questions. You may write your comments or questions on the comment sheet and leave it with one of the representatives or mail them by September 16, 2005 to the following address:

Mr. Ed Lewis, Senior Public Involvement Officer
Public Involvement & Communities Studies Group
NCDOT - Human Environment Unit
1583 Mail Service Center
Raleigh, NC 27699-1583
Email: elewis@dot.state.nc.us

Everyone present is urged to participate in the proceedings. It is important, however, that **THE OPINIONS OF ALL INDIVIDUALS BE RESPECTED REGARDLESS OF HOW DIVERGENT THEY MAY BE FROM YOUR OWN.** Accordingly, debates, as such, are out of place at public hearings. Also, the public hearing is not to be used as a POPULAR REFERENDUM to determine the location and/or design by a majority vote of those present.

WHAT IS DONE WITH THE INPUT?



A post-hearing meeting will be conducted after the comment period has ended. NCDOT staff representing Planning, Design, Traffic, Division, Right of Way, Public Involvement & Community Studies and others who play a role in the development of a project will attend this meeting. The project will also be reviewed with federal agencies such as the US Army Corps of Engineers as well as state agencies such as the NC Department of Environment and Natural Resources. When appropriate, local government officials will attend.

All spoken and written issues are discussed at this meeting. Most issues are resolved at the post-hearing meeting. The NCDOT considers safety, costs, traffic service, social impacts and public comments in making decisions. Complex issues may require additional study and may be reviewed by higher management, Board of Transportation Members and/or the Secretary of Transportation.

Minutes of the post-hearing meeting are prepared and a summary is available to the public. You may request this document on the attached comment sheet.

CORRIDOR SELECTION PROCESS

After the post hearing meeting, the Project Team will convene to recommend the **Preferred Alternative Corridor.** This team is comprised of representatives from the NCDOT and the state environmental resource and regulatory agencies, such as the NC Division of Water Quality, the NC Wildlife Resource Commission, and the State Historic Preservation Office. Other agencies are invited as appropriate. The recommendation will be sent to the Secretary of Transportation for the final selection. When this has been achieved, a news release announcing the selected corridor or corridors for further study will be sent to the local media for publication.

WHAT HAPPENS NEXT

Preliminary roadway designs may be refined for the Preferred Alternative and will include efforts to further reduce environmental impacts. Further studies and surveys will be conducted on the preliminary findings collected from the initial studies of the thirteen corridors, such as hazardous materials, historic and archaeological sites, and access to residences and businesses. A mitigation plan for streams and wetlands will also be developed with the United States Army Corps of Engineers (USACE).

Another environmental document – Final Environmental Impact Statement (FEIS) - will be prepared based on the results of the items above. The FEIS will be circulated for public and agency review. After approval of the FEIS and Record of Decision (ROD), a Design Public Hearing will be held to receive public comment.

NEED FOR THE PROJECT

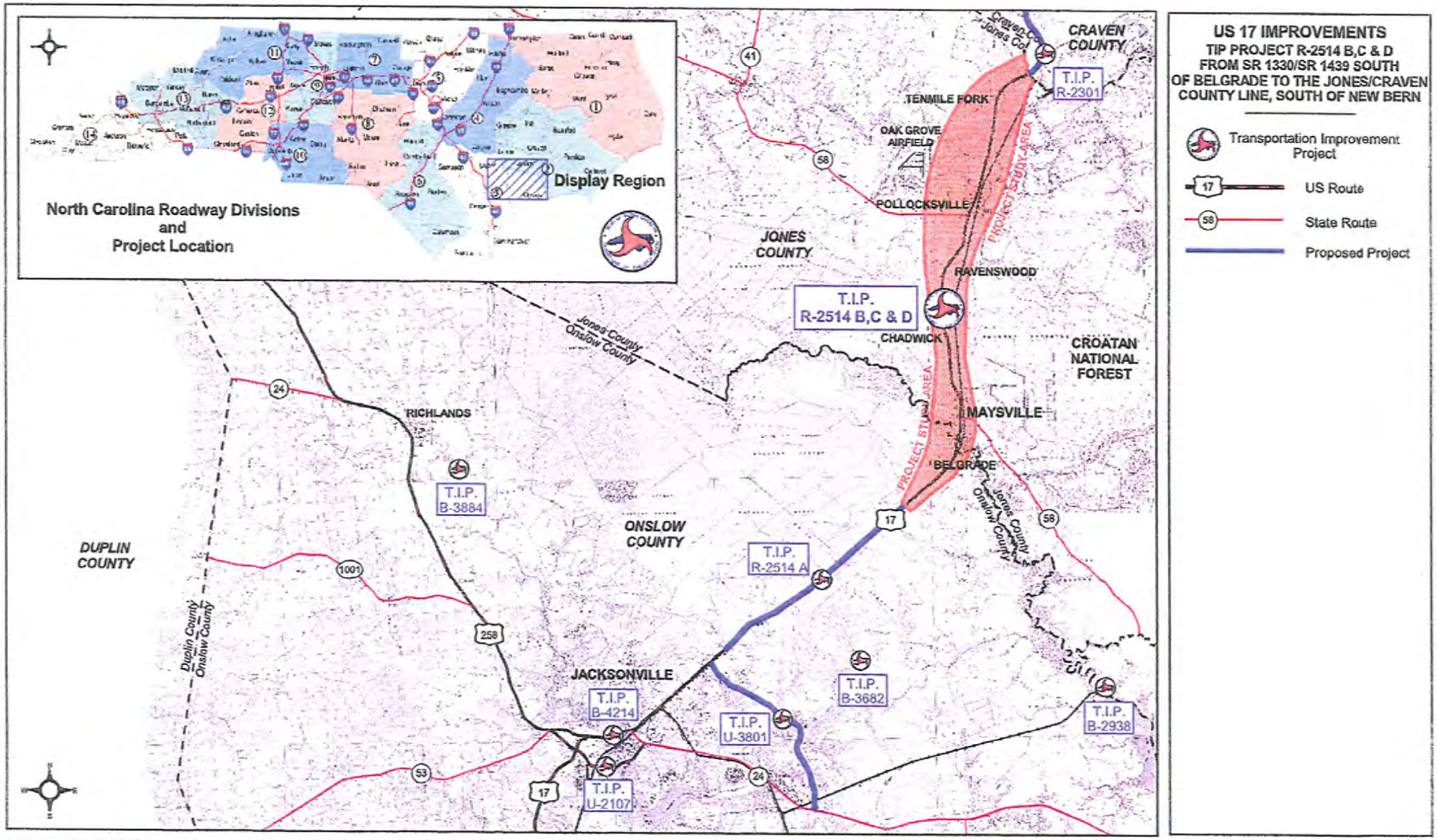
US 17 will operate near capacity within the project limits in the future design year of 2025. These conditions will increase travel delay, increase inefficient operations of motor vehicles and increase the potential for accidents. The accident rate along US 17 is substantially higher than the statewide average for similar routes. The proposed transportation improvements cover a distance of about 16 miles.

US 17 is designated as part of the North Carolina Intrastate System. The purpose of the state's **Intrastate Highway System** is to:

> "Provide high-speed, safe travel service throughout the State. It connects major population centers both inside and outside the State and provides a safe, convenient, through-travel for motorists. It is designed to support statewide growth and development objectives and to connect to major highways of adjoining states. All segments of the routes in the Intrastate System shall have at least four travel lanes and, when warranted, shall have vertical separation or interchanges at crossings, more than four travel lanes, or bypasses." (General Statute 136-178)

US 17 is designated as part of the **Strategic Highway Corridor Network** (STRAHNET) serving the Cherry Point Marine Corps Air Station and Camp LeJeune Marine Corps Base. STRAHNET includes highways that are important to the United States strategic defense policy. US 17 is also a Strategic Highway Corridors (SHC). SHC protects the mobility function of critical highway facilities. SHC's are the most important roads in the state.

Tonight's public hearing will present the design and modifications that have occurred since the November 2000 Citizens Informational Workshop. The project is tentatively scheduled to start the right-of-way acquisition process in 2009 and the construction of the project is tentatively scheduled to start 2011.

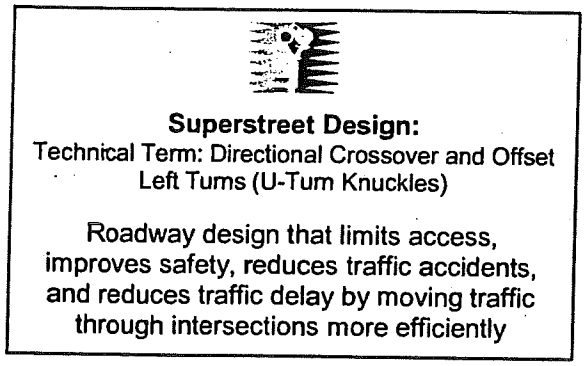


NORTH CAROLINA
DEPARTMENT
OF
TRANSPORTATION

VICINITY MAP
Figure 1

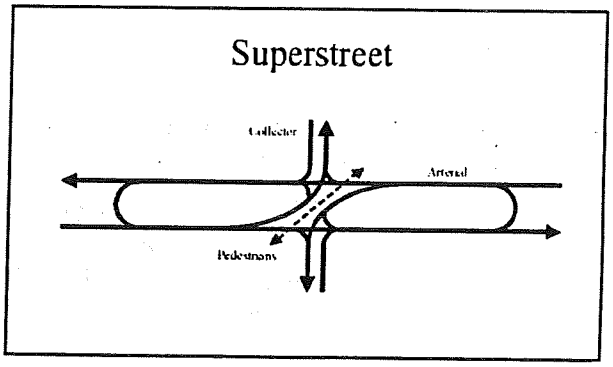
PROJECT DESCRIPTION

The NCDOT, Division of Highways, proposes to widen US 17 to mostly a four lane median divided roadway with two travel lanes in each direction. A Superstreet design is proposed to be used at several intersections along the proposed US 17 project. (See Figure.)



Superstreet Design:
Technical Term: Directional Crossover and Offset Left Turns (U-Turn Knuckles)

Roadway design that limits access, improves safety, reduces traffic accidents, and reduces traffic delay by moving traffic through intersections more efficiently



The project begins where Transportation Improvement Program (TIP) project R-2514A ends at SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road) to the proposed New Bern Bypass (TIP # R-2301) north of Pollocksville. (See Vicinity Map.) The project length is approximately 16 miles. This project has three segments: 2, 3 & 4, and a total of 13 alternatives. Segment 2 covers the Towns of Maysville and Belgrade and has four alternatives. Segment 3 follows existing US 17 from north of Maysville to south of Ravenswood. Segment 3 has only one alternative. Segment 4 covers the Town of Pollocksville and has eight alternatives. (See Corridor Map.)

Maysville/Belgrade Alternatives (Segment 2)

The Maysville/Belgrade Alternatives 2, 2A, 2B and 2C begin at SR 1330 (Deppe Loop Road)/SR 1439 (Spring Hill Road) and end about one mile north of SR 1116 (White Oak River Road). These alternatives begin as a four lane divided roadway with median. The new location alternatives end with a proposed interchage at US 17 & US 17 Business north.

Alternative 3 – Existing (Segment 3)

Alternative 3 begins about one mile north of SR 1116 (White Oak River Road) and ends just south of SR 1112 (Lee's Chapel Road). It crosses north the Croatan National Forest and the J. Nathan Foscue Farm, a property eligible for the National Historic Register. It calls for a four lane divided roadway with median along existing US 17.

Pollocksville Alternatives (Segment 4)

The Pollocksville Alternatives 4A, 4B, 4D, 4E, 4G, 4H, 4I and 4ID begins just south of SR 1112 (Lee's Chapel Road) as a four lane divided roadway with median and ties into the proposed interchange with the New Bern Bypass.

PROPOSED PROJECT INFORMATION

Length: 16 miles

Typical Section: See Figure

Right of Way: ~ 85 – 250 feet

Access Control: **EXISTING ROADWAY**

Partial Control of Access:

* If Parcel with less than 2000 feet road frontage & no other access.....1 Access
* If Parcel with more than 2000 feet road frontage.....Additional considered
* Parcels with other access, via side roads.....Possibly None

NEW LOCATION ROADWAY

Limited Control of Access:

Connections to US 17 only provided via ramps at interchanges for major crossings and at intersections for minor crossings and service roads. No Private Driveway connections will be allowed.

Relocatees: See Evaluation Matrix

Estimated Cost: See Evaluation Matrix

Tentative Schedule: **The tentative schedule is shown below. A number of factors can affect a project schedule, so schedules are subject to change.**

Section B - Begin Right of Way Acquisition –June 2009
Begin Construction – June 2011

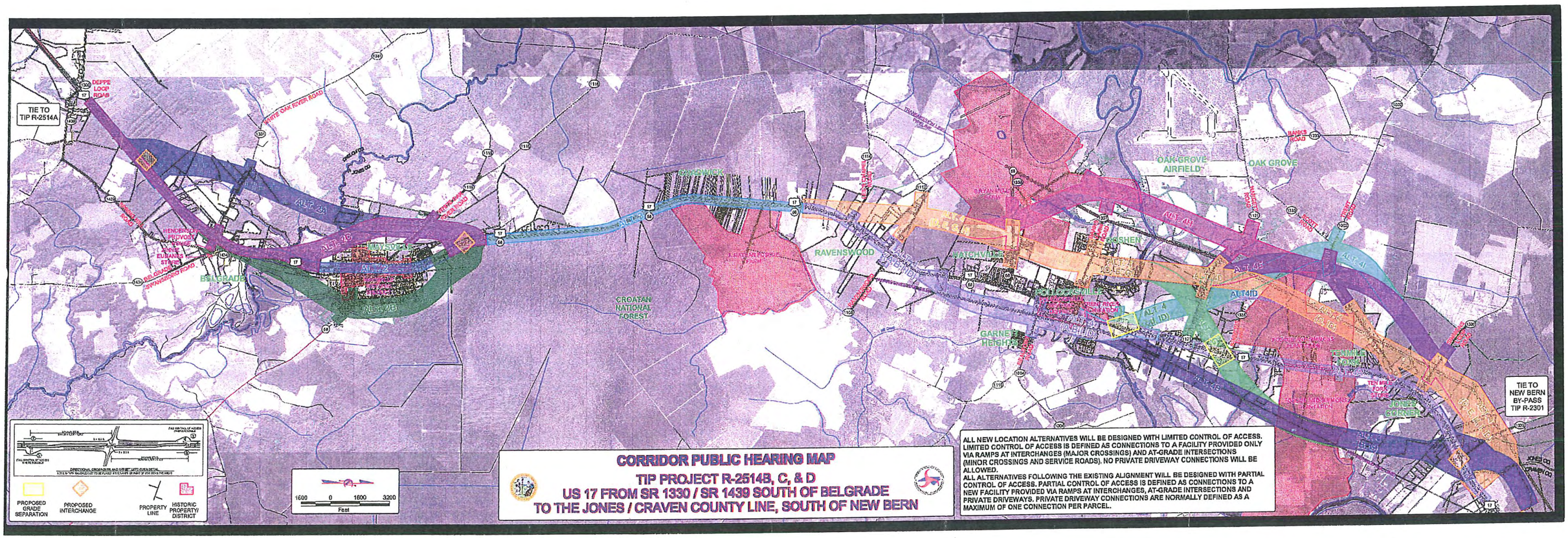
Section C - Begin Right of Way Acquisition –June 2009
Begin Construction – November 2011

Section D - Begin Right of Way Acquisition –Post Year
Begin Construction – Post Year

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

US 17 CORIDOR PUBLIC HEARING MAP

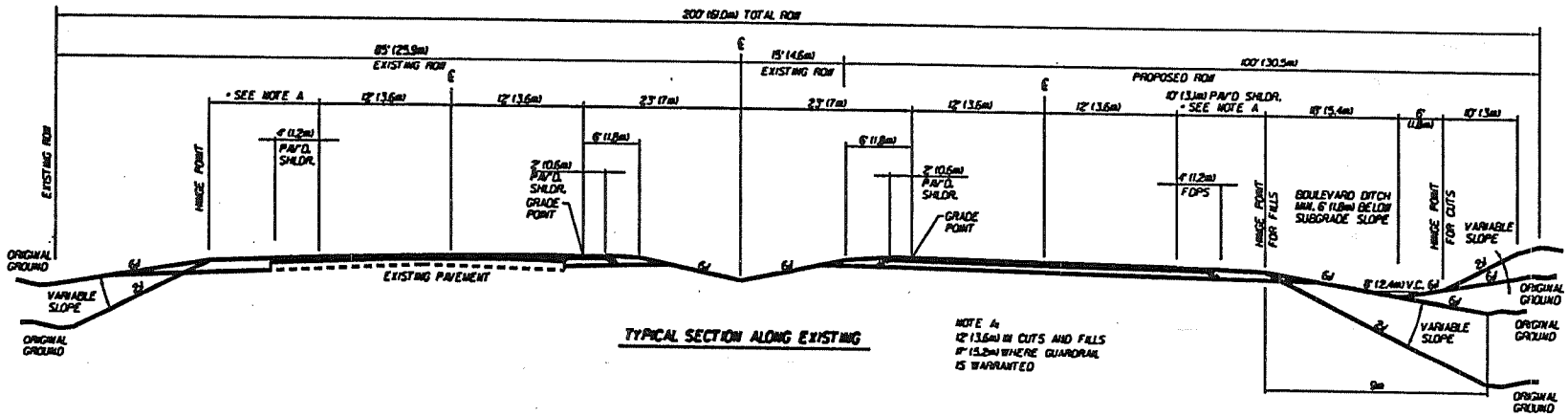
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS



TIP R-2514BCD
US 17 Improvements
Corridor Map

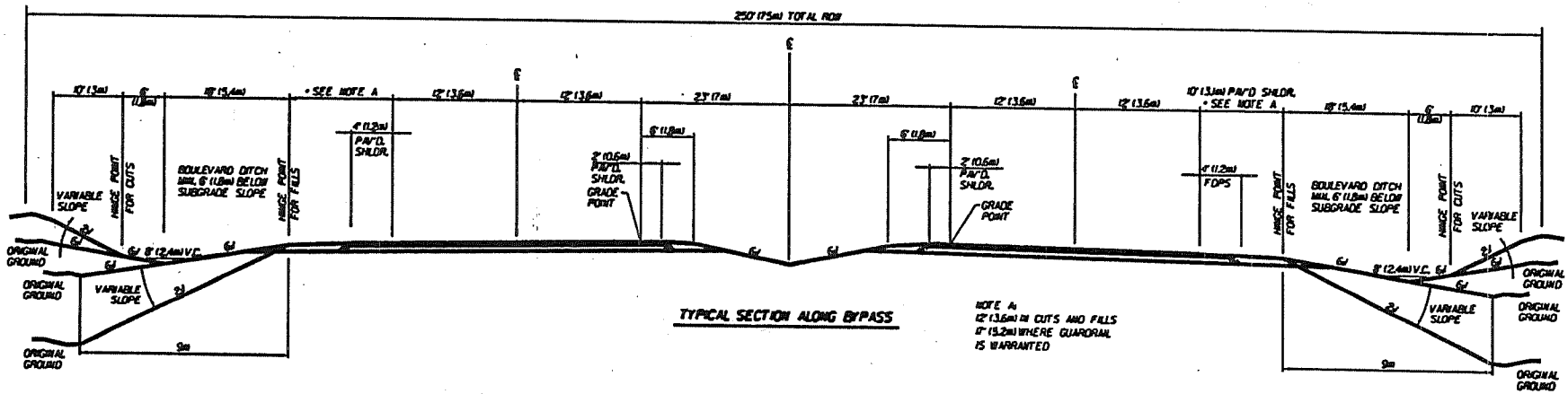
EVALUATION MATRIX TABLE
DETAILED STUDY ALTERNATIVES

Alternatives	Total Length miles(km)	Bridge Length ft(meters)	Residential Impacts	Business Impacts	Potential Contaminated Site	Cemetary Impacts	Wetland Impacts - acres (hectares)				Stream Impacts ft(meters)	Length of Floodplain Crossing ft (meters)	Noise Impacts	National Register Historic Properties	Potential Environmental Justices/ Community Impacts	Approximate Construction Cost (millions)
							High Quality	Medium Quality	Low Quality	Total Wetland Impacts						
Alt 2	4.72(7.609)	47(154)	5	4	5	0	0.801(0.324)	(7.489(3.031)	6.010(2.432)	14.300(5.787)	169(52)	154(47)	152	Maysville Historic District	Belgrade, Maysville	$16.50
Alt 2A	4.39(7.085)	3923(1196)	6	0	1	1	12.041(4.873)	11.442(4.631)	9.897(4.005)	33.380(13.509)	2066(630)	3923(1196)	60	None		$49.70
Alt 2B	5.08(8.200)	2303(702)	13	4	2	0	2.878(1.165)	25.882(10.474)	7.082(2.866)	35.842(14.505)	2357(719)	2303(702)	173	None	Belgrade, Maysville	$42.80
Alt 2C	4.71(7.595)	1676(511)	11	6	4	2	4.922(1.992)	12.281(4.970)	5.753(2.328)	22.956(9.290)	2851(869)	1676(511)	126	None	Belgrade	$33.30
Alt 3	3.36(5.426)	0	11	1	0	0	0	15.889(6.430)	5.184(2.098)	21.073(8.528)	150(46)	0	52	J. Nathan Foscue Farm	Chadwick	$10.70
Alt 4A	7.92(12.768)	538(164)	29	1	6	0	0	1.232(0.499)	2.659(1.076)	3.891(1.575)	2014(614)	538(164)	183	Pollocksville Historic District, Foscue and Simmons Plantations, Ten Mile Fork Gas Station/Store	Pollocksville, Murphytown, Ten Mile Fork	$32.10
Alt 4B	8.09(13.051)	1568(478)	15	3	2	0	3.614(1.462)	0.992(0.402)	2.540(1.028)	7.146(2.892)	1612(492)	1361(415)	100	Pollocksville Historic District, Foscue and Simmons Plantations	Pollocksville	$47.90
Alt 4D	8.28(13.36)	2758(841)	11	0	0	0	4.709(1.906)	27.834(11.264)	(13.862(5.610)	46.405(18.780)	911(278)	2581(787)	92	Foscue and Simmons Plantations	Hatchville, Goshen, Oak Grove	$63.90
Alt 4E	8.57(13.826)	2758(841)	7	0	0	0	4.029(1.630)	29.244(11.834)	19.420(7.859)	52.693(21.323)	547(167)	2581(787)	86	None	Hatchville, Goshen, Oak Grove	$65.10
Alt 4G	8.37(13.498)	3713(1132)	16	0	0	1	7.710(3.121)	20.400(8.258)	0.161(0.065)	28.271(11.444)	1505(459)	3523(1074)	90	Foscue and Simmons Plantations	Hatchville, Goshen, Oak Grove	$71.30
Alt 4H	8.70 (14.036)	4805(1465)	10	0	0	0	1.536(0.622)	20.238(8.190)	19.607(7.935)	41.381(16.747)	873(267)	4628(1411)	74	Bryan-Bell Farm	Goshen	$84.50
Alt 4I	9/07(14.622)	705(215)	9	2	2	0	0.587(0.238)	9.164(3.709)	20.737(8.392)	30.488(12.339)	1220(372)	561(171)	136	Pollocksville Historic District,	Pollocksville, Oak Grove	$50.80
Alt 4ID	8.56(13.806)	705(215)	9	3	2	0	1.18(0.476)	8.47(3.429)	16.31(6.599)	25.95(10.504)	886(270)	561(171)	136	Pollocksville Historic District, Foscue and Simmons Plantations	Pollocksville, Oak Grove	$48.00



TYPICAL SECTION ALONG EXISTING

NOTE A:
12' (3.6m) IN CUTS AND FILLS
11' (3.2m) WHERE GUARDRAIL IS WARRANTED



TYPICAL SECTION ALONG BYPASS

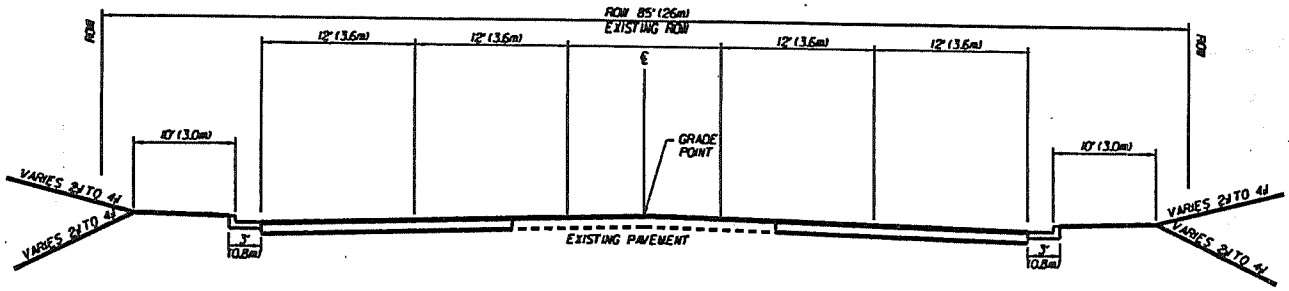
NOTE A:
12' (3.6m) IN CUTS AND FILLS
11' (3.2m) WHERE GUARDRAIL IS WARRANTED

NOT TO SCALE

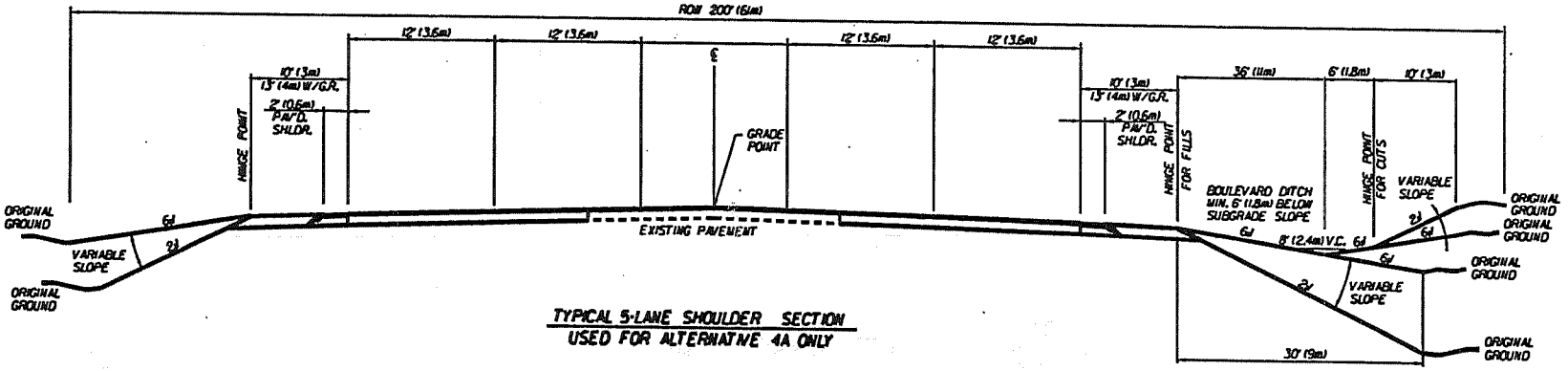
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

US 17 IMPROVEMENTS
TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH OF BELGRADE TO THE JONES/CRAVEN COUNTY LINE, SOUTH OF NEW BERN

TYPICAL SECTIONS



TYPICAL 5-LANE CURB AND GUTTER SECTION
USED FOR ALTERNATIVE 2 ONLY



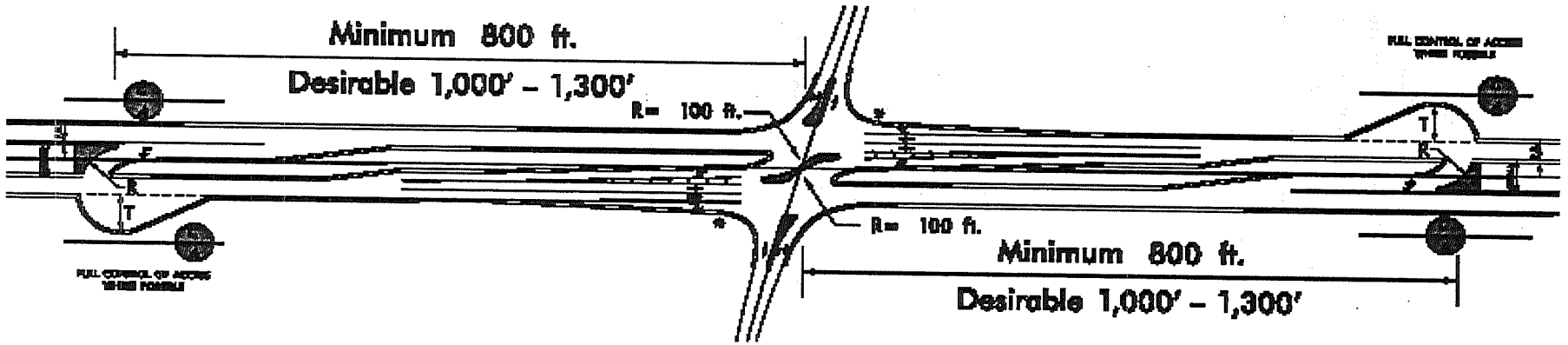
TYPICAL 5-LANE SHOULDER SECTION
USED FOR ALTERNATIVE 4A ONLY

NOT TO SCALE

NORTH CAROLINA
DEPARTMENT
OF
TRANSPORTATION

US 17 IMPROVEMENTS
TIP PROJECT R-2514 B,C & D
FROM SR 1330/SR 1439 SOUTH
OF BELGRADE TO THE JONES/CRAVEN
COUNTY LINE, SOUTH OF NEW BERN

TYPICAL SECTIONS



DIRECTIONAL CROSSOVER AND OFFSET LEFT-TURN DETAIL

NOTE: U-TURN KNUCKLES NOT TO BE PLACED IN WETLANDS OR RIGHT OF WAY SENSITIVE AREAS

* RIGHT TURN LANE LENGTHS DETERMINED BY TRAFFIC VOLUMES

RIGHT OF WAY PROCEDURES

After decisions are made regarding the final design, the proposed right-of-way limits will be staked in the ground. If you are an affected property owner, a Right of Way Agent will contact you and arrange a meeting. The agent will explain the plans and advise you as to how the project will affect you. The agent will inform you of your rights as a property owner. If permanent right of way is required, professionals who are familiar with real estate values will evaluate or appraise your property. The evaluations or appraisals will be reviewed for completeness and accuracy and then the Right of Way Agent will make a written offer to you. The current market value of the property at its highest and best use when appraised will be offered as compensation. The Department of Transportation must:

1. Treat all owners and tenants equally.
2. Fully explain the owner's rights.
3. Pay just compensation in exchange for property rights.
4. Furnish relocation advisory assistance.

RELOCATION ASSISTANCE

If you are a relocatee, that is, if your residence or business is to be acquired as part of the project, additional assistance in the form of advice and compensation is available. You will also be provided with assistance on locations of comparable housing and/or commercial establishments, moving procedures, and moving aid. Moving expenses may be paid for you. Additional monetary compensation is available to help homeowners cope with mortgage increases, increased value of comparable homes, closing costs, etc. A similar program is available to assist business owners. The Right of Way Agent can explain this assistance in greater detail.

NOTE: PAMPHLETS SUMMARIZING RIGHT OF WAY AND RELOCATION PROCEDURES ARE AVAILABLE AT THE SIGN IN TABLE.

COMMENT SHEET

US 17 Improvements

Formal Corridor Public Hearing – August 16, 2005

TIP No. R-2514BCD Onslow & Jones Counties Project 34442.1.1

NAME:

ADDRESS:

COMMENTS AND/OR QUESTIONS:

Comments may be mailed within thirty (30) days of the public hearing to:

Mr. Ed Lewis, Senior Public Involvement Officer
NCDOT - Human Environment Unit
1583 Mail Service Center
Raleigh, NC 27699-1583
Phone: (919) 715-1593 FAX: (919) 715-1501
Email: elewis@dot.state.nc.us

TOWN OF MAYSVILLE
PO Box 265
Maysville, North Carolina 28555
Telephone (910) 743-4441
Facsimile (910) 743-0895

12 September 2005

VIA ELECTRONIC MAIL & US POSTAL SERVICE

Mr. Ed Lewis
Senior Public Involvement Officer
NCDOT – Human Environment Unit
1583 Mail Service Center
Raleigh, NC 27699-1583

RE: US 17 Transportation Improvements
From SR 1330/SR 1439 south of Belgrade to Jones/Craven County Line

Dear Mr. Lewis:

This letter will confirm the Town of Maysville's position regarding the proposed Maysville/Belgrade Alternatives (Segment 2) of the US 17 project. The Town of Maysville endorses Alternate "2A" as it would have the least impact on residential homes, property valuation, and development.

The Town has been made aware of a proposed upscale residential subdivision around the quarry lakes located east of US 17S just south of town limits. The planner and developer have requested annexation into the Town's limits. The subdivision of 120+ homes has the potential to provide the Town of Maysville as well as Jones County with a substantial source of revenue. Alternate "2B" would substantially affect the proposed project as well as the historical properties located on Highway 58.

Further, Alternates "2" and "2C" would affect the Town's remaining historical landmarks as well as significantly impact residential and commercial properties. Specifically, Alternate "2" would pose major condemnation issues as it would devour residential and commercial properties along Main Street. It is the Town's position that Alternate "2A" is the best choice with the least impact for area residents.

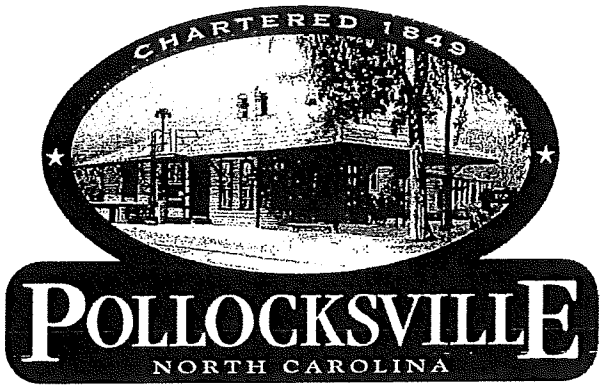
Thank you for your consideration of this matter. If you have any questions for the Town of Maysville, please do not hesitate to contact Mr. Bill Waddell or me at telephone number (910) 743-4441.

Sincerely,

Sincerely,

James D. Harper
Mayor

R-2514 BCD



P.O. Box 97, Pollocksville, NC 28573
252-224-9831 • Fax 252-224-0423

August 10, 2005

Mr. Ed Lewis, Senior Public Involvement Officer
NCDOT – Human Environment Unit
1583 Mail Service Center
Raleigh, North Carolina 27699-1583

Dear Mr. Lewis:

Thank you for allowing the Town of Pollocksville to once again comment on the various alternatives being offered for the proposed US Highway 17 By-Pass Project. We certainly appreciate the many obstacles which appear to have prevented a quick decision on the preferred route of the new by-pass, and the subsequent design and construction. The Town desires a quick resolution to the whole matter. Things have dragged on long enough.

For over 10 years now, the Town has been actively involved in the numerous discussions over the proposed by-pass. The State Draft Environmental Impact Statement for this project includes many, many statements from the Town about its wishes for the preferred route. We have written letters stating our position, and we have made oral presentations at the various Steering Committee meetings and community information workshops. After a study of the Draft E.I.S., it is apparent that the Town needs to state its position yet again.

The Town of Pollocksville **OBJECTS and OPPOSES** in the strongest language possible any proposals for the US Highway 17 Bypass which encroach upon or pass through any part of the corporate limits of the Town. Any route which goes through the Town is not a "bypass"; it is a "pass-through." Therefore, alternatives 4-A; 4-B; 4-I; and 4-ID are all unacceptable and the Town opposes them in their entirety. At the August 9,

2005 meeting of the Town's Board of Commissioners, this opposition was once again affirmed. There are many reasons for the Town's opposition, most of which have been previously stated and are listed in various places throughout the Draft E.I.S. Let me restate those:

- All four routes which track on the eastern side of the Town effectively divide the town. We will have a four-lane or five-lane high-speed road splitting the Town. The "at-grade" intersection would heighten this division, preventing rapid response by emergency personnel, and creating additional traffic and safety hazards.
- A major tract of land, which is zoned for industrial/commercial development, as well as an adjacent tract of farm land, also appropriate for residential and/or commercial development will be lost.
- The Pollocksville Historic District will be adversely impacted. The newly-completed restoration of the historic c.1893 train depot will be threatened, as well as the recently completed restoration of the Trent River waterfront.
- The Town's water and sewer facilities will be adversely affected. The location of the eastern routes threaten the Town's main water supply well and treatment facilities, and would be in direct opposition to the Town's Wellhead Protection Plan. A sewer pumping station on the eastern edge of the Town limits would be isolated.
- Residents living along the abandoned railroad bed would be adversely affected. They would be subjected to noise. The residents on the Town's eastern limits would be effectively separated from the rest of the Town, as well as those living in Garnet Heights, who benefit from the Town's water and sewer enterprise system. There are certainly environmental justice issues for these residents. In fact, the location of the route through any part of the Town's corporate limits present environmental justice issues for all of the residents of the Town of Pollocksville.
- The eastern routes through the Town impact significant areas of wetlands, including the Trent River and the Mill Creek tributary.
- In essence, the placement of the so-called bypass THROUGH the Town of Pollocksville would mark the beginning of the end of Pollocksville as a Town. Economic activity would be stymied; traffic problems will be increased through town instead of abated; the Town's public utility system will be compromised and environmentally threatened; and eventually, the Town will die!!! There will be no one left to pay taxes and financially support the Town's infrastructure.

Since the early beginnings of the discussions on the Pollocksville Bypass, the Town has opposed any route along the Town's eastern borders. The engineers, Wilbur Smith and Associates, have advised against such a route. Various Department of Transportation officials have stated that an eastern

route is outside the scope and purpose of a bypass, and that DOT would not construct such a road through a Town. The Town of Pollocksville agrees with the assessments of both the engineers and the DOT.

The Town of Pollocksville has gone on record as strongly endorsing any alternate route which tracks west of the Town limits. While the Town offers no opinion on any of the western alternatives, the Town does encourage a decision which will create minimum impact on the people. We would suggest the consideration be given to the intersection of US 17 and NC 58 on any of the western routes. This intersection should not be an "at-grade" intersection, but instead should be "grade-separated."

The Town appreciates the opportunity to comment on this most important highway project. Should you have questions or desire additional information, please do not hesitate to contact the Town.

With all good wishes,

Sincerely,

James V. Bender, Jr., Mayor

Ellis S. Banks, Jr., Commissioner

Peggy H. White, Commissioner

James L. Coleman, Commissioner

Doris W. Oliver, Commissioner

JVB/gwt

Cc: Mr. Cam McRae
Board Member, NC-DOT
PO Box 277
Kinston, NC 28502

US 17 at Maysville and Belgrade

Transportation Improvement Program Project No. R-2514

Public Hearing To Be Held

In response to the citizens of Belgrade & Maysville, the North Carolina Department of Transportation (NCDOT) and the United States Army Corps of Engineers (Corps) will conduct a Formal Public Hearing for the above–mentioned proposed highway project.

Time and Place:
Tuesday,
December 1, 2009

Public Hearing
Doors Open @
6:30pm

Formal Presentation
@ 7:00pm

Maysville Elementary
School - Gymnasium
located at 814 6th
Street, Maysville

The purpose of the public hearing is to accept any new, additional, and substantial information from the public that can be used to re-examine the corridor selection process that previously identified Alternative 2C as the proposed location of US 17. Alternative 2C follows existing US 17 through Belgrade, and Alternative 2A bypasses Belgrade to the west on a new alignment.

The formal presentation of the proposed project will include an overview of the alternative corridors, a review of past public involvement opportunities and the corridor selection process that eventually led to the selection of Alternative 2C. Following the presentation, the hearing will be open for public questions/comments. Speakers will be called in the order they have registered.

For additional information, contact Mr. Mark Pierce, NCDOT, Project Development and Environmental Analysis (919) 733-7844 Ext. 214, or email mspierce@ncdot.gov. Anyone wishing to speak publicly may register early by contacting Mr. Pierce before December 1, 2009 or may sign-in upon arrival.

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons. Anyone requiring special services should contact Mr. Pierce as early as possible so that arrangements can be made.

Connecting people and places in North Carolina — safely and efficiently, with accountability and environmental sensitivity.

US 17 at Maysville and Belgrade

Transportation Improvement Program Project No. R-2514

Public Hearing To Be Held

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Connecting people and places in North Carolina — safely and efficiently, with accountability and environmental sensitivity.

US 17 at Maysville and Belgrade
North Carolina Department of Transportation
Project Development & Environmental Analysis Branch
Attn: Mark Pierce
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Important Information.
Please read!

Homeowner's Name
234 Any Street
Hometown, NC 28985

US 17 at Maysville and Belgrade
North Carolina Department of Transportation
Project Development & Environmental Analysis Branch
Attn: Mark Pierce
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Important Information.
Please read!

Homeowner's Name
234 Any Street
Hometown, NC 28985

NOTICE OF A FORMAL PUBLIC HEARING - NCDOT REQUEST FOR ADDITIONAL PUBLIC COMMENT REGARDING PROPOSED LOCATION OF US HIGHWAY 17

WBS No. 34442.1.2 R-2514 Jones and Onslow Counties

In response to the citizens of Belgrade and Maysville, the North Carolina Department of Transportation (NCDOT) and the United States Army Corps of Engineers (Corps) will conduct a Formal Public Hearing for the above-mentioned proposed highway project, on Tuesday, December 1, 2009, at Maysville Elementary School (gymnasium), located at 814 6th Street, Maysville, 28555. The Maysville Elementary School gymnasium doors will open at 6:30 pm for public entry and registration of speakers. Attendees who wish to speak publicly at the hearing will need to sign in upon arrival. The formal presentation of the project will begin promptly at 7:00 pm.

The purpose of the public hearing is to accept any new, additional, and substantial information from the public that can be used to re-examine the corridor selection process that previously identified Alternative 2C as the proposed location of US 17. Alternative 2C follows existing US 17 through Belgrade, and Alternative 2A bypasses Belgrade to the west on a new alignment.

The formal presentation of the proposed project will include an overview of the alternative corridors in the Belgrade and Maysville area, a review of past public involvement opportunities and the corridor selection process that eventually led to the selection of Alternative 2C. Following the formal presentation, the hearing will be open for public questions and/or comments. Speakers will be called in the order they have registered. A three-minute time limit will be imposed for speaking in order to allow a fair opportunity for all those wishing to do so. Additional spoken comments will be received after those who registered have finished their comments. Additional time will be provided once everyone has had an opportunity to speak. Written comments may also be submitted until January 4, 2010.

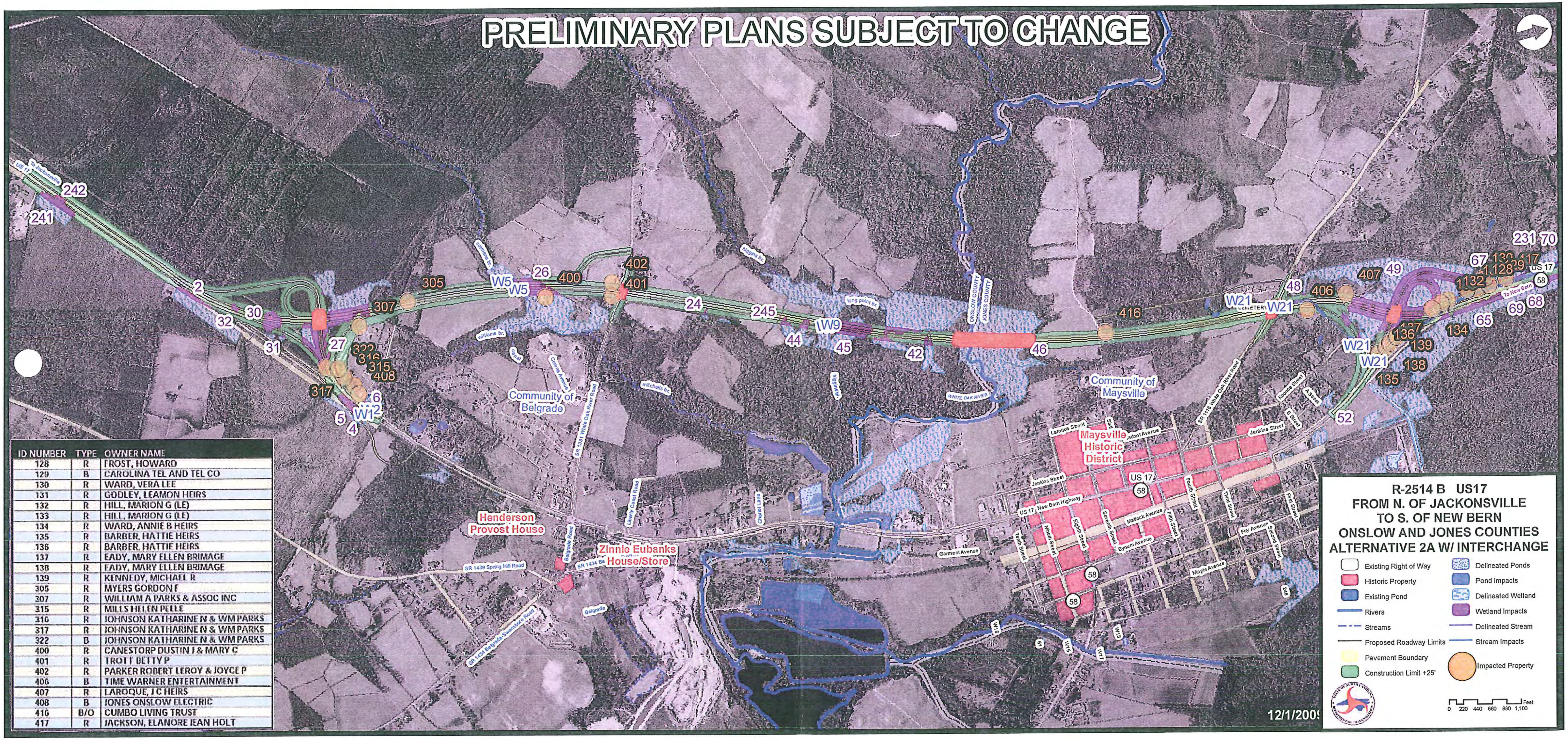
Anyone desiring additional information prior to the meeting, may contact Mark Pierce, NCDOT, Project Development and Environmental Analysis, (919) 733-7844 x 214 or via e-mail: mspierce@ncdot.gov. Anyone wishing to speak publicly may register early by contacting Mr. Pierce before November 30, 2009 or may sign-in upon arrival at the public hearing on December 1, 2009.

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this meeting. Anyone requiring special services should contact Mr. Pierce as early as possible so that arrangements can be made.

R-2514 B, C & D - US 17
CORRIDOR SELECTION SUMMARY OF IMPACTS
FOR SOUTHERN PORTION OF PROJECT FROM BELGRADE TO CHADWICK

Alternatives	Total Length (miles)	Proposed ROW	Field Recommended							Relocations		Cemetery Impacts	Noise Impacts (total)	Historic Resources Impacted	Forest Impacts (acres)	Prime Farmlands (acres)
			Bridge Length (ft)	Total Wetland Impacts (acres)	Stream Impacts (ft)	Length of Floodplain Crossing (ft)	Const. Cost # (millions)	R/W Cost	TOTAL COST	Residential	Business or Other					
Alt 2A (Freeway)	4.39	250'	3 Structures 100', Pipe, 1160' Total = 1260	39.80	2846	1260	$75.13	$2.60	$77.73	21	5	1	60	None	43	0
Alt 2A (Superstreet)	4.39	250'	3 Structures 100', Pipe, 1160' Total = 1260	26.39	1564	1260	$53.26	$2.60	$55.86	10	1	1	60	None	43	0
Alt 2C (Superstreet)	4.71	250'	560	16.74	2531	560	$46.23	$5.60*	$51.83*	18	18	2	126	None^	44	0

\# Cost estimated in Yr 2007
* Does not include the cost of Right-of-Way for Service Roads.
^ None pending further coordination.



PRELIMINARY PLANS SUBJECT TO CHANGE
Community of Belgrade
Community of Maysville
Maysville Historic District
Henderson Provost House
Zinnie Eubanks House/Store
US 17
58
12/1/2009
R-2514 B US17
FROM N. OF JACKONSVILLE
TO S. OF NEW BERN
ONSLOW AND JONES COUNTIES
ALTERNATIVE 2A W/ INTERCHANGE
Existing Right of Way
Historic Property
Existing Pond
Rivers
Streams
Proposed Roadway Limits
Pavement Boundary
Construction Limit +25'
Delineated Ponds
Pond Impacts
Delineated Wetland
Wetland Impacts
Delineated Stream
Stream Impacts
Impacted Property
0 220 440 660 880 1,100 Feet

ID NUMBER	TYPE	OWNER NAME
128	R	FROST, HOWARD
129	B	CAROLINA TEL AND TEL CO
130	R	WARD, VERA LEE
131	R	GODLEY, LEAMON HEIRS
132	R	HILL, MARION G (LE)
133	R	HILL, MARION G (LE)
134	R	WARD, ANNIE B HEIRS
135	R	BARBER, HATTIE HEIRS
136	R	BARBER, HATTIE HEIRS
137	R	EADY, MARY ELLEN BRIMAGE
138	R	EADY, MARY ELLEN BRIMAGE
139	R	KENNEDY, MICHAEL R
305	R	MYERS GORDON F
307	R	WILLIAM A PARKS & ASSOC INC
315	R	MILLS HELEN PELLE
316	R	JOHNSON KATHARINE N & WM PARKS
317	R	JOHNSON KATHARINE N & WM PARKS
322	B	JOHNSON KATHARINE N & WM PARKS
400	R	CANESTORP DUSTIN J & MARY C
401	R	TROTT BETTY P
402	R	PARKER ROBERT LEROY & JOYCE P
406	B	TIME WARNER ENTERTAINMENT
407	R	LAROQUE, J C HEIRS
408	B	JONES ONSLOW ELECTRIC
416	B/O	CUMBO LIVING TRUST
417	R	JACKSON, ELANORE JEAN HOLT

R-2514B US 17 ALTERNATIVE 2A INTERCHANGE

PRELIMINARY PLANS SUBJECT TO CHANGE

ID	TYPE	OWNER NAME
128	R	FROST, HOWARD
132	R	HILL, MARION G (LE)
133	R	HILL, MARION G (LE)
134	R	WARD, ANNIE B HEIRS
305	R	MYERS GORDON F
400	R	CANESTORP DUSTIN J & MARY C
401	R	TROTT BETTY P
402	R	PARKER ROBERT LEROY & JOYCE P
406	B/O	TIME WARNER ENTERTAINMENT
407	R	LAROQUE, J C HEIRS
416	B/O	CUMBO LIVING TRUST

R-2514 B US17
FROM N. OF JACKONSVILLE
TO S. OF NEW BERN
ONSLOW AND JONES COUNTIES
ALTERNATIVE 2A SUPER STREET

- Existing Right of Way
- Historic Property
- Existing Pond
- Rivers
- Streams
- Proposed Roadway Limits
- Pavement Boundary
- Construction Limit +25'
- Delineated Ponds
- Pond Impacts
- Delineated Wetland
- Wetland Impacts
- Delineated Stream
- Stream Impacts
- Impacted Property

Feet 0 200 400 600 800 1,000

12/1/2009

ALTERNATIVE 2A SUPER STREET US 17 R-2514B

PRELIMINARY PLANS SUBJECT TO CHANGE

ID NUMBER	TYPE	OWNER NAME
128	R	FROST, HOWARD
132	R	HILL, MARION G (LE)
133	R	HILL, MARION G (LE)
134	R	WARD, ANNIE B HEIRS
244	R	BYRD, JOHN THOMAS
249	B/O	MANNING EDWARD G & BOBBY L
250	R	MANNING EDWARD G & BOBBY L
251	B	BELGRADE VOL FIRE STATION
253	R	CARPITANO MARIE
254	R	CARPITANO MARIE
255	B	PLANT BERNARD M JR & GLORIA
264	R	PARKER EDWARD E & NANCY
265	R	LASSITER WOODROW & JOYCE
266	R	LASSITER WOODROW & JOYCE
267	R	LASSITER WOODROW & JOYCE
268	R	PARKER EDWARD & NANCY
269	B/O	LASSITER WOODROW
272	B	CORP PRODUCTION SERVICES INC
275	B/O	JENKINS ELIZABETH T & DENNIS L
276	B/O	JENKINS ELIZABETH T & DENNIS L
279	B	RIKARD JAMES C & ELIZA JANE
287	B/O	STEWART FREDERICK D
300	R	MEADOWS WILLIAM FRANK
403	B	CAROLINA POWER & LIGHT CO
404	R	BULLOCK JAMES EARL
405	B/O	BULLOCK JAMES EARL
406	B	TIME WARNER ENTERTAINMENT
407	B/O	LAROQUE, JC HEIRS
408	B	JONES ONSLOW ELECTRIC
409	R	ROBERTS FRANCES E & OTHERS
410	B/O	PARKER JERRY LEE
411	R	PARKER JERRY LEE
412	B/O	PARKER JERRY LEE
413	R	PARKER JERRY LEE SR
414	B/O	ALLEN RAYMOND S & KELLEY A M
415	B/O	PIN#542112952500

Community of Belgrade

Henderson Provost House

Zinnie Eubanks House/Store

Community of Maysville

Maysville Historic District

R-2514 B US17
FROM N. OF JACKONSVILLE
TO S. OF NEW BERN
ONSLOW AND JONES COUNTIES
ALTERNATIVE 2C SUPER STREET

- Existing Right of Way
- Historic Property
- Existing Pond
- Rivers
- Streams
- Proposed Roadway Limits
- Pavement Boundary
- Construction Limit +25'
- Delineated Ponds
- Pond Impacts
- Delineated Wetland
- Wetland Impacts
- Delineated Stream
- Stream Impacts
- Impacted Property

0 210 420 630 840 1,050 Feet

12/1/2009

ALTERNATIVE 2C SUPER STREET US 17 R-2514B

APPENDIX B

RELOCATION REPORT

North Carolina Department of Transportation

[X] E.I.S. [ ] CORRIDOR [ ] DESIGN

PROJECT:	8.T190301	COUNTY	Onslow, Jones, Craven	Alternate	2A	of Alternate
I.D. NO.:	R-2514	WBS ELEMENT:	34442.1.1			
DESCRIPTION OF PROJECT:	US 17 Improvements From North of Jacksonville to South of New Bern					

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	9	0	9	5
Businesses	0	0	0	0
Farms	0	0	0	0
Non-Profit	0	0	0	0

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
1	1	3	3	1

VALUE OF DWELLING

Owners		Tenants	
0-20M	1	$ 0-150	0
20-40M	1	150-250	0
40-70M	3	250-400	0
70-100M	3	400-600	0
100 UP	1	600 UP	0
TOTAL	9		0

DSS DWELLING AVAILABLE

For Sale		For Rent	
0-20M	0	$ 0-150	0
20-40M	3	150-250	0
40-70M	6	250-400	0
70-100M	8	400-600	0
100 UP	15	600 UP	0
TOTAL	32		0

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.	
	X	1.	Will special relocation services be necessary?
	X	2.	Will schools or churches be affect by displacement?
X		3.	Will business services still be available after project?
	X	4.	Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5.	Will relocation cause a housing shortage?
X		6.	Source for available housing (list).
	X	7.	Will additional housing programs be needed?
X		8.	Should Last Resort Housing be considered?
	X	9.	Are there large, disabled, elderly, etc. families?
	X	10.	Will public housing be needed for project?
X		11.	Is public housing available?
X		12.	Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13.	Will there be a problem of housing within financial means?
N/A		14.	Are suitable business sites available (list source).
		15.	Number months estimated to complete RELOCATION? 18

REMARKS (Respond by Number)

NOTE: All residential displacees considered families.

3. There is an ample supply of similar businesses not affected by this Project.

6 & 14. MLS Services, local REALTORS, newspapers, etc.

8. As mandated by law.

11. Onslow, Jones, and Craven Counties.

12. Or build if necessary.

NOTE: 3 Marked Graves located in proposed r/w on SR 1116

Samantha L. Straughan — 1/3/11
Right of Way Agent — Date

1/4/11
Approved by — Date

Form 15.4 Revised 10/00

Original & 1 Copy: State Relocation Agent
2 Copy Division Right of Way Office

RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.T190301	COUNTY	Onls, Jones, Crv	Alternate 3 of	Alternate
I.D. NO.:	R-2514	WBS:	34442.1.2		
DESCRIPTION OF PROJECT:	US 17 Improvements From North of Jacksonville to South of New Bern ALTERNATE 3, OPTION X				

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	10	0	10	8
Businesses	0	0	0	0
Farms	0	0	0	0
Non-Profit	0	0	0	0

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
--	2	6	2	

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Rent	
0-20M	-	$ 0-150	-	0-20M	-	$ 0-150	-
20-40M	3	150-250	-	20-40M	-	150-250	-
40-70M	5	250-400	-	40-70M	32	250-400	-
70-100M	1	400-600	-	70-100M	64	400-600	-
100 UP	1	600 UP	-	100 UP	765	600 UP	-
TOTAL	10		-		861		-

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
	X	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? 18 Months

REMARKS (Respond by Number)

All residential displacees are counted as families.

3. There is an ample supply of similar type businesses not affected by this project.
6. & 14. Realtors, MLS, Newspapers, Property Management
8. As mandated by State Law.
11. Onslow, Jones and Craven Counties
12. Or built if necessary

[signature]	01/05/11	[signature]	1/6/11
James M. Latham Right of Way Agent	Date	Relocation Coordinator	Date

FRM15-E Revised 09-02

Original & 1 Copy: Relocation Coordinator
2 Copy Division Relocation File

RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.T190301	COUNTY	Onls, Jones, Crv	Alternate 3 of	Alternate
I.D. NO.:	R-2514	WBS:	34442.1.2		
DESCRIPTION OF PROJECT:	US 17 Improvements From North of Jacksonville to South of New Bern ALTERNATE 3, OPTION Y				

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	11	0	11	9
Businesses	0	0	0	0
Farms	0	0	0	0
Non-Profit	0	0	0	0

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
--	2	6	3	

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Rent	
0-20M	-	$ 0-150	-	0-20M	-	$ 0-150	-
20-40M	3	150-250	-	20-40M	-	150-250	-
40-70M	6	250-400	-	40-70M	32	250-400	-
70-100M	1	400-600		70-100M	64	400-600	-
100 UP	1	600 UP		100 UP	765	600 UP	-
TOTAL	11		-		861		-

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
	X	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? 18 Months

REMARKS (Respond by Number)

All residential displacees are counted as families.

3. There is an ample supply of similar type businesses not affected by this project.
6. & 14. Realtors, MLS, Newspapers, Property Management
8. As mandated by State Law.
11. Onslow, Jones and Craven Counties
12. Or built if necessary

NOTE: COUNTRY JACKS SHELTER AND PRODUCE, SEASONAL – MISC MOVE

01/05/11		1/6/11	
James M. Latham Right of Way Agent	Date	Relocation Coordinator	Date

M15-E Revised 09-02

Original & 1 Copy: Relocation Coordinator
2 Copy Division Relocation File

RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

PROJECT:	8.T190301	COUNTY	Onls, Jones, Crv	Alternate 4D of	Alternate
I.D. NO.:	R-2514	WBS:	34442.1.2		
DESCRIPTION OF PROJECT:	US 17 Improvements From North of Jacksonville to South of New Bern **REVISED 01/05/2011**				

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	20	7	27	21
Businesses	0	0	0	0
Farms	0	0	0	0
Non-Profit	0	0	0	0

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
--	6	10	7	4

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Rent	
0-20M	-	$ 0-150	4	0-20M	-	$ 0-150	16
20-40M	8	150-250	3	20-40M	11	150-250	22
40-70M	8	250-400	-	40-70M	32	250-400	31
70-100M	1	400-600	-	70-100M	64	400-600	10
100 UP	3	600 UP	-	100 UP	765	600 UP	6
TOTAL	20		7		872		85

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
	X	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? **18 Months**

REMARKS (Respond by Number)

All residential displacees are counted as families.

3. There is an ample supply of similar type businesses not affected by this project.
6. & 14. Realtors, MLS, Newspapers, Property Management
8. As mandated by State Law.
11. Onslow, Jones and Craven Counties
12. Or built if necessary

PLEASE NOTE: There is a Carolina Power and Light substation that will be inmpacted at a substantial cost located off of Ten Mile Fork Road

	09/09/2010- 01/05/2011		1/6/11

Original & 1 Copy: Relocation Coordinator
2 Copy Division Relocation File

APPENDIX C

U.S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service

SCS-CPA-106
01-91

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*

Name of Project: R-2514 Multilaning US 17	3. Date of Land Evaluation Request: November 19, 2002	4. Sheet 1 of ____
Type of Project: Roadway Widening w/Bypass	5. Federal Agency Involved: FHA	
	6. County and State: Onslow Co., NC	

PART II *(To be completed by SCS)*

1. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form): YES ☑ NO ☐	1. Date Request Received By SCS	2. Person Completing Form: W. Spruill
		4. Acres Irrigated: None / Average Farm Size: 158
5. Major Crop(s): Corn	6. Farmable Land In Government Jurisdiction: Acres: 384,252 % 73.2	7. Amount Of Farmland As Defined In FPPA: Acres 345,021 % 65.7
8. Name Of Land Evaluation System Used: Onslow LE	9. Name of Local Site Assessment System: None	10. Date Land Evaluation Returned By SCS: 3/5/05

PART III *(To be completed by Federal Agency)*

	Alternative Corridor For Segment 2			
	Corridor 2	Corridor 2a	Corridor 2b	Corridor 2c
A. Total Acres To Be Converted Directly	31.5	97.8	27.8	79.5
B. Total Acres To Be Converted Indirectly, Or To Receive Services	135.5	203.2	92.2	105.5
C. Total Acres In Corridor	167.0	301.0	120.0	185
PART IV *(To be completed by SCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	10.00	88.50	22.10	7.80
B. Total Acres Statewide And Local Important Farmland	0.00	0.00	0.00	8.00
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0029	0.0257	0.006	0.0046
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	73.20	73.20	73.20	73.20
PART V *(To be completed by SCS) Land Evaluation Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	6.00	29.00	17.00	13.00

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area In Nonurban Use	15	0	15	15	15
2. Perimeter In Nonurban Use	10	0	9	9	9
3. Percent Of Corridor Being Farmed	20	0	4	0	0
4. Protection Provided By State And Local Government	20	0	0	0	0
5. Size Of Present Farm Unit Compared To Average	10	0	0	0	0
6. Creation Of Nonfarmable Farmland	25	0	0	0	0
7. Availability Of Farm Support Services	5	0	5	5	5
8. On-Farm Investments	20	0	10	10	10
9. Effects Of Conversion On Farm Support Services	25	0	12	12	12
10. Compatibility With Existing Agricultural Use	10	0	6	6	6
TOTAL CORRIDOR ASSESSMENT POINTS	160	0	52	52	52
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	6	29	17	13
Total Corridor Assessment (From Part VI above or a local site assessment)	160	0	52	52	52
TOTAL POINTS *(Total of above 2 lines)*	260	6	81	69	65

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
			YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing This Part: DATE

NOTE: Complete a form for each segment with more than one Alternative Corridor.

Soil Conservation Service

SCS-CPA-106
01-91

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*

1. Name of Project: R-2514 Multilaning US 17
2. Type of Project: Roadway Widening w/Bypass
3. Date of Land Evaluation Request: November, 2002
4. Sheet 1 of
5. Federal Agency Involved: Federal Highway Administration
6. County and State: Jones Co., NC

PART II *(To be completed by SCS)*

1. Date Request Received By SCS: 2/11/03
2. Person Completing Form: W. Sprui11
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form) YES ☑ NO ☐
4. Acres Irrigated: None | Average Farm Size: 291
5. Major Crop(s): Corn
6. Farmable Land In Government Jurisdiction: Acres: 268,782 % 89.9
7. Amount Of Farmland As Defined In FPPA: Acres: 257,899 % 86.
8. Name Of Land Evaluation System Used: Jones LE
9. Name of Local Site Assessment System: None
10. Date Land Evaluation Returned By SCS: 03/04/05

PART III *(To be completed by Federal Agency)*

	Alternative Corridor For Segment			
	Corridor 2	Corridor 2a	Corridor 2b	Corridor 2c
A. Total Acres To Be Converted Directly	7.80	21.0	95.2	15.1
B. Total Acres To Be Converted Indirectly, Or To Receive Services	107.1	166.5	260.8	110.8
C. Total Acres In Corridor	114.9	187.5	356.0	125.9
PART IV *(To be completed by SCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	7.800	32.60	14.30	15.10
B. Total Acres Statewide And Local Important Farmland	0.000	7.60	0.00	0.00
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.003	.015	0.005	0.005
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	89.900	89.90	89.90	89.90
PART V *(To be completed by SCS) Land Evaluation Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	6.00	22.00	3.00	10.00

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area In Nonurban Use	15	0	15	15	15
2. Perimeter In Nonurban Use	10	0	9	9	9
3. Percent Of Corridor Being Farmed	20	0	4	0	0
4. Protection Provided By State And Local Government	20	0	0	0	0
5. Size Of Present Farm Unit Compared To Average	10	0	0	0	0
6. Creation Of Nonfarmable Farmland	25	0	0	0	0
7. Availability Of Farm Support Services	5	0	5	5	5
8. On-Farm Investments	20	0	10	10	10
9. Effects Of Conversion On Farm Support Services	25	0	12	12	12
10. Compatibility With Existing Agricultural Use	10	0	6	6	6
TOTAL CORRIDOR ASSESSMENT POINTS	160	0	61	52	52
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	6	22	3	10
Total Corridor Assessment (From Part VI above or a local site assessment)	160	0	61	52	52
TOTAL POINTS *(Total of above 2 lines)*	260	6	83	55	62

1. Corridor Selected:
2. Total Acres of Farmlands to be Converted by Project:
3. Date Of Selection:
4. Was A Local Site Assessment Used? YES ☐ NO ☐
5. Reason For Selection:

Signature of Person Completing This Part: DATE

NOTE: Complete a form for each segment with more than one Alternative Corridor.

U.S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service

SCS-CPA-1C
01-91

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*		3. Date of Land Evaluation Request: November 2002	4. Sheet 1 of _____
1. Name of Project: R-2514 Multilaning US 17 Jacksonville to New Bern		5. Federal Agency Involved: Federal Highway Administration	
2. Type of Project: Roadway Widening with Bypass		6. County and State: Jones ~~and Onslow Counties~~ Co., NC	
PART II *(To be completed by SCS)*		1. Date Request Received By SCS: 2/11/03	2. Person Completing Form: W. Spruill
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form)	YES ☒ NO ☐	4. Acres Irrigated: None	Average Farm Size: 291
5. Major Crop(s): Corn	6. Farmable Land In Government Jurisdiction: Acres: 268,782 %: 89.9	7. Amount Of Farmland As Defined In FPPA: Acres: 257,899 %: 86	
8. Name Of Land Evaluation System Used: Jones LE	9. Name Of Local Site Assessment System: None	10. Date Land Evaluation Returned By SCS: 03/05/03	

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment 3			
	Corridor	Corridor	Corridor	Corridor
A. Total Acres To Be Converted Directly	42.70			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	159.00			
C. Total Acres In Corridor	201.00			
PART IV *(To be completed by SCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	6.00			
B. Total Acres Statewide And Local Important Farmland	4.00			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.0038			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	89.90			
PART V *(To be completed by SCS) Land Evaluation Criterion Relative Value* of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)	3.47			

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area In Nonurban Use	15	0			
2. Perimeter In Nonurban Use	10	0			
3. Percent Of Corridor Being Farmed	20	0			
4. Protection Provided By State And Local Government	20	0			
5. Size Of Present Farm Unit Compared To Average	10	0			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availability Of Farm Support Services	5	0			
8. On-Farm Investments	20	0			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	0			
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	3.47			
Total Corridor Assessment (From Part VI above or a local site assessment)	160	0			
TOTAL POINTS *(Total of above 2 lines)*	260	3.47			

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing This Part: _____ DATE _____

NOTE: Complete a form for each segment with more than one Alternative Corridor

U.S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service

SCS-CPA-10
01-91

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*		3. Date of Land Evaluation Request: November 2002	4. Sheet 1 of ____
1. Name of Project: R-2514 Multilaning US 17 Jacksonville to New Bern		5. Federal Agency Involved: Federal Highway Administration	
2. Type of Project: Roadway Widening with Bypass		6. County and State: Jones and [redacted] Co., NC	
PART II *(To be completed by SCS)*		1. Date Request Received By SCS: 2/11/03	2. Person Completing Form: W. Spruill
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form) YES ☒ NO ☐		4. Acres Irrigated: None	Average Farm Size: 291
5. Major Crop(s): Corn	6. Farmable Land In Government Jurisdiction: Acres: 268,782 % 89.9	7. Amount Of Farmland As Defined in FPPA: Acres: 257,899 % 86	
8. Name Of Land Evaluation System Used: Jones L E	9. Name of Local Site Assessment System: None	10. Date Land Evaluation Returned By SCS: 03/04/03	

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment 4			
	Corridor 4a	Corridor 4b	Corridor 4d	Corridor 4e
A. Total Acres To Be Converted Directly	110.0	369.9	355.8	283.5
B. Total Acres To Be Converted Indirectly, Or To Receive Services	500.3	509.6	634.1	741.0
C. Total Acres In Corridor	610.3	879.5	989.9	1024.5
PART IV *(To be completed by SCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	19.3	127.8	95.5	143.10
B. Total Acres Statewide And Local Important Farmland	5.0	31.6	9.00	70.20
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.0098	.06	.04	.08
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	89.90	89.90	89.90	89.90
PART V *(To be completed by SCS) Land Evaluation Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	4.00	15.00	12.00	17.00
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points			
1. Area In Nonurban Use	15	15	15	15	15
2. Perimeter In Nonurban Use	10	9	9	9	9
3. Percent Of Corridor Being Farmed	20	0	0	0	0
4. Protection Provided By State And Local Government	20	0	0	0	0
5. Size Of Present Farm Unit Compared To Average	10	0	0	0	0
6. Creation Of Nonfarmable Farmland	25	0	0	0	0
7. Availability Of Farm Support Services	5	5	5	5	5
8. On-Farm Investments	20	10	10	10	10
9. Effects Of Conversion On Farm Support Services	25	12	12	12	12
10. Compatibility With Existing Agricultural Use	10	6	6	6	6
TOTAL CORRIDOR ASSESSMENT POINTS	160	52	52	52	52
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	4	15	12	17
Total Corridor Assessment (From Part VI above or a local site assessment)	160	52	52	52	52
TOTAL POINTS *(Total of above 2 lines)*	260	56	67	64	69

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing This Part: _____ DATE _____

NOTE: Complete a form for each segment with more than one Alternative Corridor

U.S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service

SCS-CPA-1
01-91

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*		3. Date of Land Evaluation Request: November 2002	4. Sheet 1 of ____
1. Name of Project: R-2514 Multilaning US 17 Jacksonville to New Bern		5. Federal Agency Involved: Federal Highway Administration	
2. Type of Project: Roadway Widening with Bypass		6. County and State: Jones and ~~Craven~~ Co., NC	
PART II *(To be completed by SCS)*		1. Date Request Received By SCS: 2/11/03	2. Person Completing Form: W. Spruill
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form): YES ☑ NO ☐			4. Acres Irrigated: None / Average Farm Size: 291
5. Major Crop(s): Corn	6. Farmable Land In Government Jurisdiction: Acres: 268,782 % 89.9		7. Amount Of Farmland As Defined in FPPA: Acres: 257,899 % 86
8. Name Of Land Evaluation System Used: Jones LE	9. Name of Local Site Assessment System: None		10. Date Land Evaluation Returned By SCS: 03/04/03

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment 4			
	Corridor 4g	Corridor 4h	Corridor 4i	Corridor
A. Total Acres To Be Converted Directly	302.40	320.5	277.2	
B. Total Acres To Be Converted Indirectly, Or To Receive Services	626.00	719.5	718.7	
C. Total Acres In Corridor	1000.20	1040.0	995.9	
PART IV *(To be completed by SCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	274.10	104.10	28.8	
B. Total Acres Statewide And Local Important Farmland	103.10	50.80	35.2	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.15	.06	.02	
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	89.90	89.90	89.90	
PART V *(To be completed by SCS) Land Evaluation Criterion Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	28.00	14.00	5.0	
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points			
1. Area In Nonurban Use	15	15	15	15
2. Perimeter In Nonurban Use	10	9	9	9
3. Percent Of Corridor Being Farmed	20	0	0	0
4. Protection Provided By State And Local Government	20	0	0	0
5. Size Of Present Farm Unit Compared To Average	10	0	0	0
6. Creation Of Nonfarmable Farmland	25	0	0	0
7. Availability Of Farm Support Services	5	5	5	5
8. On-Farm Investments	20	10	10	10
9. Effects Of Conversion On Farm Support Services	25	12	12	12
10. Compatibility With Existing Agricultural Use	10	6	6	6
TOTAL CORRIDOR ASSESSMENT POINTS	160	52	52	52
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V)	100	28	14	5
Total Corridor Assessment (From Part VI above or a local site assessment)	160	52	52	52
TOTAL POINTS *(Total of above 2 lines)*	260	80	66	57

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing This Part: DATE

NOTE: Complete a form for