Proposed NC 32 Connector
From US 64 to the Intersection of NC 32 and NC 94
Washington County
Federal Aid Project STP-000S(252)
WBS Element 34548.1.1
TIP Project # R-3620

ADMINISTRATIVE ACTION

FINDING OF NO SIGNIFICANT IMPACT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
N.C. DEPARTMENT OF TRANSPORTATION

Submitted Pursuant to 42 U.S.C. 4332(2)(c)

APPROVED:

4/29/10
Date

for **Gregory J. Thorpe, Ph.D., Manager**
Project Development and Environmental Analysis Branch, NCDOT

4/29/10
Date

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

Proposed NC 32 Connector
From US 64 to the Intersection of NC 32 and NC 94
Washington County
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TIP Project # R-3620

Finding of No Significant Impact

March 2010

Documentation Prepared in Project Development and Environmental Analysis Branch by:

4-28-10
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4/28/10
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PROJECT COMMITMENTS

Proposed NC 32 Connector
From US 64 to the Intersection of NC 32 and NC 94
Washington County
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Project Development & Environmental Analysis Branch – Natural Environment Unit

In order to remain consistent with the Coastal Area Management Act (CAMA) Land Use Plan for Washington County, all mitigation for wetlands impacted within the county boundaries must be performed within Washington County, as opposed to any other county in North Carolina.

Roadway Design Unit & Geotechnical Engineering Unit

Additional coordination with resource agencies regarding the use of undercut versus fill will take place prior to the Concurrence Point 4B meeting.

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Proposed NC 32 Connector
From US 64 to the Intersection of NC 32 and NC 94
Washington County
WBS Element 34548.1.1
TIP Project # R-3620

FINDING OF NO SIGNIFICANT IMPACT

Prepared by the Project Development and Environmental Analysis Branch
North Carolina Department of Transportation

I. TYPE OF ACTION

This is a Federal Highway Administration (FHWA) administrative action, Finding of No Significant Impact (FONSI).

The FHWA has determined this project will not have any significant impact on the environment. This FONSI is based on the Federal Environmental Assessment (EA), which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. The EA provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. This document is also based on comments from Federal, State, and local agencies, as well as the public. The FHWA takes full responsibility for the accuracy, scope, and content of the EA.

II. DESCRIPTION OF PROPOSED ACTION

The NCDOT, in consultation with the FHWA, proposes to construct a connector from the US 64/SR 1139 (Beasley Road) interchange to the intersection of NC 32 and NC 94 in Washington County (see Figure 1).

This project is included in the approved 2009-2015 State Transportation Improvement Program (STIP), but is not included in the current five-year work plan. The total cost in the STIP is $16,589,000, which includes $300,000 for right of way, $189,000 for mitigation and $16,100,000 for construction. The current estimated total cost for the preferred alternative (Alternative 1) is $19,367,000. Right of way acquisition is scheduled to begin in Federal Fiscal Year (FFY) 2012 and construction in FFY 2014; however, these dates are subject to change based on the outcome of the pending six to ten-year work plan.

III. PREFERRED ALTERNATIVE

Several alternatives were evaluated in the EA, including the "no-build" alternative and six (6) build alternatives on both new and existing location. At the Concurrence Point 3 meeting held on October 15, 2009, the Merger team concurred on Alternative 1 as the Least Environmentally Damaging Practicable Alternative (LEDPA) for this project since it minimizes impacts to both the human and natural environment as compared to Alternative 2. Additionally, the difference in the quality of the wetland impacts, the amount of stream impacts, the cost and the relocations associated with Alternative 2 make Alternative 1 the preferred alternative.

IV. SUMMARY OF ENVIRONMENTAL EFFECTS

Adverse impacts to the human and natural environments were minimized for the proposed project through alternative development and selection, reduction of fill slopes at stream and wetland crossings, shifts in the proposed alignment, and by using culverts instead of bridges over high quality wetland areas*. No adverse effect on the air quality of the surrounding area is anticipated as a result of the project. The proposed project will not adversely impact any historic structures eligible for or listed on the National Register of Historic Places or any known archaeological sites eligible for listing in the National Register. The project will involve the relocation of one (1) business. The project will impact approximately 19.3 acres of wetlands and 191 linear feet of streams. No Environmental Justice issues were identified. The Biological Conclusion for the red wolf is *May Affect-Not Likely to Adversely Affect*. Table 1 below gives a comprehensive list of resources and the effects associated with each.

*Using culverts at the stream crossings, as opposed to bridges, minimized the impact to both wetlands and streams. Because of the grade change required to build bridges, the footprint of the bridge and the slope stakes was actually greater than the footprint required for culverts.

Table 1: R-3620 Resource Effects

Resource	Alternative 1 (Preferred)
Length (miles)	3.7
Railroad Crossings	0
Schools	0
Recreational Areas and Parks	0
Churches	0
Cemeteries	0
Major Utility Crossings	1
National Register Eligible Properties • Albemarle Grill	No Effect
Archaeological Sites	0
Federally-Listed Species within Corridor	1*
100-Year Floodplain Crossings	Yes
Residential Relocations	0
Business Relocations	1
Hazardous Material Sites	0
Wetland Impacts (acres)	19.3
Stream Crossings	1
Stream Impacts (linear feet)	191
Substantial Noise Impacts	0
Water Supply Watershed Protected Areas	0
Wildlife Refuges and Game Lands	0
Section 4(f)/Section 6(f) Impacts	0
Prime Farmland Impacts	57.9 acres
Low Income Population Impacts	Low
Minority Population Impacts	Low
Construction Cost	$16,300,000
Right of Way Cost	$2,775,000
Utilities Cost	$292,000
Total Cost	**$19,367,000**

*This project may affect, but is not likely to adversely affect the red wolf.

A. Avoidance and Minimization

1. Avoidance

As noted in the Environmental Assessment, complete avoidance of the stream and wetlands is not possible due to the presence of these resources in the project study area. All alternatives had some impact to wetlands.

2. Minimization

In an effort to minimize the impacts to wetlands associated with the construction of the selected alternative, NCDOT has implemented the following measures. All preliminary recommendations for minimization are based on the available surveys for this area:

- Alternative 1 has been shifted so that the fewest number of wetlands and streams would be affected along this alignment.
- NCDOT will employ 3:1 fill slopes in all wetland areas.
- No ditches will be utilized in wetland areas throughout the project unless undercutting is readdressed at a later date.
- There will be no impacts to Coastal Area Management Act (CAMA) Areas of Environmental Concern (AECs).
- The project will have limited control of access on the new location portion and partial control of access on the existing location portion. Limited control of access will only allow connections to the facility at interchanges or at-grade intersections and no private driveway connections will be allowed.

3. Additional Issues

a. Natural Environment

- Alternative 6 was developed to the west of Alternative 1 in the hopes of minimizing the number of wetlands impacted. However, Alternative 6 actually had a greater number of impacted wetlands, so it was removed from consideration at the Concurrence Point 2A meeting in October 2008.
- Consideration of undercutting the natural grade will be addressed once geotechnical surveys are completed.

- NCDOT will examine the use of grass swales with non-erosive velocities at the wetlands, pre-formed scour holes, energy dissipators and pipe equalizers. Stormwater basins, though probably not necessary for this project, will be designed at a later date if required.

b. Human Environment

- Alternative 1 will not displace any residences.

- Alternative 1 avoids adverse impacts to properties on or eligible for the National Register of Historic Places (Rehoboth Methodist Church and the farm on NC 32).

- Eight (8) foot shoulders (the minimum allowed by AASHTO) will be designed for this facility. If guardrail becomes necessary, the shoulders will be widened to 11 feet.

B. Wetlands Finding

In accordance with 33 CFR 328.3(b) and 23 CFR 777, 27 jurisdictional wetlands were identified and delineated within the project study area. Each wetland included the presence of hydrophytic vegetation, the presence of hydric soils, and the evidence of wetland hydrology. Jurisdictional verification of the wetlands and streams occurred on July 20, 2007 with a representative of the USACE.

The LEDPA impacts approximately 19.3 acres of Section 404 wetlands, none of which are designated as CAMA coastal wetlands. NCDOT was unable to completely avoid impacts to wetlands. It was determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. Since this project will impact more than one (1) acre of wetlands, mitigation will be expected.

C. Floodplain Finding

The Federal Emergency Management Agency (FEMA), in cooperation with federal, state and local governments, has developed floodway boundaries and Flood Insurance Rate Maps (FIRMs) for Washington County. Based on the most current information available from the North Carolina Floodplain Mapping Program (NCFMP), there are no regulated streams that will be crossed by this project. However, the Hydraulics Unit will continue to coordinate with the NCFMP and FEMA to ensure compliance with floodplain management ordinances as applicable to this project.

V. COORDINATION AND COMMENTS

A. Circulation of the Environmental Assessment (EA)

The FHWA approved the EA on March 31, 2009. The approved EA was circulated to the following federal, state, and local agencies for review and comments. An asterisk (*) indicates a written response was received from the agency. Copies of the correspondence received are included in Appendix B of this document. Responses to substantial comments are noted below in Section B.

U.S. Army Corps of Engineers – Regulatory Division
* U.S. Environmental Protection Agency
* U.S. Fish and Wildlife Service
National Marine Fisheries Service
* N.C. Department of Agriculture and Consumer Services
N.C. Department of Cultural Resources
* N.C. Department of Environment and Natural Resources
* N.C. Division of Coastal Management
* N.C. Division of Environmental Health
* N.C. Division of Marine Fisheries
* N.C. Division of Water Quality
N.C. State Clearinghouse
* N.C. Wildlife Resources Commission
* The Albemarle Commission

B. Comments Received on the EA

1. U.S. Environmental Protection Agency

COMMENT: "The EA includes a general discussion concerning the NCDOT's Geotechnical Engineering Unit recommendation to raise the grade of the existing roadway by four (4) to six (6) feet. This recommendation includes increased fill heights between the subgrade of the roadway and the water table. The proposed grade change will require NCDOT to construct a new facility adjacent to the existing roadway in all existing location sections of the project. The EA also identifies the problem that it will be impossible to maintain traffic on the existing facility with such a substantial change in grade taking place. This general issue was brought up during the CP 2A field meeting and later at the next Merger meeting in November of 2008. EPA has substantial environmental concerns for this major design change."

RESPONSE: See Section VI.A of this document for further information regarding the geotechnical and grade related issues on this project.

COMMENT: "Raising the grade of the roadway by four (4) to six (6) feet is causing substantial impacts to wetlands and streams. EPA has previously noted from the field meeting that there is no evidence of the existing roadway being flooded during normal events. NCDOT has provided no information regarding problems with the maintenance of the existing roadway as it relates to a high water table (e.g. subsidence issues or SLR projections)."

RESPONSE: Flooding is not the justification behind the raising of the grade. Please see Section VI.A of this document for further information regarding the geotechnical and grade-related issues on this project.

COMMENT: "From the Merger 01 Performance Measure analysis, a new location facility in Eastern North Carolina averages approximately 2.6 acres of wetland impact per mile of new roadway (BASELINE 2004-2007). For Alternative 1, wetland impacts average 5.2 acres per mile. For Alternative 2, wetland impacts average 1.5 acres per mile. Residential relocations for Alternative 2 average approximately 3.0 relocations per mile. The BASELINE residential relocations for an Eastern new location project are approximately four (4) relocations per mile."

RESPONSE: Comment noted.

COMMENT: "Increasing the fill heights of the existing roadway by four (4) to six (6) feet is essentially negating any avoidance and minimization benefits from using 3:1 side slopes in jurisdictional wetland areas. A four (4) foot grade increase will push the fill heights in wetlands to 12-feet on each side of the roadway even with 3:1 side slopes. A six (6) foot grade increase will push the fill heights in wetland to 18 feet on each side of the roadway even with 3:1 side slopes."

RESPONSE: Since NCDOT's Geotechnical Unit has recommended raising the grade of the proposed roadway four (4) to six (6) feet above existing ground, NCDOT will use alternative avoidance and minimization measures, such as a combination of undercutting and fill in wetland areas and alignment shifts to keep wetland impacts to a minimum.

COMMENT: "This is the first time from EPA's experience that NCDOT is proposing to substantially raise the grade of the entire roadway without direct evidence of past problems regarding flooding or subsidence from high water tables."

RESPONSE: A four (4) foot difference between groundwater and subgrade is the standard practice for NCDOT in the Coastal Plain. In addition, flooding of the existing roadway is not the reason behind the grade change. NCDOT is proposing to raise the grade of the proposed roadway because of the poor quality of the in situ soils that could lead to a compromised subgrade and because other options such as undercutting are very costly and would ultimately have a greater impact to wetlands because of the need for lateral outfall ditches.

COMMENT: "EPA is also concerned that increased fill heights for the roadway are being designed independent of the hydraulic structure recommendations that for this type of facility are designed at a 25-year or 50-year storm event. Raising the grade of the roadway four (4) to six (6) feet to a 100-year event will potentially create an 'unequal design.' There is also a potential concern for causing flooding on private property in the future, per a comment made by the Town Manager on 11/13/08."

RESPONSE: NCDOT's Hydraulic Unit's preliminary sizing of the major drainage structures was based on a 50-year storm event. Based on the sizes of the hydraulic structures, the grade could be lowered if it was dependent on a "hydraulics controlled" grade. However, the grade recommendation is based on the Geotechnical Unit's assessment of the poor soil condition, the possibility of a weakened subgrade, and the prohibitive cost and wetland impacts associated with undercutting. The 100-year storm event will be analyzed during the Hydraulic Design phase when there is more detailed topographical information available. Typically, NCDOT tries not to increase the 100-year base flood elevation at existing structure crossings and tries to limit it at new location crossings. Flooding concerns on private property will be investigated in more detail during the design phase.

COMMENT: "EPA notes that there are no details provided in the 'Avoidance, Minimization, and Mitigation' section of the EA. The discussion on page 27 of the EA concerning the culvert versus bridge issues at two sites is not relevant if NCDOT was designing a typical facility, i.e. one without four (4) to six (6) feet of additional fill height. Page 26 of the EA states that avoidance of some wetlands and streams within the project study area has been accomplished during the design, but there are no details as to how much or where these avoidance measures took place. EPA has not identified an environmentally preferred alternative and requests that NCDOT consider additional avoidance and minimization measures to lessen the potential impacts to jurisdictional wetlands."

RESPONSE: Avoidance and minimizations measures are included in Section VII.B of this document.

COMMENT: "EPA notes the comment on page 35 of the EA concerning prime farmlands and that NCDOT is currently performing a Farmland Impact Assessment for this proposed project. The EA states that the future assessment will be used in determining a recommended alternative. This analysis should have been completed and included in the EA for the two build alternatives. More than 2/3 of the project study area is in active agricultural fields. EPA requests that the prime farmland information be provided prior to the Concurrence Point 3 meeting for further evaluation."

RESPONSE: See Section VII.C of this document for information regarding the Farmland Impact Analysis.

2. **U.S. Fish & Wildlife Service**

COMMENT: "The project will have significant impacts on fish and wildlife resources, including impacts to streams, wetlands, upland forest and other habitat types. These impacts will be in the form of direct loss of habitat and habitat fragmentation effects on remaining habitat. Although these habitats are already fragmented by the predominantly agricultural land use of the project area, additional cumulative habitat fragmentation effects will occur."

RESPONSE: NCDOT and FHWA do not feel that this project will have significant impacts on the environment as a result of the selection of Alternative 1 as the LEDPA. The USFWS has stated in their comments that the EA adequately addresses the existing fish and wildlife resources, the waters and wetlands of the United States, and the potential impacts of this proposed project on these resources. Although the USFWS has stated that the impacts associated with this project will be significant, they did not request that an Environmental Impact Statement (EIS) be prepared. In addition, NCDOT has received concurrence from all the signatory agencies to proceed with Alternative 1 as the LEDPA.

COMMENT: "The red wolf (*Canis rufus*) is a federally endangered species listed as occurring in Washington County. The EA renders a biological conclusion of 'may affect, not likely to adversely affect.' The Service concurs with this biological conclusion."

RESPONSE: Comment noted.

COMMENT: "The Service has been actively involved in the NEPA/404 Merger Process coordination for this project. Our input has been incorporated into the EA. At this time, we do not have a preferred alternative. We

will defer that decision until Concurrence Point 3 in the Merger Process, and we will provide additional comments and recommendations for further avoidance and minimization to fish and wildlife resources as appropriate."

RESPONSE: The USFWS concurred on Alternative 1 as the preferred alternative at the October 15, 2009 Concurrence Point 3 Merger meeting.

COMMENT: "The Service believes that this EA adequately addresses the existing fish and wildlife resources, the waters and wetlands of the United States, and the potential impacts of this proposed project on these resources."

RESPONSE: Comment noted.

3. NC Department of Agriculture and Consumer Services

COMMENT: "Some alternatives in this proposal will further fragment farmland and land parcels. Alternatives 2 and 5 will have the least effect on the agricultural resources in the study area. Alternatives 1 and 6 will have a negative effect on the farmland and soil resources in the study area. These alternatives will also have greater indirect impacts (i.e. development, land value increases, subdivision). We believe that whenever existing infrastructure can be updated to alleviate traffic and safety concerns, this action should be taken. NCDA&CS looks forward to the Farmland Impact Assessment currently being conducted by NCDOT for this project. Again, Alternatives 1 & 6 would fragment the farm parcels of the area and thus have an adverse effect on the productivity and viability of these working lands."

RESPONSE: See Section VII.C of this document for information regarding the Farmland Impact Analysis.

4. NC Department of Environment and Natural Resources

COMMENT: "The Department of Environment and Natural Resources has reviewed the proposed project. We ask that the Department of Transportation work directly with our commenting agencies during the NEPA Merger Process. This will help avoid delays at the permit phase."

RESPONSE: NCDOT will work cooperatively with the commenting agencies throughout the NEPA/Section 404 Merger process.

5. **NC Division of Coastal Management**

COMMENT: "Please be aware that the CAMA Land Use Plan for Washington County contains the following land use plan policy:

> 'Washington County does not support and objects to the mitigation of property from county to county due to the already declining tax base. Mitigation allows property to be exchanged to provide for required wetlands as required by the State.'

At the Concurrence Point 2A meeting on November 13, 2008, the NEPA/404 Project Team agreed to study two alternatives with estimated wetland impacts of 19.3 acres and 8.5 acres, respectively. The Division of Coastal Management (DCM) District Planner will need to determine that this project is consistent with the local CAMA land use plan(s) before a final decision can be made on a CAMA Major Permit application or Consistency Certification. Therefore, when NCDOT develops a project mitigation plan, please be aware that the mitigation plan will need to be consistent with the above CAMA land use plan policy."

RESPONSE: Once NCDOT's Natural Environment Unit begins developing a mitigation plan for this project, NCDOT will comply with the all applicable CAMA land use policies.

6. **NC Division of Environmental Health**

COMMENT: "The applicant should be advised that plans and specifications for all water system improvements must be approved by the Division of Environmental Health prior to the award of a contract or the initiation of construction (as required by 14A NCAC 18C.0200 et. seq.).

RESPONSE: Comment noted.

COMMENT: "If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Environmental Health, Public Water Supply Section, Technical Services Branch, 1634 Mail Service Center, Raleigh, North Carolina, 27699-1634, (919) 733-2321. Public Water Supply approval is required for the relocation of existing water mains prior to construction. If DOT specifications are to be used, only plan submittal is required. Please contact the Washington County Water Department to verify utility location and coordinate the relocation."

RESPONSE: Comment noted.

COMMENT: "Plans and specifications for new water distribution lines that are two inches or larger in diameter must be submitted to the Public Water Supply – Plan Review Section for approval prior to construction."

RESPONSE: Comment noted.

7. **NC Division of Marine Fisheries**

COMMENT: "This agency has reviewed the EA and supports Alternative 1, provided adequate mitigation occurs for wetland loss and impacts. Even though this alternative has greater wetland impacts than Alternative 2, the number of stream crossings and stream impacts is less. The Division feels this alternative overall is the best to pursue."

RESPONSE: Comment noted.

8. **NC Division of Water Quality**

COMMENT: "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."

RESPONSE: Comment noted.

COMMENT: "The document should include a presentation or discussion of all stream classification(s) and any supplemental classifications, along with the NCDWQ Stream Index Number, for any streams which have the potential to be impacted. The document should discuss any streams which may be listed on the most recently available 303(d) list. If none are included on the list, it should be noted."

RESPONSE: This information has been included in Section VII.D of this document.

COMMENT: "The document discusses raising the existing roadbed four (4) to six (6) feet above the water table. However, the document does not discuss why this is necessary. Some of this information has been presented to team members during past Merger team meetings; however, as a matter of record, a full discussion should be presented in the document. This is especially critical since this design criterion will increase impacts to jurisdictional streams and wetlands, relocations and cost. While it is understood that the high water table in conjunction with the poorly draining soils may necessitate the need to raise the road, the direct impacts of these two factors are not clear with respect to the existing

road. Is ponding or flooding on and around the existing road an issue? If these are not issues with the existing road, why do the upgraded road sections need to be raised so much higher? Again, this issue is important to clarify and record because it will lead to increased impacts to both the natural and human environment."

RESPONSE: A further discussion of the geotechnical and grade related issues associated with this project is included in Section VI.A of this document.

COMMENT: "Upon reviewing the information provided in the EA, the NCDWQ has concluded that further cumulative impact analyses are not required. However, please keep us apprised of any additional information or revisions to the cumulative impact document(s). This decision is based on information currently provided to us; this decision may change based on updated or new information."

RESPONSE: Comment noted.

COMMENT: "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."

RESPONSE: This information will be included in the permit application.

COMMENT: "If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification."

RESPONSE: A mitigation plan for this project is in the process of being developed and will be submitted to DWQ during the permitting phase.

COMMENT: "Environmental assessment alternatives should consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives should include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc."

RESPONSE: NCDOT will use stormwater Best Management Practices (BMPs) where appropriate.

COMMENT: "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. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation."

RESPONSE: NCDOT will avoid and minimize impacts to wetlands and streams to the fullest practicable extent during final design. A mitigation plan will then be developed for any unavoidable impacts prior to submitting a request for a 401 Water Quality Certification.

COMMENT: "In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, 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. The NC Ecosystem Enhancement Program may be available for use as stream mitigation."

RESPONSE: If mitigation is required, NCDOT will consider onsite mitigation options or will coordinate with the NC Ecosystem Enhancement Program for additional stream mitigation opportunities.

COMMENT: "DWQ is very concerned with sediment and erosion impact that could result from this project. NCDOT should address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts."

RESPONSE: Please see pages 20-27 of the EA regarding potential impacts to aquatic communities, wetlands and streams and the procedures NCDOT uses to avoid, minimize, and mitigate impacts to them.

COMMENT: "NCDOT 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."

RESPONSE: Comment noted.

COMMENT: Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.

RESPONSE: Comment noted.

COMMENT: "Sediment and erosion control measures should not be placed in wetlands or streams."

RESPONSE: Comment noted.

COMMENT: "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."

RESPONSE: The application will address the proposed methods for stormwater management. Stormwater will not be permitted to discharge directly into streams or surface waters.

COMMENT: "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."

RESPONSE: Comment noted.

COMMENT: "If concrete is used during construction, a dry work area should be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete should not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills."

RESPONSE: Comment noted.

COMMENT: "If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas should be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area should be cleared but not grubbed. Clearing the area with chain

saws, mowers, bush-hogs, or other merchandized equipment and leaving the stumps and root mat intact allows the area to revegetate naturally and minimizes soil disturbance."

RESPONSE: Comment noted.

COMMENT: "Placement of culverts and other structures in waters, streams and wetlands shall be placed below the elevation of the culvert diameter for culverts having a diameter less than 48 inches to allow low flow passage of aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required."

RESPONSE: Comment noted.

COMMENT: "If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible, including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity, causing sediment deposition that requires increased maintenance and disrupts aquatic life passage."

RESPONSE: Comment noted.

COMMENT: "Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250."

RESPONSE: Comment noted.

COMMENT: "All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of the NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to prevent excavation in flowing water."

RESPONSE: NCDOT will utilize BMPs where appropriate.

COMMENT: "Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials."

RESPONSE: Comment noted.

COMMENT: "Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed."

RESPONSE: Comment noted.

COMMENT: "Riparian vegetation (native trees and shrubs) should be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction."

RESPONSE: Comment noted.

9. <u>NC Wildlife Resources Commission</u>

COMMENT: "Prior to selecting a LEDPA for this project, NCDOT should provide a justification for the need to raise the grade of the facility."

RESPONSE: The necessary justification for raising the grade of the preferred alternative was provided prior to the Concurrence Point 3 and 4A meetings. At the Concurrence Point 3 meeting on October 15, 2009, NC Wildlife Resources Commission (WRC) concurred on Alternative 1 as the LEDPA. Additional comparison of the wetland impacts associated with raising the grade versus undercutting the existing soils will be provided prior to the Concurrence Point 4B meeting.

COMMENT: "WRC remains concerned with increased habitat fragmentation that will result from any new location alternative."

RESPONSE: Comment noted.

C. Public Hearing Comments

Following the circulation of the Environmental Assessment, an informal Corridor Design Public Hearing was held on June 8, 2009 at the Windows on the World Technology Center in Roper, NC. Approximately 26 citizens attended the hearing. Of the 14 citizens that commented, eleven (11) of these were in favor of Alternative 1, including the Washington County representative. Only one person commented as being in favor of Alternative 2 since he felt that Alternative 1 would cause fragmentation of contiguous woodlands and wildlife habitat, as well as leading to increased collisions with wildlife. Two (2) citizens expressed concerns regarding both alternatives and believed both would impact the community negatively in terms of destruction of wetlands and wildlife habitat (Alternative 1) and residential displacements (Alternative 2).

D. Actions Required by Other Agencies

Due to the amount of potential wetland and stream impacts, it is anticipated that an individual Section 404 permit will be needed for this project. Moreover, in accordance with the Clean Water Act, a Section 401 Water Quality General Certification must be obtained from the NC Division of Water Quality prior to issuance of the individual permit.

E. Merger Process Coordination

Concurrence Point 3: On October 15, 2009, the Merger team met to discuss the impacts associated with Alternatives 1 and 2 and to determine which alternative should be chosen as the Least Environmentally Damaging Practicable Alternative (LEDPA). At this meeting, the Merger team concurred that Alternative 1 would be chosen as the LEDPA for this project. Copies of signed concurrence point forms are provided in Appendix C.

Concurrence Park 4A: On January 21, 2010, the Merger team met to discuss the avoidance and minimization measures utilized during the planning and design of this project. At this meeting, the Merger team concurred on the avoidance and minimization measures that have been or will be utilized for this project. A detailed list of these measures can be found in Section VI.B of this document.

VI. REVISIONS TO ENVIRONMENTAL ASSESSMENT

A. Geotechnical Issues

For the preferred Alternative 1, several members of the Merger team expressed concerns regarding the proposed grade of the new facility, which would be four (4) to six (6) feet higher than the existing ground. The additional fill associated with the grade change has led to an increase in wetland impacts for this project over an alignment with a lower grade. This proposed grade change of four (4) to six (6) feet above the existing ground elevation was deemed necessary by NCDOT's Geotechnical Engineering Unit (GEU) due to the poor condition of the in-situ soils that, in concert with the high groundwater table, could lead to subsidence issues and subgrade instability.

Based on the investigation performed by NCDOT's GEU and the general geology of the project area, it appears that there are varying depths of fine grained soils (silt and clay) at the ground surface along almost the entire length of the project. The fine grained soils are moisture susceptible, meaning that a change in the moisture content could severely weaken the soil structure, causing loss of shear strength and volume change. This could result in poor and non-uniform support of the subgrade and subsequent cracking in the asphalt pavement. The existing roadway may not have experienced overtopping during flooding events, but the groundwater elevations do fluctuate seasonally.

It is believed that at least some portions of the existing roadway were constructed with an undercut of the surface soils. Additionally, there are lateral ditches along some portions of the roadway. GEU proposed two options to prevent the subgrade instability problem of the widened or new roadway. Option 1 included raising the roadway grade such that the subgrade is four (4) to six (6) feet above the natural ground without lateral ditches, or above the bottom of ditches if lateral ditches are installed with outfalls available to drain water from them. Option 2 would require undercutting the fine grained soils and backfilling with granular soils to a depth of approximately three (3) feet or more so that the subgrade is four (4) to six (6) feet above the bottom of undercut. With this option, it would be necessary to install lateral ditches with adequate outfalls to drain water from the undercut areas for proper compaction of the backfill material and long-term performance of the subgrade and pavement. Under Option 2, the grade of the widened or new roadway could match the grade of the existing roadway. However, there is still a concern regarding differential settlement between the existing and the widened roadway due to the variance in the stiffness of the subgrade soils.

As requested by the Merger team, NCDOT evaluated a redesign of the recommended alignment using a combination of undercutting and fill in order to reduce wetland impacts. In the wetland areas, as noted previously, ditches would be required to drain the subgrade, thereby making undercutting an unacceptable option due to the additional wetland impacts that would result. Undercutting could be performed in non-wetland areas along the proposed facility, but due to the need for adequate cover over the crossline pipes, the grade would need to be raised further, negating the value of

undercutting. Geotechnical recommendations to this point have been based primarily on preliminary borings and their prior experience with soils in the coastal plain. Currently, NCDOT does not have adequately detailed survey information to determine the dimensions of undercutting that would be required. Additional investigation into the use of undercut and a comparison of wetland impacts for the two options will be performed prior to the Concurrence Point 4B meeting once additional surveys are completed. Given the current review of the design and known conditions, NCDOT has concluded that the original plan of raising the grade is the most feasible option to carry forward at this time.

B. Farmland Impact Assessment

As required by the Farmland Protection Policy Act, NCDOT completed a Farmland Impact Assessment and submitted it to the Natural Resource Conservation Service (NRCS) for review of the final two alternatives remaining prior to the Concurrence Point 3 meeting, Alternatives 1 and 2. Alternative 1 (Corridor A) received a point value of 76 and Alternative 2 (Corridor B) received a point value of 59 for Part VI. NRCS completed their evaluation and assigned points in Parts IV and V for both alternatives. The point total for both alternatives (Parts IV, V, and VI) scored below the 160 point threshold. Consequently, Alternatives 1 and 2 fall below the NRCS minimal criteria and will not be evaluated further for farmland impacts. No other alternatives other than those already discussed in this document will be considered without a reevaluation of the project's potential impacts upon farmland. This project will not have a significant impact to farmland.

C. Stream Information

1. Stream Classifications

Since the stream classifications data was not originally included in the EA, it has been added to the FONSI per the request of NCDWQ. There are 12 jurisdictional streams within the project study area, Chapel Swamp (S2) and three unnamed tributaries (UTs), Deep Creek (S10) and three UTs, and four UTs to the Albemarle Sound. The project study area is located within sub-basin 03-01-53 of the Pasquotank River Basin and is part of USGS hydrologic unit 03010205. Drainage areas within the project study area are all part of the Pasquotank River watershed.

Best Usage Classifications (BUC) and stream index numbers (SIN) follow *Classifications and Water Quality Standards* published for each river basin. Unless otherwise noted, an unnamed tributary carries the same BUC as the named stream to which it is a tributary.

Chapel Swamp (S2) [SIN 30-11] has been assigned a BUC of **C;SW** from its source to Albemarle Sound. Deep Creek (S10) [SIN 30-14-2] has been assigned a BUC

of **C;SW** from its source to Bull Bay. These waters are also protected for Class **C** uses. 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, which are different from adjacent streams.

The portion of the Albemarle Sound [SIN 30] closest to the project study area has been assigned a BUC of **SB**. Class **SB** waters are saltwaters protected for primary recreation which includes swimming on a frequent or organized basis and all Class **SC** uses. Class **SC** waters are saltwaters protected for secondary recreation, fishing, aquatic life (including propagation and survival).

2. 303(d) Listed Streams

Neither Chapel Swamp nor Deep Creek are listed on DWQ's 2008 Draft 303(d) list of impaired waterbodies. However, a portion of the Albemarle Sound in sub-basin 03-01-53 was listed as impaired for two (2) use supports: aquatic life (low pH) and fish consumption (dioxin).

D. Air Quality – Mobile Source Air Toxics

Concerns for air toxics impacts are becoming more frequent on transportation projects during the NEPA process. Transportation agencies are increasingly expected by the public and other agencies to address MSAT impacts in their environmental documents as the science emerges. Mobile Source Air Toxics (MSATs) analysis is a continuing area of research where, 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 impacts from MSATs are limited. These limitations impede FHWA's ability to evaluate how mobile source health risks should factor into project-level decision-making under the National Environmental Policy Act (NEPA). Also, EPA has not established regulatory concentration targets for the six relevant MSAT pollutants appropriate for use in the project development process. FHWA has several research projects underway to more clearly define potential risks from MSAT emissions associated with transportation projects. While this research is ongoing, FHWA requires each NEPA document to qualitatively address MSATs and their relationship to the specific highway project through a tiered approach (as according to USDOT's Federal Highway Administration memorandum, "Interim Guidance on Air Toxic Analysis in NEPA Documents," from February 3, 2006). FHWA will continue to monitor the developing research in this emerging field and will provide additional guidance once more information becomes available.

For project R-3620, the additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes and businesses; therefore, under each alternative there may be localized areas where ambient

concentrations of MSATs could be higher under certain Build Alternatives than the No Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the new alignment segments and along the sides of existing roadways where asymmetrical widening occurs. 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 summary, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Additionally, MSATs will be lower in other locations when traffic shifts away from them. However, on a regional basis, 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.

A full qualitative analysis of MSATs for this project appears in its entirety as an addendum to the project Air Quality Analysis report, which can be viewed at the PDEA Branch Office on the 4th floor of the NCDOT Transportation Building in downtown Raleigh at 1 South Wilmington Street.

VII. BASIS FOR FINDING OF NO SIGNIFICANT IMPACT

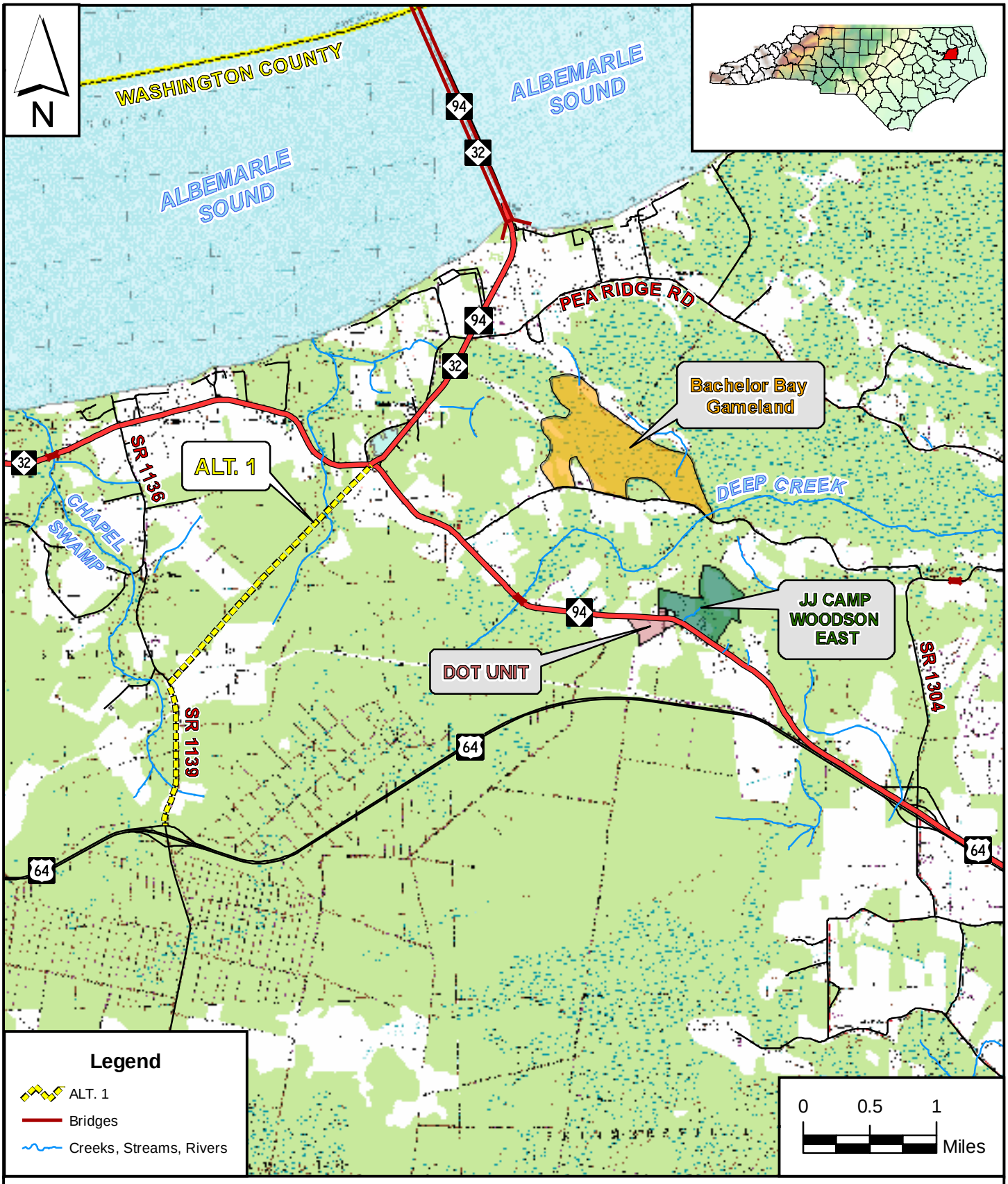
Based upon a study of the impacts of the proposed project, as documented in the EA, and upon comments received from federal, state, and local agencies, as well as the general public, it is the finding of the NCDOT that this project will not have a significant adverse impact upon the human or natural environment. The project is not controversial from an environmental standpoint. No significant impacts to natural, social, ecological, cultural, or scenic resources are expected. The proposed project is consistent with local plans and will not disrupt any communities. The project has been extensively coordinated with federal, state, and local agencies. In view of the above evaluation, it has been determined that a FONSI is applicable for this project. Therefore, neither an Environmental Impact Statement nor further environmental analysis is required.

The following people may be contacted for additional information regarding this proposal:

Mr. Gregory J. Thorpe, Ph.D.
Manager
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
(919) 733-3141

Mr. John F. Sullivan, III, P.E.
Division Administrator
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, NC 27601-1418
(919) 856-4346

Appendix A
Figures



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

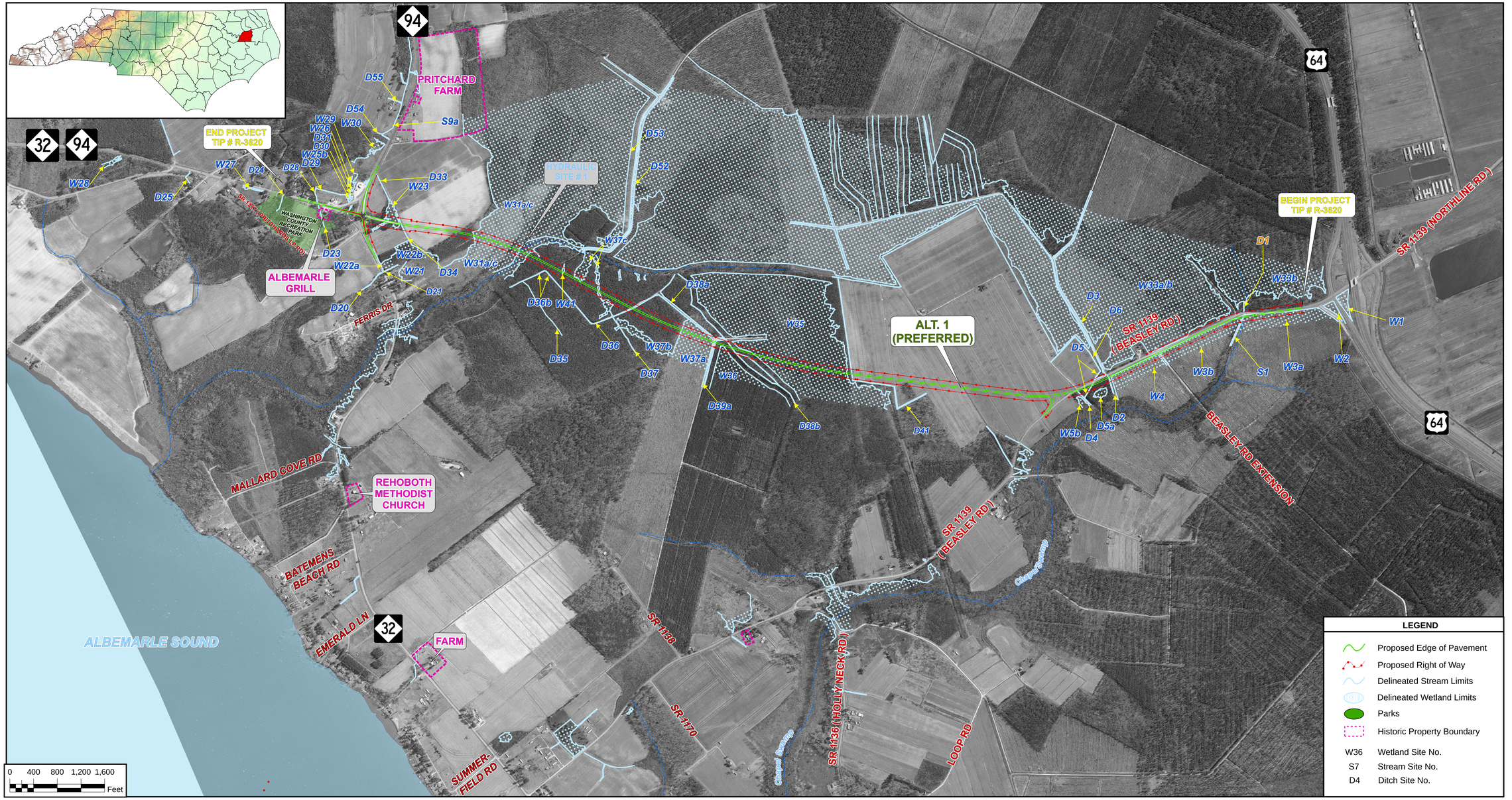
BY: J.TORTORELLA

VICINITY MAP
NC 32 CONNECTOR FROM US 64 TO THE INTERSECTION OF NC 32 AND NC 94

WASHINGTON COUNTY
TIP PROJECT R-3620

County: WASHINGTON	
Div: 1	TIP# R-3620
WBS:	34548.1.1
Date: NOVEMBER 2009	

Figure 1



LEGEND

- Proposed Edge of Pavement
- Proposed Right of Way
- Delineated Stream Limits
- Delineated Wetland Limits
- Parks
- Historic Property Boundary
- W36 Wetland Site No.
- S7 Stream Site No.
- D4 Ditch Site No.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

PROJECT AREA MAP
NC 32 CONNECTOR FROM US 64 TO THE INTERSECTION OF NC 32 AND NC 94

WASHINGTON COUNTY
TIP PROJECT R-3620

By: J.TORTORELLA

County: WASHINGTON

Div: 1 | TIP# R-3620

WBS: 34548.1.1

JANUARY 2010

Figure 2

Appendix B
Comments from Federal, State, and Local Agencies

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4 RALEIGH OFFICE
TERRY SANFORD FEDERAL COURTHOUSE
310 NEW BERN AVENUE
RALEIGH, NORTH CAROLINA 27601

Date: April 24, 2009

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

SUBJECT: EPA Review Comments of the Federal Environmental Assessment for R-3620, NC 32 Connector, Washington County

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 and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) are proposing to construct a new four-lane, connector from US 64 to the intersection of NC 32 and NC 94, in Washington County for an approximate distance of 3.7 or 5.7 miles.

The proposed project has been in the Section 404/NEPA Merger 01 process and EPA notes the following concurrence point (CP) milestones: CP 1 Purpose and Need signed 7/23/03, CP 2 Alternatives to be Carried Forward for Detailed Study signed 11/13/08, and CP 2A Bridging and Alignment Review signed 11/13/08.

There were originally six (6) new location alternatives that were under consideration, including Alternatives 1 through 6. The Merger team was requested to eliminate some of the preliminary study alternatives during the process and Alternatives 1 and 2 were carried forward for detail study in the Environmental Assessment (EA).

Alternatives 1 and 2 differ greatly in their potential impacts to human and natural resources. Alternative 2 is approximately 5.7 miles and Alternative 1 is 3.7 miles. Alternative 2 has 17 residential relocations and 8.5 acres of wetland impacts and Alternative 1 has 0 residential relocations and 19.3 acres of wetland impacts. Stream impacts are substantially greater for Alternative 2 (i.e., 621 linear feet) than Alternative 1 (i.e., 191 linear feet). EPA offers the following specific comments for some of the issues that were identified in the EA:

Geotechnical Recommendation

The EA includes a general discussion concerning the NCDOT's Geotechnical Engineering Unit recommendation to raise the grade of the existing roadway by four (4) to six (6) feet. This recommendation includes increased fill heights between the subgrade of the roadway and the water table. The proposed grade change will require NCDOT to construct a new facility adjacent to the existing roadway in all existing location sections of the project. The EA also identifies the problem that it will be impossible to maintain traffic on the existing facility with such a substantial change in grade taking place. This general issue was brought up during the CP 2A field meeting and later at next Merger meeting in November of 2008. EPA has substantial environmental concerns for this major design change.

Raising the grade of the roadway by 4 to 6 feet is causing substantial impacts to wetlands and streams. EPA has previously noted from the field meeting that there is no evidence of the existing roadway being flooded during normal events. NCDOT has provided no information regarding problems with the maintenance of the existing roadway as it relates to a high water table (e.g., Subsidence issues or SLR projections).

From the Merger 01 Performance Measures analysis, a new location facility in Eastern North Carolina averages approximately 2.6 acres of wetland impact per mile of new roadway (BASELINE 2004-2007). For Alternative 1, wetland impacts average 5.2 acres per mile. Alternative 2, wetland impacts average 1.5 acres per mile. Residential relocations for Alternative 2 average approximately 3.0 relocations per mile. The BASELINE residential relocations for an Eastern new location project are approximately 4 relocations per mile.

Increasing the fill heights of the existing roadway by 4 to 6 feet is essentially negating any avoidance and minimization benefits from using 3:1 side slopes in jurisdictional wetland areas. A 4-foot grade increase will push the fill heights in wetlands to 12 feet on each side of the roadway even with 3:1 side slopes. A 6-foot grade increase will push the fill heights in wetlands to 18 feet on each side of the roadway even with 3:1 side slopes.

There are dozens of Transportation Improvement Program (TIP) projects in the coastal plain of North Carolina. This is the first time from EPA's experience that NCDOT is proposing to substantially raise the grade of an entire roadway without direct evidence of past problems regarding flooding or subsidence from high water tables. EPA is also concerned that increased fill heights for the roadway are being designed independently of the hydraulic structure recommendations that for this type of facility are designed at a 25-year or 50-year storm event. Raising the grade of the roadway 4 to 6 feet to a '100-year event' will potentially create an 'unequal design'. There is also a potential concern for causing flooding on private property in the future (Comment made by the Town Manager, 11/13/08).

EPA notes that there are no 'Green Sheet' commitments made for the proposed project. EPA notes that there are no details provided in the 'Avoidance, Minimization and Mitigation' section of the EA (i.e., Pages 26 & 27). The discussion on Page 27 concerning the culvert versus bridge issue at two sites is not relevant if NCDOT was designing a typical facility (i.e., One without 4 to 6 feet of additional fill height). Page 26 of the EA states that avoidance of some wetlands and streams within the project study area has been accomplished during the design but there are no details as to how much or where these avoidance measures took place.

EPA notes the comment on Page 35 of the EA concerning prime farmlands and that NCDOT is currently performing a Farmland Impact Assessment for this proposed project. The EA states that the future assessment will be used in determining a recommended alternative. This analysis should have been completed and included in the EA for the two build alternatives. More than 2/3 of the project study area is in active agricultural fields.

In summary, EPA is not prepared to concur on a 'Least Environmentally Damaging Practicable Alternative' (LEDPA) until further documentation is provided concerning the need to raise the grade of the existing roadway by 4 to 6 feet. A more extensive discussion may be warranted on appropriate planning and design standards for coastal projects particularly as they relate to addressing sea level rise issues. Additionally, EPA also requests that the prime farmland information be provided prior to the Concurrence Point 3, LEDPA meeting for further evaluation. EPA has not identified an environmentally preferred alternative and requests that NCDOT consider additional avoidance and minimization measures to lessen the potential impacts to jurisdictional wetlands. EPA will continue to stay active in the Merger 01 process for this proposed project. Thank you for the opportunity to comment and if you have any questions please call me at (919) 856-4206.

Sincerely,

Christopher A. Militscher, REM, CHMM
Merger Team Representative
NEPA Program Office

For: Heinz J. Mueller, Chief
EPA Region 4 NEPA Program Office

Cc: W. Biddlecome, USACE-Washington Field Office
D. Wainwright, NCDWQ
C. Coleman, FHWA

RECEIVED
Division of Highways

MAY 01 2009

Preconstruction
Project Development and
Environmental Analysis Branch

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

April 28, 2009

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 April 9, 2009 letter which requested comments from the U.S. Fish and Wildlife Service (Service) on the Federal Environmental Assessment (FEA) for the NC 32 Connector from US 64 to the intersection of NC 32 and NC 94, Washington County, North Carolina (TIP No. R-3620). These comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

The North Carolina Department of Transportation proposes to construct a two-lane facility. Of six original alternatives, two alternatives (Alternative 1 and 2) have been carried forward for detailed study. Alternative 1 would be mostly on new location, whereas Alternative 2 would utilize existing roadway alignments.

The project will have significant impacts on fish and wildlife resources, including impacts to streams, wetlands, upland forest and other habitat types. These impacts will be in the form of direct loss of habitat and habitat fragmentation effects on remaining habitat. Although these habitats are already fragmented by the predominantly agricultural land use of the project area, additional cumulative habitat fragmentation effects will occur.

The red wolf (*Canis rufus*) is a federally endangered species listed as occurring in Washington County. The FEA renders a biological conclusion of "may affect, not likely to adversely affect". The Service concurs with this biological conclusion.

The Service has been actively involved in the NEPA/404 Merger Process coordination for this project. Our input has been incorporated into the SDEIS. At this time we do not have a preferred alternative. We will defer that decision until Concurrence Point 3 in the Merger Process, and we will provide additional comments and recommendations for further avoidance and minimization to fish and wildlife resources as appropriate.

The Service believes that this FEA adequately addresses the existing fish and wildlife resources, the waters and wetlands of the United States, and the potential impacts of this proposed project

on these resources. 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,

Gary Jordan

for Pete Benjamin
Field Supervisor

cc: Chris Militscher, USEPA, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Bill Biddlecome, USACE, Washington, NC
John Sullivan, FHWA, Raleigh, NC

Steven W. Troxler
Commissioner

North Carolina Department of Agriculture and Consumer Services

Agricultural Services

Maximilian Merrill
Environmental Programs

Ms. Valerie McMillan
State Clearinghouse
N.C. Department of Administration
1301 Mail Service Center
Raleigh, North Carolina 27699-1301

State #: 09-E-4220-0286

RE: Proposal for NC 32 Connector from US 64 bypass to the intersection of US 64 and NC 32 in Washington County.
TIP #R-3620

Dear Ms McMillan

During the period 2002-2007, NC lost 600,000 acres of farm and forest land due to conversion. This land mass is larger than most NC counties. Some of this conversion was due to new road construction. Some alternatives in this proposal will further fragment farmland and land parcels. **Alternatives 2 & 5** will have the least effect on the agricultural resources in the study area. **Alternatives 1 & 6** will have a negative effect on the farmland and soil resources in the study area. These alternatives will also have greater indirect impacts (i.e. development, land value increases, subdivision). We believe that whenever existing infrastructure can be updated to alleviate traffic and safety concerns this action should be taken. NCDA&CS looks forward to the *Farmland Impact Assessment* currently being conducted by NCDOT for this project. Again **Alternatives 1 &6** would fragment the farm parcels of the area and thus have an **adverse** effect on the productivity and viability of these working lands.

Gratefully

Maximilian Merrill.

E-mail: maximilian.merrill@ncmail.net
1001 Mail Service Center, Raleigh, North Carolina, 27699-1001 (919) 733-7125 • Fax (919) 716-0105
TTY: 1-800-735-2962 Voice: 1-877-735-8200
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O'Connor Kristine A

From: Cathy Brittingham [Cathy.Brittingham@ncmail.net]
Sent: Thursday, February 05, 2009 3:43 PM
To: Graham, Kristine O
Cc: Paugh, Leilani Y; Jim Hoadley
Subject: R-3620, NC 32 Connector, Washington County

Dear Kristine,

It may still be early in the planning process, but I want to alert you to a CAMA land use plan policy that may effect TIP No. R-3620 in Washington County.

Please be aware that the CAMA Land Use Plan for Washington County contains the following land use plan policy:

p. VIII-7 (j). "Washington County does not support and objects to the mitigation of property from county to county due to the already declining tax base. Mitigation allows property to be exchanged to provide for required wetlands as required by the State."

At the Concurrence Point 2A meeting on 11/13/08, the NEPA/404 Project Team agreed to study two alternatives with estimated wetland impacts of
19.3 acres and 8.5 acres, respectively. The DCM District Planner will need to determine that this project is consistent with the local CAMA land use plan(s) before a final decision can be made on a CAMA Major Permit application or Consistency Certification. Therefore, when NCDOT develops a project mitigation plan, please be aware that the mitigation plan will need to be consistent with the above CAMA land use plan policy.

More information about CAMA land use planning can be found at the following link: http://www.nccoastalmanagement.net/Planning/LUPabout.html.

Please let me know if you have any questions, or if you would like to discuss this further.

Sincerely,

Cathy Brittingham

North Carolina
Department of Administration

Beverly Eaves Perdue, Governor

Britt Cobb, Secretary

May 18, 2009

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

Re: SCH File # 09-E-4220-0286; EA; Proposed NC 32 Connector from US 64 Bypass to the Intersection of US 64 and NC 32 in Washington County; TIP #R-3620

Dear Mr. Thorpe:

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

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

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

Sincerely,

Valerie McMillan (STC)

Valerie W. McMillan, Director
State Environmental Review Clearinghouse

Attachments

cc: Region R

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail valerie.w.mcmillan@doa.nc.gov

Location Address:
116 West Jones Street
Raleigh, North Carolina

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North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

MEMORANDUM

TO: Valerie McMillan
State Clearinghouse

FROM: Melba McGee
Project Review Coordinator

RE: 09-0286 EA NC 32 Connector to the Existing Intersection of NC 32 and NC 94 in Washington County

DATE: May 14, 2009

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

We ask that the Department of Transportation work directly with our commenting agencies during the NEPA Merger Process. This will help avoid delays at the permit phase.

Thank you for the opportunity to comment on this project.

Attachments

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4984 \ FAX: 919-715-3060 Internet: www.enr.state.nc.us

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DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Inter-Agency Project Review Response

Project Number
09-0286
County
Washington

Project Name **USDOT/NCDOT/Federal Hwy Administration**

Type of Project **Proposed NC32 connector from US64 to intersection of NC32 & NC94, Federal Aid Project STP-000S(252), TIP R-3620.**

Comments provided by:

NCPWSS

APR. 17 2009

WASHINGTON REG OFFICE

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

Name **Harry Bailey-Washington RO** Date **04/15/2009**

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

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 Number
09-0286
County
Washington

Inter-Agency Project Review Response

Project Name **USDOT/NCDOT/Federal Hwy Administration**

Type of Project **Proposed NC32 connector from US64 to intersection of NC32 & NC94, Federal Aid Project STP-000S(252), TIP R-3620.**

☒ The applicant should be advised that plans and specifications for all water system improvements must be approved by the Division of Environmental Health prior to the award of a contract or the initiation of construction (as required by 15A NCAC 18C .0300et. seq.). For information, contact the Public Water Supply Section, (919) 733-2321.

☐ This project will be classified as a non-community public water supply and must comply with state and federal drinking water monitoring requirements. For more information the applicant should contact the Public Water Supply Section, (919) 733-2321.

☐ If this project is constructed as proposed, we will recommend closure of _____ feet of adjacent waters to the harvest of shellfish. For information regarding the shellfish sanitation program, the applicant should contact the Shellfish Sanitation Section at (252) 726-6827.

☐ The soil disposal area(s) proposed for this project may produce a mosquito breeding problem. For information concerning appropriate mosquito control measures, the applicant should contact the Public Health Pest Management Section at (919) 733-6407.

☐ The applicant should be advised that prior to the removal or demolition of dilapidated structures, a extensive rodent control program may be necessary in order to prevent the migration of the rodents to adjacent areas. For information concerning rodent control, contact the local health department or the Public Health Pest Management Section at (919) 733-6407.

☐ The applicant should be advised to contact the local health department regarding their requirements for septic tank installations (as required under 15A NCAC 18A. 1900 et. sep.). For information concerning septic tank and other on-site waste disposal methods, contact the On-Site Wastewater Section at (919) 733-2895.

☐ The applicant should be advised to contact the local health department regarding the sanitary facilities required for this project.

☒ If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Environmental Health, Public Water Supply Section, Technical Services Branch, 1634 Mail Service Center, Raleigh, North Carolina 27699-1634, (919) 733-2321.

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

Jim McRight	PWSS	04/15/2009
Reviewer	Section/Branch	Date

APR 24 2009

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Inter-Agency Project Review Response

Project # 09-0286
County Washington

Project Name: USDOT/NCDOT/ Federal Hwy Administration

Type of Project: Proposed NC32 connector from US64 to intersection of NC32 and NC94, Federal Aid Project STP-000S(252), TIP R-3620

Comments provided by:

[X] Regional Program Person

[ ] Regional Supervisor for Public Water Supply Section

[ ] Central Office program person

Name: Joey White (JW) Telephone #: (252) 948-3894 Date Rec'd: 04/17/09
Date Rev'd: 04/23/09

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

- Public Water Supply approval is required for the relocation of existing water mains prior to construction. If DOT specifications are to be used only plan submittal is required. Please contact the Washington County Water Department to verify utility location and coordinate the relocation.

- Plans and specifications for new water distribution lines that are two inches or larger in diameter must be submitted to the Public Water Supply – Plan Review Section for approval prior to construction.

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

NCDENR

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor
Dee Freeman, Secretary

Division of Marine Fisheries

Dr. Louis B. Daniel III, Director

MEMORANDUM:

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

THROUGH: Anne Deaton, Chief Habitat Section

FROM: Sara E. Winslow, Northern District Manager

SUBJECT: Project No. 09-0286 – NC DOT – Proposed NC 32 Connector – Hwy 64 to Intersection of NC 32 and NC 94 Washington County - EA

DATE: April 24, 2009

The North Carolina Division of Marine Fisheries submits the following comments pursuant to General Statute 113-131. This agency has reviewed the EA and supports Alternative 1, provided adequate mitigation occurs for wetland loss and impacts. Even though this Alternative has greater wetland impacts than Alternative 2, the number of stream crossings and stream impacts is less. The Division feels this alternative overall is the best to pursue.

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NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

May 4, 2009

MEMORANDUM

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

From: David Wainwright, Division of Water Quality

Subject: Comments on the Environmental Assessment related to proposed NC 32 Connector from existing US 64 to the existing intersection of NC 32 and NC 94, Washington County, Federal Aid Project No. STP-000S(252), TIP R-3620.

SCH#: 09-0286

This office has reviewed the referenced document dated March 2009. The NC Division of Water Quality (NCDWQ) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. The NCDWQ offers the following comments based on review of the aforementioned document:

Project Specific Comments:

1. 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.

2. The document should include a presentation or discussion of all stream classification(s) and any supplemental classifications, along with the NCDWQ Stream Index Number, for any streams which have the potential to be impacted.

3. The document should discuss any streams which may be listed on the most recently available 303(d) list. If none are included on the list, it should be noted.

4. The document discusses raising the existing roadbed four to six feet above the water table. However, the document does not discuss why this is necessary. Some of this information has been presented to team members during past Merger team meetings; however, as a matter of record a full discussion should be presented in the document. This is especially critical since this design criterion will increase impacts to jurisdictional streams and wetlands, relocations, and cost.

   While it is understood that the high water table in conjunction with the poorly draining soils may necessitate the need to raise the road, the direct impacts of these two factors are not clear with respect to the existing road. Is ponding or flooding on and around the existing road an issue? If these are not

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1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 2321 Crabtree Blvd., Raleigh, North Carolina 27604
Phone: 919-733-1786 \ FAX: 919-733-6893
Internet: http://h2o.enr.state.nc.us/ncwetlands/

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issues with the existing road, why do the upgraded road sections need to be raised so much higher? Again, this issue is important to clarify and record because it will lead to increased impacts to both the natural and human environment.

General Comments:

5. 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.

6. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

7. Environmental assessment alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of the NCDWQ's *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

8. 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. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.

9. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506[h]), 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 shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.

10. The NCDWQ is very concerned with sediment and erosion impacts that could result from this project. The NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.

11. The NCDOT is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and rip rap 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.

12. Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.

13. Sediment and erosion control measures shall not be placed in wetlands or streams.

14. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater shall not be permitted to discharge directly into streams or surface waters.

15. Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require an Individual Permit (IP) 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 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.

16. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

17. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.

18. Placement of culverts and other structures in waters, streams, and wetlands shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

19. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel shall be avoided. Stream channel

widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

20. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250. .

21. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of the NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

22. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

23. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures shall be properly designed, sized and installed.

24. Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

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

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

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

October 27, 2009

MEMORANDUM

To: Kristine O'Connor, P.E., Project Planning Engineer, NCDOT

From: David Wainwright, Division of Water Quality

Subject: Response to the Indirect Screening Assessment Report for the proposed NC 32 Connector from US 64 to the NC 32/NC 94 Intersection, Washington County, TIP R-3620.

This office has reviewed the referenced document dated September 2009. The NC Division of Water Quality (NCDWQ) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. Under 15A NAC 2H .0500 (.0506[4]), it is the NCDWQ's responsibility to ensure that projects do not result in cumulative effects or cause a violation of downstream water quality based on reasonably anticipated future impacts.

Upon reviewing the information provided in the referenced document, The NCDWQ has concluded that further cumulative impact analyses are not required. However, please keep us apprised of any additional information or revisions to the cumulative impact document(s). This decision is based on information currently provided to us; this decision may change based on updated or new information.

Thank you for requesting our input at this time. The NCDOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact David Wainwright at (919) 715-3415.

cc: Bill Biddlecome, US Army Corps of Engineers, Washington Field Office
Chris Militscher, Environmental Protection Agency (electronic copy only)
Garcy Ward, NCDWQ Washington Regional Office
File Copy

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 2321 Crabtree Blvd Raleigh, North Carolina 27604
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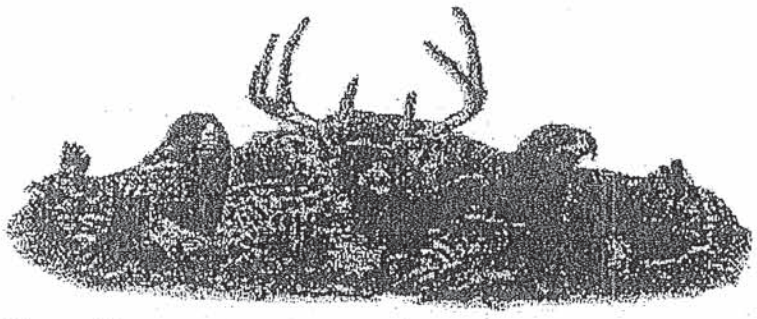

North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

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

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: May 12, 2009

SUBJECT: North Carolina Department of Transportation (NCDOT) Environmental Assessment (EA) for the proposed NC 32 Connector, Washington County, North Carolina. TIP No. R-3620, SCH Project No. 09-0286

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

NCDOT proposes to improve connectivity between US 64 and the intersection of NC 32/94 in Washington County. Two alternatives are presented in the EA and represent one improve existing alternative and one new location alternative, with both alternatives NCDOT has recommended raising the grade to as high as 6 feet between the sub-grade of the roadway and the water table. This recommendation has significantly increased both human and environmental impacts respectively on either alternative, yet on page 2 of the document under II.B.1.b.2. it states "the existing horizontal and vertical alignments along existing NC 32, NC 94, SR 1139 and SR 1136 are suitable for the posted speed limits." Prior to selecting a LEDPA for this project NCDOT should provide a justification for the need to raise the grade of the facility.

Furthermore WRC remains concerned with increased habitat fragmentation that will result from any new location alternative. This project is in the Section 404/NEPA Merger 01 process, we will continue to assess alternatives in preparation for concurrence point three, selection of the

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

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
David Wainwright, DWQ, Raleigh
Bill Biddlecome, U.S. Army Corps of Engineers, Wilmington
Chris Militscher, EPA
Cathy Brittingham, DCM

Appendix C
Merger Concurrence Forms

Section 404/NEPA Merger Project Team Agreement
Concurrence Point No. 3: LEDPA
T.I.P. Project R-3620

Project Name/Description: Proposed NC 32 Connector from the Interchange of US 64 and SR 1139 (Beasley Road) and the intersection of NC 32 and NC 94 in Washington County.

LEDPA Selection:

- **Alternative 1**

The Project Team Members listed below have concurred with the above alternative as the Least Environmentally Damaging Practicable Alternative (LEDPA) for this project.

US Army Corps of Engineers	Bill Biddlecome	10/15/09
	Bill Biddlecome	DATE
US Fish & Wildlife Service	Gary Jordan	10/15/2009
	Gary Jordan	DATE
NC Division of Water Quality	David Wainwright	10/15/09
	David Wainwright	DATE
NC Division of Marine Fisheries	Sara Winslow	10-15-09
	Sara Winslow	DATE
National Marine Fisheries	Ron Sechler	
	Ron Sechler	DATE
Wildlife Resources Commission		10-15-09
	Travis Wilson	DATE
Environmental Protection Agency		10-15-09
	Chris Militscher	DATE
NC Department of Transportation	Kristine O'Connor	10-15-09
	Kristine O'Connor	DATE
State Historic Preservation Office	Renee Gledhill-Earley	10-15-09
	Renee Gledhill-Earley	DATE

Catherine Brittingham 10/15/09
NC Division of Coastal Management

Ronald Tucker
FHWA 10/15/09

Section 404/NEPA Merger Project Team Agreement
Concurrence Point No. 4A: Avoidance & Minimization
T.I.P. Project R-3620

Project Name/Description: Proposed NC 32 Connector from the Interchange of US 64 and SR 1139 (Beasley Road) and the intersection of NC 32 and NC 94 in Washington County.

Avoidance

- Complete avoidance of the streams and wetlands is not possible due to the presence of these resources throughout the project study corridor. Each alternative had some wetland and stream impacts.

Minimization

In an effort to minimize the impacts to wetlands associated with the construction of the LEDPA, NCDOT has implemented the following measures. All preliminary recommendations for minimization are based on the available surveys for this area:

- Alternative 1 has been shifted so that the fewest number of wetlands and streams would be affected along this alignment.
- NCDOT will employ 3:1 fill slopes in all wetland areas.
- No ditches will be utilized in wetland areas throughout the project unless undercutting is readdressed at a later date.
- There will be no impacts to Coastal Area Management Act (CAMA) Areas of Environmental Concern (AECs).
- The project will have limited control of access on the new location portion and partial control of access on the existing location portion. Limited control of access will only allow connections to the facility at interchanges or at-grade intersections and no private driveway connections will be allowed.

Additional Issues

- Alternative 1 will not displace any residences.
- Alternative 1 avoids adverse impacts to properties on or eligible for the National Register of Historic Places (Rehoboth Methodist Church and the farm on NC 32).
- Alternative 6 was developed to the west of Alternative 1 in the hopes of minimizing the number of wetlands impacted. However, Alternative 6

actually had a greater number of impacted wetlands, so it was removed from consideration at the Concurrence Point 2A meeting in October 2008.

- Eight (8) foot shoulders (the minimum allowed by AASHTO) will be designed for this facility. If guardrail becomes necessary, the shoulders will be widened to 11 feet.

- Once final geotechnical surveys are completed, the issue of undercutting can be readdressed prior to the CP 4B meeting.

- NCDOT will examine the use of grass swales with non-erosive velocities at the wetlands, pre-formed scour holes, energy dissipators and pipe equalizers. Stormwater basins, though probably not necessary for this project, will be designed at a later date if required.

The Project Team Members listed below have concurred with the above listed measures as the appropriate avoidance and minimization for this project.

NC Department of Transportation Kristine O'Connor — 1/21/10 DATE

Federal Highway Administration Ron Lucas — 1/21/2010 DATE

US Army Corps of Engineers Bill Biddlecome — 1/21/2010 DATE

US Environmental Protection Agency Chris Militscher — 1/21/2010 DATE

US Fish & Wildlife Service Gary Jordan — 1/21/2010 DATE

National Marine Fisheries Service Ron Sechler — DATE

NC Division of Coastal Management Cathy Brittingham — 1/21/2010 DATE

NC Division of Marine Fisheries Sara Winslow — DATE

NC Division of Water Quality David Wainwright — 1/21/10 DATE

State Historic Preservation Office Renee Gledhill-Earley — 1-21-10 DATE

Wildlife Resources Commission Travis Wilson — 1-21-10 DATE

actually had a greater number of impacted wetlands, so it was removed from consideration at the Concurrence Point 2A meeting in October 2008.

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The Project Team Members listed below have concurred with the above listed measures as the appropriate avoidance and minimization for this project.

NC Department of Transportation_____
Kristine O'Connor DATE

Federal Highway Administration_____
Ron Lucas DATE

US Army Corps of Engineers_____
Bill Biddlecome DATE

US Environmental Protection Agency_____
Chris Militscher DATE

US Fish & Wildlife Service_____
Gary Jordan DATE

National Marine Fisheries Service Ron Sechler 2/3/2010
Ron Sechler DATE

NC Division of Coastal Management_____
Cathy Brittingham DATE

NC Division of Marine Fisheries_____
Sara Winslow DATE

NC Division of Water Quality_____
David Wainwright DATE

State Historic Preservation Office_____
Renee Gledhill-Earley DATE

Wildlife Resources Commission_____
Travis Wilson DATE

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- NCDOT will examine the use of grass swales with non-erosive velocities at the wetlands, pre-formed scour holes, energy dissipators and pipe equalizers. Stormwater basins, though probably not necessary for this project, will be designed at a later date if required.

The Project Team Members listed below have concurred with the above listed measures as the appropriate avoidance and minimization for this project.

NC Department of Transportation _____
Kristine O'Connor DATE

Federal Highway Administration _____
Ron Lucas DATE

US Army Corps of Engineers _____
Bill Biddlecome DATE

US Environmental Protection Agency _____
Chris Militscher DATE

US Fish & Wildlife Service _____
Gary Jordan DATE

National Marine Fisheries Service _____
Ron Sechler DATE

NC Division of Coastal Management _____
Cathy Brittingham DATE

NC Division of Marine Fisheries Sara Winslow 2-3-10
Sara Winslow DATE

NC Division of Water Quality _____
David Wainwright DATE

State Historic Preservation Office _____
Renee Gledhill-Earley DATE

Widlife Resources Commission _____
Travis Wilson DATE

Appendix D
NRCS Forms & Farmland Impact Assessment

HNTB Corporation
Engineers Architects Planners

343 East Six Forks Road
Suite 200
Raleigh, NC 27609

Telephone (919) 546-8997
Facsimile (919) 546-9421
www.hntb.com

HNTB

Mr. John A. Gagnon
Resource Soil Scientist
Edenton Soil Survey Office
730 N. Granville St.
Edenton, NC 27932

August 17, 2009

Subject: Draft Farmland Conversion Impact Rating Form
NCDOT STIP Project R-3620, US 64 to NC 32/94
Washington County

Mr. Gagnon:

HNTB has prepared a draft farmland conversion impact rating form for STIP Project R-3620 in Washington County. At the time of this assessment, there are two alternatives under consideration. Alternative 1 (Corridor A) is a proposed partial new location facility between US 64 and NC 32/NC94. Based on preliminary design files, it would be a two-lane, limited access facility, 3.4 miles in length, with a slope stake corridor width of approximately 100-120ft.

Alternative 2 (Corridor B) is the proposed improvement of Beasley Road, Holly Neck Road, and NC 32. Based on preliminary design files, the proposed project would be a two-lane, partially controlled facility, 5.3 miles in length, with a slope stake corridor width of approximately 100ft. The existing right-of-way on Beasley Road and Holly Neck Road is approximately 60ft, while the existing right-of-way on NC 32 is approximately 100ft.

The evaluation was based on a site visit and an interview with the Washington County Planning & Safety Director and GIS Director on June 26, 2009. Aerial images from Google Maps (2009) were also used.

Please call me at (704) 208-5352 if you have any questions.

Susan Paschal

Susan Paschal
Deputy Project Manager

Cc: Anne Lenart-Redmond, HNTB

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 8/12/09	4. Sheet 1 of 1
1. Name of Project STIP Project R-3620	5. Federal Agency Involved Federal Highway Administration	
2. Type of Project New Location (A) / Upgrade Existing (B)	6. County and State Washington County, North Carolina	
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS 9-16-09	2. Person Completing Form John Gagnon RSS
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 593 ac.
5. Major Crop(s) CORN	6. Farmable Land in Government Jurisdiction Acres: 148,555 % 69	7. Amount of Farmland As Defined in FPPA Acres: 149,500 % 70
8. Name Of Land Evaluation System Used Washington LE	9. Name of Local Site Assessment System NONE	10. Date Land Evaluation Returned by NRCS 9-22-09

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	58	58		
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor	58	58	0	0
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	2.9	16.55		
B. Total Acres Statewide And Local Important Farmland	32.0	39.64		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	<.01	<.01		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	69.1	28.1		
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	62	88.2		
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		
2. Perimeter In Nonurban Use — 10	10	10		
3. Percent Of Corridor Being Farmed — 20	19	17		
4. Protection Provided By State And Local Government — 20	0	0		
5. Size of Present Farm Unit Compared To Average — 10	10	6		
6. Creation Of Nonfarmable Farmland — 25	0	0		
7. Availability Of Farm Support Services — 5	5	5		
8. On-Farm Investments — 20	15	5		
9. Effects Of Conversion On Farm Support Services — 25	0	0		
10. Compatibility With Existing Agricultural Use — 10	2	1		
TOTAL CORRIDOR ASSESSMENT POINTS — 160	76	59	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	62	88		
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	76	59	0	0
TOTAL POINTS *(Total of above 2 lines)* — 260	~~76~~ 138	~~59~~ 147	0	0

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 ☐

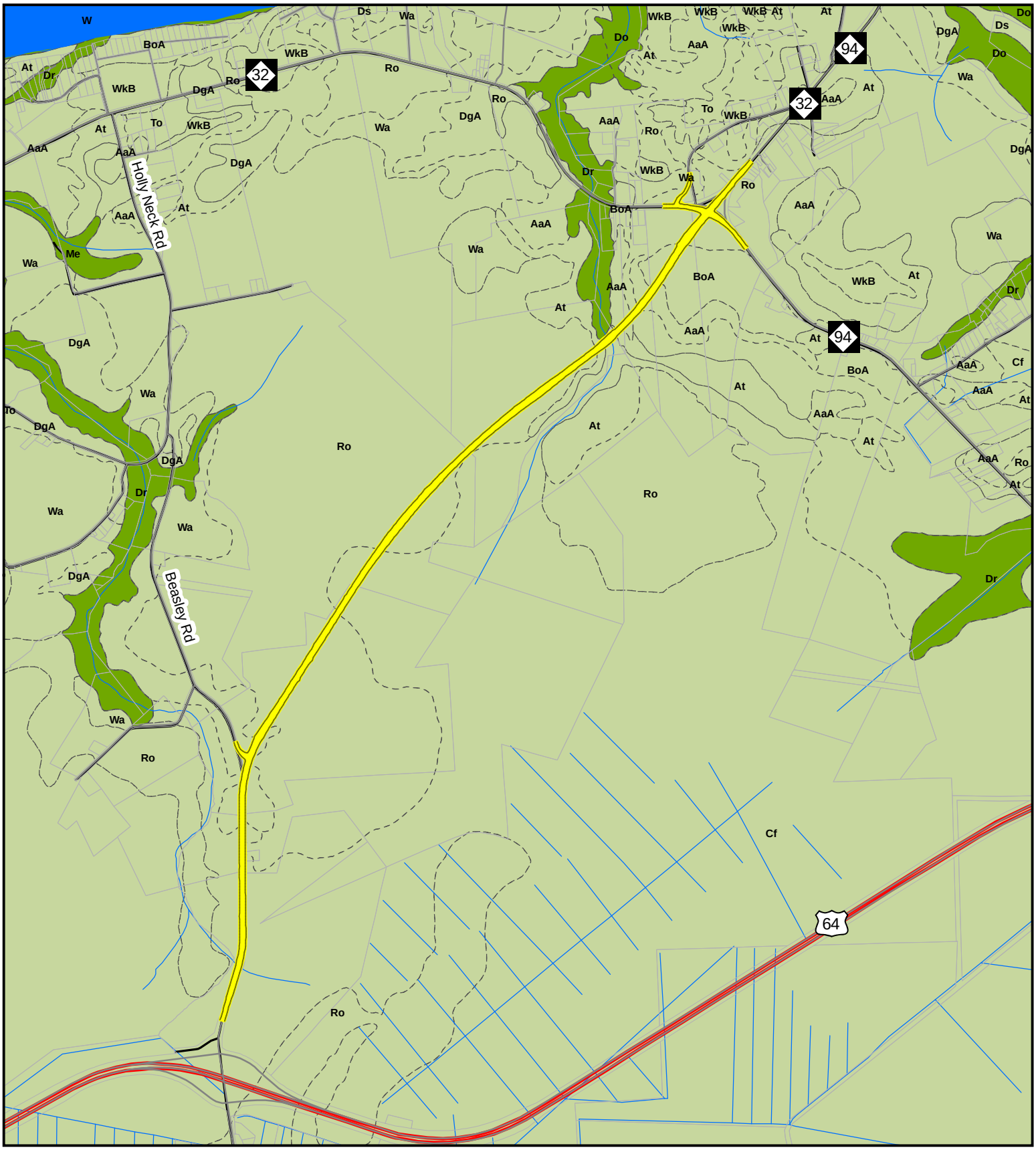
5. Reason For Selection:

Signature of Person Completing this Part: DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

R-3620 Alternative 1, New Location				
MUSYM	DESCRIPTION	FARMLAND CLASSIFICATION	Prime FL Acreage	Other Acreage
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland	2.9	
At	Augusta fine sandy loam	Prime farmland if drained	1.03	
BoA	Bojac loamy fine sand, 0 to 3 percent slopes	All areas are prime farmland	3.14	
Cf	Cape Fear loam	Farmland of statewide importance	12.27	
Dr	Dorovan mucky silt loam, overwash (Chowan)	Not prime farmland		0.02
Ro	Roanoke loam	Farmland of statewide importance	33.12	
Wa	Wahee fine sandy loam	Farmland of statewide importance	5.38	
			57.84	0.02
		Alternative 1 Total Acres to be Converted	57.86	

R-3620 Alternative 2, Upgrade Existing				
MUSYM	DESCRIPTION	FARMLAND CLASSIFICATION	Prime FL Acreage	Other Acreage
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland	4.81	
At	Augusta fine sandy loam	Prime farmland if drained	0.37	
BoA	Bojac loamy fine sand, 0 to 3 percent slopes	All areas are prime farmland	0.46	
Cf	Cape Fear loam	Farmland of statewide importance	6.68	
DgA	Dogue fine sandy loam, 0 to 3 percent slopes	All areas are prime farmland	3.62	
Dr	Dorovan mucky silt loam, overwash (Chowan)	Not prime farmland		2.18
Ro	Roanoke loam	Farmland of statewide importance	17.08	
To	Tomotley fine sandy loam	Prime farmland if drained	5.52	
Wa	Wahee fine sandy loam	Farmland of statewide importance	15.42	
WkB	Wickham loamy sand, 0 to 4 percent slopes	All areas are prime farmland	2.23	
			56.19	2.18
		Alternative 2 Total Acres to be Converted	58.37	



Legend:

- US Highway
- NC Highway
- Street
- Water body
- Parcels
- Slope Stakes
- Slope Stakes + 25'
- Soil Type Boundary

Farmland Description

- Not prime farmland
- Prime farmland

FIGURE 1

Alternative 1

Washington County
STIP Project R-3620

Draft - August 2009

Map Sources

North Carolina DOT.....http://www.ncdot.org
North Carolina One Map.....http://www.nconemap.com
North Carolina DOT Roadway Design Unit
Washington County GIS Department

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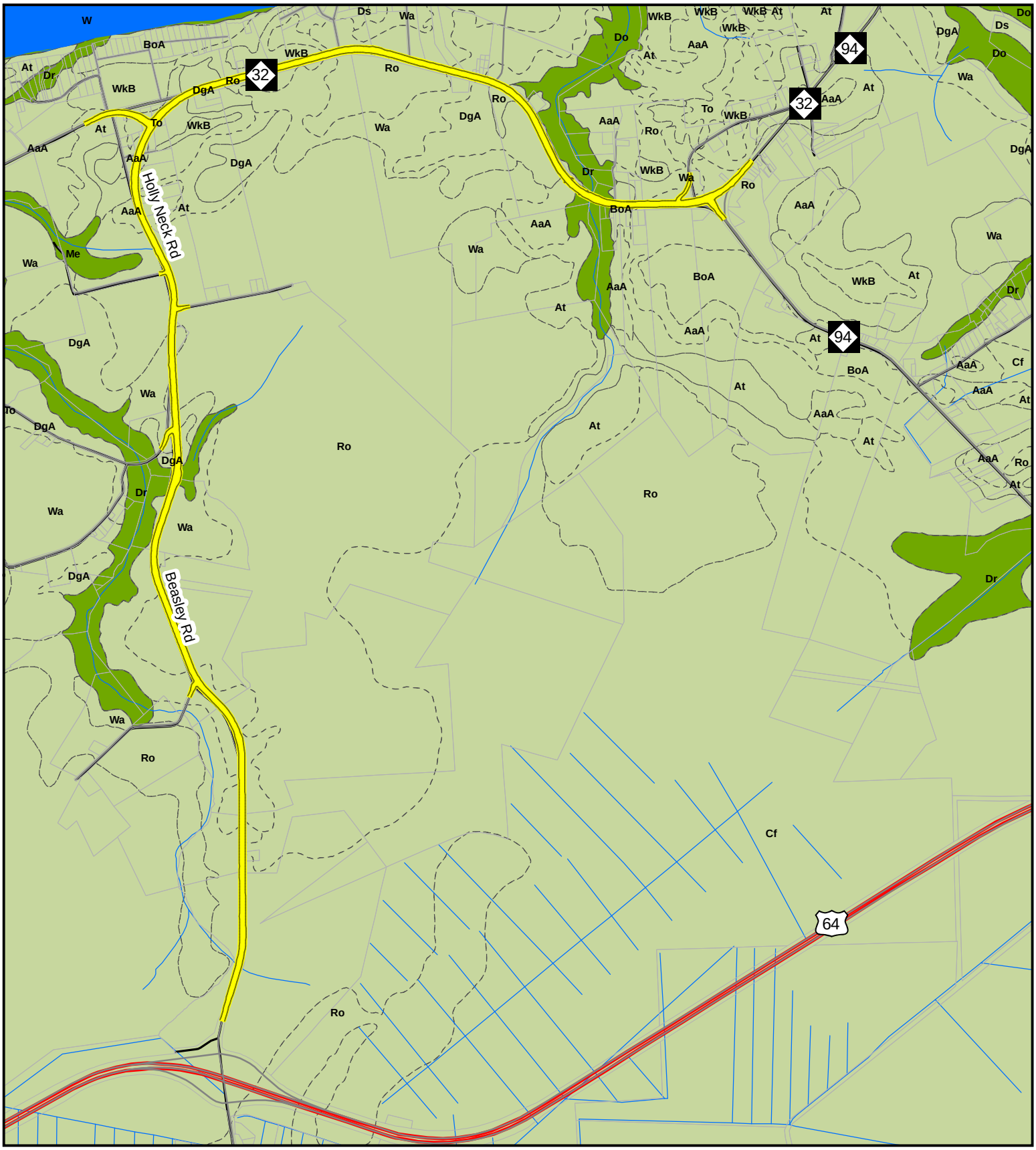

Legend:

- US Highway
- NC Highway
- Street
- Water body
- Parcels
- Slope Stakes
- Slope Stakes + 25'
- Soil Type Boundary

Farmland Description

- Not prime farmland
- Prime farmland

FIGURE 1

Alternative 2

Washington County
STIP Project R-3620

Draft - August 2009

Map Sources

North Carolina DOT.....http://www.ncdot.org
North Carolina One Map.....http://www.nconemap.com
North Carolina DOT Roadway Design Unit
Washington County GIS Department

0 1,200 2,400 4,800 Feet