NC 11 and US 13
From NC 11/NC 561 near Ahoskie to US 13/US 158/NC 45 near Winton
Hertford County
Federal-Aid Project NHF-0013(37)
WBS Element 45449.1.1
TIP Project R-5311

ADMINISTRATIVE ACTION

ENVIRONMENTAL ASSESSMENT

U. S. Department of Transportation
Federal Highway Administration
And
N. C. Department of Transportation
Division of Highways

Submitted pursuant to 42 U. S. C. 4332(2)(C)

APPROVED:

10/31/13 _____
Date for John F. Sullivan III, PE
Division Administrator, FHWA

10/30/13 _____
Date for Richard W. Hancock, P.E.
Manager, Project Development & Environmental Analysis Unit

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ENVIRONMENTAL ASSESSMENT

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Project Development and Environmental Analysis Unit

- Additional coordination will occur with the State Historic Preservation Office if it is determined during the design phase that full movement access to SR 1131 (Saluda Hall Road) for the National Register-eligible Newsome-Hall House property cannot be provided.

Roadway Design Unit

- No additional right of way or easements will be acquired from the National Register-eligible Newsome-Hall House property.

SUMMARY

1. Type of Action

This is a Federal Highway Administration (FHWA) Action, Environmental Assessment.

2. Project Purpose/Description of Action

The proposed project will make improvements to existing NC 11, SR 1212 (Shortcut Road) and portions of existing US 13 from just south of the NC 11 intersection with NC 561 to the US 13 interchange with US 158 and NC 45, a distance of approximately 7.8 miles.

The purpose of the proposed project is to improve the safety of the NC 11/US 13 corridor between the NC 11/NC 561 intersection and the US 13/US 158/NC 45 intersection in Hertford County.

3. Alternatives Considered

Along with the No-Build alternative, a total of six alternatives have been considered for this project. Four of the six (Alternatives 1, 3, 5, and 6) were studied in detail and are still under consideration.

Alternative 1 – Freeway (Part New Location)

This alternative proposes the upgrade of existing NC 11 and SR 1212 (Shortcut Road) to a four-lane freeway from south of NC 561 to US 13. A four-lane roadway on new location would be constructed between SR 1212 (Shortcut Road) at US 13 and existing US 13 at its northern intersection with NC 461. Full control of access would exist for this new roadway. Existing US 13 would be upgraded to a four-lane freeway between the northern intersection with NC 461 to south of US 158/NC 45 and interchanges would be constructed at the intersections of NC 11 with NC 561 and NC 11/SR 1212 (Shortcut Road) with NC 11. All other crossing roads would be grade separated or have their access removed and turned into cul-de-sacs. Additional right of way would be required to construct the new road segment east of existing US 13, between US 13/SR 1212 (Shortcut Road) and the northern US 13/NC 461 intersection.

Alternative 3 – Freeway/Expressway (Existing Location)

This alternative proposes the upgrade of existing NC 11 and SR 1212 (Shortcut Road) to a four-lane freeway from south of NC 561 to US 13. The portion of US 13 from SR 1212 (Shortcut Road) to NC 461 would be widened to four lanes with partial control of access (one driveway per parcel). Existing US 13 would be upgraded to a four-lane freeway between the northern intersection with NC 461 to south of US 158/NC 45. Interchanges would be constructed at NC 11 and NC 561, NC 11/SR 1212 (Shortcut Road) and the US 13 and the northern leg of NC 461.

Alternative 5 – Superstreet (Existing Location)

This alternative proposes the upgrade of NC 11, existing SR 1212 (Shortcut Road), and existing US 13 to a four-lane roadway from south of NC 561 to south of US 158/NC 45. Partial control of access would be obtained along existing US 13 between SR 1212 (Shortcut Road) and the northern intersection with NC 461 since this section of US 13 currently has no control of access. Although an interchange would be constructed at the northern intersection of US 13 and NC 461, a superstreet design will be utilized at the remaining intersections, with the exception of NC 11 and NC 561, which will be an offset or "dog leg" superstreet design.

Alternative 6 – Superstreet (Part New Location)

This alternative proposes the upgrade of existing NC 11 and SR 1212 (Shortcut Road) to a four-lane roadway from south of NC 561 to US 13. A four-lane roadway on new location would be constructed between SR 1212 (Shortcut Road) at US 13 and the northern intersection of US 13 at NC 461, which will become a grade separation. Full control of access would be obtained for the new location portion of the project beyond SR 1408 (Saluda Hall Road), meaning that connections to the facility are only provided via ramps at interchanges. Existing US 13 would be upgraded to a four-lane roadway between NC 461 to south of US 158/NC 45. No interchanges would be constructed with this alternative, but a superstreet design will be utilized at the remaining intersections, with the exception of NC 11 and NC 561, which will be an offset or "dog leg" superstreet design.

4. Summary of Environmental Impacts

Table S-1: Comparison of Detailed Study Alternatives

Resource		Alternative 1	Alternative 3	Alternative 5	Alternative 6
Project Length (miles)		7.9	7.7	7.7	7.9
Relocations	Residential	1	54	54	1
	Business	0	2	2	0
	Total	**2**	**50**	**52**	**1**
Minority/Low Income Populations - Disproportionate Impacts*		No	Yes	Yes	No
Historic Properties (adverse effect)		0	1	1	0
Community Facilities Impacted**		0	2+	2+	0
Section 4(f) Impacts		0	2	2	0
Prime Farmland (acres)		58.7	68.9	62.2	51.5
Noise Impacts		2	26	26	1
Wetlands (acres)		118.7	77.0	48.7	83.5
Streams (linear feet)		1,141	1,101	1,101	1,171
Floodplain (acres)		0	0	0	0
Federally Protected Species		0	0	0	0

* The impacts to the affected communities are considered to be disproportionately high and adverse since there is not enough available housing in this area to accommodate those relocated by these alternatives.

** Impacts to schools, parks, churches, fire stations, cemeteries, etc.

\+ Community facilities impacted include the Pleasant Plains Church & cemetery

5. Permits Required

For this project, a United States Army Corps of Engineers (USACE) Individual Permit will be required, in accordance with Section 404 of the Clean Water Act, although the USACE holds the final discretion as to what permit will be required to authorize project

construction. Because a Section 404 permit is required, a Section 401 Water Quality Certification from the North Carolina Division of Water Quality will also be needed.

6. Coordination

Comments regarding the proposed project were requested from various federal, state and local agencies. Copies of the comments received are included in Appendix A. An asterisk indicates comments were received from that agency.

* US Army Corps of Engineers
US Environmental Protection Agency
* US Fish & Wildlife Service
* NC Department of Agriculture & Consumer Services
* NC Department of Cultural Resources – State Historic Preservation Office
* NC Department of Environment & Natural Resources
NC Division of Air Quality
NC Division of Coastal Management
NC Division of Emergency Management
* NC Division of Environmental Health
* NC Division of Marine Fisheries
* NC Division of Water Quality
* NC Natural Heritage Program
* NC Wildlife Resources Commission
Mid East Rural Planning Organization

7. Contact Information

The following persons may be contacted for additional information concerning this proposal and statement:

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I. DESCRIPTION OF PROPOSED ACTION

A. General Description

The subject project proposes to improve NC 11 and US 13 from just south of the NC 11 intersection with NC 561 to the US 13 interchange with US 158 and NC 45. The project length is approximately 7.8 miles.

B. Historical Resume and Project Status

The sections of NC 11, SR 1212 (Shortcut Road) and US 13 to be improved under this project were originally part of two alternatives studied under the proposed US 13 Ahoskie Bypass project (TIP Project R-2205). Project R-2205 would have widened portions of existing US 13 to a four-lane, median divided facility, upgraded the highway to either freeway or expressway standards, and would also have included a new location bypass of Ahoskie. However, Project R-2205 is no longer funded in the State Transportation Improvement Program (STIP) and project development studies for this project have been discontinued.

Due to safety issues along the section of NC 11 and US 13 between Ahoskie and Winton, particularly at the intersections of NC 11 and NC 561 and NC 11/SR 1213 (Old NC 11 Road) and NC 11, TIP Project R-5311 was programmed in the 2012-2018 STIP. It should also be noted that in September 2010, NCDOT closed one approach to the NC 11/SR 1213 (Old NC 11 Road) intersection to temporarily address safety concerns.

According to the Draft 2013-2023 NCDOT Program and Resource Plan, right-of-way acquisition for Section A (the construction of an interchange or superstreet intersection at the existing intersection of NC 11/SR 1212 (Shortcut Road) and SR 1213 (Old NC 11 Road)) is scheduled to begin in Fiscal Year (FY) 2015, and the construction is scheduled for FY 2016. Right-of-way and construction for Section B (the remainder of the project from just south of the intersection of NC 11 and NC 561 to the intersection of US 13/US 158/NC 45) are scheduled to begin in FY 2017 and FY 2019, respectively.

C. Cost Estimates

The cost estimate included in the Draft 2013-2023 NCDOT Program and Resource Plan for this project is $87,161,000, which includes $9,400,000 for Section A and $77,761,000 for Section B. For Section A, $500,000 is estimated for right of way acquisition and $8,900,000 for construction, while for Section B, $4,425,000 is allocated for right of way acquisition, $236,000 for mitigation, and $73,100,000 for construction. Current cost estimates for each alternative are shown below in Table 1. Refer to Figures 3A-3G and 4A-4G for the individual alternative alignments.

Table 1: Cost Estimates by Alternative

	Alternative 1	Alternative 3	Alternative 5	Alternative 6
Right of Way Acquisition	$1,812,640	$15,543,520	$14,969,690	$1,243,270
Wetland Mitigation	$6,035,300	$3,915,100	$2,472,500	$4,244,500
Utility Relocation	$697,720	$1,004,920	$1,004,920	$697,720
Construction	$64,600,000	$71,100,000	$54,000,000	$50,200,000
Total	**$73,145,660**	**$91,563,540**	**$72,447,110**	**$56,385,490**

II. PURPOSE AND NEED

A. Project Purpose

The purpose of this project is to improve the safety of the NC 11/US 13 corridor between the NC 11/NC 561 intersection and the US 13/US 158/NC 45 intersection in Hertford County.

B. Need for Project

1. Description of Existing Conditions

The subject sections of NC 11, SR 1212 (Shortcut Road), and US 13 are located in north central Hertford County. In the project area, NC 11, SR 1212 (Shortcut Road), and US 13 are a continuous roadway (see Figure 1). The subject roadway is designated as NC 11 from south of the project to the NC 11 intersection. From north of the NC 11 intersection to the US 13 intersection, the roadway is designated as SR 1212 (Shortcut Road). North of the US 13 intersection, the roadway is designated as US 13 (with a short section designated as US 13/NC 461) up to the northern project limits at the US 158/NC 45 intersection. North of the project, the roadway is designated US 13/US 158. The portions of NC 11, SR 1212 (Shortcut Road), and US 13 in the project area connect the Towns of Ahoskie and Winton (see Figure 1).

a. Route Classification

NC 11 and US 13 are both classified as minor arterials in the North Carolina Functional Classification System within the project study area.

b. Physical Description of Existing Facility

(1) Roadway Typical Section

The subject sections of NC 11 and US 13 are primarily two-lane roads with 12-foot lanes, 4-foot paved shoulders, and unpaved shoulders that vary from 2-10 feet, depending on the location. Both left and right dedicated turn lanes are located intermittently at intersections along the project.

(2) Horizontal and Vertical Alignment

The existing horizontal alignment of NC 11, SR 1212 (Shortcut Road), and US 13 within the project limits meets a design speed of at least 65 miles per hour (mph). The vertical alignments of NC 11, SR 1212 (Shortcut Road), and US 13 within the project limits are flat, with no steep grades.

(3) Right of Way and Access Control

Within the project limits, existing right of way along NC 11 and SR 1212 (Shortcut Road) is approximately 400 feet wide, in order to allow for the future upgrade of this facility to freeway standards. Along US 13, the existing right of way varies within the project study area from 60 feet between the intersections of SR 1212 (Shortcut Road) and the northern leg of NC 461 to nearly 320 feet north of NC 461. At the intersections of NC 11 and NC 561 and NC 11/SR 1212 (Shortcut Road) and NC 11, NCDOT had previously purchased right of way to accommodate future interchanges.

Throughout the project, limited control of access exists along NC 11, SR 1212 (Shortcut Road), and US 13 throughout the project, except in the section of US 13 between SR 1212 (Shortcut Road) and the northern intersection with NC 461, which currently has no control of access.

(4) Speed Limit

The posted speed limit on NC 11, SR 1212 (Shortcut Road) and US 13 is 55 miles per hour (mph) within the study area.

(5) Intersections

Along the entire project length, there are twelve intersections, ten of which are stop-sign-controlled and two of which are signalized. Two of the ten stop-sign-controlled intersections also have flashing caution signals. Intersections along the project are listed below:

- NC 11 at SR 1108 (Bonner Bridge Road/Fire Tower Road) – unsignalized
- NC 11 at NC 561 (St. Johns Highway) - signalized
- NC 11 at SR 1130 (Modlin Hatchery Road) – unsignalized
- NC 11/SR 1212 at NC 11 – unsignalized (flashing signal only)
- US 13 at SR 1212 (Shortcut Road) – unsignalized (flashing signal only)
- US 13 & SR 1213 (Old NC 11 Road)/SR 1411 (Brinkleyville Road) – unsignalized
- US 13 at SR 1408/SR 1311 (Saluda Hall Road) – unsignalized; offset intersection
- US 13 at SR 1409 (Hall Siding Road) – unsignalized
- US 13 at SR 1132 (Pleasant Plain Road) – unsignalized

- US 13 at NC 461 – unsignalized
- US 13/NC 461 at NC 461 (Old US Highway 13) – unsignalized
- US 13 at US 158/NC 45 – signalized (an interchange is currently being constructed at this intersection under Project R-2507A)

(6) Railroad Crossings

No railroad crossings exist along the NC 11/US 13 corridor within the study area.

(7) Structures

There are no bridge structures or box culverts on NC 11, SR 1212 (Shortcut Road), or US 13 within the project study area. The only existing major crossing is at an unnamed tributary to Horse Swamp (Stream SZ), where three 48-inch concrete pipes carry the stream under US 13.

(8) Bicycle and Pedestrian Facilities/Greenways

No special bicycle accommodations or sidewalks exist along the NC 11/US 13 corridor within the study area.

(9) Utilities

There are several utilities located in the project study area, including power and telephone poles, an 8-inch gas line, a 12-inch PVC water line, and an 8-inch PVC sewer line. Additionally, Century Link has copper communication cables crossing underneath NC 11 at NC 561, SR 1130 (Modlin Hatchery Road), and under US 13 at SR 1408/SR 1311 (Saluda Hall Road), and fiber optic cable crossing under the intersection of US 13 and SR 1213 (Old NC 11 Road).

c. School Bus Usage

Thirty five buses, which make up over half of the county's entire fleet, travel along NC 11 and US 13 twice daily during an average school week.

d. Traffic Carrying Capacity

(1) No-Build Traffic Volumes

Traffic volumes for the NC 11/SR 1212/US 13 corridor were observed for the base year (2008) and estimated for the future year (2035). As shown in Figure 5A, in the year 2008, traffic along the corridor in the study area ranged between 4,100 and 9,200 vehicles per day (vpd). In the year 2035, as shown in Figure 5A, traffic volumes along NC 11,

SR 1212 (Shortcut Road), and US 13 are expected to range between 5,100 and 13,500 vpd.

(2) No-Build Levels of Service

The effectiveness of a roadway to service traffic demand is measured in terms of level of service (LOS). Level of service is a qualitative measure describing the ability of a facility to carry traffic and how individual users perceive traffic conditions. It is based on factors of speed, travel time, comfort, maneuverability, interruptions, convenience and safety. Levels of Service range from "A" to "F", with "A" representing free flow (ideal conditions), and "F" representing forced or breakdown flow (undesirable conditions).

A transportation facility is considered to be operating at capacity when it is just able to accommodate the traffic demand. Once the traffic demand exceeds the facility's capacity (LOS E), excessive delays occur.

The results of the traffic capacity analysis for NC 11, SR 1212 (Shortcut Road), and US 13 in the project area show sections of the existing road are currently (2008) operating at level of service C. By the year 2035, sections of the existing road will be operating at level of service D.

A 2035 No-Build Capacity Analysis indicates 8 of the 10 intersections that were studied along the project corridor are expected to operate at an acceptable LOS in both the AM and PM peak hours. Both intersections with an unacceptable LOS along NC 11/US 13 (SR 1408/SR 1311 (Saluda Hall Road) and NC 461) are minor street approaches operating with two-way stop control.

e. Crash History

A Traffic Safety Analysis was conducted for the time period from April 1, 2007 to March 31, 2012 for NC 11, SR 1212 (Shortcut Road) and US 13 from 0.5 mile west of SR 1108 (Bonner Bridge Road/Fire Tower Road) to south of US 158 in Hertford County. There were 179 reported crashes along this segment during the analysis period. Four fatal crashes were reported, resulting in a fatal crash rate of 5.31 fatal crashes per 100 Million Vehicle Miles (MVM), which exceeds the statewide average fatal crash rate of 1.83 fatal crashes per 100 MVM, as well as the critical crash rate (4.77 fatal crashes per 100 MVM). Current crash rates also exceed the statewide and critical crash rates across all categories, with the exception of wet crash rates, which exceed the statewide rate, but not the critical crash rate. A number of these crashes were angle crashes, typically caused by drivers on a cross street pulling out in front of drivers on the mainline route. Table 2 shows the comparison of the crash rates for the analyzed sections of NC 11, SR 1212 (Shortcut Road), and US 13 versus the 2008-2010 statewide overall rural NC crash rates.

Table 2: Accident Rate Comparison

Crash Type	Crashes	Crashes per 100 MVM	Statewide Rate[1]	Critical Rate[2]
Total	179	237.61	169.96	195.06
Fatal	4	5.31	1.83	4.77
Non-Fatal Injury	66	87.61	59.18	74.14
Night	61	80.97	60.28	75.83
Wet	29	38.49	29.09	39.69

1 – 2008-2010 statewide crash rate for rural North Carolina (NC) routes

2 – Based on the statewide crash rate (95% level of confidence)

Intersection safety analyses were also done over this same time period for the intersections of NC 11 and NC 561, SR 1212 (Shortcut Road) and NC 11 and US 13 and NC 461, all of which have been noted as having a consistent history of safety problems. Table 3 compares the total and fatal crash rates at these three intersections over the analysis period.

Table 3: Intersection Accident Rate Comparison

Intersection	Total Crashes	Total Crashes per 100MVE	Fatal Crashes	Fatal Crashes per 100 MVE
NC 11 & NC 561	12	72.18	1	6.01
NC 11/SR 1212 & NC 11	28	218.94	2	15.64
US 13 & NC 461	6	43.21	0	0

100MVE = 100 Million Vehicles Entered

f. Airports

There are no airports located near the study area.

g. Other Highway Projects in the Area

There are two other TIP projects located in the vicinity of this proposed project:

- R-2507: Widening of US 13 to multi-lanes from US 158 to the Virginia State Line
    - Section A: US 158 in Winton to the US 158 Bypass in Tarheel; currently under construction
    - Section B: US 158 Bypass in Tarheel to SR 1202 (Eure Road/Gates School Road); currently unfunded
    - Section C: SR 1202 (Eure Road/Gates School Road) to Virginia State Line; currently unfunded

- R-2583: Widening of US 158 to multi-lanes from Murfreesboro Bypass to US 13 west of Winton, partly on new location; currently under construction

2. Transportation and Land Use Plans

a. Local Transportation Plans

The Hertford County Comprehensive Transportation Plan (CTP) is in the early stages of initial data collection. The study is a joint effort between Hertford County, the North Carolina Department of Transportation's (NCDOT) Transportation Planning Branch (TPB), and the Peanut Belt Rural Planning Organization (RPO). The Hertford County CTP Status Report (July 17, 2012) shows the study completion to be scheduled for August 2014. Though there is no currently adopted CTP, there is a thoroughfare plan that was created for Hertford County by NCDOT in May 1985 to provide for the orderly development of an adequate street system as land development occurred.

b. Statewide Plans

The Strategic Highway Corridors (SHC) provide a network of high-speed, safe, reliable highways throughout North Carolina. The designation as a SHC is based on mobility, connectivity to activity centers, and connectivity to interstates, interstate relief routes, major hurricane evacuation routes, and corridors that are part of a national or statewide highway system. In the revised version of the Strategic Highway Corridors Vision Plan for Division 1 (dated July 2008), the NC 11/US 13 corridor was designated as a freeway, and was noted as needing an upgrade.

This section of US 13 is also included in the National Highway System as a Strategic Highway Network (STRAHNET) route. The STRAHNET is a nearly 63,000-mile system of roads deemed necessary for emergency mobilization and peacetime movement of heavy armor, fuel, ammunition, repair parts, food, and other commodities to support US military operations. Even though the Department of Defense primarily deploys heavy equipment by rail, highways play a critical role.

c. Land Use Plans

The Hertford County Coastal Area Management Act (CAMA) Land Use Plan Update was adopted on January 18, 2011. This plan analyzed existing and emerging conditions by stating policies and implementation actions in order to guide development in the CAMA permitting process.

According to the Hertford County CAMA Land Use Plan, much of the growth that the Town of Ahoskie has experienced in recent years has been single lot and multi-lot subdivisions for new modular homes. The local planning team also expects increased development along the Chowan River.

3. Evacuation Route

While the US 158 and US 158/US 13 corridors north of the project study area are designated as hurricane evacuation routes, the NC 11/US 13 corridor located within the project study area is not designated as an evacuation route.

C. Benefits of Proposed Project

1. Safety

All of the alternatives currently under consideration for this project would improve the NC 11/US 13 corridor in the project area to a four-lane, median divided facility. Intersections along the project would either be removed, grade separated, or upgraded to superstreet intersections (no left turns from side streets) or interchanges. Widening NC 11 and US 13 to four-lane divided roadways and changing access patterns at the existing intersections is expected to improve the safety of the route throughout the study area.

Over 70% of the crashes occurring on NC 11 between 2007 and 2012 were frontal impact crashes. Construction of a median divided, either fully or partially controlled access facility is expected to reduce these types of accidents by either channelizing or eliminating all left turn and side road through movements. Given that over half of the frontal impact crashes occurred at the intersection of NC 11/SR 1212 (Shortcut Road) and NC 11, changing this intersection to a superstreet or an interchange would drastically reduce the potential for frontal impact crashes. In addition, the proposed new lanes should help to reduce the number of rear-end type crashes by reducing congestion and providing another lane for faster moving traffic to move into, in order to avoid stopping or slowing vehicles.

The proposed median will reduce the likelihood of head-on collisions by separating the opposing lanes.

It has been noted there are a high percentage of heavy vehicles along the corridor, with heavy truck percentages ranging from 19 to 22%. The proposed project would provide an upgraded route for these vehicles by improving both the available capacity and overall safety of this facility.

A traffic safety analysis was performed by the NCDOT Traffic Safety Unit in August 2012. This study compared the different alternatives for the project from a safety perspective. Safety performance functions were used to make comparisons regarding the safety performance of the potential alternatives. Safety performance functions are mathematical equations that relate characteristics of a road segment or intersection to the number of predicted crashes at that site. The safety performance functions used in the analysis came from the Highway Safety Manual and safety performance functions developed or calibrated specifically for North Carolina.

Based on the traffic safety analysis, if no improvements are made to the existing facility (i.e., the No-Build alternative), the number of crashes within the project limits is expected to be 58% higher in the design year (2035) than in the current year.

2. Traffic Carrying Capacity

Although the primary purpose of this project is to improve the safety of NC 11 and US 13 within the project area, the project will improve the traffic carrying capacity of the existing facility. With any of the alternatives under consideration, NC 11 and US 13 in the project area will operate at LOS A in the year 2035.

III. ALTERNATIVES

A. Preliminary Study Alternatives

1. Alternate Modes of Transportation

Hertford County is primarily rural in nature, and therefore, has few options available with regard to alternative modes of transportation. However, there are two publicly subsidized operations available for those who may not have access to a car for their transportation needs.

Choanoke Public Transportation Authority (CPTA) is a demand responsive, paratransit community transportation program funded by the North Carolina Department of Transportation's Public Transportation Division that serves the transportation needs of Bertie, Halifax, Hertford and Northampton Counties. CPTA provides local services, Monday through Friday, for trips to human service agencies, medical appointments, community colleges, daycares, dialysis clinics, Headstart programs, individual shopping trips, and many other destinations, although there are no fixed routes.

The Hertford County Office of Aging also provides some limited public transportation services for senior citizens living within the county limits. They offer two types of services: one that is available every other week and may be scheduled by any of the seven local communities for their citizens, and one that is by appointment only for medical services.

Given these limited options for alternative transportation, and the fact that the use of public transportation systems wouldn't substantially reduce or mitigate the existing safety issues within the project study area, this alternative was not considered a viable option and was eliminated from further consideration.

2. No-Build Alternative

The No-Build alternative avoids impacts to the study area. However, this alternative does not address the purpose and need of the project because it does not improve the safety of the NC 11/US 13 corridor. According to the Alternative Safety Analysis (see Section II-C-1), under the No-Build alternative, by year 2035, crashes are predicted to be 58% higher than in the current year. For this reason, this alternative was eliminated from further consideration.

3. Transportation Systems Management

Transportation Systems Management (TSM) strategies seek to maximize the efficiency, safety, and utility of existing and planned transportation infrastructure. TSM strategies encompass many activities, such as:

- Traffic incident management
- Traffic signal coordination
- Transit signal priority (TSP) and bus rapid transit (BRT)
- Freight management
- Work zone management
- Special event management
- Road weather management
- Congestion pricing
- Managed lanes
- Ridesharing and demand management programs
- Electronic toll collection and transit smart cards
- Traveler information systems

TSM is also connected to planning and infrastructure considerations such as access management, street network layout, and intersection design (e.g., use of roundabouts, right-turn slip lanes and median islands, four-way stops, turning lanes). The emerging integration of operational improvements with urban design and context-sensitive roadway design—through such means as boulevard designs, repurposing of excess road capacity for bicycle lanes, and use of roundabouts—can help improve vehicular operations and multimodal access, while improving safety, enhancing aesthetics, and reducing emissions.

In the case of this particular study area, some TSM measures have been implemented in an effort to help reduce the existing safety issues at some intersections, including the closing of SR 1213 (Old NC 11 Road) at its intersection with NC 11 and SR 1212 (Shortcut Road). While this does reduce the number of crashes at the intersection in question, it does not wholly solve the larger safety issue, and was therefore eliminated from further consideration as a viable alternative for this project.

4. Improve Existing Facility

It is expected that the upgrade of the existing roadway would meet the project purpose and need by improving the safety of the NC 11/US 13 corridor between the intersection of NC 11 and NC 561 and the intersection of US 13 and US 158/NC 45 near Winton in Hertford County.

Six preliminary alternatives for improving the existing facility were investigated for the project. A traffic safety analysis was performed by the NCDOT Traffic Safety Unit in 2012 in order to compare the different alternatives for the project from a safety perspective (see Section II-C-1). Table 4 presents the predicted percent reduction in crashes within the project limits for each alternative in comparison to the No Build alternative.

As noted in Table 4 below, the 2012 traffic safety analysis found that all of the alternatives investigated would likely result in fewer accidents in the design year than the No Build alternative given that each build alternative would reduce conflict points on the existing roads. The table presents the predicted percent reduction in crashes within the project limits for each alternative in comparison to the No Build alternative.

Table 4: Alternative Safety Analysis Results

Alternative	Description	Predicted Crash Difference from No Build
1	Freeway, part on new location	52% decrease
2	Freeway on existing location	53% decrease
3	Freeway/expressway on existing location	45% decrease
4	Construct interchanges at NC 11/NC 561 and NC 11-SR 1212/NC 11 intersections only	24% decrease
5	Superstreet on existing location	24% decrease
6	Superstreet, part on new location	24% decrease

Source: Alternative Comparison for R-5311, Safety Planning Group, Traffic Safety Division, NCDOT, 8/8/2012

These preliminary alternatives were also evaluated from an environmental standpoint. Table 5 below presents the potential environmental impacts of the preliminary alternatives.

Table 5: Comparison of Preliminary Alternatives

Resource		Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
Project Length (miles)		8.1	8.2	8.2	Spot Improvements	8.2	8.1
Relocations	Residential	34	96	87	0	63	1
	Business	0	0	0	0	0	0
	Total	34	96	87	0	63	1
Churches		0	1	1	0	1	0
Cemeteries		0	1	1	0	1	0
Parks		0	0	0	0	0	0
Schools		0	0	0	0	0	0
NC Crews Wetland Impacts (acres)[+]		80	70	70	63	22	33
Delineated Wetland Impacts (acres)		143	87	87	74	28	85
Delineated Stream Impacts (linear Feet)		585	296	296	0	296	580
Hydric Soils (acres)		245	243	243	93	160	170
Prime Farmland Soils (acres)		117	131	131	72	66	63
Structures/Districts Listed on or Eligible for National Register		0	3	3	0	3	0

+ NC CREWS wetlands were included since delineated wetlands were not available for the portion of the project along existing US 13, between SR 1212 (Shortcut Road) and NC 461. Impacts presented are based on preliminary environmental analysis.

Four of the six preliminary alternatives were selected for detailed studies based on the results of the traffic safety analysis and preliminary environmental analysis. Alternatives 2 and 4 were dropped from consideration. These alternatives are described below.

Alternative 2 – Freeway (Existing Location)

Alternative 2 would involve upgrading existing NC 11, existing SR 1212 (Shortcut Road), and existing US 13 to a four-lane freeway from south of NC 561 to south of US 158/NC 45. Interchanges would be constructed at the NC 11/NC 561, NC 11-SR 1212/NC 11 and US 13/NC 461 intersections. All other crossing roads would be grade separated or cul-de-saced. Full control of access would be obtained along the portion of existing US 13 between SR 1212 (Shortcut Road) and NC 461. Service roads would likely be required to provide access to adjacent properties in this area, because this section of US 13 currently has no control of access. Alternative 2 was eliminated from consideration because it would relocate substantially more homes and would have greater community impacts than the other alternatives.

Alternative 4 – Interchanges Only

Alternative 4 would involve constructing interchanges only at the NC 11/NC 561 and NC 11-SR 1212/NC 11 intersections. NC 11, SR 1212 (Shortcut Road) and US 13 would remain two-lane roads with this alternative. No improvements would be made to the portion of existing US 13 between SR 1212 and NC 461. Alternative 4 was eliminated because it would provide much less crash reduction than the other alternatives.

B. Detailed Study Alternatives

Four alternatives were studied in detail for the proposed project (see Table 6 for a comparison of project related impacts). Detailed environmental surveys and preliminary designs were prepared for Alternatives 1, 3, 5 and 6. Alternatives 3 and 5 would both use property from two historic properties and would relocate substantially more homes and businesses than either Alternative 1 or Alternative 6. However, Alternatives 3 and 5 both have fewer wetland impacts than Alternatives 1 and 6. Historic properties are protected by Section 4(f) of the USDOT of 1966. Section 4(f) of the United States Department of Transportation Act of 1966 states FHWA can only select alternatives which use land from historic sites if there is no feasible and prudent alternative. Alternatives 1 and 6 are both feasible and prudent alternatives. At this stage of the project, all four alternatives are still under consideration; however, NCDOT prefers to select either Alternative 1 or 6 as the LEDPA, given that they have fewer community impacts and will not require a Section 4(f) evaluation.

Table 6: Comparison of Detailed Study Alternatives

Resource		Alternative 1	Alternative 3	Alternative 5	Alternative 6
Project Length (miles)		7.9	7.7	7.7	7.9
Relocations	Residential	1	54	54	1
	Business	0	2	2	0
	Total	**2**	**50**	**52**	**1**
Minority/Low Income Populations - Disproportionate Impacts*		No	Yes	Yes	No
Historic Properties (adverse effect)		0	1	1	0
Community Facilities Impacted**		0	2+	2+	0
Section 4(f) Impacts		0	2	2	0
Prime Farmland (acres)		58.7	68.9	62.2	51.5
Noise Impacts		2	26	26	1
Wetlands (acres)		118.7	77.0	48.7	83.5
Streams (linear feet)		1,141	1,101	1,101	1,171
Floodplain (acres)		0	0	0	0
Federally Protected Species		0	0	0	0

* The impacts to the affected communities are considered to be disproportionately high and adverse since there is not enough available housing in this area to accommodate those relocated by these alternatives.

** Impacts to schools, parks, churches, fire stations, cemeteries, etc.

\+ Community facilities impacted include the Pleasant Plains Church & cemetery

The following alternatives were selected for detailed study:

Alternative 1 – Freeway (Part New Location)

This alternative proposes the upgrade of existing NC 11 and SR 1212 (Shortcut Road) to a four-lane freeway from south of NC 561 to US 13. A four-lane roadway on new location would be constructed between SR 1212 (Shortcut Road) at US 13 and existing US 13 at its northern intersection with NC 461. Full control of access would exist for this

new roadway. Existing US 13 would be upgraded to a four-lane freeway between the northern intersection with NC 461 to south of US 158/NC 45 and interchanges would be constructed at the intersections of NC 11 with NC 561 and NC 11/SR 1212 (Shortcut Road) with NC 11. All other crossing roads would be grade separated or have their access removed and turned into cul-de-sacs. Additional right of way would be required to construct the new road segment east of existing US 13, between US 13/SR 1212 (Shortcut Road) and the northern US 13/NC 461 intersection.

Alternative 3 – Freeway/Expressway (Existing Location)

This alternative proposes the upgrade of existing NC 11 and SR 1212 (Shortcut Road) to a four-lane freeway from south of NC 561 to US 13. The portion of US 13 from SR 1212 (Shortcut Road) to NC 461 would be widened to four lanes with partial control of access (one driveway per parcel). Existing US 13 would be upgraded to a four-lane freeway between the northern intersection with NC 461 to south of US 158/NC 45. Interchanges would be constructed at NC 11 and NC 561, NC 11/SR 1212 (Shortcut Road) and NC 11 and the northern intersection of US 13 and NC 461.

Alternative 5 – Superstreet (Existing Location)

This alternative proposes the upgrade of NC 11, existing SR 1212 (Shortcut Road), and existing US 13 to a four-lane roadway from south of NC 561 to south of US 158/NC 45. Partial control of access would be obtained along existing US 13 between SR 1212 (Shortcut Road) and the northern intersection with NC 461 since this section of US 13 currently has no control of access. Although an interchange would be constructed at the northern intersection of US 13 and NC 461, a superstreet design will be utilized at the remaining intersections, with the exception of NC 11 and NC 561, which will be an offset or "dog leg" superstreet design.

Alternative 6 – Superstreet (Part New Location)

This alternative proposes the upgrade of existing NC 11 and SR 1212 (Shortcut Road) to a four-lane roadway from south of NC 561 to US 13. A four-lane roadway on new location would be constructed between SR 1212 (Shortcut Road) at US 13 and the northern intersection of US 13 at NC 461, which will become a grade separation. Full control of access would be obtained for the new location portion of the project north of SR 1408 (Saluda Hall Road), meaning that connections to the facility are only provided via ramps at interchanges. Existing US 13 would be upgraded to a four-lane roadway between NC 461 to south of US 158/NC 45. No interchanges would be constructed with this alternative, but a superstreet design will be utilized at the remaining intersections, with the exception of NC 11 and NC 561, which will be an offset or "dog leg" superstreet design.

IV. PROPOSED IMPROVEMENTS

Although there are four proposed alternatives under consideration, they are basically variations on two facility types, a freeway/expressway option (Alternatives 1 and 3) and a superstreet option (Alternatives 5 and 6). As such, description of proposed improvements will be described in terms of these two options, with additional detail added where each alternative varies.

A. Roadway Typical Section and Alignment

All proposed alternatives will be designed as four-lane, median divided sections with twelve foot lanes (see Figure 6). For the freeway/expressway alternatives, there will be 10-foot outside shoulders (4-foot paved), 6-foot inside shoulders (2-foot paved), and a 46-foot grass median. For the superstreet alternatives, there will be 8-foot outside shoulders (4-foot paved), 6-foot inside shoulders (2-foot paved), and a 46-foot grass median. In cases where guardrail will be necessary, the outside shoulder width will be 15 feet for the freeway/expressway alternatives and 13 feet for the superstreet alternatives.

B. Right of Way and Access Control

Existing right of way along NC 11 from NC 561 to SR 1212 (Shortcut Road), SR 1212 from NC 11 to US 13 and US 13 from NC 461 to the northern project terminus is adequate for widening the routes. Between the intersection with SR 1212 (Shortcut Road) and the northern intersection with NC 461, the existing section of US 13 will require a proposed right of way width of 150 feet, although more will be required at intersections/interchanges. For the new location sections on Alternatives 1 and 6, a minimum of 300 feet of right of way will be required. Table 7 below presents proposed right of way widths and access control for the detailed study alternatives.

Table 7: Proposed Right of Way Widths and Access Control

Section	Alternatives	Existing Right of Way Width	Proposed Right of Way Width	Existing Access Control	Proposed Access Control
NC 11 and SR 1212 from NC 561 to US 13	1, 3	400 feet	400 feet	Limited	Full
	5, 6	400 feet	400 feet	Limited	Limited*
US 13 from SR 1212 to northern NC 461 Intersection	1, 6	N/A (new location)	300 feet	N/A (New Location)	Full*
	3, 5	60 feet	150 feet	None	Partial
US 13 from northern NC 461 intersection to US 158/NC 45	1, 3, 5, 6	320 feet	320 feet	Limited	Full

* Limited control of access for Alt. 6 extends to SR 1408; Full control of access would be obtained for the new location portion of Alt. 6 north of SR 1408 (Saluda Hall Road)

C. Speed Limit

It is anticipated NC 11 and US 13 will be signed at 55 mph within the project limits. The actual speed limit(s) for the project will be determined during final design.

D. Design Speed

The design speed for the proposed project is 70 mph.

E. Anticipated Design Exceptions

Design exceptions are not anticipated for this project.

F. Intersections/Interchanges

For the proposed alternatives, there will be changes to several existing intersections, depending on the proposed facility type (freeway/expressway/superstreet) and whether the project is located on existing or new location. Table 8 below details proposed changes to the existing intersections under each alternative.

Table 8: Proposed Intersections/Interchanges

Intersection	Alternative 1	Alternative 3	Alternative 5	Alternative 6
NC 11 & SR 1108	Terminate	Terminate	RI/RO – east leg only; terminate west leg	RI/RO – east leg only; terminate west leg
NC 11 & NC 561	Interchange	Interchange	Superstreet	Superstreet
NC 11 & SR 1130	Grade Separation	Grade Separation	Superstreet	Superstreet
NC 11 & SR 1213	Interchange	Interchange	Superstreet	Superstreet
US 13 & SR 1212	Terminate & realign into SR 1408	Terminate & realign into SR 1408	Terminate & realign into SR 1408	Realign; superstreet
US 13 & SR 1408	Terminate (NL)	Superstreet	Superstreet	Superstreet (NL)
US 13 & SR 1213/SR 1411	Realign	Realign	Realign	Realign
US 13 & SR 1409	Terminate (NL)	Superstreet	Superstreet	Terminate (NL)
US 13 & SR 1132	N/A	Terminate	Terminate	N/A
US 13 & NC 461 (southern)	N/A	Realign; superstreet	Realign; superstreet	N/A
US 13/NC 461 & NC 461 (northern)	Grade Separation	Interchange	Interchange	Grade Separation
US 13 & US 158/NC 45	Part of TIP R-2507A	Part of TIP R-2507A	Part of TIP R-2507A	Part of TIP R-2507A

RI/RO = Right in, right out; NL = New location

G. Service Roads

Under Alternatives 3 and 5, the existing southern intersection of US 13 and NC 461 will be terminated (see Figures 3A-3G and 4A-4G). Existing NC 461 will be realigned to intersect with US 13 just north of SR 1132 (Pleasant Plains Road) and south of the existing US 13/NC 461 intersection, maintaining access to homes along existing NC 461 between SR 1132 (Pleasant Plains Road) and US 13. Also under Alternatives 3 and 5, direct access to homes along the portion of NC 461 north of the northern NC 461 intersection with US 13 will be eliminated in order to accommodate the new interchange and control of access limits. In order to retain access for these homeowners, it is proposed to realign and extend SR 1464 (Adron B. Jones Road) to SR 1407 (Blue Foot Road).

H. Railroad Crossings

There will not be any railroad crossings along the proposed NC 11/US 13 corridor.

I. Structures

Table 9 lists the major structures by alternative and their proposed improvements. Figures 2A/2B illustrate the location of these stream crossings.

Table 9: Proposed Structures

Stream	Existing Structure	Proposed Hydraulic Structure	Alternative(s)
UT to Horse Swamp (SZ)	3 @ 48-inch RCP	Extend 3 @ 48-inch RCP	1, 3, 5, 6
Mill Branch (existing location)	2 @ 48-inch RCP	4 @ 48-inch RCP (Retain & extend existing two, supplement with 2 additional)	3 & 5
Mill Branch (new location)	N/A	1 @ 84-inch RCP*	1 & 6

RCP = Reinforced Concrete Pipe

*This pipe will be buried 1-foot to create a hydraulic opening of 72-inches

J. Bicycle and Pedestrian Facilities/Greenways

Since this facility will be mainly controlled access, there will not be any special bicycle or pedestrian accommodations.

K. Utilities

There are several utilities located in the project study area, including copper communication cables, water and sewer lines, as well as gas and power infrastructure. NCDOT will coordinate with the appropriate utility companies to determine if the

proposed project will affect any of the existing utilities and if any relocations will be required.

L. Landscaping

No special landscaping is proposed as a part of the project. Disturbed areas along the project will be reseeded with grass.

M. Noise Barriers

No noise barriers meet both feasibility and reasonableness requirements outlined in the 2011 NCDOT Traffic Noise Abatement Policy for any of the four proposed design alternatives. Therefore, no traffic noise abatement measures are recommended.

V. ENVIRONMENTAL EFFECTS OF PROPOSED ACTION

A. Natural Resources

1. Biotic Resources

a. Terrestrial Communities

Six terrestrial communities were identified in the study area: maintained/disturbed, non-riverine swamp forest (sweetgum subtype), non-riverine wet hardwood forest (oak flat subtype), brownwater bottomland hardwood forest (high subtype), pine forest, and mesic mixed hardwood forest (coastal plain subtype). A brief description of each community type follows.

(1) Maintained/Disturbed

Maintained/disturbed areas are scattered throughout the study area in places where the vegetation is periodically mowed, such as roadside shoulders, residential lawns, agricultural fields, and overhead utility corridors. The vegetation in this community is comprised of low growing grasses and herbs, including fescue, clover, wild onion, broomsedge, blackberry, and Japanese honeysuckle.

(2) Non-Riverine Swamp Forest (Sweetgum Subtype)

The non-riverine swamp forest community occurs on large flatwoods throughout the study area. Areas of this community type in the study area show signs of recent logging activities. Large tracts of land appear to have been clear cut within the last five years. Sweetgum, red maple, and tulip poplar dominate the over story canopy, while red maple, sweetgum, giant cane, Chinese privet, and multiflora rose occur in the understory. Vine species were limited to greenbriar, poison ivy, and Japanese honeysuckle.

(3) Non-Riverine Wet Hardwood Forest (Oak Flat Subtype)

The non-riverine wet hardwood forest is the most common forested community found in the project study area. This community type is found on broad flats with little topographic relief and is often segmented by agricultural fields. Large tracts within this community have been recently logged, and dominant canopy species in this community include swamp chestnut oak, laurel oak, loblolly pine, red maple, sweetgum, tulip poplar, American holly, and water oak. The understory is dominated by American holly, high-bush blueberry, red maple, and sweetgum. Vine species observed were limited to greenbriar, poison ivy, and Japanese honeysuckle.

(4) Brownwater Bottomland Hardwood Forest (High Subtype)

The brownwater bottomland hardwood forest is found at the southwestern end of the project study area along the banks of Ahoskie Creek. This area was once the active

floodplain of Ahoskie Creek, but historic channelization and human impacts no longer allow this system to flood, resulting in a drier forest community. Hardwood species such as swamp chestnut oak, sweetgum, musclewood, and green ash dominate the canopy layer. The understory is dominated by American holly and highbush blueberry. Herbaceous and vine species observed were limited to Japanese grass, greenbriar, and Japanese honeysuckle.

(5) Pine Forest

Loblolly pine stands are present in the study area in tracts managed for silvicultural operations. Canopy species observed included loblolly pine and sweetgum. The understory consisted of sweetgum, red maple, and red cedar. Herbaceous and vine species observed were limited to blackberry, greenbriar, and Japanese honeysuckle.

(6) Mesic Mixed Hardwood Forest (Coastal Plan Subtype)

Mesic mixed hardwood forest communities are located on slight topographic terraces throughout the project study area. Dominant species in this community include American beech, water oak, sweetgum, tulip poplar, red oak, white oak, and red maple in the overstory. Species in the understory consist of American holly, red cedar, American beech, red maple, red oak, and Chinese privet. Herbaceous and vine species observed were limited to Christmas fern and greenbriar.

b. Summary of Anticipated Effects

Terrestrial communities in the study area may be impacted by project construction as a result of grading and paving of portions of the study area. Table 10 displays the total coverage of terrestrial communities in the study area, while Table 11 shows impacts to each terrestrial community by alternative.

Table 10: Coverage of Terrestrial Communities in the Study Area

Community	Impacts (acres)
Maintained/Disturbed	832.4
Non-Riverine Wet Hardwood Forest	725.4
Non-Riverine Swamp Forest	364.8
Pine Forest	205.1
Mesic Mixed Hardwood Forest	109.7
Brownwater Bottomland Hardwood Forest	12.0
Total:	**2,249.4**

Table 11: Terrestrial Community Impacts by Alternative

Community	Alt. 1 (acres)	Alt. 3 (acres)	Alt. 5 (acres)	Alt. 6 (acres)
Maintained/Disturbed	154.54	228.86	209.46	130.28
Non-Riverine Wet Hardwood Forest	91.79	74.81	49.50	57.02
Non-Riverine Swamp Forest	40.24	9.17	9.17	40.24
Pine Forest	19.13	22.03	16.71	13.83
Mesic Mixed Hardwood Forest	12.78	24.91	24.20	12.24
Brownwater Bottomland Hardwood Forest	0.22	0.20	0.20	0.22
Total:	**318.70**	**359.98**	**309.24**	**253.83**

c. Terrestrial Wildlife

Terrestrial communities in the study area are comprised of both natural and disturbed habitats that may support a diversity of wildlife species (those species actually observed are indicated with *). Mammal species that commonly exploit forested habitats and stream corridors found within the study area include species such as eastern chipmunk, common mouse, gray squirrel*, eastern cottontail*, raccoon, Virginia opossum, and white-tailed deer*. Birds that commonly use forest and forest edge habitats include the red-shouldered hawk, American crow*, eastern meadowlark, yellow-bellied sapsucker, pileated woodpecker*, Carolina chickadee, and tufted titmouse. Birds that may use the open habitat or water bodies within the study area include American kestrel, belted kingfisher, eastern bluebird, great blue heron, and turkey vulture. Reptile and amphibian species that may use terrestrial communities located in the study area include the water moccasin, eastern ribbon snake, copperhead, green snake*, corn snake, black rat snake, black racer, eastern box turtle*, snapping turtle*, American toad*, spring peeper, eastern fence lizard, and five-lined skink.

d. Aquatic Communities

Aquatic communities in the study area consist of both perennial and intermittent coastal streams. The perennial streams in the study area could support bluegill, bluehead chub, and redbreast sunfish. Intermittent streams in the study area are relatively small in size and would support aquatic communities of spring peeper, crayfish, and various benthic macroinvertebrates such as amphipods and isopods.

e. Invasive Species

Four species from the NCDOT Invasive Exotic Plant List for North Carolina were found to occur in the study area. The species identified were Chinese privet (Threat), Japanese grass (Threat), multiflora rose (Threat), and Japanese honeysuckle (Moderate Threat). NCDOT will manage invasive plant species as appropriate.

2. Waters of the United States

a. Streams, Rivers and Impoundments

Water resources in the study area are part of the Chowan River basin [US Geological Survey Hydrologic Units 03010203 and 03010204]. Nine jurisdictional streams were identified in the study area (Table 12). The locations of these streams are shown on Figures 2A/2B. The physical characteristics and water quality designations of these streams are detailed in Table 13 below. All jurisdictional streams in the study area have been designated as warm water streams for the purposes of stream mitigation.

Table 12: Water Resources in the Study Area

Stream Name	Map ID	Classification	NCDWQ Index #	Best Usage Classification
Flat Swamp	Flat Swamp	Intermittent	25-14-1-8-2	C;NSW
Ahoskie Creek	Ahoskie Creek	Perennial	25-14-1	C;NSW
UT to Mill Branch	SC	Intermittent	25-4-8-11	C;NSW
UT to Flat Swamp	SX	Intermittent	25-14-1-8-2	C;NSW
UT to Horse Swamp	SY	Perennial	25-14-1-8-1	C;NSW
UT to Horse Swamp	SZ	Perennial	25-14-1-8-1	C;NSW
UT to Flat Swamp	SBB	Intermittent	25-14-1-8-2	C;NSW
UT to Flat Swamp	SCC	Intermittent	25-14-1-8-2	C;NSW
Mill Branch	Mill Branch	Perennial	25-4-8-11	C;NSW

NCDWQ Classifications: C – Aquatic Life, Secondary Recreation, Fresh Water; NSW - Nutrient Sensitive Waters

Table 13: Physical Characteristics of Water Resources in the Study Area

Stream/Map ID	Bank Height (ft.)	Bankfull Width (ft.)	Water Depth (in)	Channel Substrate	Velocity	Clarity
Flat Swamp	5	15	6	Silt	Moderate	Slightly Turbid
Ahoskie Creek	10	12	24	Silt, Sand	Fast	Turbid
SC	5	6	6	Silt, Sand	Slow	Clear
SX	3	8	12	Silt	Slow	Clear
SY	6	6	12	Silt, Sand	Moderate	Clear
SZ	1	8	20	Silt	Slow	Slightly Turbid
SBB	4	10	12	Silt	Slow	Clear
SCC	3	6	30	Silt	Slow	Clear
Mill Branch	5	6	8	Silt, Sand	Moderate	Clear

There are no designated anadromous fish waters or Primary Nursery Areas (PNA) present in the study area. There are no designated High Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within one mile downstream of the study area. No streams within the project study area, or within one mile downstream of the study area, are identified on the North Carolina 2012 Final 303(d) list of impaired waters.

No benthic sampling stations or fish monitoring data is available for any streams in the study area or within one mile of the study area.

b. Wetlands

Forty-nine jurisdictional wetlands were identified within the project study area. All wetlands in the study area are within the Chowan River basin (USGS Hydrologic Units 03010203 and 03010204). Wetland classification and quality rating data are presented in Table 14. The locations of these wetlands are shown on Figures 2A/2B.

Table 14: Jurisdictional Characteristics of Wetlands in the Study Area

Map ID	NCWAM Classification	Hydrologic Classification	DWQ Wetland Rating	HUC Code	Area (acres)
WA	Hardwood Flat	Non-Riparian	12	03010203	54.3
WB	Hardwood Flat	Non-Riparian	16	03010203	17.4
WD	Hardwood Flat	Non-Riparian	16	03010203	7.1
WF	Hardwood Flat	Non-Riparian	16	03010203	5.1
WG	Hardwood Flat	Non-Riparian	16	03010203	6.1
WH	Hardwood Flat	Non-Riparian	16	03010204	271.0
WJ	Hardwood Flat	Non-Riparian	16	03010204	32.2
WL	Hardwood Flat	Non-Riparian	12	03010204	12.6
WM	Bottomland Hardwood Forest	Riparian	12	03010203	17.7
WN	Hardwood Flat	Non-Riparian	12	03010203	7.1
WO	Hardwood Flat	Non-Riparian	16	03010203	24.4
WP	Hardwood Flat	Non-Riparian	16	03010203	24.6
WR	Hardwood Flat	Non-Riparian	16	03010203	23.9
WS	Hardwood Flat	Non-Riparian	16	03010203	20.7
WT	Hardwood Flat	Non-Riparian	16	03010203	13.8
WU	Hardwood Flat	Non-Riparian	16	03010203 03010204	46.2
WV	Hardwood Flat	Non-Riparian	16	03010203	7.3
WX	Hardwood Flat	Non-Riparian	16	03010203	94.1
WY	Hardwood Flat	Non-Riparian	16	03010203 03010204	60.2
WZ	Hardwood Flat	Non-Riparian	16	03010203	43.9
WAA	Hardwood Flat	Non-Riparian	16	03010203	4.2
WAB	Hardwood Flat	Non-Riparian	16	03010203	0.8
WAC	Hardwood Flat	Non-Riparian	12	03010203	0.2
WAD	Hardwood Flat	Non-Riparian	16	03010203	2.7
WAE	Hardwood Flat	Non-Riparian	12	03010204	9.0
WAF1	Hardwood Flat	Non-Riparian	16	03010204	2.9
WAF2	Hardwood Flat	Non-Riparian	16	03010204	7.7
WAF3	Hardwood Flat	Non-Riparian	16	03010204	0.02
WAF4	Hardwood Flat	Non-Riparian	16	03010204	0.3
WAF5	Hardwood Flat	Non-Riparian	16	03010204	0.2
WAG	Hardwood Flat	Non-Riparian	16	03010204	1.2
WAH	Hardwood Flat	Non-Riparian	16	03010204	6.4
WAI	Bottomland Hardwood Forest	Riparian	16	03010204	3.3
WBB	Bottomland Hardwood Forest	Riparian	12	03010203	1.0

Map ID	NCWAM Classification	Hydrologic Classification	DWQ Wetland Rating	HUC Code	Area (acres)
WBC	Bottomland Hardwood Forest	Riparian	20	03010203	0.9
WHA	Hardwood Flat	Non-Riparian	16	03010204	97.6
WNA	Hardwood Flat	Non-Riparian	16	03010203	0.3
WRA	Hardwood Flat	Non-Riparian	16	03010203	7.5
WRB	Hardwood Flat	Non-Riparian	16	03010203	4.1
WSA	Hardwood Flat	Non-Riparian	16	03010203	6.2
WSS	Hardwood Flat	Non-Riparian	16	03010204	2.9
WTT	Hardwood Flat	Non-Riparian	16	03010204	9.2
WUU	Hardwood Flat	Non-Riparian	16	03010204	8.0
WVV	Hardwood Flat	Non-Riparian	16	03010203	3.4
WWA	Hardwood Flat	Non-Riparian	16	03010203	10.1
WWW	Hardwood Flat	Non-Riparian	16	03010204	17.6
WXX	Hardwood Flat	Non-Riparian	16	03010204	37.1
WYY	Hardwood Flat	Non-Riparian	16	03010203	31.6
WZZ	Hardwood Flat	Non-Riparian	16	03010203	19.7
				Total:	**1,085.8**

c. Summary of Anticipated Impacts

Construction of the proposed project will likely impact streams by pipe installation and/or the lengthening of existing pipes. Construction activities are likely to alter and/or interrupt stream flows and water levels at each aquatic site.

Project construction may result in the following impacts to surface waters:

- Increased sedimentation and siltation from construction and/or erosion;
- Changes in light incidence and water clarity due to increased sedimentation and vegetation removal;
- Alteration of water levels and flows due to interruptions and/or additions to surface and ground water flow from construction;
- Changes in water temperature due to removal of streamside vegetation;
- Increased nutrient loading during construction via runoff from exposed areas;
- Increased concentration of toxic compounds from highway runoff, construction, toxic spills, and increased vehicular use.

Precautions will be taken to minimize impacts to water resources in the study area. NCDOT's Best Management Practices for the Protection of Surface Waters will be strictly enforced during construction of the project.

Tables 15 and 16 present the estimated impacts to streams and wetlands. Impacts lie within an area delineated 25 feet outside of the slope stakes.

Table 15: Estimated Stream Impacts

Map ID	Class	Alternative 1 (linear feet)	Alternative 3 (linear feet)	Alternative 5 (linear feet)	Alternative 6 (linear feet)
SZ	P	155	165	165	161
SY	P	273	273	273	273
SX	I	135	130	130	151
SC	I	81	79	79	81
Mill Branch	P	254	327	327	254
Flat Swamp	I	252	200	200	252
Total:		**1,150**	**1,174**	**1,174**	**1,172**

Classification: I – Intermittent; P – Perennial

Table 16: Estimated Wetland Impacts

Map ID	NCWAM Classification	Class	DWQ Rating	Alternative 1 (acres)	Alternative 3 (acres)	Alternative 5 (acres)	Alternative 6 (acres)
WA	HWF	NR	12	7.53	0	0	7.61
WAD	HWF	NR	16	4.34	0	0	0
WAE	HWF	NR	12	0	2.72	2.72	0
WAF1	HWF	NR	16	0	0.29	0.29	0
WB	HWF	NR	16	2.79	0.01	0.01	2.59
WD	HWF	NR	16	1.23	0.42	0.42	0
WG	HWF	NR	16	0	0.87	0.87	0
WH	HWF	NR	16	31.91	11.63	11.63	31.95
WHA	HWF	NR	16	13.68	0.15	0.15	13.68
WJ	HWF	NR	16	0	4.70	4.70	0
WL	HWF	NR	12	0	0.16	0.16	0
WN	HWF	NR	12	0.34	0.33	0.33	0.35
WO	HWF	NR	16	2.98	2.99	1.44	1.44
WP	HWF	NR	16	4.96	5.00	0.26	0.25
WR	HWF	NR	16	2.33	2.32	0.53	0.55
WS	HWF	NR	16	0.68	0.67	0.73	0.74
WSA	HWF	NR	16	0.09	0.10	0.09	0.09
WT	HWF	NR	16	1.63	1.64	0.99	0.99
WU	HWF	NR	16	7.11	7.20	1.89	1.91
WV	HWF	NR	16	0.28	0.28	0.28	0.28
WWA	HWF	NR	16	1.79	1.83	1.83	1.84
WWW	HWF	NR	16	0.27	0.23	0.23	0.27
WX	HWF	NR	16	7.12	7.06	1.50	1.68

Map ID	NCWAM Classification	Class	DWQ Rating	Alternative 1 (acres)	Alternative 3 (acres)	Alternative 5 (acres)	Alternative 6 (acres)
WXX	HWF	NR	16	4.35	4.63	4.63	4.54
WY	HWF	NR	16	10.10	10.09	5.71	5.68
WYY	HWF	NR	16	0	0.06	0.06	0
WZ	HWF	NR	16	8.28	8.35	4.01	4.07
WZZ	HWF	NR	16	4.94	2.93	2.84	2.99
NC 461 Wetland	HWF	NR	16	0	0.35	0.35	0
		TOTAL:		**118.73**	**77.02**	**48.66**	**83.50**

NCWAM Classifications: HWF – Hardwood Flat
Classification: NR – Non-Riparian

d. Anticipated Permit Requirements

For this project, a United States Army Corps of Engineers (USACE) Individual Permit in accordance with Section 404 of the Clean Water Act will be required; however, the USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification from the NCDWQ will also be needed.

e. Avoidance, Minimization and Mitigation

The proposed project primarily involves improving an existing road, which crosses streams. Wetlands are adjacent to the existing road, as well. Total avoidance of streams and wetlands by the project is not feasible.

NCDOT will attempt to avoid and minimize impacts to streams and wetlands to the greatest extent practicable when choosing a preferred alternative and during project design. At this time, no final decisions have been made with regard to the location or design of the preferred alternative. Once a final decision has been rendered on the location of the preferred alternative, NCDOT will investigate potential on-site stream and wetland mitigation opportunities. If on-site mitigation is not feasible, mitigation will be provided by the North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP).

3. Rare and Protected Species

a. Federally Protected Species

As of September 22, 2010, the United States Fish and Wildlife (USFWS) lists three federally protected species for Hertford County (Table 17).

Table 17: Federally Protected Species for Hertford County

Scientific Name	Common Name	Habitat Present	Federal Status	Biological Conclusion
Acipenser oxyrinchus oxyrinchus	Atlantic sturgeon	No	E	No Effect
Picoides borealis	Red-cockaded woodpecker	No	E	No Effect
Trichechus manatus	West Indian manatee	No	E	No Effect

E = Endangered; a taxon "in danger of extinction throughout all or a significant portion of its range"

Suitable habitat for the Atlantic sturgeon does not exist in the study area (confirmed via telephone correspondence with Fritz Rohde, NMFS, May 31, 2013). No estuarine or large river systems are present within the project study area.

Surveys for red-cockaded woodpecker were conducted by biologists throughout the project study area in October and November 2012. Pedestrian surveys of forested areas were also completed within the project study area. No suitable foraging or nesting habitat was observed. Forested stands within the study area that have greater than 50% composition of pines are less than 30 years old due to active timber management practices, and are not of sufficient age to provide suitable nesting or foraging habitat for red-cockaded woodpeckers. No cavity trees or individuals were observed.

Suitable habitat for the West Indian manatee does not exist within the study area. Streams within the study area are characterized as headwater systems and would not meet the size, depth, or flow requirements for this species.

A review of North Carolina Natural Heritage Program (NCNHP) records, updated April 2013, indicates no known occurrence of any of these species within one mile of the study area. Due to the lack of habitat and known occurrences it has been determined this project will not affect any federally protected species.

b. Bald Eagle and Golden Eagle Protection Act

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within one mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1.13-mile radius (1.0 mile plus 660 feet) of the project limits, was performed on April 24, 2013 using 2010 color aerials. The Chowan River is located approximately 0.7 mile northeast of the project study area. Surveys were conducted throughout areas of suitable habitat in October and November 2012. No bald eagles or suitable nesting sites were observed. Suitable nesting trees were observed to be sparse within the study area and within 660 feet of the study area. A review of the NCNHP database, updated April 2013, revealed no known occurrences of this species within one mile of the project study area. Due to the results of the survey and lack of known occurrences, it has been determined that this project will not affect this species.

4. Coastal Zone Issues

a. Coastal Area Management Act Areas of Environmental Concern

One Area of Environmental Concern (AEC), Ahoskie Creek, was identified in the study area. Although Ahoskie Creek is a designated Public Trust Water, the project as currently proposed does not impact or cross this water body; therefore, a CAMA permit will not be required.

b. Essential Fish Habitat

No designated Essential Fish Habitat occurs in the study area.

5. Soils

The Hertford County Soil Survey identifies 11 soil series within the project study area (Table 18). This information is based on soil mapping for Hertford County.

Table 18: Soils in the Study Area

Soil Series	Map Unit	Drainage Class	Hydric
Bibb soils	BB	Poorly Drained	Hydric
Caroline fine sandy loam (0-2% slopes)	CaA	Well Drained	Nonhydric
Caroline fine sandy loam (2-6% slopes)	CaB	Well Drained	Nonhydric
Craven fine sandy loam (0-1% slopes)	CrA	Moderately Well Drained	Nonhydric
Goldsboro fine sandy loam (0-2% slopes)	GoA	Moderately Well Drained	Hydric*
Leaf loam	LF	Poorly Drained	Hydric
Lenoir loam	Ln	Somewhat Poorly Drained	Hydric*
Norfolk loamy fine sand (0-2% slopes)	NoA	Well Drained	Nonhydric
Norfolk loamy fine sand (2-6% slopes)	NoB	Well Drained	Hydric*
Roanoke loam	Ro	Poorly Drained	Hydric*
Udorthents, sandy	Ud	Variable	Nonhydric

* - Soils which are primarily nonhydric, but which may contain hydric inclusions

B. Cultural Resources

The proposed project is subject to North Carolina General Statute 121-12(a) and Section 106 of the National Historic Preservation Act of 1966. Section 106 requires federal agencies to take into account the effect of their undertakings (federally-funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and to afford the Advisory Council a reasonable opportunity to comment on such undertakings.

1. Historic Architectural Resources

As noted in the July 1, 2011 letter from the State Historic Preservation Office (SHPO), three structures of historic or architectural importance have been identified within the project study area. These include the Pleasant Plains Rosenwald School, the Newsome-Hall House, and the Pleasant Plains Baptist Church, all of which have been determined eligible for inclusion on the National Register of Historic Places. Given the function and proximity of the Pleasant Plains Baptist Church and Rosenwald School, they have been considered as one joint historic resource. A description of each resource is provided below.

The Pleasant Plains Rosenwald School, located on the west side of US 13, just south of the intersection with SR 1132 (Pleasant Plain Road), was built in the 1920s and is a well-preserved, one story, symmetrical frame building that was originally constructed as a school for African-American children. The school was built with assistance from the Rosenwald Fund, which was named for Chicago philanthropist Julius Rosenwald, president of Sears, Roebuck, and Company. The Rosenwald Fund offered matching grants to rural communities interested in building black schools, which often became the centers of small, rural, black settlements in early 20th century North Carolina. Pleasant Plains School, a three-teacher facility, was one of the first of ten Rosenwald schools built in Hertford County, and is a well-preserved example. Since the 1960s, after it ceased functioning as a school, the building has been used by its owner, Pleasant Plains Baptist Church, as a recreation building and community center.

Pleasant Plains Baptist Church, organized in 1851 and located across US 13 from the Pleasant Plains Rosenwald School, is a 1949 Gothic Revival, 2-story brick church.

The Newsome-Hall House is a two-story farmhouse with Queen Anne style-influence located at the northwest corner of the intersection of US 13 and SR 1131 (Saluda Hall Road). It was originally the home of W.D. Newsome, a free black man that lived from 1822-1916, and served Hertford County as both a county commissioner (1868-1870) and a state legislator in the House of Representatives (1870-1872).

On June 11, 2013, a meeting was held with the State Historic Preservation Office to seek concurrence on the effects that the various alternatives would have on these resources. Table 19 presents the effects of each alternative on these resources.

Table 19: Historic Resource Effects

Alternative	Historic Resource	Project Effect
1	Newsome-Hall House	No effect
1	Pleasant Plains Baptist Church & Rosenwald School	No effect
3	Newsome-Hall House	No adverse effect
3	Pleasant Plains Baptist Church & Rosenwald School	Adverse effect
5	Newsome-Hall House	No adverse effect
5	Pleasant Plains Baptist Church & Rosenwald School	Adverse effect
6	Newsome-Hall House	No adverse effect
6	Pleasant Plains Baptist Church & Rosenwald School	No effect

Under Alternative 1, there will not be any impacts to either of the historic resources, and under Alternatives 3, 5, and 6, there will be no adverse effect to the Newsome-Hall House since the access may be affected, but the character of the property will not suffer. However, under Alternatives 3 and 5, the Pleasant Plains Baptist Church and Rosenwald School will both have adverse impacts due to a loss of property and a change in access. The church will lose nearly 40 feet off the front of their lot, which will reduce the available parking and impact the adjacent cemetery, which could necessitate the relocation of graves. The church building itself will not be directly affected. The Rosenwald School will also lose approximately 100 feet of property as a result of the additional right of way that will be acquired, although the structure itself will not be affected.

2. Archaeological Resources

In 1977, during the initial planning phases for the NC 11 Ahoskie Bypass project, known archaeological sites were surveyed and recorded within the project study area. None of these identified sites were found to be eligible for inclusion in the National Register of Historic Places; regardless, as a result of the construction of that project, these sites have since been destroyed.

There may be areas within the current study area that have a high potential for the presence of eligible archaeological resources, particularly those dating to the historic period. As the designs are refined and a preferred alternative chosen, NCDOT will coordinate with the SHPO so they may assess the potential effects of the project and the need for an archaeological investigation.

C. Section 4(f)/6(f) Resources

Section 4(f) of the US Department of Transportation Act of 1966 specifies that publicly owned land from a public park, recreation area, wildlife and waterfowl refuge, and all historic sites of national, state, and local significance may be used for federal projects only if: a) there is no feasible and prudent alternative to the use of the land; and b) the project includes all possible planning to minimize harm to 4(f) lands resulting from such use.

Three resources protected by Section 4(f) exist within the project study area: the Newsome-Hall House, the Pleasant Plains Baptist Church, and the Pleasant Plains Rosenwald School. All of these are historic sites that are either listed on or eligible to be listed on the National Register of Historic Places. Alternatives 1 and 6 will not impact any of these resources. Alternatives 3 and 5 would have an adverse effect on the Pleasant Plains church and school, with an impact of 0.3 acre on this property, which is considered a Section 4(f) resource. The Newsome-Hall House is not expected to be adversely affected by any alternative. If Alternatives 3 and 5 are not dropped from consideration after the USACE's Public Notice period and the subsequent public hearing, a Section 4(f) evaluation will be prepared.

Section 6(f) of the Land and Water Conservation Fund Act of 1965 stipulates that property acquired or developed with the assistance of the Fund may not be converted to a use other than public recreation unless suitable replacement property is provided. No properties purchased or improved with funds from the Land and Water Conservation Fund are located along the project.

D. Prime and Important Farmland

The Farmland Protection Policy Act of 1981 requires all federal agencies, their representatives, or those agencies that receive federal funding to consider the impact of land acquisition and construction projects on prime and important farmland soils. Land which has been previously developed or planned for development by the local governing body or land within a defined urban area based on US Census mapping is exempt from the requirements of the Act.

North Carolina Executive Order Number 96 requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the US Natural Resources Conservation Service (NRCS). Land which is planned or zoned for urban development is not subject to the same level of preservation afforded other rural, agricultural areas. This policy does not apply to lands which are already in or committed to development projects such as water impoundment, transportation, and urban development.

There are several active farm operations in the study area (see Table 20 for the prime farmland impacts for each alternative). A Farmland Conversion Impact Rating (NRCS

CPA-106) has been completed for this project, and since all alternatives surpassed the 60 point threshold for Part VI, the Farmland Impact Conversion Rating Form was submitted to NRCS for review. Upon completion of their review (Parts IV and V of the NRCS CPA-106 form), it was determined all alternatives received final point totals of less than 160 points. Therefore, all alternatives fall below the NRCS minimum criteria rating and will not be evaluated further for farmland impacts. These alternatives will not have a significant impact to farmland.

Table 20: Prime Farmland Impacts

Alternative	Prime Farmland Impacts (acres)
1	58.7
3	68.9
5	62.2
6	51.5

E. Social Effects

1. Neighborhoods/Communities

Much of the land immediately adjacent to NC 11 and US 13 is undeveloped, although there are two small residential communities within the project study area: the California community, located near the intersection of NC 461 and US 13, and the Pleasant Plains community, which is generally located along existing US 13 in the vicinity of Pleasant Plains Baptist Church. Both of these communities have been established for several decades, and are mostly comprised of African-American, Native American, and multi-racial residents that are typically middle aged or senior citizens, many of whom are related.

2. Relocation of Homes and Businesses

Each of the four alternatives under consideration will impact homes and businesses. Table 21 below presents the anticipated effects of the project on homes and businesses.

Table 21: Anticipated Relocations

	Alternative 1	Alternative 3	Alternative 5	Alternative 6
Residential Relocatees	1 (1)	54 (54)	54 (54)	1 (1)
Business Relocatees	0 (0)	0 (0)	0 (0)	0 (1)
Total Relocations	**1 (1)**	**54 (54)**	**54 (54)**	**1 (1)**

Parentheses () indicates minority owned or occupied homes or businesses.

3. Minority/Low-Income Populations

Title VI of the Civil Rights Act of 1964, protects individuals from discrimination on the grounds of race, age, color, religion, disability, sex, and national origin. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" provides that each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations.

The racial character of the project study area in the 2010 census was very similar to that of Hertford County. African-Americans were the majority of residents in the demographic study area (DSA), making up 62 percent of the population, slightly higher than the county's total of 60.5 percent. Whites were the second largest population group, making up 33.8 percent in the DSA and 35.6 percent in the county. People who identified themselves as Hispanic in ethnicity represent 3.5 percent of the demographic study area population and 2.6 percent of the county population, as reflected by the 2010 census.

In addition to the potential presence of minority communities, there is also a high likelihood that low-income communities may be impacted as part of this project. According to the American Community Survey, over 20% of the population of the census block group encompassing both the California and Pleasant Plains communities, which constitute the vast majority of residential development in the project study area, is considered "very poor", while the average for Hertford County is only 9.4%. Communities are generally considered as qualifying for Environmental Justice consideration when the population of the area in question qualifying as "below the poverty level" is over 5 percentage points higher than the county average. Given that "very poor" is a more extreme level of poverty than simply being considered "below the poverty level", it is likely that consideration will need to be accorded for low-income Environmental Justice populations as well.

While minority and low income populations are present in the study area, no notably adverse community impacts are anticipated with Alternatives 1 and 6; thus, impacts to minority and low income populations do not appear to be disproportionately high and adverse for these alternatives. Benefits and burdens resulting from the construction of either of these alternatives are anticipated to be equitably distributed throughout the community.

Notably adverse community impacts to low income and minority populations are anticipated with Alternatives 3 and 5 due to the high number of relocations and the subsequent loss of community cohesion. Ultimately, benefits and burdens resulting from the project are not anticipated to be equitably distributed throughout the community. Despite the fact the project's proposed safety improvements will benefit all users of the facility, the impacts to the affected communities are considered to be disproportionately

high and adverse since there is not enough available housing in this area to easily absorb the proposed relocatees, given the low housing vacancy rate within the area.

Public involvement and outreach activities must ensure full and fair participation of all potentially affected communities in the transportation decision-making process. A Citizens Informational Workshop was held for the project on March 27, 2012. This workshop was advertised in local media outlets, and newsletters announcing the workshop were mailed to area property owners.

Through the public involvement efforts, citizens have been kept informed of the proposed project. Alternatives have been developed and measures implemented to minimize impacts to the low-income and minority populations identified. This project is being implemented in accordance with Executive Order 12898.

F. Land Use

1. Existing Land Use and Zoning

Land along NC 11, SR 1212 (Shortcut Road), and US 13 in the study area is located within Hertford County's planning jurisdiction. Land use along the corridor is primarily farmland and forests; however, there is a more heavily concentrated residential area near the southern NC 461 and US 13 intersection. Pleasant Plains Church and cemetery is also located within this residential area.

Zoning along NC 11, SR 1212 (Shortcut Road), and US 13 within the study area consists primarily of residential agriculture district (RA-20) zoning. Several light industrial (IL) and commercial highway district (CH) zoned land uses are scattered along the corridor.

2. Future Land Use

According to the Hertford County CAMA Land Use Plan Update (January 2011), a majority of Hertford County's land use is agriculture and forestry operations. The county intends for development to occur in areas that can access current and planned infrastructure. The Future Land Use Map shows a majority of the NC 11/US 13 corridor in the study area slated for rural development; the area of the corridor just north of the northern NC 461 intersection with US 13 and southeast of the Town of Winton is marked as developed.

Properties within the rural development area generally have access to limited services such as county water, police, and fire protection. As such, land uses cannot support a high density of uses without extension of full municipal services. Rural development areas are allowed a residential density of 2 units per acre, with an average of 30% lot coverage.

Development in the county is primarily restricted by the inability of county soils to support small lot septic tank placement. The county handles each septic tank permit on a case-by-case basis to ensure that new development does not overwhelm the soils' ability to process wastewater.

3. Project Compatibility with Local Plans

This project is consistent with local land use plans.

G. Economic Effects

No direct economic impacts are expected to result from this project.

H. Indirect and Cumulative Effects

As discussed in Section II.B.1.g, two funded highway projects are either planned or currently under construction for the study area. The expected environmental effects of these other projects are presented in Table 22.

Table 22: Environmental Effects of Adjacent Projects

	TIP # R-2507A	TIP # R-2583
Detailed Environmental Surveys?	Yes	Yes
Homes Relocated	7	19
Businesses Relocated	5	2
Wetlands Affected (Acres)	30.6	4
Streams Affected (Linear Feet)	598	1,890
Historic Properties Affected	2*	3**
Forested Land Affected (Acres)	170.2	26
Project Length (Miles)	7.1	8.1

* Two properties eligible for the National Register will be adversely affected

** There are three properties in the project study area, but all three have "no effect" calls

I. Flood Hazard Evaluation

Hertford County is a participant in the National Flood Insurance Program (NFIP). However, there are no flood zones in the study area**.**

J. Traffic Noise Analysis

1. Traffic Noise Impacts and Noise Contours

Table 23 summarizes the predicted number of receptors impacted by future traffic noise for each project alternative. The table includes those receptors expected to experience

traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria or by a substantial increase in exterior noise levels.

Table 23: Existing & Predicted Noise Impacts

	Existing Conditions (2008)	Alternative 1 (2035)	Alternative 3 (2035)	Alternative 5 (2035)	Alternative 6 (2035)
Homes	53	2	26	26	1
Businesses	0	0	0	0	0
Churches/Schools	1	0	2	2	0
Total Impacts	54	2	28	28	1

*Per TNM® 2.5 and in accordance with 23 CFR Part 772

2. Noise Abatement Alternatives

The feasibility and reasonableness of noise abatement measures were considered and evaluated for all receptors which would be impacted by any of the four detailed study alternatives. Feasibility and reasonableness are distinct and separate considerations. Feasibility is the consideration as to whether noise abatement measures *can* be implemented. Reasonableness is the consideration as to whether noise abatement measures *should* be implemented. Per NCDOT Policy, the following traffic noise abatement measures may be considered: highway alignment selection, traffic systems management, buffer zones, noise barriers (earth berms and noise walls), and noise insulation of Activity Category D land use facilities.

a. Traffic System Management Measures

Traffic management measures such as prohibition of truck traffic, lowering speed limits, limiting of traffic volumes, and/or limiting time of operation were considered as possible traffic noise impact abatement measures. The NC 11/US 13 corridor is classified as a minor arterial, meaning the facility should provide relatively high overall travel speeds and minimum interference for through movements. Therefore, prohibition of truck traffic, speed limit reduction, or screening total traffic volumes would diminish the functional capacity of the highway facility and are not considered practicable.

b. Highway Alignment Changes

Highway alignment selection for traffic noise abatement measures involves modifying the horizontal and vertical geometry of the proposed facility to minimize traffic noise to noise-sensitive receptors. The selection of alternative alignments for noise abatement

purposes must consider the balance between noise impacts and other engineering and environmental parameters. For noise abatement, horizontal alignment selection is primarily a matter of locating the roadway at a sufficient distance from noise sensitive receptors. Appreciable reductions in traffic noise transmissions to sensitive receptors can be made by adjusting the vertical highway alignment and/or section geometry. For example, lowering a roadway below existing grade creates a cut section which could act similarly as an earth berm, depending upon the relative location(s) of noise-sensitive receptor(s).

For Alternatives 1 and 6, the proposed alignments reroute the traffic east of the majority of noise sensitive receptors within the study area and notably reduce the amount of impacted receptors in comparison to existing conditions. For both Alternatives 3 and 5, noise impacts are notably higher when compared to alternatives on new location. However, when compared to existing conditions, Alternatives 3 and 5 show a reduced number of impacted noise receptors because of potential relocations. It should be noted while construction impacts associated with Alternatives 3 and 5 are anticipated to relocate a substantial number of noise sensitive receptors, the numerous remaining noise sensitive receptors may be located closer to the improved roadway due to its expanded footprint.

c. Noise Barriers

Highway sound barriers are primarily constructed as earth berms or solid-mass walls that are in close proximity to noise-sensitive land use(s). To be effective, a sound barrier must be long enough and tall enough to shield the impacted receptor(s). Generally, the noise wall length must be eight times the distance from the barrier to the receptor. For example, if a receptor is 200 feet from the roadway, an effective barrier would be approximately 1,600 feet long – with the receptor in the horizontal center. On roadway facilities with direct access for driveways, sound barriers are typically not feasible because the openings render the barrier ineffective in impeding the transmission of traffic noise. Due to the requisite lengths for effectiveness, sound barriers are typically not economical for isolated or most low-density areas. However, sound barriers may be economical for the benefit of as few as one predicted traffic noise impact if the barrier can benefit enough total receptors – impacted and non-impacted combined – to meet applicable reasonableness criteria.

For Alternative 1, both impacted receptors were considered for noise barriers, although no barriers were ultimately recommended. One impact was unfeasible because access to the residence would be eliminated, and the other impact was not considered reasonable due to the high cost. For Alternatives 3 and 5, noise barriers were not considered feasible for any of the identified impacted receptors since access to residences and businesses would be eliminated, therefore no barriers were recommended for either of these alternatives. Finally, for Alternative 6, although a noise barrier would be feasible for the impacted receptor, it was not considered reasonable due to the high cost. Overall, no noise barriers are recommended on this project.

d. Buffer Zones

Buffer zones are undeveloped, open spaces which border a highway. Buffer zones are typically not practical and/or cost effective for noise mitigation due to the substantial amount of right-of-way required, and would not be a feasible noise mitigation measure for this alternative. Creating buffer zones may prevent development vacant properties in the future; however, it would not prove effective in mitigating traffic noise impacts associated with any of the proposed alternatives, due to their proximity to the existing and/or proposed roadways. Further, the associated costs would exceed the NCDOT Policy reasonable abatement cost threshold per benefited receptor.

3. Construction Noise

The predominant construction activities associated with this project are expected to be earth removal, hauling, grading, and paving. Temporary and localized construction noise impacts are likely to occur as a result of these activities. Predicted daytime impacts will be temporary speech interference for passers-by and those individuals living, working, or attending school near the project. During evening and nighttime hours, steady-state construction noise emissions such as those from paving operations will be audible, and may cause impacts to activities such as sleep. Sporadic evening and nighttime construction equipment noise emissions (i.e., backup alarms, lift gate closures, etc.) are possible and will be perceived as distinctly louder than the surrounding steady-state acoustic environment, and will likely cause severe impacts to general peace and usage of noise-sensitive areas – particularly residences, hospitals, and hotels.

Extremely loud construction noise activities such as the use of pile-drivers and impact hammers (jack hammer, hoe ram) will provide sporadic, temporary, and significant construction noise impacts in the vicinity of such activities. It is recommended that construction activities that will produce extremely loud noises be scheduled during times of the day when such noises will create as minimal disturbance as possible.

Generally, low-cost and easily implemented construction noise control measures should be incorporated into the project plans and specifications. These measures include, but are not limited to, work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of “tail gate banging”, ambient-sensitive backup alarms, construction noise compliant mechanisms, and consistent and transparent community communication.

While discrete construction noise level prediction is difficult for a particular receptor or group of receptors, it can be assessed in a general capacity with respect to distance from known or likely project activities. For this project, earth removal, grading, hauling and paving is anticipated to occur along the entire proposed facility and may expose adjacent noise sensitive receptors to construction related noise. Pile driving is anticipated to occur at the proposed interchanges. In order to reduce the impacts of construction noise, it is recommended that:

- Earth removal, grading, hauling, and paving activities in the vicinity of residences should be limited to weekday daytime hours.

- If meeting the project schedule requires that earth removal, grading, hauling and/or paving must occur during evening, nighttime and/or weekend hours in the vicinity of residences, the contractor shall notify NCDOT as soon as possible. In such instance(s), all reasonable attempts shall be made to notify and to make appropriate arrangements for the mitigation of the predicted construction noise impacts upon the affected property owners and/or residents.

4. Summary

Based on the results of the Traffic Noise Analysis, no noise barriers meet both feasibility and reasonableness requirements outlined in the 2011 NCDOT Traffic Noise Abatement Policy for any of the four proposed design alternatives. Therefore, no traffic noise abatement measures are recommended. This evaluation completes the highway traffic noise requirements of Title 23 CFR Part 772. No additional noise analysis will be performed for this project unless warranted by a significant change in the project scope, vehicle capacity, or alignment.

K. Air Quality Analysis

Air pollution originates from various sources. Emissions from industry and internal combustion engines are the most prevalent sources. The impact resulting from highway construction ranges from intensifying existing air pollution problems to improving the ambient air quality.

1. Project Air Quality Effects

Since this project is located in Hertford County, which does not have transportation control measures outlined in the current state air quality implementation plan, a general project-level air quality analysis was performed. It was determined that the project will not cause or contribute to a new violation of the NAAQS, or increase the frequency or severity of a violation.

2. Mobile Source Air Toxics (MSATs)

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the US Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

The FHWA developed a tiered approach with three categories for analyzing MSAT in NEPA documents, depending on specific project circumstances:

1. No analysis for projects with no potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

Since this project is anticipated to have low potential MSAT effects, a qualitative analysis was performed.

The additional travel lanes contemplated as part of the proposed improvements to NC 11 and US 13 will have the effect of moving some traffic closer to nearby homes; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT could be higher under certain Build Alternatives than the No-Build Alternative. However, the magnitude and the duration of these potential increases compared to the No-Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.

Generally, when a highway is widened, 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). Also, MSAT 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 substantially lower than today.

For all Build Alternatives in the design year it is expected there would be reduced MSAT emissions in the immediate area of the project, relative to the No-Build Alternative, due to the reduced VMT associated with more direct routing, and due to EPA's MSAT reduction programs.

A copy of the unabridged version of the full air quality technical report entitled Air Quality Analysis can be viewed at the NCDOT Century Center, 1000 Birch Ridge Drive, Raleigh.

3. Construction Air Quality Effects

Construction activities will cause minor short-term air quality impacts in the form of dust from earthwork and unpaved roads and smoke from open burning. These impacts will be minimized by adherence to all state and local regulations. Construction equipment and associated work practices and procedures will have to meet the NCDOT Standard

Specifications and NC Division of Air Quality emission standards that govern activities such as open burning.

L. Hazardous Materials

Four sites presently or formerly containing petroleum underground storage tanks (USTs) were identified within the project limits:

- The former Winton Dollar Bill previously operated as a gas station. The facility is located at the intersection of US 13 and NC 45 in Winton. The UST Section Registry shows four USTs at this facility that were closed in 1992. This site is anticipated to present low geoenvironmental impacts to the project.

- The Keene property is a former UST facility. The facility is located at 614 US Highway 13 in Winton. The UST Section Registry notes that this site formerly contained USTs, but it is anticipated to present low geoenvironmental impacts to the project.

- The A.B. Jones property is a former UST facility. The facility is located at 634 US Highway 13 in Winton. The UST Section Registry notes that this site formerly contained USTs, but is anticipated to present low geoenvironmental impacts to the project.

- The Deborah Simmons property previously operated as the Al Simmons store. The facility is located at 830 US Highway 13 in Ahoskie. The UST Section Registry shows three USTs at this facility that were closed in 1993. This site is anticipated to present low geoenvironmental impacts to the project.

No hazardous waste sites or landfills were identified within the project limits. If right of way is required from any of these properties, soil and groundwater assessments will be performed before right of way acquisition. Discovery of additional sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur.

VI. COMMENTS AND COORDINATION

A. Citizens Informational Workshop

A Citizens Informational Workshop was held on March 27, 2012 at the Bearfield Primary School in Ahoskie. The meeting was advertised through a newsletter mailed to property owners in the project area and local media announcements. There were approximately 47 attendees; eight comment sheets were received at the conclusion of the workshop. Citizens who attended this workshop generally felt that improvements needed to be made to several of the existing intersections to make them safer, but they were also concerned about impacts to their homes, access, and overall quality of life. Several people stated that NCDOT should use right of way that they already own rather than purchasing new right of way.

B. Public Hearing

A public hearing will be held following approval of this document. The public hearing will allow citizens to view more detailed information than was previously available at the informational workshop, and will also provide a forum for public comments. Comments received at the hearing will be reviewed and may be incorporated into the project, if feasible and practicable.

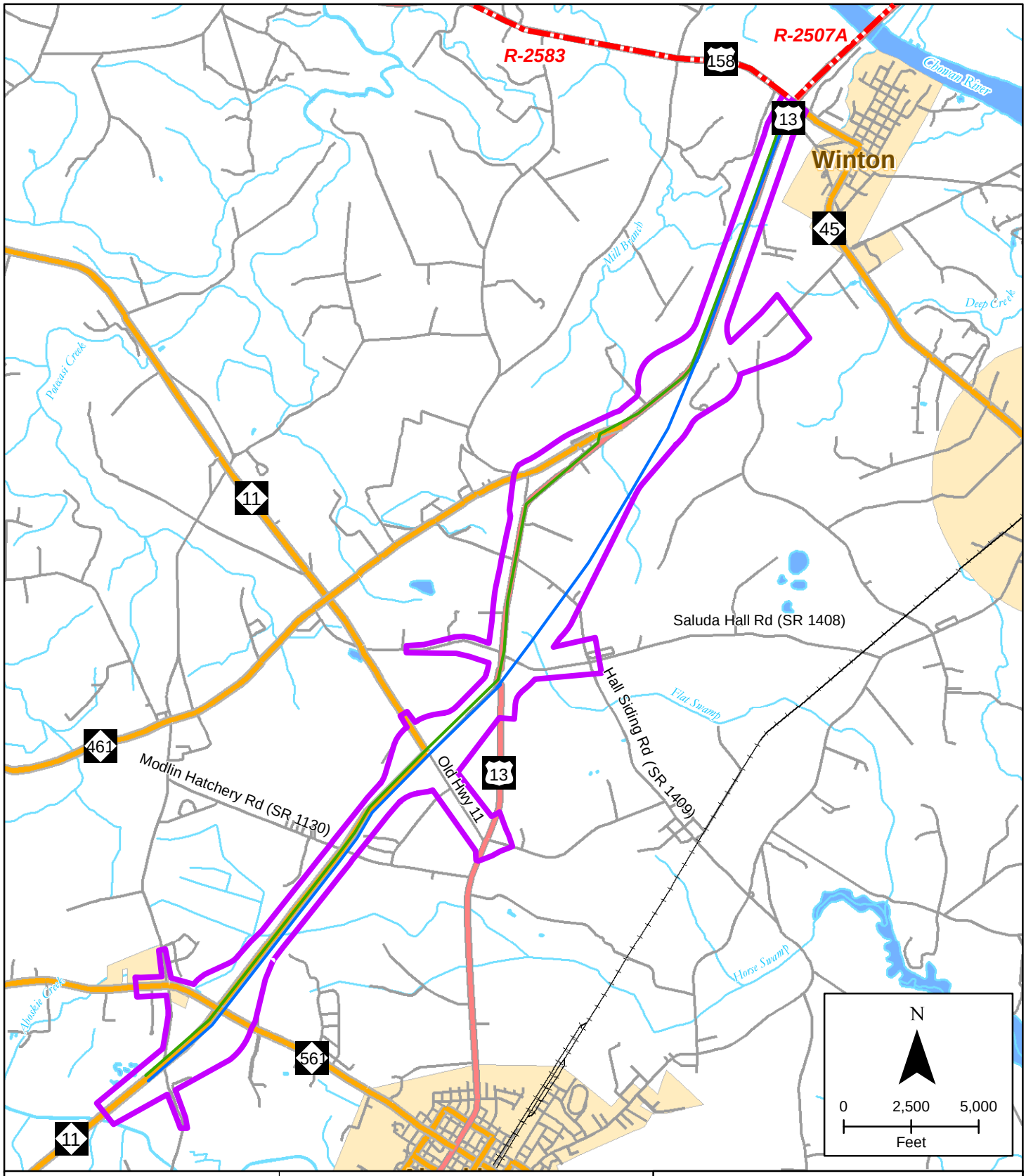
C. NEPA/404 Merger Process

This project has followed the NEPA/404 Merger process. The Merger process is an interagency procedure integrating the regulatory requirements of Section 404 of the Clean Water Act into the National Environmental Policy Act decision making process.

The following agencies participated on the NEPA/404 merger team for this project:

US Army Corps of Engineers
US Environmental Protection Agency
US Fish and Wildlife Service
Federal Highway Administration
National Marine Fisheries Service
NC Wildlife Resources Commission
NC Department of Cultural Resources
NC Department of Transportation
NC Division of Coastal Management
NC Division of Water Quality
Peanut Belt Rural Planning Organization (RPO)

On September 14, 2011, the merger team concurred on the purpose and need (Concurrence Point 1) for this project. At the Concurrence Point 2 meeting, which was held on September 19, 2012, the merger team concurred on alternatives for detailed



INSET MAP

LEGEND

- Study Area
- Municipal Limits
- Alternatives 1 and 6
- Alternatives 3 and 5
- US Route
- NC Route
- Secondary Roads
- TIP Projects

Vicinity Map

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Branch

Figure **1**

SR 1108 (Union Rd)
SR 1108 (Boone Farm Rd)
SR 1130 (Modlin Hatchery Rd)
SR 1131 (Saluda Hall Rd)
SR 1108 (Fire Tower Rd)
SR 1212 (Shortcut Rd)
SR 1408 (Saluda Hall Rd)
SR 1215 (Deerwood Rd)
SR 1213 (Old NC 11 Rd)
SR 1108 (Bonner Bridge Rd)
Saint Johns Highway
SR 1411 (Brinkleyville Rd)
MATCHLINE SHEET 2B
Newsome-Hall House (NRE)
WN
WNA
WM
WRA
WR
WRB
WT
WY
WZ
WAB
WAC
WAA
WAD
WD
WP
WSA
WS
WU
WO
WBC
WBB
WB
WA
WZZ
WX
WV
SY
WWA
SX

SHEET KEY

2A
2B
Winton
Ahoskie
Cofield

LEGEND

- Study Area
- Municipal Boundary
- Cemetery
- Delineated Stream
- Delineated Wetland
- Historic Property - National Register Listed or Eligible
- Historic Structure - National Register Listed or Eligible

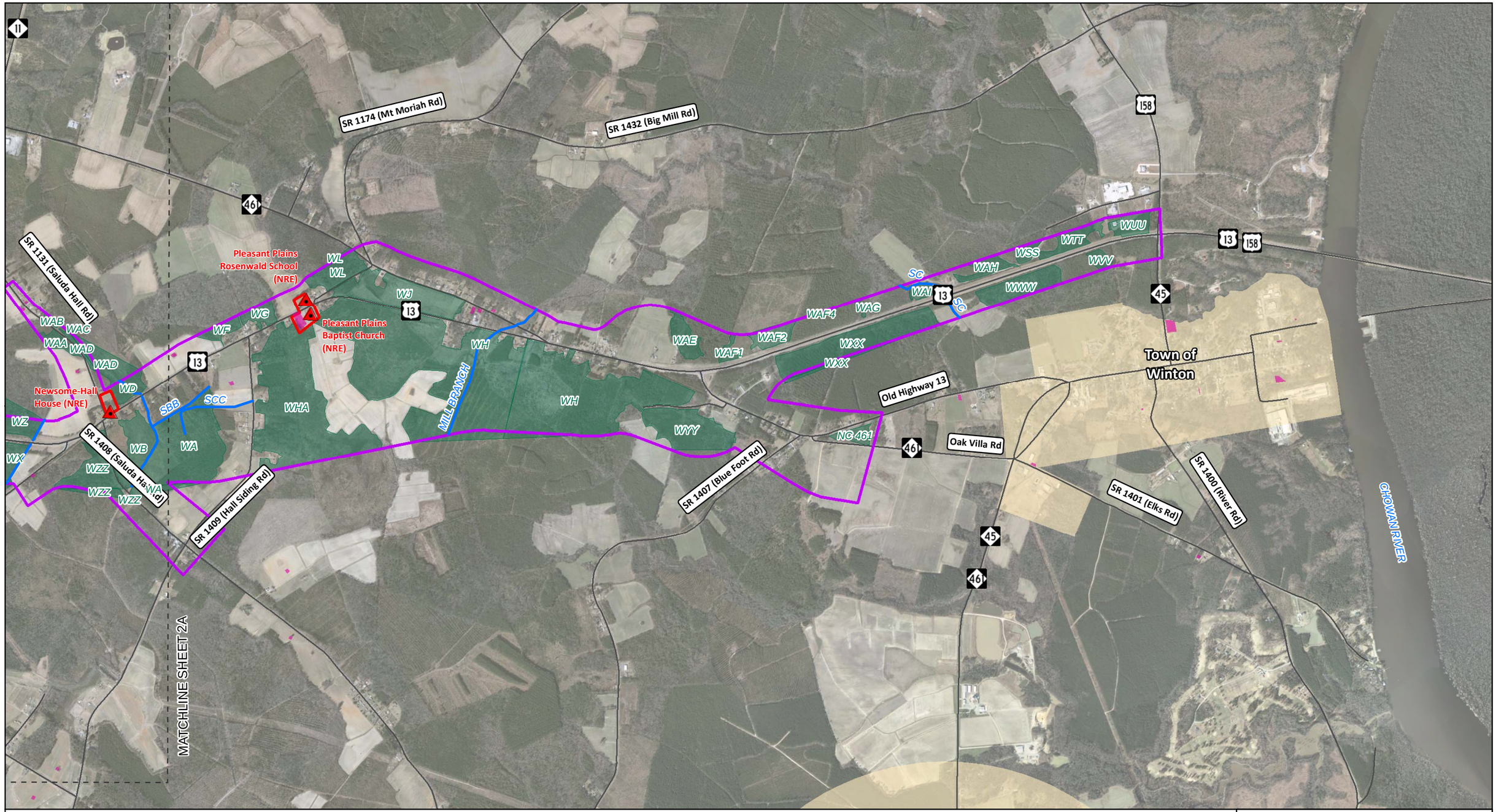
0 1,000 2,000 4,000
Feet

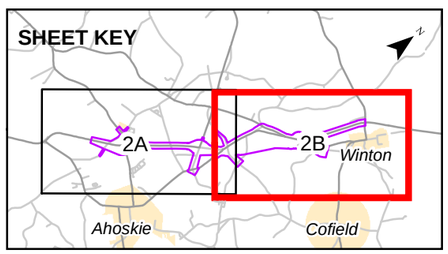
Environmental Features

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure 2A





LEGEND

- Study Area
- Municipal Boundary
- Cemetery
- Delineated Stream
- Delineated Wetland
- Historic Property - National Register Listed or Eligible
- Historic Structure - National Register Listed or Eligible

N

0 1,000 2,000 4,000

Feet

Environmental Features

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **2B**

BEGIN PROJECT

Intersection to be removed

11

561

SR 1108
(Fire Tower Rd)

SR 1108
(Bonner Bridge Rd)

Saint Johns Highway

MATCHLINE SHEET 3B

AHOSKIE CREEK

WN

WNA

WM

WRA

WR

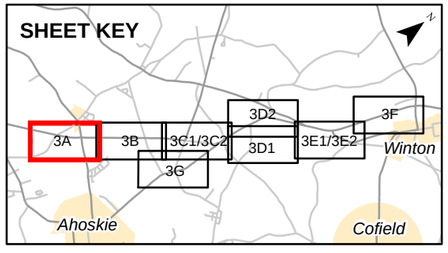
WP

WO

WBC

WBB

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternatives 1 and 3

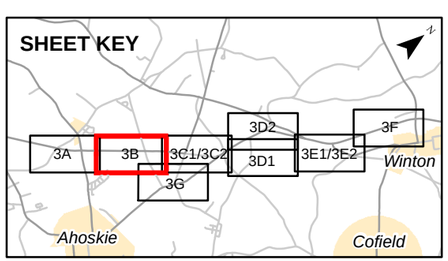
TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3A**

WRA
WR
WRB
SZ
WT
WT
WY
WY
11
WSA
SZ
WS
WU
SR 1130
(Modlin Hatchery Rd)
MATCHLINE SHEET 3A
MATCHLINE SHEET 3C1/3C2
MATCHLINE SHEET 3G
SR 1215
(Deerwood Rd)
SR 1130
(Modlin Hatchery Rd)

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

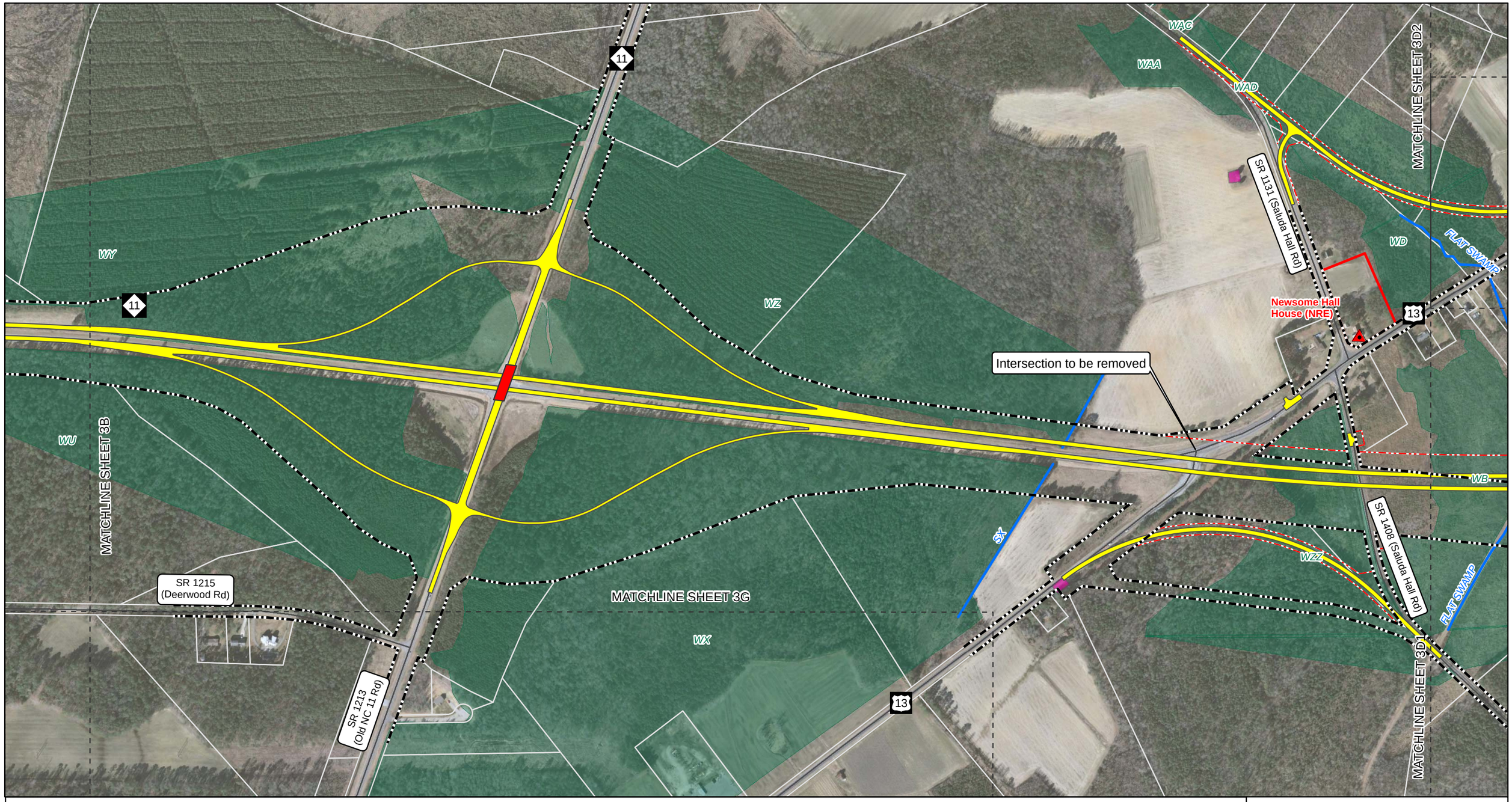
0 250 500 1,000
Feet

Alternatives 1 and 3

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3B**



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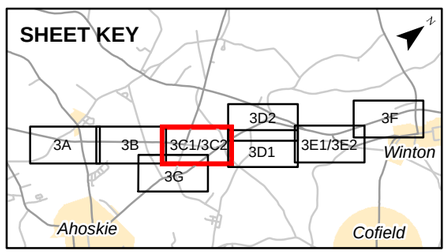


LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of Pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

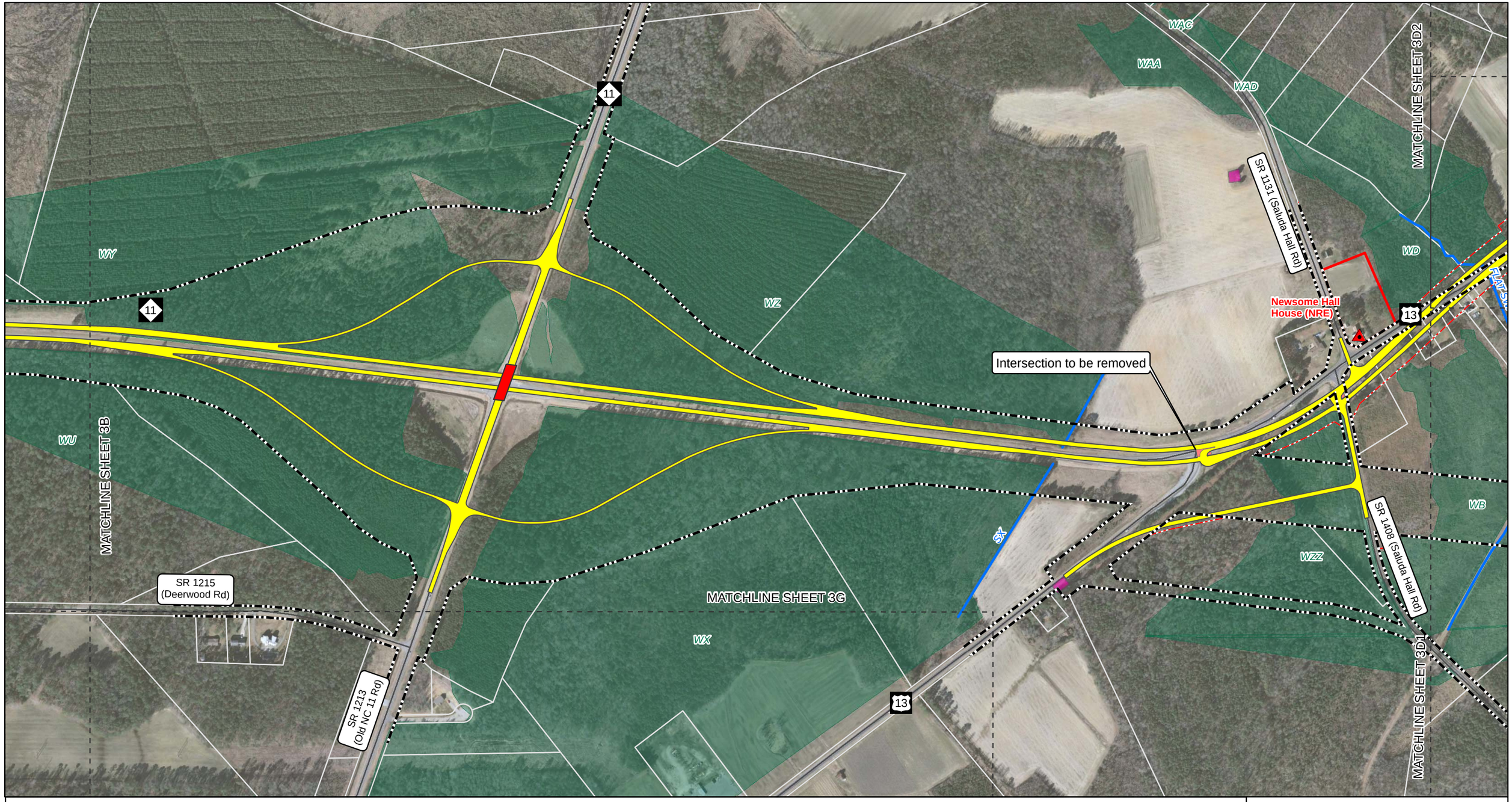
0 250 500 1,000
Feet

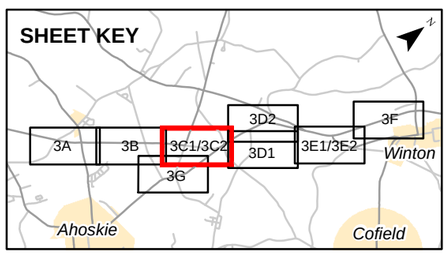
Alternative 1

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3C1**





LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternative 3

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3C2**

MATCHLINE SHEET 3C1/3C2

MATCHLINE SHEET 3E1/3E2

MATCHLINE SHEET 3D2

SR 1409 (Hall Siding Rd)

SR 1408 (Saluda Hall Rd)

FLAT SWAMP

MILL BRANCH

SCC

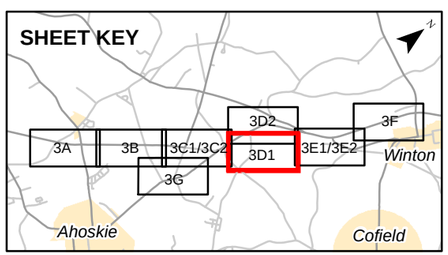
SBB

WHA

WA

WB

Intersection to be removed



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of Pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000

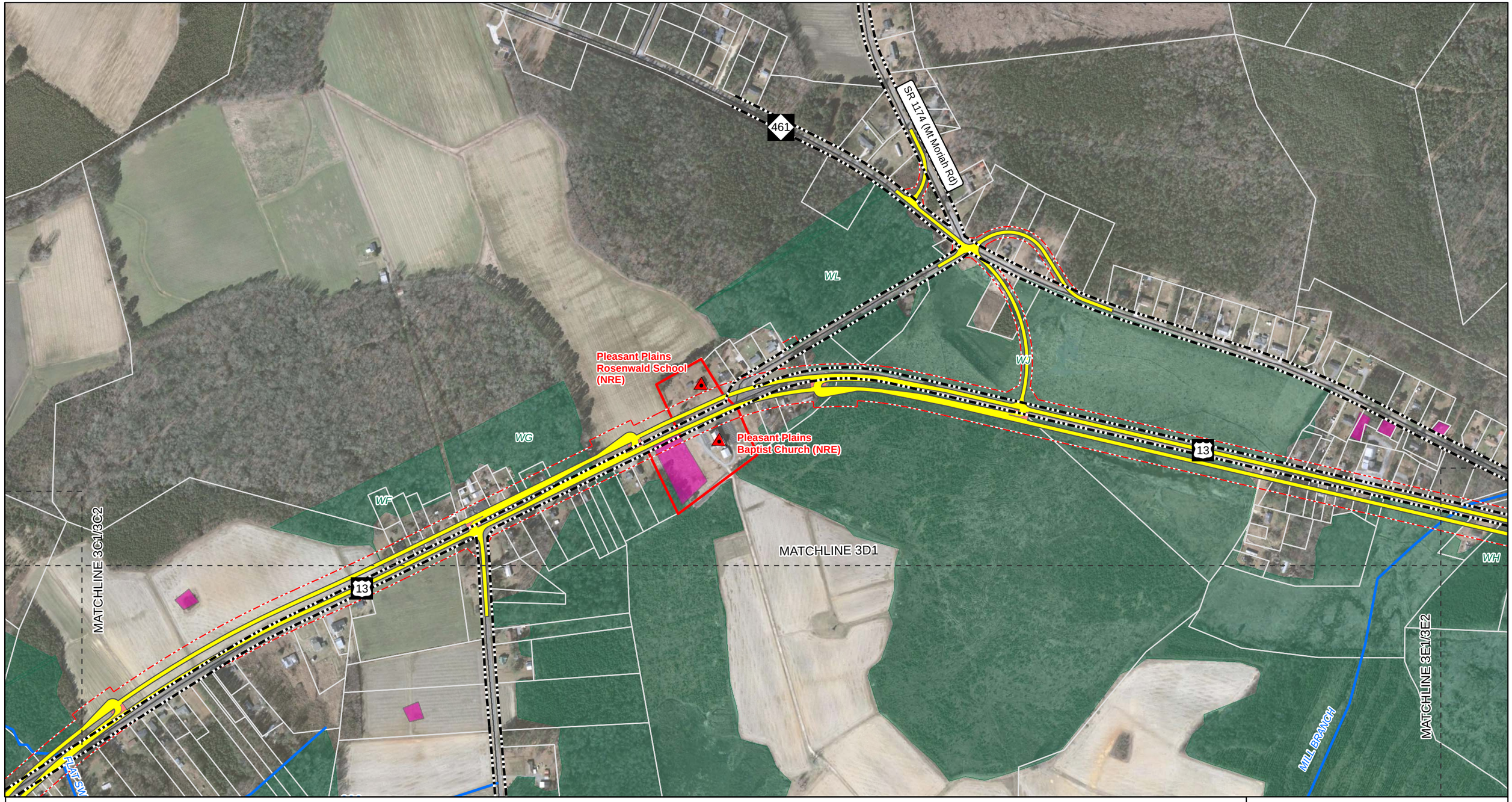
Feet

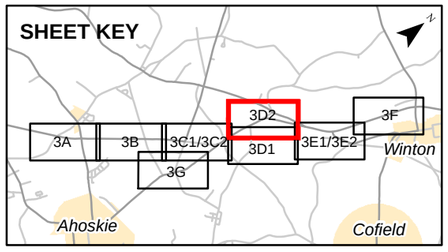
Alternative 1

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3D1**





LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

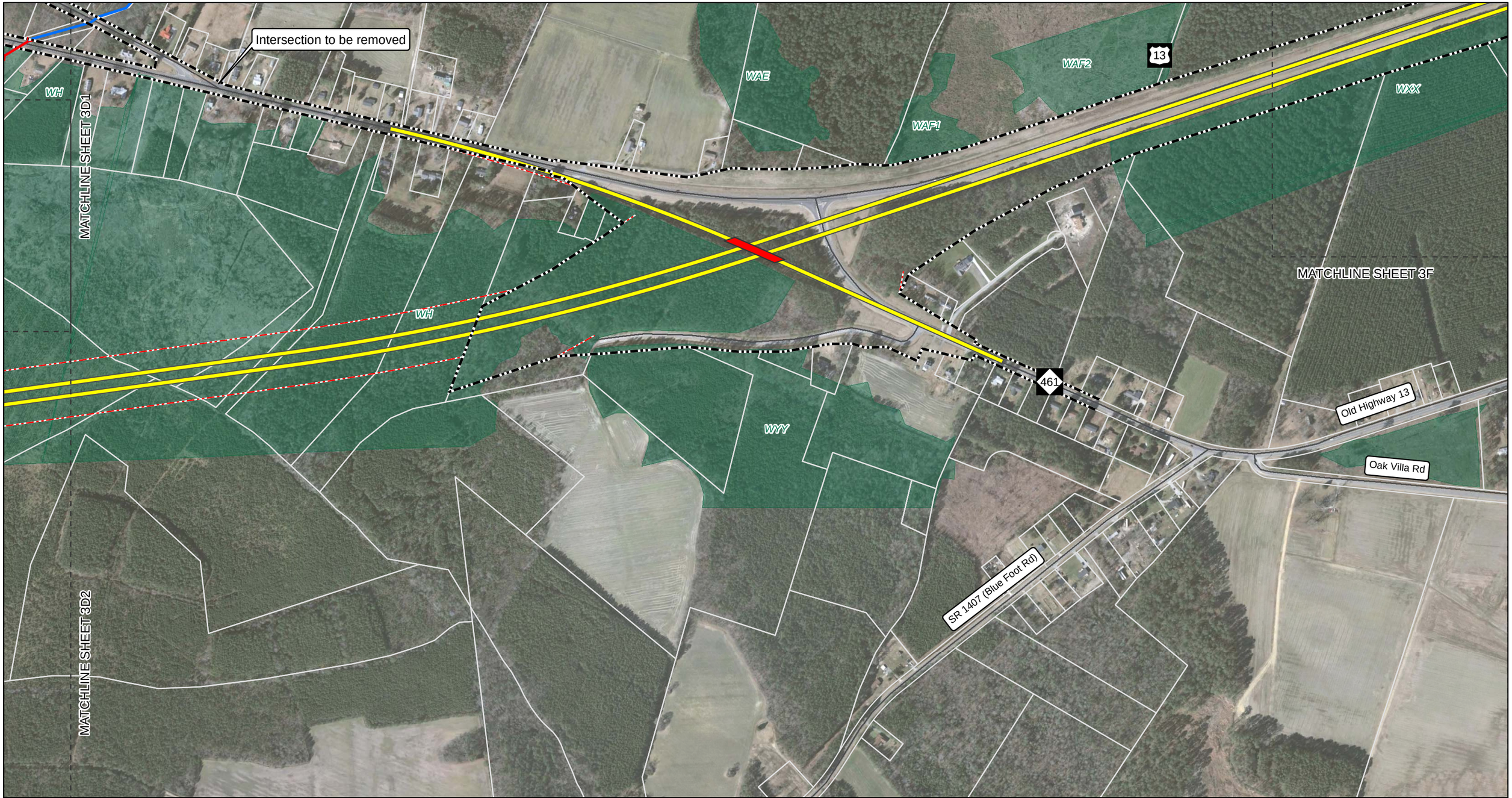
0 250 500 1,000
Feet

Alternative 3

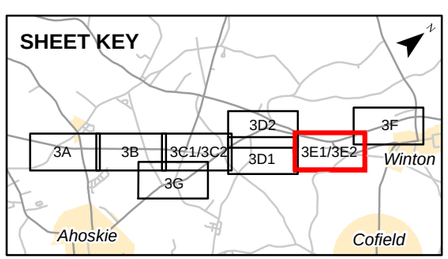
TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3D2**



SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of Pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternative 1

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3E1**

Intersection to be removed

MATCHLINE SHEET 3D2

MATCHLINE SHEET 3D1

MATCHLINE SHEET 3F

WH

WAE

WAF1

WAF2

WXX

WYY

13

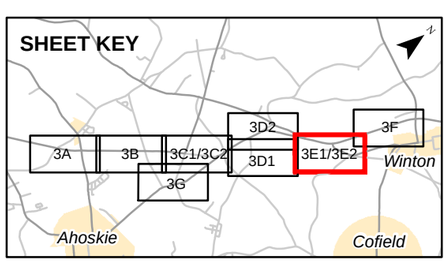
461

Old Highway 13

Oak Villa Rd

SR 1407 (Blue Foot Rd)

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternative 3

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure
3E2

END PROJECT

TIP R-2583

TIP R-2507A

MATCHLINE SHEET 3E1/3E2

TOWN OF WINTON

Old Highway 13

WAI

WAG

WAF5

WAF4

WAH

WSS

WTT

WUU

WVV

WWW

WXX

WXX

SC

SC

13

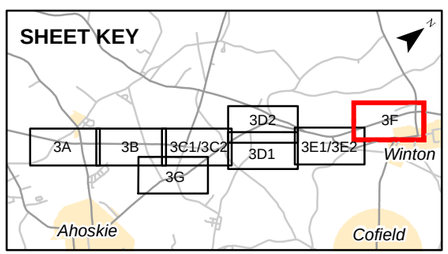
158

13

158

45

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000

Feet

Alternatives 1 and 3

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3F**

MATCHLINE SHEET 3B

MATCHLINE SHEET 3C1/3C2

SR 1130 (Moulin Hatchery Rd)

SR 1213 (Old NC 11 Rd)

SR 1411 (Brinkleyville Rd)

13

WX

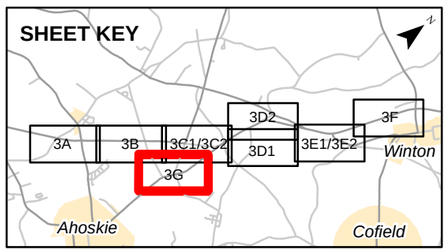
WV

WVA

SY

SY

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of Pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000

Feet

US 13 & SR 1213/SR1411 Alternative 1 and 3

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **3G**

BEGIN PROJECT

11

Intersection to be removed

SR 1108
(Fire Tower Rd)

561

WN

WNA

WM

WRA

WR

WP

WO

WBC

WBB

AHOSKIE CREEK

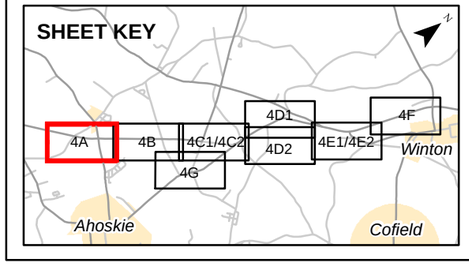
SR 1108
(Bonner Bridge Rd)

Saint Johns Highway

561

MATCHLINE SHEET 4B

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternatives 5 and 6

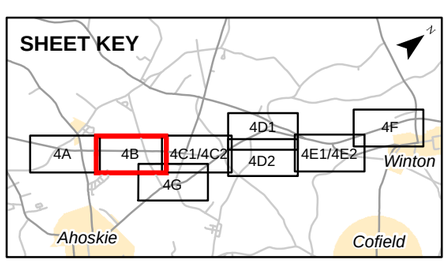
TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure
4A

WRA
WR
WRB
SZ
WT
WT
WY
WY
11
WSA
SZ
WS
WU
SR 1130
(Modlin Hatchery Rd)
MATCHLINE SHEET 4A
MATCHLINE SHEET 4C1/4C2
MATCHLINE SHEET 4G
SR 1215
(Deerwood Rd)
SR 1130
(Modlin Hatchery Rd)

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

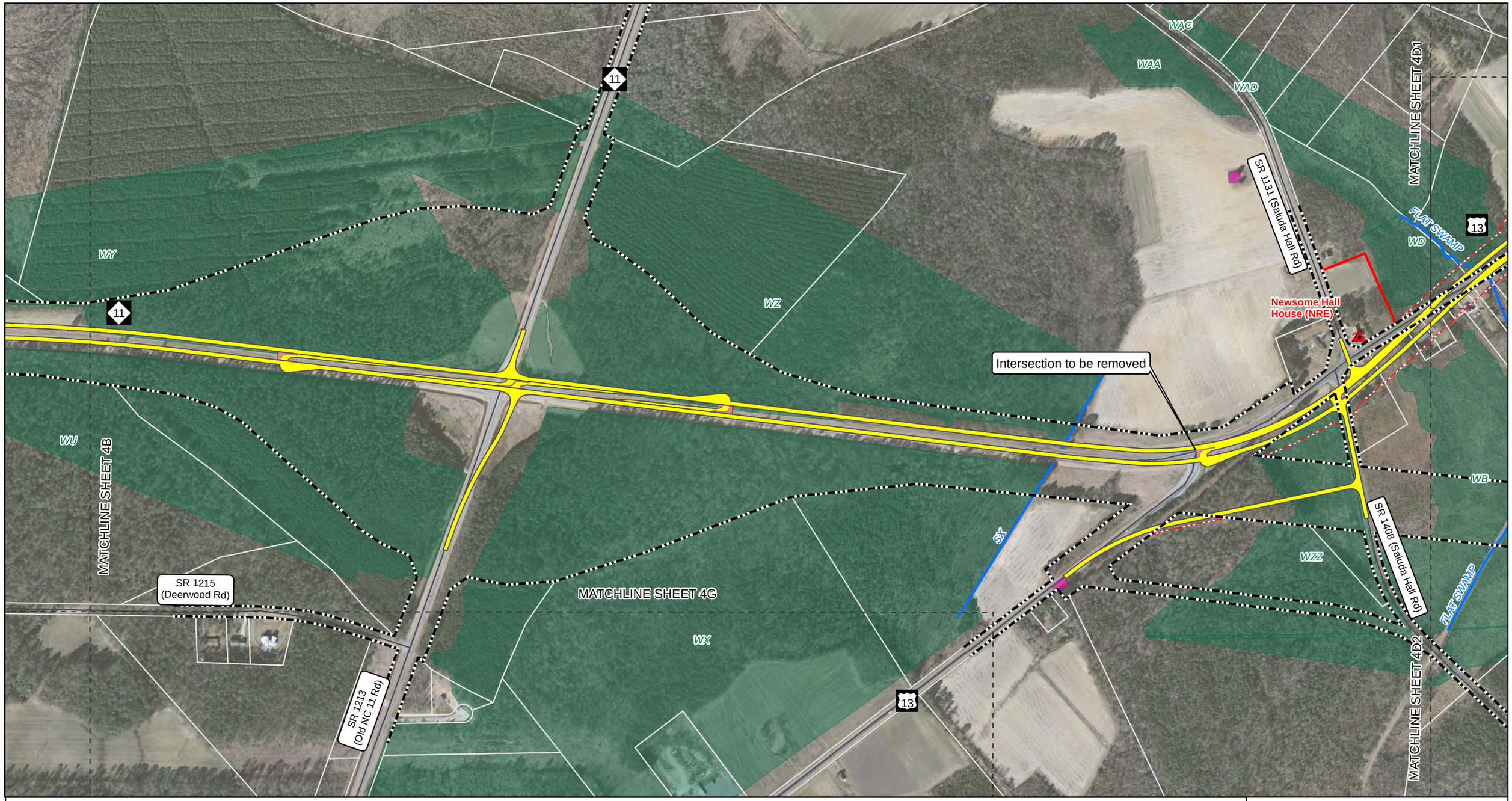
0 250 500 1,000
Feet

Alternatives 5 and 6

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **4B**



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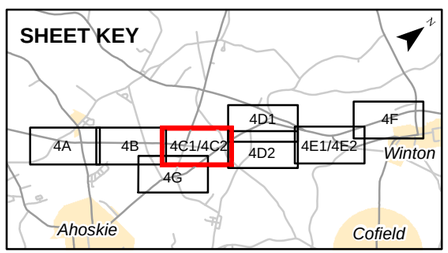


LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

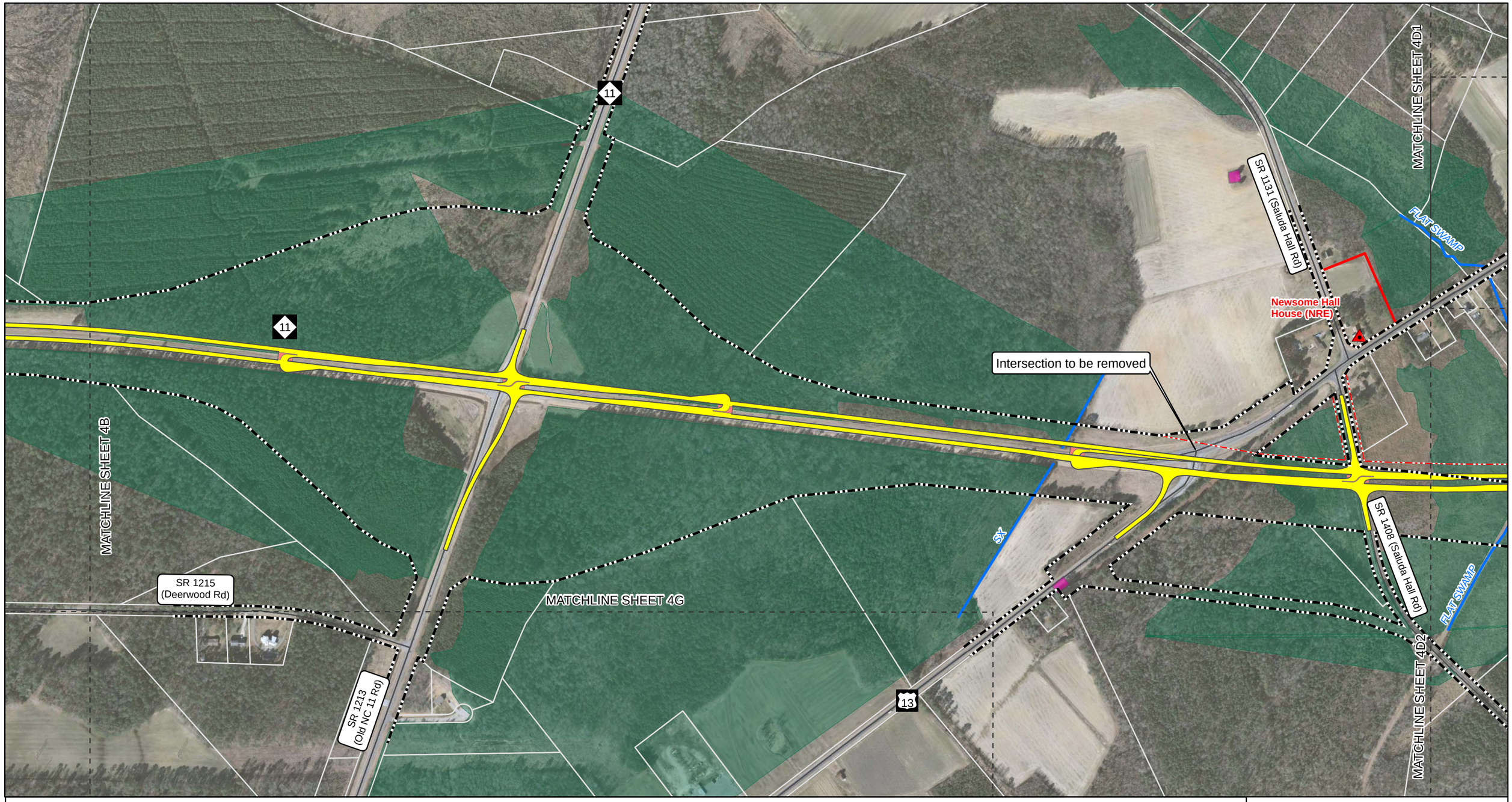
0 250 500 1,000
Feet

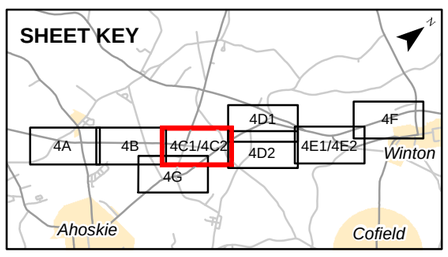
Alternative 5

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure
4C1





LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternative 6

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **4C2**

Intersection to be removed

Pleasant Plains Rosenwald School (NRE)

Pleasant Plains Baptist Church (NRE)

SR 1174 (Mt Moriah Rd)

SR 1409 (Hall Siding Rd)

461

13

WL

WJ

WG

WF

WH

SBB

SCC

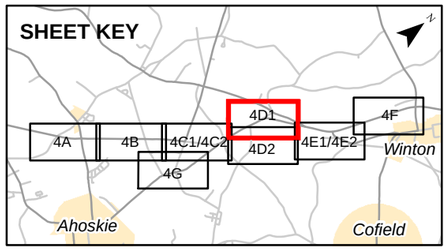
MILL BRANCH

MATCHLINE SHEET 4C1/4C2

MATCHLINE SHEET 4D2

MATCHLINE SHEET 4E1/4E2

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000

Feet

Alternative 5

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **4D1**

13

SCC

SBB

MATCHLINE SHEET 4D1

Intersection to be removed

MILL BRANCH

WH

FLAT SWAMP

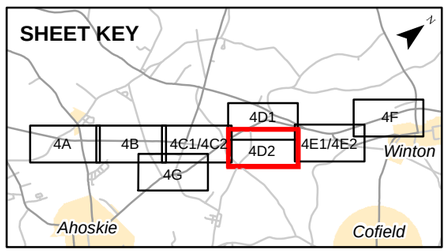
MATCHLINE SHEET 4C1/4C2

SR 1409 (Hall Siding Rd)

SR 1408 (Saluda Hall Rd)

MATCHLINE SHEET 4E1/4E2

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000

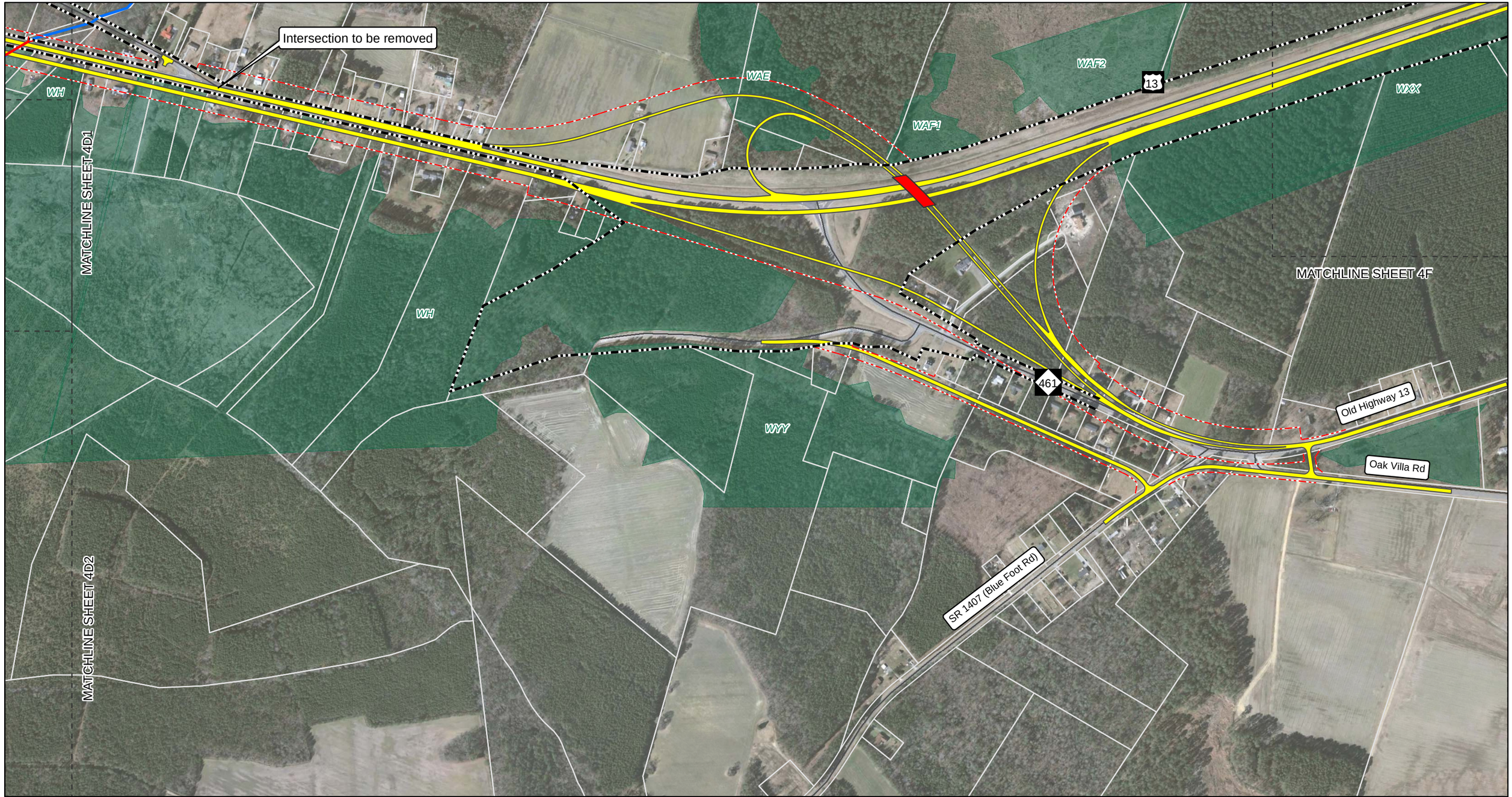
Feet

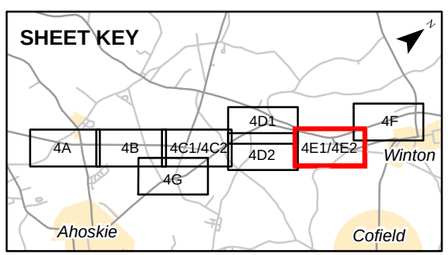
Alternative 6

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **4D2**





LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternative 5

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **4E1**

MILL BRANCH

MATCHLINE SHEET 4D1

MATCHLINE SHEET 4D2

MATCHLINE SHEET 4F

WAE

WAF2

WAF1

WX

WH

WH

WY

13

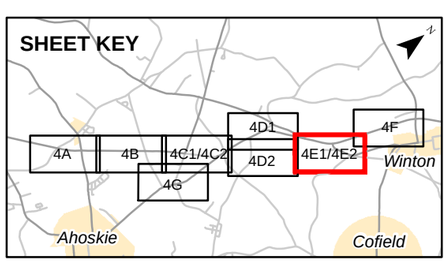
461

Old Highway 13

Oak Villa Rd

SR 1407 (Blue Foot Rd)

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000

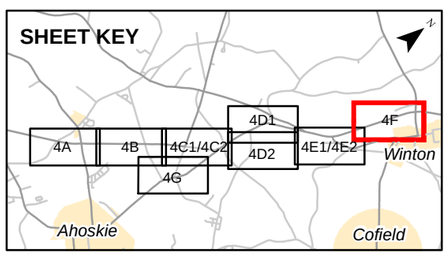
Feet

Alternative 6

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure
4E2



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000
Feet

Alternatives 5 and 6

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **4F**

MATCHLINE SHEET 4B

MATCHLINE SHEET 4C1/4C2

SR 1130 (Moulin Hatchery Rd)

SR 1213 (Old NC 11 Rd)

SR 1411 (Brinkleyville Rd)

13

WX

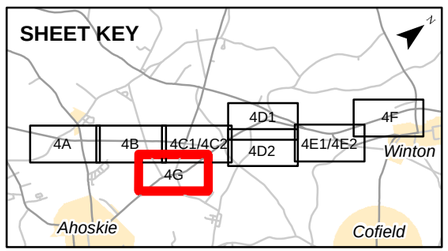
WV

WVA

SY

SY

SHEET KEY



LEGEND

- Proposed Bridge or Culvert
- Proposed Edge of Pavement
- Proposed Right of way
- Existing Right of way
- Parcel Boundary
- Delineated Wetland
- Delineated Stream
- Historic Property - Eligible for National Register of Historic Places
- Historic Structure - Eligible for National Register of Historic Places
- Municipal Boundary
- Cemetery

N

0 250 500 1,000

Feet

US 13 & SR 1212/SR 1411 Alternative 5 and 6

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **4G**

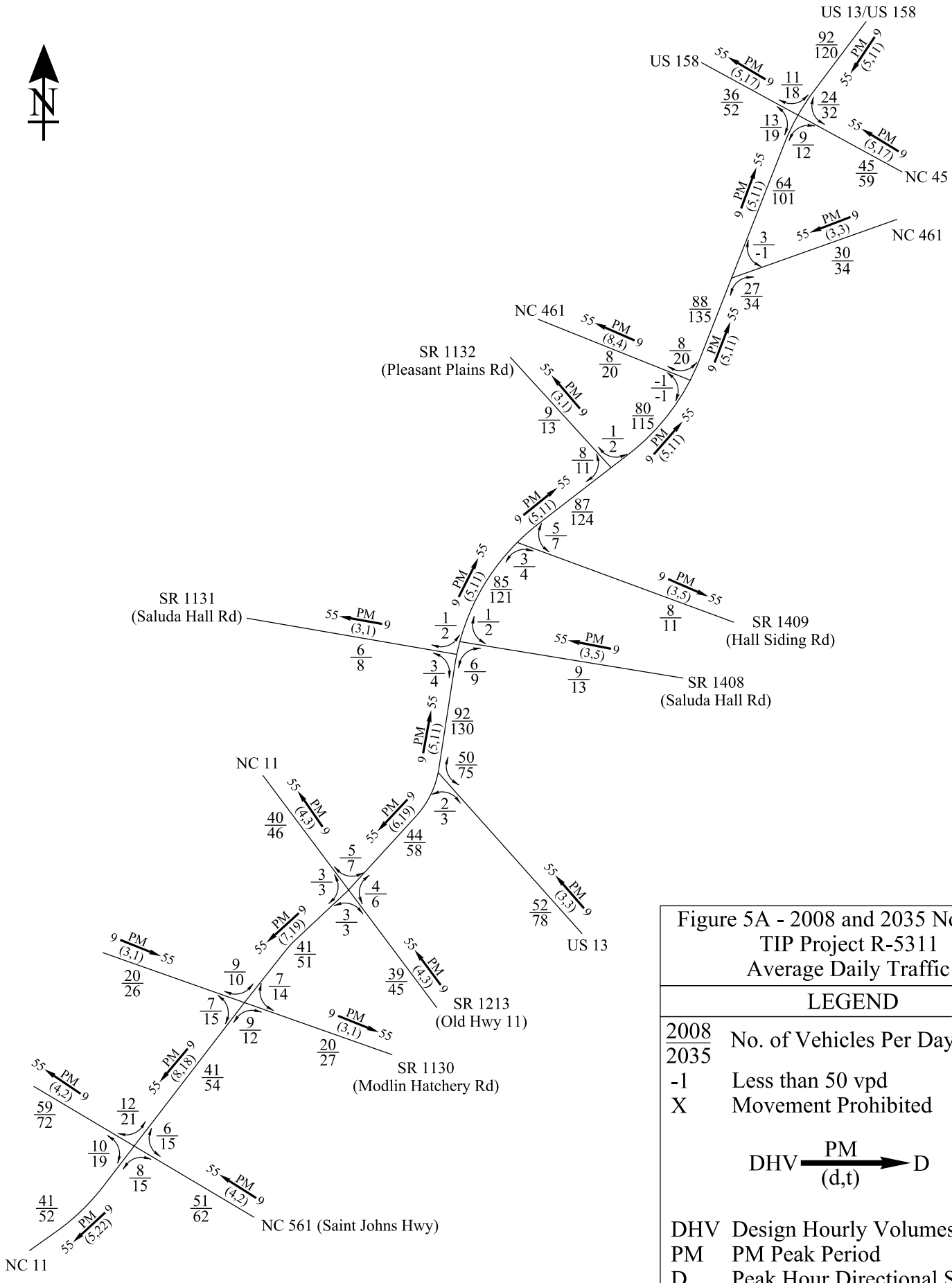
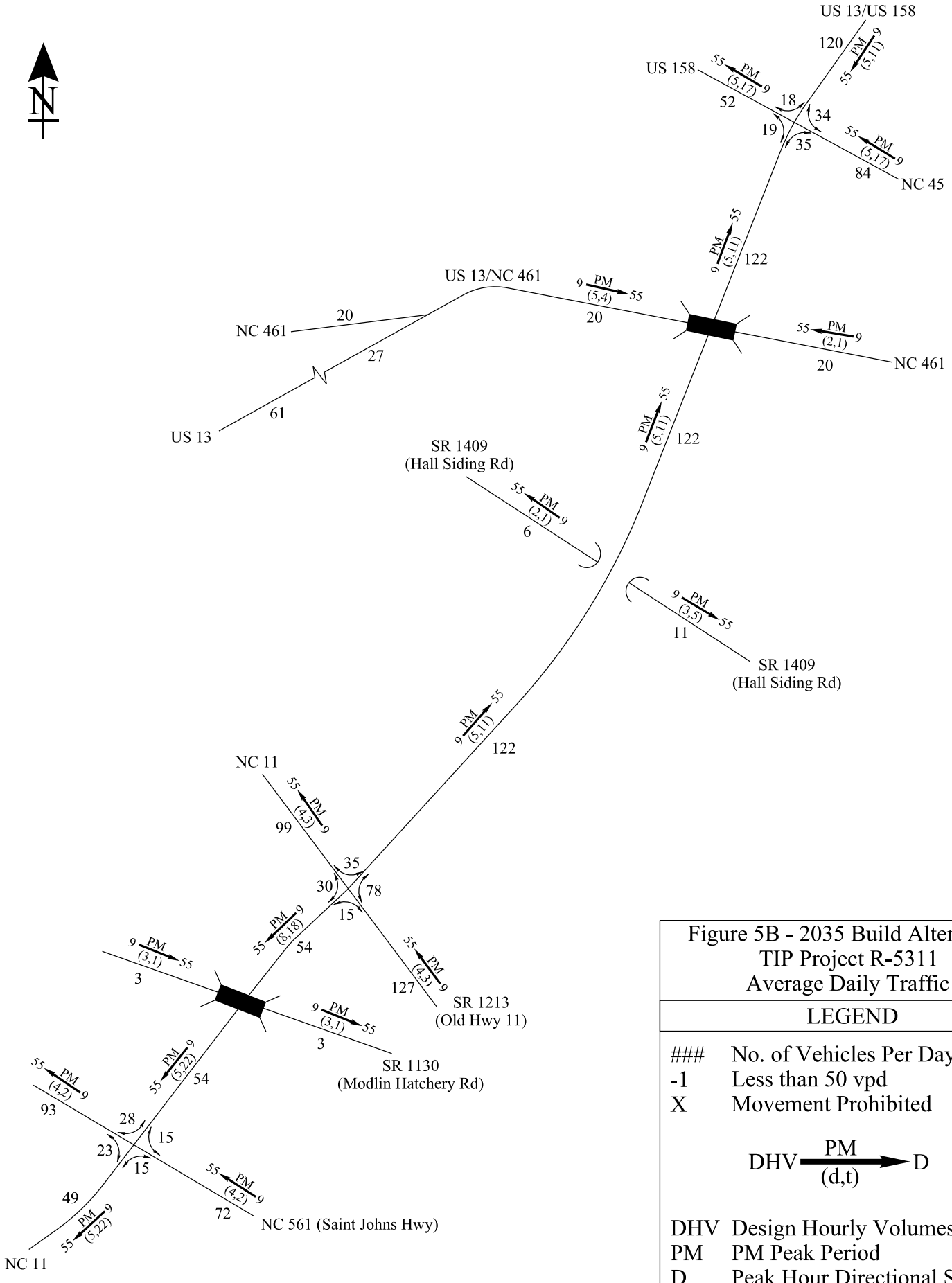


Figure 5A - 2008 and 2035 No-Build
TIP Project R-5311
Average Daily Traffic

LEGEND

2008/2035	No. of Vehicles Per Day in 100's
-1	Less than 50 vpd
X	Movement Prohibited
DHV PM (d,t) D	
DHV	Design Hourly Volumes (%) = K
PM	PM Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d,t)	Duals, TT-STs (%)



NOT TO SCALE

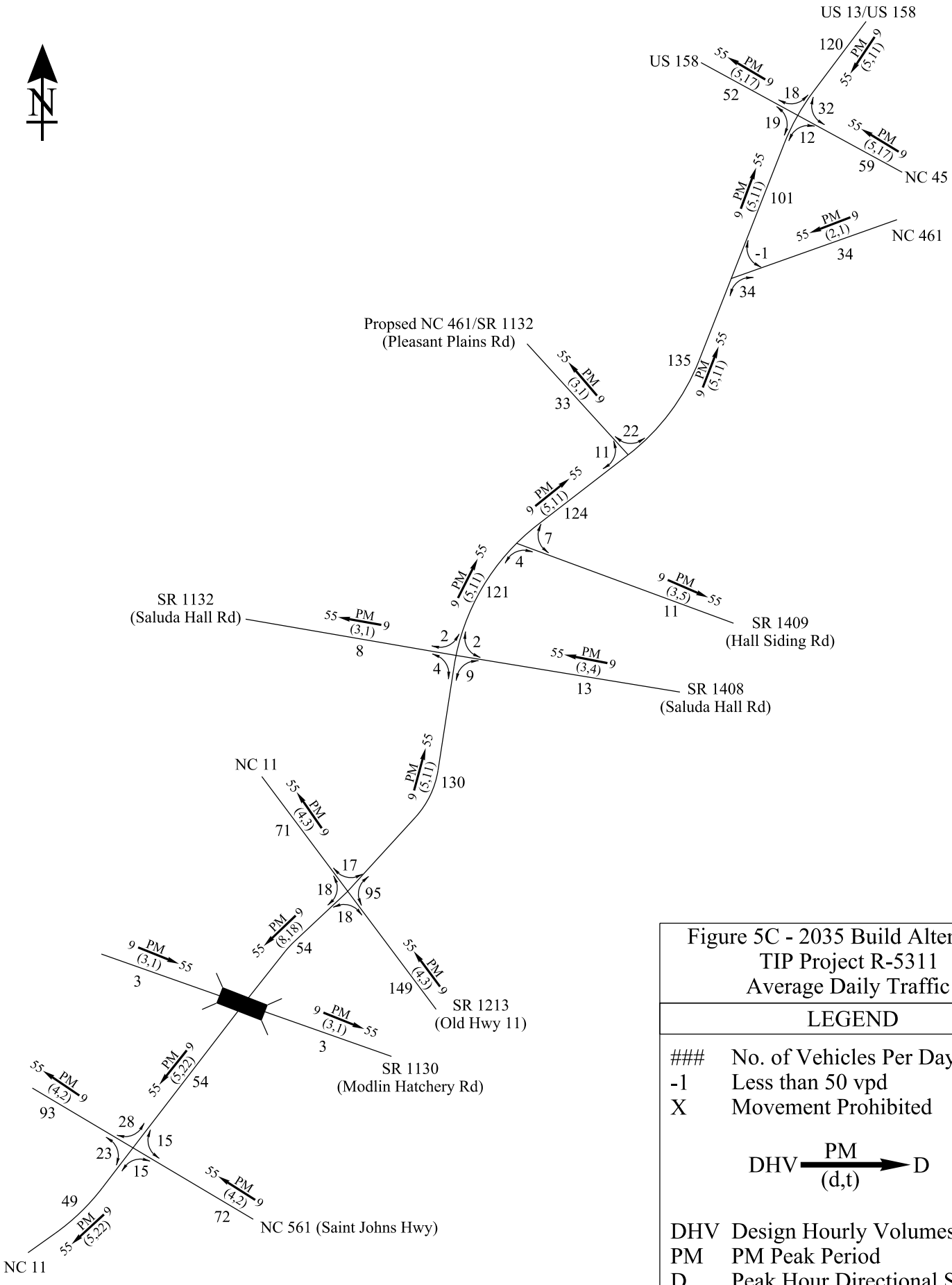
Figure 5B - 2035 Build Alternate 1
TIP Project R-5311
Average Daily Traffic

LEGEND

###	No. of Vehicles Per Day in 100's
-1	Less than 50 vpd
X	Movement Prohibited

DHV $\xrightarrow[(d,t)]{\text{PM}}$ D

DHV	Design Hourly Volumes (%) = K
PM	PM Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d,t)	Duals, TT-STs (%)



NOT TO SCALE

Figure 5C - 2035 Build Alternate 3
TIP Project R-5311
Average Daily Traffic

LEGEND

###	No. of Vehicles Per Day in 100's
-1	Less than 50 vpd
X	Movement Prohibited

DHV $\xrightarrow{\text{PM}}_{(d,t)}$ D

DHV	Design Hourly Volumes (%) = K
PM	PM Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d,t)	Duals, TT-STs (%)

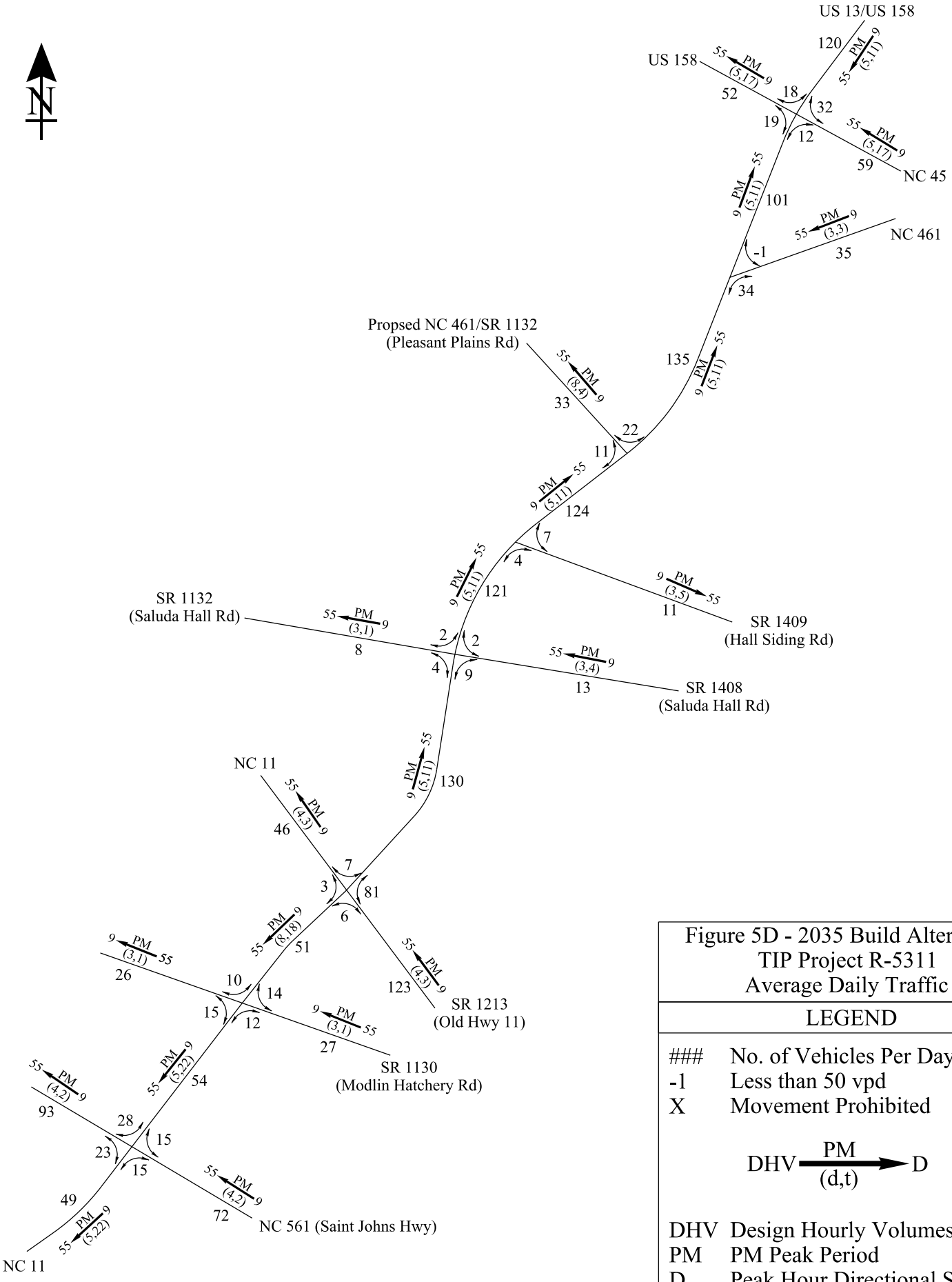


Figure 5D - 2035 Build Alternate 5
TIP Project R-5311
Average Daily Traffic

LEGEND

###	No. of Vehicles Per Day in 100's
-1	Less than 50 vpd
X	Movement Prohibited

DHV $\xrightarrow[(d,t)]{\text{PM}}$ D

DHV	Design Hourly Volumes (%) = K
PM	PM Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d,t)	Duals, TT-STs (%)

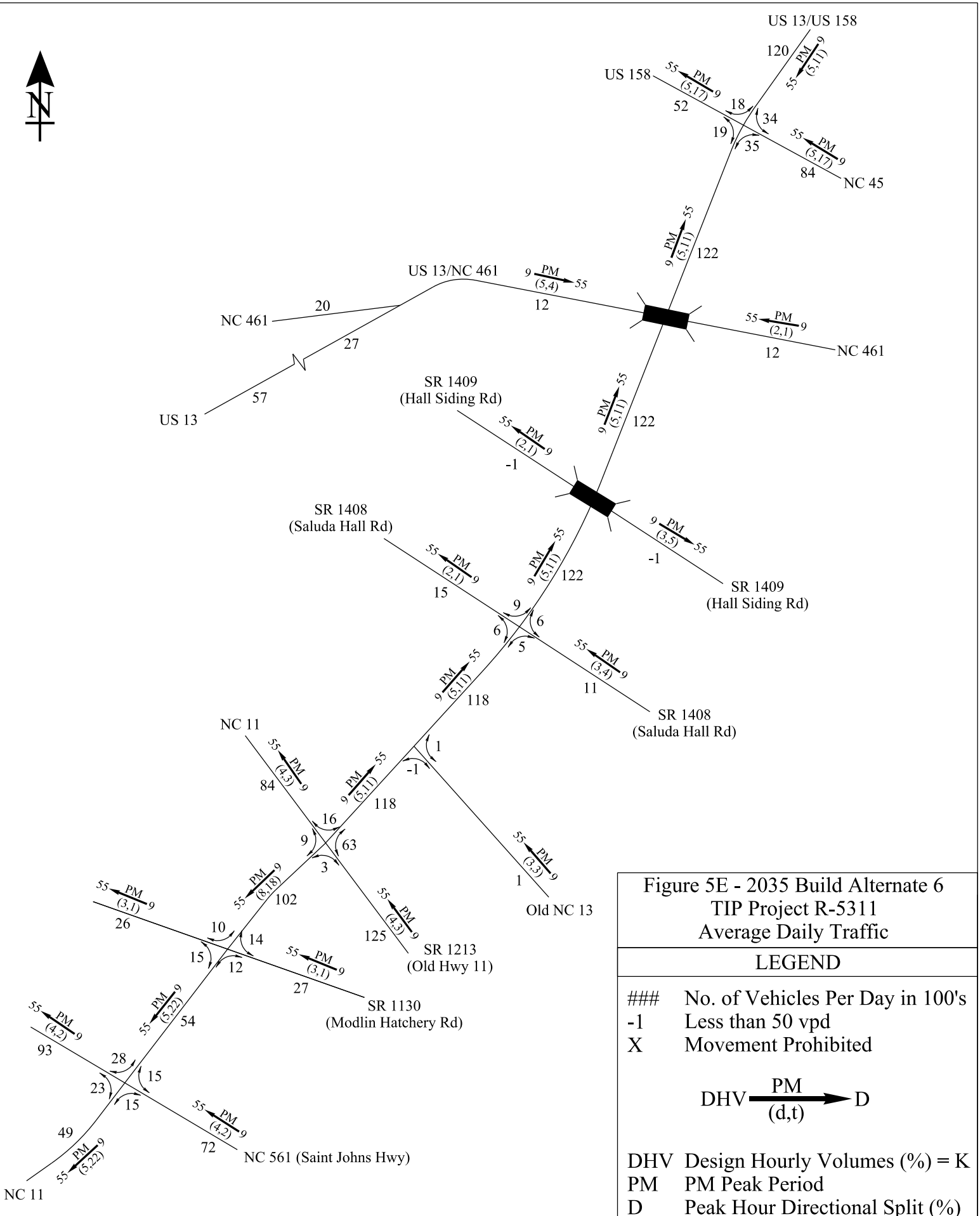


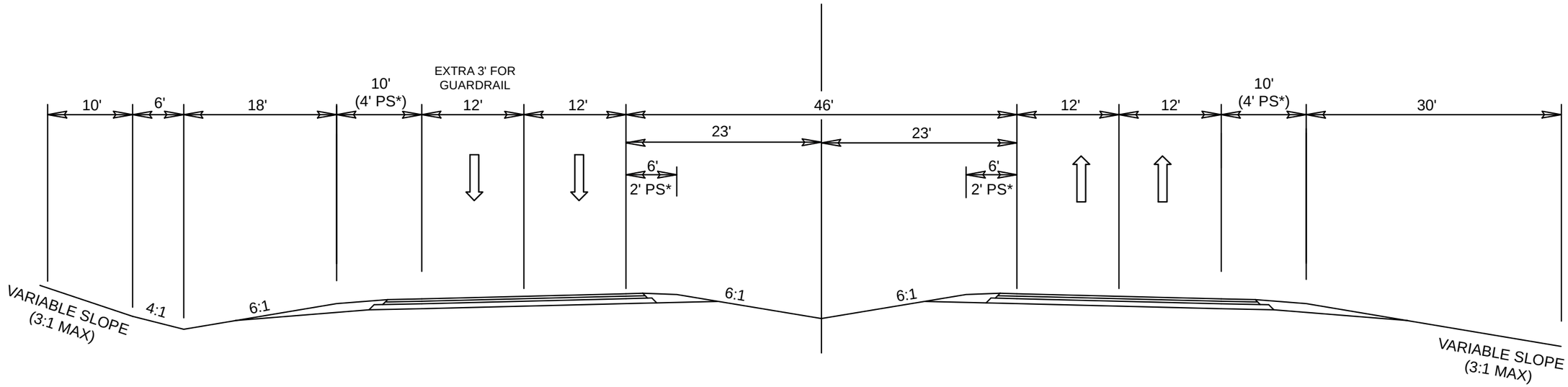
Figure 5E - 2035 Build Alternate 6
TIP Project R-5311
Average Daily Traffic

LEGEND

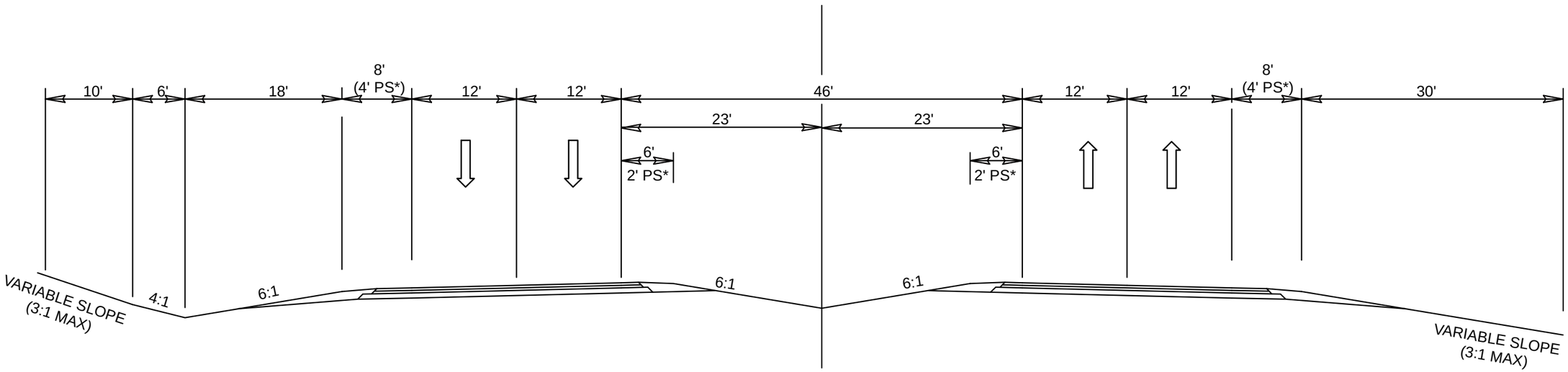
###	No. of Vehicles Per Day in 100's
-1	Less than 50 vpd
X	Movement Prohibited

DHV PM (d,t) D

DHV	Design Hourly Volumes (%) = K
PM	PM Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d,t)	Duals, TT-STs (%)



Alternatives 1 & 3



Alternatives 5 & 6

* PS = PAVED SHOULDER

Typical Sections

TIP Project Number R-5311
Improvements to US 13/NC 11
from NC 11/NC 561 near Ahoskie
to US 13/US 158/NC 45 near Winton

North Carolina Department of Transportation
Project Development and Environmental Analysis Unit

Figure **6**

APPENDIX A

AGENCY COMMENTS

Gillespie, Allyn K

From: Biddlecome, William J SAW <William.J.Biddlecome@usace.army.mil>
Sent: Thursday, July 07, 2011 3:38 PM
To: Gillespie, Allyn K
Subject: R-5311 US13/NC11 Improvements (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Kim,

This is in response to your June 3, 2011 letter requesting information which may be helpful in evaluating potential environmental impacts of the above mentioned project.

Department of the Army permit authorization, pursuant to Section 404 of the Clean Water Act of 1977, as amended, will be required for the discharge of excavated or fill material into waters and/or wetlands in conjunction with this project, including temporary impacts for construction access or bridge demolition, and the disposal of construction debris.

Review of the project indicates that the proposed work may involves the discharge of excavated or fill material into waters and wetlands. When final plans are completed, including the extent and location of any work within waters of the United States and wetlands, our Regulatory Division would appreciate the opportunity to review these plans for a project-specific determination of Department of the Army permit requirements. These plans should include temporary impacts from any necessary construction access. If there are only minor impacts to waters, including wetlands, the work might be authorized under one or more nationwide or regional general permits provided avoidance and minimization are adequately addressed.

The Corps of Engineers must assess the impacts of such activities on the aquatic environment prior to issuing Department of the Army permits. Authorization of aquatic fill activities requires that the project be water dependent and/or that no practicable alternatives are available. Our initial review emphasis for North Carolina Department of Transportation (NCDOT) projects will focus on the impacts to waters and/or wetlands. However, if degradation to other aspects of the natural environment (e.g., habitat of endangered species) is considered to be of greater concern, an alternative resulting in greater aquatic losses may be chosen as preferred.

In all cases, and in accordance with the Memorandum of Agreement between the U.S. Environmental Protection Agency and the Corps, the sequencing process of avoidance, minimization, and compensatory mitigation of unavoidable wetland impacts will be satisfied prior to the final permit decision. A Department of the Army permit will not be issued until a final plan for compensatory mitigation is approved. Mitigation for stream impacts may also be required.

Special attention should be given to avoiding impacts to stream/wetland corridors that parallel the proposed project, such as Flat Swamp, Horse Swamp, unnamed tributaries to Horse Swamp, Mill Branch and UT□s to Mill Branch. NCDOT should have some preliminary wetland and stream delineation information for the southern section of this project closest to Ahoskie from TIP Project

R-2205. However, the delineation for that project was never finalized because some areas had to be re-evaluated and the project was put on hold before it was accomplished. There may also be some delineation information available for the northern section of this project from TIP #□s R-2507A and R-2583.

I recommend you coordinate with me as this project develops to determine if the project should be coordinated through the 404/NEPA merger process or through our nationwide and general permit process. Please advise me as soon as it□s known when and where the project scoping meeting will be held for this project. Thanks!

Bill Biddlecome
Regulatory Project Manager
Washington Regulatory Field Office
P.O. Box 1000
Washington, North Carolina 27889
(910) 251-4558
william.j.biddlecome@usace.army.mil

We at the U.S. Army Corps of Engineers Regulatory Branch are committed to improving service to our customers. We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at:

http://per2.nwp.usace.army.mil/survey.html

Thank you for taking the time to visit this site and complete the survey.

Classification: UNCLASSIFIED
Caveats: NONE

United States Department of the Interior

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

June 9, 2011

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

Dear Dr. Thorpe:

This letter is in response to your request for comments from the U.S. Fish and Wildlife Service (Service) on the potential environmental effects of the proposed improvements to US 13/NC 11 from the NC 11/NC 561 intersection near Ahoskie to the US 13/158/NC 45 intersection near Winton in Hertford County, North Carolina (TIP No. R-5311). These comments provide information 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 Service does not have any specific concerns for this project at this time. However, the Service recommends the following general conservation measures to avoid or minimize environmental impacts to fish and wildlife resources:

1. Wetland and forest impacts should be avoided and minimized to the maximal extent practical. Areas exhibiting high biodiversity or ecological value important to the watershed or region should be avoided. Proposed highway projects should be aligned along or adjacent to existing roadways, utility corridors or other previously disturbed areas in order to minimize habitat loss and fragmentation. Highway shoulder and median widths should be reduced through wetland areas;

2. Crossings of streams and associated wetland systems should use existing crossings and/or occur on a bridge structure wherever feasible. Bridges should be long enough to allow for sufficient wildlife passage along stream corridors. Where bridging is not feasible, culvert structures that maintain natural water flow and hydraulic regimes without scouring or impeding fish and wildlife passage should be employed;

3. Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or flood plain. To the extent possible, piers and bents should be placed outside the bank-full width of the stream. If spanning the flood plain is not feasible, culverts should be installed in the flood plain portion of the approach to restore some of the hydrological functions of the flood plain and reduce high velocities of flood waters within the affected area;

4. Bridge designs should include provisions for roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from run-off of storm water and pollutants;

5. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along the side of the existing structure which has the least and/or least quality of fish and wildlife habitat. At the completion of construction, the detour area should be entirely removed and the impacted areas be planted with appropriate vegetation, including trees if necessary;

6. If unavoidable wetland or stream impacts are proposed, a plan for compensatory mitigation to offset unavoidable impacts should be provided early in the planning process;

7. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons. In waterways that may serve as travel corridors for fish, in-water work should be avoided during moratorium periods associated with migration, spawning and sensitive pre-adult life stages. The general moratorium period for anadromous fish is February 15 - June 30;

8. Best Management Practices (BMP) for Construction and Maintenance Activities should be implemented; and

Section 7(a)(2) of the Endangered Species Act requires that all federal action agencies (or their designated non-federal representatives), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally threatened or endangered species. To assist you, a county-by-county list of federally protected species known to occur in North Carolina and information on their life histories and habitats can be found on our web page at http://nc-es.fws.gov/es/countyfr.html .

Although the North Carolina Natural Heritage Program (NCNHP) database does not indicate any known occurrences of listed species near the project vicinity, use of the NCNHP data should not be substituted for actual field surveys if suitable habitat occurs near the project site. The NCNHP database only indicates the presence of known occurrences of listed species and does not necessarily mean that such species are not present. It may simply mean that the area has not been surveyed. If suitable habitat occurs within the project vicinity for any listed species, surveys should be conducted to determine presence or absence of the species.

If you determine that the proposed action may affect (i.e. likely to adversely affect or not likely to adversely affect) a listed species, you should notify this office with your determination, the results of your surveys, survey methodologies and an analysis of the effects of the action on listed species, including consideration of direct, indirect and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e. no beneficial or adverse, direct or indirect effect) on listed species, then you are not required to contact our office for concurrence.

We reserve the right to review any federal permits that may be required for this project, at the public notice stage. Therefore, it is important that resource agency coordination occur early in the planning process in order to resolve any conflicts that may arise and minimize delays in project implementation. In addition to the above guidance, we recommend that the environmental documentation for this project include the following in sufficient detail to facilitate a thorough review of the action:

1. A clearly defined and detailed purpose and need for the proposed project;

2. A description of the proposed action with an analysis of all alternatives being considered;

3. A description of the fish and wildlife resources, and their habitats, within the project impact area that may be directly or indirectly affected;

4. The extent and acreage of waters of the U.S., including wetlands, that are to be impacted by filling, dredging, clearing, ditching, or draining. Wetland boundaries should be determined by using the 1987 Corps of Engineers Wetlands Delineation Manual and verified by the U.S. Army Corps of Engineers;

5. The anticipated environmental impacts, both temporary and permanent, that would be likely to occur as a direct result of the proposed project. The assessment should also include the extent to which the proposed project would result in indirect and cumulative effects to natural resources;

6. Design features and construction techniques which would be employed to avoid or minimize impacts to fish and wildlife resources, both direct and indirect, and including fragmentation and loss of habitat;

7. Design features, construction techniques, or any other mitigation measures which would be employed at wetland crossings and stream channel relocations to avoid or minimize impacts to waters of the US; and,

8. If unavoidable wetland or stream impacts are proposed, project planning should include a compensatory mitigation plan for offsetting the unavoidable impacts.

The Service appreciates the opportunity to comment on 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

Steven W. Troxler
Commissioner

North Carolina Department of Agriculture and Consumer Services
Agricultural Services

Vernon N. Cox
Environmental Programs Specialist

June 23, 2011

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

State #: 11-E-4220-0299
RE: Proposal for TIP No. R-5311

Dear Ms. Green:

Thank you for the opportunity to respond to the request for information regarding the potential environmental impacts of the proposed improvements to approximately 10 miles of the NC 11/US 13 corridor in the vicinity of Ahoskie, in Hertford County. The North Carolina Department of Agriculture and Consumer Services (NCDA&CS) is concerned about the conversion of North Carolina's farm and forest lands to other uses. Due to the importance of agricultural activities in the area, as well as the economy of the entire state, NCDA&CS strongly encourages the project planners to avoid conversion of agricultural land to other uses whenever possible. When avoidance is not possible, all reasonable efforts to minimize impacts to agricultural operations and agricultural land should be implemented.

With regard to additional information, it is suggested that the NCDOT Project Development and Environmental Analysis Branch contact the Hertford Soil and Water Conservation District to obtain information regarding potential impacts to agricultural activities in the area by the proposed project. Contact information for the District is given below.

Hertford Soil & Water Conservation District
P.O. Box 265
305 West Tryon Street
Winton, NC 27986-0265
(252) 358-7846

Respectfully,

Vernon N. Cox
Environmental Programs Specialist

E-mail: vernon.cox@ncagr.gov
1001 Mail Service Center, Raleigh, North Carolina, 27699-1001 (919) 707-3070 ● Fax (919) 716-0105
TTY: 1-800-735-2962 Voice: 1-877-735-8200

North Carolina Department of Cultural Resources

State Historic Preservation Office

Claudia Brown, Acting Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

July 1, 2011

MEMORANDUM

TO: Greg Thorpe, Ph.D., Director
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: Claudia Brown PSE for Claudia Brown

SUBJECT: US 13/NC 11, From the NC 11/NC 561 Intersection near Ahoskie to South to the US 13/158/NC 45 Intersection near Winton, R-5311, Hertford County, CH 11-1159

We have received notification from the State Clearinghouse concerning the above project and offer the following comments.

The known archaeological sites recorded within the study area were located in 1977 during the survey for the Ahoskie Bypass project and have been destroyed by construction of that project. None of those identified sites were found to be eligible for inclusion in the National Register of Historic Places.

There may be areas within the current study area that have a high potential for the presence of eligible archaeological resources, particularly those dating to the historic period. As plans develop concerning the width of the improvements and the extent of the new interchanges, we recommend that our office be provided with this information in order that we may assess the potential effects of the project and the need for archaeological investigations.

We have conducted a search of our maps and files and located the following structures of historic or architectural importance within the general area of this project:

Site Number	Site Name	Status
HF 0575	Pleasant Plains Rosenwald School	Determined Eligible (DOE)
HF 0623	Newsome-Hall House	DOE
HF 0947	Pleasant Plains Baptist Church	DOE

The location of these properties is available on our GIS website at: http://gis.ncdcr.gov/hpoweb/

Because our search included properties surveyed in 2010-2011 as part of the Hertford County resurvey performed by Coastal Carolina Research, additional architectural survey work for this project is not necessary.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

cc: State Clearinghouse
Matt Wilkerson, NCDOT
Mary Pope Furr, NCDOT
Scott Power

State of North Carolina
Department of Environment and Natural Resources

Reviewing Office: _____

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

Project Number: _____ Due Date: _____

After review of this project it has been determined that the ENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters	Application 180 days before begin activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later	90-120 days (N/A)
	Water Use Permit	Pre-application technical conference usually necessary	30 days (N/A)
	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well	7 days (15 days)
	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit	55 days (90 days)
	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113)	90 days
	Permit to construct & operate Transportation Facility as per 15 A NCAC (2D.0800, 2Q.0601)	Application must be submitted at least 90 days prior to construction or modification of the source	90 days
√	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 2D.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950		
	Complex Source Permit required under 15 A NCAC 2D.0800		
	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section). At least 30 days before beginning activity. A fee of $65 for the first acre or any part of an acre. An express review option is available with additional fees		20 days (30 days)
√	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets		(30 days)
	Mining Permit	On-site inspection usual. Surety bond filed with ENR. Bond amount varies with type mine and number of acres of affected land. Any are mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued	30 days (60 days)
	North Carolina Burning permit	On-site inspection by N.C. Division Forest Resources if permit exceeds 4 days	1 day (N/A)
	Special Ground Clearance Burning Permit - 22 counties in coastal N.C. with organic soils	On-site inspection by N.C. Division Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
	Oil Refining Facilities	N/A	90-120 days (N/A)
	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to prepare plans, inspect construction, certify construction is according to ENR approved plans. May also require permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion.	30 days (60 days)

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
[ ]	Permit to drill exploratory oil or gas well	File surety bond of $5,000 with ENR running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to ENR rules and regulations	10 days N/A
[ ]	Geophysical Exploration Permit	Application filed with ENR at least 10 days prior to issue of permit Application by letter No standard application form	10 days N/A
[ ]	State Lakes Construction Permit	Application fees based on structure size is charged Must include descriptions & drawings of structure & proof of ownership of riparian property.	15-20 days N/A
[✓]	401 Water Quality Certification	N/A	60 days (130 days)
[ ]	CAMA Permit for MAJOR development	$250 00 fee must accompany application	55 days (150 days)
[ ]	CAMA Permit for MINOR development	$50 00 fee must accompany application	22 days (25 days)
[ ]	Several geodetic monuments are located in or near the project area If any monument needs to be moved or destroyed, please notify N.C Geodetic Survey, Box 27687 Raleigh, NC 27611		
[ ]	Abandonment of any wells, if required must be in accordance with Title 15A Subchapter 2C 0100		
[ ]	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation		
[ ]	Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required		45 days (N/A)
[ ]	Tar Pamlico or Neuse Riparian Buffer Rules required		

* Other comments (attach additional pages as necessary, being certain to cite comment authority)

REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

[ ] **Asheville Regional Office**
2090 US Highway 70
Swannanoa, NC 28778
(828) 296-4500

[ ] **Fayetteville Regional Office**
225 North Green Street, Suite 714
Fayetteville, NC 28301-5043
(910) 433-3300

[ ] **Mooresville Regional Office**
610 East Center Avenue, Suite 301
Mooresville, NC 28115
(704) 663-1699

[ ] **Raleigh Regional Office**
3800 Barrett Drive, Suite 101
Raleigh, NC 27609
(919) 791-4200

[✓] **Washington Regional Office**
943 Washington Square Mall
Washington, NC 27889
(252) 946-6481

[ ] **Wilmington Regional Office**
127 Cardinal Drive Extension
Wilmington, NC 28405
(910) 796-7215

[ ] **Winston-Salem Regional Office**
585 Waughtown Street
Winston-Salem, NC 27107
(336) 771-5000

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Project Number
11-0299
County
Hertford

Inter-Agency Project Review Response

Project Name NC-DOT

Type of Project Scoping - Widening of US 13/NC 11 and converting existing intersections to interchanges. TIP No. R-5311

☐ 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, an extensive rodent control program may be necessary in order to prevent the migration of the rodents to adjacent areas. For information concerning rodent control, contact the local health department or the Public Health Pest Management Section at (919) 733-6407.

☐ The applicant should be advised to contact the local health department regarding their requirements for septic tank installations (as required under 15A NCAC 18A. 1900 et. 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	06/16/2011
Reviewer	Section/Branch	Date

Project Number
11-0299
County
Hertford

DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Inter-Agency Project Review Response

Project Name: NC-DOT

Type of Project: Scoping – Widening of US 13/NC 11 and converting existing intersections to interchanges. TIP No. R-5311

Comments provided by:

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

Name: Joey White Telephone #: (252) 948-3894

Joey C. White

Date Rec'd: 06/20/11
Date Rev'd: 06/21/11

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

- Relocation of existing potable water supply lines will require engineered plans and specifications to be submitted to the Public Water Supply Section for review and approval before construction. Final approval must be issued before placing the water mains into service.
- Contractors should be aware of utility locations during entrance and egress from the project area. Please contact the Hertford County Water Department to assist with the location of existing utilities in the project area.

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

North Carolina Department of Environment and Natural Resources
Division of Marine Fisheries

Beverly Eaves Perdue
Governor

Dr. Louis B. Daniel III
Director

Dee Freeman
Secretary

TO: Melba McGee
THROUGH: Anne Deaton
FROM: Kevin Hart
DATE: July 6, 2011
SUBJECT: NCDOT Scoping- Widening of US 13/NC 11 and converting existing intersections to interchanges Tip No. R-5311

The following comments by the North Carolina Division of Marine Fisheries (NCDMF) on the subject project are offered pursuant to G.S. 113-131. The NCDOT is requesting comments regarding widening of US 13/NC 11. According to the scoping vicinity map the road will cross tributaries of the Chowan River (AFSA).

In future documentation the NCDMF requests that the following information be provided.

1. All water body impacts including streams and wetlands. Please include the name of these waterbodies, the impacts, and the area (i.e. acres or square footage) being impacted.
2. The NCDMF requests that bridges be used to cross waterbodies. The bridges will minimize impacts from the project.
3. If utilities are associated with the project the NCDMF requests that either directional boring is used to cross waterways or the utilities run along the bridge. If new utilities are needed to run alongside the road the NCDMF requests that they be placed in the current right-of-way (ROW) to minimize impacts associated with this project.
4. The Chowan River is designated as an anadromous fish spawning area. To minimize impacts to important anadromous fish habitat during the period of peak migration, the NCDMF requests that inwater work be done outside of the moratorium period of February 15 through June 30 (Deaton et al. 2010).

If you have any comments or questions, please call me at (252) 948-3878 or email me at Kevin.Hart@ncdenr.gov .

Deaton, A.S., W.S. Chappell, K. Hart, J. O'Neal. 2010. North Carolina Coastal Habitat Protection Plan. North Carolina Department of Environment and Natural Resources. Division of Marine Fisheries, NC. 617 pages.

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

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

June 15, 2011

MEMORANDUM

To: Kim Gillespie, P.E., NCDOT

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

Subject: Scoping comments on proposed improvements to US 13/NC 11from the NC 11/NC 561 intersection near Ahoskie to the US 13/158/NC 45 intersection near Winton, in Hertford County, Federal Aid Project No. NHF-0013(37), TIP R-5311 3

Reference your correspondence dated June 6, 2011 in which you requested comments for the referenced project. Preliminary analysis of the project reveals the potential for multiple impacts to streams and jurisdictional wetlands in the project area. More specifically, impacts to:

Stream Name	River Basin	Stream Classification(s)	Stream Index Number	303(d) Listing
UT to Mill Branch	Chowan	C:NSW	25-4-8-11	None
Mill Branch	Chowan	C:NSW	25-4-8-11	None
UT to Horse Swamp	Chowan	C:NSW	25-14-1-8-1	None
Horse Swamp	Chowan	C:NSW	25-14-1-8-1	None

Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality requests that NCDOT consider the following environmental issues for the proposed project:

Project Specific Comments:

1. There is insufficient information provided regarding the scope of work to be performed to allow the NCDWQ to provide meaningful specific comments at this time.

2. All surface waters are class C: NSW waters of the State. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to surface waters in the project area. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ's *Stormwater Best Management Practices*.

General Project Comments:

3. The environmental document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. 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.

4. 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

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury Street, Raleigh, North Carolina 27604
Phone: 919-807-6301 \ FAX: 919-807-6494
Internet: http://portal.ncdenr.org/web/wq

the storm water runoff through best management practices as detailed in the most recent version of NCDWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

5. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, 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.

6. 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 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.

7. NCDWQ is very concerned with sediment and erosion impacts 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.

8. If an old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.

9. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges should allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters should not be blocked. Bridge supports (bents) should not be placed in the stream when possible.

10. Bridge deck drains should not discharge directly into the stream. Stormwater should be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWQ's *Stormwater Best Management Practices.*

11. 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.

12. If temporary access roads or detours are constructed, the site should 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 mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.

13. Placement of culverts and other structures in waters, streams, and wetlands should be 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 should 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 NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

14. If multiple pipes or barrels are required, they should 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 should 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.

15. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3624/Nationwide Permit No. 6 for Survey Activities.

16. 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.

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

18. Sediment and erosion control measures should not be placed in wetlands and streams.

19. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.

20. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

21. 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.

22. In most cases, NCDWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed and restored to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. Tall fescue should not be used in riparian areas.

23. 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.

Thank you for requesting our input at this time. 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) 807-6405.

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

North Carolina Department of Environment and Natural Resources
Office of Conservation, Planning, & Community Affairs
Beverly Eaves Perdue, Governor **Linda Pearsall, Director** Dee Freeman, Secretary

June 14, 2011

MEMORANDUM

TO: Gregory Thorpe, NC DOT Project Development and Environmental Analysis Branch

FROM: Harry LeGrand, Natural Heritage Program

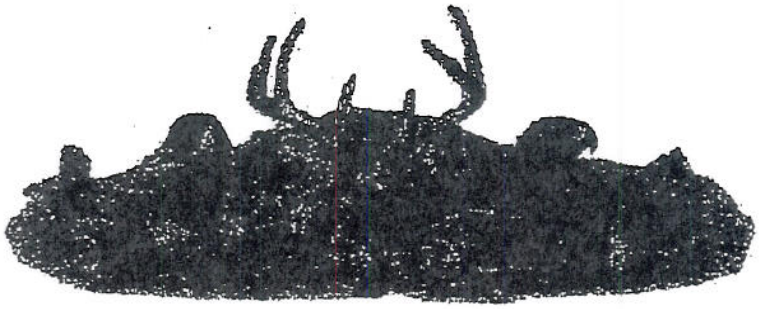
SUBJECT: Start of Study – Proposed Improvements to Approximately 10 Miles of the NC 11/US 13 Corridor, from near Ahoskie to Winton; Hertford County

REFERENCE: Federal Aid Project NHF-0013(37), WBS Element 45449.1.1, Tip Project R-5311

The Natural Heritage Program has no record of significant natural communities, significant natural heritage areas, or conservation/managed areas at the site nor within a mile of the project area. We have a 1958 record of the State Significantly Rare showy aster (*Eurybia spectabilis*), from "Roadside - field border, California, Hertford County". Not only is the location of the record somewhat vague, our Program almost always considers a record with a last date in the 1950's as an historical one. Thus, our Program will assume that the species does not currently exist at the location where reported.

Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-715-4195 \ FAX: 919-715-3060 Internet: www.oneNCNaturally.org



North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

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

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: June 30, 2011

SUBJECT: Response to the start of study notification from the N. C. Department of Transportation (NCDOT) regarding fish and wildlife concerns for the proposed widening of US 13/NC 11 and existing intersection improvements, Hertford County, North Carolina. TIP No. R-5311, SCH# 11-0299.

This memorandum responds to a request from the NCDOT for our concerns regarding impacts on fish and wildlife resources resulting from the subject project. Biologists on the staff of the N. C. Wildlife Resources Commission (NCWRC) have reviewed the proposed improvements. 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).

At this time we do not have any specific concerns related to this project. However, we do anticipate participating in the NEPA/404 Merger planning process for this project. To help facilitate document preparation and the review process, our general informational needs are outlined below:

1. Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with:

   NC Natural Heritage Program
   Dept. of Environment & Natural Resources
   1601 Mail Service Center
   Raleigh, NC 27699-1601.
   WWW.ncnhp.org

and,

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

NCDA Plant Conservation Program

P. O. Box 27647
Raleigh, N. C. 27611
(919) 733-3610

2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities.

3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.

4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.

5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).

6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.

7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.

8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.

9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

Thank you for the opportunity to provide input in the early planning stages for this project. If we can further assist your office, please contact me at (919) 528-9886.

APPENDIX B

NCDOT RELOCATION ASSISTANCE PROGRAM/ RELOCATION REPORTS

DIVISION OF HIGHWAYS RELOCATION PROGRAMS

It is the policy of NCDOT to ensure comparable replacement housing will be available prior to construction of state and federally-assisted projects. Furthermore, the North Carolina Board of Transportation has the following three programs to minimize the inconvenience of relocation:

- Relocation Assistance
- Relocation Moving Payments
- Relocation Replacement Housing Payments or Rent Supplement

As part of the Relocation Assistance Program, experienced NCDOT staff will be available to assist displacees with information such as availability and prices of homes, apartments, or businesses for sale or rent and financing or other housing programs. The Relocation Moving Payments Program provides for payment of actual moving expenses encountered in relocation. Where displacement will force an owner or tenant to purchase or rent property of higher cost or to lose a favorable financing arrangement (in case of ownership), the Relocation Replacement Housing Payments or Rent Supplement Program will compensate up to $22,500 to owners who are eligible and qualify and up to $5,250 to tenants who are eligible and qualify.

The relocation program for the proposed action will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), and/or the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). The program is designed to provide assistance to displaced persons in relocating to a replacement site in which to live or do business. At least one relocation officer is assigned to each highway project for this purpose.

The relocation officer will determine the needs of displaced families, individuals, businesses, non-profit organizations and farm operations for relocation assistance advisory services without regard to race, color, religion, sex, or national origin. The NCDOT will schedule its work to allow ample time, prior to displacement, for negotiations and possession of replacement housing which meets decent, safe and sanitary standards. The displacees are given at least a 90-day written notice after NCDOT purchases the property. Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement property will be within the financial means of the families and individuals displaced and will be reasonably accessible to their places of employment. The relocation officer will also assist owners of displaced businesses, non-profit organizations and farm operations in searching for and moving to replacement property.

All tenant and owner residential occupants who may be displaced will receive an explanation regarding all available options, such as (1) purchase of replacement housing, (2) rental of replacement housing, either private or public, or (3) moving existing owner-occupant housing to another site (if possible). The relocation officer will also supply information concerning other state and federal programs offering assistance to displaced

persons and will provide other advisory services as needed in order to minimize hardships to displaced persons in adjusting to a new location.

The Moving Expense Payments Program is designed to compensate the displacee for the costs of moving personal property from homes, businesses, non-profit organizations and farm operations acquired for a highway project. Under the Replacement Program for Owners, NCDOT will participate in reasonable incidental purchase payments for replacement dwellings such as attorney's fees, surveys, appraisals, and other closing costs and, if applicable, make a payment for any increased interest expenses for replacement dwellings. Reimbursement to owner-occupants for replacement housing payments, increased interest payments and incidental purchase expenses may not exceed $22,500 (combined total), except under the Last Resort Housing provision.

A displaced tenant may be eligible to receive a payment, not to exceed $5,250, to rent a replacement dwelling or to make a down payment, including incidental expenses, on the purchase of a replacement dwelling. The down payment is based upon what the state determines is required when the rent supplement exceeds $5,250.

It is a policy of the State that no person will be displaced by NCDOT's state or federally-assisted construction projects unless and until comparable replacement housing has been offered or provided for each displacee within a reasonable period of time prior to displacement. No relocation payment received will be considered as income for the purposes of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law.

Last Resort Housing is a program used when comparable replacement housing is not available, or when it is unavailable within the displacee's financial means, and the replacement payment exceeds the federal/state legal limitation. The purpose of the program is to allow broad latitude in methods of implementation by the state so that decent, safe and sanitary replacement housing can be provided. It is not believed this program will be necessary on the project, since there appear to be adequate opportunities for relocation within the area.

EIS RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

WBS ELEMENT:	45449.1.1	COUNTY	Hertford	Alternate 1 of 4 Alternate	
T.I.P. NO.:	R-5311				
DESCRIPTION OF PROJECT:	US 13/NC 11 from the NC 11/NC 561 intersection near Ahoskie to the US 13/158/NC 45 intersection near Winton, Hertford County, NCDOT Division 1				

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	1	0	1	1
Businesses	0	0	0	0
Billboards	0	3	3	0
Non-Profit	0	0	0	0

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
0	0	1	0	0

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Rent	
0-20M	0	$ 0-150	0	0-20M	0	$ 0-150	0
20-40M	1	150-250	0	20-40M	10+	150-250	0
40-70M	0	250-400	0	40-70M	10+	250-400	0
70-100M	0	400-600	0	70-100M	0	400-600	0
100 UP	0	600 UP	0	100 UP	0	600 UP	0
TOTAL	1		0		20+		0

Yes	No	Explain all "YES" answers.	REMARKS (Respond by Number)
	x	1. Will special relocation services be necessary?	
	x	2. Will schools or churches be affected by displacement?	
x		3. Will business services still be available after project?	3. No businesses impacted by this alternative.
	x	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.	6. Internet and local contact revealed sufficient housing available within range of of the project. Expanded search outside the County within 25 miles increased the resource pool. Due to the rural nature of this area, this range is considered comparable for replacement resources to the project area.
	x	5. Will relocation cause a housing shortage?	
x		6. Source for available housing (list).	.
	x	7. Will additional housing programs be needed?	
x		8. Should Last Resort Housing be considered?	8. Housing is available in all price ranges but probability still exists based on household determination, ds&s requirements, etc. for larger housing to be required. For the minimal rental impacts estimated, it is assumed there is a high probability for low income occupants that would require last resort housing options. Approximately 17%-18% of population are considered low income so some probability for super supplement payments to accommodate last resort housing issue. For owner's super supplement payments will also be considered optimum response to Last Resort Housing needs.
x		9. Are there large, disabled, elderly, etc. families?	9. There was a wheelchair ramp observed to the one residential displacement HTR.
	x	10. Will public housing be needed for project?	
	x	11. Is public housing available?	
x		12. Is it felt there will be adequate DSS housing	12. See cover memo for further explanation and #8 above

		housing available during relocation period?	
	X	13. Will there be a problem of housing within financial means?	
X		14. Are suitable business sites available (list source).	14. See number 3 above.
		15. Number months estimated to complete	15. Typical relocation time-frame should be sufficient to accommodate identified impacts
		RELOCATION? **18**	Total Estimated Relocation Costs: $59,500

	9/23/13			10/4/13
D. Wade Brown, SR/WA, R/W-RAC Right of Way Agent	Date		Relocation Coordinator	Date

FRM15-E

EIS RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

WBS ELEMENT:	45449.1.1	COUNTY	Hertford	Alternate 3 of 4 Alternate
T.I.P. NO.:	R-5311			
DESCRIPTION OF PROJECT:	US 13/NC 11 from the NC 11/NC 561 intersection near Ahoskie to the US 13/158/NC 45 intersection near Winton, Hertford County, NCDOT Division 1			

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	51	3	54	54
Businesses	0	0	0	0
Billboards	0	3	3	0
PP / Cemetery Plots	12	75	87	87

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
3	7	13	11	20

VALUE OF DWELLING / DSS DWELLING AVAILABLE

Owners		Tenants		For Sale		For Rent	
0-20M	3	$ 0-150	0	0-20M	10+	$ 0-150	0
20-40M	5	150-250	0	20-40M	10+	150-250	0
40-70M	12	250-400	3	40-70M	10+	250-400	5
70-100M	11	400-600	0	70-100M	10+	400-600	10+
100 UP	20	600 UP	0	100 UP	10+	600 UP	10+
TOTAL	51		3		50+		25

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.	
	x	1. Will special relocation services be necessary?	
X		2. Will schools or churches be affected by displacement?	
x		3. Will business services still be available after project?	
	x	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.	
	x	5. Will relocation cause a housing shortage?	
x		6. Source for available housing (list).	6. Internet and local contact revealed sufficient housing available within range of of the project. Expanded search outside the County within 25 miles increased the resource pool. Due to the rural nature of this area, this range is considered comparable for replacement resources to the project area.
	x	7. Will additional housing programs be needed?	
x		8. Should Last Resort Housing be considered?	8. Housing is available in all price ranges but probability still exists based on household determination, ds&s requirements, etc. for larger housing to be required. For the minimal rental impacts estimated, it is assumed there is a high probability for low income occupants that would require last resort housing options. Approximately 17%-18% of population are considered low income so some probability for super supplement payments to accommodate last resort housing issue. For owner's super supplement payments will also be considered optimum response to Last Resort Housing needs.

REMARKS (Respond by Number)

2. Pleasant Plain Baptist Church – 75 cemetery plots impacted; area does exist on the remainder but may not be sufficient to accommodate all displaced plots. Family cemeteries are typical in the area and may serve as replacement resources as well as possibility of the church using excess land on the west side of US 13 for replacement site. The church improvement is not directly impacted but proposed taking does come in proximity to front of the church and impacts parking.

3. No businesses impacted by this alternative.

x		9. Are there large, disabled, elderly, etc. families?	9. There were wheelchair ramps and elderly occupants observed on some impacted residences. This did not represent a majority of the properties impacted.
	x	10. Will public housing be needed for project?	
	x	11. Is public housing available?	
x		12. Is it felt there will be adequate DSS housing housing available during relocation period?	12. See cover memo for further explanation and #8 above.
	x	13. Will there be a problem of housing within financial means?	
x		14. Are suitable business sites available (list source).	14. See number 3 above. No businesses are impacted by this project.
		15. Number months estimated to complete	15. Typical relocation time-frame should be sufficient to accommodate identified impacts
		RELOCATION? **18**	Total Estimated Relocation Costs: $1,999,500

Other personal property moves were 3 billboards and 12 parcels that contained unhabitable housing or storage sheds. Personal Property moves were assumed on all of those 12 instances.

	9/23/13			10/4/13	
D. Wade Brown, SR/WA, R/W-RAC Right of Way Agent	Date		Relocation Coordinator	Date	

FRM15-E

EIS RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

WBS ELEMENT:	45449.1.1	COUNTY	Hertford	Alternate 5 of 4 Alternate
T.I.P. NO.:	R-5311			
DESCRIPTION OF PROJECT:	US 13/NC 11 from the NC 11/NC 561 intersection near Ahoskie to the US 13/158/NC 45 intersection near Winton, Hertford County, NCDOT Division 1			

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	51	3	54	54
Businesses	0	0	0	0
Billboards	0	6	6	0
PP / Cemetery Plots	12	75	87	87

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
3	7	13	11	20

VALUE OF DWELLING

Owners		Tenants	
0-20M	3	$ 0-150	0
20-40M	5	150-250	0
40-70M	12	250-400	3
70-100M	11	400-600	0
100 UP	20	600 UP	0
TOTAL	51		3

DSS DWELLING AVAILABLE

For Sale		For Rent	
0-20M	10+	$ 0-150	0
20-40M	10+	150-250	0
40-70M	10+	250-400	5
70-100M	10+	400-600	10+
100 UP	10+	600 UP	10+
	50+		25

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.	
	x	1. Will special relocation services be necessary?	
X		2. Will schools or churches be affected by displacement?	
x		3. Will business services still be available after project?	
	x	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.	
	x	5. Will relocation cause a housing shortage?	
x		6. Source for available housing (list).	
	x	7. Will additional housing programs be needed?	
x		8. Should Last Resort Housing be considered?	

REMARKS (Respond by Number)

2. Pleasant Plain Baptist Church – 75 cemetery plots impacted; area does exist on the remainder but may not be sufficient to accommodate all displaced plots. Family cemeteries are typical in the area and may serve as replacement resources as well as possibility of the church using excess land on the west side of US 13 for replacement site. The church improvement is not directly impacted but proposed taking does come in proximity to front of the church and impacts parking.

3. No businesses impacted by this alternative.

6. Internet and local contact revealed sufficient housing available within range of of the project. Expanded search outside the County within 25 miles increased the resource pool. Due to the rural nature of this area, this range is considered comparable for replacement resources to the project area.

8. Housing is available in all price ranges but probability still exists based on household determination, ds&s requirements, etc. for larger housing to be required. For the minimal rental impacts estimated, it is assumed there is a high probability for low income occupants that would require last resort housing options. Approximately 17%-18% of population are considered low income so some probability for super supplement payments to accommodate last resort housing issue. For owner's super supplement payments will also be considered optimum response to Last Resort Housing needs.

x		9. Are there large, disabled, elderly, etc. families?	9. There were wheelchair ramps and elderly occupants observed on some impacted residences. This did not represent a majority of the properties impacted.
	x	10. Will public housing be needed for project?	
	x	11. Is public housing available?	
x		12. Is it felt there will be adequate DSS housing housing available during relocation period?	12. See cover memo for further explanation and #8 above.
	x	13. Will there be a problem of housing within financial means?	
x		14. Are suitable business sites available (list source).	14. See number 3 above. No businesses are impacted by this project.
		15. Number months estimated to complete	15. Typical relocation time-frame should be sufficient to accommodate identified impacts
		RELOCATION? **18**	Total Estimated Relocation Costs: $2,029,500

Other personal property moves were 6 billboards and 12 parcels that contained unhabitable housing or storage sheds. Personal Property moves were assumed on all of those 12 instances.

	9/23/13			10/4/13	
D. Wade Brown, SR/WA, R/W-RAC Right of Way Agent	Date		Relocation Coordinator	Date	

FRM15-E

EIS RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

WBS ELEMENT:	45449.1.1	COUNTY	Hertford	Alternate 6 of 4 Alternate
T.I.P. NO.:	R-5311			
DESCRIPTION OF PROJECT:	US 13/NC 11 from the NC 11/NC 561 intersection near Ahoskie to the US 13/158/NC 45 intersection near Winton, Hertford County, NCDOT Division 1			

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	1	0	1	1
Businesses	0	0	0	0
Billboards	0	3	3	0
Non-Profit	0	0	0	0

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
0	0	1	0	0

VALUE OF DWELLING

Owners		Tenants	
0-20M	0	$ 0-150	0
20-40M	1	150-250	0
40-70M	0	250-400	0
70-100M	0	400-600	0
100 UP	0	600 UP	0
TOTAL	1		0

DSS DWELLING AVAILABLE

For Sale		For Rent	
0-20M	0	$ 0-150	0
20-40M	10+	150-250	0
40-70M	10+	250-400	0
70-100M	0	400-600	0
100 UP	0	600 UP	0
	20+		0

ANSWER ALL QUESTIONS

Yes	No	Explain all "YES" answers.	
	x	1.	Will special relocation services be necessary?
	x	2.	Will schools or churches be affected by displacement?
x		3.	Will business services still be available after project?
	x	4.	Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	x	5.	Will relocation cause a housing shortage?
x		6.	Source for available housing (list).
	x	7.	Will additional housing programs be needed?
x		8.	Should Last Resort Housing be considered?
x		9.	Are there large, disabled, elderly, etc. families?
	x	10.	Will public housing be needed for project?
	x	11.	Is public housing available?
x		12.	Is it felt there will be adequate DSS housing

REMARKS (Respond by Number)

3. No businesses impacted by this alternative.

6. Internet and local contact revealed sufficient housing available within range of of the project. Expanded search outside the County within 25 miles increased the resource pool. Due to the rural nature of this area, this range is considered comparable for replacement resources to the project area.

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8. Housing is available in all price ranges but probability still exists based on household determination, ds&s requirements, etc. for larger housing to be required. For the minimal rental impacts estimated, it is assumed there is a high probability for low income occupants that would require last resort housing options. Approximately 17%-18% of population are considered low income so some probability for super supplement payments to accommodate last resort housing issue. For owner's super supplement payments will also be considered optimum response to Last Resort Housing needs.

9. There was a wheelchair ramp observed to the one residential displacement HTR.

12. See cover memo for further explanation and #8 above

		housing available during relocation period?	
	X	13. Will there be a problem of housing within financial means?	
X		14. Are suitable business sites available (list source).	14. See number 3 above.
		15. Number months estimated to complete	15. Typical relocation time-frame should be sufficient to accommodate identified impacts
		RELOCATION? **18**	Total Estimated Relocation Costs: $59,500

	9/23/13			10/4/13	
D. Wade Brown, SR/WA, R/W-RAC Right of Way Agent	Date		Relocation Coordinator	Date	

FRM15-E

APPENDIX C

CONCURRENCE INFORMATION

NEPA/404 MERGER TEAM MEETING AGREEMENT

Concurrence Point No. 1: Purpose and Need

PROJECT NO./TIP NO./ NAME/DESCRIPTION:

Federal Aid Project Number:	NHF-0013(37)
State Project Number:	WBS Element 45449.1.1
TIP Project Number:	R-5311
TIP Description:	US 13/NC 11 from the NC 11-561 intersection to the US 13-158/ NC 45 intersection, Hertford County

The Project Team concurred on this date of September 14, 2011 with the purpose of and need for the proposed project as stated below and the project study area as described below and shown in the attached exhibit.

Purpose and Need of Proposed Project

The purpose of this project is to improve the safety of the NC 11/US 13 corridor between the NC 11-561 intersection and the US 13-158/NC 45 intersection in Hertford County.

NAME		AGENCY
Gary Jordan	9/14/2011	USFWS
Travis Wilson	9-14-2011	NCWRC
[signature]	9-14-11	USEPA
William J Biddlecome	9/14/11	USACE
[signature]	9/14/11	NCDWQ
Cathy Brittingham	9/14/11	DCM
Renee Gledhill-Earley	9/14/11	SHPO/DCR
Ron Lucas		FHWA
[signature]		NCDMF

NEPA/404 MERGER TEAM MEETING AGREEMENT

REVISED – Concurrence Point No. 2: *Design Options for Detailed Study*

PROJECT NO./TIP NO./ NAME/DESCRIPTION:

Federal Aid Project Number: NHF-0013(37)
State Project Number: WBS Element 45449.1.1
TIP Project Number: R-5311
TIP Description: Improvements to US 13 / NC 11 from NC 11/ NC 561 to US 13 / US 158 / US 45 in Hertford County

The Project Team concurred on this date of September 19, 2012 that the following alternatives (as indicated in the right column) be carried forward for detailed study.

Alternative	Typical Section	Location	Facility Type	Control of Access	Intersection/Interchange Descriptions	Yes/No
Alternative 1	Four-lane divided	Part on new location*	Freeway	Full	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes
Alternative 2	Four-lane divided	Existing location	Freeway	Full	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	No
Alternative 3	Four-lane divided	Existing location	Expressway	Partial	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes
Alternative 4	Two-lane undivided	Existing location	Expressway	Partial	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461; no widening	No
Alternative 5	Four-lane divided	Existing location	Superstreet	Partial	Conversion of intersections to superstreet at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes
Alternative 6	Four-lane divided	Part on new location*	Superstreet on existing, Freeway on new location	Partial	Conversion of intersections to superstreet at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes

*The new location segment would extend from US 13/SR 1212 (Shortcut Road) to US 13/NC 461, east of existing US 13.

US Army Corps of Engineers — William J. Biddlecome 9/19/12

US Environmental Protection Agency — 9/19/12

US Fish and Wildlife Service — Gary Jordan 9/19/2012

NC Wildlife Resources Commission — 9-19-2012

NC Department of Cultural Resources — Renee Gledhill-Earley 9/19/12

NCDENR, Division of Water Quality — 9/19/12

NC Department of Transportation — Allyn K. Gillespie 9/19/12

Federal Highway Administration	9/19/2012
NC Division of Coastal Management	9/19/12
Peanut Belt RPO	
NCDENR, Division of Marine Fisheries	9/20/2012

NEPA/404 MERGER TEAM MEETING AGREEMENT

REVISED – Concurrence Point No. 2: *Design Options for Detailed Study*

PROJECT NO./TIP NO./ NAME/DESCRIPTION:

Federal Aid Project Number: NHF-0013(37)
State Project Number: WBS Element 45449.1.1
TIP Project Number: R-5311
TIP Description: Improvements to US 13 / NC 11 from NC 11/ NC 561 to US 13 / US 158 / US 45 in Hertford County

The Project Team concurred on this date of September 19, 2012 that the following alternatives (as indicated in the right column) be carried forward for detailed study.

Alternative	Typical Section	Location	Facility Type	Control of Access	Intersection/Interchange Descriptions	Yes/No
Alternative 1	Four-lane divided	Part on new location*	Freeway	Full	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes
Alternative 2	Four-lane divided	Existing location	Freeway	Full	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	No
Alternative 3	Four-lane divided	Existing location	Expressway	Partial	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes
Alternative 4	Two-lane undivided	Existing location	Expressway	Partial	Interchanges at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461; no widening	No
Alternative 5	Four-lane divided	Existing location	Superstreet	Partial	Conversion of intersections to superstreet at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes
Alternative 6	Four-lane divided	Part on new location*	Superstreet on existing, Freeway on new location	Partial	Conversion of intersections to superstreet at NC 11/NC 561, SR 1212/SR 1213, US 13/NC 461	Yes

*The new location segment would extend from US 13/SR 1212 (Shortcut Road) to US 13/NC 461, east of existing US 13.

US Army Corps of Engineers — William J. Biddlecome 9/19/12

US Environmental Protection Agency — 9/19/12

US Fish and Wildlife Service — Gary Jordan 9/19/2012

NC Wildlife Resources Commission — 9-19-2012

NC Department of Cultural Resources — Renee Gledhill-Earley 9/19/12

NCDENR, Division of Water Quality — 9/19/12

NC Department of Transportation — Allison K. Billespie 9/19/12

Federal Highway Administration	9/19/2012
NC Division of Coastal Management	9/19/12
Peanut Belt RPO	9/20/12
NCDENR, Division of Marine Fisheries	

NEPA/404 MERGER TEAM MEETING AGREEMENT

Concurrence Point No. 2A: *Bridging Decisions & Alignment Review*

PROJECT INFORMATION:

Federal Aid Project Number:	NHF-0013(37)
State Project Number:	WBS Element 45449.1.1
TIP Project Number:	R-5311
TIP Description:	Improvements to US 13/NC 11 from NC 11/ NC 561 to US 13/US 158/US 45 in Hertford County

The Project Team concurred on this date of June 18, 2012 that the only major hydraulic structures on this project will be those listed in Table 1 below. All other structures are anticipated to have hydraulic openings of 72-inches or less.

Table 1: Hydraulic Structure Recommendations

Stream	Station	Alternative	Existing Structure	Recommended Structure	Stream Impacts (linear feet)
SZ	82+40	All	3 @ 48-inch RCP	Retain & extend	165
Mill Branch	309+48	3 & 5	2 @ 48-inch RCP	Minimum required hydraulic structure	255

RCP – reinforced concrete pipe
RCBC – reinforced concrete box culvert

US Army Corps of Engineers	DocuSigned by: Tracey Wheeler 09/05/2013 7FACA9008DE24E8...
US Environmental Protection Agency	DocuSigned by: Chris Militscher 09/04/2013 60B6067D021E483...
US Fish and Wildlife Service	DocuSigned by: Gary Jordan 09/05/2013 501BAD677C42452...
National Marine Fisheries Service	DocuSigned by: Fritz Rohde 09/05/2013 7D10D31C923E4AC...
Federal Highway Administration	DocuSigned by: Ronald D. Lucas 09/19/2013 7707B71B714A4F1...
NC Wildlife Resources Commission	DocuSigned by: Travis W. Wilson 09/04/2013 31585D0B682E436...
NC Department of Cultural Resources	DocuSigned by: Renee Gledhill-Earley 09/05/2013 AC28D78C939246E...
NC Division of Water Resources	DocuSigned by: David Wainwright 09/05/2013 7ADAA58A4057400...
NC Division of Coastal Management	DocuSigned by: Cathy Brittingham 09/19/2013 DE3BD6781DB34D1...
NC Division of Marine Fisheries	DocuSigned by: Kevin Hart 09/10/2013 9D1D3384E3094BE...
NC Department of Transportation	DocuSigned by: Kim Gillespie 09/04/2013 E9AA3A8EE2574FE...
Peanut Belt Rural Planning Organization	DocuSigned by: Justin Oakes 09/10/2013 67E5736D1E3C443...