

**Proposed Widening of SR 1121 (Ray Road)
From NC 210 to SR 1120 (Overhills Road)
Harnett County
Federal Aid Project STP-1121(9)
WBS No. 39017.1.1
T.I.P. No. U-3465**

CATEGORICAL EXCLUSION

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

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



APPROVED:

4/27/09
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Project Development and Environmental Analysis Branch, NCDOT

4/29/09
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Federal Highway Administration

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North Carolina Department of Transportation

April, 2009

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PROJECT COMMITMENTS

**Proposed Widening of SR 1121 (Ray Road)
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Roadway Design Unit

The project includes 14-foot outside lanes to accommodate bicycles.

Project Development and Environmental Analysis

An Archaeological survey found one site eligible for listing on the National Register of Historic Places. Avoidance of Site 31HT990 was recommended; however, impacts to Site 31HT990 can not be avoided due to its location along both sides of SR 1121 (Ray Road). Mitigation efforts will include data recovery excavations at Site 31HT990 prior to construction activities.

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**Proposed Widening of SR 1121 (Ray Road)
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SUMMARY

A. Type of Action

This Categorical Exclusion (CE) has been prepared to evaluate the potential impacts of this proposed transportation improvement project. From this evaluation, the North Carolina Department of Transportation (NCDOT) and Federal Highway Administration (FHWA) anticipate significant impacts to the environment will not occur due to this proposed project; therefore, the project is classified as a Federal “Categorical Exclusion”.

B. Description of Action

The NCDOT, in consultation with the FHWA, proposes to widen SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road), with intersection improvements at the intersection of Ray Road and Overhills Road in Harnett County (see Figures 1 and 2). The widening will convert Ray Road from its current two-lane configuration to a four-lane, median-divided facility (see Figure 3).

The total length of the project is 3.8 miles.

This project is included in the approved 2009-2015 North Carolina State Transportation Improvement Program (STIP). The total cost in the STIP is \$20,400,000, which includes \$2,300,000 for right of way, \$400,000 for mitigation, \$17,700,000 for construction. The current estimated total cost is \$30,120,000. Right of way acquisition is scheduled to begin in Federal Fiscal Year (FFY) 2011 and construction in FFY 2013.

C. Summary of Purpose and Need

The purpose of the proposed project is to improve the traffic carrying capacity of SR 1121 (Ray Road).

D. Alternatives Considered

The alternatives considered for the project consists of the “no-build” alternative and a widen on existing roadway alternative, utilizing a “best fit” alignment.

E. NCDOT Recommended Alternative

Widen on existing SR 1121 (Ray Road), utilizing a “best fit alignment” is the NCDOT recommended Alternative. This alternative best minimizes overall impacts to the human and natural environment.

F. Summary of Environmental Effects

Adverse impacts to the human and natural environment were minimized through the use of a “best fit” alignment. No adverse effect on the air quality of the surrounding area is anticipated as a result of the project. The proposed project will not impact any properties eligible for the National Register of Historic Places. The project will encroach upon one known archaeological site, eligible for listing in the National Register. Five potential Underground Storage Tanks (UST’s) Facilities were identified within the project limits; low to non-existing monetary and scheduling impacts are anticipated to result from these sites. A maximum of six business relocations could occur, and nine residential relocations are anticipated as a result of this proposed improvement. A total of 33 noise receptors will be impacted; eight are characterized as being substantial noise impacts.

Three federally protected species are listed for Harnett County; the biological conclusion for all three species was “No Effect.”

Table S-1 gives a summary of the resources and impacts due to the recommended alternative. Figure 2 shows the recommended alternative.

Table S-1: Summary of Resources and Impacts

Resource	Widen Existing Alternative
Length (miles)	3.8
Railroad Crossings	0
Schools	3
Recreational Areas and Parks	0
Churches	1
Cemeteries	0
Major Utility Crossings	0
National Register Eligible Properties	0
Archaeological Sites	1
Federally-Listed Species within Corridor	0
100-Year Floodplain Crossings	0
Prime Farmland	0
Residential Relocations	9
Business Relocations	6
Potential Hazardous Material Sites / UST's	3/5
Wetland Impacts (acres)	0.2
Stream Crossings	0
Stream Impacts (linear feet)	0
Substantial Noise Impacts	8
Water Supply Watershed Protected Areas	0
Forest Impacts (acres)	11.5
Wildlife Refuges and Game Lands	0
Section 4(f)/6(f) Impacts	0
Low Income & Minority Population Impacts	0
Construction Cost	\$22,500,000
Right of Way Cost	\$ 6,370,000
Utility Relocation Cost	\$ 1,250,000
Total Cost	\$30,120,000

G. Permits Required

It is anticipated that the proposed action will be permitted under the United States Army Corps of Engineers (USACE) Nationwide Permit 23.

H. Coordination

Federal, state, and local agencies were consulted during the preparation of this Categorical Exclusion. Written comments were received and considered from agencies noted with an asterisk (*) during the preparation of this assessment.

- U.S. Army Corps of Engineers
- U.S. Department of Defense
- U.S. Environmental Protection Agency
- Federal Emergency Management Administration
- * U.S. Fish and Wildlife Service
- Geological Survey
- Soil Conservation Service
- * State Clearinghouse
- * N.C. Department of Cultural Resources
- * N.C. Department of Environment and Natural Resources
- * N.C. Department of Public Instruction
- * N.C. Wildlife Resources Commission
- * N.C. Division of Water Quality
- * N.C. Division of Forest Resources
- Mid Carolina Council of Governments
- Cumberland County Commissioners
- Harnett County Commissioners
- City of Fayetteville

I. Contact Information

Additional information concerning the proposal and assessment can be obtained by contacting the following:

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I. DESCRIPTION OF PROPOSED ACTION

A. General Description

The North Carolina Department of Transportation (NCDOT), in consultation with the Federal Highway Administration (FHWA), proposes to widen SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road), with intersection improvements at the intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road) in Harnett County (see Figures 1 and 2). The widening will convert SR 1121 (Ray Road) from its current two-lane configuration to a four-lane, median-divided facility.

The proposed facility will have 12-foot inside lanes, 14-foot outside lanes, and a 23-foot raised grass median with curb and gutter (see Figure 3). The project will also include 10-foot grass berms to allow for any future sidewalks.

The project also proposes the realignment of SR 1120 (Overhills Road) at its intersection with SR 1121 (Ray Road), to address safety concerns at this intersection.

The total length of the project is 3.8 miles.

B. Historical Resume & Project Status

The scoping meeting for this project was held in September 2006. The project was introduced to the public at a Citizens Informational Workshop held in March 2007.

C. Cost Estimates

This project is included in the approved 2009-2015 North Carolina State Transportation Improvement Program (STIP). The total cost in the STIP is \$20,400,000, which includes \$2,300,000 for right of way, \$400,000 for mitigation, \$17,700,000 for construction. The current estimated total cost is \$30,120,000. Right of way acquisition is scheduled to begin in Federal Fiscal Year (FFY) 2011 and construction in FFY 2013.

II. PURPOSE AND NEED FOR PROJECT

A. Purpose of Project

The purpose of the proposed project is to improve the traffic carrying capacity of SR 1121 (Ray Road).

B. Need for Project

The need for the proposed project results from anticipated growth that is expected to occur in and around in the township of Anderson Creek. It is anticipated that much of the projected growth associated with the military Base Realignment and Closure program (BRAC) will occur in the Anderson Creek area due to its proximity to the Fort Bragg Military Reservation and Fayetteville metro area, in neighboring Cumberland County.

Several recent developments in the U.S. military, most notably BRAC, will result in the transfer of around 25,000 military personnel and family member to the Fort Bragg region, as well as military and private contractors. Harnett County is a Tier One BRAC County, one of the counties expected to see the most growth impacts from BRAC.

The existing SR 1121 (Ray Road) will not provide adequate capacity to service the projected 2030 traffic volumes. The existing mainline is projected to operate at Level of Service (LOS) E in the design year, without improvements. Most of the intersections will operate at LOS F in the design year without improvements.

Safety concerns exist along existing SR 1121 (Ray Road), especially at its intersection with SR 1120 (Overhills Road). A Traffic Safety Analysis showed that the geometry of this intersection is acutely skewed complicating the motorist's judgment to traverse through the intersection. NCDOT has plans to make temporary spot safety improvements at this intersection; however, to adequately address capacity, the intersection will be realigned as a part of the proposed SR 1121 (Ray Road) widening project. The proposed realignment will also alleviate the safety concerns at the intersection.

C. Description of Existing Conditions

1. Functional Classification

SR 1121 (Ray Road) is designated as an Urban Collector on the North Carolina Statewide Functional Classification System.

2. Physical Description of Existing Facility

a. Roadway Cross Section

SR 1121 (Ray Road) is currently a two-lane facility with 10-foot lanes and 4 to 6-foot shoulders, 2-feet of which are paved.

b. Horizontal and Vertical Alignment

The vertical alignment along existing SR 1121 (Ray Road) is suitable for the posted speed limit. However, there are concerns with the horizontal alignment at the intersection of SR 1121 (Ray Road) and SR 1121 (Overhills Road).

c. Right of Way and Access Control

The existing right of way along SR 1121 (Ray Road) is 60 feet. There is currently no control of access.

d. Speed Limit

The existing speed limit along SR 1121 (Ray Road) is predominately 45 miles per hour (mph); however, a short section between SR 1123 (Creeksville Church Road) and SR 1160 (Azalea Drive) has a posted speed limit of 55 mph.

e. Intersections/Interchanges

There are two four-legged intersections along SR 1121 (Ray Road): a signalized intersection with NC 210, and a flasher unit controlled intersection with SR 1120 (Overhills Road). In addition there are seven three-legged intersections along SR 1121 (Ray Road): including its intersection with SR 1124 (Rambeaut Road), SR 1123 (Creeksville Church Road), SR 1160 (Azalea Drive), SR 1162 (Rolling Springs Drive), SR 1122 (McKay Road), Spring Valley Road, and Northpoint Road.

f. Railroad Crossings

There are no railroad crossings on the project.

g. Hydraulic Structures

There are no existing bridges, culverts or pipes on this project.

h. Bicycle and Pedestrian Facilities/Greenways

No bicycle and pedestrian facilities or greenways exist along the project corridor.

i. Utilities

The following utilities are located within the project corridor: underground fiber optic lines, telephone, cable TV, electricity, water, and sewer.

j. School Bus Usage

Currently, there are approximately 35 bus routes that travel round trip along SR 1121 (Ray Road) on a daily basis to area schools, including Overhills High school and Overhills Middle school located on SR 1121 (Ray Road). Overhills Elementary school is scheduled to open in August of 2009 and will require 15 additional bus routes, raising the total to 50 round trips per day.

3. Traffic Carrying Capacity

a. Existing Traffic Volumes

According to the 2006 traffic counts, the existing Average Annual Daily Traffic (AADT) on SR 1121 (Ray Road) was between 8,000 and 9,300 vehicles per day (vpd) (see Figure 4).

b. Existing Levels of Service

The capacity analysis was performed following the NCDOT Congestion Management Section's Capacity Analysis Guidelines for TIP Projects. Highway Capacity Software[®] (HCS2000) was used to compute Level of Service (LOS) and other performance measures for the roadway segments along the study corridor. Intersection analyses were performed in Synchro[®] (Version 7-Build 759) to determine LOS and delay for each intersection under Existing and Design Year scenarios.

Simulations were completed for both the build and no-build scenarios using the Base year (2006) and the Design year (2030) traffic forecasts. A mainline analysis of SR 1121 (Ray Road) projected that under the existing geometry and with No Build conditions, the mainline will operate at LOS E during the Base year (2006). Thirteen (13) key intersections were also evaluated for proposed improvements. Under current traffic conditions, the intersection of SR 1121 (Ray Road) and NC 210 operates at LOS C during the peak hours. The intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road) is currently operating at LOS F during the AM peak hour, and at LOS D during the PM peak hour.

c. Future Traffic Volumes

According to the design year (2030) traffic forecasts, the estimated AADT for SR 1121 (Ray Road) will range from 19,300 vpd to 21,700 vpd (see Figure 4).

d. Future Levels of Service

Simulations were completed for both the build and no-build scenarios using the Design year (2030) traffic forecasts. A mainline analysis of SR 1121 (Ray Road) projected that under the existing geometry and with No Build conditions, the mainline will operate at LOS E during the Design year (2030); however, with the proposed improvements the mainline will operate at LOS B during the Design year (2030). Table 1 outlines the mainline analysis results.

Table 1: Mainline Level-of-Service Summary (Peak Direction)

Condition	No Build 2-lane section	Build 4-lane section
	LOS	LOS
Existing (2006) Traffic	E	A
Design Year (2030) Traffic	E	B

Thirteen (13) key intersections were also evaluated for proposed improvements. With the proposed improvements the intersection of SR 1121 (Ray Road) and NC 210 operates at LOS D during the peak hour for the Design year (2030). The intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road) is projected to operate at LOS D during the AM peak hour, and at LOS C during the PM peak hour, with the proposed realignment. Table 2 details the results of the intersection analysis.

Table 2: Intersection Level-of-Service Summary

	No Build 2-lane section LOS		Build 4-lane section LOS	
	2006 Traffic LOS AM (PM)	2030 Traffic LOS AM (PM)	2006 Traffic LOS AM (PM)	2030 Traffic LOS AM (PM)
SR 1121 (Ray Road) Intersections				
NC 210 (signalized)	C (C)	E (C)	C (C)	D (C)
SR 1124 (Rambeaut Road)	B (B)	F (F)	B (B)	C (C)
SR 1123 (Creeksville Church Road)	B (B)	F (F)	B (B)	C (C)
SR 1160 (Azalea Drive)	B (B)	F (F)	B (B)	C (D)
SR 1162 (Rolling Springs Drive)	C (C)	F (F)	A (B)	B (B)
SR 1122 (McKay Road)	C (C)	F (F)	B (B)	C (B)
SR 1122 (Spring Valley Road)	B (B)	F (F)	B (B)	C (C)
Overhills High School (South Driveway)	B (B)	F (F)	B (B)	E (E)
Overhills High School (North Driveway)	C (C)	F (F)	B (A)	C (B)
Overhills High School Bus Driveway/ Overhills Elementary Proposed	C (C)	F (F)	C (B)	F (E)
Overhills Middle School/ Proposed Elementary Bus Driveway	B (C)	F (F)	B (B)	E (F)
Northpoint Road	C (C)	F (F)	B (A)	C (C)
SR 1120 (Overhills Road) (Unsignalized/Signalized)	F (D)	F (F)	B (B)	D (C)

In evaluating the SR 1121 (Ray Road) corridor under build scenarios, the following intersections were studied as right-in/ right out access points:

- Rolling Springs Drive
- Spring Valley Road
- Overhills High School north driveway
- Northpoint Road

The intersections above were studied as right-in/right-out access due to spacing guidelines and in order to present a conservative analysis for the surrounding full movement intersections.

e. Accident Data

A crash analysis was performed on SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road). A total of 108 crashes were reported along this section of roadway between May 1, 2003 and April 30, 2006. For crash rate purposes, this location can be classified as a two-lane undivided urban secondary route. Table 3 shows the comparison of the crash rates for the analyzed section of SR 1121 (Ray Road) versus the 2001-2003 statewide crash rates for a comparable road type and configuration.

Table 3: Crash Rate Comparisons

Rate	Crashes	Crashes per 100 MVM¹	Statewide Rate²	Critical Rate³
Total	108	325.52	407.28	466.41
Fatal	1	3.01	0.58	5.76
Non-Fatal Injury	51	153.72	131.79	166.07
Night	33	99.46	91.95	120.83
Wet	21	63.29	71.95	97.67

¹ MVM = Million Vehicle Miles

² 2001-2003 statewide crash rate for urban 2-lane undivided secondary routes in North Carolina

³ Based on the statewide crash rate (95% level of confidence). The critical crash rate is a statistically derived value against which a calculated rate can be compared to see if the rate is above an average far enough so that something besides chance must be the cause.

Frontal Impact crashes (including Angle and Turning) accounted for 34% of all crashes within the study area. Factored into this percentage is a large proportion that occurred at the intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road). There were 22 Frontal Impact crashes, or 20% of the total crashes in this section of roadway, which occurred at this location. The existing signal is a flasher unit with the stop control being on SR 1120 (Overhills Road). The geometry of the roadway is acutely skewed complicating the motorist’s judgment to traverse this intersection. Failure to yield the right of way was cited as causal in the majority of these crashes.

The crash rate for the analyzed section exceeded the statewide rates in Fatal, Non-Fatal injury and Night, but did not exceed the critical rates.

f. Airports

There are no public airports within 10 miles of the project corridor.

g. Other Highway Projects in the Area

There are two TIP projects near the proposed project area. TIP project R-2529 proposes to widen NC 24 and NC 27 from the Carthage Bypass to NC 87. It is currently unfunded for both right of way and construction. There is also one bridge replacement project in the area, B-3655, which is funded for construction in FY 2009. B-3655 proposes to replace Bridge No. 59 over Mcleod Creek on SR 1117 (Nursery Road).

4. Transportation and Land Use Plans

a. NC Transportation Improvement Program (TIP)

This project is currently included in the 2009-2015 TIP. Right of way acquisition is scheduled to begin in Federal Fiscal Year (FFY) 2011 and construction in FFY 2013.

b. Local Thoroughfare Plans

The Fayetteville Transportation Plan was completed by NCDOT's Transportation Planning Branch in September 2004. This transportation plan designates this project as a major thoroughfare.

c. Land Use Plans

Based on the Harnett County Land Use Map, the proposed project is located within a Compact Mixed Use Area and the intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road) is the center of a Rural Development Node.

5. System Linkage/Travel Time/Access Need

The proposed widening will add increased capacity to the main route, SR 1121 (Ray Road), that connects the rapidly growing township of Anderson Creek to areas south such as Fort Bragg, the Town of Spring Lake, and the City of Fayetteville.

6. Safety

Safety concerns exist along existing SR 1121 (Ray Road), especially at its intersection with SR 1120 (Overhills Road). The geometry of this intersection is acutely skewed complicating the motorist's judgment to traverse this intersection. NCDOT has plans to make temporary spot safety improvements at this intersection; however, to improve safety and capacity the intersection will be realigned as a part of the proposed SR 1121 (Ray Road) widening project.

D. Benefits of Proposed Project

The proposed widening of SR 1121 (Ray Road) will improve the traffic carrying capacity of SR 1121 (Ray Road) into the future. This proposed project will also establish a more efficient travel route between the rapidly growing township of Anderson Creek and areas to the south such as, Fort Bragg, the Town of Spring Lake, and the City of Fayetteville. This project will also address the safety concerns along existing SR 1121 (Ray Road) especially at the intersection with SR 1120 (Overhills Road).

III. ALTERNATIVES

A. Preliminary Study Alternatives

1. No-Build Alternative

The No-Build Alternative offers no improvements to the project area. This alternative assumes that all other projects currently planned or programmed in the TIP will be constructed in the area as proposed.

This alternative will not allow for improved safety conditions along SR 1121 (Ray Road), nor will it provide the additional capacity needed to efficiently service the projected growth within the township of Anderson Creek. Level of service along SR 1121 (Ray Road) will continue to worsen unless improvements are made.

Since the No-Build Alternative does not address the purpose and need of the proposed action, it is not recommended. However, it is used as a basis for comparison of the other alternatives.

2. Alternative Modes of Transportation

While the inclusion of bicycle and pedestrian accommodations, as well as transit options, could aid in reducing congestion in the project area, these options alone do not meet the purpose and need of this project since they do not improve the traffic carrying capacity of SR 1121 (Ray Road). There are limited transit options currently available in this section of Harnett County.

3. Transportation Systems Management

The Transportation Systems Management (TSM) alternative includes those types of limited construction activities designed to maximize the utilization and energy efficiency of an existing roadway. Possible TSM improvement options with this alternative include traffic signal optimization or improvements to existing roadways in the vicinity of the proposed project. Due to the limited number of signals on the project and limited surrounding roadway network, improvements of this type alone will not adequately address the traffic carrying capacity of SR 1121 (Ray Road).

4. Widen on Existing Utilizing a “best fit” Alignment

This alternative begins at the intersection of SR 1121 (Ray Road) and NC 210 and continues north-west, along the existing alignment of SR 1121 (Ray Road) until its intersection with SR 1121 (Overhills Road). This Alternative also proposes the realignment of both legs of SR 1120 (Overhills Road) at its intersection with SR 1121 (Ray Road) to address safety concerns and capacity at this intersection. The western leg of SR 1120 (Overhills Road) will be relocated approximately 650 feet to the north of its existing location. The eastern leg of

SR 1120 (Overhills Road) will be relocated approximately 425 feet south of its existing location (see Figure 2).

B. Detailed Study Alternative

Widening on Existing Utilizing a “best fit” Alignment was the only alternative carried forward for detailed environmental studies. The impacts associated with this alternative are noted in Table 4 below.

Table 4: Summary of Resources and Impacts

Resource	Widen Existing
Length (miles)	3.8
Railroad Crossings	0
Schools	3
Recreational Areas and Parks	0
Churches	1
Cemeteries	0
Major Utility Crossings	0
National Register Eligible Properties	0
Archaeological Sites	1
Federally-Listed Species within Corridor	0
100-Year Floodplain Crossings	0
Prime Farmland	0
Residential Relocations	9
Business Relocations	6
Potential Hazardous Material Sites / UST's	3/5
Wetland Impacts (acres)	0.2
Stream Crossings	0
Stream Impacts (linear feet)	0
Substantial Noise Impacts	8
Water Supply Watershed Protected Areas	0
Forest Impacts (acres)	11.5
Wildlife Refuges and Game Lands	0
Section 4(f)/6(f) Impacts	0
Low Income & Minority Population Impacts	0
Construction Cost	\$22,500,000
Right of Way Cost	\$ 6,370,000
Utility Relocation Cost	\$ 1,250,000
Total Cost	\$30,120,000

C. NCDOT Recommended Alternative

After careful review and extensive environmental studies, NCDOT recommends Widening on Existing Utilizing a “best fit” Alignment as the preferred alternative. This alternative best meets the purpose of the project and minimizes impacts to both the human and natural environment.

IV. PROPOSED IMPROVEMENTS

A. Roadway Cross-Section and Alignment

The proposed typical section for SR 1121 (Ray Road) is a 4-lane, median divided facility with curb and gutter, consisting of a 23-foot raised median, 12-foot inside lanes, and 14-foot outside lanes (see Figure 3).

B. Right of Way and Access Control

The proposed right of way width for this project is 100 feet. There is no proposed control of access along the project corridor.

C. Speed Limit & Design Speed

The design speed for the proposed widening of SR 1121 (Ray Road) is 50 mph. The anticipated posted speed limit is 45 mph.

D. Anticipated Design Exceptions

There are no design exceptions anticipated on this project.

E. Intersections/Interchanges

Exclusive right and left-turn lanes will be constructed at each full movement intersection. This will include all of the intersections listed in Table 2, except for the following: (which will be limited to right-in/right-out access only)

- Rolling Springs Drive
- Spring Valley Road
- Overhills High School north driveway
- Northpoint Road

F. Service Roads

There are no service roads needed on this project.

G. Railroad Crossings

There are no railroad crossings impacted by this project.

H. Structures

This project does not involve any major stream crossings and as such, no hydraulic structures are recommended.

I. Bicycle and Pedestrian Facilities

14-foot outside travel lanes will be used to accommodate bicycles. No additional sidewalks will be built in conjunction with this project.

J. Utilities

The project does not propose improvements to existing utilities along SR 1121 (Ray Road). However, utilities will be relocated as needed for construction.

K. Noise Barriers

No noise barriers are proposed as part of this project.

L. Work Zone, Traffic Control and Construction Phasing

Construction phasing will be utilized to maintain traffic along SR 1121 (Ray Road) during construction. All traffic control devices used during the construction of this project will conform to the most current FHWA Manual of Uniform Traffic Control Devices (MUTCD).

V. ENVIRONMENTAL EFFECTS OF PROPOSED ACTION

A. Natural Resources

1. Biotic Resources

a. Terrestrial Communities

Seven terrestrial communities were identified within the project area: Bottomland hardwood Forest, Mixed Evergreen-Deciduous Forest, Early Succession Pine, Mesic Pine Flatwoods, Dry Oak-Hickory Forest, Clear-Cut, and Human-Maintained/Disturbed (see Figure 2). Dominant faunal components associated with these terrestrial areas will be discussed after the community descriptions.

1. Bottomland Hardwood Forest

This community occurs at two sites within the project area and includes jurisdictional wetlands. The plant community within the forest is diverse, consisting of tree and shrub species such as, sweetgum, red maple, tulip poplar, loblolly pine, sweetpepperbush, and tag alder. Vines and herbaceous species present include greenbriar, muscadine grape, and trumpet creeper. The herbaceous layer is sparse and includes species such as blackberry and Solomon's seal.

2. Mixed Evergreen-Deciduous Forest

This community is characterized by the co-dominance of pines and hardwoods in the canopy and is typically xeric within the project area. The pine/hardwood ratio varies considerably from site to site depending on the age of the community and previous land management practices. Typical canopy vegetation for mixed evergreen-deciduous forest within the project study area includes mature loblolly pine and long-leaf pine and oaks: white oak, southern red oak, and black oak; as well as mockernut hickory, sweetgum, and red maple. Midstory vegetation includes sapling-sized canopy species as well as dogwood. The understory consists mostly of vines such as greenbrier, muscadine grape, and poison ivy. The herbaceous layer is primarily absent, with seedling size canopy species occurring sparsely.

3. Early Succession Pine

This community ranges from a dense canopy (early succession pine forest) to an open canopy (early succession pine woodland). The early succession pine forest is primarily a monoculture of loblolly pine. These areas have obviously been disturbed in the recent past, possibly due to agriculture or logging, and have been deliberately planted or allowed to voluntarily reseed with loblolly pine. The loblolly pines are variable at some sites and planted in rows within the plantations, and appear to be approximately 3-15 years old. The canopy is dominated almost entirely by loblolly pine. The subcanopy layer consists of sweetgum, loblolly pine, and red maple. The shrub, herb, and vine layers include broomsedge, blackberry, greenbrier, poison ivy, and Japanese honeysuckle. The early succession pine woodland is

comprised of sparse (canopy cover is < 30%) loblolly and long-leaf pines approximately 3 to 15 years old. Dominant vegetation is primarily in the herbaceous layer and is comprised of broomsedge, sour dock, dandelion, goatsbeard, and various other graminoids and forbs.

4. Mesic Pine Flatwoods

The mesic pine flatwoods community within the project area is predominately an open canopy of long-leaf pine (some sites have been logged in the past and allowed to regenerate with denser stands of loblolly pine). Canopy trees are likely greater than 60 years old. The understory is sparse and contains species such as southern red oak, black oak, mockernut hickory and sapling sized long-leaf pine. The herbaceous layer is dominated by wiregrass with patches of bracken fern and huckleberry.

5. Dry Oak-Hickory Forest

This forest community is dominated by oaks, primarily southern red oak and black oak, as well as mockernut hickory. Sparse to many loblolly and long-leaf pines are also present. The understory is comprised of red maple, blackgum, and blueberry. Vines include muscadine grape, greenbrier, and poison ivy. The herbaceous layer is sparse with low ericaceous shrubs dominating.

6. Clear-Cut

This area had received recent disturbance from logging activity. The entire canopy was removed, however early successional species are emerging. These include loblolly pine, red maple, sweetgum, dogfennel, horseweed, and broomsedge.

7. Human-Maintained/Disturbed

These communities encompass various types of habitats that have recently been or are currently impacted by human disturbance consisting primarily of roadside shoulders and maintained lawns. These regularly maintained habitats are kept in a low-growing early successional state. Herbaceous species expected in these communities include fescue, ryegrass, horseweed, dogfennel, dandelion, poison ivy, Japanese honeysuckle, and greenbrier. Shrubs, saplings, and trees may also be present in these communities.

b. Terrestrial Wildlife

Many fauna species are highly adaptive and may populate or exploit the entire range of biotic communities located within the project study area (those species actually observed are indicated with *). Maintained roadsides and residential communities adjacent to forested tracts provide foraging and cover areas and support early successional species. Forested areas provide forage and cover for wildlife dependent on mature forests with mast producing hardwoods. Many opportunistic species use both habitats to satisfy nutritional requirements and shelter. White-tailed deer*, eastern cottontail, raccoon*, gray squirrel, gray fox, and Virginia opossum* are likely to be found in the project area. Reptiles expected in this area are

eastern box turtle, five-lined skink, broadhead skink, copperhead, and the rat snake*. Avian species that may use habitat within the project study area include pine warbler*, great-crested flycatcher*, eastern wood peewee*, eastern towhee*, ovenbird*, Carolina chickadee*, brown-headed nuthatch*, hairy woodpecker*, red-tailed hawk*, northern cardinal*, and Carolina wren.

c. Aquatic Communities

No aquatic communities occur in the project area.

d. Invasive Species

Japanese honeysuckle and *Sericea lespedeza* was observed within Early Succession Pine and Human Maintained-Disturbed community. Chinese privet was observed in the Bottomland Hardwood Forest community during field inspection. Invasive species are categorized into one of three threat levels, Level 1 (Server Threat), Level 2 (Threat), and Level 3 (Watch List). Threat levels for the observed invasive species are shown in Table 5.

Table 5: Invasive Species within Project Area

Common Name	Scientific Name	Threat Level
Chinese privet	<i>Ligustrum sinense</i>	1
<i>Sericea lespedeza</i>	<i>Lespedeza cuneata</i>	1
Japanese honeysuckle	<i>Lonicera japonica</i>	2

NCDOT will follow the Department’s Best Management Practices (BMPs) for the management of invasive plant species.

e. Summary of Anticipated Effects

Table 6 describes the acreage of terrestrial communities within the project corridor. Impacts to terrestrial communities associated with construction activities include the removal of vegetation, soil compaction, damaging and/or exposing root systems, as well as potential impacts associated with petroleum spills. Efforts have been made to align corridors in order to minimize impacts to woodlands.

Table 6: Estimated Area of Terrestrial Communities within the Project Area

Community	Area (acres)	Estimated Impact
Bottomland Hardwood Forest	3.03	1.34
Mixed Evergreen-Deciduous Forest	3.80	3.95
Early Succession Pine	26.02	1.15
Mesic Pine Flatwoods	22.57	4.47
Dry Oak-Hickory Forest	12.46	0.22
Clear-Cut	5.82	N/A
Human Maintained/Disturbed	187.16	N/A
Total Area:	260.86	11.13

Loss of wildlife is an unavoidable aspect of development. Temporary fluctuations in populations of animal species that utilize these communities are anticipated during the course of construction. Slow-moving, burrowing, and/or subterranean organisms will be directly impacted by construction activities, while mobile organisms will be displaced to adjacent communities.

2. Waters of the United States

The project corridor was surveyed for jurisdictional wetlands in accordance with the guidelines for wetland delineation outlined by the USACE.

a. Water Resources

Water resources in the study area are part of the Cape Fear River basin (sub-basin 03-06-14, HUC 03030004). The entire project area is located on an interstream divide. Therefore, no jurisdictional streams occur in the project area.

No waters classified as High Quality Water (HQW), Water Supplies (WS-I or WS-II), listed Section 303(d) impairments, or Outstanding Resource Waters (ORW) occur within 1.0 mile (1.6 km) of the project study area.

b. Wetlands

Two jurisdictional wetlands and one isolated wetland (Table 7) occur within the project area and will likely be impacted by project construction (Figure 2).

Table 7: Jurisdictional Characteristics of Wetlands in the Project Study Area

Map ID	Cowardin Classification	Classification	Area (ac)
WET A	PFO1	Riverine	0.37
WET B	PFO1	Non-Riverine	0.91
ISO A	PEM1	Non-Riverine	0.09

c. Summary of Anticipated Effects

Wetland impacts have been calculated using a 25-foot buffer outside of the slope stakes in the preliminary design and are given below in Table 8. There are no stream impacts anticipated for this project.

Table 8: Anticipated Wetland Impacts

Wetland ID	Anticipated Impact (acres)
WET A	0.1
WET B	0.0
ISO A	0.1
Total Impact	0.2

d. Avoidance, Minimization, and Mitigation

The NCDOT has utilized a “best fit” alignment which will avoid and minimize impacts to streams and wetlands to the greatest extent practicable.

The NCDOT will investigate potential on-site stream and wetland mitigation opportunities once a final decision has been rendered with regard to the location of the final alignment. If on-site mitigation is not feasible, mitigation will be provided by North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP). In accordance with the “Memorandum of Agreement among the North Carolina Department of Transportation, and the U.S. Army Corps of Engineers, Wilmington District” (MOA), July 22, 2003, the EEP will be requested to provide off-site mitigation to satisfy the federal Clean Water Act compensatory mitigation requirements for this project.

e. Anticipated Permit Requirements

A Nationwide Permit 23 will likely be applicable for this project. However, an Individual Permit may be necessary if impacts to these waters are greater than 0.5 acre. The USACE holds the final discretion as to what permit will be required to authorize project construction. In addition to the 404 permit, other required authorizations include the corresponding Section 401 Water Quality Certification (WQC) from the NCDWQ.

3. Rare and Protected Species

a. Federally Protected Species

As of January 31, 2008, the USFWS lists three species under federal protection for Harnett County (Table 9).

Table 9: Species under Federal Protection in Harnett County

Common Name	Scientific Name	Federal Status	Habitat Present	Biological Conclusion
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Yes	No Effect
Cape Fear shiner	<i>Notropis mekistocholas</i>	E	No	No Effect
Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E	No	No Effect

Key: E = Endangered

Red-cockaded woodpecker

Habitat Requirements: The red cockaded woodpecker occupies open, mature stands of southern pines, particularly longleaf pine, for foraging and nesting habitat. The RCW typically nests in pine trees that are >60 years old, and which are contiguous with pine stands at least 30 years of age to provide foraging habitat. The foraging range of the RCW is normally no more than 0.5 miles.

Biological Conclusion: No Effect

A review of NCNHP records, updated September 28, 2007, indicates no known RCW occurrence within 1.0 mile of the study area. Suitable nesting habitat does exist within the area to be impacted by the project. However, following an intensive field survey based on the Guidelines for Surveys to Assess Potential Project Impacts to Red-cockaded Woodpecker (RCW) Nesting and/or Foraging Habitat from the 2003 USFWS Recovery Plan, no evidence of RCW use (past or present) was identified in the project area. Furthermore, no foraging habitat within ½ mile of existing nesting habitat was identified in the project area.

Cape Fear shiner

Habitat Requirements: Cape Fear shiner habitat occurs in streams with gravel, cobble, or boulder substrates. It is most often observed inhabiting slow pools, riffles, and slow runs associated with water willow beds. Juveniles can be found inhabiting slackwater, among large rock outcrops and in flooded side channels and pools. The Cape Fear shiner is limited to three populations in North Carolina. The strongest population of the Cape Fear shiner is in Chatham and Lee counties from the Locksville dam upstream to Rocky River and Bear Creek. Another population is located above the Rocky River Hydroelectric Dam in Chatham County, and the third population is found in the Deep River system in Randolph and Moore counties.

Biological Conclusion: No Effect

The project area does not provide suitable habitat for the Cape Fear shiner due to the absence of surface water. A review of NCNHP records, updated September 28, 2007, indicates no known Cape Fear shiner occurrence within 1.0 mile of the study area. There has been no sighting of this species within the project vicinity. Impacts to this species will not occur from project construction.

Rough-leaved loosestrife

Habitat Requirements: The habitat for the rough-leaved loosestrife is generally the ecotone between longleaf pine or oak savannas and wetter, shrubby areas, where moist, sandy, or peaty soils occur and where low vegetation allows abundant sunlight into the herb layer. Fire is the main factor for the suppression of taller vegetation. The rough-leaved loosestrife is associated with six natural community types: low pocosin, high

pocosin, wet pine flatwoods, pine savanna, streamwood pocosin, and sandhill seep.

Biological Conclusion: No Effect

A search of the NHP files, updated on September 28, 2007 found no occurrences of rough-leaved loosestrife in the project vicinity. In addition, following comprehensive surveys for habitat, it was concluded that suitable habitat for this species does not exist within the project area. Impacts to this species will not occur from project construction.

b. Bald 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. Suitable nesting or foraging habitat for the bald eagle is a significant distance from open water. There have been no sightings of this species within the project vicinity during the investigation. Impacts to this species will not occur from project construction.

c. Federal Species of Concern and State Protected Species

There are no Federal Species of Concern or State Protected Species for this project.

4. Soils

Information about soils in the project area was obtained from the Soil Survey of Harnett County, North Carolina (USDA 1994). Twelve soil series occur in the project area (Table 10).

Table 10: Soils within U-3465 Project Study Area

Soil Series	Mapping Unit	Drainage Class	Hydric
Altavista fine sandy loam	AtA	Rarely flooded	No
Bibb sandy loam	Bb	Poorly drained	Yes
Blaney loamy sand	BnB	Well drained	No
Blaney loamy sand	BnD	Well drained	No
Candor sand	CaB	Somewhat excessively drained	No
Fuquay loamy sand	FaB	Well drained	No
Gilead loamy sand	GaB	Moderately well drained	No
Gilead loamy sand	GaD	Moderately well drained	No
Roanoke loam	Ro	Poorly drained	Yes
State fine sandy loam	StA	Well drained	No
Vaucluse loamy sand	VaB	Well drained	No
Vaucluse loamy sand	VaD	Well drained	No

B. Cultural Resources

This project is subject to compliance with section 106 of the National Historic Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified as 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally-funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and to afford the Advisory Council a reasonable opportunity to comment on such undertakings.

1. Historic Architectural Resources

In a memorandum dated June 17, 2006, the North Carolina Historic Preservation Office (NCHPO) determined that this project as it is proposed will not affect any historic structures. A copy of this memorandum is included in Appendix B.

2. Archaeological Resources

In a memorandum dated June 17, 1996, the NCHPO recommended that an archaeological survey be conducted in connection with the proposed project and that all unassessed sites be evaluated in regards to their National Register eligibility (see Appendix B).

As a result of this survey, eleven (11) previously unrecorded archaeological sites (31HT981 to 31HT991) were discovered. Ten of the archaeological sites (31HT981 to 31HT989 and 31HT991) are recommended as ineligible for listing on the National Register of Historic Places (NRHP). Site 31HT990 was recommended as eligible for the NRHP per Criterion D because of the site's variety, quantity, clarity, integrity (both vertical and horizontal), and context. Avoidance of Site 31HT990 was recommended; however, impacts to Site 31HT990 can not be avoided due to its location along both sides of SR 1121 (Ray Road). Mitigation efforts will include data recovery excavations at Site 31HT990 prior to construction activities.

NCDOT reported its findings to the NCHPO in a manuscript dated June 30, 2008. The NCHPO concurred with the above findings in a memorandum dated July 7, 2008. A copy of this memorandum is included in Appendix B.

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

Section 4(f) of the USDOT Act of 1966 protects the use of publicly owned parks, recreation areas, wildlife/waterfowl refuges, and historic properties. No Section 4(f) protected properties will be impacted by this project.

Section 6(f) of the Land and Water Conservation Act applies to the conversion of certain recreation lands to non-recreational purposes. The act applies to recreation lands that

have received Land and Water Conservation Fund (LWCF) money. Any land conversions on property that has received LWCF money must be approved by the National Park Service. Section 6(f) also requires that any applicable land converted to non-recreational uses must be replaced with land of equal or greater value, location, and usefulness. No Section 6(f) protected properties will be impacted by this project.

D. Farmland

The construction of this proposed project will have no direct impact to any existing farmland, and is not anticipated to have any indirect or cumulative effects on farmland that is currently in production.

E. Social Effects

1. Demographics

The Demographic Study Area is the smallest statistical area of the 2000 Census, at block group level, that includes and is derived from the Direct Community Impact Area. The Demographic Study Area, is used to provide approximate demographic characteristics for the community inside the Direct Community Impact Area. The Demographic Study Area for this project consists of Census Tract 712, Block Groups 1, 3, and 4.

a. Population

According to the 2000 U.S. Census, the total population in the Demographic Study Area was 7,756 people and 91,025 people in Harnett County. From 1990 to 2000, the population in the demographic area grew by 12 percent, which was considerably less than the 34 percent growth rate for Harnett County during the same period (See Table 11). Most of that growth occurred in northern Harnett County near the Wake County border and in southern Harnett County near the Cumberland County border and the proposed project. The growth rates of nearby Spring Lake, Fayetteville, and Fort Bragg were 9 percent, 60 percent, and -16 percent respectively, from 1990 to 2000.

Table 11: Population Growth Rates

Area	Population			
	1990	2000	Difference	% Change
Demographic Study Area	6,907	7,756	849	12.3%
Harnett County	67,822	91,025	23,203	34.2%
North Carolina	6,628,637	8,049,313	1,420,676	21.4%
Fort Bragg	34,862	29,246	-5,616	-16.1%
Fayetteville	75,695	120,843	45,148	59.6%
Spring Lake	7,524	8,193	669	8.9%

Harnett County has become one of the fastest growing counties in North Carolina. In 2005, the county population was 101,486 people, according to the N.C. Office of State Budget and Management (OSBM), far exceeding the 94,664 projection for 2005 made by OSBM in 1999. Thus, the county grew 2.3 percent annually from 2000 to 2005, outpacing the statewide annual growth rate of 1.6 percent, during the same period.

b. Age

The Demographic Study Area has a median age of roughly 27 years compared to 33 years for Harnett County. Only 10 percent of County residents are 65 or older, and even less in the Demographic Area (4 percent). Additionally, 36 percent of Demographic Area residents are 19 and under, compared to 30 percent of Harnett County residents. These numbers likely reflect the younger military personnel living in the Demographic Area and younger families moving to Harnett County.

c. Ethnicity

Race and ethnicity in the Demographic Study Area is consistent with Harnett County. The Demographic Area is 67 percent White, 24 percent Black, and 8 percent Hispanic while the County is 71 percent White, 22 percent Black, and 6 percent Hispanic (See Table 12).

Table 12: Population by Race

Race and Ethnicity	Demographic Study Area		Harnett County		North Carolina	
	Pop.	%	Pop.	%	Pop.	%
White	5,167	66.6%	64,802	71.2%	5,802,165	72.1%
Black or African American	1,873	24.1%	20,297	22.3%	1,734,154	21.5%
American Indian and Alaska Native	74	1.0%	1,093	1.2%	100,956	1.3%
Asian	150	1.9%	639	0.7%	111,292	1.4%
Native Hawaiian and Other Pacific Islander	7	0.1%	63	0.1%	3,699	0.0%
Some other race	192	2.5%	2,319	2.5%	185,138	2.3%
Two or more races	293	3.8%	1,812	2.0%	111,909	1.4%
Total Population	7,756	100.0%	91,025	100.0%	8,049,313	100.0%
Hispanic	606	7.8%	5,179	5.7%	372,964	4.6%

d. Income

The Demographic Study Area had an estimated median household income of \$30,839, compared to \$35,105 for Harnett County. Among N.C. counties, Harnett County ranked 43rd in median household income in 2003 and 64th in average weekly wage per employee in 2006 at \$522 per week, according to the N.C. Department of Commerce.

The economic conditions in Harnett County appear to be improving as the County grows. According to the 2000 Census, the Demographic Study Area had an unemployment rate of 8.7 percent, compared to 8.3 percent for Harnett County. In September 2006, Harnett County had an unemployment rate of 4.6 percent, down from 5.2 percent in September 2005, according to the NC Department of Commerce. The Demographic Study Area and Harnett County both have poverty rates of around 14.4 percent, ranking 40th among N.C. counties in percent in poverty for 2000.

2. Communities

Ray Road (SR 1121) is located in an unincorporated area of the south central Harnett County township of Anderson Creek. The Anderson Creek Township has 11,137 residents, second only to the Averasboro Township where the City of Dunn is located, according to the OSBM. Dunn, the largest municipality in the County, is about 20 miles east of the proposed project, and the Town of Lillington, the county seat, is about 15 miles north of Ray Road on NC 210. A portion of the Fort Bragg Military Reservation extends into the Anderson Creek

Township, approximately 1 mile to the west of SR 1121 (Ray Road); however, street addresses along Ray Road are with the Town of Spring Lake in neighboring Cumberland County. Ray Road is less than ten minutes from Fort Bragg and the Fayetteville metro area. Harnett County is bordered by Cumberland County to the south, Moore, Lee, and Chatham Counties to the west, Wake County to the north, and Johnston and Sampson Counties to the east.

Local and regional officials expect major growth in southern Harnett County, particularly due to the United States military Base Realignment and Closure Program (BRAC), which will bring additional military personnel, contractors, and families to the region. The BRAC Task Force identified Harnett County as a Tier One BRAC county, which are the counties expected to receive the most growth impacts from the base realignment. Most of that anticipated growth will occur in southern Harnett County, which includes the Anderson Creek Township. Several residential subdivisions and planned unit developments (PUD) have already been approved in and around SR 1121 (Ray Road), and developers have approached some local landowners about undeveloped parcels immediately adjacent to Ray Road. Other property owners and investors are planning to convert mobile home parks into more profitable apartment complexes or subdivisions, and a new elementary school is under construction on Ray Road in anticipation of the growth. Ray Road and much of Harnett County remains rural, but proximity to Fort Bragg and urbanized areas where land prices are generally priced higher than in Harnett County, makes the area suitable for development. A new and expansive gated country club community, a mile north of the project, is further evidence of the changing area.

The Anderson Creek Plaza area surrounds the intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road), which is the northern terminal for the project. The Anderson Creek Plaza area extends from just north of the intersection of Ray Road and Overhills Road southward to Northpoint Drive, about 2,300 feet south of the intersection. This is the most developed portion of the project area, featuring a small shopping center, apartments, subdivisions, and several health care facilities. Harnett County has designated this area as a rural development node, and Wellons Realty owns most of the land in the area.

The remainder of the project area is a mixture of small businesses, residential development, and undeveloped property. The majority of the residential development is located off of SR 1160 (Azalea Drive) and SR 1122 (McKay Drive), and is comprised of various residential types ranging from singlewide mobile home parks to two-story single-family dwellings. While mobile home parks and apartment complexes are the prevailing residential uses on Ray Road, several small, singlewide trailers and single-family homes are located near the SR 1121 (Ray Road) and NC 210 intersection, which is the southern terminal for the project. A 1 mile section of SR 1121 (Ray Road) between SR 1123 (Creeksville Church Road) and Liberty Baptist Church is currently undeveloped, and is lined on both sides by forests.

3. Community Impacts

Based on the current design of the preferred alternative and current development patterns along SR 1121 (Ray Road), the project should mostly affect lawns and driveways, such as the school properties, parking lots, and trees on undeveloped tracts of land. Even though most physical impacts appear to be right-of-way concerns, the widening will impact several buildings, three gas pumps, and underground fuel tanks at two gas stations. The widening will have minor right-of-way impacts on the Anderson Creek Fire and Rescue Station, but will not impact the building or its current operations.

Some storeowners expressed concerns over the median affecting access to their business; however, left-turn/ median U-turn breaks will be provided, where allowable, to maintain access.

The proposed project could potentially have a greater impact on community cohesion than the other changes occurring locally, because it could directly remove businesses and homes and thus, people, from the community, effectively spurring redevelopment of the corridor and further changing the identity of the community.

4. Relocation of Residences and Businesses

Nine residential displacements and six business displacements will result from the proposed project. Please see Appendix C for a copy of the Relocation Report and the NCDOT's policies regarding displacements.

5. Bicycle & Pedestrians Facilities

There are currently no bicycle or pedestrian facilities along SR 1121 (Ray Road). The proposed project will provide 14-foot outside lanes to accommodate bicycles, and a 10-foot berm will be provided for any future sidewalks.

6. Recreational Facilities

There are no recreational facilities that will be impacted as a result of this project.

7. Other Public Facilities

a. Harnett County School Campuses

As meeting places for local activities and events, schools are institutions that can promote cohesiveness in a community. Three Harnett County public schools and a preschool are located less than one mile south of the intersection of SR 1121 (Ray Road) and SR 1121 (Overhills Road). The school buildings are set back from the existing and proposed right of way, and the parking lots between the schools and roadway are typically offset from the roadway. Overhills High School and Overhills Middle School are on the west side of Ray Road, and Overhills Elementary School will open in August of 2009 across the street.

Overhills High School has approximately 1,019 students (grades 9-12), according to the N.C. Dept. of Public Instruction (NCDPI), and the student body is 51 percent White, 41 percent Black, 5 percent Hispanic, and 46 percent get free or reduced-price lunch, according to the National Center for Educational Statistics (NCES). Overhills Middle School has 882 students (grades 6-8), according to the NCDPI, and its students are 49 percent White, 41 percent Black, and 7 percent Hispanic, while 61 percent participate in the free or reduced-price lunch program, according to the NCES. Students from both schools who ride school buses are bused together.

b. Anderson Creek Fire and Rescue

The Anderson Creek Fire and Rescue Department is located at 2980 Ray Road north of and adjacent to the new elementary school currently under construction across from Overhills Middle School, about a mile south of the intersection of Ray Road and Overhills Road. The station has two driveways, one for its three fire engines and ambulance, and one for the side parking lot. The station is currently set approximately 40 feet from the edge of Ray Road. The widening will have minor right-of-way impacts on the Anderson Creek Fire and Rescue Station, but will not impact the building or its current operations.

SR 1121 (Ray Road) is located in the Anderson Creek Emergency Medical Service and Fire Insurance districts. The Anderson Creek Fire and Rescue Department on Ray Road is the primary fire and EMS responder at the EMT-Intermediate Level for Anderson Creek, including Ray Road. The Anderson Creek area also has one Quick Response Vehicle (QRV) furnished by Harnett County EMS at the Paramedic Level. Since the proposed project is in an unincorporated part of Harnett County, the Harnett County Sheriffs Department and State Highway Patrol provide law enforcement services.

8. Environmental Justice

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. Special populations may include the elderly, children, the disabled, low-income areas, American Indians and other minority groups.

Executive Order 12898 requires that Environmental Justice principles be incorporated into all transportation studies, programs, policies and activities. The three environmental principles are: 1) To ensure the full and fair participation of all potentially affected communities in the transportation decision-making process. 2) To avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority or low income populations. 3) To fully evaluate the benefits and burdens of transportation programs, policies, and activities, upon low-income and minority populations.

Based on conversations with the Director of the Tiny Town Preschool and confirmed by site reconnaissance, the low-income residents along SR 1121 (Ray Road) live primarily in the mobile home parks along the corridor. NCDOT GIS mapping identifies the trailer park behind the Exxon service station as a site with environmental justice characteristics, and the daycare noted that many of the low-income students live in the trailer park next to Matthews General Store. However, the entire project generally falls within the County Average to 2x County Average range. Plans are to convert several of the trailer park sites into subdivisions, and all sites are set back from the roadway. There is also one area, across the street from the junkyard, at the southern end of the proposed project with EJ characteristics that are 3x County Average to 100%, but based on site observations, this site has few residences living in doublewide trailers. In summary, the project does not appear to have any notable environmental justice issues.

F. Economic Effects

The proposed realignment at the intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road) could take property from two outparcels of the Anderson Creek Plaza; however, the developer would like to sell these parcels to food vendors.

The widening could potentially take much of Matthews General store's front parking along with the fuel pumps. The proposed action could also affect the fuel pumps at the Exxon service station and the Mystik store. The gas pumps at the Mystik store are inactive, and not the economic draw that they are for Matthews Store. Proximity to the residential neighborhoods across the street, which will be unaffected by the proposed project, is the attraction to Mystik. The fuel pumps are the primary attraction for the Exxon service station. However, Exxon is a major franchise more capable of responding to potential impacts than some of the other stores on SR 1121 (Ray Road).

The shop owners on SR 1121 (Ray Road) expressed concerns over the proposed median and the potential effect on their business. Studies have shown that in most cases changes in access does not cause a change in the highest and best use of the abutting properties, according to the Center for Urban Transportation Research (CUTR) at the University of South Florida. The main concern, a perceived loss of access, is usually more pessimistic than what actually happens, as business owners report no change in pass-by traffic after median installations. In addition, businesses benefit economically when a new corridor attracts people to an area. Improving the roadway also gets customers to businesses faster and more efficiently, which generally offsets small delays entering the driveways. Studies show that most business types report increases in the numbers of customers per day and gross sales after upgrades are completed. However, the typical business on SR 1121 (Ray Road) is a store/gas station or a parts and automotive repair shop, the business types that tend to report decreases in customers and gross sales after the installation of a median, according to the CUTR. Thus, the project could adversely affect the existing businesses on SR 1121 (Ray Road). Still, regular customers are as likely or more likely to continue patronizing the businesses after the roadway improvements, and property values typically stay the same or increase. Business activity is often the most affected, temporarily, during construction.

G. Land Use

1. Existing Land Use and Zoning

Based on the Harnett County Land Use Map, the proposed project is located within a Compact Mixed Use Area and the intersection of SR 112 (Ray Road) and SR 1120 (Overhills Road) is the center of a Rural Development Node. Compact Mixed Use areas and Rural Development Nodes are future land development categories that describe patterns of development. According to the Harnett County Planning Department, there are no small area plans or highway corridor overlay districts for the SR 1121 (Ray Road) area, but there may be in the future.

According to the 1999 Harnett County Land Use Plan, Compact Mixed Use areas are located along transportation arteries served by utilities, where a combination of small lot residential, multifamily, manufactured home parks, commercial, institutional, and light industrial uses are encouraged.

Rural Development Node are community focus areas where neighborhood business, institutional and small residential uses are encouraged. Pedestrian and vehicular accessibility are also encouraged.

Zoning around the proposed project is RA-20M (Residential/Agricultural District) and COMM (Commercial/ Business). The COMM districts are located at the intersections of NC 210 and SR 1120 (Overhills Road) with SR 1121 (Ray Road), and a segment of the project from Azalea Drive to the Highgrove subdivision area. The remainder of the project is zoned RA-20M. The RA-20M Residential/Agricultural Districts supports high-density residential development of single-family and multi-family dwellings, duplexes, and manufactured home parks. The COMM Commercial/Business Districts accommodate the widest variety of commercial, wholesale, and retail businesses in areas that are best located and suited for such uses.

2. Future Land Use / Base Realignment and Closure (BRAC)

Harnett County is one of the eleven member counties in the United States Military's Base Realignment and Closure Program (BRAC). The BRAC region in NC is one of 20 BRAC growth regions in the United States, but is unique because of Fort Bragg and Pope Air Force Base. The base realignment could bring 20,000 additional people to the region from Georgia (military personnel, contractors, and families) by 2013 alone, including Forces Command and the U.S. Army Reserve Command. The BRAC Regional Task Force (RTF) coordinates those efforts and provides a regional approach to the planning and implementation effort.

3. Project Compatibility with Local Plans

The proposed project is consistent with local and regional development goals and plans.

H. Indirect and Cumulative Effects

1. Indirect Effects

The limited scope of this project, which is primarily restricted to existing location, and very limited travel time savings with no new access provided, will inhibit change in land use effects associated with this project. Therefore, indirect effects from this project alone will be minor, and the threat to downstream water quality will be very limited.

2. Cumulative Effects

Further development of the SR 1121 (Ray Road) area is expected. The typical subdivision already approved for the corridor will be on sites once occupied by mobile home parks. Fort Bragg stretches to SR 1120 (Overhills Road), and base expansion at Bragg might influence residential development within the Future Land Use Study Area. With upgrades to SR 1121 (Ray Road) relatively cheap and undeveloped land, compared to Cumberland and Wake Counties, and planned public sewer upgrades could make the area more attractive to developers. Development could require the removal of forest like previous development did, but BMPs would be required to protect streams and wetlands or to treat runoff. Additional development would be planned and controlled by the local ordinances and land use plans. Since the project is not likely to result in a change in land use as a result the transportation impact causing activities associated with the project, cumulative effects beyond the others cited above would be minimal or low.

I. Flood Hazard Evaluation

Harnett County is currently participating in the National Flood Insurance Regular Program. As no major stream crossings are involved, this project will not affect any designated flood hazard zones, and the proposed improvements will not have any adverse effect on any existing floodplain areas. NCDOT's Hydraulics Unit will coordinate with the Federal Emergency Management agency and local authorities to ensure compliance with applicable floodplain ordinances.

J. Traffic Noise Analysis

Traffic noise impacts are an unavoidable consequence of transportation projects, especially in areas where there are no previous traffic noise sources. A Traffic Noise Analysis was performed utilizing the FHWA Traffic Noise Model software to predict future noise levels and impacted receptors along the proposed alignments. This analysis compared all proposed alignment alternatives. A copy of the unabridged version of the full technical report entitled Traffic Noise Analysis can be viewed in Room 462 of NCDOT's Transportation Building, 1 South Wilmington Street, Raleigh, NC.

1. Ambient Noise Levels

An ambient noise measurement was taken in the vicinity of the project to determine the ambient (existing) noise level for the identified land uses. The purpose of this noise level information was to quantify the existing acoustic environment and to provide a base for assessing the impact of noise level increases. The existing Leq noise level in the project area as measured at 50 feet from edge of pavement was found to be 63.3 dBA. A background noise level of 45 dBA was determined for the project to be used in areas where traffic noise was not the predominant source. The ambient measurement is shown below in Table 13.

The existing roadway and traffic conditions were used with the most current traffic noise prediction model to calculate existing noise levels for comparison with noise levels actually measured. The calculated existing noise levels averaged less than 1 dBA difference from the measured noise levels for the location where noise measurements were obtained. Hence, the computer model is a reliable tool in the prediction of noise levels. Differences in dBA levels can be attributed to "bunching" of vehicles, low traffic volumes, and actual vehicle speeds versus the computer's "evenly-spaced" vehicles and single vehicular speed.

Table 13: Ambient Noise Levels (Leq)

Site	Location	Description	Noise Level (dBA)
1	SR 1121 @ Liberty Baptist Church	Grassy	63.3

2. Analysis Results

A land use is considered impacted by highway traffic noise when exposed to noise levels approaching or exceeding the FHWA noise abatement criteria and/or predicted to sustain a substantial noise increase. The NCDOT Traffic Noise Abatement Policy defines a traffic noise impact occurs when the predicted traffic noise levels either:

- Approach or exceed the FHWA noise abatement criteria (NAC) (with "approach" meaning within 1 dBA of the value in Table 2 of the full Traffic Noise Report), or
- Substantially exceed the existing noise levels as shown in the lower portion of Table 2 in the Traffic Noise Report.

Consideration for noise abatement measures must be given to receptors that fall in either category.

The number of receptors in each activity category, for each section, that are predicted to become impacted by future traffic noise are shown in Table 14. These receptors are noted in terms of those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA NAC or by a substantial increase in exterior noise levels. Under Title 23 CFR Part 772, thirty-one (31) residences and two (2) businesses are predicted to be impacted due to highway traffic noise in the project area.

Table 14: Approximate Number of Impacted Receptors

Description	Leq Noise Levels (dBA)			Maximum Contour Distance		Approximate # of Impacted Receptors According to Title 23 CFR Part 772				
	50 ft	100 ft	200 ft	72 dBA	67 dBA	A	B	C	D	E
Best Fit Alignment	68.0	64.0	57.4	<60.5	94.9	0	31	2	0	0
No Build	66.3	60.4	54.7	<37.0	55.3	0	7	0	0	0

Table 15 exhibits the exterior traffic noise level increases for the identified receptors by roadway section. There are eight (8) substantial noise level impacts anticipated for this project. The predicted noise level increases for this project range up to +12 dBA. When real-life noises are heard, it is barely possible to detect noise level changes of 2 to 3 dBA. A 5-dBA change is more readily noticeable.

Table 15: Predicted Substantial Noise Level Impacts

Description	Receptor Exterior Noise Level Increases							Substantial Noise Level Increase "1"	Impacts Due to Both Criteria "2"
	<=0	1-4	5-9	0-14	15-19	20-24	>=25		
Best Fit Alignment	2	4	51	8	0	0	0	8	5
No Build	4	67	0	0	0	0	0	0	0

"1" As defined by only a substantial increase (See bottom of Table N2 in full Traffic Noise Report).

"2" As defined by both criteria in Table N2 of full Traffic Noise Report.

3. Traffic Noise Abatement Measures

If traffic noise impacts are predicted, examination and evaluation of alternative noise abatement measures for reducing or eliminating the noise impacts must be considered. Consideration for noise abatement measures must be given to all impacted receptors. There are impacted receptors due to highway traffic noise in the project area. The following discussion addresses the applicability of these measures to the proposed project.

a. Highway Alignment Selection

Highway alignment selection involves the horizontal or vertical orientation of the proposed improvements in such a way as to minimize impacts and costs. 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 sitting the roadway at a sufficient distance from

noise sensitive areas. Changing the highway alignment is not a viable alternative for noise abatement.

b. Traffic System Management Measures

Traffic system management measures, which limit vehicle type, speed, volume and time of operations, are often effective noise abatement measures. For this project, traffic management measures are not considered appropriate for noise abatement due to their effect on the capacity and Level of Service (LOS) of the proposed facility. Past project experience has shown that reducing the speed limit by 10 mph would result in a noise level reduction of approximately one (1) to two (2) dBA. Because most people cannot detect a noise reduction of up to three (3) dBA, and because reducing the speed limit would reduce roadway capacity, it is not considered a viable noise abatement measure. This and other traffic system management measures, including the prohibition of truck operations, are not considered to be consistent with the project's purpose and need.

c. Noise Barriers

Physical measures to abate anticipated traffic noise levels are often applied with a measurable degree of success on fully controlled facilities by the application of solid mass, attenuable measures strategically placed between the traffic sound source and the receptors to effectively diffract, absorb, and reflect highway traffic noise emissions. Solid mass, attenuable measures may include earth berms or artificial abatement walls.

The project will maintain uncontrolled or limited control of access, meaning most commercial establishments and residents will have direct access connections to the proposed roadway, and all intersections will adjoin the project at grade. For a noise barrier to provide sufficient noise reduction, it must be high enough and long enough to shield the receptor from significant sections of the highway. Access openings in the barrier severely reduce the noise reduction provided by the barrier. It then becomes economically unreasonable to construct a barrier for a small noise reduction. Safety at access openings (driveways, crossing streets, etc.) due to restricted sight distance is also a concern. Furthermore, to provide a sufficient reduction, a barrier's length would normally be eight (8) times the distance from the barrier to the receptor. For example, a receptor located 50 feet from the barrier would normally require a barrier 400 feet long. An access opening of 40 feet (ten (10) percent of the barrier length) would limit its noise reduction to approximately four (4) dBA. Consequently, this type of control of access effectively eliminates the consideration of berms or noise walls as noise mitigation measures.

Additionally, businesses, churches, and other related establishments located along a particular highway normally require accessibility and high visibility. Solid mass, attenuable measures for traffic noise abatement would tend to disallow these two qualities, and thus, would not be acceptable abatement measures in this case.

d. Other Mitigation Measures

The acquisition of property in order to provide buffer zones to minimize noise impacts is not considered a feasible noise mitigation measure for this project. The cost to acquire impacted receptors for buffer zones would exceed the allowed abatement cost per benefited receptor. The use of buffer zones to minimize impacts to future sensitive areas is not recommended because this could be accomplished through land use control.

The use of vegetation for noise mitigation is not considered reasonable for this project, due to the substantial amount of right-of-way necessary to make vegetative barriers effective. FHWA research has shown that a vegetative barrier must be approximately 100 feet wide to provide a 3-dBA reduction in noise levels. In order to provide a 5-dBA reduction, substantial amounts of additional right-of-way are required. The cost of the additional right-of-way, materials and labor to plant sufficient vegetation is estimated to exceed the abatement cost allowed per benefitted receptor. Noise insulation was also considered; however, no public or non-profit institutions were identified that would be impacted by this project.

4. Construction Noise

The major construction elements of this project are expected to be earth removal, hauling, grading, and paving. General construction noise impacts, such as temporary speech interference for passersby and those individuals living or working near the project, can be expected, particularly from paving operations and from the earth moving equipment during grading operations. However, considering the relatively short-term nature of construction noise and the limitation of construction to daytime hours, these impacts are not expected to be substantial. The transmission loss characteristics of nearby natural elements and man-made structures are believed to be sufficient to moderate the effects of intrusive construction noise.

5. Summary

Traffic noise impacts are an unavoidable consequence of transportation projects especially in areas where there are no previous traffic noise sources. All traffic noise impacts identified in this analysis were considered for noise mitigation. Based on these preliminary studies, traffic noise abatement is not recommended, and no noise abatement measures are proposed. This evaluation completes the highway traffic noise requirements of Title 23 CFR Part 772. Unless a major project change develops, no additional noise reports are necessary for this project.

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. Changing traffic patterns are a primary concern when determining the impact of a new highway facility or the improvement of an existing highway facility. Motor vehicles emit carbon monoxide (CO), nitrogen oxide (NO), hydrocarbons (HC), particulate matter, sulfur

dioxide (SO₂), and lead (Pb) (listed in order of decreasing emission rate). Automobiles are considered the major source of CO in the project area. For this reason, most of the analysis presented herein is concerned with determining expected carbon monoxide levels in the vicinity of the project due to traffic flow.

1. Background CO Concentrations

In order to determine the ambient CO concentration at a receptor near a highway, two concentration components must be used: local and background. The local concentration is defined as the CO emissions from cars operating on highways in the near vicinity (i.e., distances within 400 feet) of the receptor location. The background concentration is defined by the North Carolina Department of Environment, Health and Natural Resources as "the concentration of a pollutant at a point that is the result of emissions outside the local vicinity; that is, the concentration at the upwind edge of the local sources." A microscale air quality analysis is performed to determine future CO concentrations resulting from the proposed highway improvements. "CAL3QHC – A Modeling Methodology for Predicting Pollutant Concentrations near Roadway Intersections" is used to predict the CO concentration near sensitive receptors.

This project is an air quality neutral project, which is in accordance with 40 CFR 93.126. It is not required to be included in the regional emissions analysis (if applicable) and a project level CO analysis is not required. Therefore no microscale air quality analysis was performed for this project.

2. Mobile Source Air Toxics (MSATs)

Recently, concerns for air toxics impacts are more frequent on transportation projects during the NEPA process. Transportation agencies are increasingly expected by the public and other agencies to address MSAT impacts in their environmental documents as the science emerges. Mobile Source Air Toxics (MSATs) analysis is a continuing area of research where, while much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health impacts from MSATs are limited. These limitations impede FHWA's ability to evaluate how mobile source health risks should factor into project-level decision-making under the National Environmental Policy Act (NEPA). Also, EPA has not established regulatory concentration targets for the six relevant MSAT pollutants appropriate for use in the project development process. FHWA has several research projects underway to more clearly define potential risks from MSAT emissions associated with transportation projects. While this research is ongoing, FHWA requires each NEPA document to qualitatively address MSATs and their relationship to the specific highway project through a tiered approach.¹ The FHWA will continue to monitor the developing research in this emerging field. A qualitative analysis of MSATs for this project appears in its entirety in the project *Air Quality Analysis*, dated April 29, 2008. A copy of this report may be viewed in Room 462 of the Transportation Building, 1 South Wilmington Street, Raleigh.

¹ US DOT, Federal Highway Administration memorandum, "Interim Guidance on Air Toxic Analysis in NEPA Documents", February 3, 2006.

L. Hazardous Material

Five possible UST facilities, one automotive repair facility, and two automobile junkyards were identified within the proposed project corridor. The sites are described in Table 16. Low to non-existent monetary and scheduling impacts resulting from these sites is anticipated.

NCDOT’s Geo Environmental Section observed no additional contaminated properties during the field reconnaissance and regulatory agencies’ records search. The GeoEnvironmental Section will provide soil and groundwater assessments on each of the above properties after identification of the selected alternative and before right of way acquisition. Please note that discovery of additional sites not recorded by regulatory agencies and not reasonably discernable during the project reconnaissance may occur. The GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed. No Hazardous Waste Sites were identified within the project limits. No apparent landfills were identified within the project limits.

Table 16: Known and Potential GeoEnvironmental Impact Sites

Property Location	Property Owner	UST Owner	Facility ID #
SR 1121 & NC 210 Spring Lake, NC	Stuart Lewis	N/A	N/A
This former business is located on the south side of SR 1121 (Ray Road) at the corner of NC 210. The building is set back 100 feet from the NC 210 and SR 1121 medians. Numerous cars, trucks, construction equipment, parts, batteries, etc. are located in a fenced in area on the north side of the building. This property does not appear on the UST Section’s registry. There is no evidence of USTs or UST removal. This site will have a low impact to this project.			
Property Location	Property Owner	UST Owner	Facility ID #
140 Ray Road Spring Lake, NC	Annie Speas	N/A	N/A
This active auto salvage and recycling yard is located on the north side of SR 1121 with 320 foot frontage. Hundreds of vehicles, school buses, etc., are located from the right-of-way and back across several acres. Piles of tires, gas tanks, parts, etc. were sorted throughout the yard. No waste oil AST was noted. This property does not appear on the UST Section’s registry and there is no evidence of USTs or UST removal. This site will have a low impact to this project			
Property Location	Property Owner	UST Owner	Facility ID #
1899 Ray Road Spring Lake, NC	Gordon Mason	H&H Cable Contractors, Inc.	0-017886
This active gas station and convenience store is located on the west side of SR 1121 (Ray Road). This location was formerly known as Holders Grocery. Three gasoline ASTs are behind and south of the store. Kerosene AST is located on the north side of the building. The UST Section’s registry shows that three USTs that were removed from this property in July 1997. One monitoring well was noted south of the present pump island. This site is listed on the DENR incident database but type of contamination is not noted. There is no other evidence of USTs or UST removal. This site will have a low impact to this project.			

Property Location	Property Owner	UST Owner	Facility ID #
1964 Ray Road Spring Lake, NC	Joseph Phillips	N/A	N/A
This active automotive garage is located across and just north of the Stop N' Shop gas station. The parts building is set back 110 feet from the SR 1121 median. This clean operation has customer vehicles parked on the south side of the building within a fenced in area. A waste oil AST is located behind the building with dumpsters for parts. This property does not appear on the UST Sections registry and there is no evidence of USTs or UST removal. This site will have a negligible impact to this project.			
Property Location	Property Owner	UST Owner	Facility ID #
2330 Ray Road Spring Lake, NC	Louise B. Lee	N/A	N/A
This former gas station and closed home improvement business is located on the east side of SR 1121, and immediately south of the Matthews General Store. A pump island is located at the front of the building 60 feet from the SR 1121 median. The pumps have been removed but three electrical conduits are present. This property does not appear on the UST Sections registry. There is no evidence of USTs or UST removal. This site will have a low impact to this project.			
Property Location	Property Owner	UST Owner	Facility ID #
2340 Ray Road Spring Lake, NC	Margaret Matthews	Foster Matthews	0-002736
This active gas station and convenience store is located on the east side of SR 1121 (Ray Road). Three fill ports are located on the north side of the property between the canopied pump island and the building. These active USTs are located 75 feet from the SR 1121 median. The UST Sections registry indicates that these USTs were installed in April 1994. There is no other evidence of USTs or UST removal. This site will have a low impact to this project.			
Property Location	Property Owner	UST Owner	Facility ID #
3235 Ray Road Spring Lake, NC	Edward M. Hughes	Lil Thrift Food Marts, Inc.	0-021508
This active gas station and convenience store is located on the west side of SR 1121. The pump island with canopy is set back 45 feet from the median of SR 1121. Three UST fill ports are located on the north side of the property between the store and the pump island and are set back 100 feet from the SR 1121 median. Kerosene AST is located at the north side of the store. There is no other evidence of USTs or UST removal. This site will have a low impact to this project.			
Property Location	Property Owner	UST Owner	Facility ID #
3455 Ray Road Spring Lake, NC	Allen Westbrook	Christine Ryan	0-035485
This active tire store and automotive repair business was the site of the former Ryan's Grocery and gas station. According to the present owner, the USTs were removed in the early 1990's. A dirt-gravel area marking this UST location is still visible and immediately adjacent to the right-of-way. The UST section registry indicates that four USTs were removed in 1993. However, there are five USTs on this list. The present business operates in a clean professional manner, and no parts, debris, or oil staining was noted. There is no other evidence of USTs, UST removal, or monitoring wells. This site will have a low impact to this project.			

VI. COMMENTS AND COORDINATION

A. Citizens Informational Workshop

On March 13, 2007, a Citizens' Informational Workshop was held by NCDOT representatives to present the proposed project to the public and obtain comments and suggestions about the improvements. The workshop was held at the Overhills High School located on SR 1121 (Ray Road). Approximately 53 people attended this workshop.

Five comments were received during and after this meeting. Four citizens expressed support for the project and noted that improvements need to be made at the intersection of SR 1121 (Ray Road) and SR 1120 (Overhills Road). The fifth citizen was concerned about vehicles wrecking into her front yard and feared that if the road is widened someone will eventually hit her house. Two people also noted a concern about limited access due to the raised median island.

B. Public Hearing

A public hearing will be held following the circulation of this document. This public hearing will provide more detailed information to the public about the proposed improvements. The public will be invited to make additional comments or voice concerns regarding the proposed project.

C. NEPA/404 Merger Process

The Merger Process is a process to streamline the project development and permitting processes, agreed to by the USACE, NCDENR-DWQ, FHWA, and NCDOT and supported by other stakeholder agencies and local units of government. To this effect, the Merger Process provides a forum for appropriate agency representatives to discuss and reach consensus on ways to facilitate meeting the regulatory requirements of Section 404 of the Clean Water Act during the NEPA/SEPA decision-making phase of transportation projects.

Due to its limited scope and lack of substantial environmental consequences this project does not meet the criteria for the NEPA/404 Merger Process.

D. Other Agency Coordination

Federal, state, and local agencies were consulted during the preparation of this Categorical Exclusion. Written comments were received and considered from agencies noted with an asterisk (*) during the preparation of this assessment.

U.S. Army Corps of Engineers
U.S. Department of Defense
U.S. Environmental Protection Agency
Federal Emergency Management Administration
* U.S. Fish and Wildlife Service

- Geological Survey
- Soil Conservation Service
- * State Clearinghouse
- * N.C. Department of Cultural Resources
- * N.C. Department of Environment and Natural Resources
- * N.C. Department of Public Instruction
- * N.C. Wildlife Resources Commission
- * N.C. Division of Water Quality
- * N.C. Division of Forest Resources
- Mid Carolina Council of Governments
- Cumberland County Commissioners
- Harnett County Commissioners
- City of Fayetteville

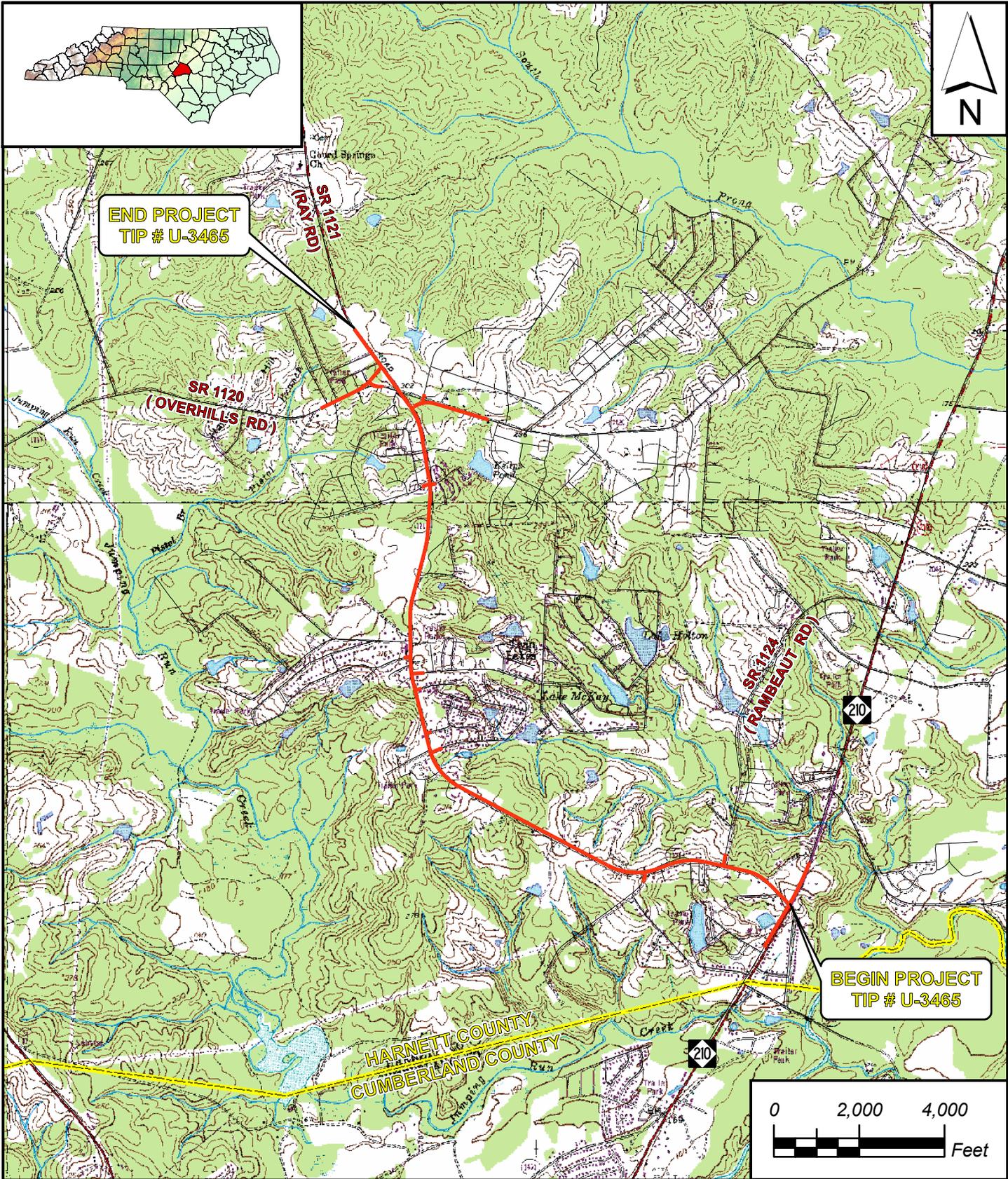
These comments and related issues, included in Appendix B, have been addressed in this document.

VII. CONCLUSION

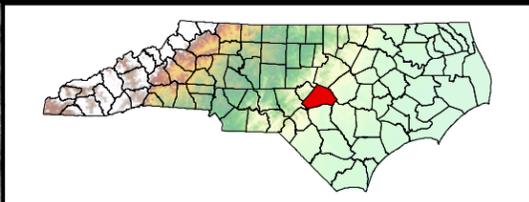
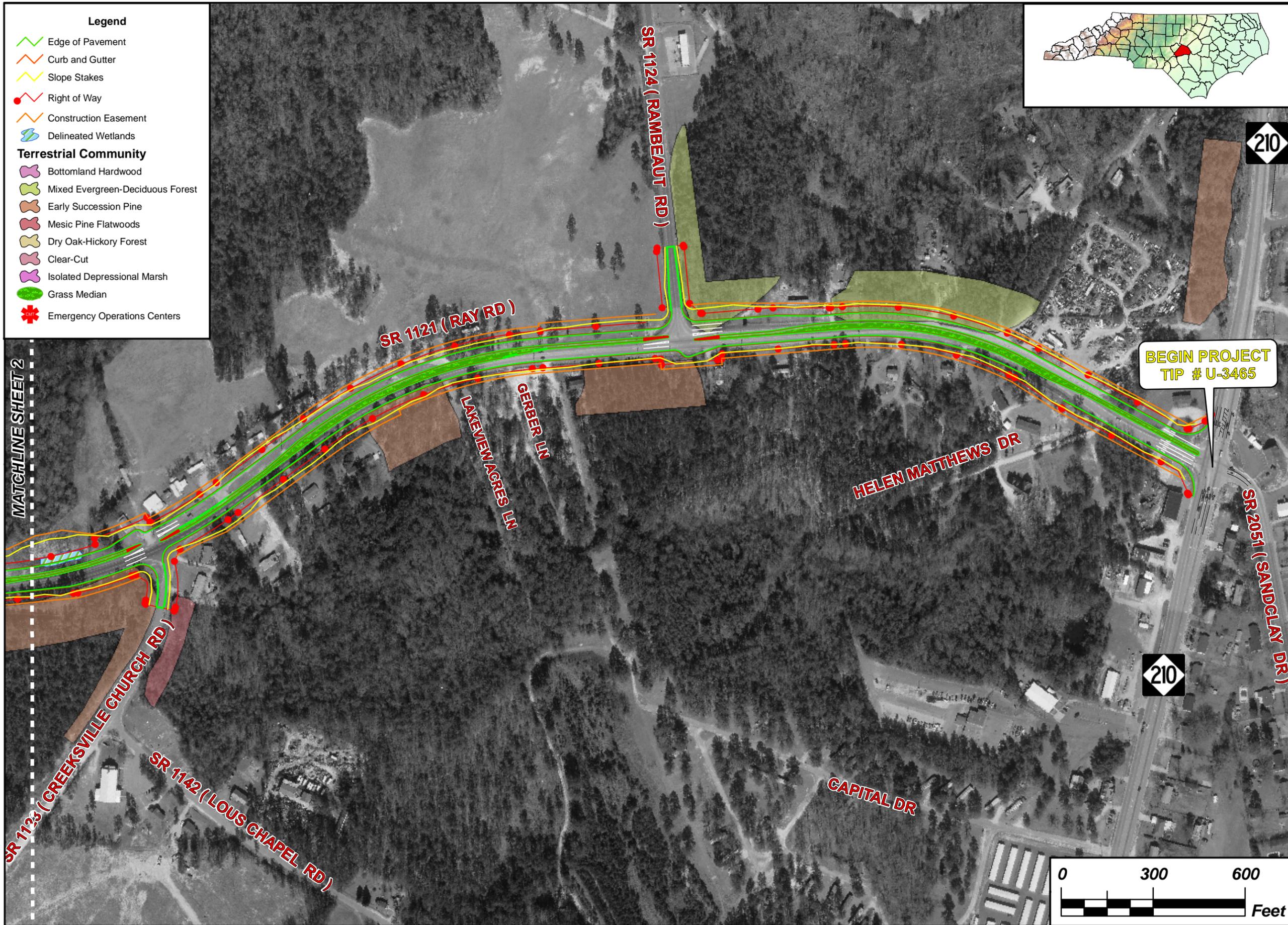
On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from the implementation of the project. The project is therefore considered to be a Federal Categorical Exclusion due to its limited scope and lack of substantial environmental consequences.

APPENDIX A

Figures



 <p> NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH By: J.TORTORELLA </p>	VICINITY MAP PROPOSED WIDENING OF SR 1121 (RAY ROAD) FROM NC 210 TO SR 1120 (OVERHILLS RD) HARNETT COUNTY TIP PROJECT U-3465		County: HARNETT Div: 6 WBS: 39017.1.1 Date: DEC 2008	Figure 1
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- Legend**
- Edge of Pavement
 - Curb and Gutter
 - Slope Stakes
 - Right of Way
 - Construction Easement
 - Delineated Wetlands
- Terrestrial Community**
- Bottomland Hardwood
 - Mixed Evergreen-Deciduous Forest
 - Early Succession Pine
 - Mesic Pine Flatwoods
 - Dry Oak-Hickory Forest
 - Clear-Cut
 - Isolated Depressional Marsh
 - Grass Median
 - Emergency Operations Centers



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

AERIAL MAP
PROPOSED WIDENING OF
SR 1121 (RAY ROAD) FROM
NC 210 TO SR 1120
(OVERHILLS ROAD)
HARNETT COUNTY
TIP PROJECT U-3465



County:
HARNETT

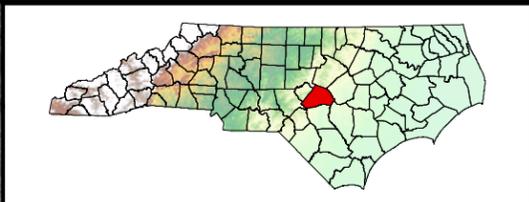
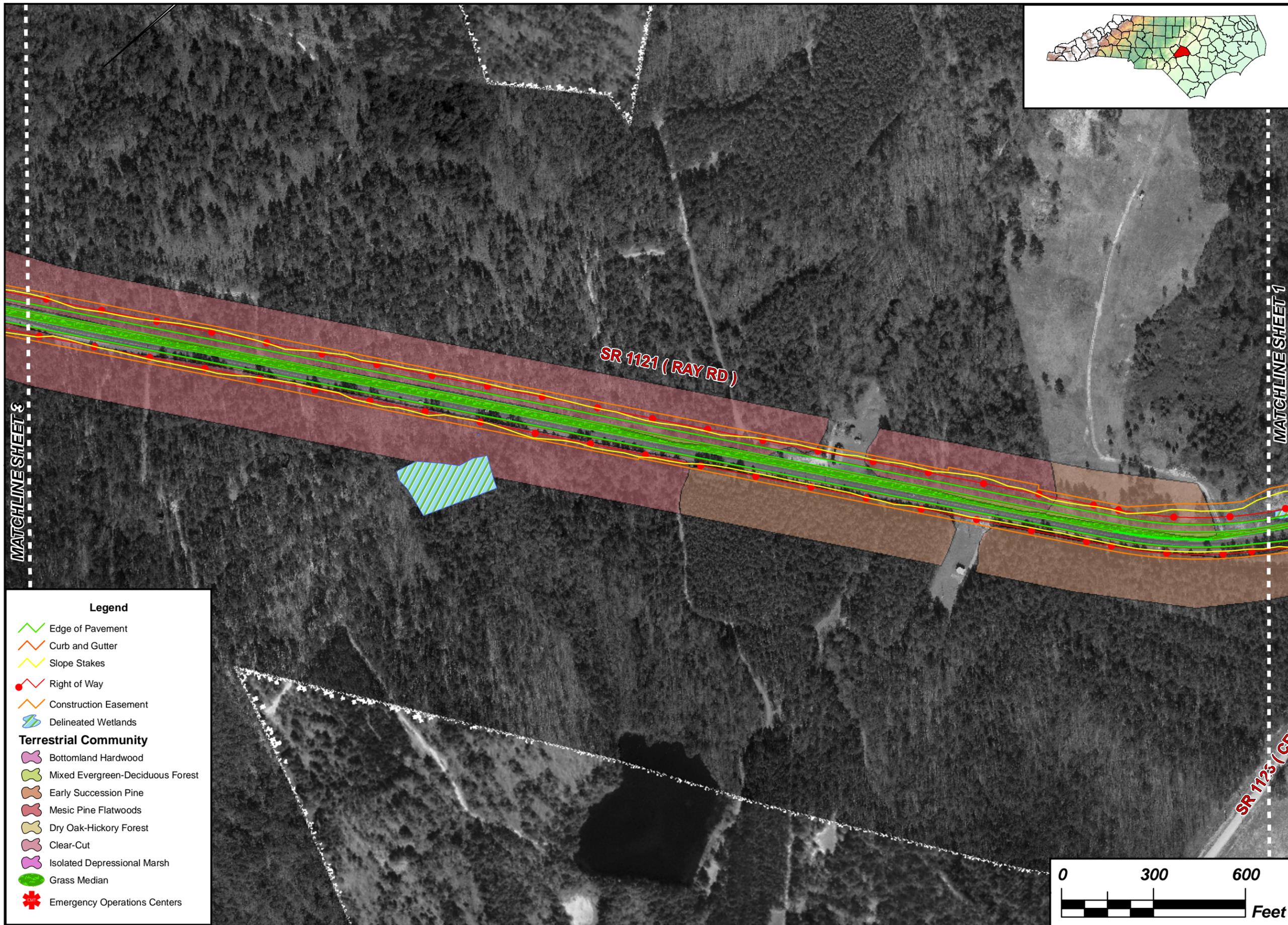
Div: 6 TIP#
U-3465

WBS:
39017.1.1

Date:
DEC 2008

Figure
2
Sheet 1 of 5

By: J.TORTORELLA



Legend

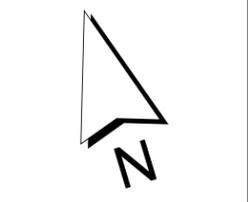
- Edge of Pavement
- Curb and Gutter
- Slope Stakes
- Right of Way
- Construction Easement
- Delineated Wetlands

Terrestrial Community

- Bottomland Hardwood
- Mixed Evergreen-Deciduous Forest
- Early Succession Pine
- Mesic Pine Flatwoods
- Dry Oak-Hickory Forest
- Clear-Cut
- Isolated Depressional Marsh
- Grass Median
- Emergency Operations Centers


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

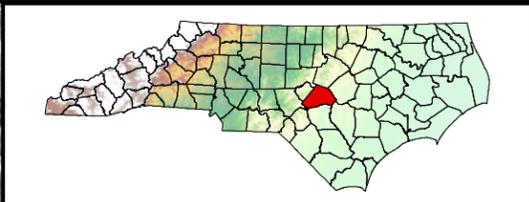
AERIAL MAP
PROPOSED WIDENING OF
SR 1121 (RAY ROAD) FROM
NC 210 TO SR 1120
(OVERHILLS ROAD)
 HARNETT COUNTY
 TIP PROJECT U-3465



County: HARNETT	
Div: 6	TIP# U-3465
WBS: 39017.1.1	
Date: DEC 2008	

Figure
2
 Sheet 2 of 5

By: J.TORTORELLA



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

AERIAL MAP
PROPOSED WIDENING OF
SR 1121 (RAY ROAD) FROM
NC 210 TO SR 1120
(OVERHILLS ROAD)
HARNETT COUNTY
TIP PROJECT U-3465



County:
HARNETT

Div: 6 TIP#
U-3465

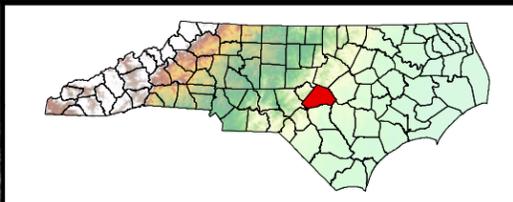
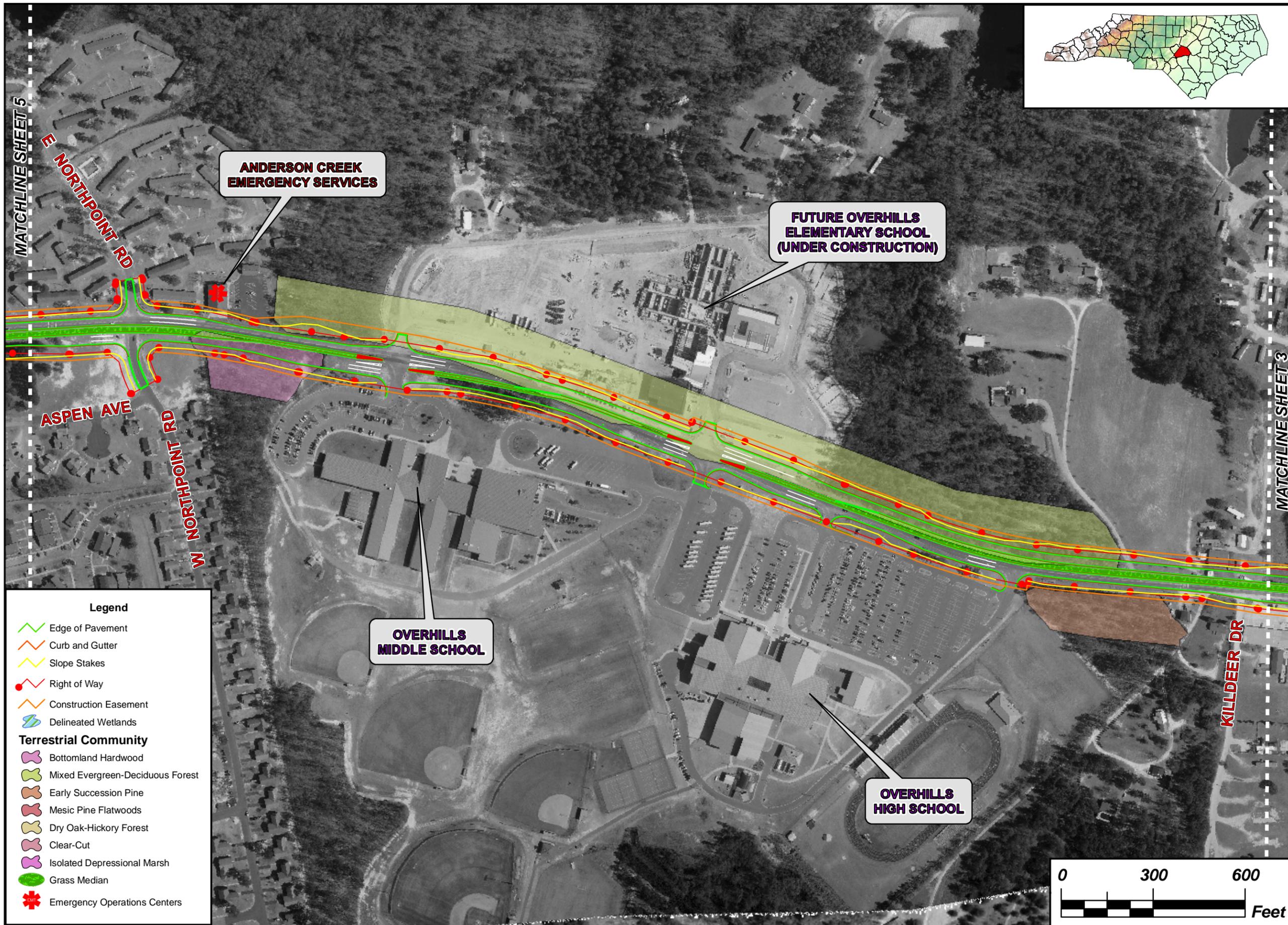
WBS:
39017.1.1

Date:
DEC 2008

Figure
2
Sheet 3 of 5



By: J.TORTORELLA



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

AERIAL MAP
PROPOSED WIDENING OF
SR 1121 (RAY ROAD) FROM
NC 210 TO SR 1120
(OVERHILLS ROAD)
HARNETT COUNTY
TIP PROJECT U-3465



County:
HARNETT

Div: 6 TIP#
U-3465

WBS:
39017.1.1

Date:
DEC 2008

Figure
2
Sheet 4 of 5

By: J.TORTORELLA

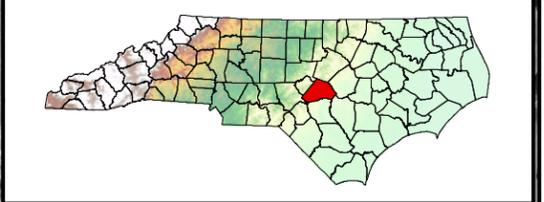


Legend

- Edge of Pavement
- Curb and Gutter
- Slope Stakes
- Right of Way
- Construction Easement
- Delineated Wetlands
- Pavement Removal

Terrestrial Community

- Bottomland Hardwood
- Mixed Evergreen-Deciduous Forest
- Early Succession Pine
- Mesic Pine Flatwoods
- Dry Oak-Hickory Forest
- Clear-Cut
- Isolated Depressional Marsh
- Grass Median
- Emergency Operations Centers



**ANDERSON CREEK
PLAZA SHOPPING CENTER**

**END PROJECT
TIP # U-3465**



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

AERIAL MAP
**PROPOSED WIDENING OF
SR 1121 (RAY ROAD) FROM
NC 210 TO SR 1120
(OVERHILLS ROAD)**
HARNETT COUNTY
TIP PROJECT U-3465



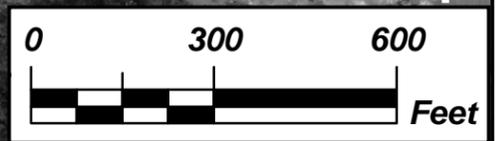
County:
HARNETT

Div: 6 TIP#
U-3465

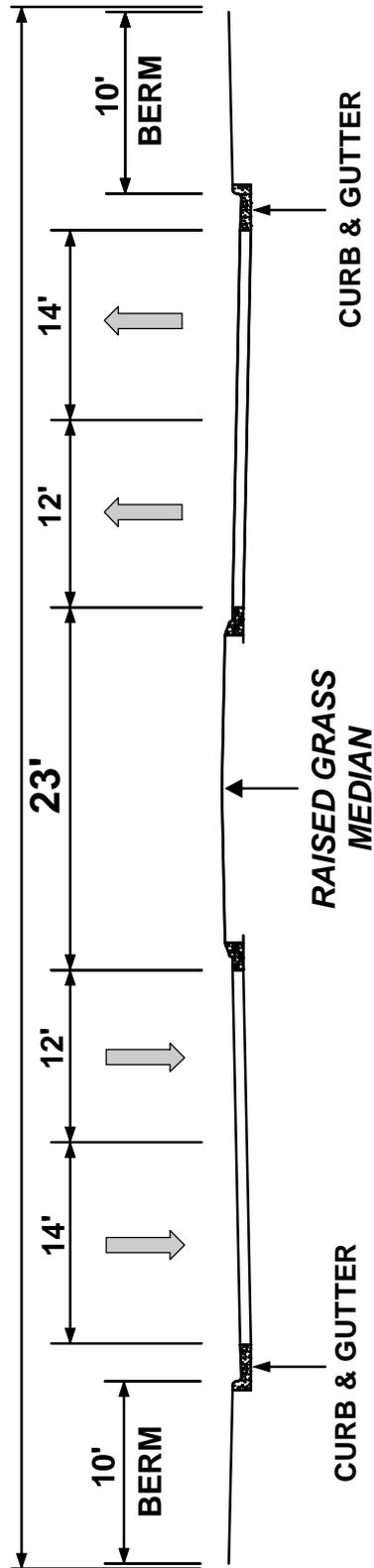
WBS:
39017.1.1

Date:
DEC 2008

**Figure
2**
Sheet 5 of 5



100' PROPOSED RIGHT OF WAY



NOT TO SCALE



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

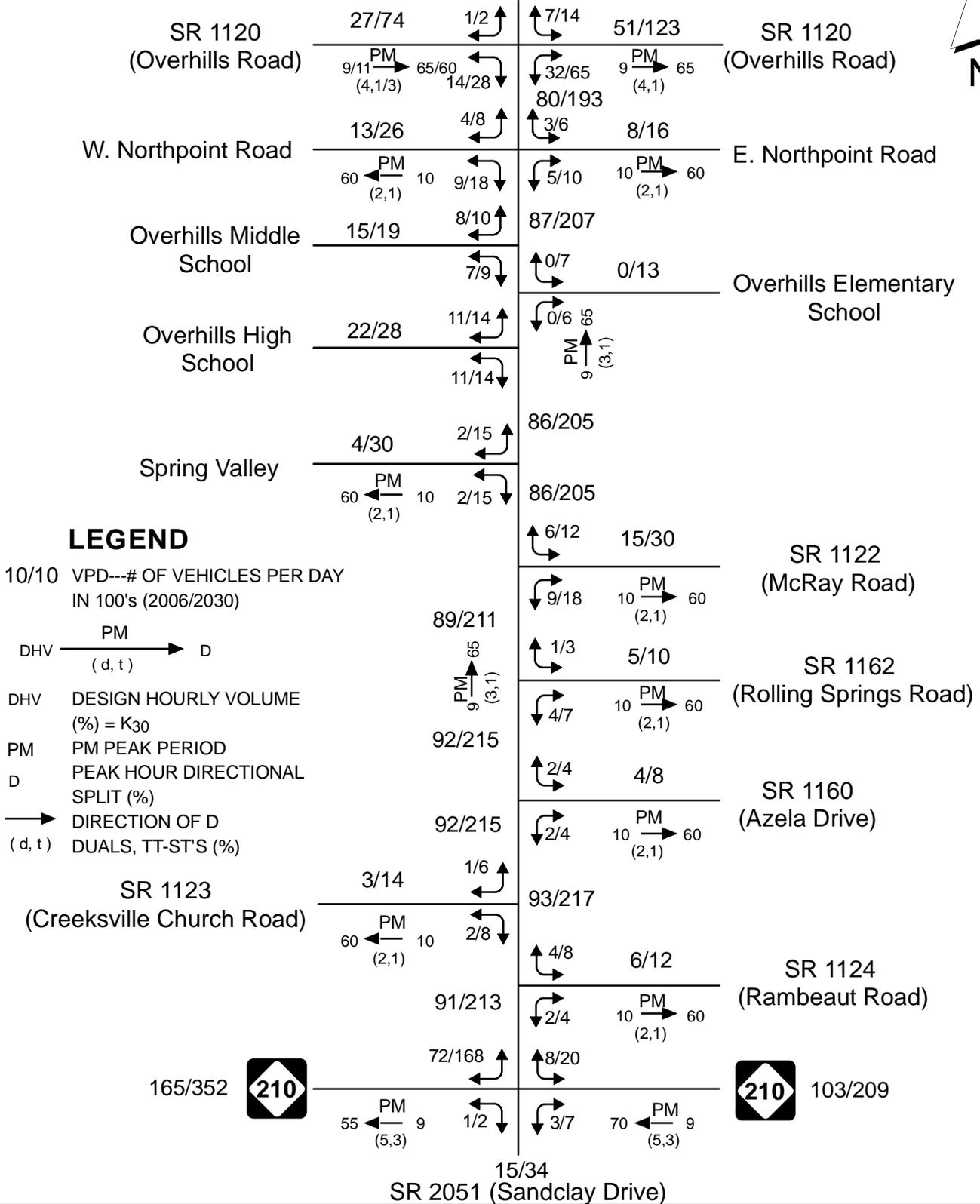
PROPOSED TYPICAL SECTION SR 1121 (RAY ROAD) FROM NC 210 TO SR 1120 (OVERHILLS ROAD)

HARNETT COUNTY
TIP PROJECT U-3465

County:	HARNETT
Div: 6	TIP# U-3465
WBS:	39017.1.1
Date:	DECEMBER 2008

Figure
3

SR 1121 (Ray Road)
42/116



LEGEND

- 10/10 VPD---# OF VEHICLES PER DAY IN 100's (2006/2030)
- DHV $\xrightarrow{\text{PM}}$ D
(d, t)
- DHV DESIGN HOURLY VOLUME (%) = K₃₀
- PM PM PEAK PERIOD
- D PEAK HOUR DIRECTIONAL SPLIT (%)
- \rightarrow DIRECTION OF D
- (d, t) DUALS, TT-ST'S (%)

SR 1123
(Creeksville Church Road)



SR 2051 (Sandclay Drive)
15/34



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

TRAFFIC FORECAST
2006/2030 ESTIMATED AADT
SR 1121 (RAY ROAD) FROM
NC 210 TO SR 1120 (OVERHILLS ROAD)
HARNETT COUNTY
TIP PROJECT U-3465

County:	HARNETT
Div:	6
TIP#	U-3465
WBS:	39017.1.1
Date:	DECEMBER 2008

Figure
4

APPENDIX B

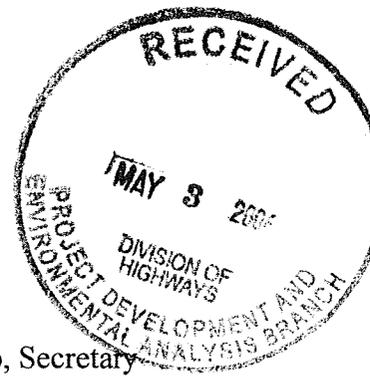
Comments from Federal, State, and Local Agencies



North Carolina
Department of Administration

Michael F. Easley, Governor

Britt Cobb, Secretary



April 28, 2006

Mr. George Thorpe
NCDOT
Transportation Building
1548 Mail Service Center
Interoffice

Dear Mr. Thorpe:

Subject: Scoping - Proposal of widening SR 1121 (Ray Road) from NC 210 to SR 1120
(Overhills Road). TIP # U-3465

The N. C. State Clearinghouse has received the above project for intergovernmental review. This project has been assigned State Application Number 06-E-4220-0315. Please use this number with all inquiries or correspondence with this office.

Review of this project should be completed on or before 05/28/2006. Should you have any questions, please call (919)807-2425.

Sincerely,

Ms. Chrys Baggett
Environmental Policy Act Coordinator

cc: Matthew Potter, Project Engineer

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

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail: Chrys.Baggett@ncmail.net

Location Address:
116 West Jones Street
Raleigh, North Carolina



North Carolina
Department of Administration



Michael F. Easley, Governor

Britt Cobb, Secretary

May 31, 2006

Mr. George Thorpe
NCDOT
Transportation Building
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Thorpe:

Re: SCH File # 06-E-4220-0315; Scoping; Proposal of widening SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road). TIP # U-3465

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

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

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

Sincerely,

Chrys Baggett / s-jc

Ms. Chrys Baggett
Environmental Policy Act Coordinator

Attachments

cc: Region M

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

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail Chrys.Baggett@ncmail.net

Location Address:
116 West Jones Street
Raleigh, North Carolina



North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

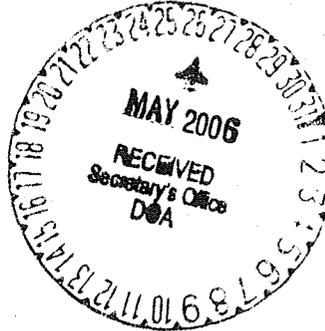
MEMORANDUM

TO: Chrys Baggett
State Clearinghouse

FROM: Melba McGee *MM*
Environmental Review Coordinator

SUBJECT: 06-0315 Scoping Widening of SR 1121 from NC 210 to SR 1120 in
Harnett County

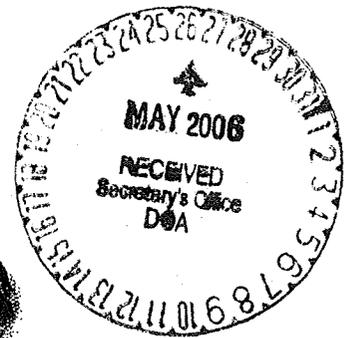
DATE: May 25, 2006



The Department of Environment and Natural Resources has reviewed the proposed information. The attached comments are for the applicant's information.

Thank you for the opportunity to review.

Attachments

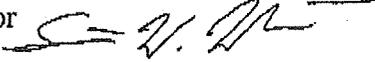


 **North Carolina Wildlife Resources Commission** 

MEMORANDUM

Richard B. Hamilton, Executive Director

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

FROM: Travis Wilson, Highway Project Coordinator 
Habitat Conservation Program

DATE: May 12, 2006

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 SR 1121 from NC 210 to SR 1120, Harnett County, North Carolina. TIP No. U-3465, SCH Project No. 06-0315.

This memorandum responds to a request from Gregory J. Thorpe of 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. 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:

The Natural Heritage Program
N. C. Division of Parks and Recreation
1615 Mail Service Center
Raleigh, N. C. 27699-1615
(919) 733-7795
www.ncsparks.net/nhp

and,

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

2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities.
3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.
4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.
5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).
6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.
7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.
8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.
9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

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

Cc: Richard Spencer, USACE
John Hennessy, NCDWQ
Gary Jordan, USFWS
Chris Militscher, USEPA



North Carolina
Department of Environment and
Natural Resources

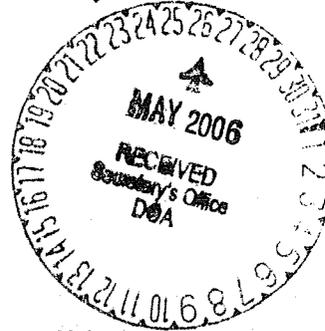
Michael F. Easley, Governor
William G. Ross Jr., Secretary



North Carolina
Division of Forest Resources

Stanford M. Adams, Director

May 24, 2006



MEMORANDUM

TO: Melba McGee, Office of Legislative Affairs

FROM: Michael Mann, NC Division of Forest Resources

SUBJECT: Scoping Document for the Widening of SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road). TIP # U-3465

PROJECT #: 06-0315

The North Carolina Division of Forest Resources has reviewed the referenced document and offers the following comments that should be addressed in the EA concerning impacts to woodlands.

1. In order to evaluate construction impact, list, by timber type, the total forest land acreage that is removed or taken out of forest production as a result of the project. Fragmentation of woodlots into small sections can make forest management difficult and should be avoided where possible. If no impacts will occur please state so in the document.
2. Efforts should be made to avoid or minimize impact to forest resources. Areas to avoid include unique or unusual ecosystems, highly productive managed woodlands and wetlands. Additionally, efforts should be made to align corridors to minimize impacts to woodlands in the following order of priority:
 - Managed, high site index woodland
 - Productive forested woodlands
 - Managed, lower site index woodlands
 - Unique forest ecosystems
 - Unmanaged, fully stocked woodlands
 - Unmanaged, cutover woodlands
 - Urban woodlands

3. The EA should include a summary of the potential productivity of the forest stands affected by the proposed project. Potential productivity is quantified by the soil series, and is found in the USDA Soil Survey for the county involved.
4. The provisions the contractor will take to utilize the merchantable timber removed during construction. Emphasis should be on selling all wood products. However, if the wood products cannot be sold then efforts should be made to haul off the material or turn it into mulch with a tub grinder. This practice will minimize the need for debris burning, and the risk of escaped fires and smoke management problems to residences, highways, schools, and towns.
5. If woodland burning is needed, the contractor must comply with the laws and regulations of open burning as covered under G.S. 113-60.21 through G.S. 113-60.31. Harnett County is classified as a non-high hazard counties, and G.S. 113-60.24 requiring a regular burning permit applies.
6. The provisions that the contractor will take to prevent erosion and damage to forestland. Trees, particularly the root system, can be permanently damaged by heavy equipment. Efforts should be to avoid skinning of the tree trunk, compacting the soil, adding layers of fill, exposing the root system, or spilling petroleum or other substances.

We appreciate the opportunity to comment on the proposed project, and encourage the impact on our forestland be considered during the planning process.

cc: Barry New



May 1, 2006



MEMORANDUM

To: Gregory J. Thorpe, Ph.D., NCDOT PDEA
From: Rob Ridings, NC DWQ, Transportation Permitting Unit *RR*
Through: John Hennessy, NC DWQ, Transportation Permitting Unit *JH*
Subject: Scoping comments on proposed widening to SR 1121 in Harnett County, TIP U-3465.

Reference your correspondence dated April 25, 2006 in which you requested comments for the referenced project. Preliminary analysis of the project reveals the potential for multiple impacts to streams and wetlands in the project area. More specifically, possible impacts to:

Stream Name	River Basin / Subbasin	Stream Classification(s)	Stream Index Number
UT Pistol Branch	CPF 14	C	18-23-29-4
UTs Lake McKay (incl. UT Kelly's Pond)	CPF 14	B	18-23-30
UT Jumping Run Creek	CPF 14	C	18-23-29
UTs Little River	CPF 14	C	18-23-(24)

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 (or the consultant(s) that requested the comments) consider the following environmental issues for the proposed project:

General Project Comments:

1. 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.
2. Environmental assessment alternatives should consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives should include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.
4. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation is required, the mitigation plan should be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.
5. DWQ is very concerned with sediment and erosion impacts that could result from this project. NC DOT 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.
6. If a bridge is being replaced with a hydraulic conveyance other than another bridge, DWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).
7. If the 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.
8. Bridge supports (bents) should not be placed in the stream when possible.
9. Whenever possible, the DWQ 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 allow for human and wildlife passage beneath the structure, do not block fish passage and do not block navigation by canoeists and boaters.
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 NC DWQ *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 shall be graded to its preconstruction contours and elevations. Disturbed areas should be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other 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 shall 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 shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ 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 and/or sills 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 3494/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 NC DWQ. 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, the DWQ 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. The DOT 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 Rob Ridings at (919) 733-9817.

cc: David Timpy, US Army Corps of Engineers, Wilmington Field Office
Terry Gibson, PE, Division 6 Engineer
James Rerko, Division 6 Environmental Officer)
Travis Wilson, NC Wildlife Resources Commission
Ken Averitte, DWQ Fayetteville Regional Office
File Copy

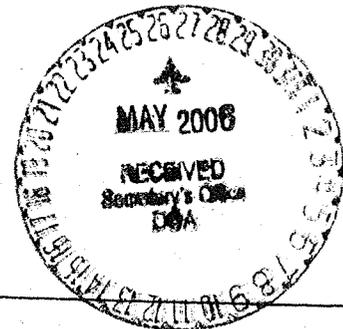


INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

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

PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (Statutory Time Limit)
<input type="checkbox"/> 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)
<input type="checkbox"/> NPDES-permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection preapplication conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90 - 120 days (N/A)
<input type="checkbox"/> Water Use Permit	Preapplication technical conference usually necessary	30 days (N/A)
<input type="checkbox"/> Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
<input type="checkbox"/> Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Preapplication conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
<input type="checkbox"/> Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100, 2Q.0300, 2H.0600)	N/A	60 days
<input checked="" type="checkbox"/> Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
<input checked="" type="checkbox"/> Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 2D.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-733-0820.		
<input type="checkbox"/> Complex Source Permit required under 15 A NCAC 2D.0800		
<input type="checkbox"/> The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) at least 30 days before beginning activity. A fee of \$50 for the first acre or any part of an acre.		20 days (30 days)
<input type="checkbox"/> The Sedimentation Pollution Control Act of 1973 must be addressed with respect to the referenced Local Ordinance.		30 days
<input checked="" type="checkbox"/> 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.		
<input type="checkbox"/> Mining Permit	On-site inspection usual. Surety bond filed with DENR. Bond amount varies with type mine and number of acres of affected land. Any are mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
<input type="checkbox"/> North Carolina Burning permit	On-site inspection by N.C. Division of Forest Resources if permit exceeds 4 days	1 day (N/A)
<input type="checkbox"/> Special Ground Clearance Burning Permit-22 counties in coastal N.C. with organic soils.	On-site inspection by N.C. Division of Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
<input type="checkbox"/> Oil Refining Facilities	N/A	90 - 120 days (N/A)

PERMITS		SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (Statutory Time Limit)
<input type="checkbox"/>	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 DENR 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)
<input type="checkbox"/>	Permit to drill exploratory oil or gas well	File surety bond of \$5,000 with DENR running to State of N.C. conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DENR rules and regulations.	10 days (N/A)
<input type="checkbox"/>	Geophysical Exploration Permit	Application filed with DENR at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days (N/A)
<input type="checkbox"/>	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)
<input type="checkbox"/>	401 Water Quality Certification	N/A	55 days (130 days)
<input type="checkbox"/>	CAMA Permit for MAJOR development	\$250.00 fee must accompany application	60 days (130 days)
<input type="checkbox"/>	CAMA Permit for MINOR development	\$50.00 fee must accompany application	22 days (25 days)
<input type="checkbox"/>	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, N.C. 27611		
<input type="checkbox"/>	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
<input type="checkbox"/>	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
<input type="checkbox"/>	Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required.		45 days (N/A)
*	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
59 Woodfin Place
Asheville, N.C. 28801
(828) 251-6208

Mooresville Regional Office
919 North Main Street
Mooresville, N.C. 28115
(704) 663-1699

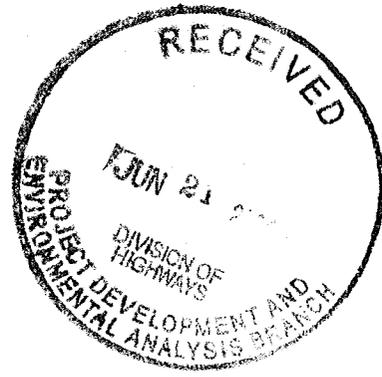
Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, N.C. 28405
(910) 395-3900

Fayetteville Regional Office
225 Green Street, Suite 714
Fayetteville, N.C. 28301
(910) 486-1541

Raleigh Regional Office
3800 Barrett Drive, P.O. Box 27687
Raleigh, N.C. 27611
(919) 571-4700

Winston-Salem Regional Office
585 Woughtown Street
Winston-Salem, N.C. 27107
(336) 771-4600

Washington Regional Office
943 Washington Square Mall
Washington, N.C. 27889
(252) 946-6481



North Carolina Department of Cultural Resources
State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

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

June 17, 2006

MEMORANDUM

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

FROM: Peter Sandbeck *Peter Sandbeck* u-3965

SUBJECT: Start of Study for Widening of SR1131 (Ray Road) from NC210 to SR 1120 (Overhills Road),
Harnett County, ER 06-1242

Thank you for your letter of April 25, 2006, transmitting the information concerning the above project.

A number of archaeological sites are recorded in the region. Within or near the proposed project area are sites 31HT286-290 and 31HT318. Site 31HT288 remains unassessed with respect to its eligibility for listing in the National Register of Historic Places. We, therefore, recommend that an archaeological survey be conducted in connection with this project and that all unassessed sites be evaluated in regards to their National Register eligibility. As always, we will be happy to assist you in planning your archaeological survey strategy.

We have determined that the project as proposed will not affect any historic structures.

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 considerations. If you have any questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919.733.4763. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr
Matt Wilkerson

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 276994617	(919)733-4763/733-8653
RESTORATION	515 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 276994617	(919)733-6547/715-4801
SURVEY & PLANNING	515 N. Blount Street, Raleigh, NC	4617 Mail Service Center, Raleigh NC 276994617	(919)733-6545/715-4801



North Carolina Department of Cultural Resources
State Historic Preservation Office

Peter B. Sandbeck, Administrator

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

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

July 7, 2008

MEMORANDUM

TO: Matt Wilkerson
Office of Human Environment
NCDOT Division of Highways

FROM: Peter Sandbeck

SUBJECT: Intensive Archaeological Survey and Evaluation (Phase I and II) for Widening of SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road), U-3465, Harnett County, ER 06-1242

Thank you for providing our office a copy of the above referenced report. For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following archaeological properties, 31HT981-31HT989 and 31HT991, are not eligible for listing in the National Register of Historic Places. These properties do not retain the level of integrity nor do they possess the potential to yield significant new information pertaining to either the prehistory or history of North Carolina.

The report author further states that the following archaeological property, 31HT990 is eligible for listing in the National Register of Historic Places under Criterion D. We agree with this assessment. This site has the potential to provide important data relevant to the prehistory of North Carolina. If the site cannot be avoided by the proposed project we concur that archaeological mitigation will be necessary prior to construction activities.

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.

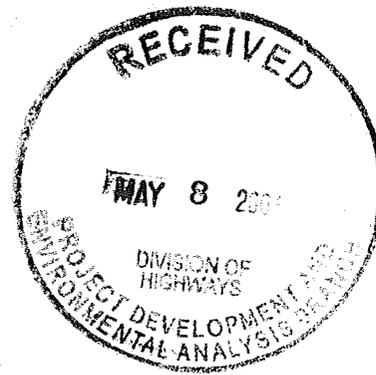
Thank you for your cooperation and considerations. If you have any questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919.807.6579. In all future communication concerning this project, please cite the above referenced tracking number.



United States Department of the Interior

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

May 3, 2006



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 widening of SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road) in Harnett County, North Carolina (TIP No. U-3465). These comments provide information in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

The 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. Highway shoulder and median widths should be reduced through wetland areas;
2. Culvert structures that maintain natural water flow and hydraulic regimes without scouring or impeding fish and wildlife passage should be employed;
3. 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;
4. Best Management Practices (BMP) for Construction and Maintenance Activities should be implemented.

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-listed threatened or endangered species. A biological assessment/evaluation may be prepared to fulfill the section 7(a)(2) requirement and will expedite the consultation process. 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> .

The North Carolina Natural Heritage Program database indicates historical accounts of the federally endangered red-cockaded woodpecker (*Picooides borealis*) near the project area. 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.

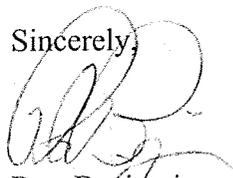
We reserve the right to review any federal permits that may be required for this project, at the public notice stage. Therefore, it is important that resource agency coordination occur early in the planning process in order to resolve any conflicts that may arise and minimize delays in project implementation. 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, supported by tabular data, if available, and including a discussion of the project's independent utility;
2. A description of the proposed action with an analysis of all alternatives being considered, including the upgrading of existing roads and a "no action" alternative;
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. Acres of wetland impact should be differentiated by habitat type based on the wetland classification scheme of the National Wetlands Inventory (NWI). 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 secondary impacts to natural resources, and how this and similar projects contribute to cumulative adverse effects;

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 direct 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. Please continue to advise us during the progression of the planning process, including your official determination of the impacts of this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,



Pete Benjamin
Ecological Services Supervisor

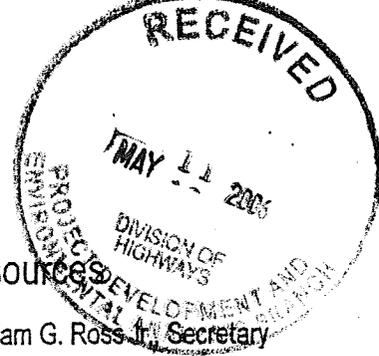
cc: Richard Spencer, USACE, Wilmington, NC
Chris Militscher, USEPA, Raleigh, NC
John Sullivan, FHWA, Raleigh, NC



North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross, Jr., Secretary



May 8, 2006

MEMORANDUM

TO: Gregory J. Thorpe, DOT Project Development and Environmental Analysis

FROM: ^{HJL} Harry LeGrand, Natural Heritage Program

SUBJECT: Widening of SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road); Harnett County

REFERENCE: F. A. Project STP-1121(9), TIP No. U-3465

The Natural Heritage Program has no record of rare species, significant natural communities, or significant natural heritage areas at the site nor within a mile of the project area. Although our maps do not show records of such natural heritage elements in the project area, it does not necessarily mean that they are not present. It may simply mean that the area has not been surveyed. The use of Natural Heritage Program data should not be substituted for actual field surveys, particularly if the project area contains suitable habitat for rare species, significant natural communities, or priority natural areas.

You may wish to check the Natural Heritage Program database website at www.ncnhp.org for a listing of rare plants and animals and significant natural communities in the county and on the topographic quad map. Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.



North Carolina
Department of Administration



Michael F. Easley, Governor

Britt Cobb, Secretary

June 22, 2006

Mr. George Thorpe
NCDOT
Transportation Building
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Thorpe:

Re: SCH File # 06-E-4220-0315; Scoping; Proposal of widening SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road). TIP # U-3465

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

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

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

Sincerely,

Ms. Chrys Baggett
Environmental Policy Act Coordinator

Attachments

cc: Region M

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

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail Chrys.Baggett@ncmail.net

Location Address:
116 West Jones Street
Raleigh, North Carolina

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

RECEIVED
MAY 2 2006

STATE NUMBER: 06-E-4220-0315
DATE RECEIVED: 04/28/2006
AGENCY RESPONSE: 05/23/2006
REVIEW CLOSED: 05/28/2006

MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORD
DEPT OF CUL RESOURCES
ARCHIVES-HISTORY BLDG - MSC 4617
RALEIGH NC

Ref # ER 06-1242
SDM
6/14/06

REVIEW DISTRIBUTION
CC&PS - DEM, NFIP
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CUL RESOURCES
DEPT OF TRANSPORTATION
MID CAROLINA COG



PROJECT INFORMATION

APPLICANT: NCDOT
TYPE: National Environmental Policy Act
ERD: Scoping
DESC: Proposal of widening SR 1121 (Ray Road) from NC 210 to SR 1120 (Overhills Road).
TIP # U-3465

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED:

- NO COMMENT
- COMMENTS ATTACHED

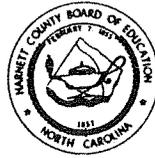
SIGNED BY: Renee Gledhill-Earley

DATE: 6-19-06

MAY 1 0 2006

HARNETT COUNTY BOARD OF EDUCATION

Donna McNeill, Chairman
Billy B. Tart, Vice-Chairman
Vivian W. Bennett
Chuck Levorse
Thomas A. Womble
Duncan McCormick, Board Attorney



Dan C. Honeycutt, Superintendent
Dr. Nancy Holmes, Assistant Superintendent
P.O. Box 1029
Lillington, NC 27546
Ph: (910) 893-8151
Fax: (910) 893-5816

HARNETT COUNTY SCHOOLS
OFFICE OF SUPERINTENDENT

MAY - 5
2006

May 5, 2006

Mr. Steven M. Taynton
Section Chief
School Planning
Department of Public Instruction
6319 Mail Service Center
Raleigh, N.C. 27699-6319

Dear Mr. Taynton:

In response to your letter of May 1, 2006 pertaining to the widening of Ray Road, SR 1121, Harnett County Schools has a high school and a middle school located within the project mentioned. This section of road is also used by our primary and elementary school. It would involve approximately thirty bus route round trips each day.

We would certainly hope DOT would work with Harnett County Schools to minimize the amount of time of bus routes during this construction period.

Thank you for your interest in this matter and allowing us to respond.

Sincerely,

Handwritten signature of Dan C. Honeycutt in black ink.

Dan C. Honeycutt
Superintendent

DCH/sw

APPENDIX C

Relocation Report/ Displacement Policies

EIS RELOCATION REPORT

**North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM**

E.I.S. CORRIDOR DESIGN

WBS ELEMENT:	39017.1.1	COUNTY	Harnett	Alternate	1	of	1	Alternate
T.I.P. No.:	U-3465							
DESCRIPTION OF PROJECT:	SR1121 (Ray Rd.) From NC210 to SR1120 (Overhills Rd.)							

ESTIMATED DISPLACEDS					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	2	3	5	1	0	2	2	1	0
Businesses	2	4	6	1	VALUE OF DWELLING				
Farms	0	0	0	0	DSS DWELLING AVAILABLE				
Non-Profit	0	1	0	1	Owners	Tenants	For Sale	For Rent	
					0-20M	\$ 0-150	0-20M	\$ 0-150	
					20-40M	150-250	20-40M	150-250	
					40-70M	250-400	40-70M	250-400	
					70-100M	400-600	70-100M	400-600	
					100 UP	600 UP	100 UP	600 UP	
					TOTAL	2	3	1678	551

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
X		2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? 18-24

REMARKS (Respond by number)
4. 1 Small Gas Station/Store "Stop & Shop" (3 Employees – 1 Minority)
1 Small Gas Station/Store "Matthews General Store" (3 Employees – 1 Minority)
1 Small Gas Station/Store "Short Stop" (4 Employees – 2 Minorities)
1 Small Towing/Tire Shop "Jeff's Towing & Tire shop" (2 Employees – 2 Minorities)
1 Small Restaurant "Tigers Pizza & Subs" (3 Employees – 2 Minorities)
1 Small Restaurant "Tigers Restaurant" (2 Employees – 1 Minority)
6. & 14. MLS, Local Realtors, Newspapers, Internet, etc.
8. As mandated by law.
11. Harnett Co.

 R.M. Abbott, JR. Right of Way Agent	2-5-09 Date		 Ann Simpson Relocation Coordinator	2-6-09 Date
--	----------------	--	---	----------------

NCDOT's policy regarding displacements involves providing assistance to those affected by transportation improvements per the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act. The best fit alternative under evaluation will result in the displacement of homes and/or businesses. Some residents in the Direct Community Impact Study Area appear to be low-income. If so, and if they are displaced, the Last Resort Housing Program established by the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (PL 91-646) may be used.

The Division of Highways offers a Relocation Assistance Program to help minimize the effects of displacement on families and businesses. The occupants of the affected residences or businesses may qualify for aid under one or more of the NCDOT relocation programs.

It is the policy of the NCDOT to ensure that 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

The Relocation Assistance Program provides experienced NCDOT staff 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 cases of ownership), the Relocation Replacement Housing Payments or Rent Supplement Program will compensate up to \$22,500 to owners who are eligible and qualify and up to \$5,250 to tenants who are eligible and qualify.

The relocation program for the proposed action will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), and 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 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 that 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 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 or federal programs offering assistance to displaced persons and will provide other advisory services as needed in order to minimize hardships to displaced persons in adjusting to a new location.

The Moving Expense Payments Program is designed to compensate the displacee for the costs of moving personal property from homes, businesses, non-profit organizations, and farm operations acquired for a highway project. Under the Replacement Program for Owners, NCDOT will participate in reasonable incidental purchase payments for replacement dwellings such as attorney's fees, surveys, appraisals, and other closing costs and, if applicable, make a payment for any increased interest expenses for replacement dwellings. Reimbursement to owner-occupants for replacement housing payments, increased interest payments, and incidental purchase expenses may not exceed \$22,500 (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 the policy of the state that no person will be displaced by the 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 before 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 latitudes in methods of implementation by the state so that decent, safe, and sanitary replacement housing can be provided. Last Resort Housing may be used if necessary.