FEASIBILITY STUDY

Greenville
New Connector
From NC 33 To US 264
Pitt County
U-3430

Prepared by
Program Development Branch
Division of Highways
N. C. Department of Transportation

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Date

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I. GENERAL DESCRIPTION

This preliminary study describes a proposed new connector road between NC 33 and US 264 in Greenville. The project location is shown on Figure 1. Four alternative alignments, as shown on Figure 1, were studied. **Alternate 1 is the recommended alignment.** This alternate includes a 0.3 mile (0.5 m) extension of the connector south of NC 33 to SR 1759 as shown on Figure 1.

The proposed connector, between NC 33 and US 264, will be a 4-lane, median divided shoulder section, approximately 2.9 miles (4.6 km) in length, with a 40-foot (12.2 m) median, 12-foot (3.6 m) wide travel lanes, 4-foot (1.2 m) wide full depth paved right shoulders and 2-foot (0.6 m) wide full depth paved median shoulders. The total shoulder width will be a minimum of 8 (2.4 m) feet. The total right-of-way width will be 150 feet (45.7 m).

At the Tar River dual bridges will be constructed. Each bridge will be approximately 500 feet (153 m) long with a clear roadway width of 38 feet (11.6 m).

The proposed connector, between SR 1759 and NC 33, will be a 2-lane shoulder section, approximately 0.3 miles (0.5 km) in length, with 4-foot (1.2 m) wide full depth paved shoulders. The total shoulder width will be a minimum of 8 feet (2.4 m). The total right-of-way width will be 150 feet (45.7 m) to allow future widening.

Near the north project terminal, approximately 0.7 miles (1.1 km) of the project will follow the alignment of SR 1536, a soil 2-lane road. The remaining 2.5 miles (4.0 km) will be built on new location.

Traffic signals are anticipated where the new connector intersects NC 33 and US 264, and the cost for these are included in the project cost estimate.

One business and 6 residential relocations are anticipated due to this project.

The total cost including construction and right-of-way is estimated to be $ 15,300,000. A 2-lane option built on 4-lane right-of-way is estimated to have a total project cost of $ 11,600,000 as shown on Table 1.

This study is the initial step in the planning and design process for this project and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the needs, recommend a treatment including costs, and identify potential problem areas that require consideration in the planning and design phases.

II. NEED FOR PROJECT

The purpose of this project is to improve north-south traffic flow in eastern Greenville. The area south of NC 33 is experiencing rapid residential development and a new school is planned north of NC 33. The new connector will relieve congestion at the intersection of US 264A and NC 33. The project was requested by the Pitt County Board of Commissioners.

The proposed connector is shown on the Pitt County Thoroughfare Plan as a Proposed Minor Arterial.

NC 33 is 2-lane shoulder section and US 264 is a 4-lane, median-divided, shoulder section. NC 33 west of this project is scheduled for widening to a 5-lane roadway under Project R-2251.

Traffic volume estimates for the new connector for the years 1996 and 2015 are 6,600 vehicles per day (vpd) and 10,200 vpd respectively. The Level of Service (LOS) is estimated to be LOS A based on 1996 traffic volumes, and LOS A based on 2015 traffic volumes. The Level of Service (LOS) for the 2-lane option, for the years 1996 and 2015 are estimated to be LOS C and LOS D respectively.

III. DISCUSSION OF ALTERNATIVES

The alignment of Alternate 4, as shown on Figure 1, is the alignment described in the initial request for this project. Early in the course of the study the Pitt County Planning Department expressed concern that this alignment could not be easily extended to the south, as called for on the Pitt County Thoroughfare Plan, because of existing and planned development between NC 33 and SR 1759. Alternates 1, 2, and 3 were studied in a effort to identify an alignment that offered more opportunity for future extension to the south of NC 33.

For each alignment alternate, a cost estimate was made for a 4-lane median divided cross-section, and a 2-lane cross-section.

Alternate 1 is the recommended alignment because it includes a connection from NC 33 to SR 1759 as shown on Figure 1.

Table 1 shows comparisons of the cost, length, number of relocations required, and future extension capability, for the four alternate alignments.

TABLE 1. COMPARISON OF ALTERNATES U-3430 GREENVILLE		
	4-lane Road, 150' R/W	2-lane Road, 150' R/W
ALTERNATE 1	Cost: $15,300,000 Relocat's: 7 Length: 3.2 miles Future Ex: Best	Cost: $11,600,000 Relocat's: 7 Length: 3.2 miles Future Ex: Best
ALTERNATE 2	Cost: $15,400,000 Relocat's: 7 Length: 3.2 miles Future Ex: Poor	Cost: $11,600,000 Relocat's: 7 Length: 3.2 miles Future Ex: Poor
ALTERNATE 3	Cost: $13,700,000 Relocat's: 1 Length: 3.0 miles Future Ex: Poor	Cost: $ 10,000,000 Relocat's: 1 Length: 3.0 miles Future Ex: Poor
ALTERNATE 4	Cost: $13,200,000 Relocat's: 2 Length: 2.9 miles Future Ex: Worst	Cost: $ 9,500,000 Relocat's: 2 Length: 2.9 miles Future Ex: Worst

IV. RECOMMENDATIONS

It is recommended to construct a new connector road between NC 33 and US 264 in Greenville. The project location is shown on Figure 1. Four alternative alignments, as shown on Figure 1, were studied. **Alternate 1 is the recommended alignment.** This alternate includes a 0.3 mile (0.5 m) extension of the connector south of NC 33 to SR 1759 as shown on Figure 1.

The proposed connector, between NC 33 and US 264, will be a 4-lane, median divided shoulder section, approximately 2.9 miles (4.6 km) in length, with a 40-foot (12.2 m) median, 12-foot (3.6 m) wide travel lanes, 4-foot (1.2 m) wide full depth paved right shoulders and 2-foot (0.6 m) wide full depth paved median shoulders. The total shoulder width will be a minimum of 8 (2.4 m) feet. The total right-of-way width will be 150 feet (45.7 m).

At the Tar River dual bridges will be constructed. Each bridge will be approximately 500 feet (153 m) long with a clear roadway width of 38 feet (11.6 m).

The proposed connector, between SR 1759 and NC 33, will be a 2-lane shoulder section, approximately 0.3 miles (0.5 km) in length, with 4-foot (1.2 m) wide full depth paved shoulders. The total shoulder width will be a minimum of 8 feet (2.4 m). The total right-of-way width will be 150 feet (45.7 m) to allow future widening.

Near the north project terminal, approximately 0.7 miles (1.1 km) of the project will follow the alignment of SR 1536, a soil 2-lane road. The remaining 2.5 miles (4.0 km) will be built on new location.

Traffic signals are anticipated where the new connector intersects NC 33 and US 264, and the cost for these are included in the project cost estimate.

One business and 6 residential relocations are anticipated due to this project.

The total cost including construction and right-of-way is estimated to be $ 15,300,000 as follows:

Construction.....	$ 14,200,000
Right-of-Way.....	1,100,000
Total Cost.....	$ 15,300,000

A 2-lane option built on 4-lane right-of-way is estimated to have a total project cost of $ 11,600,000 as follows:

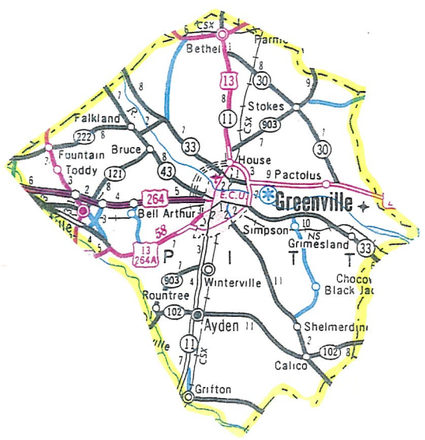
Construction.....	$ 10,500,000
Right-of-Way.....	1,100,000
Total Cost.....	$ 11,600,000

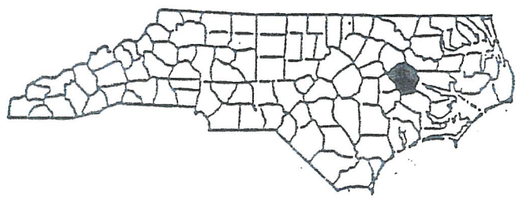
V. OTHER COMMENTS

The Level of Service (LOS) for the 2-lane option, for the years 1996 and 2015 are estimated to be LOS C and LOS D respectively.

An environmental screening was not conducted for this study. No historic properties have been identified; however, an endangered animal species (Vexturus Lewisi) has been identified by the Natural Heritage Program approximately 2 miles east of the Alternate 1 alignment.

It is estimated that approximately 25 acres of wetlands will be involved in this project. Costs for wetland mitigation, estimated at $ 125,000, have not been included in the above construction cost.





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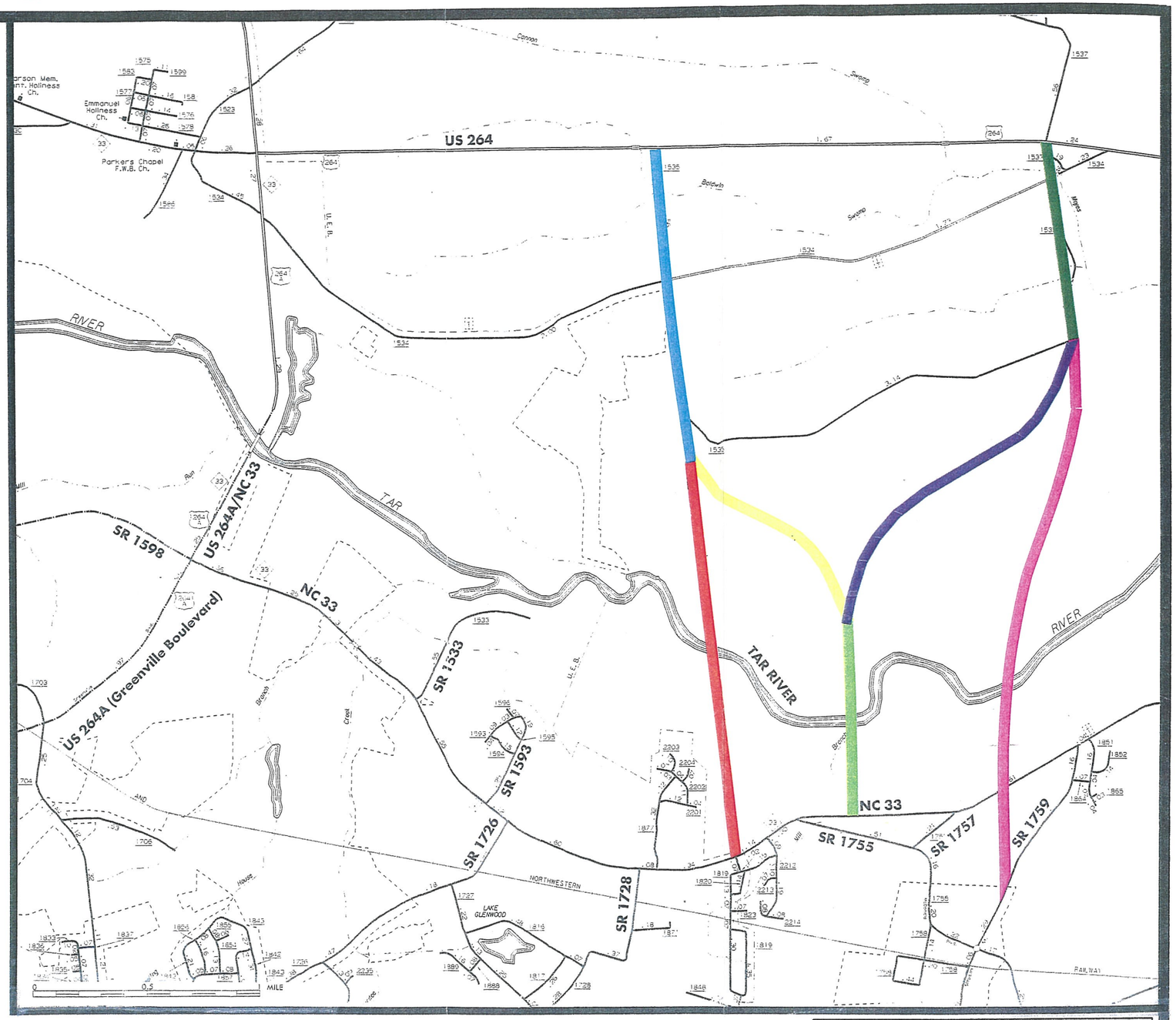

LEGEND

- ALTERNATE 1
- ALTERNATE 2
- ALTERNATE 3
- ALTERNATE 4

FEASIBILITY STUDIES UNIT

FIGURE 1. PROJECT LOCATION
NEW CONNECTOR
from NC 33
to US 264

GREENVILLE, PITT COUNTY

U-3430 DIVISION 2 FIGURE 1