

FEASIBILITY STUDY

Roxboro

US 501 (East Roxboro Bypass)  
From US 501 at SR 1700  
To NC 49  
Person County

Division 5

R-3609

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



William J. Watson, P.E.  
Highway Planning Engineer



David G. Modlin, Jr., Ph.D., P.E.  
Head of Feasibility Studies

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**I. GENERAL DESCRIPTION**

This preliminary study describes the proposed East Roxboro Bypass from US 501 to NC 49 in Roxboro. Between US 501 at the south project terminus and SR 1703 the project alignment follows SR 1700, a 2-lane, paved, shoulder section. The remainder of the bypass will be built on new location, as shown on Figure 1. The total project length is approximately 4.9 miles (7.8 km). The proposed cross-section, for the entire project length is a 2-lane shoulder section, with 4-foot (1.2-m) wide paved shoulders. The total required right-of-way width for this cross-section is 120 feet (36.6 m), with partial control of access (one entrance per parcel).

The recommended 2-lane roadway should be positioned asymmetrically within the 120-foot (36.6-m) right-of-way in order to facilitate the future construction of the ultimate cross-section which is a multi-lane curb-and gutter section.

The project will require the minor relocation of SR 1144, SR 1700, and SR 1534, in order for these to make suitable intersections with the project roadway.

The US 501 intersection, the US 158 intersection, the SR 1536 intersection, and the NC 49 intersection may require traffic signals and the cost for these is included in the estimates shown below. Also, approach widenings for turn lanes at these intersections are included in the cost estimate.

This project is expected to require 1 business relocation and 20 residential relocations. The total project cost including construction and right-of-way is estimated to be \$17,900,000.

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 relieve current and future traffic congestion along the existing US 501 corridor in Roxboro. This corridor, within the Roxboro central business district, is characterized by dense, commercial, strip, development. This project was requested by the Roxboro/Person County Thoroughfare Advisory Committee. The proposed project corridor is shown as a Major Thoroughfare on the Roxboro Thoroughfare Plan. Existing US 501 in Roxboro is a 5-lane curb-and-gutter facility. Land in the proposed project corridor is primarily cultivated farm land and undeveloped woodland.

Traffic volume estimates for the project corridor, for the years 1996 and 2020 are 5,200 vehicles per day (vpd) and 9,800 vpd respectively. The estimated Level of Service (LOS) based on 1996 traffic volumes is LOS C. By the 2020 design year the LOS is expected to be LOS D. The ultimate multi-lane cross-section will provide LOS A in the 2020 design year

## III. RECOMMENDATIONS

It is recommended to construct the East Roxboro Bypass from US 501 to NC 49 in Roxboro. Between US 501 at the south project terminus and SR 1703 the project alignment follows SR 1700, a 2-lane, paved, shoulder section. The remainder of the bypass will be built on new location, as shown on Figure 1. The total project length is approximately 4.9 miles (7.8 km). The proposed cross-section, for the entire project length is a 2-lane shoulder section, with 4-foot (1.2-m) wide paved shoulders. The total required right-of-way width for this cross-section is 120 feet (36.6 m), with partial control of access (one entrance per parcel).

The recommended 2-lane roadway should be positioned asymmetrically within the 120-foot (36.6m) right-of-way in order to facilitate the future construction of the ultimate cross-section which is a multi-lane curb-and gutter section.

The project will require the minor relocation of SR 1144, SR 1700, and SR 1534, in order for these to make suitable intersections with the project roadway.

The US 501 intersection, the US 158 intersection, the SR 1536 intersection, and the NC 49 intersection may require traffic signals and the cost for these is included in the estimates shown below. Also, approach widenings for turn lanes at these intersections are included in the cost estimate.

The US 501 Corridor will extend north of NC 49 under TIP Project R-2241, which is currently in the planning stage. The proposed cross-section for R-2241 is a multi-lane section.

This project is expected to require 1 business relocation and 20 residential relocations. The total cost including construction and right-of-way is estimated to be \$17,900,000 as follows:

Right-of-Way .....	\$ 5,600,000
Construction .....	\$12,300,000
Total Cost .....	\$17,900,000

#### IV. OTHER COMMENTS

An environmental screening was not conducted for this study. Wetlands will be involved at Morlowe's Creek and at the tributaries to Deep Creek. No historic properties or endangered species are anticipated.

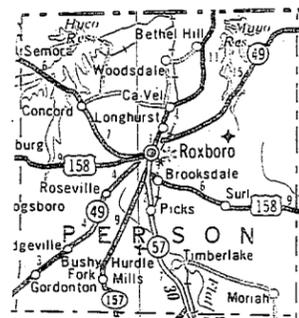
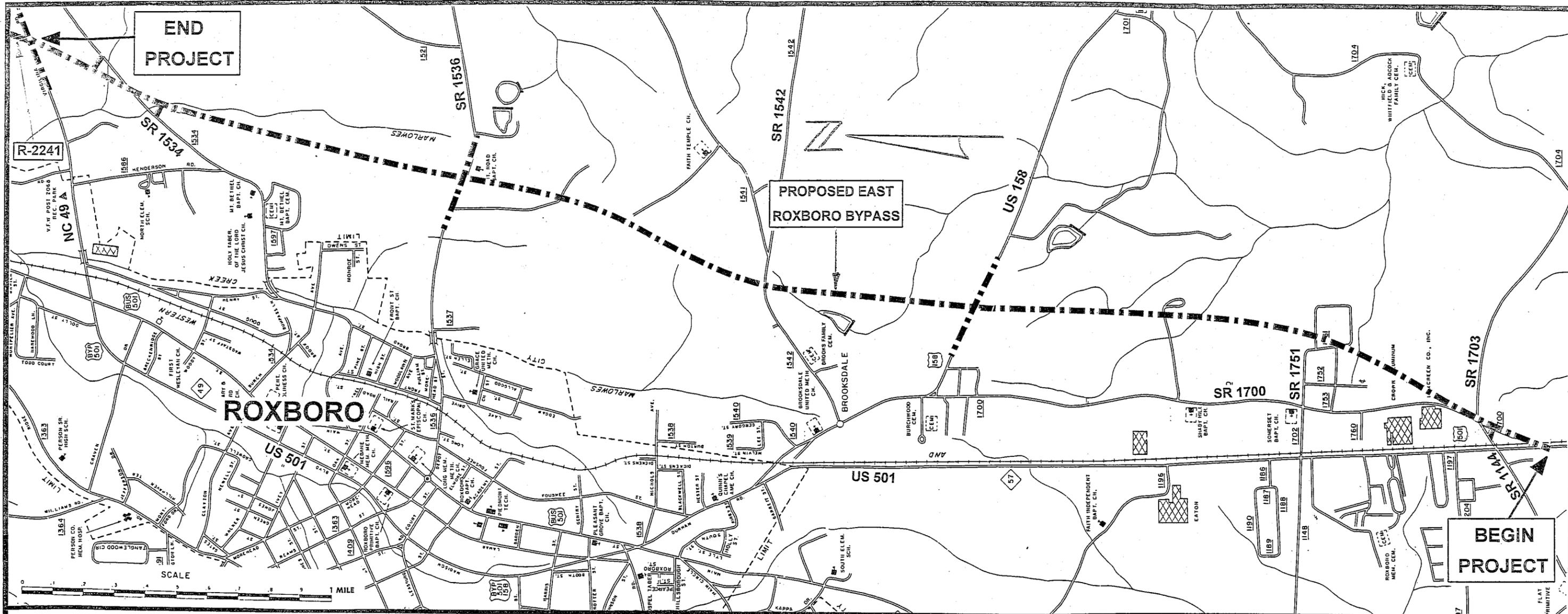
The ultimate cross-section for this project is either a 5-lane curb-and-gutter section or a 4-lane curb-and-gutter section with a 16-foot (4.9-m) median. The construction cost estimates for the potential widening of the proposed 2-lane cross-section are as follows:

Widen 2-lane to a 5-Lane Curb-and-Gutter Section

Construction.....\$7,000,000

Widen 2-lane to a 4-Lane Curb-and-Gutter Section with 16-foot Median

Construction.....\$7,400,000



North Carolina Department of Transportation  
 Program Development Branch

**R-3609**

Figure 1. Project Location  
 US 501 (East Roxboro Bypass)  
 from US 501 at SR 1700  
 to NC 49  
 Roxboro, Person County

DIVISION 5 FIGURE 1