

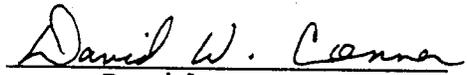
FEASIBILITY STUDY

Carrboro
Smith Level Road (SR 1919)
From US 15-501 to Bridge #88
Orange County
U-2803

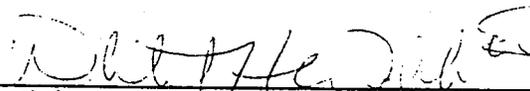
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12/10/92
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I. GENERAL DESCRIPTION

This preliminary study describes proposed improvements to Smith Level Road (SR 1919) in Orange County. For a location map please see Figure 1. It is proposed to widen Smith Level Road from US 15-501 to Bridge #88, a distance of approximately 2.8 miles. Also, it is proposed to relocate approximately 2000 feet of Damascus Church Road (SR 1939) so that it intersects Smith Level Road opposite Dogwood Drive (SR 1962) as shown on Figure 1.

The proposed cross section, for the entire project length, is a 5 lane curb and gutter section (68 feet wide from face to face of curbs) providing two travel lanes in each direction and a center turn lane. Wide outside lanes are recommended to accommodate bicycle traffic.

The proposed cross section for the relocation of Damascus Church Road is a 28 foot wide pavement including 2 foot wide paved shoulders on each side.

No residential or business relocatees are expected on this project. The total estimated cost including construction and right of way is \$9,400,000.

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 problem, evaluate a treatment alternative including costs, and identify potential problem areas that require consideration in the planning and construction stages.

II. NEED FOR PROJECT

The purpose of these improvements is to improve the traffic carrying capacity and accident experience of Smith Level Road. This project was requested by the Town of Carrboro and should improve traffic flow and congestion on Smith Level Road while reducing the accident potential for cyclists in the area.

Smith Level Road is designated as a Minor Collector on the North Carolina Statewide Functional Classification System and a Major Thoroughfare on the Durham-Chapel Hill-Carrboro Urban Area Thoroughfare Plan. Development along the roadway is generally light to heavy density residential with over 16% of Carrboro's population concentrated in the BPW Club Road area.

Smith Level Road is generally a two lane roadway with a pavement width of varying from 20 feet to 24 feet and soil shoulders that vary in width from 6 to 8 feet. There is one bridge on Smith Level Road (Bridge #88), located at the northern project terminal. Bridge #88 is being replaced with a bridge with a clear deck width of 64 feet, and between Bridge #88 and NC 54, Smith Level Road is being widened to a 64 foot wide curb and gutter facility. The intersections with US 15-501 and Culbreth Drive (SR 1994) are controlled with traffic signals. The width of existing right of way on Smith Level Road is believed to be 60 feet.

The 1992 Average Daily Traffic (ADT) on Smith Level Road is estimated to be approximately 12,000 vehicles per day (vpd), and the ADT for the design year (2012) is estimated to be approximately 26,000 vpd. Bicycle traffic on Smith Level Road is reported by the Town of Carrboro to be extensive.

The Level of Service (LOS) on Smith Level Road is estimated to currently be level E and without the proposed improvements will deteriorate to level F by the year 2012. With the proposed improvements the LOS is estimated to improve to level A, and level C is expected to prevail in 2012.

During the period from January 1, 1989 through December 31, 1991, there were 60 accidents reported on Smith Level Road from Bridge #88 to US 15-501. This resulted in an accident rate of 158 accidents per 100 million vehicle miles (Acc/100 MVM), compared to a state wide average of 295.0 Acc/100 MVM for all urban secondary routes during 1991. There were no fatalities reported during the period; however, 30 of the accidents resulted in injuries, and 2 accidents involved bicycles. The most prevalent accident types were rear end (28%), left turn (13%), and angle (8%). The proposed wider cross section should reduce the potential for these types of accidents.

III. RECOMMENDATIONS

It is proposed to widen Smith Level Road from US 15-501 to Bridge #88, a distance of approximately 2.8 miles. Also, it is recommended to relocate approximately 2000 feet of Damascus Church Road (SR 1939) so that it intersects Smith Level Road opposite Dogwood Drive (SR 1962) as shown on Figure 1. It is recommended that a cul-de-sac be constructed on Damascus Church Road where it currently intersects Smith Level Road.

The recommended cross section, for the entire project length, is a 5 lane curb and gutter section (68 feet wide from face to face of curbs) providing two travel lanes in each direction and a center turn lane. Wide outside lanes are recommended to accommodate bicycle traffic.

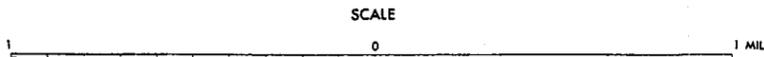
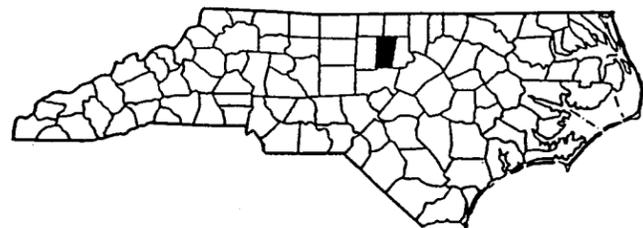
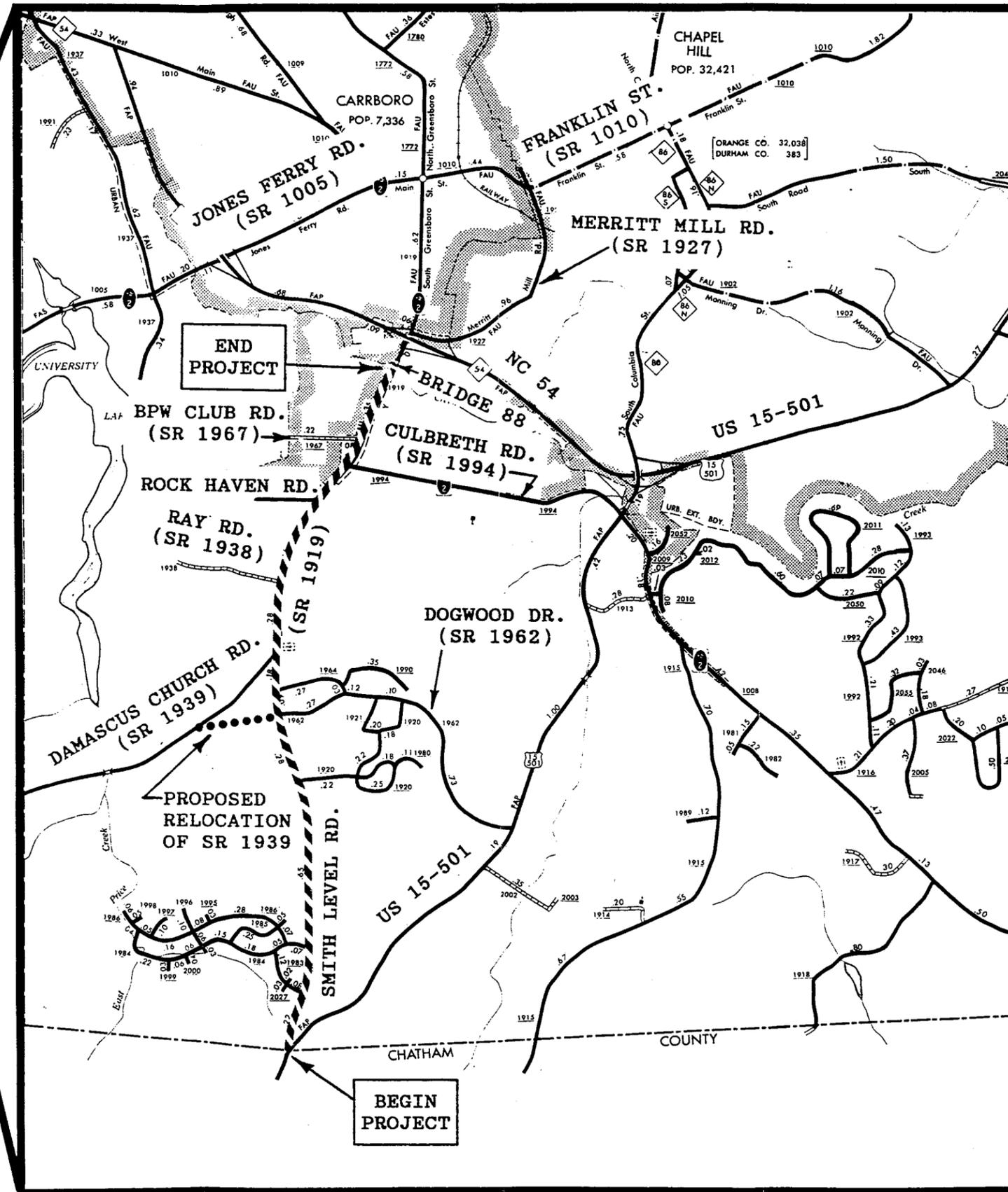
The recommended cross section for the relocation of Damascus Church Road is a 28 foot wide pavement including 2 foot wide paved shoulders on each side.

No residential relocatees are expected on this project. One business is expected to be relocated. The total estimated cost including construction and right of way is \$9,400,000 as follows:

Construction	\$6,700,000
Right of Way	2,700,000
Total Cost	9,400,000

IV. OTHER COMMENTS

An environmental screening was not conducted for this project.



FEASIBILITY STUDIES UNIT

FIGURE 1. LOCATION MAP

CARRBORO
SMITH LEVEL RD. (SR 1919)
FROM US 15-501
TO BRIDGE #88

ORANGE COUNTY

U-2803 DIV. 7 FIGURE 1