

FEASIBILITY STUDY

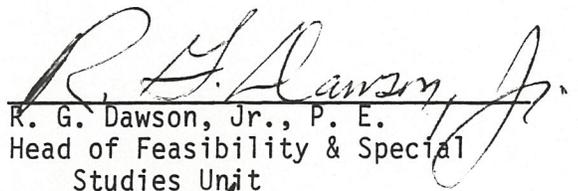
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Mount Airy
South Street
From Rockford Street (US 601)
To West Lebanon Street (US 52 Business)
Surry County, U-2553

Prepared by
Planning and Research Branch
Division of Highways
N. C. Department of Transportation

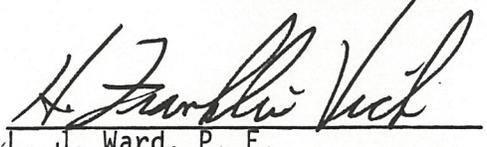


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Mount Airy
South Street
From Rockford Street (US 601)
To West Lebanon Street (US 52 Business)
Surry County, U-2553

I. GENERAL DESCRIPTION

This report covers a preliminary study of the proposed upgrading of South Street in Mount Airy to a multi-lane facility. The proposed project extends from Rockford Street (US 601) to West Lebanon Street (US 52 Business) and is approximately 2.2 miles in length (see Figure 1). It is included in the 1990-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection. It is not currently funded for design, right-of-way acquisition, or construction.

II. PURPOSE OF PROJECT

Existing Route Characteristics

South Street is a major north-south street in the City of Mount Airy. The portion of South Street from Pine Street to just north of the Southern Railway is on the State Highway System (SR 1669), while the remainder of the street is a city street. It is classified as a major thoroughfare on the Mount Airy Thoroughfare Plan which was adopted in October 1987. This route is classified as an Urban Minor Arterial in the North Carolina Functional Classification System.

The 0.6 mile portion of South Street from Pine Street to just south of the railroad tracks is a 4-lane, 52-foot, curb and gutter roadway. The remainder of the road a two-lane facility with varying pavement widths, ranging from a 20-foot pavement and 5-foot shoulders to a 30-foot curb and gutter section. The existing right-of-way on the four-lane portion of South Street varies from 80 to 92 feet. On the two-lane sections, the existing right-of-way is claimed 40 feet, symmetrical about the present centerline. Both the horizontal and the vertical alignments are fair along the studied section of road. There is an at grade crossing with Southern Railway that has crossbucks but no signals or gates. All intersections along the studied route are at grade. The intersections of South Street with Worth Street, Pine Street, Franklin Street, SR 1670, Orchard Street, and West Lebanon Street are signalized. All other intersections are stop sign controlled. The present speed limit is 35 mph. Three problem intersections were identified on the project. At the intersection of South Street with Rockford Street, the South Street approach is often blocked by traffic on Rockford Street backed up from the US 52 Bypass intersection. The split intersection of South Street with Worth Street has problems with congestion and sight distance. The southbound move from Grace Street to South Street must dog-leg on West Lebanon Street, resulting in congestion and potential safety problems.

Development along the studied route is heavy and is a mixture of commercial, residential, and institutional. The Mount Airy High School and the Mount Airy Junior High School are located on the west side of South Street just north of the Orchard Street intersection. The Northern Hospital of Surry County is located south of Worth Street between South Street and Rockford Street. The Zion Baptist Church and Salvation Army Church are located on the east side of the project near the southern end.

Traffic Volumes, Capacity, and Accident Record

The current traffic volume of 8000 vehicles per day (vpd) is projected to increase to approximately 15,000 vpd by the year 2010. With the current traffic volumes, South Street is approaching capacity and experiencing congestion during peak periods. Without improvements to this street, the level of traffic service will deteriorate in the future as traffic volumes continue to grow. With the proposed improvements, South Street should operate at Level of Service C or better throughout the planning period.

During the period from April 1, 1987 through March 31, 1990, a total of 86 accidents were reported on the subject portion of South Street, resulting in an accident rate of 496.8 accidents per 100 million vehicle miles (acc/100mvm). This compares to a statewide average of 379.0 acc/100mvm for all urban secondary roads over a similar period. The most common accident types were as angle accidents and rear-end collisions. The proposed improvements to South Street should reduce the potential for these types of accidents.

Need for Project

The widening of South Street to a multi-lane section is needed to provide adequate capacity for existing and future traffic volumes. The project will improve access to the development along the road, such as the schools and the hospital. The project will also enhance safety along the road.

III. RECOMMENDATIONS AND COSTS

The widening of South Street to a multi-lane facility is immediately warranted. The recommended improvement is a four-lane curb and gutter cross section, 52 feet from face to face of curbs, widening to a five-lane, 64-foot curb and gutter cross section, at selected locations to provide a center left-turn lane. Preliminary investigations indicate left-turn lanes will be needed from Rockford Street to West Haymore Street, and at the intersections of South Street with Pine Street, Orchard Street and West Lebanon Street. While the provision of a five-lane cross section throughout the project length would be desirable, the four-lane cross section was selected to minimize damage to the existing development located close to the roadway along both sides of South Street. The proposed widening should be a combination of symmetrical widening and widening to one side or the other to minimize damage to

adjacent development and to improve the horizontal alignment. The re-alignment of the intersections of South Street with Grace Street at the northern project terminal, and Worth Street near the south end of the project are recommended to simplify traffic operations at these locations. A right-of-way width varying from 80 feet in the four-lane sections to 90 feet in the five-lane sections, plus construction easements as needed, is anticipated for the proposed roadway. Flashing signals and gates are recommended at the Southern Railway crossing. A projected traffic volume of 8,000 vpd combined with 3 trains per day results in an exposure index of 24,000 which is below the criteria of 30,000 utilized for consideration of railroad separations in urban areas. In addition, the provision of a grade separation at this location would greatly increase the cost of this project and require additional residential relocatees.

The estimated costs of this project are as follows:

Construction	\$ 2,050,000
Right-of-Way	<u>4,200,000</u>
TOTAL	\$ 6,250,000

The construction cost includes engineering and contingencies and the right-of-way cost includes relocation, acquisition, and utility costs.

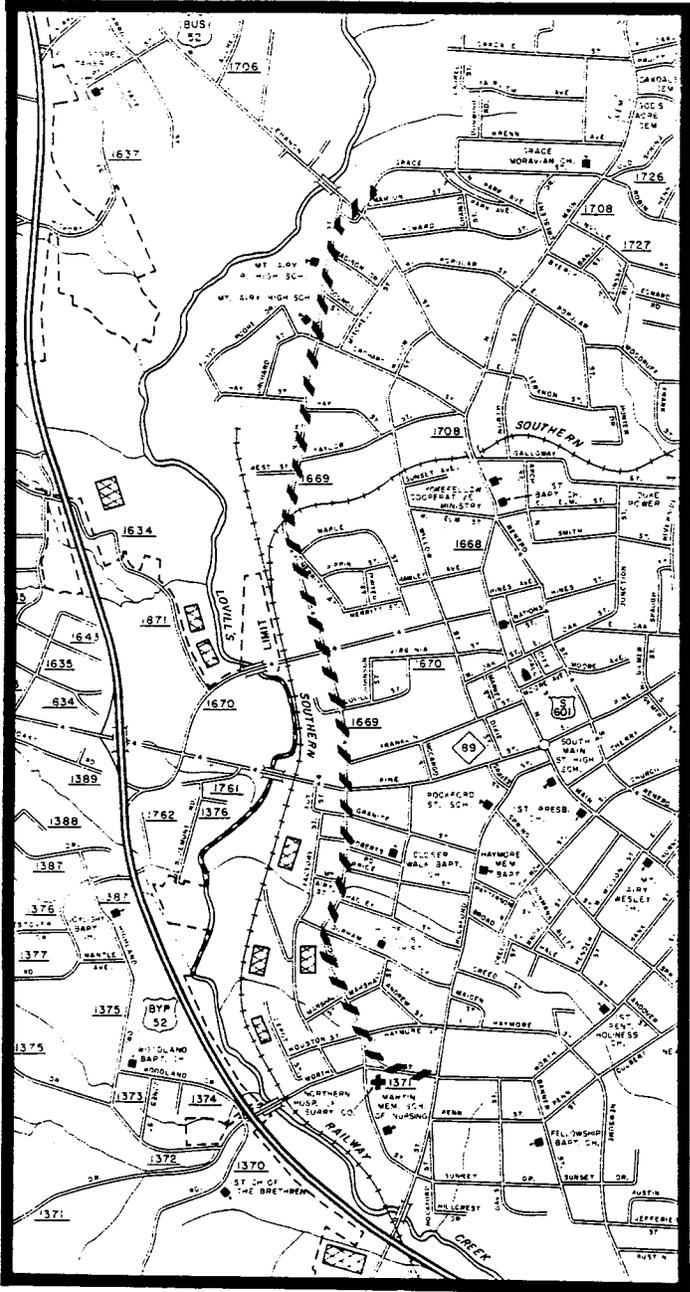
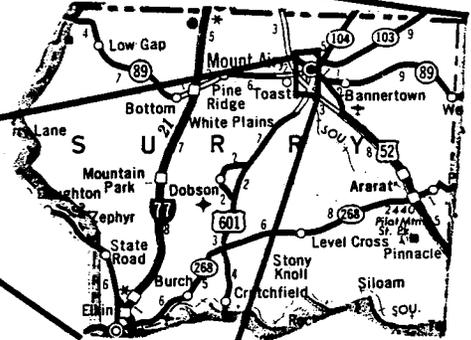
IV. ENVIRONMENTAL EFFECTS

The widening of South Street road will require the relocation of an estimated 26 residences and 12 businesses. The project will also result in increased noise levels for development adjacent to the roadway. Other impacts will be primarily related to the actual construction of the proposed roadway. These include minor erosion and siltation, increased noise levels from construction machinery, and delay and inconvenience to motorists using the subject route.

V. FUTURE ACTIVITIES

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts will need to be evaluated in a planning/environmental document prior to that time, and a decision made as to the most appropriate improvement.

RBD/plr



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANNING AND RESEARCH BRANCH</p>
<p>MOUNT AIRY, SOUTH STREET FROM US 601 (ROCKFORD STREET) TO US 52 BUSINESS (LEBANON STREET) SURRY COUNTY, U-2553</p>	
<p>0 mi. 1/2 FIG. 1</p>	