FEASIBILITY STUDY

US 70
from SR 2318 (Fanjoy Road) near Statesville
to SR 1956 (Holly Avenue) in Salisbury

Iredell and Rowan Counties

R-2911

Prepared by
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I. GENERAL DESCRIPTION

This is a feasibility study for the widening and partial relocation of US 70 from SR 2318 (Fanjoy Road) east of Statesville to SR 1956 (Holly Avenue) in Salisbury, a distance of approximately 19.7 miles (See Figures 1 and 2). The recommended typical cross-sections are a five-lane, 64-foot, face-to-face, curb and gutter section with 8-foot berms on a 100-foot wide right-of-way with no control of access, and a four-lane divided roadway with a 46-foot median on a 250-foot wide right-of-way with partial or no control of access (one or more access points per property). Estimated cost of the project is $53,500,000 ($21,900,000 for right-of-way and $31,600,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents recommended cross sections for improvements, general alignments of improvements, and estimated cost of construction and right-of-way. This study attempts to identify any potential environmental, permitting, or other observed issues which deserve consideration in the planning and construction stages.

II. NEED FOR PROJECT

This project was requested by Rowan County and the Cities of Salisbury and Statesville to improve traffic capacity and facilitate development between Salisbury and Statesville. US 70 is classified as an Other Principle Arterial on the Statewide Functional Classification System.

The existing US 70 is mainly a two-lane, 24-foot pavement with 2 to 8-foot shoulders, from SR 2318 (Fanjoy Road), east of Statesville, to SR 1954 (Goodson Road), west of Statesville. From SR 1954 to approximately 300 feet east of SR 1956 (Holly Avenue), US 70 consists of a three-lane, 40-foot shoulder section with variable shoulders. Land use is predominantly industrial and rural residential between Salisbury and Statesville. Within the urbanized areas of Statesville and Salisbury, land use is mixed, residential and commercial.

The west terminal of the project is at the unsignalized intersection of SR 2318 (Fanjoy Road) and US 70 (See Figure 2). West of this intersection, US 70 consists of a two-lane shoulder section. TIP Project U-2421 proposes to widen US 70, from SR 2318 (Fanjoy Road) westward into the City of Statesville utilizing a five-lane, 64-foot, face-to-face, curb and gutter section. Land use is industrial and agricultural around the intersection.

The east terminal of the project is located at the existing multi-lanes approximately 300 feet east of the intersection of SR 1956 (Holly Avenue) with US 70 (See Figure 2). East of this terminal US 70 is a five-lane, 64-foot, face-to-face, curb and gutter section. Land use is commercial in this area.

The Southern Railway parallels US 70 throughout the project length. The rail line carries approximately ten trains per day at an average speed of 45 miles per hour. There are four railroad crossings along the project corridor; two at-grade and two grade separated. The two at-grade crossings are railroad spurs, near SR 2361 in Iredell County, which carry two trains per day at 15 mph.

Railroad bridge number 67 carries Southern Railway over US 70 approximately 0.3 miles west of the intersection of US 70 with NC 801. This four-span bridge has a vertical clearance of 17 feet and a horizontal clearance of 45 feet.

Bridge number 71 carries US 70 over the Southern Railway approximately 1.2 miles east of the intersection of US 70 with NC 801. This 238-foot long bridge has a bridge roadway width of 28.2 feet and a bridge deck width of 31.6 feet. The bridge sufficiency rating is 49.6 out of 100.

Bridge number 9 carries US 70 over Third Creek approximately 1.0 mile west of the intersection of US 70 with SR 1001. This 226-foot long bridge has a bridge roadway width of 28 feet and a bridge deck width of 31.3 feet. The sufficiency rating for bridge number 9 is 70.5 out of 100.

Bridge number 81 carries US 70 over North Second Creek approximately 2.7 miles east of the intersection of US 70 with NC 801. This bridge has a sufficiency rating of 31.2 out of 100. Bridge number 81 is 214 feet long and has a bridge roadway width of 28.1 feet and a bridge deck width of 31.5 feet.

The 1992 Average Daily Traffic (ADT) on US 70 ranged from 13,400 to 18,500 vehicles per day (vpd). In the year 2012 anticipated traffic is estimated to range between 26,600 and 36,800 vpd. The higher traffic volumes are near the termini in the cities of Statesville and Salisbury, whereas the lower volumes are in the central rural sections of the project. With the existing facility, peak hour traffic currently experiences a level of service (LOS) E, and is expected to experience a LOS F before 2012. With the recommended improvements, current traffic on US 70 would experience LOS A, and is projected to experience a LOS B in the year 2015.

During the period from September 1, 1989 through October 31, 1992, a total of 218 accidents were reported along the studied section of US 70. This resulted in an accident rate of 114.9 accidents per 100 million vehicle miles, compared to a statewide average of 147.3 for similar routes. Rear-end collisions accounted for 40% of the accidents. Trucks accounted for 20% of the vehicles involved in accidents. The recommended improvements would reduce the accident rate.

III. RECOMMENDATIONS

It is recommended that 19.7 miles of US 70 be improved by widening and partial relocation. This project should be divided into the following three sections.

Section One recommends the widening and partial relocation of US 70, from SR 2318 to SR 2362, a distance of approximately 3.6 miles (See Figure 2). The recommended typical cross-section for US 70, from SR 2318 to 0.2 miles east of SR 2488, is a five-lane, 64-foot, face-to-face, curb and gutter section with 8-foot berms on a 100-foot wide right-of-way with no control of access, on new location south of the existing US 70. The section on new location will reduce the number of relocations along the corridor. The five-lane section would be consistent with the five-lane section recommended for T.I.P. Project U-2421. A bridge is recommended at the intersection of the relocated US 70 and the industrial railroad spur. This bridge will carry the relocated US 70 over the railroad spur. From 0.2 miles east of SR 2488 to SR 2362, US 70 would be widened to a four-lane divided roadway with a 46-foot median on a 250-foot wide right-of-way with partial control of access. Land use is predominantly industrial and agricultural along this corridor.

Section Two would consist of the widening of US 70, from SR 2362 in Iredell County to SR 1953 in Rowan County, a distance of approximately 12.7 miles (See Figure 2). The recommended typical cross-section is a four-lane divided roadway with a 46-foot median on a 250-foot wide right-of-way with partial or no control of access. In addition, bridge number 9 would be widened and rehabilitated. A similar structure would be constructed parallel to bridge number 9 on the south side of the existing US 70 to carry westbound traffic. Bridge number 67 would be removed and replaced at the same location. A detour facility would be provided during construction for the Southern Railway. Bridge number 71 would be removed and replaced. Also, a parallel bridge would be built on the south side of bridge number 71 to carry eastbound traffic. Bridge number 85 would be removed and replaced. Also, a parallel bridge would be built on the north side of bridge 85 to carry westbound traffic. Land use is rural residential and agricultural in Section Two.

Section Three would consist of the widening of US 70, from SR 1953 to approximately 300 feet east of SR 1956 (Holly Road), a distance of approximately 3.4 miles. The recommended typical cross-section is a five-lane, 64-foot, face-to-face, curb and gutter section with 8-foot berms on a 100-foot wide right-of-way with no access control. Land use is commercial and residential along this corridor. A five-lane roadway would be used in this section to minimize the right-of-way cost and minimize the relocation or disruption of several residences and businesses.

The recommended improvements to US 70 would increase traffic capacity and stimulate development and travel between Statesville and Salisbury. Also, these improvements should increase truck safety along US 70.

Moderate utility conflicts are expected.

The following table provides project cost for each section and the total project.

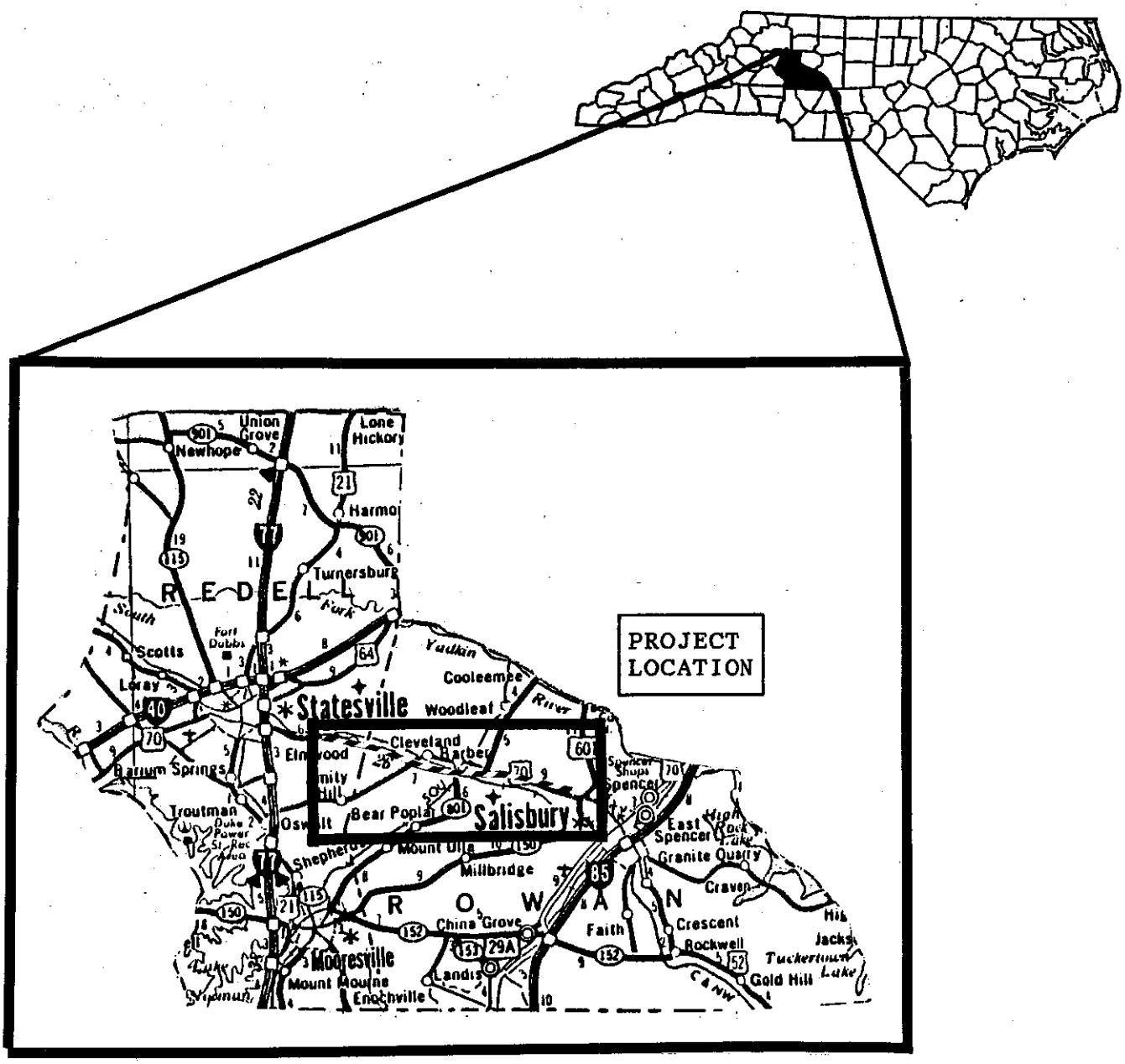
SECTION	RIGHT-OF-WAY	CONSTRUCTION	SECTION TOTAL
1	$ 3,300,000	$ 7,300,000	$ 10,600,000
2	$ 15,600,000	$ 20,200,000	$ 35,800,000
3	$ 3,000,000	$ 4,100,000	$ 7,100,000
PROJECT TOTAL	$ 21,900,000	$ 31,600,000	$ 53,500,000

In the event of phasing/staging this project, it is recommended that Sections One and Three be given priority, due to their higher traffic demands.

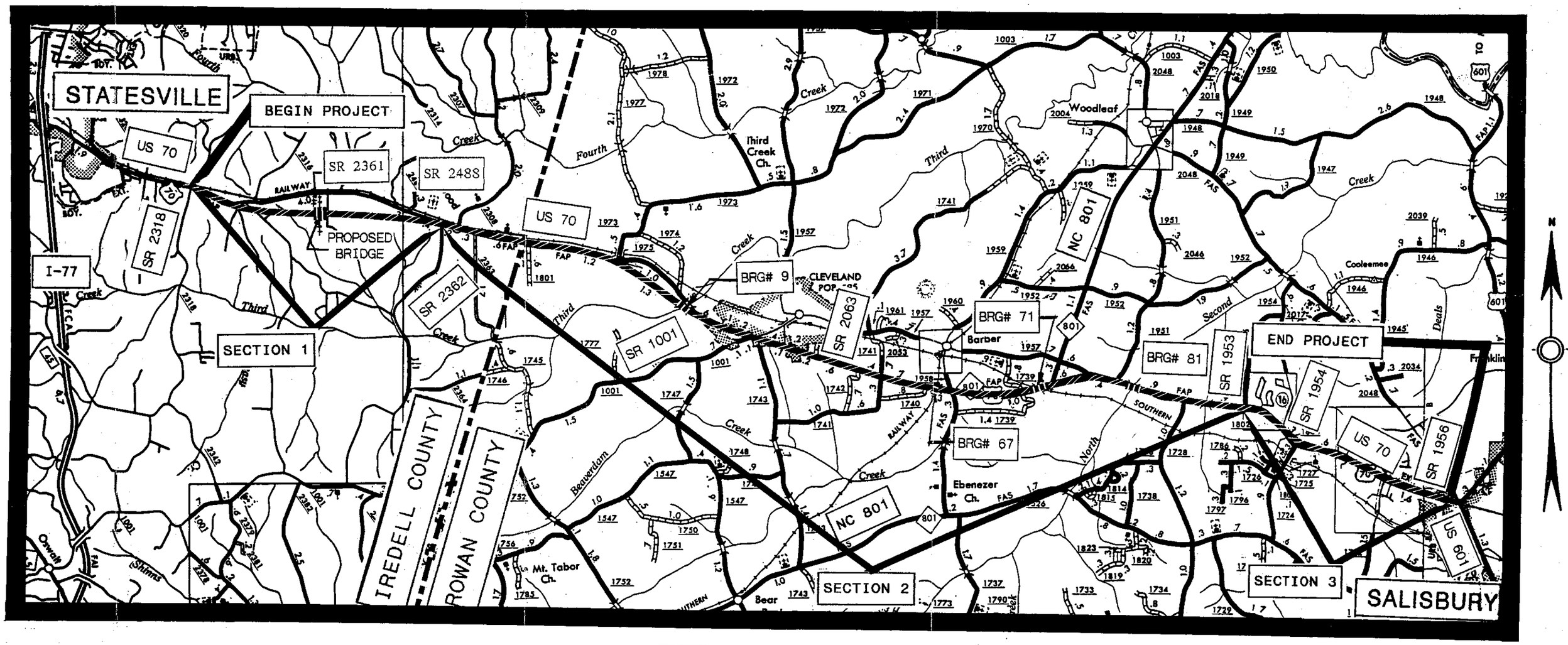
IV. OTHER COMMENTS AND CONCERNS

This project would require the relocation of a total of 63 residences and 24 businesses.

US 70 crosses a water supply watershed between Cleveland and Salisbury. No historical or architecturally significant sites are known to be in the limits of the proposed project. No public parks are located in the project corridor.



FEASIBILITY STUDY UNIT	
R-2911	
US 70	
from SR 2318 near Statesville to SR 1956 in Salisbury	
DIV. 9 & 12	FIGURE 1



SCALE: 1" = 1.4 MILES

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US 70	
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DIV. 9 & 12	FIGURE 2