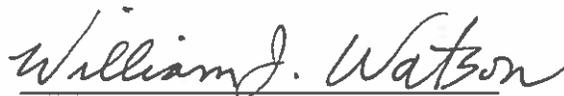


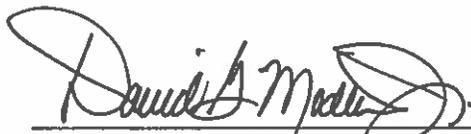
FEASIBILITY STUDY

Reidsville
US 29 Business (Freeway Drive)
Widening
From SR 2670 (South Scales Street)
To NC 14 (North Scales Street)
Rockingham County
U-3326

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 the proposed widening of US 29 Business (Freeway Drive) from SR 2670 (South Scales Street) to NC 14 (North Scales Street) in Reidsville. The proposed cross-section is a five-lane rural section for the entire project length of 6.7 miles (10.8 km). Four structures will require replacement. Generally, the project can be built within the existing right-of-way which is 150 feet (45.7 m) wide. However, significant amounts of right-of-way and/or construction easements will be required in areas of deep fill and where interchange ramps require realignment.

Two residential and 3 business relocations are anticipated due to this project.

The total cost including construction and right-of-way is estimated to be \$21,000,000.

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 increase the traffic carrying capacity and safety of US 29 Business in Reidsville. The project was requested by the City of Reidsville.

Existing US 29 Business is designated a Major Thoroughfare on the Reidsville Thoroughfare Plan. US 29 Business, between South Scales Street and US 158, is classified as a urban minor arterial in the North Carolina Statewide Functional Classification System. Between US 158 and NC 14, US 29 Business is classified as an urban other principal arterial.

Land use along the project corridor is mostly undeveloped. Development consists of a mix of retail and service businesses, and some single family residential areas.

Existing US 29 Business is generally a two-way, two-lane road with grass shoulders. In some areas the road has been widened to a three-lane section.

Bridge No. 65 carries SR 2686 (Richardson Drive) over US 29 Business. This structure was built in 1956 and has a sufficiency rating of 58.7, a clear length of 126 feet (38.4 m), and a clear deck width of 31 feet (9.4 m). The distance between piers under the bridge is approximately 48 feet (14.6 m).

Bridge No. 146 carries SR 1998 (Wentworth Road) over US 29 Business. This structure was built in 1956 and has a sufficiency rating of 53.1, a total length of 143 feet (43.6 m), and a clear deck width of 38 feet (11.6 m). The distance between piers under the bridge is approximately 54 feet (16.5 m).

Bridge No. 56 carries SR 2670 (North Scales Street) over US 29 Business. This structure was built in 1956 and has a sufficiency rating of 47.9, a total length of 123 feet (37.5 m), and a clear deck width of 38 feet (11.6 m). The total between piers under the bridge is approximately 48 feet (14.6 m).

Each of the above described structures has insufficient horizontal clearance between bridge piers for the recommended new cross-section for US 29 Business; therefore, these three bridges will be replaced.

Bridge No. 126 carries US 29 Business over NC 87 (Harrison Avenue). This structure was built in 1956 and has a sufficiency rating of 43.9, a total length of 125 feet (38.1 m), and a clear deck width of 31 feet (9.4 m). The distance between piers under the bridge is approximately 50 feet (15.2 m). This bridge has insufficient clear deck width to accommodate the recommended cross-section and will be replaced.

The intersections with South Scales Street, SR 2525, and NC 14 are signalized, and will require traffic signal revisions.

Traffic volume estimates for US 29 Business for the years 1994 and 2020 are 11,400 vehicles per day (vpd) and 24,800 vpd respectively. The Level of Service (LOS) is estimated to be Level D in 1994 without the proposed improvements and Level A with the improvements. With the proposed improvements the LOS is estimated to be B in 2020.

During the three year period beginning April 1, 1991, and ending March 31, 1994, there were 112 accidents reported on US 29 Business within the project limits. This resulted in a total accident rate of 175 accidents per 100 million vehicle miles (ACC/100MVM). This compares with the statewide average of 252 ACC/100MVM for all urban US routes, in North Carolina, for 1993.

There were no fatal accidents reported, however, 49 accidents resulted in 88 injured persons. The most prevalent type accidents were Rear-end (36%), Left-turn (24%), Angle (16%), and Ran-off-Road (10%). The proposed wider cross-section with center turn-lane will reduce the potential for these type accidents.

III. RECOMMENDATIONS

It is recommended to widen US 29 Business (Freeway Drive) from SR 2670 (South Scales Street) to NC 14 (North Scales Street) in Reidsville, a distance of approximately 6.7 miles (10.8 km). The proposed cross-section is a five-lane shoulder section consisting of 4 travel lanes, a center turn lane, and paved shoulders, for a total pavement width of 80 feet (24.4 m). The paved shoulder width on each side will be 10 feet (3.0 m) including 2.0 feet (0.6 m) of full depth pavement.

Four structures will require replacement. Bridge No. 65 carries SR 2686 (Richardson Drive) over US 29 Business. This structure will be replaced with a new bridge with a total length of approximately 160 feet (48.8 m), and a clear deck width of approximately 32 feet (9.8 m).

Bridge No. 146 carries SR 1998 (Wentworth Road) over US 29 Business. This structure will be replaced with a new bridge with a total length of approximately 188 feet (57.3 m), and a clear deck width of approximately 32 feet (9.8 m).

Bridge No. 56 carries SR 2670 (North Scales Street) over US 29 Business. This structure will be replaced with a new bridge with a total length of approximately 164 feet (50.0 m), and a clear deck width of approximately 40 feet (12.2 m).

Each of the above described structures has insufficient horizontal clearance between bridge piers for the recommended new cross-section for US 29 Business, therefore these three bridges will be replaced.

The intersections with South Scales Street, SR 2525, and NC 14 will require traffic signal revisions.

Bridge No. 126 carries US 29 Business over NC 87 (Harrison Avenue). This structure will be replaced with a new bridge with a total length of approximately 160 feet (48.8 m), and a clear deck width of approximately 80 feet (24.4 m).

At the southern project terminal, the proposed cross-section will be compatible with the 5-lane shoulder section proposed for Project U-2418 (Reidsville Southern Loop) which is scheduled to be let in June, 1995.

At the north project terminal, NC 14 is a 5-lane shoulder section. On US 29 Business, both the northbound and southbound approaches have been widened to provide three approach lanes and one lane exiting the intersection.

Generally, the project can be built within the existing right-of-way which is 150 feet (45.7 m) wide. However, significant amounts of right-of-way and/or construction easements will be required in areas of deep fill and where interchange ramps require realignment.

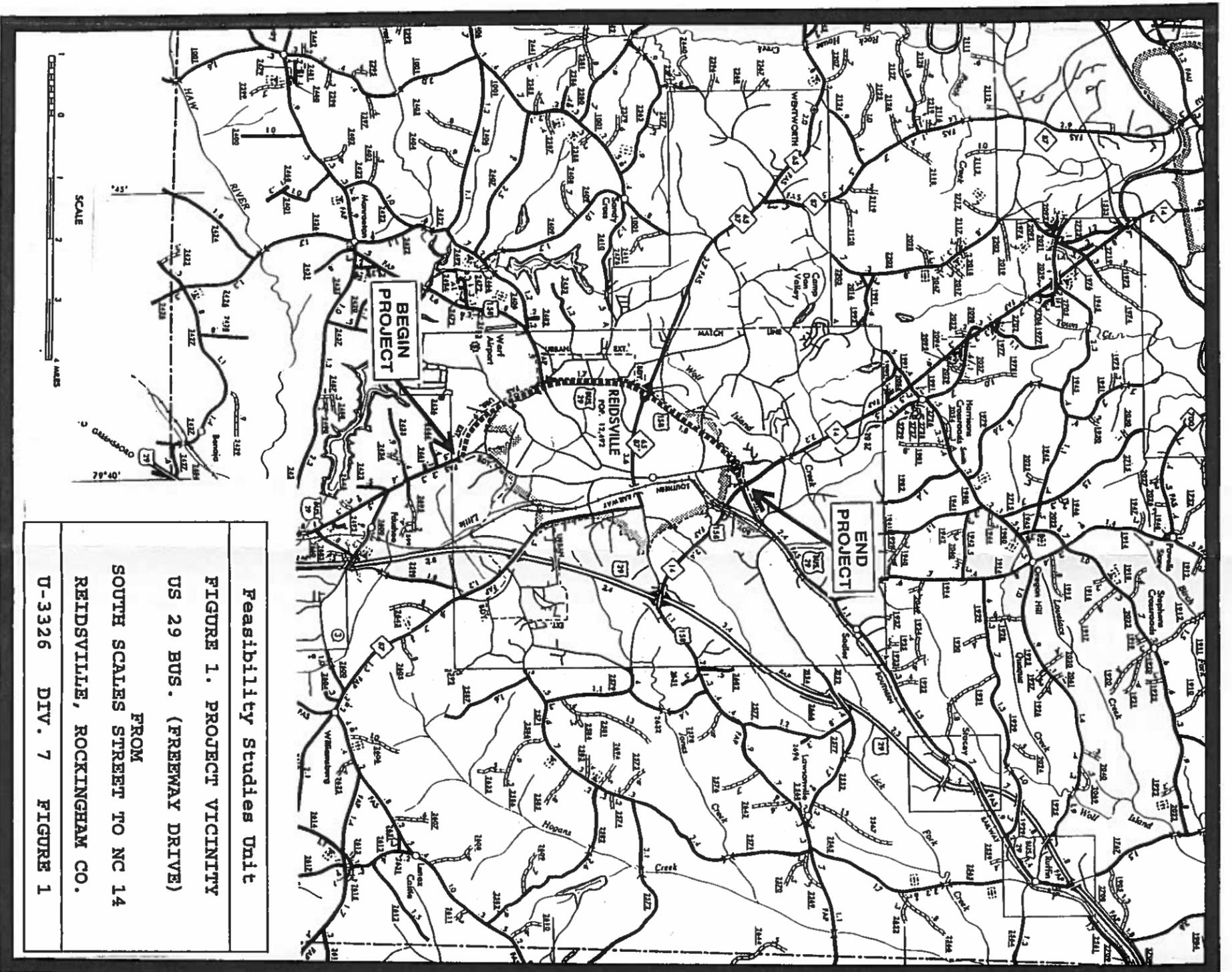
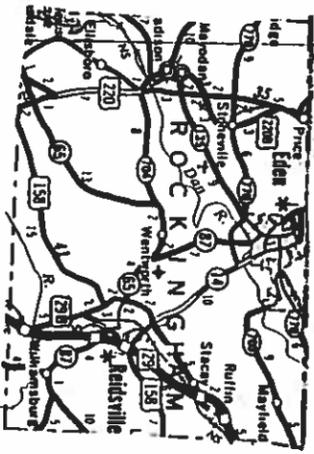
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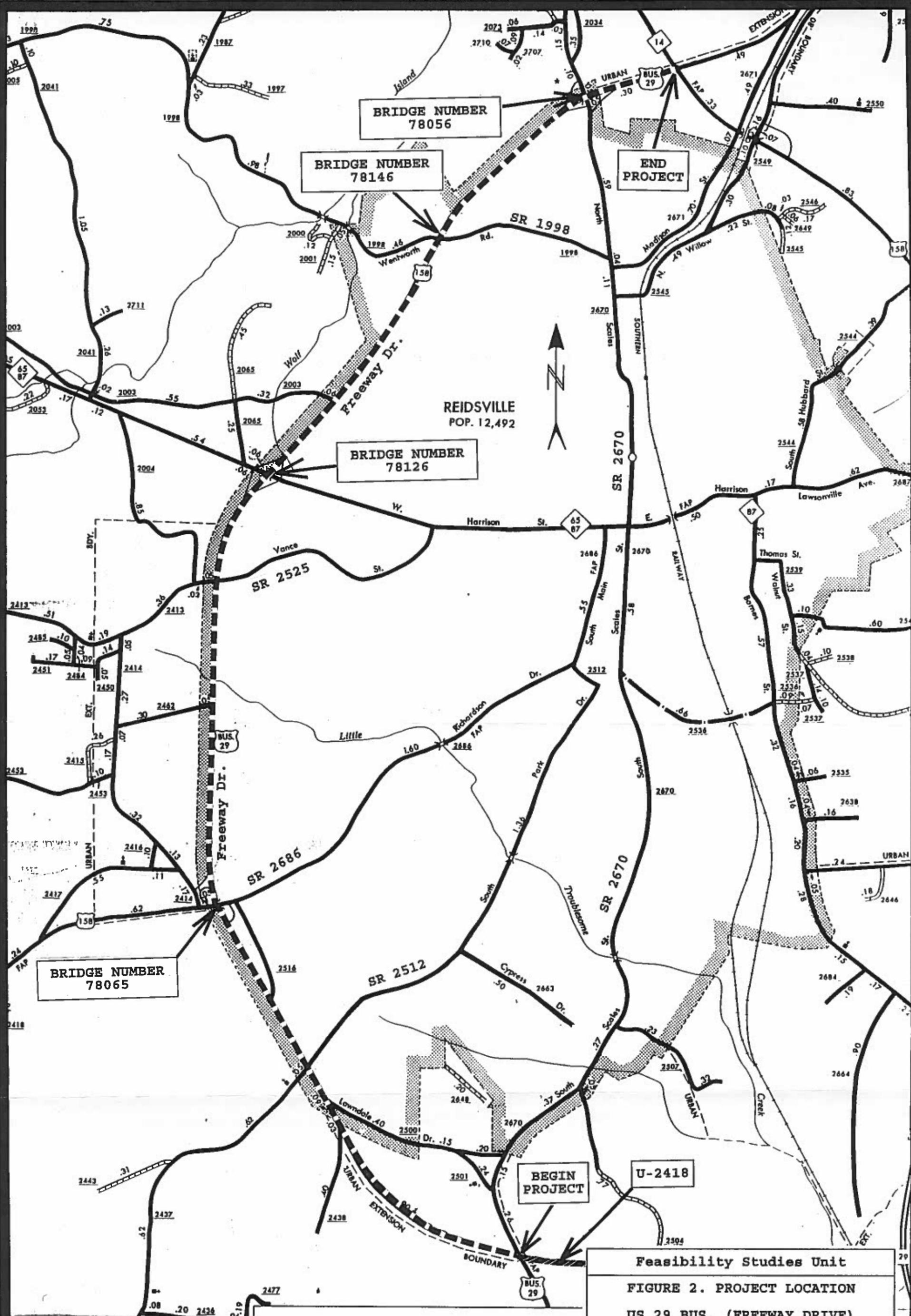
The total cost including construction and right-of-way is estimated to be \$21,000,000 as follows:

Construction.....	\$20,200,000
Right-of-Way.....	800,000
Total Cost.....	\$21,000,000

IV. OTHER COMMENTS

An environmental screening was not conducted for this study. This project will cross some wetlands. No historic properties or endangered species are anticipated.





BRIDGE NUMBER
78056

BRIDGE NUMBER
78146

END
PROJECT

REIDSVILLE
POP. 12,492

BRIDGE NUMBER
78126

BRIDGE NUMBER
78065

BEGIN
PROJECT

Feasibility Studies Unit

FIGURE 2. PROJECT LOCATION
US 29 BUS. (FREEWAY DRIVE)
FROM
SOUTH SCALES STREET TO NC 14
REIDSVILLE, ROCKINGHAM CO.

U-3326 DIV. 7 FIGURE 2