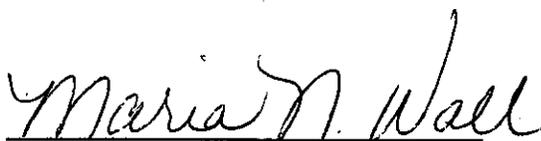


FEASIBILITY STUDY

US 52
from SR 1002 (Bringle Ferry Road) near Salisbury
to SR 1444 (Finch Road) south of Richfield
Rowan, Cabarrus, and Stanly Counties

R-2903

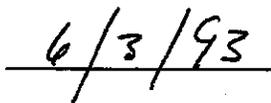
Prepared by
Program Development Branch
Division of Highways
N. C. Department of Transportation



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Date



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Head of Feasibility Studies

FEASIBILITY STUDY

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from SR 1002 (Bringle Ferry Road) near Salisbury
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R-2903

I. GENERAL DESCRIPTION

This is a feasibility study for the widening and partial relocation of US 52, from SR 1002 (Bringle Ferry Road) near Salisbury to SR 1444 (Finch Road) south of Richfield in Rowan, Cabarrus, and Stanly Counties, a distance of approximately 19.2 miles (See Figures 1 and 2). The recommended typical section is a four-lane roadway divided by a 46-foot median, on 230 feet of right-of-way with primarily partial control of access (one or more access points per property). Estimated cost of the project is \$52,200,000 (\$10,500,000 for right-of-way and \$41,700,000 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. US 52 is classified as an Other Principal Arterial on the Statewide Functional Classification System. The recommended improvements would relieve congestion on the existing US 52, while also establishing a regional corridor to encourage commercial and industrial development.

The studied section of the existing US 52 consists of a two-lane, 24-foot pavement with 6 to 10-foot unpaved shoulders on 60 to 100-foot wide right-of-way with no control of access. Land use is predominantly agricultural and rural residential. US 52 links Salisbury with several rural communities (See Figure 2).

The west terminal of the project is located at SR 1002 (Bringle Ferry Road). It is also the east terminal of Feasibility Study R-2718, which recommends the realignment of Bringle Ferry Road and a new interchange on I-85 (See Figures 2 and 3). At the west terminal the recommended typical section on the realigned Bringle Ferry Road is a two-lane, 28-foot pavement. Land use is agricultural.

The east terminal of the project is located at the unsignalized intersection of the existing US 52 and SR 1444 (Finch Road) south of Richfield (See Figure 2). At this intersection, US 52 consists of a five-lane, 64-foot curb and gutter section. Land use is rural residential and agricultural in this area.

Bridge number 20, in Rowan County, carries US 52 over South Second Creek, approximately 0.2 miles east of the intersection of SR 2340 and US 52 (existing). The sufficiency rating of this structure is 53.4 out of 100. Bridge number 20 is 112 feet in length with a 28-foot bridge roadway width and a deck width of 31.3 feet.

Richfield Park, a town park, is located on the west side of NC 49 approximately 0.5 miles north of the intersection of the existing US 52 in Stanly County.

The existing US 52 bisects Pfeiffer College approximately 1.1 miles west of the intersection with NC 49 in Stanly County.

Estimated 1997 Average Daily Traffic (ADT) on the existing US 52 ranges from 7,200 vehicles per day (vpd), in Cabarrus County, to 15,600 vpd, near Salisbury. In the year 2017, anticipated traffic on the existing US 52 is expected to range from 13,000 vpd to 28,000 vpd. Traffic volumes are not available at this time for the proposed US 52 corridor (new location). With the existing facility, traffic currently experiences a level of service (LOS) E, near Salisbury, and a LOS C in Cabarrus County. In the year 2017, a LOS F is expected near Salisbury and a LOS D in Cabarrus County. With the recommended improvements, it is anticipated that traffic on the proposed, multi-laned US 52 (new location) would experience a LOS C, or better, through the year 2013.

During the period from June 1, 1989 through May 31, 1992, a total of 430 accidents were reported along the existing US 52, between I-85 and NC 49. This resulted in an accident rate of 179.7 accidents per 100 million vehicle miles of travel, compared to a statewide average of 147.3 for similar routes. Rear-end accidents accounted for 40% of the accidents. Trucks accounted for 19% of the vehicles involved in accidents during the study period. The recommended improvements are expected to reduce the accident rate.

III. RECOMMENDATIONS

It is recommended that the US 52 corridor be improved in four sections, as follows (See Figure 2):

Section A: This section includes the proposed corridor from I-85 to SR 1002 (Bringle Ferry Road). The recommendations in Feasibility Study R-2718 should be changed, such that 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 would be utilized on the realigned Bringle Ferry Road, between the I-85 interchange and the existing Bringle Ferry Road east of I-85 (See Figures 2 and 3). The five-lane section would facilitate turning movements to adjacent neighborhoods and maintain traffic flow between the I-85 interchange and US 52 (new location). An interchange would be constructed at the intersection of the realigned Bringle Ferry Road and I-85. The existing bridge, number 127, which carries the existing SR 1002 (Bringle Ferry Road) over I-85, would be removed and SR 1002 would be terminated with a cul-de-sac on each side. Section A should be programed with R-2903, in order to link US 52 directly with I-85. The estimated construction cost of Section A is \$4,500,000 for the I-85 interchange and the five-lane roadway.

Section B: From SR 1002 (Bringle Ferry Road) to SR 2340 in Rowan County, a distance of approximately 9.0 miles (See Figure 2), it is recommended that US 52 be relocated on new location north of the existing US 52. A four-lane roadway divided by a 46-foot median with two 12-foot lanes in each direction, 10-foot wide paved shoulders (2 feet full depth) on the outside and 2-foot wide full depth paved shoulders in the median, on a 230-foot wide right-of-way with partial control of access (one or more access points per property) would be utilized in this section. Although no detailed traffic projections are available at this time, interchanges may be justified at the intersection of SR 1004 with US 52 (new location) and at the intersection of US 52 (existing) with US 52 (new location). A decision regarding providing these interchanges can be made once detailed traffic projections are available. Each interchange is estimated to have a construction cost of \$3,500,000. The remaining intersections would be at-grade. Section B would allow thru traffic to bypass South Salisbury, and the towns of Granite Quarry and Rockwell (See Figure 2), thereby reducing congestion and accidents through these towns. The estimated cost of Section B is \$22,600,000 (\$4,600,000 for right-of-way, including right-of-way for the interchanges, and \$18,000,000 for construction). The construction cost of the interchanges is not included in the estimated cost for Section B.

Section C: The existing US 52 would be widened and partially relocated, between SR 2340 in Rowan County and SR 2459 in Cabarrus County in Section C (See Figure 2). A four-lane roadway divided by a 46-foot median with two 12-foot lanes in each direction, 10-foot wide paved shoulders (2 feet full depth) on the outside and 2-foot wide full depth paved shoulders in the median, on a 230-foot wide right-of-way with no control of access is recommended for this section. From SR 2340 to 0.4 miles southeast of SR 2143, a distance of approximately 3.4 miles, US 52 would be relocated north of the existing US 52. Bridge number 20 would be replaced and a parallel structure would be constructed for westbound traffic. Relocating US 52 would decrease the number of residential relocations that would be caused by widening the existing US 52 in this area. From approximately 0.4 miles southeast of SR 2143 in Rowan County to SR 2459 in Cabarrus County, a distance of approximately 2.2 miles, the existing US 52 would be widened to the recommended typical cross-section. All intersections would be at-grade in Section C. The estimated cost for Section C is \$13,300,000 (\$2,700,000 for right-of-way and \$10,600,000 for construction).

Section D: From SR 2459 to SR 1444 in Stanly County, a distance of approximately 4.5 miles, US 52 would be relocated north of the existing US 52 (See Figure 2). The recommended typical section is a four-lane roadway divided by a 46-foot median with two 12-foot lanes in each direction, 10-foot wide paved shoulders (2 feet full depth) on the outside and 2-foot wide full depth paved shoulders in the median, on a 230 feet of right-of-way with partial control of access (one or more access points per property). The existing US 52 would be "teed" into the new US 52. The relocation of US 52 would reduce traffic through the Pfeiffer College campus and reduce the number of residential relocations caused by widening the existing US 52 in this area. Although no detailed traffic projections are available at this time, an interchange may be justified at the intersection of the new US 52 with NC 49. A decision regarding providing these interchanges can be made once detailed traffic projections are available. This interchange is estimated to have a construction cost of \$3,500,000. TIP Project Number R-2533 recommends widening NC 49 to a multi-lane facility, from Harrisburg to the Yadkin River. The estimated cost for Section D is \$11,800,000 (\$3,200,000 for right-of-way, including right-of-way for the interchange, and \$8,600,000 for construction). The construction cost of the interchange at the intersection of NC 49 and the new US 52 is not included in the estimated cost for Section D.

The recommended corridors would provide a safer and more efficient route between Salisbury and Richfield. The relocation segments will minimize relocations and disruption to existing communities. The project corridor would also encourage commercial and industrial development in this region.

Total project cost is estimated at:

Right-of-way	\$10,500,000
Construction	\$41,700,000
Project Cost	\$52,200,000

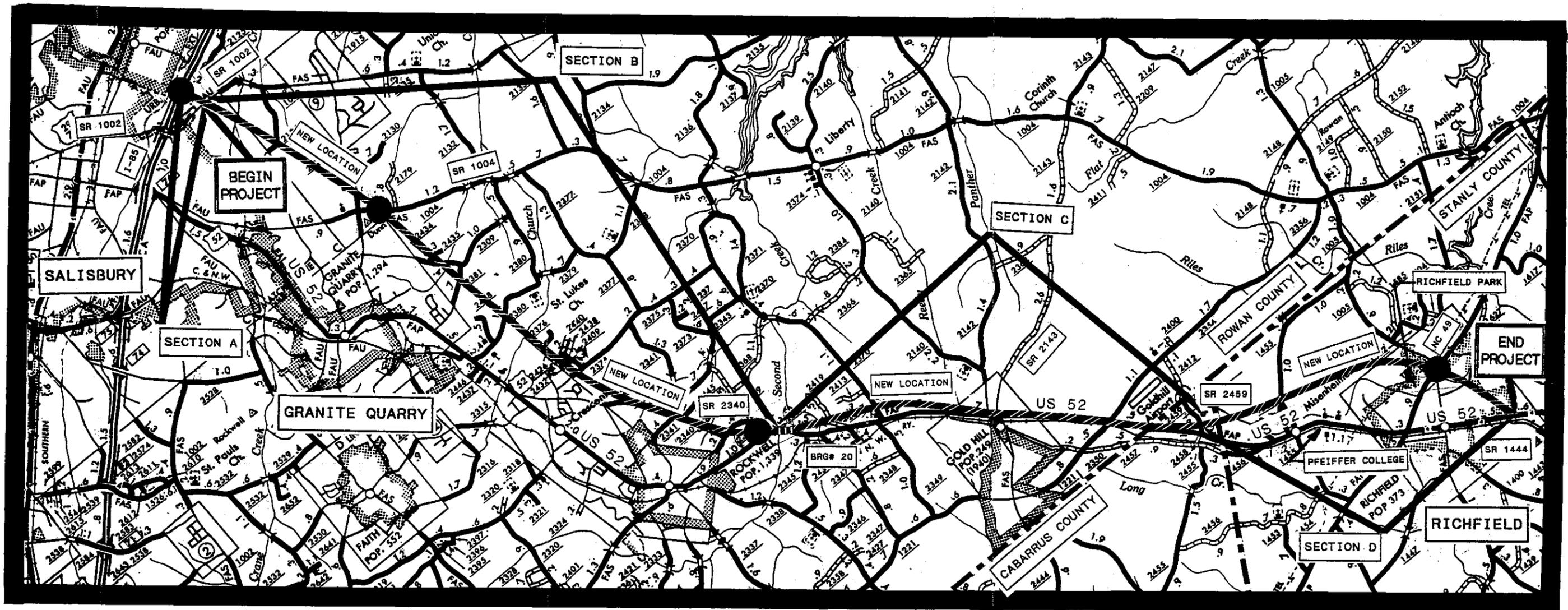
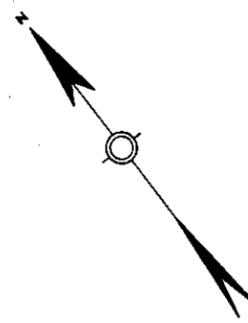
The right-of-way cost includes the right-of-way for the interchanges, however, the construction cost does not include construction of the interchanges, except at I-85 and Bringle Ferry relocation in Section A.

Moderate utility conflicts are expected.

IV. OTHER COMMENTS AND CONCERNS

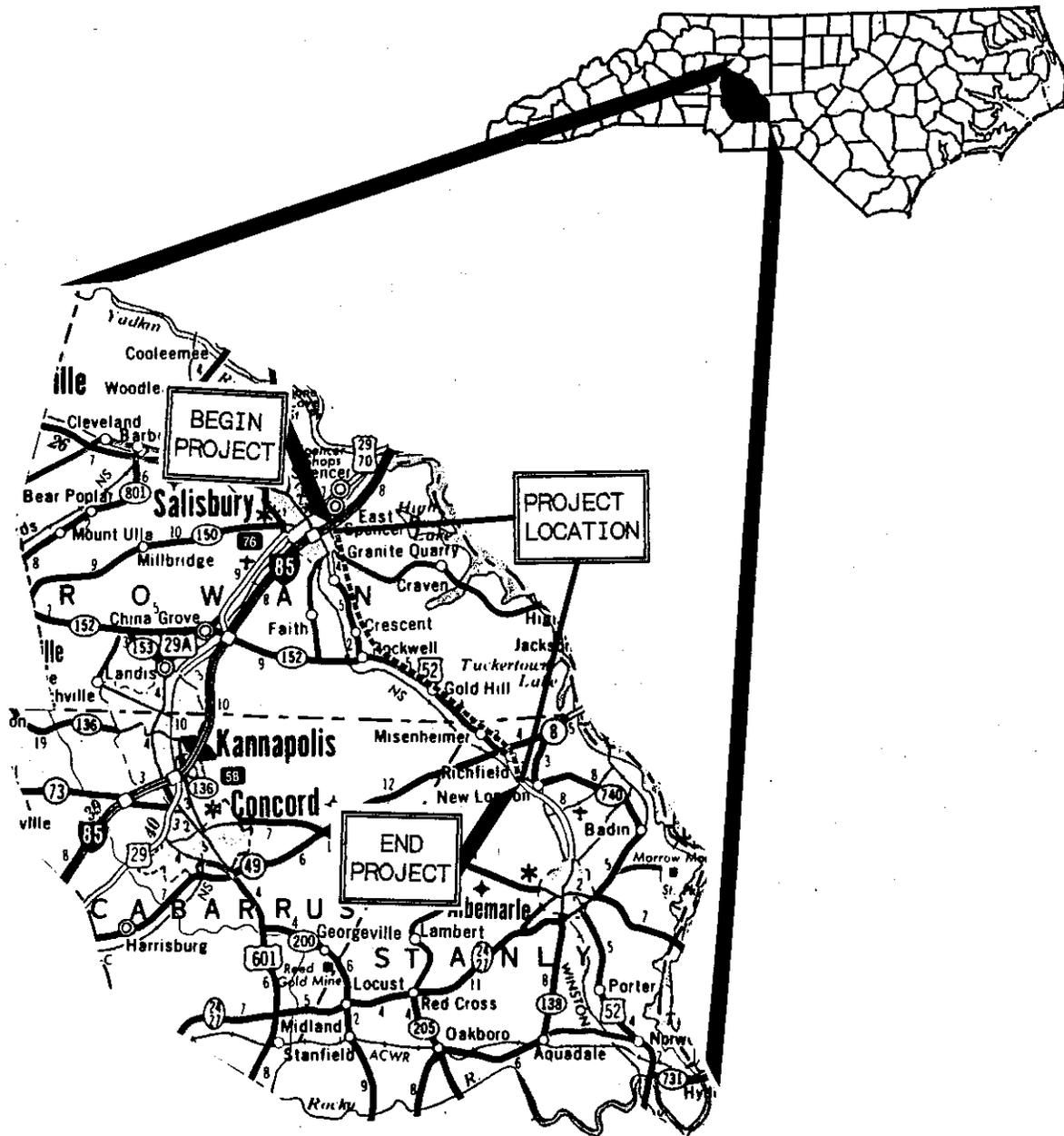
It is estimated that this project would require the relocation of 54 residences and 4 businesses.

This project may require a Section 404, Corps of Engineers Nationwide Permit. A water supply watershed exists north of the existing US 52 in Cabarrus and Stanly Counties. No historical or architecturally significant sites are known to be in the vicinity of the proposed project. It is anticipated that there will be no impact on Richfield Park or Pfeiffer College.

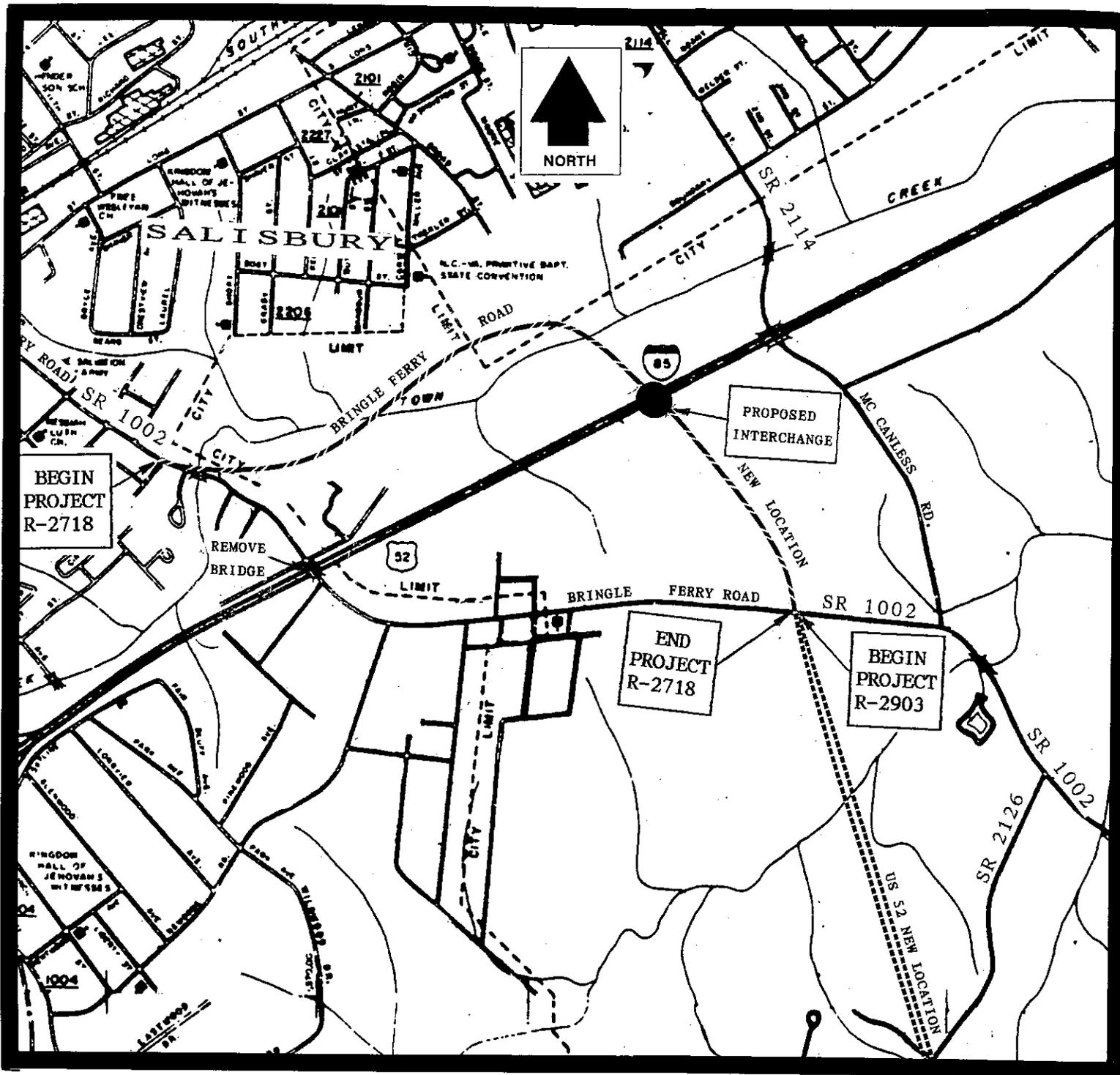


SCALE: 1" = 1.5 MILES

FEASIBILITY STUDIES UNIT	
R-2903	
US 52	
from SR 1002 (Bringle Ferry Road) in Salisbury to SR 1444 (Finch Road) east of Richfield	
Rowan, Cabarrus, and Stanly Counties	
DIV. 9 & 10	FIGURE 2



FEASIBILITY STUDIES UNIT	
R-2903	
US 52	
from SR 1002 (Bringle Ferry Road) in Salisbury to SR 1444 (Finch Road) east of Richfield	
Rowan, Cabarrus, and Stanly Counties	
DIV. 9 & 10	FIGURE 1



FEASIBILITY STUDIES UNIT	
COORDINATION OF R-2718 (BRINGLE FERRY ROAD & I-85 INTERCHANGE) WITH R-2903 (US 52)	
DIV. 9 & 10	FIGURE 3