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FEASIBILITY STUDY

NC 56
From I-85 to US 15
Granville County
R-2542

Prepared by
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NC 56
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I. DESCRIPTION

This report covers a preliminary study of the proposed widening of NC 56 to a multi-lane facility from I-85 near Butner to US 15 in Creedmoor (see Figure 1). This project is included in the 1990-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection, and is not currently funded.

II. PURPOSE OF PROJECT

Existing Route Characteristics

NC 56 is classified as a major collector on the Granville County Thoroughfare Plan adopted in 1987 (see Figure 2), and on the County Functional Classification Plan as a Rural Major Collector. It is basically a 2-lane, 22-foot paved facility with variable 6 to 8-foot unpaved shoulders. The existing right-of-way is 60 feet throughout the project length. The cross section of NC 56 through the I-85 interchange area is a 64-foot, 5-lane width that tapers to 2 lanes at SR 1108. The posted speed limit is generally 45 mph, but drops to 35 mph within the Creedmoor City Limits. Development along NC 56 is predominantly residential with commercial uses near the I-85 interchange (see Figure 3).

There is one bridge located on the project:

<u>Bridge No.</u>	<u>Location</u>	<u>Length (Ft.)</u>	<u>Width (Ft.)</u>	<u>Age (yrs.)</u>	<u>Rating (New=100)</u>
2	Ledge Creek	126	29.2	23	66.5

This bridge is located adjacent to the Lake Rogers dam and water treatment facility.

Traffic Volumes, Capacity, and Accident Record

The volume of traffic that utilizes this route is approximately 9,000 vehicles per day (vpd), increasing to an estimated 16,000 vpd by the year 2010.

The capacity of the existing road at level of service C in an area that is suburban in nature is approximately 7000 vehicles per day. The actual volumes presently using the facility (9000 vpd) indicate that the capacity is exceeded along the entire studied length.

Accident data for a recent 3-year period shows a total of 66 accidents on the studied section of NC 56. This yields an accident rate of 234 accidents per hundred million vehicle miles, which is slightly more than the state wide average of 217 accidents per hundred million vehicle miles for comparable 2-lane rural North Carolina routes. Rear-end (23%) and angle (21%) collisions, and left turn-crossing traffic (15%) were predominant accident types.

Need for Project

The improvement of NC 56 is needed to provide increased capacity and safety for existing and future traffic volumes. The improvement of NC 56 to a multi-lane facility from US 15 in Creedmoor to I-85 near Butner is immediately warranted.

III. RECOMMENDATIONS AND COSTS

The recommended cross section for NC 56 is 5 lanes, 64-foot face to face of curbs throughout the project length. This cross section is consistent with the anticipated traffic volumes and the concentration of commercial development along the project area. In general, widening should be accomplished symmetrically about the existing centerline of NC 56. At I-85 where significant commercial development occurs, widening should be on the north side to minimize property damage, and in the Lake Rogers area, widening should be on the south side to avoid adverse impacts on the dam and lake.

It is anticipated that the bridge can be rehabilitated and widened to accommodate the recommended cross section.

Estimated right-of-way width used for cost estimating purposes is 100 feet.

The estimated costs of the recommended improvements are as follows:

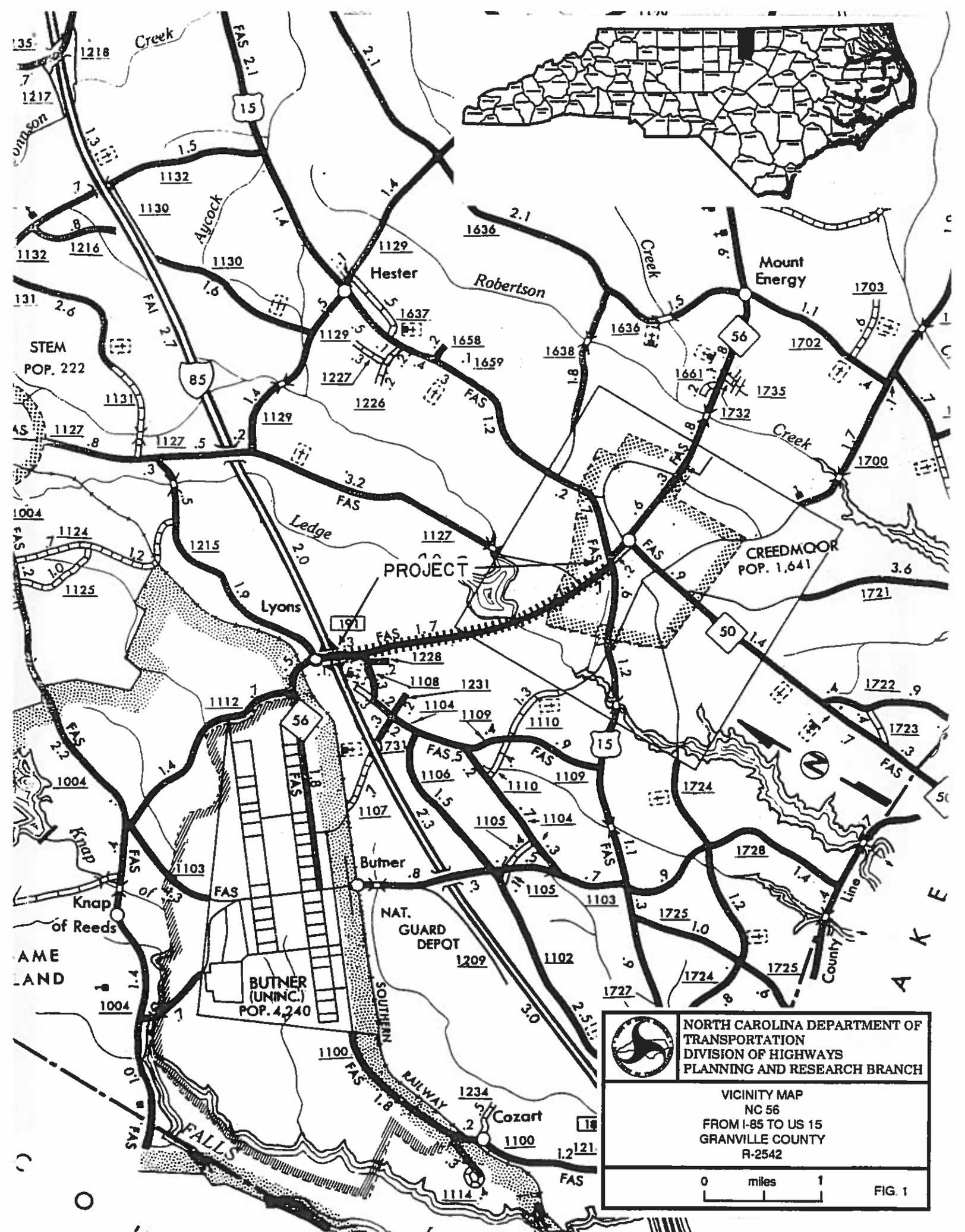
<u>Construction Cost</u>	<u>Right-of-Way Cost</u>	<u>Total Cost</u>
\$ 5,000,000	\$ 1,440,000	-\$ 6,440,000

IV. OTHER COMMENTS

Possible negative environmental impacts of the proposed widening of NC 56 include the relocation of 3 residences, land damage, the loss of wetlands at Ledge Creek, and increased noise levels for remaining businesses and residences.

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

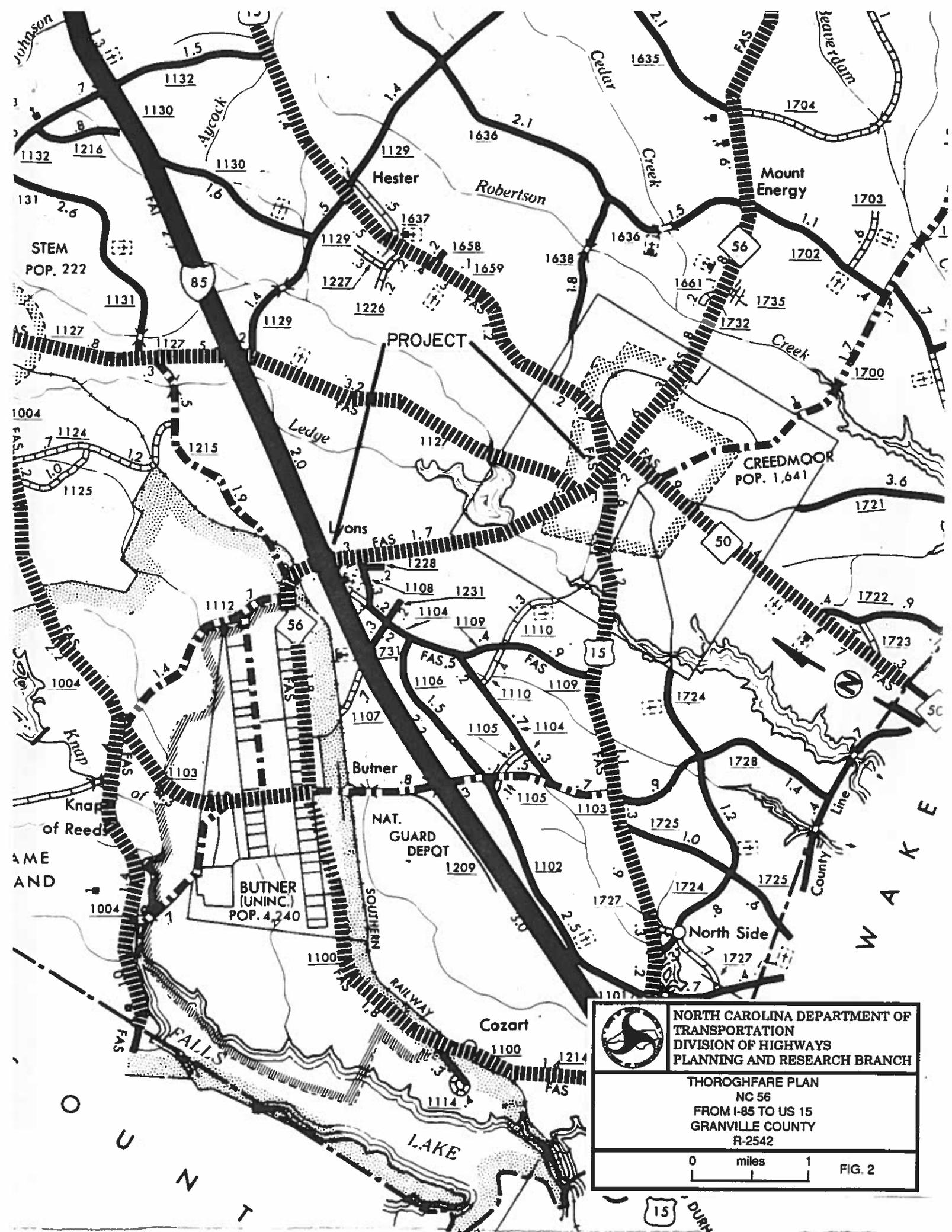
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VICINITY MAP
 NC 56
 FROM I-85 TO US 15
 GRANVILLE COUNTY
 R-2542

0 miles 1
 FIG. 1

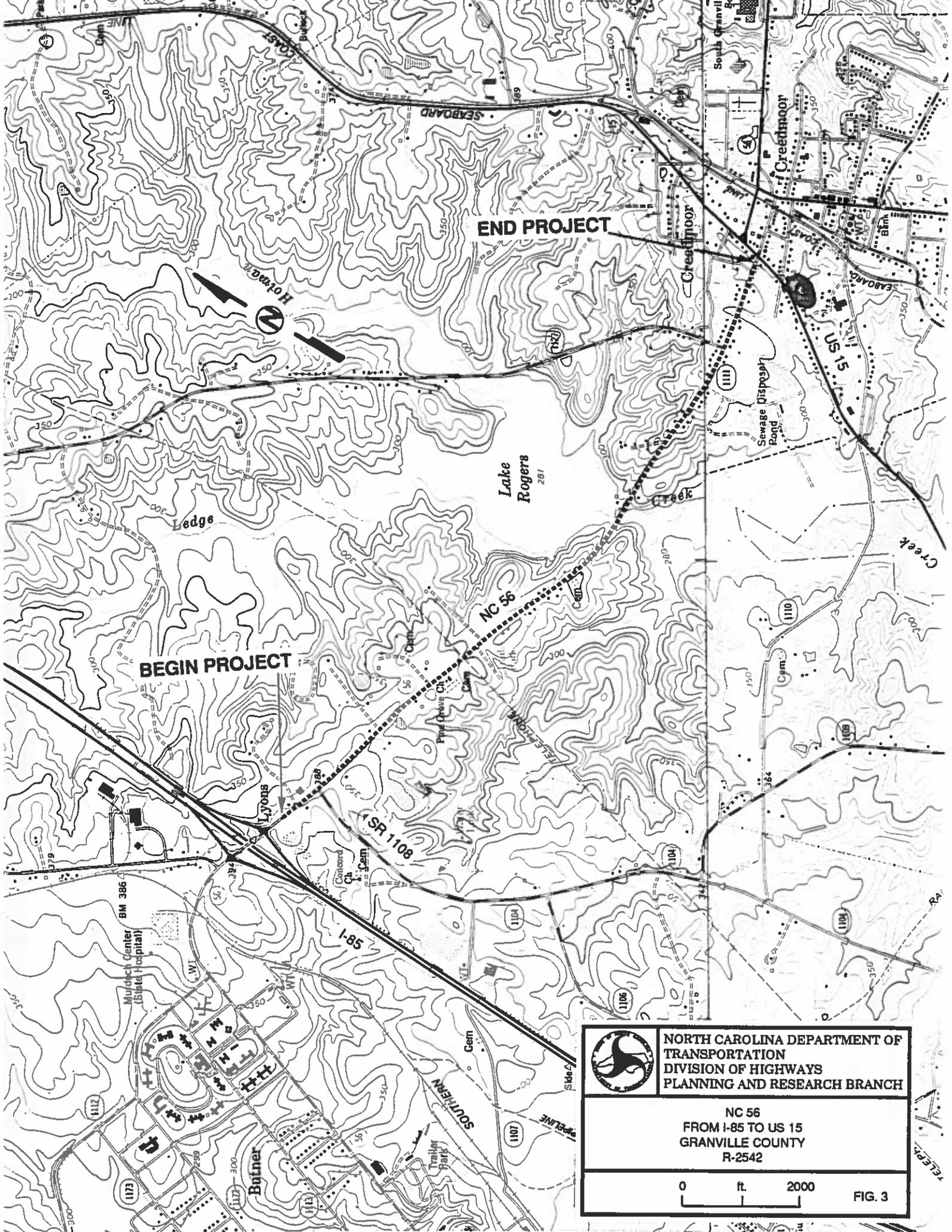



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THOROUGHFARE PLAN
 NC 56
 FROM I-85 TO US 15
 GRANVILLE COUNTY
 R-2542

0 miles 1  FIG. 2

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**NC 56
FROM I-85 TO US 15
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0 ft. 2000

FIG. 3