

FEASIBILITY STUDY

Elkin  
Oak Grove Road (SR 1138)  
US 21 Bypass to I-77  
Surry County  
R-2236

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

July, 1987

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Oak Grove Road (SR 1138)  
US 21 Bypass to I-77  
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The subject project is included in the 1987-1995 Transportation Improvement Program for feasibility study and/or right-of-way protection. This report provides a brief, initial analysis of possible improvements. The project is not currently funded.

I. GENERAL DESCRIPTION

The proposed project consists of widening Oak Grove Road (SR 1138) from the interchange with US 21 Bypass to the interchange with I-77, a distance of approximately 1.1 miles. *TO FIVE LANES*

II. EXISTING CONDITIONS

The existing pavement width along the studied segment is 24 feet with 10 feet of usable grass shoulders. Horizontal and vertical alignments are good, and the existing pavement appears to be in good condition. The existing right of way is assumed to be 60 feet. The posted speed limit through the area is 55 mph.

Bridges carry Oak Grove Road over US 21 Bypass and I-77 at the termini of the studied segment. The bridge over US 21 Bypass was built in 1964, has a horizontal clearance of 28 feet, and is 207 feet long. It has a sufficiency rating of 72.8. The bridge over I-77 was built in 1974, has a horizontal clearance of 55 feet, and is 279 feet long. It has a sufficiency rating of 93.7.

III. NEED FOR PROJECT

The studied segment of Oak Grove Road is designated as a major thoroughfare in the Elkin Thoroughfare Plan and will function as a part of a future NC 268 Bypass which will pass through northern Elkin. The current average daily traffic volumes (ADT) along the proposed project is 2400 vehicles per day (vpd). By the year 2007 the ADT is expected to increase to 3800 vpd.

Existing development along the proposed project consists primarily of cultivated fields and undeveloped woodlands with some scattered residential usage. However, the Town of Elkin plans to extend its water and sewerage services to this area within the next 12 to 18 months. Also, a shopping center is currently planned for construction in the southwest quadrant of the Oak Grove Road - US 21 Bypass interchange. Town officials anticipate that due to the accessibility from the two interchanges and to the availability of water and sewerage services, the area surrounding the proposed project will likely develop quickly with large scale commercial use and small scattered industrial use.

It should be noted that the traffic projections do not take into consideration any large commercial development in the project area.

The Elkin Municipal Airport is located on SR 1138 approximately 1.5 miles east of the I-77 interchange.

#### IV. STUDIED IMPROVEMENT

Based on the conditions that currently exist along the proposed project, the existing facility can adequately handle the anticipated traffic volumes. The one improvement to Oak Grove Road would be the addition of a two-foot paved shoulder along both sides of the existing pavement at a cost of \$125,000. It is anticipated that the addition of the paved shoulders can be contained within the existing right of way.

If large scales commercial development does occur in the project area, a five-lane, 64-foot face to face of curbs roadway would be necessary to handle the traffic at an adequate level of service. An 80-foot wide right of way with easements would be required to contain the proposed construction. It is anticipated that one residential relocatee would result from acquiring this right of way. The total cost of this improvement is \$1,310,000 which includes \$210,000 for right of way costs and \$1,100,000 for construction costs.

#### V. RECOMMENDATIONS

No major improvements to the studied segment of Oak Grove Road are recommended at this time. When the surrounding area is developed and improvements to the roadway are needed, it is recommended that a five-lane, 64-foot face to face of curbs, roadway be constructed. The existing bridge over I-77 has sufficient horizontal clearance to accommodate four travel lanes; therefore, no improvements are recommended for the bridge. Also, no improvements to the bridge over US 21 Bypass are recommended as a part of this project. West of the bridge the alignment for the future NC 268 Bypass is on new location. Widening or replacing the bridge should be done in conjunction with the construction of the new roadway for the bypass in order to coordinate the alignment and cross section.

If this project is implemented in the future, the feasible alternatives and their associated impacts will need to be evaluated in an environmental document and a final decision made as to the most appropriate alternative.

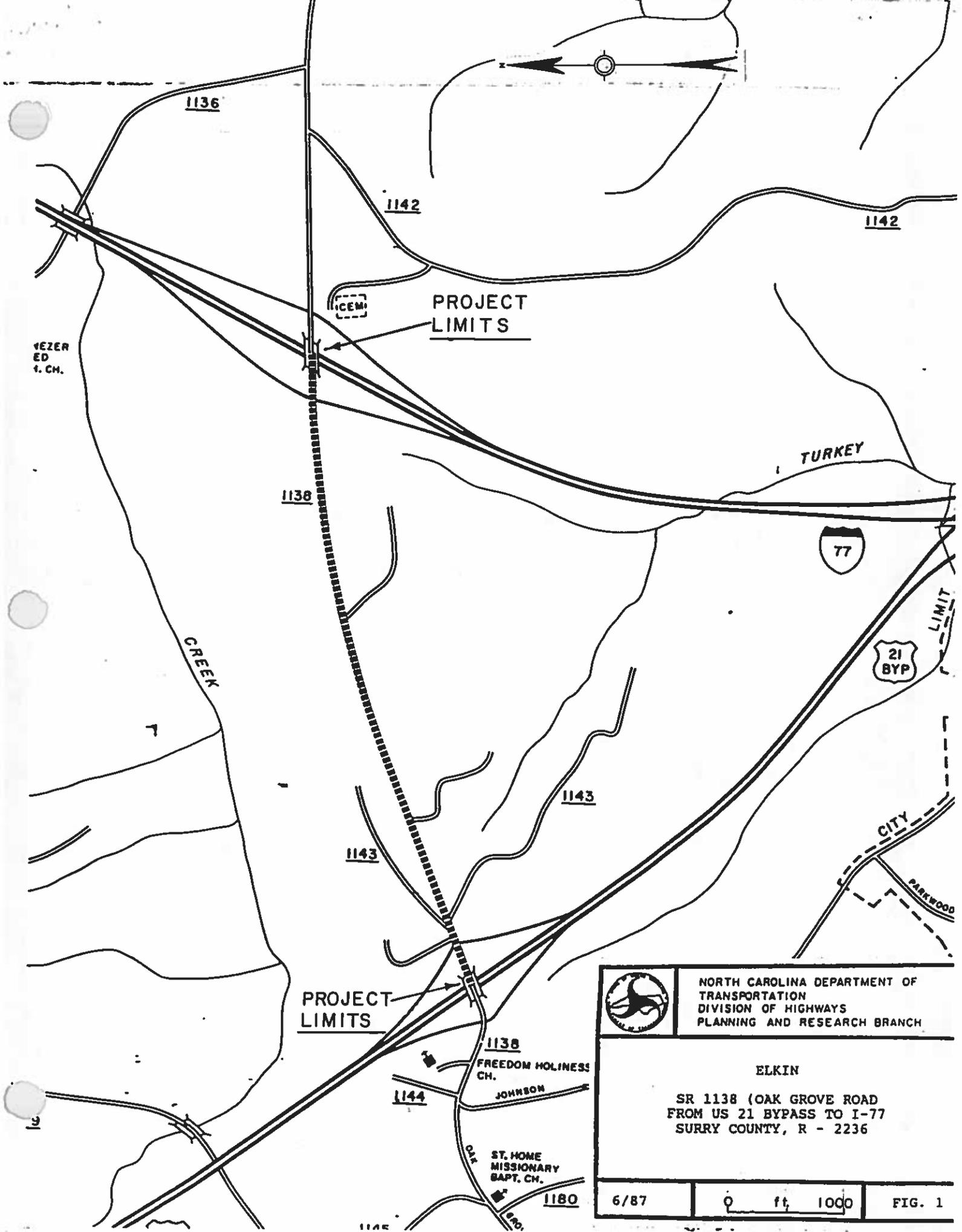
#### VI. POSSIBLE ENVIRONMENTAL IMPACTS

No significant environmental impacts are anticipated from the ultimate recommended improvements. Since the project is within two miles of the Elkin Municipal Airport, Federal Aviation Administration approval may be required. It is anticipated that one residence will be displaced.

## VII. BASIS FOR STUDY

The findings contained in this report are based on field investigations and discussions with the Division Engineer, Town Manager, and Roadway Design Unit. Construction cost estimates and right of way cost estimates are based on field investigations and aerial photography.

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VEZER  
ED  
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CEM

PROJECT  
LIMITS

TURKEY

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CREEK



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CITY

PARKWOOD

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LIMITS

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FREEDOM HOLINESS  
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JOHNSON

ST. HOME  
MISSIONARY  
BAPT. CH.

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NORTH CAROLINA DEPARTMENT OF  
TRANSPORTATION  
DIVISION OF HIGHWAYS  
PLANNING AND RESEARCH BRANCH

ELKIN

SR 1138 (OAK GROVE ROAD  
FROM US 21 BYPASS TO I-77  
SURRY COUNTY, R - 2236

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FIG. 1

Aerial

Mosaic

Being  
Prepared