

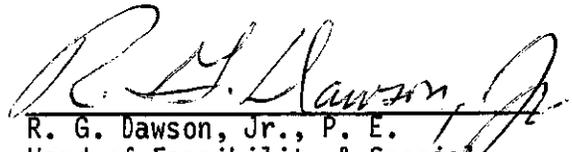
FEASIBILITY STUDY

US 64-NC 90, From NC 18 to SR 1313
in Alexander County,
Caldwell/Alexander Counties,
R-2550

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



R. J. Booker III
Project Planning Engineer



R. G. Dawson, Jr., P. E.
Head of Feasibility & Special
Studies Unit

8/20/90

Date

for



L. J. Ward, P. E., Manager
Planning and Environmental Branch

US 64-NC 90, From NC 18 to SR 1313
in Alexander County,
Caldwell/Alexander Counties,
R-2550

I. DESCRIPTION

This report covers a preliminary study of the proposed improvement of US 64-NC 90 from NC 18 near Lenoir in Caldwell County to SR 1313 near Taylorsville in Alexander County, a distance of 18.2 miles. 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

US 64-NC 90 is classified as a Rural Major Collector in the North Carolina Functional Classification Plan and is a Federal Aid Secondary route. It is basically a 2-lane, 24-foot paved facility with five to ten-foot grassed shoulders. The existing right-of-way from NC 18 to NC 127 is 100 feet. From NC 127 to SR 1313, the right-of-way width is 60 feet. The posted speed limit is generally 55 miles per hour.

Land development along US 64-NC 18 is predominately light residential and agricultural. Scattered gas stations, churches and several small businesses were observed along the route.

The alignment is generally good with curves ranging up to 7 degrees and grades ranging up to 6 percent.

There are four bridges located along the project. They are listed below with pertinent information.

<u>Bridge No.</u>	<u>Location</u>	<u>Length (Ft.)</u>	<u>Width (Ft.)</u>	<u>Age (Yrs.)</u>	<u>Rating (New=100)</u>
Caldwell County					
39	Lower Creek	41	30	28	95.3
47	Middle Little River	145	28	24	72.0
Alexander County					
02	Duck Creek	152	34	24	82.6
06	Lower Little River	169	20	62	54.7

Bridge number 06 is listed in the Transportation Improvement Program for replacement. Right-of-way acquisition is scheduled for Fiscal Year 1991 with construction to take place in Fiscal Year 1992.

The project adjoins the proposed US 64-NC 90 Taylorsville Bypass (R-1016). Right-of-way is presently being acquired, and construction of the planned 2-lane facility is scheduled to begin in FY 1991.

Traffic Volumes, Capacity, and Accident Record

Traffic volumes near NC 18 and the Town of Taylorsville are approximately 5000 vehicles per day (VPD) while for the rest of the project the traffic volume is approximately 2300 VPD.

The capacity of a 2-lane road at level of Service C in an area that is rural in nature is approximately 6000 vehicles per day. The actual volumes presently using the facility indicate they are within the capacity along the entire route.

Accident data for a recent 3-year period shows a total of 107 accidents on the studied section of US 64-NC 90. This yields an accident rate of 37.4 accidents per hundred million vehicle miles, which is much less than the statewide average of 201.1 accidents per hundred million vehicle miles for comparable 2-lane rural NC-US routes. The predominate types of accidents were ran-off-road and rear-end collisions which accounted for 56% of all accidents.

III. RECOMMENDATIONS AND COSTS

Widening of the existing shoulders, construction of paved shoulders, and resurfacing of the existing pavement are recommended along the studied 18.2-mile project length. No changes to the existing road alignment are anticipated.

The recommended cross section for US 64-NC 90 is a 24-foot pavement with 10-foot usable shoulders including 4-foot paved. The Bicycle Coordination Unit has indicated this segment of US 64-NC 90 is part of the NC 2 Bicycling Highways System. The addition of the 4-foot paved shoulders will increase the safety of both the bicyclist and the motorist. This cross section is consistent with the anticipated traffic volumes and development along the project area.

It is anticipated that the existing bridges over Middle Little River and Duck Creek should be adequate through the planning period. However, the bridge over Lower Creek will need to be widened to accommodate a left turn lane at the intersection of NC 18 and US 64-NC 90.

It is recommended a left turn lane be provided on US 64-NC 90 at the signalized intersection of NC 18 and US 64-NC 90. Also, a left turn lane is recommended on US 64-NC 90 at its non-signalized intersection with NC 127.

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

The estimated cost of the recommended improvements, including widening the bridge over Lower Creek, is:

<u>Construction Cost</u>	<u>Right-of-Way Cost</u>	<u>Total Cost</u>
\$5,650,000	\$750,000	\$6,400,000

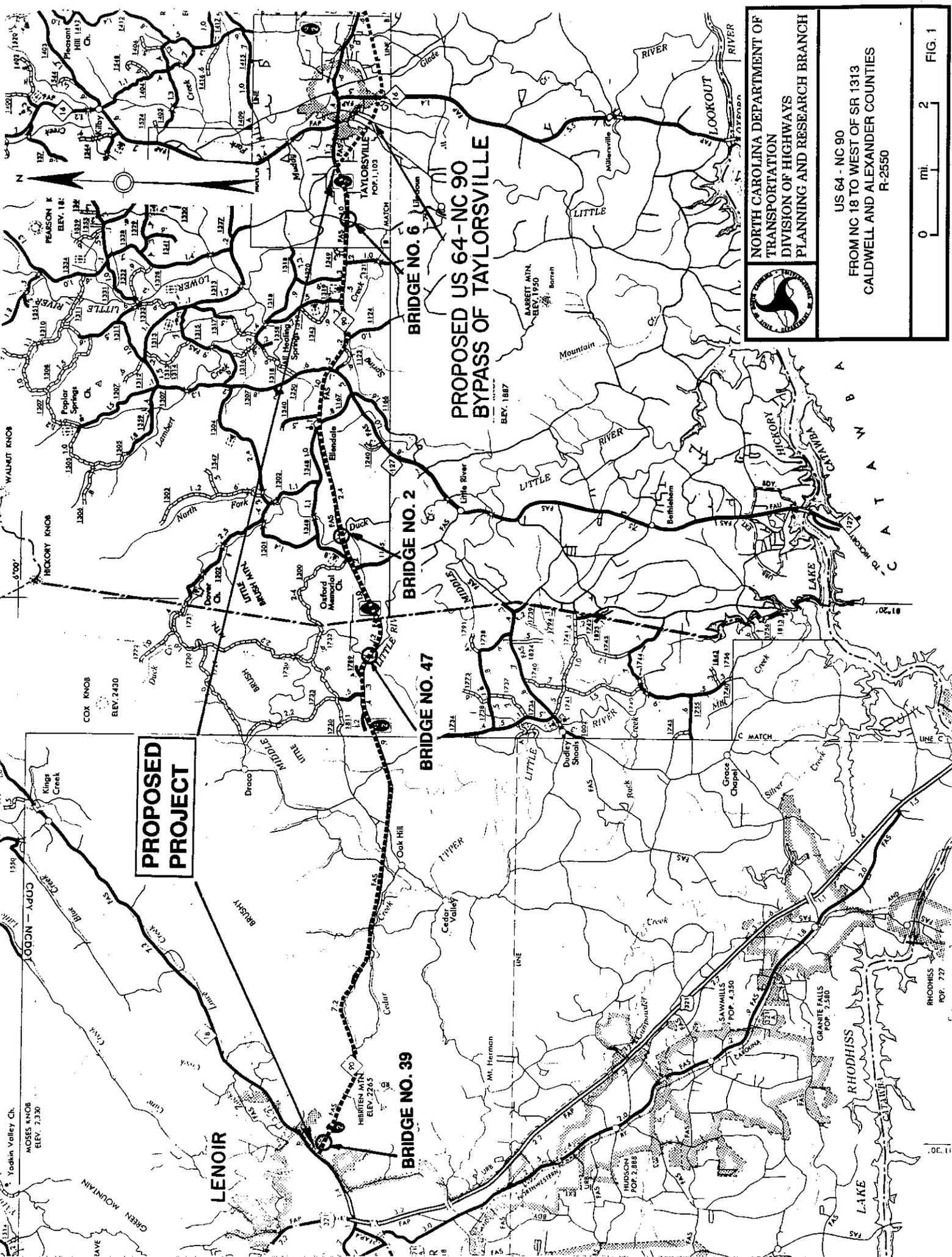
The construction cost includes engineering and contingencies, and the right-of-way includes relocation, acquisition, and utility costs.

VII. OTHER COMMENTS

The implementation of the proposed project is not expected to result in any significant impact on the environment. The construction of the project may require the relocation of two residences.

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

BB/rm



PROPOSED PROJECT

PROPOSED US 64-NC 90 BYPASS OF TAYLORSVILLE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PLANNING AND RESEARCH BRANCH



US 64 - NC 90
 FROM NC 18 TO WEST OF SR 1313
 CALDWELL AND ALEXANDER COUNTIES
 R-2550

0 1 2
 mi.

FIG. 1