

FEASIBILITY STUDY

West End  
NC 73 Relocation  
Moore County  
R-2807

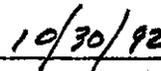
Prepared by  
Program Development Branch  
Division of Highways  
N. C. Department of Transportation



W. J. Watson, P.E.  
Highway Planning Engineer



Whitmél H. Webb, III, P.E.  
Head of Feasibility Studies



Date

West End  
NC 73 Relocation  
Moore County  
R-2807

I. GENERAL DESCRIPTION

This preliminary study describes proposed improvements to the NC 73 corridor in West End. A vicinity map is shown on Figure 1 and project location details are shown on Figure 2. It is proposed to relocate NC 73, on new location as shown on Figure 2. The project length is approximately 2800 feet and the recommended cross section is a 2 lane 24 foot pavement with 10 foot wide usable shoulders (including 4 foot paved shoulders) on 100 feet of right of way. The estimated cost of these improvements is \$910,000. It is anticipated that the relocation of 1 residence and 2 businesses will be required.

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 problem, propose a feasible solution including cost estimates, and identify potential problems that will require consideration in future planning and design phases.

II. NEED FOR PROJECT

The purpose of this improvement is to remove a 1200 foot discontinuity or "offset" in NC 73 at West End. Currently, eastbound through traffic, approaching West End on NC 73, must make a left turn on NC 211 - NC 73, travel 1200 feet north and make a right turn to continue on NC 73. During the peach harvesting season NC 73 through West End experiences heavy truck traffic. The reduction in turning traffic, resulting from this improvement, should improve the capacity and accident experience at both intersections, and along NC 211 - NC 73.

NC 73 is designated a Major Collector on both the Moore County Thoroughfare Plan and the North Carolina Statewide Functional Classification System. Development along NC 73 within the study area is generally agricultural and light residential from SR 1229 to the northernmost intersection with NC 211. Commercial development is most prominent from the northernmost to the southernmost NC 211 intersection.

NC 73 is generally a two lane roadway with a pavement width of 24 feet and two foot wide paved shoulders.

The Average Daily Traffic (ADT) on NC 73 for the year 1991, in the area of study, is estimated to be approximately 2,300 vehicles per day (vpd) east of NC 211 and 1,200 vpd west of NC 211. The ADT estimates for the same locations in the year 2015 are 3,000 and 1,500 respectively.

During the period from January 1, 1989 through December 31, 1991 there were 14 accidents reported on NC 73 from 2000 feet south of the southernmost intersection with NC 211 to 2000 feet north of the northernmost intersection. This resulted in an accident rate of 307.7 accidents per 100 million vehicle miles (Acc/100MVM), compared to a statewide average of 202.0 Acc/100 MVM for all rural NC routes during 1991. There were no fatalities reported during the period; however, 9 of the accidents resulted in injuries and 10 of the accidents occurred in the intersections. The most prevalent accident types were angle (29%), rear-end (21%), and left turn (29%). Removal of the offset intersections on NC 73 should reduce the potential for these types of accidents.

### III. RECOMMENDATIONS

It is recommended that a portion of NC 73 in West End be relocated to a new facility on new location. The proposed roadway will be a two-lane, two-way facility and will have a 24 foot wide pavement with 10 foot wide usable shoulders (including 4 foot paved shoulders). The total project length is approximately 2800 feet. The new roadway section will begin at the southernmost intersection with NC 211 and run generally in a northeast direction to a point on NC 73 approximately 900 feet west of SR 1229. Please see Figure 2 for the project location.

At the northern terminal of the project, a portion of existing NC 73 will be realigned to intersect the new roadway as a T intersection. This new intersection will be controlled by a stop sign on the realigned section. Please see Figure 2 for these details.

The total cost for right of way and construction is estimated to be \$910,000 as follows:

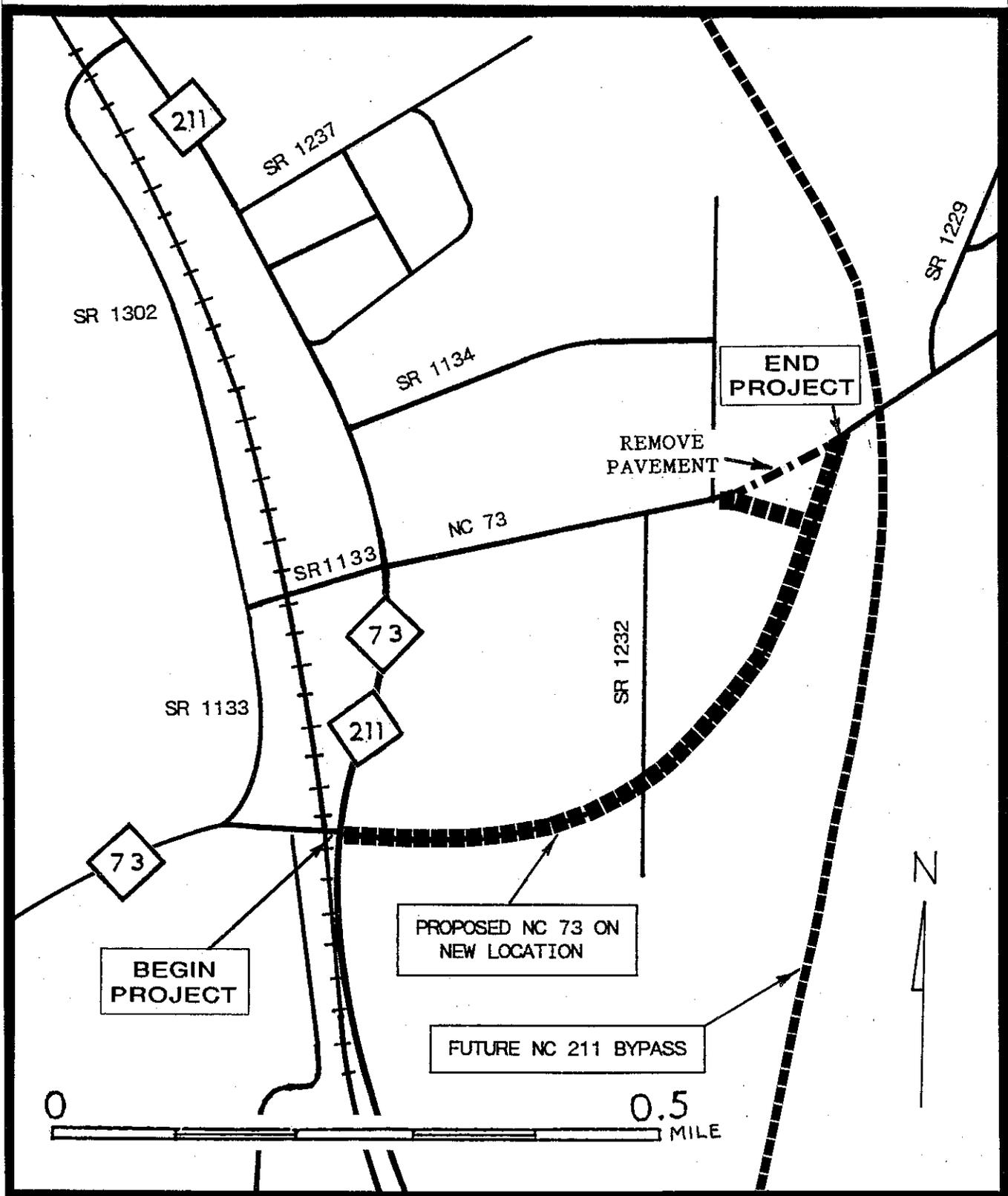
|                |           |
|----------------|-----------|
| Construction : | \$530,000 |
| Right of Way : | 380,000   |
| Total :        | \$910,000 |

#### IV. OTHER COMMENTS

As an alternative to the proposed improvements, consideration was given to extending NC 73 from its northernmost intersection with NC 211, west along SR 1133 to SR 1302 and on new location from SR 1302 to a point on NC 73 west of West End. This was rejected because it may require relocation of portions of a major manufacturing facility, would increase traffic congestion around the manufacturing facility, and might affect two properties that may hold historical significance.

The section of NC 73 under study is a part of the Tour Moore system of mapped and signed bicycle routes in Moore County. The recommendation for 4 foot wide paved shoulders is in consideration of the potentially heavy bicycle traffic.





|  |              |
|--|--------------|
| FEASIBILITY STUDIES UNIT                                     |              |
| FIGURE 2. LOCATION MAP                                       |              |
| NC 73 RELOCATION<br>FROM NC 211<br>TO PROPOSED NC 211 BYPASS |              |
| WEST END   | MOORE COUNTY |
| R-2807   | DIVISION 8   |