FEASIBILITY STUDY

Mebane
SR 1301 Extended, SR 1301, & SR 1374
From SR 1007 to SR 1374
(Alternative to I-40/I-85 Interchange at SR 1144)
Orange County
R-2716

Prepared by
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I. GENERAL DESCRIPTION

A service road parallel to I-40/I-85 connecting SR 1007 and SR 1144 is proposed to provide better access between the industrialized western part of Mebane and the Interstate System. Figure 1 shows the location of improvements. An interchange of SR 1144 with I-85 was requested for a feasibility study in the 1990 Transportation Improvement Program (TIP). These improvements are an alternative to building this interchange. The total estimated cost for these improvements is $2,245,000.

This is not an exhaustive environmental or design investigation but a preliminary study to define a feasible project alternative and determine estimated right-of-way and construction costs for this alternative.

II. NEED FOR PROJECT

The City of Mebane desires improved access to the Interstate for the industrialized western part of Mebane. Specifically, better access is desired for industrial developments along SR 1301 and SR 1374 north of the Interstate and for industrial and residential developments along SR 1144. SR 1374 and SR 1301 are the existing service roads that will be extended to provide access to the existing interchanges on SR 1114 and SR 1007. Both SR 1374 and SR 1301 are classified as Rural Local in the North Carolina Statewide Functional Classification System and neither is on the Federal Aid System. The existing pavement widths for these roads varies from 20 feet to 22 feet and the existing right-of-way for each road is 60 feet. Figure 1 shows the relationship of these existing roads to the proposed improvements.

The Average Daily Traffic (ADT) on SR 1374 east of SR 1144 for the years 1992 and 2012 are estimated to be 4200 vehicles per day (vpd) and 7300 vpd respectively. Capacity analysis for the 1992 conditions indicate a Level of Service C. By 2012, the Level of Service will be D.

III. RECOMMENDATIONS

A service road parallel to I-40/I-85 connecting SR 1007 and SR 1374 is recommended. The total project length is approximately 2.1 miles. Two segments of the project will be built on new location (Sections A and C on Figure 1) and a third segment (Section B) will consist of improvements to existing SR 1301. Section A will be built on new location and extends from SR 1007 to SR 1301, a distance of 1.0 mile. Section B is approximately 0.6 mile in length and follows the existing alignment of SR 1301, ending about 500 feet west of SR 1144. Section C is approximately 0.5 mile long, is built on new location crossing SR 1144 at a right angle, and ties into existing SR 1374 about 1500 feet east of SR 1144. Stop-sign control is recommended for the new intersection on SR 1144. Abandoned pavement on SR 1301 and SR 1374 will be removed.

A two lane rural section is recommended with 28' of pavement. The lanes will be 12 feet wide with two foot wide paved shoulders. The service road on new location will require new right-of-way 80 feet wide. SR 1301 will be resurfaced and widened within existing right-of-way.

Power and telephone lines must be relocated. Utility conflicts are medium. One business relocation will be required. The total estimated cost for the improvements is $2,245,000 including $635,000 for right-of-way and $1,610,000 for construction.

IV. OTHER STUDIED ALTERNATIVES

An Interchange Justification Study was done for a proposed interchange at I-40/I-85 and SR 1144 (Mattress Factory Road). The study provides only marginal justification for an interchange and was never approved by the Federal Highway Administration (FHWA). In a meeting with FHWA on 19 March 1991, FHWA requested that we investigate the alternative of an improved and extended service road which is the subject of this feasibility study. Cost of the interchange is $3,350,000 including $2,500,000 for construction and $850,000 for right-of-way.

More details on this alternative may be found in the study entitled Interchange Justification Study, I-40/I-85, Orange County, Proposed Interchange at SR 1144 (Mattress Factory Road) dated 6/18/90).

This alternative is not recommended because it is more expensive than the recommended alternative and will have a negative impact on traffic operations on I-40/I-85.

V. COST ESTIMATES

Access/Service Road

Residential Relocatees	:	0
Business Relocatees	:	1
R/W Cost	:	$ 635,000
Construction Cost	:	1,610,000
Total Cost	:	$2,245,000

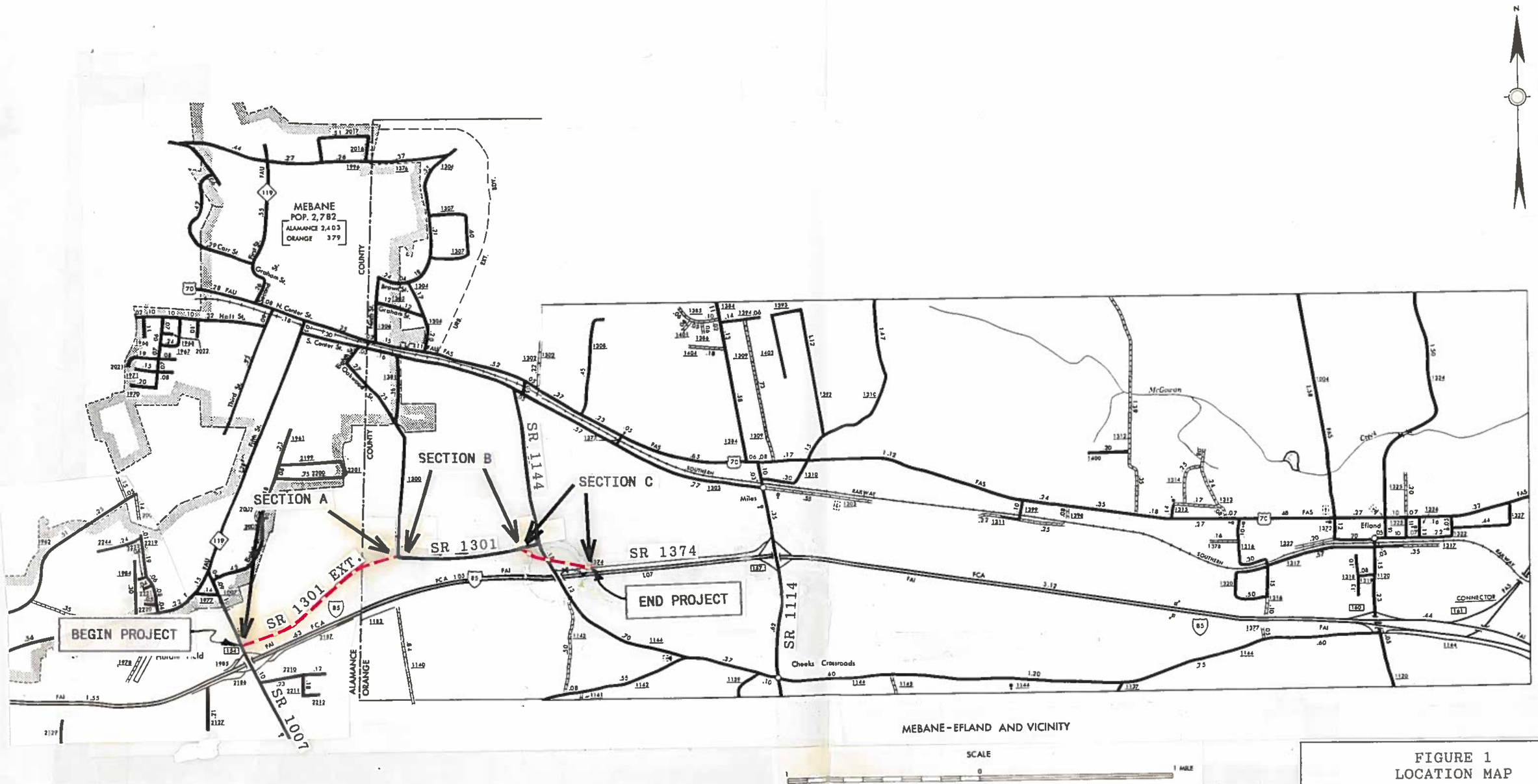
Interchange (based on Interchange Justification Study 6/18/90)

R/W Cost	:	$ 850,000
Construction Cost	:	2,500,000
Total Cost	:	$3,350,000

VI. OTHER COMMENTS

The studied area is in the Burlington Planning Boundary. The Burlington/Alamance County Urban Area Land Use Plan is in conflict with Orange County's Land Use Plan at this location. Orange County does not want further development in this area they define as rural buffer.

There is a privately owned golf course located in the north-east quadrant of the Interstate interchange at SR 1007 which is in the path of the recommended service road extension. A portion of this property must be acquired for right-of-way. The property is now for sale and is expected to be purchased for industrial development by September 1, 1991. The City of Mebane or Alamance County may pursue having the property owners donate this right-of-way when the golf course tract is developed. The estimate cost of this right-of-way is $292,000.



MEBANE-EFLAND AND VICINITY

SCALE

1 0 1 MILE

FIGURE 1
LOCATION MAP

SR 1301 EXTENDED, SR 1301, AND SR 1374 FROM SR 1007 TO SR 1374
ORANGE COUNTY U-2716

SCALE: 1"= 0.5MI DATE: AUG, 91