location

FEASIBILITY STUDY

Sanford Southern Loop
from NC 42 to NC 78
Lee County
U-2566

Prepared by
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4/4/90
Date

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I. DESCRIPTION

This report covers a preliminary study of a proposed segment of the Southern Loop in southwest Sanford. This project is included in the 1990-1996 Transportation Improvement Program for feasibility study and/or right of way protection. It is not presently funded. A vicinity map of the Sanford area is shown on Figure 1. The study presents two alternate locations, one utilizing generally an alignment suggested by the City of Sanford and the other following the alignment proposed in the Sanford Thoroughfare Plan.

II. PURPOSE OF PROJECT

The proposed facility is currently designated as a major thoroughfare on the adopted Sanford Thoroughfare Plan (see Figure 4).

Two possible alternate routes were considered for the studied loop section:

Alternate "A", shown on Figure 2, would utilize portions of existing Garden Street (SR 1117) and Keller Andrews Road (SR 1154). This alternate is approximately 4.3 miles long.

Alternate "B", which follows the Sanford Thoroughfare Plan, would be on new location for the most part as shown in Figure 3. This alternate is approximately 4.7 miles long. Both alternatives provide for the interchanging of the proposed loop and US 1-15-501, an access controlled facility.

Sanford is a growing city with a current population of over 17,000. Due to the increased growth in the southern section of Sanford, a connector route is greatly needed to alleviate congestion on secondary roads and to provide a more direct route from east to west. A southern loop would significantly reduce travel time and provide relief to the existing city streets through Sanford. The loop would also improve accessibility to areas of local traffic generation. Additional traffic will be generated on the east-west movement due to the opening of a school south-east of town, below the Jonesboro Heights area off of SR 1131 and new school off NC 42 in the Cool Springs area (see Figures 2 and 3).

II. DESCRIPTION OF ALTERNATIVES

For purposes of possible staging of construction, each alternate is broken into sections. The descriptions are as follows:

Alternate A

Section 1 begins on SR 1325 just north of the NC 42 intersection and ends at Fire Tower Road (SR 1152). This includes realignment of Franklin Drive (SR 1332) to provide a 4-legged intersection of the loop and NC 42 and the construction of a proposed half clover interchange at US 1-15-501. Also, a portion of SR 1154 must be relocated to provide room for the half clover. Section 2 extends from SR 1152 to NC 78 (see Figure 2).

Participation by the City is possible in this alternate. Plans are already underway to extend Harkey Road westward, to Garden Street, and construction is to be completed this spring.

Except for the east end, Alternate A generally follows the alignment favored by the City. The City has suggested that the proposed Southern Loop connect with the planned extension of Harkey Road to Courtland Drive (SR 1122). From there, the loop traffic could continue along Harkey Road and Woodland Avenue, both city streets, to NC 78 (see Figure 4). The connection to Harkey Road and Woodland Avenue would provide continuity to NC 78 but should only be considered as an interim plan. Both Harkey Road and Woodland Avenue are residential facilities and because of their minor thoroughfare importance are not appropriate use for carrying anticipated large increases in traffic. If the southern end of Alternate A bends southward on new location from Garden Street to NC 78 as shown on Figure 2, it assures a future loop extension southward and eastward around the industrial and business areas and eventually connect with NC 87 and US 421 southeast of Sanford in accordance with the thoroughfare plan shown on Figure 4.

The location of the proposed interchange with US 1-15-501 would be approximately 3000 feet from the NC 42 interchange, which may interfere with safe traffic flow. However, it should be noted that the existing interchange on US 1-15-501 at US 421 and Spring Lane are also approximately 3000 feet apart.

Alternate B

Section 1 begins on SR 1325 just north of the intersection with NC 42 and ends at Fire Tower Road (SR 1152). It includes the realignment of Franklin Drive north of NC 42 and the construction of an interchange with US 1-15- 501. Also included in this section are the proposed rerouting of portions of SR 1154 and SR 1333 to make room for the interchange. The interchange with US 1-15-501 would be located approximately 6000 feet south of the interchange with NC 42, meeting acceptable spacing standards. Section 2 extends from SR 1152 to the end of the project at NC 78.

Estimated Costs

The estimated costs of providing a modern 2-lane facility with an interchange at US 1-15-501 are as follows:

	Length (Miles)	Construction Cost	Right-of-Way Cost	Total Cost
Alternate A				
Section 1	2.5	$ 9,050,000	$1,725,000	$10,775,000
Section 2	1.8	$ 2,900,000	$ 675,000	$ 3,575,000
Total Alt. A	4.3	$11,950,000	$2,400,000	$14,350,000
Alternate B				
Section 1	3.2	$ 8,700,000	$2,280,000	$10,980,000
Section 2	1.6	$ 2,600,000	$ 440,000	$ 3,040,000
Total Alt. B	4.7	$11,300,000	$2,720,000	$14,020,000

The estimated right-of-way width used for cost estimate purposes is 100 feet throughout the project with sufficient right-of-way for the interchange and connector roads.

II. RECOMMENDATIONS

Location and Design

Based on consideration of the adopted thoroughfare plan, development in the southern part of Sanford, overall cost, and the need for a continuous major east-west loop, Alternate B is recommended. The recommended alignment is shown in Figure 3.

Estimated year 2010 traffic volume along this proposed route is approximately 10,000 vpd. Initial provision of a two-lane, 24-foot shoulder section is recommended, but sufficient right-of-way should be acquired to accommodate an ultimate 5-lane curbed section.

Signalization is anticipated at the NC 42 intersection, at the Fire Tower Road (SR 1152) intersection, and at NC 78. At the CSX railroad crossing, 2 trains per day currently utilize this track, leading to an exposure index of 20,000 in the design year 2010. This indicates an at-grade crossing protected by signals and gates should be adequate.

IV. COMMENTS

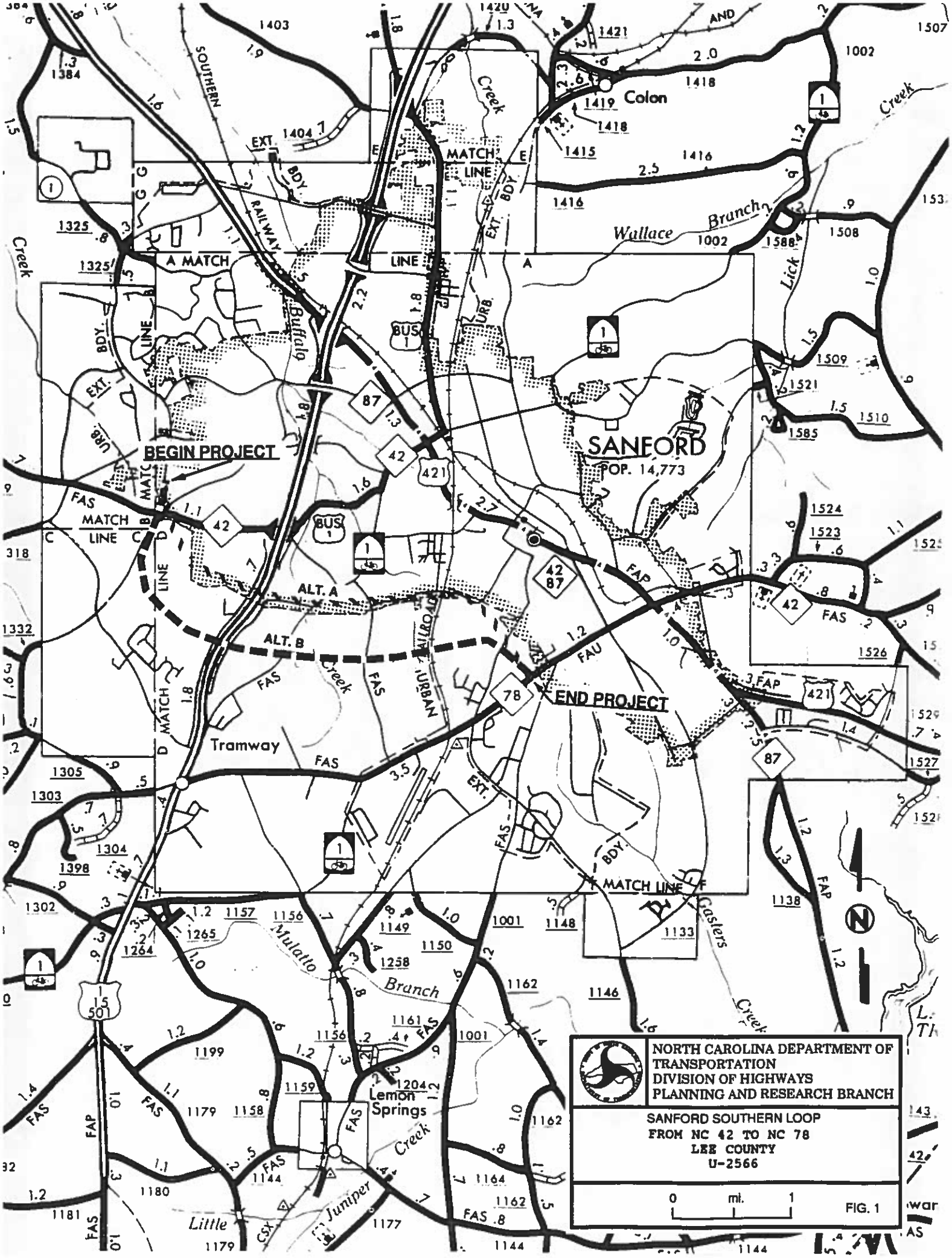
Possible negative environmental impacts of the proposed Southern Loop are as follows:

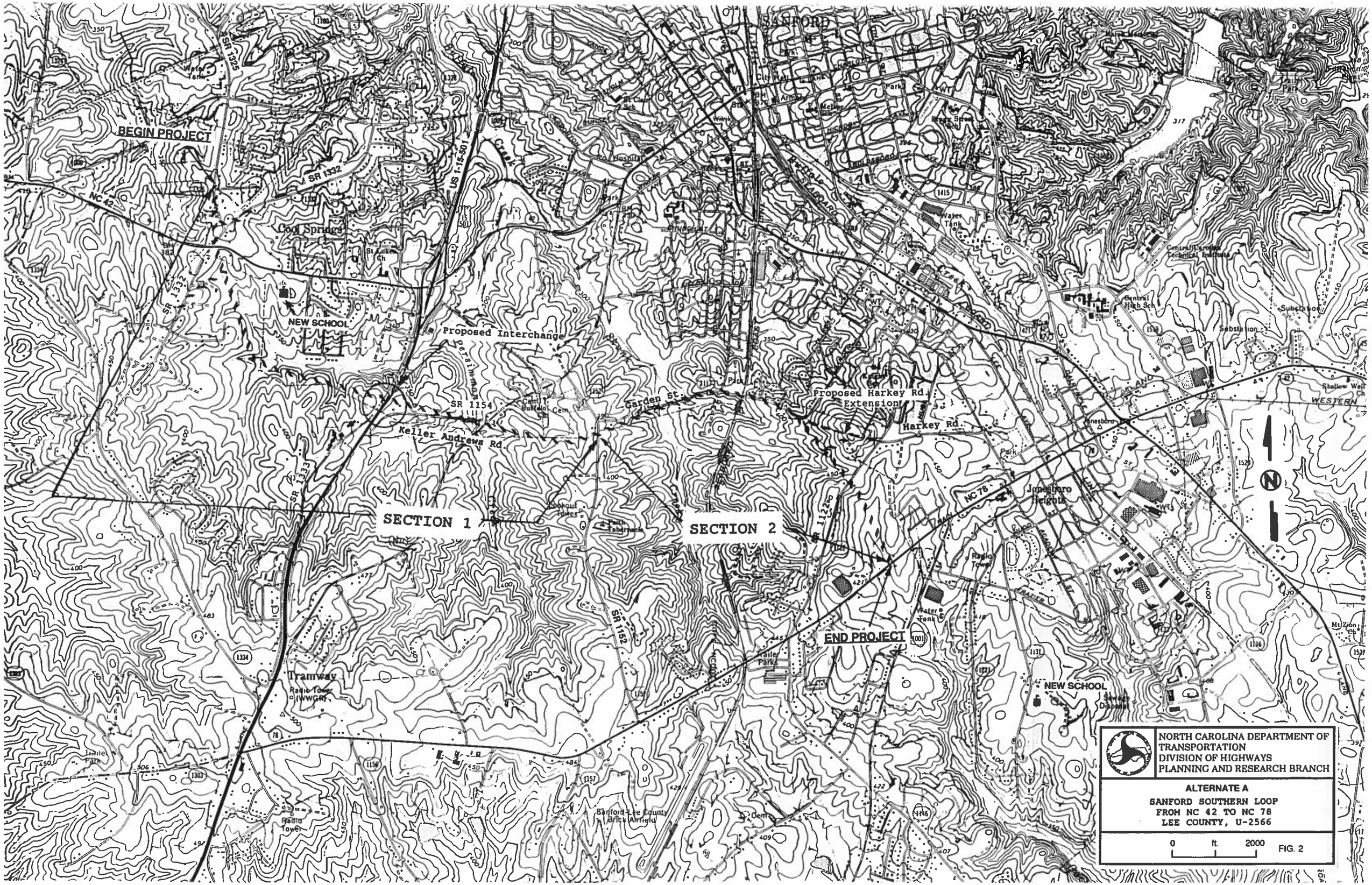
Alternate A would involve a small loss of forested land (and wildlife habitat) and the relocation of 3 residences and 1 business. This route passes through some established neighborhoods.

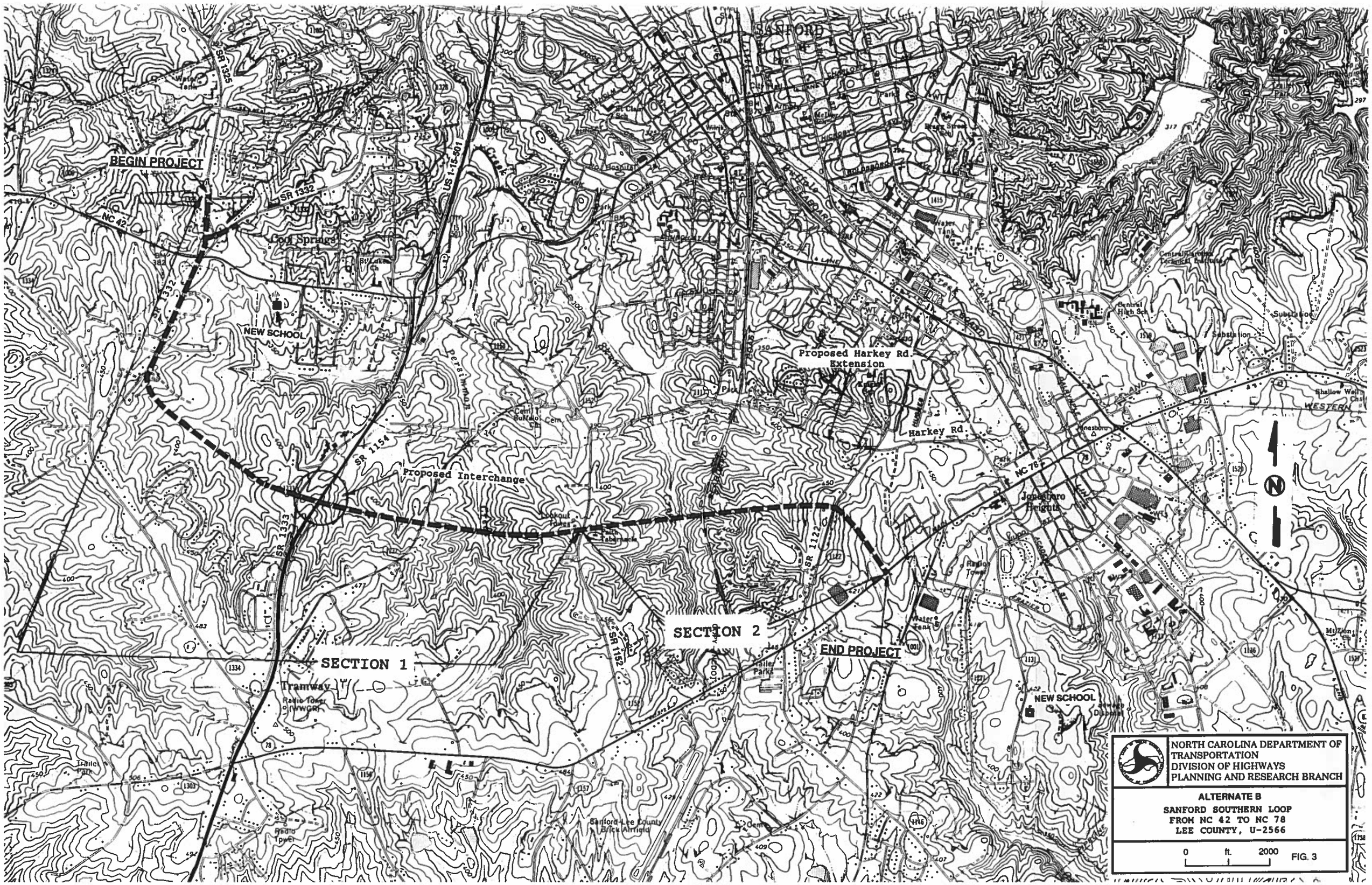
Alternate B would involve a larger loss of forested land and the relocation of 2 residences and 1 business.

If the project is 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.

AS/plr


BEGIN PROJECT
END PROJECT
SANFORD
POP. 14,773
Colon
Lemon Springs
Tramway
ALT. A
ALT. B
MATCH LINE
A MATCH LINE
Wallace Branch
Buffalo Creek
Mulatto Branch
Little Juniper Creek
Gasters Creek
SOUTHERN RAILWAY
CSX
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH
SANFORD SOUTHERN LOOP
FROM NC 42 TO NC 78
LEE COUNTY
U-2566
0 mi. 1
FIG. 1


SANFORD
BEGIN PROJECT
SR 1325
SR 1332
NC 42
US I-15-501
Cool Springs
NEW SCHOOL
Proposed Interchange
SR 1154
Keller Andrews Rd.
Garden St.
Proposed Harkey Rd. Extension
Harkey Rd.
SECTION 1
SECTION 2
SR 1333
SR 1152
NC 78
Jonesboro Heights
END PROJECT
Tramway
Radio Tower (WWGR)
Radio Tower
Sanford-Lee County Brick Airfield
Central Carolina Technical Institute
Central High Sch
Substation
Water Tank
Trailer Park
Shallow Well Ch
WESTERN
Mt Zion Ch
Sewage Disposal
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH
ALTERNATE A
SANFORD SOUTHERN LOOP
FROM NC 42 TO NC 78
LEE COUNTY, U-2566
0 ft. 2000
FIG. 2



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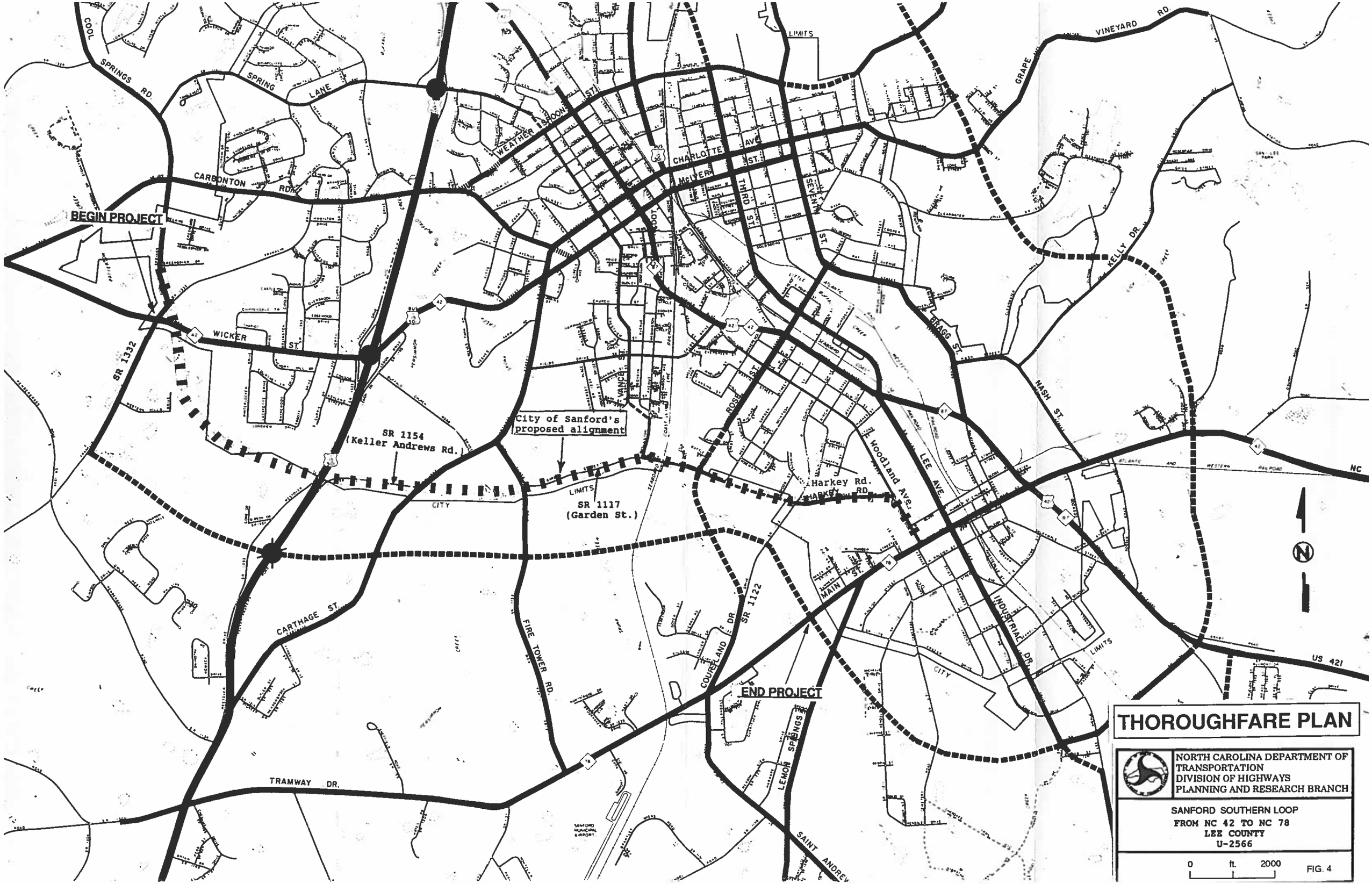
ALTERNATE B

SANFORD SOUTHERN LOOP
FROM NC 42 TO NC 78
LEE COUNTY, U-2566

0 ft. 2000

FIG. 3



THOROUGHFARE PLAN

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

SANFORD SOUTHERN LOOP
FROM NC 42 TO NC 78
LEE COUNTY
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0 ft. 2000

FIG. 4