R-2214

FEASIBILITY STUDY

US 25, Henderson County
From SR 1528 to the Buncombe County Line
R-2214

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

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I. DESCRIPTION

This report covers a preliminary study of the proposed widening of the subject road to a multi-lane facility for a distance of approximately 6.9 miles. This project is included in the 1987-1995 Transportation Improvement Program for feasibility study and/or right of way protection. It is not currently funded. Location of the project is shown on the attached maps.

II. PURPOSE OF PROJECT

Existing Road Characteristics

US 25 is designated as a major collector in the Functional Classification Plan for Henderson County. It provides an important connection between Asheville and Hendersonville and is an essential traffic feeder of I-26.

The studied section of road has a basic 24-foot pavement with variable shoulder widths of up to 5 feet. Its alignment is fair, with a maximum curvature of 10 degrees and maximum grade of 5 percent. Existing right of way width is approximately 60 feet. Through the I-26 interchange area, US 25 widens to a 4-lane divided section with control of access.

Five concrete bridges are in place along the subject road. Except for the modern bridge over I-26, the bridges were constructed in 1924 at a width of 28 feet and varying lengths of 62 to 236 feet.

Traffic Volumes, Capacity, and Accident Record

Current traffic volumes range from approximately 11,000 to 13,000 vehicles per day. Estimated traffic volumes in twenty years are 18,000 and 22,000 vpd respectively. Approximately 8 percent of the total traffic volume constitutes trucks.

At level of service C, present capacity along the two-lane facility is approximately 5000 vpd in rural areas and 10,000 vpd in urban areas. Thus, capacity is exceeded by current traffic volumes at all points along the existing road.

Nearly 350 accidents were reported on this section of US 25 during a recent 4-year period. This record yielded an accident rate of 2.71 accidents per million vehicle miles, which is higher than the 1985 statewide average of 2.02 acc/mvm for two-lane US routes. Major patterns of accidents were rear-end collisions (32%) and angle collisions (21%).

Need for Project

The purpose of the project is to provide additional lanes that would eliminate the present and future capacity deficiency and improve safety along US 25.

Implementation of this project would provide a continuation of existing and planned five-lane roadways extending from Hendersonville northward to SR 1528. The proposed project adjoins a 2.5-mile segment that is scheduled to be widened to 5 lanes with curb and gutter between SR 1528 and a point just north of NC 191 in 1995 (U-2106).

III. RECOMMENDATIONS AND COST

Widening of US 25 to a multi-lane facility is feasible and immediately warranted. Recommended cross section is 5 lanes with curb and gutter (64 feet face to face of curbs). It is anticipated that the existing road will not require any alignment change and that all bridges will be replaced at their existing sites. Estimated right of way for widening is 80 feet plus easements. Other needed improvements include upgrading of three existing traffic signals and installation of flashing signals and gates at a crossing of a Southern Railway spur track.

Through the I-26 interchange area, US 25 should be improved as follows: (a) add paved shoulders; (b) resurface; (c) retrofit bridge rails over I-26; upgrade existing guardrail; and (e) add right turn tapers from US 25 to the ramps.

The total estimated cost of the recommended improvements is $17,000,000 including $7,900,000 for roadway, $1,670,000 for bridges, $130,000 for signals and gates, and $7,300,000 for right of way. Cost estimates were made by the Roadway Design Unit and Right of Way Branch. The cost of proposed improvements within the 4-lane divided section at I-26 is $250,000. The right of way cost estimate is based on 80 feet of right of way with easements and on widening being unsymmetrical in certain areas to minimize right of way damage.

IV. OTHER COMMENTS

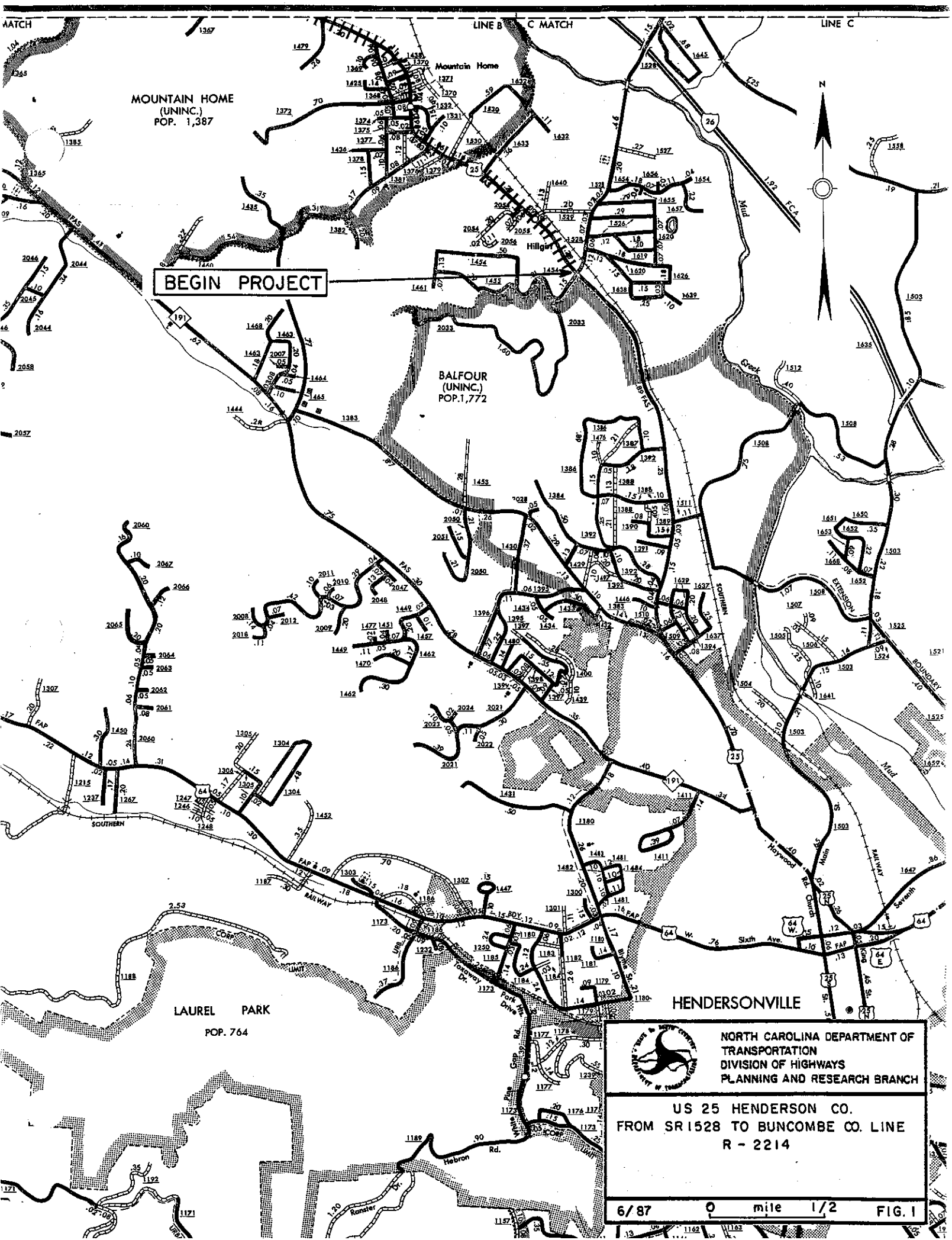
No other alternatives were considered for the proposed project.

Negative environmental impacts of the project are: (1) loss of strips of land for required additional right of way; (2) displacement of approximately 1 residence and 16 businesses; and (3) increased noise levels for remaining residences and businesses.

Although not part of the current state bicycle program, US 25 has potential significance for bike traffic because of its proximity to mountain resort areas and Blue Ridge Parkway. Consideration should be given to possible provision of wide outside lanes to accommodate bike traffic.

Local government should be encouraged to ensure that any new development planned along this section is adequately set back from the road to allowing widening.

RGD/sdt


MATCH
LINE B
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LINE C
MOUNTAIN HOME
(UNINC.)
POP. 1,387
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BEGIN PROJECT
BALFOUR
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POP.1,772
LAUREL PARK
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HENDERSONVILLE
N
NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH
US 25 HENDERSON CO.
FROM SR 1528 TO BUNCOMBE CO. LINE
R - 2214
6/87
0 mile 1/2
FIG. 1

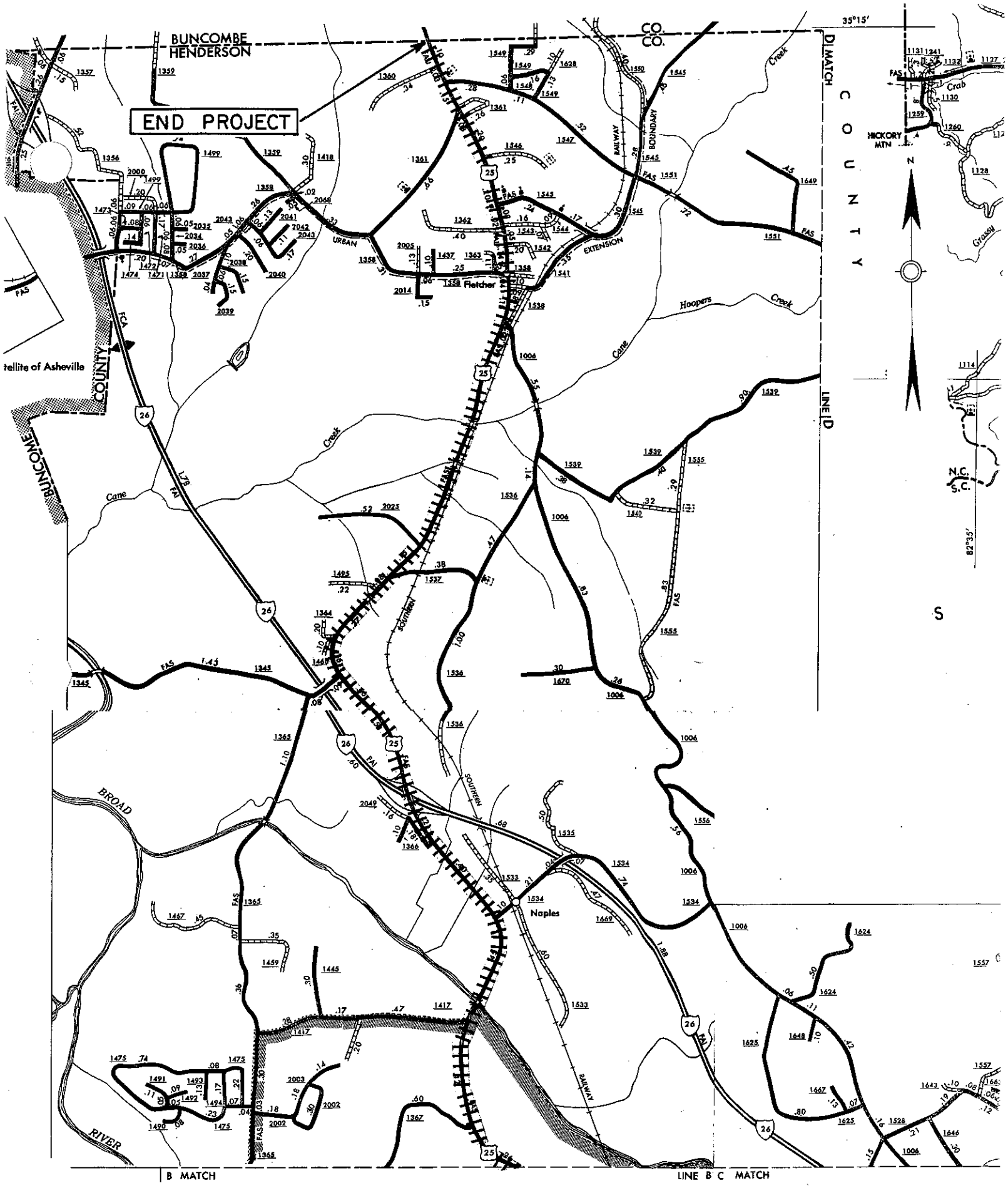
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FIGURE 1A