

FEASIBILITY STUDY

**Winston Salem
Northern Beltway
I-40 to US 52
Forsyth County
R-2247**

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

June, 1987

Winston Salem
Northern Beltway
I-40 to US 52
Forsyth County
R-2247

The subject project is included in the 1987-1995 Transportation Improvement Program for feasibility study and/or right-of-way protection. This report provides a brief, initial analysis of possible improvements. The project is not currently funded.

I. GENERAL DESCRIPTION

The proposed project consists of constructing a freeway on new location around the northern and western sides of Winston Salem. A four-lane divided facility is proposed for construction initially.

II. PURPOSE OF PROJECT

The purpose of the project is to implement a portion of the Winston Salem Thoroughfare Plan by providing an important segment of the outer loop system.

The proposed expressway around the northern and western sides of Winston Salem would provide improved access to the entire area. The facility would connect US 52 north of Winston Salem to I-40 southwest of Winston Salem.

The project would serve as a bypass, thus removing traffic from existing roads and streets. The facility would benefit through traffic as well as local traffic.

If the Northern Beltway were complete today, initial traffic volumes would range from 9,400 VPD to 11,800 VPD (see Figure 2). By the year 2007 (20-year planning period), it is anticipated that traffic volumes would range from 16,000 VPD to 20,000 VPD.

The project has received strong support and a high priority from the City of Winston Salem.

III. RECOMMENDED IMPROVEMENTS

The project consists of providing a freeway on new location. The proposed corridor is shown in Figure 1.

A four-lane divided facility is proposed initially. Ultimately, a six-lane facility is to be provided.

The two travelways (each 24 feet) are to be separated by a 30-foot median. A right-of-way width of 200 feet is to be acquired. Control of access should be acquired wherever possible. It is anticipated that

some rights-of-way will be dedicated by developers. Driveway connections will be limited to planned developments. Primary access to abutting developments will be on cross streets (not on the main route).

Consideration is being given to the provision of interchanges at I-40, US 421, Robinhood Road, NC 61, old US 421, Country Club Road, and US 52. Substantial additional studies will be required to determine the types of interchanges appropriate for these locations. Grade separations are to be provided over streams, railroads, and intersecting streets where appropriate. At some intersecting streets, at-grade connections are envisioned.

The project has a total length of about 15 miles.

Estimated cost of the project is approximately \$135,000,000, including \$87,000,000 for construction and \$48,000,000 for right-of-way acquisition.

Construction cost estimates were furnished by the Design Services Unit and are based on a county map. Right-of-way estimates were prepared by the City of Winston Salem and are considered to be approximations.

IV. ALTERNATIVES

The location of the Northern Beltway is quite uncertain. The alignment shown on the attached map is the general corridor shown in the thoroughfare plan and has been adopted by the Transportation Advisory Committee. Other alternative corridors exist.

V. ENVIRONMENTAL IMPACTS

The primary impacts of the project are expected to be positive. Improved access will benefit the entire area.

Possible adverse impacts include: (1) relocation of about 325 families and 8 to 10 businesses; (2) disruption of wetlands; (3) conversion of woodlands to highway purposes; (4) increased noise levels; and (5) impacts on historic properties.

The environmental aspects of the project are to be analyzed during future planning studies. These impacts will be minimized and mitigated wherever possible.

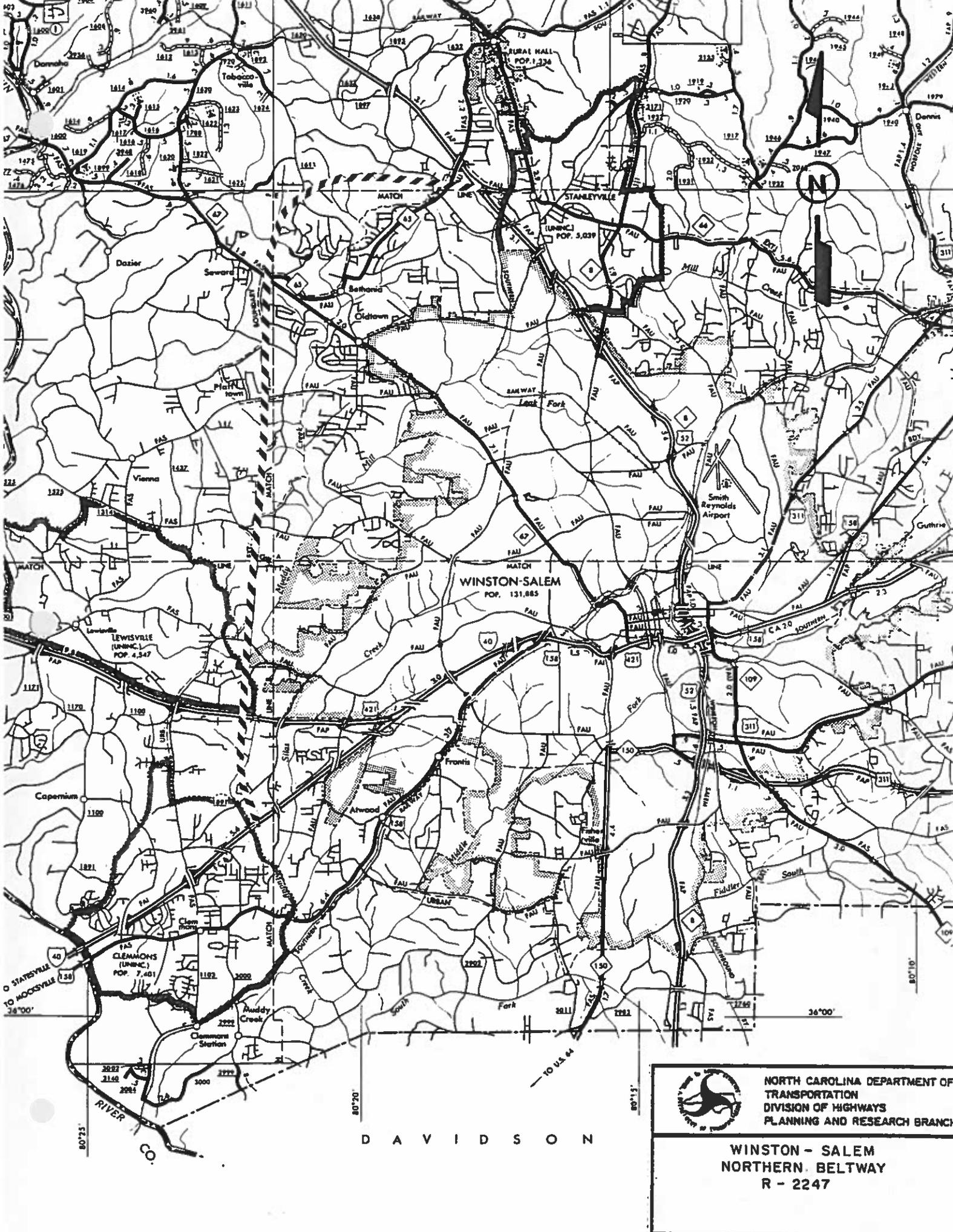
VI. SUMMARY

The provision of a bypass facility on the north and west side of Winston Salem is highly desirable and easily justifiable.

The project is strongly supported by the City of Winston Salem.

Functional design plans are scheduled to be prepared in the near future by the Roadway Design Unit. These plans will provide a basis for protecting right-of-way to the extent practical. It is anticipated that a substantial portion of the rights-of-way will be donated by developers.

WE/sdt



WINSTON-SALEM
POP. 131,885

LEWISVILLE
(UNINC.)
POP. 4,347

CLEMMONS
(UNINC.)
POP. 7,401

RURAL HALL
POP. 1,236

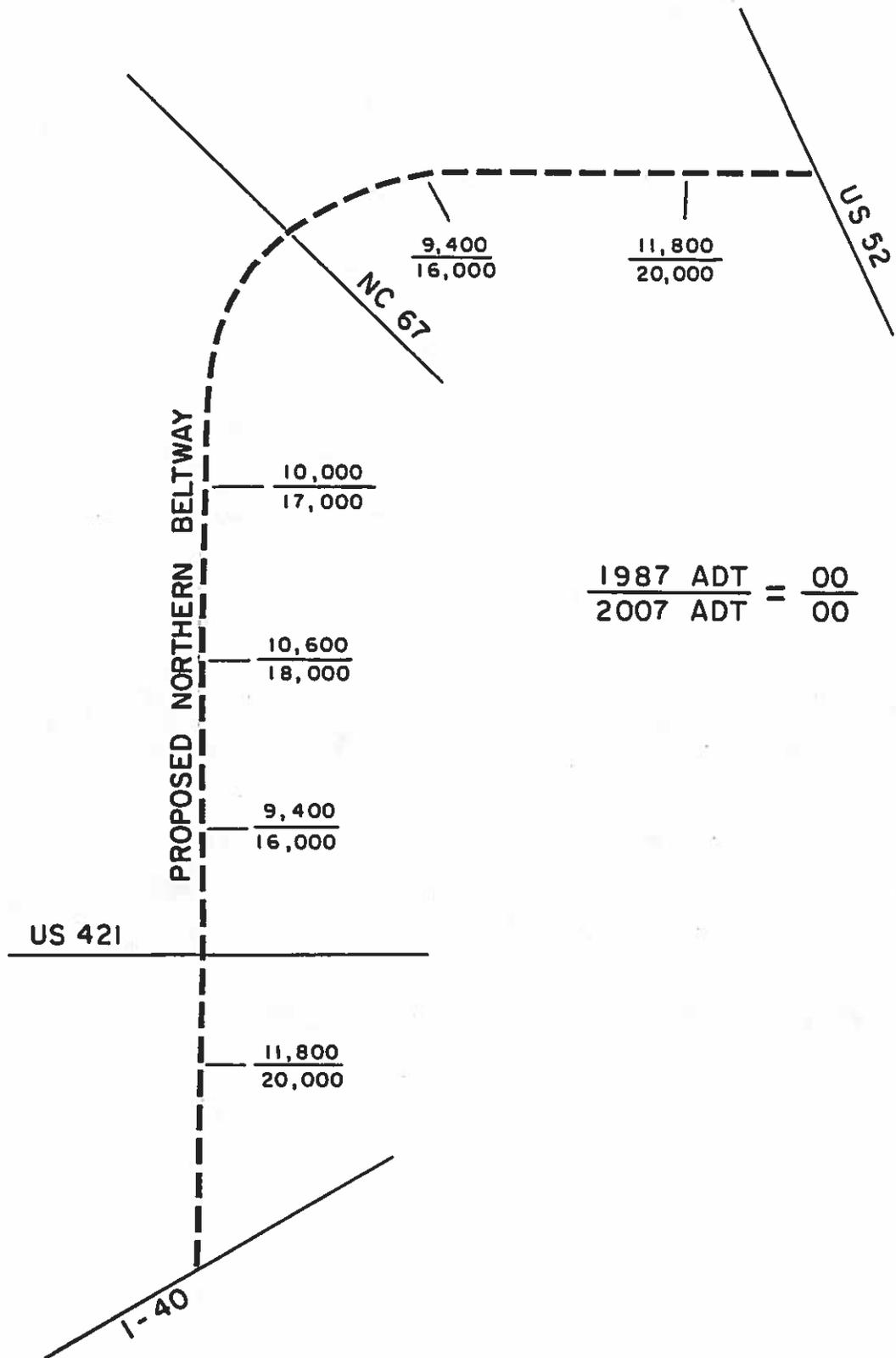
DAVIDSON

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

WINSTON - SALEM
NORTHERN BELTWAY
R - 2247

0 1 mile 2

ESTIMATED TRAFFIC VOLUMES



$$\frac{1987 \text{ ADT}}{2007 \text{ ADT}} = \frac{00}{00}$$

FIGURE 2