



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

E. NORRIS TOLSON
SECRETARY

May 25, 1999

MEMORANDUM TO: Mr. S. Clark Jenkins, Member, Board of Transportation
Mr. D. R. Dupree, Division Engineer, Division 4
Mr. David D. King
Mr. W. H. Webb, P.E.
Mr. J. M. Lynch, P.E. (6)
Mr. J. B. Williamson
Mr. Bill Gilmore, P.E.
Mr. R. L. Hill, P.E.
Mr. G. T. Shearin, P.E.
Mr. M. R. Poole, P.E.
Mr. A. L. Avant (2)
Mr. J. D. Lane
Mr. T. A. Peoples, P.E.
Mr. David Smith, P.E.

FROM: David G. Modlin, Ph.D., P.E. *David*
Head of Feasibility Studies

SUBJECT: Feasibility Study # FS-9904B, Rocky Mount, SR 1613 (North
Winstead Avenue) from SR 1770 (Sunset Avenue) to SR 1604
(Hunter Hill Road), Nash County.

Our staff has completed a feasibility study for the subject proposed project. This brief analysis suggests improvements that would be logical if the project were to be funded. A copy of our report is attached for your information.

DGM/joa

Attachment

cc: Mr. Kim L. So, P.E.



FEASIBILITY STUDY

Rocky Mount

SR 1613 (North Winstead Avenue)
from SR 1770 (Sunset Avenue)
to SR 1604 (Hunter Hill Road)

Nash County

Division 4

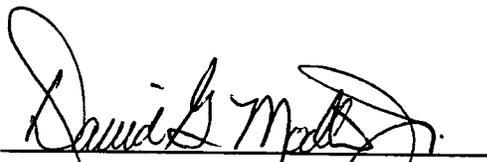
FS-9904B

U-4019

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



Kim L. So, PE
Highway Planning Engineer



David G. Modlin, Jr., PhD, PE
Head of Feasibility Studies

5/7/99

Date

FEASIBILITY STUDY

SR 1613 (North Winstead Avenue) from SR 1770 (Sunset Avenue) to SR 1604 (Hunter Hill Road) in Rocky Mount

Nash County

FS-9904B

I. GENERAL DESCRIPTION

This feasibility study evaluates the potential for the widening of SR 1613 (North Winstead Avenue) from SR 1770 (Sunset Avenue) to SR 1604 (Hunter Hill Road) in Rocky Mount, Nash County (see Figure 1). The project is approximately 1.7 miles (2.7 km) in length.

The studied typical section is a five-lane, curb and gutter with 10-foot (3.0-m) berms on existing 170-foot (51.8-m) wide right-of-way with no control of access. The estimated cost of the project is \$6,100,000 (\$400,000 for right-of-way and \$5,700,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents studied cross-sections for improvements, general corridors of improvements, and estimated costs of construction and right-of-way. This study attempts to identify any potential environmental, permitting, or other observed issues that deserve consideration in the planning and construction stages.

II. NEED FOR PROJECT

This project was requested by the Rocky Mount Area Transportation Advisory Committee.

North Winstead Avenue is classified as a Minor Arterial on the Statewide Functional Classification System. On the Rocky Mount Thoroughfare Plan, it is classified as a Major Thoroughfare. The project corridor is the western portion of the Rocky Mount urban loop system.

Existing North Winstead Avenue within the project limits is a 3-lane, 36-foot (11.0-m) wide, shoulder section with 6-foot to 10-foot (1.8-m to 3.0-m) wide shoulders. A short section of the roadway from Sunset Avenue to Woodridge Court has been widened with curb and gutter to accommodate two

thru-lanes and a right-turn lane in the southbound direction. The project corridor lies within an area that is mostly commercial.

Estimated 1999 average daily traffic (ADT) on North Winstead Avenue varies from 11,900 vehicles per day (vpd) near SR 1604 (Hunter Hill Road) to 19,800 vpd near SR 1770 (Sunset Avenue). In the design year 2025, the traffic volume is estimated to range from 26,700 to 35,400 vpd. The existing North Winstead Avenue is operating at a level of service (LOS) between D and E, and is anticipated to operate at a LOS between E and F in the design year 2025. If widened to multi-lanes, existing on traffic North Winstead Avenue would operate at a LOS B, and in the design year, LOS C.

During the period from July, 1995, through June, 1998, there were 148 accidents reported along North Winstead Avenue within the project limits. This resulted in an accident rate of 412.8 accidents per 100 million vehicle miles (acc/100mvm) compared to a statewide average of 250.5 acc/100mvm for this type of facility. No fatalities and 57 injuries were reported during this period. The rear-end slow or stop type of accidents accounted for 38% of all the accidents. If widened to multi-lanes, the accident rate on North Winstead Avenue is expected to reduce.

III. STUDIED IMPROVEMENTS

It is proposed to widen SR 1613 (North Winstead Avenue) from SR 1770 (Sunset Avenue) to SR 1604 (Hunter Hill Road) in Rocky Mount, Nash County (see Figure 1). The project is approximately 1.7 miles (2.7 km) in length. The studied typical section is a five-lane, 64-foot (19.5-m) wide (face-to-face) curb and gutter section with 10-foot (3.0-m) wide berms. There would be two 12-foot (3.7-m) wide lanes in each direction and a 12-foot (3.7-m) wide center turn lane. Widening would be symmetrical to the existing roadway.

Bridge Number 285 over Stoney Creek and Bridge Number 179 over US 64 would be widened to have a clear roadway width of 64 feet (19.5 m) with 5-foot (1.5-m) wide sidewalks on both sides.

The approach of SR 1660 (Garris Shearin Road) would be realigned so that it intersects North Winstead Avenue perpendicularly (see Figure 1). The realigned section is approximately 900 feet (274.3 m) long. A 100-foot (30.5-m) wide right-of-way is recommended for the realigned section, which would be a two-lane shoulder section with 24-foot (7.3-m) wide pavement and 8-foot (2.4-m) wide grass shoulders.

It is estimated that this project would require no relocation of residences or businesses.

The cost of the project is estimated as follows:

Right-of-Way	\$ 400,000
Construction	<u>\$ 5,700,000</u>
Total Cost	\$ 6,100,000

A transportation benefit analysis was also completed for this project. For the period between 1999 and design year 2025, it is estimated that the total transportation benefits for the project are \$81,440,000 with an average of \$3,130,000 per year. The total benefits include accident cost savings, time cost savings, and operating cost savings.

IV. OTHER COMMENTS AND CONCERNS

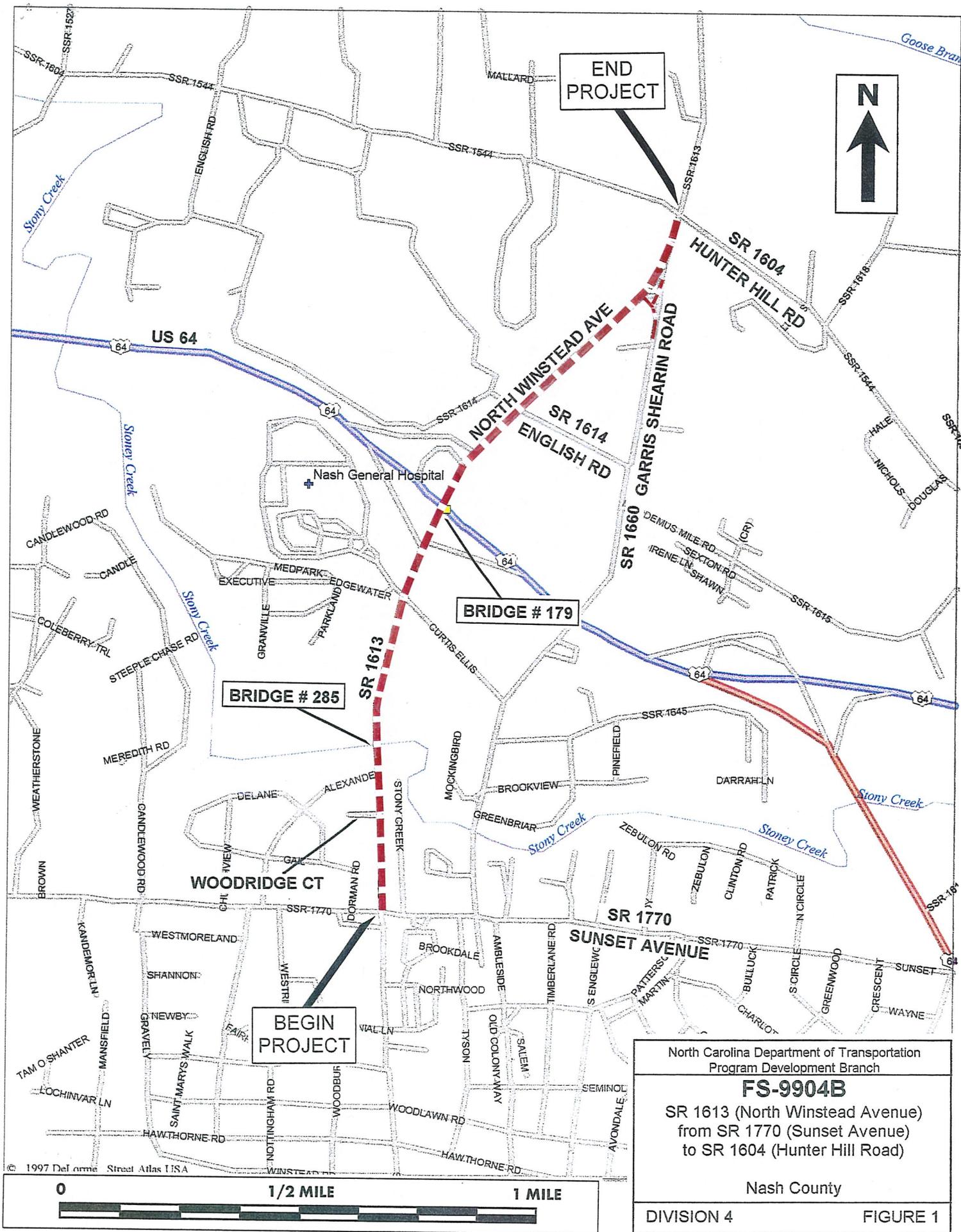
An alternative typical section of a four-lane, curb and gutter with 16-foot (4.9-m) raised median was also considered. The estimated cost of this alternate is \$7,500,000 (\$400,000 for right-of-way and \$7,100,000 for construction).

The Traffic Engineering Branch indicated that traffic management system components are desired on the project corridor to facilitate efficient traffic operations. One of these components is a surveillance camera, estimated to cost \$40,000.

No historical or architecturally significant sites have been identified in the project corridor.

Based on maps available at the Department of Environment, Health, and Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.

No recommendation for bicycle accommodations was received from the NCDOT Office of Bicycle and Pedestrian Transportation.



END PROJECT



BRIDGE # 179

BRIDGE # 285

BEGIN PROJECT

