

FEASIBILITY STUDY

Winston-Salem

**Intersection of SR 2456 (South Main Street)
and Waughtown Street**

Forsyth County

U-2926

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

Maria N. Wall

**Maria N. Wall
Highway Planning Engineer**

6/14/93

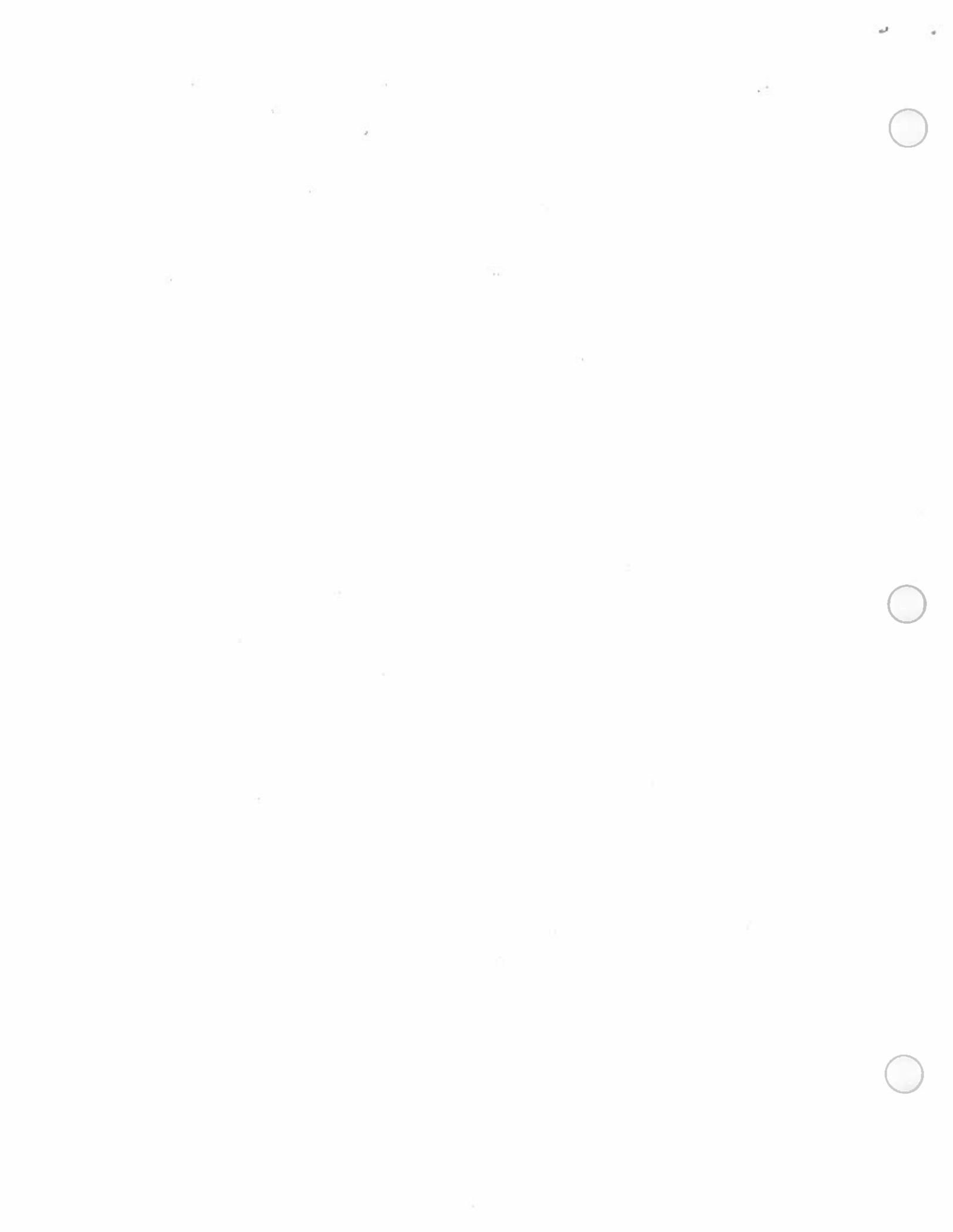
Date

M. B. Mustafa

**Mohammed B. Mustafa
Highway Planning Engineer**

Whitmel H. Webb, III

**Whitmel H. Webb, III, P.E.
Head of Feasibility Studies**



FEASIBILITY STUDY

Winston-Salem

Intersection of SR 2456 (South Main Street)
and Waughtown Street

Forsyth County

U-2926

I. GENERAL DESCRIPTION

This is a feasibility study for the realignment of the intersection of SR 2456 (South Main Street) and Waughtown Street in Winston-Salem (See Figures 1 and 2). Estimated cost of the project is \$2,300,000 (\$500,000 for right-of-way and \$1,800,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents recommended cross sections for improvements, general alignments of improvements, and estimated cost of construction and right-of-way. This study attempts to identify any potential environmental, permitting, or other observed issues which deserve consideration in the planning and construction stages. This study was completed without the benefit of mapping.

II. NEED FOR PROJECT

This project was requested by the City of Winston-Salem to improve traffic flow at the studied intersection. SR 2456 (South Main Street) is classified as a minor arterial; and Waughtown Street is classified as an other principle arterial in the Statewide Functional Classification System. A sketch of the existing intersection is shown in Figure 3. Land use along the corridor is predominantly commercial.

Figures 2 and 3 show the alignment of the existing intersection. The existing SR 2456 (South Main Street), from Salem Avenue to 0.25 miles south of the intersection of Salem Avenue and SR 2456, is a 2-lane, 36 to 40-foot, face-to-face, curb and gutter section with sidewalks on each side. The existing Waughtown Street, from SR 2456 to Alder Street is a 2-lane, 24 to 40-foot, face-to-face, curb and gutter section with sidewalks on each side.

Bridge number 314 carries Waughtown Street over Salem Creek, approximately 375 feet south of the intersection of SR 2456 (Main Street) and Salem Avenue. The sufficiency rating of bridge number 314 is 43.5. The bridge is 111 feet long. The approach travelway width is 36 feet. The bridge roadway width is 34 feet with a deck width of 52.5 feet.

Bridge number 8 carries SR 2456 (Main Street) over Salem Creek, approximately 525 feet south of the intersection of SR 2456 and Salem Avenue. The sufficiency rating of bridge number 8 is 59.6. The bridge is 111 feet long. The approach travelway width is 36 feet. The bridge roadway width is 39.8 feet with a deck width of 58.0 feet.

Traffic counts and turn movements are not available for the study area at this time. The recommended improvements are based on estimated traffic demand along the studied roadways, and are anticipated to accommodate traffic demand through 2013.

During the period from June 1, 1989 through May 31, 1992, a total of 16 accidents were reported at the intersection of SR 2456 and Waughtown Street. This resulted in an accident rate of 116.9 accidents per 100 million vehicle miles, compared to a statewide average of 340.3. The most common accident types were angle accidents (44%) and vehicles running off the road (31%). The recommended improvements will reduce the accident rate by reducing traffic conflicts and eliminating adverse alignments.

III. RECOMMENDATIONS

The recommended intersection realignment is shown on Figure 3. The realigned intersection of Waughtown Street and SR 2456 (South Main Street) will be signalized.

SR 2456 is to be widened to a five-lane, 64-foot, face-to-face, curb and gutter section with 8-foot berms on a 100-foot wide right-of-way, from Salem Avenue to the new intersection with Waughtown and then taper to match the existing 40-foot, face-to-face, curb and gutter section, for approximately 450 feet (See Figure 3). Improvements to SR 2456 will be approximately 1200 feet in length.

Waughtown Street is to be realigned to form a "tee" intersection with SR 2456 (See Figure 3). The realigned Waughtown Street will utilize a four-lane, 52-foot, face-to-face, curb and gutter section for approximately 300 feet and then taper to match the existing 40-foot, face-to-face, curb and gutter section, for approximately 400 feet. Improvements to Waughtown Street will be approximately 750 feet in length. The existing Waughtown Street will be removed between Alder Street and SR 2456.

The recommended realignment of the intersection of SR 2456 and Waughtown Street will reduce congestion and provide safer and more efficient traffic flow through this corridor. Figure 3 shows the configuration of the intersection of SR 2456 (Main Street) and Waughtown Street. The north leg of the intersection will consist of four 12-foot lanes and a striped 12-foot median: one southbound lane, one left-turn lane, and two northbound thru-lanes. The east leg of the intersection will utilize four 12-foot lanes: two right-turn lanes, one left-turn lane, and one eastbound thru-lane. The south leg of the intersection will consist of three 12-foot lanes: one right-thru-lane, one northbound thru-lane, and one southbound thru-lane. This intersection will be signalized.

Sidewalks will be provided on both sides of the realigned Waughtown Street and South Main Street to replace the existing sidewalks.

Bridge number 314 will be removed. Bridge number 8 will be removed and replaced by a new bridge to accommodate the recommended roadway section.

Total project cost is estimated at:

Right-of-way	\$ 500,000
Construction	\$1,800,000
Project Cost	\$2,300,000

Medium utility conflicts are expected.

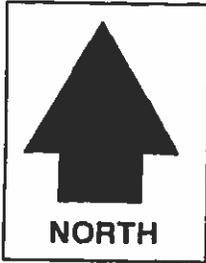
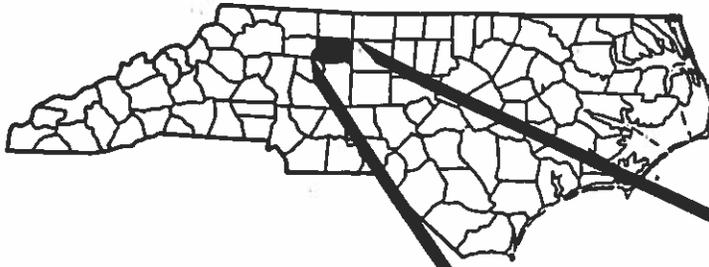
IV. OTHER COMMENTS AND CONCERNS

This project will not require the relocation of any residences or businesses.

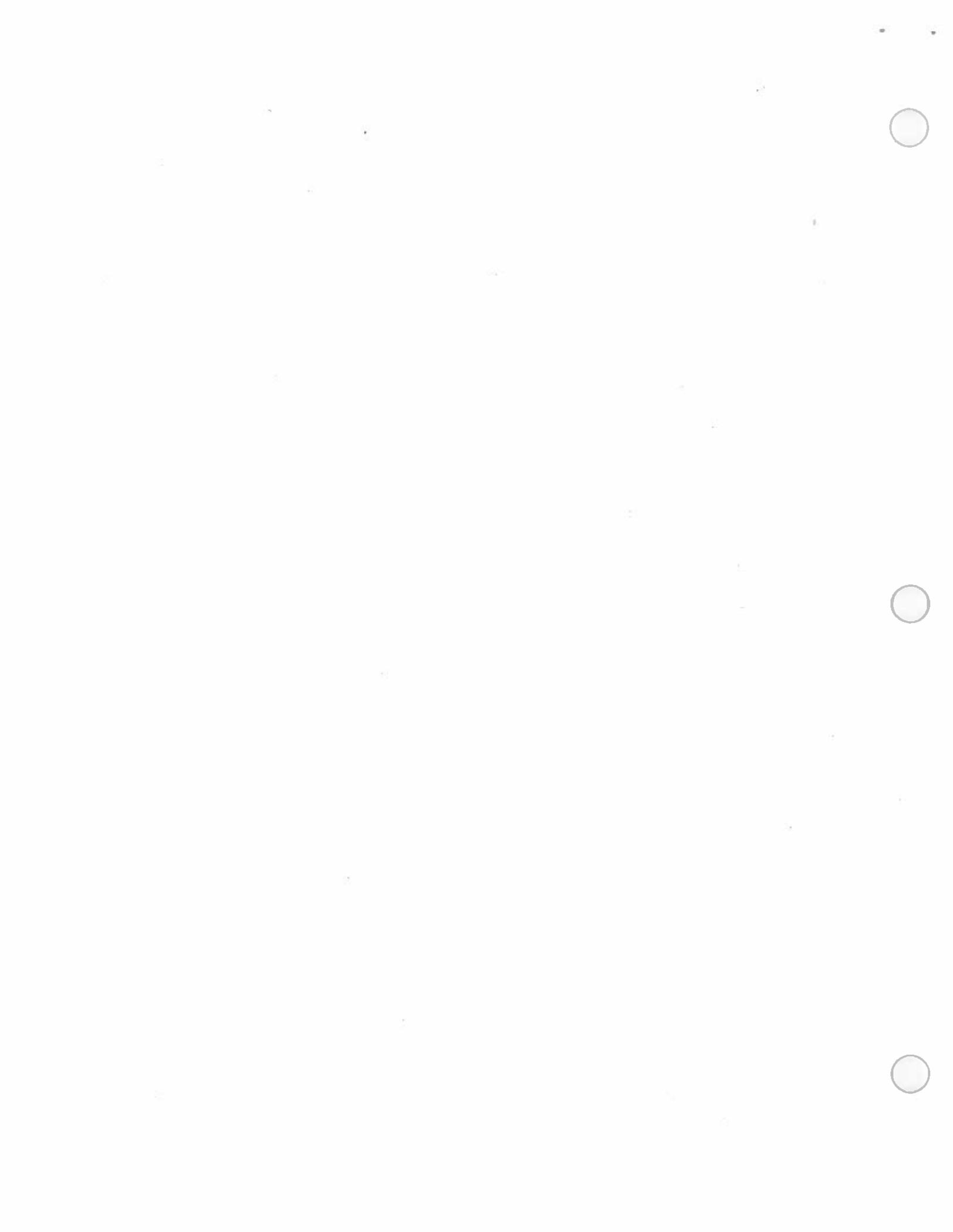
This project may require a Section 404, Corps of Engineers Nationwide Permit. No historical or architecturally significant sites are known to be within the limits of the proposed project.

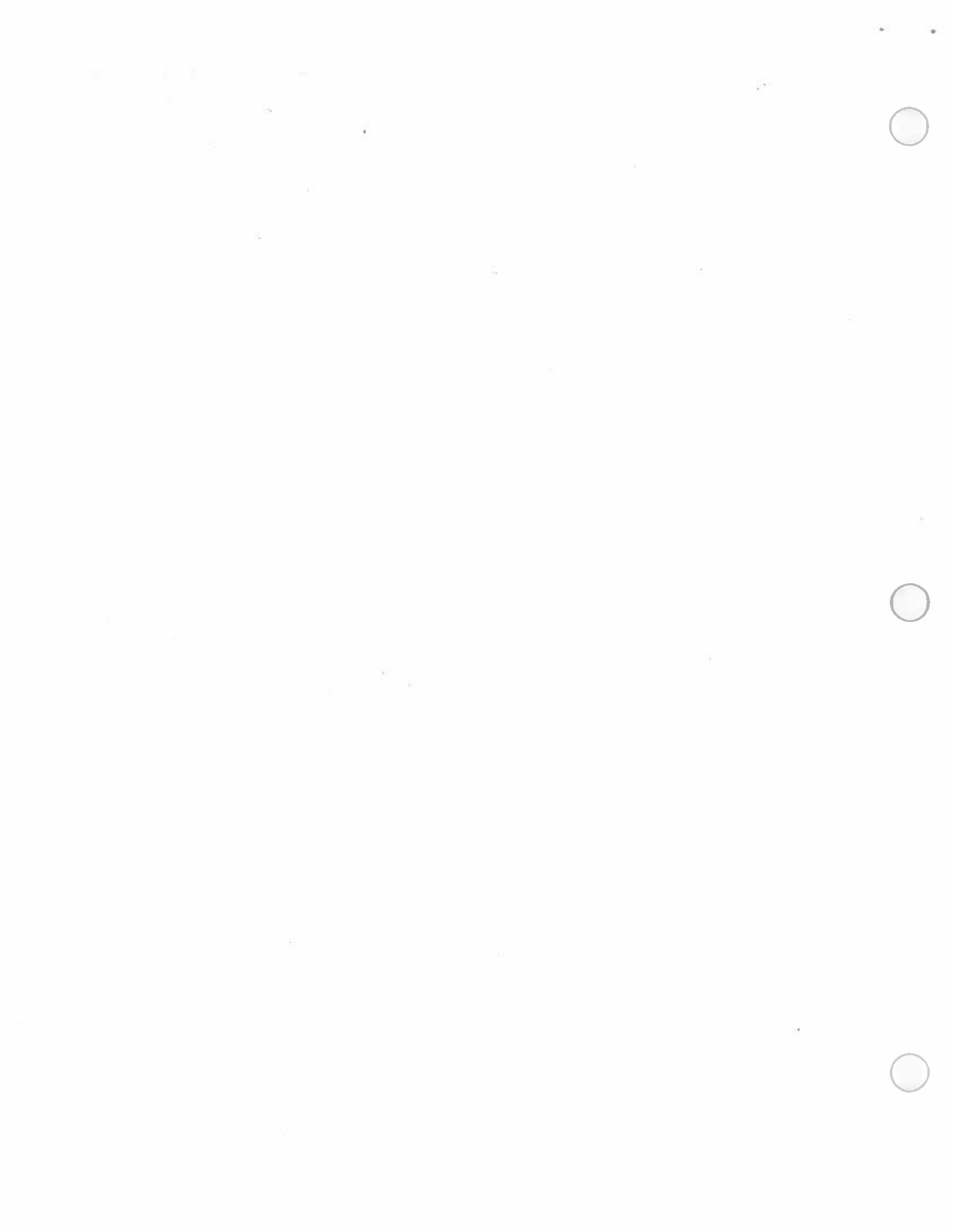
The Old Salem Historic District is located north of the intersection of Salem Avenue and SR 2456 (South Main Street). The North Carolina School of the Arts is located south of the project corridor (See Figure 2). No impacts are anticipated in these areas.

The Southeastern Gateway Group of Winston-Salem has expressed an interest in this project, and should be contacted if this project is programmed for construction.



FEASIBILITY STUDY UNIT	
U-2926	
WINSTON-SALEM	
Intersection of SR 2456 (South Main Street) and Waughtown Street	
Forsyth County	
DIVISION 9	FIGURE 1

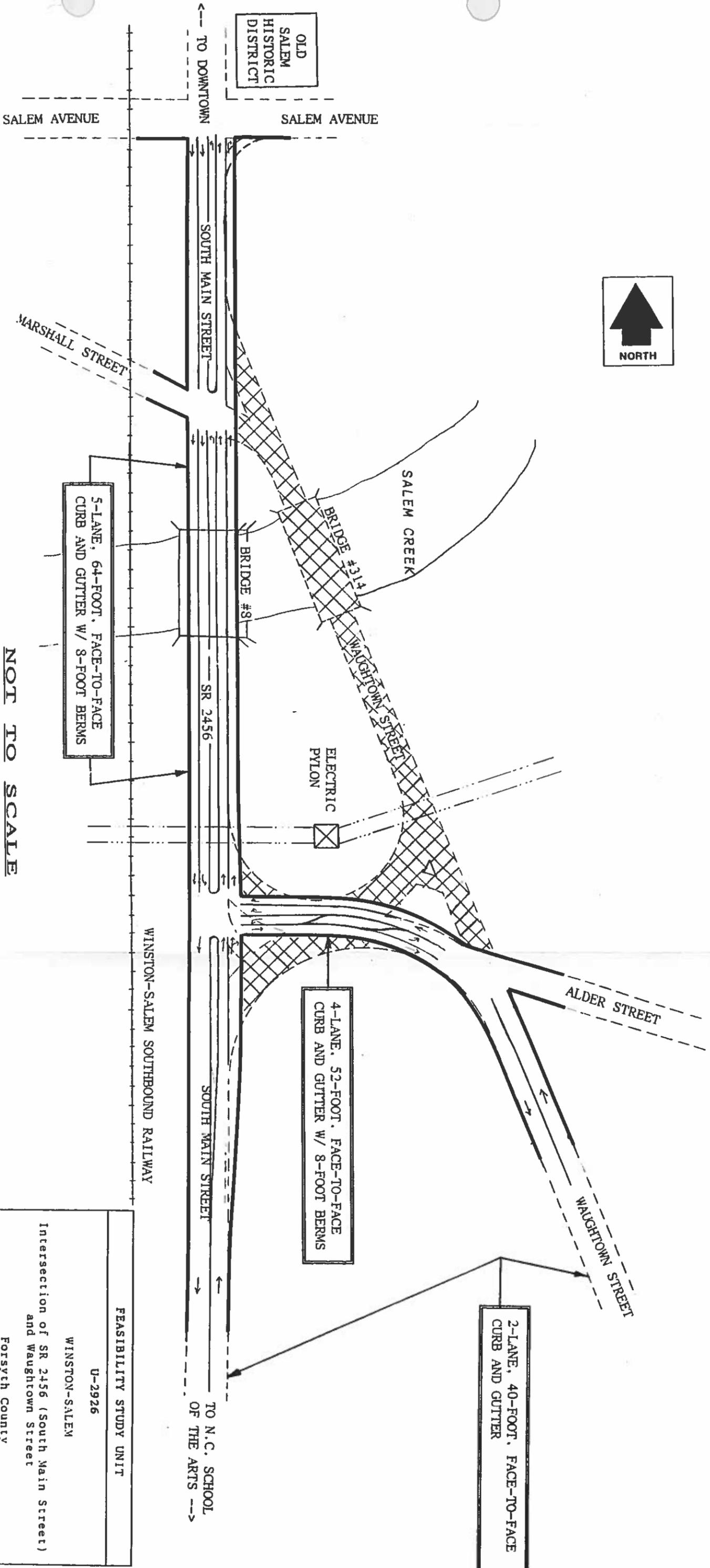






LEGEND

- EXISTING ALIGNMENT
- PROPOSED ALIGNMENT
- ▨ PAVEMENT OR BRIDGE REMOVAL
- RAILROAD TRACKS



NOT TO SCALE

FEASIBILITY STUDY UNIT
 U-2926
 WINSTON-SALEM
 Intersection of SR 2456 (South Main Street)
 and Waughtown Street
 Forsyth County

DIVISION 9 FIGURE 3

