

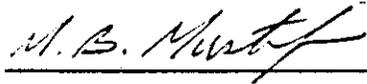
FEASIBILITY STUDY

Kinston
Crescent Road
from US 70 to NC 11
Lenoir County
R-2719

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



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Date



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I. GENERAL DESCRIPTION

This is a feasibility study for the construction of Crescent Road primarily on new location from US 70 to NC 11, a distance of 9.1 miles (See Figure 1). The recommended typical section is a 2-lane, 28-foot pavement, with 8-foot usable shoulders, on 100-feet of right of way. Estimated cost of the project is \$8,520,000 (\$ 1,810,000 for right of way and \$6,710,000 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.

II. NEED FOR PROJECT

This project was requested by the City of Kinston, and is included in the mutually adopted 1981 Kinston Thoroughfare Plan as a proposed major thoroughfare. Crescent Road is needed to serve the regional Kinston Airport and to provide a northern alternative for local traffic currently using the congested US 70 Business in the downtown Kinston Area. It is not intended to be a northern bypass of Kinston.

The proposed alignment of Crescent Road passes through predominantly wooded and agricultural land, with the exception of industrial development neighboring Kinston Airport. The alignment is on the north side of Kinston, between the City and the airport (See Figure 1). This roadway provides improved access to the airport from US 70 to the west, and from NC 11 to the east. It passes just north of Kinston High School on SR 1745, and provides improved access to Lenoir Memorial Hospital. Ambulance response time to west and northern Kinston should improve significantly. The proposed alignment allows local

commuters to utilize Crescent Road, thus avoiding the congested downtown area. This alignment also improves access to the Westinghouse factory, which is located east of the proposed Crescent Road's intersection with US 70.

The recommended alignment will widen sections of SR 1573 and SR 1745. Both roads presently consist of 24-foot pavement with 6-foot shoulders. Claimed right-of-way is a 60-foot maintained width, with no control of access.

A currently programmed project (U-2542) intersects this project's proposed corridor where US 258 meets SR 1001 (See Figure 1). U-2542 will likely widen US 258 to a multilane facility from US 70 to SR 1575. It will provide north-south movement and access from US 70 to the Kinston Airport, and is in close proximity to Section 3 of this project (See Figure 2). Since U-2542 intersects the proposed Crescent Road alignment where Section 2 begins, the need for Section 3 of this project should be delayed.

A portion of this project, along existing SR 1573 from SR 1607 to SR 1572, has been designated as part of a bicycle route (See Figure 2). Therefore, the North Carolina Bicycle Program has requested accommodations for bicycles in this section.

Current traffic estimates are unavailable. However, the 1981 Kinston Thoroughfare Plan shows a Crescent Road Average Daily Traffic (ADT) projection at 10,900 vehicles per day (vpd) by year 2005. For this study, traffic estimates have been extrapolated to 13,300 vpd for the design year of 2011. With a new two-lane facility, traffic is expected to experience a LOS D in the design year.

III. RECOMMENDATIONS

It is recommended that Crescent Road be constructed from US 70 to NC 11 along the corridor shown in Figure 2. The recommended typical section consists of a two-lane, 28-foot pavement with 8-foot usable shoulders, with the exception of 32-foot pavement from SR 1607 to SR 1572 to accommodate bicycle traffic. Total project length is 9.1 miles. This project is primarily on new location. To save cost, SR 1573 and SR 1745 are to be utilized as part of Crescent Road.

The corridor is to be on new location from US 70 to east of the intersection of SR 1573 and SR 1574. Crescent Road is to utilize SR 1573 in its present cross-section for approximately 2,000-feet eastward to SR 1572. The roadway is to be continued on new location, curving to the southeast until it joins with SR 1745 at NC 58. Crescent Road is to utilize SR 1745 in its

existing configuration from NC 58 to NC 11. The existing alignments of SR 1573 and SR 1745 should be retained and utilized to the extent possible. The new roadway is to be constructed on 100 feet of right of way with no control of access, with the exception of maintaining the existing 60 feet of right-of-way on SR 1573 and SR 1745.

New traffic signals will be required at US 70, SR 1578, and NC 58, with signal upgrades to be installed at intersections with US 258 and NC 11.

Consideration should be given to constructing this project in three stages (See Figure 2). Since access to Kinston Airport from the east is the least developed, Construction Stage 1 should construct Section 1 from SR 1578 to NC 11. Construction Stage 2 should construct Section 2 from US 258 to SR 1578. Construction Stage 3 should construct Crescent Road from US 70 to US 258. Since Project U-2542 may reduce the need for Section 3, it should be the third stage of the project, pending justification by high traffic volumes on US 258.

One new structure will be required on Section 2 to carry Crescent Road over Briery Run. A triple 9 x 7 foot box culvert with an estimated length of 115-feet long will be required to carry traffic over the creek. This length may be changed during the planning stage, depending upon hydrographic studies.

Total project cost is estimated at \$8,520,000:

	Stage 1 (Section 1)	Stage 2 (Section 2)	Stage 3 (Section 3)
Right of Way	\$ 950,000	\$ 630,000	\$ 230,000
Construction	\$1,590,000	\$2,900,000	\$2,220,000
Total Cost	\$2,540,000	\$3,530,000	\$2,450,000

IV. OTHER COMMENTS AND CONCERNS

An environmental screening was conducted for this study. Crescent Road may impact wetlands, particularly in the Briery Run area. A Corps of Engineers Individual Permit may be required. Habitat in the project area is suitable to the Red-cockaded woodpecker, known to occur in Lenoir County. No archaeological sites have been identified; however nearby sites have been previously recorded, indicating potential for a site. The section of Crescent Road which widens SR 1745 (Cunningham Road) may impact high school soccer fields which are also used by the Kinston Department of Parks and Recreation; therefore potential exists for Section 4(f) involvement.

The Tull-Sugg House is located in the northeast quadrant of the intersection of SR 1579 and SR 1578 (See Figure 2). The family retains 180 acres of the original plantation, bounded roughly by Briery Run on the south and SR 1578 on the west side. According to NCDOT's Architectural Historian, it is likely that all 180 acres are eligible for the National Register of Historic Places. The house retains an unusually high degree of integrity and is of a type that is relatively rare due to its age and expense when built.

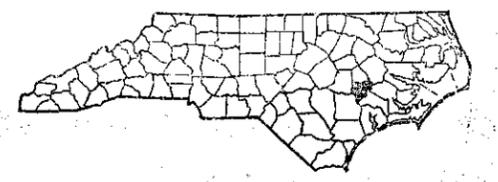
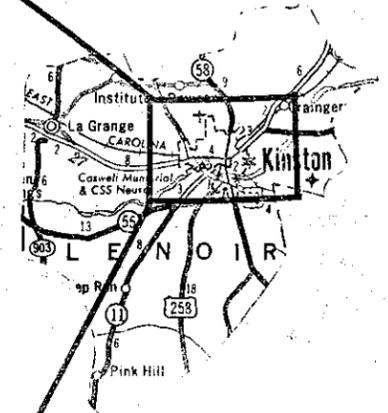
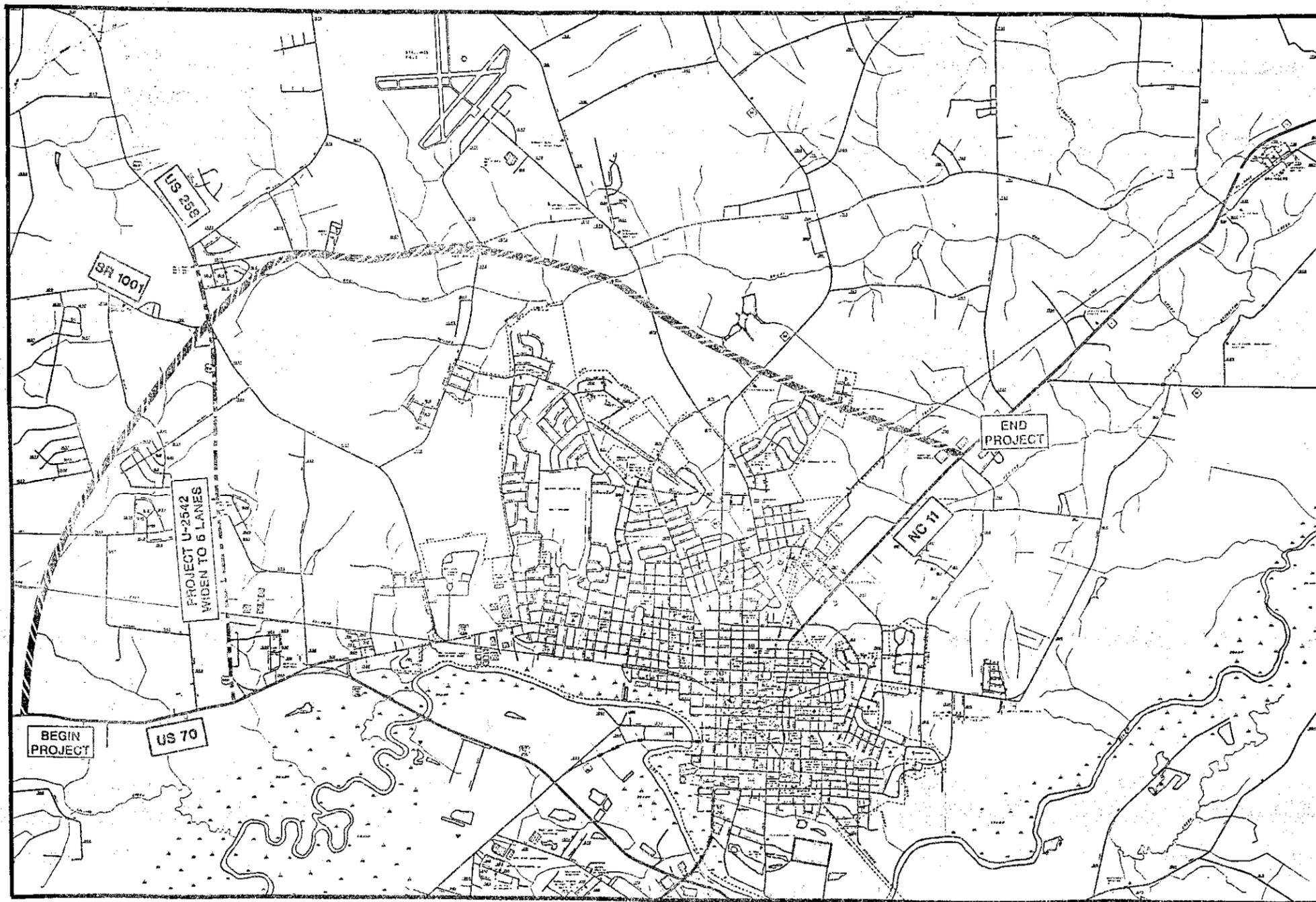
Section 1 of Crescent Road passes through land which is part of the Raymond P. Cunningham farm. The farm was left in trust to North Carolina State University by provisions in Mr. Cunningham's will, on the condition that the land remain in agricultural production. NCSU currently uses the farm as a crop research center, therefore further inquiry into this issue should be made during the planning/environmental study.

The Section 3 corridor passes through the intersections of US 258 with SR 1001 and SR 1557. The two intersections are so close that the junction functions as one intersection with four legs. As Section 3 of Crescent Road is constructed, this intersection would have six approaches. An intersection safety improvement project (W-2502) is already programmed for the intersection of US 258 and SR 1001.

This project may cause one residential relocatee.

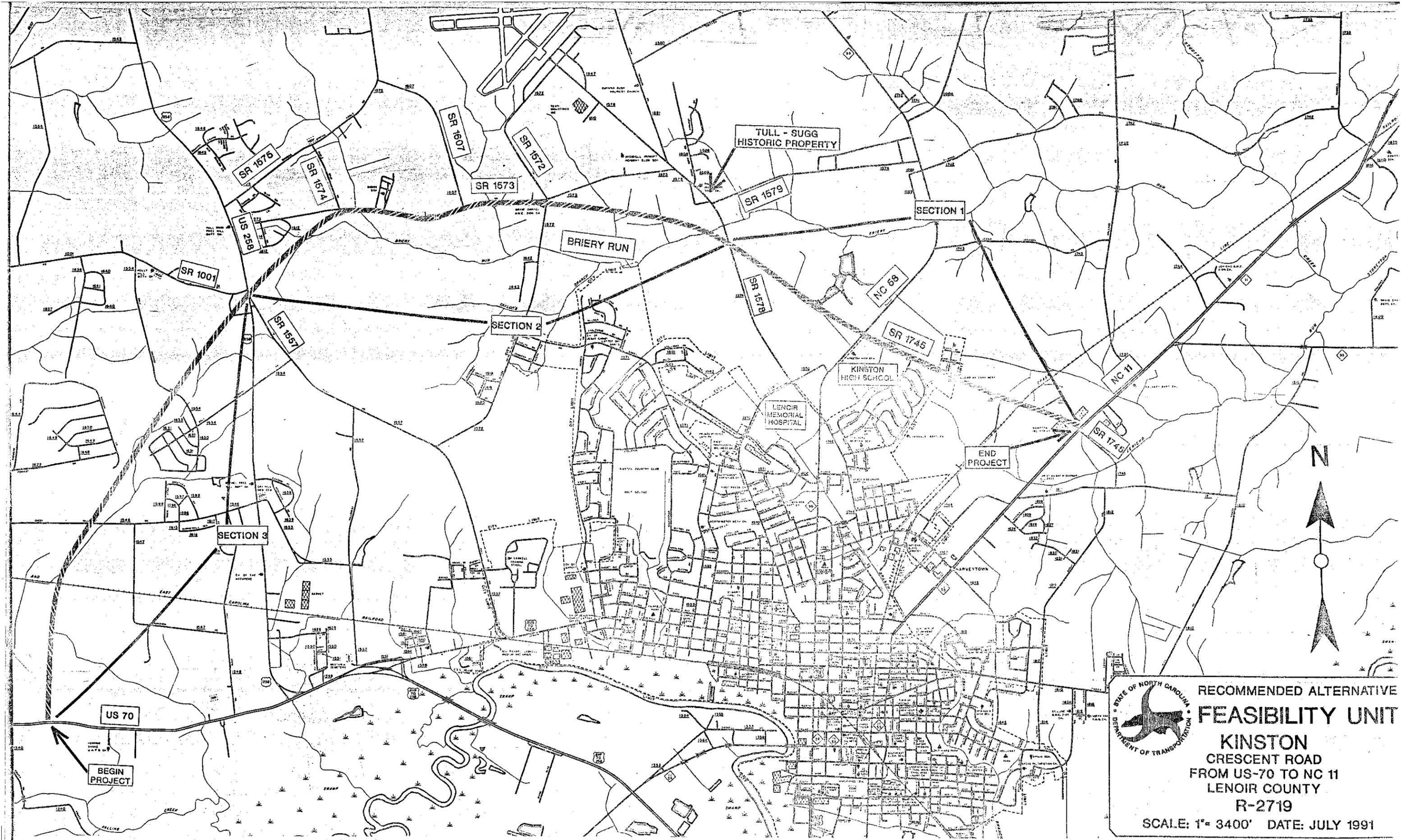
V. ALTERNATIVES STUDIED BUT NOT RECOMMENDED

To reduce impact upon wetlands, several alternatives were analyzed which avoid Briery Run and/or provide alternatives to other alignments (See Figure 3). These alignments were not chosen due to various factors. For example, on the western side of Crescent Road, alternatives B and C were studied, however Section B was not chosen because it intercepts more wetlands than Section C, fragments forest land, and divides a future golf course that Kinston may develop. Sections E, H, and I provide feasible alternatives which avoid Briery Run; however all these rejected alignments will adversely impact the Tull-Sugg Plantation.




**LOCATION MAP
FEASIBILITY UNIT**
KINSTON
 CRESCENT ROAD
 FROM US-70 TO NC 11
 LENOIR COUNTY
 R-2719
 SCALE: 1" = 5450' DATE: JULY 1991

FIGURE 1

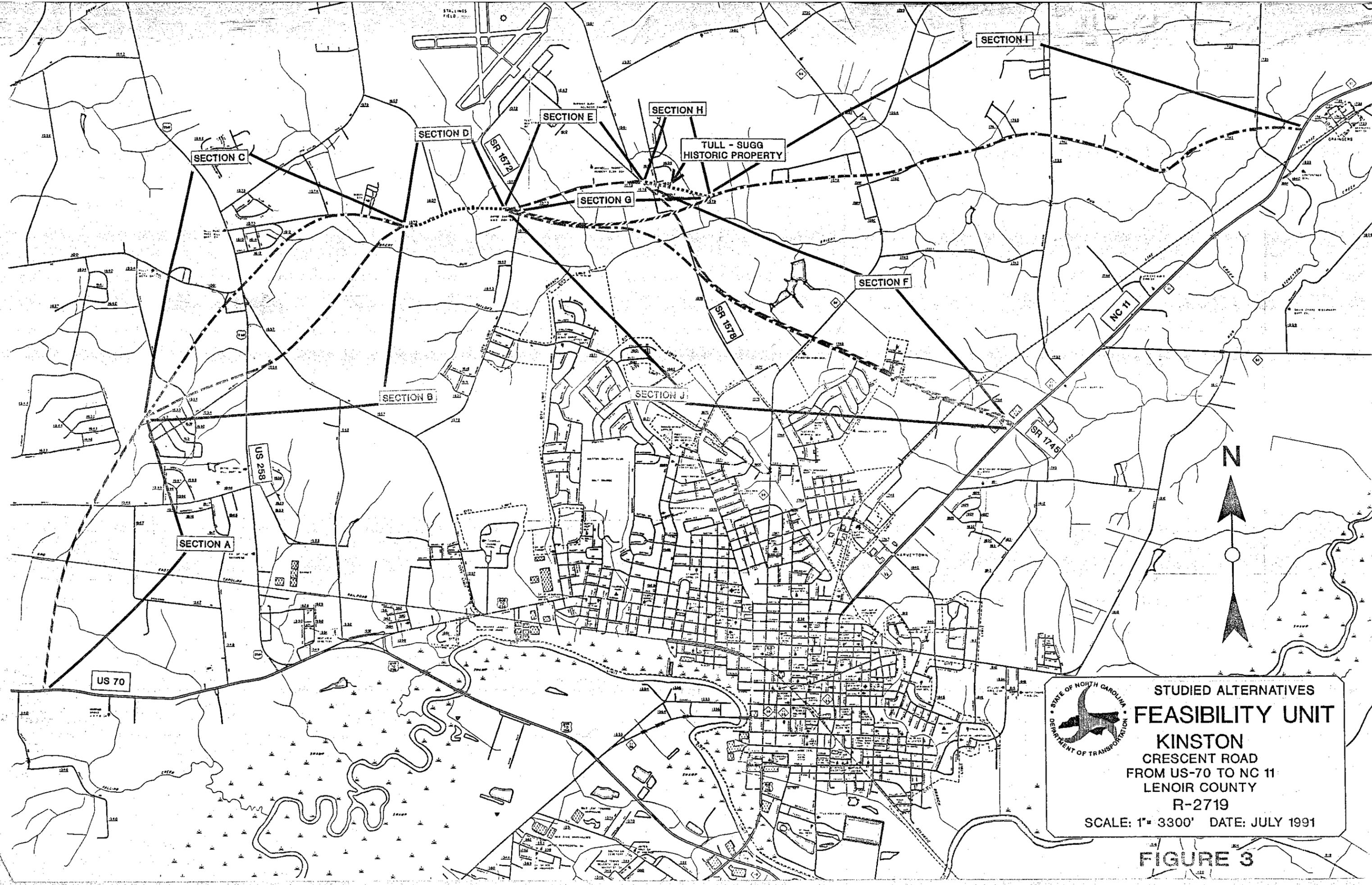


**RECOMMENDED ALTERNATIVE
FEASIBILITY UNIT**

KINSTON
CRESCENT ROAD
FROM US-70 TO NC 11
LENOIR COUNTY
R-2719

SCALE: 1" = 3400' DATE: JULY 1991

FIGURE 2




STUDIED ALTERNATIVES
FEASIBILITY UNIT
KINSTON
 CRESCENT ROAD
 FROM US-70 TO NC 11
 LENOIR COUNTY
 R-2719
 SCALE: 1" = 3300' DATE: JULY 1991

FIGURE 3