

FEASIBILITY STUDY

Northeast Burke County Corridor

Burke County

R-2920

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

Maria N. Wall

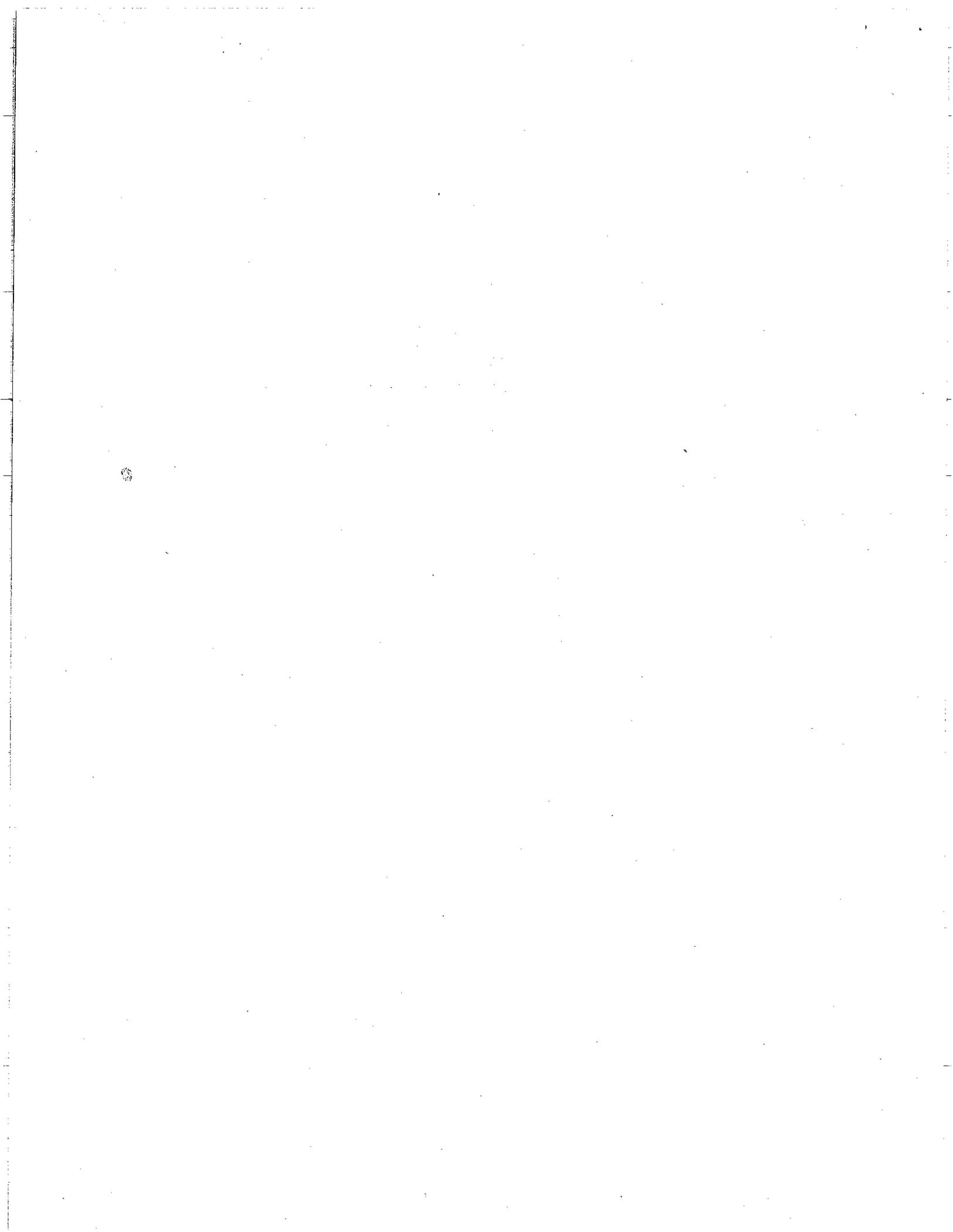
Maria N. Wall
Highway Planning Engineer

8/26/93

Date

Whitmel H. Webb, III

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



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I. GENERAL DESCRIPTION

This is a feasibility study for the widening and the partial realignment of several routes to form a continuous Northeast Burke County Corridor. The project is 7.7 miles in length. The routes to be connected are SR 1614, SR 1611, SR 1653, and SR 1625 (See Figures 1 and 2). The recommended typical cross-sections are a two-lane, 24-foot roadway, with 8-foot usable shoulders (4 feet paved); and a five-lane, 64-foot face-to-face, curb and gutter section with 8-foot berms. A 100-foot wide right-of-way with no control of access is recommended for this project. Estimated cost of the project is \$14,300,000 (\$ 8,000,000 for construction and \$ 6,300,000 for right-of-way).

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 Burke County Chamber of Commerce. The Northeast Burke County Corridor would provide the residents of rural northern Burke County safer and more efficient access to Hickory Municipal Airport, the City of Hickory, and the new L. P. Frans Baseball Stadium in Winkler Park (See Figure 2). Land use along the corridor is rural residential and agricultural.

The existing SR 1614 (Oak Ridge Church Road), from SR 1608 to SR 1611, is 1.4 miles in length. SR 1614 is classified as a local road on the Statewide Functional Classification System. The existing typical cross-section is an 18-foot pavement with 4 to 8-foot shoulders. The pavement is a deteriorated bituminous surface treatment.

The existing SR 1611 (Rhodhiss Road), from SR 1614 to SR 1650, is approximately 2.6 miles in length. SR 1611 is classified as a minor collector on the Statewide Functional Classification System. The existing typical cross-section on SR 1611 is a 20-foot pavement with 2 to 8-foot shoulders.

The existing SR 1653 (Airport-Rhodhiss Road), from SR 1650 to 0.2 miles east of bridge number 27, a length of approximately 1.8 miles, is classified as a minor collector on the Statewide Functional Classification System. The existing typical cross-section is an 18-foot pavement with 2 to 8-foot shoulders.

The existing SR 1625 (9th Avenue Drive NW), from SR 1687 to the airport access road, is approximately 1.0 mile in length. SR 1625 is classified as an urban collector on the Statewide Functional Classification System. The existing typical cross-section is a two-lane, 24-foot pavement with 5-foot shoulders.

The west terminal of the project is located at the unsignalized intersection of SR 1608 (Shady Grove Road), SR 1613 (Tomlinson Loop Road) and SR 1614 (Oak Ridge Church Road) (See Figure 2). West of this intersection, SR 1613 consists of a two-lane, 18-foot wide pavement. This intersection is also the east terminal of Section 2 of Feasibility Study R-2824, which recommends widening SR 1613 (Tomlinson Loop Road) to a two-lane 28-foot pavement. Land use is agricultural around the intersection.

The east terminal of the project is located just west of the intersection of the Burke/Catawba County Line at the terminal of the existing airport access road. The existing airport access road, from near the county line to US 321 in Catawba county is a five-lane, 59-foot, face-to-face, curb and gutter section with 8-foot berms. Land use is rural residential and recreational in this area.

Bridge number 200, which carries SR 1614 over an unnamed creek, is located 0.6 miles west of the intersection of SR 1617 and SR 1614. The 19-foot long bridge has a bridge roadway width of 15 feet and the deck width of 16 feet. The sufficiency rating of bridge number 200 is 46.2 out of 100.

Bridge number 27, which carries SR 1653 over Drowning Creek, is located 0.1 miles east of the intersection of SR 1658 and SR 1653. This 133-foot long bridge has a roadway width of 28 feet and a deck width of 30.6 feet. Bridge number 27 has a sufficiency rating of 90.1 out of 100.

Winkler Park is located on the north side of SR 1625. L. P. Frans Stadium is currently under construction, in the park, north of the existing airport access road.

Hickory Municipal Airport is located on the south side of SR 1625, between SR 1653 in Burke County and 21st Street in Catawba County.

Estimated Traffic (ADT) along the Northeast Burke County Corridor is 2,500 vehicles per day (vpd). In the year 2013, anticipated traffic is estimated to be 9,900 vpd. Traffic on the existing routes, will experience a level of service (LOS) B in 1993 and is expected to experience a LOS E in 2013. With the recommended improvements, traffic on the entire length of the Northeast Burke County Corridor will experience at least a LOS B in 1993 and at least a LOS D in 2013.

During the period from July 1, 1989 to June 30, 1992, a total of 70 accidents were reported along the existing routes of the corridor. This resulted in an accident rate of 1469.7 accidents per 100 million vehicle miles (acc/100mvm) compared to a statewide average of 305.2 acc/100mvm. Vehicles running off the road accounted for 51% of the accidents. The recommended improvements will reduce the accident rate.

III. RECOMMENDATIONS

It is recommended that the following improvements be made to establish a northeast travel corridor in Burke County.

On SR 1614, from SR 1608 to SR 1611, the deteriorated pavement would be removed and replaced. The recommended typical cross-section is a two-lane, 24-foot roadway, with 8-foot usable shoulders (4 feet paved) on a 100-foot wide right-of-way with no access control. Also, the intersection of SR 1614 and SR 1611 would be realigned to form a four-leg intersection with SR 1617 (See Figure 2).

On SR 1611, from SR 1614 to SR 1650, the existing roadway would be widened to a two-lane, 24-foot roadway with 8-foot usable shoulders (4 feet paved) on a 100-foot wide right-of-way with no access control.

On SR 1653, from SR 1650 to 0.2 miles east of bridge number 27, the existing roadway would be widened to a two-lane, 24-foot roadway with 8-foot usable shoulders (4 feet paved) on a 100-foot wide right-of-way with no access control. Also, the intersection of SR 1653 and SR 1611 would be realigned to form a four-leg intersection with SR 1650 (See Figure 2).

A 0.7 mile connector road, on new location, from 0.2 miles east of bridge number 27 to SR 1687 will utilize a two-lane, 24-foot roadway, with 8-foot usable shoulders (4 feet paved) on a 100-foot wide right-of-way with no access control.

From SR 1687 to the existing airport access road, SR 1625 will 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 with no access control. The five-lane section will provide safer turning movements into Hickory Municipal Airport and Winkler Park.

Bridge number 200 will be removed and replaced with an adequate structure to accommodate the recommended typical cross-section. Bridge number 27 will be widened.

The existing routes are anticipated to become part of the Burke County bicycle routes which will be signed and mapped in FFY 1993. Therefore, in addition to the two 12-foot travel lanes, 4-foot paved shoulders are recommended to provide safety to bicyclists.

The recommended improvements would provide a travel route that would link several municipalities in northern Burke County and bolster future economic development in this area. This corridor would also provide better access to Hickory Municipal Airport, the Town of Hickory, and Winkler Park.

Total project cost is estimated at:

Right-of-way	\$ 6,300,000
Construction	\$ 8,000,000
Project Cost	\$14,300,000

Low utility conflicts are expected.

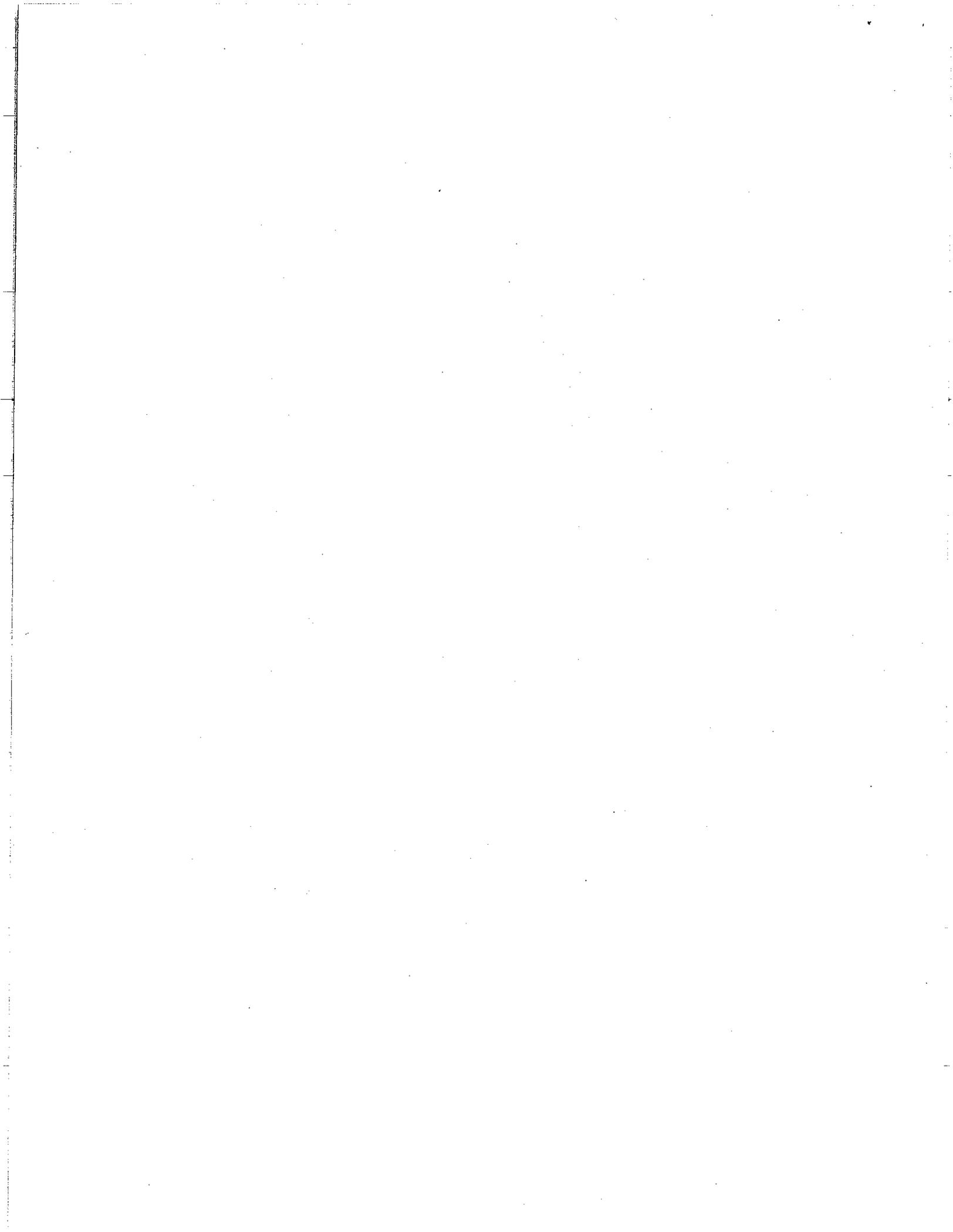
IV. OTHER COMMENTS AND CONCERNS

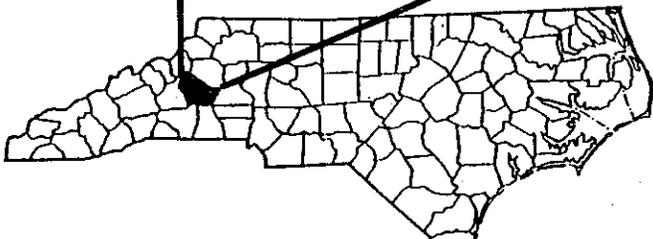
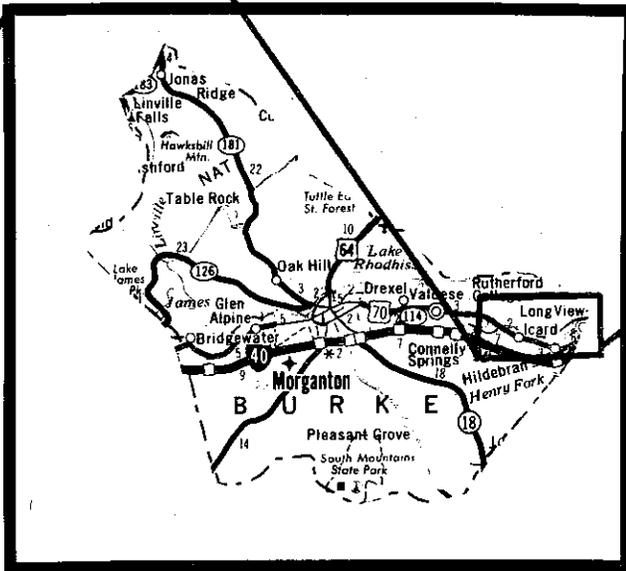
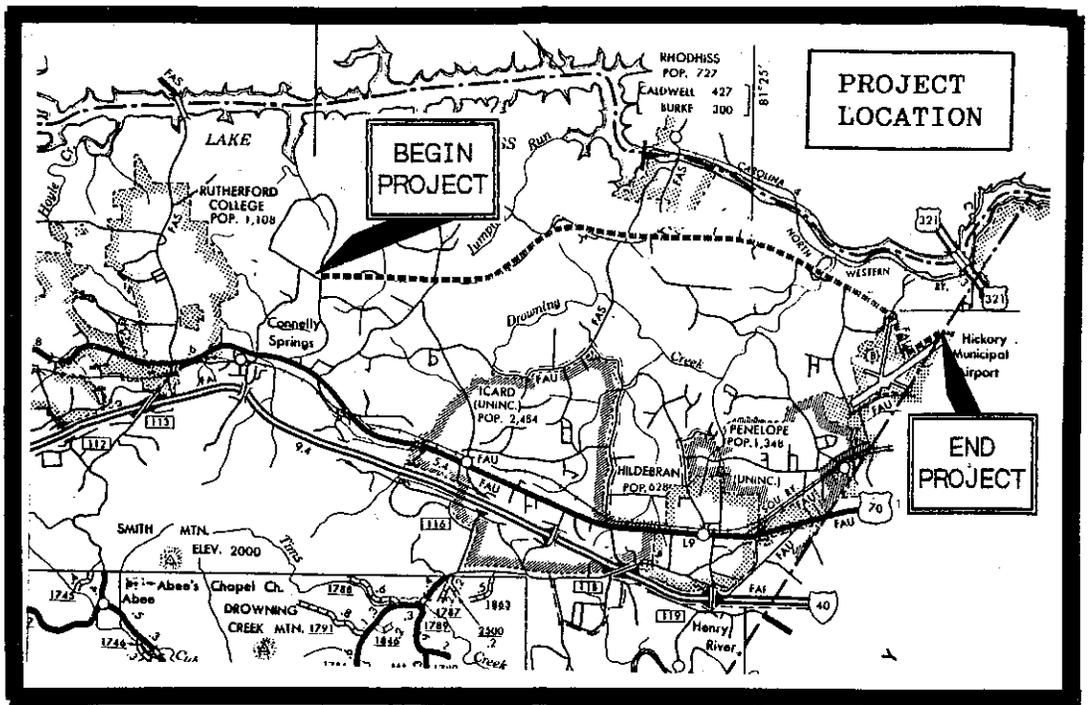
It is estimated that this project would require the relocation of 31 residences and 5 businesses.

This project may require a Section 404, Corps of Engineers Nationwide Permit. The project corridor is within a Water Supply Watershed and a Water Supply Critical Area, WS-1. Also, there is a Water Supply Intake near the intersection of US 321 and the Catawba River, north of the project corridor. No historical or architecturally significant sites are known to be in the study corridor.

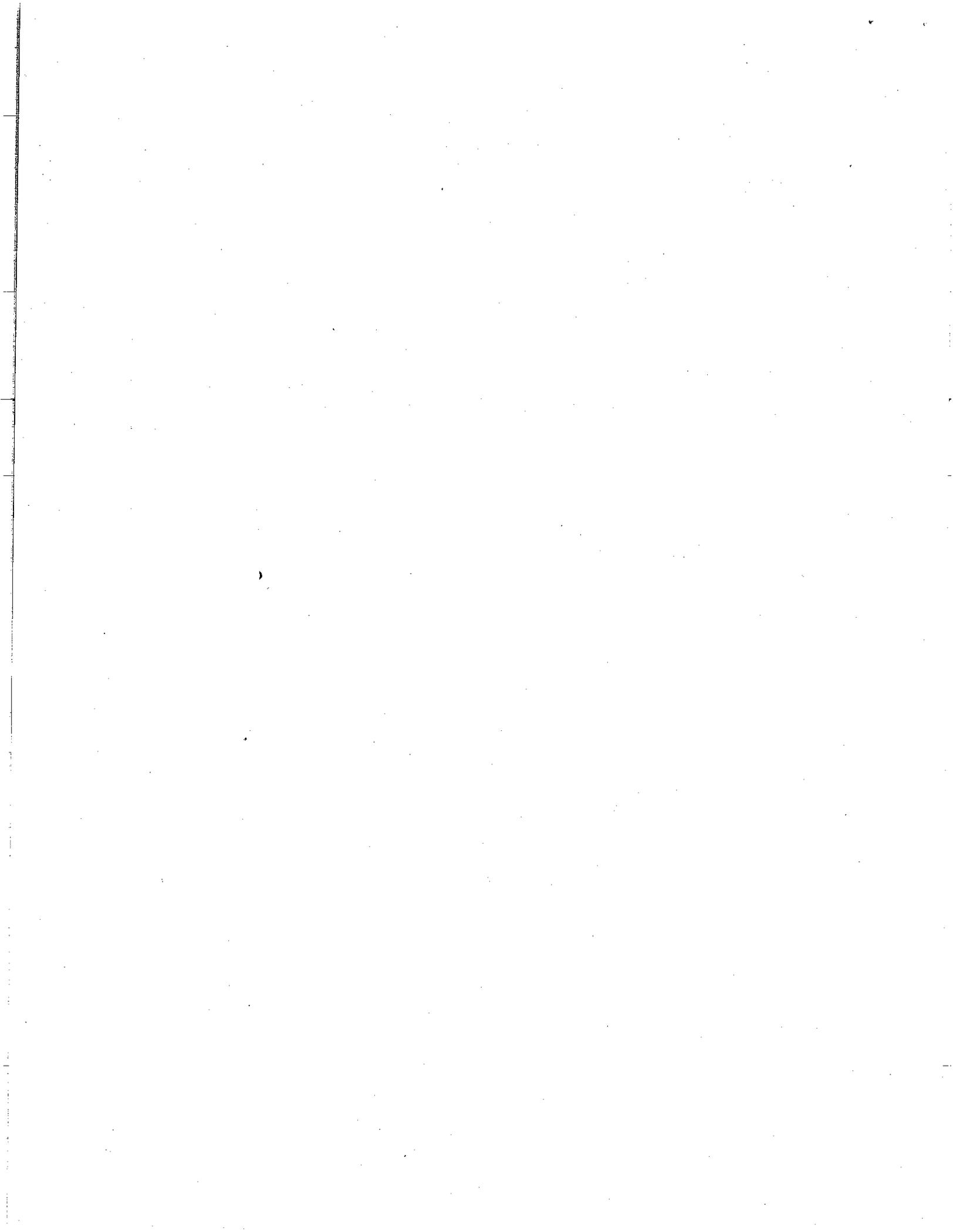
V. OTHER ALTERNATIVES CONSIDERED

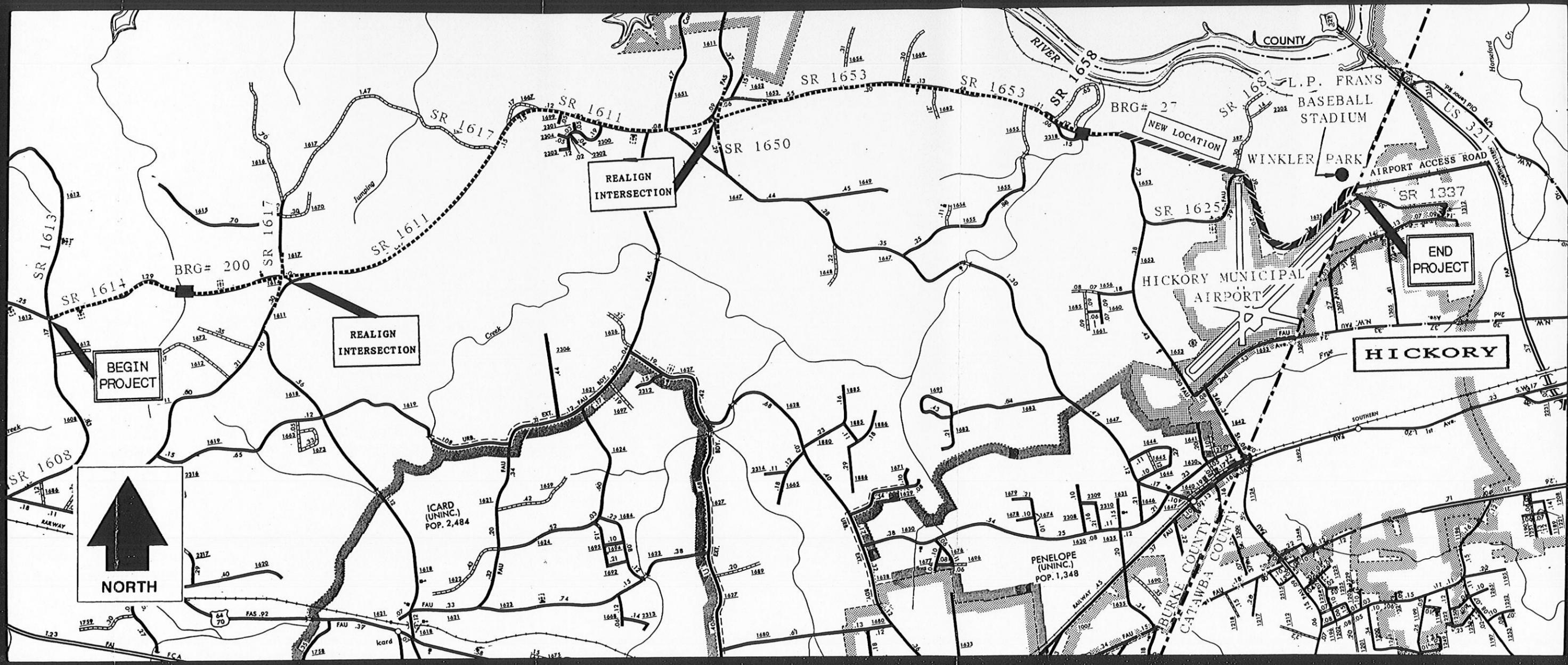
The Hickory Thoroughfare Plan recommends extending the airport access road from west of the Burke/Catawba County Line to SR 1687, on new location. The recommended typical cross-section is a five-lane, 64-foot face-to-face, curb and gutter section with 8-foot berms on a 100-foot wide right-of-way. The airport access road extension would bisect Winkler Park. Since Winkler Park is a public park, involvement with Section 4(f) of the DOT Act would be anticipated. A 70-foot wide right-of-way is reserved for this route on the Winkler Park master plan. However, this does not provide adequate width for the recommended five-lane section. Widening the right-of-way would impact some park facilities. If the airport access road were extended, instead of widening SR 1625 the estimated project cost would be \$13,900,000 (\$8,100,000 for construction and \$5,800,000 for right-of-way). It is estimated that this corridor would require the relocation of 29 residences and 5 businesses. Widening SR 1625 would impact the Hickory Municipal Airport master plan for future expansion. Also there are several sharp curves on SR 1625. Although there are drawbacks to widening SR 1625, it now appears to be the more feasible alternate. If the City of Hickory constructs the portion of the airport access road through Winkler Park; then an alignment more closely following the thoroughfare plan would be desirable.





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DIVISION 13	FIGURE 1





SCALE



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DIVISION 13	FIGURE 2