FEASIBILITY STUDY

Buncombe County
Airport Road (SR 3526)
From I-26 to US 25
U-2402

Prepared by
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I. GENERAL DESCRIPTION

This report covers the widening of Airport Road (SR 3526) to a multi-lane roadway from I-26 to US 25 in Buncombe County. The proposed project is 1.9 miles long. Its location is shown on Figure 1. This project is included in the 1988-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection.

II. PURPOSE OF PROJECT

Existing Route Characteristics

Airport Road serves as the primary access to the Asheville Municipal Airport from the southern area of Asheville via US 25 and US 25A. It also serves as a vital link between I-26 and the industrial/commercial areas surrounding US 25. Airport Road is classified as an Other Urban Principal Arterial in the North Carolina Functional Classification System and is a Federal Aid Urban route. The project is located outside the limits of the Asheville Thoroughfare Plan.

The existing cross section on Airport Road consists of a 24-foot roadway with 8 to 10-foot unpaved shoulders, located in the center of a 100-foot recorded right-of-way. In addition, there are sight distances provided at all intersections with state maintained roads. The existing horizontal and vertical alignment is good. The speed limit on Airport Road is 45 mph.

All intersections along Airport Road are at grade. The intersection with US 25 is signal controlled while all other intersections are stop sign controlled. The existing signal at US 25 is proposed to be upgraded in conjunction with the project.

Roadside development is of moderate density. The type of development varies widely, including industrial, commercial, residential, a post office, and three churches. The Asheville Municipal Airport is located just west of the project's I-26 terminal.

The development along Airport Road is served by the full range of utilities. Overhead power and telephone lines were observed along the project, as well as, underground water, sewer, telephone, and gas lines.

Traffic Volumes, Capacity, and Accident Record

The current traffic volume of 9500 vehicles per day (vpd) is expected to increase to 17,000 vpd by the year 2010. With the present traffic volumes, Airport Road is operating at Level of Service E during peak periods. As traffic volumes continue to grow, the level of service will continue to deteriorate if the roadway is not widened. The widening of Airport Road to five lanes will improve the level of traffic service to Level of Service D, or better, throughout the planning period.

During the three-year period from January 1, 1985 through December 31, 1987 a total of 92 accidents were reported on the studied portion of Airport Road. This resulted in an accident rate of 481.2 accidents per 100 million vehicle miles (ACC/100 MVM) compared to a statewide average of 439.9 ACC/100 MVM for all rural secondary roads over the same period. There were no fatalities during the period, but 31 of the accidents resulted in injuries. The primary accident types were rear-end and angle accidents that were located near intersections. The provision of additional lanes and a center left-turn land should reduce the potential for these types of accidents.

Need for Project

The widening of Airport Road is needed to provide adequate capacity for the existing and future traffic volumes. The project will improve access to the Asheville Airport and the varied development surrounding Airport Road. The improvements will also enhance safety along the road.

III. OTHER PROGRAMMED PROJECTS AFFECTING AIRPORT ROAD

The southern project terminal will tie into project R-401E, which is the improvement of Airport Road from NC 280 to the north side of the I-26 interchange. The R-401E project will widen existing Airport Road to a 64-foot curb and gutter cross section. This five- lane cross section will extend to the SR 3568 intersection then taper back to the existing two lanes.

The 1988-1996 NCDOT Transportation Improvement Program (TIP) calls for right-of-way acquisition for the entire R-401E project to begin in Fiscal Year (FY) 1989. Construction of the portion of Airport Road north of I-26 is scheduled to begin in FY 1995.

Project R-401E is also included in the "Accelerated Schedules" section of the TIP. Projects included in that section are considered high priority and could be accelerated if sufficient funds become available. The accelerated schedule for Project R-401E calls for the widening the segment of Airport Road north of I-26 to begin in FY 1990.

The northern project terminal ties into US 25 opposite the US 25A intersection. US 25A is scheduled to be widened to five lanes at this intersection in conjunction with the replacement of the bridge over the Southern Railway. This intersection and the existing bridge can be seen on Figure 2.

The proposed bridge replacement is included as project B-1063 in the 1988-1996 TIP with construction scheduled to begin in FY 1991.

IV. RECOMMENDATIONS AND COSTS

The widening of the studied section of Airport Road to a multi-lane facility is immediately warranted. The recommended improvement is a five-lane curb and gutter cross section, 64 feet from face to face of curbs. This cross section will provide adequate capacity throughout the

planning period and enhance safety on Airport Road. The 64-foot cross section will also match the proposed cross sections of the two adjacent highway projects discussed in section III of this report.

At US 25, it is recommended that Airport Road be widened primarily to the north side to avoid disrupting the traffic operations at the Post Office located in the southwest quadrant of the intersection. There are two residences located opposite the Post Office that will be relocated by the proposed construction. Because of their position, on top of an existing cut, they would probably be relocated by symmetrical widening; therefore, shifting the widening to the north side of Airport Road at this location will not result in any additional residential relocatees. The Post Office driveway and the houses can be seen in the center photograph on Figure 2.

The existing 100-foot right-of-way will be sufficient permanent right-of-way in most locations. However additional right-of-way may be needed at the US 25 intersection, and temporary construction easements will be needed in many areas due to the terrain.

The estimated costs of the project are as follows:

Construction	$3,150,000
Right-of-Way	620,000
TOTAL	$3,770,000

The construction cost includes engineering and contingencies and the right-of-way cost includes relocation, acquisition, and utility costs.

V. ALTERNATIVES CONSIDERED

Since the proposed project involves the widening of an existing highway within a 100-foot existing right-of-way, no alternative alignments were considered.

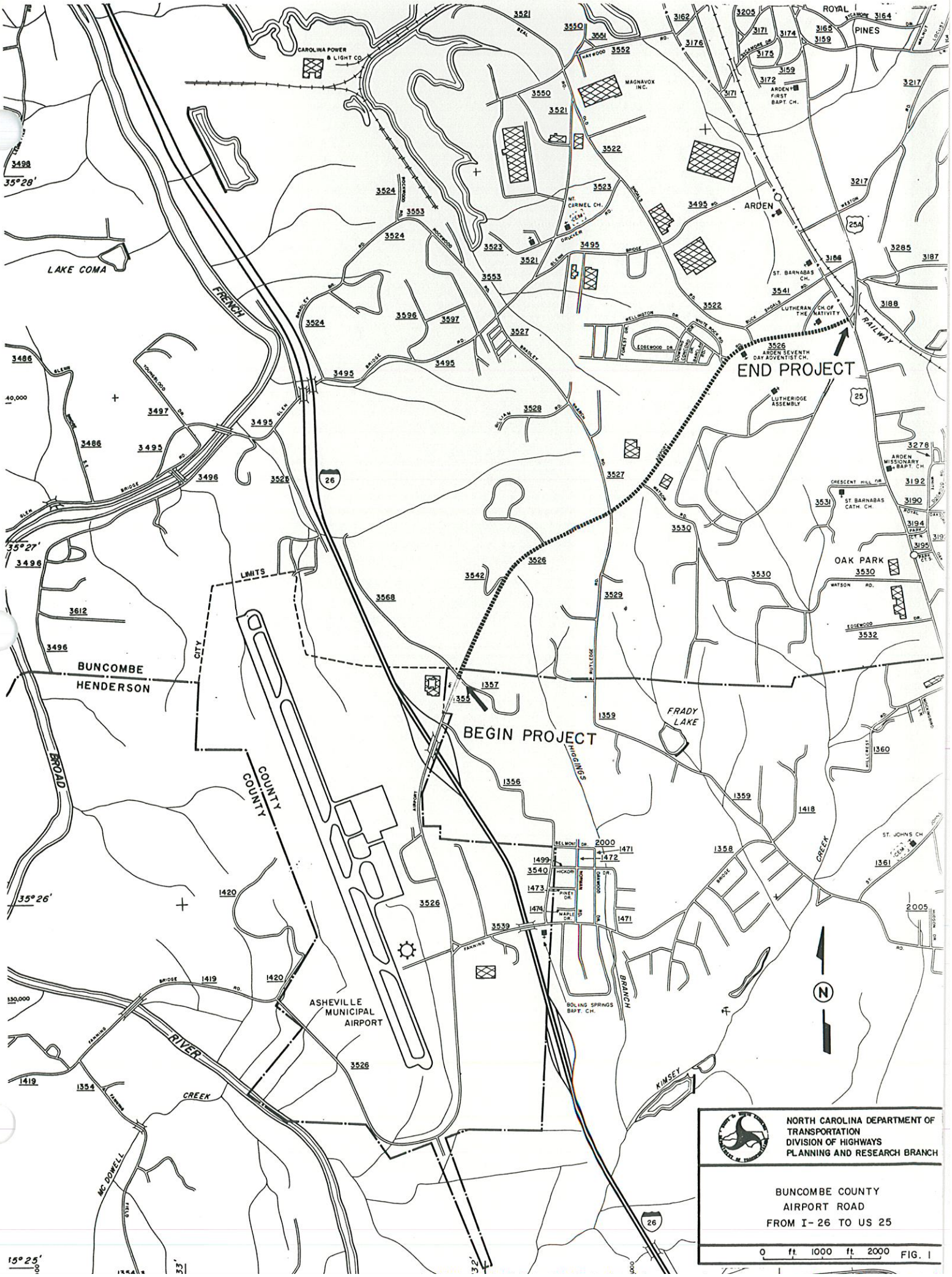
A four-lane cross section was considered for the improvement to Airport Road. The four-lane alternative would be somewhat less expensive than the recommended five-lane cross section; however, the interference of existing driveways and side streets and the turning traffic which they generate would create a capacity deficiency on this section soon after it is opened to traffic. Without the center turn lane, the roadway would not only have a capacity deficiency, but would have a high accident potential due to the high number of turns. Drivers are accustomed to using the left lane of a highway as a high speed through lane and are not expecting vehicles to be stopped or turning from this lane. The four-lane cross section would not appreciably lessen the accident potential for rear-end and angle collisions over the present roadway, and these have been the predominant types of accidents on this highway in the past. Due to the inadequate capacity, the difficulty of turning into adjacent

development, and the higher accident potential, a four-lane cross section is not recommended.

VI. ENVIRONMENTAL EFFECTS

The implementation of the proposed project is not expected to result in any significant impact on the environment. The construction of the project will require the relocation of an estimated four residences. The project will also result in increased noise levels for remaining development adjacent to the roadway. Other impacts will be primarily related to the actual construction of project and will cease upon completion of the project. These include minor erosion and siltation, increased noise levels from construction machinery and delay and inconvenience to motorists using Airport Road.

RBD/sdt



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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PLANNING AND RESEARCH BRANCH

BUNCOMBE COUNTY
AIRPORT ROAD
FROM I-26 TO US 25

0 ft. 1000 ft. 2000 FIG. 1

LOOKING SOUTH TOWARD THE SOUTHERN END OF THE PROJECT

AT US 25 LOOKING SOUTH AT AIRPORT ROAD

AT US 25 LOOKING NORTH AT US 25A

FIGURE 2