



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.  
GOVERNOR

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

GARLAND B. GARRETT JR.  
SECRETARY

February 13, 1998

MEMORANDUM TO: Mr. Gordon Myers, Member, Board of Transportation  
Mr. W. D. Smart, P.E., Division Engineer, Division 13  
Mr. C. W. Leggett, P.E.  
Mr. W. H. Webb, P.E.  
Mr. J. M. Lynch, P.E. (6) Attention: Roberto Canales, P.E.  
Congestion Management Engineer  
Mr. J. B. Williamson  
Mr. H. F. Vick, P.E. (2)  
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.  
Head of Feasibility Studies

SUBJECT: Feasibility Study # U-3840, Asheville, Sayles Bleachery Area  
Improvements, SR 3276 (Wood Ave.) Extension, US 74/NC 81  
(Swannanoa River Rd.) Widening, Buncombe 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: Dr. L. R. Goode, P.E.  
Mr. D. R. Morton, P.E.  
Mr. Eric J. Lamb, P.E.



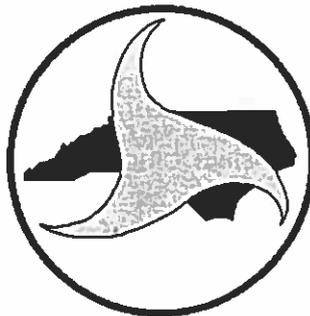
FEASIBILITY STUDY

Asheville

Sayles Bleachery Area Improvements  
SR 3276 (Wood Ave.) Extension  
US 74-A / NC 81 (Swannanoa River Rd.) Widening  
Buncombe County

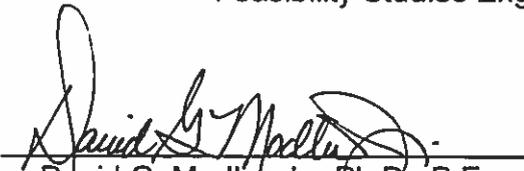
Division 13

U-3840



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

  
Eric J. Lamb, P.E.  
Feasibility Studies Engineer

  
David G. Modlin, Jr., Ph.D., P.E.  
Head of Feasibility Studies

2/10/98.  
Date

Asheville  
Sayles Bleachery Area Improvements  
SR 3276 (Wood Ave.) Extension  
US 74-A / NC 81 (Swannanoa River Rd.) Widening  
Buncombe County  
U-3840

### I. General Description

This feasibility study describes roadway improvements in the vicinity of the Sayles Bleachery in Asheville. These improvements include:

- realigning SR 3276 (Wood Ave.) from US 74-A / NC 81 (Swannanoa River Rd.) as a three-lane curb and gutter facility to SR 3278 (Fairview Rd.), a distance of 0.9 miles (1.5 km)
- widening US 74-A / NC 81 (Swannanoa River Rd.) to a three-lane curb and gutter facility from SR 3276 (Wood Ave.) to US 74-A (Fairview Rd.), a distance of 1.0 miles (1.7 km)
- constructing a new two-lane curb and gutter connector from the proposed Wood Avenue realignment to Swannanoa River Road at Truckers Place, a distance of 0.6 miles (0.9 km).

The project location is shown on Figure 1. It is anticipated that there will be twelve residences and four businesses relocated due to this project. The total cost of the project, including construction and right-of-way, is estimated to be \$12,300,000.

This study is the initial step in the planning and design process for this project and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the proposed project including costs, and to identify potential problems that may require consideration in the planning and design phases.

### II. Need for Project

The purpose of this project is to provide improved access to the Sayles Bleachery property in order to accommodate future development.

US 74-A / NC 81 (Swannanoa River Rd.) is designated as a major thoroughfare in the Asheville Urban Area Thoroughfare Plan and as a minor urban arterial in the North Carolina Statewide Functional Classification System.

SR 3276 (Wood Ave.) is currently a two-lane curb and gutter section roadway with a pavement width of 20 to 22 feet (6.1-6.7 m). Development along Wood Avenue is primarily residential, with a large shopping center located near the intersection with US 74-A / NC 81 (Swannanoa River Rd.). Swannanoa River Road is currently a two-lane shoulder section, 22 feet (6.7 m) wide with soil shoulders. Development in the project area is a combination of industrial and commercial. From east of Fairway Drive to Fairview Road, there is a golf course on the north side of the roadway.

It is proposed to utilize an abandoned railroad spur for the new connector from the proposed Wood Avenue realignment to Swannanoa River Road. Bridges No. 499 and No. 501 carry I-240 over this abandoned spur. These bridges were built in 1977 and are 182 feet (55.5 m) and 185 feet (56.4 m) long, respectively. Both bridges have an under lateral clearance of approximately 40 feet (12.2 m), and currently have a sufficiency rating of 92.4.

There are existing traffic signals at the intersection of Wood Avenue and Swannanoa River Road, and at the intersection of Swannanoa River Road and Fairview Road.

The following table illustrates the projected Average Daily Traffic (ADT) in vehicles per day (vpd) and the anticipated Level of Service (LOS) for each segment of the project.

| Segment (Truck traffic)    | ADT (vpd) |        | LOS  |      |
|----------------------------|-----------|--------|------|------|
|                            | 1996      | 2020   | 1996 | 2020 |
| Wood Avenue Extension (5%) | 12,400    | 14,100 | C    | D    |
| Swannanoa River Road (4%)  | 11,200    | 16,900 | C    | D    |
| New Connector (3%)         | 12,900    | 12,900 | D    | D    |

Table 1. Traffic and LOS Data

Traffic estimates for the new connector assume full build-out of all of the Sayles Bleachery commercial property in the base year, 1996.

During the three-year period from March 1994 to February 1997, there were 40 accidents reported on Swannanoa River Road within the project limits. There were 24 injuries reported as a result of these accidents, including no fatalities. The accident rate along Swannanoa River Road within the project limits is 370.37 accidents per 100 million vehicle miles (acc/100mvm). This compares with the 1996 statewide rate of 287.40 acc/100mvm for two-lane urban US routes.

### III. Description of Project

#### SR 3276 (Wood Ave.) Realignment

It is proposed to realign SR 3276 (Wood Ave.) from US 74-A / NC 81 (Swannanoa River Rd.) to SR 3278 (Fairview Rd.), a distance of 0.9 miles (1.5 km). The studied cross-section is a three-lane curb and gutter section, 40 feet (12.2 m) wide from face-to-face of curbs, with 10-foot (3.0-m) berms, on 100 feet (30.5 m) of right-of-way with no access control. Additional right-of-way will be required in several large fill sections along this segment.

It is anticipated that eleven residences and two businesses will be relocated due to this segment of the proposed project. The estimated cost of this segment is as follows:

|                   |              |
|-------------------|--------------|
| Construction..... | \$ 4,400,000 |
| Right-of-way..... | \$ 1,700,000 |
| <hr/>             |              |
| Total Cost .....  | \$ 6,100,000 |

#### New Connector

It is proposed to construct a new connector from the proposed Wood Avenue realignment to Swannanoa River Road at Truckers Place, a distance of 0.6 miles (0.9 km). This connector would utilize an abandoned rail spur under I-240. The studied cross-section is a two-lane curb and gutter section, 28 feet (8.5 m) wide from face-to-face of curbs, with 10-foot (3.0-m) berms, on 100 feet (30.5 m) of right-of-way with no access control.

A new structure will be required to cross the Swannanoa River. The studied structure should be 150 feet (45.7 m) long with a clear roadway width of 40 feet (12.2 m) with 5-foot (1.5-m) sidewalks.

It is not anticipated that any residences or businesses will be relocated due to this segment of the proposed project. The estimated cost of this segment is as follows:

|                   |              |
|-------------------|--------------|
| Construction..... | \$ 2,000,000 |
| Right-of-way..... | \$ 400,000   |
| <hr/>             |              |
| Total Cost .....  | \$ 2,400,000 |

#### US 74-A / NC 81 (Swannanoa River Rd.)

It is proposed to widen US 74-A / NC 81 (Swannanoa River Rd.) from SR 3276 (Wood Ave.) to US 74-A (Fairview Rd.), a distance of 1.0 mile (1.7 km). The proposed cross-section is a three-lane curb and gutter section, 40 feet

(12.2 m) wide from face-to-face of curbs, with 10-foot (3.0-m) berms, on 80 feet (24.4 m) of right-of-way with no access control. This widening should be done asymmetrically to the north side of the roadway in order to minimize impacts to the Swannanoa River.

It is anticipated that one residence and two businesses will be relocated due to this segment of the proposed project. The estimated cost of this segment is as follows:

|                   |              |
|-------------------|--------------|
| Construction..... | \$ 1,900,000 |
| Right-of-way..... | \$ 1,900,000 |
| <hr/>             |              |
| Total Cost .....  | \$ 3,800,000 |

The total estimated cost of all studied segments is as follows:

|                   |               |
|-------------------|---------------|
| Construction..... | \$ 8,300,000  |
| Right-of-way..... | \$ 4,000,000  |
| <hr/>             |               |
| Total Cost .....  | \$ 12,300,000 |

#### IV. Additional Comments

Additional right turn lanes should be added to each ramp from I-240 onto US 74-A (Fairview Rd.). The cost of constructing these additional lanes is \$200,000, which is not included in the costs for any of the segments above.

An environmental screening was not conducted for this study. However, no impacts to any currently registered historic properties or wetlands are anticipated. However, the Historic Resources Commission of Asheville and Buncombe County has identified the residences on the east side of Wood Avenue as part of the Sayles Village community, one of the few intact mill villages in North Carolina. This village area is a potential candidate for historical protection. The residential relocations identified in the right-of-way estimates will come exclusively from this village.

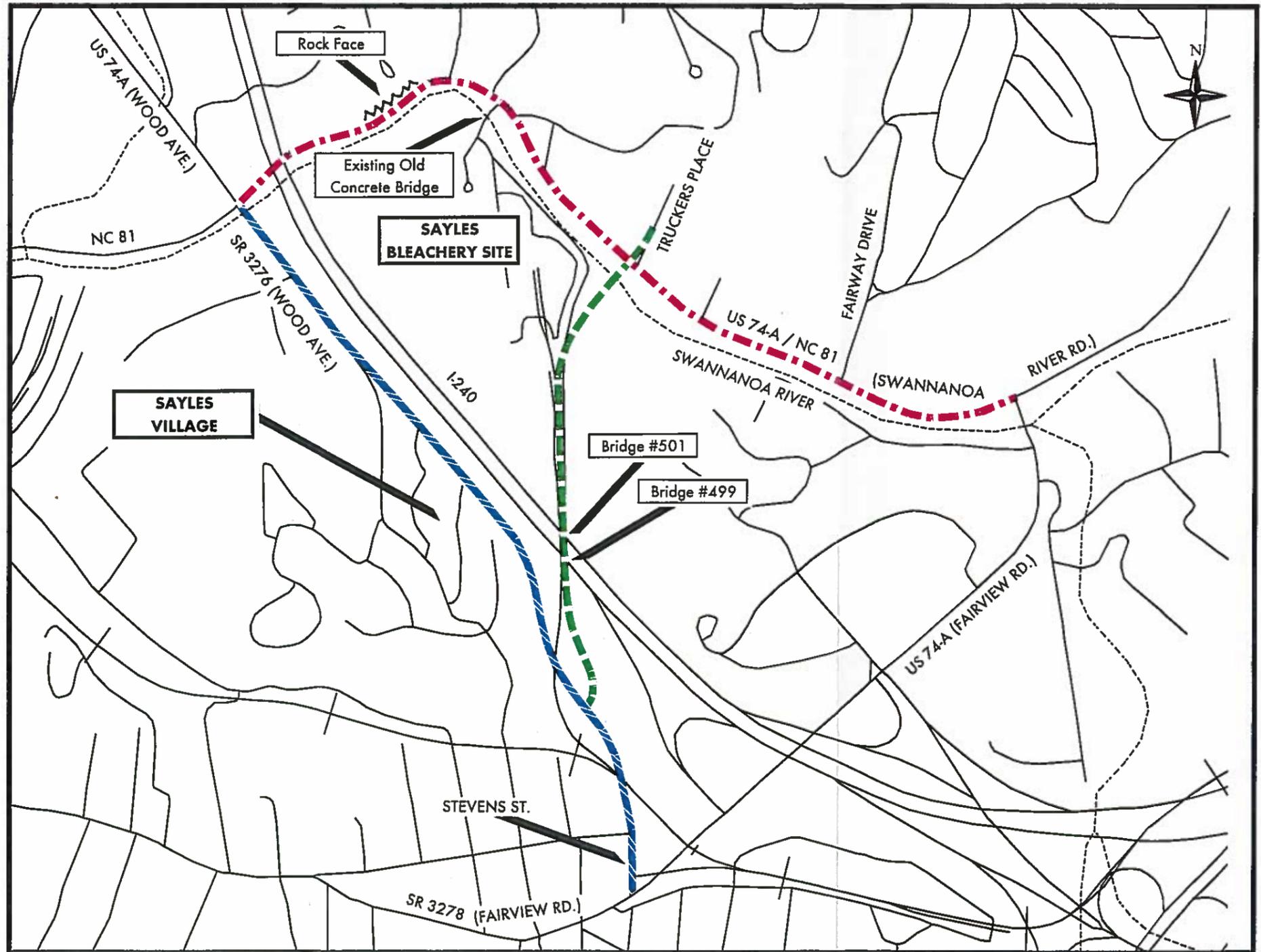
Based on maps at the Department of Environment, Health & Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor. However, several natural heritage elements have been identified downstream of the project area west of Wood Avenue along the Swannanoa River.

The Sayles Bleachery is currently designated as a Superfund site (NCD # 062 552 153). There is an old concrete bridge that currently provides access over the Swannanoa River to this property. It is recommended that this bridge be removed and for all access to this property be established from the proposed new connector.

There is a steep rock face along the north side of Swannanoa River Road east of the I-240 grade separation. Costs for modifying this rock formation are included in the construction estimate for this segment.

This section of the Swannanoa River within the project corridor is a Class C waterway and is part of the French Broad River Basin.

No special accommodation for bicycles is recommended on this project.



0.1 0 0.1 0.2 0.3 Miles

| LEGEND |  |
|--------|--|
|        | PROPOSED THREE-LANE ROADWAY ON NEW ALIGNMENT       |
|        | PROPOSED THREE-LANE WIDENING ON EXISTING ALIGNMENT |
|        | PROPOSED TWO-LANE ROADWAY ON NEW ALIGNMENT         |

|  |                        |                 |
|--|------------------------|-----------------|
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION<br>PROGRAM DEVELOPMENT BRANCH      |                        |                 |
| <b>U-3840</b><br><b>SAYLES BLEACHERY AREA IMPROVEMENTS</b><br><b>ASHEVILLE</b> |                        |                 |
| <b>DIVISION 13</b>   | <b>BUNCOMBE COUNTY</b> | <b>FIGURE 1</b> |