



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

1534 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1534

W. LYNDO TIPPETT  
SECRETARY

April 30, 2002

**MEMORANDUM TO:** Mr. D. M. Campbell, Jr., Member, Board of Transportation  
Mr. Terry Gibson, P.E., Division Engineer, Division 6  
Mr. David King  
Mr. Calvin Leggett, P.E.  
Mr. Troy Peoples, P.E. (3) Attention: Jim Dunlop, P.E.  
Mr. John Williamson  
Mr. Bill Gilmore, P.E. (2)  
Ms. Deborah Barbour, P.E.  
Mr. Jay Bennett, P.E.  
Mr. Blake Norwood, P.E.  
Mr. A. L. Avant  
Mr. J. M. McIntyre, P.E.  
Mr. Doug Lane  
Mr. Burt Tasaico, P.E., Attention: Omar S. Sultan  
Mr. Rick Heicksen, Secretary, Fayetteville Urban Area M.P.O.  
Ms. Brenda Cameron

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**FROM:** Ms. Nicole M. Hackler *Nicole M. Hackler*  
Feasibility Studies Unit

**SUBJECT:** Feasibility Study FS-0106C; SR 1131 (Cameron Road) from SR 1132 (Legion Road) to NC 59 (Main Street). Evaluate the need to widen the existing roadway in Hope Mills; Cumberland County.

Our staff has completed a feasibility study for the proposed project referenced above. 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.

NMH/nmh

Attachment

cc: Mr. Len Hill, P.E.  
Mr. Len Sanderson, P.E.

# FEASIBILITY STUDY

Town of Hope Mills

SR 1131 (Cameron Road) from SR 1132 (Legion Road)  
to NC 59 (Main Street) in Hope Mills

Cumberland County

Division 6

FS-0106C

U-4706



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

Nicole M. Hackler  
Feasibility Studies Engineer

Derrick W. Lewis, P.E.  
Feasibility Studies Engineer

4/30/02  
Date

**SR 1131 (Cameron Road) from SR 1132 (Legion Road)  
to NC 59 (Main Street) in Hope Mills  
Cumberland County  
FS-0106C**

## **I. General Description**

This feasibility study describes upgrading SR 1131 (Cameron Road) from SR 1132 (Legion Road) to NC 59 (Main Street) in Hope Mills, a distance of approximately 0.3 miles. The project location is shown on Figure 1. As part of this study three different cross-sections were investigated. The details of each are as follows:

- ◆ *ALTERNATIVE #1:* Three-lane curb and gutter section on 80-feet of right-of-way.
- ◆ *ALTERNATIVE #2:* Five-lane curb and gutter section on 100-feet of right-of-way.
- ◆ *ALTERNATIVE #3:* Four-lane divided curb and gutter section on 100-feet of right-of-way.

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. Background**

The purpose of this project is to increase the traffic carrying capacity and safety of SR 1131 (Cameron Road), particularly in the vicinity of Hope Mills Middle School, as well as provide improved multilane access to both NC 59 (Main Street) and SR 1132 (Legion Road) in Hope Mills.

SR 1131 (Cameron Road) is designated as a minor arterial in the North Carolina Statewide Functional Classification System. SR 1131 is currently a two-lane curb and gutter facility, 36 feet wide face to face of curbs. The development along this road is primarily residential, with institutional development (Hope Mills Middle School) at SR 1132 (Legion Road), and some commercial development at the intersection of NC 59 (Main Street).

The five-lane widening of SR 1132 (Legion Road) from SR 1131 (Cameron Road) to SR 1363 (Elk Road) is proposed under TIP U-2809 A. This TIP project is currently scheduled for right-of-way acquisition in October of 2006, with a construction date in April of 2008. As a result of the proposed road modifications under the TIP project, this study included room for dual left turn lanes from Cameron Road onto Legion Road in order to accommodate the traffic projected for SR 1132 (Legion Road).

There is one existing traffic signal on Cameron Road at the intersection with NC 59 (Main Street). A traffic signal may be needed at the Cameron Road and SR 1132 (Legion Road) intersection. However, the area traffic engineer will determine if signalization is warranted during later planning and design studies.

The current year Average Daily Traffic (ADT) along SR 1131 (Cameron Road) within the project limits is 6900 vehicles per day (vpd). For the design year 2025, the estimated traffic volumes on SR 1131 (Cameron Road) will be 12,700 vpd. Truck traffic is estimated to make up approximately three percent of the daily traffic.

Currently the intersections along this section of Cameron Road operate at Level of Service (LOS) "B". If no improvements are made, Cameron Road at NC 59 (Main Street) will be operating at an LOS "F" in the design year 2025. In order to improve the traffic operations of this intersection, additional improvements beyond the scope of this project will be required. These improvements include, but are not limited to, additional through capacity and turn lanes on the NC 59 approaches to Cameron Road.

During the three-year period from January 1998 to December of 2000, there were 14 accidents reported within the project limits. There were 4 injuries reported as a result of these incidents with no fatalities. The accident rate for this short 0.3-mile roadway is 661.17 accidents per 100 million vehicle miles of travel (acc/100mvm). However, due to the very short section and high number of accidents, a comparison with a statewide accident rate is not valid. It should be noted that of the 14 accidents recorded in this area, only 3 occurred on Cameron Road. Ten others occurred on NC 59, with the 11<sup>th</sup> on Legion Road. The high number of accidents on NC 59 further emphasizes the need for additional improvements on NC 59.

### **III. Description of Project**

It is proposed to widen SR-1131 (Cameron Road) from SR-1132 (Legion Road) to NC 59 (Main Street), a distance of 0.3 miles. The project location is shown on Figure 1. Three cross-sections were proposed for this project, and under all three alternatives dual left turn lanes from Cameron Road onto SR 1132

(Legion Road) were included. These lanes were added due to the anticipated improvements from TIP U-2809 A. The three cross sections proposed are as follows:

**ALTERNATIVE #1:** Three-lane curb and gutter section, 40' wide face to face of curbs, with 10-foot berms. The proposed right of way width for this section is 80-feet.

With this proposed cross-section, it is anticipated there will be 3 residences and 0 businesses relocated due to this project. The total cost of this alternative, including construction and right-of-way, is estimated to be \$ 1,170,000.

Construction.....	\$ 450,000
Right-of-Way.....	\$ 720,000
<hr/>	
Total Project Cost (Alternative 1).....	\$1,170,000

**ALTERNATIVE #2:** Five-lane curb and gutter section, 64' wide face to face of curbs, with 10-foot berms. The proposed right of way width for this section is 100-feet.

With this proposed cross-section, it is anticipated there will be 4 residences and 0 businesses relocated due to this project. The total cost of this alternative, including construction and right-of way, is estimated to be \$ 1,840,000.

Construction.....	\$1,100,000
Right-of-Way.....	\$ 740,000
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Total Project Cost (Alternative 2).....	\$1,840,000

Both Alternative #1 and Alternative #2 will also require a 4-foot raised concrete island to be installed on Cameron Road between SR 1132 (Legion Road) and School Road. This island is necessitated by the close intersection spacing between Legion Road and School Street, and the proximity to the Hope Mills Middle School driveway just east of School Street. Because of the inadequate driveway-to-intersection spacing, this island would provide positive control of left turns in this area, and reduce the potential for vehicular conflicts in the vicinity of Hope Mills Middle School.

**ALTERNATIVE #3:** Four-lane divided curb and gutter section, 70-foot wide face to face of curbs, with an 18-foot grassed median and 10-foot berms. The proposed right of way width for this section is 100-feet.

With this proposed cross-section, it is anticipated there will be 4 residences and 0 businesses relocated due to this project. The total cost of this alternative, including construction and right-of way, is estimated to be \$ 1,990,000.

Construction.....	\$1,250,000
Right-of-Way.....	\$ 740,000
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Total Project Cost (Alternative 3).....	\$1,990,000

#### IV. Recommendations

**ALTERNATIVE #1:** Although it was found the three-lane curb and gutter section would likely be able to accommodate projected traffic volumes in the design year 2025, our analyses indicate the facility would be operating at or near full capacity, leaving no room for unexpected growth in this area. For impact minimization purposes this alternative would have the least effect on the surrounding areas, however capacity and functional lifespan concerns keep Alternative #1 from being selected as the recommended option.

**ALTERNATIVE #2 & ALTERNATIVE #3:** It was found that both the five-lane curb and gutter section (Alternative #2) and the four-lane divided curb and gutter section (Alternative #3) would be able to accommodate design year 2025 volumes. However, five-lane sections tend to promote strip development and indiscriminate left turn movements, while four-lane divided sections minimize strip development, prevent indiscriminate left turn movements and allow pedestrian refuge if needed. ***Because of these factors, Alternative #3 would be the preferred option for the proposed SR 1131 (Cameron Road) widening.***

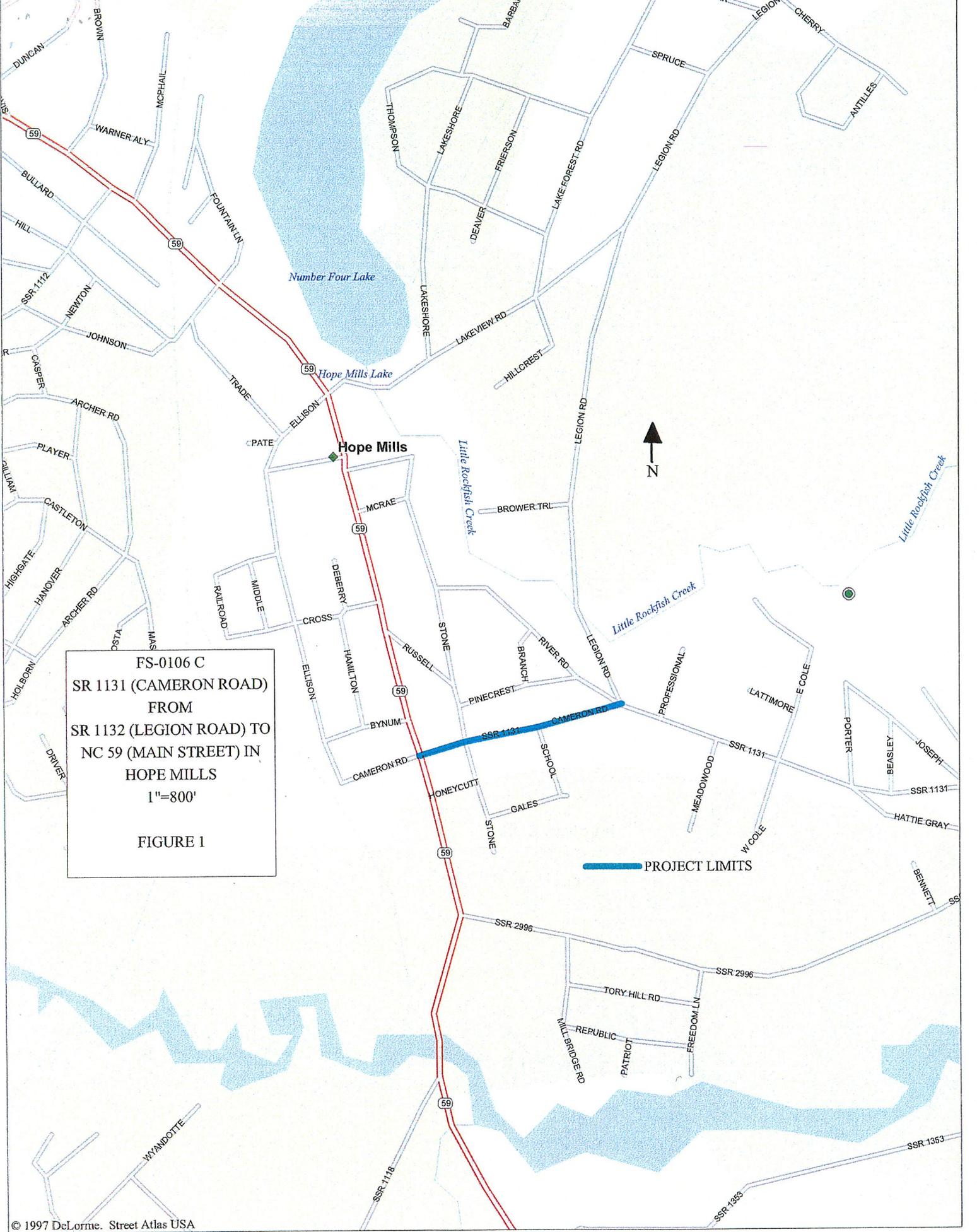
#### V. Additional Comments

A detailed environmental study was not conducted for this feasibility study. However, existing information available for this area has been screened for environmental and historic concerns, and no impacts to historic properties or wetlands are anticipated.

Based on maps at the Department of Environment, Health & Natural Resources and Natural Heritage Section, impacts to threatened or endangered species are not anticipated in the project area.

No provisions for bicycles have been included in this report.

It should be noted that a Petition of Opposition was filed by Ms. Brenda Cameron on March 6, 2002, with the signatures of 359 local citizens who also oppose this project.



FS-0106 C  
 SR 1131 (CAMERON ROAD)  
 FROM  
 SR 1132 (LEGION ROAD) TO  
 NC 59 (MAIN STREET) IN  
 HOPE MILLS  
 1"=800'  
 FIGURE 1