

# FEASIBILITY STUDY

FS-0201C

Construct a Service Road From  
SR 1125 (Millpond Road)  
To SR 1126 (Newland Road)  
in Roper

Washington County

Division 1



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

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8/15/05  
Date

# **Construction of a Service Road from SR 1125 (Millpond Road) to SR 1126 (Newland Road) in Roper**

## **Washington County**

### **FS-0201C**

#### **I. General Description**

This feasibility study describes the construction of a service road from SR 1125 (Millpond Road) to SR 1126 (Newland Road), a distance that varies between 1 mile and 2.4 miles, depending upon the alternative selected. The project location is shown on Figure 1. As part of this study, two different alignments were investigated. The details of each are as follows:

***ALTERNATIVE 1:*** Construct a two-lane shoulder section on new location from SR 1125 (East Millpond Road) to SR 1126, a distance of approximately 1 mile. The recommended right-of-way for this alternative is 100 feet.

***ALTERNATIVE 2:*** Construct a two-lane shoulder section from SR 1125 (West Millpond Road) to SR 1126. This alternative upgrades the existing SR 1123 (Gourd Neck Road) from SR 1125 (West Millpond Road) and continues on new location to SR 1126. This alignment is approximately 2.4 miles in length. The recommended right-of-way width for this alternative is 100 feet.

This study is the initial step in the planning and design process for this project and is not to be considered the product of exhaustive environmental or design investigations. The purpose of the study is to describe the problem, recommend a treatment including costs, and identify potential problem areas that deserve consideration in the planning and design phases.

## **II. Background**

This study proposes to construct a two-lane service road on new location from SR 1125 (Millpond Road) to SR 1126 (Newland Road). The purpose of this service road is to provide improved access for SR 1126 traffic to the proposed US 64 Bypass currently under construction. The proposed US 64 Bypass has an interchange at SR 1125 (East Millpond Road) and grade separations at both SR 1125 (West Millpond Road) and SR 1126 (Newland Road). In addition to the improved access to the US 64 Bypass, this project would ultimately help the traffic flow in and around the town of Roper.

The land immediately surrounding the project area is mostly undeveloped property with a mix of agricultural fields surrounded by woodlands. There are some single-family residences in the project area. It should be noted that the Washington County Union Middle School is located on SR 1125 (East Millpond Road) just north of the proposed US 64 Bypass.

## **III). Traffic and Safety**

The current year Average Daily Traffic (ADT) along the proposed service road within the project limits is 900 vehicles per day (vpd). For the design year 2030, the estimated traffic volumes will be 1800 vehicles per day (vpd). Truck traffic is estimated to make up approximately four percent (4%) of the daily traffic on the project.

Currently the proposed service road would be operating at a level of service (LOS) B or better. In the design year, the level of service is expected to remain unchanged.

## IV). Description of Alternatives

**ALTERNATIVE #1:** This alternative proposes to construct a new two-lane shoulder section with 12-foot travel lanes and 2-foot paved shoulders on 100 feet right-of-way from SR 1125 (East Millpond Road) to SR 1126 (Newland Road). Two new bridges are included in this alternative. The first bridge will be constructed over Lewis Canal and the other bridge will be over Main Canal just west of SR 1126. The length of this alternative is approximately 1 mile.

The total cost of this alternative, including construction and right-of-way, is estimated to be \$2,260,000.

Construction.....	\$2,200,000
Right-of-Way.....	\$60,000
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Total Project Cost (Alternative #1).....	\$2,260,000

With Alternative #1, no relocations (Business or Residential) are anticipated.

**ALTERNATIVE #2:** This alternative proposes to construct a two-lane shoulder section with 12-foot travel lanes and 2-foot paved shoulders on 100 feet right-of-way from SR 1125 (West Millpond Road) to SR 1126 (Newland Road). This alternative upgrades the existing SR 1123 (Gourd Neck Road) from SR 1125 (West Millpond Road). Then proceeds on new location intersecting SR 1125 (East Millpond Road) and ends at a new intersection with SR 1126 (Newland Road). Three new bridges are included in this alternative. The first bridge will be constructed over Kendricks Creek, the second over Lewis Canal and the third is over Main Canal, just west of SR 1126 (Newland Road). The length of this alternative is approximately 2.4 miles.

In order to avoid impacting an old cemetery on the north side of existing SR 1123 (Gourd Neck Road), it is recommended that improvements be asymmetrical at this location and symmetrical for the rest of the project.

The total cost of this alternative, including construction and right-of-way, is estimated to be \$4,270,000.

Construction.....	\$3,950,000
Right-of-Way.....	\$320,000
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Total Project Cost (Alternative #2).....	\$4,270,000

With Alternative #2, one (1) residential relocation and zero (0) business relocations are expected.

### V). Recommendation

The Traffic Control Unit prepared a transportation benefit analysis for this project. This benefit analysis is based on the reduction in Road User Cost (i.e. operating cost savings and time cost savings) for motorists using the proposed extension identified in Alternative #2 instead of the existing route used in Alternative #1. Currently, motorists must travel approximately 5 miles along existing secondary roads to access the proposed US 64/East Millpond Road interchange from the West Millpond Road/Gourd Neck Road intersection. However, with the proposed Gourd Neck Road extension in place (Alternative #2), motorists can expect to travel 1.5 miles less. The benefit analysis results are described in the table below.

#### Cost Benefits Breakdown

	Total Cost	Cost Difference	Road User Cost Per Year	5 Year Road User Cost
Alternative #1	2,260,000		-0-	-0-
Alternative #2	4,270,000	2,010,000	\$400,000	\$2,000,000

Table 1

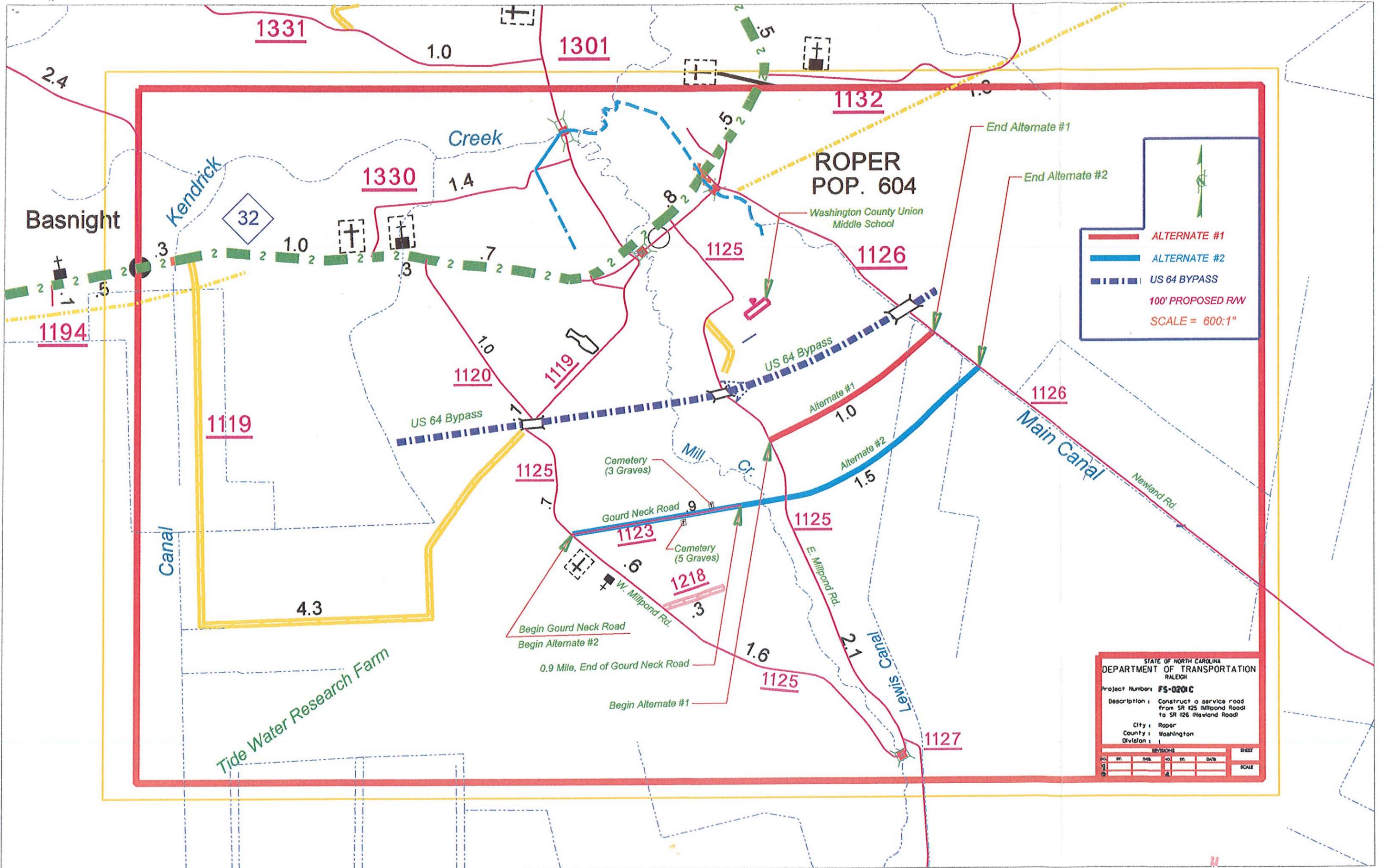
The benefit analysis indicates that the initial investment in the proposed Gourd Neck Road extension (Alternative #2) would be offset by the Road User benefits after five years of operation. In addition, Tide Water Research Farm located off of West Millpond Road would have improved access to US 64 Bypass with the Gourd Neck Road extension. Based on these findings, it is recommended that Alternative #2 be implemented when this project is funded.

## **VI). Additional Comments**

There is no indication of threatened or endangered species impacting the area based on maps developed by the Department of Environmental, Health Resources and Natural Heritage Section. No impacts to historic properties are anticipated on this project.

Due to the anticipated construction across Kendrick Creek, Lewis Canal, and Main Canal, wetland impacts are expected, and permits from the US Army Corps of Engineers will likely be necessary.

No special accommodation for sidewalks and/or bicycles is recommended on this project.



  
**ALTERNATE #1**  
**ALTERNATE #2**  
**US 64 BYPASS**  
 100' PROPOSED RW  
 SCALE = 600:1"

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 Project Number: **FS-0201C**  
 Description: Construct a service road from SR 125 Millpond Road to SR 126 Newland Road  
 City: Roper  
 County: Washington  
 Division:

REVISIONS				SHEET	
NO.	BY	DATE	NO.	DATE	SCALE
1			1		
2			2		