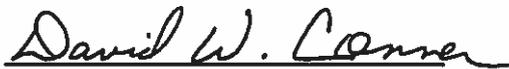


FEASIBILITY STUDY

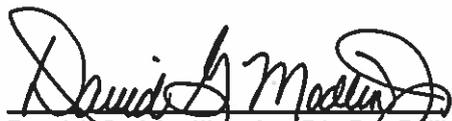
**Charlotte
New Route
From US 521 (Lancaster Highway)
To NC 16 (Providence Road)
Mecklenburg County**

U-3307

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



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3/14/95

Date

**Charlotte
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From US 521 (Lancaster Highway)
To NC 16 (Providence Road)
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I. General Description

This feasibility study describes construction of a new 2-lane facility on 4-lane right-of-way, from US 521 (Lancaster Highway) to NC 16 (Providence Road) south of Charlotte. The total project length is 5.1 miles (8.2 km). The location of the new facility is shown on Figure 1.

The studied cross section is a 2-lane, 28-foot (8.5-m) wide (face-to-face), curb-and-gutter section, with 8-foot (2.4-m) wide berms, and grading for future widening to a 4-lane facility. The required right-of-way width is 100 feet (30.5 m).

The estimated cost of right-of-way and construction is \$10,200,000 as follows:

Right-of-Way	\$ 2,200,000
Construction	8,000,000
Total Cost	\$10,200,000

It is also estimated that the construction cost for future widening of the above section to a 52-foot (15.8-m) wide (face-to-face) curb-and-gutter facility is \$5,500,000.

It is anticipated that no businesses or residences will be relocated as a result of this project.

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 this study is to describe the alternative treatments including costs, and identify potential problem areas that deserve consideration in the planning and design phases.

II. Existing Conditions

The purpose of this project is to provide an alternate route from US 521 to NC 16 south of Charlotte.

At the western project terminal, US 521 is a 2-lane roadway with 26-foot (7.9-m) wide pavement and 8-foot (2.4-m) wide soil shoulders.

At the eastern project terminal, NC 16 is currently a 2-lane roadway with 18-foot (5.5-m) wide pavement and 6-foot (1.8-m) wide soil shoulders. As part of the Charlotte Outer Loop (R-211), NC 16 is being widened to a 5-lane, 68-foot (20.7-m) wide (edge-of-pavement to edge-of-pavement) shoulder section. The pavement width includes 4-foot (1.2-m) wide paved shoulders on each side.

The studied corridor is generally undeveloped woodlands and farmlands with a few residences scattered throughout. However, in the area bordered by SR 3628 (Tom Short Road) and NC 16, the corridor skirts an section that is heavily developed with expensive residences and a golf course.

It is estimated that if this project were in place at this time, it would have traffic volumes approaching 8,000 vehicles per day (vpd) and in the design year (2020), volumes are estimated to reach approximately 25,100 vpd.

Based on current traffic projections, it is estimated that construction of a 2-lane facility will allow the roadway to operate at a Level of Service D until about the year 2001. Construction of a 4-lane facility will allow a Level C through the design year (2020).

III. Detailed Description

This feasibility study describes construction of a new 2-lane facility on 4-lane right-of-way, from US 521 (Lancaster Highway) to NC 16 (Providence Road) south of Charlotte. The total project length is 5.1 miles (8.2 km). The location of the new facility is shown on Figure 1.

The studied cross section is a 2-lane, 28-foot (8.5-m) wide (face-to-face), curb-and-gutter section, with 8-foot (2.4-m) wide berms, and grading for future widening to a 4-lane facility. The required right-of-way width is 100 feet (30.5 m).

The studied alignment includes the following:

1. On new location from US 521 to SR 3632 (Ardrey Kell Road)
2. Along existing Ardrey Kell Road to SR 3635 (Marvin Road)
3. On new location from SR 3635 to Annie Ross Road
4. Along existing Annie Ross Road to SR 3630 (Community House Road)
5. On new location from Community House Road to Landen Ford Road
6. Along existing Landen Ford Road to SR 3628 (Tom Short Road)
7. On new location from Landen Ford Road to NC 16

A new traffic signal should be installed at NC 16.

Immediately north of this project, SR 3632 should be realigned such that it makes a 90 degree intersection with Marvin Road.

The estimated cost of right-of-way and construction is \$10,200,000 as follows:

Right-of-Way	\$ 2,200,000
Construction	8,000,000
Total Cost	\$10,200,000

It is also estimated that the construction cost for future widening of the above section to a 4-lane, 52-foot (15.8-m) wide (face-to-face) curb-and-gutter facility is \$5,500,000.

It is anticipated that no businesses or residences will be relocated as a result of this project.

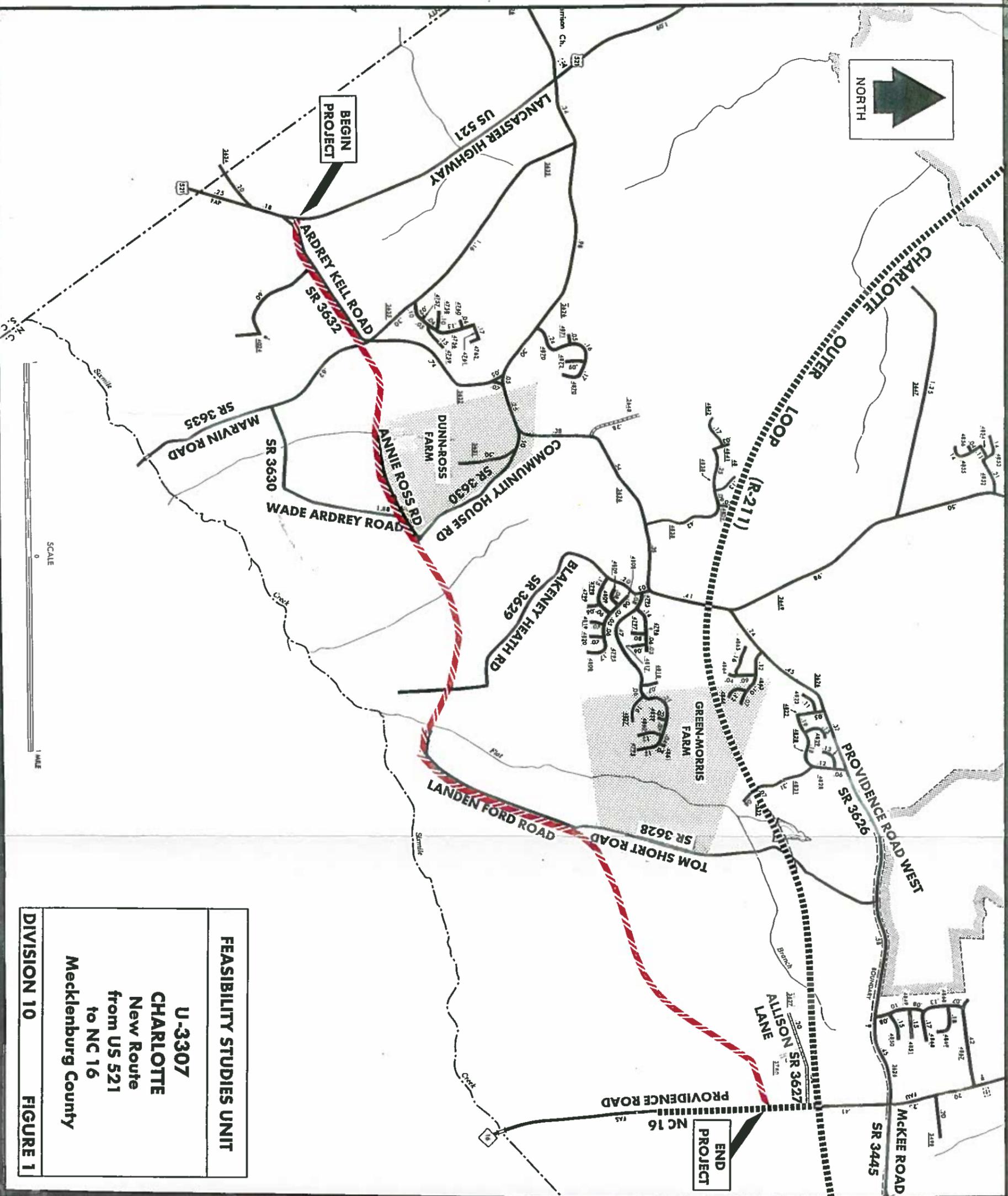
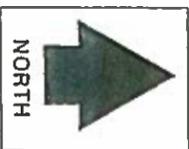
IV. Other Comments

In addition to the above described alternative, a second alternative was studied. This second alternative is the construction of a 5-lane, 64-foot (19.5-m) wide (face-to-face) curb-and-gutter section throughout the project length. It is estimated that right-of-way and construction costs of this alternative is \$15,300,000 as follows:

Right-of-Way	\$ 2,200,000
Construction	13,100,000
Total Cost	\$15,300,000

There are two historic properties located near this project corridor. The Dunn-Ross Farm is located north of this corridor and immediately west of and adjacent to SR 3630 (Community House Road). The Green-Morris Farm is located north of this corridor and immediately west of and adjacent to SR 3628 (Tom Short Road).

The Mecklenburg-Union Technical Coordinating Committee and the Mecklenburg-Union Metropolitan Planning Organization ranks this project 92nd out of 103 projects included in their 2015 Transportation Plan and they do not endorse the project at this time.



FEASIBILITY STUDIES UNIT	
U-3307	
CHARLOTTE	
New Route	
from US 521	
to NC 16	
Mecklenburg County	
DIVISION 10	FIGURE 1