

FEASIBILITY STUDY

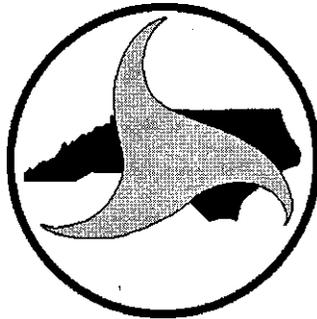
Goldsboro

**Ash Street (US 70 Business) from
US 70 to Berkeley Boulevard (SR 1579)**

Wayne County

Division 4

FS-9904F



Prepared by the
Programming and TIP Branch
Division of Highways
N. C. Department of Transportation

A handwritten signature in black ink, appearing to read "Derrick W. Lewis". The signature is written in a cursive, flowing style.

Derrick W. Lewis, P.E.
Acting Head of Feasibility Studies

1/24/2000
Date

Goldsboro

Ash Street (US 70 Business)
From US 70 to Berkeley Boulevard (SR 1579)

Wayne County

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I. General Description

This feasibility study describes the widening of Ash Street (US 70 Business) from US 70 to Berkeley Boulevard (SR 1579), a distance of 1.75 miles (2.8 km). The project location is shown on Figure 1. The recommended cross section is a five-lane, curb and gutter section, 64 feet (19.5 m) wide face to face of curbs with 10-foot (3.0-m) berms. The recommended right-of-way width is 100 feet (30.5 m).

The Goldsboro Urban Area MPO has expressed concerns over the US 70 / Ash Street intersection and requested that an interchange be provided at this location. Therefore, this feasibility study considered both an interchange and an at-grade intersection at this location. These alternates are as described below:

Alternate 1

Under Alternate 1, a signalized at-grade intersection is utilized at the US 70 / Ash Street junction (See Figure 2). It is anticipated that 12 residences and 5 businesses will be relocated due to this alternate. The total cost of the project, including construction and right-of-way, is estimated to be \$15,500,000.00.

Construction.....	\$ 5,200,000
Right-of-way.....	\$ 10,500,000
Total Cost	\$ 15,700,000

Alternate 2

Under Alternate 2, a trumpet type interchange is utilized at the US 70 / Ash Street intersection (See Figure 3). It is anticipated that 30 residences and 18 businesses will be relocated due to this alternate. The total cost of the project, including construction and right-of-way, is estimated to be \$26,600,000.00.

Construction.....	\$ 10,300,000
Right-of-way.....	\$ 16,500,000
Total Cost	\$ 26,800,000

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 increase the traffic carrying capacity and safety of Ash Street (US 70 Business) in Goldsboro. The Goldsboro Urban Area MPO and City of Goldsboro support this project

Ash Street is designated as a major thoroughfare in the Goldsboro Thoroughfare Plan and as a minor urban arterial in the North Carolina Statewide Functional Classification System.

As it exists now, this section of Ash Street is mostly a three-lane shoulder section, 32-foot (9.8-m) wide with additional widening at the Berkeley Boulevard intersection. Development along the project is a mixture of residential, institutional (schools), commercial, and some undeveloped property.

There are two existing traffic signals on Ash Street in the project area. One is at the Oak Forest Road intersection and the other is at the Berkeley Boulevard (SR 1579) intersection. The US 70 / Ash Street intersection is a semi-directional at-grade intersection with ramps. The semi-directional classification is because no left turn movement is provided from Ash Street to US 70.

The Feasibility Studies Unit is currently studying Berkeley Boulevard (SR 1579 / US 13) from Ash Street (US 70 Business) to SR 1003. However, since this is a candidate project, no funding or construction schedule is currently available.

The current year Average Daily Traffic (ADT) along Ash Street is estimated to be between 11,700 to 12,700 vehicles per day (vpd). For the design year 2020, the estimated traffic volumes on Ash Street will range between 17,600 and 19,500 vpd. Truck traffic is estimated to make up four percent of daily traffic.

Currently, Ash Street is operating at Level of Service (LOS) D or better. If no improvements are made, it is projected that the roadway will operate at LOS F in the design year 2020. If Ash Street is widened to a five-lane curb and gutter section, the facility should operate at a LOS C or better in the current year and at LOS D or better in the design year 2020.

During the three-year period from September 1995 through August 1998, there were 100 accidents reported on Ash Street within the project limits. There were 61 injuries reported as a result of these accidents, including 2 fatalities.

The accident rate along Ash Street within the project limits is 465.55 accidents per 100 million vehicle miles (acc/100mvm). This compares with the 1995 to 1997 statewide rate of 291.06 acc/100mvm for urban primary 3-lane roadways.

III. Discussion of Alternates / Recommendations

This feasibility study describes the widening of Ash Street (US 70 Business) from US 70 to Berkeley Boulevard (SR 1579), a distance of 1.75 miles (2.8 km). The project location is shown on Figure 1. The recommended cross section is a five-lane, curb and gutter section, 64 feet (19.5 m) wide face to face of curbs with 10-foot (3.0-m) berms.

At the Ash Street / Berkeley Boulevard intersection, we recommend that the southbound Berkeley Boulevard approach be widened to provide an additional left turn lane while an exclusive right turn lane is added to northbound Berkeley Boulevard. It is anticipated that this widening will impact approximately 500 feet (152.4 m) of Berkeley Boulevard in each direction. In addition, the westbound Ash Street approach to this intersection will need to be widened to provide an additional left-turn lane. It is anticipated that this improvement will impact 600 feet (182.9 m) of Ash Street.

At the Ash Street / Oak Forest Road (SR 1711) intersection, we recommend that Oak Forest Road be relocated to the west to improve the intersection skew angle.

The Goldsboro Urban Area MPO has expressed concerns over the US 70 / Ash Street (US 70 Business) intersection and requested that an interchange be considered at this location. Therefore, both an at-grade intersection and an interchange were considered alternates for this location. The recommended right-of-way width is 100 feet (30.5 m). The alternates are as described below:

Alternate 1

Under Alternate 1, a signalized at-grade intersection would be utilized at the US 70 / Ash Street junction (See Figure 2). This at-grade intersection will require dual westbound left turn lanes on US 70. We also recommended that the freeflow right turn ramp be replaced by dual right turn lanes under signal control because the existing ramp does not have access control and down stream driveways adversely impact merging traffic. This alternate is expected to minimize the right-of-way impacts on the adjacent properties while providing improved traffic safety and operational benefits. It is anticipated that 12 residences and 5 businesses will be relocated due to this alternate. The total cost of the project, including construction and right-of-way, is estimated to be \$15,700,000.00.

Construction.....	\$ 5,200,000
Right-of-way.....	\$ 10,500,000
Total Cost	\$ 15,700,000

Alternate 2

Under Alternate, a trumpet type interchange is utilized at the US 70 / Ash Street junction (See Figure 3). In addition, the eastbound US 70 through lanes should be relocated into a parallel alignment with the westbound US 70 lanes. This trumpet interchange will also include a new structure approximately 54 feet (16.5 m) wide face to face of rail and 180 feet (54.9 m) long. Full control of access will be utilized in the interchange area. This alternate should provide the best traffic safety and operational benefits, but result in higher right-of-way impacts. It is anticipated that 30 residences and 18 businesses will be relocated due to this alternate. The total cost of the project, including construction and right-of-way, is estimated to be \$26,800,000.00.

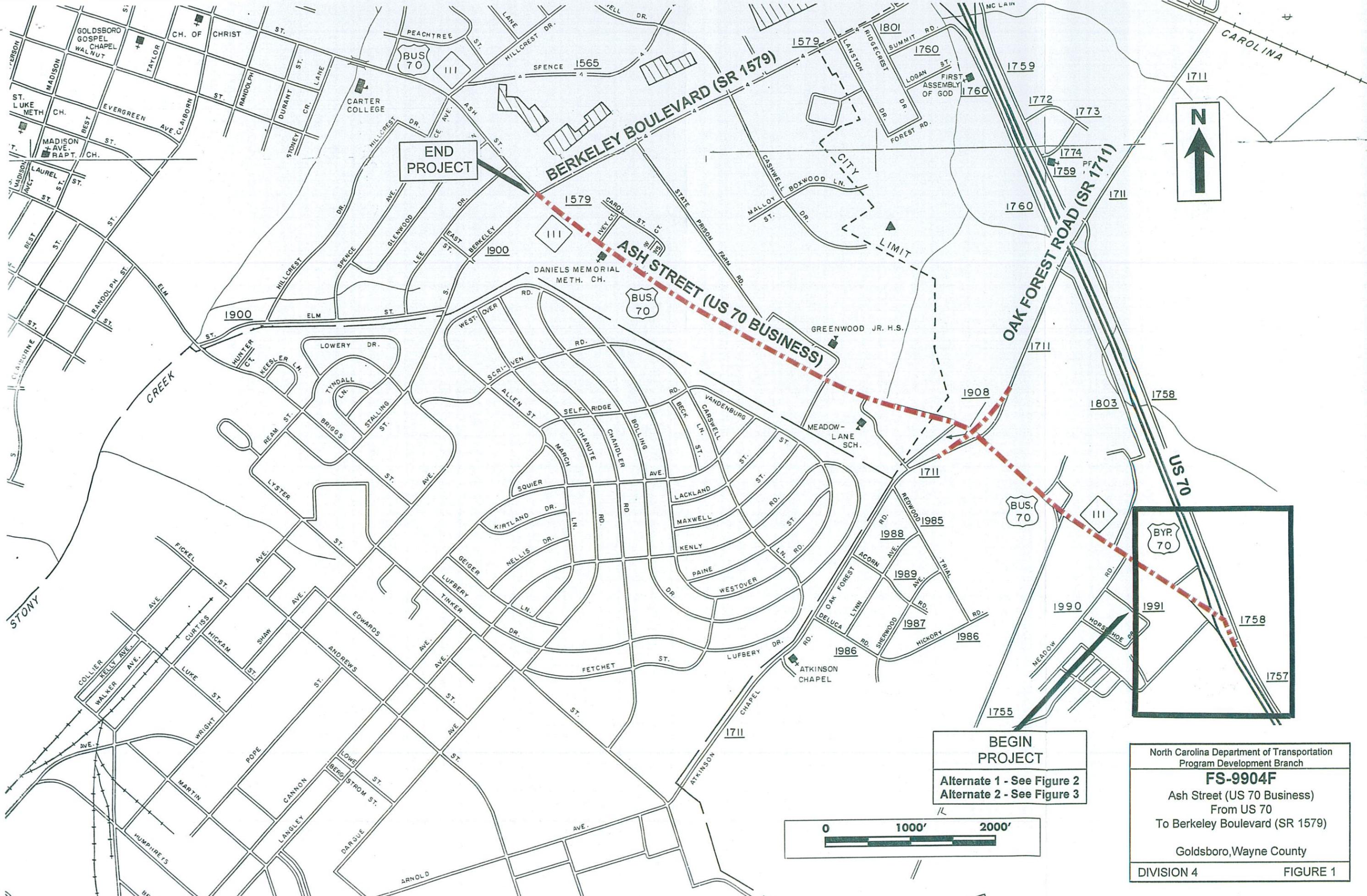
Construction.....	\$ 10,300,000
Right-of-way.....	\$ 16,500,000
Total Cost	\$ 26,800,000

A transportation benefit analysis was also completed for this project. For the period between the current year and the 2020 design year, it is estimated that the total transportation benefits for the project are \$15,000,000, which is an average of \$714,300.00 per year. The total benefits include accident cost savings, time cost savings, and operating cost savings.

IV. Additional Comments

An environmental screening was not conducted for this study. No historic properties, endangered species, wetlands or stream crossings are anticipated.

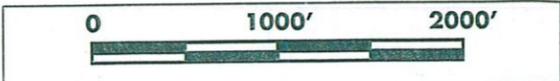
No special accommodation for bicycles is recommended on this project.



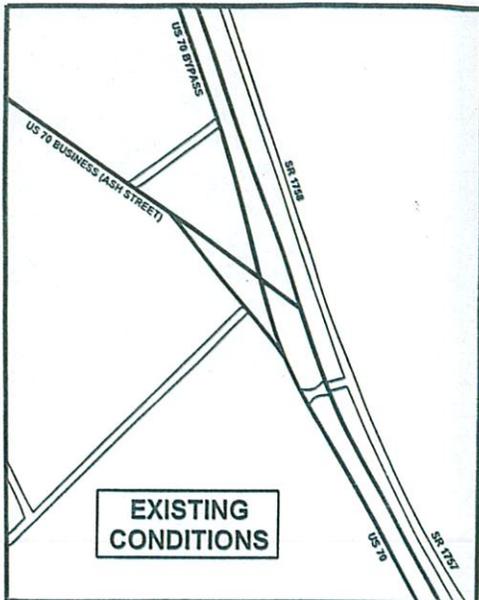
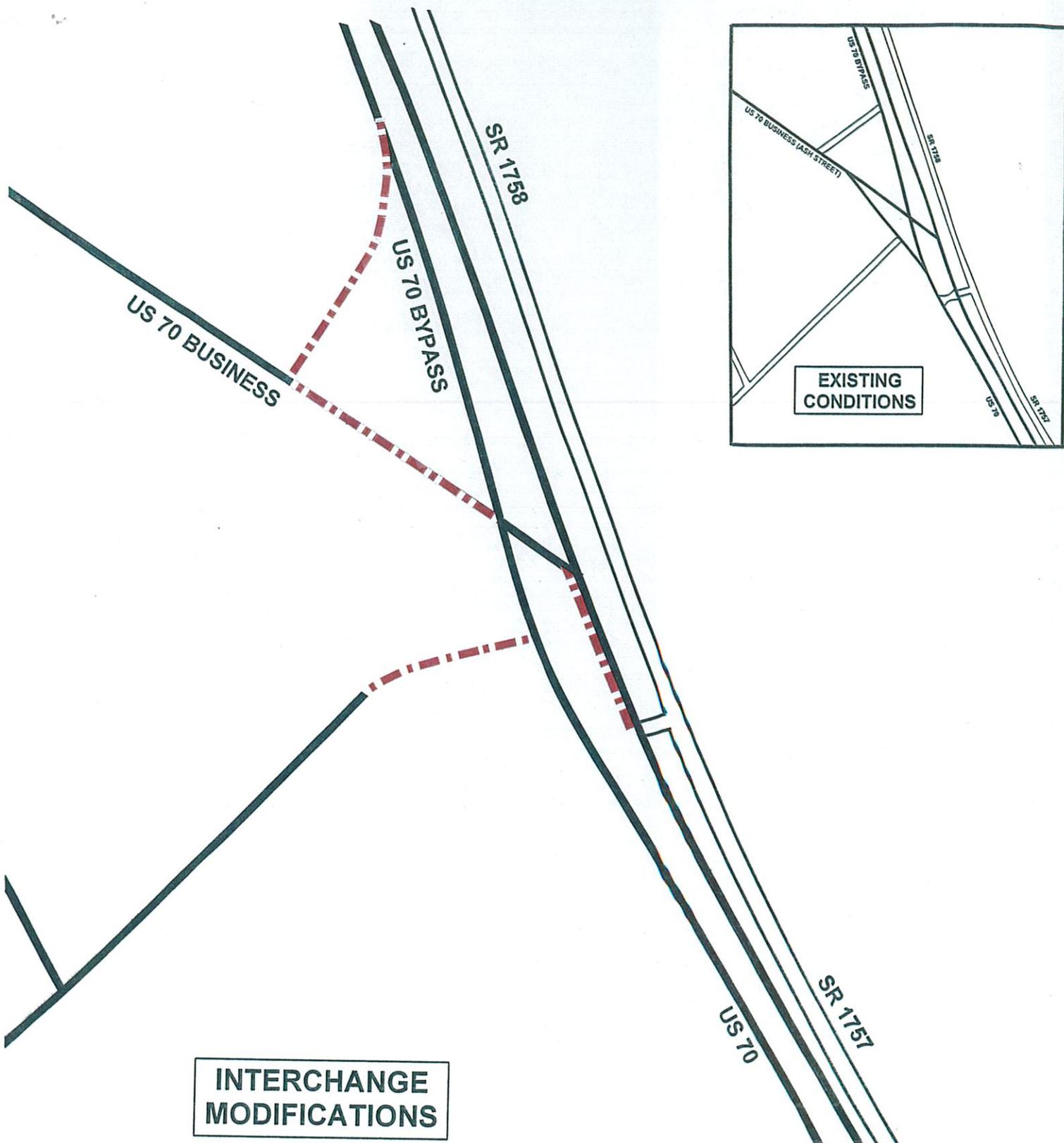
END PROJECT

BEGIN PROJECT

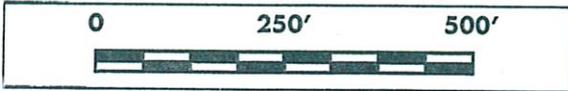
Alternate 1 - See Figure 2
 Alternate 2 - See Figure 3



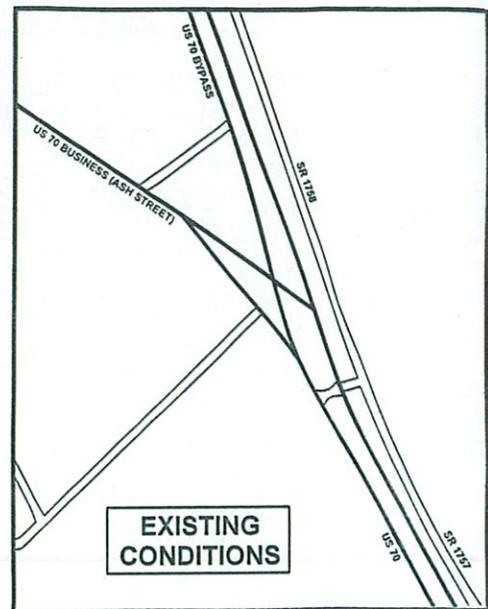
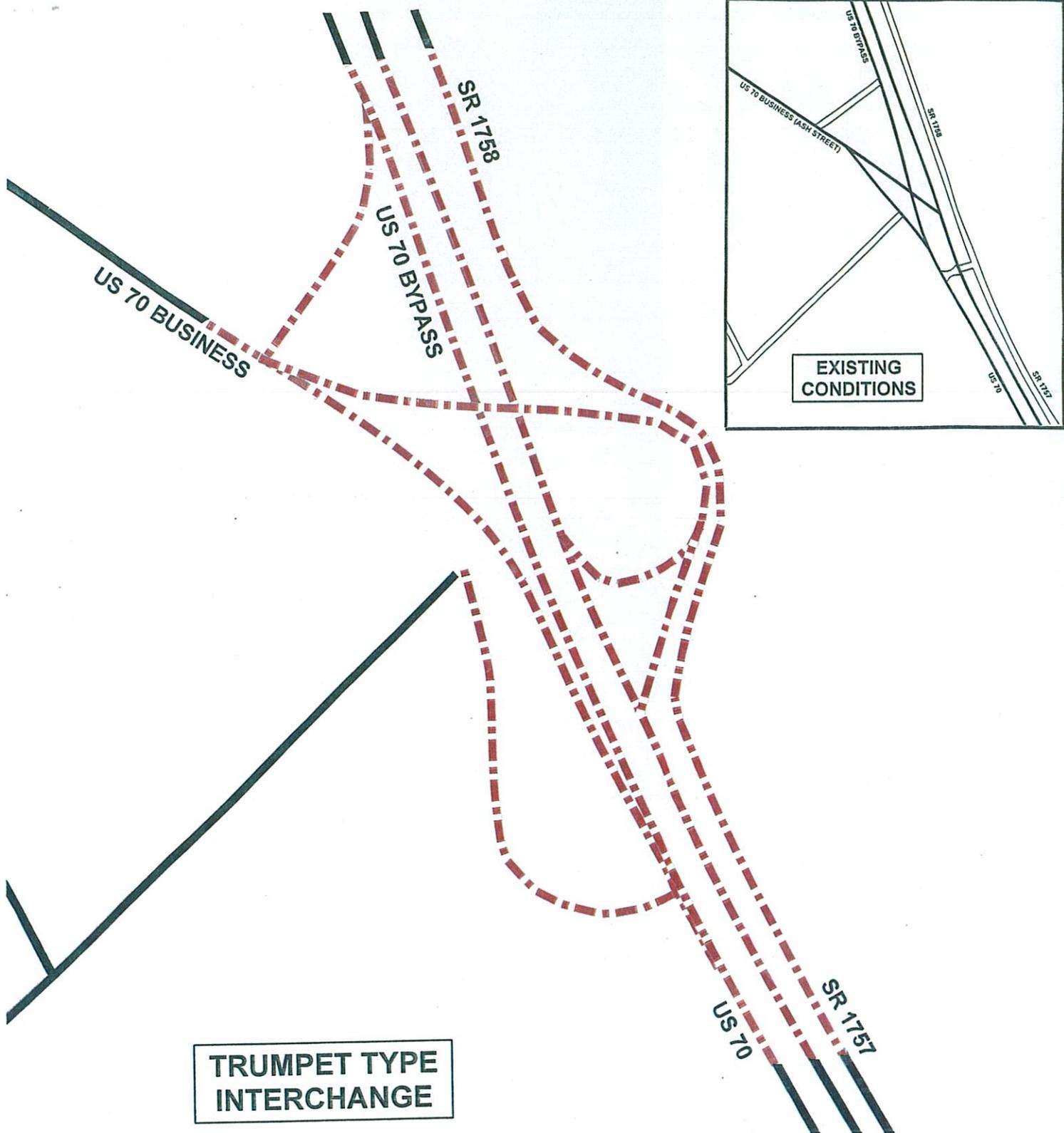
North Carolina Department of Transportation
 Program Development Branch
FS-9904F
 Ash Street (US 70 Business)
 From US 70
 To Berkeley Boulevard (SR 1579)
 Goldsboro, Wayne County
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**INTERCHANGE
MODIFICATIONS**



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 Ash Street (US 70 Business)
 From US 70
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**TRUMPET TYPE
INTERCHANGE**



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