

**FEASIBILITY STUDY**

**Gastonia  
Franklin Boulevard (US 29/74)  
from Cox Road (SR 2200)  
to Church Street (SR 2339)  
Gaston County**

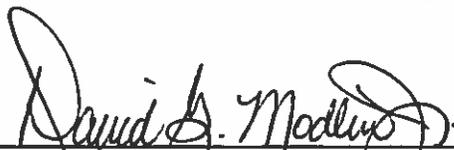
**Division 12**

**U-3806**

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



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### I. General Description

This feasibility study describes recommended improvements to Franklin Boulevard (US 29/74) in Gastonia. It is recommended that one additional eastbound lane be added to Franklin Boulevard from the existing eastbound three lanes at approximately 0.5 miles (0.8 km) east of Cox Road (SR 2200) to the existing eastbound three lanes at Church Street (SR 2339), a distance of approximately 0.7 miles (1.1 km). The project location is shown on Figure 1.

The recommended improvements will create a generally uniform, median divided, curb-and-gutter cross section with 3 travel lanes in each direction and turn lanes at key locations.

For construction of the recommended improvements, an additional 25 feet (7.6 m) of right-of-way will be required on the south side of the existing roadway from approximately 0.3 miles (0.5 km) east of Cox Road to Church Street. It is anticipated that there will not be any residences or businesses relocated as a result of the improvements.

The total cost of the project, including construction and right-of-way, is estimated to be \$1,400,000 as follows:

Right-of-way	\$ 250,000
Construction	1,150,000
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Total	\$1,400,000

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 improve the traffic carrying capacity and accident experience of Franklin Boulevard and to relieve traffic congestion in a highly developing and vital shopping area of Gastonia. This project was requested by the City of Gastonia and is ranked second on the Gaston Urban Area's 1995 Congestion Plan and is ranked fourth on its Unmet Needs List.

Franklin Boulevard is designated as a major thoroughfare in the Gastonia Urban Area Thoroughfare Plan and is designated as a Principle Arterial in the North Carolina Statewide Functional Classification System.

Within the project terminals, Franklin Boulevard is heavily developed commercially. Development includes restaurants, building supply businesses, major retail businesses, a major shopping center, and a mobile home dealership. Development along the south side of the roadway is currently concentrated around the project terminals and includes food stores, automobile dealerships, and mobile/prefabricated home dealerships.

Within the project terminals, existing Franklin Boulevard is a multi-lane, median divided facility with varying cross sections as follows:

1. From Cox Road to 0.3 miles (0.5 km) east of Cox Road, the cross section consists of three 12-foot (3.6-m) wide travel lanes in each direction, a 16-foot (4.9-m) wide raised median, and 2-foot (0.6-m) wide curb-and-gutter along both the eastbound and westbound outside lanes. The median is tapered at key points to provide left-turn lanes.
2. From 0.3 miles (0.5 m) east of Cox Road to 0.5 miles (0.8 m) east of Cox Road, the cross section consists of three 12-foot (3.6-m) wide travel lanes in each direction, a 16-foot (4.9-m) wide raised median, a 2-foot (0.6-m) wide curb-and-gutter along the westbound outside lane and a soil shoulder along the outside eastbound lane. The median is tapered at key points to provide left-turn lanes.
3. From 0.5 miles (0.8 m) east of Cox Road, to Church Street, the cross section consists of three 12-foot (3.6-m) wide travel lanes in the westbound direction, two 12-foot (3.6-m) wide travel lanes in the eastbound direction, a 16-foot (4.9-m) wide raised median, a 2-foot (0.6-m) wide curb-and-gutter along the westbound outside lane and soil shoulders along the eastbound outside lane. The median is tapered at key points to provide left-turn lanes.

Beyond both project terminals, existing Franklin Boulevard is a 6-lane, curb-and-gutter facility.

There is one structure located within the project termini. Culvert #67, at Duhart's Creek, is located approximately 0.3 miles (0.5 km) east of Cox Road. The structure is a triple 8-foot (2.4-m) by 6-foot (1.8-m) reinforced concrete box culvert. The culvert was constructed in 1960, has a sufficiency rating of 78.1 out of a possible 100 points, and has an estimated remaining life of 25 years

The 1997 Average Daily Traffic (ADT) volume on Franklin Boulevard (within the project terminals) is estimated to be approximately 43,000 vehicles per day (vpd). The estimated design year (2020) ADT is 69,800 vpd. Truck traffic is estimated to make up 5% of daily traffic.

It is estimated that the eastbound lanes of Franklin Boulevard are currently operating at Level of Service D and will reach Level F before the year 2020. If an additional eastbound lane is constructed, it is estimated that the roadway will operate at Level C until close to the design year.

During the three-year period from February 1, 1994 thru January 31, 1997, there were 232 accidents reported on Franklin Boulevard within the project limits. There were no fatalities reported during this period, but 102 of the accidents resulted in injuries. The accident rate along this segment of roadway is 415.2 accidents per 100 million vehicle miles (acc/100mvm). The 1996 statewide rate for urban US routes is 196.6 acc/100mvm.

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

This report describes a studied eastbound lane addition to Franklin Boulevard (US 29/74), in Gastonia, from approximately 0.5 miles (0.8 km) east of Cox Road (SR 2200) to Church Street (SR 2339), a distance of approximately 0.7 miles (1.1 km). The project location is shown on Figure 1 and is described in detail as follows:

1. Add a 2-foot (0.6-m) wide curb-and-gutter and 10-foot (3.0-m) wide berm to the outside eastbound lane of Franklin Boulevard from approximately 0.3 miles (0.5 km) east of Cox Road to approximately 0.5 miles (0.8 km) east of Cox Road.
2. Add a 12-foot (3.6-m) wide travel lane, a 2-foot (0.6-m) wide curb-and-gutter, and a 10-foot (3.0-m) wide berm to the south side of Franklin Boulevard from approximately 0.5 miles (0.8 km) east of Cox Road to Church Street.
3. Re-grade the entrance to the automobile dealership located on the south side of Franklin Boulevard, at approximately 0.2 miles (0.3 km) east of Cox Road.

4. Upgrade the three existing traffic signals located within the project limits.

The recommended improvements will create a generally uniform, median divided, curb-and-gutter cross section with 3 travel lanes in each direction and turn lanes at key locations.

For construction of the recommended improvements, an additional 25 feet (7.6 m) of right-of-way will be required on the south side of the existing roadway from approximately 0.3 miles (0.5 km) east of Cox Road to Church Street. It is anticipated that there will not be any residences or businesses relocated as a result of the improvements.

The total cost of the project, including construction and right-of-way, is estimated to be \$1,400,000 as follows:

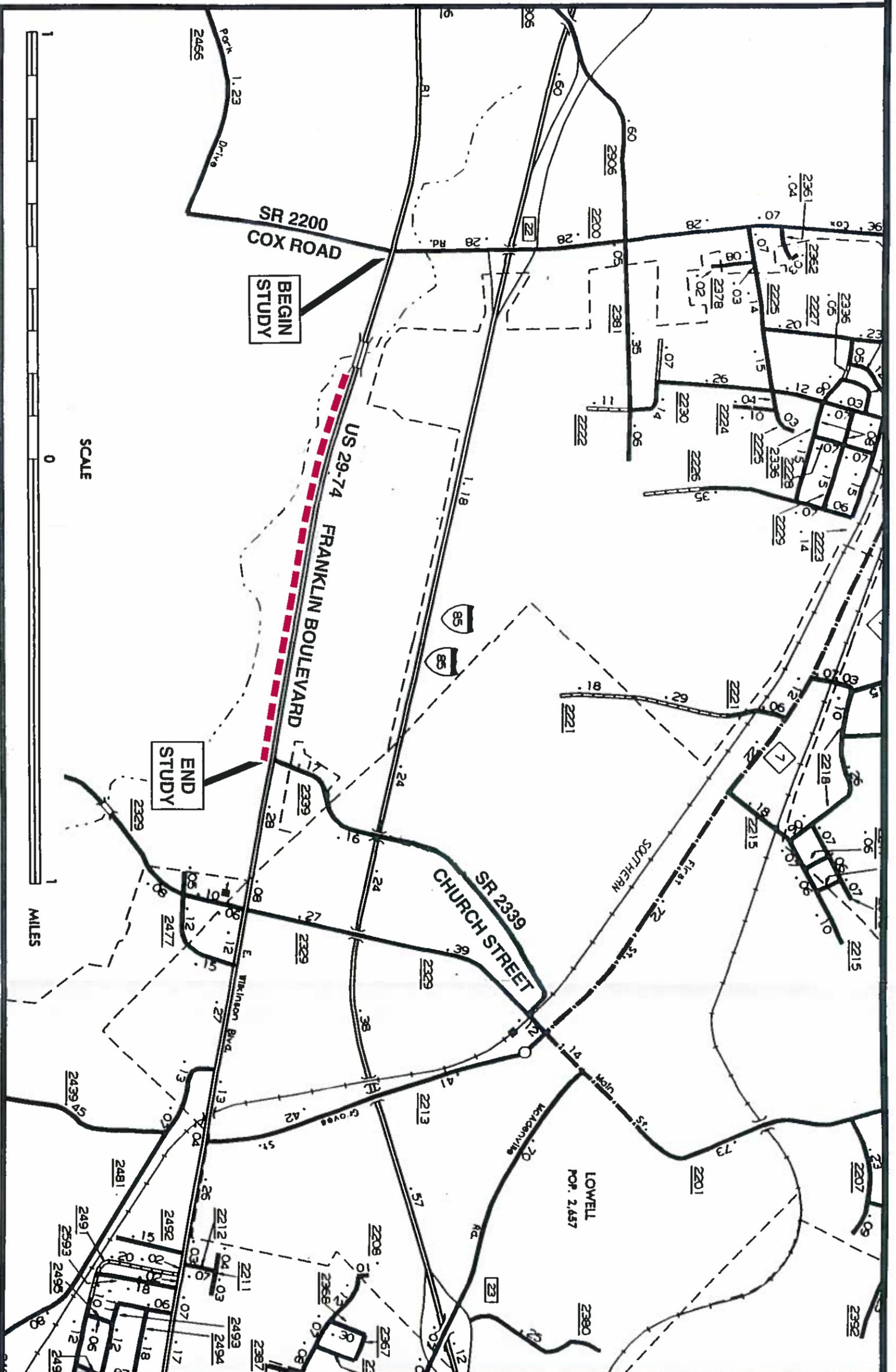
Right-of-way	\$ 250,000
Construction	1,150,000
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Total	\$1,400,000

## VI. Other Comments

An environmental screening was not conducted for this study. However, no impacts to historic properties or wetlands are anticipated.

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.

The NCDOT Bicycle Program has not identified Franklin Boulevard as a roadway which has need for special accommodations for bicycles.



North Carolina Department of Transportation Program Development Branch
<b>U-3806</b>
US 29-74 (Franklin Boulevard) from SR 2200 (Cox Road) to SR 2339 (Church Street)
Gastonia, Gaston County
DIVISION 12
FIGURE 1