

**FEASIBILITY STUDY**

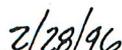
**Madison-Mayodan  
Market Street Extension  
from US 220 Business / NC 704 (Decatur St.) to NC 135  
Rockingham County  
U-3443**



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

  
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Madison-Mayodan  
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from US 220 Business / NC 704 (Decatur St.) to NC 135  
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## I. General Description

This feasibility study describes the Market Street Extension from US 220 Business / NC 704 (Decatur St.) to NC 135 at the intersection with SR 2216 (Cardwell Dr.), a distance of 1.4 miles (2.3 km). The project location is shown on Figure 1. The recommended cross-section is a two-lane curb and gutter section, 28 feet (8.5 m) wide from face-to-face of curbs with 8-foot (2.4-m) berms, on right-of-way of various widths with no access control. A major structure across the Mayo River and the Norfolk Southern Railroad is proposed to be approximately 2200 feet (670.7 m) long with a deck width of 40 feet (12.2 m). No residential or business locations are anticipated as a result of this project. The total cost of the project, including construction and right-of-way, is estimated to be \$10,500,000.

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 create a logical link between downtown Madison and NC 135 east of Mayodan. This project will also alleviate traffic along the congested US 220 Business corridor between Madison and Mayodan. This project is supported by the Rockingham County Economic Development Commission.

The proposed Market Street Extension is designated as a proposed major thoroughfare in the Madison-Mayodan Thoroughfare Plan. Existing US 220 Business / NC 704 (Market St. and Decatur St. - see Figure 2) is listed as a major rural collector in the North Carolina Statewide Functional Classification System.

Existing Market Street is currently a two-lane, two-way roadway with a pavement width of 20 feet (6.1 m) and soil shoulders from the intersection with

Decatur Street to Piedmont Street (see Figure 2). This section of Market Street has some vertical alignment problems. North of Piedmont Street, Market Street is a two-lane 24-foot (7.3-m) curb and gutter section. SR 2216 is a two-lane roadway, 22 feet (6.7m) wide with soil shoulders.

Along existing Market Street, development consists primarily of single-family residences. There is similar development along SR 2216. Unifi Industries has two plants within the project limits, one located at the northern end of existing Market Street and the other at the southern end of SR 2216. There is also a wastewater treatment plant with access to SR 2216.

Norfolk Southern currently operates a railway adjacent to the Mayo River. This railroad carries six trains per day at an average speed of 30 mph (48 kph).

The intersection between Market Street and Decatur Street is currently signalized.

TIP Project R-1033 will widen NC 135 to a three-lane curb and gutter facility, 40 feet (12.2 m) wide from face-to-face of curbs. This project is scheduled for construction in FY 2000.

The 1995 Average Daily Traffic (ADT) along the Market Street Extension will be 2100 vehicles per day (vpd). For the design year 2020, the estimated traffic volume on the Market Street Extension will be 4200 vpd. Truck traffic is estimated to make up 3% of daily traffic.

If the Market Street Extension is constructed as a two-lane curb and gutter section, the facility will operate at Level of Service (LOS) B in the current year and at LOS C in the design year 2020.

### **III. Recommendations**

It is recommended to construct the Market Street Extension from US 220 Business / NC 704 (Decatur St.) to NC 135 at the intersection with SR 2216 (Cardwell Dr.), a distance of 1.4 miles (2.3 km). The project location is shown on Figure 1. The recommended cross-section is a two-lane curb and gutter section, 28 feet (8.5 m) wide from face-to-face of curbs with 8-foot (2.4-m) berms. On existing Market Street and SR 2216, the recommended right-of-way is 60 feet (18.3 m) wide. Where construction is required on new location, the recommended right-of-way is 100 feet (30.5 m) wide. No access control is proposed within the project limits.

A major structure will be required to cross the Mayo River and the Norfolk Southern Railroad. It is recommended to construct a steel structure with a

concrete deck, approximately 2200 feet (670.7 m) long with a deck width of 40 feet (12.2 m).

No residential or business locations are anticipated as a result of this project. The total cost is as follows:

Construction.....	\$ 10,000,000
Right-of-way.....	\$ 500,000
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Total Cost .....	\$ 10,500,000

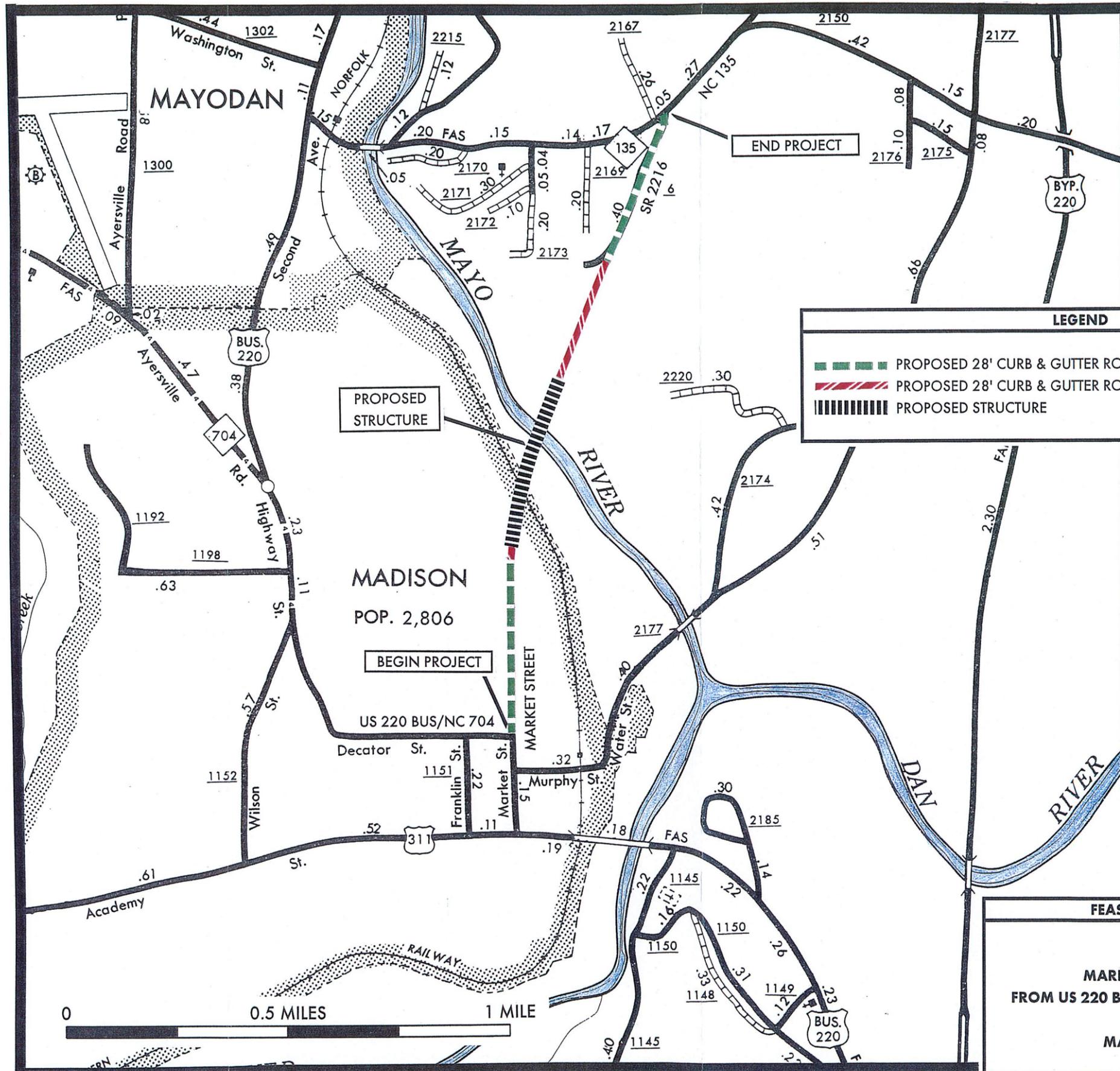
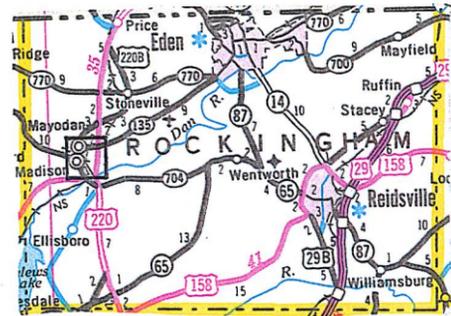
#### **IV. Other Comments**

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 portion of the Mayo River within the project area is classified WS-IV and is part of the Dan River Basin. This area is also identified as an aquatic habitat.

No special accommodation for bicycles is recommended on this project.



**LEGEND**

- PROPOSED 28' CURB & GUTTER ROADWAY - EXISTING ALIGNMENT
- PROPOSED 28' CURB & GUTTER ROADWAY - NEW LOCATION
- PROPOSED STRUCTURE

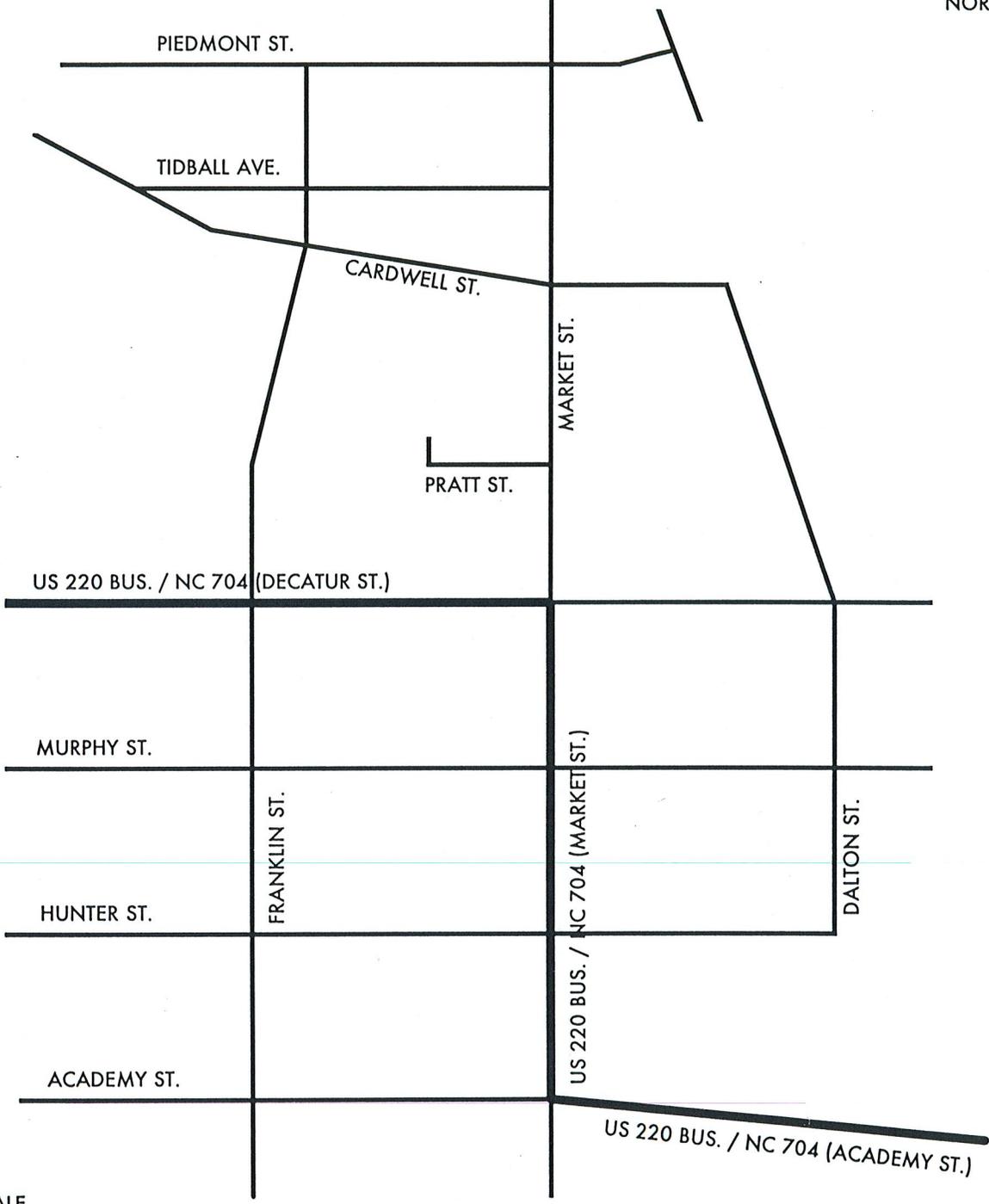
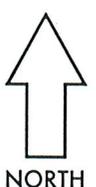
**FEASIBILITY STUDIES UNIT**

U-3443  
MARKET STREET EXTENSION  
FROM US 220 BUSINESS / NC 704 (DECATUR ST.)  
TO NC 135  
MADISON-MAYODAN

DIVISION 7 | ROCKINGHAM COUNTY | FIGURE 1



UNIFI INDUSTRIES →



NOT TO SCALE

U-3443  
DOWNTOWN MADISON

FIGURE 2