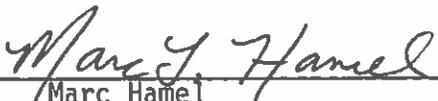
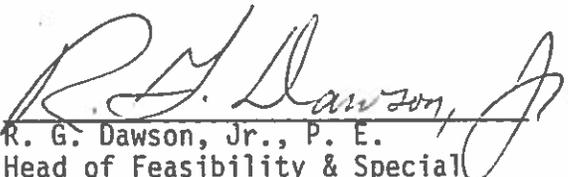


FEASIBILITY STUDY

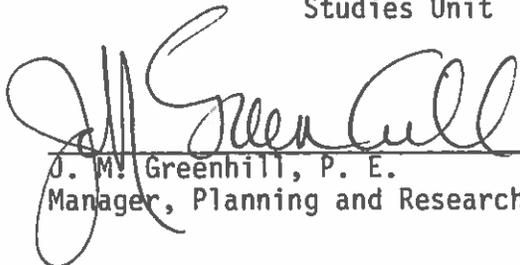
NC 274, From NC 275 to US 29/74  
in Gastonia, Gaston County  
U-2408

Prepared by  
Planning and Research Branch  
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I. DESCRIPTION

This report covers a preliminary study of the proposed upgrading of the subject road to a multi-lane facility. As shown on the attached map, this study extends from NC 275 in West Gastonia to US 29/74 in Gastonia. The project is approximately 2.8 miles in length and appears in the 1988-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection. It is not currently funded.

II. PURPOSE OF PROJECT

Existing Route Characteristics

NC 274 appears as a major thoroughfare on the Gaston Urban Area Thoroughfare Plan adopted in 1986. It serves the western area of Gastonia and provides a major connector between I-85 and US 29/74.

The studied section of road has varying pavement widths. From NC 275 to the I-85 interchange, the basic pavement width is 24 feet with 2 to 6-foot shoulders. There is a left-turn lane at NC 275. The 0.3-mile section at the I-85 interchange has two 26-foot pavements with curb and gutter and a 16-foot raised median. From the interchange to US 29/74, the predominant pavement width is 24 feet with 2 to 4-foot shoulders. There are additional turn lanes along this segment at US 29/74, Myrtle Avenue, and Arkray Street.

Garrison Boulevard (SR 2466), which the southern end of the project will tie into, has a 5-lane cross section at the US 29/74 intersection (a left, right, and through lane northbound and 2 lanes through southbound). NC 274 north of the project has a 2-lane, 24-foot pavement flared to accommodate a left-turn lane at the NC 275 intersection.

The existing alignment of NC 274 is generally good and is constructed through rolling terrain. The speed limit for the northwestern segment from NC 275 to SR 1338 (Northwest Blvd.) is 45 mph and 35 mph for the remaining segment to US 29/74.

Two concrete bridges are located on the studied project. They are listed below with pertinent information:

<u>Bridge No.</u>	<u>Location</u>	<u>Length (Ft.)</u>	<u>Width (Ft.)</u>	<u>Age (Yrs.)</u>	<u>Rating (New Bridge=100)</u>
38	I-85	292	80	27	86.6
57	Southern R.R.	236	44	10	95.5

There are 7 existing traffic signals on the studied route. They are located at the intersections with NC 275, Shannon-Bradley Road (SR 1135), Northwest Blvd. (SR 1338), Crescent Lane, and Franklin Avenue (US 29/74), and at the northern and southern I-85 ramp terminals.

Development along the northwestern half of the project is predominantly commercial and industrial, while the remainder is mainly residential.

### Traffic Volumes, Capacity, and Accident Record

Current traffic volumes range from a low of 12,000 vehicles per day (vpd) near US 29/74 to 20,000 vehicles per day (vpd) at the I-85 interchange. Traffic volume north of NC 275 is 11,500 vpd. By the year 2010, it is estimated that traffic volumes will reach from 25,000 vpd near US 29/74 to approximately 35,000 vpd north of I-85.

Accident data for a recent 3 year period indicates a total of 343 accidents, yielding a total accident rate of 746 accidents per hundred million vehicle miles. This is above the statewide average of 285 accidents per hundred million vehicle miles for similar urban N.C. routes. Predominant accident types were rear-end and angle collisions.

Present capacity along the two-lane facility operating under urban conditions is approximately 10,000 vehicles per day. Thus, capacity is exceeded by current traffic volumes at all points along the route.

### Need for Project

The existing road has critical capacity and safety problems at this time, and will have more severe problems in the future that can only be addressed with provision of additional lanes to reduce congestion and increase safety.

## III. RECOMMENDATIONS AND COSTS

Upgrades to NC 274 are proposed for the existing sections of 2-lane pavement (approximately 2.5 miles). The existing 0.3-mile, 4-lane section at the I-85 interchange should suffice for the planning period.

The improvements to the existing two-lane road consist of widening to a 5-lane curb and gutter section, 64-foot face-to-face of curbs. The bridge over Southern Railway will require widening, but the need for a detour structure is not anticipated.

Widening is recommended to be symmetrical from NC 275 to just north of bridge number 57. From north of this bridge to the existing multi-lane section at I-85, widening should be accomplished on the west side. The widening south of I-85 to SR 1338 should also be on the west side, then transition to the east side for the remainder of NC 274 to US 29/74. The existing development, especially on the southern end of the project, is very dense necessitating transitioning of right-of-way to minimize

land damage and costs. A 100-foot total right-of-way width was used for cost estimate purposes.

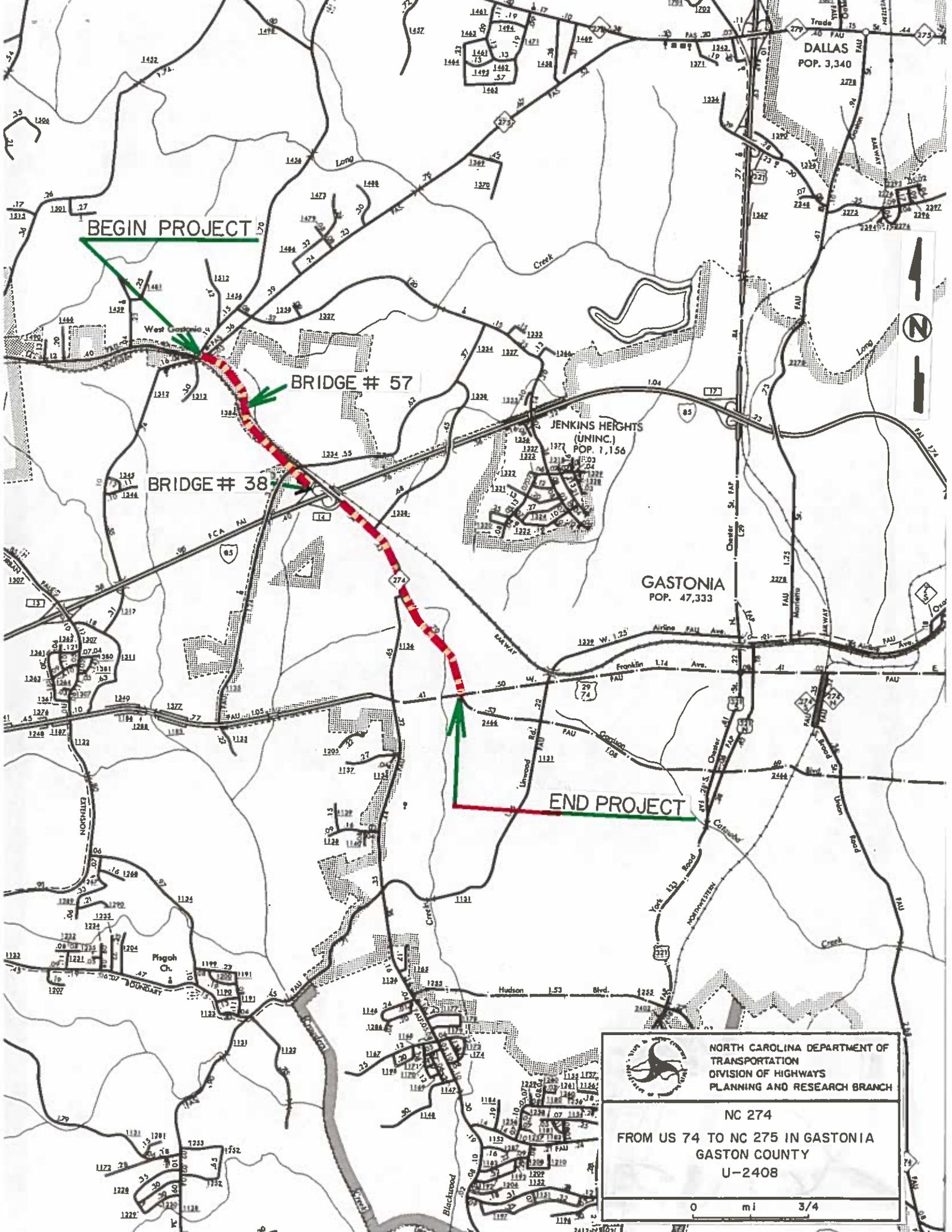
The total estimated cost of the recommended improvements is \$8,800,000, including \$5,400,000 for roadway construction and \$3,400,000 for right-of-way. Cost estimates were prepared by the Preliminary Estimate Engineer and the Right-of-Way Branch.

#### IV. OTHER COMMENTS

Negative environmental impacts of the project are: (1) relocation of 4 residences and 14 businesses; and (2) increased noise levels for the remaining roadside development.

If this project is to be implemented at a future date, all feasible alternatives and their associated impacts will have to be evaluated in a planning and environmental document prior to that time, and a final decision made as to the most appropriate improvement.

MH/rm



BEGIN PROJECT

BRIDGE # 57

BRIDGE # 38

END PROJECT

DALLAS  
POP. 3,340

JENKINS HEIGHTS  
(UNINC.)  
POP. 1,156

GASTONIA  
POP. 47,333


 NORTH CAROLINA DEPARTMENT OF  
 TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 PLANNING AND RESEARCH BRANCH

NC 274  
 FROM US 74 TO NC 275 IN GASTONIA  
 GASTON COUNTY  
 U-2408

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