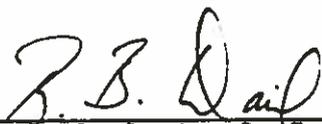


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FEASIBILITY STUDY

US 70 (Monroe Street)
From Barkley Road (SR 2352)
To Fanjoy Road (SR 2318)
Statesville, Iredell County
U-2421

Prepared by
Planning and Research Branch
Division of Highways
N. C. Department of Transportation

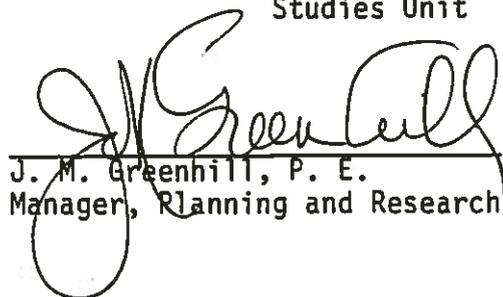


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US 70 (Monroe Street)
From Barkley Road (SR 2352)
To Fanjoy Road (SR 2318)
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I. GENERAL DESCRIPTION

This report covers the widening of US 70 (Monroe Street) from Barkley Road (SR 2352) to Fanjoy Road (SR 2318) in Statesville (see Figures 1 and 2). The project is 1.6 miles long. This project is included in the 1988-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection.

II. PURPOSE OF PROJECT

Existing Route Characteristics

Monroe Street is a radial route into Statesville from the southeast, and it serves as a direct access to the commercial/industrial development located adjacent to it from I-77. Monroe Street is included in the Statesville Thoroughfare Plan as a Major Thoroughfare. It is classified as a Principal Arterial in the North Carolina Functional Classification System and is a Federal Aid Primary Route.

The existing cross section on Monroe Street consists of a 22-foot paved roadway with 2 to 6-foot unpaved shoulders. The roadway widens to a 4-lane, 44-foot, cross section on the approach to Barkley Road. The existing right-of-way is a claimed 60 feet. The existing horizontal and vertical alignments are good. The speed limit on Monroe Street is 45 mph from Barkley Road to SR 2475 where it increases to 55 mph for the remainder of the project.

All intersections along Monroe Street are at grade. The intersection at Barkley Road is signalized while all other intersections are stop sign controlled.

The adjacent portion of Monroe Street to the west of Barkley Road has been widened to a four-lane curb and gutter cross section, 44 feet from face to face of curbs. On the eastern end of the project, the 22-foot shoulder cross section continues.

Roadside development is of moderate to high density along Monroe Street. The development from Barkley Road to SR 2475 is primarily high density commercial development including the large J. C. Penny Distribution Center located on the south side of the project. From SR 2475 to Fanjoy Road, the development changes to primarily residential on the south side with one church and some commercial development near the end of the project. On the north side of the project, across the Southern Railway tracks, the area is developing industrially. The area is served by overhead power and telephone lines, as well as underground gas, water, and telephone lines.

Traffic Volumes, Capacity, and Accident Record

The current traffic volumes on Monroe Street range from a high of 18,400 vehicles per day (vpd) at Barkley Road to a low of 9400 vpd at Fanjoy Road. These volumes are projected to increase to approximately 33,000 vpd and 17,000 vpd respectively by the year 2010. With the present traffic volumes, Monroe Street is operating in excess of the theoretical capacity of the roadway. This is resulting in congestion that will only worsen as traffic volumes continue to grow. The widening of Monroe Street to five lanes will improve traffic operations to Level of Service C initially and to Level of Service D or better throughout most of the planning period. The use of wider cross sections to improve the level of service further is not considered feasible due to constraints of surrounding development and the fact that the additional lanes would have to be extended at least to I-77 to have any practical impact on capacity.

During the three-year period from January 1, 1985 through December 31, 1987 a total of 35 accidents were reported on the studied portion of Monroe Street. This resulted in an accident rate of 167.2 accidents per 100 million vehicle miles (ACC/100 MVM) which compares favorably to a statewide average of 319.7 ACC/100 MVM for all two-lane, urban US routes over the same period. There was 1 fatality during the period, and 16 of the accidents resulted in injuries. The primary accident types were rear-end and angle accidents that were located near intersections. The provision of additional lanes and a center left-turn land should reduce the potential for these types of accidents.

Need for Project

The widening of Monroe Street is needed to provide adequate capacity for the existing and future traffic volumes. The project will also improve access to the varied development surrounding Monroe Street and enhance safety along the road.

III. RECOMMENDATIONS AND COSTS

The widening of the studied section of Monroe Street to a multi-lane facility is immediately warranted. The recommended improvement is a five-lane curb and gutter cross section, 64 feet from face to face of curbs. This cross section will greatly improve the capacity of the roadway and enhance safety. A 100-foot right-of-way is recommended to contain the proposed project.

The estimated costs of the project are as follows:

Construction	\$2,500,000
Right-of-Way	<u>1,500,000</u>
TOTAL	\$4,000,000

The construction cost includes engineering and contingencies and the right-of-way cost includes relocation, acquisition, and utility costs.

IV. ALTERNATIVES CONSIDERED

Since the proposed project involves the widening of an existing highway, no alternative alignments were considered.

A four-lane cross section was considered for the improvement to Monroe Street. The four-lane alternative would cost approximately \$500,000 less than the recommended five-lane cross section, and it would be compatible with the existing four-lane cross section on Monroe Street west of Barkley Street. The interference of existing driveways and side streets and the turning traffic which they generate would create a capacity deficiency on this section soon after it is opened to traffic. Without the center turn lane, the roadway would not only have a capacity deficiency, but would have a high accident potential due to the high number of turns. Drivers are accustomed to using the left lane of a highway as a high speed through lane and are not expecting vehicles to be stopped or turning from this lane. The four-lane cross section would not appreciably lessen the accident potential for rear-end and angle collisions over the present roadway, and these have been the predominant types of accidents on this highway in the past. Due to the inadequate capacity, the difficulty of turning into adjacent development, and the higher accident potential, a four-lane cross section is not recommended.

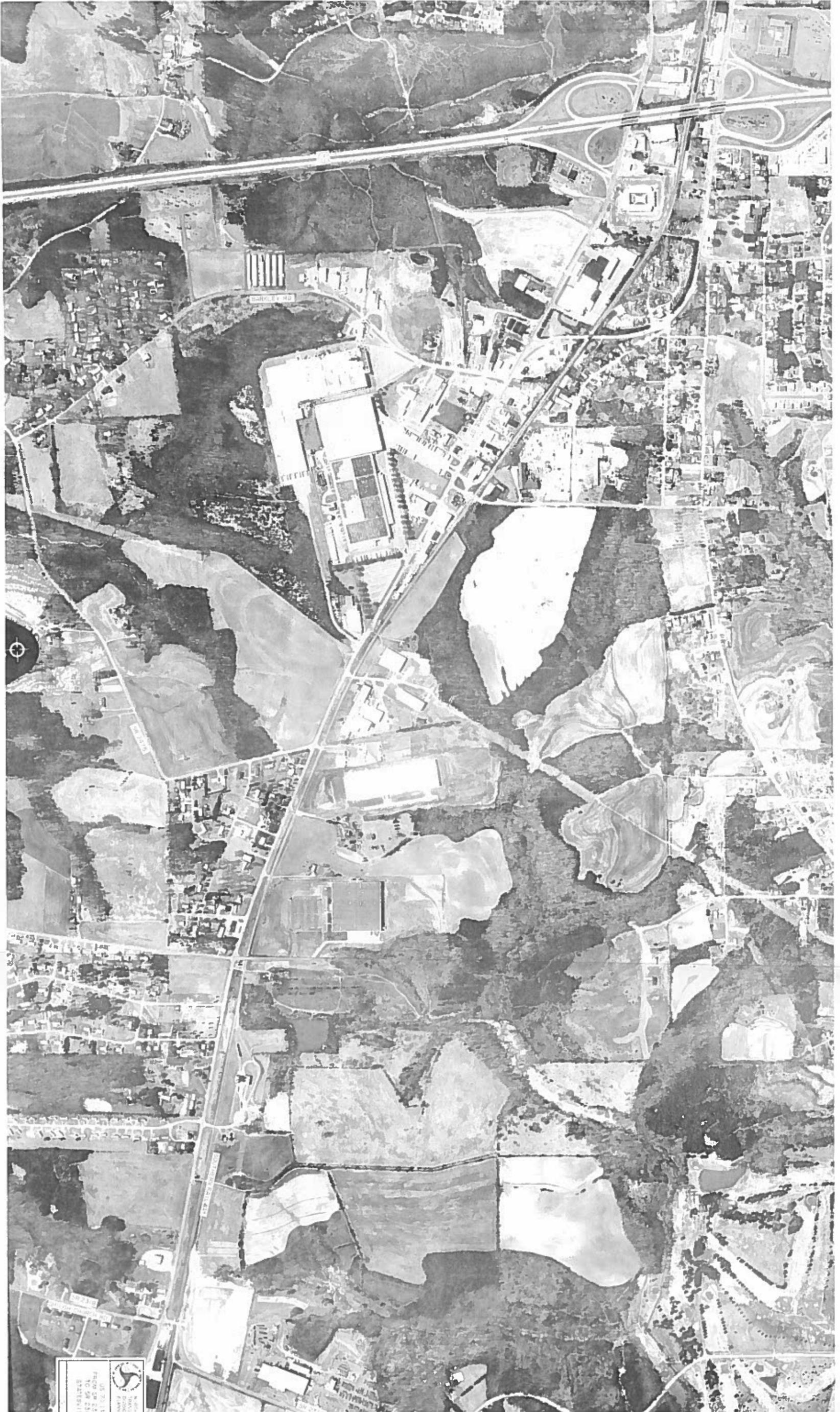
A five-lane cross section utilizing 11-foot travel lanes was also considered for the improvement of Monroe Street. This alternative would be somewhat less costly than the recommended 12-foot lanes, but is was not chosen due to the high truck volumes using Monroe Street.

V. ENVIRONMENTAL EFFECTS

The implementation of the proposed project is not expected to result in any significant impact on the environment. The construction of the project will require the relocation of an estimated two residences and one business. The project will also result in increased noise levels for remaining development adjacent to the roadway. Other impacts will be primarily related to the actual construction of project and will cease upon completion of the project. These include minor erosion and siltation, increased noise levels from construction machinery, and delay and inconvenience to motorists using Monroe Street.

VI. FUTURE ACTIVITIES

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



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