

*At FFI
Location.*

FEASIBILITY STUDY

Cramerton, SR 2505,
(Mayflower Ave.)
Gaston County
U-2516

*U-2205
C moved from 194 to '96*

Prepared by
Planning and Research Branch
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I. DESCRIPTION

This report covers a preliminary study of the SR 2505 (Mayflower Ave.) area in Cramerton. This project is included in the 1990-1996 Transportation Improvement Program (T.I.P.) for feasibility study and/or right-of-way protection, and is not currently funded. Location of the project is shown on Figure 1.

II. PURPOSE OF PROJECT

Existing Conditions

The Town of Cramerton is a small community in southeast Gaston County. The predominant employer in the town is the Burlington Mills factory located along SR 2505. The town is bisected by the twin Southern Railroad tracks paralleling SR 2490 (Eighth Ave.) and SR 2505 (see Figure 2).

Options for crossing the tracks are limited to three grade separations: SR 2209 (Wesleyan Dr.) at the western town limit; SR 2505 directly across from Burlington Mills; and SR 2490 near the Cramerton Town Hall. Of these locations, only the SR 2209 separation is constructed to modern design standards. Pertinent data on these bridges are listed below:

Bridge Number	16	R 303	R 299
Facility carried	SR 2209	Southern R.R.	Southern R.R.
Location	Southern R.R.	SR 2505	SR 2490 (8th Ave.)
Length	145 feet	41 feet	39 feet
Vert. Clearance	23.1 ft. (over RR)	14.8 feet (over rd.)	10.0 feet (over rd.)
Horiz. Clearance	38 feet (rd. width)	15.8 feet (to abut.)	15.8 feet (to abut.)
Age	11 years	50 years	72 years
Sufficiency Rating	97.4	N/A	N/A

As can be seen from the above data, only bridge number 16 is built to a standard that allows for more than one-lane operation. Utilization of this bridge for north/south traffic movement in Cramerton is circuitous due to its location on the northwestern edge of town. The other crossing points have serious capacity problems due to the one-lane bottlenecks.

SR 2505, to the south of the Southern Railroad tracks, is a two-lane facility from SR 2209 to SR 2490. It turns sharply northwest at Burlington Mills to pass under bridge number R-303 described above (see Figure 1). Pavement width along this route is predominantly 18 feet, widening to 24 feet along the Burlington Mills property.

A connecting extension of SR 2505 (labeled Non-System Street on Figure 2) runs from Burlington Mills to SR 2490 south of the railway. The pavement on this two-lane route is in very poor condition.

Previous Studies

A prior feasibility study was undertaken in 1987 (T.I.P. number U-2205) to resolve the deficiencies incurred by the two inadequate structures. The study concentrated on replacement alternatives for bridge number R-299 over SR 2490. This bridge was chosen for upgrading due to route continuity and condition, proximity to existing development, and age of the structure.

Two options were presented as feasible by the study:

- Option 1 - Relocate the Southern Railway tracks immediately southwest of their present alignment in the area of the existing underpass, and construct a new structure over SR 2490.
- Option 2 - Raise the railroad along its present alignment, and construct a new structure at the existing site.

Option 1 was determined to be the least expensive and most logical alternative (see Figure 2). Other options were briefly considered, but each had obvious negative factors and were therefore not studied in detail.

This project is programmed in the 1990-1996 T.I.P. for construction at an estimated cost of \$2,800,000. The current project schedule calls for right-of-way acquisition in FFY 1996, and construction in post FFY 1996.

Traffic Volumes

The present annual average daily traffic on SR 2490 ranges from a low of 2700 vehicles per day (vpd) in town, to a high of 3200 vpd south of bridge R-299. In the year 2010, the traffic under bridge R-299 is expected to increase to approximately 5700 vpd. Presently less than 1000 vpd utilize SR 2505.

III. STUDIED ALTERNATIVES

Due to objection by the Town of Cramerton to the feasible options investigated in the project U-2205 study, another option was suggested by local officials as an acceptable alternative to replacing the SR 2490 underpass of the railroad. This alternative consists of three components (see Figure 2):

- 1. Constructing a skewed separation over the railway (running north/south) from SR 2490 to SR 2505. This structure would be located approximately 700 feet southeast of SR 2209.
- 2. Upgrading SR 2505 from this proposed separation to its 90-degree turn at Burlington Mills to an adequate two-lane road.
- 3. Upgrading the existing non-system road from SR 2505 to SR 2490 southeast of the mill.

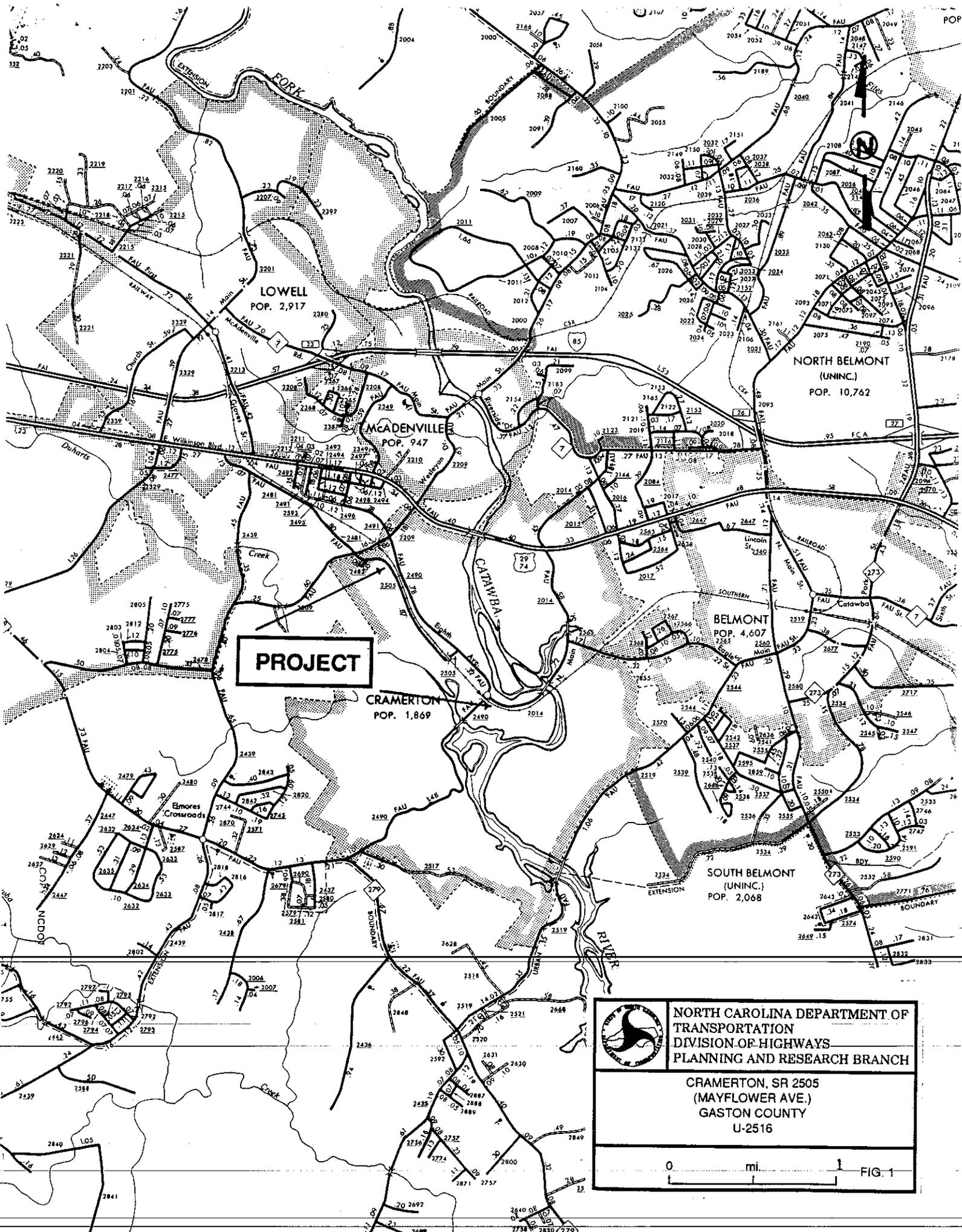
This alternative would provide an alternate route for traffic from the north to NC 279 by way of SR 2490 in southwest Cramerton.

IV. RECOMMENDATIONS

The alternative described above would provide an alternative route and relieve traffic on Eighth Avenue, but would not address the serious deficiency caused by the narrow width and condition of bridge R-299 unless it is permanently closed. However, closing the bridge is not a prudent plan, because traffic served by SR 2490 north of the railroad would be forced to travel considerably out of direction to reach destinations to the south. In addition, widening of narrow SR 2505 to an adequate 2-lane roadway would cause substantial and costly damage to residences that very closely front the road at elevations high above the road.

Due to poor traffic circulation, higher overall cost, and significant disruption to existing development, the alternative of utilizing SR 2505 for rerouting SR 2490 traffic through Cramerton is not recommended. The original recommendation to replace the existing SR 2490 underpass of the railroad at or near the existing site remains the most viable option to serve the Cramerton area. Relocating the railway just south of the existing location at a raised elevation will allow construction of a bridge with adequate vertical and horizontal clearances to accommodate a two-lane highway and maintain train movements during construction. The existing structure and portions of the existing railroad would be removed upon completion of the improvement.

MH/plr



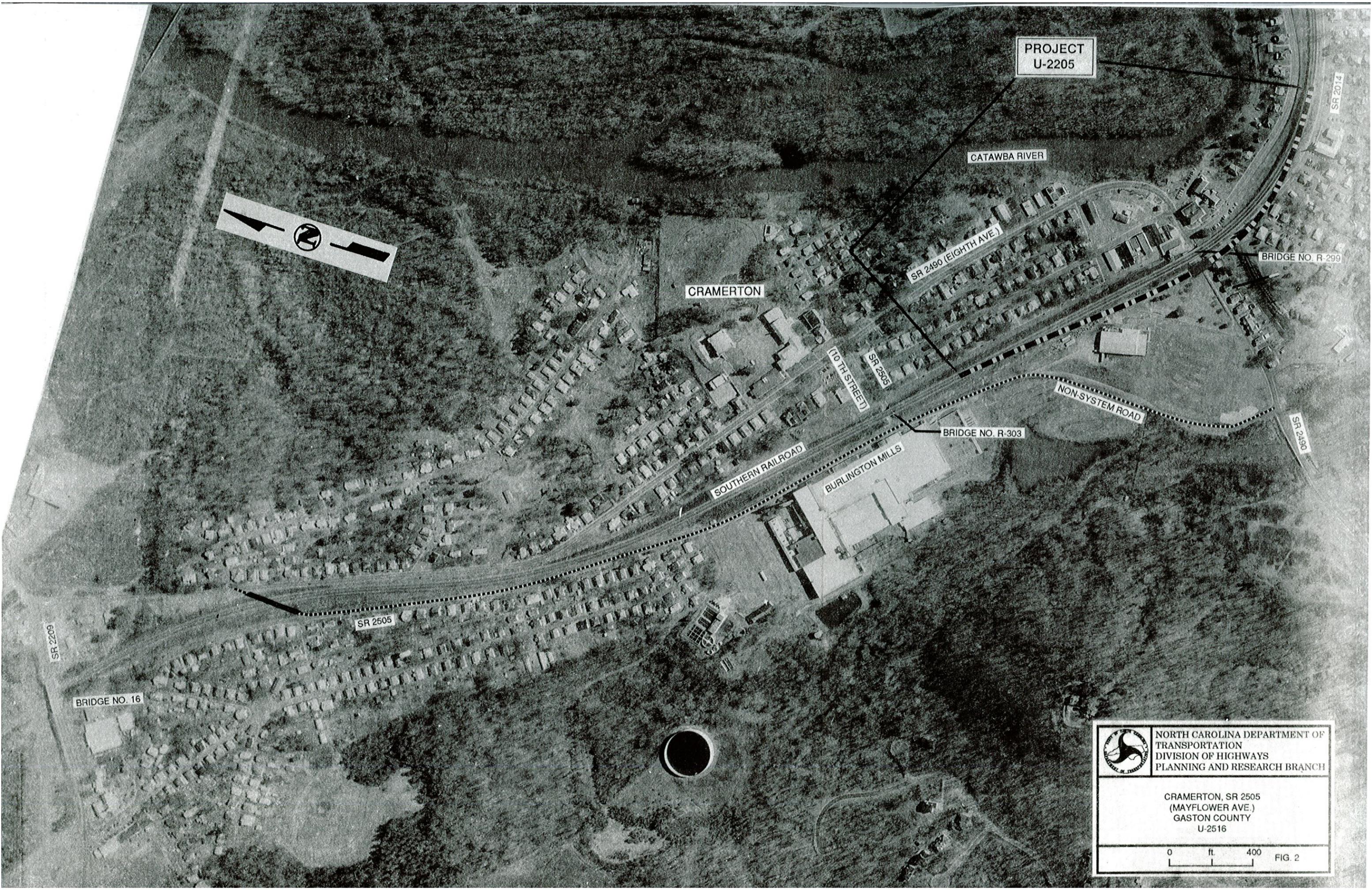
PROJECT



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

**CRAMERTON, SR 2505
(MAYFLOWER AVE.)
GASTON COUNTY
U-2516**

0 mi. 1 FIG. 1



PROJECT
U-2205

CATAWBA RIVER

SR 2490 (EIGHTH AVE.)

BRIDGE NO. R-299

CRAMERTON

(10 TH STREET)

SR 2505

NON-SYSTEM ROAD

BRIDGE NO. R-303

SR 2490

SOUTHERN RAILROAD

BURLINGTON MILLS

SR 2505

SR 2209

BRIDGE NO. 16

	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANNING AND RESEARCH BRANCH
	CRAMERTON, SR 2505 (MAYFLOWER AVE.) GASTON COUNTY U-2516
0 ft 400	
FIG. 2	