

FEASIBILITY STUDY

Charlotte  
Park Road - Johnston Road Extension - US 521  
From Goneaway Road to South Carolina Line  
Mecklenburg County  
U-2204  
and  
R-2242

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

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Park Road - Johnston Road Extension - US 521  
From Goneaway Road to South Carolina Line  
Mecklenburg County  
U-2204  
and  
R-2242

The subject project is included in the 1987-1995 Transportation Improvement Program for feasibility study and/or right-of-way protection. This report provides a brief, initial analysis of possible improvements. The project is not currently funded.

I. GENERAL DESCRIPTION

The segment of the project described as U-2204 in the Transportation Improvement Program includes improvements as follows (see Figure 1):

1. Widen Park Road from Goneaway Road to Johnston Road
2. Widen Johnston Road from Park Road to McAlpine Creek
3. Extend Johnston Road to the planned Outer Loop
4. Provide an interchange at the Outer Loop

Improvements described by project R-2242 are as follows:

1. Construct new connector from Outer Loop to US 521
2. Widen US 521 to South Carolina Line

II. PURPOSE OF PROJECT

Park Road and Johnston Road are presently two-lane facilities. Some turning lanes and segments of curb and gutter exist at various locations on these routes. The current traffic volumes on Park Road and Johnston Road exceed the capacities of these streets. Estimated 1987 and 2007 traffic volumes are shown in Figure 2. Initial volumes range from 6,500 VPD (south of the Outer Loop) to 22,000 VPD (north of the Outer Loop). Projected (year 2007) volumes range from 11,700 VPD to 39,600 VPD.

Currently, severe congestion and intolerable delays are experienced on Park Road. The studied improvements would provide additional lanes which will increase the capacity of the existing roads.

The studied route is designated as a major thoroughfare in the Charlotte Thoroughfare Plan. The primary function of the recommended improvements would be to provide a radial route into Charlotte from the south, with an interchange at the planned Outer Loop. Park Road and Johnston Road traverse a rapidly developing area of Charlotte. Substantial new growth is occurring in the studied corridor. The City of Charlotte plans to extend Park Road northward from the northern terminal (Goneaway Road) of the studied project within the next year.

### III. RECOMMENDED IMPROVEMENTS

For analysis purposes, the studied routes have been divided into sections (see Figure 1). These sections and recommended improvements (see Figure 3) are described as follows:

- Section A: Park Road - Goneaway Road to Sharon Road. Widen to a five-lane (59-foot) curbed roadway.
- Section B: Park Road - Sharon Road to Gleneagles Road. Widen to a seven-lane (81-foot) curbed roadway.
- Section C: Park Road - Gleneagles Road to Johnston Road. Widen to a six-lane divided facility with a 14-foot median.
- Section D: Johnston Road - Park Road to NC 51. Widen to a five-lane (59-foot) curbed roadway.
- Section E: Johnston Road - NC 51 to McAlpine Creek. Widen to a five-lane (59-foot) curbed roadway.
- Section F: Johnston Road Extension - McAlpine Creek to Outer Loop. Provide a five-lane (59-foot) curbed roadway on new location.
- Section G: Interchange at Outer Loop. Provide a diamond-type interchange.
- Section H: Johnston Road Extension - Outer Loop to US 521. Provide a four-lane divided facility on new location.
- Section I: US 521 - Johnston Road Extension to South Carolina line. Widen to a four-lane divided facility.

Proposed right-of-way widths are shown in Figure 3. Partial control of access is recommended for Sections F and H (new location).

Typical roadway cross sections (for Sections A,B,C, and D only) are shown in Figure 4. These recommendations were taken from a City of Charlotte, Department of Transportation study entitled "Park Road/ Johnston Road Widening Project (from Goneaway Road to NC 51)."

### IV. ALTERNATIVES

For the segments of the project on new location the recommended alignments are based on the information available at this time. In Section H, one alternative alignment was studied but not selected.

For the segments of the project on existing location, alternative cross sections may be feasible. Detailed surveys and preliminary design work would be required to compare alternative cross sections.

## V. ENVIRONMENTAL IMPACTS

The primary impacts of the project are expected to be positive. Improved access will benefit the entire area.

Possible adverse impacts include: (1) relocation of a few families; (2) limited disruption of wetlands; (3) conversion of woodlands to high-way purposes; and (4) increased noise levels.

## VI. ESTIMATED COST

The estimated cost of studied improvements is shown in Figure 3.

The segment of the project north of the Outer Loop (U-2204) is estimated to cost \$18,445,000, including \$11,725,000 for construction, and \$6,720,000 for right-of-way acquisition.

The segment of the project south of the Outer Loop (R-2242) is estimated to cost \$11,565,000, including \$6,125,000 for construction, and \$5,440,000 for right-of-way acquisition.

## VII. SCOPE OF STUDY

Construction cost estimates, furnished by the Roadway Design Unit, were based on a blue-line copy of a 1 inch = 200 feet aerial mosaic.

Right-of-way estimates were based on the same map.

## VIII. SUMMARY

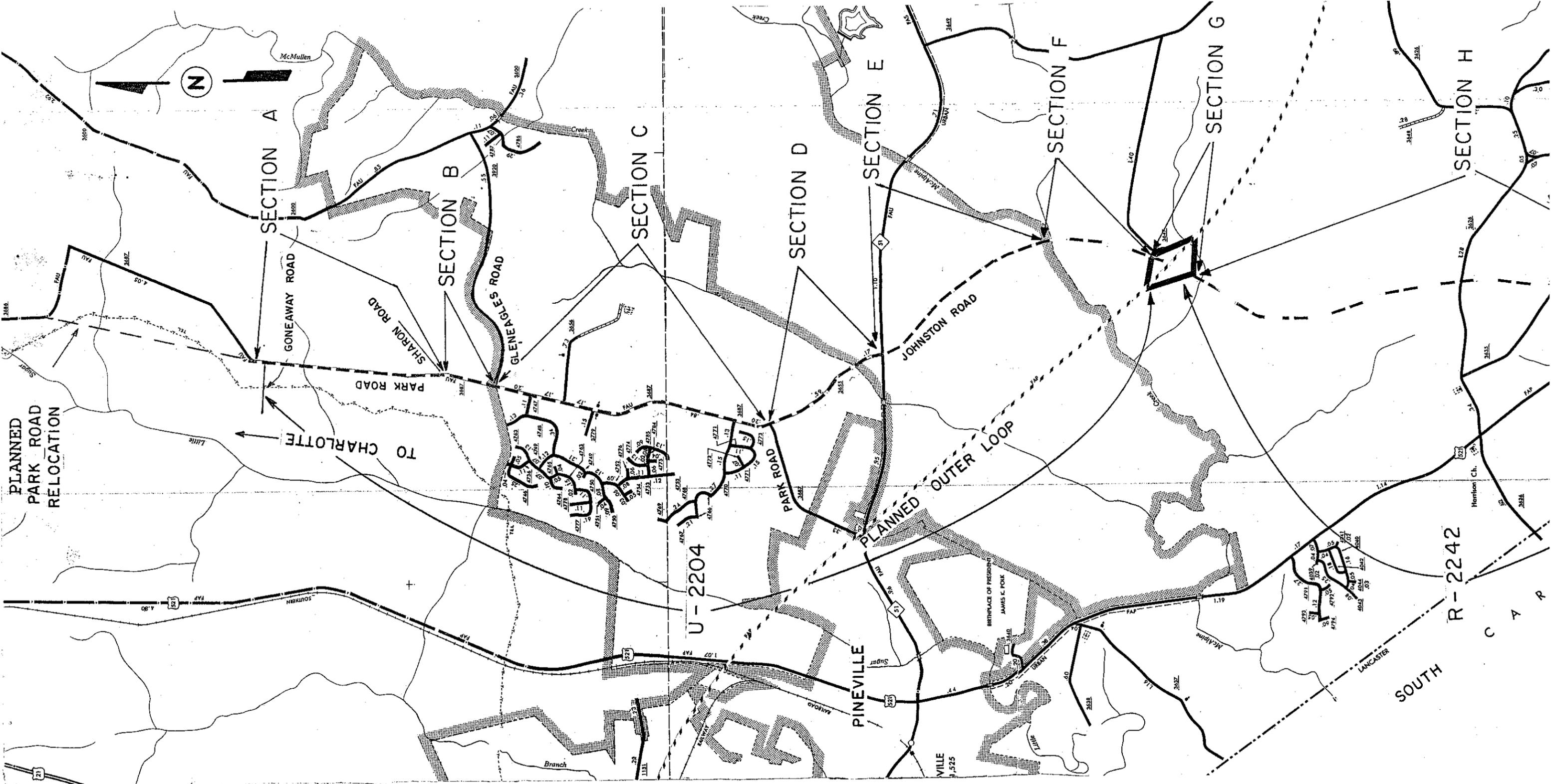
The studied improvements are highly desirable and easily justifiable. The widening of Park and Johnston Roads in Charlotte would improve traffic flow on these facilities. Extending the project on new location to South Carolina would create a bypass of Pineville thus relieving congestion on NC 51 and US 521 in Pineville.

The project is strongly supported by the City of Charlotte. It is anticipated that developers will donate the right-of-way for the segments on new location.

It would be desirable to prepare a planning/environmental document to obtain public input and evaluate any feasible alternatives. Functional design work is also needed to assist in reservation of right-of-way.

WE/sdt

PLANNED  
PARK ROAD  
RELOCATION



SECTION A

SECTION B

SECTION C

SECTION D

SECTION E

SECTION F

SECTION G

SECTION H



GONEAWAY ROAD

SHARON ROAD

GLENGALES ROAD

JOHNSTON ROAD

PLANNED OUTER LOOP

TO CHARLOTTE

U-2204

PINEVILLE

BRITNACE OF PRESIDENT  
JAMES K. POLK

R-2242

SOUTH

LANCASTER

Harrison Ch.

VILLE

LANCASTER

C A R

# ESTIMATED TRAFFIC VOLUMES

$$\frac{1987 \text{ ADT}}{2007 \text{ ADT}} = \frac{00}{00}$$

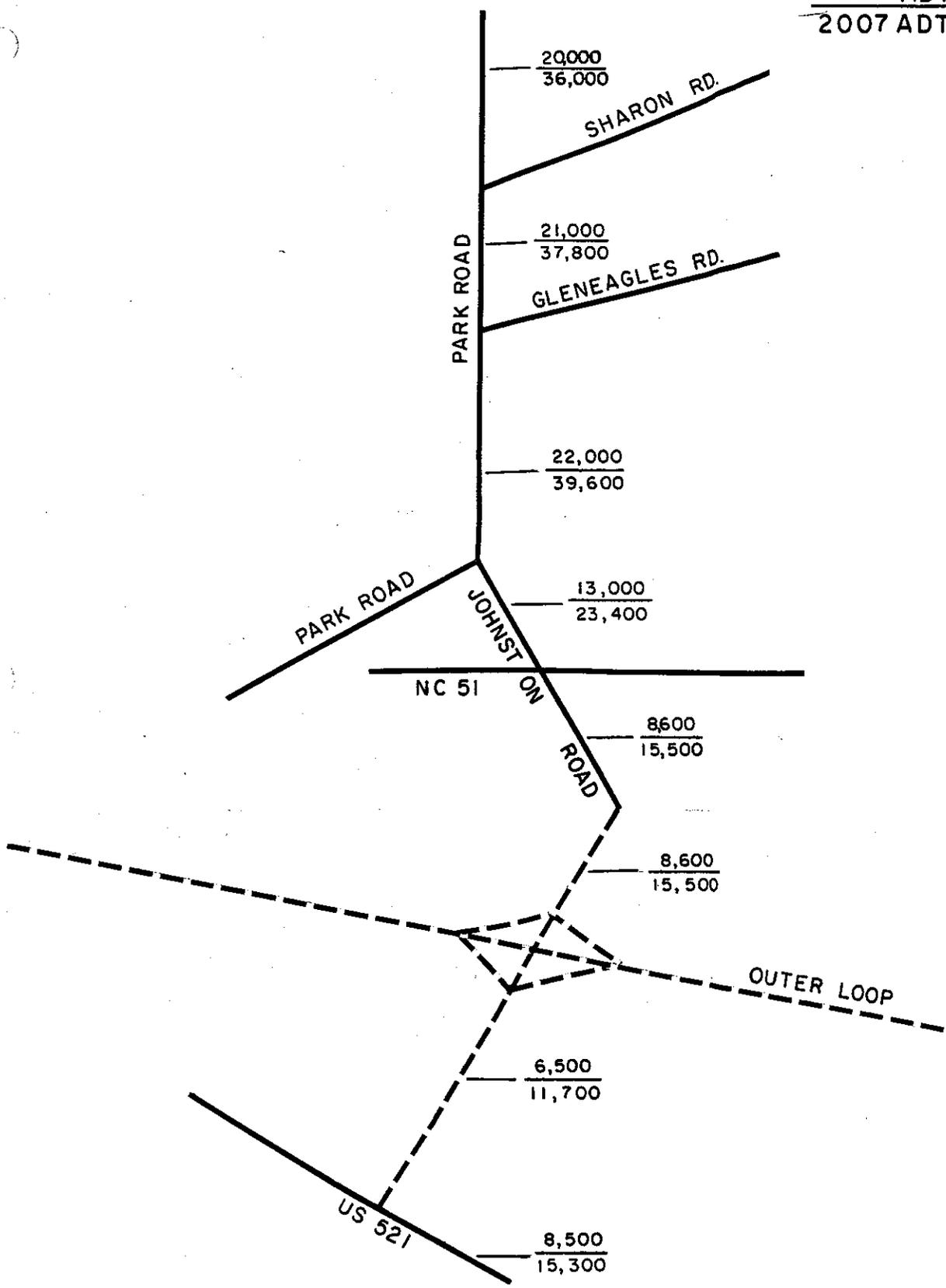


FIGURE 2

U-2204

Route	Section	Termini	Length (miles)	Proposed Roadway	Proposed R/W	Estimated Construction Costs	Estimated R/W Costs	Total Costs
Park Rd.	A	Goneaway Rd. to Sharon Rd.	1.2	59' curbed 5 lanes undivided	80 ft.	\$ 1,350,000	\$ 730,000	\$ 2,080,000
Park Rd.	B	Sharon Rd. to Gleneagles Rd.	0.4	81' curbed 7 lanes undivided	102 ft.	\$ 775,000	\$ 480,000	\$ 1,255,000
Park Rd.	C	Glensagles Rd. to Johnston Rd.	1.6	2 @ 37' curbed 6 lanes divided	108 ft.	\$ 2,400,000	\$ 2,480,000	\$ 4,880,000
Johnston Rd.	D	Park Road to NC 51	0.8	59' curbed 5 lanes undivided	80 ft.	\$ 1,300,000	\$ 550,000	\$ 1,850,000
Johnston Rd.	E	NC 51 to McAlpine Creek	1.5	59' curbed 5 lanes undivided	80 ft.	\$ 1,400,000	\$ 260,000	\$ 1,660,000
Johnston Rd. Ext.	F	McAlpine Creek to Outer Loop	0.6	59' curbed 5 lanes undivided	80 ft.	\$ 1,950,000	\$ 500,000	\$ 2,450,000
Interchange at Outer Loop	G	-	-	-	-	\$ 2,550,000	\$ 1,720,000	\$ 4,270,000
Totals						\$11,725,000	\$6,720,000	\$18,445,000

R-2242

Johnston Rd. Ext.	H	Outer Loop to US 521	2.8	2 @ 24' 4 lanes divided		\$ 5,400,000	\$4,370,000	\$ 9,770,000
US 521	I	Johnston Rd. Ext. to S. C.	0.6	2 @ 24' 4 lanes divided		\$ 725,000	\$1,070,000	\$ 1,795,000
Totals						\$ 6,125,000	\$5,440,000	\$11,565,000

<sup>a</sup> Interchange cost could be attributed to R-2242 instead of U-2204.

FIGURE 3

