

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

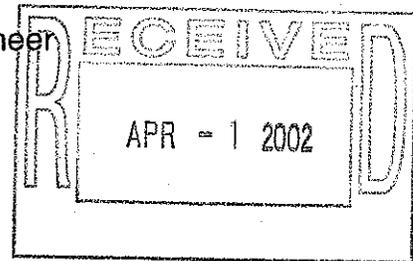
## INTERDEPARTMENT CORRESPONDENCE

FILE: STP-0004-00(527) Baldwin County  
P.I. No.: 0004527  
SR 243/US 441 @ CR 466/Swint &  
CS 670/Caraker/Milledgeville  
Safety/Intersection Improvements

OFFICE: Traffic Safety and Design  
Atlanta, Georgia  
DATE: March 28, 2002

FROM:  Phillip M. Allen, State Traffic Safety & Design Engineer

TO: Mike Thomas, District Engineer, Tennille  
Attn: David Griffith



SUBJECT: **APPROVED CONCEPT REPORT**

Attached is a copy of the approved concept report on the above listed project for your use and further handling.

This project consists of merging the approaches of SR 243, Swint Avenue, and Cracker Street by constructing a modern roundabout with a slip ramp on the southbound approach of SR 243. A stop and go traffic signal is not warranted.

By copy of this letter, this office is requesting for this project be assigned to Chuck Hasty as Project Manager. The design of this project will be handled under our Consultant Design Contract, STP-0001-00(853).

Should you have any questions, please contact Ken Werho of this office at 404-635-8144.

PMA:kms

### Attachments

cc: Frank Danchetz  
Tom Turner, w/attach.  
David Mulling, w/attach.  
Wayne Hutto, w/attach.  
Herman Griffin, w/attach.  
Harvey Keeper, w/attach.  
Roger Price, w/attach.  
General Files

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

BALDWIN COUNTY

STP-0004-00(527)

FEDERAL ROUTE NO: 441

STATE ROUTE NO: 243

GADOT P.I. NO: 0004527

SEE ATTACHED  
LOCATION SKETCH

Date of Report: December 6, 2001

RECOMMENDED: 12/20/01  
DATE

Phillip M. Allen  
STATE TRAFFIC SAFETY & DESIGN ENGINEER

RECOMMENDED: 10-07-02  
DATE

Michael L. ...  
DISTRICT ENGINEER

RECOMMENDED: 1/16/03  
DATE

John L. D... ..  
CHIEF ENGINEER

APPROVED: \_\_\_\_\_  
DATE

Tom Clump  
COMMISSIONER



**PROJECT CONCEPT REPORT**

**P.I. No.:** 0004527

**Project No.:** STP-0004-00(527) Baldwin County

**Route No.:** S.R. 243/US 441  
CR 466/Swint Avenue  
CS 670/Caraker Street

**Location:** The intersection of S.R. 243 at Swint Avenue/Caraker Street is located at the south of the City Limits of Milledgeville, approximately 9 miles north of the Wilkinson County Line.

**Description:** This project proposes to merge the approaches of S.R. 243, Swint Avenue, and Caraker Street by constructing a modern roundabout with a slip ramp on the southbound approach of S.R. 243.

<b><u>Traffic – Current ADT:</u></b>	S.R. 243	-----	14,000 (1998 ADT)
	Swint Ave.	-----	5,600 (1998 ADT)
	Caraker St.	-----	3,100 (1998 ADT)

**Existing Typical:** S.R. 243: The northbound approach consists of 1-20 ft. and 1-11 ft. travel lane, and an 11 ft. northbound right-turn lane. The southbound approach consists of 4-10 ft. lanes; 3 travel lanes and a southbound left-turn lane. Both approaches have sidewalks and concrete curb and gutter.

Swint Avenue: 2-12 ft. travel lanes with concrete curb and gutter.

Caraker Street: 2-20 ft. travel lanes with concrete curb and gutter.

<b><u>Existing Right of Way:</u></b>	S.R. 243	-----	60' (Estimated)
	Swint Ave.	-----	50' (Estimated)
	Caraker St.	-----	80' (Estimated)

**Existing Traffic Control:** S.R. 243 is a through movement. Swint Avenue is controlled by a yield sign at the intersection of S.R. 243. Caraker Street is controlled by stop signs and stop bars at Swint Avenue and S.R. 243.

**Existing Major Structures:** None.

**Statement of Need & Purpose:** Accident history shows that in a one year period beginning in 8/99, there were 7 accidents at this intersection. Of these, four were left-turn collisions and one was a right-angle collision, which are considered correctable by installation of a roundabout. Observations confirmed that inadequate storage exists between Swint Avenue and S.R. 243 for school buses turning left from Caraker Street. In addition, warrants 1, 9, and 11 were met in the traffic signal warrant evaluation. Although a signal is warranted, given the geometrics of this location it was determined that an alternative solution should be derived that would involve merging the four approaches to form a single intersection. By constructing a modern roundabout at this location, left-turns will be eliminated which will reduce the number of accidents. To improve the safety and orderly progression of traffic through the intersection, these improvements are recommended.

**Bicycle & Pedestrian Considerations:** The sidewalk on the west side of S.R. 243 will be replaced and crosswalks will be installed on the Swint Avenue and Caraker Street approaches of the roundabout.

**Length:** 0.35 mile

<b><u>Termini:</u></b>	S.R. 243	Swint Ave.	Caraker St.
<b>From M.P.</b>	9.21	0.58	0.00
<b>To M.P.:</b>	9.46	0.64	0.04

**PDP Class:** Minor Existing

**Functional Class:** S.R. 243 ----- Urban Minor Arterial  
 Swint Ave. ----- Urban Collector Street  
 Caraker St. ----- Urban Minor Arterial

**Max Degree of Curve:** +/- 4.0 Degrees                      **Max Grades:** +/-7.0 %

**Design Speed:** S.R. 243 ----- 40 mph  
 Swint Ave. ----- 35 mph  
 Caraker St. ----- 30 mph

**Proposed Typical Section:** S.R. 243: 3-12 ft. travel lanes, one in each direction, tapering to 2-16 ft. lanes with sidewalks and concrete curb and gutter and a southbound slip ramp, separated from the roundabout by a splitter island.

Swint Avenue: 2-12 ft. travel lanes in each direction, tapering to 2-16 ft. lanes separated by a splitter island with concrete curb and gutter.

Caraker Street: 2-20 ft. travel lanes in each direction tapering to 2-16 ft. lanes separated by a splitter island with concrete curb and gutter.

Proposed Roundabout: A 20 ft. travel lane with an exterior non-mountable and interior mountable concrete curb and gutter adjacent to a 7 ft. concrete apron with an interior non-mountable curb and gutter. The island will be landscaped and lighted.

**Proposed Major Structures:** None.

**Type Access:** By Permit.

**Traffic Control During Construction:** Traffic operation shall be maintained during construction by a temporary detour.

**Right-of-Way Requirement:** The City of Milledgeville shall be responsible for the acquisition of all Required Right of Way for this project.

**Utilities:** The City of Milledgeville shall be responsible for all Utility adjustments.

**Estimated Cost:**

<b><u>Item</u></b>	<b><u>Total Amount</u></b>	
Right-of-way	\$ 1,297,800	(By City of Milledgeville)
Utilities	\$ 150,100	(By City of Milledgeville)
Estimated LGPA Total	\$1,447,903	
Construction	\$ 313,059	
Traffic Signal	\$ 0	
Railroad Equipment	\$ 0	
E & C 10 %	\$ 31,305	
Total Construction	\$ 344,364	

**Permits Required:** None.

**Level of Environmental Analysis:** Categorical Exclusion.

**Level of Public Involvement:** None.

**Time Saving Procedures Appropriate:** Yes (X) No ( )

**Design Variances Required:** None.

**Alternates Considered:** Since several traffic signal warrants were met, a traffic signal could be installed at the existing intersection, however, given the geometrics of this location, it was determined that an alternative solution should be derived that would involve merging the four approaches to form a single intersection. The solution was the construction of a modern roundabout.

**Comments:** This project will be built in two stages.

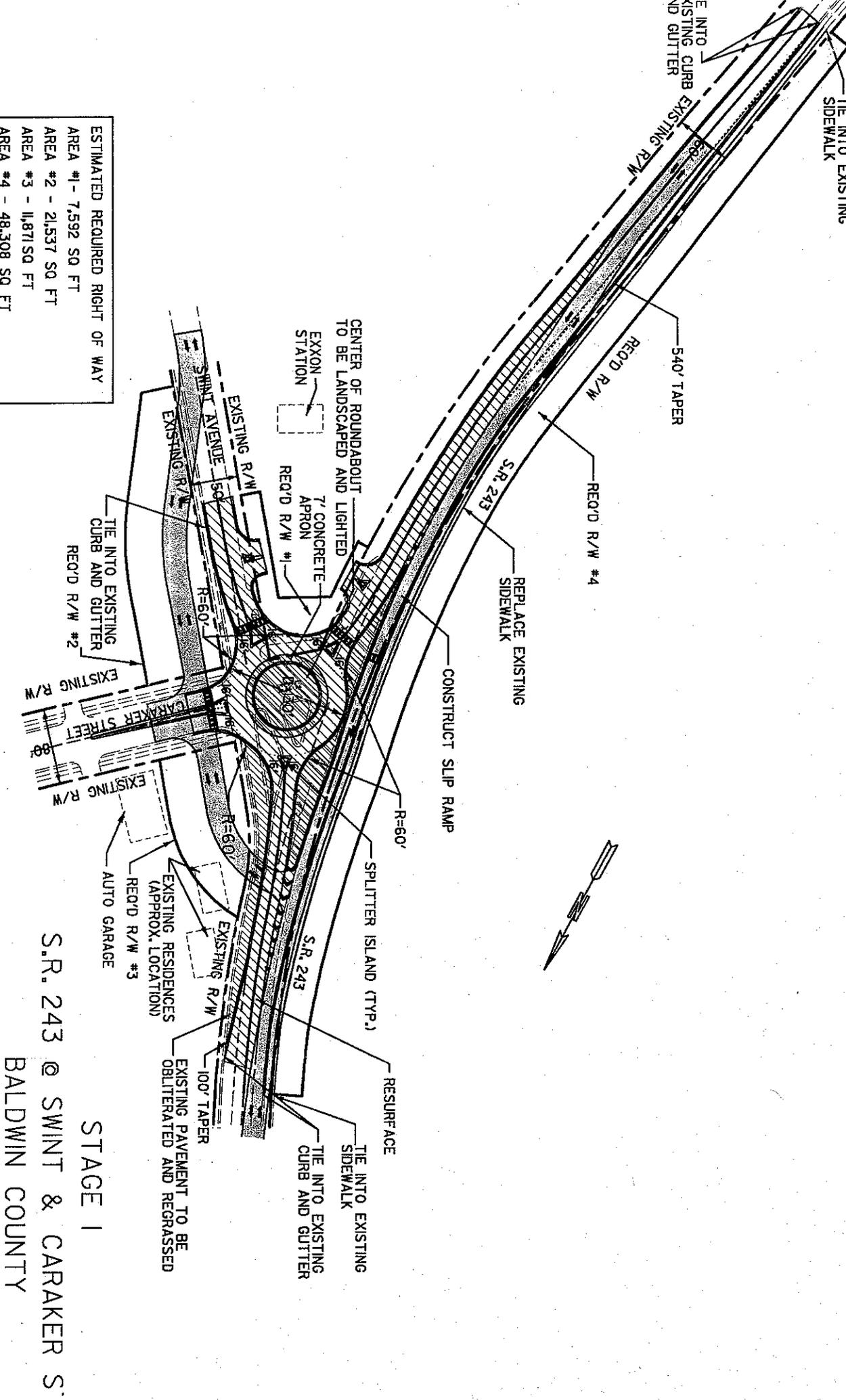
**Attachments:** None

Prepared by Gresham, Smith and Partners on behalf of the Office of Traffic Safety and Design of the Georgia Department of Transportation.

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Michael R. Holt, P.E.

ESTIMATED REQUIRED RIGHT OF WAY	
AREA #1 -	7,592 SQ FT
AREA #2 -	21,537 SQ FT
AREA #3 -	11,871 SQ FT
AREA #4 -	48,308 SQ FT
TOTAL AREA - 89,308 SQ FT	

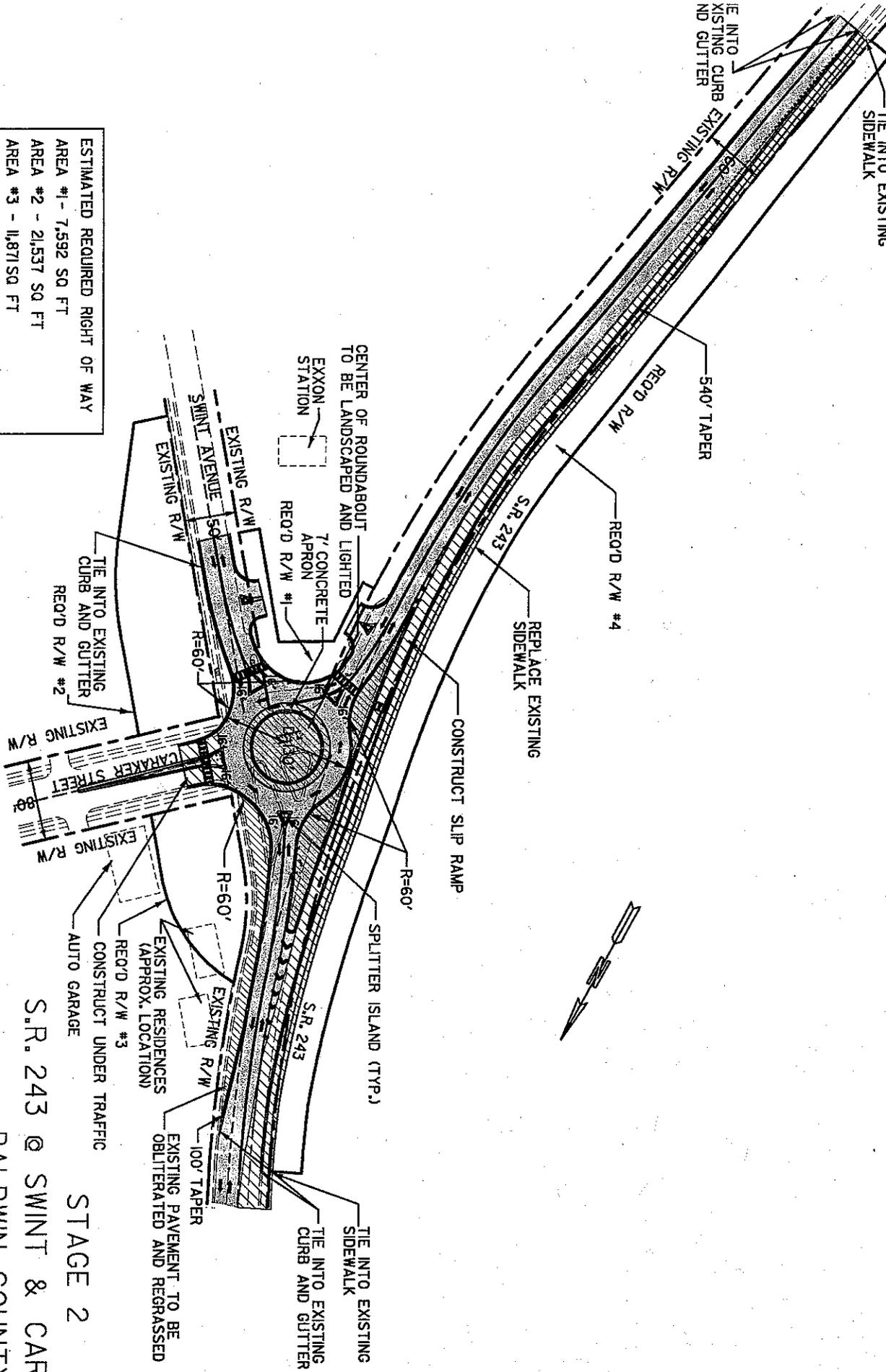


S.R. 243 @ SWINT & CARAKER S.  
BALDWIN COUNTY

STAGE I



ESTIMATED REQUIRED RIGHT OF WAY	
AREA #1 -	7,592 SQ. FT.
AREA #2 -	21,537 SQ. FT.
AREA #3 -	11,871 SQ. FT.
AREA #4 -	48,308 SQ. FT.
TOTAL AREA - 89,308 SQ. FT.	



S.R. 243 @ SWINT & CARAKER S  
BALDWIN COUNTY

STAGE 2



**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE** State Route 243 at Swint/Caraker Avenue  
Baldwin County

**OFFICE** Tennille

**DATE** February 26, 2001

**FROM** *REP:tp*  
Roger E. Price, District Traffic Engineer

**TO** Joe Fletcher, Assistant State Traffic Operations Engineer

**SUBJECT** TRAFFIC ENGINEERING REPORT

Attached is a Traffic Engineering Report with supporting information, a cost estimate, and a concept drawing for a modern roundabout at this location.

Please advise if you need additional information.

REP:tp



# Georgia Department of Transportation

## TRAFFIC ENGINEERING REPORT

February 22, 2001

LOCATION: *State Route 243 at Swint Avenue / Caraker Avenue*

COUNTY: *Baldwin County*

CITY: *Milledgeville*

REQUESTED BY: *Jane Fallin, adjacent property owner*

REASON FOR INVESTIGATION: *To determine if operational improvements are recommended.*

MILEPOST *9.40*

### FINDINGS

#### TOPOGRAPHY

*The intersection of State Route 243 and Swint / Caraker Avenue is located at the border of the city of Milledgeville in Baldwin County. The southwest quadrant of the intersection is vacant. The southeast quadrant of the intersection is occupied by an Exxon service station. The northwest quadrant is occupied by Birthflowers Landscaping and a residence occupies the northeast quadrant.*

*State Route 243 is a minor arterial that runs north into Milledgeville. The northbound approach of State Route 243 consists of one 20-foot thru lane, one 11-foot thru lane, and a 10-foot right turn lane. The southbound approach of State Route 243 consists of four 10-foot lanes. The roadway has a total width of 40 feet at the intersection. The grade of the northbound approach is -3.5 % and the grade of the southbound approach is +7.0 %.*

*Swint Avenue is a two-lane collector street that runs in a southeastern direction. Its westbound approach to the intersection consists of two 12-foot lanes. The total width of the roadway at the intersection is 24 feet. The grade is 0 % when approaching the intersection.*

Page Two

State Route 243 at Swint Avenue / Caraker Avenue

February 22, 2001

Caraker Avenue is a two-lane collector street that comes in contact with this intersection. The total width of the roadway at the intersection is 45 feet. This approach consists of two 22-foot lanes. The grade is +6.0 % when approaching the intersection.

There are two raised islands located within this intersection. There is concrete curb and gutter on all shoulders of each of the approaches to the intersection.

A location map and sketch of the existing conditions are attached.

### EXISTING TRAFFIC CONTROL

There is a double yellow center line on all approaches. The visibility of the centerlines are poor on Swint and Caraker Avenues. There are stop bars and R1-1 (STOP) signs on Caraker Avenue. There is a R1-2 (Yield) sign at the intersection on Swint Avenue's approach to State Route 243. There are white edge lines on State Route 243 but not on Swint or Caraker Avenues.

### VEHICULAR VOLUME

Twenty-four hour traffic volume counts were taken on September 21, 2000 and September 22, 2000. The peak and one hour maximum volumes are shown below from these counts.

Copies of the traffic volume counts are attached.

ROUTE	APPROACH	PEAK HOUR (3:00pm- 4:00 pm)	ONE HOUR (11:00am- 12:00pm)
State Route 243	NORTHBOUND	thru + right turn 395+91= 486	thru + right turn 352+71= 423
State Route 243	SOUTHBOUND	thru + left turn 457+193= 650	thru + left turn 373+294= 667
Swint Avenue	WESTBOUND	215	236
Caraker Avenue	WESTBOUND	90	79
Intersection	Total	1441	1405

Page Three

State Route 243 at Swint Avenue / Caraker Avenue

February 22, 2001

### VEHICULAR SPEED

The posted speed is 40 mph for State Route 243 and 35 mph for Swint Avenue.  
The speed was not posted for Caraker Avenue.

### PEDESTRIAN MOVEMENTS

During the six hour volume counts three pedestrians were observed around the intersection. Given this information minimal pedestrian movement around the intersection would be expected at any time.

### DELAY

A delay study was not conducted for this study.

### PARKING

Vehicles have not been observed parking near this intersection.

### ACCIDENT HISTORY

Accident information has been compiled for this intersection using reports provided by the Milledgeville Police Department and the Georgia State Patrol. The accident information includes any accident that was between the dates of August 15, 1999 and August 15, 2000. Two left turn collisions, one side swipe, and one right angle type accident occurred at State Route 243 and Swint Avenue. Two left turn collisions and one rear end type collision occurred at Caraker Avenue and Swint Avenue.

Accident listings were also compiled for 1995, 1996, 1997, and 1998.

#### *State Route 243 at Swint/Caraker Avenue*

1995- 6 accidents with 1 injury  
Type: 2 right angles, 3 rear end, 1 sideswipe same

1996- 5 accidents with 5 injuries  
Type: 2 right angles, 1 rear end, 1 sideswipe

1997- 3 accidents with no injuries  
Type: 2 rear ends, 1 foreign object collision

1998- 4 accidents with 2 injuries  
Type: 2 right angles, 1 rear end, 1 foreign object collision

#### *Swint Avenue at Caraker Avenue*

1 accident with 1 injury  
1 rear end

5 accidents with 2 injuries  
3 right angles, 1 rear end, 1 sideswipe

4 accidents with 3 injuries  
3 right angles, 1 rear end

2 accidents with 1 injury  
2 right angles

Page Four  
State Route 243 at Swint Avenue / Caraker Avenue  
February 22, 2001

*A copy of the accident listings and collision diagram is attached.*

#### ADJACENT SIGNALIZED INTERSECTION

*There is no signalized intersection within one-half mile of this intersection.*

#### INTERSECTION HISTORY

*This is the first study performed at this intersection.*

#### OTHER INFORMATION

*Sight distances for the intersection are as follows.*

*Sight distance at the intersection for the northbound approach of State Route 243 is approximately 525+/- feet. Sight distance at the intersection for the southbound approach of State Route 243 is approximately 700+/- feet*

#### WARRANT ANALYSIS

*A Traffic Signal Warrant Evaluation was performed for this intersection based on the data gathered for this report. Warrants I (minimum volume), 9 (four hour volume), and II (peak hour volume), as described in Part 4C of the Manual on Uniform Traffic Control Devices were satisfied. None of the other warrants as described in Part 4C of the manual were satisfied.*

*A copy of the evaluation is attached.*

#### CONCLUSION

*This intersection warrants a signal, but given the geometrics it was determined by this office that an alternative solution should be derived that would involve merging the four approaches to form one intersection. A Modern Roundabout with a slip ramp on the southbound approach of State Route 243 was determined to be a solution satisfactory for current conditions at this intersection.*

Page Five  
Bypass at State Route 23 / Sardis Road  
February 22, 2001

RECOMMENDATIONS

*It is the recommendation of this office that a safety project should be implemented for the construction of a Modern Roundabout with a slip ramp at this location.*

SIGNATURES

PREPARED BY: Todd Price

RECOMMENDED:  DATE: 02/22/01  
DISTRICT TRAFFIC ENGINEER

RECOMMENDED: \_\_\_\_\_ DATE: \_\_\_\_\_  
STATE TRAFFIC OPERATIONS ENGINEER

RECOMMENDED: \_\_\_\_\_ DATE: \_\_\_\_\_  
DIRECTOR OF OPERATIONS

<b>COST ESTIMATE</b>					
<b>ASPALT CONCRETE</b>					
TYPE	AREA		QUAN.	COST	TOTAL
1 1/2" E	6,030 sq. yd.	x 110 per inch	498 tons		
2" B	6,030 sq. yd.	x 110 per inch	633 tons		
6" Base	6,030 sq. yd.	x 110 per inch	1,990 tons		
			3,121 TONS	\$40/TON	\$124,800
<b>CURB AND GUTTER</b>					
		AMOUNT		COST	TOTAL
		3,600 feet		\$10/FT	\$36,000
<b>EARTH WORK</b>					
		AMOUNT		COST	TOTAL
		2000 cu. yd.		\$5/cu. yd.	\$10,000
				<b>TOTAL</b>	<b>\$ 249,600</b>

Additional right away will be required on the south quadrants where the Exxon Service Station is located which could involve the relocation of the station. This was not included in the estimate.