

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

Project Number: CSSFT-0008-00(534)
County: Peach
P. I. Number: 0008534
Federal Route Number: N/A
State Route Number: SR 247 Connector

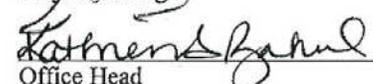
SR 247 CO @ CR 189/John E. Sullivan Road/Walker Road

Submitted for approval:

DATE 31 DECEMBER 2010

DATE 12-3-10



Project Manager


Office Head

Recommendation for approval:

DATE _____

State Design Policy Engineer

DATE _____

Program Control Administrator

DATE 10/15/09

GLENN BOWMAN ^{TJ} (RECOMMENDATION ON FILE)

State Environmental Administrator

DATE _____

State Traffic Engineer

DATE _____

Project Review Engineer

DATE _____

District Engineer

DATE _____

State Transportation Financial Management Administrator

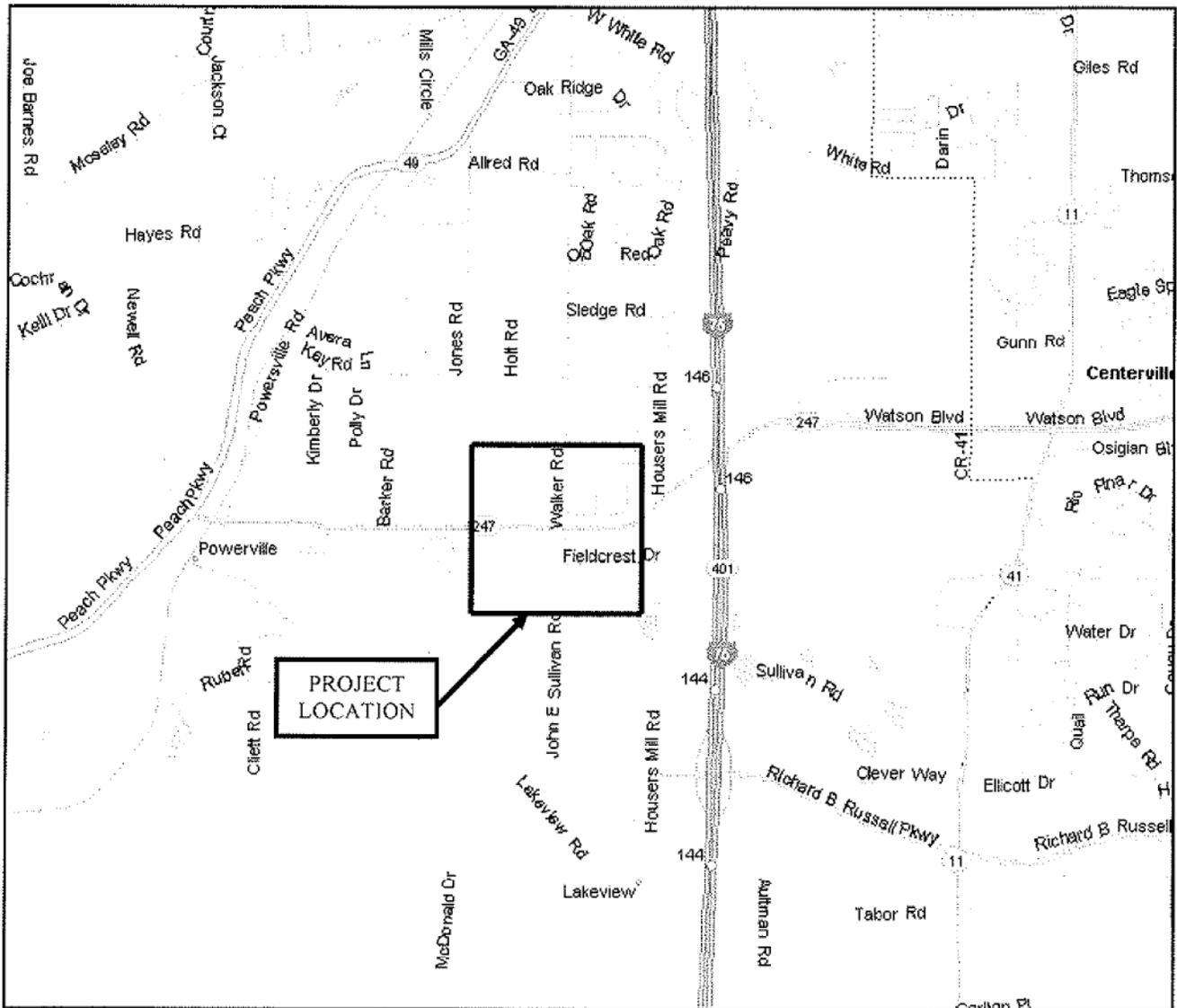
The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Program (RTP) and/or the State Transportation Improvement Program (STIP).

DATE 10/2/09

ANGELA ALEXANDER ^{TJ} (RECOMMENDATION ON FILE)

State Transportation Planning Administrator

PROJECT LOCATION MAP



Need and Purpose: The intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road is located in a rural area outside of Byron, Georgia. SR 247 Connector links SR 49 with Robins Air Force Base in Warner Robins. State Route 247 Connector and CR 189/John E. Sullivan Road/Walker Road are both two-lane rural roadways. State Route 247 Connector is classified as a rural minor arterial, and CR 189/John E. Sullivan Road/Walker Road is classified as a rural minor collector.

The purpose of the proposed project is to improve the operations and overall safety of the intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road. As shown in the table below, the intersection in the existing condition would operate at an unacceptable level of service in both the build year and the design year. This project proposes the installation of a single lane roundabout at the intersection with a bypass lane in the northeast quadrant, which would greatly improve the level of service for the intersection as shown below.

Intersection Level of Service

Traffic Signal Synchro Analysis Level of Service by Approaches				
	N	E	S	W
2011	B/A	C/B	B/B	A/B
2031	B/B	C/B	C/B	A/B

Roundabout Analysis Level of Service by Approaches				
	N	E	S	W
2011	A/A	A/A	A/A	C/A
2031	A/A	A/A	A/A	C/A

Because of its conservative methodologies, the NCHRP-572 model was used for 2011 computations. This will compensate for driver unfamiliarity with roundabout navigation. For the design year 2031, the British Model was used because drivers will have already become acclimated to maneuvering through the roundabout.

From 2005 through 2009 there were 24 crashes at this intersection with half of these crashes resulting in injuries or fatalities. The tables below summarize the crash history and the crash types that have occurred. A larger number of the crashes have been rear end and angle crashes. Adding a roundabout at this intersection would reduce the number of vehicular conflict points from 32 to 8; thereby reducing potential crashes and reducing vehicle delay.

Crash History

Year	Crashes		
	Total	Injury	Fatal
2005	8	5	1
2006	3	1	1
2007	5	0	0
2008	3	2	0
2009	5	2	0
Total	24	10	2

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 County: Peach

Summary of Collision Types

Year	Angle	Head On	Rear End	Sideswipe	Deer	Ditch	Total
2005	2	1	3	1	1	0	8
2006	1	0	1	0	1	0	3
2007	1	0	3	0	0	1	5
2008	2	0	0	0	0	1	3
2009	1	0	2	1	0	1	5
Total	4	1	7	1	2	1	16

Description of the proposed project: The intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road is currently a two lane roadway on all approaches and stop controlled on the CR 189/John E. Sullivan Road/Walker Road approaches. The proposed project would improve the overall safety at the intersection by constructing a single lane roundabout with a bypass lane in the northeast quadrant. The roundabout will be illuminated with roadway lighting.

Environmental Impacts: A potentially eligible environmentally sensitive area is located approximately 400 feet beyond the project limits on the SR 247 Connector with no proposed impacts to the site. A stream crossing is located on the SR 247 Connector east of SR 189/John E. Sullivan Road/Walker Road approximately 170 feet beyond the project limits. There are no eligible or potentially eligible historic resources within the project corridor.

Is the project located in a PM 2.5 Non-attainment area? ___Yes___ No.

Is the project located in an Ozone Non-attainment area? _____Yes ___ No.

PDP Classification: Major _____ Minor

Federal Oversight: Full Oversight (), Exempt (), State Funded (), or Other ()

Functional Classification:

- SR 247 Connector – Rural Minor Arterial
- CR 189/John E. Sullivan Road/Walker Road – Rural Minor Collector

U. S. Route Number(s): N/A

State Route Number(s): 247 Connector

Traffic (AADT):

Roadway	Build Year (2011)	Design Year (2031)
SR 247 Connector	9,925	11,475
CR 189/John E. Sullivan Road/Walker Road	2,700	3,325

Existing Design Features: SR 247 Connector

- Typical Section: Existing rural section with 2-12' travel lanes, a 4' paved shoulder and an 8' grass shoulder.

- Posted speed: 55 mph Minimum radius for curve: no curves on project
- Maximum super-elevation rate for curve: N/A – no curves on project
- Maximum grade: 0.2%
- Width of right-of-way: 120 ft.
- Major structures: None
- Major interchanges or intersections along the project:
 - Intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road
- Existing length of roadway segment: 0.2 miles

Existing Design Features: CR 189/John E. Sullivan Road

- Typical Section: Existing rural section with 2-10' travel lanes and an 8' grass shoulder.
- Posted speed: 55 mph Minimum radius for curve: no curves on project
- Maximum super-elevation rate for curve: N/A – no curves on project
- Maximum grade: 0.4%
- Width of right-of-way: 80 ft.
- Major structures: None
- Major interchanges or intersections along the project:
 - Intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road
- Existing length of roadway segment: 0.1 miles

Existing Design Features: CR 189/Walker Road

- Typical Section: Existing rural section with 2-10' travel lanes and a 5' grass shoulder.
- Posted speed: 50 mph Minimum radius for curve: no curves on project
- Maximum super-elevation rate for curve: N/A – no curves on project
- Maximum grade: 0.5%
- Width of right-of-way: 80 ft.
- Major structures: None
- Major interchanges or intersections along the project:
 - Intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road
- Existing length of roadway segment: 0.2 miles

Proposed Design Features: SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road

- Rural Section containing 2 – 12' lanes with a 4' paved shoulder and a 6' grass shoulder
- Urban Section containing 2 – 12' lanes with an 8' raised median and a 12' shoulder with 30" curb and gutter, 2' grass strip and a 5' sidewalk.
- Proposed Design Speed: 45 mph on all roadway approaches
- Proposed Design Speed: 25 mph inside the roundabout
- Proposed Maximum grade Mainline 0.5 % Maximum grade allowable: 4%
- Proposed Maximum grade Side Street 0.5 % Maximum grade allowable: 6%
- Proposed Maximum grade driveway 11 %
- Proposed Maximum degree of curve no curves on project

- Right-of-Way
 - Width 80'-130'
 - Easements: Temporary (), Permanent (X), Utility (), Other ().
 - Type of access control: Full (), Partial (), By Permit (X), Other ().
 - Number of parcels: 9 Number of displacements:
 - ♦ Business: 0
 - ♦ Residences: 0
 - ♦ Mobile homes: 0
 - ♦ Other: 0
- Structures:
 - Bridges: None
 - Retaining walls: None
- Major intersections and interchanges:
 - Intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road
- Traffic control during construction: Traffic would be maintained at all times through staged construction

▪ Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	()	()	(X)
ROADWAY WIDTH:	()	()	(X)
SHOULDER WIDTH:	()	()	(X)
VERTICAL GRADES:	()	()	(X)
CROSS SLOPES:	()	()	(X)
STOPPING SIGHT DISTANCE:	()	()	(X)
SUPERELEVATION RATES:	()	()	(X)
HORIZONTAL CLEARANCE:	()	()	(X)
SPEED DESIGN:	()	()	(X)
VERTICAL CLEARANCE:	()	()	(X)
BRIDGE WIDTH:	()	()	(X)
BRIDGE STRUCTURAL CAPACITY:	()	()	(X)
LATERAL OFFSET TO OBSTRUCTION:	()	()	(X)

- Design Variances: None anticipated
- Environmental concerns: Two potential USTs/hazardous waste sites are located within the project limits, one on the southeast corner of the intersection, and one at the eastern terminus on the north side. There are also two other sensitive land uses for the Crossroads Ministries and the proposed hospital.
- Level of environmental analysis:
 - ~~Are Time Savings Procedures appropriate?~~ Yes (X) ~~No ()~~ *MS*
 - Categorical Exclusion anticipated (X).
- Utility involvements:
 - BellSouth Telecommunications, Inc., d/b/a- Telecom

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- City of Byron-Sewer
- Flint EMC- Electric
- Fort Valley Utilities Commission-Water, Sewer, & Natural Gas
- Georgia Power Company-Electric
- Jointly Owned Natural Gas – Natural Gas
- Windstream Communications- Telecom

- VE Study Required: Yes () No (X)
- Benefit/Cost Ratio 5.94

Project Cost Estimate and Funding Responsibilities:

	PE	ROW	UTILITY	CST	MITIGATION
By Whom	GDOT	GDOT	GDOT	GDOT	N/A
\$ Amount	\$312,942.00	\$303,800.00	\$99,767.00	\$1,083,277.78	\$0.00

Project Activities Responsibilities:

- Design: Gresham, Smith and Partners
- Right-of-Way Acquisition: GDOT
- Relocation of Utilities: GDOT
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor
- Providing detours: GDOT
- Environmental Studies/Documents/Permits: Edwards-Pitman Environmental, Inc.

Coordination

- Concept Team Meeting held on July 20, 2009. *See Attachments*
- Other projects in the area:
 - CSSTPM-004-000(36) a maintenance and resurfacing project on SR 247 Connector from SR 49 to I-75 would begin construction in summer 2009
 - A new hospital with several outparcels is proposed on the south east corner of the intersection. The main entrance for the hospital will be located approximately 700 feet from the intersection on the SR 247 Connector. Construction is currently scheduled to begin in the spring of 2010.

Scheduling – Responsible Parties’ Estimate

- Time to complete the environmental process: 11/2009 – 6/2010
- Time to complete preliminary construction plans: 11/2009 – 4/2010
- Time to complete right-of-way plans: 5/2010 – 6/2010
- Time to complete final construction plans: 6/2010 – 2/2011
- Time to complete purchase of right-of-way: 8/2010-8/2011
- List other major items that will affect the project schedule: None

Other alternates considered:

- A signalized intersection with left and right-turn lanes on all four approaches was considered at this location. The level of service is less favorable and construction costs are more expensive for the traffic signal with turn lanes in comparison to the roundabout. The roundabout is the preferable option because of the added safety benefit. Roundabouts have been proven to reduce the number and severity of crashes when compared to a signalized intersection. A roundabout has less conflicts points when compared with a signalized intersection which results in fewer crashes. Also, the operating speed through the intersection is lower with a roundabout when compared to a signalized intersection. The lower operating speed allows drivers more time to react to potential conflicts which results in fewer crashes and reduced severity of the crashes
- The no-build alternate was rejected because traffic analysis shows that the intersection would operate at a level of service "F" in the design year.

Attachments:

1. Cost Estimates:
 - a. Construction including E&I
 - b. Right-of-Way
 - c. Completed Fuel/Asphalt price adjustment form
2. Typical Sections
3. Minutes of Concept Team Meeting
- ~~4. Location and Design Notice~~ *or*
5. Capacity Analysis
6. Signal Warrant Analysis
7. Roundabout Analysis

Exempt Projects

Concur: *Jimm B Buel*
Director of Engineering

Approve: *Dale M Kon*
Chief Engineer

Date: *1/5/2011*

Summary of Estimated Costs

Project P.L.No. 0008534

Subtotal Construction Cost:	\$846,111.61
• Engineering & Inspection 5%	\$42,305.58
• Total Fuel Adjustment	\$59,982.25
• Total Liquid AC Adjustment	\$134,878.34
Total Construction Cost:	\$1,083,277.78
• Right of way	\$303,800.00
• Reimbursable Utilities	\$99,767.00
Total Project Cost	\$1,486,844.78

Estimate Report for file "CSSFT-0008-00(534)"

Section ROADWAY					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	60000.00	TRAFFIC CONTROL -	60000.00
210-0100	1	LS	50000.00	GRADING COMPLETE -	50000.00
310-1101	5100	TN	17.99	GR AGGR BASE CRS, INCL MATL	91749.00
402-1812	1040	TN	75.00	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	78000.00
402-3121	1350	TN	75.00	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	101250.00
402-3130	1160	TN	75.00	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	87000.00
402-3190	790	TN	75.00	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	59250.00
413-1000	700	GL	2.15	BITUM TACK COAT	1505.00
439-0022	540	SY	58.00	PLAIN PC CONC PVMT, CL 3 CONC, 10 INCH THK	31320.00
441-0748	600	SY	55.09	CONCRETE MEDIAN, 6 IN	33054.00
441-6222	2700	LF	14.96	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	40392.00
500-9999	48	CY	192.85	CLASS B CONC, BASE OR PVMT WIDENING	9256.80
550-1180	900	LF	38.29	STORM DRAIN PIPE, 18 IN, H 1-10	34461.00
550-1240	330	LF	41.79	STORM DRAIN PIPE, 24 IN, H 1-10	13790.70
550-1300	600	LF	59.55	STORM DRAIN PIPE, 30 IN, H 1-10	35730.00
550-2180	70	LF	33.42	SIDE DRAIN PIPE, 18 IN, H 1-10	2339.40
550-2300	160	LF	40.28	SIDE DRAIN PIPE, 30 IN, H 1-10	6444.80
550-3418	6	EA	545.19	SAFETY END SECTION 18 IN, SIDE DRAIN, 4:1 SLOPE	3271.14
550-3630	4	EA	1661.17	SAFETY END SECTION 30 IN, SIDE DRAIN, 6:1 SLOPE	6644.68
550-4218	2	EA	551.07	FLARED END SECTION 18 IN, STORM DRAIN	1102.14
550-4224	2	EA	643.26	FLARED END SECTION 24 IN, STORM DRAIN	1286.52
550-4230	2	EA	761.29	FLARED END SECTION 30 IN, STORM DRAIN	1522.58
603-2182	18	SY	53.29	STN DUMPED RIP RAP, TP 3, 24 IN	959.22
603-7000	18	SY	4.35	PLASTIC FILTER FABRIC	78.30
668-1100	14	EA	2429.74	CATCH BASIN, GP 1	34016.36
668-4300	2	EA	2269.90	STORM SEWER MANHOLE, TP 1	4539.80
Section Sub Total:					\$788,963.44

Section PERMANENT EROSION CONTROL					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
700-6910	3	AC	824.81	PERMANENT GRASSING	2474.43
700-7000	6	TN	65.41	AGRICULTURAL LIME	392.46
700-7010	8	GL	22.15	LIQUID LIME	177.20
700-8000	3	TN	458.16	FERTILIZER MIXED GRADE	1374.48
700-8100	150	LB	2.34	FERTILIZER NITROGEN CONTENT	351.00
Section Sub Total:					\$4,769.57

Section TEMPORARY EROSION CONTROL					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	2	AC	375.19	TEMPORARY GRASSING	750.38
163-0240	64	TN	164.91	MULCH	10554.24
163-0503	4	EA	442.20	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	1768.80
163-0528	1200	LF	3.74	CONSTRUCT AND REMOVE FABRIC CHECK DAM - TYPE C SILT FENCE	4488.00
163-0550	14	EA	188.29	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	2636.06
165-0010	150	LF	0.53	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	79.50
165-0041	1200	LF	1.94	MAINTENANCE OF CHECK DAMS - ALL TYPES	2328.00
165-0087	4	EA	113.48	MAINTENANCE OF SILT CONTROL GATE, TP 3	453.92
165-0105	14	EA	78.69	MAINTENANCE OF INLET SEDIMENT TRAP	1101.66
167-1000	2	EA	559.68	WATER QUALITY MONITORING AND SAMPLING	1119.36
167-1500	12	MO	746.02	WATER QUALITY INSPECTIONS	8952.24
171-0010	300	LF	1.84	TEMPORARY SILT FENCE, TYPE A	552.00

716-2000	2000	SY	0.95	EROSION CONTROL MATS, SLOPES	1900.00
Section Sub Total:					\$36,684.16

Section SIGNING AND MARKING					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1020	120	SF	16.67	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	2000.40
636-1033	130	SF	20.24	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	2631.20
636-2070	400	LF	8.71	GALV STEEL POSTS, TP 7	3484.00
653-0120	2	EA	75.17	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	150.34
653-1501	5600	LF	0.46	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	2576.00
653-1502	6500	LF	0.46	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	2990.00
653-1704	20	LF	3.46	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	69.20
653-3501	550	GLF	0.32	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	176.00
653-6004	310	SY	2.71	THERMOPLASTIC TRAF STRIPING, WHITE	840.10
653-6006	290	SY	2.68	THERMOPLASTIC TRAF STRIPING, YELLOW	777.20
Section Sub Total:					\$15,694.44

Total Estimated Cost: \$846,111.61

P.I. Number 8534

County PEACH

Project Number CSSFT-0008-00(534)

Special Provision, Section 109-Measurement and Payment
FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)

ENTER FPL DIESEL	2.877
ENTER FPM DIESEL	6.473

ENTER FPL UNLEADED	2.716
ENTER FPM UNLEADED	6.111

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

INCREASE ADJUSTMENT
125.00%

INCREASE ADJUSTMENT
125.00%

ROADWAY ITEMS	QUANTITY	DIESEL FACTOR	GALLONS DIESEL	UNLEADED FACTOR	GALLONS UNLEADED	REMARKS
Excavations paid as specified by Sections 205 (CUBIC YARD)		0.29		0.15		
Excavations paid as specified by Sections 206 (CUBIC YARD)		0.29		0.15		
GAB paid as specified by the ton under Section 310 (TON)	5100.000	0.29	1479.00	0.24	1224.00	
Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON)		2.90		0.71		
Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON)	4340.000	2.90	12566.00	0.71	3081.40	
PCC Pavement paid as specified by the square yard under Section 430 (SY)		0.25		0.20		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Bridge Excavation (CY) Section 211				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Concrete Handrail (LF) Section 500				8.00		1.00		
Concrete Barrier (LF) Section 500				8.00		1.50		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Stru Steel Pjan Quantity (LB) Section 501				8.00		1.50		
Stru Steel Pjan Quantity (LB) Section 501				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
Stru Reinf Pjan Quantity(LB) Section 511				8.00		1.50		
Stru Reinf Pjan Quantity(LB) Section 511				8.00		1.50		
Bar Reinf Steel (LB) Section 511				8.00		1.50		
Piling____ inch (LF) Section 520				8.00		1.50		
Piling____ inch (LF) Section 520				8.00		1.50		
Piling____ inch (LF) Section 520				8.00		1.50		
Piling____ inch (LF) Section 520				8.00		1.50		
Piling____ inch (LF) Section 520				8.00		1.50		
Piling____ inch (LF) Section 520				8.00		1.50		
Drilled Caisson____ (LF) Section 524				8.00		1.50		
Drilled Caisson____ (LF) Section 524				8.00		1.50		
Drilled Caisson____ (LF) Section 524				8.00		1.50		
Pile Encasement____(LF) Section 547				8.00		1.50		
Pile Encasement____(LF) Section 547				8.00		1.50		
SUM OF DIESEL=			14065.00	SUM OF UNLEADED=			4385.46	
DIESEL PRICE ADJUSTMENT(\$)				\$46,534.76				
UNLEADED PRICE ADJUSTMENT(\$)				\$13,447.49				

ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)

APPLICABLE TO CONTRACTS CONTAINING THE 413 SPEC. SECTION 413.5.01 ADJUSTMENTS ASPHALT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

ENTER APL

ENTER APM

125.00% INCREASE ADJUSTMENT

Use this side for Asphalt Emulsion Only

L.I.N.	TYPE	ASPHALT EMULSION (GALLONS)

TMT =

REMARKS:

Use this side for Asphalt Cement Only

L.I.N.	TYPE	TACK (GALLONS)
413-1000	PG 58-22	700

TMT =

REMARKS:

MONTHLY PRICE ADJUSTMENT(\$) **\$1,818.37**

ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)

DIESEL PRICE ADJUSTMENT(\$) **\$46,534.76**

UNLEADED PRICE ADJUSTMENT(\$) **\$13,447.49**

ASPHALT CEMENT PRICE ADJUSTMENT (BITUMINOUS TACK COAT 125% MAX) **\$1,818.37**

400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX **\$131,241.60**

ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX) **\$1,818.37**

REMARKS:

TOTAL ADJUSTMENTS

\$194,860.59

Preliminary Right of Way Cost Estimate



Phil Copeland
Right of Way Administrator
By: LaShone Alexander

Date: April 02, 2009
Project: CSSFT-0008-00(534) Peach
Existing/Required R/W: Varies/Varies
Project Termini: Traffic Light @ Intersection Install Rt and Lft turn lane
Project Description: SR 247/@ SR 189 John Sullivan Rd/Walker Rd

P.I. Number: 0008534
No. Parcels:

Land:
Agricultural/ Commercial/Res. RW
1.5 acres @ \$ 75,000.00/acre \$ 112,500.00

\$ 112,500.00

Improvements: landscaping, misc. site improvements \$ 10,000.00

Relocation: Residential (0)	\$ 0	
Commercial (0)	0	
		\$ _____

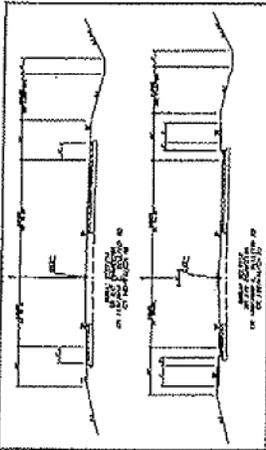
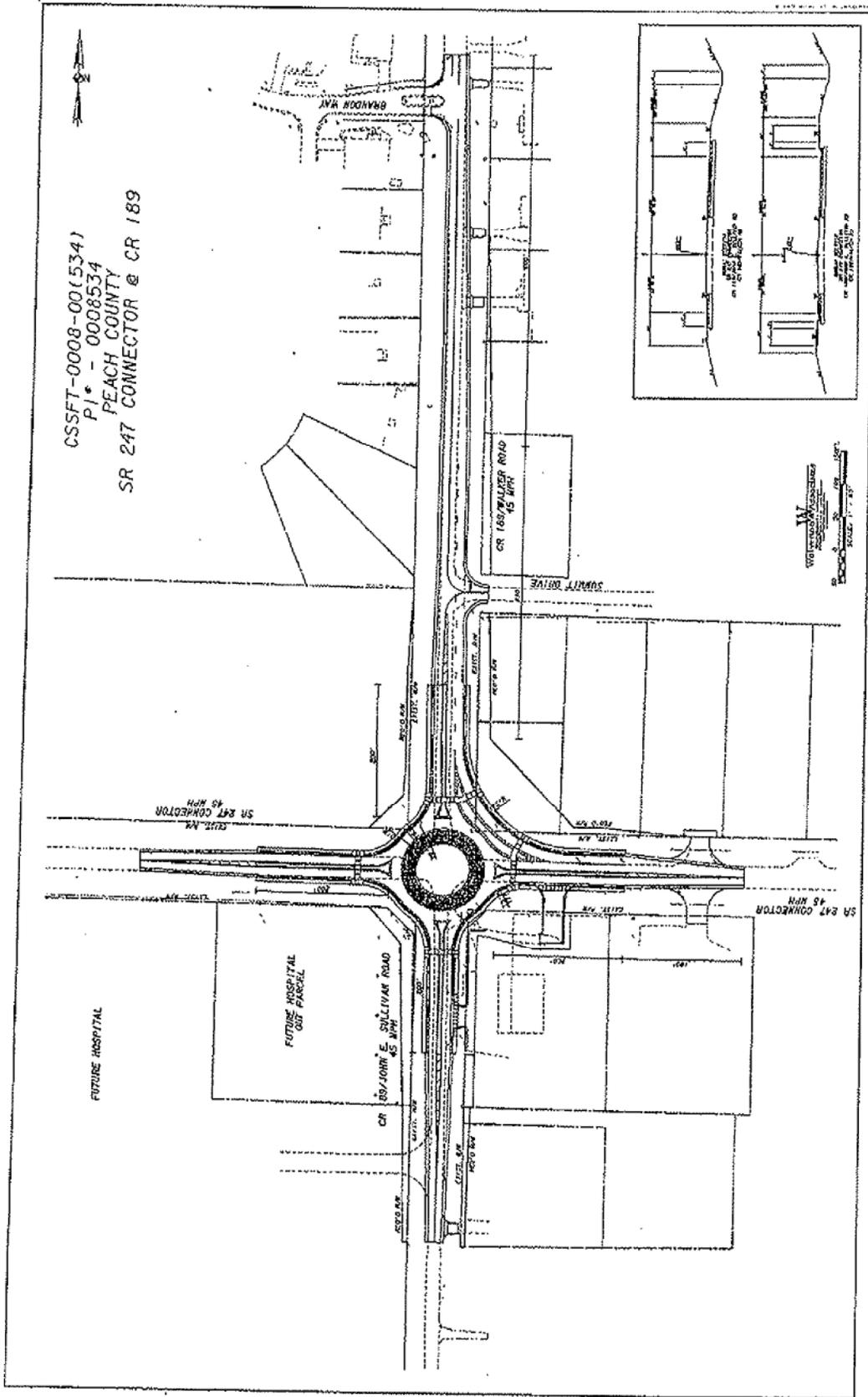
Damage: Proximity (0)	\$ 0	
Cost to Cure (0)	\$ 0	
		\$ _____
	Net Cost	\$ 122,500.00

Net Cost		\$ 122,500.00
Scheduling Contingency	55 %	67,375.00
Adm/Court Cost	60 %	113,925.00
		\$ 303,800.00

Total Cost \$304,000.00

Note: The Market Appreciation (40%) is not included in the updated Preliminary Cost Estimate.

CSSFT-0008-00(534)
P.L. - 0008534
PEACH COUNTY
SR 247 CONNECTOR @ CR 189



W
SCALE: 1" = 20'



CONCEPT TEAM MEETING MINUTES

LOCATION: GDOT District 3 Office

MEETING DATE: Monday, July 20, 2009

RE: SR 247 Connector at CR 189/John E. Sullivan Rd/Walker Rd
CSSFT-0008-00(534) Peach County
P.I. No. 0008534

ATTENDEES: Mike England, GDOT, District 3
Kerry Gore, GDOT, District 3
David Millen, GDOT, District 3
Carol Perry, GDOT, District 3
Michael Presley, GDOT, District 3
Bill Rountree, GDOT, District 3
Brink Stokes, GDOT, District 3
Derrick Cameron, GDOT, Office of Traffic Operations
Lakeshia Osborn, GDOT, Office of Traffic Operations
Michael Chidester, City of Byron
Bill McDaniel, City of Byron
Bob Rychel, Middle Georgia Regional Commission
Marcia Johndon, Peach County
Scott Shelton, Gresham Smith and Partners
Kerrie Boyette, Wolverton and Associates, Inc.

Derrick Cameron called the meeting to order and had all the attendees introduce themselves. Scott Shelton and Kerrie Boyette discussed the Need and Purpose statement, crash history and proposed design features.

The proposed project is to improve the operations and safety of the intersection of SR 247 Connector and CR 189/John E. Sullivan Road/Walker Road. The existing intersection operates at an unacceptable level of service during both the AM and PM peak hour for the build year of 2011. The proposed project would add a roundabout at the intersection with a bypass lane in the northeast quadrant to improve the level of service to an acceptable level.

A discussion was held regarding pedestrian and bicycle use of the intersection. It was decided upon by the group that if this location is on the approved bike plan, then the concept layout will be revised to show a 10' multi-use concrete path throughout the urban section. If this location is not on the approved bike plan, then a 12' shoulder with a 5' concrete sidewalk will be shown throughout the urban section. With either scenario, crosswalks and ramps will be added to accommodate pedestrians at the intersection.

A discussion was held regarding the location of existing and proposed utilities. The City of Byron officials confirmed that an existing force main is located on the north side of the SR 247 Connector. Kerry Gore

asked that Wolverton & Associates consider extending the urban section on the north and south ends of the project if the existing power poles are located within the clear zone for 45 mph to save on the cost associated with relocating the power poles.

A discussion was held concerning the posted speed of 55 mph on three legs of the intersection and 50 mph on the north leg. It was decided that the GDOT District Office will repost the speed limit at 45 mph approximately one-quarter mile before approaching the project limits on each roadway.

A discussion was held concerning the need for public involvement. It was determined that a Public Information Open House would not be held for this project since there are no displacements and the impacts to property owners would be minor.

Action Items:

Wolverton & Associates

1. Widen the proposed driveway on CR 189/John E. Sullivan Rd for the property on the southeast corner of the intersection to accommodate trucks. Also, add a driveway on SR 247 Connector to access this property.
2. Revise the property lines shown on the south west corner of the intersection based on the latest subdivision plat from Peach County.
3. Contact Debra Pruitt with the GDOT, District 3 Office concerning the location of the existing USTs.
4. On the draft concept report, the second signature line should read "State Traffic Engineer."
5. On the draft concept report, determine if any changes are needed to the design variances and design exceptions sections based on plan changes to accommodate pedestrians and also bicycles if required.
6. On the draft concept report, in the project responsibilities section, providing detours should read "not required".
7. On the draft concept report, in the scheduling section, the time to complete the purchase of right-of-way should be 12 months.
8. On the Notice of Location and Design Approval, the affected land lots should be listed, and Derrick Cameron's name should be listed instead of David Millen.
9. Proposed lighting will be required for the roundabout. Kerry Gore asked that the location of the lighting be finalized before the second submission to the utility companies is made.
10. The preliminary plans will need to include staging plans that address how traffic will be maintained during the construction of the roundabout.

HCM Unsignalized Intersections



Approach	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Configurations	↔			↔			↔			↔		
Volume (veh/h)	555	10	20	260	125	30	40	80	30	30	24	16
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate (veh)	60	60	22	27	136	33	43	196	33	33	24	16
Pedestrians												
Peak Volume (h)												
Walking Speed (ft/s)												
Pedestrian Blockage												
Right turn flare (veh)												
Median type	None			None			None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	408		614		1144	1179	609	1171	1117			340
tC, 1 stage (s)	4.1		4.0		6.9	6.9	6.2	7.1	6.5			6.2
tC, 2 stage (s)												
IF (s)	2.2		2.2		3.5	4.0	3.3	3.5	4.0			3.3
p0 queue free %	95		98		96	82	91	0	83			98
MC capacity (veh/h)	1151		965		1422	1376	1095	1265	1192			708
Volume Total	674	428	82	245								
Volume Left	60	22	5	196								
Volume Right	71	136	13	46								
cSH	1151	965	262	140								
Volume to Capacity	0.05	0.02	0.01	1.75								
Queue Length 95th (ft)	4	2	32	454								
Control Delay (s)	1.4	1.0	24.3	42.6								
Lane LOS	A	A	C	F								
Approach Delay (s)	1.4	1.0	24.3	42.6								
Approach LOS			C	F								
Average Delay	74.4											
Intersection Capacity Utilization	7.8%			vCu Level of Service								
Analysis Period (min)	15											

HCM Unsignalized Intersection



	EB	NB	SB	WB
Lane Configurations	↕	↕	↕	↕
Volume (veh/h)	35	310	35	16
Sign Control	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92
Hourly Flow Rate (vph)	38	337	38	16
Pedestrians				
Lane Width (ft)				
Walking Speed (ft/s)				
Percent Blockage				
Right turn flare (veh)				
Median type	None	None	None	None
Median storage (veh)				
Unstream signal (R)				
pX, platoon unblocked				
vC, conflict volume	647	342	1149	1182
vC1, stage 1 conf vol			340	1136
vC2, stage 2 conf vol			1101	562
vCu, unblocked vol	647	342	1149	1182
τ (s)	4.7	4.7	6.5	6.5
tC, 2 stage (s)			2.9	3.4
τ (s)	2.2	2.7	3.0	4.0
pD queue free %	96	95	88	87
Capacity (veh/h)	939	1217	703	703
Queue				
Volume Total	38	60	16	120
Volume Left				
Volume Right				
cSH	939	1217	229	179
Volume to Capacity	0.04	0.11	0.28	1.03
Queue Length 95th (ft)	3	4	28	218
Control Delay (s)	1.0	1.3	26.8	30.7
Lane LOS	A	A	D	F
Approach Delay (s)	2.1	1.3	26.8	30.7
Approach LOS			D	F
Average Delay			20.4	
Intersection Capacity Utilization			68.0%	ICU Level of Service
Analysis Period (min)			15	

HCM Unsignalized Intersection



Approach	1	2	3	4	5	6	7	8	9	10	11				
Lane Configurations	↕		↕		↕		↕		↕		↕				
Volume (veh/h)	70	890	15	25	110	155	5	35	60	225	35	16			
Sign Control	Free		Free		Stop		Stop		Stop		Stop				
Grade	0%		0%		0%		0%		0%		0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly Volume (veh)	76	836	16	26	122	163	5	38	66	245	38	16			
Pedestrians															
Lane Width (ft)															
Walking Speed (ft/s)															
Percent Blockage															
Right turn flare (veh)															
Median type	None														
Median storage (veh)															
Upstream signal (ft)															
pX, platoon unblocked															
vC, conflicting volume	505		766		1421		1470		758		1459		1394		421
vC1, stage 1 conf vol															
vC2, stage 2 conf vol															
vCu, unblocked vol	505		766		1421		1470		758		1459		1394		421
IC, 1 stage (s)	2.1		2.1		2.1		2.1		2.1		2.1		2.1		2.1
IC, 2 stage (s)															
p0 queue free %	93		97		93		67		87		0		70		97
SC capacity (veh/h)	1059		847		183		72		107		245		127		682
Volume Total	942	836	96	26	280	155	42	60	225	35	16				
Volume Left	76	27	5	245											
Volume Right	15	168	61	16											
cSH	1059	847	183	72											
Volume to capacity	0.87	0.83	0.64	4.16											
Queue Length 95th (ft)	6	2	69	Err											
Control Delay (s)	18	10	45	Err											
Lane LOS	A	A	E	F											
Approach Delay (s)	18	10	45	Err											
Approach LOS	E	F													
Average Delay	1690.6														
Intersection Capacity Utilization	90.1%														
Analysis Period (min)	15														

HCM Unsignalized Intersection



Volume	EB	WB	SB	NB
Lane Configurations	4	4	4	4
Volume (veh/h)	799	424	1397	1448
Sign Control	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92
Hourly Flow Rate (veh)	799	424	1397	1448
Pedestrians				
Lane Width (ft)				
Walking Speed (ft/s)				
Percent Blockage				
Right turn flare (veh)				
Median type	None	None		
Median storage (veh)				
Upstream signal (ft)				
pX, platoon unblocked				
vC1, stage 1 conf vol				
vC2, stage 2 conf vol				
vCu, unblocked vol	799	424	1397	1448
IC, single (s)				
IC, 2 stage (s)				
p0 queue free %	95	94	81	81
EM capacity (veh/h)	824	1135	163	109
Volume Total	799	424	1397	1448
Volume Left	43	71	16	152
Volume Right	35	207	33	38
cSH	824	1135	163	109
Volume to Capacity	0.05	0.06	0.02	0.09
Queue Length 95th (ft)	4	5	49	451
Control Delay (s)	1.5	1.6	42.3	54.5
Lane LOS	A	A	E	F
Approach Delay (s)	1.5	1.6	42.3	54.5
Approach LOS			E	F
Average Delay			75.7	
Intersection Capacity Utilization			89.4%	
Analysis Period (min)			15	

GEORGIA DEPARTMENT OF TRANSPORTATION
Traffic Operations Division
Thomaston



TRAFFIC ENGINEERING STUDY
June 26, 2006

LOCATION: *State Route 247 Connector @ John E. Sullivan Road/Walker Road M.P. 2.09*

COUNTY: *Peach*

REQUESTED BY: *Peach County Commissioners/City of Byron*

REASON FOR STUDY: *To determine if a Stop and Go signal is warranted for this location.*

FINDINGS

TOPOGRAPHY: *State Route (S.R.)247 Connector is a two lane facility running east/west from Warner Robins to S.R. 49 in Powersville. Both side approaches to the intersection, John E. Sullivan Road and Walker Road, are also two lane roadways. All approaches have no auxilliary turn lanes. S.R. 247 Connector has a slight 1% slope draining to the east, while both side approaches slope 0.5% away from the intersection.*

The northwest sector of the intersection is currently an undeveloped field currently up for sale, the southwest quadrant is a large pecan orchard, and the southeast quadrant is a auto repair shop with access off of John E. Sullivan Road approximaetely 50' south of the intersection. The northeast quadrant is an undeveloped field.

EXISTING TRAFFIC CONTROL: *Both John E. Sullivan Road and Walker Road are currently controlled by stop signs. Posted speed limit is 45 m.p.h. on S.R. 247 Connector and 35 m.p.h. on both approach roads.*

VEHICLE VOLUMES: *S.R. 247 C. EB: 5625 V.P.D. S.R. 247 C. WB: 5757 V.P.D.
John E. Sullivan Road NB: 544 V.P.D. Walker Road SB: 1481 V.P.D.*

PEDESTRIAN MOVEMENTS: *Pedestrians were observed at this intersection after several visits.*

PARKING: *There have been no vehicles observed parking in this area. There are no visible signs or any indications that there are vehicles parking in or around this intersection.*

COLLISION HISTORY: *See attached collision diagrams. In 2005 there were four (4) collisions at this intersection. This includes one (1) rear-end collision, two (2) right angle collisions and one (1) left turn collision. The right angle collision dated 2/17/05 resulted in one (1) fatality. Another fatality was recorded at this intersection on 01/01/1998 from a right angle collision.*

WARRANT ANALYSIS: *Warrant #1 A was met for five (5) hours, warrant #1B was met for fifteen (15) hours, and warrants 2 and 3 have been met. Right turn side approach counts were removed from the evaluation. (See the attached Traffic signal Warrant Evaluation.)*

STOP AND GO SIGNALS IN THE AREA: *There are two (2) stop and go signals approximately 1 mile to the east of the study location at both ramps off of Interstate 75 (State Route 401). There is also a stop and go signal two (2) miles to the west of the study intersection at S.R. 49.*

OTHER INFORMATION:

Just to the north of the study intersection is a new subdivision with approximately sixty (60) homes being constructed. Approximately 20% of these homes are currently occupied. Another subdivision of approximately 200 homes is planned just to the southwest of the intersection.

Peach County has secured approximately twenty-seven (27) acres in the southwest quadrant to relocate the Peach Regional Medical Center, and a pharmacy is planned for the southwest quadrant of the subject intersection. The construction schedule for the hospital, pharmacy and subdivision has a two (2) year build out date. These developments will add a substantial amount of vehicular traffic to the study intersection, especially considering the close access to Interstate 75.

CONCLUSION:

It can be concluded from the data reviewed for this intersection and from on site observations that signalization would benefit the operation of this intersection. The traffic through this intersection warrants a stop and go signal, meeting warrant 1B, 2, and 3.

RECOMMENDATIONS:

It is recommended that a permit for a stop and go signal be issued to Peach County for this intersection. It is further recommended that a safety project be programmed to construct left and right turn lanes for each approach to the subject intersection in conjunction with a stop and go signal. At a minimum it is recommended to construct left turn lanes on SR 247 Connector and a right turn lane westbound on SR 247 Connector before a stop and go signal is installed at the subject intersection. Pedestrian accomodations including pedestrian crosswalks and pedestrian equipment should be included with the signal installation with either plan.



District Traffic Operations Manager

7/11/06

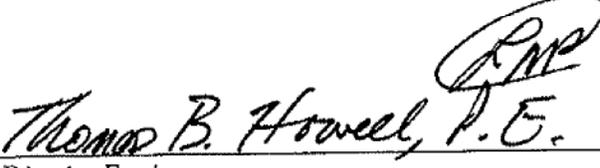
Date



District Traffic Engineer

7/5/06

Date



District Engineer

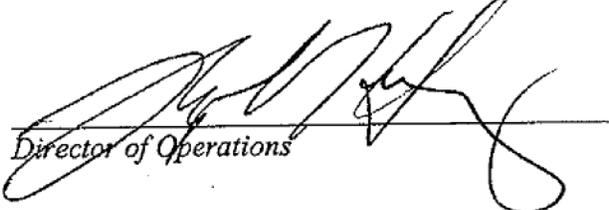
Date



State Traffic Safety and Design Engineer

3.16.07

Date



Director of Operations

3/17/07

Date

GDOT DISTRICT 3
TRAFFIC OPERATIONS
THOMASTON, GA

Study Name : Sr 247 C @ John E Sullivan Road
 Study Date : 03/30/06
 Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: S.R. 247 C
 Number of Lanes: 1
 Approach Speed: 55
 Total Approach Volume: 5,625

Westbound: S.R. 247 C
 Number of Lanes: 1
 Approach Speed: 55
 Total Approach Volume: 5,757

Minor Street Approaches

Northbound: John E. Sullivan Road
 Number of Lanes: 1

Total Approach Volume: 581

Southbound: Walker Road
 Number of Lanes: 1

Total Approach Volume: 1,481

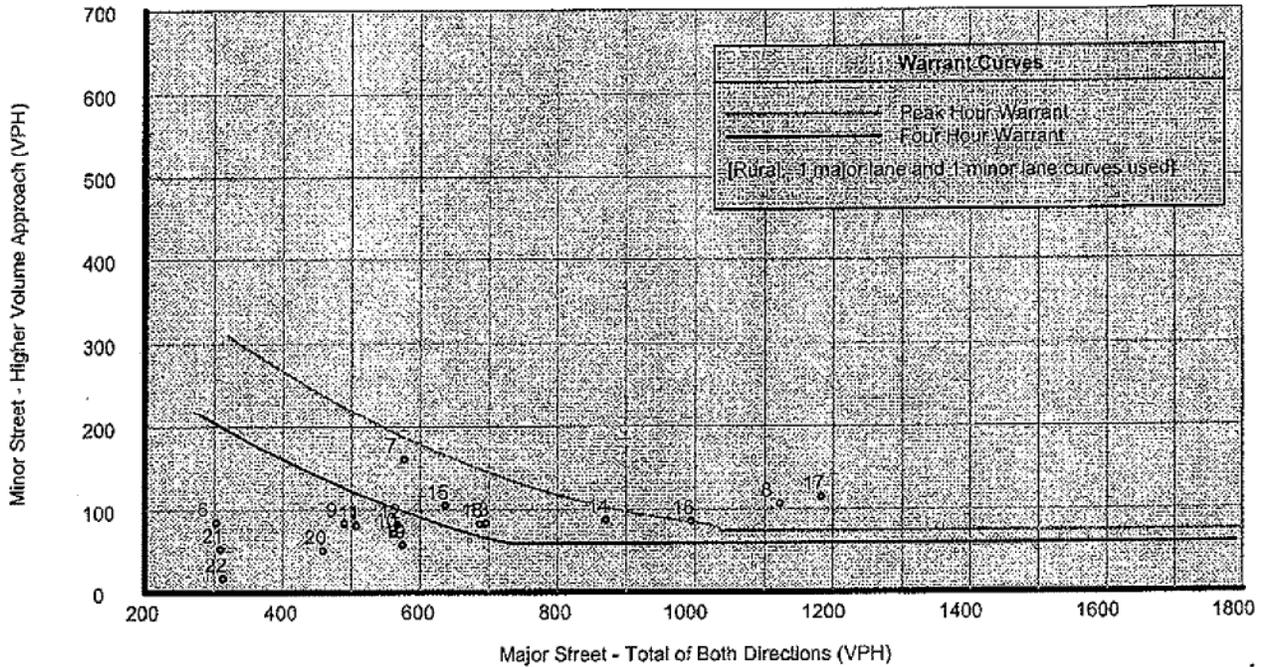
Warrant Summary (Rural values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Satisfied
Warrant 1A - Minimum Vehicular Volume	Not Satisfied
Required volumes reached for 4 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Satisfied
Required volumes reached for 11 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants	Satisfied
Required volumes reached for 8 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Satisfied
Number of hours (8) volumes exceed minimum >= minimum required (4).	
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Delay	Not Satisfied
Total approach volumes and delays on minor street do not exceed minimums for any hour.	
Warrant 3B - Peak Hour Volumes	Satisfied
Volumes exceed minimums for at least one hour.	
Warrant 4 - Pedestrian Volumes	Not Satisfied
Required 4 Hr pedestrian volume reached for 0 hour(s) and the single hour volume for 0 hour(s)	
Warrant 5 - School Crossing	Not Satisfied
Number of gaps > .0 seconds (0) exceeds the number of minutes in the crossing period (0).	
Warrant 6 - Coordinated Signal System	Not Satisfied
No adjacent coordinated signals are present	
Warrant 7 - Crash Experience	Not Satisfied
Number of accidents (4) is less than minimum (5). Volume minimums are met.	
Warrant 8 - Roadway Network	Not Satisfied
Major Route conditions not met. One or more volume requirement met.	

**GDOT DISTRICT 3
TRAFFIC OPERATIONS
THOMASTON, GA**

Study Name : Sr 247 C @ John E Sullivan Road
Study Date : 03/30/06
Page No. : 2

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor		War-1A			War-1B			War-1A&B		
		Vol	Dir	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	94	10	SB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---
01:00	37	5	SB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---
02:00	36	4	SB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---
03:00	21	3	NB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---
04:00	45	11	SB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---
05:00	149	40	SB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---
06:00	303	85	SB	350-No	105-No	---	525-No	53-Yes	Minor	420-No	84-Yes	Minor
07:00	577	161	SB	350-Yes	105-Yes	Both	525-Yes	53-Yes	Both	420-Yes	84-Yes	Both
08:00	1,122	107	SB	350-Yes	105-Yes	Both	525-Yes	53-Yes	Both	420-Yes	84-Yes	Both
09:00	489	84	SB	350-Yes	105-No	Major	525-No	53-Yes	Minor	420-Yes	84-Yes	Both
10:00	562	72	SB	350-Yes	105-No	Major	525-Yes	53-Yes	Both	420-Yes	84-No	Major
11:00	507	81	SB	350-Yes	105-No	Major	525-No	53-Yes	Minor	420-Yes	84-No	Major
12:00	567	82	SB	350-Yes	105-No	Major	525-Yes	53-Yes	Both	420-Yes	84-No	Major
13:00	696	84	SB	350-Yes	105-No	Major	525-Yes	53-Yes	Both	420-Yes	84-Yes	Both
14:00	871	88	SB	350-Yes	105-No	Major	525-Yes	53-Yes	Both	420-Yes	84-Yes	Both
15:00	636	105	SB	350-Yes	105-Yes	Both	525-Yes	53-Yes	Both	420-Yes	84-Yes	Both
16:00	994	86	SB	350-Yes	105-No	Major	525-Yes	53-Yes	Both	420-Yes	84-Yes	Both
17:00	1,183	115	SB	350-Yes	105-Yes	Both	525-Yes	53-Yes	Both	420-Yes	84-Yes	Both
18:00	687	83	SB	350-Yes	105-No	Major	525-Yes	53-Yes	Both	420-Yes	84-No	Major
19:00	574	58	SB	350-Yes	105-No	Major	525-Yes	53-Yes	Both	420-Yes	84-No	Major
20:00	458	51	SB	350-Yes	105-No	Major	525-No	53-No	---	420-Yes	84-No	Major
21:00	309	53	NB	350-No	105-No	---	525-No	53-Yes	Minor	420-No	84-No	---
22:00	313	18	SB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---
23:00	152	11	SB	350-No	105-No	---	525-No	53-No	---	420-No	84-No	---

Date/Time/Volume/Average Speed/Temperature Report

HI-Star ID: 3527 Street: John Sullivan State: GA City: Byron County: Peach	Begin: 03/13/2006 03:00 PM Lane: south Oper: JCM Posted: 45 AADT Factor: 1	End: 03/14/2006 03:00 PM Hours: 24:00 Period: 60 Raw Count: 1481 AADT Count: 1481
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Date & Time Range	Count	Avg Speed	Temp	Wet/Dry
NC97				
03/13/2006				
[03:00 PM-04:00 PM]	105	17 mph	105 F	Dry
[04:00 PM-05:00 PM]	86	19 mph	97 F	Dry
[05:00 PM-06:00 PM]	115	17 mph	93 F	Dry
[06:00 PM-07:00 PM]	83	18 mph	85 F	Dry
[07:00 PM-08:00 PM]	58	19 mph	80 F	Dry
[08:00 PM-09:00 PM]	51	19 mph	78 F	Dry
[09:00 PM-10:00 PM]	37	18 mph	76 F	Dry
[10:00 PM-11:00 PM]	18	20 mph	76 F	Dry
[11:00 PM-12:00 AM]	11	19 mph	76 F	Dry
03/14/2006				
[12:00 AM-01:00 AM]	10	18 mph	76 F	Dry
[01:00 AM-02:00 AM]	5	21 mph	74 F	Dry
[02:00 AM-03:00 AM]	4	19 mph	74 F	Dry
[03:00 AM-04:00 AM]	3	21 mph	74 F	Dry
[04:00 AM-05:00 AM]	11	19 mph	72 F	Dry
[05:00 AM-06:00 AM]	40	19 mph	72 F	Dry
[06:00 AM-07:00 AM]	85	19 mph	72 F	Dry
[07:00 AM-08:00 AM]	161	17 mph	70 F	Dry
[08:00 AM-09:00 AM]	107	19 mph	68 F	Dry
[09:00 AM-10:00 AM]	84	19 mph	70 F	Dry
[10:00 AM-11:00 AM]	72	18 mph	78 F	Dry
[11:00 AM-12:00 PM]	81	20 mph	85 F	Dry
[12:00 PM-01:00 PM]	82	20 mph	91 F	Dry
[01:00 PM-02:00 PM]	84	19 mph	95 F	Dry
[02:00 PM-03:00 PM]	88	19 mph	97 F	Dry

Date/Time/Volume/Average Speed/Temperature Report

HI-Star ID: 3828 Street: 247 connector State: GA City: Byron County: Peach	Begin: 03/13/2006 03:00 PM Lane: west Oper: JCM Posted: 45 AADT Factor: 1	End: 03/14/2006 03:00 PM Hours: 24:00 Period: 60 Raw Count: 5757 AADT Count: 5757
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Date & Time Range	Count	Avg Speed	Temp	Wet/Dry
NC97				
03/13/2006				
[03:00 PM-04:00 PM]	391	40 mph	99 F	Dry
[04:00 PM-05:00 PM]	486	38 mph	93 F	Dry
[05:00 PM-06:00 PM]	544	36 mph	89 F	Dry
[06:00 PM-07:00 PM]	367	40 mph	83 F	Dry
[07:00 PM-08:00 PM]	307	42 mph	78 F	Dry
[08:00 PM-09:00 PM]	246	41 mph	78 F	Dry
[09:00 PM-10:00 PM]	186	41 mph	76 F	Dry
[10:00 PM-11:00 PM]	135	46 mph	76 F	Dry
[11:00 PM-12:00 AM]	96	46 mph	76 F	Dry
03/14/2006				
[12:00 AM-01:00 AM]	51	46 mph	74 F	Dry
[01:00 AM-02:00 AM]	22	46 mph	74 F	Dry
[02:00 AM-03:00 AM]	14	43 mph	74 F	Dry
[03:00 AM-04:00 AM]	14	43 mph	72 F	Dry
[04:00 AM-05:00 AM]	24	53 mph	72 F	Dry
[05:00 AM-06:00 AM]	82	50 mph	70 F	Dry
[06:00 AM-07:00 AM]	149	48 mph	70 F	Dry
[07:00 AM-08:00 AM]	278	43 mph	68 F	Dry
[08:00 AM-09:00 AM]	665	40 mph	70 F	Wet
[09:00 AM-10:00 AM]	228	46 mph	74 F	Wet
[10:00 AM-11:00 AM]	306	40 mph	78 F	Dry
[11:00 AM-12:00 PM]	254	43 mph	83 F	Dry
[12:00 PM-01:00 PM]	302	40 mph	89 F	Dry
[01:00 PM-02:00 PM]	307	44 mph	95 F	Dry
[02:00 PM-03:00 PM]	303	42 mph	95 F	Dry

Date/Time/Volume/Average Speed/Temperature Report

HI-Star ID: 3326 Street: John Sullivan State: GA City: Byron County: Peach	Begin: 03/13/2006 03:00 PM Lane: north Oper: JCM Posted: 45 AADT Factor: 1	End: 03/14/2006 03:00 PM Hours: 24:00 Period: 60 Raw Count: 544 AADT Count: 544
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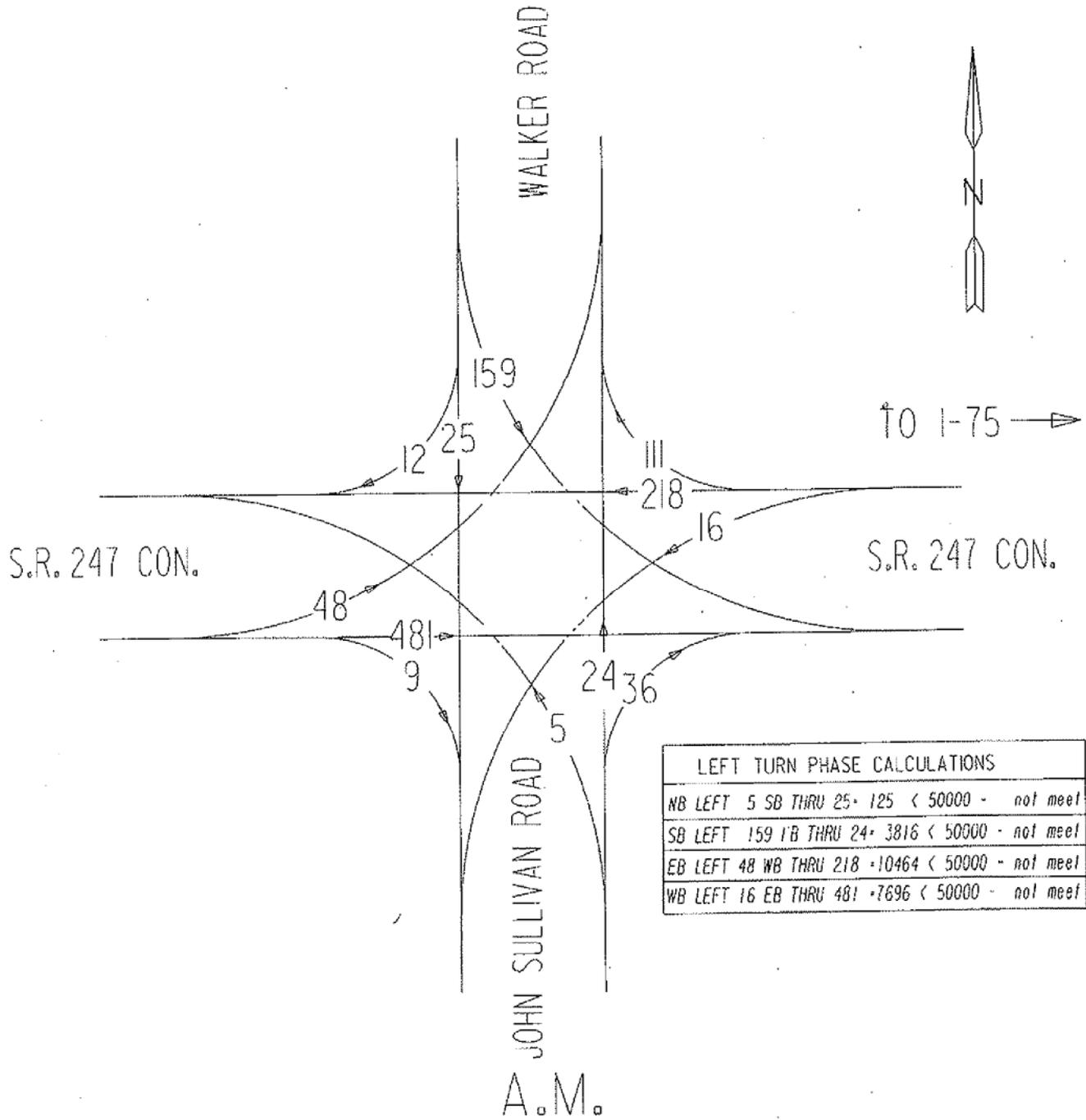
NC97				
Date & Time Range	Count	Avg Speed	Temp	Wet/Dry
03/13/2006				
[03:00 PM-04:00 PM]	37	13 mph	107 F	Dry
[04:00 PM-05:00 PM]	46	13 mph	97 F	Dry
[05:00 PM-06:00 PM]	42	17 mph	89 F	Dry
[06:00 PM-07:00 PM]	35	13 mph	82 F	Dry
[07:00 PM-08:00 PM]	21	17 mph	78 F	Dry
[08:00 PM-09:00 PM]	13	17 mph	76 F	Dry
[09:00 PM-10:00 PM]	16	14 mph	76 F	Dry
[10:00 PM-11:00 PM]	4	12 mph	76 F	Dry
[11:00 PM-12:00 AM]	0	0 mph	74 F	Dry
03/14/2006				
[12:00 AM-01:00 AM]	1	13 mph	74 F	Dry
[01:00 AM-02:00 AM]	0	0 mph	74 F	Dry
[02:00 AM-03:00 AM]	0	0 mph	74 F	Dry
[03:00 AM-04:00 AM]	3	41 mph	74 F	Dry
[04:00 AM-05:00 AM]	1	23 mph	72 F	Dry
[05:00 AM-06:00 AM]	8	22 mph	72 F	Dry
[06:00 AM-07:00 AM]	18	22 mph	72 F	Dry
[07:00 AM-08:00 AM]	57	13 mph	70 F	Dry
[08:00 AM-09:00 AM]	46	19 mph	68 F	Dry
[09:00 AM-10:00 AM]	24	16 mph	74 F	Dry
[10:00 AM-11:00 AM]	35	13 mph	78 F	Dry
[11:00 AM-12:00 PM]	23	15 mph	85 F	Dry
[12:00 PM-01:00 PM]	37	15 mph	89 F	Dry
[01:00 PM-02:00 PM]	40	13 mph	93 F	Dry
[02:00 PM-03:00 PM]	37	16 mph	95 F	Dry

INTERSECTION S.R. 247 CONNECTOR @ JOHN SULLIVAN/WALKER ROAD MP 2.09

COUNTY HOUSTON CITY N/A

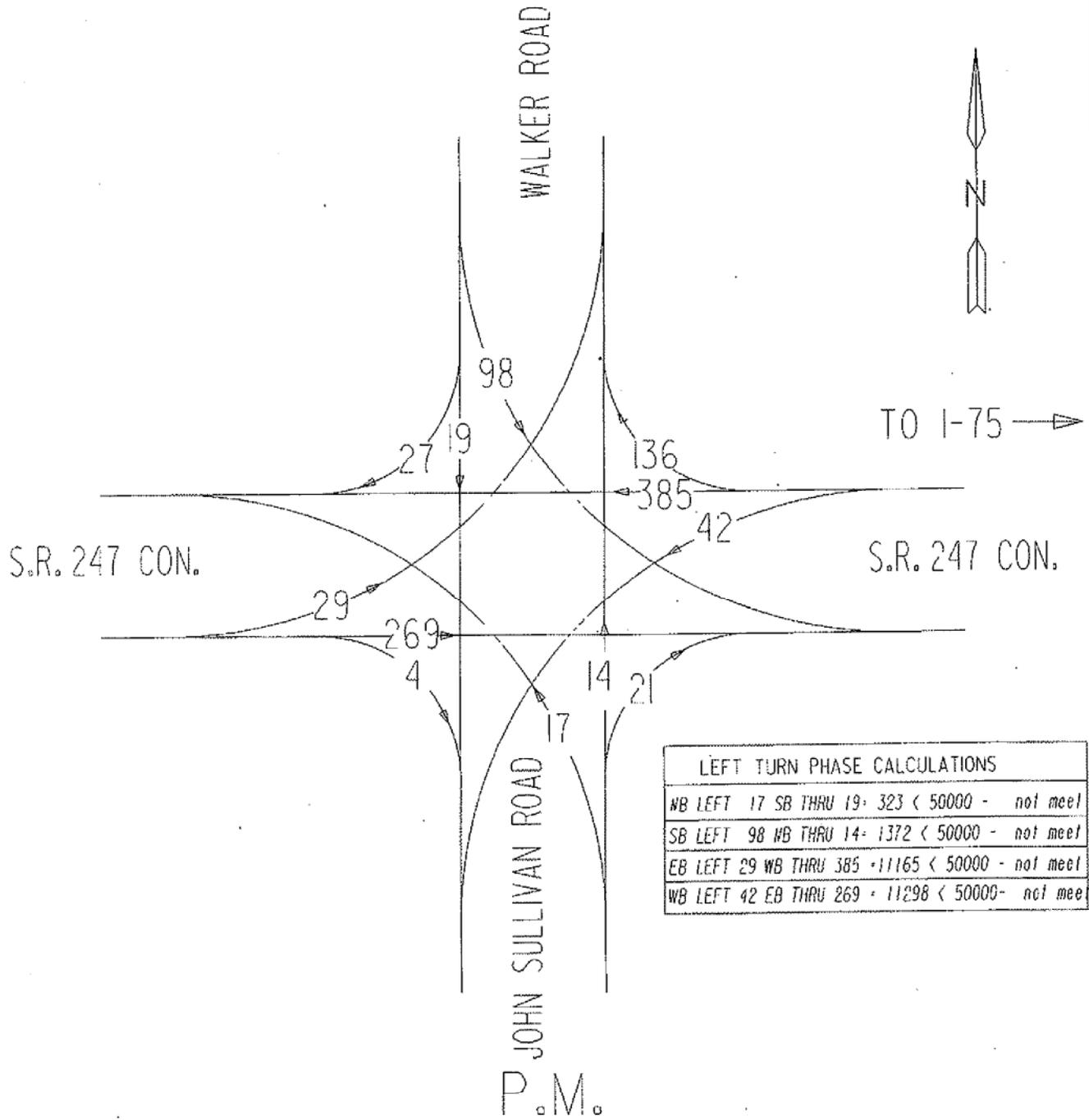
TIME 7:30 AM - 8:30 AM DATE 04/18/06 WEATHER SUNNY

PERSON COUNTING JCM



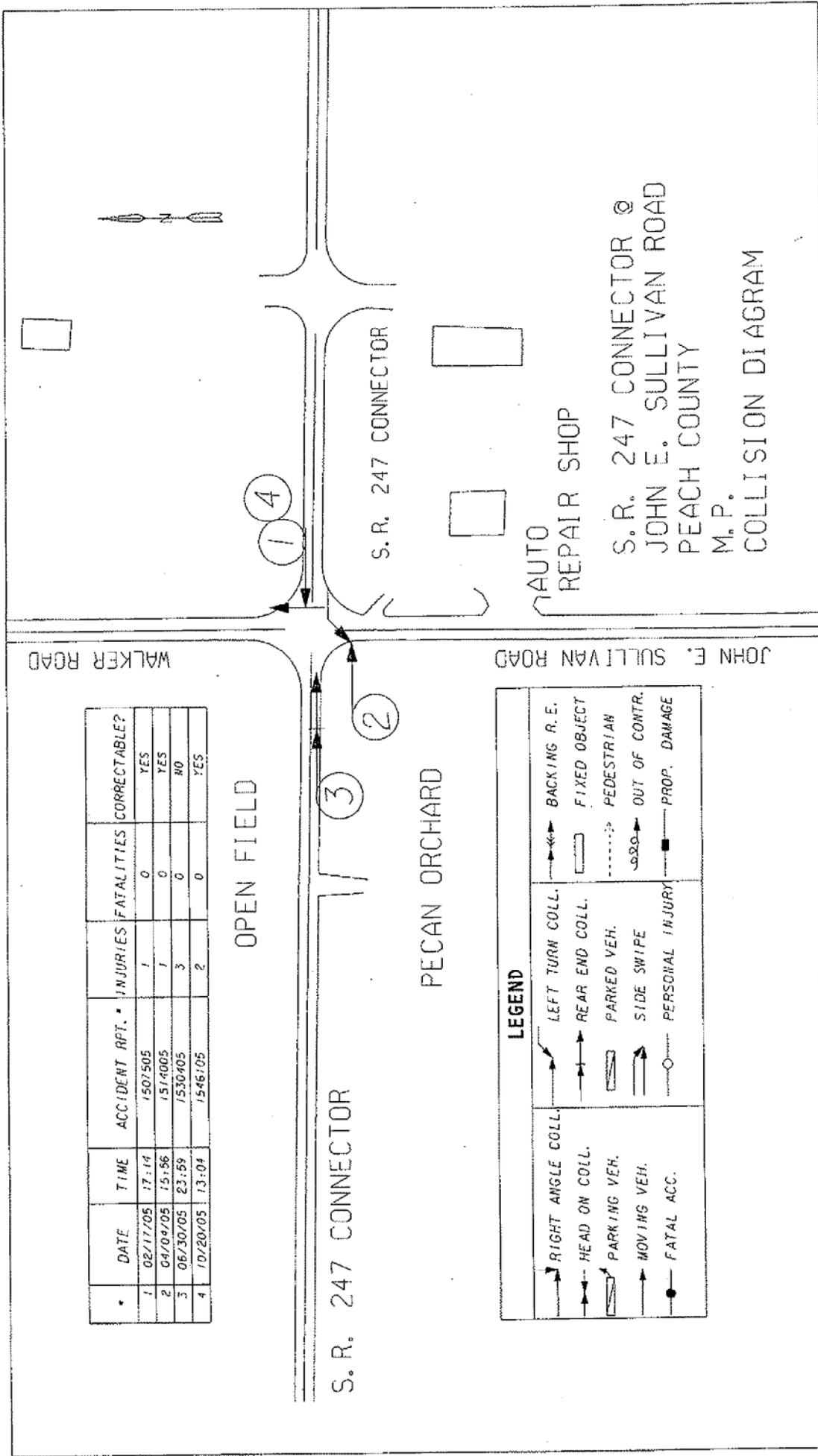
PEAK HOUR TURNING COUNTS

INTERSECTION S.R. 247 CONNECTOR @ JOHN SULLIVAN/WALKER ROAD MP 2.09
 COUNTY HOUSTON CITY N/A
 TIME 4:45 PM - 5:45 PM DATE 04/18/06 WEATHER SUNNY
 PERSON COUNTING JCM



LEFT TURN PHASE CALCULATIONS	
WB LEFT 17	SB THRU 19 • 323 < 50000 - not meet
SB LEFT 98	WB THRU 14 • 1372 < 50000 - not meet
EB LEFT 29	WB THRU 385 • 11165 < 50000 - not meet
WB LEFT 42	EB THRU 269 • 11298 < 50000 - not meet

PEAK HOUR TURNING COUNTS



•	DATE	TIME	ACCIDENT RPT. #	INJURIES	FATALITIES	CORRECTABLE?
1	02/17/05	17:14	1507505	1	0	YES
2	04/04/05	15:56	1514005	1	0	YES
3	06/30/05	23:59	1530405	3	0	NO
4	10/20/05	13:04	1546105	2	0	YES

LEGEND	
RIGHT ANGLE COLL.	LEFT TURN COLL.
HEAD ON COLL.	REAR END COLL.
PARKING VEH.	PARKED VEH.
MOVING VEH.	SIDE SWIPE
FATAL ACC.	PERSONAL INJURY
	BACKING R. E.
	FIXED OBJECT
	PEDESTRIAN
	OUT OF CONTR.
	PROP. DAMAGE

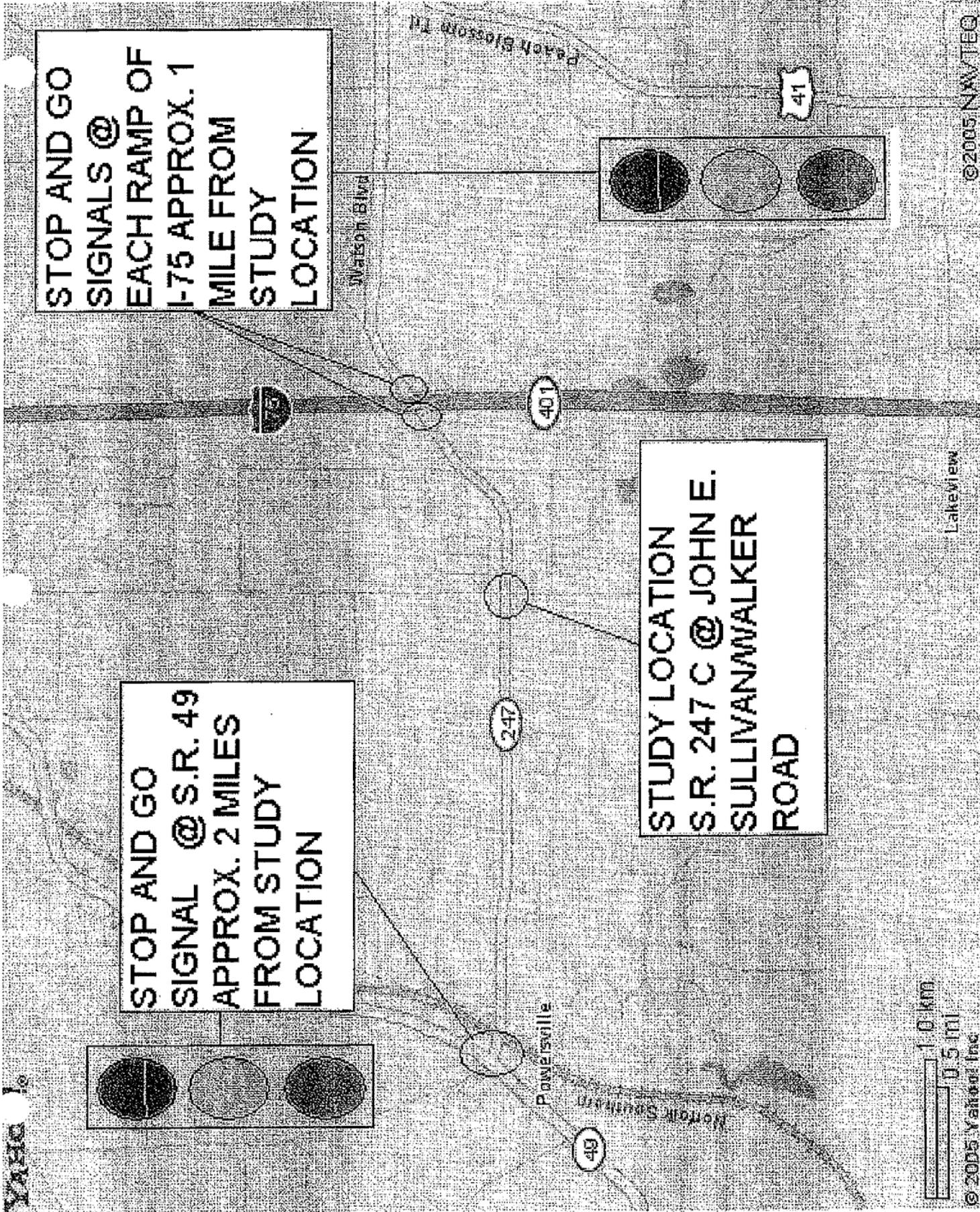
S.R. 247 CONNECTOR @
 JOHN E. SULLIVAN ROAD
 PEACH COUNTY
 M.P.
 COLLISION DIAGRAM

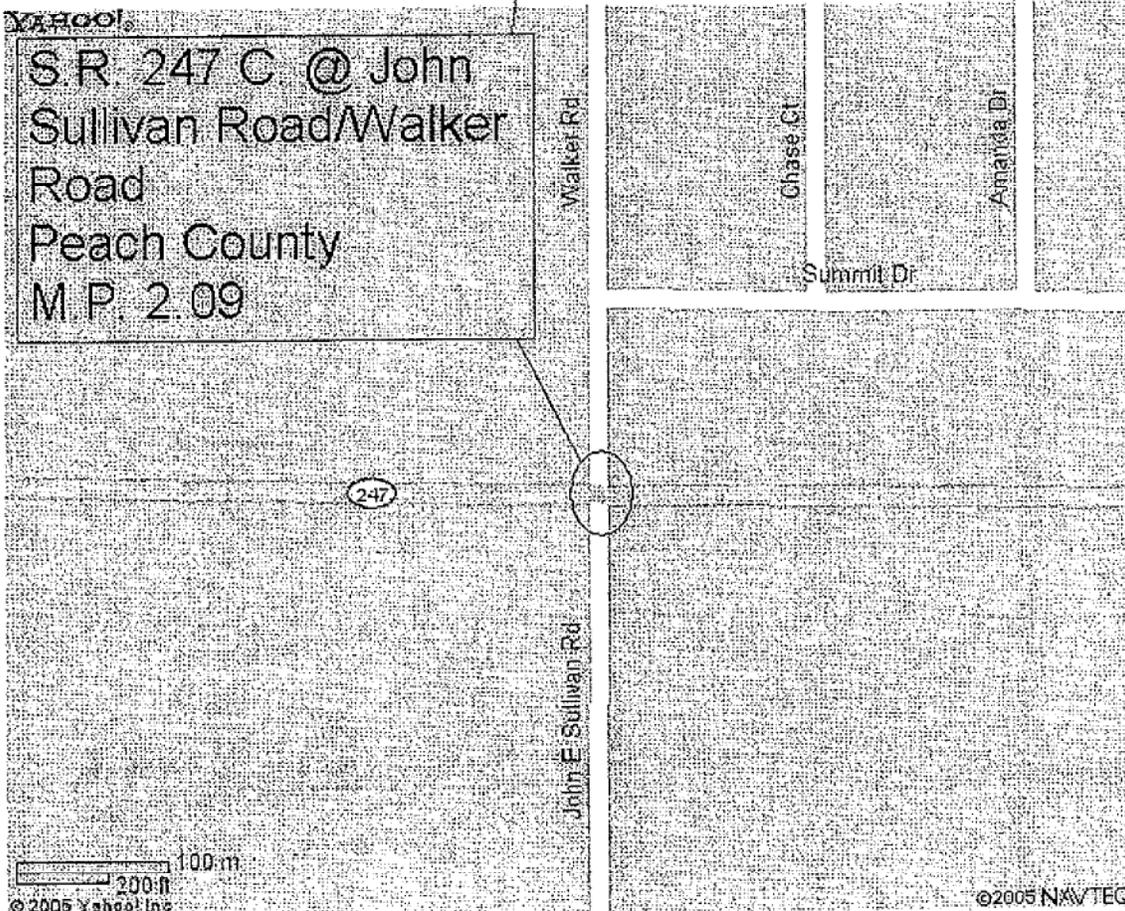
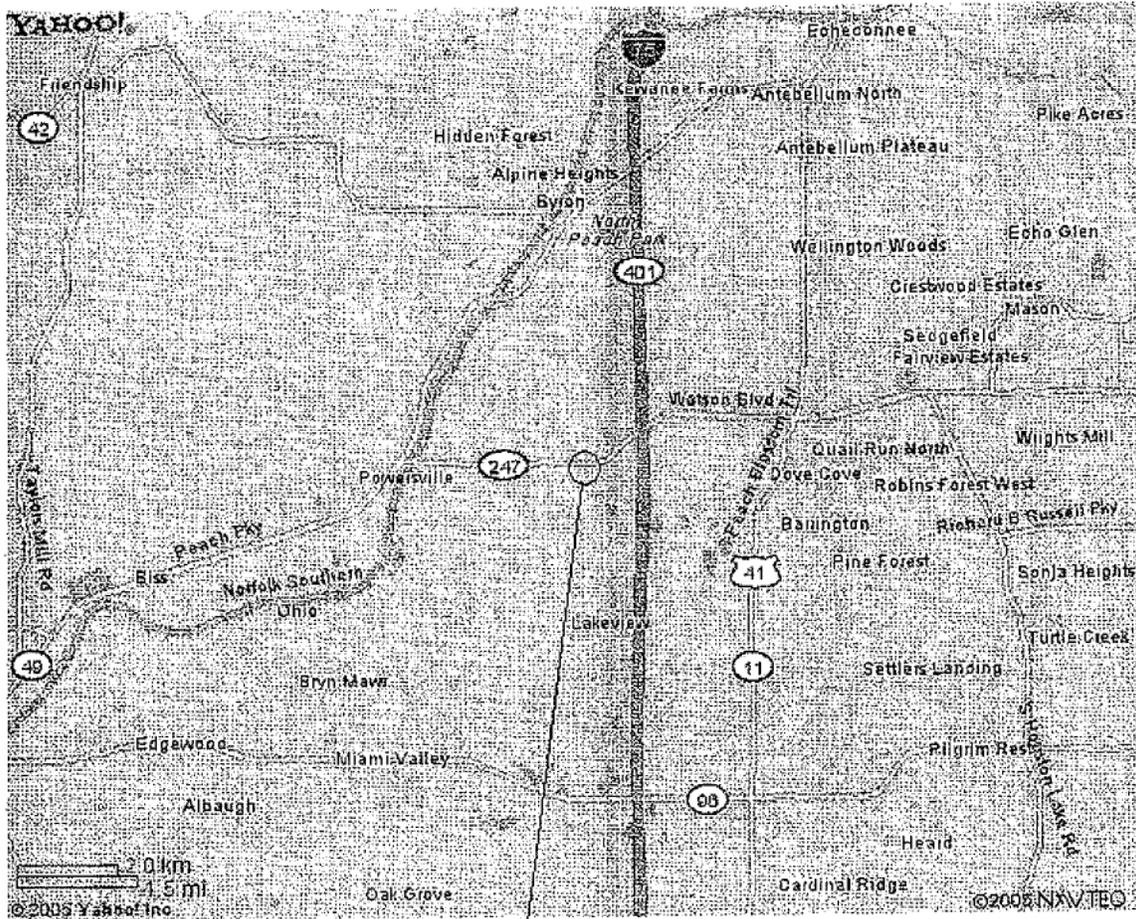


STOP AND GO
SIGNAL @ S.R. 49
APPROX. 2 MILES
FROM STUDY
LOCATION

STOP AND GO
SIGNALS @
EACH RAMP OF
I-75 APPROX. 1
MILE FROM
STUDY
LOCATION

STUDY LOCATION
S.R. 247 C @ JOHN E.
SULLIVAN WALKER
ROAD

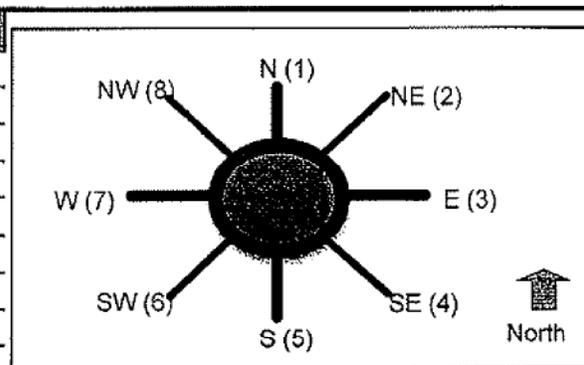




Roundabout Analysis Tool
Single Lane

4/5/2010
Version 1.1

General Site Information	
Analyst:	Lakeshia Osborn
Agency/Company:	GDOT
Date:	4/5/2010
Project Name or PI#:	8534
Main Street:	SR 247 CONN
Side Street(s):	CR 189/JOHN E. SULLIVAN
Year:	2011, AM PEAK
County/District:	Henry/3



Volume		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit	N (1), vph								
	NE (2), vph								
Legs	E (3), vph								
(TO)	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
Output	Total Vehicles	225	0	270	0	75	0	620	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	95%	100%	100%	100%	95%	100%
% SU/ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	0%	0%	0%	0%	0%	0%	0%	0%
% Bicycle	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F _{HV}	1.000	1.000	0.952	1.000	1.000	1.000	0.952	1.000

Entry/Conflict/Flow	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	34	0	12	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	205	0	0	0	45	0	662	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	34	0	24	0	0	0	66	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	17	0	298	0	6	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	256	0	322	0	85	0	740	0
Conflicting flow, pcu/h	328	0	52	0	879	0	263	0

Roundabout Type: Urban Compact - 1 Standard Single Lane - 2

Enter type here...

Results: Approach Measures of Effectiveness								
NOHPP 5/2 Model	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	814	NA	1073	NA	469	NA	869	NA
V/C ratio	0.31		0.30		0.18		0.85	
Control Delay, sec/pcu	6		5		9		23	
LOS	A		A		A		C	
95th % Queue (ft)	34		33		16		274	

Basis Model	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	1033	NA	1184	NA	733	NA	1069	NA
V/C ratio	0.25		0.27		0.12		0.69	
Control Delay, sec/pcu	5		4		6		11	
LOS	A		A		A		B	
95th % Queue (ft)	24		29		10		155	

Bypass Lane Merge Point Analysis						
Bypass Characteristics	Bypass 1	Bypass 2	Bypass 3	Bypass 4	Bypass 5	Bypass 6
Select Entry Leg from Bypass (FROM)	F(3)					
Select Exit Leg for Bypass (TO)	N(1)					
Volumes						
Right Turn Volume removed from Entry Leg	125					
Volume Characteristics (for entry leg)						
PHF	0.88					
F _{HV}	0.95					
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow	149					
Conflicting Flow	46					
Bypass Lane Results (NOHPP 5/2 Model)						
Entry Capacity at bypass mergepoint, pcu/hr	1079					
V/C ratio	0.14					
Control Delay, sec/pcu	3.9					
LOS	A					
95th % Queue (ft)	13					

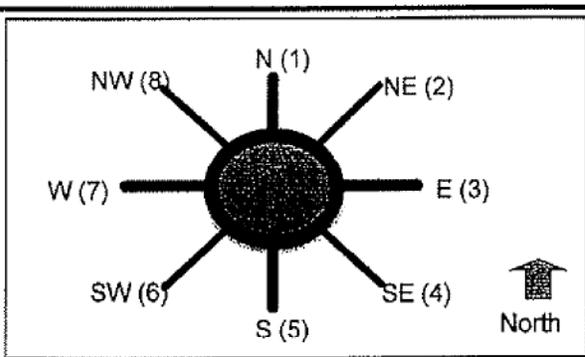
Notes:

Approach Designations	
SR 247 CONN	
CR 189/JOHN E. SULLIVAN	

Roundabout Analysis Tool
Single Lane

4/5/2010
Version 1.1

General Site Information	
Analyst:	Lakeshia Osborn
Agency/Company:	GDOT
Date:	4/5/2010
Project Name or PI#:	8534
Main Street:	SR 247 CONN
Side Street(s):	CR 189/JOHN E. SULLIVAN
Year:	2011, PM PEAK
County/District:	Henry/3



Volumes		Entry Leg (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit	N (1), vph								
Legs	NE (2), vph								
(TO)	E (3), vph								
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
Output	Total Vehicles	170	0	495	0	60	0	350	0

Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		100%	100%	95%	100%	100%	100%	95%	100%
% SU/ Bus		0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.		0%	0%	0%	0%	0%	0%	0%	0%
% Bicycle		0%	0%	0%	0%	0%	0%	0%	0%
PHF		0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F _{HV}		1.000	1.000	0.952	1.000	1.000	1.000	0.952	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to Leg #	N (1), pcu/h	0	0	0	0	23	0	6	0
	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	125	0	0	0	28	0	370	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	28	0	66	0	0	0	42	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	40	0	525	0	17	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	193	0	591	0	68	0	418	0
	Conflicting flow, pcu/h	608	0	46	0	501	0	219	0

Roundabout Type:

Results Approach Measures of Effectiveness								
NO HRP 572 Model	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	615	NA	1079	NA	685	NA	908	NA
V/C ratio	0.31		0.55		0.10		0.46	
Control Delay, sec/pcu	9		7		6		7	
LOS	A		A		A		A	
95th % Queue (ft)	33		90		8		65	

British Model								
	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	881	NA	1187	NA	939	NA	1093	NA
V/C ratio	0.22		0.50		0.07		0.38	
Control Delay, sec/pcu	5		6		4		5	
LOS	A		A		A		A	
95th % Queue (ft)	21		75		6		48	

Bypass Lane Merge Point Analysis						
Bypass Characteristics	BYPASS N	BYPASS E	BYPASS S	BYPASS W	BYPASS NE	BYPASS NW
Select Entry Leg from Bypass (FROM)	N (1)					
Select Exit Leg for Bypass (TO)	E (3)					
Volumes						
Right Turn Volume removed from Entry Leg	155					
Volume Characteristics (for entry leg)						
PHF	0.88					
F _{HV}	1.00					
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow	176					
Conflicting Flow	523					
BYPASS Lane Results (NO HRP 572 Model)						
Entry Capacity at bypass mergepoint, pcu/hr	670					
V/C ratio	0.26					
Control Delay, sec/pcu	7.3					
LOS	A					
95th % Queue (ft)	26					

Notes:

Approach Designations

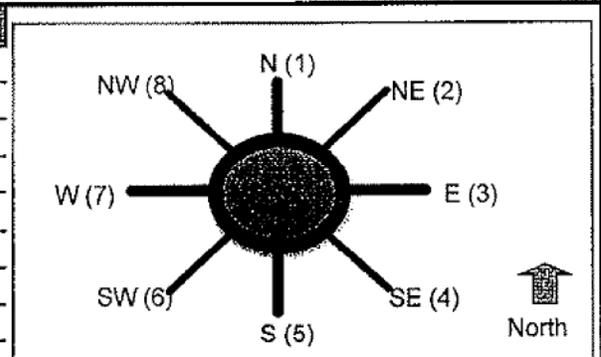
SR 247 CONN
CR 189/JOHN E. SULLIVAN

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Roundabout Analysis Tool
Single Lane

4/5/2010
Version 1.1

General Site Information	
Analyst:	Lakeshia Osborn
Agency/Company:	GDOT
Date:	4/5/2010
Project Name or PI#:	8534
Main Street:	SR 247 CONN
Side Street(s):	CR 189/JOHN E. SULLIVAN
Year:	2031, PM PEAK
County/District:	Henry/3



Volumes		Entry Leg (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph								
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph	15		545					
	NW (8), vph								
Output	Total Vehicles	200	0	610	0	65	0	430	0

Vehicle Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100%	100%	95%	100%	100%	100%	95%	100%
% SU/ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	0%	0%	5%	0%	0%	0%	0%	0%
% Bicycle	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F _{HV}	1.000	1.000	0.952	1.000	1.000	1.000	0.952	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	23	0	48	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	159	0	0	0	34	0	459	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	28	0	78	0	0	0	6	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	40	0	650	0	17	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	227	0	728	0	74	0	513	0
Conflicting flow, pcu/h	745	0	88	0	666	0	265	0

Roundabout type	Urban compact 1 - Standard Single Lane
Enter type here...	

Results - Approach Measures of Effectiveness								
NCHRP 372 Model	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	537	NA	1035	NA	580	NA	867	NA
V/C ratio	0.42		0.70		0.13		0.59	
Control Delay, sec/pcu	12		11		7		10	
LOS	B		B		A		A	
95th % Queue (ft)	52		161		11		105	

British Model								
	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	806	NA	1164	NA	849	NA	1068	NA
V/C ratio	0.28		0.63		0.09		0.48	
Control Delay, sec/pcu	6		8		5		6	
LOS	A		A		A		A	
95th % Queue (ft)	29		121		7		70	

Bypass Lane Merge Point Analysis						
Bypass Characteristics	Bypass 1	Bypass 2	Bypass 3	Bypass 4	Bypass 5	Bypass 6
Select Entry Leg from Bypass (FROM)	E (S)					
Select Exit Leg for Bypass (TO)	W (N)					
Volumes						
Right Turn Volume removed from Entry Leg	190					
Volume Characteristics (for Entry Leg)						
PHF	0.88					
F _{HV}	0.95					
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow	227					
Conflicting Flow	70					
Bypass Lane Results (NCHRP 372 Model)						
Entry Capacity at bypass mergepoint, pcu/hr	1053					
V/C ratio	0.22					
Control Delay, sec/pcu	4.4					
LOS	A					
95th % Queue (ft)	21					

Notes:

Approach Designations

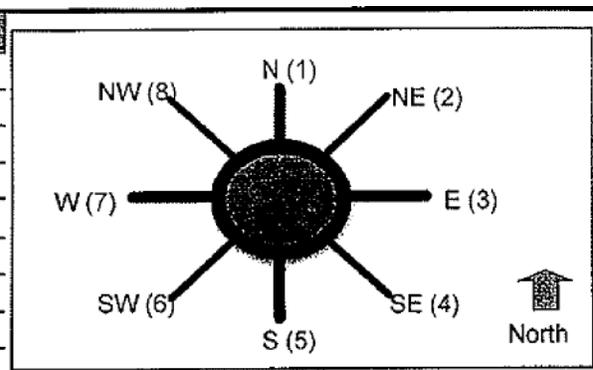
SR 247 CONN
CR 189/JOHN E. SULLIVAN



Roundabout Analysis Tool
Single Lane

4/5/2010
Version 1.1

General & Site Information	
Analyst:	Lakeshia Osborn
Agency/Company:	GDOT
Date:	4/5/2010
Project Name or PI#:	8534
Main Street:	SR 247 CONN
Side Street(s):	CR 189/JOHN E. SULLIVAN
Year:	2031 AM PEAK
County/District:	Henry/3



Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph					3		71	
	NE (2), vph								
	E (3), vph					5		823	
	SE (4), vph								
	S (5), vph								
	SW (6), vph								
	W (7), vph								
	NW (8), vph								
Output	Total Vehicles	275	0	335	0	90	0	775	0

Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		100%	100%	95%	100%	100%	100%	95%	100%
% SU/ Bus		0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.		0%	0%	0%	0%	0%	0%	0%	0%
% Bicycle		0%	0%	0%	0%	0%	0%	0%	0%
PHF		0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
F _{HV}		1.000	1.000	0.952	1.000	1.000	1.000	0.952	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to Leg #	N (1), pcu/h	0	0	0	0	40	0	84	0
	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	256	0	0	0	57	0	823	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	40	0	30	0	0	0	18	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	17	0	370	0	6	0	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	313	0	400	0	102	0	925	0
	Conflicting flow, pcu/h	405	0	129	0	1163	0	325	0

Roundabout Type	
Urban Impact	Standard Single Lane - 2
Enter type here...	

Results: Approach Measures of Effectiveness								
NCRRP-572 Model	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	753	NA	993	NA	353	NA	816	NA
V/C ratio	0.41		0.40		0.29		1.13	
Control Delay, sec/pcu	8		6		14		90	
LOS	A		A		B		F	
95th % Queue (ft)	51		52		29		698	

British Model	N	NE	E	SE	S	SW	W	NW
Entry Capacity, pcu/h	991	NA	1142	NA	579	NA	1035	NA
V/C ratio	0.32		0.35		0.18		0.89	
Control Delay, sec/pcu	5		5		8		24	
LOS	A		A		A		C	
95th % Queue (ft)	34		42		16		340	

Bypass Lane Merge Point Analysis						
Bypass Characteristics	Bypass 1	Bypass 2	Bypass 3	Bypass 4	Bypass 5	Bypass 6
Select Entry Leg from Bypass (FROM)	E (3)					
Select Exit Leg for Bypass (TO)	N (1)					
Volumes						
Right Turn Volume removed from Entry Leg	155					
Volume Characteristics (for entry leg)						
PHF	0.88					
F _{HV}	0.95					
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry Conflicting Flows						
Entry Flow	185					
Conflicting Flow	123					
Bypass Lane Results (NCRRP-572 Model)						
Entry Capacity at bypass mergepoint, pcu/hr	999					
V/C ratio	0.19					
Control Delay, sec/pcu	4.4					
LOS	A					
95th % Queue (ft)	18					

Notes:

Approach Designations

SR 247 CONN
CR 189/JOHN E. SULLIVAN

