

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. # 0009851 **OFFICE** Design Policy & Support
Randolph County
GDOT District 4 - Tifton **DATE** 8/21/2014
No Build Roundabout: SR1/US 27
At SR 50/US 82

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Glenn Bowman, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Hiral Patel, State Environmental Administrator
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Jeff Fletcher, Statewide Location Bureau Chief
Andy Casey, State Roadway Design Engineer
Attn: Fletcher Miller, Design Group Manager
Joe Sheffield, District Engineer
Sandy Griffin, District Preconstruction Engineer
Tim Warren, District Utilities Engineer
Matt Bennett, Project Manager
BOARD MEMBER - 2nd Congressional District

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

Project Type: Safety P.I. Number: 0009851
GDOT District: 4 County: Randolph
Federal Route Number: 27, 82 State Route Number: 1, 50

Existing signalized intersection of SR 1/US 27 at SR 50/US 82 - No-Build Roundabout

Submitted for approval:

<u>C. Anthony Long</u> State Roadway Design Engineer	<u>5/23/14</u> DATE
<u>Albert Shelby</u> <i>BSK</i> State Program Delivery Engineer	<u>6/5/14</u> DATE
<u>JHB</u> GDOT Project Manager	<u>5/30/2014</u> DATE

*** Recommendation for approval:**

<u>KATHY ZAHUL</u> State Traffic Engineer	<u>7/22/2014</u> DATE
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The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

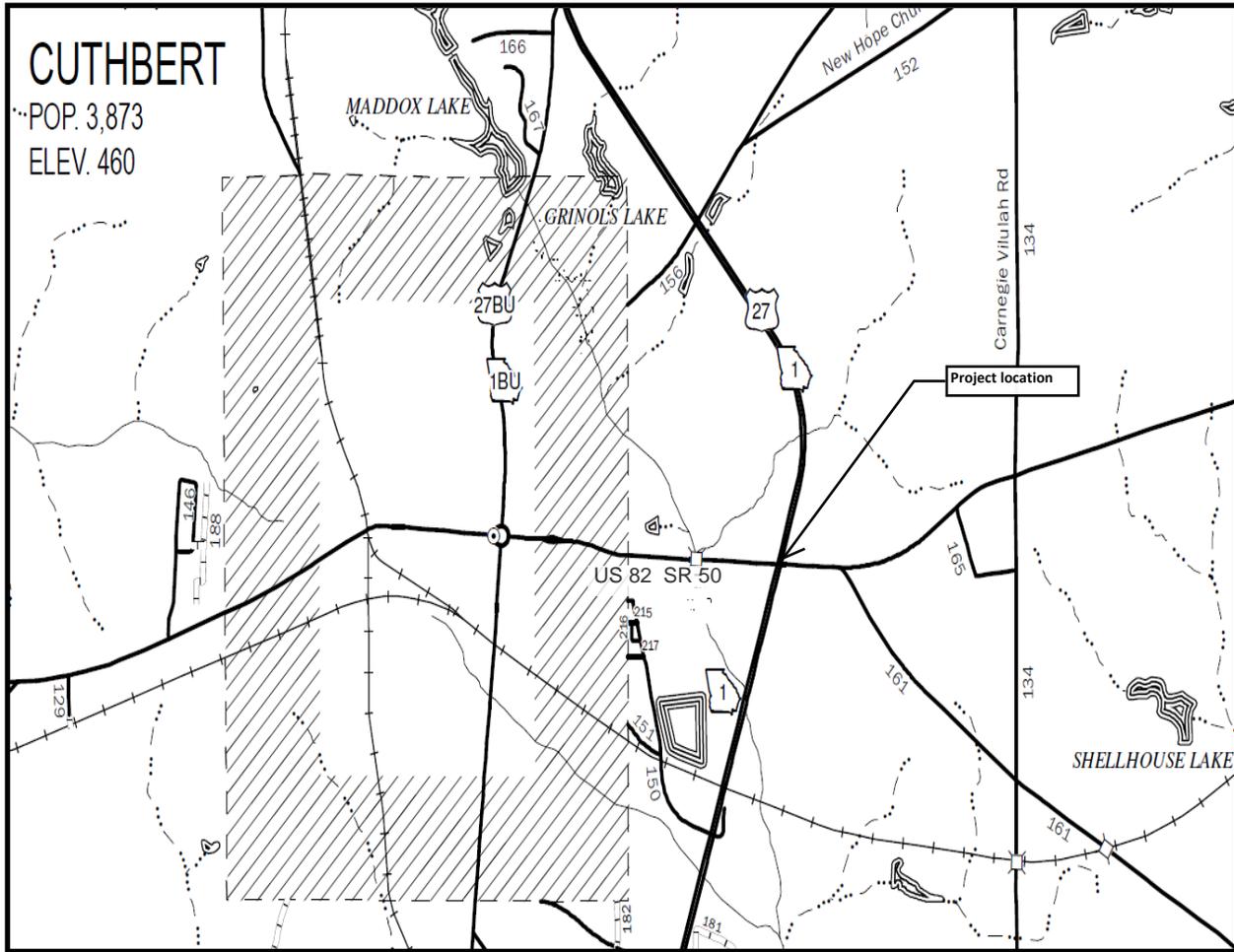
*** CYNTHIA L VANDIKE**
State Transportation Planning Administrator 6/20/2014
DATE

Approval:

Concur: <u>[Signature]</u> GDOT Director of Engineering	<u>8/13/2014</u> DATE
Approve: <u>Russell McMurry</u> <i>ATM</i> GDOT Chief Engineer	<u>8/15/14</u> DATE

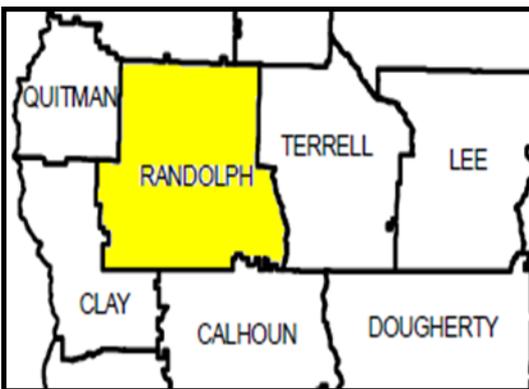
*** RECOMMENDATION ON FILE - [Signature]**

PROJECT LOCATION



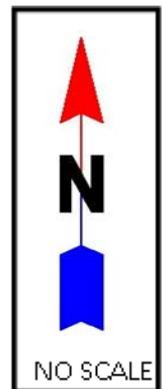
SOURCE: GDOT COUNTY MAPS

06-27-13



Project Location
SR 1/US 27/Cuthbert Bypass at
SR 50/US 82/Broad Street

P.I. NO. 0009851



PLANNING & BACKGROUND DATA

Project Justification Statement: (Prepared by the Office of Traffic Operations) The proposed project would enhance safety by reducing crash frequency and severity and improve operational efficiency at the intersection of SR1/US 27 at SR 50/US 82 in Randolph County, GA. In Georgia, nearly a third of fatal crashes occur at intersections making intersection safety a focus area for the Georgia Department of Transportation. Nationally, intersection crashes account for 40% of all reported crashes and approximately 20% of traffic fatalities. Of those fatalities, nearly 50% are the result of angle collisions. Angle collisions are often high speed high impact crashes which often result in serious injuries or fatalities.

Roundabouts have been identified as one of nine proven countermeasures by the Federal Highway Administration (FHWA). The installation of roundabouts in comparison to traditional safety countermeasures such as traffic signals have resulted in a greater reduction in crash frequency and in many instances better operational efficiency. Roundabouts are generally navigated at slower speeds which correlate with lower impact and less severe crashes. A roundabout also presents fewer conflict points than a traditional intersection resulting in fewer collisions.

Existing conditions: The proposed project area is currently signalized with all four approaches having double indicated ground-mounted advance signal ahead warning signs and rumble strips. Additionally, SR 1/US 27 has traffic calming pavement markings on both northbound and southbound approaches. SR 1/US 27 is currently a four-lane divided facility that reduces to a single through lane to the north and south of the intersection at SR 50/US 82. SR 50/US 82 is a two lane facility both east and west of the intersection with exclusive left-turn lanes and yield-controlled right-turn channelized lanes provided on both eastbound and westbound approaches. SR 1/US 27 and SR 50/US 82 are both classified as rural principal arterial highways. SR 1/US 27 and SR 50/US 82 both have a reduced posted speed of 45 mph in the vicinity of the intersection.

Crash data from 2005-2009 indicated that 14 crashes occurred at this intersection resulting in 11 total injuries. Of those crashes 50% were angle collisions accounting for 72% of the injuries. GEARs raw data from 2011-2013 indicated that 4 crashes occurred at this intersection resulting in 5 total injuries and no fatalities. Of those crashes, 50% were angle collisions accounting for 80% of the injuries. Studies have shown that the installation of a roundabout results in nearly 80% reduction in fatal and serious injury crashes and nearly 40% reduction in property damage crashes.

Description of the proposed project: The project is located at the existing signalized intersection of SR 1/US 27 at SR 50/US 82 in Randolph County, Georgia. The total project length is 0.25 mile. It is proposed to retain the intersection in the current configuration; therefore a No-Build alternative is preferred.

Other projects in the area: None

MPO: Not Urban/Not in MPO

TIP #: N/A

TIA Regional Commission: River Valley RC

RC Project ID N/A

Congressional District(s): 2

Federal Oversight: Exempt State Funded Other

County: Randolph

Projected Traffic: ADT

Current Year (2011): 4,750

Open Year (2012): 4950

Design Year (2032): 6700

Traffic Projections Performed by: Office of Planning

Functional Classification (Mainline): Rural Principal Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: None Bicycle Pedestrian Transit

DESIGN DATA

Mainline Design Features: SR 1/US 27

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	4	4	No change
- Lane Width(s)	12 ft	11-12 ft	No change
- Median Width & Type	Unavailable	32-44 ft Depressed	No change
- Outside Shoulder or Border Area Width	Unavailable	N/A	No change
- Outside Shoulder Slope	Unavailable	6%	No change
- Inside Shoulder Width	Unavailable	N/A	No change
- Sidewalks	N/A	N/A	No change
- Auxiliary Lanes	Unavailable	N/A	No change
- Bike Lanes	N/A	N/A	No change
Posted Speed	45 MPH		No change
Design Speed	55 MPH	N/A	No change
Min Horizontal Curve Radius	Unavailable	1060 FT	No change
Maximum Superelevation Rate	Unavailable	6%	No change
Maximum Grade	Unavailable	6%	No change
Access Control	Permitted	N/A	No change
Design Vehicle	WB-67	N/A	No change

*According to current GDOT design policy if applicable

Major Intersection: SR 1/US 27 at SR 50/US 82

Lighting required: No Yes

Randolph County does not support advancement of this project. See attachments.

Transportation Management Plan [TMP] Required: No Yes

If Yes: Project classified as: Non-Significant Significant

TMP Components Anticipated: TTC TO PI

Will Context Sensitive Solutions procedures be utilized? No Yes

Design Exceptions to FHWA/AASHTO controlling criteria anticipated: None

Design Variances to GDOT Standard Criteria anticipated: None

UTILITY AND PROPERTY

Temporary State Route Needed: No Yes Undetermined

Railroad Involvement: N/A

Utility Involvements: N/A

SUE Required: No Yes

Public Interest Determination Policy and Procedure recommended (Utilities)? No Yes

Right-of-Way:

Required Right-of-Way anticipated: No Yes Undetermined
 Easements anticipated: None Temporary Permanent Utility Other

ENVIRONMENTAL AND PERMITS

Anticipated Environmental Document:

GEPA: NEPA: CE PCE

MS4 Compliance – Is the project located in an MS4 area? No Yes

Environmental Permits, Variances, Commitments, and Coordination anticipated: None

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? No Yes
 Is the project located in an Ozone Non-attainment area? No Yes
 Is a Carbon Monoxide hotspot analysis required? No Yes

NEPA/GEPA Comments & Information: No environmental document is required for the preferred alternative.

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Public Information Open House (PIOH) Meeting: A PIOH was held on 9/19/2013. See attachments.

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Office of Roadway Design
Design	N/A
Right-of-Way Acquisition	N/A
Utility Relocation	N/A
Letting to Contract	N/A
Construction Supervision	N/A
Providing Material Pits	N/A
Providing Detours	N/A
Environmental Studies, Documents, and Permits	N/A
Environmental Mitigation	N/A
Construction Inspection & Materials Testing	N/A

Other coordination to date:

Project Deletion Discussion Meeting Minutes, 5/31/2011
 Kittleson & Associates, Inc., Roundabout Feasibility Report and Response, 7/12/2012, 10/5/2012

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	GDOT	GDOT	GDOT	GDOT	N/A	
\$ Amount	\$390,000	N/A	N/A	N/A	N/A	\$390,000*
Date of Estimate	2/22/2010	N/A	N/A	N/A	N/A	

*Total cost should be revised to amount spent after No Build Concept is approved.

ALTERNATIVES DISCUSSION

No-Build Alternative: Retain existing signalized intersection with traffic calming.			
Estimated Property Impacts:	N/A	Estimated Total Cost:	N/A
Estimated ROW Cost:	N/A	Estimated CST Time:	N/A
Rationale: This alternative was chosen due to recent safety improvements resulting in a reduction of crashes. A PIOH was held on 9/19/2013, in which the public poll showed favor to leave the intersection signalized. The intersection currently operates with a LOS A. See attachments 3 and 4.			

Alternative 1: Single-Lane Roundabout			
Estimated Property Impacts:	3	Estimated Total Cost:	\$ 1,143,871
Estimated ROW Cost:	Not Determined	Estimated CST Time:	12 months
Rationale: This alternative was considered because it would resolve safety concerns by reducing conflict points. Additionally, this roundabout configuration is sized appropriately for design volumes. It provides a smaller footprint and has less right-of-way impacts than roundabout Alternative 2.			

Alternative 2: Staged Multilane Roundabout			
Estimated Property Impacts:	4	Estimated Total Cost:	Not Determined
Estimated ROW Cost:	Not Determined	Estimated CST Time:	12 months
Rationale: This alternative is not selected because it has a larger impact on right-of-way than Alternative 1. Increased capacity provided by a multilane roundabout is offset by increased conflict points.			

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Detailed Cost Estimates
3. Crash summaries
4. Crash Report
5. Traffic diagrams
6. Summary of TE Study and Signal Warrant analysis
7. Capacity analysis summary
8. Project Deletion Discussion Meeting Minutes
9. Roundabout Feasibility Report and Response
10. PIOH Summary of Comments and Response

CONCEPTUAL ROUNDABOUT DESIGN

PI0H - September 19, 2013

SR 50/US 82/BROAD ST AT
SR 1/US 27/CUTHBERT BYPASS

RANDOLPH COUNTY
P.I. No. 0009851

GEORGIA
DEPARTMENT
OF
TRANSPORTATION



82 50 BROAD ST

27 1 CUTHBERT BYPASS

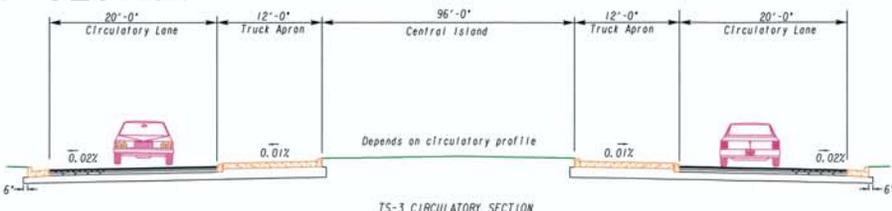
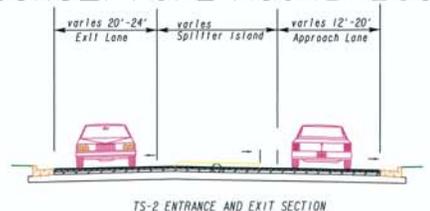
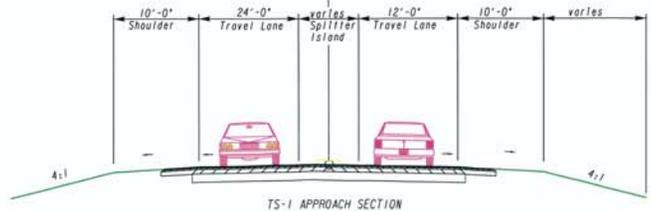
27 1 CUTHBERT BYPASS

82 50 BROAD ST

LEGEND

- PROPERTY AND EXISTING R/W LINE (Blue dashed line)
- REQUIRED R/W LINE (Red dashed line)
- CENTRAL ISLAND (Blue circle)
- PROPOSED ROADWAY (Orange square)

CONCEPTUAL ROUNDABOUT SECTION



DETAILED COST ESTIMATE



Job: 0009851

JOB NUMBER 0009851

FED/STATE PROJECT NUMBER

SPEC YEAR: 01

DESCRIPTION: SR 1/ U 27 @ SR 50 / US 82

ITEMS FOR JOB 0009851

0010 - ROADWAY

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0005	150-1000	1.000	LS	\$100,000.00000	TRAFFIC CONTROL - 0009851	\$100,000.00
0095	210-0100	1.000	LS	\$200,000.00000	GRADING COMPLETE - 0009851	\$200,000.00
0100	310-1101	1600.000	TN	\$20.69743	GR AGGR BASE CRS, INCL MATL	\$33,115.89
0105	402-1812	1500.000	TN	\$76.58358	RECYL AC LEVELING,INC BM&HL	\$114,875.37
0110	402-3121	525.000	TN	\$72.69432	RECYL AC 25MM SP,GP1/2,BM&HL	\$38,164.52
0115	402-3130	750.000	TN	\$80.55680	RECYL AC 12.5MM SP,GP2,BM&HL	\$60,417.60
0120	402-3190	275.000	TN	\$91.99071	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	\$25,297.45
0125	413-1000	500.000	GL	\$3.66304	BITUM TACK COAT	\$1,831.52
0130	432-5010	500.000	SY	\$7.27336	MILL ASPH CONC PVMT,VARB DEPTH	\$3,636.68
0135	441-0204	150.000	SY	\$38.49502	PLAIN CONC DITCH PAVING, 4 IN	\$5,774.25
0140	441-0748	2500.000	SY	\$40.49662	CONC MEDIAN, 6 IN	\$101,241.55
0145	441-0756	460.000	SY	\$46.81000	CONC MEDIAN, 8 IN	\$21,532.60
0150	441-5002	325.000	LF	\$13.68219	CONC HEADER CURB, 6", TP 2	\$4,446.71
0155	441-5011	390.000	LF	\$13.68219	CONC HDR CURB, 6 IN, TP 9A	\$5,336.05
0160	441-6222	2500.000	LF	\$14.87885	CONC CURB & GUTTER/ 8"X30"TP2	\$37,197.13
0165	446-1100	2000.000	LF	\$3.59149	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	\$7,182.98
0170	456-2015	1.000	GLM	\$880.50561	INDENT. RUMB. STRIPS - GRND-IN-PL (SKIP)	\$880.51
0175	550-1180	600.000	LF	\$32.50280	STM DR PIPE 18",H 1-10	\$19,501.68
0180	550-4218	8.000	EA	\$536.99753	FLARED END SECT 18 IN, ST DR	\$4,295.98
0185	573-2006	1000.000	LF	\$14.75206	UNDDR PIPE INCL DRAIN AGGR 6"	\$14,752.06
0190	603-2181	200.000	SY	\$28.26664	STN DUMPED RIP RAP, TP 3, 18"	\$5,653.33
0195	603-7000	200.000	SY	\$3.56837	PLASTIC FILTER FABRIC	\$713.67
0200	620-0100	2000.000	LF	\$26.90866	TEMP BARRIER, METHOD NO. 1	\$53,817.32
0205	634-1200	10.000	EA	\$101.48623	RIGHT OF WAY MARKERS	\$1,014.86
0250	668-2100	12.000	EA	\$1,782.57043	DROP INLET, GP 1	\$21,390.85
SUBTOTAL FOR ROADWAY:						\$882,070.56

DETAILED COST ESTIMATE



Job: 0009851

0020 - EROSION CONTROL

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0010	163-0232	2.000	AC	\$4.26099	TEMPORARY GRASSING	\$8.52
0015	163-0240	40.000	TN	\$226.04598	MULCH	\$9,041.84
0020	163-0300	2.000	EA	\$1,201.38567	CONSTRUCTION EXIT	\$2,402.77
0025	163-0503	2.000	EA	\$342.14093	CONSTR AND REMOVE SILT CONTROL GATE, TP 3	\$684.28
0030	163-0527	10.000	EA	\$226.72472	CNST/REM RIP RAP CKDM, STN P RIPRAP/SN BG	\$2,267.25
0035	163-0528	1500.000	LF	\$3.16798	CONSTR AND REM FAB CK DAM -TP C SLT FN	\$4,751.97
0040	163-0529	1000.000	LF	\$3.68647	CNST/REM TEMP SED BAR OR BLD STRW CK DM	\$3,686.47
0045	165-0010	500.000	LF	\$0.63754	MAINT OF TEMP SILT FENCE, TP A	\$318.77
0050	165-0030	1000.000	LF	\$0.70121	MAINT OF TEMP SILT FENCE, TP C	\$701.21
0055	165-0041	1600.000	LF	\$1.07079	MAINT OF CHECK DAMS - ALL TYPES	\$1,713.26
0060	165-0071	1000.000	LF	\$1.33139	MAINT OF SEDIMENT BARRIER - BALED STRAW	\$1,331.39
0065	165-0087	2.000	EA	\$111.38174	MAINT OF SILT CONTROL GATE, TP 3	\$222.76
0070	165-0101	2.000	EA	\$452.93946	MAINT OF CONST EXIT	\$905.88
0075	167-1000	2.000	EA	\$228.40549	WATER QUALITY MONITORING AND SAMPLING	\$456.81
0080	167-1500	18.000	MO	\$314.07742	WATER QUALITY INSPECTIONS	\$5,653.39
0085	171-0010	1000.000	LF	\$1.89692	TEMPORARY SILT FENCE, TYPE A	\$1,896.92
0090	171-0030	2000.000	LF	\$2.79017	TEMPORARY SILT FENCE, TYPE C	\$5,580.34
0260	700-6910	2.000	AC	\$485.50571	PERMANENT GRASSING	\$971.01
0265	700-7000	6.000	TN	\$41.65240	AGRICULTURAL LIME	\$249.91
0270	700-8000	2.000	TN	\$543.11553	FERTILIZER MIXED GRADE	\$1,086.23
0275	700-8100	100.000	LB	\$2.87607	FERTILIZER NITROGEN CONTENT	\$287.61
0280	700-9300	800.000	SY	\$3.86348	SOD	\$3,090.78
0285	710-9000	500.000	SY	\$3.62460	PERM SOIL REINFORCING MAT	\$1,812.30
0290	716-2000	2000.000	SY	\$0.99589	EROSION CONTROL MATS, SLOPES	\$1,991.78
SUBTOTAL FOR EROSION CONTROL:						\$51,113.45

0030 - SIGNING & MARKING

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0210	636-1033	100.000	SF	\$18.74391	HWY SIGNS, TP1MAT,REFL SH TP 9	\$1,874.39
0215	636-2070	250.000	LF	\$6.92151	GALV STEEL POSTS, TP 7	\$1,730.38
0220	653-1501	4200.000	LF	\$0.50887	THERMO SOLID TRAF ST 5 IN, WHI	\$2,137.25
0225	653-1502	5200.000	LF	\$0.49480	THERMO SOLID TRAF ST, 5 IN YEL	\$2,572.96
0230	653-3501	850.000	GLF	\$0.32263	THERMO SKIP TRAF ST, 5 IN, WHI	\$274.24
0235	653-6006	500.000	SY	\$3.49346	THERM TRAF STRIPING, YELLOW	\$1,746.73
0240	654-1001	50.000	EA	\$3.65988	RAISED PVMT MARKERS TP 1	\$182.99
0245	654-1003	50.000	EA	\$3.35809	RAISED PVMT MARKERS TP 3	\$167.90
SUBTOTAL FOR SIGNING & MARKING:						\$10,686.84

0040 - LIGHTING

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0255	682-9030	1.000	LS	\$200,000.00000	LIGHTING SYSTEM 0009851	\$200,000.00
SUBTOTAL FOR LIGHTING:						\$200,000.00

TOTALS FOR JOB 0009851

DETAILED COST ESTIMATE



Job: 0009851

ITEMS COST:	\$1,143,870.85
COST GROUP COST:	\$0.00
ESTIMATED COST:	\$1,143,870.85
CONTINGENCY PERCENT:	0.00
ENGINEERING AND INSPECTION:	0.00
ESTIMATED COST WITH CONTINGENCY AND E&I:	\$1,143,870.85

CRASH SUMMARIES

(2011-2013)

P.I. No. 0009851 Randolph County

SR 1/ US 27 at SR 50/ US 82

2011	Number of Incident	Injury	Fatality
Rear End	0	0	0
Angle	0	0	0
Head On	0	0	0
Not a Collision with Motor Vehicle	1	1	0
Undetermined	0	0	0
TOTAL	1	1	0

2012	Number of Incident	Injury	Fatality
Rear End	1	0	0
Angle	1	2	0
Not a Collision with Motor Vehicle	0	0	0
Head On	0	0	0
Undetermined	0	0	0
TOTAL	2	2	0

2013	Number of Incident	Injury	Fatality
Rear End	0	0	0
Angle	1	2	0
Not a Collision with Motor Vehicle	0	0	0
Head On	0	0	0
Undetermined	0	0	0
TOTAL	1	2	0

*State-wide data compilation not yet available for these years

GEARS Advanced Search Crash Report
P.I. No. 0009851
Randolph County

IDCELL	Date of Collision	Location	Injuries	Fatalities	Collision
3953628	12/22/2011 15:20	SR 1 at SR 50	1	0	Not a Collision with a Motor Vehicle
3999870	2/6/2012 15:02	SR 50 AND GA1 at GA50 AND GA1	0	0	Rear End
4129210	6/25/2012 13:23	GA1 AND GA50 at GA50	2	0	Angle
4690624	12/26/2013 13:30	SR 1 SR50 at SR50 SR 1	2	0	Angle
4722105	1/31/2014 8:20	SR 1 SR50	0	0	Angle
4736633	2/15/2014 13:52	SR 1 SR50	3	0	Angle
4829125	4/26/2014 14:05	SR 1 at SR 50	1	0	Rear End

The crash reports listed above were determined by use of the Advanced Search feature of the Georgia Electronic Accident Reporting System (GEARS).

Appriss, the Georgia Department of Transportation and Office of Traffic Operations Disclaimer:

No warranties or guaranties, either expressed or implied are made with respect to the data provided by Appriss, the Georgia Department of Transportation (GDOT) and Office of Traffic Operations (OTO). Appriss, GDOT and OTO collect and maintain data pursuant to legal mandate of the Federal Government.

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CRASH HISTORY
 SR 1 @ SR 50
 Randolph County

D=DIR. OF TRAVEL		VM=VEH. MANEUVER		TYPE=MANNER OF COLLISION	
1	NORTH	1	TURNING LEFT	1	ANGLE
2	SOUTH	2	TURNING RIGHT	2	HEAD ON
3	EAST	3	U-TURN	3	REAR END
4	WEST	4	STOPPED	4	SIDESWIPE SAME DIR.
		5	STRAIGHT	5	SIDESWIPE OPP DIR.
		6	CHANGING LANES	6	NOT A COLLISION WITH A VEH.
		7	BACKING		
		8	PARKED		
		9	PASSING		
		10	NEGOTAITING A CURVE		

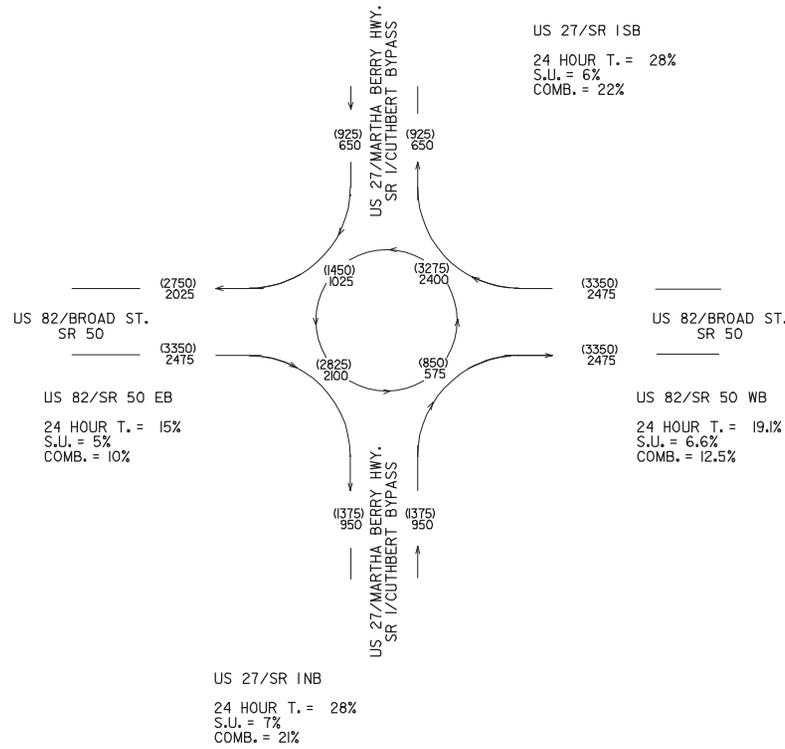
SU=SURFACE CONDITION

1	DRY
2	WET
3	SNOWY
4	ICY
5	OTHER

#	DATE	TIME	INJ	FAT	D1	VM1	D2	VM2	TYPE	SU	D3	VM3	D4	VM4
1	9/23/01	17:45	3	0	04	04	04	05	03	02				
2	4/12/01	13:00	2	1	02	05	03	05	01	01				
3	3/10/06	21:10	0	0	02	05	03	05	01	02				
4	8/3/06	11:36	0	0	04	07	04	04	02	01				
5	11/11/06	09:11	0	0	04	05	04	04	03	02				
6	11/27/06	09:05	1	0	03	05	01	05	01	01				
7	02/21/07	18:41	1	0	02	05	04	05	01	02				
8	03/16/07	16:40	0	0	04	05	04	05	03	01				
9	06/21/07	16:52	0	0	04	04	04	07	03	01				
10	08/11/07	11:35	0	0	02	05	03	05	01	01				
11	03/03/08	12:15	2	0	02	05	03	05	01	01				
12	3/10/08	12:07	0	0	03	05	02	05	01	01				
13	06/9/08	09:32	0	0	03	05	04	01	02	01				
14	06/26/09	08:06	4	0	01	04	03	05	01	01				
15	07/15/09	15:18	1	0	04	05	04	05	03	02				
16	09/25/09	08:02	2	0	03	05	03	04	03	01				
17	1/27/10	08:07	1	0	03	02	03	05	03	01				
18	2/10/10	14:33	0	0	03	07	02	10	03	01				
19	12/12/11	15:20	1	0	02	01			06	01				
20	2/6/12	15:02	0	0	03	04	03	05	03	01				
21	6/25/12	13:23	2	0	01	05	04	05	01	01				

2032 ADT = (000)
2012 ADT = 000

RANDOLPH COUNTY



BUILD

P.I. # 0009851
RANDOLPH COUNTY
SR 1/US 27 @
SR 50/US 82

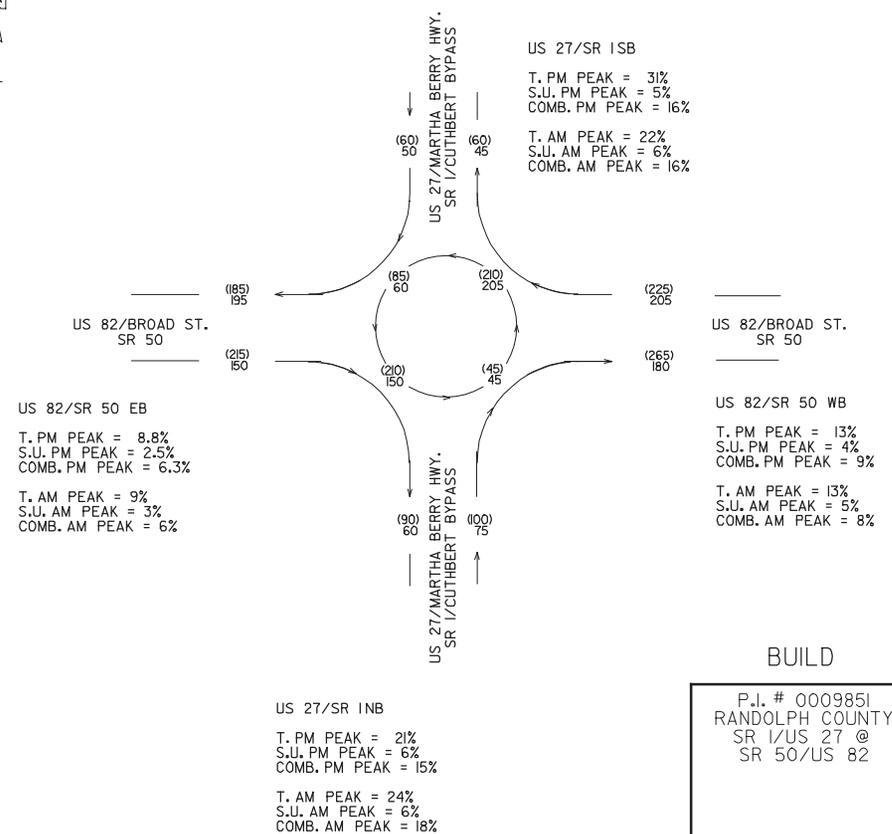
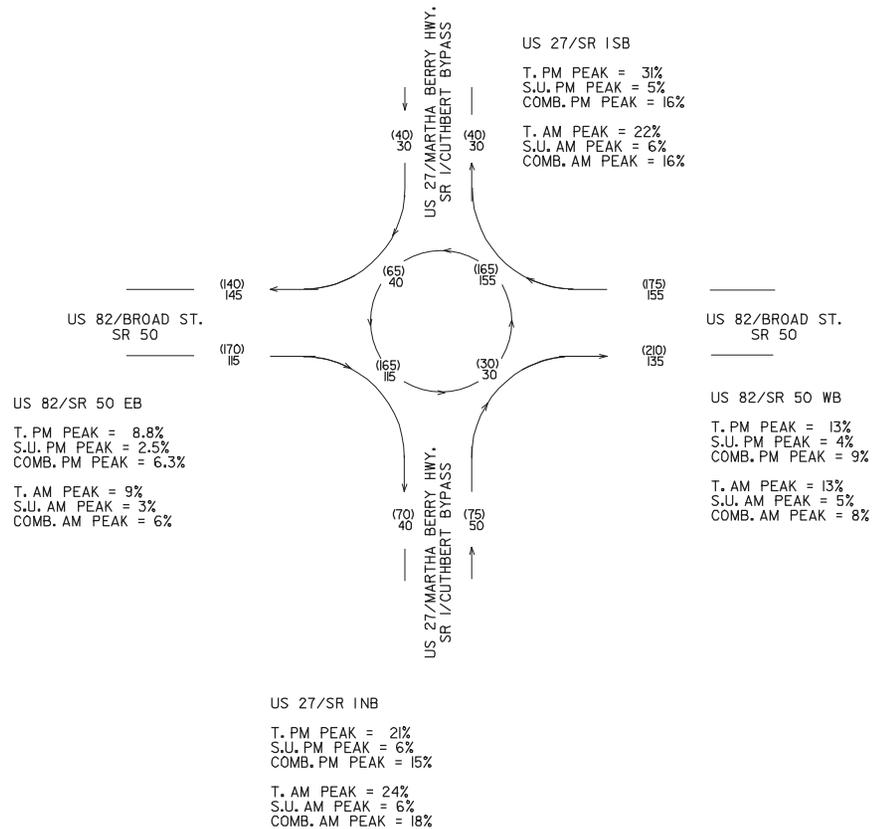
2032 ADT = (000)
2012 ADT = 000

MTW
09/11

2012 PM DHV = (000)
2012 AM DHV = 000

RANDOLPH COUNTY

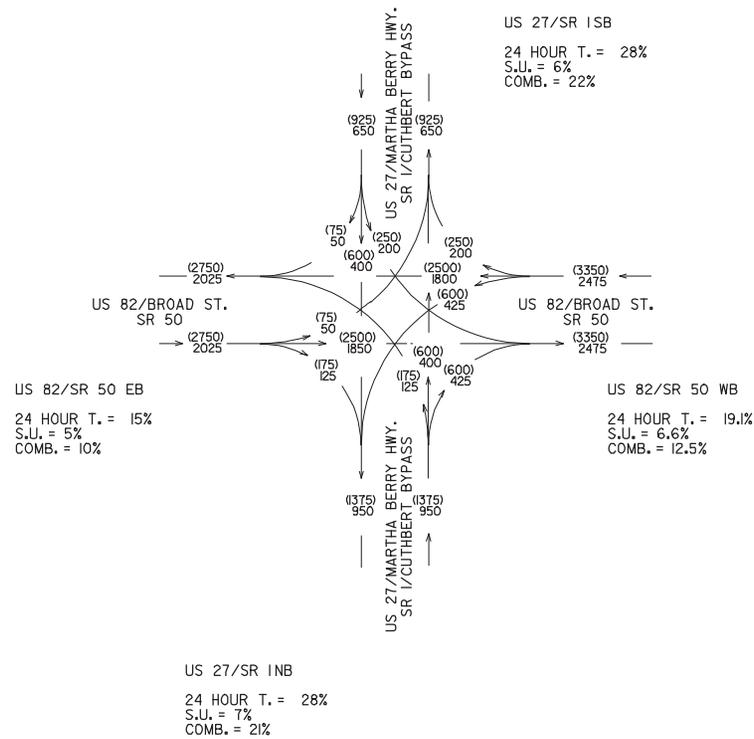
2032 PM DHV = (000)
2032 AM DHV = 000



BUILD
P.L. # 0009851
RANDOLPH COUNTY
SR 1/US 27 @
SR 50/US 82

2032 ADT = (000)
2012 ADT = 000

RANDOLPH COUNTY



NO BUILD

P.I. # 0009851
RANDOLPH COUNTY
SR 1/US 27 @
SR 50/US 82

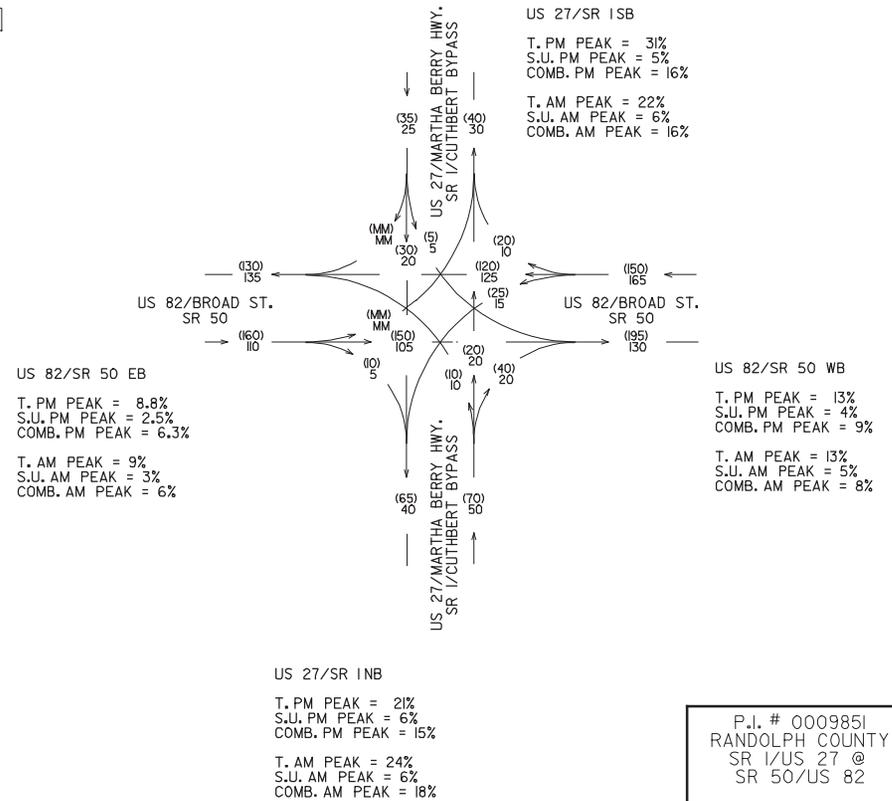
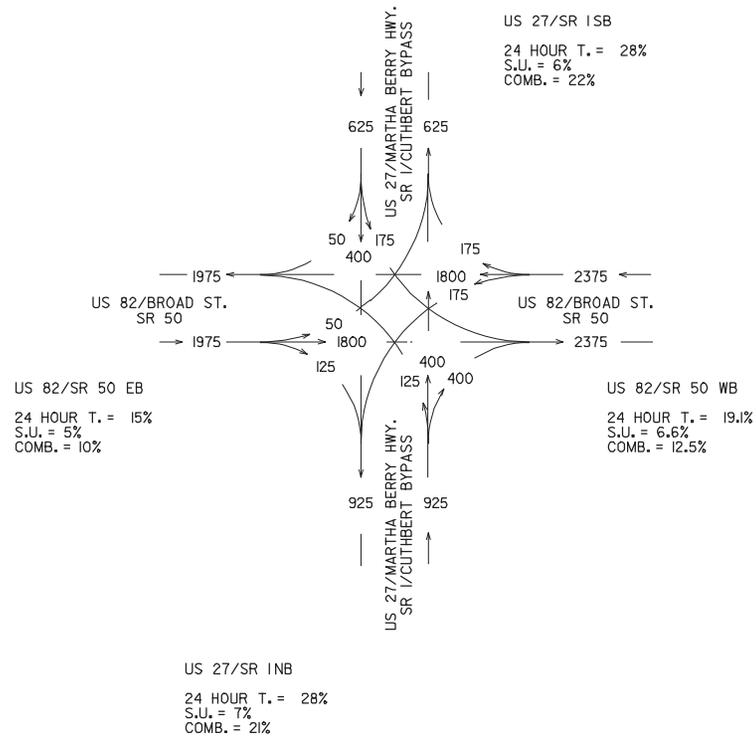
2032 ADT = (000)
2012 ADT = 000

MTW
09/11

EXISTING 2011

RANDOLPH COUNTY

2011 PM DHV = (000)
2011 AM DHV = 000



P.L. # 0009851
RANDOLPH COUNTY
SR 1/US 27 @
SR 50/US 82

TRAFFIC ENGINEERING REPORT

October 1, 2010

FILE: State Route 1/ US 27 @ State Route 50/ US 82

COUNTY: Randolph

CITY: Cuthbert

REASON FOR INVESTIGATION:

Scott Zehngraft, General Operations Manager (GDOT), contacted Van Mason, requesting a traffic study at the intersection of State Route 1/ US 27 @ State Route 50/ US 82. Scott made the request to the Department to do a Traffic Engineering study in order to determine if a roundabout could improve safety or operational efficiency.

TOPOGRAPHY:

State Route 1/ US 27 and State Route 50/ US 82 are rural principal arterial highways with moderate commercial development through the general area of study. Three quadrants are currently vacant and the southeast quadrant has a BP Station/ Churches' Chicken and adjacent to this development is a Huddle house to the east and a hotel to the south.

State Route 1/ US 27 is a divided four lane with four twelve foot lanes that run north and south through Randolph County. State Route 50/ US 82 is a two lane road with two twelve feet lanes that run east and west through Randolph County.

The study intersection is located approximately twenty one (21) miles southeast of Eufaula, Alabama and 40 miles northwest of Albany, GA.

VEHICLE VOLUMES:

The current (2010 data) average daily two- way traffic on State Route 1/ US 27 is 1,720 vehicles per day with the 15 year projected (2%) value at 2,307. State Route 50/ US 82 has a current (2010 data) average daily two- way traffic count of 2,830 vehicles per day with a 15 year projected (2%) value at 3,800.

EXISTING TRAFFIC CONTROL:

The intersection is presently signalized. All four approaches have double indicated ground mounted advance signal ahead warning signs. All four approaches also have overhead signal ahead warning flashers along with rumble strips. State Route 1/ US 27 on both the northbound and southbound approaches currently has traffic calming pavement markings.

PEDESTRIAN MOVEMENTS:

No pedestrian movement was noted during the field work for the study intersection.

SPEED LIMITS:

The posted speed limit on all approaches is 45 mph

ACCIDENT HISTORY:

Accident printouts from the Departments database, was reviewed from 2006 to 2009. Accident history and reports from the Georgia State Patrol were also evaluated. Fourteen accidents were reported between March 2006 and September 2009. Based on the information provided to us, there have been three (3) angle intersecting accidents (in twelve consecutive months) at the intersection in the past four years. Below is a summary by year and type of accident at the study intersection.

- 2006- 4 Accidents with 1 injury: 2 Angles, 2 rear ends
- 2007 - 4 Accidents with 1 injury: 2 Angles, 2 rear ends
- 2008 - 3 Accidents with 2 injuries: 2 Angles, 1 head on
- 2009 - 3 Accidents with 7 injuries: 1Angle, 2 rear ends

OTHER INFORMATION:

Intersection Sight Distance (ISD) was measured using a driver's eye height of 42", 16' from edge of pavement and a vehicle height of 42" as per AASHTO guidelines. Sight distance measurements were also conducted as per the Geometric

OTHER INFORMATION CONT.:

Design of Highways and Streets, Fifth Edition. The sight distance was checked in each direction and is in excess of 1000 feet. Minimum Intersection Sight Distance required for 45 mph is 500 feet.

MUTCD SIGNAL WARRANTS ANALYSIS:

A traffic signal warrant analysis was performed for the study intersection of State Route 1/ US 27 and State Route 50/US 82 using the criteria provided in the Manual of Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration (FHWA), 2009. According to the MUTCD, the investigation of the need for traffic signal control shall include an analysis of the applicable factors contained in the following traffic signal warrants and other factors related to existing operations and safety at the study location:

- Warrant 1 – Eight-Hour Peak Volume
- Warrant 2 – Four-Hour Vehicular Volume
- Warrant 3 – Peak Hour

MUTCD SIGNAL WARRANTS ANALYSIS CONT.:

- Warrant 4 – Pedestrian Volume
- Warrant 5 – School Crossing
- Warrant 6 – Coordinated Signal System
- Warrant 7 – Crash Experience
- Warrant 8 – Roadway Network
- Warrant 9 – Intersection Near a Grade Crossing

A traffic control signal should not be installed unless one or more of the above warrants are met. However, the satisfaction of a traffic signal warrant or warrants should not in itself require the installation of a traffic control signal.

This traffic signal warrant analysis evaluated actual traffic conditions to determine if they satisfy the minimum warrants established by the MUTCD.

Additionally, it should be noted that Warrants 1, 2 and 3 are vehicular volume warrants and are based on mainline traffic volumes, minor traffic volumes, the number of travel lanes and mainline traffic speed. The results of the MUTCD signal warrant analysis are summarized and attached.

Refer to the Signal Warrant Analysis Results Table for the study intersection:

Warrant	Criteria Satisfied	Met/Required
1A	Not Met	0/8
1B	Not Met	0/8
1C	Not Met	N/A
2	Not Met	0/4
3A	Not Met	0/1
3B	Not Met	0/1
4	Not Met	0/4
5	Not Met	N/A
6	Not Met	N/A
7	Not Met	0/5
8	Not Met	N/A
9	Not Met	N/A

Signal Warrant Analysis Table

The above signal warrant analysis table indicates that none of the nine MUTCD signal warrants were satisfied.

A capacity analysis was also performed at the intersection to determine the level of service (LOS), which is the quality of flow. A capacity analysis reflects the intersection's ability to accommodate a moving stream of people or vehicles. It is a measure of the supply side of transportation facilities. It is also a measure of the quality of service provided by an existing facility during peak periods, and how much traffic increase can be tolerated.

FOUR WAY CONTROL CAPACITY ANALYSIS:

Capacity and Level of Service (LOS) for the intersection State Route 1/ US 27 and State Route 50/ US 82 were based on analysis procedures provided in the Highway Capacity Manual, 2000 Edition. The capacity was examined, turning movement counts were used with the 2% projections for 15 years and results of the study intersection capacity analysis are summarized in the following table.

Approach	Weekday AM Peak Hour (10:00 AM to 11:00 AM)		Weekday PM Peak Hour (4:00 PM to 5:00 PM)	
	LOS	DELAY	LOS	DELAY
SR 1/ US 27NB	A	8.30	A	9.03
SR 1/ US 27 SB	A	7.92	A	8.59
SR 50/ US 82 EB	A	8.16	A	8.71
SR 50/ US 82WB	A	8.35	A	9.02

Four way Stop Control Delay and Intersection Level of Service (LOS) Table

The capacity analysis results indicate that all movements are expected to operate at LOS A, reasonably free flow, or better during all peak hours of the day.

ROUNDBOUT CAPACITY ANALYSIS:

Capacity analysis was performed for a roundabout, all approaches had a level of service "A" and the report is attached.

CONCLUSIONS:

After reviewing all of the data collected for the study intersection, it was determined that none of the signal warrants were satisfied.

- A roundabout would perform at a level of service (LOS) of "A". The roundabout would need to be large to accommodate the truck traffic that was observed during the study.
- The traffic counts and turn movement counts were based on 2% increase for fifteen years.

RECOMMENDATIONS:

It is recommended to change the existing traffic control from a signalized intersection to a single lane roundabout.

Roundabout Feasibility Report

SR 1/US 27 at SR 50/US 82

Randolph County, Georgia

July 2012



KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

SUMMARY AND CONCLUSIONS

The following bullet-points summarize the findings of the feasibility study:

- The existing signal control is estimated to provide adequate intersection operations through the design year 2032.
- Implementation of a single-lane roundabout is expected to provide adequate intersection operations through the design year 2032. Roundabout operational performance is comparable to the existing signalized intersection due to the low existing and projected future traffic demand.
- A roundabout is estimated to provide safety benefits by reducing the likelihood for injury crashes due to reduced intersection speeds and removal of severe crash types such as right-angle and left-turn crashes. A reduction in total vehicle crashes is also expected with roundabout implementation.
- The conceptual geometric designs illustrate that roundabouts are spatially feasible at the study intersection. Potential right-of-way impacts are unknown; however, relatively low impacts (if any) are expected due to the roundabout footprint primarily staying within the existing intersection footprint (with the exception of the northwest quadrant of the intersection).
- The concept designs present options for both a single-lane or partial multilane roundabout to be considered. The concepts were developed to allow for a phased implementation to give GDOT flexibility if a multilane roundabout is desired in the future. To maximize safety performance and minimize the intersection footprint, it is anticipated that a single-lane roundabout will likely be constructed initially. However, consideration could be given by GDOT to implement the multilane roundabout in the opening year with the benefit of providing lane continuity for the four-lane cross-section along SR 1.
- Additional investigation of vertical geometry and utility impacts will be needed if the project proceeds into the design phase.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: P. I. No. 0009851

OFFICE: Environmental Services

DATE: November 13, 2013

FROM: Glenn Bowman, P.E., State Environmental Administrator

TO: Distribution Below

SUBJECT: Randolph County, Summary of Comments Received During the Public Comment Period - SR 1/US 27 at SR 50/US 82 Proposed Roundabout

COMMENT TOTALS:

A total of 50 people attended the public information open house held for the subject project on September 19, 2013.

From those attending, 32 comment forms, no letters and 2 verbal statements were received. Three additional comments were received during the ten-day comment period following the public information open house, for a total of 37 comments. They are summarized as follows:

No. Opposed	No. In Support	Uncommitted	Conditional
<u>22</u>	<u>7</u>	<u>3</u>	<u>5</u>

MAJOR CONCERNS:

The major concerns expressed were over the safety of a roundabout with the past crash problems and the suitability of the project for high volumes of commercial truck traffic.

OFFICIALS:

Officials attending included the following:

Walter Mattox (Randolph County Development Authority); Jimmy Bradley (Randolph County Board of Commissioners); Jack Torbow (Cuthbert City Councilman); Lamar White (Randolph County Board of Commissioners); Gerald Greene (State Representative); Anna Paul (Hospital Authority); Carolyn Taylor (Randolph County Tax Office); Robert Andrews (Deputy Director, Emergency Management); Pamela Knighton (Neighborhood Service Center)

Summary of Comments
PI No. 0009851, Randolph County
November 13, 2013
Page 2

MEDIA:

Cindy Millard (Southern Tribune)

DISPOSITION OF COMMENTS:

The Georgia Department of Transportation will respond to all comments. Edwards-Pitman Environmental will assist in the compilation of the comments and responses as well as preparation of the letter to those individuals that provided comment.

The GDOT offices below are asked to review the responses provided by the consultant for the comments in their section. The project manager will review all responses.

REVIEWING OFFICE	COMMENT #	NATURE OF COMMENT	PROPOSED RESPONSE
Design	13, 22, 32	Truck traffic will have difficulty navigating the roundabout safely creating dangerous situations	T
	9	Roundabout needs to be large/wide enough to handle truck traffic	
	13, 18, 22, 26, 29, 33	Heavy amount of truck traffic traverse through this intersection	
	12	Roundabouts would decrease accidents at this intersection	
	13, 17, 19, 21, 24, 27, 28, 30, 31	Roundabout will increase crashes	
	6, 22, 32	Roundabout will increase rollovers and truck spills of material	
	4, 7, 33, 34	Want improvements that will reduce crashes at this intersection	
	8, 35	Roundabout is not best option	
2, 5, 6	In favor of roundabouts		

REVIEWING OFFICE	COMMENT #	NATURE OF COMMENT	PROPOSED RESPONSE
Design	6	Roundabout needs to be level to help	

(Continued)		prevent truck rollovers	
	4, 12, 14, 18, 24	Prefer overpass	
	33	Turn lane into businesses' driveway needs to accommodate truck traffic	

REVIEWING OFFICE	COMMENT #	NATURE OF COMMENT	PROPOSED RESPONSE
Traffic Operations	25	This will reduce traffic that visits the business at this intersection	

REVIEWING OFFICE	COMMENT #	NATURE OF COMMENT	PROPOSED RESPONSE
Planning	15, 16, 17, 18, 19, 21, 24, 26, 27, 30, 31, 33, 35, 36, 37	Fatalities have decreased at this intersection, therefore, improvements not needed	
	3	Always want to see improvements on our roads	
	26, 28, 33, 36, 37	Concern about cost of project and if improvements are worthwhile	

REVIEWING OFFICE	COMMENT #	NATURE OF COMMENT	PROPOSED RESPONSE
Environment	General Response 1, 10, 20, 23	All letters	Thank you for your comments concerning the proposed project referenced above. We appreciate your participation and all of the input that was received. Every written comment received will be made part of the official record of the project.
	11, 24	There should have been a formal presentation with a question and answer held session afterward.	Your suggestion regarding the Public Information Open House (PIOH) format is appreciated. The Department has developed the current open house format to accommodate individuals with varying schedules, allowing participants to arrive at various times to review the project information and to speak with Department representatives. The information that would have been presented by a speaker was included in the handout at the PIOH. The handout is also available online at http://www.dot.ga.gov/ . Please select "Public Outreach" under "Projects", then select "Randolph County" from the dropdown menu to access the SR 1/US 27 Roundabout at SR 50/US 82 project information.
	16	Meetings should be held after normal working hours where most working people can attend	
	28	Hold future meetings in this format	
	15	There should be weekly notices in the paper for at least 30 days	Advertisement of the PIOH was conducted consistent with GDOT policy. Per GDOT's policy, the date, time and location of the PIOH are advertised twice, three weeks prior to the meeting and one week prior to the meeting. In addition, signage was placed along all four approaches to the project intersection.
	21, 34	The meeting should have been held closer to town or at a different location	GDOT chose the location (the Randolph County Agriculture Building) because it was capable of accommodating the large number of people anticipated in attendance. This location has been utilized by GDOT on previous projects in the area and is located in close proximity to the project intersection (approximately 2.6 miles away).
	34, 35	GDOT staff were very helpful answering questions and providing input on the project	

Summary of Comments
PI No. 0009851, Randolph County
November 13, 2013
Page 6

Attached is a complete transcript of the comments received during the comment period and a copy of the public information open house handout for review. **Your input on the proposed responses is required by Friday, November 20, 2013.** Please direct your comments via email to Russ Danser (rdanser@edwards-pitman.com) and copy Bobby Dollar (rdollar@dot.ga.gov), of this office.

If you have any questions about the comments, please either email or call Bobby Dollar at (404) 631-1920.

GB/RD/epei-rkd

Attachments

DISTRIBUTION:

Russell R. McMurry, w/attachments
District 4 Attn: Joe W. Sheffield, P.E., w/attachments
Angela T. Alexander, w/attachments
Kathy Zahul, P.E., w/attachments
Howard (Phil) Copeland (Attn: Troy Byers), w/attachments
Joe W. Sheffield, P.E.
Matt Bennett
Genetha Rice-Singleton
Kimberly Larson
Fletcher Miller
David Acree
Shane Pridgen
Van Mason
Paul DeNard
Scott Zehngraft

PUBLIC INFORMATION OPEN HOUSE
 PUBLIC/CITY OFFICIALS SIGN-IN SHEET

PI. NO. 0009851

RANDOLPH COUNTY

September 19, 2013

Please print

Name	Affiliation	Address	Phone No.
WALTER MATTOX	Randolph Co. De. Dir	P.O. Box 4127 Cuthbert	229-310-7664
Jimmy P. Bradley	Randolph Co. POC	Cuthbert, Ga.	229-732-6440
Jack Toehent	City Councilman Cuthbert	147 Raleigh Cuthbert	229-869-8600 2-4-2013
Blank			
Lamar White	County Commission	Cuthbert, GA 27 Blakey Street	229-357-0055
Margaret Hoover	State Representative	5805 US Hwy 82W Cuthbert, GA	229-732-2750
Annastacia	Hosp. Authority	Ce. Cuthbert	
Cindy Miller	Southern Tribune	66 Maple St P.O. Box 257 Cuthbert	229 732 6016 39840
Christina Taylor	Tax Office	332 W. Lake Drive Cuthbert, GA	229-732-3040 732-2861
Robert Andrews	Dept Dir - EMU	525 Calhoun St. Cuthbert	229 732 7602
Pamela Knighton	Neighborhood Service Ctr.	P.O. Box 383 24 Calhoun St. Cuthbert	(229) 732-6991 → 6971