

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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

**FILE** P.I. #0008420                      **OFFICE** Design Policy & Support  
CSSFT-0008-00(420)  
Lowndes County                      **DATE** June 1, 2010  
Intersection of SR 38/US 84/E Hill Ave at  
CR 439/Clay Rd & CS 1271/Hollywood St

**FROM**  for Brent Story, State Design Policy Engineer

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED CONCEPT REPORT WITH NOTICE OF LOCATION & DESIGN

Attached is the approved Concept Report with Notice of Location and Design for the above subject project.

Attachment

**DISTRIBUTION:**

Genetha Rice-Singleton, Program Control Administrator  
Ron Wishon, State Project Review Engineer  
Glenn Bowman, State Environmental Administrator  
Ken Thompson, Statewide Location Bureau Chief  
Michael Henry, Systems & Classification Branch Chief  
Keith Golden, State Traffic Operations Engineer  
Angela Alexander, State Transportation Planning Administrator  
Paul Liles, State Bridge Engineer  
Bobby Hilliard, State Program Delivery Engineer  
Angela Robinson, Financial Management Administrator  
Jeff Baker, State Utilities Engineer  
Shane Pridgen, Tifton District Planning & Programming Engineer  
V. Timothy Warren, Tifton District Utilities Engineer  
Brent Thomas, Tifton District Preconstruction Engineer  
Jerry Hughes, Area Engineer (Valdosta)  
Joe Sheffield, Tifton District Engineer  
Derrick Cameron, Project Manager  
BOARD MEMBER

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: CSSFT-0008-00(420)  
County: Lowndes  
P. I. Number: 0008420  
Federal Route Number: US 84  
State Route Number: SR 38

SR 38/US 84 E. Hill Avenue @ CR 439/Clay Road and CS 1271/Hollywood Street

Submitted for approval:

DATE 1 March 2010

DATE 3-1-10

  
\_\_\_\_\_  
Project Manager  
*Kathleen Gehl for*  
\_\_\_\_\_  
State Traffic Engineer

Recommendation for approval:

DATE \_\_\_\_\_

DATE \_\_\_\_\_

DATE \_\_\_\_\_

DATE 3/29/10

DATE 3/16/10

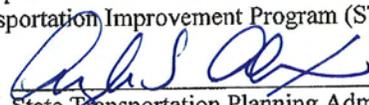
DATE 3/17/10

\_\_\_\_\_  
State Design Policy Engineer  
\_\_\_\_\_  
Program Control Administrator  
\_\_\_\_\_  
State Transportation Financial Management Administrator  
*Glenn Bowman \* /DRP*  
\_\_\_\_\_  
State Environmental Administrator  
*Joe Sheffield \* /DRP*  
\_\_\_\_\_  
District Engineer  
*Ron Wishon \* /DRP*  
\_\_\_\_\_  
Project Review Engineer

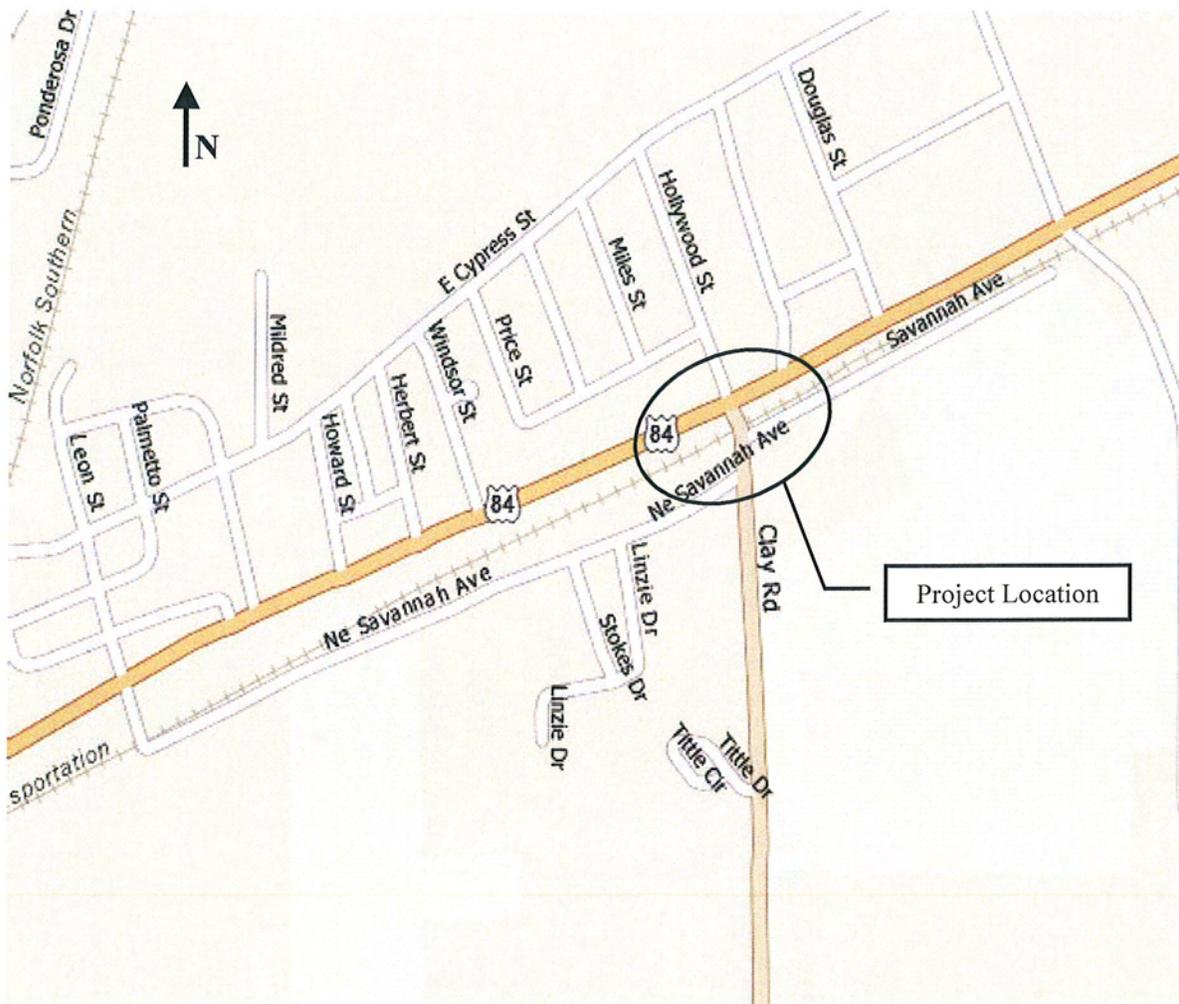
*\* Recommendation on file*

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 4/14/10

  
\_\_\_\_\_  
State Transportation Planning Administrator

Project Concept Report page 2  
Project Number: CSSFT-0008-00(420)  
P. I. Number: 0008420  
County: Lowndes



### LOCATION MAP

Project: CSSFT-0008-00(420) Lowndes County, PI No: 0008420  
Description: SR 38/US 84 @ Clay Rd/Hollywood St Intersection Improvement

**Need and Purpose:** The intersection of SR 38/East Hill Avenue at CR 439/Clay Road/CS 1271/Hollywood Street in Lowndes County has been examined for signalization and safety improvement needs. The intersection is located approximately four miles east of I-75 interchange, Exit #16, in Valdosta, Georgia. SR 38/East Hill Avenue is a major four-lane urban arterial route with 12-foot lanes. Clay Road has two 12-foot lanes that lead to an industrial park which generates a high volume of semi-truck traffic. Hollywood Street has two 12-foot lanes and serves a residential neighborhood. Hollywood Street intersects SR 38/East Hill Avenue approximately 50 feet to the west of Clay Road, creating an offset intersection.

The average daily traffic for 2007 along SR 38/East Hill Avenue is 10,500 vehicles per day and according to traffic counts performed in 2002, Clay Road and Hollywood Street had approach volumes of 2291 and 392 vehicles per day, respectively. Clay Road and Hollywood Street are controlled by stop signs. SR 38 has no traffic control devices at the intersection. No pedestrians or evidence of pedestrian activity was observed during the time of the study. There are no signalized intersections along SR 38/East Hill Avenue within one mile of the Clay Road/Hollywood Street intersection. SR 38/East Hill Avenue has a LOS A in both directions. The Clay Road and Hollywood Street approaches both experience a LOS C or better for a non-signalized intersection. Logical Termini for this project are approximately 1000 feet in all directions from the intersection centerline in order to provide adequate room for new turning lanes, set back pulse loops, and the realignment of Clay Road.

Crash data obtained from the Valdosta Police Department for the period of February 2004 through September 2008 indicate a total of 47 crashes at this location. There was one fatality that occurred in November of 2005. Of these crashes, 27 were the angle intersecting type which is considered correctable through intersection signalization.

A signal warrant analysis, including the expected traffic volume data from the future development of the Leticia Manufacturing Plant, was performed at this intersection to determine if future conditions would warrant a signal. Three of the MUTCD signal warrants were satisfied with the addition of development generated traffic. The volume criterion for the peak hour warrant was satisfied in addition to the crash experience warrant.

Future growth in the area indicates that the future traffic conditions will warrant the installation of a signal. To facilitate efficient signal operations, realigning Clay Road with Hollywood Street is recommended. In addition, turn lanes will be added to on SR 38 and Clay Road.

**Description of the proposed project:** This safety project proposes to improve the intersection of SR 38/US 84/East Hill Avenue at CR 439/Clay Road/CS 1271/Hollywood Street in Lowndes County from approximately mile post 12.49 to 12.89 by realigning CR 439/Clay Road to tie into CS 1271/Hollywood Street; installing a traffic signal; and adding turn lanes on each approach except Hollywood Street. This project also will incorporate bicycle facilities along the mainline in accordance with the South Georgia Regional Development Center Bike and Pedestrian Plan.

Is the project located in a PM 2.5 Non-attainment area? \_\_\_\_\_ Yes  X  No

Is the project located in an Ozone Non-attainment area? \_\_\_\_\_ Yes  X  No

PDP Classification: Major \_\_\_\_\_ Minor  X

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

Functional Classification: Urban Principal Arterial

U. S. Route Number(s):  84  State Route Number(s):  38

**Traffic (AADT):**

Base Year: (2012)  9700

Design Year: (2032)  12,300

**Existing design features:**

- Typical Section: SR 38/US 84/East Hill Avenue is an urban arterial route with four 12-foot lanes. There is curb and gutter but no pedestrian accommodations. Clay Road is an urban collector street with two 12-foot lanes. Hollywood St is an urban local road with two 12-foot lanes.
- Posted speed  45  mph SR 38/US 84/East Hill Avenue
- Posted speed  40  mph CR 439/Clay Road
- Posted speed  30  mph CS 1271/Hollywood Street
- Minimum radius for curve:  711 feet, 533 feet, 250 feet
- Maximum super-elevation rate for curve:  4%
- Maximum grade:  Mainline - 8%, Cross streets - 9%, 10%
- Width of right of way:  .80  ft.
- Major structures:  None
- Major interchanges or intersections along the project:  N/A
- Existing length of roadway segment and the beginning mile logs for each county segment: Mile point 12.49 to mile point 12.89 for SR 38/US 84/East Hill Ave

**Proposed Design Features:**

- Proposed typical section(s): SR 38/East Hill Ave will have four 12-foot through lanes, two eastbound and two westbound, one 12-foot right turn lane eastbound, one 12-foot left turn lane at both approaches, two 4-foot bike lanes. Clay Road will have two 12-foot through lanes, one northbound and southbound, and one 12-foot right turn lane. Hollywood Street will retain its existing typical section.
- Proposed Design Speed Mainline  45  mph
- Proposed Maximum grade Mainline  +/- 1  %
- Maximum grade allowable  9  %.
- Proposed Maximum grade Side Street  +/- 1  %
- Maximum grade allowable  8  %.
- Proposed Maximum grade driveway  10% Commercial / 17% Residential
- Proposed Minimum radius for curve  N/A
- Proposed Maximum super-elevation rate for curve:  N/A
- Maximum radius allowable  N/A
- Proposed Maximum degree of curve  N/A

- Maximum degree allowable   N/A
- Right of way
  - Width   80 ft
  - Easements: Temporary (X), Permanent (X), Utility ( ), Other ( ).
  - Type of access control: Full ( ), Partial ( ), By Permit (X), Other ( ).
  - Number of parcels:   7        Number of displacements:
    - Business:   N/A
    - Residences:   N/A
    - Mobile homes:   N/A
    - Other:   N/A
- Structures:
  - Bridges: None
  - Retaining: None
- Major intersections and interchanges: N/A
- Traffic control during construction: Existing operations shall be maintained during construction
- Design Exceptions to controlling criteria anticipated:

	UNDETERMINED	YES	NO
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)

- Design Variances: The existing typical for SR 38 does not include a sidewalk in its curb/gutter section. The design will exclude sidewalk behind the curb/gutter section on SR 38 eastbound adjacent to the railroad and install ADA compliant landing areas at the signalized intersection.
- Environmental concerns: None known at this time
- Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes (x), No ( ),
  - Categorical exclusion anticipated Yes (x), No ( )
- Utility involvements: Make ready work will resolve clearance issues and conflicts when joint use poles, strain poles, or mast arm poles are utilized. Railroad Coordination will be necessary on this project for the reconstruction of the Clay Road railroad crossing. We will also involve Gas, Electrical, Water/Sewer, Cable, Telephone companies.

**VE Study Anticipated**      Yes ( )      No ( X )

**Benefit/Cost Ratio:**      5.64

**Project Cost Estimate and Funding Responsibilities:**

	PE	ROW	UTILITY	CST
By Whom	GDOT	GDOT	GDOT	GDOT
\$ Amount	\$100,000	\$360,000	\$305,000	\$1,554,670

**Project Activities responsibilities:**

- Design: Gresham, Smith, & Partners with GDOT Review
- Right of Way Acquisition: GDOT
- Right of Way funding (real property): GDOT
- Relocation of Utilities: GDOT
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor
- Environmental Studies/Documents/Permits: Gresham, Smith, & Partners with GDOT Review
- Environmental Mitigation: N/A

**Coordination**

- Initial Concept Meeting date and brief summary: N/A
- Concept meeting date and brief summary: The Concept Team Meeting was held on January 12, 2010 in Tifton, GA with GDOT and Valdosta officials. The meeting minutes are attached.
- P. A. R. meetings, dates and results: N/A
- FEMA, USCG, and/or TVA: N/A
- Public involvement: Anticipated
- Local government comments: See attachment with meeting minutes.
- Other projects in the area: None
- Other coordination to date: None
- Railroads: CSX at-grade crossing on Clay Road approximately 100' from intersection. The signals will need to be interconnected and timed with railroad preemption.

**Scheduling – Responsible Parties' Estimate**

- Time to complete the environmental process:   9   Months.
- Time to complete preliminary construction plans:   3   Months.
- Time to complete right of way plans:   2   Months.
- Time to complete the Section 404 Permit:   N/A   Months.
- Time to complete final construction plans:   2   Months.
- Time to complete to purchase right of way:  12  Months.
- Railroad Agreement:  18  Months.

**Other Alternatives Considered:**

*Hollywood Street Realignment*

This alternative realigns CS 1271/Hollywood Street to the CS 439/Clay Road approach at the signalized intersection, adding turn lanes on all approaches. This alternative was not considered because of anticipated right-of-way acquisitions including three residential parcels north of the intersection and significant utility impacts, including a gas line relocation.

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County: Lowndes

*Split-phased Signalization with no realignment*

This alternative maintains the current alignment of both CS 1271/Hollywood Street and CS 439/Clay Road and adds turn lanes to every approach except Hollywood Street. This alternative was not considered because of increased intersection delay caused by split phase signalization required for this geometric configuration.

*Multilane Roundabout Alternative*

An operational analysis using the GDOT Roundabout Analysis Tool was performed for the subject intersection. The roundabout performed at LOS A in the future year during the AM and PM peak hours. The roundabout was not considered a feasible alternative for this project because of excessive right-of-way acquisition, proximity to the adjacent railroad, and significant mainline realignment needed for the roundabout approaches.

**Comments:** *None*

**Attachments:**

1. Detailed Cost Estimates:
  - a. Construction including E&C,
  - b. Completed Fuel/Asphalt price adjustment form
  - c. Right of Way, and
  - d. Utilities.
2. Sketch location map (see page 2 in Report)
3. Typical Sections
4. Traffic Diagrams
5. Capacity Analysis
  - a. Summary from TE Study
  - b. Roundabout Analysis Output
6. Minutes of Concept meetings
  - a. Local Government Comments
7. Location and Design Notice
8. Benefit/Cost Estimate

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Project Number: CSSFT-0008-00(420)  
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County: Lowndes

## Exempt projects

Concur:   
Director of Engineering

Approve:  Date: 5/14/2010  
Chief Engineer

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## INTERDEPARTMENT CORRESPONDENCE

FILE PROJECT No.  ,  OFFICE

DATE

P.I. No.

FROM <sup>KZ</sup>

TO Ronald E. Wishon, Project Review Engineer

SUBJECT REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER

MNGT LET DATE

MNGT R/W DATE

**PROGRAMMED COST (TPro W/OUT INFLATION)**

**LAST ESTIMATE UPDATE**

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

**REVISED COST ESTIMATES**

CONSTRUCTION\* \$

RIGHT OF WAY \$

UTILITIES\*\* \$

\* Costs contain  % Engineering and Inspection and  % Construction Contingencies.

\*\* Costs contain  % contingency.

**REASON FOR COST INCREASE**

**CONTINGENCY SUMMARY**

Construction Cost Estimate:	\$ <input type="text" value="1,321,462.14"/>	(Base Estimate)
Engineering and Inspection:	\$ <input type="text" value="66,073.11"/>	(Base Estimate x <input type="text" value="5"/> %)
Construction Contingency:	\$ <input type="text" value="0"/>	(Base Estimate x <input type="text" value="0"/> %)
		(The Construction Contingency is based on the Project Improvement Type in TPro.)
Total Fuel Adjustment	\$ <input type="text" value="50,300.50"/>	(From attached worksheet)
Total Liquid AC Adjustment	\$ <input type="text" value="116,734.10"/>	(From attached worksheet)
<b>Construction Total:</b>	\$ <input type="text" value="1,554,569.85"/>	
Utility Cost Estimate:	\$ <input type="text" value="305,300.00"/>	
Utility Contingency:	\$ <input type="text" value="0"/>	<input type="text" value="0"/> %
<b>Utility Total:</b>	\$ <input type="text" value="305,300.00"/>	

**REIMBURSABLE UTILITY COST**

Utility Owner	Reimbursable Cost
AT&T Corp.	\$144,300.00
CSX Railroad	\$161,000.00
Atlanta Gas Light	\$0
Bellsouth/AT&T of Georgia	\$0
City of Valdosta	\$0
Georgia Power Company (Distribution)	\$0
Georgia Power Company (Transmission)	\$0
Mediacom	\$0

Attachments

c: Genetha Rice-Singleton, State Program Control Administrator

### Estimate Report for file "0008420\_2010-02-15"

Section Roadway					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	81370.84	TRAFFIC CONTROL - 0008420	81370.84
153-1300	1	EA	64089.88	FIELD ENGINEERS OFFICE TP 3	64089.88
210-0100	1	LS	150000.0	GRADING COMPLETE - CSSFT-0008-00(420)	150000.0
310-5100	4256	SY	13.39	GR AGGR BASE CRS, 10 INCH, INCL MATL	56987.84
402-1812	493	TN	59.21	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	29190.53
402-3121	702	TN	54.01	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	37915.02
402-3130	1090	TN	59.87	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	65258.29
402-3190	1454	TN	58.0	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	84332.0
413-1000	1586	GL	1.73	BITUM TACK COAT	2743.77
441-0016	70	SY	36.25	DRIVEWAY CONCRETE, 6 IN TK	2537.5
441-0104	2934	SY	23.64	CONC SIDEWALK, 4 IN	69359.76
441-0748	108	SY	29.05	CONCRETE MEDIAN, 6 IN	3137.4
441-6222	7300	LF	11.76	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	85848.0
446-1100	5000	LF	3.01	PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH	15049.99
550-1180	2500	LF	29.13	STORM DRAIN PIPE, 18 IN, H 1-10	72825.0
550-2240	200	LF	28.11	SIDE DRAIN PIPE, 24 IN, H 1-10	5622.0
550-3618	6	EA	542.27	SAFETY END SECTION 18 IN, SIDE DRAIN, 6:1 SLOPE	3253.62
550-3624	4	EA	788.87	SAFETY END SECTION 24 IN, SIDE DRAIN, 6:1 SLOPE	3155.48
603-2182	100	SY	32.56	STN DUMPED RIP RAP, TP 3, 24 IN	3256.0
603-7000	100	SY	3.36	PLASTIC FILTER FABRIC	336.0
668-1100	12	EA	2117.93	CATCH BASIN, GP 1	25415.15
<b>Section Sub Total:</b>					<b>\$861,684.11</b>

Section Permanent Erosion Control					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
700-6910	2	AC	667.95	PERMANENT GRASSING	1335.9
700-7000	7	TN	52.94	AGRICULTURAL LIME	370.58
700-7010	6	GL	15.9	LIQUID LIME	95.4
700-8000	3	TN	360.45	FERTILIZER MIXED GRADE	1081.35
700-8100	125	LB	2.22	FERTILIZER NITROGEN CONTENT	277.5
<b>Section Sub Total:</b>					<b>\$3,160.73</b>

Section Temporary Erosion Control					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	2	AC	291.16	TEMPORARY GRASSING	582.32
163-0240	84	TN	141.98	MULCH	11926.32
163-0300	4	EA	932.66	CONSTRUCTION EXIT	3730.64
163-0501	1	EA	749.28	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 1	749.28
163-0503	1	EA	368.6	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	368.6
163-0550	20	EA	145.08	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	2901.60
165-0030	3780	LF	0.63	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	2381.4
165-0085	1	EA	242.68	MAINTENANCE OF SILT CONTROL GATE, TP 1	242.68
165-0087	1	EA	99.23	MAINTENANCE OF SILT CONTROL GATE, TP 3	99.23
165-0101	4	EA	432.2	MAINTENANCE OF CONSTRUCTION EXIT	1728.8
165-0105	20	EA	52.5	MAINTENANCE OF INLET SEDIMENT TRAP	1050.0
167-1000	1	EA	409.97	WATER QUALITY MONITORING AND SAMPLING	409.97
167-1500	12	MO	508.17	WATER QUALITY INSPECTIONS	6098.04
171-0030	7560	LF	2.65	TEMPORARY SILT FENCE, TYPE C	20034.0
<b>Section Sub Total:</b>					<b>\$52,302.88</b>

<b>Section Signing/Marking &amp; Signals</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
636-1020	50	SF	13.48	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	674.0
636-1033	50	SF	18.17	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	908.50
636-1041	50	SF	27.7	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 9	1385.0
636-2070	100	LF	6.93	GALV STEEL POSTS, TP 7	693.0
636-2080	100	LF	8.94	GALV STEEL POSTS, TP 8	894.0
636-2090	100	LF	7.63	GALV STEEL POSTS, TP 9	763.0
636-3010	6	EA	524.21	GROUND-MOUNTED BREAKAWAY SIGN SUPPORT	3145.26
639-3004	4	EA	8684.64	STEEL STRAIN POLE, TP IV	34738.56
647-1000	1	LS	100000.0	TRAFFIC SIGNAL INSTALLATION NO - CSSFT-0008-00(420)	100000.0
653-0120	26	EA	68.7	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	1786.2
653-1501	9500	LF	0.31	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	2945.0
653-1502	7500	LF	0.33	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	2475.0
653-1704	110	LF	3.59	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	394.9
653-3501	6000	GLF	0.22	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	1320.0
653-6004	340	SY	2.55	THERMOPLASTIC TRAF STRIPING, WHITE	866.99
653-6006	500	SY	2.65	THERMOPLASTIC TRAF STRIPING, YELLOW	1325.0
<b>Section Sub Total:</b>					<b>\$154,314.42</b>

<b>Section Railroad Crossing</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
647-1000	1	LS	250000.0	RR CROSSING SIGNAL INSTALLATION - CSSFT-0008-00(420)	250000.0
<b>Section Sub Total:</b>					<b>\$250,000.00</b>

**Total Estimated Cost: \$1,321,462.14**

<b>Subtotal Construction Cost</b>	<b>\$1,321,462.14</b>
E&C Rate 0.0 %	\$0.00
Inflation Rate 0.0 % @ 0 Years	\$0.00
<hr/>	
<b>Total Construction Cost</b>	<b>\$1,321,462.14</b>
Right Of Way	360000.00
ReImb. Utilities	305300.00
<hr/>	
<b>Grand Total Project Cost</b>	<b>\$1,986,762.14</b>

## 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 =		<input style="width: 100%;" type="text"/>
REMARKS:		

Use this side for Asphalt Cement Only		
L.I.N.	TYPE	TACK (GALLONS)
413-1000	PG 58-22	1586
TMT =		<input style="width: 100%;" type="text" value="6.8120"/>
REMARKS:		

**MONTHLY PRICE ADJUSTMENT(\$)** **\$3,964.60**

### ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)	
DIESEL PRICE ADJUSTMENT(\$)	<u>\$39,109.36</u>
UNLEADED PRICE ADJUSTMENT(\$)	<u>\$11,191.14</u>
ASPHALT CEMENT PRICE ADJUSTMENT (BITUMINOUS TACK COAT 125% MAX)	<u>\$3,964.60</u>
400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX	<u>\$108,804.90</u>
ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)	<u>\$3,964.60</u>

REMARKS:

**TOTAL ADJUSTMENTS** **\$167,034.61**

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

ENTER FPL DIESEL	2.772
ENTER FPM DIESEL	6.237

ENTER FPL UNLEADED	2.538
ENTER FPM UNLEADED	5.7195

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

<b>INCREASE ADJUSTMENT</b>
125.00%

<b>INCREASE ADJUSTMENT</b>
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)	4915.000	0.29	1425.35	0.24	1179.60	
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)	3739.000	2.90	10843.10	0.71	2654.89	
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		1.50		
Concrete Barrier (LF) Section 500				8.00		1.50		

BRIDGE ITEMS	Quantity	Unit Price	GF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Stru Steel Plan Quantity (LB) Section 501				8.00		1.50		
Stru Steel Plan 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 Plan Quantity(LB) Section 511				8.00		1.50		
Stru Reinf Plan 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=	12268.45	SUM OF UNLEADED=		3834.29	
				DIESEL PRICE ADJUSTMENT(\$)		\$39,109.36		
				UNLEADED PRICE ADJUSTMENT(\$)		\$11,191.14		



# Preliminary Right of Way Cost Estimate



**Phil Copeland**  
 Right of Way Administrator  
 By: LaShone Alexander

Date: August 24, 2009  
 Project: Lowndes County  
 Existing/Required R/W: Varies/Varies  
 Project Terminal: Intersection Improvement SR 38/US 84 E. Hill Ave @ Clay Rd/Hollywood St  
 Project Description: Intersection Improvement SR 38/US 84 E. Hill Ave @ Clay Rd/Hollywood St

P.I. Number: 0008420  
 No. Parcels:

Land: Heavy Com/Res/Indus. R/W: 63,545.27 sf @ \$ 1.80/sf \$ 114,381

Improvements: landscaping, misc. site improvements 30,000

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

Damage: Proximity (0) \$ 0  
 Consequential (0) 0  
 Cost to Cure (0) 0

Net Cost \$ 144,381

Net Cost \$ 144,381  
 Scheduling Contingency 55% 79,409  
 Adm/Court Cost 60% 134,274  
 \$ 358,066

**Total Cost \$ 360,000**

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

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

FILE

Project No: CSSPT-0008-00(420)  
County: LOWNDES  
P.L.#: 0008420

OFFICE: Tifton  
DATE: August 20, 2009

Description: SR 38/US 84 @ CR 439/CLAY ROAD/CS 127/HOLLYWOOD STREET

FROM: *Tom* Tim Warren, P.E., District Utilities Engineer

TO: Cynthia Burney, Project Manager  
(VIA Email)

SUBJECT: UTILITY COST ESTIMATE

A review of utilities located on the above referenced project has been conducted based on the latest available plans. Listed below is a breakdown of the anticipated reimbursable and non-reimbursable cost.

Utility Owner	Reimbursable	Non-Reimbursable	Estimate Based on
AT&T Corp.	\$144,300.00	\$0.00	Site Visit / Available Drawings
Atlanta Gas Light	\$0.00	\$36,500.00	Site Visit / Available Drawings
Bellsouth/AT&T Of Georgia	\$0.00	\$230,000.00	Site Visit / Available Drawings
City Of Valdosta **	\$0.00	\$147,300.00	Site Visit / Available Drawings
Georgia Power Company (Distribution)	\$0.00	\$28,000.00	Site Visit / Available Drawings
GEORGIA POWER COMPANY (TRANSMISSION)	\$0.00	\$75,000.00	Site Visit / Available Drawings
Mediacom	\$0.00	\$6,120.00	Site Visit / Available Drawings
CSX Railroad See Richard Crowley	?????????	?????????	
<b>Total</b>	<b>\$144,300.00</b>	<b>\$522,920.00</b>	

30% Utility Contingency \$44,190.00

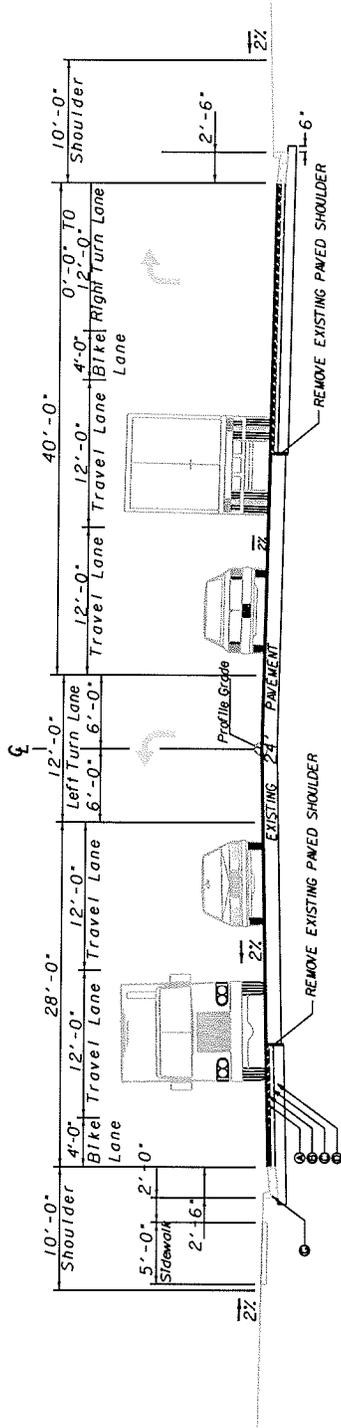
\*\* Indicates Potential Utility Aid Request from Local Gov't  
If additional information is needed, please contact me or Bill Cooper, Assistant District Utilities Engineer at (229) 386-3288.

*bc*  
TW:BC:KC:cc

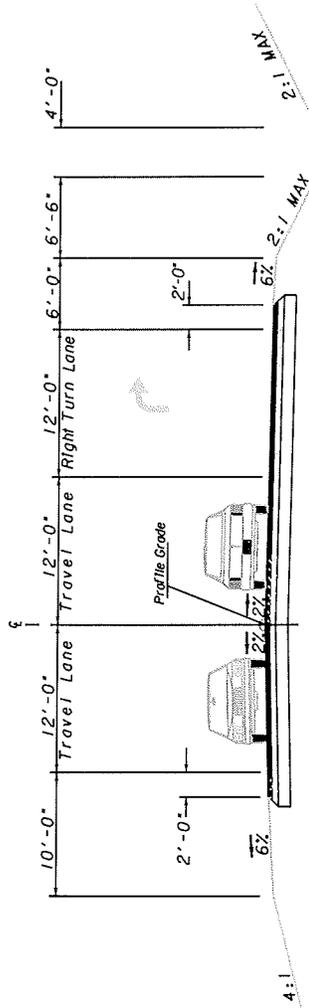
cc: Jeff Baker, P.E., State Utilities Engineer  
Brent Thomas, District Preconstruction Engineer  
Angela Whitworth, State Financial Management Administrator



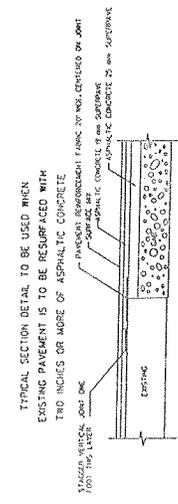
NOT RELEASED  
FOR CONSTRUCTION



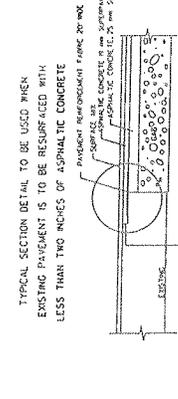
Typical Section - Tangent Section  
Normal Crown - Tangent Section  
SR 38/US 84 Easthill Ave  
Eastbound Approach @ Intersection



Typical Section - Tangent Section  
Normal Crown - Tangent Section  
CR 439/Clay Road  
@ SA 38 Intersection

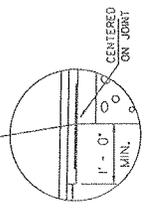


TYPICAL SECTION DETAIL TO BE USED WHEN EXISTING PAVEMENT IS TO BE RESURFACED WITH TWO INCHES OR MORE OF ASPHALTIC CONCRETE



TYPICAL SECTION DETAIL TO BE USED WHEN EXISTING PAVEMENT IS TO BE RESURFACED WITH LESS THAN TWO INCHES OF ASPHALTIC CONCRETE

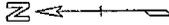
WELL EXISTING LANE ONE FOOT WIDE BE PLACED. COST OF MAKING IT FOR THIS WORK TO BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT RECONSTRUCTION FRAMING.



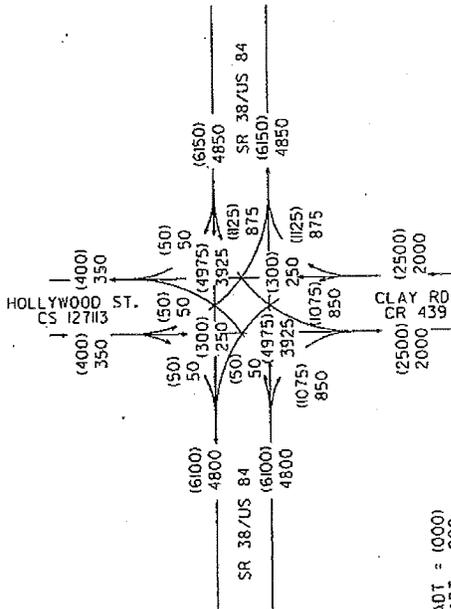
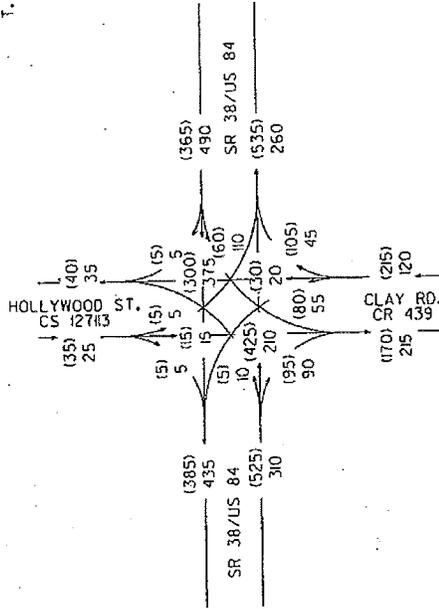
PI# 0008420  
SR 38 @ CLAY RD/HOLLYWOOD  
SAFETY IMPROVEMENTS

NOT TO SCALE

LOWNDES COUNTY



2032 PM DHV = 0000  
2032 AM DHV = 000  
T<sub>c</sub> = 10%

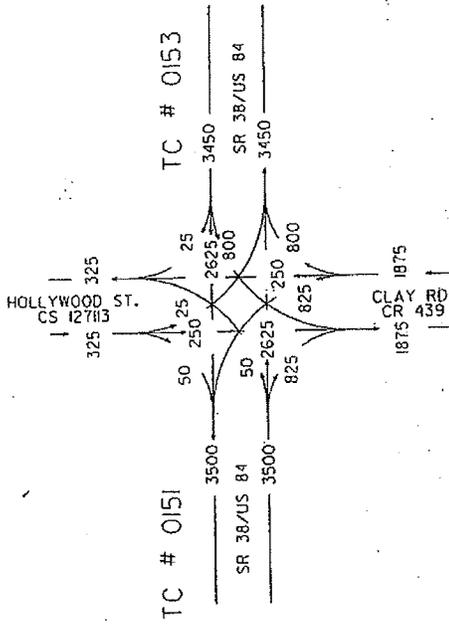
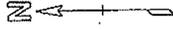


2032 ADT = 0000  
2012 ADT = 000  
24 HOUR T<sub>c</sub> = 14%  
S.U. = 5%  
COMB. T = 9%

CSSFT-0008-00420  
P.L. # 0008420  
LOWNDES COUNTY  
SR 38/US 84 @  
CR 439/CLY RD.  
CS 1271/HOLLYWOOD ST.

APR. 2009

LOWNDES COUNTY  
EXISTING 2009 TRAFFIC



CSSFT-0008-001420  
P.I. # 0008420  
LOWNDES COUNTY  
SR 38/US 84 @  
CR 439/CLY RD.  
CS 127H/HOLLYWOOD  
ST.



## Traffic Signal Warrant Analysis – TE Study Level 3 SR 38/East Hill Avenue at Clay Road/Hollywood Street Lowndes County

- Warrant 7 – Crash Experience
- Warrant 8 – Roadway Network

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 the vehicular volume warrants and are based on mainline traffic volumes, minor street traffic volumes, number of travel lanes, and mainline traffic speed. The result of the MUTCD signal warrant analysis is summarized in Table 3.

The warrant analysis was run with the right turn volume reductions for the minor approaches being applied. In terms of the proper allocation or reduction for right turning volumes during warrant analysis, the procedure outlined in *NCHRP Report 457*, specifically Figure 2-11 (Minor-road right-turn volume reduction warrant check), was used as a guideline. Reductions made to the right turn volumes are summarized in Appendix J

Table 4 Signal Warrant Analysis Results - Existing Conditions		
Warrant	Without Right Turn Volume	Hrs. Met / Required
1A	Not Met	5/8
1B	Not Met	2/8
1C	Not Met	N/A
2	Not Met	2/4
3A	Not Met	2/3
3B	Not Met	0/1
4	N/A	N/A
5	N/A	N/A
6	N/A	N/A
7	Not Met*	6/5
8	N/A	N/A

\*Note: Although the number of accidents meets the accident warrant criteria the volume element of Warrant 7 is not met. Therefore, Warrant 7 is not met.

As Table 4 shows, none of the MUTCD signal warrants were satisfied under current conditions.

### INTERSECTION CAPACITY ANALYSIS

The capacity and level of service (LOS) for the intersection of SR 38/East Hill Avenue at Clay Road/Hollywood Street was based on analysis procedures provided in the Highway Capacity Manual, Special Report 209, published by the Transportation Research Board, 2000. The capacity was examined for unsignalized conditions. The results of the intersection capacity



**Traffic Signal Warrant Analysis – TE Study Level 3  
SR 38/East Hill Avenue at Clay Road/Hollywood Street  
Lowndes County**

analysis are summarized in Table 5 and Appendix H and peak hour turning movement counts used in the analysis are shown in Appendix E.

<b>Table 5</b>			
<b>LOS for SR 38/East Hill Avenue at Clay Road/Hollywood Street</b>			
<b>Unsignalized Intersection</b>			
	Approach LOS (approach Delay in Seconds)		
	AM Peak	Midday Peak	PM Peak
Northbound Clay Road	C (16.7)	B (14.1)	C (21.2)
Southbound Hollywood Street	B (12.6)	B (12.4)	B (14.7)
Eastbound SR 38/ East Hill Avenue	A (7.9)	A (7.7)	A (7.9)
Westbound SR 38/ East Hill Avenue	A (7.6)	A (7.6)	A (7.8)

As the capacity analysis results show, both the Clay Road and Hollywood Street approaches experience acceptable LOS (LOS C or better).

**TRIP GENERATION**

According to the Valdosta Industrial Authority there are plans to develop 103 acres south of SR 38/East Hill Avenue adjacent to Clay Road. Currently 30 acres, 280,000 square feet of gross floor area, of the site is planned for development by the Letica Manufacturing Plant within the next year. Confirmation of intent to build has been submitted by the Valdosta Industrial Authority. (Please refer to Letter of Intent in Appendix I.) The installation of the water and sewage infrastructure is presently underway. The traffic generation was estimated using peak trip rates provided in Trip Generation, 6<sup>th</sup> Edition, by the Institute of Transportation Engineers (ITE). The trip generation rates provide an estimation of the number of trips a particular land use will generate during the AM and PM peak hour, in addition to daily rates. A trip is defined as travel to or from a destination. The trips resulting from the development are shown in Table 6.



**Traffic Signal Warrant Analysis – TE Study Level 3  
SR 38/East Hill Avenue at Clay Road/Hollywood Street  
Lowndes County**

**Table 6  
Trip Generation**

Manufacturing (140) Daily Trips (1070) Estimated Trips Traveling North on Clay Road							
Time	80% Trips Generate	AM Split		Noon Split		PM Split	
		entering	exiting	entering	exiting	entering	exiting
		0.77	0.23	0.5	0.5	0.36	0.64
6:00	24	18	6				
7:00	184	142	42				
8:00	41	32	10				
9:00	36	28	8				
10:00	35	27	8				
11:00	42			21	21		
12:00	39			20	20		
13:00	51			25	25		
14:00	50			25	25		
15:00	59					21	38
16:00	61					22	39
17:00	187					67	120

**ASSIGNMENT AND ANALYSIS OF DEVELOPMENT TRAFFIC**

The trips generated were split according to the percentage entering or exiting the development provided in Trip Generation, 6<sup>th</sup> Edition, and distributed north on Clay Road and east-west on SR 38/East Hill Avenue. According to the Valdosta Industrial Authority, 80% of the 1,070 trips generated will travel north on Clay Road to SR 38/East Hill Avenue. Turning movement volumes from the intersection of SR 38/East Hill Avenue and Clay Road were used to determine a ratio of traffic ingressing and egressing the intersection. The development trips were then allocated and combined with the existing traffic volumes to provide an estimate of future traffic volumes. The resulting volumes were analyzed using the signal warrant software to determine if future conditions would warrant a signal. The results of the signal warrant analysis is shown in Table 7.



## Traffic Signal Warrant Analysis – TE Study Level 3 SR 38/East Hill Avenue at Clay Road/Hollywood Street Lowndes County

Warrant	Without Right Turn Volume	Hrs. Met / Required
1A	Warrant Met	8/8
1B	Not Met	2/8
1C	Not Met	N/A
2	Not Met	2/4
3A	Not Met	2/3
3B	Warrant Met	2/1
4	N/A	N/A
5	N/A	N/A
6	N/A	N/A
7	Warrant Met	6/5
8	N/A	N/A

As Table 7 shows, three of the MUTCD signal warrants were satisfied with the addition of development generated traffic, the Eight-Hour Peak Volume warrant, where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. The volume criteria for the peak hour warrant was satisfied in addition to the crash experience warrant.

### CONCLUSIONS

The following conclusions are based on the collected data, signal warrant and intersection capacity analyses, and field observations for existing conditions and conditions with the addition of development traffic:

- An examination of existing traffic volumes indicates that none of the applicable MUTCD signal warrant criteria are satisfied at this intersection.
- An examination of existing traffic volumes with the inclusion of development generated traffic indicates that three of the applicable MUTCD signal warrant criteria are satisfied at this intersection.
- An examination of collision experience at the intersection indicates the MUTCD signal warrant criteria are satisfied at this intersection given the additional development volumes.
- Unsignalized intersection LOS during the peak hour is acceptable for the minor approach (LOS C or better).
- The misalignment of Clay Road and Hollywood Street would result in the need for less efficient split phase operation if the intersection is signalized.

General & Site Information	
Analyst:	Paul DeNard
Agency/Company:	GDOT
Date:	5/27/2009
Project Name or PI#:	0008420
Year, Peak Hour:	2032, AM Peak
County/District:	Lowndes/District 4
Intersection:	SR 38/US 84 @ Clay Rd/Hollywood St

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Exit	N (1), vph						5		
Legs (TO)	NE (2), vph								
	E (3), vph	5							
	SE (4), vph								
	S (5), vph	15				110			
	SW (6), vph								
	W (7), vph	5				125	250		
	NW (8), vph								
	Entry Volume, vph	25	0	0	0	235	255	0	0
		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
	N (1), vph		20			10			
	NE (2), vph								
	E (3), vph		45			140	70		
	SE (4), vph								
	S (5), vph						90		
	SW (6), vph								
	W (7), vph	55							
	NW (8), vph								
	Entry Volume, vph	55	65	0	0	150	160	0	0

Critical Lane Volumes	N	NE	E	SE	S	SW	W	NW
N (1), vph	0	0	5	0	20	0	0	0
NE (2), vph	0	0	0	0	0	0	0	0
E (3), vph	5	0	0	0	45	0	70	0
SE (4), vph	0	0	0	0	0	0	0	0
S (5), vph	15	0	0	0	0	0	90	0
SW (6), vph	0	0	0	0	0	0	0	0
W (7), vph	5	0	250	0	0	0	0	0
NW (8), vph	0	0	0	0	0	0	0	0
Entry Volume, vph	25	0	255	0	65	0	160	0

Roundabout Analysis Tool  
Multi-Lane

3/8/2010  
Version 1.1

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	90%	100%	90%	100%	90%	100%	90%	100%
% S.U./ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	10%	0%	10%	0%	10%	0%	10%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
F <sub>hv</sub>	0.909	1.000	0.909	1.000	0.909	1.000	0.909	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	6	0	24	0	12	0
Leg # NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	6	0	0	0	54	0	251	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	18	0	132	0	0	0	108	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	6	0	448	0	66	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Conflicting flow, pcu/h	646	0	102	0	269	0	155	0

**Results: Approach Measures of Effectiveness**

NCHRP-572 Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	719	NA	1052	NA	936	NA	1014	NA
Crit. Lane Entry Flow pcu/h	30	0	305	0	78	0	191	0
V/C ratio	0.04		0.29		0.08		0.19	
Control Delay, sec/pcu	5.2		4.8		4.2		4.4	
LOS	A		A		A		A	
95th % Queue (ft)	4		33		7		19	

UK Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	1962	NA	2351	NA	2231	NA	2313	NA
Entry Flow pcu/h	30	0	586	0	143	0	371	0
V/C ratio	0.02		0.25		0.06		0.16	
Control Delay, sec/pcu	1.9		2.0		1.7		1.9	
LOS	A		A		A		A	
95th % Queue (ft)	1		27		6		16	

Notes:

Unit Legend:

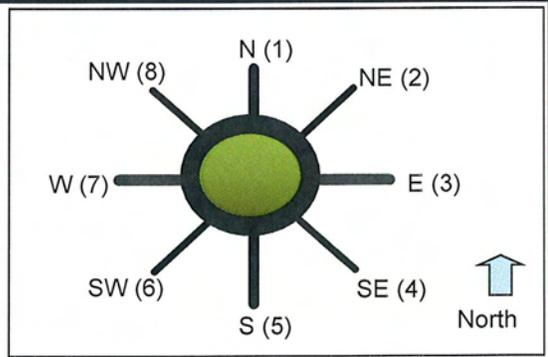
- vph = vehicles per hour
- PHF = peak hour factor
- F<sub>HV</sub> = heavy vehicle factor
- pcu = passenger car unit

Roundabout Analysis Tool  
Multi-Lane

3/8/2010  
Version 1.1

**General & Site Information**

Analyst: Paul DeNard  
 Agency/Company: GDOT  
 Date: 5/27/2009  
 Project Name or PI#: 0008420  
 Year, Peak Hour: 2032, PM Peak  
 County/District: Lowdnes/District 4  
 Intersection: SR 38/US 84 @ Clay Rd/Hollywood St



**Volumes** Entry Legs (FROM)

	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
N (1), vph						5		
Exit NE (2), vph								
Legs E (3), vph	5							
(TO) SE (4), vph								
S (5), vph	15				60			
SW (6), vph								
W (7), vph	5				120	180		
NW (8), vph								
Entry Volume, vph	25	0	0	0	180	185	0	0
	<b>S1 (5)</b>	<b>S2 (5)</b>	<b>SW1 (6)</b>	<b>SW2 (6)</b>	<b>W1 (7)</b>	<b>W2 (7)</b>	<b>NW1 (8)</b>	<b>NW2 (8)</b>
N (1), vph	30				5			
NE (2), vph								
E (3), vph		105			275	150		
SE (4), vph								
S (5), vph						95		
SW (6), vph								
W (7), vph	80							
NW (8), vph								
Entry Volume, vph	110	105	0	0	280	245	0	0

**Critical Lane Volumes**

	N	NE	E	SE	S	SW	W	NW
N (1), vph	0	0	5	0	30	0	5	0
NE (2), vph	0	0	0	0	0	0	0	0
E (3), vph	5	0	0	0	0	0	275	0
SE (4), vph	0	0	0	0	0	0	0	0
S (5), vph	15	0	0	0	0	0	0	0
SW (6), vph	0	0	0	0	0	0	0	0
W (7), vph	5	0	180	0	80	0	0	0
NW (8), vph	0	0	0	0	0	0	0	0
Entry Volume, vph	25	0	185	0	110	0	280	0

Roundabout Analysis Tool  
Multi-Lane

3/8/2010  
Version 1.1

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	90%	100%	90%	100%	90%	100%	90%	100%
% S.U./ Bus	0%	0%	0%	0%	0%	0%	0%	0%
% Trucks/ Combin.	10%	0%	10%	0%	10%	0%	10%	0%
% Bicycles	0%	0%	0%	0%	0%	0%	0%	0%
PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
F <sub>hv</sub>	0.909	1.000	0.909	1.000	0.909	1.000	0.909	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	6	0	36	0	6	0
Leg # NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	6	0	0	0	126	0	508	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	18	0	72	0	0	0	114	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	6	0	359	0	96	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Conflicting flow, pcu/h	526	0	138	0	520	0	96	0

**Results: Approach Measures of Effectiveness**

NCHRP-572 Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	782	NA	1026	NA	785	NA	1057	NA
Crit. Lane Entry Flow pcu/h	30	0	221	0	132	0	335	0
V/C ratio	0.04		0.22		0.17		0.32	
Control Delay, sec/pcu	4.8		4.5		5.5		5.0	
LOS	A		A		A		A	
95th % Queue (ft)	3		22		16		38	

UK Model	N	NE	E	SE	S	SW	W	NW
Crit. Entry Capacity pcu/h	2047	NA	2326	NA	2052	NA	2356	NA
Entry Flow pcu/h	30	0	436	0	257	0	628	0
V/C ratio	0.01		0.19		0.13		0.27	
Control Delay, sec/pcu	1.8		1.9		2.0		2.1	
LOS	A		A		A		A	
95th % Queue (ft)	1		19		12		30	

Notes:

Unit Legend:

vph = vehicles per hour  
PHF = peak hour factor  
F<sub>HV</sub> = heavy vehicle factor  
pcu = passenger car unit



# Roundabout Analysis Tool

v 1.1

Updated: 9/1/09

Welcome to GDOT's Roundabout Analysis Tool. This tool is designed for the user to determine the functionality of a proposed roundabout. The analysis is based on NCHRP Report 572 and the FHWA's Roundabout Design Guide (2000) standards. Please read the notes in the [Instructions](#) tab before using the spreadsheet.

Analyst:	Paul DeNard
Agency/Company:	GDOT
Date:	5/27/2009
Project Name or PI#:	0008420
Year, Peak Period:	2032, PM Peak
County/District:	Lowdnes/District 4
Intersection:	SR 38/US 84 @ Clay Rd/Hollywood St

*Insert Project Information Here in the BLUE SPACE. This information is linked to the Single Lane and Multi Lane Worksheets.*

### Roundabout Considerations Worksheet

Roundabouts may not operate well if there is too much traffic entering the intersection or if the percentage of traffic on the major road is too high. Candidate intersections shall be analyzed to determine whether a roundabout will perform acceptably. Shown below are thresholds to determine if a roundabout capacity analysis is required:

# of circulatory lanes	ADTs (current/ build year)	% traffic on Major Road
Single Lane	less than 20,000	less than 80%
Multi-Lane	less than 40,000	less than 80%

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

### Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street		0%
Minor Street		0%
Total volumes	0	

### Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)?  

3 Is the proposed intersection located within a coordinated signal network?

**Go up to next section...**

**Proposed Design Configuration Chart**

**Directions for this Section only:** (see Instructions Tab for other sections)

1. **Select** the type of roundabout you are analyzing.
2. **Key in** the number of approaches and the street names at the proposed intersections.
3. Complete the Approach Characteristics Chart:
  - a. **Select** the Street Name from the pulldown menu for each approach leg
  - b. **Select** the Lane Type for each entry approach lane  
*\*The first box is the inner lane, the second box is the outer lane*
  - c. **Select** Yes or No if a right turn bypass will be added to each approach leg

Roundabout Characteristics

Roundabout Type:

# of Approaches:

Name of Streets:

Chart Key:

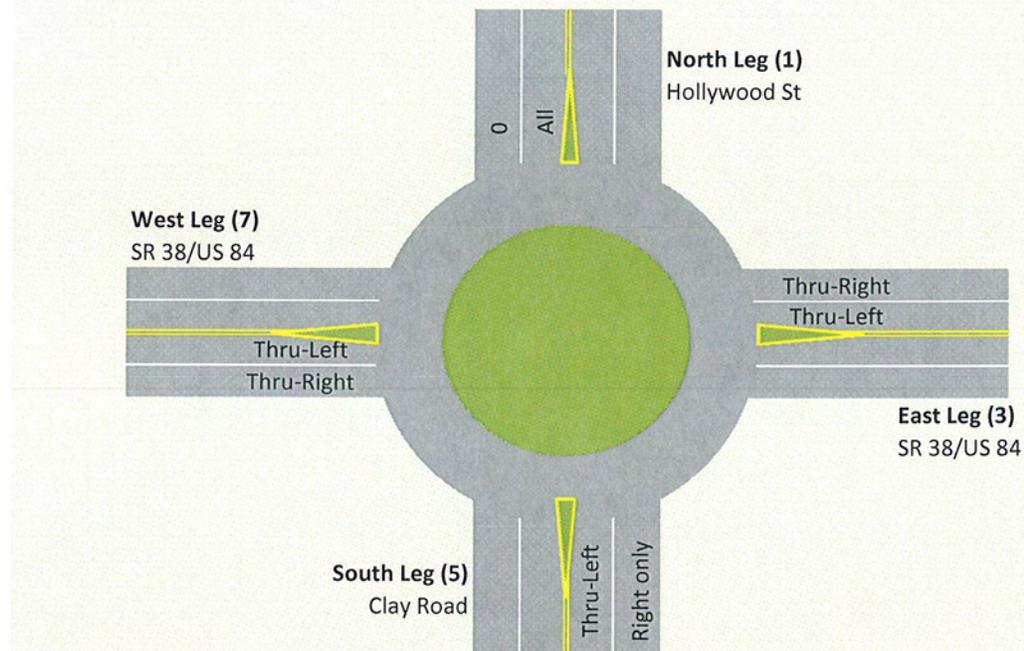
Single Lane	Street Name	
	All	
	Bypass?	
Multi-lane	Street Name	
	Inner Ln	Outer Ln
	Bypass?	

Approach Leg Characteristics:

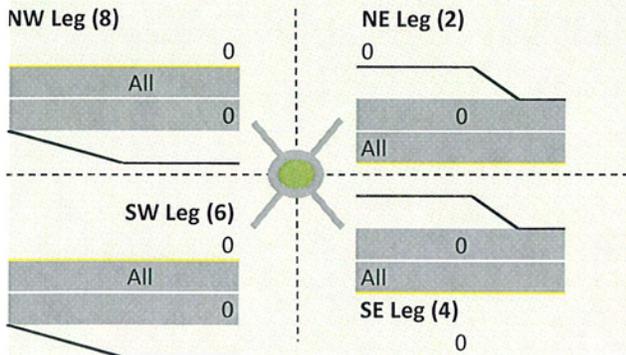
	North Leg (1)		NE Leg (2)		East Leg (3)		SE Leg (4)	
Street Name:	Hollywood St				SR 38/US 84			
Entry Lane Config	All		All		Thru-Left	Thru-Right	All	
Bypass to Adj Leg?								
	South Leg (5)		SW Leg (6)		West Leg (7)		NW Leg (8)	
Street Name:	Clay Road				SR 38/US 84			
Entry Lane Config	Thru-Left	Right only	All		Thru-Left	Thru-Right	All	
Bypass to Adj Leg?								

Additior

**Preliminary Roundabout Rendering\*\***



**Cardinal Legs**



**\*\*Note**

*This roundabout sketch does not include the secondary cardinal direction legs due to restrictions in the Excel software. For complex roundabouts, a separate sketch is recommended by the designer.*

## Concept Meeting Minutes

CSSFT-0008-00(420)

PI #0008420

Lowndes County

January 12, 2010

The Concept Meeting was held at the District 4 Office in Tifton, GA. Paul DeNard welcomed everyone and opened the meeting at 9:05 a.m. and asked everyone to introduce him/herself.

Mr. DeNard followed the attached agenda and power point presentation.

Mr. DeNard takes a moment so everyone can look at and discuss the layout of the project.

Von Shipman (City of Valdosta) stated that the typical section in the draft report shows two lanes with a left arrow in one lane and a right arrow in the other for Clay Rd. The left arrow needs to be changed to a thru/left arrow. Asked if the signal would be split phased, allowing the thru/left of Clay Rd. to clear out before giving the green light to Hollywood St. Also notes that a new signal at this location might attract more traffic to Hollywood St.

Paul Teague (AGL) discusses what will happen with the ROW around the old Clay Rd. section.

Patrick Allen (GDOT – Traffic Ops) states that we will make an effort not to impact the Railroad ROW.

Mr. Teague suggests not moving the gas line and states that it is likely only 4 ft. deep.

Mr. DeNard continues with the presentation and discusses drainage issues

Bill Cooper (GDOT – District 4 Utilities) states it is a possibility that there will be reimbursable utilities in the north-west quadrant of the project. There is a AT&T manhole with conduit in that quadrant.

Mr. DeNard continues with the presentation and discusses the typical sections.

Mr. Teague asks if the drainage system will be changed from an open system to a closed system. Typical section shows open system.

Mr. DeNard continues with the presentation and discusses the ROW.

Kim Bradford (GDOT – District 4 ROW) asked about the need to acquire ROW on the William J. Holland property in the northwest quadrant.

Mr. Shipman stated that there was no access to the building on the SR 38 side and might not have to buy the whole property.

Brent Thomas (GDOT – District 4 Preconstruction) suggests that we not place a sidewalk on the south side of the intersection near the railroad and that we not allow pedestrians to cross Clay Rd.

Mr. DeNard continues with the presentation and discusses environmental issues.

Mr. DeNard continues with the presentation and discusses utilities issues.

Mr. DeNard continues with the presentation and discusses project responsibilities, coordination, and schedule.

Mr. Shipman asked if GDOT will be acquiring the ROW.

Ms. Bradford confirms that GDOT will be acquiring the ROW.

Dennis Carter (GDOT – District 4 Environmental) and Mr. Shipman anticipate public involvement.

Mr. Shipman will email City of Valdosta's comments to Mr. DeNard.

Ms. Bradford agrees that ROW acquisition will take approximately 1 year.

Mr. Carter agrees that environmental certification will take approximately 9 months.

Mr. Shipman asked if everything will run concurrent.

Mr. DeNard stated that there is a 2012 let date in TPro.

Charity Belford (GDOT – Traffic Operations) stated that the let date will also depend on ROW, environmental, and utility certifications.

Mr. DeNard continues with the presentation and discusses the alternative considerations.

Mr. DeNard continues finishes the presentation with comments and questions.

Mr. DeNard stated that the total cost estimate is approximately 1.5 million.

Mr. Shipman asked if there will be a detection loop in the right turn lane on Clay Rd. States that if a truck is sitting in the right turn lane it may block a car from sitting on the detection loop in the thru/left lane.

Mr. Allen states that we will consider.

Mr. Shipman asked if we can upgrade Clay Rd. with pedestrian accommodations, bike lanes, etc.

Mrs. Belford states that upgrading Clay Rd. would be outside the scope of the project.

Mr. DeNard ask about relocating transmission lines.

Jerry Hughes (GDOT – District 4, Area 1 Engineer) stated that relocating them would be a possibility.

Mr. Shipman notes that the pole on the southwest corner has a lot of attachments.

Mr. Thomas asked what type of poles will be used.

Mr. Hughes suggest using joint use poles

Mr. Allen states that we anticipate using joint use poles where we can.

Mr. Shipman suggested the use of mast arms on the southeast and northwest corners.

Mr. DeNard asked if the City of Valdosta has a plan in place to install bike lanes on SR 38.

Mr. Shipman states that there is no current plan for bike lanes on SR 38, but it is in there master plan to target major arterials to install sidewalks, bike lanes, and become current with ADA compliances.

Mr. Thomas states that we should keep everything we have in the plans regarding pedestrians.

Mr. DeNard asked who will handle the ROW with the rail road.

Ms. Bradford states that she usually works with utilities to acquire ROW from the rail road and that it may take up to 2 years.

Mr. Thomas states that we typically use temporary easement near railroads.

Ms. Bradford asked who owns the property on the south side near the railroad.

Mr. Shipman suggested we change the horizontal curve on the south end to require less ROW.

Mr. DeNard states that we will consider changing the horizontal curve on the south end.

Mr. Teague as if we will use SUE to locate utilities.

Mr. DeNard states that SUE will not be used on this project.

Mr. DeNard thanked everyone for attending and the meeting was adjourned at 10:04 am.

Meeting minutes prepared by Michael Turpeau Jr.

Sign In List		
Name	Company	Email Address
Charity Belford	GDOT - Traffic Operations	<a href="mailto:cbelford@dot.ga.gov">cbelford@dot.ga.gov</a>
Michael Turpeau Jr.	GDOT - Traffic Operations	<a href="mailto:mturpeau@dot.ga.gov">mturpeau@dot.ga.gov</a>
Van Mason	GDOT - District 4 Traffic Ops	<a href="mailto:vmason@dot.ga.gov">vmason@dot.ga.gov</a>
Brent A. Thomas	GDOT - District 4 Preconstruction	<a href="mailto:bthomas@dot.ga.gov">bthomas@dot.ga.gov</a>
Bill Cooper	GDOT - District 4 Utilities	<a href="mailto:wcooper@dot.ga.gov">wcooper@dot.ga.gov</a>
Tim Warren	GDOT - District 4 Utilities	<a href="mailto:twarren@dot.ga.gov">twarren@dot.ga.gov</a>
Jerry Hughes	GDOT - District 4, Area 1 Engineer	<a href="mailto:jehughes@dot.ga.gov">jehughes@dot.ga.gov</a>
Jim Childs	AT&T Long Distance	<a href="mailto:jim_childs@bellsouth.net">jim_childs@bellsouth.net</a>
Von Shipman	Valdosta City Engineer	<a href="mailto:vshipman@valdostacity.com">vshipman@valdostacity.com</a>
Paul Teague	AGL	<a href="mailto:pteague@aglresources.com">pteague@aglresources.com</a>
Darin G. Purvis	GDOT - Engineering Services	<a href="mailto:dpurvis@dot.ga.gov">dpurvis@dot.ga.gov</a>
Donna Garrison	GDOT - Engineering Services	<a href="mailto:dgarrison@dot.ga.gov">dgarrison@dot.ga.gov</a>
Dennis Carter	GDOT - District 4 Environmental	<a href="mailto:decarter@dot.ga.gov">decarter@dot.ga.gov</a>
Kim Bradford	GDOT - District 4 Right of Way	<a href="mailto:kbradford@dot.ga.gov">kbradford@dot.ga.gov</a>
Patrick Allen	GDOT - Traffic Operations	<a href="mailto:paallen@dot.ga.gov">paallen@dot.ga.gov</a>
Paul DeNard	GDOT - Traffic Operations	<a href="mailto:pdenard@dot.ga.gov">pdenard@dot.ga.gov</a>

**DeNard, Paul**

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**From:** Von Shipman [vshipman@valdostacity.com]  
**Sent:** Tuesday, January 26, 2010 12:53 PM  
**To:** DeNard, Paul  
**Cc:** Thomas, Brent; Larry Hanson; John Whitehead III; Cindy Randall; ktolliver@valdostacity.com  
**Subject:** E. Hill at Clay Road Concept Report Meeting Comments

**Importance:** High

Mr. DeNard:

It was a pleasure to meet with you and the other DOT personnel at the recent concept meeting in Tifton regarding the proposed realignment and widening of E. Hill (SR 38) and at Clay Road/Hollywood Street here in Valdosta. I have listed below my comments for your consideration.

1. It is my understanding the proposed plan includes on Clay Road a northbound straight/left lane with a right drop lane. The concept is to reconstruction Clay to line up with Hollywood. This is acceptable only if the proposed traffic signal is to be programmed in a split phased configuration which will serve the Clay Road approach first followed by the Hollywood side. I also commented on the fact that the right drop turn lane will need to have a presence loop. This will help ensure the northbound traffic on Clay will not gap out when there is a heavy right turn movement.
2. The concept also includes east/west left turn lanes on E. Hill with a right drop lane in the eastbound direction.
3. Please note the city has plans to install bike lanes on Clay Road along with a sidewalk on the west side in the future. Therefore we need the plan to include curb & gutter with bike lanes and a sidewalk on the west side of Clay Road to a point south of the new railroad crossing.
4. Because of the need to have a preemption phase on the new traffic signal to clear any Clay Road traffic that may be queued across the railroad crossing, it is our understanding the proposed signalized intersection will have pedestrian crossings on the west, north and east legs of the intersection. We also understand a sidewalk will be constructed on the north side of E. Hill within the project limits.
5. Due to utility issues and right-of-way restraints, the installation of mast arms in lieu of the normal box span configuration seems to be a concept that can be used. The mast arms should be at the northwest and southeast corners of the intersection.
6. It is suggested the Clay Road leg be constructed at a right angle to E. Hill instead of the proposed skew. This will reduce the amount of right-of-way that needs to be acquired while helping to slow the northbound traffic on Clay when approaching E. Hill. The preliminary concept includes a rather long circular curve due to the speed limit on Clay being 40 mph. Again we want northbound motorists to slow down when approaching the railroad track and this major intersection.
7. The city understands that traffic will be maintained during construction. This is imperative due to the industrial facilities and residential subdivisions that need to use Clay to access E. Hill.
8. Finally, we understand the DOT is to acquire the right-of-way at no cost to the city of Valdosta.

In closing, we look forward to this project moving to construction as soon as possible. While the price tag is estimated to be \$1.5 million, this project will provide huge benefits to the traveling public and those who use Clay Road both now and in the future.

Please call should you have any questions.

Sincerely,

Von Shipman, PE  
City Engineer

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# NOTICE OF LOCATION AND DESIGN APPROVAL

## *CSSFT-0008-00(420), Lowndes County P. I. NUMBER 0008420*

Notice is hereby given in compliance with Georgia Code 22-2-109 that the Georgia Department of Transportation has approved the Location and Design of this project.

The date of location approval is: *June 1, 2010*

*This project is located in Lowndes County within the City of Valdosta within the 11<sup>th</sup> Land District in Land Lots 107 and 124 in G.M.D 663. Construction will take place on State Route 38/US 84/East Hill Avenue from at the intersection of CR439/Clay Road/Hollywood Street between mile post 12.49 and mile post 12.89.*

*SR 38/US 84 East Hill Avenue is a four lane undivided rural arterial running east-west through Valdosta, GA. Project CSSTF-0008-00(420) proposes to realign CR 439/Clay Road to tie into CS 1271/Hollywood Street intersecting at SR 38. The proposed typical section of this project consists of widening each approaching streets to add left turn lanes except Hollywood Street. Additionally, a right turn deceleration lane turning southbound will be added to the eastbound approach of SR 38 with adequate storage. As part of improving safety measures, a traffic signal will be installed at the realigned intersection. This project will also incorporate a four-foot bicycle lane for both directions along each approach of SR 38/US 84/East Hill Avenue in accordance to the South Georgia Regional Development Center Bike and Pedestrian Plan.*

Drawings, maps, or plats of the proposed project, as approved, are on file and are available for public inspection at the Georgia Department of Transportation:

Jerry Hughes, Area One Engineer (Valdosta)  
jehughes@dot.ga.gov  
1411 Madison Hwy  
Valdosta, Georgia 31601  
(229) 333-5287

Any interested party may obtain a copy of the drawings or maps or plats or portions thereof by paying a nominal fee and requesting in writing to:

Derrick Cameron, Traffic Design Manager  
Office of Traffic Operations  
dcameron@dot.ga.gov  
935 East Confederate Avenue, Bldg. 24  
Atlanta, Georgia 30316  
(404) 635-8153

Any written request or communication in reference to this project or notice SHOULD include the Project and P. I. Numbers as noted at the top of this notice.

## BENEFIT COST ANALYSIS WORKSHEET

SR 38/US 84 @ Clay Rd./Hollywood Street

Lowndes 0008420

### ACCIDENT DATA

Description	Symbol	Value
Property Damage Accidents (no fatality or injury)	P	5.2
Fatalities	F	0.2
Injuries	I	4

### FIXED VALUES

Description	Symbol	Value
Fatality Cost	Fc	\$5,800,000
Injury Cost	Ic	\$333,500
Property Damage Cost	Pc	\$4,400
Maintenance/Operating Cost	Cm	\$50,000

### TABLE VALUES

Description	Symbol	Value
Reduction Factor (fatalities and injuries) (Appendix E)	R	0.772736
Reduction Factor (property damage) (Appendix E)	Rp	0.772736
Capital Recovery Factor (Appendix E)	Ek	0.135
Initial Improvement Cost (Itemized Cost Estimate)	Ci	\$2,182,469.54

**Q = Weighted cost of fatal and injury collisions**

$$Q = \frac{(Fc \times F) + (Ic \times I)}{F + I}$$

$$Q = 593809.5238$$

**B = Benefit**

$$B = Q (F + I) (R) + Pc (P) (Rp)$$

$$B = 1944883.784$$

**C = Cost**

$$C = Ek (Ci) + Cm$$

$$C = 344633.3879$$

**B/C = Benefit/Cost Ratio**

$$B/C = 5.643341162$$

**BENEFIT/COST RATIO: 5.64**

## ***BENEFIT COST ANALYSIS FACTOR DEFINITIONS***

- F: annual number of collisions involving fatalities during study period
- I: average annual number of collisions involving injured people for the period of the study
- P: average annual number of collisions involving only property damage for the period of the study
- R: reduction of fatal and injury collisions by type (from Table A - Appendix E)
- R<sub>p</sub>: reduction of property damage only collisions by type (from Table A - Appendix E)
- P<sub>c</sub>: average cost, in thousands of \$, per property damage only collision
- Q: weighted cost, in thousands of \$, of fatal and injury collisions
- I<sub>c</sub>: average cost per injury in thousands of \$
- F<sub>c</sub>: average cost per fatality in thousands of \$
- E<sub>k</sub>: capital recovery factor based on countermeasure life (from Table B - Appendix E)
- C<sub>i</sub>: estimated initial cost of the countermeasure (cost of the improvement including r/w) in thousands of \$
- C<sub>m</sub>: estimated annual maintenance and operating cost of the countermeasure in thousands of \$