

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** MSL00-0004-00(644), Gwinnett County  
P. I. No.: 0004644  
SR 20/Loganville Highway Widening

**OFFICE:** Engineering Services

**DATE:** February 23, 2009

**FROM:** Ronald E. Wishon, Acting Project Review Engineer *REW*

**TO:** Brent A. Story, P.E., State Road Design Engineer

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>ROADWAY (RD)</b>				
A-2	Reduce pavement width of lanes to 11-feet.	\$476,250	No	The 24 hour Truck percentage is 11% and the corridor is experiencing rapid growth. Re-design costs are \$200,000 and would cause a 6 month plan preparation delay.
A-6	Reduce length of turn lanes.	\$272,000	Yes	This should be done. Turn lane lengths will be evaluated based on design volumes and shortened where possible.
C-1	Reduce median width to 16-feet.	\$399,343	No	Redesign costs are \$200,000 and would cause a 6-month plan preparation delay.
D-1	Steepen the front slopes from 4:1 to 2:1.	\$200,000	No	Would require the use of guardrail in some areas. The majority of the ROW has been purchased so no savings would be realized by the smaller footprint.

ROADWAY (RD)				
E-1	Eliminate the sidewalk on the north side of the project.	\$142,050	No	This area has a high density of houses and also has schools in close proximity. Does not accommodate all users as stated in ADA and MUTCD guidelines. Would require \$15,000 in re-design costs.
F-2	Change wall type from Type 2C Side Barrier to a MSE wall.	Proposed= \$132,000 Actual= \$124,000	Yes	This should be done. The wall type will be changed to Type P3 Parapet Wall.
B-3	Provide an alternate layout of the longitudinal storm drain system.	Design Suggestion	Yes	Alternates in the VE Study will be considered and implemented if design criteria and practicality allows.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved: Gerald M. Ross Date: 2/24/09  
 Gerald M. Ross, P. E., Chief Engineer

REW/DMF

Attachments

- c: Genetha Rice-Singleton
- Brent Story
- Jason McCook
- Brad McManus
- Randy Davis
- Ken Werho
- Lisa Myers
- Douglas Fadool
- Patrick Allen
- Anthony Eadie
- Nicole Law
- Darrell Richardson
- Francis Alomia
- General Files

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** MSL00-0004-00(644)

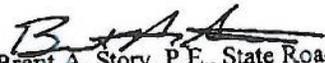
**OFFICE**

Road Design

P.I. No. 0004644

**DATE**

February 20, 2009

**FROM**   
Brent A. Story, P.E., State Road Design Engineer

**TO** Brian Summers, P.E., Project Review Engineer  
Attention: Ron Wishon, P.E., Acting Project Review Engineer

**SUBJECT** ROAD DESIGN REPOSE TO V.E. STUDY FOR MSL00-004-00(644)

A VE study was held on project MSL00-0004-00(644) from January 26<sup>th</sup> through the 30<sup>th</sup> of 2009. Attached are the recommendations of the VE study team as well as the Office of Road Design's decisions regarding their implementation. We are asking that you schedule an implementation meeting at your earliest convenience in order to discuss the Departments decisions regarding those recommendations. Thank you.

BAS:MBM:

Attachments:

**Office of Road Design's response to the VE study report on GDOT  
project MSL00-0004-00(644) Gwinnett County**

**PI No. 0004644**

**Alternative -A-2**

**Description:** Reduce Pavement width of lanes to 11'

**Cost savings:** \$476,250

**Response:** The 24 hour truck percentage is 11%. This corridor is experiencing rapid growth and the volume of trucks is expected to increase. The cost of engineering associated with re-designing the plans is \$200,000. Furthermore this project is scheduled to be let in July and to reduce the lane widths would mean a 6 month delay in the plans.

**The recommendation of the Road Design Office is:** Not to implement this recommendation.

**Alternative A-6**

**Description:** Reduce length of turn lanes

**Cost Savings:** \$272,000

**Response:** Turn lane lengths will be evaluated based on design volumes. Where traffic justifies the turn lane lengths will be shortened. The turn lanes will be evaluated based on traffic volumes per signal phase.

**The recommendation of the Road Design Office is:** Partially implement this recommendation.

**Alternative C-1**

**Description:** Reduce median width to 16'

**Cost Savings:** \$399,343

**Response:** Reducing the median width also reduces the sight distance for vehicles turning left. The 2006 Roadside Design Guide recommends a clear-zone distance of 20-22 feet for this facility. A 16 foot median would not meet the clear-zone requirements of AASHTO. Also this alternative (like alternative A-2) would require a redesign costing \$200,000 and delaying the project by 6 months.

**The recommendation of the Road Design Office is:** Not to implement this recommendation.

### Alternative D-1

**Description:** Steepen the front slopes from 4:1 to 2:1

**Cost Savings:** \$200,000

**Response:** The majority of the right of way has been purchased for this project therefore eliminating the bulk of the savings possibly realized by the implementation of this alternative. Also placing 2:1 slopes presents a road hazard that will require the use of guardrail in some locations. Slopes that are 4:1 or flatter can be maintained and mowed easier and are also more pleasing to the eye. No supporting documentation could be found for the value of \$200,000.

**The recommendation of the Road Design Office is:** Not to implement this recommendation.

### Alternative E-1

**Description:** Eliminate sidewalk on North side of Project

**Cost Savings:** \$142,050

**Response:** This area has a high density of houses and also has schools in close proximity. Having only one sidewalk violates ADA and MUTCD guidelines that all users must be accommodated. Also this would cost \$15,000 in design costs.

**The recommendation of the Road Design Office is:** Not to implement this recommendation

### Alternative F-2

**Description:** Change wall type from Type 2C Side Barrier to a MSE wall.

**Cost Savings:** \$132,000

**Response:** The VE team did not add coping at the top of the MSE wall which will be required. This adds \$250/linear foot thereby raising the cost of the wall above that of the Type 2C Side Barrier shown in the plans. Our Bridge office recommends that we use a Type P3 parapet wall that cost \$550/linear foot. This would save \$124,000.

**The recommendation of the Road Design Office is:** Not to implement (change to P wall)

### Alternative B-3

**Description:** Provide Alternate layout of longitudinal storm drainage system.

**Cost Savings:** Design Suggestion

**Response:** Improvements to the drainage layout were proposed in the FFPR earlier in the month. Alternates suggested in the VE study will be considered and implemented if design criteria and practicality allow.

**The recommendation of the Road Design Office is:** Partially implement this recommendation.

**PRECONSTRUCTION STATUS REPORT FOR PI:0004644**

SR 20/LOGANVILLE HIGHWAY FM OZORA ROAD TO BRAND ROAD - GRTA

PROJ ID : 0004644  
 COUNTY : Gwinnett  
 LENGTH (MI) : 2.30  
 PROJ NO. : MS100-0004-00(644)  
 PROJ MGR : McManus, Brad  
 OFFICE : Road Design  
 CONSULTANT : Local Design, Reimbursed by GDOT funds  
 Gwinnett County  
 SPONSOR : Kinley-Horn and Associates, Inc.  
 DESIGN FIRM : Kinley-Horn and Associates, Inc.

MPO : Atlanta TMA  
 TIP # : GW-020F  
 MODEL YR : 2010  
 TYPE WORK : Widening  
 CONCEPT : Reconstruction/Rehabilitation  
 PROG TYPE : GRTA ARTERIAL  
 BOND PROJ : GRTA ARTERIAL

MGMT LET DATE : 07/17/2009  
 MGMT ROW DATE : 05/18/2007  
 SCHED LET DATE : 5/21/2009  
 WHO LETS? : GDOT Let  
 LET WITH :

SCHED START		SCHED FINISH	ACTIVITY	ACTUAL START	ACTUAL FINISH	%	Phase	Approved	Proposed	Cost	Fund	Status	Date Auth
4/13/2009			Concept Development	5/13/2005	5/19/2005	100	PE	2003	2003	273,084.36	42210	AUTHORIZED	7/1/2003
			Concept Meeting	12/16/2004	12/16/2004	100	PE	2003	2003	476,391.84	CFTS	AUTHORIZED	7/1/2003
			PM Submit Concept Report	4/18/2005	4/19/2005	100	ROW	2007	2007	2,015,000.00	RRB	AUTHORIZED	6/29/2007
			Receive Preconstruction Concept Approval	4/25/2005	5/3/2005	100	CST	2009	2009	15,089,550.00	STM09	PRECAST	
			Management Concept Approval Complete	5/13/2005	5/19/2005	100							
			Value Engineering Study	11/3/2008		78							
			Environmental Approval	9/1/2005	5/14/2007	100							
			Mapping	7/20/2004	10/31/2004	100							
			Field Surveys/SIDE	7/20/2004	10/31/2004	100							
			Preliminary Plans	5/24/2005	6/27/2006	100							
			404 Permit Obtainment	6/17/2008	8/6/2008	100							
			PHPR Inspection	6/27/2006	6/27/2006	100							
			R/W Plans Preparation	7/3/2006	7/16/2007	100							
			RAW Plans Final Approval	3/12/2007	6/19/2007	100							
			L & D Report Development and Approval	10/27/2007	11/5/2007	43							
			R/W Acquisition	6/19/2007		0							
			Stake R/W	12/5/2005	3/26/2008	100							
			Soil Survey	8/1/2007	1/10/2009	54							
			Final Design	1/8/2009		100							
			FFPR Inspection	1/10/2009	2/2/2009	100							
			Submit FFPR Responses (OES)										

SCHED START		SCHED FINISH	ACTIVITY	ACTUAL START	ACTUAL FINISH	%	Phase	Approved	Proposed	Cost	Fund	Status	Date Auth
3/4/2009			Stake R/W	12/5/2005	3/26/2008	100	PE	2003	2003	273,084.36	42210	AUTHORIZED	7/1/2003
5/21/2009			Soil Survey	8/1/2007	1/10/2009	54	PE	2003	2003	476,391.84	CFTS	AUTHORIZED	7/1/2003
4/16/2009			Final Design	1/8/2009		100	ROW	2007	2007	2,015,000.00	RRB	AUTHORIZED	6/29/2007
			FFPR Inspection	1/10/2009	2/2/2009	100	CST	2009	2009	15,089,550.00	STM09	PRECAST	

**STIP AMOUNTS**

Phase	Cost	Fund
PE	0.00	42210
PE	0.00	CFTS
ROW	0.00	RRB
CST	0.00	STM09

**District Comments**

GRTA BUS DEAL PROJECT

Acquired by: LOC  
 Acquisition MGR: Byers, Kim (LOC)  
 R/W Cert Date:

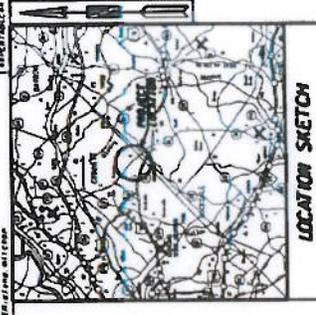
DEEDS CT: 38

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## PLAN AND PROFILE OF PROPOSED S.R. 20/LOGANVILLE HIGHWAY FROM OZORA ROAD TO BRAND ROAD GWINNETT COUNTY

FEDERAL AID PROJECT  
MSL00-0004-0016441  
GWINNETT COUNTY

FEDERAL ROUTE - R/A  
STATE ROUTE - SR-20  
PLAND. 000644



**DESIGN DATA**

TRAFFIC ADT <sub>1</sub>	26,300 (2001)
TRAFFIC ADT <sub>2</sub>	35,000 (2031)
TRAFFIC ADT <sub>3</sub>	35,334 (2031)
DIRECTIONAL DIST. 10%	
% TRUCKS	24
TRUCKS	24
SPEED DESIGN	45 MPH

LOCATION & DESIGN APPROVAL: [Signature]

FUNCTIONAL CLASS: [Blank]

OWNER: [Blank]

THIS PROJECT IS LOCATED IN GWINNETT COUNTY AND IS AIDED BY FEDERAL AID.

PROJECT DESCRIPTION: [Blank]

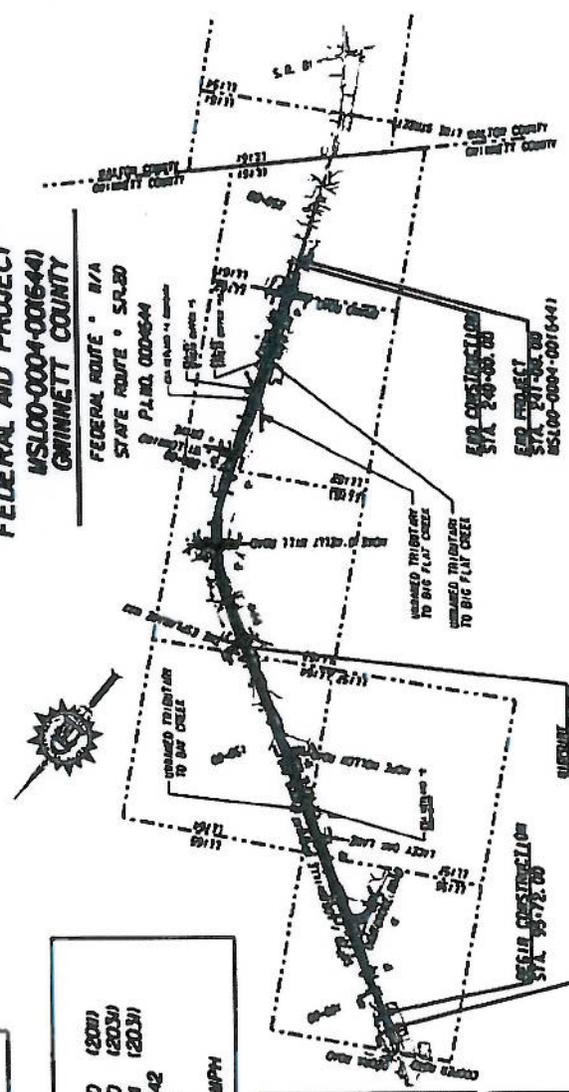
THIS PROJECT WILL BE CONSTRUCTED UNDER THE SUPERVISION OF THE STATE ENGINEER.

DATE: [Blank]

STATION: [Blank]

DATE: [Blank]

The design engineer will be held responsible for the design of the project. The design engineer will be held responsible for the design of the project. The design engineer will be held responsible for the design of the project.



**LENGTH OF PROJECT**

NET LENGTH OF ROADWAY	2,000
NET LENGTH OF BRIDGES	0.000
NET LENGTH OF TUNNELS	0.000
NET LENGTH OF STRUCTURES	0.000
GROSS LENGTH OF PROJECT	2,000

Scale: 1" = 100'

North Arrow

Kimley-Horn and Associates, Inc.  
Professional Engineers and Planners  
1000 North Peachtree Street, N.W.  
Atlanta, Georgia 30309

NOTE: All structures in this contract shall be designed as independent structures. The design engineer shall be held responsible for the design of the project. The design engineer shall be held responsible for the design of the project.

P.E. STAMP  
COES HERE

PLANS PREPARED BY: [Blank]

DESIGN: [Blank]

RECOMMENDED FOR SUBMISSION BY: [Blank]

DESIGN: [Blank]

SUBMITTED BY: [Blank]

STATE ROAD & AIRPORT DESIGN ENGINEER

DATE: [Blank]

DESIGN ENGINEER: [Blank]

REVISIONS:

NO.	DATE	DESCRIPTION