

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** P.I. No.: 0009679, Hall County **OFFICE:** Engineering Services  
 Spout Springs Road from  
 Hog Mountain Rd. to Gwinnett Co Line **DATE:** October 15, 2012

**FROM:** Lisa L. Myers, State Project Review Engineer *slm*

**TO:** Genetha Rice-Singleton, State Program Delivery Engineer  
 Attn.: Douglas Fadool

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

The VE Study for the above project was held August 27-30, 2012. Responses were received on October 11, 2012. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project. Please note, if the implementation of a VE recommendation requires a Design Exception and/or Design Variance, the DE or DV must be requested separately.

ALT #	Description	Potential Savings/ LCC	Implement	Comments
B-1	Realign the access drive at Thompson Mill Road intersection.	<b>Cost Increase (\$387,000)</b>	No	The proposed change would allow access to a commercial area (Kroger Shopping Center) which will lose partial access as a result of the improvements along the mainline. Rather than realign this drive, a partial median break will be included along the mainline at Sta. 214+35 to allow for continued left turn access into the commercial area.
B-2	Narrow all lanes to 11 feet wide.	\$1,327,300	Yes	This will be done.
B-2.1	Reduce only inside lanes to 11 feet wide.	\$663,650	No	B-2.1 will not be implemented because B-2 was selected instead.
B-3	Reduce number of median openings; add signals at designated locations.	\$2,110,000	No	All public side roads were evaluated according to the MUTCD for signal warrants as part of the approved traffic study. Warrants were conducted where volumes dictated and signals are proposed only in locations that met the MUTCD warrants.

B-6	Reduce 32 feet median width at southern section to 24 feet.	\$674,000	No	B-6 will not be implemented because B-6.1 was selected to be partially implemented instead.
B-6.1	Reduce 32 feet median width at southern section to 20 feet.	Proposed = \$836,900 Actual = \$639,900	Yes, with modifications	The new proposed savings were revised because the VE Team's savings were based on some assumptions. Please see the attached calculation sheets which clarify the differences, but the median will be narrowed between Sta. 208+00 to Sta. 228+00 for a modified savings.
B-6.2	Eliminate the raised median at southern section.	\$3,405,000	No	B-6.2 will not be implemented because B-6.1 was selected to be partially implemented instead.
B-8	Use rural section for Elizabeth Lane.	\$203,500	Yes	This will be done.
E-1	Use maximum allowable grades to adjust profile to reduce earthwork near Sta. 297+00.	Proposed = \$399,900 Actual = \$241,900	Yes, with modifications	The profile recommended by the VE Team would have constructability staging challenges related to maintaining access to the current residents. However, the profile at Lollis Creek will be lowered by the Design team for a modified savings.
E-1.1	Adjust profile to reduce impacts to the stream from Sta. 485+00 to Sta. 499+00.	Proposed = \$0 Actual = \$0	Yes, with modifications	No dollar value was associated with this recommendation, but the profile will be tweaked wherever possible to further optimize and balance impacts as well as mitigation costs.
G-1	Reduce 24 feet median width to 20 feet.	\$1,130,000	No	As stated in the VE Report this only applies to the 24' wide median sections. It will not be implemented because the 24' median with offset left turns was specifically requested by GDOT District 1 and concurred with by Hall County Public Works at the project kick-off meeting and addressed again at the Concept Team Meeting. According to the meeting minutes this type of median could have been considered as a project constraint.
K-1	Use 8"x 24" Type 7 curb and gutter in median.	Proposed = \$165,600 Actual = \$0	Yes, with modifications	This type of curb will be used, but no right of way cost savings will be realized, because the median width will maintain the 24 feet as noted in G-1. According to the Design team, the material cost savings for using less concrete for this type of curb will be offset by the additional cost for the extra foot of grassing/landscaping in the median.

M-1	Use asphalt in lieu of concrete for multi-use trail.	\$117,200	No	The Design team claims concrete paving will last approximately 30 years while asphalt paving will last approximately 15 years with a maintenance overlay required after about 12 years. The overlay (3/4") would add approximately \$5.50/SY x 36889 SY = \$202,900 in maintenance costs before the design year. This negates the original \$117,200 in savings suggested by the VE Team. Sawed joints can be used in lieu of troweled joints to alleviate any potential discomfort to cyclists.
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The Office of Engineering Services concurs with the Project Manager's responses.

Approved:  Date: 10/19/2012  
Gerald M. Ross, PE, Chief Engineer

LLM/MJS  
Attachments

c: Russell McMurry/Paul Liles  
Genetha Rice-Singleton/Hiral Patel/Douglas Fadool  
Marc Mastronardi  
Lisa Deaton  
Harold Mull/Matt Needham/Doug Wood  
Ken Werho  
Matt Sanders

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** Hall County **OFFICE:** Program Delivery  
P.I. No.: 0009679  
Spout Springs Road **DATE:** October 10, 2012  
*Genetha Rice*  
**FROM:** Genetha Rice-Singleton, State Program Delivery Engineer  
**TO:** Lisa Myers, State Project Review Engineer  
Attn: Matt Sanders, Value Engineering Specialist

**SUBJECT: RESPONSE TO VALUE ENGINEERING STUDY ALTERNATIVES**

Attached are the responses for the Value Engineering Study. This office concurs with the responses.

If you have any questions, please contact Douglas Fadool, AVS, Project Manager at (404-308-1353).

*RM*  
GRS:HPP:dmf  
c: Russell McMurry



October 10, 2012

Hall County  
Department of Public Works  
Engineering Division  
2875 Browns Bridge Road  
3<sup>rd</sup> Floor  
Gainesville, GA 30504

Attention: Mr. Jody Woodall, PE

Dear Mr. Woodall:

Enclosed are STV/Ralph Whitehead Associates' responses to the VE study for Spout Springs Road, PI 0009679. Once approved, we will move forward with implementation of these responses during Phase 4, Preliminary Design.

Should you have any questions, or require additional information, please do not hesitate to contact me directly at 678-892-4955.

Sincerely:

STV/RALPH WHITEHEAD ASSOCIATES

A handwritten signature in blue ink that reads "Margie S. Pozin". The signature is written in a cursive style.

Margie S. Pozin, PE  
Project Manager

**1) Recommendation B-1: Realign the side access driveway at the Thompson's Mill Road intersection to eliminate the 5-leg intersection.**

VE Team Project Increase: \$ 387,000

No, will not implement. Justification for the proposed change was to allow access to a commercial area (Kroger Shopping Center) that would lose partial access as a result of the proposed improvements along the mainline. Rather than add this realignment, a partial ("three-quarter") median break will be included along the mainline at Station 214+35 to allow for continued left turn access into the subject commercial area.

**2) Recommendation B-2: Use 11' lanes; all 4 lanes.**

VE Team Savings: \$ 1,327,300

Yes, will implement.

**3) Recommendation B-2.1: Alternate to B-2; Use 11' lanes for only the 2 inside lanes.**

VE Team Savings: \$ 663,650

No. Will not implement - because we are implementing B-2. Only one of the recommendations can be implemented.

**4) Recommendation B-3: Reduce the number of median openings, add signals at designated locations.**

VE Team Savings: \$ 2,110,000

No. Will not implement. All public side roads were evaluated according to Chapter 4 of the MUTCD for traffic signal warrants as part of the approved traffic study. Warrants were conducted where volumes dictated, and signals are proposed only in locations that met the MUTCD warrants. One location (Union Circle) is proposed for a future signal as the warrants were not met by the opening year, but are met by the design year. Current projections anticipate signal installation at Union Circle in 2034. See attached traffic signal location chart.

**5) Recommendation B-6: Reduce the 32' median to 24' at the southern section.**

VE Team Savings: \$ 674,000

No, will not implement – Because we are partially implementing B-6.1. Only one of the recommendations can be implemented.

**6) Recommendation B-6.1: Alternate to B-6; Reduce the 32' median to 20' at the southern section.**

VE Team Savings: \$ 1,305,000

Yes, will partially implement. However, estimated savings will not match the VE Team Savings. The VE Team considered a 32' median throughout the entire "Southern Section" between Thomson Mill Road and the Publix Access Drive, however, that section as currently proposed, is in transition from a 32' median to a 24' median from STA 216+70 to STA 214+90. The 24' median is then constant from STA 214+90 to Thompson's Mill Road at STA 207+40.

Also, the VE team assumed the proposed medians were raised concrete throughout this stretch. The narrow portions of the median are proposed as concrete, however, the wider portions are proposed as landscaped. Further, a 3' wall reduction height was assumed by the VE team for each of 5 walls. Actual wall height will not change significantly as a result of the proposed revisions.

Revised VE Team Actual Savings Using Current Proposed Design: \$ 836,900 See calc sheets 1-5

The median opening at the commercial drive / Publix drive must stay open to maintain access to both properties (on opposite sides of the road). Because a signal is not warranted at this location, a 32' median is required to allow for two-stage left turns out of each access point. From this opening to the next opening south of it (SR 347), the median width will transition from 32' to 20', and will remain 20' until the intersection of Spout Springs Road and Thompsons Mill Road. South of Thompsons Mill Road, the project ties to the existing through lanes.

Revised VE Team Savings: \$ 639,900 See calc sheet 6

**7) Recommendation B-6.2: Alternate to B-6; Eliminate the raised median.**

VE Team Savings: \$ 3,405,000

No, will not implement – Because we are partially implementing B-6.1. Only one of the recommendations can be implemented. Design year traffic volumes are consistent with the use of a raised median along the southern end of the project.

**8) Recommendation B-8: Use rural section for Elizabeth Lane.**

VE Team Savings: \$ 203,500

Yes, will implement.

**9) Recommendation E-1: Adjust profile to optimize grades.**

VE Team Savings: \$399,900

Yes, will partially implement. The profile at Lollis Creek (referenced in the VE report) can be adjusted slightly to lower the low point and reduce the right of way, embankment, and culvert extension length. However, the profile is limited by maintenance of traffic during construction, maintenance of side road tie ins, and constructability of side road tie ins. The profile recommended by the VE team is not as constructible. It lowers the grade too much at Litany Court (STA 286+80) and the New Access Drive (STA 305+00). Lowering the grade at Litany Court would require road closure and/or relocation that would result in additional right-of-way and residential displacements along Litany Court. Lowering the grade at the new access drive would prohibit the driveways of the two properties on the corner from tying in to the new drive, requiring two additional residential displacements. Those costs were not factored into the VE Team's savings value.

A conceptual revised profile, lowering the grade, was developed by the design team and will be implemented during preliminary design.

Revised VE Team Savings: \$ 241,900 See calc sheets 7-8

**10) Recommendation E-1.1: Design Consideration: Adjust profile to optimize grades.**

VE Team Savings: No dollar value associated with this recommendation

Yes, will partially implement. The current proposed design is a retrofit and access to all adjacent properties must be maintained throughout the duration of construction. We propose overlay and widening in this northern section. Lowering the profile at the northern terminus of the project as referenced in the VE report will have negative impacts on the adjacent commercial properties (Walgreens, Bank, Daycare, DOT Maintenance facility, and Church with cemetery) as well as constructability impacts (requiring additional shoring for greater cuts and additional temporary pavement and construction easements for maintenance of traffic). This will lead to higher right of way costs. The profile is based on balancing right of way impacts and earthwork costs with constructability and maintenance of traffic during construction. The design team believes overlay and widening in this area is the best option for this location as it requires the least amount of right of way with minimal impacts to adjacent businesses.

The remainder of the profile will be tweaked, and profile grades up to 8% will be used wherever possible, during preliminary design to further optimize and balance impacts and costs.

**11) Recommendation G-1: Reduce the median width to 20 feet**

VE Team Savings: \$1,130,000

No, will not implement.

In the case of this corridor, the 24' median width allows for offset lefts to be included in the design. Offset lefts are important in keeping left and U-turning vehicles out of opposing driver

sight lines. The majority of the median openings along the corridor are mid block. The approved traffic study recommended altering the majority of the side road access to right-in-right-out and implementing mid-block median openings to avoid Level of Service (LOS) F in the open and design years. Twenty-eight median openings are proposed along the corridor between (but not including) Thompsons Mill Road and Hog Mountain Road. Eleven of those median openings are at public side roads or major driveways. The remaining 17 median openings are midblock U-turn openings. Due to the high number of left and U-turns that will be executed along the corridor, it is critical to maximize sight distances to execute these maneuvers. The 24' median is GDOT's preferred width (See GDOT Design Policy Manual 6.8.2 for design speed 45 mph.) The 24' median with offset left turns was requested by GDOT District 1 and concurred with by Hall County Public Works at the kickoff meeting (See attached Kickoff Meeting minutes, page 4) and the Concept Team Meeting (CTM) (See Attached CTM Minutes, page 5).

Note: The southern section of the project will be partially reduced to a 20' median as noted in B-6.1. However, G-1 does not apply to the 32' median sections. As stated in the report, it applies only to the 24' median sections.

**12) Recommendation K-1: Use 24" curb and gutter for median.**

VE Team Savings: \$ 165,600

Yes, will implement. However, no cost savings will be realized as a result. As stated above (in G-1), a 24' median was requested by GDOT with concurrence from Hall County for this corridor. We will use the 24" curb and gutter, but the median width will remain 24'. As a result, no right of way cost saving will be realized, and the material cost saving earned by using less concrete will be offset by the additional cost for the extra foot of grassing/landscaping in the median.

Revised VE Team Savings: \$ 0

**13) Recommendation M-1: Use asphalt in lieu of concrete for multi-use path**

VE Team Savings: \$ 117,200

No. Will not implement. Concrete paving will last approximately 30 years while asphalt paving will last approximately 15 years with a maintenance overlay required after about 12 years. The overlay (3/4") would add approximately  $\$5.50/\text{SY} \times 36889 \text{ SY} = \$202,900$  in maintenance costs before the design year. This more than negates the original \$117,200 in savings. Sawed joints can be used in lieu of troweled joints to alleviate potential discomfort to cyclists.

At GDOT's option, the project can be bid for both materials. If there is a greater than \$202,900 difference in cost (asphalt being the less expensive option by at least that much), GDOT can opt to use the asphalt in lieu of concrete.

0009679 Spout Springs Road Traffic Signals, VE Recommendation B-3

STA.	Location	Existing	Proposed STV	Proposed VE	Distance (ft)
207+38.00	Thompson Mill Road	Yes			
221+50.00	SR 347	Yes			1,412
258+05.00	Sherwood Mills Road			Yes	3,655
275+96.00	Williams Road			Yes	1,791
331+00.00	Driveway			Yes	5,504
357+16.00	Union Circle			Yes*	2,616
370+94.00	FBHS, Elementary School		Yes		1,378
399+32.00	Lake Sterling Blvd/Elizabeth Lane	Yes**			2,838
442+16.00	Oak Ridge Drive			Yes	4,284
469+87.00	Castlegate Drive			Yes	2,771
499+00.00	Hog Mountain Road	Yes			2,913

\*STV estimates that a traffic signal will be warranted in the year 2034.

\*\*Elizabeth Lane is being relocated to line up with Lake Sterling Blvd.

CLIENT	HALL CO / GDOT	MADE BY	MSR	CHECKED BY		PROJECT NO.	2515244
PROJECT	0009679						
SUBJECT	RECOM. B-6.1	DATE	9/19/12	DATE		REVISION	
	SPOUT SPRINGS RD VE RESPONSE						1

B-6.1 VE TEAM SAVINGS \$1,305,000

VE ASSUMPTIONS: REDUCTION OF ROW FROM 208100 TO 240100 IS UNIFORM.  
THIS IS NOT THE CASE. THE MEDIAN VARIES ALONG THAT STRETCH

208100 TO 214100 → 24' MEDIAN  
 214100 TO 216170 → 24' → 32' MEDIAN (34428' AVG)  
 216170 TO 232150 → 32' MEDIAN  
 232150 TO 235115 → 32' → 24' MEDIAN (34428' AVG)  
 235115 TO 240100 → 24' MEDIAN  
 (ADD BLANKS)

ROW REDUCTIONS:

208100 TO 214190 → 4' × 690' = 2760 sf  
 214190 TO 216170 → 8' × 180' = 1440 sf  
 216170 TO 232150 → 12' × 1580' = 18,960 sf  
 232150 TO 235115 → 8' × 265' = 2120 sf  
 235115 TO 240100 → 4' × 485' = 1940 sf  
 27,220 sf

USING VE COMMERCIAL SF COST FOR ROW:

$$27,220 \text{ sf} \times \$27.945/\text{sf} = \underline{\$760,663}$$

$$\text{VE TEAM USED } \$1,073,088 \quad \Delta = \$312,425$$

VE ASSUMPTIONS: MEDIAN REDUCTIONS FROM 208100 TO 240100 IS 100% CONCRETE.

THIS IS NOT THE CASE. THE MEDIAN IS LANDSCAPED AS FOLLOWS:

211100 TO 217150 → 10,931 SF LANDSCAPING (NOT CONC.)  
 225100 TO 227100 → 2,315 SF LANDSCAPING  
 232150 TO 236100 → 6,574 SF LANDSCAPING

CLIENT	HALL CO / GDOT	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	0009079	MSP		2515244	
SUBJECT	RECOM, B-6.1 SPOUT SPRINKER PD VE RESPONSE	DATE	DATE	REVISION	SHEET NO.
		9/19/12			2

LANDSCAPE AREA 1

- 211+00 TO 214+90 SAY 4' x 890' = 1560 SF
- 214+90 TO 216+70 SAY 8' x 180' = 1440 SF
- 216+70 TO 217+50 SAY 12' x 80' = 960 SF

L.A. 2

- 220+00 TO 227+00 SAY 12' x 200' = 2400 SF

LA 3

- 232+50 TO 235+15 SAY 8' x 265' = 2120 SF
- 235+15 TO 236+00 SAY 4' x 85' = 340 SF

Σ 8820 SF LANDSCAPE

MEDIAN LOCATION

- 208+00 TO 214+90 SAY 4' x 690' = 2760 SF
- 214+90 TO 216+70 SAY 8' x 180' = 1440 SF
- 216+70 TO 220+70 SAY 12' x 400' = 4800 SF
- 220+70 TO 229+20 SAY 12' x 700' = 8400 SF
- 230+10 TO 232+50 SAY 12' x 240' = 2880 SF
- 232+50 TO 235+15 SAY 8' x 265' = 2120 SF
- 235+15 TO 240+00 SAY 4' x 485' = 1940 SF

Σ = 21,340 SF TOTAL

21,340 SF - 8820 SF = 15,520 SF CONC

CONC ⇒ 15,520 SF → 1724.4 → 1725 SY

LANDSCAPE ⇒ 8820 SF → 980 SY

CLIENT	HALL CO / GDOT	MADE BY	CHECKED BY	PROJECT NO.
PROJECT	0009679	MSP		2515244
SUBJECT	RECOM, B-6.1	DATE	DATE	REVISION
	SPOUT SPRINGS RD VE RESPONSE	9/19/12		3

CONC SAVINGS WOULD BE:

$$1725 \text{ SY} \times \$35.22 / \text{SY} = \underline{\$60,755}$$

VE TEAM HAD \$111,154  
 $\Delta = 50,399$

LANDSCAPE SAVINGS

\$56.36 per LF based on 12' width  
 $\Rightarrow$  \$4.70 per LF based on 1' width  $\Rightarrow$  \$4.70 / SF  
 $\Rightarrow$  \$42.30 / SY

$$980 \text{ SY} \times \$42.30 / \text{SY} = \$41,454$$

VE TEAM HAD 0.  
 $\Delta = \$41,454$

VE ASSUMPTION 1 RETAINING WALLS WILL ALL BE REDUCED 3', THAT IS NOT THE CASE.

WALL #1 228420 RT TO 209780 RT (52' OFFSET 1/2)  
 WILL HAVE  $\approx$  1' REDUCTION  
 $100' \times 1' = 100 \text{ SF}$

210740 RT TO 212400 RT (52' OFFSET 1/2)  
 WILL HAVE  $\approx$  1' REDUCTION  
 $100' \times 1' = 100 \text{ SF}$

212180 RT TO 214100 RT (52' OFFSET 1/2)  
 NO REDUCTIONS, SEE XS.

WALL #1 TOTAL SAVINGS: 320 SF

CLIENT	HALL-Co / GDOT	MADE BY	CHECKED BY	PROJECT NO.	
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SPOUT SPRINGS RD VE RESPONSE		9/19/12			4

WALL #2 214+80 LT TO 216+80 LT (52 → 55' OFFSET)  
 REDUCTION VARIES 0-1'.  
 SAY 1/2', SEE XS.  
 (0.5') x 200' = 100 SF  
 AVG 1' WIDTH REDUCTION IN MEDIAN OVER THIS STA. RANGE ON LT SIDE

217+10 LT TO 219+90 LT  
 THIS SECTION IS ELIMINATED.  
 SAY 3' x 280' = 840 SF  
 AVG 6' WIDTH REDUCTION IN MEDIAN OVER THIS STA. RANGE ON LT. SIDE.

WALL #2 TOTAL SAVINGS: 940 SF

WALL #3 219+20 (RT) TO 220+20 (RT) 63' OFFSET 1/2  
 ELIMINATES THIS WALL  
 SAY 3' x 100' = 300 SF  
 AVG 6' WIDTH RED. ON RT SIDE.

WALL #4 230+50 (LT) TO 232+00 (L) 68' OFFSET 1/2  
 AVG 2' REDUCTION  
 SAY 2' x 210' = 420 SF  
 AVG 6' WIDTH RED. ON LT SIDE

WALL #5 235+80 (LT) TO 239+80 (LT)  
 AVG 6' WIDTH REDUCTION ON LT SIDE  
 NO REDUCTION IN WALL HT. SEE XS.

TOTAL WALL REDUCTIONS = 320 SF + 940 SF + 300 SF + 420 SF  
 = 1980 SF  
 x \$50/SF = \$99,000

VE TEAM HAS \$246,000  
 Δ = 147,000

CLIENT	HALL CO / GDOT	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	00091079	MSP		2515244	
SUBJECT	RECOM. B-6.1	DATE	DATE	REVISION	SHEET NO.
	SPOUT SPRINGS RD VE RESPONSE	9/19/12			5

ACTUAL VE SAVINGS SHOULD HAVE BEEN:

ROW \$ 760,603  
 CONC. MED \$ 60,455  
 LANDSCAPE MED \$ 41,454  
 RET. WALLS \$ 99,000

$\Sigma$  SAVINGS \$ 961,872

VE TEAM THEN SUBTRACTED COST FOR SIGNAL  
 \$ 125,000.

SIGNAL IS NOT WARRANTED, BUT IN THIS  
 COMPARISON, IT NEEDS TO BE INCLUDED

$961,872 - 125,000 = \$ 836,872$  SAY \$ 836,900

CLIENT	HALL Co / GDOT	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	0009679	MSP		2515244	
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CALCULATIONS FOR PARTIAL IMPLEMENTATION OF B-6.1 :

WILL IMPLEMENT PROPOSED MEDIAN NARROWING FROM 208100 TO 228100, CANNOT NARROW NORTH OF THAT POINT,

ROW: 208100 TO 214190 → 2,760 SF  
 214190 TO 216170 → 1,440 SF  
 216170 TO 228100 → 13,560 SF

17,760 SF

$17,760 \text{ SF} \times \$27,945 / \text{SF} = \$496,303.20 \rightarrow \underline{\$496,300}$

MEDIAN: 208100 TO 214190 → 2,760 SF  
 214190 TO 216170 → 1,440 SF  
 216170 TO 220170 → 4,200 SF  
 222120 TO 228100 → 6,960 SF

Σ 15,960 SF

LANDSCAPE: AREA 1 (1560 + 1440 + 960) = 3960 SF → 440 SY  
 $440 \times \$42.30 = \underline{\$18,612}$

CONC : 15,960 - 3960 = 12,000 SF → 1333.3 SY  
 $1333.33 \times \$35.22 = \underline{\$46,960}$

WALLS : #1 320 SF  
 #2 940 SF  
 #3 300 SF  
 #4 N/A  
 #5 N/A  
 Σ = 1560 SF × \$50/SF = \$78,000

TOTAL SAVINGS: \$496,300 + \$18,612 + \$46,960 + \$78,000 = 639,872  
 SAY \$639,900

CLIENT: HALL CO / 680T  
 PROJECT: 0009679  
 SUBJECT: RECOM. E-1

MADE BY: MSP 9/19/12 SHEET #7  
 PROJ #: 2515244

SPOUT SPRINGS RD VE RESPONSE

**EARTHWORK SUMMARIES**  
 Volumes in Cubic Yards

CONCEPT		Project Name		Spout Springs Road		Project P.I. Number		Project Number		0008879		2515244	
LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	CULVERT EMB.	EMBANK. +30%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	
Original Concept Mainline	270+50.00	322+00.00	47,744		0	47,744	110,521		143,677	95,933	0	0	
Rev Mainline due to VE	270+50.00	322+00.00	58,470		0	58,470	80,919		105,194	46,724	0	0	
<b>DIFFERENCE TOTAL PROPOSED</b>			-10,726	0	0	-10,726	29,602			49,209	0	0	
<b>GRAND TOTAL</b>			-10,726	0.00	0.00	-10,726				49,209		0	
<b>SUMMARY TOTAL</b>			-10,800				0		0	49,300	0	0	
<b>DIFFERENCE</b>		<b>SAY</b>	-10,800							49,300		0	
<b>UNIT PRICE</b>			\$5.23							\$4.00			
<b>NEW ESTIMATE</b>			-556,484.00							\$197,200.00			
<b>SAVINGS</b>										\$140,716.00			

CLIENT	HALL CO / GDOT	MADE BY	CHECKED BY	PROJECT NO.	
PROJECT	0009079	MSP		2515244	
SUBJECT	RECOM. E-1	DATE	DATE	REVISION	SHEET NO.
	SPRINT SPRINGS RD VE RESPONSE	9/19/12			8

E-1 VE TEAM SAVINGS \$399,900

PARTIAL IMPLEMENTATION -

LOWERING PROFILE  $\approx 3'$ , WHICH IS ABOUT HALF OF THE PROFILE  
GRADE DIFFERENCE RECOMMENDED BY VE TEAM.

ASSUME  $\frac{1}{2}$  SAVINGS IN ROW COST:

$$8,950 \text{ SF} \times \$7.72 = \$69,094$$

ASSUME 5% CULV. LENGTHENING REDUCTIONS:

$$(0.05) \times \$641,640 = \$32,082$$

EARTHWORK SAVINGS (SEE SHEET '7)  $\rightarrow$  \$140,716

$$\Sigma \text{ SAVINGS} = 241,892 \rightarrow \underline{\underline{\$241,900}}$$

PROJECT LOCATION MAP

CR 1287/SPOUT SPRINGS ROAD FROM APPROXIMATELY 700 FEET SOUTH OF THOMPSONS MILL RD TO HOG MOUNTAIN RD



