

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: CSHPP-0006-00(891) DeKalb County
P.I. No.: 0006891
Turner Hill Road Widening

OFFICE: Engineering Services

DATE: June 8, 2009

FROM: Ronald E. Wishon, Project Review Engineer *rlw*

TO: Mike Lobdell, PE, District 7 Preconstruction Engineer

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held February 23-27, 2009. Responses were received on June 4, 2009. 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.

ROADWAY				
ALT No.	Description	Savings PW & LCC	Implement	Comments
A-1	Reduce the lane widths from 12-feet to 11-feet from STA. 131+92 to 178+67.	\$126,000	No	Right of Way savings were overstated in the VE report because much of the ROW will be donated. Cost to redesign would negate the remainder of the savings. Time to redesign and apply for design variance would add several months to the design process.
A-2	Reduce the raised median from 24-foot grassed to 16-foot grassed.	\$161,000	No	The median is necessary to fulfill the requirements of the Access Management Plan. The ROW savings are overstated since much of the ROW will be donated. Cost to redesign would negate the remainder of the savings. Time to redesign and apply for design variance would add several months to the design process.

ROADWAY - Continued				
ALT No.	Description	Savings PW & LCC	Implement	Comments
A-3	Reduce the westside shoulder width from 16-feet to 12-feet and the eastside shoulder width from 22-feet to 12-feet.	\$1,120,000	No	Due to the close proximity of development, it will be difficult to maintain the required 16 foot clear zone if the shoulder width is reduced. Reducing the shoulder width would limit the space available for utilities, and not allow for the proposed multiuse trail. The ROW savings are overstated since much of the ROW will be donated. Cost to redesign would negate the remainder of the savings. Time to redesign and apply for design variance would add several months to the design process.
A-5	Eliminate the raised median and provide a four lane section, widening at the intersections for turn lanes.	\$1,030,000	No	Removing the median would increase the possibility of head on collisions. ADT is projected to be 23,700 in 2030. The median is necessary to fulfill the requirements of the Access Management Plan. The ROW savings are overstated since much of the ROW will be donated. Cost to redesign would negate the remainder of the savings. Time to redesign and apply for design variance would add several months to the design process.
A-6	Begin the project approximately 700 feet west of McDaniel Mill Road at STA. 112+00, thus reducing the project length by 775 feet.	\$189,000	No	Based on traffic counts, it would be possible to shorten the project, but as designed, the project will correct an existing substandard horizontal curve. In 2008 there were 9 accidents reported in the vicinity of the curve, and 8 to date in 2009.
B-1	Utilize 9 ½" of Recycled Asphalt on top of 10" GAB in lieu of 11 ½" RA and 12" GAB.	\$812,000	Yes	OMR will have the final approval of the pavement design, but DeKalb County will move forward with the suggested pavement design.

ROADWAY - Continued				
ALT No.	Description	Savings PW & LCC	Implement	Comments
E-2	Eliminate both the roadway and pedestrian lighting from the project.	Proposed = \$700,000 Actual = \$175,000	Yes	Lighting was one of the features shown during the public involvement process; therefore, it cannot be eliminated. DeKalb County will investigate if the lighting can be redesigned to increase the spacing and reduce the number of lights. It is estimated that ¼ of the lighting may be eliminated, but final lighting spacing will be determined by a GDOT approved photometric analysis.
G-2	Delay the project until after the proposed development is constructed in order to reduce impacts to wetlands.	\$424,100	No	The proposed development is nearly complete. The wetland area in question was created as a mitigation site by the development. The proposed road improvements were designed to avoid the wetland. Delaying the project will have no positive outcome since the project has been designed to avoid this area.
I-1	Reduce the proposed 10-foot wide concrete multiuse path to a 5-foot sidewalk.	\$117,000	No	The proposed multiuse path ties to an existing trail near the mall. This project was shown to the public as part of a pedestrian friendly corridor.
I-3	Utilize a 4-inch asphaltic concrete section in lieu of the 4 inch Portland cement concrete section for the multiuse path.	\$123,000	No	GAB under the asphalt and maintenance of the path were not included in the VE Study report. This would add a cost of \$67,000 reducing the savings to \$56,000. The existing paths at either end of this proposed multiuse path are concrete.

ROADWAY - Continued				
ALT No.	Description	Savings PW & LCC	Implement	Comments
J-1	Eliminate the proposed traffic signal at Turner Hill Road/Star Magnolia Drive.	\$106,000	No	The development is anticipated to be complete before this proposed project begins. If the development installed the signal now, it would require adjustment during the project. The signal will be installed as part of this project.

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

Approved:  Date: 6/9/09
Gerald M. Ross, P.E., Chief Engineer

REW/DMF/LLM

Attachments

c: Genetha Rice-Singleton
Mike Lobdell
Melvin Waldrop
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VE Team: Albert Shelby
Jill Franks
Nicoe Alexander
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DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: CSSTP-0006-00(891), DeKalb County
P.I. No.0006891
Turner Hill/Rockland Road Widening

OFFICE: District 7

DATE: May 28, 2009

FROM: Mike Lobdell, PE, District Preconstruction Engineer

TO: Ronald E. Wishon, Acting Project Review Engineer

SUBJECT: **Value Engineering Study-Responses**

Reference is made to the recommendations that were contained in the Value Engineering Mod 1 Training Report dated March 11, 2009 for the above referenced project.

This project consists of widening Turner Hill Road from just south of the Hayden Quarry Road intersection to 1500 ft west of the McDaniel Mill Road intersection, a distance of 1.10 miles. Rockland Road and McDaniel Mill Road will be realigned at their intersections to provide a ninety degree intersection angle and the horizontal and vertical alignments will be designed to meet the 35 mph design speed.

The proposed project will provide 2-12 ft lanes in each direction separated by a 24 ft raised, grassed median and include sidewalks, drainage, lighting and landscaping. This corridor serves as an important north-south connection in this part of DeKalb County with the tremendous amount of residential growth, this area will experience high pedestrian volumes.

Our responses and recommendations to the VE Recommendations are as follows:

<i>VE Recommendation No. & Description w/ Projected Initial Cost Savings</i>		<i>Recommendation Response</i>	<i>Comments</i>
<i>Idea No.</i>			
A-1	Reduce lane width \$126,000	Approval Not Recommended	<ul style="list-style-type: none"> • This project has a significant amount of development planned and thus the ROW savings have been overstated because much of the ROW required will be donated. Only savings to materials would be seen here. • In addition, the plans are ready for PFPR pending environmental approval so the cost and time to redesign the project would cause significant delays to the overall schedule of the project. The cost of redesign would be approximately \$50,000 which would reduce the overall savings. A design variance would be required prior to making any changes to the plans. Approval of a design variance would be questionable because the only legitimate reason for the variance would be project cost which is not typically a reason that is considered. It would take approximately 1 month for preparation and approval of the design variance followed by approximately 2-3 months for the redesign.
A-2	Reduce median width \$161,000	Approval Not Recommended	<ul style="list-style-type: none"> • An Access Management Plan is required by ARC for this project. The median is necessary in order to accomplish the goals of the Access Management Plan including encouraging inter-parcel access and limiting the number of access points. • This project has a significant amount of development planned and thus the ROW savings have been overstated because approximately 50% of the ROW required will be donated. This would reduce the anticipated savings by \$62,000. • The cost of re-design of the construction plans would be approximately \$50,000 further reducing the anticipated savings. • Approximately 2-3 months of delay for redesign is anticipated and as previously mentioned this project is ready for PFPR pending FHWA approval of the EA. • The proposed median is much more desirable from a safety and sight distance perspective. • A design variance would be required for a 16' median which would further delay the project. Approval of a design variance would be questionable because the only legitimate reason for the variance would be project cost which is not typically a reason that is considered.

<i>VE Recommendation No. & Description w/ Projected Initial Cost Savings</i>		<i>Recommendation Response</i>	<i>Comments</i>
A-3	Reduce shoulder width \$1,120,000	Approval Not Recommended	<ul style="list-style-type: none"> • According to the Road Side Design Guide, based on the traffic volumes on this roadway, the clear zone needs to be 16'. Due to the close proximity to development, it will be difficult to maintain this clear zone without the additional shoulder width. • This project has a significant amount of development planned and thus the ROW savings have been overstated because approximately 50% of the ROW required will be donated. This would reduce the anticipated savings by \$527,500. • In addition, this was shown to the public as a pedestrian friendly corridor with it tying to proposed trails on the south end and eventually tying into an existing trail at the mall. DeKalb County is trying to provide alternate means of transportation to get to the developments and business in the area. Reducing the shoulder will not leave room for the proposed trail. • The landscaping and lighting were shown to the public as a feature of this project. Reducing the shoulder will eliminate the space for these features to be included in the project. • Reducing the shoulder width would reduce the room available for utilities. • The cost of redesign would be approximately \$15,000.
A-5	Eliminate Median \$1,030,000	Approval Not Recommended	<ul style="list-style-type: none"> • This road serves as a north-south connection for DeKalb and traffic volumes are projected to be 23,700 in 2030. The GDOT Design Policy Manual calls for a 5 lane section minimum, requiring design to incorporate a future 20 ft median (24 ft preferable) if the design year traffic is 24,000 ADT which is just barely above our design year ADT. DeKalb County feels that removing the median and having a four lane section would produce a safety issue increasing threat for head on collisions. • Early on in the conceptual phase the median was removed to reduce costs and impacts on the southern end but the County feels this isn't feasible for the remainder of the project. • An Access Management Plan is required by ARC for this project. The median is necessary in order to accomplish the goals of the Access Management Plan including encouraging interparcel access and limiting the number of access points. • Approximately 50% of the required right of way for this project will be donated reducing the anticipated savings by approximately \$186,000. • The cost of redesign would be approximately \$50,000 and would result in a delay of 2-3 months.

<i>VE Recommendation No. & Description w/ Projected Initial Cost Savings</i>	<i>Recommendation Response</i>	<i>Comments</i>
A-6 Shorten Length of Project \$189,000	Approval Not Recommended	<ul style="list-style-type: none"> Based on the traffic study, the project could terminate at the location proposed by the VE team, but the County requests that the project terminus remain as shown in order to correct an existing substandard horizontal curve. In 2008 there were 9 accidents reported and in 2009 there were 8 accidents reported in the vicinity of this curve. Correcting the horizontal curve issue could help to eliminate future accidents.
B-1 Minimize Pavement Structure \$812,000	Approval Recommended	<ul style="list-style-type: none"> OMR will have the final approval of the pavement design but DeKalb County will move forward with suggested pavement structure.
E-2 Eliminate Lighting \$700,000	Approval Partially Recommended	<ul style="list-style-type: none"> Lighting was one of the features shown during the public involvement process. DeKalb County is committed to encouraging alternative modes of transportation, including pedestrian modes. Lighting of the corridor will provide a more inviting corridor for the pedestrian traffic and is therefore a valuable component for meeting the goals of the project. DeKalb County will investigate if the lighting can be redesigned to increase the spacing and thus reduce the amount of lights.
G-2 Delay Project \$424,100	Approval Not Recommended	<ul style="list-style-type: none"> The proposed development is nearly complete. The wetland area in question was created as a mitigation site by the development and will not be removed at the end of construction. The proposed road improvements in this area were redesigned to avoid impacts to this wetland through the use of walls. Since we need to avoid the wetlands, delaying the project will have no positive impact on costs.
I-1 Eliminate Multi-Use Path \$117,000	Approval Not Recommended	<ul style="list-style-type: none"> The multi-use trail proposed on this project ties to an existing trail near the mall and a proposed trail near Rockland. Reducing this section to a 5' sidewalk would cause the overall trail path not to be uniform. In addition, this was shown to the public as a pedestrian friendly corridor with it tying to proposed trails on the south end and eventually tying into an existing trail at the mall. DeKalb County is trying to provide alternate means of transportation to get to the developments and business in the area. Eliminating the path would leave a "hole" in the overall trail system that DeKalb County has established. The proposed change would result in a redesign cost of approximately \$8,000.

<i>VE Recommendation No. & Description w/ Projected Initial Cost Savings</i>	<i>Recommendation Response</i>	<i>Comments</i>
I-3 Utilize asphalt on Multi-Use Path \$123,000	Approval Not Recommended	<ul style="list-style-type: none"> • GAB would be required under the 9.5 mm and wasn't included in the cost savings estimate. Assuming 4" GAB, the cost of GAB would be approximately \$33,000, reducing the calculated savings to \$90,000. • The maintenance costs for having asphalt versus concrete on the trails is higher. We expect that the asphalt trail would need to be resurfaced 1 additional time per life cycle. This maintenance cost would be approximately \$34,000 reducing the savings to \$56,000. • The existing trail at Stonecrest Mall is concrete and the trail proposed to tie into the southern end of the project is concrete as well.
J-1 Eliminate Signal at Star Magnolia Drive \$106,000	Approval Not Recommended	<ul style="list-style-type: none"> • The development is anticipated to be complete before our project will be let to construction. As a part of the DRI, they were not required to put in a signal, thus it will need to be put in as a part of our project. • If the proposed development installed the signal prior to our project, the entire signal would have to be reconstructed when the road is widened.

-End of Responses-

