

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: STP-8042(9) Muscogee
P.I. No. 351190
I-185 @ Buena Vista Road

OFFICE: Engineering Services

DATE: July 24, 2006

FROM: Brian K. Summers, PE, Project Review Engineer *REW*

TO: Ben Buchan, PE, State Urban Design Engineer

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

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

| ALT # | Description | Potential Savings/LCC | Implement | Comments |
|-------|--|----------------------------|-----------|---|
| 1 | Eliminate proposed acceleration lane from southbound Rosewood Drive to westbound Buena Vista Road | \$167,550 | No | This "lane" is actually the additional pavement for U-Turns at Median Openings. Appropriate striping should be used at this location. |
| 2 | Add a left turn lane at the Linden Circle intersection with Buena Vista Road | -\$6,684 Cost Increase | Yes | This will be done. |
| 3 | Begin the three-lane section of Buena Vista Road westbound at the main entrance to the shopping center | -\$74,649 Cost Increase | No | The Traffic Study indicated that a right turn lane is needed for the Shopping Center. |

| ALT # | Description | Potential Savings/LCC | Implement | Comments |
|-------|--|-------------------------------|-----------|---|
| 7 | Extend proposed project limits along Buena Vista Road to Floyd Road | Design Suggestion | No | These improvements should be covered under a separate project. |
| 8 | Increase project limits eastward to the Hunt Avenue/Wright Drive intersection | -\$2,475,498 Cost Increase | No | These improvements should be covered under a separate project. |
| 9 | Shift the I-185 southbound exit to use more of the existing ramp | \$87,462 | No | Since the ramps are going from Asphalt to Concrete there is no added benefit do making this change. |
| 10 | Eliminate the parallel northbound I-185 exit ramp to Buena Vista Road | \$1,031,642 | No | Because of the decision sight distance at the gore area the decision was made to use a parallel ramp scenario. |
| 11 | Improve the existing shoulder for northbound I-185 exit ramp to Buena Vista Road | \$856,717 | No | Additional studies would be required to verify that sight distance could be achieved; however, this would not satisfy the decision to use a parallel ramp scenario. |
| 12 | Reconfigure the northbound I-185 on ramp to eliminate the Bull Creek Bridge widening | \$716,252 | No | In order to meet the AASHTO ramp taper length, the bridge would still need to be widened with a tapered or parallel ramp scenario. |
| 13 | Reduce the width of the Buena Vista Road Bridge over I-185 | \$315,994 | No | This cuts down on the overall capacity of the interchange. |

| ALT # | Description | Potential Savings/LCC | Implement | Comments |
|-------|---|-----------------------|-----------|---|
| 16A | Eliminate the third through lane up to Buena Vista Road and I-185 | \$927,054 | No | This cuts down on the overall capacity along Buena Vista Road. |
| 16B | Eliminate the free right-turn Buena Vista Road lane eastbound to I-185 | \$794,961 | No | This cuts down on the overall capacity along Buena Vista Road. |
| 22 | Cul-de-sac Pembroke Drive to eliminate relocations | \$619,073 | No | Would result in commercial traffic going through residential subdivisions. |
| 23 | Close the Fairfield Drive intersection with Buena Vista Road | \$8,984 | Yes | This will be done. |
| 25 | Eliminate the right lane (deceleration lane) from westbound Buena Vista Road to Brighton Road | \$84,827 | No | Does not meet current policy which states to include right turn/decel lanes on the mainline at all major side roads and traffic generators. |

A meeting was held on July 21, 2006 to discuss the above recommendations. David Painter of FHWA, Neal O'Brien of Urban Design, and Brian Summers and Ron Wishon of Engineering Services were in attendance.

The results above reflect the consensus of those in attendance and those who provided input.

Approved:  Date: 7/29/06
 David E. Studstill, Jr., P. E., Chief Engineer

Approved:  Date: 8/16/06
 For: Robert Callan, P. E., FHWA Division Administrator

STP-8042(9) Muscogee

P.I. No. 351190

Implementation of Value Engineering Study Alternatives

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BKS/REW

Attachments

c: Gus Shanine, FHWA
David Painter, FHWA
Lamar Pruitt
Neil O'Brien
Mark Mastronardi
Steve Gaston
Bill Ingalsbe
Jennifer Mathis
Ron Hardy
Lisa Myers

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE



FILE STP-8042(9), Muscogee County OFFICE Urban Design
P.I. No. 351190-
I-185@ Buena Vista Road - Interchange Reconstruction DATE June 21, 2006
James B. Buchan
FROM James B. Buchan, P.E., State Urban Design Engineer
TO Brain Summers, P.E., State Review Engineer
SUBJECT Value Engineering Study Report Response

This office has received and reviewed the Value Engineering Study Final Report dated October 5, 2005. The study has developed fifteen alternatives. The following are the alternatives with Urban Design's recommendations for each.

ALT. 1.0 - Eliminate proposed acceleration lane from southbound Rosewood Drive to westbound Buena Vista Road. This alternative incorrectly refers to the additional pavement as an acceleration lane. The additional pavement is needed for the motorist to access westbound Buena Vista Road by completing a U-turn at Dogwood Drive/Rosewood Drive intersection. This alternative is not recommended as part of this project.

ALT. 2.0 - Add a left-turn lane at the Linden Circle intersection with Buena Vista Road. This alternative cannot be supported by the traffic study. The traffic study did not recommend a left-turn lane at this location due to minimal existing and forecasted left-turns from Linden Circle to Buena Vista Road. This alternative is not recommended as part of this project.

ALT. 3.0- Begin the three-lane section of Buena Vista Road westbound at the main entrance to the shopping center. This alternative cannot be supported by the traffic study. The traffic study recommended a 150' right-turn lane into the shopping center. No additional right of way will be needed for the right-turn lane as shown on the concept layout. We may want to stripe out the lane just west of the mall entrance in order to make this lane for the shopping center only. This alternative is not recommended as part of this project.

ALT. 7.0 - Extend proposed project limits along Buena Vista Road to Floyd Road. Although these improvements may be desirable, they do not fit within the scope of this project, which is for interchange improvements. Extending the limits to Floyd Road would make this an arterial widening project instead of an interchange reconstruction. The project limits would need to be extended on the west side also to meet logical termini requirements. We recommend that these improvements be made part of a separate project. This alternative is not recommended as part of this project.

ALT. 8.0 - Increase project limits eastward to the Hunt Avenue/Wright Drive intersection. Although these improvements may be desirable, they do not fit within the scope of this project, which is for interchange improvements. Revising this project from an interchange to an arterial widening would require extension of this project further to the east past Hunt Avenue/Wright Drive, to meet logical termini requirements. It would also require extending the project to the west to satisfy logical termini requirements. We recommend that these improvements be made part of a separate project. This alternative is not recommended as part of this project.

ALT. 9.0 - Shift the I-185 southbound exit to use more of the existing ramp. The existing ramp is asphalt or asphalt overlay. The proposed ramp would be concrete construction. Therefore, the existing ramp could not be saved. Furthermore, the alignment shift will facilitate staging of traffic. The Orkin parcel currently has access through joint use with Brooke's Floral Shop. The access rights along Brooke's Floral Shop will be acquired to get the minimum 300 foot limited access requirement from the interchange ramp. To provide access to Orkin would require acquisition from another parcel. This alternative is not recommended as part of this project.

ALT. 10.0 - Eliminate the parallel northbound I-185 exit ramp to Buena Vista Road. Because of decision sight distance at the ramp gore the decision was made to use parallel ramps. The parallel ramps extended beyond the non-access bridge and there was inadequate width under the bridge to provide for shoulders. The decision was made to extend the ramp between the intermediate bent and the end bent to eliminate replacing the bridge and also provide for the parallel ramp. This decision received concurrence from FHWA. This alternative is not recommended as part of this project.

ALT. 11 - Improve the shoulder for northbound I-185 exit ramp to Buena Vista Road. This alternative would require additional studies to verify that decision sight distance can be achieved through shoulder improvements. The existing profile and shoulder elevations would need to be surveyed. It is our opinion that this would not satisfy FHWA's express desire for a parallel ramp exit. This alternative is not recommended as part of this project.

ALT. 12.0 - Reconfigure the northbound I-185 on ramp to eliminate the Bull Creek bridge widening. Due to the close proximity between the ramp and the bridge, eliminating the bridge widening is not possible using current tapered or parallel entrance ramp standards. The entrance ramp and freeway are in a curve and the decision was made to use the parallel ramp. This decision received concurrence from FHWA. This alternative is not recommended.

ALT. 13.0 - Reduce the width of the Buena Vista Road bridge over I-185. This alternative includes the elimination of one of the EB through lanes. Traffic studies show that Buena Vista Road would experience unacceptable levels of service in the design year without the third through lane, which would also negatively impact I-185. This alternative is not recommended as part of this project.

ALT. 16.0A - Eliminate third through lane up to Buena Vista Road and I-185. This alternative also includes elimination of one of the EB through lanes. Traffic studies show that unacceptable levels of service would result on Buena Vista Road. One of the advantages listed as part of this alternative was to avoid the displacement of the Chevron

business. It is probable that this business would require relocation even if the alternative was accepted, due to the loss of access along Buena Vista Road. This alternative is not recommended as part of this project.

ALT. 16.0B - Eliminate free right-turn Buena Vista Road lane eastbound to southbound I-185. The proposed right-turn lane is a yield condition, which would result in a safer situation along Buena Vista Road by separating decelerating vehicles from through traffic. Furthermore, combining the right-turn lane with the outside through lane would have a negative impact on the level of service for the through movement. Chevron will have its access acquired as part of this project requiring relocation. This alternative is not recommended as part of this project.

ALT. 22.0 - Cul-de-sac Pembroke Drive to eliminate relocations. The anticipated relocations along Buena Vista Road are due to the proposed widening. Pembroke Drive was left open as a right-in/ right-out intersection because it provided access from westbound Buena Vista Road to the dense residential area north of Buena Vista Road. Eliminating the right-in/right-out access would send commercial traffic, including trucks that need to access the storage business, through residential subdivisions. This alternative is not recommended as part of this project.

ALT. 23.0 - Close the Fairfield Drive intersection with Buena Vista Road. There is currently a commercial property along Fairfield Drive that would access there site from the proposed right-in/ right-out intersection with Buena Vista Road. Allowing possible truck traffic to access the commercial site from this intersection would avoid having to divert them to the Brighton Road intersection, which currently serves residential properties. This alternative is not recommended as part of this project.

ALT. 25.0 - Eliminate the right lane (deceleration lane) from westbound Buena Vista Road to Brighton Road. Current Department policy is to provide a right-turn lane to all public side roads wherever feasible. The proposed deceleration lane is also expected to increase safety along Buena Vista Road. This alternative is not recommended as part of this project.

If you have any additional questions or comments, please contact Neal O'Brien at (404) 656-5442.

JBB:^{WNS}WNO

cc: Buddy Gratton
Paul Liles
Taylor Wright, PBS&J

Wishon, Ron

From: Myers, Lisa
Sent: Monday, December 05, 2005 6:41 AM
To: Wishon, Ron
Subject: FW: STP-8042(9) VE Study comments.

Sorry - I should have sent these to you last week.

Lisa Myers
Design Review Engineer Manager/VE Coordinator

GA DOT - Engineering Services
2 Capitol Square Room 266
Atlanta, GA 30334

404-651-7468

-----Original Message-----

From: Painter, David [mailto:David.Painter@fhwa.dot.gov]
Sent: Thursday, December 01, 2005 12:29 PM
To: Myers, Lisa
Cc: Shanine, Gus
Subject: STP-8042(9) VE Study comments.

Comments VE study for STP-8042(9) interchange reconstruction at I-185 and Buena Vista (BV) Road.

General comments

1. Several of the alternatives required additional ROW. The markup used in calculating the cost of this ROW was 247.2%. How was this markup figure determined?
2. I do not support eliminating left/right turn bays on BV road. Usually such elimination will increase congestion and reduce capacity.

Specific comments

1. Alt 1 - I don't recommend adopting this alternative. It decreases the capacity of BV road. It saves a minimal amount of money.
2. Alt 2 - A sketch of original design and alternative design was not provided to better explain the proposal. Without this sketch the confusing explanation in which the original design is described as having left turn, right turn and through lanes and the alternative design is described as adding a left turn lane to the right and through lanes - makes this alternative impossible to evaluate. In principle, I support the idea of providing dedicated lanes for left turners. I recommend further evaluation of this alternative.
3. Alt 3 - A sketch of original design and alternative design was not provided to better explain the proposal. Based on the explanation provided I cannot determine if the right turn lane is being converted to a through lane or eliminated. In either case I don't understand the added cost for additional pavement. I do not recommend adopting this alternative, because it is not possible to evaluate in its current form.
4. Alt 7 & 8 - A sketch or plan view of original design and alternative design was not provided to better explain the proposals. I don't recommend adopting these alternatives. The VE team mentions obtaining additional funding from various funding sources. How much is this funding and what are its sources? The alternative description states that Alt 8 is similar to Alt 2. I did not understand this similarity. I do not support eliminating deceleration/acceleration lanes without much better documentation than is provided in this document. In principle, I support the idea of extending the project limits to improve congestion and eliminate a bottleneck that produces accidents and the additional cost to do this seems minimal, but this document does not provide sufficient

information to evaluate this idea.

5. Alt 9 - I don't recommend adopting this alternative. Providing inferior geometry to save a minimal amount of money is usually not a good idea.

6. Alt 10 & 11 - A sketch or plan view of original design and alternative design was not provided to better explain the alternatives. I don't recommend adopting these alternatives. While they save a significant amount of money they reduce the sight distance to the ramp gore, which is key to safe operation of the ramp. On Alt 10 I am unsure how improving the shoulder between the overpass bridge and BV road will enhance sight distance. The overpass bridge is the primary obstacle to that sight distance and no amount of shoulder improvement will change this fact.

7. Alt 12 - A sketch or plan view of original design and alternative design was not provided to better explain the proposals. I do not recommend adopting this alternative. I did not understand the explanation of the alternative.

8. Alt 13 - The confusing explanation in which the original design is described as having five lanes (3 thru and 2 turn) and the alternative design is described as adding four lanes (3 thru and 2 turn) - makes this alternative more difficult to evaluate. A sketch was provided that clears up the confusion. In principle, I support the idea of providing lanes where traffic loading requires them and not providing them where it does not. Adding a new lane to handle the influx of right turning traffic would line up capacity where it is needed. No actual traffic data was provided to support this alternative, but I recommend further evaluation of it.

9. Alt 16A&B - I don't recommend adopting these alternatives. Insufficient information is provided to evaluate the effects of reducing the roadway from 3 to 2 lanes. Where is the data to backup the claim that demographics do not appear to support a third through lane? See general comment 2 for my take on 16B. Also how would this alternative effect FHWA required limits of access control?

10. Alt 22 - A sketch or plan view of original design and alternative design was not provided to better explain the proposal. In principle, I support the idea of reducing access to BV road. I recommend further evaluation of this alternative.

11. Alt 23 - A sketch or plan view of original design and alternative design was not provided to better explain the proposal. In principle, I support the idea of reducing access to BV road. I recommend further evaluation of this alternative.

12. Alt 25 - I don't recommend adopting this alternative. It decreases the capacity of BV road. It saves a minimal amount of money.

David Painter
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FHWA, GA Division
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