

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: Greene & Putnam Counties **OFFICE:** Engineering Services
 CSSTP-0006-00(252) & (253)
 P.I. No.: 0006252 & 0006253
 SR44 from US 441 to I-20 **DATE:** May 20, 2013

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

TO: Genetha Rice-Singleton, State Program Delivery Engineer

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The Value Engineering Study for the above projects was held on December 3 - 6, 2012. Responses were received on May 20, 2013. Recommendations for implementation of VE 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 these projects. 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
CSSTP-0006-00(252) PI No.0006252				
B2-1	Lower the profile of SR 44 over Rooty Creek by approximately 3 feet.	\$62,400	No	The Design team is in the preliminary design phase of the project. While establishing the profile grade all aspects of the design of this bridge will be considered including, but not limited to hydraulic clearance and roadway geometrics. The GDOT Office of Bridge Design concurs that lowering the profile 3 feet is not acceptable at this time.
B2-2	Lower the profile of SR 44 over Crooked Creek by approximately 2.5 feet.	\$52,000	No	The Design team is in the preliminary design phase of the project. While establishing the profile grade all aspects of the design of this bridge will be considered including, but not limited to hydraulic clearance and roadway geometrics. The GDOT Office of Bridge Design concurs that lowering the profile 2.5 feet is not acceptable at this time.

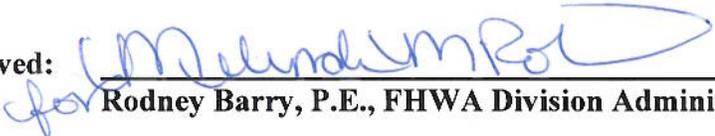
B2-5	Construct a parallel pre-stress beam bridge without connecting to the existing bridge at SR 44 over Lick Creek by leaving an open joint in the median to allow separation of the two structures.	\$38,000	No	The 90 feet long center span would require a 54" pre-stress beam. The existing steel beam is only 36" deep, which would result in a lowering of the beam by 18". The existing bridge barely provides hydraulic clearance (8ft) for this lake crossing so lowering the bottom of the beam 18" would reduce this to 6.5 ft. In addition, the GDOT Drainage Manual suggests, "the minimum grade should not reduce the freeboard from existing conditions."
B2-6	Eliminate the overlay of the existing bridge deck for SR44 over Lick Creek.	\$80,739	No	The existing pavement on either side of the current bridge will not be retained and will be reconstructed in reverse crown. It is intended to correct the cross slope to achieve uniformity in the roadway design. If normal crown were to be retained, additional median drainage structures would be required in the area of the transitioning roadway to capture the water that would drain to the median. With the existing deck thickness of 7.5", adding deck drains in this area may not be possible without removing a section of the deck to increase the thickness which would negate the reported savings. In addition, the existing crown point is not located at a proposed lane line which would force traffic to straddle the crown.
B2-7	Construct a parallel pre-stress beam bridge instead of widening the existing steel plate girder bridge "in kind" at SR 44 over the Oconee River.	\$56,780	No	The 180 feet long center span would require an 84" pre-stress beam. The existing plate girder is 6'-2" deep, which would result in a lowering of the beam by 10". The existing bridge provides a hydraulic clearance of 8ft for this lake crossing so lowering the bottom of the beam. In addition, the GDOT Drainage Manual suggests, "the minimum grade should not reduce the freeboard from existing conditions."
R2-1	Reduce all travel lanes for the rural sections from 12' to 11'.	\$784,168	No	R2-1.1 was chosen as the preferred alternative to be implemented.
R2-1.1	For rural sections use 11' wide inside lanes and 12' outside lanes.	\$392,084	Yes	This will be done.

R2-2	For urban sections use a 16' wide raised median in lieu of a 20' raised median.	\$222,697	Yes	This will be implemented, but will require a design variance.
R2-4	For 2-lane side street sections use 11' lane widths in lieu of 12 feet wide lanes.	\$64,914	Yes	This will be done.
R2-5	Eliminate 2' paved shoulders on the rural 2-lane side street sections.	\$138,756	Yes	This will be done.
R2-7	Retain existing pavement and overlay the approximate locations from Sta. 332+00 to 359+00 and from Sta. 485+00 to 734+00.	\$2,729,088	No	The feasibility of implementing this idea cannot be determined until the pavement evaluation is completed so concurrence from the Office of Materials could not be obtained. However, this option will be revisited if the evaluation shows that the existing pavement can be kept.
R2-8	Reduce the shoulder widths on the rural side streets from 10' to 8' wide.	\$1,454	Yes	This will be done.
R2-9	Reduce the shoulder widths on the urban side streets from 12' to 10' wide.	\$449	Yes	This will be done.
R2-10	Reduce the required Right of Way width from 200' to 140' and use permanent easement beyond the Right of Way.	\$394,000	Yes	This will be done.
R2-11	Revise the vertical profile from Sta. 115+00 to 234+00 to reduce the volume of earthwork.	\$385,135	No	The Design team is in the preliminary design phase of the project. While establishing the profile grade all aspects of the design of this road will be considered including, but not limited to hydraulic clearance and roadway geometrics. Therefore, lowering the profile 3 feet is not acceptable at this time.
R2-12	Revise horizontal alignment from Sta. 393+00 to 490+00 to closer match existing alignment and avoid two (2) right of way displacements on the west side of SR 44 near Sta. 401+00 & 414+00.	\$117,000	Yes	This will be done.
R2-16	Revise the vertical profile from Sta. 297+00 to 370+00 to reduce the volume of earthwork.	\$210,533	No	The Design team is in the preliminary design phase of the project. While establishing the profile grade all aspects of the design of this road will be considered including, but not limited to hydraulic clearance and roadway geometrics. Therefore, lowering the profile 2.5 feet is not acceptable at this time.

CSSTP-0006-00(253) PI No.0006253				
B3-4	Maintain existing bridge baseline for the bridge over I-20, eliminate overlay, and widen only to one side.	\$166,243	No	This proposal will adversely impact vertical clearance and will also require extensive revisions to the current preliminary bridge layout.
B3-4.1	Maintain the original design construction centerline on the SR 44 bridge spanning over I-20, widen it symmetrically, but reduce the amount of overlay by warping the center of the raised median.	Proposed = \$224,180 Actual = \$200,160	Yes, with revisions	The Design team agrees to move the PGL to the left and widen the bridge symmetrically. Instead of warping the median it will be rotated as shown maintaining 6" curb on both faces because the rotated median is cheaper and easier to form (see the Typical Section).
R3-1	Reduce all travel lanes for the rural sections from 12' to 11'.	\$763,434	No	R3-1.1 was chosen as the preferred alternative to be implemented.
R3-1.1	For rural sections use 11' wide inside lanes and 12' outside lanes.	\$381,717	Yes	This will be done.
R3-2	For urban sections use a 16' wide raised median in lieu of a 20' raised median.	\$33,072	Yes	This will be implemented, but will require a design variance.
R3-4	For side street sections use 11' maximum lane widths in lieu of 12' maximum.	\$7,571	Yes	This will be done.
R3-5	Eliminate 2' paved shoulders on rural side street sections.	\$11,149	Yes	This will be done.
R3-7	Retain existing pavement and overlay the approximate locations from Sta. 900+00 to 966+00 from 974+00 to 982+00 from 1155+00 to 1183+00 and from 1186+00 to 1191+00.	\$860,160	No	The feasibility of implementing this idea cannot be determined until the pavement evaluation is completed so concurrence from the Office of Materials could not be obtained. However, this option will be revisited if the evaluation shows that the existing pavement can be kept.
R3-8	Revise SR 44 the horizontal alignment approximately from Sta. 1075+00 to 1145+00 to match the existing and avoid the displacement on parcel 34 at Sta. 1135+00.	\$1,125,480	No	The existing roadway alignment contains undesirable horizontal curves based on the proposed speed design and the intent of this project is to improve the current geometry. This alternative precludes this and will impact a historical property.
R3-9	Revise SR 44 the horizontal alignment approximately from Sta. 830+00 to 845+00 to match the existing and avoid the displacement on parcel 55 at the intersection of Lake County Drive.	\$250,000	No	The existing roadway alignment contains undesirable horizontal curves based on the proposed speed design and the intent of this project is to improve the current geometry. This alternative precludes this and will impact a major transmission line.

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

Approved:  Date: 5/30/13
Russell McMurry, P.E., Chief Engineer

Approved:  Date: 6/10/13
Rodney Barry, P.E., FHWA Division Administrator

LLM/RLR/MJS

Attachments

c: Melinda Roberson/Kendra Fly - FHWA
Joe Carpenter/Paul Liles
Genetha Rice-Singleton/Hiral Patel/George Brewer
Ben Rabun/Bill Duvall
Marc Mastronardi
Keisha Jackson
Bryan Gibbs/Corbett Reynolds
Ken Werho
Matt Sanders

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE CSSTP-0006-00(252) & (253) Putnam/Greene Counties OFFICE Program Delivery
P.I. No. 0006252 & 0006253
Widening of SR 44 from US 441 to I-20 DATE May 20, 2013

FROM *GMB* Genetha Rice-Singleton, State Program Delivery Engineer

TO Lisa Myers, State Project Review Engineer

SUBJECT Value Engineering Report Responses

Please find attached responses to the Value Engineering Report for the above noted project.

If there are any questions please contact George Brewer at (478)538-8604.

GRS:HPP:GMB



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1780 Corporate Dr. NW
Suite 400
Norcross, GA 30093
Tel 770.931.8005
Fax 770.931.8555

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CSSTP-0006-00(252), (253) Greene/Putnam Counties
SR 44 from US 441 to I-20
PI# 0006252, 0006253

B2-1 Lower Profile of SR 44 over Rooty Creek by approximately 3 ft.

VE Team Savings \$62,400

No, will not implement. We are currently in the preliminary design phase of the project. While establishing the profile grade we will be considering all aspects of the design including, but not limited to, hydraulic clearance and roadway geometrics. We cannot definitively say that a 3 ft decrease in profile is acceptable at this time.

B2-2 Lower Profile of SR 44 over Crooked Creek by approximately 2.5 ft.

VE Team Savings \$52,000

No, will not implement. We are currently in the preliminary design phase of the project. While establishing the profile grade we will be considering all aspects of the design including, but not limited to, hydraulic clearance and roadway geometrics. We cannot definitively say that a 2.5 ft decrease in profile is acceptable at this time.

B2-5 Build Parallel Prestress Beam Bridge Without Connecting to Existing Bridge at SR 44 over Lick Creek.

VE Team Savings \$38,000

No, will not implement. The 90 ft long center span will require a 54" pre-stressed beam. The existing steel beam is 36" deep, resulting in a lowering of the bottom of beam by approximately 18". The existing bridge barely provides required hydraulic clearance for this lake crossing (8 ft) so a lowering of 18" would reduce this to approximately 6.5 ft. In addition, the Drainage manual (14.1.1.5c) states, "The minimum grade should not reduce the freeboard from the existing conditions...." This is an issue of boater expectancy where a boat that passes safely under the existing bridge may not under the new widened portion. This issue could be addressed by jacking the existing bridge, which would add approximately \$75,000 to the bridge cost plus the additional costs associated with the higher roadway section negates the savings of \$38,000.

B2-6 Eliminate the Overlay on the Existing Bridge for SR 44 over Lick Creek.

VE Team Savings \$80,739

No, will not implement. The existing pavement on either side of the existing bridge will not be retained and therefore will be reconstructed in reverse crown. It is our preference to correct the cross slope on the existing bridge to achieve uniformity of the design. If normal crown on the existing bridge were to be retained, additional median drainage structure(s) would be required in the area of the transitioning roadway to capture the water that would then drain to the median. With the existing deck thickness of 7.5", adding deck drains in this area may not even be possible

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without removing a section of the deck in order to increase the thickness. This would offset the reported savings. In addition, the existing crown point is not located at a proposed lane line. As a result, retaining the existing crown would force traffic to "straddle" the crown, which violates driver expectations.

B2-7 Build Parallel Prestress Beam Bridge Instead of Widening "in-kind" the Existing Steel Plate Girder Bridge at SR 44 over Oconee River.

VE Team Savings \$56,780

No, will not implement. The 180 ft long center span will require an 84" pre-stressed beam. The existing plate girder is 6'-2" deep, resulting in a lowering of the bottom of by approximately 10". Although there is adequate hydraulic clearance for this lake crossing (8 ft), the Drainage manual (14.1.1.5c) states, "The minimum grade should not reduce the freeboard from the existing conditions...." This is an issue of boater expectancy where a boat that passes safely under the existing bridge may not under the new widened portion. This issue could be addressed by jacking the existing bridge, which would add approximately \$75,000 to the bridge cost plus the additional costs associated with the higher roadway section and negates the savings of \$56,780.

R2-1 For Rural Sections Use 11' Lane Width in lieu of 12'

VE Team Savings \$784,168

No, will not implement, because we are implementing R2-1.1.

R2-1.1 For Rural Sections Use 11' Wide Lane and 12' Outside Lane.

VE Team Savings \$392,084

Yes, will implement.

R2-2 For Urban Sections use a 16' Wide Raised Median in lieu of a 20' Raised Median.

VE Team Savings \$222,697

Yes, will implement, but will require a design variance.

R2-4 For 2 Lane Side Street Sections Use 11' Lane Width in lieu of 12'.

VE Team Savings \$64,914

Yes, will implement.

R2-5 Eliminate 2' Paved Shoulder on 2-Lane Side Street Sections.

VE Team Savings \$138,756

Yes, will implement.

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R2-7 Reuse and Overlay Existing Pavement from Approximate Sta 332+00 to Approximate Sta 359+00 and from Approximate Sta 486+00 to Approximate Sta 734+00.

VE Team Savings \$2,729,088

No, will not implement. The pavement evaluation at the point has not be completed to determine if the existing pavement can be used. This option will be revisited if the pavement evaluation shows that the existing pavement can be used.

R2-8 Reduce Shoulder width on Rural Side Streets from 10' to 8'.

VE Team Savings \$1,454

Yes, will implement.

R2-9 Reduce Shoulder Width on Urban Side Streets from 12' to 10'.

VE Team Savings \$449

Yes, will implement.

R2-10 Reduce the Required Right of Way Width from 200' to 140' and Use Permanent Easement Outside of Right of Way.

VE Team Savings \$394,000

Yes, will implement.

R2-11 Revise the Vertical Profile from Sta 115+00 to Sta 234+00 to Reduce the Volume of Earthwork.

VE Team Savings \$385,135

No, will not implement per comment for B2-1.

R2-12 Revise Horizontal Alignment from Approximate Sta 393+00 to Approximate Sta 490+00 to Closer Match Existing Alignment.

VE Team Savings \$117,000

Yes, will implement. The property which was considered historical has been reclassified and is not historical anymore, which will allow for the realignment of the road.

R2-16 Revise the Vertical Profile from Sta 297+00 to Sta 370+00 to Reduce the Volume of Earthwork.

VE Team Savings \$210,533

No, will not implement per comment for B2-2.

B3-4 Maintain Existing Bridge Baseline for I-20 Bridge, Eliminate Overlay and Widen Only to One Side.

VE Team Savings \$166,243

No, will not implement. This proposal will adversely impact vertical clearance and will also require extensive revision of the current layout.

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B3-4.1 Maintain the Original Design Construction Centerline on the SR 44 Bridge over I-20, Widen the Bridge Symmetrically, but Reduce the Amount of Bridge Overlay by Warping the Center Raised Median.

VE Team Savings \$224,180

Yes, will implement with modifications. We agree with VE recommendation to retain current design that moved the PGL to the left and widened the bridge symmetrically. Instead of warping the median as VE proposed, the median is rotated as shown maintaining 6" curb on both faces (see current layout typical section). The rotated median is cheaper and easier to form.

Revised Savings \$200,160

R3-1 For Rural Sections Use 11' Lane Width in lieu of 12'.

VE Team Savings \$763,434

No, will not implement, because we are implementing R3-1.1.

R3-1.1 For Rural Sections Use 11' Wide Lane and 12' Outside Lane.

VE Team Savings \$381,717

Yes, will implement.

R3-2 For Urban Sections use a 16' Wide Raised Median in lieu of a 20' Raised Median.

VE Team Savings \$33,072

Yes, will implement, but will require a design variance.

R3-4 For 2 Lane Side Street Sections Use 11' Lane Width in lieu of 12'.

VE Team Savings \$7,571

Yes, will implement.

R3-5 Eliminate 2' Paved Shoulder on 2-Lane Side Street Sections.

VE Team Savings \$11,149

Yes, will implement.

R3-7 Reuse and Overlay Existing Pavement from Approximate Sta 900+00 to Approximate Sta 966+00 and from Approximate Sta 974+00 to Approximate Sta 982+00, from Sta 1155+00 to Sta 1183+00 and from Sta 1186+00 to Sta 1191+00.

VE Team Savings \$860,160

No, will not implement. The pavement evaluation at the point has not been completed to determine if the existing pavement can be used. This option will be revisited if the pavement evaluation shows that the existing pavement can be used.

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R3-8 Revise SR 44 Horizontal Alignment from Approximate Sta 1075+00 to Approximate Sta 1145+00 to Closer Match Existing Alignment.

VE Team Savings \$1,125,480

No, will not implement. The existing roadway condition demonstrates an undesirable horizontal curve condition based on the proposed design speed. The intent of this project is the improvement of roadway geometry and implementing the VE recommendation would preclude this. Additionally, this will create a displacement on one of the historical properties.

R3-9 Revise Horizontal Alignment from Approximate Sta 830+00 to Approximate Sta 845+00 to Closer Match Existing Alignment.

VE Team Savings \$250,000

No, will not implement. The existing roadway condition demonstrates an undesirable horizontal curve condition based on the proposed design speed. The intent of this project is the improvement of roadway geometry and implementing the VE recommendation would preclude this. Additionally, this will create a relocation of one of the major transmission lines.

Original Design

Overlay Limits

Width (ft.)	Length (ft)	Area (SF)	Area (SY)
42.41	266.10	11285	1254
44.90	266.10	11948	1328

Width (see typical section) = ~~66.42~~ - 34 + 10 = 42.41 ft 44.90 Ft. (see below)

Exist Bridge out to out (21.444m) = 70.35 Ft. (see exist bridge section)
 Exist Bridge overhang width (1092mm) = 3.58 Ft. (see exist bridge section)
 Exist Beam top flange width = 3.50 Ft.
 Cutline to Cutline = 70.35 - 2(3.58) + 3.50 = 66.69 Ft. (at ext. face of ext. beam top flange)
 Exist Bridge PGL to exist Bridge edge of deck (7.200m) = 23.62 Ft. (see exist bridge section)
 Exist PGL to Rt. Cutline = 23.62 - 3.58 + 3.5/2 = 21.79 Ft.
 Overlay Width = 66.69 - 21.79 = **44.90** Ft. (Exist PGL to Lt Cutline)

Cost

519-0400 Concrete overlay, Portland Cement, Variable Thickness = \$266.88 / SY
 Cost = ~~1254 x \$266.88~~ = \$334,652
 Cost = 1328 x \$266.88 = \$354,417

Proposed Change

Width (ft.)	Length (ft)	Area (SF)	Area (SY)
14.00	266.10	3725	414
19.56	266.10	5205	578

Width (see typical section) = ~~4~~ + 10 = 14.00 ft 19.56 Ft. (see below)

Widened Bridge Out to Out = 81.42 Ft. (see current layout typical section)
 Edge of new deck to cutline = (81.42 - 66.69)/2 = 7.37 Ft.
 Exist PGL to Lt edge of new deck = 44.9 + 7.37 = 52.27 Ft.
 Lt edge of new deck to Lt face of Raised Median = 26 + 5.5 + 1.208 = 32.71 Ft. (layout section)
 Lt face of Raised Median to Exist PGL = 52.27 - 32.71 = **19.56** Ft.

Cost

519-0400 Concrete overlay, Portland Cement, Variable Thickness = \$266.88 / SY
 Cost = ~~414 x \$266.88~~ = \$110,472
 Cost = 578 x \$266.88 = \$154,257

Savings = \$224,180 \$200,160

AT-David Henry

From: DuVall, Bill [bduvall@dot.ga.gov]
Sent: Wednesday, May 08, 2013 7:30 AM
To: AT-John McWhorter
Cc: AT-David Henry; Brewer, George; Sanders, Matt
Subject: FW: CSSTP-0006-00(252) Greene/Putnam Counties, PI# 0006252, Bridge Related VE Responses
Attachments: VE Responses_Bridge_rev05062013 DH.docx

John,

I have reviewed the attached bridge related comments and I'm in agreement with the responses. Please include these responses in the formal response to Engineering Services. You can attach a copy of this e-mail for Bridge Design concurrence.

Thanks,
Bill

Bill DuVall, PE, MSCE
Assistant State Bridge Engineer
Office of Bridge Design
(404) 631-1883 work
(404) 895-4943 mobile

From: jkmcwhorter@transystems.com [<mailto:jkmcwhorter@transystems.com>]
Sent: Tuesday, May 07, 2013 5:00 PM
To: DuVall, Bill
Cc: dbhenry@transystems.com
Subject: FW: CSSTP-0006-00(252) Greene/Putnam Counties, PI# 0006252, Bridge Related VE Responses

Bill,

We have received your comments on our VE responses and have revised the attached file accordingly. Let me know if this is acceptable.

Thanks,

John

From: AT-John McWhorter
Sent: Thursday, March 14, 2013 1:09 PM
To: bduvall@dot.ga.gov
Cc: AT-David Henry
Subject: FW: CSSTP-0006-00(252) Greene/Putnam Counties, PI# 0006252, Bridge Related VE Responses

Bill,

Just following up on this. Did you have any comments on our responses to the VE study comments for the above named project?

Thanks,

John

From: AT-John McWhorter
Sent: Thursday, February 07, 2013 12:48 PM
To: bduvall@dot.ga.gov
Cc: AT-David Henry
Subject: CSSTP-0006-00(252) Greene/Putnam Counties, PI# 0006252, Bridge Related VE Responses

Bill,

As requested, I am providing you with our responses to the Bridge related comments generated during the VE study on this project. After you review our responses, we will incorporate any necessary changes and include these responses into our overall VE response package.

For your reference, I have attached the pages from the VE Study that contain the Bridge related comments. One of our responses refers to the Drainage Manual and I have included that page here as well.

Please let me know if you have any questions.

Thanks,

John

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Sanders, Matt

Subject: FW: CSSTP-0006-00(252) Greene/Putnam Counties, PI# 0006252, Bridge Related VE Responses

From: DuVall, Bill

Sent: Friday, May 03, 2013 2:30 PM

To: Brewer, George

Cc: Rabun, Ben; Sanders, Matt

Subject: RE: CSSTP-0006-00(252) Greene/Putnam Counties, PI# 0006252, Bridge Related VE Responses

George,

As you are aware, this project is currently in the preliminary phase and I believe that the concept may still be in development. The hydraulic studies/preliminary layouts are not complete nor have they been submitted to the Bridge Office. The VE recommendations include lowering the proposed bridges closer to the required freeboard and also recommends change the widening of the steel girder bridges from "in-kind" to widened with PSC girders. Although I agree that these are good design suggestions which should be vetted during the design process I must OPPOSE all as recommendations at this stage in design. For instance if we accept the suggestion to lower the profile 3 feet to meet the Drainage Manual requirements for freeboard and then the profile is lowered 2.5 feet or 3.5 feet during the design then technically we need request a "Reversal" in the VE recommendation. Please be aware, freeboard is not the only basis in the hydraulic design for setting the profile. If this had been a design suggestion then we could have considered it during design. For the suggestions to lower the profile the consultant should reject the recommendation.

The same argument is true with the widening of the steel girder bridges. The consultant suggests that the recommendation to widen the bridge over Lick Creek with PSC beams would in effect decrease the available freeboard and violate the drainage manual. Although they are correct in their response, they did not address the possibility of jacking the existing bridge to provide the necessary freeboard. Just the cost in jacking the existing bridge would be another \$75,000 plus the additional roadway section. This needs to be added to the consultants response.

VE recommendation B2-6 recommends not overlaying the existing bridge to remove the normal crown. The consultant's response is reasonable. They should add in the response that the crown point is not at the lane line so traffic will "straddle" the crown; this does violate driver expectations. The drainage structures at the median would require a drainage system. I'm not even sure a drainage system can be added on the side with the sidewalk. The existing deck is only 7.5" thick and I don't know if there is a retrofit grate which could be added without removing a sector of the deck and increasing the thickness. Not to mention, the grate on the inside along the median would most likely be impacted by traffic. I would recommend the consultant include this information in their response and recommend rejection.

As far as the last recommendation, B2-7, it also recommends widening the steel bridge with PSC beams. The consultant should respond similarly as stated above.

Please revise the responses and resubmit for Bridge Design concurrence.

Thanks,
Bill

Bill DuVall, PE, MSCE
Assistant State Bridge Engineer
Office of Bridge Design
(404) 631-1883 work
(404) 895-4943 mobile