Form C-104
Rev. 2/01

CONSTRUCTION VALUE ENGINEERING CONCEPT PROPOSAL
MISSOURI DEPARTMENT OF TRANSPORTATION

Date 06/22/2009

Contract ID 070928-X01 **Job No.** J0P0928

County Madison **Route** 67 **Original Bid Cost** $37,597,624.33

Contractor Emery Sapp & Sons **By** Matthew Oesch

Designed By Jesse Hinton **Phone** (573) 489-9216

VECP 09-50

1. **Description of existing requirements and proposed change(s). Advantages/Disadvantages**

   Emery Sapp & Sons proposes to wedge the new SBL into the existing highway at Sta 865+00 to Sta 872+00 and Sta 1025+00 to Sta 1035+00. By wedging the new roadway up against the existing highway the need for four of the five crossovers will be eliminated. The wedging scenario will create a smoother transition from the existing highway onto the new SBL creating fewer traffic disruptions and safer travel.

2. **Estimate of reduction in construction costs.** $10,064.21

3. **Prediction of any effects the proposed change(s) will have on other department costs, such as maintenance and operations.**

   None

4. **Anticipated date for submittal of detailed change(s) of items required by Section 104.6 of the Specifications.**

   06/22/2009
   (date)

5. **Deadline for issuing a change order to obtain maximum cost reduction, noting the effect of contract completion time or delivery schedule.**

   07/06/2009 (date) — Provide ample time to demo and grade ahead of paving spread (effect)

6. **Dates of any previous or concurrent submission of the same proposal.**

   N/A
   (date and/or dates)

Additional Comments:

A letter with detailed explanations of the pavement wedging for both tie-ins and spreadsheets detailing cost savings are included.

***** Portion Below This Line To Be Filled Out by MoDOT *****

Comments: 5 Alt. 865 ± & 1035 ± VE
ES5 VE #7

Matt Mahn — 6-26-09
Submitted By Resident Engineer — Date

Comments: 50/50 split
Concept approved. Quantities may need adjustment prior to change order.

☑ **Approval Recommended**
☐ **Rejection Recommended**

Mark Shelton by [illegible] — 7-1-09
District Engineer — Date

Comments:

☑ **Approval**
☐ **Rejection**

David D. Gaines BGW — 7-6-09
State Operations Engineer — Date

Distribution: Resident Engineer, District Operations Engineer, State Operations Engineer
*Value Engineering Administrator - *MoDOT, P.O. Box 270, Jefferson City, MO 65102

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June 22, 2009

Mr. Matt Malone, R.E.
Missouri Dept. of Transportation
105 Industrial Dr.
Park Hills, MO 63601

RE: Value Engineering Proposal 7,
Alternative Alignment for 865+00-1035+00
Rte. 67, Madison County,
Job No. J0P0928

Mr. Malone:

This letter is written in proposition of a Value Engineering Proposal for an alternative tie-in design for Sta 865+00 to 872+00 and Sta 1025+00 to1035+00. The proposal will allow ESS to construct the SBL tie-ins by wedging the new SBL into the existing highway using concrete pavement and asphalt overlays. The proposal provides an alternative design eliminating the need for four of the five crossovers required by the original design, and provides a solution to the constructability issue surrounding some of the crossovers.

Under the original design, a series of staging would be used to complete tie-ins on the north and south bound lanes for Sta 865+00 to 885+00 and Sta 1015+00 to 1035+00. Once Stage 1 paving is completed on the NBL and SBL, a series of crossovers will need to be constructed in order to maneuver traffic around the tie-ins. Five crossovers in all will be needed in the following order: #5, #6, #7, #8, and #9. Crossovers #6 and #9 will both have to be constructed across the existing roadway under live traffic. Once all of the crossovers are completed and opened, the existing roadway can be demolished and Stage 2 paving will begin on the tie-in sections. After Stage 2 paving is finished, the roadway will be striped and opened to traffic. Crossovers will then be removed from the median under live traffic on the NBL and SBL.

There are several problems surrounding the constructability of the original design. At both Crossovers #6 and #9, the new roadway grades are significantly higher than existing US 67. The excessive grade difference will require closure of existing US 67 so fill can be placed over the road to achieve the necessary grade for the crossovers. Crossovers #6 and #9 both require 24 inch CMP to be placed under the crossover for drainage. In order to achieve proper flow line and adequate cover on the pipes the existing roadway will need to be broke up and dug out to a depth below the existing pavement. No traffic control plans or items are provided for safely managing and or detouring traffic during this stage of construction. If crossovers #6 and #9 are intended to

be constructed by asphalt wedging, the designers failed to provide sufficient asphalt quantities to perform the work.

The profile grades for the new mainline fail to match that of the existing highway at both tie-in locations. At Sta 865+00, a vertical difference of over 1.5 feet exists between the new profile and existing profile. The horizontal alignment is off by over two feet at the Sta 865+00 tie-in. At Sta 1035+00, the design profile requires the new roadway to be over three feet higher than the existing top of pavement.

Emery Sapp & Sons proposes to wedge the new SBL into the existing highway at Sta 865+00 to Sta 872+00 and Sta 1025+00 to Sta 1035+00. By wedging the new roadway up against the existing highway the need for four of the five crossovers will be eliminated. The wedging scenario will create a smoother transition from the existing highway onto the new SBL creating fewer traffic disruptions and safer travel.

For the tie-in at Sta 865+00 the profile will need to be adjusted in order for the new SBL to tie-in cleanly with the existing highway. The vertical curve will need to be adjusted to the following: PVI 868+89.89, Elevation 759.56, Up Station Slope +1.74%, Down Station Slope -2.11%, SSD = 665, K=202, and 779 VC. The difference in horizontal alignment has been adjusted out from Sta 865+00 to Sta 869+00. Additional fill will be needed in order to raise the grade to meet new vertical curve and match the existing roadway. The fill will be placed prior to Stage 1 paving. Stage 1 paving will be completed on the SBL from Sta 872+00 to Sta 1025+00 at full width and depth using machine pour. Full depth 9 inch PCCP pavement and Type 5 Base will then be hand placed from Sta 865+00 to Sta 872+00 tying the new SBL into the existing highway. The hand placed pavement will slowly taper out wider as the alignment shifts away from the existing highway. Then Type 5 Base and 9 inch PCCP will be hand placed along the inside shoulder from Sta 865+00 south tapering in as the alignment shifts into and across the existing pavement. The inside shoulder will taper from approx 2 ft to 0 ft maintaining a 13 foot wide lane as the shoulder merges into the existing roadway.

Doweling will be used along the edge of the existing concrete on both sides to securely join the new concrete pavement to the existing roadway. Edge treatment will be used where necessary while preparing for paving to insure motorist safety. Once the concrete wedging is completed, 3 inch of BP-1 will be placed 26 feet wide from Sta 865+00 to Sta 870+50 creating a smooth seamless tie-in of the joint between the roadways. Full depth saw cuts will be used along the inside shoulder to cleanly remove the remaining portions of existing US 67 that require demolition in order to perform median grading. A3 shoulders and Daylight of Aggregate Base will be completed from Sta 865+00 to Sta 872+00 as well. Portions of existing US 67 may be left under the inside 3 foot A3 shoulder for added support. Flagging and traffic control will be used throughout the wedging process to insure safety of motorist and workers alike.

The tie-in at Sta 1035+00 will require profile adjustments as well in order to obtain a smooth tie-in with existing US 67. The vertical curve will need to be adjusted to the following: PVI 1029+42.63, Elevation 688.22, Up Station Slope +2.44%, Down Station Slope -2.58%, SSD = 650, K=193, and 971 VC. Additional fill will be needed in order to raise the grade to meet new vertical curve and

match the existing roadway. The fill will be placed prior to Stage 1 paving. Stage 1 paving will be completed on the SBL from Sta 872+00 to Sta 1025+00 at full width and depth using machine pour. Type 5 Base and 9 inch PCCP pavement will then be hand placed along the west side of existing US 67 from Sta 1025+00 to Sta 1035+00 tying the new SBL into the existing highway. Then Type 5 Base and 9 inch PCCP will be hand placed along the inside shoulder from Sta 1035+00 north tapering in as the alignment shifts into and across the existing pavement. The inside shoulder will taper from approx 2 ft – 0 ft maintaining a 13 foot wide lane as the shoulder merges into the existing roadway.

Doweling will be used on both side of the existing concrete to securely join the new concrete pavement to the existing roadway. Edge treatment will be used where necessary while preparing for paving to insure motorist safety. Once the concrete wedging is completed, 3" of BP-1 will be placed 26 ft wide from Sta 1026+50 to Sta1035+00 creating a smooth seamless tie-in over the joint between the roadways. Full depth saw cuts will be used along the inside shoulder to cleanly remove the remaining portions of existing US 67 that require demolition in order to perform median grading. A3 shoulders and Daylight of Aggregate Base will be completed from Sta 1025+00 to Sta 1035+00 as well. A portion of existing US 67 (where the alignments intersect) may be left under the inside 4 foot A3 shoulder for added support. Flagging and traffic control will be used throughout the wedging process to insure safety of motorist and workers alike.

Once the wedging has been completed at both Sta 865+00 and Sta 1035+00 the roadway will be temporary striped. The new SBL will be striped for head to head traffic from Sta 865+00 to Sta 1035+00 with Temporary Waterborne Acrylic Paint on the inside shoulder and centerline, while permanent striping can be placed on the outside shoulder. ESS would like to request a MoDOT traffic representative assist with the striping detail for the centerline section from Sta 865+00 to Sta 1035+00. By placing traffic head to head on the new SBL, the remaining portions of the old highway can be removed and Stage 2 paving for NBL tie-ins at Sta 885+00 and Sta 1015+00 can be completed. Once the Stage 2 paving on the NBL is completed, the old highway markings can be removed and the road can be completely restriped free of traffic. At this stage traffic can be released onto the NBL allowing full divided highway from Sta 497+00 through Sta 1035+00.

Under Value Engineering Proposal #1, once Stage 1 paving of the NBL is completed from Sta 1025+00 to Sta 1099+00; head to head traffic will then be switched from Bypass 2 over to the new NBL. ESS's proposes to move Crossover #7 from Sta 885+00 to approximately Sta 1063+00. Crossover #7's starting point will be changed from Sta 883+00 to Sta 1060+00, and its' new ending point will become Sta 1065+00. All of the horizontal alignment and lengths will remain the same as the original design. The relocated Crossover #7 will allow motorist access to divided highway from Sta 497+00 to Sta 1060+00. The crossover is required to allow traffic traveling in the SBL from Sta 497+00 to Sta 1060+00 to merge left onto the new NBL at Sta 1065+00. From Sta 1065+00 south traffic will remain head to head in the NBL, as it is under current conditions. The crossover is necessary to allow for Stage 2 construction of the SBL from Sta 1075+00 to Sta 1090+00 and demolition of Bypass 2.

A spreadsheet has been created detailing the additional costs and savings incurred by using the value engineering proposal. Some items have higher unit prices than the contract unit price to account for increased labor for hand work and or traffic control/flagging expenses.

There are several advantages obtained by using the value engineered wedging scenario versus the original design. The VE proposal will reduce the number of crossovers from five to one, which will decrease lane changes and disruption of traffic flow. By eliminating the crossovers additional cost savings are obtained. Elimination of crossovers will also prevent future demolition of the crossovers under live traffic along the edge of the newly opened divide highway. Constructability issues with Crossovers #6 and #9 are eliminated as is the need to produce a traffic control solution for handling live traffic safely while attempting to lay pipe and fill over the existing roadway. By wedging into the existing roadway, Stage 2 paving is reduced further expediting project completion. Cost savings of $10,064.21 are obtained by using the proposed wedging over the original design. No disadvantages are foreseen when using the value engineering proposal.

In conclusion the value engineering proposal will provide a more cost effective, constructible, and safe design than what is provided by the plans. A cost savings of $10,064.21 will be obtained by using the proposal. The proposed value engineered design is completely constructible under live traffic with minimal delays from flagging. No lengthy road closures or detours will be needed while performing the grading and paving as would not be the case with the original design. Safety will be greatly increased by eliminating several of the crossovers. Traffic will no longer be required to switch back and forth between lanes while navigating through several traffic control signs and devices. Traffic will only be required to slightly veer left once and right once through the proposed tie-ins and navigate a single crossover that sets away from the tie-ins providing fewer distractions. Removal of existing striping and new permanent striping on the NBL will be preformed free of traffic, creating safer travel and fewer disruptions for motorist. Most importantly the proposal provides a solution to a problem area that is practically impossible to build under the original design.

Sincerely,

Matthew Oesch

Project Engineer
Emery Sapp & Sons Inc.

Total Cost Saving for Valued Engineering Propsal #3

Elimination of Crossovers #5, #6, #7, #8, & #9	
Savings from Removals	$203,854.10
Added Costs	
Total Savings	**$203,854.10**

Modification of Tie-Ins at STA 865+00 & 1035+00 (and Traffic Control Plan)	
Savings from Removals	$117,305.00
Added Costs	$292,324.19
Total Savings	**-$175,019.19**

Total Cost Savings	**$28,834.92**

Value Engineering Proposal #3: Cost Savings

SAVINGS

Line No.	Description	Quantity	Unit	Unit Cost	Savings
300	Linear Grading Class 2				
	Crossover #5	5.52	STA	$500.00	$2,760.00
	Crossover #6	8.34	STA	$500.00	$4,170.00
	Crossover #7	5.58	STA	$500.00	$2,790.00
	Crossover #8	5.6	STA	$500.00	$2,800.00
	Crossover #9	6.1	STA	$500.00	$3,050.00
370	Bituminous Pavement Mixture PG64-22 (Base)				
	Crossover #5	262	TONS	$58.00	$15,196.00
	Crossover #6	551	TONS	$58.00	$31,958.00
	Crossover #7	264	TONS	$58.00	$15,312.00
	Crossover #8	256	TONS	$58.00	$14,848.00
	Crossover #9	390	TONS	$58.00	$22,620.00
850	Construction Signs				
	Crossovers #5 & #6				
	2- Road Work Ahead	16	SF	$7.00	$112.00
	3- Reduced Speed Ahead	12	SF	$7.00	$84.00
	4- Speed Limit 40 mph	12	SF	$7.00	$84.00
	5- Rt/Lt Lane Closed Ahead	16	SF	$7.00	$112.00
	6- Rt/Lt Lane Closed	16	SF	$7.00	$112.00
	15- Reverse Curve	48	SF	$7.00	$336.00
	16- Horizontal Arrow	64	SF	$7.00	$448.00
	29- Road Closed	40	SF	$7.00	$280.00
	44- Advisory Speed (plaque)	12	SF	$7.00	$84.00
	54- Work Zone (plaque)	6	SF	$7.00	$42.00
	Crossover #7				
	2- Road Work Ahead	32	SF	$7.00	$224.00
	3- Reduced Speed Ahead	24	SF	$7.00	$168.00
	4- Speed Limit 40 mph	48	SF	$7.00	$336.00
	5- Rt/Lt Lane Closed Ahead	32	SF	$7.00	$224.00
	6- Rt/Lt Lane Closed	32	SF	$7.00	$224.00
	15- Reverse Curve	64	SF	$7.00	$448.00

No. of Signs	*SF per Sign*
1	*16*
1	*12*
1	*12*
1	*16*
1	*16*
3	*16*
8	*8*
4	*10*
3	*4*
2	*3*

No. of Signs	*SF per Sign*
2	*16*
2	*12*
4	*12*
2	*16*
2	*16*
4	*16*

16- Horizontal Arrow	16	SF	$7.00	$112.00	2	8
25- Speed Limit 60mph	24	SF	$7.00	$168.00	2	12
29- Road Closed	10	SF	$7.00	$70.00	1	10
31- Two Way Traffic (Symbol)	32	SF	$7.00	$224.00	2	16
44- Advisory Speed (plaque)	16	SF	$7.00	$112.00	4	4
54- Work Zone (plaque)	18	SF	$7.00	$126.00	6	3
55- Do Not Enter	6.25	SF	$7.00	$43.75	1	6.25

						No. of Signs	SF per Sign
	Crossover #8						
	2- Road Work Ahead	32	SF	$7.00	$224.00	2	16
	3- Reduced Speed Ahead	24	SF	$7.00	$168.00	2	12
	4- Speed Limit 40 mph	24	SF	$7.00	$168.00	2	12
	5- Rt/Lt Lane Closed Ahead	32	SF	$7.00	$224.00	2	16
	6- Rt/Lt Lane Closed	32	SF	$7.00	$224.00	2	16
	15- Reverse Curve	64	SF	$7.00	$448.00	4	16
	16- Horizontal Arrow	16	SF	$7.00	$112.00	2	8
	25- Speed Limit 60mph	24	SF	$7.00	$168.00	2	12
	31- Two Way Traffic (Symbol)	32	SF	$7.00	$224.00	2	16
	44- Advisory Speed (plaque)	16	SF	$7.00	$112.00	4	4
	54- Work Zone (plaque)	12	SF	$7.00	$84.00	4	3
	55- Do Not Enter	6.25	SF	$7.00	$43.75	1	6.25
	Crossover #9					No. of Signs	SF per Sign
	15- Reverse Curve	64	SF	$7.00	$448.00	4	16
	16- Horizontal Arrow	32	SF	$7.00	$224.00	4	8
	29- Road Closed	20	SF	$7.00	$140.00	2	10
	44- Advisory Speed (plaque)	16	SF	$7.00	$112.00	4	4
880	Type III Moveable Barricade						
	Crossovers #5 & #6	12	EA	$110.00	$1,320.00		
	Crossover #7	3	EA	$110.00	$330.00		
	Crossover #8	4	EA	$110.00	$440.00		
	Crossover #9	6	EA	$110.00	$660.00		
890	Flashing Arrow Panel						
	Crossover #7	1	EA	$3,000.00	$3,000.00		
	Crossover #8	1	EA	$3,000.00	$3,000.00		
910	Tubular Markers						
	Crossovers #5 & #6	100	EA	$60.00	$6,000.00		
	Crossover #7	35	EA	$60.00	$2,100.00		
	Crossover #8	21	EA	$60.00	$1,260.00		
	Crossover #9	57	EA	$60.00	$3,420.00		
980	Preformed Removable Marking Tape 4 in., White						
	Crossovers #5 & #6	3394	LF	$1.10	$3,733.40		
	Crossover #7	3510	LF	$1.10	$3,861.00		

	Crossover #8	2189	LF	$1.10	$2,407.90
	Crossover #9	2094	LF	$1.10	$2,303.40
990	Preformed Removable Marking Tape 4 in., Yellow				
	Crossovers #5 & #6	3394	LF	$1.10	$3,733.40
	Crossover #7	3510	LF	$1.10	$3,861.00
	Crossover #8	2189	LF	$1.10	$2,407.90
	Crossover #9	2094	LF	$1.10	$2,303.40

1000	4 in. White Acrylic Waterborne Paint				
	Crossovers #5 & #6	896	LF	$0.20	$179.20
	Crossover #7	164	LF	$0.20	$32.80
	Crossover #8	229	LF	$0.20	$45.80
	Crossover #9	206	LF	$0.20	$41.20
1010	4 in. Yellow Acrylic Waterborne Paint				
	Crossovers #5 & #6	896	LF	$0.20	$179.20
	Crossover #7	164	LF	$0.20	$32.80
	Crossover #8	229	LF	$0.20	$45.80
	Crossover #9	206	LF	$0.20	$41.20
1030	Pavement Marking Removal (Tape)				
	Crossovers #5 & #6	6788	LF	$0.20	$1,357.60
	Crossover #7	7020	LF	$0.20	$1,404.00
	Crossover #8	4158	LF	$0.20	$831.60
	Crossover #9	3360	LF	$0.20	$672.00
1040/1050	Temporary Raised Pavement Markers Types 1 & 2				
	Crossovers #5 & #6	44	EA	$2.00	$88.00
	Crossover #7	39	EA	$2.00	$78.00
	Crossover #8	40	EA	$2.00	$80.00
	Crossover #9	28	EA	$2.00	$56.00
1140	24 in. Pipe - Group B				
	Crossover #5	204	LF	$26.75	$5,457.00
	Crossover #6	297	LF	$26.75	$7,944.75
	Crossover #7	168	LF	$26.75	$4,494.00
	Crossover #8	180	LF	$26.75	$4,815.00
	Crossover #9	263	LF	$26.75	$7,035.25

Savings	***$203,854.10***

Value Engineering Proposal #3: Cost Savings

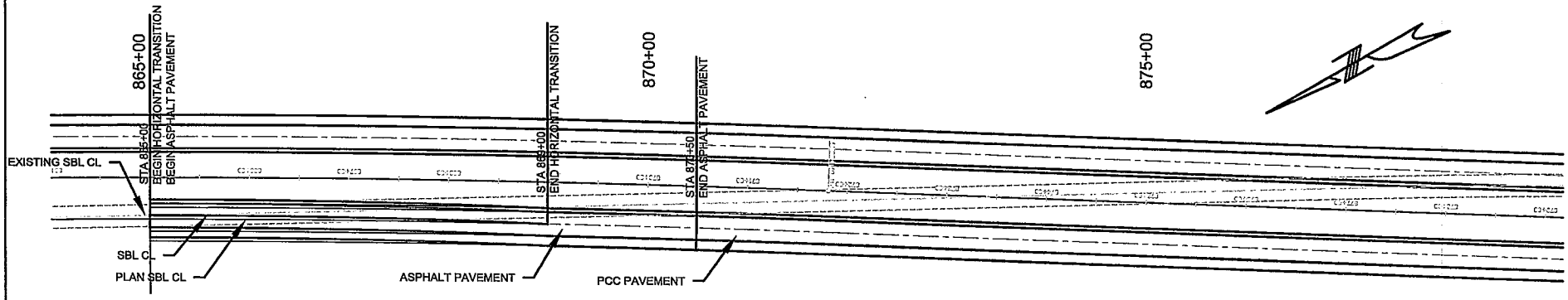
SAVINGS

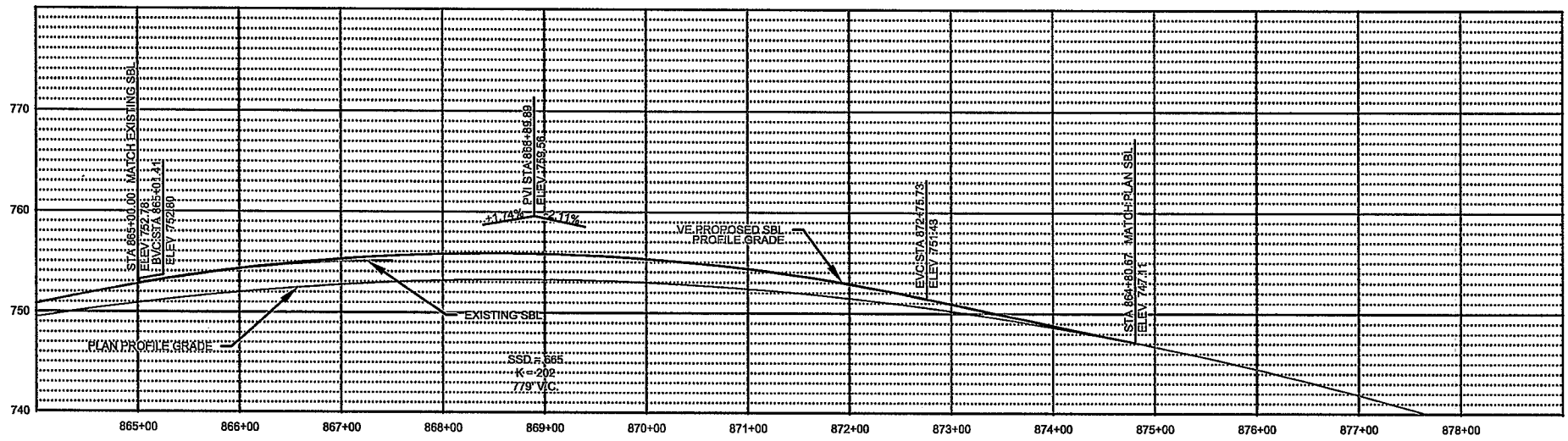
Line No.	Description	Quantity	Unit	Unit Cost	Savings
340	Type 5 Aggregate for Base (4 in. Thick)				
	STA 865+00 - 870+50	1589	SY	$3.40	$5,402.60
	STA 1026+50 - 1035+00	2456	SY	$3.40	$8,350.40
1720	Concrete Pavement (9 in. NR)				
	STA 865+00 - 870+50	1589	SY	$25.60	$40,678.40
	STA 1026+50 - 1035+00	2456	SY	$25.60	$62,873.60
	Savings				***$117,305.00***

ADDITIONAL COSTS

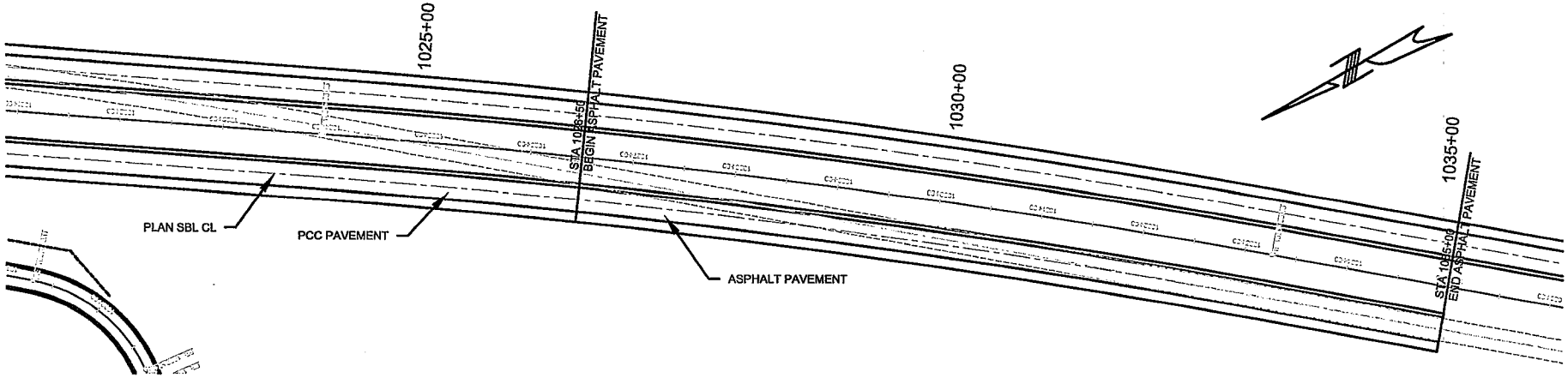
Line No.	Description	Quantity	Unit	Unit Cost	Savings
	Embankment in Place				
	STA 865+00 - 864+81	2870	CY	$10.07	$28,886.55
	STA 1023+00 - 1032+00	1310	CY	$10.07	$13,185.15
	Bituminous Pavement Mixture PG64-22 (BP-1)				
	STA 865+00 - 870+50	269	TONS	$85.25	$22,932.25
	STA 1026+50 - 1035+00	415	TONS	$85.25	$35,378.75
	Type 5 Aggregate for Base (4 in. Thick)				
	STA 865+00 - 870+50	833	SY	$20.19	$16,814.11
	STA 1026+50 - 1035+00	968	SY	$20.19	$19,539.08
	Concrete Pavement - Hand Finish (9 in. NR)				
	STA 865+00 - 870+50	833	SY	$49.50	$41,233.50
	STA 1026+50 - 1032+00	968	SY	$49.50	$47,916.00
	Full Depth Saw Cuts				
	STA 865+00 - 870+50	1100	LF	$4.27	$4,694.80
	STA 1026+50 - 1035+00	1700	LF	$4.27	$7,255.60
	Pavement Edge Treatment				
	STA 865+00 - 870+50	1100	LF	$3.94	$4,331.80
	STA 1026+50 - 1035+00	1700	LF	$3.94	$6,694.60
1000	4" White Acrylic Waterborne Paint				
	STA 865+00 - 1035+00	34000	LF	$0.20	$6,800.00
1010	4" Yellow Acrylic Waterborne Paint				
	STA 865+00 - 1035+00	34000	LF	$0.20	$6,800.00
1020	Pavement Marking Removal (Paint)				
	STA 865+00 - 1035+00	51000	LF	$0.40	$20,400.00

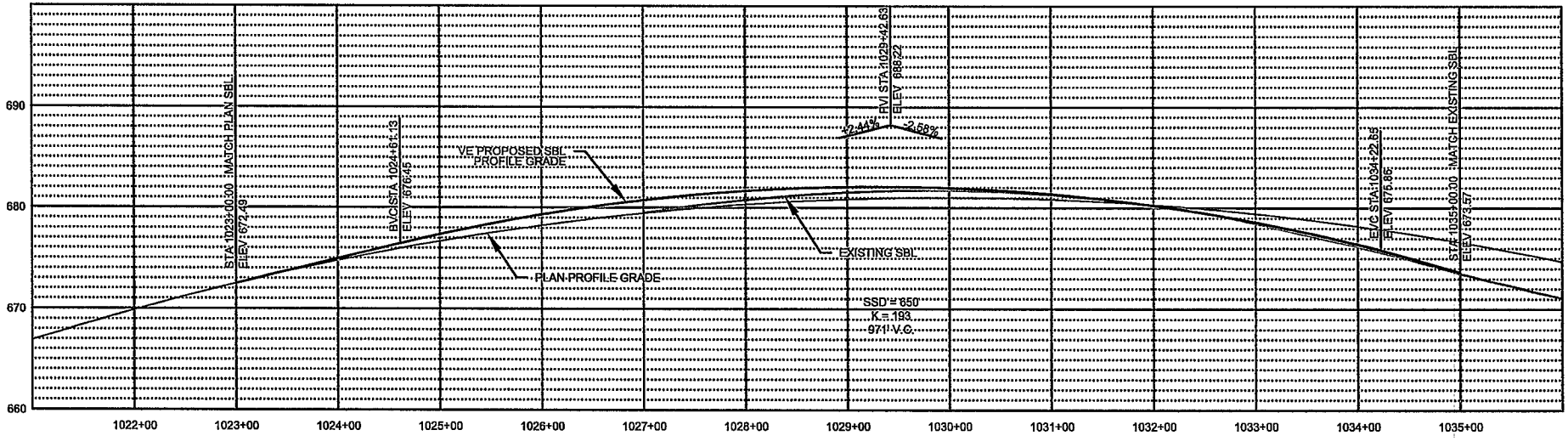
850	Construction Signs				
	2- Road Work Ahead	32	SF	$7.00	$224.00
	3- Reduced Speed Ahead	24	SF	$7.00	$168.00
	4- Speed Limit 40 mph	24	SF	$7.00	$168.00
	5- Rt/Lt Lane Closed Ahead	32	SF	$7.00	$224.00
	6- Rt/Lt Lane Closed	32	SF	$7.00	$224.00
	7- One Lane Road Ahead	32	SF	$7.00	$224.00
	8- Flagger	32	SF	$7.00	$224.00
	10- Truck Crossing	32	SF	$7.00	$224.00
	11- Be Prepared to Stop	32	SF	$7.00	$224.00
	25- Speed Limit 60mph	24	SF	$7.00	$168.00
	31- Two Way Traffic (Symbol)	32	SF	$7.00	$224.00
	44- Advisory Speed (plaque)	8	SF	$7.00	$56.00
	46- Do Not Pass	24	SF	$7.00	$168.00
	54- Work Zone (plaque)	6	SF	$7.00	$42.00
880	Type III Moveable Barricade				
	STA 865+00 - 870+50	3	EA	$110.00	$330.00
	STA 1026+50 - 1032+00	3	EA	$110.00	$330.00
1040/1050	Temporary Raised Pavement Markers Types 1 & 2				
	STA 865+00 - 870+50	48	EA	$2.00	$96.00
	STA 1026+50 - 1032+00	72	EA	$2.00	$144.00
	Changeable Message Sign, Contractor Furnished/Retained				
	STA 865+00 - 870+50	1	EA	$3,000.00	$3,000.00
	STA 1026+50 - 1032+00	1	EA	$3,000.00	$3,000.00
	Additional Costs				***$292,324.19***
	Total Costs of Tie-Ins at STA 865+00 and 1035+00				***$175,019.19***





EMERY SAPP & SONS, INC 2602 N. STADIUM BLVD. (573) 445-8331	MADISON CO RT 67 STA 865+00 TRANSITION	MoDOT JOB: J0P0928	
		SCALE 1" = 100'	
		JUNE 03, 2009	SHEET 1 OF 1





EMERY SAPP & SONS, INC 2602 N. STADIUM BLVD. (573) 445-8331	MADISON CO RT 67 STA 1035+00 TRANSITION	MoDOT JOB: J0P0928	
		SCALE 1" = 100'	
		JUNE 03, 2009	SHEET 1 OF 1

VALUE ENGINEERING CHECK SHEET

TYPE OF WORK

(Check one that applies)

- ☐ Bridge/Structure/Footings
- ☐ Drainage Structures (RCP, RCB, CMP's, ect.)
- ☐ TCP/MOT
- X Paving (PCCP, ect.)
- ☐ Grading/MSE Walls
- ☐ Signal/Lighting/ITS
- ☐ Misc. _____

SUMMARY OF PROPOSAL

(If needed, condense summary to a couple of lines)

Contractor proposes to construct the Route 67 tie-ins with an alternate method that will eliminate the need for 4 crossovers and by doing so will be much safer to the traveling public. This is a 50/50 split.

SCANNING OF DOCUMENT

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.

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