## MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

## **CHANGE ORDER**

Date: June 12, 2019 Page 1 of 4

> 0010445 Emery Sapp & Sons, Inc.

Approved - Chief Operating Officer

Approved - Chief Financial Officer Brenda Morris

Ed Hassinger

Contractor

Change Order No. 002 Contract ID

181019-A01 Federal Project No. 1 35-2(96)

I-35 Route County Harrison

Chief Engineer & Chief Operating Officer Approval

Change Order Type Federal Oversight No

YOU ARE HEREBY DIRECTED TO MAKE THE FOLLOWING CHANGES FROM THE CONTRACT:

ESTIMATE OF COST OF WORK AFFECTED BY THIS CHANGE ORDER											
PROJECT NUMBER	LINE ITEM NUMBER	ITEM CODE	CATEGORY NUMBER	DESCRIPTION	UNITS		UNITS TO BE CONSTRUCTED	UNITS OVERRUN, UNDERRUN, CONTINGENT	CONTRACT OR AGREED UNIT PRICE	AMOUNT OF OVERRUN OR PLUS CONTINGENT	AMOUNT OF UNDERRUN OR MINUS CONTINGENT
J1I3017	0090	4071005	0001	TACK COAT	GAL	56,061.000	21,061.000	(35,000.000)	\$1.00000		(\$35,000.00)
	0170	6133020		FURNISHING AND PLACING BITUMINOUS MATERIAL FOR CLASS C PARTIAL DEPTH PAVEMENT REPAIR	TONS	3,202.400	0.000	(3,202.400)	\$63.00000		(\$201,751.20)
	0180	6133021	0001	REMOVAL FOR CLASS C PARTIAL DEPTH PAVEMENT REPAIR	SQYD	23,244.600	0.000	(23,244.600)	\$3.10000		(\$72,058.26)
	0300	6221001	0001	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 IN. THICK OR LESS)	SQYD	518,329.000	0.000	(518,329.000)	\$0.32000		(\$165,865.28)
	5002	4030016	0001	ASPH. CONC. MIXTURE PG 70-22 (SP048F)	TONS	0.000	20,208.200	20,208.200	\$88.69000	\$1,792,265.26	
	5003	4079912	0001	MISC. NON STANDARD TACK COATMISC. POLYMER MODIFIED EMULSION MEMBRANE	GAL	0.000	76,618.200	76,618.200	\$3.35000	\$256,670.97	
	5004	6181000	0001	MOBILIZATION	LS	0.000	1.000	1.000	\$50,000.00000	\$50,000.00	
	5005	6221001	0001	COLDMILLING BIT. PAVT FOR REM OF SURF.(3 IN. THICK OR LESS	SQYD	0.000	135,239.000	135,239.000	\$1.25000	\$169,048.75	
	5006	6221001	0001	COLDMILLING BIT. PAVT FOR REM OF SURF.(GREATER THAN 3 IN. THICK)	SQYD	0.000	383,091.000	383,091.000	\$2.49000	\$953,896.59	
SETTLEMENT FOR COST OF THE ABOVE CHANGE TO BE MADE AT CONTRACT UNIT PRICES, EXCEPT AS NOTED:									\$3,221,881.57	(\$474,674.74)	

THE TERMS OF SETTLEMENT OUTLINED ABOVE ARE HEREBY AGREED TO: \$4,984,999.45 CONTRACT AMOUNT OVERRUN THIS ORDER \$2,747,206.83 0010445 Emery Sapp & Sons, Inc. CONTRACTOR OVERRUN PREVIOUS ORDERS \$0.00 TOTAL OVERRUN TO DATE \$2,747,206.83 TOTAL \$7,732,206.28 Signatures required on first page only. Contractor's Authorized Representative Approved - Resident Engineer Larry W. Jacobson Approved - District Engineer Chris Redline Approved - Division Construction & Materials Engineer Dave Ahlvers

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## **Change Order Reasons**

Change Order No. 002 Contract ID 181019-A01

Line Item Number	Reason Code	Description and Reason for Change
0090	DC	DC - Line Number 0090 - Tack Coat - Underrun: (See General Reason) The milling depth was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer within the travel way. The increase in milling depth will require an intermediate asphalt lift to be placed which was determined to be PG 70-22 SP048F mix with Polymer Modified Emulsion Membrane placed with a spray paver to bond the new asphalt to the existing roadway. The use of Polymer Modified Emulsion Membrane will reduce the amo unt of Tack Coat on the job, since Tack Coat will only be used outside of the mainline paving where the SP048 mix is not being placed. This is an initial estimate of the underrun and final quantities will be determined after work is complete.
0170	DC	DC - Line Number 0170 - Furnishing and Placing Bituminous Material for Class C Partial Depth Pavement Repair - Underrun - (See General Reason) The mainline milling depth for resurfacing was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer. The increase in milling depth is at the depth of designed partial depth pavement repairs. Therefore, the Class C Partial Depth Pavement Repairs will be eliminated.
0180	DC	DC - Line Number 0180 - Removal for Class C Partial Depth Pavement Repair - Underrun - (See General Reason) The mainline milling depth for resurfacing was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer. The increase in milling depth is at the depth of designed partial depth pavement repairs. Therefore, the Class C Partial Depth Pavement Repairs will be eliminated.
0300	DC	DC - Line Number 0300 - Coldmilling Bituminous Pavement for Removal of Surfacing (3 In. Thick or Less) - Underrun - (See General Reason) The milling depth was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer. The increas e in milling depth requires a change in the pay item since this bid item is for less than 3 inches of milling. New contingent items will be made for milling payment.
5002	DC	DC - Line Number 5002 - Asphalt Concrete Mixture PG 70-22 (SP048F Mix) - Contingent - Extra Work - Settlement of cost based on the agreed unit price of \$88.69 per ton as outlined in section 109.4.2 of the 2017 Missouri Standard Specifications for Highway Construction which includes all equipment, material and labor. (See General Reason) The milling depth was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer within the travel way. The increase in milling depth will require an intermediate asphalt lift to be placed which was determined to be PG 70-22 SP048F mix. This new contingent item will allow payment for the PG 70-22 SP048F (Level Course) mix. Density will not be part of the Superpave PWL factors in section 403.23.7.2, but will be per 403.23.7.4.1 (b).

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**Change Order Reasons** 

Change Order No. 002 Contract ID 181019-A01

Line Item Number	Reason Code	Description and Reason for Change
		AC adjustment will be made per contract choice and calcluated from the letting month of October 2018.
5003	DC	DC - Line Number 5003 - Tack Coat - Polymer Modified - Contingent - Extra Work - Settlement of cost based on the agreed unit price of \$3.35 per gallon as outlined in section 109.4.2 of the 2017 Missouri Standard Specifications for Highway Construction which includes all equipment, material and labor.  (See General Reason) The milling depth was increased from ½ inches to 3¾ inches to remove the deteriorated HIR asphalt layer within the travel way. The increase in milling depth will require an intermedia te asphalt lift to be placed which was determined to be PG 70-22 SP048F mix with Polymer Modified Emulsion Membrane placed with a spray paver to bond the new asphalt to the existing roadway. This new contingent item will allow payment for the Polymer Mod ified Emulsion Membrane to be placed with the PG 70-22 SP048F (Level Course) mix.
5004	DC	DC - Line Number 5004 - Mobilization - Contingent - Extra Work - Settlement of cost based on the agreed unit price of \$50,000.00 per Lump Sum as outlined in section 109.4.2 of the 2017 Missouri Standard Specifications for Highway Construction which inclu des all equipment, material and labor.  (See General Reason) The milling depth was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer within the travel way. The increase in milling depth will require an intermediate asphal t lift to be placed which was determined to be PG 70-22 SP048F mix. This new contingent item will allow payment for the Mobilzation of the the additional equipment required to complete the work as changed.
5005	DC	DC - Line Number 5005 - Coldmilling Bituminous Pavement for Removal of Surfacing (3 In. Thick or Less) - Contingent - Extra Work - Settlement of cost based on the agreed unit price of \$1.25 per Square Yard as outlined in section 109.4.2 of the 2017 Misso uri Standard Specifications for Highway Construction which includes all equipment, material and labor. (See General Reason) The milling depth was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer. The increase in milling depth requires a change in the pay item since this bid item is for less than 3 inches of milling. This new contingent item will be provide payment of the 3 In. Thick or less milling depth for the shoulders as noted in the revised cross sections.
5006	DC	DC - Line Number 5006 - Coldmilling Bituminous Pavement for Removal of Surfacing (Greater Than 3 In. Thick) - Contingent - Extra Work - Settlement of cost based on the agreed unit price of

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**Change Order Reasons** 

Change Order No. 002 Contract ID 181019-A01

Line Item Number	Reason Code	Description and Reason for Change
		\$2.49 per Square Yard as outlined in section 109.4.2 of the 2017 Missouri Standard Specifications for Highway Construction which includes all equipment, material and labor. (See General Reason) The milling depth was increased from ½ inches to 3 ¾ inches to remove the deteriorated HIR asphalt layer. The increase in milling depth requires a change in the pay item since this bid item is for less than 3 inches of milling. This new contingent item will be provide payment of the Greater Than 3 In. Thick milling of the mainline pavement as noted in the revised cross sections.
	Th	The winter of 2018/2019 was more severe than average winters in Harrison County. The additional moisture and freeze thaw cycles allowed moisture to penetrate to the intermediate Hot-in-place Recycling (HIR) lift, accelerating deterioration. The pavement was re-evaluated by MoDOT in March of 2019 visually and by drilling core samples. The HIR lift exhibited low to moderate strength with striping ranging from minimal to severe. The underlying lifts of Type I-B asphalt exhibited moderate to high strengths and were considered in stable condition. Based on the pavement condition and core evaluations, recommendation options were provided to remove the entire surface mix and HIR layers and replace the HIR layer with either a SP190 lift or SP048 (Level Cours e) lift. After cost proposals were provided, the SP048 lift was chosen. (See typical sections for details). The existing 1 ¾ inches of SP125B mix milled will be hauled and retained by ESS. The existing 2 inches of HIR mix will be milled by ESS, and haule d and retained by MoDOT.  The contract will be extended to December 1, 2019 on a separate change order.



