

STATE OF MISSOURI
HIGHWAYS and TRANSPORTATION
COMMISSION

JEFFERSON CITY, MISSOURI

CONSTRUCTING OR IMPROVING
CONTRACT I.D. 170519-A01

THIS JOB SHALL BE CONSTRUCTED UNDER
FEDERAL PROJECT NUMBER(S) : I-29-2(171)

Job J1P3023C Route I-29 HOLT County

BIDDER CHECKLIST
FINAL CHECKLIST BEFORE SUBMITTING BID

1. Submit completed Contractor Questionnaire and/or Contractor Prequalification Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Secs 101-103 of the Missouri Standard Specifications for Highway Construction, and Rule 7 CSR 10-15.010, "Prequalifications to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website.
2. All bids shall be submitted electronically using "Bid Express Secure Internet Bidding" at www.bidx.com. Any paper bid submitted will be considered irregular per section 102.8 of the Missouri Standard Specifications for Highway Construction.
3. Please read all items in the bidding document carefully. The EBS files from MoDOT's website may be used for the itemized bid.
4. If submitted in the name of a firm or corporation, the legal name of the firm or corporation should appear in the space designated, and be signed for by one or more persons legally qualified to execute papers in the name of said firm or corporation.
5. The bidder shall submit a Bid Guaranty meeting the requirements of Sec 102 of the Missouri Standard Specifications for Highway Construction. If submitting a project specific or annual bid bond, bidders must use the MoDOT provided bid bond forms. The project specific bond form is included in the request for bid. The project specific and annual bid bond forms are also available on MoDOT's website. Annual bid bonds shall be executed by June 15th of each year.
6. Submit the Subcontractor Disclosure Form in accordance with the bidding documents. For bids of more than \$2,000,000, each bidder shall submit with each bid a disclosure of the subcontracts that have a subcontract value that is equal or greater than twenty percent of the total project bid or subcontracts that are greater than or equal to \$2,000,000. If that information is not available at the time of bid the bidder shall submit the "Subcontractor Disclosure Form" pages with MoDOT on or before 4:00 p.m. of the third business day after the bid opening date.
7. Submit the DBE Identification Submittal in accordance with the bidding documents for Federal Projects Only.
8. Alternate Pavements; to exercise this option, separate pay items, descriptions and quantities are included in the itemized proposal for each of the two alternates. The bidder shall bid only one of the two alternates and leave the contract unit price column blank for any pay item listed for the other alternate.

9. When submitting a bid, your bid will still come through with "red" folders. You should make sure that it is not the Schedule of Items folder or the Signature and Identity of Bidder folder. Click on the yellow checkmark (Check Bid) at the top and it will list any errors in the bid. To view itemized folders, click the Tree View. This will show the status of the individual folders.

Below is a list of common mistakes made by bidders leading to non-responsive bids. Please refer to the Standard Specifications for the appropriate procedures for completing and submitting a bid.

- a) Submitting a paper bid for a project
- b) Using a different bid bond form than the one provided
- c) Improper use of the Maximum Monetary Value Award Provision
-only used if bidding more than one project and should be in only one bid proposal
- d) Not obtaining a digital ID in advance of the letting
(obtaining a digital ID may take 5 business days)

All questions concerning the bid document preparation shall be directed to the Central Office - Design Division at (573) 751-2876. Project specific questions shall be directed to the project contact listed in the Job Special Provisions.

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Bid Bond*

Subcontractor Disclosure Form*

DBE Identification Submittal (Applies to Federal Projects Only) *

*These forms are also available on MoDOT's Website, www.modot.org under General Information on the Bid Opening Info page of the Contractor Resources site.

NOTICE TO CONTRACTORS

Electronic bids submitted through the Bid Express website for the proposed work will be received by the Missouri Highways and Transportation Commission until 11:00 o'clock a.m. (prevailing local time) on 05-19-17.

Bid bonds will be received at the office of the Secretary to the Commission in the Missouri Department of Transportation Central Office Building, 105 West Capitol Avenue, Jefferson City, Missouri; delivered by US Mail should be mailed to: Missouri Highways and Transportation Commission, Attention: State Design Engineer/Bid Bond, P.O. Box 270, Jefferson City, MO 65102 or delivered by parcel delivery services, (such as UPS, Fed Ex, DHL, etc.) should be shipped to Missouri Highways and Transportation Commission, Attention: State Design Engineer/Bid Bond, 105 West Capitol Avenue, Jefferson City, MO 65102.

(1) PROPOSED WORK: The proposed work, hereinafter called the work, includes:

****(1): Job J1P3023C Route I-29 HOLT County. Bridge rehabilitation at Davis Creek and abandoned railroad, near Mound City, the total length of improvement being 0.241 miles.

Combination bids will be Not Required on the Jobs listed above.

(2) COMPLIANCE WITH CONTRACT PROVISIONS: The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction, 2016," and "Missouri Standard Plans for Highway Construction, 2016", their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted. All questions concerning the bid document preparation shall be directed to the Central Office - Design Division at (573) 751-2876.

(3) PERIOD OF PERFORMANCE: If the bid is accepted, the bidder shall continuously and diligently prosecute the work in such order and manner as will ensure the completion of the work within the time specified in the Job Special Provisions in accordance with Sec 108.

(4) LIQUIDATED DAMAGES: The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages as specified in the Job Special Provisions to be recovered in accordance with Sec 108.

(5a) ACCEPTANCE OF PROVISION FOR PRICE ADJUSTMENT FOR FUEL: Bidders have the option to accept the provision for Price Adjustment for Fuel in accordance with Sec. 109.14. The bidder must select "Yes" for those items of work in which they choose to accept the provision. No price adjustments will be made, due to fuel price changes, for bidders who do not accept this provision. This provision does not apply to Seal Coat.

EXCAVATION PRODUCTION
ASPHALT PAVING PRODUCTION AND HAULING
CONCRETE PAVING PRODUCTION AND HAULING
AGGREGATE BASE HAULING

(5b) ACCEPTANCE FOR PROVISION FOR ASPHALT CEMENT PRICE INDEX, SEAL COAT PRICE INDEX, UNDERSEAL PRICE INDEX, OR POLYMER MODIFIED EMULSION MEMBRANE PRICE INDEX:

Bidders have the option to accept the provision for Asphalt Cement Price Index, Seal Coat Price Index, Underseal Price Index, and/or Polymer Modified Emulsion Membrane Price Index in accordance with the General Provisions. The bidder must mark each box below if they choose to accept the provision. No price adjustments will be made, due to asphalt price changes, for bidders who do not accept this provision.

ASPHALT CEMENT
SEAL COAT
UNDERSEAL
POLYMER MODIFIED EMULSION MEMBRANE

(6) MAXIMUM MONETARY VALUE OF AWARDS ACCEPTED THIS BID OPENING: Bidders have the option to specify the maximum monetary value of awards that they will accept for the total of all bids they have submitted in the bid opening, Sec 102.7.2. If the bidder is submitting only one bid, or if the bidder does not want to specify a maximum monetary value for submitted bids, this section should not be completed. If a submitted bid upon correction exceeds the indicated maximum monetary amount, the bid may be

declared non-responsive. If a bidder's submitted bids show different values for the maximum monetary value, the lowest value will govern.

MAXIMUM MONETARY VALUE OF AWARDS ACCEPTED THIS BID OPENING

(Note: this amount should be entered in only one of the bids for this bid opening)

(7) COMBINATION BIDS: (Applies only if combination bids are specified. See cover and/or notice to contractor(s).) Combination bids will be in accordance with Sec 102.12. By selecting "ALL OR NONE", the bidder desires to combine all projects in accordance with Sec 102.12.2.1.

(8) BID GUARANTY: The bidder shall submit a Bid Guaranty meeting the requirements of Section 102 of the Missouri Standard Specifications for Highway Construction. MoDOT's bid bond and annual bid bond forms are available on MoDOT's website.

(9a) CERTIFICATIONS FOR FEDERAL JOBS: (Applies to Federal Projects only.) By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec.102.18.3 (regarding anti-collusion), and Sec.102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec.108.13, the Commission may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

(9b) CERTIFICATIONS FOR STATE JOBS: (Applies to State Projects only.) By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.2 (regarding diseligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.5 (regarding Missouri Domestic Products Procurement Act). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the Commission may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the Commission may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

By selecting "No" the bidder REFUSES to make one or more certifications for the above items 9a or 9b. The bidder shall provide a statement of explanation for the refusal in the space below or by fax to the Design Division @ Fax no. 573-522-2281.

(10) ANTIDISCRIMINATION: The Commission hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

(11) PREFERENCE TO MISSOURI FIRMS IN AWARDING OF CONTRACTS: (Applies to State Projects only.) The bidder's attention is directed to Section 34.355 RSMo Supp 2000, et seq, which requires that preference be given in awarding contracts to firms, corporations, or individuals doing business as Missouri firms, corporations, or individuals, or which maintain Missouri offices or places of business, when the quality of performance promised is equal, or better, and the price quoted is the same, or less.

The law also requires that a contractor or bidder domiciled outside the state of Missouri shall be required, in order to be the successful bidder, to submit a bid which is the same percent less than the lowest bid submitted by a responsible contractor or bidder domiciled in Missouri as would be required for the Missouri domiciled contractor or bidder to succeed over the bidding contractor or bidder domiciled outside Missouri in a like contract or bid being let in his state. A contractor or bidder domiciled outside Missouri domiciliary shall also be required to submit an audited financial statement as would

be required of a Missouri domiciled contractor or bidder on a like contract or bid being let in the domiciliary state of that contractor or bidder.

For firms, corporations or individuals domiciled outside the state of Missouri, it is requested they submit the following information:

List the state of domicile

List address of all Missouri offices or places of business

I acknowledge that I have read, understand and completed the above Contract Provisions.

(12) Signature and Identity of Bidder

BY SUBMITTING THIS BID ELECTRONICALLY, I HEREBY ACKNOWLEDGE THAT ALL REQUIREMENTS INCLUDED IN THE HARD COPY REQUEST FOR BID, AND AMENDMENTS ARE A PART OF THIS BID AND CONTRACT.

*** AN ELECTRONIC PROPOSAL SUBMITTED AND SIGNED WITH A DIGITAL ID, UNDER THE PROVISION OF THE MISSOURI DEPARTMENT OF TRANSPORTATION, WILL BE CONSIDERED VALID AND BINDING. ***

THE BIDDER CERTIFIES THAT THE BIDDER AND ITS OFFICIALS, AGENTS, AND EMPLOYEES HAVE NEITHER DIRECTLY NOR INDIRECTLY ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THIS BID, AND THAT THE BIDDER INTENDS TO PERFORM THE WORK WITH ITS OWN BONAFIDE EMPLOYEES AND SUBCONTRACTORS, AND DID NOT BID FOR THE BENEFIT OF ANOTHER CONTRACTOR.

THE BIDDER CERTIFIES THAT THE BIDDER'S COMPANY KNOWINGLY EMPLOYS ONLY INDIVIDUALS WHO ARE AUTHORIZED TO WORK IN THE UNITED STATES IN ACCORDANCE WITH THE APPLICABLE FEDERAL AND STATE LAWS AND ALL PROVISIONS OF MISSOURI EXECUTIVE ORDER NO. 07-13 FOR CONTRACTS WITH THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION, ACTING THROUGH THE MISSOURI DEPARTMENT OF TRANSPORTATION.

THE BIDDER ACKNOWLEDGES THAT THIS IS AN UNSWORN DECLARATION, EXECUTED UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND/OR FALSE DECLARATION UNDER THE LAWS OF MISSOURI, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS. THE FAILURE TO PROVIDE THIS CERTIFICATION IN THIS BID MAY MAKE THIS BID NON-RESPONSIVE, AND CAUSE IT TO BE REJECTED.

Select "No" ONLY if the bidder REFUSES to make this certification. The bidder may provide an explanation for the refusal with this submittal in the space below or by fax to the Design Division @ fax no. 573-522-2281.

USE OF ANOTHER PERSON'S DIGITAL ID IN THIS BIDDING PROCESS VIOLATES THE LAWS OF MISSOURI.

I acknowledge that I have read, understand and completed the above Electronic Bid Submission Certification.

DBE CERTIFICATION

(13) Trainees: (Applies to Federal Projects only) The number of trainee hours provided under this contract will be 0 slots at 1000 hours per slot or 0 hours.

(14) Bidder's Certification for DBE Program and Contract Goal (Applies to Federal Projects Only.)

(A) DBE Contract Goal: By submitting this bid, the bidder certifies that the bidder is familiar with the DBE Program Requirements in the General Provisions. The contract goal for the amount of work to be awarded is 8.00% of the total federal project price. The bidder shall also complete the DBE Identification Submittal form in accordance with the General Provisions. This form is available on MoDOT's Website, www.modot.org under General Information on the Bid Opening Info page of the Contractor Resources site.

(B) DBE Participation: The bidder certifies that it will utilize DBE's as follows: % OF TOTAL FEDERAL CONTRACT

NOTE: Bidder must fill in the above box. If no percentage is specified, the bidder certifies that it agrees to and will comply with the contract goal. If a percentage below the contract goal is specified, then the bidder must submit complete documentation of good faith efforts to met the DBE contract goal, immediately below.

The DBE Identification Submittal form will be submitted via

(C) Certification of Good Faith Efforts to Obtain DBE Participation: By submitting its signed bid, the bidder certifies under penalty of perjury and other provisions of law, that the bidder took each of the following steps to try to obtain sufficient DBE participation to achieve the Commission's proposed DBE Contract Goal:

(15) ITEMIZED BID: The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 170519-A01
 Letting Date: 05-19-17
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
Section 0001 Roadway Items - J1P3023C				
Alt Group				
0010	2013000 CLEARING AND GRUBBING	2.000 ACRE		
0020	2022010 REMOVAL OF IMPROVEMENTS	LUMP	LUMP	
0030	2153000 SHAPING SLOPES, CLASS III	14.000 100F		
0040	6072010 WOVEN WIRE FENCE	407.000 LF		
0050	6122019 IMPACT ATTENUATOR (19 SAND BARRELS)	2.000 EA		
0060	6122020 REPLACEMENT SAND BARREL	8.000 EA		
0070	6122030 IMPACT ATTENUATOR (RELOCATION)	2.000 EA		

State of MISSOURI
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 Schedule of Items

Contract ID: 170519-A01
 Letting Date: 05-19-17
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0080	6123000A TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)	EA 2.000				
0090	6161005 CONSTRUCTION SIGNS	SQFT 1,813.000				
0100	6161008 ADVANCED WARNING RAIL SYSTEM	EA 8.000				
0110	6161009 FLAG ASSEMBLY	EA 8.000				
0120	6161010 RELOCATED SIGNS	SQFT 816.000				
0130	6161025 CHANNELIZER (TRIM LINE)	EA 94.000				
0140	6161030 TYPE III MOVEABLE BARRICADE	EA 12.000				
0150	6161040 FLASHING ARROW PANEL	EA 2.000				

State of MISSOURI
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Contract ID: 170519-A01
 Letting Date: 05-19-17
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0160	6161055 SEQUENTIAL FLASHING WARNING LIGHT	EA 30.000				
0170	6161098A CHANGEABLE MESSAGE SIGN WITHOUT COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED	EA 4.000				
0180	6175010A RELOCATING TEMPORARY TRAFFIC BARRIER	LF 2,202.000				
0190	6181000 MOBILIZATION	LUMP	LUMP			
0200	6189902 MISC. ADDITIONAL MOBILIZATION FOR SEEDING	EA 4.000	600.00000		2,400.00	
0210	8051000A SEEDING - COOL SEASON MIXTURES	ACRE 2.500				
0220	8061005 ROCK DITCH CHECK	LF 144.000				

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Contract ID: 170519-A01
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 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0230	8061016 SEDIMENT REMOVAL	26.000 CUYD				
0240	8061019 SILT FENCE	2,158.000 LF				
0250	8069928 MISC. WATER POLLUTION CONTROL MANAGER	42.000 WK				
	Section 0001 Total					2,400.00

Section 0002 Alternate A - F111 Under Bride A1768 Items - J1P30

Alt Group AA1

0260	2031000 CLASS A EXCAVATION	192.000 CUYD				
0270	2035500 EMBANKMENT IN PLACE	23,997.000 CUYD				
0280	2036000 COMPACTING EMBANKMENT	123.000 CUYD				
0290	2129900 MISC. SHOULDER GRADING	28.000 100F				

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 Letting Date: 05-19-17
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0300	2164000 CURB REMOVAL	624.000 LF				
0310	3040506 TYPE 5 AGGREGATE FOR BASE (6 IN. THICK)	2,397.000 SQYD				
0320	3105002 GRAVEL (A) OR CRUSHED STONE (B)	44.000 TONS				
0330	4019905 MISC. OPTIONAL SHOULDER	2,396.700 SQYD				
0340	4030116 ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125B MIX)	943.200 TONS				
0350	4030217 ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP190B MIX)	439.200 TONS				
0360	4071005 TACK COAT	1,160.000 GAL				
0370	6173600D TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED / RETAINED	2,202.000 LF				

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Contract ID: 170519-A01

Letting Date: 05-19-17

Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0380	6205301B PREFORMED REMOVABLE MARKING TAPE 4 IN., WHITE	8,985.000 LF				
0390	6205303B PREFORMED REMOVABLE MARKING TAPE 4 IN., YELLOW	7,828.000 LF				
0400	6205902A 6 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS	8,130.000 LF				
0410	6205903A 6 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS	6,405.000 LF				
0420	6205906A 12 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS	938.000 LF				
0430	6207001 PAVEMENT MARKING REMOVAL	21,228.000 LF				
0440	6224010 MODIFIED COLDMILLING (DEPTH TRANSITIONS)	3,256.000 SQYD				

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 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0450	6261000A BITUMINOUS SHOULDER RUMBLE STRIP	43.000 STA				
	Section 0002 Total				0.00	

Section 0003 Alternate B - Remove Bridge A1768 - J1P3023C

Alt Group AA2

0460	2031000 CLASS A EXCAVATION	481.000 CUYD				
0470	2035500 EMBANKMENT IN PLACE	22,631.000 CUYD				
0480	2036000 COMPACTING EMBANKMENT	346.000 CUYD				
0490	2037075 COMPACTING IN CUT	1.100 STA				
0500	2129900 MISC. SHOULDER GRADING	30.000 100F				
0510	2160500 REMOVAL OF BRIDGES	LUMP	LUMP			

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 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0520	3040506 TYPE 5 AGGREGATE FOR BASE (6 IN. THICK)	4,213.000 SQYD				
0530	3105002 GRAVEL (A) OR CRUSHED STONE (B)	3.000 TONS				
0540	4010150 TYPE A2 SHOULDER	331.900 SQYD				
0550	4019905 MISC. OPTIONAL PAVEMENT	1,244.800 SQYD				
0560	4019905 MISC. OPTIONAL SHOULDER	2,635.600 SQYD				
0570	4030116 ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125B MIX)	98.800 TONS				
0580	4071005 TACK COAT	100.000 GAL				
0590	6173600D TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED / RETAINED	1,600.000 LF				

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 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0600	6173700B TEMPORARY TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED / RETAINED	384.000 LF				
0610	6173706 TEMPORARY TRAFFIC BARRIER STIFFNESS TRANSITION SECTION, CONTRACTOR FURNISHED / RETAINED	436.000 LF				
0620	6205301B PREFORMED REMOVABLE MARKING TAPE 4 IN., WHITE	9,253.000 LF				
0630	6205303B PREFORMED REMOVABLE MARKING TAPE 4 IN., YELLOW	8,045.000 LF				
0640	6205902A 6 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS	8,347.000 LF				
0650	6205903A 6 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS	6,580.000 LF				

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Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0660	6205906A 12 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS	938.000 LF				
0670	6207001 PAVEMENT MARKING REMOVAL	21,986.000 LF				
0680	6224010 MODIFIED COLDMILLING (DEPTH TRANSITIONS)	1,022.000 SQYD				
0690	6269909 MISC. OPTIONAL SHOULDER RUMBLE STRIP	35.700 STA				
	Section 0003 Total					0.00

Section 0004 Guardrail/Guard Cable Items - J1P3023C

Alt Group

0700	6061060 MGS GUARDRAIL	938.000 LF				
0710	6061069 MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB)	4.000 EA				

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Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0720	6063014 TYPE A CRASHWORTHY END TERMINAL (MASH)	4.000 EA				
Section 0004 Total						0.00

Section 0005 Bridge A17674 Items - J1P3023C

Alt Group

0730	2169904 MISC. REMOVAL OF EXISTING DECK REPAIRS	500.000 SQFT				
0740	2169904 MISC. REMOVAL OF EPOXY POLYMER OVERLAY	9,614.000 SQFT				
0750	5052000 LATEX MODIFIED CONCRETE WEARING SURFACE	1,068.000 SQYD				
0760	7034600 CURB BLOCKOUT	458.000 LF				
0770	7040106 FULL DEPTH REPAIR	100.000 SQFT				
0780	7040109 TOTAL SURFACE HYDRO DEMOLITION	1,068.000 SQYD				

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Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0790	7040113 CLEAN AND EPOXY SEAL	1,210.000 SQFT				
0800	7049907 MISC. MONOLITHIC DECK REPAIRS	15.000 CUYD	600.00000		9,000.00	
	Section 0005 Total					9,000.00

Section 0006 Bridge A17675 Items - J1P3023C

Alt Group

0810	2169904 MISC. REMOVAL OF EXISTING DECK REPAIRS	500.000 SQFT				
0820	2169904 MISC. REMOVAL OF EPOXY POLYMER OVERLAY	9,614.000 SQFT				
0830	5052000 LATEX MODIFIED CONCRETE WEARING SURFACE	1,068.000 SQYD				
0840	7034600 CURB BLOCKOUT	458.000 LF				
0850	7040106 FULL DEPTH REPAIR	100.000 SQFT				

State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 170519-A01
 Letting Date: 05-19-17
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cts	Dollars	Ct
0860	7040109 TOTAL SURFACE HYDRO DEMOLITION	1,068.000 SQYD				
0870	7040113 CLEAN AND EPOXY SEAL	1,210.000 SQFT				
0880	7049907 MISC. MONOLITHIC DECK REPAIRS	9.000 CUYD	600.00000		5,400.00	
	Section 0006 Total				5,400.00	
	Bid Total				16,800.00	

Contract Id: 170519-A01
Vendor Name:

Vendor Number:

SUBCONTRACTOR DISCLOSURE

The bidder shall submit with this bid any subcontracts that meet the requirements of Sec 102. List below the name of each subcontractor that will be furnishing labor or labor and materials, the category of work that the subcontractor will be performing (e.g. asphalt, concrete, earthwork, bridges...), and the dollar value of the subcontract. Select "NONE" if there are no subcontractors that need to be disclosed.

If the information is not available at the time of bid the bidder shall submit the "Subcontractor Disclosure Form", located on MoDOT's website, on or before 4:00 p.m. of the third business day after the bid opening date, directly to the Design Division, Missouri Department of Transportation, 105 W. Capitol Avenue, P.O. Box 270, Jefferson City, Missouri 65102-0270. Telefax transmittal to MoDOT will be permitted at fax no. 573-522-2281 or e-mailed to subcontractor.disclosure@modot.mo.gov. The complete signed original documents do not need to be mailed to MoDOT, but the bidder shall have it available if requested by the Design Division or the engineer.

SUBCONTRACTOR NAME	DOLLAR VALUE OF SUBCONTRACT	CATEGORY OF WORK
--------------------	--------------------------------	------------------

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we as principal and and as surety, are held and firmly bound unto the state of Missouri (acting by and through the Missouri Highways and Transportation Commission) in the penal sum of 840.00 Dollars to be paid to the commission to be credited to the state road fund, the principal and surety binding themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this.

THE CONDITION OF THIS OBLIGATION is such that WHEREAS the principal is submitting herewith a bid to the commission on

route(s)
in County(ies)
project(s)

for construction or improvement of state highway as set out in said bid;

NOW THEREFORE, if the commission shall accept the bid of the principal and if the principal shall properly execute and deliver to the commission the contract, contract bond, and evidence of insurance coverage in compliance with the requirements of the bid, the specifications, and the provisions of section 227.100 RSMo, to the satisfaction of the commission, then this obligation shall be void and of no effect, otherwise to remain in full force and effect.

In the event the said principal shall, in the judgment of the commission, fail to comply with any requirement as set forth in the preceding paragraph, then the state of Missouri, acting by and through the commission, shall immediately and forthwith be entitled to recover the full penal sum above set out, together with court costs, attorney's fees, and any other expense of recovery.

The principal and surety hereby certify that the document is the original or a verbatim copy of the bid bond form furnished by the Commission, in accordance with Sec 102.9 of the Missouri Standard Specifications for Highway Construction.

This Bid contains 0 amendment files



Job No.: J1P3023C
 Route: I-29
 County: Holt


JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

(Job Special Provisions shall prevail over General Special Provisions whenever in conflict therewith.)

- A. General
- B. Contract Liquidated Damages
- C. Work Zone Traffic Management Plan (WZTMP)
- D. Utilities
- E. Project Contact for Contractor/Bidder Questions
- F. Fertilizing, Seeding, and Mulch
- G. Supplemental Revisions
- H. Emergency Provisions and Incident Management
- I. Alternate Bidding Requirements
- J. Embankment in Place
- K. Optional Pavements
- L. Optional Shoulder Rumble Strip
- M. Additional Mobilization for Seeding
- N. Contractor Quality Control
- O. DBE Program Requirements
- P. Electronic Information for Bidder's Automation
- Q. Restrictions for Migratory Birds
- R. Slurry and Residue Produced During Surface Treatment of PCCP and Bridge Decks
- S. Stormwater Compliance Requirements
- T. Shoulder Grading
- U. Optional Shoulders

ADDITIONAL INFORMATION

Asbestos Survey Report

 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636</p>
	<p>If a seal is present on this sheet, JSP's have been electronically sealed and dated.</p>
	<p>JOB NUMBER: J1P3023C HOLT COUNTY, MO DATE PREPARED: 03/29/2017</p>
	<p>ADDENDUM DATE:</p>
<p>Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: A-U</p>	

JOB
SPECIAL PROVISION

A. GENERAL - FEDERAL JSP-09-02B

1.0 Description. The Federal Government is participating in the cost of construction of this project. All applicable Federal laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate Federal Agency in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations, and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. State Wage Rates, Information on the Required Federal Aid Provisions, and the current Federal Wage Rates are available on the Missouri Department of Transportation web page at www.modot.org under "Bidding". Effective Wage Rates will be posted 10 days prior to the applicable bid opening. These supplemental bidding documents have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

1.2 The following documents are available on the Missouri Department of Transportation web page at www.modot.org under "Business"; "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to October 2016 Missouri Standard Plans
For Highway Construction

These supplemental bidding documents contain all current revisions to the published versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

B. CONTRACT LIQUIDATED DAMAGES JSP-13-01B

1.0 Description. Liquidated Damages for failure or delay in completing the work on time for this contract shall be in accordance with Sec 108.8. The liquidated damages include separate amounts for road user costs and contract administrative costs incurred by the Commission.

2.0 Period of Performance. Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Job No.: J1P3023C
Route: I-29
County: Holt

Notice to Proceed: July 10, 2017
Completion Date: December 1, 2017

2.1 Calendar Days. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Job Number	Calendar Days	Daily Road User Cost
J1P3023C	135	\$3,200

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified completion date or calendar days.

4.0 Liquidated Damages for Road User Costs. Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged road user costs in accordance with Sec 108.8 in the amount specified in Section 2.1 for each calendar day, or partial day thereof, that the work is not fully completed. These damages are in addition to the contract administrative damages and any other damages as specified elsewhere in this contract.

C. WORK ZONE TRAFFIC MANAGEMENT PLAN (WZTMP) JSP-02-06D

1.0 Description. Work zone traffic management shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

1.1 Work Zone Specialist (WZS). The Traffic Management Plan shall name an individual, either employed by the contractor or hired by the contractor, to act as the Work Zone Specialist (WZS) throughout the entirety of the project. Any change in personnel for the WZS shall be submitted in written form to the engineer. This individual will be a trained Work Zone Specialist in accordance with Standard Specifications Section 616.3.3 and will be directly involved with daily traffic management and traffic management planning. It will be the responsibility of the WZS to coordinate daily traffic management with the engineer. The WZS shall maintain daily contact with the engineer either on-site or via telecommunication.

1.2 Maintaining Work Zones and Work Zone Reviews. The WZS shall maintain work zones on a daily basis to ensure safety to the traveling public and the workers; this includes long term work zones that have devices and/or roadway conditions that need to be maintained. If the engineer or a designated MoDOT employee (identified at the preconstruction meeting) notifies the WZS of any safety or traffic delay concerns in the work zone, the WZS shall promptly inspect and work to provide a solution to correct the situation. The WZS shall have personnel reviewing traffic control devices daily and any temporary lane drop traffic control devices for initial set up and during the operation. Missing, damaged or over-turned traffic control devices shall typically be corrected without the need for direction by the engineer. The WZS is responsible to assure all traffic control devices are maintained in accordance with EPG

standards. The WZS is responsible to ensure the work zone is operated within the hours specified by the engineer and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. The WZS and engineer shall submit one joint weekly technical review of work zone operations identifying any concerns present and the corrective actions taken. Reviews may be subjected to unannounced inspections by the engineer to corroborate the validity of the ratings. The engineer and WZS will be notified of the results.

1.3 Work Zone Conflict Resolution. Any conflict resolution shall be in accordance with Standard Specifications Section 616.4. Failure to make corrections on time may result in the engineer suspending work. The suspension will be non-excusable and non-compensable regardless if road user costs are being charged for closures.

2.0 Traffic Management Schedule.

2.1 Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

2.2 The contractor shall request permission at least two working days prior to lane closures or shifting traffic onto detours, and 14 calendar days prior to the imposition of height, width or weight restrictions. This is to ensure closures do not conflict with other work within the zone of influence and the work zone information on the MoDOT's website can remain real-time.

2.3 The engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.

2.4 In order to ensure minimal traffic interference, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.5 Traffic Congestion. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of **15 minutes** to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable. The contractor may refer to the Work Zone Analysis Spreadsheet found in the electronic deliverables under the MoDOT Online Plans Room for detailed information on traffic delays.

2.5.1 Traffic Safety.

2.5.1.1 Where traffic queues routinely extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall extend the advance warning area, as approved by the engineer.

2.5.1.2 When a traffic queue extends to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway due to non-recurring congestion, the contractor shall deploy a means of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1000 feet and no more than 0.5 mile in advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

3.0 Work Hour Restrictions.

3.1 There are six major holiday periods shown below. All lanes shall be scheduled to be open to traffic during these holiday periods, from 12:00 noon on the last working day proceeding the holiday until 9:00 a.m. on the first working day subsequent to the holiday.

Memorial Day
Independence Day
Labor Day
Thanksgiving
Christmas
New Year' Day

3.2 The contractor shall not perform any construction operation on the roadway, including the hauling of material within the project limits, during restricted periods, holiday periods or other special events specified in the contract documents.

3.3 The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$1,000 per 15 minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

3.3.1 The said liquidated damages specified will be assessed regardless if it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract.

4.0 Detours and Lane Closures.

4.1 The contractor shall provide changeable message signs (CMS) notifying motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. The CMS shall be capable of communication with the Transportation Management Center (TMC), if applicable, prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. Permanent dynamic message signs (DMS) owned and operated by MoDOT may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

4.2 At least one lane of traffic in each direction shall be maintained at all times except for brief intervals of time required when the movement of the contractor’s equipment will seriously hinder the safe movement of traffic. Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer.

5.0 Basis of Payment. No direct payment will be made to the contractor to recover the cost of equipment, labor, materials or time required to fulfill the above provisions, unless specified elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Standard Specifications Section 616.

D. UTILITIES

1.0 For informational purposes only, the following is a list of names, addresses, and telephone numbers of the known utility companies in the area of the construction work for this improvement:

<u>Utility Name</u>	<u>Known Required Adjustment</u>
City of Mound City P.O. Box 215 Mound City, MO 64470 Phone: (660) 442-3447	None
Empire District Gas 601 Wilson Industrial Road Maryville, MO 64468 Phone: (660) 582-6331	None
KCP&L P.O. Box 418679 Kansas City, MO 64141-9679 Phone: (816) 471-5275	None

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Lightcore, a CenturyLink Company None
 Brian Cornish
 600 New Century Parkway, 4th Floor
 New Century, KS 66031-1101
 Phone: (913) 390-2746
 Email: brian.cornish@centurylink.com

1.1 The existence and approximate location of utility facilities known to exist, as shown on the plans, are based upon the best information available to the Commission at this time. This information is provided by the Commission "as-is" and the Commission expressly disclaims any representation or warranty as to the completeness, accuracy, or suitability of the information for any use. Reliance upon this information is done at the risk and peril of the user, and the Commission shall not be liable for any damages that may arise from any error in the information. It is, therefore, the responsibility of the contractor to verify the above listing information indicating existence, location and status of any facility. Such verification includes direct contact with the listed utilities.

E. PROJECT CONTACT FOR CONTRACTOR/BIDDER QUESTIONS

All questions concerning this project during the bidding process shall be forwarded to the project contact listed below.

Wes Moore, Project Contact
 Northwest District
 3602 N. Belt Highway
 St. Joseph, MO 64506

Telephone: (816) 387-2499
 Email: wesley.moore@modot.mo.gov

All questions concerning the bid document preparation can be directed to the Central Office – Design at (573) 751-2876.

F. FERTILIZING, SEEDING, AND MULCH

1.0 In accordance with Section 801, 802, and 805, the following shall be applied at the rate specified below, to all disturbed areas:

<u>Pounds per Acre</u>			<u>Effective</u>
<u>Nitrogen</u>	<u>Phos.</u>	<u>Potash</u>	<u>Neutralizing</u>
<u>(N)</u>	<u>(P₂O₅)</u>	<u>(K₂O)</u>	<u>Material</u>
80	240	80	0

<u>Seeding Mixture</u>	<u>Pounds Pure Live Seed per Acre</u>
Smooth Brome	36
Annual Ryegrass	8
Birdsfoot Trefoil	6
Total	50

Mulch: Vegetative w/Overspray

2.0 Basis of Payment. Seeding mixtures shall be paid for under Item No. 805-10.00A, Seeding-Cool Season Mixtures, per acres. No direct payment will be made for the liming, fertilizing, or mulching of areas to be seeded.

G. SUPPLEMENTAL REVISIONS JSP-09-01W

Insert Sec 109.15, Sec 109.16 and Sec 109.17, subsequent section renumbered accordingly:

109.15 Seal Coat Price Index. Adjustments will be made to the payments due the contractor for Seal Coat placed in accordance with Sec 409 of the Standard Specifications. Adjustments will be calculated in accordance with Asphalt Cement Price Index of the General Provisions, except as defined herein.

109.15.1 Basis of Payment. To determine the adjustment for any material specified in this provision the following formula will be used.

$$A = B \times (0.68 \times 8.58 / 2000) \times (D - E)$$

Where:

- A = adjustment for Seal Coat placed during the index period
- B = gallons of seal coat placed during the index period
- D = average index price at the beginning of the period
- E = average index price at the time of bid
- 0.68 = factor to reduce volume of emulsion to AC only
(use average specific gravity of 1.03 for seal coat)

109.15.2 Optional. This provision is optional. If the bidder wishes to be bound by this provision, the bidder shall execute the acceptance form in the Bid for the Asphalt Cement Price Index. Acceptance of this provision will apply to both the Asphalt Cement Price Index and Seal Coat Price Index. Failure by the bidder to execute the acceptance form will be interpreted to mean election to not participate in the Asphalt Cement Price Index or Seal Coat Price Index.

109.16 Asphalt Underseal Price Index. Adjustments will be made to the payments due the contractor for Asphalt underseal placed in accordance with Sec 625 of the Standard Specifications. Adjustments will be calculated in accordance with Asphalt Cement Price Index of the General Provisions, except as defined herein.

109.16.1 Basis of Payment. To determine the adjustment for any material specified in this provision the following formula will be used.

$$A = B \times (8.66/2000) \times (D - E)$$

Where: A = adjustment for asphalt underseal placed during the index period
B = gallons of asphalt underseal placed during the index period
D = average index price at the beginning of the period
E = average index price at the time of bid
(use average specific gravity of 1.04 for underseal)

109.16.2 Optional. This provision is optional. If the bidder wishes to be bound by this provision, the bidder shall execute the acceptance form in the Bid for the Seal Coat Price Index. Failure by the bidder to execute the acceptance form will be interpreted to mean election to not participate in the Seal Coat Price Index.

109.17 Polymer Modified Emulsion Membrane Price Index. Adjustments will be made to the payments due the contractor for Polymer Modified Emulsion Membrane placed in accordance with Sec 413.30. Adjustment will be calculated in accordance with the Supplemental Asphalt Price Adjustment except as defined herein.

109.17.1 Basis of Payment. To determine the adjustment for any material specified in this provision the following formula will be used.

$$A=B \times (0.9/2000) \times (D - E)$$

Where: A = adjustment for membrane placed during the index period
B = square yards of membrane placed during the index period
D = average index price at the beginning of the period
E = average index price at time of bid

109.17.2 Optional. This provision is optional. If the bidder wishes to be bound by the provision, the bidder shall execute the acceptance form in the Bid for Polymer Modified Emulsion Membrane Price Index. Failure by the bidder to execute the acceptance form will be interpreted to mean election not to participate in the Polymer Modified Emulsion Membrane Price Index.

Delete Sec 403.2.5.2 and substitute the following:

403.2.5.2 Fibers. A fiber additive shall be used as a stabilizer in SMA Mixtures. Fibers shall be uniformly distributed by the end of the plant mixing process. The dosage rate for fibers shall be no less than 0.3 percent by weight of the total mixture for cellulose and no less than 0.4 percent by weight for mineral fibers.

Amend Sec 620.10.3.1.1.1, and 620.10.3.1.1.2 to include the following:

620.10.3.1.1.1 Type 1 Preformed Marking Tape in Lieu of Type 2. Type 1 Preformed Pavement Marking Tape will be allowed in lieu of Type 2 Preformed Marking Tape (Grooved) at no additional cost to the Commission. This work shall be in accordance with Sec 620 and accompanying provisions except as modified herein.

620.10.3.1.1.2 Construction Requirements. Grooving will not be required when Type 1 Preformed Marking Tape is used.

Delete Sec 606.30.4 & 606.30.5 and substitute the following:

606.30.4 Method of Measurement. Measurement for crashworthy end terminals will be made for each unit assembled, installed and complete in place. Grading for crashworthy end terminals will be measured in accordance with [Sec 203](#) when roadway and drainage excavation is included in the contract, otherwise grading will be measured in accordance with Shaping Slopes, Class III or as directed on plans.

606.30.5 Basis of Payment. The accepted quantities of Type A, B C, D and E crashworthy end terminals, complete in place, will be paid for at the contract unit price. Payment will be considered full compensation for complete installation including any backup assemblies or other items necessary for proper installation of the end terminal or crash cushion as required. Grading for end terminals will be paid for at the contract unit price for roadway and drainage excavation if included in the contract; otherwise it will be paid for as Shaping Slopes, Class III. If the contractor elects to use a flared Type A crashworthy end terminal, additional embankment as shown on the plans shall be provided at the contractor's expense.

Insert Sec 620.80 by to including the following:

SECTION 620.80 CONTRAST PAVEMENT MARKINGS

620.80.1 Description. This work shall consist of furnishing and installing black contrasting pavement marking for intermittent markings (skips), dotted lines and solid intersection lane lines on new, and newly ground concrete surfaces. This work shall be in accordance with Sec 620 and accompanying provisions except as modified herein

620.80.2 Material. The black contrast marking shall be compatible with the white pavement marking material specified in the plans.

620.80.3 Construction Requirements.

620.80.3.1 The Contrast markings shall be accomplished by placing the black pavement marking according to manufacturer's recommendations.

620.80.3.2 The white marking shall be centered within the black marking such that there will be a 1.5 inch border of black on both sides of the white marking. Tolerances for the width and length of the black and white markings shall be in accordance with Sec 620.2.4.2.

620.80.4 Basis of Payment. There will be no direct payment for compliance with the requirements of this provision.

Delete Sec 1048.10.1.1 and substitute the following:

1048.10.1.1 Application. Application shall be in accordance with the manufacturer's recommendations.

Delete Sec 1081.4.3.3.1 and substitute the following:

1081.4.3.3.1 Hazardous Waste Notification. The contractor shall submit a "Notification of Regulated Waste Activity" form to MDNR Hazardous Waste Program to obtain the EPA identification number. Requests shall be submitted as soon as hazardous waste is determined

or at least 30 days prior to shipping hazardous waste. The cost of obtaining the EPA identification number will be considered as part of the surface preparation cost and the engineer will subtract the cost from the contract. Hazardous waste shall not be shipped offsite until the EPA identification number has been received. The contractor will file the quarterly and annual hazardous waste reports in accordance with 10 CSR 25-5.262(2)(D)1 and will deactivate the EPA identification number upon contract completion. The contractor shall submit copies of all hazardous waste manifests and quarterly/annual reports to MoDOT's Environmental Section.

H. EMERGENCY PROVISIONS AND INCIDENT MANAGEMENT

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow through the job site, the contractor shall notify police or other emergency agencies immediately as needed. The area engineer's office shall also be notified when the contractor requests emergency assistance.

2.0 In addition to the 911 emergency telephone number for ambulance, fire or police services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol:	(816) 387-2345
Atchison Holt Ambulance District:	(660) 736-5216
Holt County Sheriff:	(660) 446-3300
Mound City Police Department:	(660) 442-3100
Mound City Rural Fire Protection District:	(660) 442-3515

2.1 This list is not all inclusive. Notification of the need for wrecker or tow truck services will remain the responsibility of the appropriate police agency.

2.2 The contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

3.0 No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials or time required to fulfill the above provisions.

I. ALTERNATE BIDDING REQUIREMENTS

1.0 Description. This work shall consist of constructing embankment under the existing bridge and asphaltic concrete resurfacing of the existing surface (Alternate A); or removing the existing bridge and constructing embankment, base and pavement (Alternate B). Work shall be done in accordance with the standard specifications or special provisions contained herein and in conformity with the lines, grades, thickness and typical cross-sections shown on the plans or as directed by the Engineer.

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1.1 Separate pay items, descriptions and quantities are included in the itemized proposal for each of the alternates. The bidder shall only bid one of the alternates and leave the contract unit price column blank for any pay item listed for any other alternate. If the bidder leaves any value in the unit price column for another alternate other than the one he is bidding, the bid will be rejected.

2.0 Basis of Payment. The accepted quantities of the chosen alternate and other associated items will be paid for at the unit price for each of the appropriate pay items included in the contract.

J. EMBANKMENT IN PLACE

1.0 Description. Embankment in place shall meet the requirements of Sec. 203 except as modified below.

1.1 Alternates A and B. In areas that are accessible for the placement of embankment, but where space limitations prevent the contractor from meeting the compaction requirements of Sec. 203, sand or material meeting the requirements of Sec. 214, Rock Fill, shall be substituted at no additional cost to the Commission.

1.2 Alternate A only. In areas inaccessible for the placement of embankment, flowable backfill shall be substituted at no additional cost to the Commission.

2.0 Construction Requirements for Flowable Backfill. To facilitate placement of the material, the contractor shall drill holes through the existing bridge deck, pump material into the void, and plug the holes in the bridge deck.

2.1 A minimum of two holes shall be drilled in the existing bridge deck per cell, for a total of at least fifty-six (56) holes per bridge. Each cell shall have one hole for pumping material and one for venting. The drilled holes shall be a maximum of 1-½ inches in diameter, drilled vertically and round. The Engineer reserves the right to modify the hole pattern.

2.2 The equipment and pumping methods shall be subject to the approval of the Engineer.

2.3 All drill tailings, spilled material, and other debris shall be cleaned up before the affected lane is opened to traffic.

2.4 After inspection and approval by the engineer, the drilled holes shall be filled flush with the surface of the pavement using a fast setting sand and cement mixture approved by the Engineer. The mortar for filling the holes shall be composed of one part cement and two parts fine aggregate, by volume, and only enough water to permit placing and packing of the mortar in the holes, or an approved commercial pre-mixed rapid set mortar or concrete may be used.

3.0 Basis of Payment. Payment will be made at the contract unit price for Item 203-55.00, Embankment in Place, per cubic yard. Payment will be considered full compensation for all labor, equipment, and material necessary to complete the described work.

K. OPTIONAL PAVEMENTS

1.0 Description. This work shall consist of a pavement composed of either Portland cement concrete or asphaltic concrete constructed on a prepared subgrade. This work shall be performed in accordance with the standard specifications and as shown on the plans or established by the engineer.

2.0 The quantities shown reflect the total square yards of pavement surface designated for each pavement type as computed and shown on the plans.

2.1 No additional payment will be made for quantities to construct the required 1:1 slope along the outside edge of the pavement (H.M.A. option), for quantities to construct the required Safety Edgesm along the inside edge of the pavement (H.M.A. and P.C.C.P. options), or for tack applied between lifts of asphalt.

2.2 No additional payment will be made for aggregate base quantities outside the limits of the final surface area as computed and shown on the plans. When A2 shoulders are specified, payment for aggregate base will be as shown on the plans.

2.3 The grading shown on the plans was designed for the thicker pavement option. For projects with grading in the contract, there will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for optional pavements.

2.4 The contractor shall comply with Sections 401 through 403 for the asphalt option and Sections 501 and 502 for the concrete option.

2.5 Pavement options composed of Portland cement concrete shall have contrast pavement marking for intermittent markings (skips), dotted lines, and solid intersection lane lines. The pavement markings shall be in accordance with Section 620. No additional payment will be made for the contrast pavement markings.

3.0 Method of Measurement. The quantities of concrete pavement will be measured in accordance with Section 502.14. The quantities of asphaltic concrete pavement will be measured in accordance with Section 403.22.

4.0 Basis of Payment. The accepted quantity of the chosen option will be paid for by the contract unit bid price for Item 401-99.05, Optional Pavement, per square yard.

L. OPTIONAL SHOULDER RUMBLE STRIP

1.0 Description. This work shall consist of milling shoulder rumble strips into bituminous or concrete pavements in accordance with section 626 and as shown on the plans or directed by the engineer.

2.0 Method of Measurement. Final measurement will not be made except as allowed by section 626.3.

3.0 Basis of Payment. The accepted quantity of shoulder rumble strips will be paid for by the contract unit price for Item 626-99.09, Optional Shoulder Rumble Strips, per 1/10 Station. Payment will be considered full compensation for all labor, equipment, and material necessary

to complete the described work, including loading, hauling, stockpiling and disposal of milled material; and any other incidental items.

M. ADDITIONAL MOBILIZATION FOR SEEDING NJSP-16-03

1.0 Description. This provision provides compensation for additional mobilization for seeding, as specified herein.

2.0 Additional Mobilization for Seeding. Additional mobilization to perform temporary or permanent seeding, beyond the initial occurrence, may be necessary as specified in Sec 806.50.2 and as required per terms of the SWPPP. Mobilization of all equipment, workers and materials necessary to perform seeding and mulching shall be considered included in this work.

2.1 Measurement of the number of occurrences authorized by the engineer to mobilize equipment onto the project to perform temporary or permanent seeding will be made per each occurrence, except for the initial occurrence and as specified herein. No measurement will be made for mobilization necessary to perform repair work to previously seeded areas or for mobilization necessary due to removal of equipment prior to completion of seeding all areas available for seeding, as determined by the engineer.

3.0 Basis of Payment. The accepted occurrences of Additional Mobilization for Seeding will be paid for under 618-99.02, Additional Mobilization for Seeding, at a fixed unit price of \$600 per each occurrence. Payment for the initial occurrence to mobilize for seeding, and any additional mobilization costs in excess of the fixed price, shall be considered completely covered under other items.

N. CONTRACTOR QUALITY CONTROL NJSP-15-42

1.0 The contractor shall perform Quality Control (QC) testing in accordance with the specifications and as specified herein. The contractor shall submit a Quality Control Plan (QC Plan) to the engineer for approval that includes all items listed in Section 2.0, prior to beginning work.

2.0 Quality Control Plan.

- (a) The name and contact information of the person in responsible charge of the QC testing.
- (b) A list of the QC technicians who will perform testing on the project, including the fields in which they are certified to perform testing.
- (c) A proposed independent third party testing firm for dispute resolution, including all contact information.
- (d) A list of Hold Points, when specified by the engineer.
- (e) The MoDOT Standard Inspection and Testing Plan (ITP). This shall be the version that is posted at the time of bid on the MoDOT website (www.modot.org/quality).

3.0 Quality Control Testing and Reporting. Testing shall be performed per the test method and frequency specified in the ITP. All personnel who perform sampling or testing shall be certified in the MoDOT Technician Certification Program for each test that they perform.

3.1 Reporting of Test Results. All QC test reports shall be submitted as soon as practical, but no later than the day following the test. Test data shall be immediately provided to the engineer upon request at any time, including prior to the submission of the test report. No payment will be made for the work performed until acceptable QC test results have been received by the engineer and confirmed by QA test results.

3.1.1 Test results shall be reported on electronic forms provided by MoDOT. Forms and Contractor Reporting Excel2Oracle Reports (CRE2O) can be found on the MoDOT website. All required forms, reports and material certifications shall be uploaded to a Microsoft SharePoint® site provided by MoDOT, and organized in the file structure established by MoDOT.

3.2 Non-Conformance Reporting. A Non-Conformance Report (NCR) shall be submitted by the contractor when the contractor proposes to incorporate material into the work that does not meet the testing requirements or for any work that does not comply with the contract terms or specifications.

3.2.1 Non-Conformance Reporting shall be submitted electronically on the Non-Conformance Report form provided on the MoDOT Website. The NCR shall be uploaded to the MoDOT SharePoint® site and an email notification sent to the engineer.

3.2.2 The contractor shall propose a resolution to the non-conforming material or work. Acceptance of a resolution by the engineer is required before closure of the non-conformance report.

4.0 Work Planning and Scheduling.

4.1 Two-week Schedule. Each week, the contractor shall submit to the engineer a schedule that outlines the planned project activities for the following two-week period. The two-week schedule shall detail all work and traffic control events planned for that period and any Hold Points specified by the engineer.

4.2 Weekly Meeting. When work is active, the contractor shall hold a weekly project meeting with the engineer to review the planned activities for the following week and to resolve any outstanding issues. Attendees shall include the engineer, the contractor superintendent or project manager and any foreman leading major activities. This meeting may be waived when, in the opinion of the engineer, a meeting is not necessary. Attendees may join the meeting in person, by phone or video conference.

4.3 Pre-Activity Meeting. A pre-activity meeting is required in advance of the start of each new activity, except when waived by the engineer. The purpose of this meeting is to review construction details of the new activity. At a minimum, the discussion topics shall include: safety precautions, QC testing, traffic impacts, and any required Hold Points. Attendees shall include the engineer, the contractor superintendent and the foreman who will be leading the new activity. Pre-activity meetings may be held in conjunction with the weekly project meeting.

4.4 Hold Points. Hold Points are events that require approval by the engineer prior to continuation of work. Hold Points occur at definable stages of work when, in the opinion of the engineer, a review of the preceding work is necessary before continuation to the next stage.

4.4.1 A list of typical Hold Point events is available on the MoDOT website. Use of the Hold Point process will only be required for the project-specific list of Hold Points, if any, that the

engineer submits to the contractor in advance of the work. The engineer may make changes to the Hold Point list at any time.

4.4.2 Prior to all Hold Point inspections, the contractor shall verify the work has been completed in accordance with the contract and specifications. If the engineer identifies any corrective actions needed during a Hold Point inspection, the corrections shall be completed prior to continuing work. The engineer may require a new Hold Point to be scheduled if the corrections require a follow-up inspection. Re-scheduling of Hold Points require a minimum 24-hour advance notification from the contractor unless otherwise allowed by the engineer.

5.0 Quality Assurance Testing and Inspection. MoDOT will perform quality assurance testing and inspection of the work, except as specified herein. The contractor shall utilize the inspection checklists provided in the ITP as a guide to minimize findings by MoDOT inspection staff. Submittal of completed checklists is not required, except as specified in 5.1.

5.1 Inspection and testing required in the production of concrete for the project shall be the responsibility of the contractor. Submittal of the 501 Concrete Plant Checklist is required.

6.0 Basis of Payment. No direct payment will be made for compliance with this provision.

O. DBE PROGRAM REQUIREMENTS NJSP-15-41A

1.0 Description: Insert the following additional program provisions in the Disadvantaged Business Enterprise (DBE) Program Requirements of the General Provisions and Supplemental Specifications to Missouri Standard Specifications for Highway Construction.

13.6 Factors Used to Determine if a DBE Regular Dealer of Liquid Asphalt is Performing a CUF. The DBE must be responsible with respect to materials and supplies used on a contract perform all of the following, pursuant to 49 CFR § 26.55(c)(1) and 7 CSR 10-8.131:

- (a) Negotiating price.
- (b) Determining quality and quantity.
- (c) Ordering the material.
- (d) Paying for the material itself.
- (e) 30% of the work must be performed by the DBE's permanent employees (which does not include owner-operators or leased employees) or those hired by the DBE firm for the project from an independent source other than the prime contractor, such as a union hall. For at least 30% of the work the DBE's owned (not leased) equipment shall be used and the DBE must provide documentation that this owned equipment was used on the project as required by this provision.
- (f) For up to 70% of the remaining work the equipment used by the DBE must be by long term lease (at least one year) with another DBE or non-DBE but not the prime contractor. The DBE must have absolute priority over other businesses or entities to use the long term leased equipment and must display the name and identification number of the DBE.

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(g) The Contractor shall require DBE subcontractors to provide documentation in one of the following formats: bills of lading, hauling tickets, shippers manifest, and/or paid invoices. Regardless of the document format, the document(s) shall include the following information: name of the carrier, full name of the driver, driver ID number(s), truck and tanker ID or VIN number, and reflect the contract number, job number, county and route.

The contract number, job number, county and route can be reported through a consignee number or lift number, as long as the DBE Subcontractor has provided the consignee number, or lift number, along with project specific information which shall include contract number, job number, county and route.

The documentation must be submitted and generated by the DBE Subcontractor and be printed on letterhead or other similar documentation outlining the contact information for the DBE Subcontractor. In addition the documentation shall indicate the quantity and amount invoiced to the prime contractor (Such as an invoice). **“MoDOT’s DBE Contractor/Subcontractor Project Trucker and Equipment List”** (Form 1) will be provided by MoDOT and shall be completed and submitted to MoDOT by the DBE Subcontractor or Liquid Asphalt Supplier before Asphalt Operations begin. The DBE Subcontractor shall report all trucks and tankers they currently own and all full time drivers that they employ, including all of the drivers numbers for each terminal the drivers pick up from. In addition the DBE Subcontractor shall include a list of “long term” leased equipment, along with drivers and drivers’ numbers to the DBE Subcontractor Project Trucker and Equipment List. The DBE Subcontractor shall attach copies of all current long term lease agreements to the DBE Subcontractor Project Trucker and Equipment List.

(h) DBE Trucking/Hauling regulations do not apply to regular dealers of liquid asphalt.

13.7 When a DBE Regular Dealer of Liquid Asphalt is Not Eligible for DBE Credit.

(a) “If its role is limited to that of an extra participant in a transaction, contract or project through which funds are passed in order to obtain the appearance of DBE participation.” 49 CFR § 26.55(c)(2)

(b) If the type of transaction does not allow the DBE subcontractor to perform one of the four required functions, such as a prime contractor deciding the price of a commodity to be supplied by the DBE, that transaction is not eligible for DBE credit.

(c) Work that is performed with trucks that are not owned nor under a lease of at least one year by the DBE will not be eligible for DBE credit.

(d) A lack of documentation verifying that at least one DBE owned (not leased) tractor and tanker/ trailer was used to haul liquid asphalt on the project will result in no DBE credit given on that project.

13.8 This form will be completed by the inspector from the project office during the time of the project. MoDOT will use the *MoDOT DBE Job-Site Review CUF Determination Form* to verify CUF was performed on the project, a copy of which is available on the MoDOT Contractor Resource website.

P. ELECTRONIC INFORMATION FOR BIDDER'S AUTOMATION JSP-05-05A

1.0 Electronic Information. Electronic information, consisting of survey and design information including but not limited to 3-dimensional design models, cross-section models, alignment data, and plan view geometry, does not constitute part of the bid or contract documents. This electronic information will be distributed with the cross-sections or upon the contractor's request. This information, used for project design and quantity estimation purposes, is provided for the bidder's use in automation of bid estimating, contractor furnishing staking, automated machine guidance and other construction methods if provided in the contract. This information shall not be considered a representation of actual conditions to be encountered during construction. Furnishing this information does not relieve a bidder or contractor from the responsibility of making an investigation of conditions to be encountered including, but not limited to site visits, and basing the bid on information obtained from these investigations, and the professional interpretations and judgment of the bidder or contractor. The bidder or contractor shall assume the risk of error if the information is used for any purposes for which the information was not intended. The Commission makes no representation as to the accuracy or reliability of the information, since the information may not be representative of the sealed contract documents. Any assumption the bidder or contractor may make from this electronic information is at the bidder or contractor's risk; none are intended by the Missouri Highways and Transportation Commission. The bidder or contractor assumes the sole risk of liability or loss if the bidder or contractor does rely on this electronic information to its detriment, delay or loss.

Q. RESTRICTIONS FOR MIGRATORY BIRDS NJSP-16-06

1.0 Description. Swallows or other bird species protected by the Migratory Bird Treaty Act may be nesting under the bridge or bridges that will be repaired under this contract.

2.0 Restrictions. To comply with the Migratory Bird Treaty Act, nests of protected species cannot be disturbed when active (eggs or young are present). Generally, nests are active between April 1 and July 31, but active nests can be present outside of these dates.

3.0 Avoidance Measures. The contractor shall not disturb active nests or destroy adults, eggs or young birds. In an effort to comply with the Migratory Bird Treaty Act, the contractor operations will be limited to the options established in the following sections.

3.1 Inactive or Partially Constructed Nests. If nests are present and MoDOT determines that the nests are inactive or partially constructed, the contractor may remove the nests provided that the colony's inactive or partially constructed nests are completely removed by March 15 and the contractor maintains a nest free condition until the bridge work is complete. Dry removal methods shall be used when practicable. If dry removal is not practicable, hydro cleaning may be used if approved by the Engineer and only if water is free of blasting grit, chemicals, or detergents, and applied using pressure less than 5,000 PSI. Clean water such as that from municipal water treatment plants or wells shall be used. Use of source water from Waters of the State (i.e., streams or lakes), is allowable, if the appropriate methods to prevent the possible spread of invasive aquatic species are implemented.

3.2 Water and Water Tanks Used for Hydro cleaning. Aquatic invasives such as zebra mussels and some algae species have infested several bodies of water in the United States and can be transported by vessels (barges, boats, tugs, tankers, etc.) and equipment that have been

used in areas that contain these invasive species. If equipment is not properly inspected and treated to prevent the spread of invasives, these species can be introduced into areas not currently known to have a population. These invasive species are detrimental to existing ecosystems and can outcompete native species. To assist in preventing the introduction and spread of aquatic invasive species through MoDOT projects in Missouri streams and lakes, the following precautions shall be followed.

3.2.1 Use of Water from Streams, Lakes or Ponds. Contractors shall not use water for nest removal from streams, lakes or ponds, unless they have implemented appropriate methods to prevent the possible spread of invasive aquatic species. Water sources from municipal water treatment plants or wells may be used without following these measures provided the water hauling equipment has not previously contained waters from streams, lakes or ponds. If the water hauling equipment has previously contained waters from other streams or lakes, the following measures must be implemented prior to use.

3.2.1.1 Tank Washing. Prior to the use or re-use of water hauling equipment following any use with water from streams, lakes or ponds, all equipment shall be washed and rinsed thoroughly with hard spray (power wash) or hot (104° F) water, e.g. at a truck wash facility.

3.2.1.2 Tank Drying or Treating. Tanks shall be dried or treated in one of the following manners.

3.2.1.2.1 The equipment shall be dried thoroughly, 5-7 days, in the sun before using in or transporting between streams and lakes.

3.2.1.2.2 All interior tank surfaces shall be treated with 140° F water for a minimum of 10 seconds contact on all surfaces.

3.2.1.2.3 All interior tank surfaces shall be treated with a 10% bleach solution to kill any aquatic nuisance species. When chlorine treatment is used, all chlorine runoff from equipment washing must be collected and properly treated and/or disposed of.

3.2.2 Prior to use of a water holding tank, contractors shall provide the MoDOT inspector written documentation of the tank's geographic origin (including the water body it was last used in), as well as defining the specified treatment method used to adequately ensure protection against invasive species. The written documentation will include a statement indicating that the contractor is aware of these provisions and will also treat the equipment appropriately after completion of the project.

3.3 Active Nests. The contractor may work on the bridge if active nests are present, as long as the work does not impact or disturb the birds and nests. At a minimum, work shall not be performed within 10 feet of an active nest; however, the contractor is responsible for ensuring that their activities do not impact the nests, eggs, or young.

4.0 Additional Responsibilities. If active bird nests remain after all reasonable avoidance measures have been taken, or if bird nests are observed during project construction, the contractor shall notify the Resident Engineer and contact the MoDOT Environmental Section (573-526-4778) to determine if there are other allowable options.

4.0 Basis of Payment. No direct pay will be made to the contractor to recover the cost of the equipment, labor, materials or time required to fulfill the above provisions.

R. SLURRY AND RESIDUE PRODUCED DURING SURFACE TREATMENT OF PCCP AND BRIDGE DECKS DSP-06-05

1.1 Description. This work covers the requirements for controlling residue or slurry produced by milling, grinding, planing, grooving or other methods of surface treatments on new or existing PCCP and bridge decks in addition to Section 622.

2.0 Construction Requirements. The following shall be considered the minimum requirements for performing this work within the project limits.

2.1 The contractor shall submit to the Engineer for approval in writing prior to the pre-construction meeting, the best management practices (BMP's) to be used to protect the environment, including the method of disposal of the residue whether on right of way or off-site.

2.2 Prior to starting work, slurry or residue "no discharge zones" will be identified by the Engineer with respect to the contractor's approved BMP and residue disposal plan.

2.3 Operations may be suspended by the Engineer during periods of rainfall or during freezing temperatures.

2.4 When slurry is dispersed on the right of way, BMP's shall be installed to keep slurry residue from entering drainage structures, from entering any waterways and from leaving the right of way.

3.0 Basis of Payment. No direct payment for slurry or residue control requirements for BMP's will be made. Compliance with this specification along with the cost of all materials, labor and equipment necessary for the surface treatment work shall be included in and completely covered by the unit price bid for each of the items of work for surface treatment included in contract.

S. STORMWATER COMPLIANCE REQUIREMENTS JSP-15-04A

1.0 Description. The Contractor shall comply with the terms of the United States of America v. Missouri Highways and Transportation Commission Consent Decree (Consent Decree) that are identified as the responsibility of the Contractor or subcontractor, and with the terms of this provision. Viewing of the Consent Decree is available on the MoDOT Land Disturbance webpage under Contractor Resources, or by going to the web address www.modot.org/LD.

1.1 Applicability. The Consent Decree and this provision apply to any project that includes land disturbance of areas totaling greater than one (1) acre on the project site. The project site consists of all areas designated on the plans, including temporary and permanent easements. The Consent Decree and this provision do not apply to Contractor staging, plant, or borrow areas that are not located on MoDOT right of way (Off-site). The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

2.0 Stormwater Training for Contractor Employees. The Contractor's on-site project manager, designated Water Pollution Control Manager (WPCM), as defined in Section 3.0, and WPCM delegate, shall complete MoDOT Stormwater Training prior to serving in those roles. If someone other than the Contractor's project manager is given the authority to manage the grading or erosion control operations, the project manager(s) for those operations shall also complete MoDOT Stormwater Training. MoDOT Stormwater Training is also required for any other person who the Contractor gives authority to take measures to prevent or minimize the consequences of non-compliance with the Stormwater requirements, as defined in Section 3.1(a) of this provision.

2.1 The Commission will provide MoDOT Stormwater Training to the Contractor employees specified in Section 2.0 at a location and time determined by MoDOT. There will be no fee for attending the training; however, the Contractor shall be responsible for all other cost related to the training, such as travel expenses, if necessary, and wages for its employees. The time to complete the training is anticipated to be no more than 6 hours. As long as the Consent Decree is in effect, MoDOT will provide periodic trainings at various locations around the state, as needed, to ensure contractors and bidders have the opportunity to maintain the number of WPCMs they need to comply with this provision.

2.2 Those who require MoDOT Stormwater Training per Section 2.0 shall complete the training prior to beginning any land disturbance work. Thereafter, training shall occur at least once every two (2) years. The training is not project-specific. Any Contractor employee who receives the training will be qualified to perform the WPCM duties on any MoDOT project for a period of two (2) years.

2.3 MoDOT will document the names and dates that contractor employees attend MoDOT Stormwater Training and will retain those records for the period of time specified in the Consent Decree. Duplicate record keeping by the contractor is not required.

3.0 Water Pollution Control Manager (WPCM). Prior to the Pre-Activity meeting for Grading/Land Disturbance, the Contractor shall designate a Water Pollution Control Manager (WPCM) to fulfill the duties and responsibilities listed in Section 3.1 until final stabilization occurs. The Contractor's on-site project manager may also serve as the WPCM or that role may be assigned to another manager employed by the contractor or a subcontractor. The Contractor shall also maintain a WPCM delegate to temporarily fulfill the WPCM duties in the absence of the primary WPCM (e.g. illness, vacation, other leave).

3.1 Duties of the WPCM:

- (a) Be familiar with Stormwater Requirements including the National Pollutant Discharge Elimination System (NPDES), the current MoDOT State Operating Permit for construction stormwater discharges/ land disturbance activities, the Project-specific Stormwater Pollution Prevention Plan (Project SWPPP), the Corps of Engineers Section 404 Permit, when applicable, the Consent Decree, and this provision. The Project SWPPP includes: a title page with project-specific information, the general SWPPP posted on the MoDOT land disturbance website, the Project Erosion & Sediment Control Plan, all applicable special provisions, and all applicable specifications and standard drawings;
- (b) Complete the stormwater training set forth in Section 2.0;

- (c) Attend the Pre-Activity for Grading/ Land Disturbance Meeting or, if hired after the meeting has occurred, be familiar with the conference decisions;
- (d) Review and sign the Project-specific SWPPP and all updates thereto within time periods set out in the Consent Decree;
- (e) Visit and review the project site for compliance with Stormwater Requirements at least once per week from the start of any grading operations until final stabilization is achieved and permit is closed;
- (f) Be authorized by the Contractor to supervise all work performed by the Contractor and subcontractors that involves compliance with Stormwater Requirements, including the authority to order work be stopped on a Project, implement MoDOT-directed changes in work related to Stormwater Requirements, and order the taking of, measures to cease, correct, prevent, or minimize the consequences of non-compliance with Stormwater Requirements;
- (g) Review and certify electronically each MoDOT inspection report for the Project within three (3) days of receiving each report to ensure it conforms with report requirements in the National Pollution Discharge Elimination System Stormwater (NPDES SW) Permit, Project SWPPP and the Consent Decree and ensure that all Stormwater Deficiencies noted on the report are corrected within the time required;
- (h) Recommend in writing within three (3) days of discovering any changes in site conditions and Best Management Practices (BMPs) that require an update to the Project-specific SWPPP; and
- (i) Be the point of contact relating to Stormwater Requirements and the Consent Decree between the Contractor, Subcontractors and MoDOT.

4.0 Pre-Activity Meeting for Grading/Land Disturbance and Required Hold Point. At each Project, a Pre-Activity Meeting for Grading/Land Disturbance shall be held prior to the start of any land disturbance and shall include a physical visit and review of the project site. Discussion items at the pre-activity meeting shall include a review of the project SWPPP, the planned order of grading operations, proposed areas of initial disturbance, identification of all necessary BMPs that shall be installed prior to commencement of grading operations, and any issues relating to compliance with the Stormwater requirements that could arise in the course of construction activity at the project.

4.1 Contractor employees who shall attend the Pre-Activity Meeting for Grading/Land Disturbance include the WPCM for the Project and the person(s) designated the authority to manage the grading and erosion control operations.

4.2 Following the pre-activity meeting for Grading/land disturbance, and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM the time needed to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

5.0 Compliance with the NPDES SW Permit and Project SWPPP. On all projects, the Contractor shall comply with all applicable Stormwater Requirements which are defined as, but are not limited to:

- (a) Consulting with the engineer on recommended design revisions to the Project SWPPP to accommodate the Contractor's staging plan, implementation, managing, and maintaining BMPs or other control measures to prevent or minimize sediment and other pollutants in stormwater runoff in accordance with contract specifications or any relevant manufacturer specifications and good engineering practices, including but not limited to the manuals (*Note: two manuals cited in the MoDOT permit are "Developing your stormwater pollution prevention plan: A guide for construction activities" and "Protecting Water Quality: A Field Guide to erosion, sediment and stormwater best management practices for development sites in Missouri"*) and any other applicable standards for sedimentation basins, stabilization, rock dams, brush checks, construction entrances, and other BMPs;
- (b) Installing all BMPs at the locations and relative times specified in the Project SWPPP; and
- (c) Complying with the Missouri Water Quality Standards and with effluent limitations in Section E.1 of the NPDES SW Permit. Measurement of effluent is not required except as specified in E.2.

5.1 Stormwater Deficiency Corrections. Per terms of the Consent Decree, Stormwater Deficiencies identified on the MoDOT Land Disturbance Inspection Report shall be corrected within 7 days of the inspection date to avoid stipulated penalties, except that more time might be granted by the engineer when weather or field conditions prohibit the corrective work. If the Contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs related to this halting of work, including, but not limited to stand-by time for equipment, shall be borne by the Contractor. Work shall not resume until the engineer approves the corrective work.

6.0 Inspection Protocol. The Contractor and all subcontractors shall review and adhere to MoDOT's written Stormwater Inspection Protocol, found on the MoDOT Land Disturbance webpage (www.modot.org/LD). The Inspection Protocol is applicable to all Projects under the consent decree. The MoDOT Resident Engineer will serve the role of Stormwater Resident Engineer, or a delegate will be named in their absence.

6.1 Inspection Reports. MoDOT will provide one or more Environmental Construction Inspectors (ECI) to perform the weekly and post run-off inspections and other duties described in paragraph 17 of the Consent Decree. The ECI will enter the inspection reports into a web-based Stormwater Compliance database. The WPCM will have access to this database to view all report information, including any noted deficiencies, and to certify the report as required in Section 3.1 (g.). Automated email reminders of pending reports that need to be certified and for deficiencies that need to be corrected will be sent to the WPCM. The Contractor may designate other employees or subcontractor employees to have viewing access to this database and to receive the email reminders. Completion of MoDOT Stormwater Training is necessary in order to receive the email reminders. The WPCM and other users shall be equipped with an electronic device (desktop computer, laptop, tablet, smartphone, etc.) with a browser and

internet access to connect to the database. The contractor shall be responsible for providing the electronic devices.

7.0 Stipulated Penalties. If the Contractor fails to comply fully and timely with the requirements of the Consent Decree, stipulated penalties will be assessed to the Commission. For matters under the Contractor’s responsibility and control the following stipulated penalties will be assessed to the Contractor and MoDOT will withhold payment pursuant to the following:

Violation	Stipulated Penalty Amount
Failure to Designate or Maintain WPCM at each Project in Accordance with Section 3.0.	\$750 for the initial violation (each person not designated) and then \$750 for each fourteen (14) day period that person is not designated.
Failure to complete MoDOT Stormwater Training by an Individual Required to be Trained in Accordance with Section 2.0, such as the WPCM or Project Manager.	\$750 per person for each missed training. This \$750.00 per person violation shall continue to accrue for each fourteen (14) day period that the person fails to timely receive the applicable training
Failure of WPCM to Review and Certify an Inspection Report in Accordance with Inspection Protocol as set forth in Section 6.	\$250 per inspection report not reviewed or signed.
Failure to Comply with Any NPDES SW Permit or SWPPP Requirement.	\$1000 per violation for the first ten (10) days of the violation; \$2500 per violation for days 11-20; \$3500 per violation for days 21 and beyond.
Failure to Correct a Stormwater Deficiency Identified in a MoDOT Inspection Report, or Otherwise Discovered by the WPCM, within the Time Required by the NPDES SW Permit or SWPPP.	\$1000 per deficiency for the first ten (10) days after correction was required; \$2500 per deficiency for days 11-20 after correction was required; \$3500 per deficiency for days 21 and beyond after correction was required.

8.0 Information Collection and Retention. The EPA, its representatives and its agents shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credential, to:

- (a) monitor the progress of activities required under the Consent Decree;
- (b) verify any data or information submitted to the United States in accordance with the terms of the Consent Decree;
- (c) obtain samples and, upon request, splits of any samples taken by MoDOT or its representatives, contractors, or consultants;
- (d) obtain documentary evidence, including photographs and similar data; and
- (e) assess MoDOT’s compliance with the Consent Decree.

8.1 Until three (3) years after the termination of the Consent Decree, Contractors and the agents of the Contractors shall preserve all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its Contractors’ or agents’ possession or control, or that come into the Contractor’s or agent’s possession or control, and that relate to MoDOT’s performance of its obligations under the

Job No.: J1P3023C
Route: I-29
County: Holt

Consent Decree or to the Contractor's performance of its obligations under the Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures.

9.0 Basis of Payment. Payment for compliance with this provision will be made per week. All cost associated with the weekly on-site project reviews by the WPCM, compliance with this provision and the Consent Decree, including all other duties of the WPCM and delegate, and all expenses to attend training, will be considered fully covered under 806-99.28, Water Pollution Control Manager. Separate payment will be made for erosion and sediment control devices, and for permanent and temporary seeding and mulching, when payment for those items are provided elsewhere in the contract.

9.1 Method of Measurement. Measurement of the number of full weeks (7 days) will begin on the date of the first MoDOT Inspection Report following initial land disturbance and will continue until the engineer declares final stabilization has been achieved, except that no measurement will be made for any period of time past the contract completion date, or adjusted completion date, when liquidated damages are being assessed for failure of the Contractor to complete the work on time.

T. SHOULDER GRADING NJSP-15-27A

1.0 Description. This work shall consist of excavating and grading the existing shoulder to facilitate placement of shoulder pavement, as well as backfilling the shoulder and shaping the fore slope following placement of the shoulder pavement.

2.0 Construction Requirements. The shoulder shall be excavated and graded as shown on the typical section with minimal disturbance of the existing sub-grade and fore slope. Density shall be obtained from reasonable compactive efforts consisting of no less than three passes with a roller until no further visible compaction can be achieved, or by other methods approved by the engineer.

2.1 Following placement of the shoulder pavement, the shaping of the fore slope shall be done to backfill the shoulder edge as shown on the typical section.

2.2 It may be necessary to go outside the limits of the right of way to obtain additional material or to dispose of excess material. All costs for providing additional material or disposing of excess material shall be included in SHOULDER GRADING.

2.3 Included in this work is any pavement edge treatment that might be necessary in order to stay in compliance with the Standard Plans. The need for edge treatment is determined by the contractor's method of operations.

3.0 Method of Measurement. Final measurement will not be made except where appreciable errors are found in the contract quantity.

3.1 Where required, measurement will be made to the nearest 10 feet, separately for the length of shoulder along each side of the roadway, measured along centerline of the traveled way and totaled to the nearest 100 feet for the sum of all segments.

Job No.: J1P3023C
Route: I-29
County: Holt

4.0 Basis of Payment. Payment for SHOULDER GRADING as described in this provision will be made at the contract unit price for pay item 212-99.00, SHOULDER GRADING.

U. OPTIONAL SHOULDERS

1.0 Description. This work shall consist of a shoulder composed of either Portland cement concrete or asphaltic concrete constructed on a prepared subgrade. This work shall be performed in accordance with the standard specifications and as shown on the plans or established by the engineer.

2.0 The quantities shown reflect the total square yards of shoulder surface designated for each shoulder type as computed and shown on the plans.

2.1 No additional payment will be made for quantities to construct the required 1:1 slope along the edge of the outside shoulders (H.M.A. option), for quantities to construct the required Safety Edgesm along the edge of the inside shoulders (H.M.A. and P.C.C.P. options), or for tack applied between lifts of asphalt.

2.2 No additional payment will be made for aggregate base quantities outside the limits of the final surface area as computed and shown on the plans.

2.3 There will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for optional shoulders.

2.4 The contractor shall comply with Sections 401 through 403 for the asphalt option and Sections 501 and 502 for the concrete option.


3.0 Method of Measurement. The quantities of concrete shoulder will be measured in accordance with Section 502.14. The quantities of asphaltic concrete shoulder will be measured in accordance with Section 403.22.

4.0 Basis of Payment. The accepted quantity of the chosen option will be paid for by the contract unit bid price for Item 401-99.05, Optional Shoulder, per square yard.



MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Wes Moore-NW/de
COPY: ProjectWise
FROM: Diane Roegge 
Environmental Chemist
DATE: May 2, 2016
SUBJECT: Materials
Updated Asbestos Inspection & Heavy Metal Paint Survey
Route I-29
Job No. J1P3023C
Bridges A-1767R1, A-1767R2, A-1768R1, and A-1768R2
Holt County

Attached is an updated asbestos inspection and heavy metal paint survey report with additional information on the above referenced job. The additional information is a new suspect asbestos-containing material. Please discard the old report and replace it with the attached report.

Should you have any questions regarding this report, please contact me at (573) 526-4359.

db/dr

[http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared
documents/asbestos/districts/northwest \(nw\)/jxp's/j1p3023c/dr1605021.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared/documents/asbestos/districts/northwest(nw)/jxp's/j1p3023c/dr1605021.docx)
Attachments




MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Wes Moore-NW/de

COPY:

FROM: Diane Roegge 
Environmental Chemist

DATE: March 12, 2015

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route I-29
Job No. J1P3023C
Bridges A-1767 (Twin) and A-1768 (Twin)
Holt County

We are providing you with the results of the requested inspection on the above referenced properties. The inspection report contains an asbestos and a heavy metals survey, unless otherwise requested. The asbestos inspection included sample collection of suspect asbestos-containing material and National Voluntary Laboratory Accreditation Program (NVLAP) accredited testing to confirm the presence of asbestos. This asbestos and heavy metal paint report includes four different report forms. Form T746 lists all of the samples taken during the asbestos inspection. Form T747 shows only those samples that tested positive for Category I nonfriable asbestos-containing materials that may remain in the structure during demolition, if kept adequately wet to avoid visible air emissions. Form T748 shows only those samples that tested positive for asbestos and require removal prior to demolition. Form C760 lists all paint samples taken during the heavy metal paint survey and their metal content.

In accordance with the National Emissions Standard for Hazardous Air Pollutants (NESHAP), as well as city and county asbestos abatement regulations - Registration, Notification, and Performance Requirements, regulated asbestos-containing material (RACM) namely, Friable and Category II nonfriable, have a high probability of becoming friable under normal demolition forces. Practices and procedures for removal prior to demolition, disposal, and clearances should be in accordance with referenced regulations. Missouri Department of Transportation policy is to perform asbestos abatements in accordance with NESHAP.

In accordance with Missouri Department of Natural Resources' Technical Bulletin "Managing Construction and Demolition Waste" dated January 31, 2003, a heavy metal paint survey has been performed on the above referenced properties. We are providing you with the results of this survey. This survey includes locating painted concrete, block and/or brick surfaces, sampling/testing the painted surface(s) to determine if hazardous heavy metals are present. Non-hazardous painted concrete, blocks, or bricks may be used as clean fill materials, if properly

TO: Moore-NW/de
Page 2
March 12, 2015

handled. You must contact the Central Office Design Division for proper handling of the reported painted surfaces.

Although our survey included observing and sampling behind walls, above ceilings, beneath floors, etc., it is possible that potentially hidden asbestos-containing materials may exist within the structures. To our knowledge, we have located all suspect asbestos-containing and all painted concrete, block and brick surfaces. If suspect asbestos-containing materials or if painted concrete, block and/or brick surfaces are observed in addition to those reflected in this inspection report, then please advise us immediately so that we may schedule a follow-up inspection.

Should you have any questions regarding these reports, please contact me at (573) 526-4359.

db/dr

[http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared
documents/asbestos/districts/northwest \(nw\)/jxp's/j1p3023c/dr1503122.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared/documents/asbestos/districts/northwest(nw)/jxp's/j1p3023c/dr1503122.docx)

Attachments

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM

ROUTE: 1-29
 MODOT JOB NO.: JIP3023C
 DISTRICT: NW
 COUNTY: Holt
 DATE OF SURVEY: March 11, 2015, and April 20, 2016
 PARCEL NO.: Bridge A-1767R1

SURVEYED BY: Frank Reichart and Diane Roegge
 CERTIFICATION #: 7118110514MOIR11239, F.R.
 CERTIFICATION #: 7118110514MOIR7165, D.R.
 SITE ADDRESS: Northbound, Over Davis Creek, near Mound City
 TYPE(S) OF STRUCTURE(S): Bridge



Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
16MFJR 448	Insulating Compound	Under 56-Tube Rail Attachments, Over Concrete	II NF	21 Sq. Ft.
	Bridge Paint is not a suspect ACM per MSDS's on file.			


N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable F = Friable
 NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure II NF = Category II Nonfriable

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report

Nonfriable Asbestos-Containing Materials

(Abatement not required if not made friable during demolition.)



 Frank Reichart and Diane Roegge

ROUTE: I-29	TESTED BY: Frank Reichart and Diane Roegge
MODOT JOB NO.: JIP3023C	CERTIFICATION #: 7118110514MOIR11239, F.R.
DISTRICT: NW	CERTIFICATION #: 7118110514MOIR7165, D.R.
COUNTY: Holt	SITE ADDRESS: Northbound, Over Davis Creek, near Mound City
DATE OF TESTS: April 27, 2016	TYPE(S) OF STRUCTURE(S): Bridge
PARCEL NO.: Bridge A-1767R1	

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			


All necessary work to handle this material is the contractor's responsibility.

INF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report

All materials requiring removal or special handling.

ROUTE:	1-29	TESTED BY:	Frank Reichart and Diane Roegge 
MODOT JOB NO.:	JIP3023C	CERTIFICATION #:	7118110514MOIR11239, F.R.
DISTRICT:	NW	CERTIFICATION #:	7118110514MOIR7165, D.R.
COUNTY:	Holt	SITE ADDRESS:	Northbound, Over Davis Creek, near Mound City
DATE OF TESTS:	April 27, 2016	TYPE(S) OF STRUCTURE(S):	Bridge
PARCEL NO.:	Bridge A-1767R1		

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
202-40.43	16MFJR 448	Insulating Compound	Under 56-Tube Rail Attachments, Over Concrete None Located	II NF F	21 Sq. Ft.	Chrysotile	1-2

IN F = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE: I-29
MODOT JOB NO.: JIP3023C
DISTRICT: NW
COUNTY: Holt
SURVEYED BY: Frank Reichart
DATE OF SURVEY: March 11, 2015

TESTED BY: N/A
DATE OF TESTS: N/A
PARCEL NO.: Bridge A-1767R1
SITE ADDRESS: Northbound, Over Davis Creek, near Mound City
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Color/Location of Material/Substrate	Metals (ppm)								
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag	
	No samples taken. No painted surfaces located.									

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Asbestos Survey Report
All Suspect ACM

ROUTE: I-29
MODOT JOB NO.: JIP3023C
DISTRICT: NW
COUNTY: Holt
DATE OF SURVEY: March 11, 2015, and April 20, 2016
PARCEL NO.: Bridge A-1767R2



SURVEYED BY: Frank Reichart and Diane Roegge
CERTIFICATION #: 7118110514MOIR11239, F.R.
CERTIFICATION #: 7118110514MOIR7165, D.R.
SITE ADDRESS: Southbound, Over Davis Creek, near Mound City
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
16MFJR 472	Insulating Compound	Under 56-Tube Rail Attachments, Over Concrete	II NF	21 Sq. Ft.
	Bridge Paint is not a suspect ACM per MSDS's on file.			


N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable F = Friable
 NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure II NF = Category II Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report

Nonfriable Asbestos-Containing Materials

(Abatement not required if not made friable during demolition.)



TESTED BY: Frank Reichart and Diane Roegge
CERTIFICATION #: 7118110514MOIR11239, F.R.
CERTIFICATION #: 7118110514MOIR7165, D.R.
SITE ADDRESS: Southbound, Over Davis Creek, near Mound City
TYPE(S) OF STRUCTURE(S): Bridge

ROUTE: I-29
MODOT JOB NO.: JIP3023C
DISTRICT: NW
COUNTY: Holt
DATE OF TESTS: April 28, 2016
PARCEL NO.: Bridge A-1767R2

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			

All necessary work to handle this material is the contractor's responsibility.


INF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report
All materials requiring removal or special handling.

ROUTE: 1-29
 MODOT JOB NO.: JIP3023C
 DISTRICT: NW
 COUNTY: Holt
 DATE OF TESTS: April 28, 2016
 PARCEL NO.: Bridge A-1767R2

TESTED BY:
 CERTIFICATION #:
 CERTIFICATION #:
 SITE ADDRESS:
 TYPE(S) OF STRUCTURE(S):

Frank Reichart and Diane Roegge 
 7118110514MOIR1239, F.R.
 7118110514MOIR7165, D.R.
 Southbound, Over Davis Creek, near Mound City
 Bridge

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
202-40.43	16MFJR 472	Insulating Compound	Under 56-Tube Rail Attachments, Over Concrete	II NF	21 Sq. Ft.	Chrysotile	1-2
			None Located	F			

INF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE: I-29
 MODOT JOB NO.: JIP3023C
 DISTRICT: NW
 COUNTY: Holt
 SURVEYED BY: Frank Reichart
 DATE OF SURVEY: March 11, 2015

TESTED BY: N/A
 DATE OF TESTS: N/A
 PARCEL NO.: Bridge A-1767R2
 SITE ADDRESS: Southbound, Over Davis Creek, near Mound City
 TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Color/Location of Material/Substrate	Metals (ppm)									
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag		
	No samples taken. No painted surfaces located.										

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
 b = USEPA SW-846 Method 7471

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM

ROUTE: I-29 SURVEYED BY: Frank Reichart and Diane Roegge
MODOT JOB NO.: JIP3023C CERTIFICATION #: 7118110514MOIR11239, F.R.
DISTRICT: NW CERTIFICATION #: 7118110514MOIR7165, D.R.
COUNTY: Holt SITE ADDRESS: Northbound, Over Abandoned Railroad, near Mound City
DATE OF SURVEY: March 11, 2015, and April 20, 2016 TYPE(S) OF STRUCTURE(S): Bridge
PARCEL NO.: Bridge A-1768R1

NR

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
16MFJR 447	Insulating Compound	Under 38-Tube Rail Attachments, Over Concrete	II NF	14 Sq. Ft.
	Bridge Paint is not a suspect ACM per MSDS's on file.			

N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable F = Friable
NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure II NF = Category II Nonfriable

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report

Nonfriable Asbestos-Containing Materials

(Abatement not required if not made friable during demolition.)

DR

ROUTE: I-29
MODOT JOB NO.: JIP3023C
DISTRICT: NW
COUNTY: Holt
DATE OF TESTS: April 27, 2016
PARCEL NO.: Bridge A-1768R1

TESTED BY: Frank Reichart and Diane Roegge
CERTIFICATION #: 7118110514MOIR11239, F.R.
CERTIFICATION #: 7118110514MOIR7165, D.R.
SITE ADDRESS: Northbound, Over Abandoned Railroad, near Mound City
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			

All necessary work to handle this material is the contractor's responsibility.

INF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report
All materials requiring removal or special handling.


ROUTE: I-29
MODOT JOB NO.: JIP3023C
DISTRICT: NW
COUNTY: Holt
DATE OF TESTS: April 27, 2016
PARCEL NO.: Bridge A-1768R1

TESTED BY: Frank Reichart and Diane Roegge
CERTIFICATION #: 7118110514MOIR11239, F.R.
CERTIFICATION #: 7118110514MOIR7165, D.R.
SITE ADDRESS: Northbound, Over Abandoned Railroad, near Mound City
TYPE(S) OF STRUCTURE(S): Bridge

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
202-40.43	16MFJR 447	Insulating Compound	Under 38-Tube Rail Attachments, Over Concrete None Located	II NF F	14 Sq. Ft.	Chrysotile	1-2

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE:	I-29	TESTED BY:	N/A
MODOT JOB NO.:	JIP3023C	DATE OF TESTS:	N/A
DISTRICT:	NW	PARCEL NO.:	Bridge A-1768R1
COUNTY:	Holt	SITE ADDRESS:	Northbound, Over Abandoned Railroad, near Mound City
SURVEYED BY:	Frank Reichart 	TYPE(S) OF STRUCTURE(S):	Bridge
DATE OF SURVEY:	March 11, 2015		

Sample ID	Color/Location of Material/Substrate	Metals (ppm)									
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag		
	No samples taken. No painted surfaces located.										

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM**

ROUTE: 1-29
 MODOT JOB NO.: J1P3023C
 DISTRICT: NW
 COUNTY: Holt
 DATE OF SURVEY: March 11, 2015, and April 20, 2016
 PARCEL NO.: Bridge A-1768R2

SURVEYED BY: Frank Reichart and Diane Roegge
 CERTIFICATION #: 7118110514MOIR11239, F.R.
 CERTIFICATION #: 7118110514MOIR7165, D.R.
 SITE ADDRESS: Southbound, Over Abandoned Railroad, near Mound City
 TYPE(S) OF STRUCTURE(S): Bridge

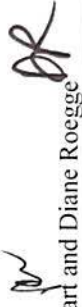
Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
16MFJR 473	Insulating Compound	Under 38-Tube Rail Attachments, Over Concrete	II NF	14 Sq. Ft.
	Bridge Paint is not a suspect ACM per MSDS's on file.			

N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable F = Friable
 NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure II NF = Category II Nonfriable

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report

All materials requiring removal or special handling.

ROUTE:	I-29	TESTED BY:	Frank Reichart and Diane Roegge 
MODOT JOB NO.:	JIP3023C	CERTIFICATION #:	7118110514MOIR11239, F.R.
DISTRICT:	NW	CERTIFICATION #:	7118110514MOIR7165, D.R.
COUNTY:	Holt	SITE ADDRESS:	Southbound, Over Abandoned Railroad, near Mound City
DATE OF TESTS:	April 28, 2016	TYPE(S) OF STRUCTURE(S):	Bridge
PARCEL NO.:	Bridge A-1768R2		

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
202-40.43	16MFJR 473	Insulating Compound	Under 38-Tube Rail Attachments, Over Concrete None Located	II NF F	14 Sq. Ft.	Chrysotile	1-2

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE: I-29
MODOT JOB NO.: JIP3023C
DISTRICT: NW
COUNTY: Holt
SURVEYED BY: Frank Reichart
DATE OF SURVEY: March 11, 2015

TESTED BY: N/A
DATE OF TESTS: N/A
PARCEL NO.: Bridge A-1768R2
SITE ADDRESS: Southbound, Over Abandoned Railroad, near Mound City
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Color/Location of Material/Substrate	Metals (ppm)							
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag
	No samples taken. No painted surfaces located.								

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471




MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Wes Moore-NW/de

CC:

FROM: Frank Reichart 
Environmental Chemist, Lead License #110506-300003364

DATE: March 12, 2015

SUBJECT: Materials
Job No. J1P3023C/J1P3023B
I-29/Holt County
Bridge A-1767 (Twin)

On March 11, 2015, a field check of the paint system was performed on the subject bridge. TMS paint data shows System A paint, applied in 1975. The field check verified the information found in TMS for the paint system; however 1973 was stenciled on the girder as the paint year.

The existing paint system is lead-based paint (LBP). Therefore the redecking project as well as any painting project will be subject to DHSS notification and regulation.

Should further screenings be required, please contact Todd Bennett, Chemical Laboratory Director, at (573) 751-1045.

Should you have any questions, feel free to call me at (573) 526-4359.

fr/dr

[http://sharepoint/systemdelivery/cm/chemicallab/environmental/shareddocuments/asbestos/districts/northwest\(nw\)/jxp's/j1p3023b/fr1503123 a1767.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shareddocuments/asbestos/districts/northwest(nw)/jxp's/j1p3023b/fr1503123a1767.docx)




MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Wes Moore-NW/de

CC:

FROM: Frank Reichart 
Environmental Chemist, Lead License #110506-300003364

DATE: March 12, 2015

SUBJECT: Materials
Job No. J1P3023C
I-29/Holt County
Bridge A-1768 (Twin)

On March 11, 2015, a field check of the paint system was performed on the subject bridge. TMS paint data shows System A paint, applied in 1972. The field check verified the information found in TMS for the paint system; however 1973 was stenciled on the girder as the paint year.

The existing paint system is lead-based paint (LBP). Therefore the redecking project as well as any painting project will be subject to DHSS notification and regulation.

Should further screenings be required, please contact Todd Bennett, Chemical Laboratory Director, at (573) 751-1045.


Should you have any questions, feel free to call me at (573) 526-4359.

fr/dr

[http://sharepoint/systemdelivery/cm/chemicallab/environmental/shareddocuments/asbestos/districts/northwest\(nw\)/jxp's/j1p3023c/fr1503124a1768.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shareddocuments/asbestos/districts/northwest(nw)/jxp's/j1p3023c/fr1503124a1768.docx)

TABLE OF CONTENTS

- A. Construction Requirements
- B. Total Surface Hydro Demolition and Monolithic Deck Repairs
- C. Clean and Epoxy Seal

 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636</p>
	<p>If a seal is present on this sheet, JSP's has been electronically sealed and dated.</p>
	<p>JOB NO. J1P3023C Holt County, MO Date Prepared: 2/11/2016</p>

JOB SPECIAL PROVISIONS (BRIDGE)

A. CONSTRUCTION REQUIREMENTS

1.0 Description. This provision contains general construction requirements for this project.

2.0 Construction Requirements. Plans for the existing structure(s) are included in the contract with the bridge plans for informational purposes only.

2.1 In order to assure the least traffic interference, the work shall be scheduled so that a lane closure is for the absolute minimum amount of time required to complete the work. A lane shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.2 Qualified special mortar shall be a qualified rapid set concrete patching material in accordance with [Sec 704](#). A qualified rapid set concrete patching material will not be permitted for repairing concrete deck (half-soling), deck repair with void tube replacement, full depth repair, modified deck repair and substructure repair (formed) unless a note on the bridge plans specifies that a qualified special mortar may be used.

2.3 Provisions shall be made to prevent any debris and materials from falling into the stream. Any debris and materials that falls below the bridge outside the limits mentioned previously and if determined necessary by the engineer, the debris shall be removed as approved by the engineer at the contractor's expense.

2.4 Any damage sustained to the remaining structure as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

2.5 Provisions shall be made to prevent damage to any existing utilities. Any damage sustained to the utilities as a result of the contractor's operations shall be the responsibility of the contractor. All costs of repair and disruption of service shall be as determined by the utility owners and as approved by the engineer.

3.0 Method of Measurement. No measurement will be made.

4.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.

B. TOTAL SURFACE HYDRO DEMOLITION AND MONOLITHIC DECK REPAIR

1.0 Description. This provision describes requirements for the hydro demolition process and all other preparatory and repair work associated with the placement of a concrete wearing surface on a bridge deck. Included in this provision are the requirements for scarification of the bridge deck, removal of unsound existing deck repairs, total surface hydro demolition of the deck, preparation of the deck for a concrete wearing surface, and monolithic deck repair.

2.0 Mechanical Scarification of the Bridge Deck.

2.1 Prior to hydro demolition, any existing wearing surface (concrete, asphalt, seal coat, etc.) shall be removed and the original deck shall be scarified 0.5 inch or to the adjusted depth described in Section 2.4. Scarification shall be done by mechanical means such as cold milling.

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2.2 Removal of any existing deck surface, including measurement and payment, shall be in accordance with Sec 216.30. Scarification is included in the cost of the removal of the existing wearing surface.

2.3 For decks that do not have an existing wearing surface, the deck shall be scarified with measurement and payment made in accordance with Sec 216.20, Scarification of Bridge Decks.

2.4 Prior to scarification of the existing deck, the contractor shall verify the depth of the top mat of reinforcing steel within the deck. If the depth of the reinforcing steel is less than 0.5 inch, the cold milling depth shall be reduced to avoid damage to the reinforcing steel. Any reinforcing steel damaged by the milling operation shall be repaired or replaced at the contractor's expense.

3.0 Removal of Unsound Existing Deck Repairs.

3.1 Following scarification of the deck and prior to hydro demolition, the engineer will visually inspect and perform a sounding test on all existing deck repairs. Existing deck repairs are defined as any repairs made to the original deck previous to this project. Existing deck repairs that are loose, partially delaminated, or otherwise unsound, will be measured by the engineer and marked for removal. The contractor shall remove the existing deck repairs per Sec 704.4.1.3. Removal shall not include any unsound original bridge deck concrete. Payment for removal of any loosened existing deck repairs will be made per Section 6.2.

3.2 Following removal of unsound existing deck repairs, all debris shall be removed from the deck prior to hydro demolition, at no additional cost.

4.0 Total Surface Hydro Demolition and Deck Repair.

4.1 Description. This work shall consist of the selective removal of all unsound concrete over the entire top surface of the bridge deck, and establishment of a highly rough and bondable surface, with a single pass of hydro demolition equipment. Unsound concrete is defined as existing bridge deck concrete that is deteriorated, spalled or as determined by the engineer to be unacceptable.

4.2 Material. Water used in the hydro demolition shall be in accordance with Sec 1070.

4.3 Environmental Compliance.

4.3.1 Prior to the start of any bridge repair work, the contractor shall submit to the engineer for review an Environmental Compliance Plan (ECP) that ensures compliance with all federal, state, and local environmental laws and regulations. The ECP shall include specific details of the contractor's plan for containment, filtering, and disposal of water, slurry, and other debris, including all best management practices (BMPs) that the contractor plans to utilize to prevent environmental pollution and protect the waters of the state.

4.3.2 All drains, joints, and other locations where discharge water could exit the deck shall be blocked in order to direct runoff to a central collection and filtering location, as designed by the contractor. When runoff is allowed to be dispersed adjacent to the bridge, BMPs shall be utilized to contain and filter the slurry to prevent the discharge of slurry or other contaminants.

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4.3.3 No direct payment will be made for compliance with this ECP, including, but not limited to, containment of the water and slurry, installing, maintaining, and removing the BMPs, filtering, and disposal of all waste materials.

4.4 Equipment.

4.4.1 The hydro demolition process shall consist of a water supply system, a high pressure water pumping system, and a demolition type unit. The demolition unit shall be robotic, computerized, and self-propelled, utilizing a high pressure water jet stream that is capable of removing concrete to the desired depths specified with a single pass of the unit, including the selective removal of all unsound concrete. It shall also be capable of cleaning rust and concrete particles from all exposed reinforcing steel. The resulting concrete surface profile shall be one that is highly rough and bondable.

4.4.2 The hydro demolition equipment shall provide shielding to ensure containment of all dislodged concrete within the removal area in order to protect the traveling public and work crew from flying debris on, adjacent to, and below the work site.

4.4.3 Vacuum equipment shall be utilized for clean-up of hydro demolition debris. This equipment shall be equipped with fugitive dust control devices and shall be capable of removing wet debris and standing water in the same pass.

4.4.4 Calibration. The hydro demolition equipment shall be calibrated on a representative sample of sound deck concrete, as directed by the engineer. The calibration will demonstrate the ability to cut to the desired depth, as indicated on the plans, in a single pass. The minimum allowable water pressure shall be 13,000 psi and the maximum water pressure shall not exceed 20,000 psi. The minimum allowable water usage shall be 20 gallons per minute. The calibration shall accomplish the desired surface roughness, profile, and cutting depth as indicated on the contract plans. The equipment shall then be moved to an area of deteriorated deck, as directed by the engineer, in order to demonstrate the ability to remove all unsound material. The equipment shall selectively remove all unsound concrete, avoid the removal of unnecessary sound concrete, and provide a highly rough and bondable surface.

4.4.4.1 If the equipment does not demonstrate the ability to produce the desired result, as determined by the engineer, the equipment shall be removed from the project and the contractor shall provide other equipment for calibration. No additional contract time or compensation will be allowed for the mobilization of replacement equipment to the work site.

4.4.4.2 After the contractor has calibrated the equipment settings to the satisfaction of the engineer so that the equipment does selectively remove all unsound concrete and provide a highly rough and bondable surface, without removing additional sound concrete, the calibration will be approved by the engineer and the contractor shall record the equipment settings as follows:

Water Pressure Gauge	
Machine Staging Control (Step)	
Nozzle Size	
Nozzle Type	
Nozzle Travel Speed	
Water Usage Rate	

4.5 Hydro Demolition Operation Requirements.

4.5.1 After calibration of the equipment, the contractor shall perform total surface hydro demolition over the entire surface of the bridge deck. The settings shall be maintained throughout the operation, unless the desired results are not being attained, in which case re-calibration shall be performed. Calibration shall be required on each bridge and when different equipment is brought to the site for use. The engineer will periodically verify the calibration settings to ensure the desired results are being attained.

4.5.2 The operator shall minimize the overlap of the individual hydro demolition passes to limit the amount of sound concrete removal.

4.5.3 When the hydro demolition process is taking place above an area of concern, the contractor shall take measures to protect that area from hydro blasting through the deck, falling debris, water runoff, or any other action that the engineer considers a risk to public safety or a risk of property damage. An area of concern shall include vehicular traffic, boat traffic, pedestrian traffic, parking areas, private property, railroad property or any other area of concern as determined by the engineer.

4.5.4 Only those vehicles directly required to perform the hydro demolition work and clean-up, or corresponding overlay construction equipment, shall be allowed on the bridge deck. Contamination of the deck by construction equipment or any other source shall be prevented.

4.5.5 The contractor shall clean up the slurry and rubble from the hydro demolition operation as soon as possible following the hydro demolition process. This clean-up shall be completed prior to the drying of the slurry on the deck and reinforcing steel. The contractor shall utilize a vacuum collection type system capable of removing wet debris and water in a single operation. Following the cleaning, the surface shall be free of all debris, loose material, slurry, or cement paste.

4.6 Post-Hydro Demolition Concrete Removals.

4.6.1 After the deck has been cleaned and dried, and is free of frost, the engineer will perform a second sounding test of the entire deck and identify any unsound original deck material that remains, as well as any existing deck repairs that may have been loosened during the process.

4.6.2 The contractor shall remove all identified unsound original deck material, as well as any areas on the deck that were inaccessible to the hydro demolition equipment. This removal work shall be included in the cost of the hydro demolition. Payment for removal of any loosened existing deck repairs will be made per Section 6.2.

4.6.3 All post-hydro demolition removals shall be done with pneumatic hammers no heavier than the nominal 35-pound class and operated no more than a 45 degree angle from the horizontal. Use of mechanical equipment for the purpose of chipping shall be kept to the absolute minimum to avoid creating micro-fractures on the surface of the deck.

4.6.4 Reinforcing Steel Repair. The contractor shall take steps necessary to prevent damage to existing reinforcing steel. All equipment shall be operated in a manner that does not damage the deck, reinforcing steel or superstructure components. Any damage caused by the contractors equipment or negligence shall be repaired at the contractors expense.

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4.6.4.1 Reinforcing steel that is exposed by the process shall be cleaned and repaired in accordance with Sec 704, except that where the bond between the existing concrete and reinforcing steel has not been compromised, as determined by the engineer, then removal of concrete around the perimeter of the bar, as specified in Sec 704.4.1.6.3, shall not apply. Partially exposed reinforcing steel that is bonded to the deck concrete is acceptable.

4.6.4.2 Replacement of damaged reinforcing steel may include the removal of additional concrete to adequately anchor reinforcing steel to the appropriate lap splice length in accordance with Sec 706.

4.6.4.3 No direct payment will be made for additional cleaning of reinforcing steel or for removal of loose concrete from the bars. Replacement of reinforcing steel will be made at the fixed unit price in Sec 109.15, except that no payment will be made for replacement of reinforcing steel cut or broken by the contractor.

4.7 Forming for Full Depth Repairs.

4.7.1 Following removal of unsound concrete by hydro demolition and hand chipping, any areas requiring a full depth repair will be identified by the engineer.

4.7.2 If the engineer determines the full depth repair can be made monolithic with the deck overlay, the contractor shall form the bottom of the repair prior to the overlay. No payment will be made for forming the bottom of full depth monolithic repairs, including form removal.

4.7.3 If the engineer determines the full depth repair shall be made prior to the deck overlay, repairs and payment for repairs shall be in accordance with Sec 704. Concrete or qualified repair mortars used for full depth repairs made prior to the deck overlay shall be fully cured prior to the overlay.

4.8 Preparation of Deck for Concrete Wearing Surface.

4.8.1 All areas of the deck, where further removal of concrete was performed with pneumatic hammering after the hydro demolition, shall be thoroughly sand blasted to remove any loose material and micro-cracking. After completion of sand blasting and associated clean-up of debris, the entire deck surface shall be thoroughly cleaned by high pressure water blasting with sufficient pressure to remove all debris and slurry residue. Water blasting shall continue until the run-off water from cleaning flows clear.

4.8.2 After cleaning, the deck surface shall be thoroughly saturated to the point that the surface does not dry out, and any excess water removed with compressed air. Clean polyethylene sheeting shall then be used to cover the deck completely until such time as the overlay is poured. Just prior to placement of the overlay, the deck shall be brought to a saturated surface dry (SSD) condition and maintained in a SSD condition throughout the pour, with no ponding of water.

4.9 Monolithic Deck Repair.

4.9.1 Monolithic deck repair is defined as providing and placing the deck overlay material necessary to fill all depressions in the deck below the bottom of the planned deck overlay thickness. This material is placed monolithic during the deck overlay process.

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4.9.2 Shallow and deep areas, including approved full depth repair areas, shall be filled monolithically with the deck overlay. Deep areas shall be filled in advance during the wearing surface pour so that material stiffens enough that it will not roll back under the paving screed. Any standing water on the deck or in the depressed areas shall be removed prior to placement of concrete overlay material. Hand vibrators shall be used in areas where concrete is being placed around reinforcement, deeper areas within the pour, and along curb lines and construction joints.

4.9.3 The volume of material necessary to fill areas removed by the contractor's negligence, including milling too deep during scarification and excessive overlap of hydro demolition passes, will be deducted from the total quantity of monolithic deck repair.

5.0 Method of Measurement.

5.1 Measurement for Removal of Existing Deck Repairs will be made to the nearest square foot. Measurement will include removal of existing deck repairs made both prior to and following hydro demolition.

5.2 Measurement for Total Surface Hydro Demolition will be per square yard of the bridge deck as specified on the plans or shown in the contract. No final measurement will be made for hydro demolition except for authorized changes during construction or where appreciable errors are found in the contract quantity.

5.3 Measurement for Monolithic Deck Repair will be made to the nearest 0.1 cubic yards. The quantity of monolithic deck repair will be determined by deducting the theoretical volume of material necessary to construct the deck overlay at plan thickness from the total volume of deck overlay material placed on the deck surface. Any volume of material wasted or used to fill depressed areas caused by the contractor's negligence in scarification or concrete removal will not be included in this quantity.

6.0 Basis of Payment

6.1 Payment for removal of an existing wearing surface, when required, and scarification will be as specified in Section 2.0.

6.2 Payment for Removal of Existing Deck Repairs will be made at the contract unit price.

6.3 Payment for Total Surface Hydro Demolition of the bridge deck will be paid for at the contract unit price. Payment includes all work associated with the hydro demolition process including, but not limited to, ECP, equipment calibration, hand chipping curb areas, removal of remaining unsound concrete, clean-up of debris and slurry, forming for full depth monolithic repairs, and preparation of the deck for concrete wearing surface.

6.4 Payment for Monolithic Deck Repairs will be made at the fixed unit price for the type of overlay material specified in the plans. Fixed unit price shall be \$600 per cubic yard for Latex Modified Concrete. Payment for Monolithic Deck Repairs includes all material, labor and equipment, and any other incidental items necessary to complete the work. Labor and equipment costs for placing the wearing surface concrete monolithically with the deck repair will be considered completely covered by the contract unit price for the concrete wearing surface.

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C. CLEAN AND EPOXY SEAL

1.0 Description. In order to protect the bridge superstructure concrete from deicing chemicals and other contaminants, loose and delaminated concrete shall be removed and an epoxy seal shall be applied to the concrete in the area of curb outlets in accordance with the bridge plans and this job special provision.

2.0 Construction Requirements. All loose and delaminated concrete in the areas as required by this job special provision shall be removed in the cleaning process with hand tools. Hand tools may include chipping chisels, wire brushes, dust brushes, etc. After the loose and delaminated concrete has been removed to the satisfaction of the engineer, the epoxy sealing preparation and applying the epoxy to these areas shall be in accordance with [Sec 704](#). The areas to be cleaned and epoxy sealed shall be as follows:

- (a) Deck surface and vertical faces inside the curb outlets.
- (b) Outside edge of the deck for 3 feet on each side of the centerline of curb outlets.
- (c) Superstructure concrete area directly below the area described in (b) above from the edge of the deck to the outside edge of the top flange of the exterior girder/stringer.

3.0 Method of Measurement. The area to be cleaned and epoxy sealed will be computed to the nearest square foot. Final measurement will not be made except for authorized changes during construction or if appreciable errors are found in the contract quantity.

4.0 Basis of Payment. Payment for the above described work, including all material, equipment, labor and any other incidental work necessary to complete this item, will be based on the contract plan quantities and will be considered completely covered by the contract unit price for "Clean and Epoxy Seal". Any change in the contract plan quantities, based on approved change orders, will be paid for at the contract unit price.