STATE OF MISSOURI
HIGHWAYS and TRANSPORTATION
COMMISSION

JEFFERSON CITY, MISSOURI

CONSTRUCTING OR IMPROVING
CONTRACT I.D. 140321-C02

THIS JOB SHALL BE CONSTRUCTED UNDER
FEDERAL PROJECT NUMBER(S): I-670-1(157)

Job J4I2023 Route 670 JACKSON County

Contract Id: 140321-C02

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 10-15.900, "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.

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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 at the top and it will tell you what the errors are.

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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)

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All questions concerning the bid document preprartion 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.

TABLE OF CONTENTS

*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.

Contract Id: 140321-C02

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 03-21-14.

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 J4I2023 Route 670 JACKSON County. Bridge rehabilitation and ADA improvements at Charlotte Street Bridge in Downtown Kansas City, the total length of improvement being 0.2 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,2011," and "Missouri Standard Plans for Highway Construction, 2009", 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.

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(3) PERIOD OF PERFORMANCE: If the bid is accepted, the bidder shall continuously and dilligently 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 UBAWS 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 UBAWS 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. The Asphalt Cement provision applies only to projects that have a quantity of asphalt wet ton mix pay items or converted square yard quantity over 1,000 tons, the Seal Coat provision applies only to projects that have a quantity that exceeds 50,000 square yards, the Underseal provision applies only to projects that have a quantity that exceeds 10,000 gallons, and the UBAWS Membrane provision applies only to projects that have a quantity exceeds 5,000 square yards. The above quantity limits apply to an individual project or any number of projects in the contract combination.

ASPHALT CEMENT
SEAL COAT
UNDERSEAL
UBAWS 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

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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. The project bid bond form is included in the bid book, and the project and annual bid bond forms are also available on MoDOT's website. Paper annual bid bonds shall be submitted to MoDOT by June 15th of each year, and electronic annual bid bonds shall be executed by June 15th of each year.

(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.

(9c) CERTIFICATIONS FOR FEDERAL STATE COMBINATION: (Applies to Federal/State Projects combinations 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 anticollusion), Sec. 102.18.4 (regarding lobbying activities), 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.

By selecting "No" the bidder REFUSES to make one or more certifications for the above items 9a, 9b or 9c. 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 and Federal/State Project Combinations 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.

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(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 10.00% 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: 140321-C02
Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
Section 0001	ROADWAY ITEMS - J4I2023					
	Alt Group					
0010	2022010 REMOVAL OF IMPROVEMENTS	LUMP	LUMP			
0020	2079909 MISC. MISC. LINEAR GRADING FOR SIDEWALKS	0.500 STA				
0030	4011209 BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	264.200 TONS				
0040	4019905 MISC. MISC. ASPHALT DEPTH TRANSITION	237.000 SQYD				
0050	4071005 TACK COAT	200.000 GAL				
0060	5029905 MISC. CONCRETE PAVEMENT (12 1/2 IN. NON-REINF)	12.100 SQYD				
0070	6061010 GUARDRAIL TYPE A	425.000 LF				

State of MISSOURI
Dept of Transportation
Schedule of Items

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Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0080	6061054 GUARDRAIL TYPE E, 6 FT POST, 6 FT.-3 IN. SPACING	88.000 LF				
0090	6062204A BRIDGE ANCHOR SECTION, 6.5 FT. POSTS (SAFETY BARRIER CURB) (NEW CONSTRUCTION ONLY)	1.000 EA				
0100	6062303 ASYMETRICAL TRANSITION SECTION, 6.5 FT. POSTS	2.000 EA				
0110	6081010 CONCRETE CURB RAMP	104.500 SQYD				
0120	6081012 TRUNCATED DOMES	182.000 SQFT				
0130	6083008 8 IN. CONCRETE MEDIAN STRIP	58.600 SQYD				
0140	6086004 CONCRETE SIDEWALK, 4 IN.	255.300 SQYD				

State of MISSOURI
Dept of Transportation
Schedule of Items

Contract ID: 140321-C02
Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0150	6091010 CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE S	308.000 LF				
0160	6091011 CONCRETE CURB (OVER 6 IN. HEIGHT) TYPE S	66.000 LF				
0170	6092011 INTEGRAL CURB (6 IN. HEIGHT AND UNDER) TYPE A	76.000 LF				
0180	6092032 CONCRETE CURB LOW PROFILE TYPE F	38.000 LF				
0190	6116010A SLOPE PROTECTION	100.000 SQYD				
0200	6123000A TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)	1.000 EA				
0210	6141120 CURVED VANE GRATE AND FRAME (2 FT. X 2 FT. OR 600MM X 600MM)	1.000 EA				
0220	6141121 CURVED VANE GRATE AND FRAME (4 FT X 2 FT OR 1200MM X 600MM)	4.000 EA				

State of MISSOURI
Dept of Transportation
Schedule of Items

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Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0230	6161005 CONSTRUCTION SIGNS	1,810.000 SQFT				
0240	6161009 FLAG ASSEMBLY	12.000 EA				
0250	6161025 CHANNELIZER (TRIM LINE)	85.000 EA				
0260	6161031 TYPE III MOVEABLE BARRICADE WITH LIGHT	18.000 EA				
0270	6161040 FLASHING ARROW PANEL	2.000 EA				
0280	6161098 CHANGEABLE MESSAGE SIGN, CONTRACTOR FURNISHED, CONTRACTOR RETAINED	6.000 EA				
0290	6162010 WORK ZONE LIGHTING	LUMP	LUMP			
0300	6181000 MOBILIZATION	LUMP	LUMP			

State of MISSOURI
Dept of Transportation
Schedule of Items

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Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0310	6205101A TYPE 2 PREFORMED MARKING TAPE (GROOVED), 4 IN., WHITE	1,241.000 LF				
0320	6205103A TYPE 2 PREFORMED MARKING TAPE (GROOVED), 4 IN., YELLOW	30.000 LF				
0330	6205105 TYPE 2 PREFORMED MARKING TAPE (GROOVED), 6 IN., WHITE	633.000 LF				
0340	6205120 TYPE 2 PREFORMED MARKING TAPE (GROOVED), 24 IN., WHITE	177.000 LF				
0350	6205130 TYPE 2 PREFORMED MARKING TAPE (GROOVED), LEFT/RIGHT ARROW	4.000 EA				
0360	6205131 TYPE 2 PREFORMED MARKING TAPE (GROOVED), STRAIGHT ARROW	4.000 EA				

State of MISSOURI
Dept of Transportation
Schedule of Items

Contract ID: 140321-C02
Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0370	6221001 COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 IN. THICK OR LESS)	2,412.000 SQYD				
0380	6274000 CONTRACTOR FURNISHED AND STAKING	LUMP SURVEYING	LUMP			
0390	7319902 MISC. INLET and DRAINAGE SYSTEM CLEANOUT	1.000 EA				
0400	8052000A SEEDING - WARM SEASON MIXTURES	0.100 ACRE				
0410	8061016 SEDIMENT REMOVAL	3.000 CUYD				
0420	8061019 SILT FENCE	325.000 LF				
	Section 0001 Total				0.00	

Section 0002 TRAFFIC SIGNAL ITEMS - J4I2023

Alt Group

State of MISSOURI
Dept of Transportation
Schedule of Items

Contract ID: 140321-C02
Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0430	9025300 CONDUIT, 3 IN., TRENCH	202.000 LF				
0440	9027300 CONDUIT, 3 IN., PUSHED	22.000 LF				
0450	9028308 CABLE, 16 AWG 2 CONDUCTOR	230.000 LF				
0460	9028500 CABLE, LOOP DETECTOR, IN DUCT	2,350.000 LF				
0470	9029100 BASE, CONCRETE	4.400 CUYD				
0480	9029902 MISC. 3.5 FT PEDESTRIAN PUSH BUTTON POST	1.000 EA				
0490	9029902 MISC. 4.25 FT PEDESTRIAN PUSH BUTTON POST	9.000 EA				
0500	9029902 MISC. ADA PUSHBUTTON, RIGHT	7.000 EA				

State of MISSOURI
Dept of Transportation
Schedule of Items

Contract ID: 140321-C02
Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
	9029902					
0510	MISC. ADA PUSHBUTTON, LEFT	6.000 EA				
	Section 0002 Total				0.00	

Section 0003 HIGHWAY SIGNING ITEMS - J4I2023

Alt Group

	9031010					
0520	CONCRETE FOOTINGS, EMBEDDED	0.100 CUYD				
	9031220					
0530	PIPE POSTS	90.000 LB				
	9031240					
0540	BREAKAWAY ASSEMBLY	1.000 EA				
	9035004					
0550	TYPE SHR2L-1 SIGN	102.000 SQFT				
	9035068					
0560	SIGNAL SIGN, TYPE SHR2L-1	10.000 SQFT				
	Section 0003 Total				0.00	

State of MISSOURI
Dept of Transportation
Schedule of Items

Contract ID: 140321-C02
Letting Date: 03-21-14
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
Section 0004	BRIDGE A0807 ITEMS - J4I2023					
	Alt Group					
0570	2169904 MISC. REMOVAL OF POST-TENSIONED SLAB	30,205.000 SQFT				
0580	7034226 REINFORCED CONCRETE SLAB OVERLAY	3,357.000 SQYD				
0590	7034610 CORRAL CURB	1,253.000 LF				
0600	7034620 FORM LINERS	266.000 SQYD				
0610	7040101 SUBSTRUCTURE REPAIR (FORMED)	100.000 SQFT				
0620	7040104 REPAIRING CONCRETE DECK (HALF-SOLING)	3,100.000 SQFT				
0630	7040106 FULL DEPTH REPAIR	400.000 SQFT				

State of MISSOURI
Dept of Transportation
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Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0640	7040113 CLEAN AND EPOXY SEAL	11,385.000 SQFT				
0650	7071000 CONDUIT SYSTEM ON STRUCTURE	LUMP	LUMP			
0660	7110200 PROTECTIVE COATING - CONCRETE BENTS (EPOXY)	LUMP AND PIERS	LUMP			
0670	7121060 FABRICATED SIGN SUPPORT BRACKETS	LUMP	LUMP			
0680	7123100 CLEANING AND COATING EXISTING BEARINGS	14.000 EA				
0690	7129903 MISC. (48 IN.) ORNAMENTAL PEDESTRIAN FENCE (STRUCTURES)	1,211.000 LF				
0700	7172001 STRIP SEAL EXPANSION JOINT SYSTEM	112.000 LF				
	Section 0004 Total				0.00	
	Bid Total				0.00	

Contract Id: 140321-C02 Vendor Number:
Vendor Name:

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

Contract Id: 140321-C02

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 0.00 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

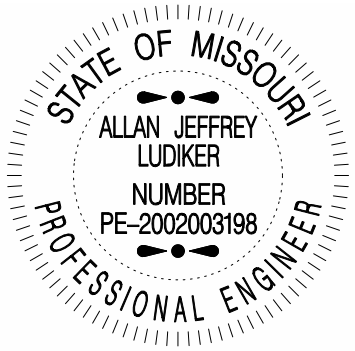
Job No.: J4I2023
Route: I-670
County: Jackson

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

ADDITIONAL INFORMATION

Asbestos Survey Reports
D-15 Equipment and Materials List



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 W. CAPITOL AVE.
JEFFERSON CITY, MO 65102
Phone 1-888-275-6636

If a seal is present on this sheet, JSP's have been electronically sealed and dated.

JOB NUMBER: J4I2023
JACKSON COUNTY, MO
DATE PREPARED: January 13, 2013

ADDENDUM DATE:

Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: A-P

Job No.: J4I2023
Route: I-670
County: Jackson

JOB
SPECIAL PROVISION

A. GENERAL - FEDERAL JSP-09-02A

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 2009 Missouri Std. Plans
For Highway Construction

These supplemental bidding documents contain all current revisions to the bound printed 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

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.

Notice to Proceed: June 2, 2014
Completion Date: November 1, 2014

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

Job Number	Calendar Days
JI2023	100

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 the amount of **$500** per calendar day for each full calendar day 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 4.1. These damages are in addition to the contract administrative damages and any other damages as specified elsewhere in this contract.

4.1 Road User Costs.

Job Number	Road User Cost
J4I2023	$ 3,200

C. WORK ZONE TRAFFIC MANAGEMENT PLAN

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.

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, hours traffic control will be in place, and work hours.

2.2 The contractor shall notify the engineer prior to lane closures or shifting traffic onto detours.

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.

2.5.1 Traffic Delay. The contractor shall be responsible for maintaining the existing traffic flow through the job site during construction. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from occurring again.

2.5.2 Traffic Safety.

2.5.2.1 Where traffic queues routinely extend to within 1000 feet of the ROAD WORK AHEAD, or similar sign on I-670, the contractor shall extend the advance warning area, as approved by the engineer.

2.5.2.2 When a traffic queue extends to within 1000 feet of the ROAD WORK AHEAD, or similar sign on I-670 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 I-670.

3.0 Work Hour Restrictions.

3.1 There are three major summer holiday periods: Memorial Day, Independence Day, and Labor Day. All lanes on I-670 or ramps 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.

3.2 The contractor shall not perform any construction operation on the I-670 roadway or ramps nor on the Charlotte Street bridge requiring lane closures on the I-670 roadway or ramps, (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 Any work requiring a reduction in the number of lanes of traffic on I-670 or ramps shall be completed during nighttime hours. Nighttime hours shall be considered to be 7:30 p.m. to 5:00 a.m. for this project.

3.4 Any work requiring complete closure of traffic on I-670 or ramps shall be completed during weekend hours. Any weekend closures shall be completed from 7:30 p.m. Friday to 5:00 a.m. Monday.

4.0 Detours and Lane Closures.

4.1 The contractor shall provide changeable message signs notifying motorists of future traffic disruption and possible traffic delays on Charlotte Street one week before traffic is shifted to a detour or prior to lane closures. The changeable message signs shall be installed at locations as approved or directed by the engineer.

4.2 Due to the limited time frames for any complete closures on I-670 or ramps detour and closure signs will not be required. However, changeable message signs shall be installed at locations as approved or directed by the engineer one week prior to the weekend closure.

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.

D. LIQUIDATED DAMAGES SPECIFIED FOR ADA IMPROVEMENTS

1.0 Description. If any work associated with the ADA improvements, including but not limited to sidewalk, sidewalk ramps, truck apron, concrete median island and pedestrian push button posts, along Charlotte Street, both left and right, from approximately Station negative 00+25.0 (location of the pedestrian push button signal post at the northwest corner of 13th and Charlotte Street) to approximately Station 2+10 is not complete, fully functional and open to pedestrian traffic within 60 calendar days of commencement of that work, 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 flow regulation cost, and pedestrian delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **$3,200 per day** for each full day the above described work is not complete and open to pedestrian. In addition, the contractor shall have all necessary personnel, equipment and materials at hand for all work at each location before the work begins so that work may proceed without delay. Sidewalk and curb ramp work on each street corner shall be completed within 84 hours after work begins on that corner. Any violation of this time frame will result in the same liquidated damages specified above.

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

E. AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE AND FINAL ACCEPTANCE OF CONSTRUCTED FACILITIES JSP-10-01A

1.0 Description. The contractor shall comply with all laws pertaining to the Americans with Disabilities Act (ADA) during construction of pedestrian facilities on public rights of way for this project. An ADA Checklist is provided herein to be utilized by the contractor for verifying compliance with the ADA law. The contractor is expected to familiarize himself with the plans involving pedestrian facilities and the ADA Post Construction Checklist prior to performing the work.

2.0 ADA Checklist. The contractor can locate the ADA Checklist form on the Missouri Department of Transportation website:

http://www.modot.mo.gov/business/contractor_resources/forms.htm

2.1 The ADA Checklist is intended to be a helpful tool for the contractor to use during the construction of the pedestrian facilities and a basis for the commission's acceptance of work.

Prior to work being performed, the contractor shall bring to the engineer's attention any planned work that is in conflict with the design or with the requirement shown in the checklist. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

2.2 It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize negative impacts that his equipment, subcontractors or general public may have on the work. Completed facilities must comply with the requirements of ADA and the ADA Checklist or have documented reasons for the non-complaint items to remain.

3.0 Coordination of Construction.

3.1 Prior to construction and/or closure on an existing pedestrian path of travel, the contractor shall submit a schedule of work to be constructed, which includes location of work performed, the duration of time the contractor expects to impact the facility and an accessible signed pedestrian detour complaint with MUTCD Section 6D that will be used during each stage of construction. This plan shall be submitted to the engineer for review and approval at or prior to the pre-construction conference. Accessible signed detours shall be in place prior to any work being performed that has the effect of closing an existing pedestrian travel way.

3.2 When consultant survey is included in the contract, the contractor shall use their survey crews to verify that the intended design can be constructed to the full requirements as established in the 2010 ADA Standards. When 2010 ADA Standards do not give sufficient information to construct the contract work, the contractor shall refer to the PROWAG.

3.3 When consultant survey is not included in the contract, the contractor shall coordinate with the engineer, prior to construction, to determine if additional survey will be required to confirm the designs constructability.

4.0 Final Acceptance of Work. The contractor shall provide the completed ADA Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA requirements and the ADA Checklist. Each item listed in the checklist must receive either a "YES" or an "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer. Documentation must be provided about the location of any non-complaint items that are allowed to remain at the end of the construction project. Specific details of the non-complaint items, the ADA requirement that the work was not able to comply with, and the specific reasons that justify the exception are to be included with the completed ADA Checklist provided to the engineer.

4.1 Slope and grade measurements shall be made using a properly calibrated, 2 foot long, electronic digital level approved by the engineer.

5.0 Basis of Payment. The contractor will receive full pay of the contract unit cost for all sidewalk, ramp, curb ramp, median, island, approach work, cross walk striping, Accessible Pedestrian Signals(APS) buttons, pedestrian heads, detectible warning systems and temporary

traffic control measures that are completed during the current estimate period as approved by the engineer. Based upon completion of the ADA Checklist, the contractor shall complete any necessary adjustments to items deemed non-compliant as directed by the engineer.

5.1 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 documents.

F. LINEAR GRADING FOR SIDEWALKS

1.0 Description. This work shall consist of grading work necessary to bring the sidewalk to the required grade and cross section within reasonable tolerances. It shall also include the following:

(a) Grading to construct green space, sidewalks, and ramps.

2.0 Construction Requirements.

2.1 The sidewalk shall be brought to the required grade and cross sections within tolerances by back sloping, ditching, removing stone and boulders from the subgrade surface, or any other work necessary, including hauling and or disposal of any excavated material.

2.2 Bituminous material, stumps, roots, rubbish or any other deleterious material shall not be placed in embankments. Where an embankment less than 2 feet high is to be constructed, all vegetative matter shall be cut and removed from the surface upon which the embankment is to be placed. The cut-over surface shall be thoroughly broken. All ditches including inlet and outlet ditches shall be cut to grades that will properly drain.

2.3 Shape existing slopes to construct new sidewalks as directed by the engineer.

3.0 Method of Measurement. Measurement of Linear Grading for Sidewalks will be made to the nearest 1/10 station.

4.0 Basis of Payment. The accepted quantity of linear grading for sidewalks will be paid for at the contract unit price for Item 207-99.09, “Linear Grading for Sidewalks”, per station.

G. URBAN SEEDING RECOMMENDATION

Within the first 30 feet or the mow area

Blue gramma	15 lbs
Annual ryegrass	5 lbs
Buffalo grass	10 lbs
Oats	15 lbs
TOTAL	45 lbs/acre

H. RETENTION OF GRATES AND BEARING PLATES

1.0 Description. The existing grates and bearing shall be removed by the contractor and transported to the Missouri Department of Transportation's maintenance lot located at:

650 Mulberry, Kansas City, Missouri
Ronnie Smith, Maintenance Supervisor
(816) 889-2137

The contractor shall exercise reasonable care in the handling of the equipment during removal and transportation. Should any of the equipment be damaged by the contractor's negligence, it shall be replaced at the contractor's expense. This work will be considered included in the contract unit price for Item No. 202-20.10, Removal of Improvements.

I. 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 (816-622-0800)
City of Kansas City
Fire: 816-784-9200
Police: 816-234-5111

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.

J. 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:

Utility Company	**Known Required Adjustment**
Mr. Craig Shaw Qwest Communications 711 E. 19th Street Kansas City, Missouri 64108 (816) 221-7233	None
Tram Fenimore Kansas City Public Works Dept Electrical Design 1301 Chouteau Trafficway, Suite A Kansas City, MO 64120 (816) 513-9866	None

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.

1.2 The contractor agrees that any effects of the presence of the utilities, their relocation, contractor's coordination of work with the utilities and any delay in utility relocation shall not be compensable as a suspension of work, extra work, a change in the work, as a differing site condition or otherwise including but, without limitation, delay, impact, incidental or consequential damages. The contractor's sole remedy for the effects of the presence of utilities, delay in their relocation or any other effects shall be an excusable delay as provided in Section 105.7.3. The contractor waives, for itself, its subcontractors and suppliers the compensability of the presence of utilities, delay in their relocation and any cost to the contractor, it's subcontractors and suppliers in any claim or action arising out of or in relation to the work under the contract.

1.3 The contractor shall be solely responsible and liable for incidental and consequential damage to any utility facilities or interruption of the service caused by it or its subcontractors operation. The contractor shall hold and save harmless the Commission from damages to any utility facilities interruption of service by it or its subcontractor's operation.

2.0 It shall be noted by the contractor that MoDOT is a member of Missouri One Call (800 Dig Rite). Some work on this project may be in the vicinity of MoDOT utility

facilities, which includes but is not limited to traffic signal cables, highway lighting circuits, ITS cables, cathodic protection cables, etc. Prior to beginning work, the contractor shall request locates from Missouri One Call. The contractor shall also complete the Notice of Intent to Perform Work form located at the Missouri Department of Transportation website:

http://www.modot.mo.gov/asp/intentToWork.shtml.

The contractor shall submit the form over the web (preferred method) or by fax to the numbers on the printed form. The notice must be submitted a minimum of 2 and a maximum of 10 working days prior to excavation just as Missouri One Call requires.

K. SUPPLEMENTAL REVISIONS JSP-09-01M

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 Section 409 of the Standard Specifications when the quantity exceeds 50,000 square yards for an individual project or any number of projects in the contract combination. 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.

$$A = B \times (2.01/2000) \times (D - E)$$

Where: A = adjustment for Seal Coat placed during the index period
B = square yards 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

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 Section 625 of the Standard Specifications when the quantity exceeds 10,000 gallons for an individual project or any number of projects in the contract combination. 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 when the quantity exceeds 5,000 square yards. Adjustment will be calculated in accordance with the Supplemental Asphalt Price Adjustment except as defined herin.

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

$$A=B \times (1.20/2000) \times (D - E)$$

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 407 in its entirety and substitute the following:

407.1 Description. This work shall consist of preparing and treating an existing bituminous or concrete surface with bituminous material, in accordance with these specifications.

407.2 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Emulsified Asphalt or PG Liquid Asphalt	1015

407.3 Equipment. The contractor shall provide a system for heating and applying the bituminous material. The system shall be designed, equipped, maintained and operated such that emulsified asphalt or liquid asphalt, at even heat, may be applied uniformly on variable widths of surface up to 15 feet with uniform pressure and an allowable variation from any specified rate of ±0.01 gallon per square yard. The system shall include a calibrated tank and a thermometer for measuring temperature of tank contents. The system shall be equipped with instrumentation that continuously verifies application rates. The calibration of the system shall

be approved by the engineer prior to use, and the contractor shall furnish all equipment, material and assistance if calibration is required.

407.4 Construction Requirements.

407.4.1 Preparation of Surface. The existing surface shall be free of all dust, loose material, grease or other foreign material at the time the tack is applied. Any excess bituminous surface mixture or bituminous joint material will be removed by MoDOT without cost to the contractor before the tack is applied.

407.4.2 Application. Asphalt emulsion or PG liquid asphalt shall be applied uniformly with a pressure distributor at the minimum rates indicated in the following table. No dilution of the emulsified asphalt material shall be allowed. The tack coat material shall be heated at the time of application to a temperature in accordance with Sec 1015. The tack coat shall be properly cured and the tacked surface shall be clean of all dirt before the next course is placed.

Tack Coat Application Rates	
Surface Type	**Minimum Application Rate (gal/sq yd)**
New Asphalt Pavement	0.05
Existing Asphalt or Concrete Pavement	0.08

407.4.3 Tack. The tack coat shall be applied in such a manner as to cause the least inconvenience to traffic and to permit one-way traffic without tracking of asphalt emulsion. All exposed tack coat shall be covered with bituminous mixture prior to opening to traffic.

407.5 Method of Measurement. Measurement of asphalt emulsion to the nearest 10 gallons will be made in accordance with Sec 1015.

407.6 Basis of Payment. The accepted quantity of tack coat will be paid for at the contract unit price.

Delete Sec 1015.20.5.1 and substitute the following:

1015.20.5.1 Polymer Modified Asphalt Emulsion – Seal Coat. Bituminous material for polymer modified asphalt shall be in accordance with the following:

Polymer Modified Asphalt Emulsion				
Test [a]	**CRS-2P**		**EA-90P**	
	Min	**Max**	**Min**	**Max**
Viscosity, SSF @ 50 C	100	400	100	400
Storage Stability Test[b], 24 hour, percent	----	1	----	1
Classification Test	Pass	----	----	----
Particle Charge Test	Positive	----	----	----
Sieve Test, percent	----	0.3	----	0.3
Demulsibility, 0.02 N $CaC1_2$, percent	----	----	30	----
Distillation:				
Oil distillate by volume of emulsion, percent	----	3	----	3
Residue from distillation[c] , percent	65	----	65	----
Tests on Residue from Distillation:				
Penetration,25 C, 100 g, 5 sec	100	200	100	200
Ductility, 4 C, 5 cm/minute, cm	30	----	25	----
Ash[d] , percent	----	1	----	1
Float Test at 60 C, sec	----	----	1200	----
Elastic Recovery[e] , percent	58	----	58	----

[a]All tests shall be performed in accordance with AASHTO T 59 except as noted.

[b]In addition to AASHTO T 59, upon examination of the test cylinder, and after standing undisturbed for 24 hours, the surface shall show no appreciable white, milky colored substance and shall be a homogeneous brown color throughout.

[c]AASHTO T 59 shall be modified to maintain a 399 F ± 10 F maximum temperature for 15 minutes.

[d]Percent ash shall be determined in accordance with AASHTO T 111, *Ash in Bituminous Material*.

[e]Elastic recovery shall be determined as follows. Condition the ductilometer and samples to be treated at 50 F. Prepare the brass plate, mold and briquet specimen in accordance with AASHTO T 51. Keep the specimen at the specified test temperature of 50 F for 85 to 95 minutes. Immediately after conditioning, place the specimen in the ductilometer and proceed to elongate the sample to 20 cm at a rate of pull of 5 cm/min. After the 20 cm elongation has been reached, stop the ductilometer and hold the sample in the elongated position for 5 minutes. After 5 minutes, clip the sample approximately in half by means of scissors or other suitable cutting devices. Let the sample remain in the ductilometer in an undisturbed condition for one hour. At the end of this time period, retract the half sample specimen until the two broken ends touch. At this point note the elongation (x) in cm. Calculate the percent recovery by the following formula:

$$\% \text{ Recovery} = \frac{20 - X}{20} \times 100$$

Polymer Modified Asphalt Emulsion		
Test [a]	**CHFRS-2P**	
	Min.	**Max.**
Viscosity, SFS @ 50 C	100	400
Storage Stability Test, 24 hour, percent	---	1.0
Demulsibility, 35 ml 0.8% dioctyl sodium sulfosuccinate, percent	60	---
Sieve Test, percent	---	0.10
Particle Charge Test	Positive	
Distillation [b]		
Oil Distillate, by volume of emulsion, percent	---	0.5
Residue from distillation, percent	65	---
Tests on Residue from Distillation:		
Polymer content, weight, percent (solids based)	3.0	---
Softening Point, C	54	
Float test at 60 C, s	1800	---
Penetration, 25 C, 100 g, 5 s	80	130
Viscosity @ 60 C, Poise	1300	---
Solubility in Trichloroethylene, percent	95	---
Elastic Recovery [c] @ 10 C , percent	65	---

[a]All tests shall be performed in accordance with AASHTO T-59 except as noted.
[b]AASHTO T59 shall be modified to maintain a 177 ± 5 C maximum temperature to be held for 20 minutes. Complete the total distillation in 60 ± 5 minutes from the first application of heat.
[c]Elastic recovery shall be determined as follows. Condition the ductilometer and samples to be treated at 10 C. Prepare the brass plate, mold, and briquet specimen in accordance with AASHTO T 51. Keep the specimen at the specified test temperature of 10 C for 85 to 95 minutes. Immediately after conditioning, place the specimen in the ductilometer and proceed to elongate the sample to 20 cm at a rate of pull of 5 cm/min. After the 20 cm elongation has been reached, stop the ductilometer and hold the sample in the elongated position for 5 minutes. After the 5 minutes, clip the sample approximately in half by means of scissors or other suitable cutting devices. Let the sample remain in the ductilometer in an undisturbed condition for one hour. At the end of this time period, retract the half sample specimen until the two broken ends touch. At this point note the elongation recovery (X) in cm. Calculate the percent recovery by the following formula:

$$\% \text{ Recovery} = \frac{20 - X}{20} \times 100$$

Amend Sec 1015.20.5.1.1 to include the following:

1015.20.5.1.1 Polymer Modified Asphalt Emulsion – Tack Coat. Bituminous material for polymer modified asphalt shall be in accordance with the following:

Slow Setting Polymer Modified Asphalt Emulsion[a]					
		SS-1HP		CSS-1HP	
Test on Emulsion	Method	Min	Max	Min	Max
Viscosity, Saybolt Furol @ 25°C (77°F), s	AASHTO T 59	20	100	20	100
Particle Charge Test		Negative		Positive	
Storage Stability Test[b], 24 hr, percent	AASHTO T 59	--	1	--	1
Sieve Test, percent	AASHTO T 59	--	0.50	--	0.50
Residue by Distillation[c], percent	AASHTO T 59	57		57	
Oil Distillate by Distillation, percent	AASHTO T 59	--	--	--	--
Test on Residue from Distillation					
Penetration 25°C, 100 g, 5 s	AASHTO T 49	40	90	40	90
Elastic Recovery[d], 20 cm, 5 cm/min, 60 min, %	AASHTO T 301	30	--	30	--
Solubility in Trichloroethylene[e], %	AASHTO T 44	97.5	--	97.5	--

[a] The emulsified asphalt shall be in accordance with Section 1015.20.5 of the 2011 Missouri Standard Specifications for Highway Construction, except as indicated above, and shall be modified with a styrene-butadiene diblock or triblock copolymer or a styrene butadiene rubber.

[b] In addition to AASHTO T 59, upon examination of the test cylinder, and after standing undisturbed for 24 hours, the surface shall show no appreciable white, milky colored substance and shall be homogeneous brown color throughout. The storage stability test may be waved provided the asphalt emulsion storage tank at the project site has adequate provisions for circulating the entire contents of the tank, provided satisfactory field results are obtained.

[c] AASHTO T 59 shall be modified to use a lower distillation temperature of 177° C (350° F).

[d] AASHTO T 301 shall be modified to allow the residue to be obtained from distillation as long as the distillation temperature is modified as stated above. The test on residue shall be conducted at a temperature of 10° C (50° F).

[e] In lieu of performing AASHTO T 44, AASHTO T 111, Ash in Bituminous Material, may be performed with a maximum allowable percent ash of 1.0 percent.

L. QUALITY MANAGEMENT

1.0 Quality Management. The contractor shall provide Quality Management as specified herein to ensure the project work and materials meets or exceeds all contract requirements.

1.1 The contractor shall provide all Quality Control (QC) of the work and material. Contractor QC staff shall hold the primary responsibility for ensuring all work and material is in compliance with contract requirements. QC staff shall perform and document all inspection and testing. The QC inspectors and testers may be employed by the contractor, sub-contractor, or a qualified professional service hired by the contractor.

1.2 The engineer will provide Quality Assurance (QA) inspection. The role of QA is to verify the performance of QC and provide confidence that the product will satisfy given requirements for quality.

1.3 The contractor shall designate a person to serve as the project Quality Manager (QM). The QM shall be knowledgeable of standard testing and inspection procedures for highway and bridge construction, including a thorough understanding of the standard specifications. The QM shall be responsible for the implementation and execution of the Quality Management Plan and shall oversee all QC responsibilities, including all sub-contract work. The QM shall be the primary point of contact for all quality related issues and responsibilities, and shall ensure qualified QC technicians and inspectors are assigned to all work activities. The QM should be separate from the manager of the work activities.

1.4 Any QC personnel determined in sole discretion of the engineer to be incompetent, derelict in their duties, or dishonest, shall at a minimum be removed from the project. Further investigation will follow with a stop work notification to be issued until the contractor submits a corrective action report that meets the approval of the engineer.

2.0 Quality Management Plan. The contractor shall develop, implement and maintain a Quality Management Plan (QMP) that will ensure the project quality meets or exceeds all contract requirements, and provides a record for acceptance of the work and material.

2.1 The QMP shall address all QC inspection and testing requirements of the work as described herein. A draft QMP shall be submitted to the Resident Engineer for review at least two weeks prior to the pre-construction conference.

2.2 Physical work on the project shall not begin prior to approval of the QMP by the engineer. The approved QMP shall be considered a contract document and any revisions to the QMP will require approval from the engineer.

2.3 The following items shall be included in the Quality Management Plan:

a) General organizational structure of the contractor's production and QC staff.

b) Name, qualifications and job duties of the Quality Manager.

c) A list of all certified QC testers who will perform QC duties on the project, including sub-contract work, and the areas of testing in which they are certified.

d) A list of all QC inspectors who will perform inspection duties on the project, including sub-contract work, and the areas of inspection that they will be assigned.

e) A Document Control Procedure for verifying documentation is accurate and complete as described in Section 3.

f) A procedure describing QC Inspections as outlined in Section 4.

g) A procedure describing QC Testing, as outlined in Section 5, including a job specific Inspection and Test Plan (ITP).

h) A procedure describing Material Receiving as outlined in Section 6.

i) A list of Hold Points as outlined in Section 8.

j) A procedure for documenting and resolving Non-Conforming work as described in Section 9.

k) A procedure for tracking revisions to the QMP.

l) A list of any approved changes to the Standard Specifications or ITP, including a reference to the corresponding change order.

m) Format for the Weekly Schedule and Work Plans as described in Section 10, including a list of activities that will require pre-activity meetings.

3.0 Project Documentation. The contractor shall establish a Document Control Procedure for producing and uploading the required Quality Management documents to a web-based electronic storage site provided by MoDOT (Microsoft SharePoint), or to an alternate storage site provided by the contractor and approved by the engineer. This process will allow efficient sharing of documents among authorized users. Any proposed alternate site must provide equal or better efficiency in document sharing as the MoDOT provided site. If an alternate site is utilized, upon completion of the project the contractor shall provide all files to the engineer on an approved electronic media.

3.1 The contractor shall utilize a file naming system that allows efficient location of documents. The file naming system for each folder should be shown in the QMP.

3.2 Documents (standard forms, reports, and checklists) referenced throughout this provision are considered the minimum documentation required. They shall be obtained from MoDOT at the following web address: http://www.modot.org/quality . The documents provided by MoDOT are required to be used in the original format, unless otherwise approved by the engineer. Contractor-altered versions may be allowed in some cases; however, many of these forms must remain in the original format in order to simplify data entry into SiteManager (MoDOT's internal project management system).

3.3 Timely submittal of the required documents to the MoDOT document storage location is essential to ensure payment can be processed for the completed work. Submittal of the documents is required within 12 hours of the work shift that the work was performed, or on a document-specific schedule approved by the engineer and included in the QMP.

3.4 The contractor shall establish a verification procedure that ensures all required documents are submitted to the engineer within the specified time, and prior to the end of each pay period for the work that was completed during that period. Payment will not be made for work that does not include all required documents. Minimum documents that might be required prior to payment include: Test Reports, Inspection Checklists, Materials Receiving Reports, and Daily Inspection Reports.

3.5 The contractor shall perform an audit at project closeout to ensure the final collection of documents is accurate and complete.

4.0 Quality Control Inspections. The QMP shall identify a procedure for performing QC inspections. QC inspections shall be performed for all project activities to ensure the work is in compliance with the contract, plans and specifications.

4.1 The QM shall identify the QC inspectors assigned to each work activity. The QC inspectors shall inspect the work to ensure the work is completed in accordance with the plans and specifications, and shall document the inspection by completing the required inspection checklists, forms, and reports provided by MoDOT. Depending on the type of work, the checklists may be necessary daily, or they may follow a progressive work process. The frequency of each checklist shall be stated in the QMP. The contractor may propose alternate versions of checklists that are more specific to the work.

4.2 A Daily Inspection Report is required to document pertinent activity on the project each day. This report shall include a detailed diary that describes the work performed as well as observations made by the inspection staff regarding quality control. The report shall include other items such as weather conditions, location of work, installed quantities, tests performed, and a list of all subcontractors that performed work on that date. The report shall include the full name of the responsible person who filled out the report and shall be digitally signed by an authorized contractor representative.

4.3 External fabrication of materials does not require further QC inspection if the product is currently under MoDOT inspection or an approved QC/QA program. QC inspection and testing required in the production of concrete for the project shall be the responsibility of the contractor.

4.4 The contractor shall measure and document the quantity for all items of work that require measurement. Any calculations necessary to support the measurement shall be included with the documentation. The engineer will verify the measurements prior to final payment.

5.0 Quality Control Testing. The QMP shall identify a procedure for QC testing. The contractor shall perform testing of the work at the frequency specified in the Inspection and Test Plan (ITP).

5.1 MoDOT will provide a standard ITP and the contractor shall modify it to include only the items of work in the contract, including adding any Job Special Provision items. The standard ITP is available on the MoDOT website at http://www.modot.org/quality. The contractor shall not change the specifications, testing procedures, or the testing frequencies, from the standard ITP without approval by the engineer and issuance of a change order.

5.2 Test results shall be recorded on the standard test reports provided by the engineer, or in a format approved by the engineer. Any test data shall be immediately provided to the engineer upon request at any time, including prior to the submission of the test report.

5.3 The contractor shall ensure that all personnel who perform sampling and/or testing are certified by the MoDOT Technician Certification Program or a certification program that has been approved by MoDOT for the sampling and testing they perform.

5.4 If necessary, an independent third party will be used to resolve any significant discrepancies between QC and QA test results. All dispute resolution testing shall be performed by a laboratory that is accredited in the AASHTO Accreditation Program in the area of the test performed. The contractor shall be responsible for the cost to employ the third party laboratory if the third party test verifies that the QA test was accurate. The Commission shall be responsible for the cost if the third party test verifies that the QC test was accurate.

6.0 Material Receiving. The QMP shall identify a procedure for performing material receiving. Standard material receiving forms will be provided by the engineer.

6.1 The procedure shall address inspections for all material delivered to the site (excluding testable material such as concrete, asphalt, aggregate, etc.) for general condition of the material at the time it is delivered. The material receiving procedure shall record markings and accompanying documentation indicating the material is MoDOT accepted material (MoDOT-OK Stamp, PAL tags, material certifications, etc.).

6.2 All required material documentation must be present at the time of delivery. If the material is not MoDOT accepted, the contractor shall notify the engineer immediately and shall not incorporate the material into the work.

7.0 Quality Assurance. The engineer will perform Quality Assurance inspection and testing (QA) to verify the performance of QC inspection and testing. The frequency of the QA testing will be as shown in the ITP, but may be more frequent at the discretion of the engineer. The engineer will record the results of the QA testing and inspection and will inform the contractor of any known discrepancies.

7.1 QA is responsible for verifying the accuracy of the final quantity of all pay items in the contract. This includes taking measurements on items that require measurement and other items that are found to have appreciable errors.

7.2 QA inspection and test results may not be used as a substitute for QC inspection and testing.

7.3 QA will be available for Hold Point inspections at the times planned in the Weekly Schedule. The inspections may be re-scheduled as needed, but a minimum 24-hour advance notification from the contractor is required unless otherwise approved by the engineer.

8.0 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 the succeeding work depends on a QA review of the preceding work.

8.1 A list of minimum Hold Points will be provided by the engineer and shall be included in the QMP. The engineer may make changes to the Hold Point list at any time.

8.2 Prior to all Hold Point inspections, QC shall provide the engineer with the Daily Inspection Reports, Inspection Checklists, Test Reports, and Material Receiving Reports for the work performed leading up to the Hold Point. 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.

9.0 Non-Conforming Work. Non-conforming work is defined as work that does not meet the contract requirements. The contractor shall establish a procedure for identifying and resolving non-conforming work as well as tracking the status of the reports.

9.1 Contractor QC staff or production staff should identify non-conforming work and document the details on the Non-Conformance Report form provided by MoDOT. QA staff may also initiate a non-conformance report.

9.2 In-progress work that does not meet the contract requirements may not require a non-conformance report if production staff is aware of the issue and corrects the problem during production. QC or QA may issue a non-conformance report for in-progress work when documentation of the deficiency is considered beneficial to the project record.

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

9.4 For recurring non-conformance work of the same or similar nature, a written Corrective Action Request will be issued by QC or QA. The contractor shall then establish a procedure for tracking the corrective action from issuance of the request to implementation of the solution. Approval from the engineer is required prior to implementation of the proposed corrective action. The contractor shall notify the engineer after the approved corrective action has been implemented.

10.0 Work Planning and Scheduling. The contractor shall include Quality Management in all aspects of the work planning and scheduling. This shall include providing a Weekly Schedule, a Work Plan for each work activity, and holding pre-activity meetings for each new activity.

10.1 A Weekly Schedule shall be provided to the engineer each week that outlines the planned project activities for the following two-week period. This schedule shall include all planned work, identification of all new activities, traffic control events, and requested hold point inspections for the period. Planned quantity of materials, along with delivery dates should also be included in the schedule.

10.2 A Work Plan shall be submitted to the engineer at least one week prior to the pre-activity meeting. The Work Plan shall include the following: a safety plan, list of materials to be used, work sequence, defined responsibilities for QC testing and inspection personnel, and stages of work that will require hold point inspections.

10.3 A pre-activity meeting is required prior to the start of each new activity. The purpose of this meeting is to discuss details of the Work Plan and schedule, including all safety precautions. Those present at the meeting shall include: the production supervisor for the activity, the Quality Manager, QC inspection and testing staff, and QA. The Quality Manager will review the defined responsibilities for QC testing and inspection personnel and will address any quality issues with the production staff. Attendees may join the meeting in person or by phone or video conference.

11.0 Basis of Payment. Payment for all costs associated with developing, implementing and maintaining the Quality Management Plan, providing Quality Control inspection and testing, and all other costs associated with this provision, will be considered included in the unit price of each contract item. No direct pay will be made for this provision.

M. SAFETY PLAN

1.0 Description. This contractor shall submit to the engineer a project Safety Plan (SP) for all work performed by the contractor and all subcontractors. The purpose of the SP is to encourage and enable all work to be performed in the safest possible manner and that all parties involved are aware of their individual responsibility for safety on the jobsite.

1.1 The SP shall be completed by the contractor and provided to the engineer prior to the beginning of any construction activity or phase on the project.

1.2 The contractor shall designate a person to serve as Project Safety Manager (PSM). The PSM shall be responsible for implementing and overseeing the SP. The PSM is not required to be present on the project at all times, but must be available to address safety issues and needs.

1.3 The PSM shall make revisions to the SP as necessary. Any new project activities or phases shall be included in the SP prior to work beginning on that activity or phase.

1.4 An example Safety Plan is available at:
http://www.modot.mo.gov/business/contractor_resources/bid_opening_info/bidGenInfo.shtml

2.0 Emergency Preparedness. The SP shall outline and detail for all workers, the specific procedures and actions necessary to respond to a jobsite emergency and the measures taken to communicate these requirements to all workers.

2.1 The SP shall include a list of local emergency contacts including phone numbers. A copy of the emergency contact list shall be accessible to workers.

2.2 In the case where there is no cellular or land line phone service at the jobsite, the SP shall identify how to reach the nearest available phone service.

3.0 Project Safety Analysis. The SP should contain a basic Project Safety Analysis (PSA) that outlines the actions necessary to complete each activity or phase of the project. The SP shall include a general description of the primary activities or steps required to safely complete the project.

3.1 Each activity should also include a general description of the work involved along with the known risks associated with the activity. In addition the PSA should outline the controls for those risks, including any Personal Protection Equipment (PPE) requirements for that activity or phase, and whether or not the activity or phase requires a specific safety meeting prior to beginning the activity or phase.

3.2 Submittal of the PSA for all activities or phases is not required with the initial submittal of the SP; however, the PSA for each activity or phase shall be completed prior to the beginning of that activity or phase.

4.0 Safety Meetings. The SP shall include the types of safety meetings that will be required of and conducted by the contractor.

5.0 Safety Training. The SP shall identify the required safety training provided to the contractor's personnel. The contractor shall require that the appropriate safety training for the contractor's personnel is completed prior to the beginning of work on each activity or phase.

5.1 The SP shall identify the recommended safety training needs and PPE for MoDOT employees who will be exposed to the work activities. MoDOT will provide safety training and PPE to MoDOT employees based on MoDOT safety policies.

6.0 Payment. There will be no direct payment for compliance with this Safety Plan provision.

N. CONTRACTOR RETAINED GUARDRAIL JSP-04-11

1.0 Description. All guardrail removed from this project shall become the property of the Contractor and shall be disposed of in accordance with Sec 202.

2.0 Basis of Payment. All costs incurred for complying with this provision shall be considered completely covered by the contract unit price for Item No. 202-20.10, Removal of Improvements.

O. DISPOSITION OF EXISTING SIGNS

1.0 Signs to be removed and relocated. The Contractor will be responsible for the removal and storage of any existing signs that are to be relocated whether they are ground mounted or overhead. If any signs are damaged during removal or damaged during storage due to the Contractor's negligence, he shall be responsible for replacing them at no additional cost to the Commission.

2.0 Signs to be salvaged. The Contractor will be required to remove State owned sign faces and/or posts identified on the plans. All State owned sign faces and/or posts that are removed as part of this project that are considered salvageable by the Engineer shall be taken to MoDOT's Sign Shop located at 3050 NE Independence Avenue, Lee's Summit, Missouri 64064.

The Contractor shall notify the Sign Shop before deliveries are made. The phone number the contractor shall call to notify the Sign Shop is (816) 622-0505.

2.1 Sign faces shall be broken down into no larger than 8-foot by variable length sections. Signs shall be stacked neatly in bins provided by MoDOT's Sign Shop, under the supervision of MoDOT personnel, during normal working hours. All other signs shall be removed and disposed of by the Contractor.

3.0 Payment. No direct payment shall be made for the cost associated with removing, storage and transporting or disposing of signs as shown on the plans, or as directed by the Engineer.

P. PROJECT CONTACT FOR CONTRACTOR/BIDDER QUESTIONS

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

Allan Ludiker, Project Contact
Kansas City District
600 N.E. Colbern Road
Lee's Summit, MO 64086
Telephone Number: 816-607-2267
e-mail: Allan.Ludiker@modot.mo.gov

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

MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Allan Ludiker-KC/pm

COPY: ProjectWise

FROM: Frank Reichart
Environmental Chemist

DATE: November 22, 2013

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route I-670
Job No. J4I2023
Bridge A-0807
Jackson County

We are providing you with the results of the requested inspection on the above referenced property. 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 property. 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

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 structure. 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/kansas city (kc)/jxi's/j4i2023/fr1311222.docx
Attachments

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

ROUTE:	I-670	**SURVEYED BY:**	Frank Reichart and Diane Roegge
MODOT JOB NO.:	J4I2023	**CERTIFICATION #:**	7118122712MOIR11239, F.R.
DISTRICT:	KC	**CERTIFICATION #:**	7118122712MOIR7165, D.R.
COUNTY:	Jackson	**SITE ADDRESS:**	Charlotte Street, Over I-670, Downtown Kansas City
DATE OF SURVEY:	November 21, 2013	**TYPE(S) OF STRUCTURE(S):**	Bridge
PARCEL NO.:	Bridge A-0807		

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	No samples taken. No suspect ACM located.			
	Bridge Paint is not a suspect ACM per MSDS's on file.			
	NOTE: The scope of this project did not involve disturbing the Kansas City Power & Light (KCP&L) fibreduct conduit; therefore this suspect material was not sampled and tested.			

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

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
Nonfriable Asbestos-Containing Materials
(Abatement not required if not made friable during demolition.)

ROUTE:	I-670	**TESTED BY:**	Frank Reichart and Diane Roegge
MODOT JOB NO.:	J4I2023	**CERTIFICATION #:**	7118122712MOIR11239, F.R.
DISTRICT:	KC	**CERTIFICATION #:**	7118122712MOIR7165, D.R.
COUNTY:	Jackson	**SITE ADDRESS:**	Charlotte Street, Over I-670, Downtown Kansas City
DATE OF TESTS:	N/A	**TYPE(S) OF STRUCTURE(S):**	Bridge
PARCEL NO.:	Bridge A-0807		

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	I NF			
	NOTE: The scope of this project did not involve disturbing the Kansas City Power & Light					
	(KCP&L) fibreduct conduit; therefore this suspect material was not sampled and tested.					

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

I NF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All materials requiring removal or special handling.

ROUTE:	I-670	**TESTED BY:**	Frank Reichart and Diane Roegge
MODOT JOB NO.:	J4I2023	**CERTIFICATION #:**	7118122712MOIR11239, F.R.
DISTRICT:	KC	**CERTIFICATION #:**	7118122712MOIR7165, D.R.
COUNTY:	Jackson	**SITE ADDRESS:**	Charlotte Street, Over I-670, Downtown Kansas City
DATE OF TESTS:	N/A	**TYPE(S) OF STRUCTURE(S):**	Bridge
PARCEL NO.:	Bridge A-0807		

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			
		NOTE: The scope of this project did not involve disturbing the Kansas City Power & Light (KCP&L) fibreduct conduit; therefore this suspect material was not sampled and tested.					

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-670	**TESTED BY:**	N/A
MODOT JOB NO.:	J4I2023	**DATE OF TESTS:**	N/A
DISTRICT:	KC	**PARCEL NO.:**	Bridge A-0807
COUNTY:	Jackson	**SITE ADDRESS:**	Charlotte Street, Over I-670, Downtown Kansas City
SURVEYED BY:	Frank Reichart	**TYPE(S) OF STRUCTURE(S):**	Bridge
DATE OF SURVEY:	November 21, 2013		

Sample ID	Color/Location of Material/Substrate	Metals (ppm)							
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag
	No samples taken. No painted surfaces located.								
	NOTE: The scope of this project did not involve disturbing the Kansas City Power & Light (KCP&L) fibreduct conduit; therefore this suspect material was not sampled and tested.								

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

CONTRACTOR: _____

ADDRESS: _____
_____
_____
_____

Date January 9, 2014

To: Dan Niec
District Engineer
Missouri Department of Transportation

Subject: Construction
Route Charlotte St /670, JACKSON County
Job No. J4I2023
Equipment and Materials List

We respectfully submit the attached list of proposed (Traffic Signal) items for your review and approval.

It is understood approval of this list does not constitute final acceptance nor in any way void sections of the specifications requiring sampling and testing of equipment and materials prior to final acceptance.

Furthermore, we understand none of these items are to be ordered nor any related construction work performed until this list has been approved in writing by your ofice.

Signature _____

Contractor

Job No: J4I2023
Route: Charlotte St /670
County: JACKSON

REQUIRED INFORMATION
LIST OF EQUIPMENT & MATERIALS
PROPOSED FOR THIS PROJECT

ITEM NO.	DESCRIPTION	MANUFACTURER OR FABRICATOR[1]	CATALOG NUMBER OR DRAWING NUMBER [1]
TRAFFIC SIGNALS:			
9025300	"CONDUIT, 3 IN., TRENCH"		
9027300	"CONDUIT, 3 IN., PUSHED"		
9028308	"CABLE, 16 AWG 2 CONDUCTOR"[2]		
9028500	"CABLE, LOOP DETECTOR, IN DUCT"[2]		
	Loop Sealant		
	Detector Splice Kit		
9029100	"BASE, CONCRETE"		
9029902	MISC. 3.5 FT PEDESTRIAN PUSH BUTTON POST		
9029902	MISC. 4.25 FT PEDESTRIAN PUSH BUTTON POST		
9029902	MISC. ADA PUSHBUTTON, RIGHT		
9029902	MISC. ADA PUSHBUTTON, LEFT		

NOTES:

(1) Contractor Complete
(2) Indicate type of insulation on cable items. Certifications required for approval (see Standard Specifications).
(3) All documentation required by Standard Specification Section 901.4.1 must be submitted to the engineer for review and approval.
(4) All documentation required by Standard Specification Section 902.4.3.3 must be submitted to the engineer for review and approval.
(5) Certifications required for approval (see Standard Specifications).
(6) Specification sheets required for approval (shop drawings required for fabricated items).

TABLE OF CONTENTS

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 W. CAPITOL AVE.
JEFFERSON CITY, MO 65101
Phone (888) 275-6636

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JOB NO. J4I2023
Jackson County, MO
Date Prepared: 1/23/2014

A. CONSTRUCTION REQUIREMENTS

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

2.0 Construction Requirements. Plans for the existing structure 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 the structure closure is for the absolute minimum amount of time required to complete the work. The structure shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed structure 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 onto the roadway. 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. Traffic under the bridge shall be maintained in accordance with the contract documents.

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. FORM LINERS

1.0 Description. This work item shall consist of constructing the form liner aesthetic treatment on cast-in-place concrete architectural elements as shown on the plans and described in this special provision.

2.0 Materials.

2.1 Shop Drawings. Contractor shall provide complete shop drawings of all aesthetic treatments.

2.2 Formwork. Formwork for aesthetic treatment of the cast-in-place concrete shall be a type that produces uniform results consistent in both, pattern and depth of relief with the project

design aesthetics. The contractor shall be responsible to coordinate the aesthetic treatments of all components to meet the design aesthetic criteria described herein and as shown on plans. No mixing of pattern numbers or manufacturers will be permitted. The form liner pattern shall be one of the patterns listed on the plans or approved equal.

2.3 Form Ties. In surface areas receiving the aesthetic treatment form liner, all form ties shall be placed in the simulated stone surface. Form ties shall be fiberglass ties that shall hold the forms in the correct alignment. The color of the ties shall closely match the concrete wall color. Ties shall be ground flush with the surface of concrete prior to pressure washing.

2.4 Form Release Agent. Form release agents shall be the manufacturer's standard non-staining, non-petroleum based and compatible with surface sealer finish coating. Form release agents shall be applied to all surfaces of the form liner at the manufacturer's recommended rate.

2.5 Gaskets. Closed cell compressible neoprene of such thickness as is appropriate to assure leakage prevention shall be used to prevent joint leakage. One face shall be coated with an adhesive tape to assure proper positioning at the time of form closure. The neoprene shall be sufficiently compressible as to assure virtual "zero" separation of the forms as a result of the use of this product.

2.6 Aggregates.

2.6.1 Aggregate Source. The aggregate incorporated into the concrete mix of all aesthetic concrete bridge components shall be from the same source as the balance of the bridge concrete work. The purpose for this provision is to ensure uniformity of materials and color once areas are pressure washed and aggregates become exposed. Single-source shall be interpreted as one contiguous rock quarry, gravel pit or dredging location. This provision in no way alters the specification requirements for aggregate quality specified in other sections of the project specifications.

2.6.2 Aggregate Gradation. Concrete mixes supplied for the construction of the aesthetic treatments shall be in accordance with the following requirements. The concrete aggregate for the aesthetic treatment mix shall be Gradation E in accordance with Sec 1005 for any areas where aesthetic treatment is formed monolithically with the structure. This requirement for aggregate size is necessary to permit concrete mixture to flow freely and fill completely into reveals and form liner proposed in the aesthetic treatment. Gradation E aggregate shall meet the aggregate source requirements.

2.7 Joint Materials. Bond breaker material shall be polyethylene tape, coated paper, metal foil or similar type materials. The backup material shall be compressible, non-shrink, non-reactive with the sealant and non-absorptive material type such as extruded butyl or polychloroprene foam rubber. The joint sealant shall be an elastomeric, multi-component sealant, in accordance with Federal Specification TT-S-227, Type II. The sealant color shall match the pressure washed concrete surface color.

3.0 Construction Requirements.

3.1 Reveals and Texture. All reveals and texture shall be continuous from element to element through construction joints and around corners. Techniques shall be utilized to ensure true continuous texture between separate elements. Sand blasting will not be permitted for cleaning concrete surface, as sand blasting will reduce the special surface texture specified. Pressure washing with water is the preferred method of removing laitance. Pressure washing cleaning

shall provide a minimum pressure of 3000 psi (21 MPa) at a rate of 3 to 4 gallons per minute (11.4 to 15.1 L/min) using a fan nozzle held perpendicular to the surface at a distance of 2 to 3 feet (0.6 to 0.9 m). The completed surface shall be free of blemishes, discolorations, surface voids and conspicuous form marks to the satisfaction of the engineer.

3.2 Sample Test Panels. Sample test panels shall be constructed to demonstrate the contractor's workmanship for all form liner textures and patterns as shown on the plans. The sample test panels may also be used for demonstration special surface finish if approved by the engineer. The architectural surface treatment of the finished work shall achieve the same final effect as demonstrated on the approved sample test panels. The materials used in construction of the sample test panels shall be in accordance with all standards as listed in this specification and the plans. The concrete mix shall be consistent with the project specifications and criteria. The minimum size of the sample test panels shall be 6 x 6 feet x 8 inches (1.8 x 1.8 x 0.2 m). The form liner finish shall be demonstrated in a vertical strip covering one-half to three-quarters of the sample test panel(s).

3.3 Patches. Holes and defects in concrete surface shall be filled within 48 hours of when the forms are removed. The same patching materials and techniques shall be used that were approved on sample test panels. The patches shall be made with a stiff mortar made with the same material sources as the concrete. The mortar mix proportions shall be adjusted so the dry patch matches the dry adjacent concrete. White cement shall be added to the mortar mix if necessary to lighten the mortar mix.

3.4 Joints. Joints shall be sealed when the sealant, air and concrete temperatures are above 40°F (4°C). Joints shall be primed and filled flush with joint sealant in accordance with the manufacturer's recommendation. All construction control and expansion joints shall occur within the vertical joints as shown in the elevation views on the plans. All vertical expansion joints shall be filled with preformed fiber expansion joint filler covered with bond break tape and sealed with elastomeric, multi-component sealant.

4.0 Method of Measurement. Final measurement will not be made except for authorized changes during construction or where significant errors are found in the contract quantity. The revision or correction will be computed and added to or deducted from the contract quantity.

4.1 Form Liners for Cast-In-Place Concrete. Measurement of form liners will be made to the nearest square yard (m^2).

5.0 Basis of Payment.

5.1 Form Liners for Cast-In-Place Concrete. Payment for form liners will be based on the contract plan quantities. Payment for the above described work, including all material, additional concrete, equipment, labor and any other incidental work necessary to complete this item, will be considered completely covered by the contract unit price for "Form Liners". Any change in the contract plan quantities, based on approved change orders, will be paid for at the contract unit price.

C. CLASS 2 PENETRATING CONCRETE SEALER

1.0 Description. This work shall consist of preparing and treating the concrete surfaces of the bridge deck, approach slabs (if present) and roadway face and top of sidewalks, curbs, parapets, medians and barrier curbs with a class 2 penetrating concrete sealer meeting this

specification. This type of sealer shall be used in lieu of the normal surface sealing for concrete in accordance with Sec 703.

2.0 Materials. The sealer shall meet the requirements of this job special provision. The sealer selected by the contractor shall be submitted to the engineer for approval two weeks before application and shall be listed on MoDOT's Pre-Qualified Product List. If the contractor chooses to submit a new product for MoDOT's Pre-Qualified Product List, the product shall be submitted to the engineer 30 days prior to application. Either submittal shall include certified test data from an independent test laboratory and the concrete mix design and curing procedure on the test specimens in which sealer was tested.

2.1 The sealer shall be a solvent-free 100% solids isobutyltrialkoxysilane, with low oligomer and polymer compound content. The chemical composition shall meet the following requirements:

Property	Specification
Purity	98% minimum monomer by weight
Solvent	Less than 0.1% by weight
Siloxan or polymer Residue	Less than0.1% by weight
Chloride Ion Content	Less than 40 PPM
Density	ASTM D2111: 7.2 to 7.4 pounds per gallon
Flash Point	ASTM D93: greater than 145 degrees F
Dry Time	ASTM D7539: less than one hour

2.2 The sealer shall meet the following performance criteria based on a single application at the manufacturer's recommended application rate. All test specimens shall be produced using MoDOT Class B-2 concrete in accordance with Section 501.

Test	Test Method	Duration	Max Absorption / Cl^-
Water Immersion	ASTM C 642	48 hours	0.5 percent by weight (mass)
Water Immersion	ASTM C 642	50 days	1.5 percent by weight (mass)
Salt Water Ponding (based on non-abraded specimen)	AASHTO T 259	90 days	0.50 lbs/cu yd (0.30 kg/m^3) Cl^- Depth: (1/2 to 1") (13 to 25 mm)

2.2.1 Absorption. The absorption of the treated concrete under total immersion shall not exceed 0.5 percent after 48 hours or 1.5 percent after 50 days per ASTM C 642 as modified below for non-air entrained concrete.

2.2.1.1 In addition to ASTM C 642 section 4.1, one 4-inch (10 cm) diameter by 4 inch (10 cm) long core shall be retrieved from the surface of a concrete test specimen to which sealer has been applied. No cores shall be taken from the bridge deck. The core shall be oven dried as designated by ASTM C 642 section 5.1. The core shall be sealed with a rapid setting two part epoxy on the sides and bottom. The epoxy shall overlap the top edge of the core 1/8" (3mm). The core shall be weighed to determine the oven dry weight (mass) of the core and coating. The weight (mass) shall be designated as "A".

2.2.1.2 The core, processed in accordance with section 2.2.1.1 of this job special provision, shall be immersed in a suitable receptacle and covered with tap water. The procedure as designated by ASTM C 642 section 5.2 shall be followed to determine the soaked surface dry weight (mass) of the core and coating. This weight (mass) shall be designated as "B".

2.2.1.3 The percent moisture absorption of the core shall be determined by ASTM C 642 section 6.1, equation (1). ASTM C 642 sections 5.3, 5.4, 6.1 and equations (2) through (7) shall not apply.

2.2.2 Salt water ponding. After 90 days ponding of 3 percent NaCl solution per ASSHTO T 259, the chloride ion content of the concrete shall not exceed 0.5 pounds per cubic yard (0.30 kg/m^3) at ½ to 1 inch (13 to 25 mm) depth.

2.3 The sealer shall not permanently stain, discolor or darken the concrete. Application of the sealer shall not alter the surface texture or form a coating on the concrete surfaces. Treated concrete shall be surface dry within 60 minutes after application.

2.4 The sealer shall be tinted with a fugitive dye to enable the coating to be visible on the treated concrete surface for at least 4 hours after application. The fugitive dye shall not be conspicuous more than 7 days after application when exposed to direct sunlight.

2.5 The sealer shall be delivered to the project in unopened containers with the manufacturer's label identifying the product and with the seal(s) intact. Each container shall be clearly marked by the manufacturer with the following information:

- Manufacturer's name and address.
- Product name.
- Date of manufacture and expiration date.
- Lot identification.
- Storage requirements.

3.0 Construction Requirements.

3.1 Equipment. Application equipment shall be as recommended by the manufacturer. The spray equipment, tanks, hoses, brooms, rollers, coaters, squeegees, etc. shall be thoroughly clean, dry, free of foreign matter, oil residue and water prior to applying the treatment.

3.2 Cleaning and Surface Preparation. Surfaces which are to be treated shall meet the approved product's requirements for surface condition. Sealing shall not be done until all concrete construction or repair has been completed and cured to the requirements of the manufacturer. At a minimum, the wet cure must be complete and the moisture content of the concrete must be at or below the manufacturer's recommendation as measured by a moisture meter. The contractor shall furnish the engineer with written instructions for the surface preparation requirements and a representative of the manufacturer shall be present to assure that the surface conditions meet the manufacturer's requirements.

3.2.1 Sealing shall be done after the bridge deck has been textured.

3.2.2 At a minimum, the surface shall be thoroughly cleaned to remove dust, dirt, oil, wax, curing components, efflorescence, laitance, coatings and other foreign materials. The manufacturer or manufacturer's representative shall approve the use of chemicals and other cleaning compounds to facilitate the removal of these foreign materials before use. The treatment shall be applied within 48 hours following surface preparation.

3.2.3 Cleaning equipment shall be fitted with suitable traps, filters, drip pans and other devices to prevent oil and other foreign material from being deposited on the surface.

3.3 Test Application. Prior to final application, the contractor shall treat a measured test coverage area on horizontal and vertical surfaces of the different components of the structure to be treated for the purpose of demonstrating the desired physical and visual effect on an application or of obtaining a visual illustration of the absorption necessary to achieve the specified coverage rate. In the latter case, the applicator shall use at least ½ gallon (1.9 liter) of treatment following the manufacturer's recommended method of application for the total of the test surfaces. Horizontal test surfaces shall be located on the deck and on the curb or sidewalk, and vertical test surfaces shall be located on a parapet or safety barrier curb so that the different textures are displayed.

3.4 Application. The sealer shall be applied by thoroughly saturating the concrete surfaces at an application rate of 175 square feet per gallon or the rate designated on the plans.

3.4.1 The concrete surface temperature shall be above 35°F (2°C).

3.4.2 Allow concrete to dry a minimum of 48 hours after any measurable precipitation.

3.4.3 The treatment shall be spread from puddles to dry areas.

3.4.4 If the applicator is unable to complete the entire application continuously, the location where the application was stopped shall be noted and clearly marked.

3.5 Protection of Adjoining Surfaces and the Public.

3.5.1 When applying the sealer, the contractor shall protect adjoining surfaces of the structure that are not to be sealed by masking off or by other means. Sealer shall not leave residue on glass, painted metal or automobiles. The contractor shall also make provision to protect the public when sealing the fascia of a bridge that spans an area used by the public.

3.5.2 Asphalt and mastic type surfaces shall be protected from spillage and overspray. Any asphalt pavement damaged by the sealer will result in removal and replacement at the contractor’s expense. Joint sealants, traffic paints and asphalt overlays may be applied to the treated surfaces 48 hours after the treatment has been applied. Adjoining and nearby surfaces of aluminum or glass shall be covered where there is possibility of the treatment being deposited on the surfaces. Plants and vegetation shall be protected from overspray by covering with drop cloths. Precautions shall be followed as indicated on the manufacturer's product and material safety data sheet.

3.6 Opening to Traffic. Traffic shall be allowed on a deck only after a treated area is visibly dry. Dried coating shall not leave residue on glass, painted metal or automobiles.

4.0 Method of Measurement. No direct measurement will be made.

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

D. CLEAN AND EPOXY SEAL

1.0 Description. In order to protect the bridge superstructure concrete from deicing chemicals and other contaminates, loose and delaminated concrete shall be removed and an epoxy seal

shall be applied to the concrete 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 shown on plans.

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.

E. CLEANING AND COATING EXISTING BEARINGS

1.0 Description. This work shall consist of cleaning and coating existing bearings at End Bent No. 1 & 9 before the slab overlay is constructed and as directed by the engineer.

2.0 Construction Requirements.

2.1 Cleaning and Coating. The existing bearings shall be recoated with System G in accordance with Sec 1081 with one coat of Inorganic Zinc Primer, Intermediate & Finish Coats.

3.0 Method of Measurement. Measurement for cleaning and coating existing bearings will be made per each.

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 considered completely covered by the contract unit price for “Cleaning and Coating Existing Bearings”.