

STATE OF MISSOURI
HIGHWAYS and TRANSPORTATION
COMMISSION

JEFFERSON CITY, MISSOURI

CONSTRUCTING OR IMPROVING
CONTRACT I.D. 161216-G03

THIS JOB SHALL BE CONSTRUCTED UNDER
FEDERAL PROJECT NUMBER(S) : FAS-S600 (75)
FAS-S600 (74)

Job J7P2228F Route 96 JASPER County
Job J7P2228G Route 96 JASPER County

BIDDER CHECKLIST
FINAL CHECKLIST BEFORE SUBMITTING BID

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

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

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

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

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

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Bid Bond*

Subcontractor Disclosure Form*

DBE Identification Submittal (Applies to Federal Projects Only) *

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



NOTICE TO CONTRACTORS

Electronic bids submitted through the Bid Express website for the proposed work will be received by the Missouri Highways and Transportation Commission until 11:00 o'clock a.m. (prevailing local time) on 12-16-16.

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 J7P2228F Route 96 JASPER County. Bridge replacement and ADA improvements bridge over MNA Railroad in Carthage, the total length of improvement being 0.114 miles.****(2): Job J7P2228G Route 96 JASPER County. Bridge replacement bridge over Spring River Overflow in Carthage, the total length of improvement being 0.137 miles.

Combination bids will be Required on the Jobs listed above.

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

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

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

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

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

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

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

ASPHALT CEMENT
SEAL COAT
UNDERSEAL
POLYMER MODIFIED EMULSION MEMBRANE

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

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

MAXIMUM MONETARY VALUE OF AWARDS ACCEPTED THIS BID OPENING

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

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

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

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

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

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

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

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

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

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

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

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

List the state of domicile

List address of all Missouri offices or places of business

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

(12) Signature and Identity of Bidder

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

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

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

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

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

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

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

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

DBE CERTIFICATION

(13) Trainees: (Applies to Federal Projects only) The number of trainee hours provided under this contract will be 1 slots at 1000 hours per slot or 1000 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 7.00% 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: 161216-G03
 Letting Date: 12-16-16
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
Section 0001 ROADWAY ITEMS - J7P2228F				
Alt Group				
0010	2022010 REMOVAL OF IMPROVEMENTS	LUMP	LUMP	
0020	2031000 CLASS A EXCAVATION	5,110.000 CUYD		
0030	2036000 COMPACTING EMBANKMENT	4,843.000 CUYD		
0040	2063000 CLASS 3 EXCAVATION	2.000 CUYD		
0050	3040504 TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	1,241.000 SQYD		
0060	3101003 GRAVEL (A)	8.000 SQYD		
0070	4010151 TYPE A3 SHOULDER	512.200 SQYD		

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0080	4019905 MISC. OPTIONAL PAVEMENT	729.400 SQYD		
0090	6071102 MODIFIED CONCRETE GUTTER TYPE B	268.000 LF		
0100	6079903 MISC. 5 FT DECORATIVE FENCE	281.000 LF		
0110	6086004 CONCRETE SIDEWALK, 4 IN.	113.300 SQYD		
0120	6086008 CONCRETE SIDEWALK, 8 IN.	30.600 SQYD		
0130	6094010 DRAIN BASIN	2.000 EA		
0140	6097000 ROCK LINING	6.000 CUYD		
0150	6113020 FURNISHING TYPE 2 ROCK BLANKET	1,133.000 CUYD		

State of MISSOURI
Dept of Transportation
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Project(s):

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
0160	6113040 PLACING TYPE 2 ROCK BLANKET	1,133.000 CUYD		
0170	6173200 CONCRETE TRAFFIC BARRIER, TYPE E	170.000 LF		
0180	6181000 MOBILIZATION	LUMP	LUMP	
0190	6206000C 4 IN. WHITE WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	1,244.000 LF		
0200	6206001C 4 IN. YELLOW WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	1,167.000 LF		
0210	6240103A PERMANENT EROSION CONTROL GEOTEXTILE	1,700.000 SQYD		
0220	6274000 CONTRACTOR FURNISHED SURVEYING AND STAKING	LUMP	LUMP	

State of MISSOURI
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Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
0230	7110300 CONCRETE AND MASONRY PROTECTION SYSTEM	LUMP	LUMP	
0240	7110400 SACRIFICIAL GRAFFITI PROTECTION SYSTEM	LUMP	LUMP	
0250	7201000 MECHANICALLY STABILIZED EARTH WALL SYSTEMS	715.000 SQFT		
0260	7250415 15 IN. PIPE GROUP C	25.000 LF		
0270	7320815A 15 IN. OR ALLOWED SUBSTITUTE GROUP C FLARED END SECTION	2.000 EA		
0280	8051000A SEEDING - COOL SEASON MIXTURES	0.600 ACRE		
0290	8061005 ROCK DITCH CHECK	30.000 LF		

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
0300	8061006 ALTERNATE DITCH CHECK	12.000 LF		
0310	8061007A CURB INLET CHECK	2.000 EACH		
0320	8061016 SEDIMENT REMOVAL	16.000 CUYD		
0330	8061019 SILT FENCE	1,339.000 LF		
	Section 0001 Total			0.00
Section 0002 GUARDRAIL / GUARD CABLE ITEMS - J7P2228F				
Alt Group				
0340	6061060 MGS GUARDRAIL	125.000 LF		
0350	6061061 MGS GUARDRAIL, 8 FT. POSTS, 6 FT. - 3 IN. SPACING	238.000 LF		

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Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0360	6061069 MGS BRIDGE APPROACH TRANSITION SECTION (MINOR ROUTE)	2.000 EA		
0370	6061080 MGS END ANCHOR	1.000 EA		
0380	6063014 TYPE A CRASHWORTHY END TERMINAL (MASH)	3.000 EA		
	Section 0002 Total			0.00

Section 0003 LIGHTING ITEMS - J7P2228F

Alt Group

0390	9012230 BASE MOUNTED CONTROL STATION 240 VOLT - 4 CIRCUIT	1.000 EA		
0400	9013002 CONDUIT, 2 IN. RIGID, IN TRENCH	40.000 LF		
0410	9015020 TRENCHING TYPE II	205.000 LF		

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
0420	9016110 PULL BOX, PREFORMED CLASS 1	EA 2.000		
0430	9017110 CABLE, 10 AWG 1 CONDUCTOR, POLE AND BRACKET	LF 930.000		
0440	9017407 CABLE-CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG	LF 620.000		
0450	9017408 CABLE-CONDUIT, 1 IN., 3 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG	LF 620.000		
0460	9018610 POWER SUPPLY ASSEMBLY, TYPE 1, 240/120 VOLT SERVICE, LIGHTING ONLY	EA 1.000		
0470	9019902 MISC. KING LUMINAIRE LIGHT FIXTURE	EA 8.000		
0480	9019902 MISC. STRESS CRETE - KWC 15 LIGHT POLES	EA 8.000		

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 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
0490	9028202 CABLE, 2 AWG 1 CONDUCTOR, POWER	150.000 LF		
	Section 0003 Total			0.00

Section 0004 BRIDGE A8425 ITEMS - J7P2228F

Alt Group

0500	2061000 CLASS 1 EXCAVATION	65.000 CUYD		
0510	2065500 TEMPORARY SHORING	LUMP	LUMP	
0520	2160500 REMOVAL OF BRIDGES	LUMP	LUMP	
0530	5031011A BRIDGE APPROACH SLAB (MINOR ROAD)	192.000 SQYD		
0540	6079903 MISC. ORNAMENTAL PEDESTRIAN FENCE	346.000 LF		
0550	7011107 DRILLED SHAFTS (4 FT. 6 IN. DIA.)	156.100 LF		

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0560	7011206 ROCK SOCKETS (4 FT 0 IN. DIA.)	60.000 LF		
0570	7011300 SUPPLEMENTARY TELEVISION CAMERA INSPECTION	6.000 EA		
0580	7011400 FOUNDATION INSPECTION HOLES	120.000 LF		
0590	7011600 SONIC LOGGING TESTING	6.000 EA		
0600	7021212 GALVANIZED STRUCTURAL STEEL PILES (12 IN)	497.000 LF		
0610	7025002 PILE WAVE ANALYSIS	2.000 EA		
0620	7027000 PILE POINT REINFORCEMENT	14.000 EA		
0630	7032003 CLASS B CONCRETE (SUBSTRUCTURE)	177.500 CUYD		

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0640	7034213 SLAB ON CONCRETE I-GIRDER	1,511.000 SQYD		
0650	7034219A BARRIER CURB (TYPE D)	674.000 LF		
0660	7056003 TYPE 6 (54 IN.), PRESTRESSED CONCRETE I-GIRDER	1,515.000 LF		
0670	7061060 REINFORCING STEEL (BRIDGES)	44,440.000 LB		
0680	7071000 CONDUIT SYSTEM ON STRUCTURE	LUMP	LUMP	
0690	7123301 STEEL INTERMEDIATE DIAPHRAGM FOR P/S CONCRETE GIRDERS	24.000 EA		
0700	7151001 VERTICAL DRAIN AT END BENTS	2.000 EA		
0710	7161002 LAMINATED NEOPRENE BEARING PAD	10.000 EA		

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 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0720	7161003 LAMINATED NEOPRENE BEARING PAD (TAPERED)	20.000 EA		
0730	7251000 CORRUGATED METAL PIPE PILE SPACERS	7.000 EA		
	Section 0004 Total			0.00

Section 0005 WALL A8519 ITEMS - J7P2228F

Alt Group

0740	7110300 CONCRETE AND MASONRY PROTECTION SYSTEM	LUMP	LUMP	
0750	7110400 SACRIFICIAL GRAFFITI PROTECTION SYSTEM	LUMP	LUMP	
0760	7201000 MECHANICALLY STABILIZED EARTH WALL SYSTEMS	4,253.000 SQFT		
	Section 0005 Total			0.00

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 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
Section 0006 INCENTIVE/DISINCENTIVE CLAUSE - J7P2228F				

Alt Group

0770	6189916 MISC. ACCELERATING THE COMPLETION OF DLR CLOSURE WORK (INCENTIVE/DISINCENTIVE CLAUSE)	20,000.000		
Section 0006 Total				0.00

Section 0007 ROADWAY ITEMS - J7P2228G

Alt Group

0780	2022010 REMOVAL OF IMPROVEMENTS	LUMP	LUMP	
0790	2031000 CLASS A EXCAVATION	1,057.000		
		CUYD		
0800	2036000 COMPACTING EMBANKMENT	1,039.000		
		CUYD		
0810	3040504 TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	1,401.000		
		SQYD		

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0820	4010151 TYPE A3 SHOULDER	573.000 SQYD		
0830	4039905 MISC. OPTIONAL PAVEMENT (10.5 IN. ASPHALT OR 8.5 IN PCCP)	827.700 SQYD		
0840	4071005 TACK COAT	10.000 GAL		
0850	6113020 FURNISHING TYPE 2 ROCK BLANKET	498.000 CUYD		
0860	6113040 PLACING TYPE 2 ROCK BLANKET	498.000 CUYD		
0870	6131010 FURNISHING AND PLACING CONCRETE MATERIAL FOR FULL DEPTH PAVEMENT REPAIR	66.700 SQYD		
0880	6131012 SUBGRADE COMPACTION (6 IN. DEPTH) (PAVEMENT REPAIR)	67.000 SQYD		

State of MISSOURI
Dept of Transportation
Schedule of Items

Contract ID: 161216-G03
Letting Date: 12-16-16
Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0890	6131013 TYPE 1 OR 5 AGGREGATE FOR BASE (4 IN. THICK) (PAVEMENT REPAIR)	67.000 SQYD		
0900	6131014 FULL DEPTH PAVEMENT REPAIR SAW CUT (FOR PERIMETER AND INTERNAL SAW CUTS)	120.000 LF		
0910	6131015 DOWEL BAR (DRILLING, FURNISHING AND INSTALLATION) FOR FULL DEPTH PAVEMENT REPAIR	40.000 EA		
0920	6133018 FURNISHING AND PLACING BITUMINOUS MATERIAL FOR CLASS B PARTIAL DEPTH PAVEMENT REPAIR	16.200 TONS		
0930	6133019 REMOVAL FOR CLASS B PARTIAL DEPTH PAVEMENT REPAIR	66.700 SQYD		
0940	6161005 CONSTRUCTION SIGNS	2,438.000 SQFT		

State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 161216-G03
 Letting Date: 12-16-16
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
0950	6161009 FLAG ASSEMBLY	20.000 EA		
0960	6161031 TYPE III MOVEABLE BARRICADE WITH LIGHT	28.000 EA		
0970	6161099 CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED	7.000 EA		
0980	6181000 MOBILIZATION	LUMP	LUMP	
0990	6206000C 4 IN. WHITE WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	1,448.000 LF		
1000	6206001C 4 IN. YELLOW WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	905.000 LF		

State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 161216-G03
 Letting Date: 12-16-16
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
1010	6240103A PERMANENT EROSION CONTROL GEOTEXTILE	747.000 SQYD		
1020	6274000 CONTRACTOR FURNISHED SURVEYING AND STAKING	LUMP	LUMP	
1030	8051000A SEEDING - COOL SEASON MIXTURES	0.600 ACRE		
1040	8061016 SEDIMENT REMOVAL	13.000 CUYD		
1050	8061019 SILT FENCE	1,251.000 LF		
1060	8061050 TYPE C BERM	272.000 LF		
	Section 0007 Total			0.00
Section 0008 GUARDRAIL / GUARD CABLE ITEMS - J7P2228G				
Alt Group				

State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 161216-G03
 Letting Date: 12-16-16
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
1070	6061060 MGS GUARDRAIL	225.000 LF		
1080	6061069 MGS BRIDGE APPROACH TRANSITION SECTION (MINOR ROUTE)	4.000 EA		
1090	6063014 TYPE A CRASHWORTHY END TERMINAL (MASH)	4.000 EA		
	Section 0008 Total			0.00

Section 0009 SIGNING ITEMS - J7P2228G

Alt Group

1100	9031250A U-CHANNEL POST, 3 LB	26.000 LF		
1110	9035004 TYPE SHR2L-1 SIGN	6.000 SQFT		
	Section 0009 Total			0.00

Section 0010 BRIDGE A8424 ITEMS - J7P2228G

Alt Group

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State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 161216-G03
 Letting Date: 12-16-16
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
1120	2061000 CLASS 1 EXCAVATION	220.000 CUYD		
1130	2160500 REMOVAL OF BRIDGES	LUMP	LUMP	
1140	5031011A BRIDGE APPROACH SLAB (MINOR ROAD)	198.000 SQYD		
1150	7021212 GALVANIZED STRUCTURAL STEEL PILES (12 IN)	322.000 LF		
1160	7021214 GALVANIZED STRUCTURAL STEEL PILES (14 IN)	872.000 LF		
1170	7026000 PRE-BORE FOR PILING	464.000 LF		
1180	7027000 PILE POINT REINFORCEMENT	14.000 EA		
1190	7032003 CLASS B CONCRETE (SUBSTRUCTURE)	259.800 CUYD		

State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 161216-G03
 Letting Date: 12-16-16
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Cts
1200	7034213 SLAB ON CONCRETE I-GIRDER	2,061.000 SQYD		
1210	7034219A BARRIER CURB (TYPE D)	837.000 LF		
1220	7056002 TYPE 4 (45 IN.), PRESTRESSED CONCRETE I-GIRDER	1,969.000 LF		
1230	7061060 REINFORCING STEEL (BRIDGES)	12,680.000 LB		
1240	7123301 STEEL INTERMEDIATE DIAPHRAGM FOR P/S CONCRETE GIRDERS	20.000 EA		
1250	7123610 SLAB DRAIN	10.000 EA		
1260	7151001 VERTICAL DRAIN AT END BENTS	2.000 EA		
1270	7161002 LAMINATED NEOPRENE BEARING PAD	13.000 EA		

State of MISSOURI
 Dept of Transportation
 Schedule of Items

Contract ID: 161216-G03
 Letting Date: 12-16-16
 Project(s):

Bidder: -

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars Cts	Bid Amount Dollars Ct
1280	7161003 LAMINATED NEOPRENE BEARING PAD (TAPERED)	37.000 EA		
	Section 0010 Total			0.00
	Bid Total			0.00

Contract Id: 161216-G03
Vendor Name:

Vendor Number:

SUBCONTRACTOR DISCLOSURE

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

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

SUBCONTRACTOR NAME	DOLLAR VALUE OF SUBCONTRACT	CATEGORY OF WORK
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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.: J7P2228F/J7P2228G

Route: 96

County: Jasper

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

- A. General
- B. Contract Liquidated Damages
- C. Early Notice to Proceed
- D. Accelerating the Completion of Closure Work (Incentive/Disincentive Clause)
- E. Work Zone Traffic Management Plan
- F. Liquidated Damages for Winter Months
- G. ADA Compliance and Final Acceptance of Constructed Facilities
- H. Project Contact for Contractor/Bidder Questions
- I. Emergency Provisions and Incident Management
- J. Electronic Information for Bidder's Automation
- K. Contractor Quality Control
- L. Utilities
- M. Supplemental Revisions
- N. Fertilizing, Seeding and Mulching
- O. Remove and Relocate Existing Signs
- P. Contractor Retained Guardrail
- Q. Optional Pavements
- R. DBE Program Requirements
- S. Decorative Pedestrian Fence
- T. Light Supports and Fixtures
- U. Restrictions for Migratory Birds
- V. Maintenance of Historic Route 66 Detour
- W. Temporary Easement Area
- X. Insurance Requirements

ADDITIONAL INFORMATION

Asbestos and Heavy Metals Survey Reports
D-15 Equipment and Materials List
Light Support Cut Sheets
Light Fixture Cut Sheets

Job No.: J7P2228F/J7P2228G

Route: 96

County: Jasper

 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636</p>
	<p>HDR 4435 Main St, Suite 1000 Kansas City, MO 64111 Certificate of Authority #000856 Consultant Phone 816-360-2700</p>
	<p>If a seal is present on this sheet, JSP's have been electronically sealed and dated.</p>
	<p>JOB NO. J7P2228F Jasper County, MO Date Prepared: 11/15/2016</p>
<p>Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: A - X.</p>	

JOB
SPECIAL PROVISION

A. GENERAL - FEDERAL

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to October 2016 Missouri Standard Plans
For Highway Construction

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

B. CONTRACT LIQUIDATED DAMAGES

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

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

Job No.: J7P2228F/J7P2228G
Route: 96
County: Jasper

Notice to Proceed: January 16, 2017
Completion Date: October 15, 2017

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

Job Number	Calendar Days	Daily Road User Cost
J7P2228F	N/A	\$2,300
J7P2228G	N/A	\$2,300

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$1,000** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified completion date or calendar days.

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

C. EARLY NOTICE TO PROCEED

The contractor will be given a notice to proceed date of January 16, 2017. All contracts shall be executed and returned to the Commission prior to this date.

D. ACCELERATING THE COMPLETION OF CLOSURE WORK (Incentive/Disincentive Clause)

1.0 Description. This provision contains modifications to the standard specifications for accelerating the replacement of bridge K0428 with bridge A8425 (Job No. J7P2228F) and bridge L0409 with bridge A8424 (Job No. J7P2228G) and minimizes closure time of Route 96. Job No. J7P2228F and J7P2228G are being let in required combination. The bridges in both of these jobs shall be open to traffic and items met in 7.2.4 of this provision by the number of days bid for Job No. J7P2228F and Job No. J7P2228G to qualify for the incentives described in this special provision. Similarly, if both bridges are not open to traffic and items met in 7.2.4 of this provision by the number of days bid for Job No. J7P2228F and Job No. J7P2228G, the contractor will be subject to the disincentives as described in this special provision.

1.1 Unless otherwise stated, specification section references are to the Missouri Standard Specifications for Highway Construction and its supplements in effect at the time of this contract.

2.0 Definition of Terms.

2.1 For this project the following terms are used as defined below:

(a) Closure Time

Closure time is defined as any day or other unit of time, including Saturdays, Sundays and legal holidays, when any lane or lanes are closed to traffic on Route 96 due to the contractor's operations. Once closure time starts, closure time count will continue until the items of Paragraph 7.2.4 of this provision are met.

The number of closure time bid shall not exceed 214 days.

(b) Incentive Road-User Cost per day

The amount shown in the bid, determined by the Commission, that interference and inconvenience to highway traffic will cost the road-users for each unit of closure time of the Route 96 closure. The Incentive Road-User Cost cannot be changed by the bidder. Bidder and its surety stipulate to the reasonableness and accuracy of that amount and expressly waive any right they may have to contest that amount in any claim, litigation or otherwise.

(c) Contract Amount

The total amount bid for all items of work to be performed by the contractor. This amount is the summation of the products of the approximate quantities shown in the bid schedule multiplied by the contract unit price. The contract amount does not include the amount produced by this acceleration of work clause.

3.0 Preparation of Bid.

3.1 In addition to the requirements of Sec 102.7, the bidder shall specify in the bid the closure time which it determines is required to complete the work. The bidder shall show the product of the closure time and the average daily road-user cost in the amount column provided for that purpose. This amount will be added to the contract amount. The sum will be read as the bid total.

3.2 A bidder may alter or correct the units of closure time entered in the bid, provided the bidder follows the same requirements set forth for altering or correcting bid prices in Sec 102.7.1.

4.0 Bid Guaranty. For this project the amount of guaranty required by Sec 102.9 shall be not less than five percent of the contract amount as defined above in 2.1 (c) of these provisions.

5.0 DBE Goal. The DBE contract goal percentage, if any, applies to the contract amount as defined in 2.1 (c) of these provisions.

6.0 Award and Execution of Contract. Delete Sec 103.1 and substitute the following:

6.1 Consideration of Bids. After the bids are opened and the bid totals read, they will be compared on the basis of the contract amount, to which has been added the product of the closure time submitted by the bidder and the Incentive Road-User Cost shown in the bid. This total amount will be used to determine the lowest responsive and responsible bid for the project. The Commission reserves the right to reject any and all bids including those which, in the sole judgment of the Commission, contain too few or too many units of closure time.

7.0 Prosecution and Progress.

7.1 Subletting of Contract. For this project the total contract cost referred to in Sec 108.1.1 shall be considered as the summation of the products of the approximate quantities shown in the bid schedule multiplied by the contract unit price.

7.2 Prosecution of Work. Assessment of closure time will begin on the first day any work begins on either project other than allowances stipulated in **Section 7.2.1** of this provision. Regardless of which project the contractor elects to begin first, closure days will begin on the first day either project construction begins and will continue without any suspension in calendar day count until both projects are open to traffic and the items are completed as listed in **Section 7.2.4.**

7.2.1 The contractor shall erect construction detour signing as the first order of work. Closure days will not be assessed for the following:

- (a) Installation of Detour Signing
- (b) Mobilization

7.2.2 Prior to beginning work causing lane closure, the engineer may require the contractor to submit a schedule and written narrative for the lane closure work. The schedule shall be provided in accordance with Sec 108.4, or by the Critical Path Method if that is the schedule method specified by the contract. This schedule is required to reflect the effect of all constraints on the lane closure work.

7.2.3 This schedule requirement is in addition to any other schedule requirement of the contract. The cost for this requirement will be considered fully covered by the contract prices for the lane closure work.

7.2.4 The following items shall be completed before the closure time will end:

- (a) Bridge A8424 and Bridge A8425.
- (b) All permanent roadway pavements
- (c) All guardrail and associated work
- (d) All MSE Walls
- (e) Sidewalks
- (f) All Lighting erect and in working order
- (g) Decorative fencing
- (h) Roadway Culverts
- (i) Temporary Pavement Striping

Permanent Pavement Marking, Permanent Seeding and Mulch, Detour Signing Removals, and Erosion Control Removals will not be a requirement of this provision.

7.3 Liquidated Damages for Failure or Delay in Completing Work on Time. Sec 108.8 is modified as follows:

7.3.1 If the contractor fails to complete all work necessary to have all lanes of traffic open on Route 96 and have all items are completed as indicated in Paragraph 7.2.4 of this provision in the closure time specified by the bidder, the amount shown in the bid as Incentive Road-User

Cost per day will be deducted from the contractor's payment for each unit of closure time, including Saturdays, Sundays and legal holidays more than the closure time bid until such time as all lanes of Route 96 are opened to traffic.

7.3.2 This deduction will be made as liquidated damages from any money due or to become due to the contractor under the contract. The contractor and surety shall be liable for any liquidated damages assessed in excess of any amount due the contractor.

7.3.3 This deduction will continue until such time as all lanes of Route 96 are open to traffic and all items completed as indicated in Paragraph 7.2.4 of this provision. Liquidated damages as described elsewhere in the contract will be assessed on any work, if not complete by **September 15, 2017**.

7.4 Credit for Completion of Work Ahead of Time. If the contractor completes all work required and has all lanes of traffic opened on Route 96 and all items are completed as indicated in Paragraph 7.2.4 of this provision in less than the closure time specified by the bidder, the amount shown in the bid as the Incentive Road-User Cost per day will be added to the contractor's payment for each unit of closure time, including Saturdays, Sundays and legal holidays less than the closure time specified in the bid.

7.4.1 Computation of this payment will begin on the first full unit of closure time that all lanes of Route 96 are opened to traffic and all items are completed as indicated in Paragraph 7.2.4 of this provision. This credit will be added to the amount of money due or to become due the contractor under the contract. The total amount of this credit shall not exceed **\$420,000**.

7.4.2 An extension of the closure time may be granted for changes in the work as specified in Sec 104.3 or for excusable, noncompensable and compensable delays as specified in Sec 108.14 only to the extent, as determined by the engineer, they actually affect the then major item of work or the critical path of the work.

7.4.3 In the event of an excusable delay, an extension of the closure time specified by the bidder will not be made for determining any liquidated savings or incentive payment. Further, in the event of an excusable delay, if the contractor completes the work within the closure time specified by the bidder, that shall not constitute a basis to claim acceleration costs in addition to the liquidated savings or incentive that may be earned.

8.0 Measurement and Payment. Sec 109.2 is supplemented by the following:

8.1 Scope of Payment. The Incentive Road-User Cost per day, shown in the bid, will be used only for bid comparisons and as a deduction from money due the contractor in accordance with section 7.3, "Liquidated Damages for Failure or Delay in Completing Work on Time ", or as a credit for additional money due the contractor in accordance with section 7.4, "Credit for Completion of Work Ahead of Time", and for no other purpose. Incentive/Disincentive payment in accordance with this special provision applies to both Job No. J7P2228F and J7P2228G which are being let in required combination. The bridges in both of these jobs shall be open to traffic and all items are completed as indicated in Paragraph 7.2.4 of this provision by the number of days bid for Job No. J7P2228F to qualify for the incentives described in this special provision. Similarly, if both bridges are not open to traffic by the number of days bid for Job No. J7P2228F, the contractor will be subject to the disincentives as described in this special provision.

E. WORK ZONE TRAFFIC MANAGEMENT PLAN (WZTMP)

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, the 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. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of 10 minutes to prevent congestion from escalating to 15 minute or above threshold. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

2.5.1 Traffic Safety.

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

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

3.0 Work Hour Restrictions.

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

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

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

4.0 Detours and Lane Closures.

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

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

F. LIQUIDATED DAMAGES FOR WINTER MONTHS

1.0 **Description.** Revise Sec 108.8.1.2 (a) and (b) and substitute the following for the project:

- (a) Liquidated damages will be assessed from December 15 to March 15
- (b) Liquidated damages will be assessed for Saturdays, Sundays and Holidays.

G. ADA COMPLIANCE AND FINAL ACCEPTANCE OF CONSTRUCTED FACILITIES

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 compliant 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, 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.

H. PROJECT CONTACT FOR CONTRACTOR/BIDDER QUESTIONS

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

Sean Matlock, Project Contact
Southwest District
3025 E. Kearney Street
Springfield, MO 65803

Telephone Number: 417-621-6310
Email: Sean.Matlock@modot.mo.gov

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

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 resident engineer's office shall also be notified when the contractor requests emergency assistance.

Jasper County: Greg Chapman Office: 417-829-8017

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 417-895-6868, Emergency 1-800-525-5555, Cellular *55	
MoDOT Customer Service	417-895-7600
MoDOT Incident Response	417-864-1160
Jasper County Sheriff	417-624-1601
City of Carthage Police	417-237-7200
City of Carthage Ambulance	417-358-8121

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. ELECTRONIC INFORMATION FOR BIDDER'S AUTOMATIONA

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

K. CONTRACTOR QUALITY CONTROL NJSP-15-42

1.0 The contractor shall perform Quality Control (QC) testing in accordance with the specifications and as specified herein. The contractor shall submit a Quality Control Plan (QC

Plan) to the engineer for approval that includes all items listed in Section 2.0, prior to beginning work.

2.0 Quality Control Plan.

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

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

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

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

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

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

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

4.0 Work Planning and Scheduling.

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

4.2 Weekly Meeting. When work is active, the contractor shall hold a weekly project meeting with the engineer to review the planned activities for the following week and to resolve any

outstanding issues. Attendees shall include the engineer, the contractor superintendent or project manager and any foreman leading major activities. This meeting may be waived when, in the opinion of the engineer, a meeting is not necessary. Attendees may join the meeting in person, by phone or video conference.

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

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

4.4.1 A list of typical Hold Point events is available on the MoDOT website. Use of the Hold Point process will only be required for the project-specific list of Hold Points, if any, that the engineer submits to the contractor in advance of the work. The engineer may make changes to the Hold Point list at any time.

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

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

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

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

L. UTILITIES

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

<u>Utility Name</u>	<u>Known Required Adjustment</u>
AT&T - Distribution Joseph "Joe" Crim 600 St. Louis, Room 630 Springfield, MO 65806 Phone: 417-836-2651 Email: jc600a@att.com	None
City of Carthage Zeb Carney 624 E. Seventh Street Carthage, MO 64836 Phone: 417-237-7010 Email: z.carney@carthagemo.gov	None
Carthage Water & Electric Plant Elvis Caster 627 W. Centennial Ave. Carthage, MO 64836 Phone: 417-237-7300 Email: ecaster@cwep.com	None (see 1.1 below)
MGE (Laclede Group) Ken Stegall Construction Engineer 520 E 5th St Joplin, MO 64801 Phone: 417-626-4831 Email: Ken.Stegall@spireenergy.com	None

1.1 Carthage Water and Electric Plant (CWEP) will be supplying power to the new lighting controller. The contractor will be responsible for digging a trench from the lighting controller to CWEP's pole and backfilling that trench after CWEP installs the conduit and wire. The contractor will be responsible for paying CWEP's fee for their installation which is a \$125 flat fee plus \$2.95 per foot of conduit/wire. The new service is to be set up in the City of Carthage's name as the City will be paying for the electrical power upon completion of the project. The contractor shall call Gary Sheets (417-237-7010) at Carthage Public Work for inspection of any electrical work downstream of the meter socket. Inspection of the electrical work from the meter socket to the power source will be performed by CWEP. The contractor shall be responsible for removing the two existing wood poles on the east side of Route 96, south of the bridge. The existing street light on one of the wood poles shall be returned to CWEP. Any damage to the street light caused by contractor negligence shall be repaired or replaced solely at the contractor's expense. All cost associated with removing the poles and returning the street light shall be completely covered in the lump sum price of Removal of Improvements. All cost associated with provide electrical service to the new lighting controller shall be completely covered in the unit bid price for the power supply.

1.2 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.

1.3 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 [Sec 105.7.6](#). 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, its subcontractors and suppliers in any claim or action arising out of or in relation to the work under the contract.

1.4 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.

M. SUPPLEMENTAL REVISIONS JSP-09-01U

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Delete Sec 403.2.5.2 and substitute the following:

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

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. per 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.

Amend Sec 620.10.3.1.1.1, and 620.10.3.1.1.2 to include the following:

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

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

Delete Sec 606.30.4 & 606.30.5 and substitute the following:

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

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

Insert Sec 620.80 by to including the following:

SECTION 620.80 CONTRAST PAVEMENT MARKINGS

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

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

620.80.3 Construction Requirements.

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

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

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

Delete Sec 1048.10.1.1 and substitute the following:

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

N. FERTILIZING, SEEDING AND MULCHING

In accordance with Section 801.2.3, the following fertilizer shall be applied at the rate specified. No direct payment will be made for fertilizer.

Nitrogen (N)	80 lbs. per acre
Phosphoric Acid (P ₂ O ₅)	80 lbs. per acre
Potash (K ₂ O)	160 lbs. per acre

Seeding: The following seed mixture shall be applied at the rate specified:

	POUNDS PURE
<u>SEEDING MIXTURE</u>	<u>LIVE SEED/ACRE</u>
Tall Fescue	80
Annual Ryegrass	10
Perennial Ryegrass	6
White Clover	6
<u>Oats</u>	<u>10</u>
Total	112

Mulch shall be applied as specified in Section 802.

The accepted quantity of seeding will be paid for at the unit price for Item No. 805-10.00A, Seeding - Cool Season Mixtures, per acre. No direct payment will be made for fertilizing seeded areas.

O. REMOVE AND RELOCATE EXISTING SIGNS

1.0 Description. Any existing signs which are to be removed and relocated in the execution of this contract shall be stored at a location off of the right of way at the contractor's expense or stored on the right of way at a location designated by the engineer.

2.0 Any signs, sign supports, etc., removed and not reused on the project shall become property of the contractor and disposed of off the right of way.

3.0 If any sign is damaged due to the contractor's activities during the removal, transportation or re-installation of existing signs, it will be the contractor's responsibility to replace or repair the sign. The engineer shall have the final determination on whether the signs should be replaced or repaired.

4.0 Basis of Payment. Payment for these items shall be completely covered by the unit prices for items included in the contract. Payment for relocating signs shall include all excavation, materials, equipment, tools, labor, and work incidental thereto, and shall be considered to be completely covered by the contract unit price for Item Number 202-20.10, "Removal of Improvements," lump sum.

P. CONTRACTOR RETAINED GUARDRAIL

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.

Q. OPTIONAL PAVEMENTS

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

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

2.1 No additional payment will be made for asphaltic concrete mix quantities to construct the required 1:1 slope along the edge of the pavement.

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

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

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

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

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

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

R. DBE PROGRAM REQUIREMENTS NJSP-15-41A

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

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

- (a) Negotiating price.
- (b) Determining quality and quantity.
- (c) Ordering the material.
- (d) Paying for the material itself.
- (e) 30% of the work must be performed by the DBE's permanent employees (which does not include owner-operators or leased employees) or those hired by the DBE firm for the project from an independent source other than the prime contractor, such as a union hall. For at least 30% of the work the DBE's owned (not leased) equipment shall be used and the DBE must provide documentation that this owned equipment was used on the project as required by this provision.
- (f) For up to 70% of the remaining work the equipment used by the DBE must be by long term lease (at least one year) with another DBE or non-DBE but not the prime contractor. The DBE must have absolute priority over other businesses or entities to use the long term leased equipment and must display the name and identification number of the DBE.
- (g) The Contractor shall require DBE subcontractors to provide documentation in one of the following formats: bills of lading, hauling tickets, shippers manifest, and/or paid invoices. Regardless of the document format, the document(s) shall include the following information: name of the carrier, full name of the driver, driver ID number(s), truck and tanker ID or VIN number, and reflect the contract number, job number, county and route.

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

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

along with drivers and drivers' numbers to the DBE Subcontractor Project Trucker and Equipment List. The DBE Subcontractor shall attach copies of all current long term lease agreements to the DBE Subcontractor Project Trucker and Equipment List.

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

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

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

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

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

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

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

S. DECORATIVE PEDESTRIAN FENCE

1.0 Description. This work shall consist of furnishing and installing the fence to the edge of sidewalk and to the modified Type B gutter at the top of MSE Walls A8519 and J7P2228F-1 to the limits described in the plans.

2.0 Design Specification. Decorative Pedestrian Fence shall be in accordance with 2010 ASSHTO LRFD Bridge Design Specifications and 2010 Interim Revisions. 50 lb/ft and 200 lb loading shall not be applied simultaneously.

3.0 Material. All material used in fabrication and construction of the Decorative Pedestrian Fence shall be in accordance with the manufacture's specifications, except as modified in the contract documents.

3.1 Fencing Suppliers. Decorative Pedestrian Fence system shall be supplied by only one of the listed manufactures. The fencing system used at the edge of the sidewalk and along the modified Type B gutter at the top of MSE Walls A8519 and J7P2228F-1 shall match the fencing used on Bridge A8425. Fencing system shall include all components except the anchor bolts and #4 bars welded to the anchor bolts. The assembly of the pickets to the rails and the rails to the posts shall be the same as the style mentioned for the manufacturer.

Job No.: J7P2228F/J7P2228G
Route: 96
County: Jasper

Ameristar Fence Products, Inc.
1555 N. Mingo
Tulsa, OK 74116
Phone: (800) 321-8724
Email: www.ameristarfence.com

Iron Eagle Industries, Inc.
1256 Cardiff Blvd
Mississauga, Ontario Canada L5S1R1
Phone: (905) 670-2558
Email: www.ironeagleind.com

Betafence USA
3309 S.W. Interstate 45
Ennis, TX 75119
Phone: (888) 650-4766
Email: www.betafenceusa.com

Merchants Metals
6575 Romiss Court
St. Louis, MO 63134
Phone: (800) 293-3363
Email: www.merchantsmetals.com

3.2 Base Plates. Base plates shall be fabricated from ASTM A709, Grade 36 material.

3.3 Finish. All portions of the exposed fence, including base plates, shall have a gloss black finish (Federal Standard #17038). The finish shall be System "G" in accordance with Sec 1081.

4.0 Submittal Requirements. The contractor shall submit structural design computations and complete detailed shop drawings in accordance with Sec 1080 signed and sealed by a professional engineer registered in the State of Missouri.

5.0 Method of Measurement. Measurement for Decorative Pedestrian Fence will be made per linear foot.

6.0 Basis of Payment. Payment for the above described work, including all material, equipment, labor and any other incidental work necessary, will be considered completely covered under the contract unit price for 5 Ft. Decorative Fence.

T. LIGHT SUPPORTS AND FIXTURES

1.0 Description. This work shall consist of furnishing and installing the lights to be mounted to bridge A8425 and at the locations as described in the plans.

2.0 Material. All material used shall be in accordance with Sec 1000 except as noted below.

2.1 Lighting Poles. The contractor shall furnish light poles, bases and anchorages from StressCrete Group. The poles shall project 15' above the base as part of the Washington series with a catalog number of KWC15. The pole color shall be Aztec Jade – E51. The catalog number for the light pole on the bridge is KWC15-G-E51-FBP-AG-BA-GFI C/W 140-35/35 & FH. The catalog number for the light pole off the bridge is KWC15-G-E51-DB-AG-BA-GFI C/W 140-35/35 & FH. The manufactures cut sheet is included at the end of these provisions as an attachment.

2.2 Lighting Pole Foundations. The lighting poles shall be attached to bridge A8425 light blisters using the Baseplate Option 1. Additional poles shall be installed off of the bridge using the Direct Embedment option.

2.2.1 Localized Grading. The contractor shall perform any localized grading necessary to install the lighting poles using the Direct Embedment option.

2.3 Lighting Fixtures. The contractor shall furnish light fixtures and luminaires from King Luminaire. The fixture shall be Sol-Lux Acorn luminaire with Savannah Rings and Struts and Solid Spun Aluminum Top. The fixture color shall be Federal Green. The fixture shall contain a 75 watt, T1 post top LED engine. The catalog number for the light fixture is K445R-T1GR-IV-75(SSL)-4004-120V-K13-SRS-TB. The manufacture cut sheet is included at the end of these provisions as an attachment.

3.0 Method of Measurement. Measurement for the lighting poles with baseplates or foundations will be made per each. Measurement of the lighting fixtures with LED engine included will be made per each.

4.0 Basis of Payment. Payment for the Lighting Poles including all light pole material, all base plates, anchorage hardware, direct embedment hardware and any other material necessary to complete the installation and including all labor and equipment necessary to install the poles will be considered completely covered by the contract unit price for Stress Crete – KWC15 Light Poles. Payment for the Light Fixtures including the fixture with all options noted, the attachment hardware and the LED engine noted and any other material necessary to complete the installation and including all labor and equipment necessary to install the light fixtures will be considered completely covered by the contract unit price for King Luminaire Light Fixture. Payment for any localized grading necessary to complete the installation of the lighting poles by direct embedment will be considered completely covered by the contract unit price for other items.

U. RESTRICTIONS FOR MIGRATORY BIRDS

1.0 Description. Swallows or other bird species protected by the Migratory Bird Treaty Act may be nesting under Bridge L0409 over the Spring River Overflow that will be replaced under this contract.

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

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

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

3.2 Water and Water Tanks Used for Hydro cleaning. Aquatic invasives such as zebra mussels and some algae species have infested several bodies of water in the United States and

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

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

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

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

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

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

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

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

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

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

V. MAINTENANCE OF HISTORIC ROUTE 66 DETOUR

1.0 Description. This provision shall describe the maintenance requirements to detour Historic Route 66 detour onto Garrison Street in Carthage, MO.

2.0 Existing Condition Assessment. The Contractor shall make an assessment of the existing condition of Garrison St. from the junction with Route 96 on the south to the junction with Route V on the north. Key defects or deterioration found shall be measured and recorded in a format acceptable to the Engineer. The bridges on Garrison St. within the limits of the detour shall also be visually inspected. The condition assessment shall consist of digital photographs of noted key defects and deterioration and video recording of the entire length of Garrison St. to be used for the Historic Route 66 Detour. The digital photographs and video recordings shall be of sufficient resolution to distinguish the existing deterioration.

3.0 Route Maintenance. The Contractor shall make all partial depth (including removal and replacement) or full depth pavement repairs (including saw cutting, removal, subgrade compaction and pavement replacement) to Garrison St. as directed by the Engineer from the time the Historic Route 66 detour is posted until Route 96 is reopened and the detour is removed. The Engineer shall have the sole authority to delineate areas to be repaired.

3.1 Partial depth pavement repair shall include the removal and replacement of the existing pavement. Full depth pavement replacement shall include saw cutting, pavement removal, subgrade compaction and placement of new pavement. Pavement repairs shall meet the requirements of Sec 613.

3.2 The Contractor shall make pavement repairs within one week of receipt of written direction from the Engineer.

4.0 Materials. Materials for pavement repair shall be in accordance with Sec. 613.

5.0 Method of Measurement. Measurement of pavement repair items shall in accordance with Sec 613.

6.0 Basis of Payment. Payment for the condition assessment of the existing pavement will be considered completely covered by the contract price for other items. Payment for the full depth and partial depth pavement repairs shall be considered completely covered by the contract unit prices.

W. TEMPORARY EASEMENT AREA

1.0 Description. The Commission has acquired two donated temporary easements from the property owners of Leggett & Platt, Incorporated a Missouri corporation for the contractor's use in completing the construction of wall A8519 and associated grading. Contractor will provide Leggett & Platt with 14 days notice before beginning use of the temporary easement area. The temporary construction easement shall expire upon completion and approval of this purpose, but in no event shall the easement survive beyond twelve months from the Notice to Proceed.

1.1 The contractor shall use due care in use of the Easement, so as not to unreasonably disturb the property owner's use of the property. The contractor shall not dig any open pits, trenches, borings or holes on or under the Easement. The contractor is not to disturb any

existing trees or shrubs, landscaping, small block walls or irrigation lines. The contractor will solely be responsible for repairing any damage to the property caused by contractor operations.

2.0 Construction Requirements. The contractor will be required to limit their operations to existing public right-of-way and donated temporary easement. The contractor shall not use the easement as a staging area and will not store equipment, trucks, dirt, supplies, materials, rubble, spoil or any other materials of the contractor. The contractor may elect to work out an agreement that is separate from this contract with individual property owner for storage of material and equipment during construction. The contractor shall still be required to comply with Division 100 of the Standard Specifications for storage of material and equipment.

3.0 Insurance Requirements The contractor shall indemnify, defend and hold harmless Leggett & Platt, Incorporated, a Missouri corporation, its directors, officers, employees, agents, representatives and successors from any and all losses, liabilities (including strict liability), claims, causes of action, damages, injuries, liens, (including mechanic's liens and materialman's liens), expenses and costs, including without limitation reasonable attorney's fees of any settlement, judgment or claims of any and every kind whatsoever paid, incurred or suffered, in connection with any damage or liability to persons or property that might arise directly or indirectly during construction of improvements, or use of Easement.

3.1 The contractor shall, at all times during the duration of the Easement, maintain and pay for comprehensive general liability insurance affording protection to Leggett & Platt, Incorporated, a Missouri corporation, as additional insureds on the policy or policies for a combined bodily injury and property damage limit of liability not less than \$5,000,000.00 for each occurrence with waiver of subrogation.

4.0 Basis of Payment. No direct payment will be made to the contractor for any expense incurred to comply with this special provision.

X. INSURANCE REQUIREMENTS

1.0 Description. All section of the Missouri Standard Specifications for Highway Construction pertaining to insurance requirements shall apply except for the following revisions to Sec 107.13.2.3.

2.0 Delete Sec 107.13.2.3 and substitute the following:

107.13.2.3 Additional Insureds. Each such policy of commercial general liability insurance and commercial auto liability insurance, shall name the State of Missouri for the benefit of the State of Missouri's Legal Expense Fund, the Commission and the Commission's members, agents and employees, **Leggett & Platt, Incorporated** as additional insureds. Each commercial general liability insurance policy and commercial auto liability insurance policy shall also contain a separation of insureds condition. The insurance afforded by the contractor shall be primary insurance.

3.0 No direct payment will be made for compliance with revisions to Sec 107.13.2.3.



MEMORANDUM

Missouri Department of Transportation Construction and Materials Central Laboratory

TO: Patrick Whitaker-SW/de

COPY: eProjects

FROM: Diane Roegge 
Environmental Chemist

DATE: October 24, 2016

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route 96
Job No. J7P2228F
Bridge K-0428
Jasper 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

TO: Whitaker-SW/de
Page 2
October 24, 2016

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/southwest \(sw\)/jxp's/j7p2228f/dr1610242.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared/documents/asbestos/districts/southwest%20(sw)/jxp's/j7p2228f/dr1610242.docx)

Attachments



MEMORANDUM

Missouri Department of Transportation Construction and Materials Central Laboratory

TO: Patrick Whitaker-SW/de

COPY: eProjects

FROM: Diane Roegge 
Environmental Chemist

DATE: October 24, 2016

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route 96
Job No. J7P2228G
Bridge L-0409
Jasper 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.

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TO: Whitaker-SW/de
Page 2
October 24, 2016

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db/dr

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documents/asbestos/districts/southwest \(sw\)/jxp's/j7p2228g/dr1610243.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared/documents/asbestos/districts/southwest%20(sw)/jxp's/j7p2228g/dr1610243.docx)
Attachments

CONTRACTOR: _____

ADDRESS: _____

Date November 3, 2016

To: Becky Baltz
District Engineer
Missouri Department of Transportation

Subject: Construction
Route 96, JASPER County
Job No. J7P2228F
Equipment and Materials List

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

It is understood approval of these lists do 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 these lists have been approved in writing by your office.

Signature _____

Contractor

REQUIRED INFORMATION LIST OF EQUIPMENT & MATERIALS PROPOSED FOR THIS PROJECT

ITEM NO.	DESCRIPTION	MANUFACTURER OR FABRICATOR ⁽¹⁾	CATALOG NUMBER OR DRAWING NUMBER ⁽¹⁾
HIGHWAY LIGHTING:			
9012230	BASE MOUNTED CONTROL STATION 240 VOLT - 4 CIRCUIT	_____	_____
	Cabinet	_____	_____
	Main Breaker (Type A)	_____	_____
	Lighting Breakers (Type A)	_____	_____
	Control Breaker ⁽⁶⁾	_____	_____
	Photoelectric Control	_____	_____
	Lightning Arrestor	_____	_____
	Contactor	_____	_____
9013002	"CONDUIT, 2 IN. RIGID, IN TRENCH" ⁽⁵⁾ (Pushed or Trenched)	_____	_____
9015020	TRENCHING TYPE II	_____	_____
9016110	"PULL BOX, PREFORMED CLASS 1"	_____	_____
9017110	"CABLE, 10 AWG 1 CONDUCTOR, POLE AND BRACKET" ⁽²⁾	_____	_____
	Fused Slip Connectors	_____	_____
9017407	"CABLE-CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG" ⁽²⁾	_____	_____
	Splice Kit	_____	_____
9017408	"CABLE-CONDUIT, 1 IN., 3 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG" ⁽²⁾	_____	_____
	Splice Kit	_____	_____

REQUIRED INFORMATION LIST OF EQUIPMENT & MATERIALS PROPOSED FOR THIS PROJECT

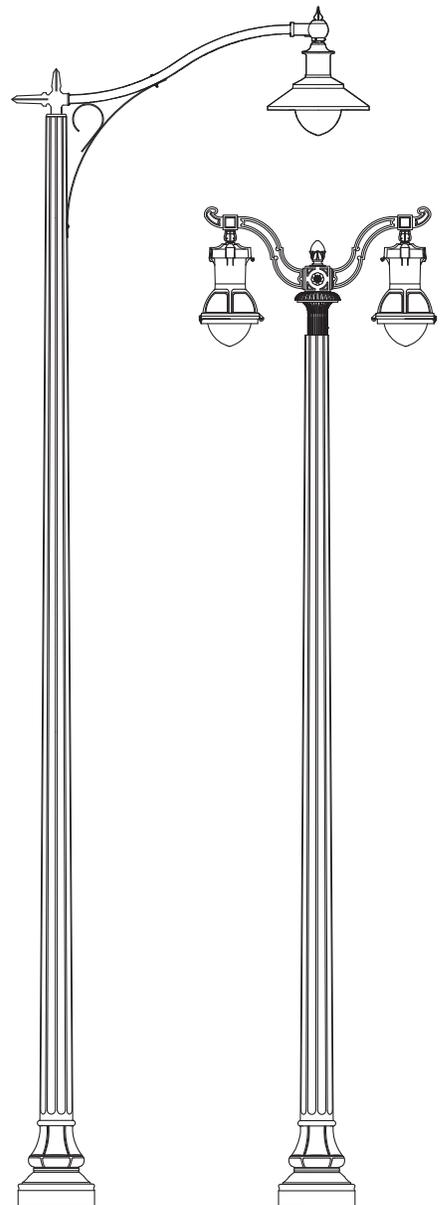
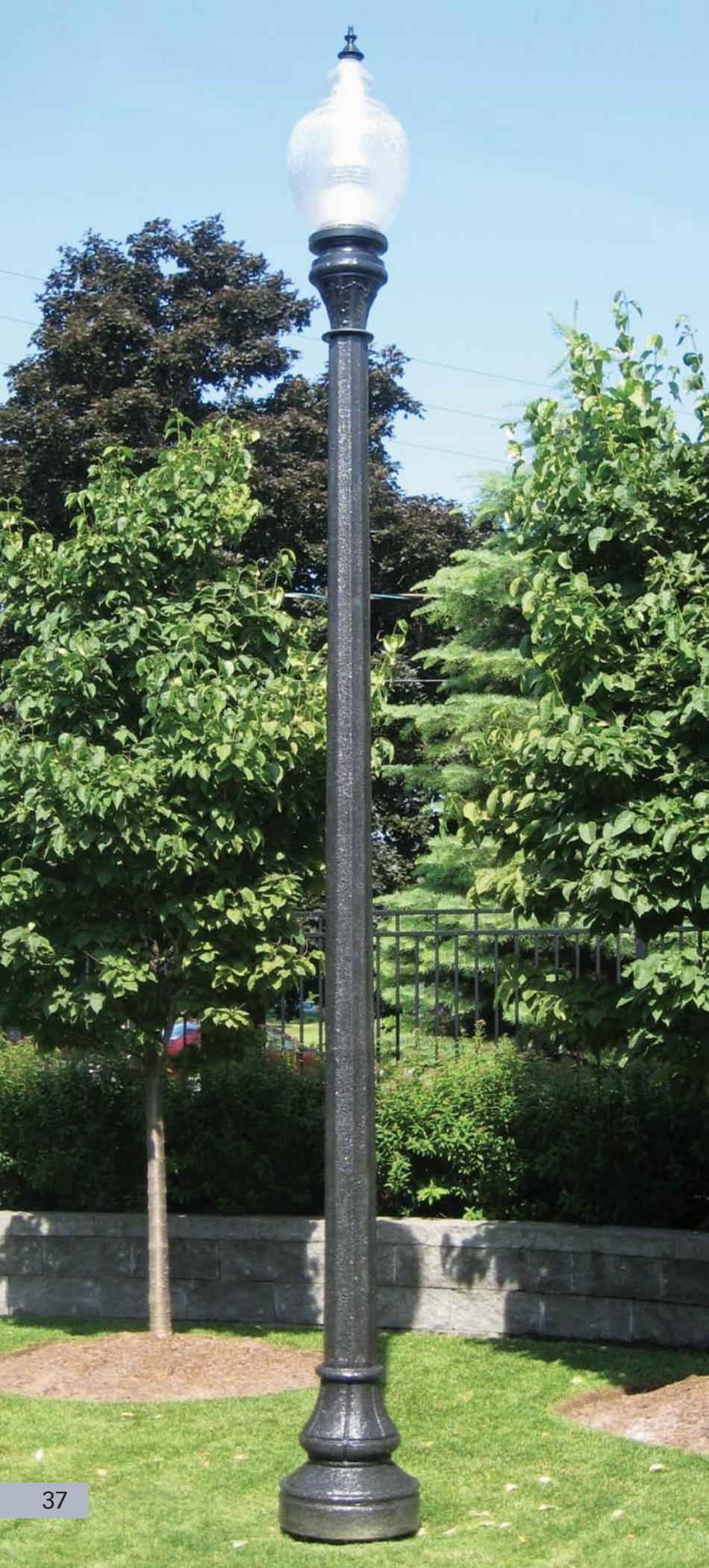
ITEM NO.	DESCRIPTION	MANUFACTURER OR FABRICATOR ⁽¹⁾	CATALOG NUMBER OR DRAWING NUMBER ⁽¹⁾
HIGHWAY LIGHTING:			
9018610	"POWER SUPPLY ASSEMBLY, TYPE 1, 240/120 VOLT SERVICE, LIGHTING ONLY"	_____	_____
	Lightning Arrestor	_____	_____
	Meter Socket ⁽⁶⁾	_____	_____
	Disconnect Box	_____	_____
	Main Breaker ⁽⁶⁾	_____	_____
9019902	KING LUMINAIRE LIGHT FIXTURE	_____	_____
9019902	STRESS CRETE - KWC 15 LIGHT POLES	_____	_____
TRAFFIC SIGNALS:			
9028202	"CABLE, 2 AWG 1 CONDUCTOR, POWER" ⁽²⁾	_____	_____

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).

THE WASHINGTON

The Washington Design has a long history. Originally installed around the Capital Hill & White House grounds in 1910, it is now widely used throughout the DC area and has become extremely popular across the country. StressCrete is proud to introduce a spun concrete 10 fluted version of this historic design. It is available in heights from 5' to 30' as well as a lighted and nonlighted bollard.



Specifications Details*

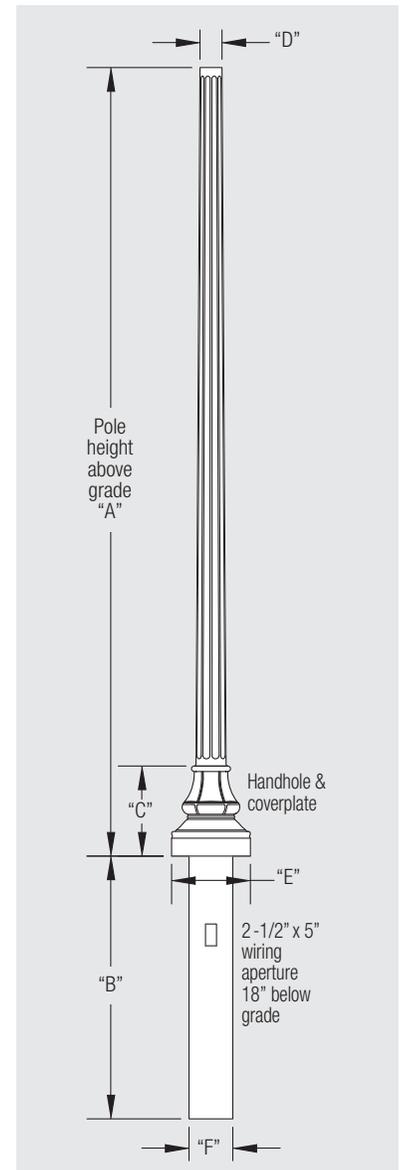
Description	Catalog Number	"A" Pole Height Above Grade	"D" Tip Dimension	"C" Stepped Section Height	"E" Flare	"B" Direct Burial Length & "F" Dia.	Pole Weight Direct Burial	Pole Weight Base Plate
Washington 10'	KWC10	10' 0"	5 3/4"	20 1/2"	18"	4' 6" x 10"	860 lbs	655 lbs
Washington 13'	KWC13	13' 0"	5 1/4"	20 1/2"	18"	4' 6" x 10"	925 lbs	720 lbs
Washington 15'	KWC15	15' 0"	5"	20 1/2"	18"	4' 6" x 10"	1100 lbs	895 lbs
Washington 18'	KWH18	18' 0"	6 3/4"	24"	21"	5' 0" x 12"	1660 lbs	1390 lbs
Washington 20'	KWH20	20' 0"	6"	24"	21"	5' 0" x 12"	1750 lbs	1480 lbs
Washington 25'	KWH25	25' 0"	5 3/4"	24"	21"	5' 0" x 12"	1900 lbs	1630 lbs
Washington 30'	KWH30	30' 0"	5"	24"	21"	5' 0" x 12"	2140 lbs	1870 lbs

* For bollard catalog information please see the bollard section in the King Luminaire catalog or visit our website at www.kingluminaire.com

How to Catalog for Washington Concrete Pole

Pole Style	Finish	Footing Details	Arms* (Pendant Mount)	Coating
KWC KWH	E – Etched Finish	DB – Direct Buried FBP – Flush Baseplate SBP – Stub Baseplate	KA15 – Bishops Crook KA16 – Florentine KA30 – Scroll Arm KA40 – Mini Scroll Arm KA69 – Jefferson Arm KA75 – Santiago Arm	NA – Non Acrylic A – Acrylic AG – Anti Graffiti Coating***
KWH 30'	E 40	DB 140 30/30	KA15 GFI	NA
Height 5' - 30'	Color** 10 – Midnight Lace 11 – Eclipse Black 30 – Salt & Pepper 40 – Pearl Gray 90 – Saluki bronze	Tenon (Post Top Mount) Specify Tenon Size For example 140 30/30 = 2 7/8" OD & 3" long	Options* DR – Duplex Receptacle GFI – Ground Fault Duplex Receptacle SR – 1 Outlet LRN – Ladder Rest BPC – Base Plate Cover AB – Anchor Bolts BA – Banner Arms FH – Flag Holders	

* Consult website for full listings. ** See decor colors on page 2 for full selection of colors.
***Anti Graffiti Coating is extra, consult factory for more details.

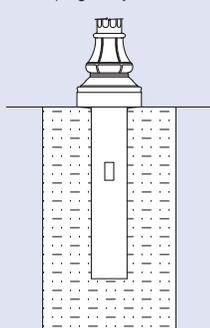


Footing Details

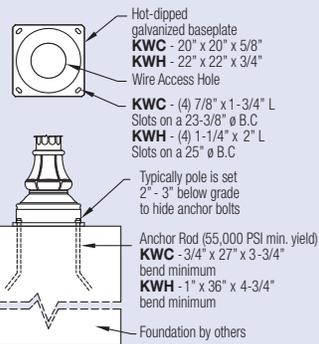
Direct Embedment

(Simple and Cost Effective)

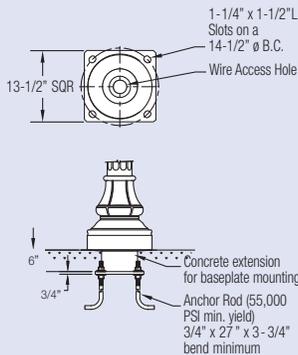
1. Auger the setting hole.
2. Set pole in hole and plumb straight.
3. Backfill* with required backfill tamping every 4" to 6".



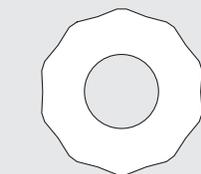
Baseplate Option 1: FBP



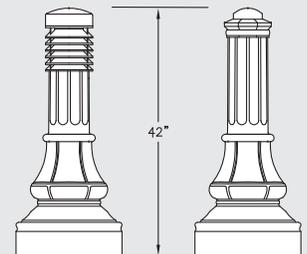
Baseplate Option 2: SBP



*Generally the excavated material can be used for backfill, in some situations better backfill may be required.



Typical Pole Cross Section



Lighted Bollard

Nonlighted Bollard



KING LUMINAIRE™

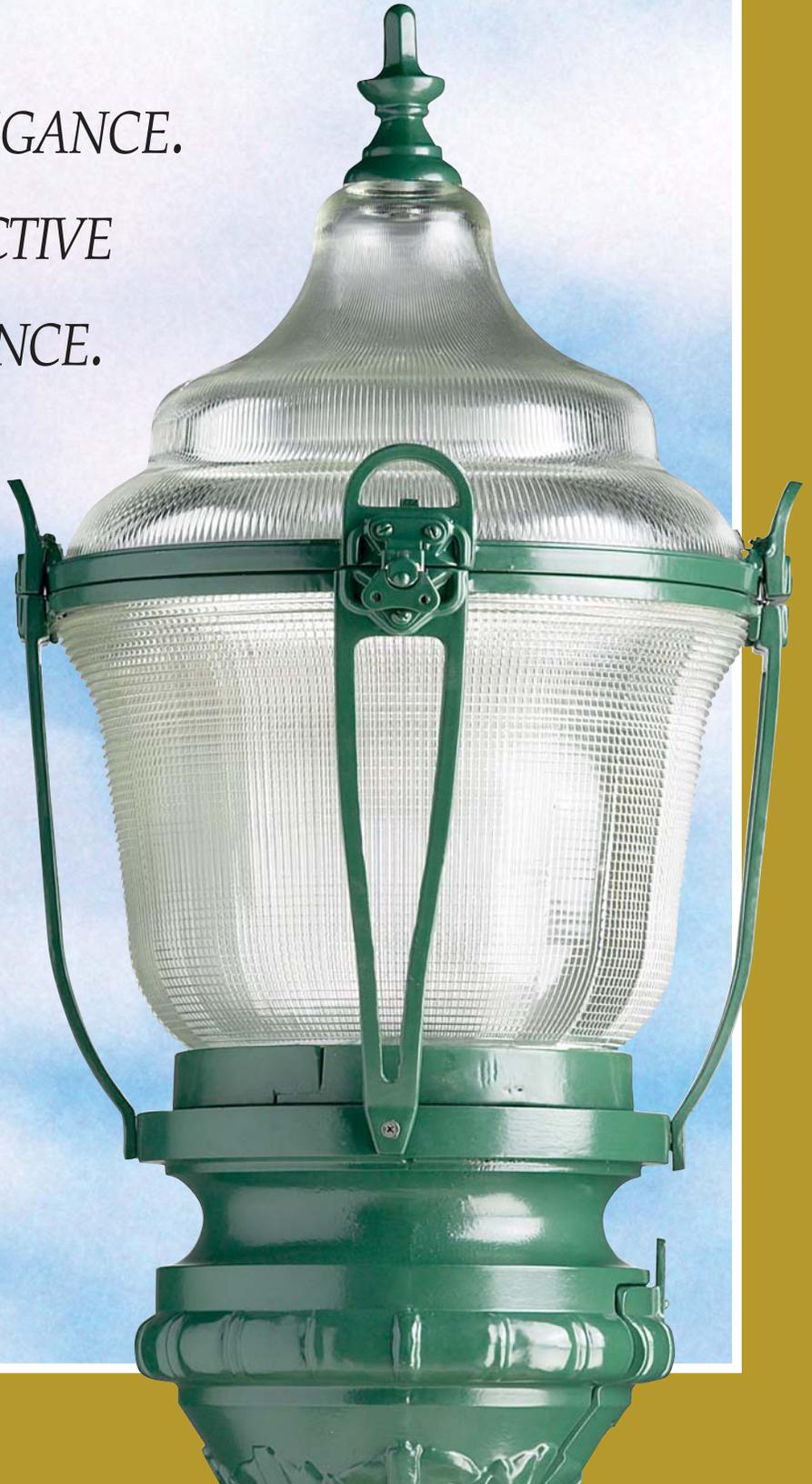
O R N A M E N T A L L I G H T I N G

K 4 4 5 S O L - L U X™ A C O R N L U M I N A I R E S

CLASSICAL ELEGANCE.

COST EFFECTIVE

PERFORMANCE.



CLASSICAL ELEGANCE WITH

K445 Sol-Lux™ Luminaire

The Sol-Lux™ luminaire was one of the many classical acorn shapes that were used so extensively in the street lighting revolution of the early 1900's. Now upgraded both mechanically and photometrically to modern standards, the K445 offers the dual advantages of a traditional appearance together with the high performance and minimal maintenance characteristics that are expected from King Luminaire™. Featuring King's famous Rotolock™ fastening system, modular ballast and optional built in twist lock photo-cell, the K445 provides tool-less lamp and ballast changeout and easy maintenance features previously unheard of in a borosilicate glass acorn luminaire.

Available with the exceptional lighting performance of our external optical system(EGP); it is also offered with a top internal reflector(CGP) resulting in true cutoff optics for those circumstances where "cutoff classification" is required.

To specify either optical system, as well as the many other options available, please refer to the "How to Catalog" on the back page.

K445 with SRS & SST

*Savannah Rings & Struts and
Solid Spun Top Options*



K445

with Standard Glass Top



K445 with SST

Solid Spun Top Option



COST EFFECTIVE PERFORMANCE

K445 with CRS

Contemporary Rings & Struts Option



The K445 Type V Luminaire

with type V external glass refractive globe and open top, one 175w clear ED-28 metal halide lamp and lumen rating of 14,000 LMS.
Report #: LSC A310
Catalog #: K445-EGR-V

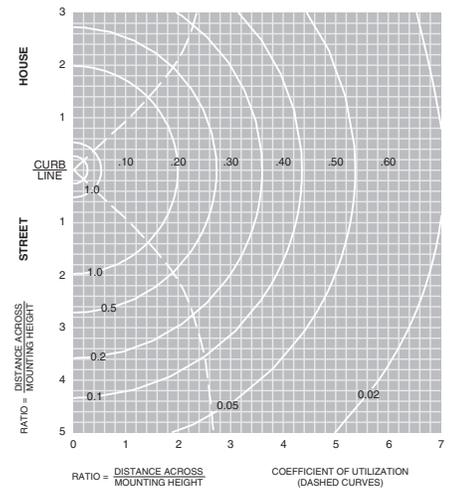
Luminaire Efficiency

Downward:	Streetside	29.3%
	Houseside	29.3%
	Total	58.7%
Upward:	Streetside	13.2%
	Houseside	13.2%
	Total	26.4%
Total Efficiency		85.1%

Mounting Height for ISOFC 15.0 Ft.

Iso footcandle

Values based on 15 foot mounting height
Lamp 175 metal halide
Lumen Rating = 14000 LMS
Type V Semi-Cutoff Optics
Coefficient of utilization (dashed curves)



The K445 Type III Luminaire

with type III external glass refractive globe, one 175w clear ED-28 metal halide lamp and lumen rating of 14,000 LMS.
Report #: LSC A004
Catalog #: K445-EGR-III-175 (MOG)MH

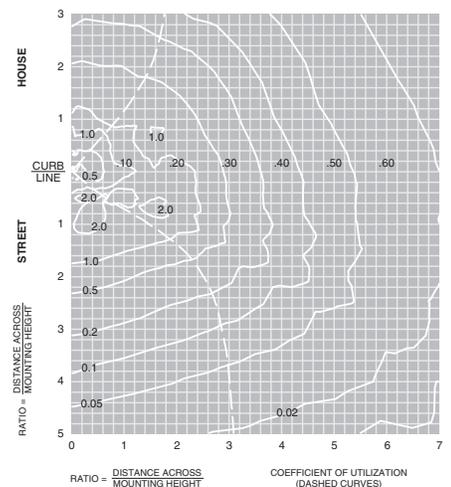
Luminaire Efficiency

Downward:	Streetside	32.9%
	Houseside	21.2%
	Total	54.1%
Upward:	Streetside	13.6%
	Houseside	12.8%
	Total	26.4%
Total Efficiency		80.5%

Mounting Height for ISOFC 15.0 Ft.

Iso footcandle

Values based on 15 foot mounting height
Lamp 175 metal halide
Lumen Rating = 14000 LMS
Type III Non-Cutoff Optics
Coefficient of utilization (dashed curves)



K445 with SRS

Savannah Rings & Struts with Standard Glass top in Open Position



Available Options

- Art Deco ring and struts with hinged lid
- Shielded GFI available in K23 capital
- Twistlock photo receptacle or button photocell
- Variety of decorative finials
- Spun aluminum closed canopy
- Non Cutoff, Semi-Cutoff and Cutoff optics
- Rotolock Globe fastening system

REFRACTOR DESIGN

E - External
C - Top Reflector
offering Cutoff
Optics

GLOBE MATERIAL

Glass

DESIRED WATTAGE

Max Available Wattages
MV - 175 w
MH - 250 w
INC - 200 w
HPS - 250 w
IND - 165 w

LIGHT SOURCE

MV - Mercury Vapor
MH - Metal Halide
INC - Incandescent
HPS - High Pressure Sodium
IND - Induction

PHOTO CONTROLS

PR - Receptacle to accept Twistlock Photoeye
PE - Twistlock Photoeye c/w Receptacles
PBC - Photo Button Cell
PEC - Photo Electronic Button Cell

LUMINAIRE STYLE

"Sol-Lux™"

GLOBE FINISH

P - Prismatic

SOLID TOP

SST - Solid Spun Top
(Glass Top Standard)

K445**R****EGP****III****250****(MOG)****MH****120****K14****PBC****CRS****SST****GLOBE MOUNTING**

R - Rotolock
(Unless specified
Thumb Screw mounting
is Standard)

IES DESIGNATION

III - Type III
V - Type V

SOCKET TYPE

MOG - Mogul
MED - Medium

LINE VOLTAGES

All standard line
voltages available
including multi-tap

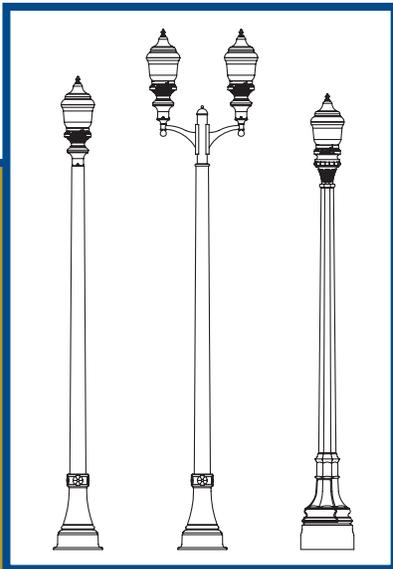
CAPITALS

K5
K10
K13
K14
K16
K18
K23

For further options
please see Arm and Capital
Section of Catalog

RINGS AND STRUTS

(Unless specified Rings and Struts
are not supplied)
CRS - Contemporary Rings and Struts
SRS - Savannah Rings and Struts

**K445 Sol-Lux™ Acorn Luminaire: How to Catalog****KING LUMINAIRE™**

www.kingluminaire.com

[email: sales@kingluminaire.com](mailto:sales@kingluminaire.com)

9200 Energy Lane
Northport, Alabama 35476-3442
(205) 339-0711
1-800-435-6563
Fax: (205) 339-4840

1153 State Route 46 North
P.O. Box 266
Jefferson, Ohio 44047
1-800-268-7809
Fax: (905) 632-8116

14503 Wallick Road
Atchison, Kansas 66002
(913) 255-3112
1-800-837-1024
Fax: (913) 255-3124

840 Walkers Line, P.O. Box 7
Burlington, Ontario L7R 3X9
(905) 632-9301
1-800-268-7809
Fax: (905) 632-8116



K445 SOL-LUX™ - LED



The King Luminaire Sol-Lux™ Fixture is one of the many classic shapes extensively used in the streetlighting revolution of the early 1900's. Offered today in high performance LED, it makes for a beautifully historical, energy efficient streetlighting solution.

PROJECT: _____

PREPARED BY: _____

DATE: _____

PRODUCT SPECIFICATIONS

LED ENGINE

The light engine shall be an array of 4 or 6 Cree Chip On Board (COB) diodes mounted to a highly conductive aluminum extrusion with the use of 2 electrical connectors. The aluminum extrusion will be mechanically attached to a thermal heat sink at both the top and bottom of the aluminum extrusion. It shall remain in thermal contact to the heat sinks with the use of conductive silicone. There will be an aluminum upright reflector in both Type IV & Type V IESNA distribution patterns.

REFRACTIVE GLASS GLOBE

The glass globe shall be made of 9018 clear borosilicate glass having a minimum thickness of 0.300" with an overall diameter of 13.5" and an over-all height of 19.25". It will be designed for optimum optical efficiency and light control.

The glass globe is secured to the luminaire body by means of a split-clamping ring of durable cast A319 aluminum, which allows easy, tool-less removal of the globe assembly from the luminaire body by means of King Luminaire's Rotolock™ system.

A minimum ingress protection against water or dust particles of IP66 for the LED optical chamber is provided by non-porous, closed-cell silicon rubber sponge gasketing which is highly efficient in sealing against particle ingress for a wide temperature range (-40°F to 310°F).

LUMINAIRE CONSTRUCTION

All K445 Sol-Lux™ cast components shall consist of a heavy grade A319 cast aluminum. The main body, or capital, acts as an enclosure for the driver assembly and is of adequate thickness to give sufficient structural rigidity. The capital shall have an opening at the base tenon body to allow the luminaire to be mounted to a tenon of 3-1/2" maximum diam-

eter. The luminaire shall be locked in place by means of heavy duty, stainless-steel set-screws.

DRIVER

CSA certified and/or UL listed, electronic programmable, Constant Light Output (CLO) driver with a 0-10v dimming lead. Driver shall supply correct DC voltage and current to maintain proper operation of the emitters. The driver shall be UL1310/UL48 Class 1 certified, and contain over-circuit, over-voltage, and over-power protection. An in-line ferrite choke is utilized to provide protection against EFT's. The multi-volt driver shall be capable to connect to AC input voltages of 120V - 277V or 347 - 480V. The driver shall have a minimum life expectancy of 100,000 hrs with an operating case temperature range from a minimum of -40°C to a maximum of 70°C. The driver casing shall have a minimum ingress protection rating of IP67.

PHOTOMETRICS

Fixtures are tested to IESNA LM79 specifications. These reports are available upon request.

CHROMATICITY

High output COB LEDs come standard at 3000K & 4000K (+/- 300K) with a minimum nominal 70 CRI. Additional CCT emitters are available upon request.

LUMEN MAINTENANCE

Reported (TM21) and Calculated (L70) reports are available upon request with a minimum calculated value of 100,000 hrs.

WIRING

All internal wiring and connections shall be completed so that it will be necessary only to attach the incoming supply connectors to Mate-N-Lok connectors or to a terminal block. Mate-N-Lok shall be certified for 600V operation. Internal wire connectors shall be crimp connector only and rated at 1000V and 150°C. All wiring to

be CSA certified and/or UL listed, type SFF-2, SEWF-2, or SEW-2 No. 14 gauge, 150°C, 600V, and color coded for the required voltage.

THERMALS

Fixtures tested to determine the maximum in-situ case temperature of the LED emitters as recommended by Cree. This report is available upon request.

FINISH

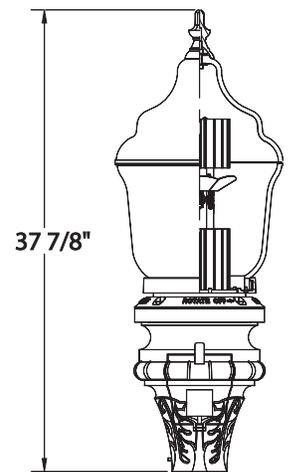
Housing is finished with a 13 step KingCoat™ SuperDurable polyester TGIC powder coat. Standard colors include strobe white, brown metal, marina blue, gate gray, Chicago bronze, standard gold, standard black, federal green and rain forest. Additional RAL or custom color matches are available. Please see our website for a complete list of colors.

MISCELLANEOUS

All exterior hardware and fasteners, wholly or partly exposed, shall be stainless-steel alloy. All internal fasteners are stainless-steel or zinc coated steel. All remaining internal hardware is stainless steel, aluminum alloy, or zinc coated steel.

WARRANTY

The K445 Sol-Lux™ LED luminaire comes with a 7 year limited warranty.



CERTIFICATION:

CSA US Listed
Suitable for wet locations
ISO 9001
IP66
ARRA Compliant
LM79 / LM80 Compliant

DRIVER INFO:

>0.9 Power Factor
<20% Total Harmonic Distortion
120V - 277V or 347 - 480V
-40°C Minimum Temperature
70°C Maximum Ambient Operating Temperature
20KA / 10Kv Surge Protection

EPA:

1.16 sq. ft.

FIXTURE WEIGHT:

51 lbs





Test Voltage: 120V
Nominal Color Temperature: 3000 & 4000K¹
4004 Engine Series: 4 COB Emitters (Type III)
4006 Engine Series: 6 COB Emitters (Type V)
LED Engine + Driver Rated Life = 100,000 hrs²

To learn more about the T1 Optic, please see the T1 Optic Information Sheet

Photometric Test Report Number	Decorative Option	Color Temperature	IES Distribution	Nominal Watts	Engine Series	Delivered Lumens ³	Efficacy (LM/W) ³	mA @ Emitter	Driver Output Current	BUG Rating	HID Equivalent ⁴
In Testing	N/A	3000	Type IV	40	4004	N/A	N/A	N/A	N/A	N/A	50-70
In Testing	N/A	4000	Type IV	40	4004	N/A	N/A	N/A	N/A	N/A	50-70
In Testing	N/A	3000	Type V	40	4006	N/A	N/A	N/A	N/A	N/A	50-70
In Testing	N/A	4000	Type V	40	4006	N/A	N/A	N/A	N/A	N/A	50-70
In Testing	N/A	3000	Type IV	60	4004	N/A	N/A	400	400	N/A	70-100
H265C	N/A	4000	Type IV	60	4004	6664	110.3	400	400	1-5-3	70-100
In Testing	N/A	3000	Type V	60	4006	N/A	N/A	275	550	N/A	70-100
H268C	N/A	4000	Type V	60	4006	7305	117.9	275	550	3-5-3	70-100
In Testing	N/A	3000	Type IV	75	4004	N/A	N/A	500	500	N/A	100-150
H266C	N/A	4000	Type IV	75	4004	7976	104.7	500	500	1-5-3	100-150
In Testing	N/A	3000	Type V	75	4006	N/A	N/A	340	680	N/A	100-150
H267C	N/A	4000	Type V	75	4006	8731	114.2	340	680	3-5-3	100-150
In Testing	N/A	3000	Type IV	100	4004	N/A	N/A	620	620	N/A	150-250
H255C	N/A	4000	Type IV	100	4004	9448	97.7	620	620	1-5-4	150-250
In Testing	N/A	3000	Type V	100	4006	N/A	N/A	430	860	N/A	150-250
H256C	N/A	4000	Type V	100	4006	10612	108.6	430	860	3-5-4	150-250

¹Color temperature is nominal, please see test report for specific chromaticity information

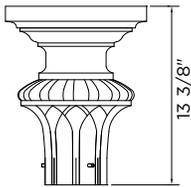
²Contact factory for TM21 information

³Due to the continuous advancements in LED technology, luminaire delivered lumen and efficacy is subject to change without notice at the discretion of King Luminaire

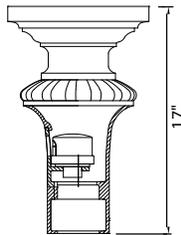
⁴Equivalence should always be confirmed by performing a photometric layout, due to the variability of performance requirements and application criteria

FIXTURE OPTIONS

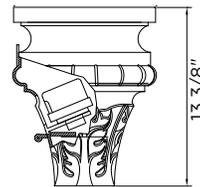
Capital Options



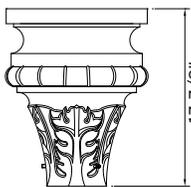
K16



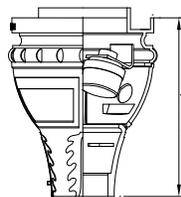
K18



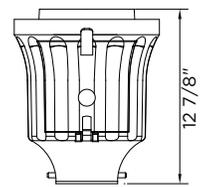
K14 C/W PR



K13

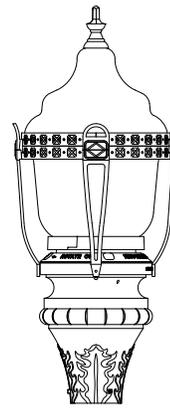


K23 C/W PR



K24 C/W PR

Decorative Options

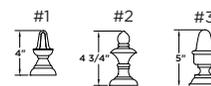


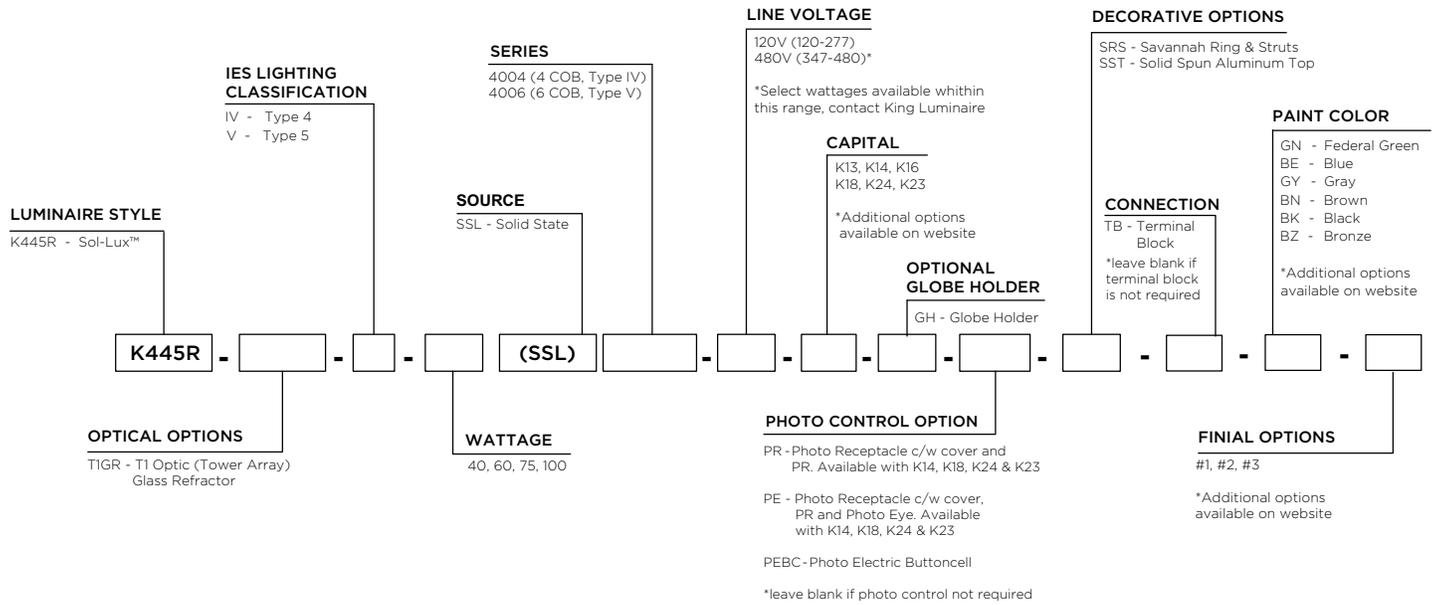
Savannah Ring & Struts



Solid Spun Aluminum Top

Finial Options





A Member of The StressCrete Group of Companies
www.stresscretigroup.com

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- A. Construction Requirements.
- B. Pipe Pile Spacers.
- C. Galvanized Structural Steel Pile.
- D. Partial Retainage of Existing Bridge Rail.
- E. Pile Wave Analysis.
- F. Ornamental Pedestrian Fence
- G. MSE Wall Requirements.
- H. UP and MNA Railroad Requirements.

	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636
	HDR Engineering, Inc. 4435 Main Street, Suite 1000 Kansas City, MO 64111 Certificate of Authority # 000856 Consultant Phone # 816-370-2700
	JOB NO. J7P2228F Jasper County, MO Date Prepared: 11/2/2016
Date: 11-7-2016	
Only the following items of the Job Special Provisions (Bridge) are authenticated by this seal: A thru G.	

	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636
	If a seal is present on this sheet, JSP's has been electronically sealed and dated.
	JOB NO. J7P2228F Jasper County, MO Date Prepared: 11/2/2016
Only the following items of the Job Special Provisions (Bridge) are authenticated by this seal: H.	

JOB SPECIAL PROVISIONS (BRIDGE)

A. CONSTRUCTION REQUIREMENTS

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

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

2.1 Provisions shall be made to prevent any debris and materials from falling onto the railroad. 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. Railroad traffic under the bridge shall be maintained in accordance with the contract documents.

2.2 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. PIPE PILE SPACERS

1.0 Description. The contractor shall install pipe pile spacers at pile locations in the porous backfill of the mechanically stabilized earth walls to protect the reinforcement when driving pile for bridge substructure at end bent(s) as shown on the bridge plans. The pipe pile spacer shall be accurately located and capped for future pile construction.

2.0 Construction Requirements. The pipe pile spacer shall be in accordance with requirements of Sec 724 for Group C "Flexible Pipe – Metal" or "Flexible Pipe –Thermoplastic".

2.1 The pipe pile spacer shall have an inside diameter greater than that of the pile and large enough to avoid damage to the pipe when driving the pile. The size of pipe pile spacer shall be subject to approval by the engineer before work is started. The bottom of the pipe pile spacers shall be placed below the bottom of the MSE wall leveling pad as shown on the plans. The pipe pile spacers shall be filled with sand or other approved material after the pile is placed and before being driven. Shop drawings of the pipe pile spacers will not be required.

2.2 In lieu of using pipe pile spacers, the contractor has the option of driving the piles before construction of the retaining wall and placing the wall reinforcing and backfill material around the piling. The contractor must adequately support the piling to insure that proper pile alignment is maintained during the wall construction. The contractor's plan for bracing the pile shall be submitted to the engineer for review.

3.0 Method of Measurement. Measurement for pipe pile spacers 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 "Pipe Pile Spacers". No direct

JOB SPECIAL PROVISIONS (BRIDGE)

payment will be made when the contractor chooses the option as described in section 2.2 of this provision.

C. GALVANIZED STRUCTURAL STEEL PILE

1.0 Description. This job special provision contains general requirements for furnishing, coating and placing galvanized steel piles as shown on the plans and shall be in addition to the requirements of Sec 702.

2.0 Material. Structural steel piles shall be galvanized in accordance with ASTM A123 and Sec 1080. Repairs to the galvanized coating and field galvanizing shall be in accordance with ASTM A780. Zinc rich paints will not be allowed. Repairs and field galvanizing will not be required where the pile will be encased in concrete or below the limits specified in section 3.0 of this job special provision. Protective Coatings specified in Sec 702 will not be required for galvanized piles.

3.0 Construction Requirements.

3.1 Galvanizing material shall be omitted or removed for a minimum of 2 inch on either side of weld locations. The method used to omit or remove the galvanizing material shall be masking, grinding or other methods as approved by the engineer. If a weld location falls within an area where galvanizing is required, clean the weld area making sure to remove all welding slag. Then field galvanize the weld area in accordance with ASTM A780. Zinc rich paints will not be allowed.

3.2 At the contractor's option, the entire pile length may be galvanized.

3.3 All pile below the pile concrete encasement shall be galvanized down to a minimum depth of 20 feet below the finished ground line.

4.0 Method of Measurement. Galvanized Structural Steel Pile in place will be the actual length to the nearest linear foot for that portion of the pile that remains permanently in the structure. See Sec 702 Basis of Payment for any additional length authorized by the engineer resulting from pile splices. No separate measurement will be made for pile that is not galvanized.

5.0 Basis of Payment. The accepted quantity of galvanized and non galvanized pile in place will be paid for at the contract unit price for Galvanized Structural Steel Pile. No direct payment will be made for incidental items necessary to complete the work unless specifically provided as a pay item in the contract.

D. PARTIAL RETAINAGE OF EXISTING BRIDGE RAIL

1.0 Description. The contractor shall carefully remove the existing stone bridge rail spindles and deliver them to the City of Carthage, Missouri at the Carthage Recycling Center 1309 Oak Hill Road, Carthage, MO. Any existing spindle that will not be delivered to the City of Carthage due to existing damage or deterioration should be identified and approved by the Engineer. The contractor shall completely remove and dispose of the balance of the existing bridge rail as indicated in the plans using a method acceptable to the Engineer.

JOB SPECIAL PROVISIONS (BRIDGE)

2.0 Payment. Payment for the above described work will be considered completely covered by the contract lump sum price for "Removal of Bridges (K0428)".

E. PILE WAVE ANALYSIS

1.0 General.

1.1 Scope of Work. Scope of work shall include furnishing a wave equation analysis of piles (WEAP) as specified in this special provision.

1.2 Performance and Design Requirements. Performance and design conditions for WEAP shall be in accordance with [section 4.0](#) of this special provision.

1.3 Qualifications. The contractor shall perform wave equation analysis utilizing the services of an independent dynamic pile testing consultant and qualified personnel. An engineer with a minimum of 5 years WEAP experience shall perform the analysis.

2.0 Execution.

2.1 Pile Driving Modeling. The contractor shall perform preconstruction wave equation analyses and prepare a summary report of the results. The wave equation analyses shall be used to assess the ability of all proposed pile driving systems to install piles to the required capacity and the desired penetration depth within allowable driving stresses. The report shall include a drivability graph relating pile capacity, blow count and driving stresses to depth. The report shall include a bearing graph relating the pile capacity to the pile driving resistance. The bearing graph shall indicate blow count versus capacity and stroke. The report shall also contain a constant capacity analysis or inspector's chart to assist the engineer in determining the required driving resistance at other field observed strokes. The contractor shall perform wave equation analyses in accordance with [section 4.0](#) of this special provision. Acceptability of the wave equation report and the adequacy of analyses will be determined by the engineer.

2.1.1 WEAP shall provide driving criteria for driving piling to rock. WEAP shall give pile solution for driving piling through hard material to rock, or through soft material to rock.

2.1.2 Approval by the engineer of the proposed pile driving system will be based upon the wave equation analyses indicating that the proposed system can develop the specified pile capacity at a pile driving rate of 2 to 10 blows per inch at the end of driving, and within allowable driving stresses per *AASHTO LRFD Bridge Construction Specifications*, Section 4.4.1. The contractor shall provide preliminary pile driving criteria based on wave equation analyses and any anticipated capacity changes after driving, set-up or relaxation, subject to revision based upon field measurements.

2.1.3 If any changes or modifications are made to the approved pile driving system, additional wave equation analyses in accordance with [section 2.1](#) of this special provision shall be required.

3.0 Schedule of Contract Submittals.

3.1 Proposed independent dynamic pile testing consultant, and a list of assigned personnel and their experience and qualifications shall be submitted to the engineer. All documents shall be submitted 45 calendar days before pile driving starts.

4.0 Wave Equation Analysis. A minimum of one and sufficient additional analyses as needed are required to define performance for all combinations of piles, driving systems and subsurface conditions anticipated.

5.0 Method of Measurement. Pile wave analysis will be measured per each bent.

6.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract unit price for "Pile Wave Analysis".

F. ORNAMENTAL PEDESTRIAN FENCE

1.0 Description. This work shall consist of supplying and installing the fence to the top of the curb along the right side of the sidewalk Bridge A8425 to the limits described in the plans.

2.0 Design Specification. Ornamental Pedestrian Fence shall be in accordance with 2010 ASSHTO LRFD Bridge Design Specifications and 2010 Interim Revisions. 50 lb/ft and 200 lb loading shall not be applied simultaneously.

3.0 Material. All material used in fabrication and construction of the Ornamental Pedestrian Fencing shall be in accordance with the manufacture's specifications, except as modified in the contract documents.

3.1 Fencing Suppliers. Ornamental Pedestrian Fencing system shall be supplied by only one of the listed manufactures. The fencing system used on Bridge A8425 shall match the fencing system used at Wall A8519 and Wall J7P2228F-1. Fencing system shall include all components except the anchor bolts and #4 bars welded to the anchor bolts. The assembly of the pickets to the rails and the rails to the posts shall be the same as the style mentioned for the manufacturer.

Ameristar Fence Products, Inc.
1555 N. Mingo
Tulsa, OK 74116
(800) 321-8724
www.ameristarfence.com

Iron Eagle Industries, Inc.
1256 Cardiff Blvd.
Mississauga, Ontario Canada L5S1R1
(905) 670-2558
www.ironeagleind.com

Betafence USA
3309 S.W. Interstate 45
Ennis, TX 75119
(888) 650-4766
www.betafenceusa.com

Merchants Metals
6575 Romiss Court
St. Louis, MO 63134
(800) 293-3363
www.merchantsmetals.com

3.2 Base Plates. Base plates shall be fabricated from ASTM A709, Grade 36 material.

3.3 Finish. All portions of the exposed fence, including base plates, shall have a gloss black finish (Federal Standard #17038). The finish shall be System "G" in accordance with Sec 1081.

4.0 Submittal Requirements. The contractor shall submit structural design computations and complete detailed shop drawings in accordance with Sec 1080 signed and sealed by a professional engineer registered in the State of Missouri.

JOB SPECIAL PROVISIONS (BRIDGE)

5.0 Method of Measurement. Measurement for Ornamental Pedestrian Fence will be made per linear foot.

6.0 Basis of Payment. Payment for the above described work, including all material, equipment, labor and any other incidental work necessary, will be considered completely covered under the contract unit price.

G. MSE WALL REQUIREMENTS

1.0 Description. This work shall consist of furnishing and constructing mechanically stabilized earth (MSE) wall system for walls A8519 and J7P2228F-1 (Rdwy. Item) in accordance with this provision and as shown on the plans or as directed by the engineer.

2.0 Construction Requirements. The MSE wall system shall be constructed according to Sec 720 and the requirements described in section 2.1 of this provision.

2.1 To satisfy global stability the length of reinforcement shall be equal to at least 1.0 times the wall height. The following paragraph from the Report of Subsurface Exploration and Geotechnical Engineering Evaluation for Jasper County Bridge – Route 96 – A8425 prepared by TSi Geotechnical, Inc. on October 11, 2016 is incorporated into this provision.

The MSE wall leveling pads should consist of Portland cement concrete with minimum dimensions of 6 inches thick by 12 inches wide, a minimum unconfined compressive strength of 4,000 pounds per square inch (psi), and be placed a minimum of 3 feet below the lowest adjacent grade for frost considerations. The bottom of the first reinforced layer should begin at the lowest attachment point on the wall panel. The minimum factor of safety for the global stability of MSE wall structures is 1.5. MSE walls A8519 and J7P2228F-1 require a reinforcement length of at least 1.0 multiplied by the total wall height, including embedment, to achieve the required safety factor.

2.2 To achieve the allowable bearing pressure noted in the plan the subgrade beneath the MSE walls shall be properly prepared. The following paragraphs from the Report of Subsurface Exploration and Geotechnical Engineering Evaluation for Jasper County Bridge – Route 96 – A8425 prepared by TSi Geotechnical, Inc. on October 11, 2016 is incorporated into this provision.

Construction areas should be stripped of existing pavement, organic soil, bridge debris and any deleterious materials prior to site excavation and grading. Care should be taken during stripping to prevent excessive disturbance of the underlying soil. After the removal of these materials, and where further excavation is not required, the exposed subgrade should be proofrolled. Proofrolling is accomplished by passing over the subgrade with proper equipment, such as a loaded tandem-axle dump truck or scraper, and observing the subgrade for pockets of excessively soft, wet, disturbed, or otherwise unsuitable soils. Any unacceptable materials thus found should be excavated and either recompacted or replaced with new structural fill.

Prior to placing fill in any area, the subgrade should be scarified to a depth of about 6 inches, the moisture content adjusted to near its optimum moisture content, and the subgrade recompacted in accordance with recommendations made in subsequent sections of this report. The recommended proofrolling and/or scarification and recompaction may be waived if, in the opinion of a geotechnical engineer, this procedure

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would be detrimental or unnecessary. Following satisfactory preparation of the subgrade, controlled fill material may be placed.

2.3 The record of subsurface data titled Report of Subsurface Exploration and Geotechnical Engineering Evaluation for Jasper County Bridge – Route 96 – A8425 prepared by TSi Geotechnical, Inc. on October 11, 2016 is available from the Project Contact upon written request.

3.0 Method of Measurement. Measurement for mechanically stabilized earth wall systems will be in accordance with Sec 720. No measurement of the subgrade preparation will be made.

4.0 Basis of Payment. Payment for mechanically stabilized earth wall systems will be in accordance with Sec 720. Payment for subgrade preparation will be included with other items.

H. UP and MNA RAILROAD REQUIREMENTS

1.0 Introduction.

1.1 The portion of the line of railroad involved in this project is owned by Union Pacific Railroad Company (“UP”) and leased to the Missouri & Northern Arkansas Railroad Company (“MNA”). The other portion of the line is owned and operated by the Missouri & Northern Arkansas Railroad Company (“MNA”) These Railroad Requirements set forth terms and conditions agreed between UP, MNA, and the Missouri Highways and Transportation Commission (Commission), under which the Railroad will allow the Commission’s contractors to enter in and upon Railroad's real property, right of way, tracks and other facilities owned by UP and currently leased to MNA (Railroad's Property) to perform the contractor’s work relating to this project. Except as otherwise specifically provided in this subsection and in sections 3.0 and 17.0 of these Railroad Requirements, the word “Railroad” as used in these Railroad Requirements shall mean MNA. However, if MNA’s leasehold interest in the Railroad’s Property terminates before the contractor’s work on this project is completed and accepted by the Commission, then after such termination the word “Railroad” as used in these Railroad Requirements shall mean UP.

1.2 To report an emergency on the Railroad, call: 866-527-3499.

1.3 The project location is the Railroad’s Aurora Subdivision at Milepost 526.8, a crossing designated as USDOT No. 435 226P.

1.4 Definitions of terms set forth in the current edition of the Missouri Standard Specifications for Highway Construction shall be applicable to those terms as used in these Railroad Requirements.

1.5 Contractor may not access, at any time, any property of the Railroad outside the State’s permanent and temporary easements without Railroad’s prior, written approval.

2.0 Authority of Railroad Representative and Engineer; Notices.

2.1 The authorized representative of the Railroad, herein called "Railroad Representative", shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks.

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2.1.1 The Railroad designates the following individual as the Railroad Representative for this project. Except as otherwise provided in these Railroad Requirements, the contractor shall address all notices concerning this project to the Railroad Representative, as follows:

Mr. Rick Oeltjen
General Manager
Missouri & Northern Arkansas Railroad Company, Inc.
514 North Orner
Carthage, MO 64836
Email: Rick.Oeltjen@gwrr.com
TEL: (417) 313-3046 [office]
(417) 793-9966 [mobile]

2.1.2 Whenever any provision in these Railroad Requirements requires the contractor to notify the Railroad or the Railroad Representative, the contractor shall provide a copy of the notice to the Union Pacific Railroad Company's Manager, Industrial and Public Projects, as follows:

Mr. Jordon Albers
Manager of Industry and Public Projects
Union Pacific Railroad
100 North Broadway
St. Louis, MO 63102
Office (314) 331-0682
Email: jralbers@up.com

2.1.3 The Railroad, or the individual Railroad Representative identified in paragraph 2.1.1 of these Railroad Requirements, may designate a different individual to act as the Railroad Representative for this project, and may change the address information stated in paragraph 2.1.1, by giving written notice of the changes to the contractor and to the Engineer, as provided in these Railroad Requirements. In the same manner, the Union Pacific Railroad Company (UP), or its individual Manager identified in paragraph 2.1.2 of these Railroad Requirements, may designate a different individual to receive copies of notices on behalf of UP pursuant to these Railroad Requirements, or may change the address information stated in paragraph 2.1.2.

2.2 The authorized representative of the Commission (Engineer) shall have authority over all other matters as prescribed herein and in the project specifications.

3.0 Contractor's Indemnity Obligations to the Railroad. The contractor agrees to indemnify, defend and hold harmless the Railroad from and against any injury or death of persons whomsoever, or from any loss or damage to the Railroad's Property, caused by acts or omissions of the contractor in performing work on this project, whether on, over, under or in the vicinity of the Railroad's Property. In the event the contractor shall fail to restore the Railroad's Property immediately to a condition acceptable to the Railroad when any such loss or damage to the Railroad's Property is called to the contractor's attention by the Railroad, then the Railroad may perform such corrective work at the cost of the contractor. In addition to such remedies of the Railroad, the Commission will withhold from final payment due to the contractor the amount reasonably necessary to reimburse the Railroad for such loss or damage or for performing such work. The term "loss or damage" as used herein shall include, but not be limited to, the erosion and silting of, water damage to, and the accidental or intentional placing or dropping of objects on the Railroad's Property. As used in this section, the word "Railroad" shall mean either UP or MNA, or both, in proportion to the respective liability of MNA and UP for

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any such claim, or if applicable, in accordance with the respective property rights of MNA and UP in the Railroad's Property that is lost or damaged.

4.0 Notice of Starting Work. The contractor shall not commence any work on the Railroad's right of way until contractor has complied with the following conditions:

4.1. At least thirty (30) days in advance of the date the contractor proposes to begin work on the Railroad's Property, the contractor has given written notice of the contractor's proposed start date and time to the Railroad Representative, and Railroad's Manager of Track Maintenance (see paragraph 12.2.3 below), with a copy to the Engineer.

4.2 The Commission has obtained written approval from the Railroad's Representative for the contractor's insurance coverage as required by Section 17 of these Railroad Requirements, and authorization for the contractor to begin work on the Railroad's Property.

4.3 The contractor has determined whether fiber optic cable systems are buried on the Railroad's Property. If fiber optic cable systems are buried on the Railroad's Property, then the contractor has contacted the Railroad at the 24 hour number, 800-336-9193, has contacted the telecommunications company involved, has arranged for a cable locator, and has made arrangements for relocation or other protection of the fiber optic cable system on the Railroad's Property.

4.4 The contractor's employees, representatives or agents who are regularly assigned to perform work on the Railroad's Property have been certified as having completed the Internet Safety Orientation available at www.rtrainers.com/RWTonlineTraining/ where contractor needs to complete the course – 2014 Genesee & Wyoming Roadway Worker Protection Training for Railroad Contractors. This certification shall be renewed annually. In addition the contractor shall require that every employee, representative or agent who is not regularly assigned to perform work on the Railroad's Property has received appropriate safety training before performing any work on the Railroad's property. The cost of the Internet Safety Orientation, which is subject to change, is currently \$35 per person per year.

4.5 MNA Right of Entry. At least forty five (45) days in advance of the date the contractor proposes to begin work on the Railroad's Property, the contractor shall enter into a Right of Entry Agreement with Railroad prior to working on Railroad property. The application for Right of Entry Agreement can be found at the following address: http://www.gwrr.com/real_estate/accessing_property.be

4.5.1 The applicant must submit the completed application to the Real Estate Department including a check or money order, to cover the non-refundable fee of \$1,500 made payable to the Railroad. The application must include railroad milepost, railroad subdivision, and scope of work.

4.6 UP Right of Entry. At least sixty (60) days in advance of the date the contractor proposes to begin work on the Railroad's Property, the contractor shall enter into a Contractor's Right of Entry Agreement (CROE) with Railroad prior to working on Railroad property. Submit the following information to the Railroad Representative:

- a. MoDOT manager contact information
- b. Contractor contact information
- c. Site location (include address, DOT#)
- d. Site map

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- e. Brief description of scope of work
- f. Proposed schedule for work on UP right of way

4.6.1 After reviewing the information, the Railroad Representative will send all of the information to UP Real Estate for processing. UP Real Estate will draft the CROE agreement and send it to the contractor for signature. The signed contract and administrative fee must then be returned to UP Real Estate.

4.6.2 Administrative Fee. Upon the execution and delivery of this CROE agreement, Contractor shall pay the Railroad Five Hundred Dollars (\$545) as reimbursement for clerical, administrative and handling expenses in connection with the processing of this CROE agreement.

4.6.3 The contractor must submit a demolition and falsework plan to the Railroad for review and approval. These plans can be submitted along with the Right of Entry application, however the Right of Entry will not be approved until the demolition and falsework plan is approved by the Railroad.

5.0 Interference with Railroad's Operations.

5.1 The Railroad's right of way is located within the limits of this project. The contractor shall take care to insure that it will not drop any debris or material on the Railroad's Property.

5.2 The contractor shall arrange and conduct all of the contractor's work so that it causes no interference with the Railroad's operations, including train, signal, telephone, telegraphic services, damage to the Railroad's Property, poles, wires and other facilities of tenants on the Railroad's Property. Whenever the contractor's work may directly affect the operations or safety of trains, the contractor shall submit a written description of the method of doing such work to the Railroad Representative for approval, but such approval shall not relieve the contractor from liability resulting from the contractor's work. Any work to be performed by the contractor that requires flagging service shall be deferred by the contractor until the flagging services are available at the job site.

5.3 Whenever the contractor's work upon the Railroad's Property will unavoidably cause an impediment to the Railroad's operations, such as requiring the use of runaround tracks or reduced train speed, the contractor should schedule and conduct these operations so that this impediment is reduced to the absolute minimum.

5.4 If conditions arising from, or in connection with the work require immediate and unusual provisions to protect the Railroad's operations and property, the contractor shall make such provisions. If in the judgment of the Railroad Representative, or the Engineer if the Railroad Representative is absent, such provision is insufficient, then the Railroad Representative or Engineer may require or provide such provisions as he/she deems necessary. In any event, the contractor shall make such provisions at the contractor's expense, and without cost to the Railroad or the Commission.

6.0 Track Clearances. During construction, the contractor shall maintain not less than the minimum track clearances as shown on the project plans. However, before undertaking any work within the Railroad's Property and before placing any obstruction over any track, the contractor shall:

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6.1 Notify the Railroad Representative at least ten (10) days in advance of the proposed work.

6.2 Receive assurance from the Railroad Representative that arrangements have been made for flagging service as may be necessary.

6.3. Receive permission from the Railroad Representative to proceed with the work, as provided in section 4.0.

6.4. Confirm that the Engineer has received copies of the contractor's notice to the Railroad, and of the Railroad's response.

7.0 Construction Procedures.

7.1. General. The contractor's work on the Railroad's property shall be performed in accordance with these Railroad Requirements and shall be subject to the Railroad's inspection and review. The contractor shall submit plans that shall be signed, sealed, and stamped in accordance with the laws relating to Architects and Professional Engineers, Chapter 327, RSMo, for the demolition of any structure over Railroad right of way, and for temporary shoring and falsework that may affect the Railroad's facilities or traffic.

7.2 Excavation. The contractor shall maintain the subgrade of an operated track with the beam edge at least 12 feet from centerline of track and not more than 26 inches below top of rail, unless the existing section fails to meet this specification, in which case the contractor shall maintain the existing section.

7.3 Excavation for Structures. The contractor shall take special precaution and care in connection with excavating, shoring pits and in driving piles for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which the tracks carry without disturbance of track alignment and surface and to avoid obstructing track clearances with working equipment, tools or other material. The contractor shall obtain advance review by the Engineer, and advance review and approval by the Railroad Representative for the proposed procedures for doing such work, including plans for any necessary shoring. However, such approval shall not relieve the contractor from any liability relating to this project.

7.4 Demolition of Existing Structures. The contractor shall take special precaution and care in connection with any demolition of existing structures. The contractor shall obtain advance review by the Engineer, and advance review and approval by the Railroad Representative for the proposed procedure for doing such work, including any plans for temporary falsework, but such approval shall not relieve the contractor from any liability relating to this project.

7.5 Falsework. The contractor shall take special precaution and care to prevent any material from falling on the Railroad's right of way. The contractor shall obtain advance review by the Engineer, and advance review and approval by the Railroad Representative for the proposed procedure for preventing material from falling, including any plans for temporary falsework, Railroad Representative, but such approval shall not relieve the contractor from any liability relating to this project.

8.0 Maintenance of Railroad Facilities. Within the project limits, the contractor shall maintain Railroad's Property, including all ditches and drainage structures, free of silt or other obstructions that may result from contractor's operations. The contractor shall promptly repair eroded areas within the Railroad's Property and repair any other damage to the Railroad's

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Property or the Railroad's tenants. The contractor shall perform all such maintenance and repair of damages due to the contractor's operations at the contractor's expense.

9.0 Storage of Materials and Equipment.

9.1 The contractor shall obtain permission from the Railroad Representative before storing any materials or equipment anywhere on Railroad's Property. The Railroad will not ordinarily permit storage within twenty-five feet (25') from the centerline of any track, or within three hundred feet (300') from any grade crossing. The Railroad will not be liable for damage to such material and equipment from any cause, and the Railroad Representative may move such material and equipment or require the contractor to move it, at the contractor's expense.

9.2 The contractor shall not leave unattended any grading or construction machinery parked upon Railroad's Property, unless it is effectively immobilized so that unauthorized persons cannot move such machinery.

10.0 Cleanup. Upon completion of the work, the contractor shall remove from within the limits of the Railroad's Property all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the contractor's and shall leave Railroad's Property in a neat condition satisfactory to the Railroad Representative.

11.0 Damages. The Railroad shall not assume liability for any damages to the contractor, contractor's work, employees, servants, equipment and materials caused by the Railroad's traffic. However, the preceding sentence shall not exempt the Railroad from liability for any loss, damage or injury proximately caused by the Railroad's intentional misconduct or sole or gross negligence. The contractor shall directly reimburse the Railroad for any cost the Railroad reasonably incurs for repairing damages to the Railroad's Property or to property of the Railroad's tenants, caused by or resulting from the operations of the contractor relating to this project.

12.0 Flagging Services.

12.1 When Flagging is Required. The Railroad has sole authority to determine the need for flagging to protect the Railroad's operations. Whenever the Railroad requires flagging services with reference to any of the contractor's work on this project, the contractor shall not perform any such work until all required flaggers are present at the job site.

12.1.1 In general, the Railroad may require flagging services whenever the contractor's personnel or equipment are, or are likely to be, working on the Railroad's Property, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging, to prevent unreasonable risks of accidental hazard to the Railroad's operations or personnel.

12.1.2 Normally the Railroad will assign one flagger to a project; but in some cases, more than one may be necessary, such as yard limits where the Railroad may assign up to three flaggers. However, if the contractor works within distances that violate instructions given by the Railroad Representative, or performs work upon or adjacent to Railroad's Property that has not been scheduled with the Railroad Representative, the Railroad may require flagging services full time until the project is completed.

12.2 Scheduling and Notification of Flagging Services.

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12.2.1 The contractor shall arrange with the Railroad all flagging services required by the Railroad to accomplish the contractor's work on this project.

12.2.2 Before the contractor begins work on the Railroad's Property, the contractor shall furnish to the Railroad Representative and the Engineer a schedule for all work required to complete the contractor's portion of the project within the Railroad's Property, and shall arrange for a job site meeting between the contractor, the Engineer, and the Railroad Representative. Until the contractor has provided its work schedule and met on-site with the Railroad Representative and the Engineer, the Railroad may withhold all flagging services from the contractor's proposed job site. Before the flagger(s) begin each day's work, the flagger(s) and the contractor shall meet to conduct a job briefing.

12.2.3 Before the contractor first begins any work upon or adjacent to the Railroad's Property, the contractor shall give not less than thirty (30) days' advance notice to the Railroad, and to the Engineer, of its intent to begin such work. The contractor shall address all notices relating to flagging to the Railroad as follows:

Mr. Rick Oeltjen
General Manager
Missouri & Northern Arkansas Railroad Company, Inc.
514 North Orner
Carthage, MO 64836
Email: Rick.Oeltjen@gwrr.com
TEL: (417) 313-3046 [office]
(417) 793-9966 [mobile]

12.2.4 The Railroad usually assigns one flagger to work at the job site on a continuous basis until the contractor no longer needs flagging services. The contractor shall not call for flagging services on a spot basis. The Railroad's assigned flagger shall notify the Engineer when flagging services have begun and ended. The flagger shall give these notices immediately upon arrival at the job site on the first day, and before departing from the job site on the last day of each separate period when the Railroad provides flagging services, or as soon as possible thereafter. The Engineer shall document these notifications in the project records.

12.2.5 After the contractor has begun work that requires flagging services, the contractor shall give not less than five (5) day's advance written notice to the Railroad before discontinuing flagging services and terminating the obligation to pay for flagging services. The contractor shall simultaneously provide a copy of this notice to the Engineer. If the contractor's work on or adjacent to the Railroad's Property is suspended at any time, or for any reason, then before the contractor resumes any work on or adjacent to the Railroad's Property, the contractor shall give advance, written notice to the Railroad and to the Engineer of its intent to resume such work. This notice shall provide sufficient details of the contractor's proposed work to enable the Railroad Representative to determine whether flagging services will be required before the contractor resumes its work on or adjacent to the Railroad's Property. The contractor shall give this required notice at least three (3) working days' before it intends to resume such work; however, the Railroad may take up to thirty (30) days after the contractor has given this notice before resuming flagging services at the job site. The requirements of this paragraph 12.2.5 shall not apply if the suspension and resumption of the contractor's work were previously scheduled with the Railroad pursuant to paragraph 12.2.2 of these Railroad Requirements, or the suspension was caused by an emergency as provided in paragraph 12.2.6 of these Railroad Requirements.

12.2.6 If, after the Railroad has assigned a flagger to the project site in accordance with section 12.0, any emergency requires the flagger's presence elsewhere, then the contractor shall suspend work on the Railroad's Property until the flagger is again available. Any additional costs to the contractor resulting from such delay shall be borne by the contractor and not by the Railroad.

12.3 Payment for Flagging Services.

12.3.1 The Commission will pay the Railroad directly for the cost of flagging services associated with this project by deducting the amount from the Commission's payments to the contractor.

12.3.2 The estimated cost of flagging services is approximately \$1,075 per day, based on an 8-hour work day and a 40-hour work week. The Railroad shall charge not more than its actual cost of providing these flagging services, which includes the base pay for the flagger or flaggers who actually performed the required flagging services, the Railroad's reasonable overhead costs, and the reasonable costs actually incurred for the flagger's travel expenses, meals and lodging if required. The Railroad may charge a maximum of one-hour travel time each way per day per flagger, for travel to and from the job site. A flagger's work in excess of 8 hours per day or 40 hours per week, but not more than 12 hours per day, will result in overtime pay at 1.5 times that employee's regular hourly rate. A flagger's work in excess of 12 hours per day will result in overtime pay at 2.0 times that employee's regular hourly rate. If a flagger performs required flagging services on a holiday, then the overtime pay rate shall be 2.5 times that employee's regular hourly rate. The Commission also shall reimburse the Railroad for its actual expenses reasonably incurred in preparing and handling invoices to the Commission for the cost of these flagging services. The Railroad's charges to the Commission shall be in accordance with applicable provisions of the Federal Aid Policy Guide issued by the Federal Highway Administration, including all current amendments.

12.3.3 The Railroad shall submit progress invoices to the Engineer during the time the Railroad requires flagging services. The Railroad shall submit its final invoice for flagging services to the Engineer within one hundred eighty (180) days after the contractor has notified the Railroad and the Commission that all its work over the Railroad's Property is complete, in accordance with section 18.0 below. If the Commission does not receive the Railroad's final flagging invoice within this time period, then the Railroad shall obtain payment directly from the contractor.

12.3.4 If a dispute arises between the Railroad, the Commission and the contractor concerning the amount charged for flagging service, then the Commission may deduct the full amount of the Railroad's invoice from the contractor's payment, until the dispute is resolved.

12.4 Flagging Complaints. The contractor and the Railroad shall attempt to resolve any complaints concerning flagging services in a timely manner. If the contractor disputes the need for a flagger, the contractor shall notify the Railroad Engineer and the Engineer. The contractor shall confirm any verbal complaints in writing within five (5) working days, by sending a copy to the Railroad Representative and to the Engineer.

13.0 Temporary Construction Grade Crossing.

13.1 When the contractor has no reasonable alternate method of transporting construction materials and personnel across the Railroad's track, the contractor shall be make all necessary arrangements with the Railroad for the installation, maintenance and removal of one temporary

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grade crossing for a construction haul road. The contractor shall bear all costs incidental to such crossings, including flagging, whether services are performed by contractor's own forces or by the Railroad's personnel. The contractor shall execute the Railroad's standard Road Crossing Agreement covering terms and conditions for the temporary crossing.

13.2 Neither the contractor nor the Railroad shall construct any crossing for use by the contractor for transporting materials or equipment across the tracks of the Railroad until the Railroad Representative specifically authorizes the installation, maintenance, necessary watching and flagging thereof and removal, which shall be done at the contractor's expense.

14.0 Work for the Benefit of the Contractors. The project plans show all temporary or permanent changes in wire lines or other facilities that are necessary to complete the project, or these changes will be covered by appropriate plan revisions approved by the Commission and the Railroad. If the contractor desires any further changes, the contractor shall make separate arrangements with the Railroad for those changes, at the contractor's expense.

15.0 Cooperation and Delays. The contractor shall arrange a schedule with the Railroad for accomplishing staged construction involving work by the Railroad or tenants of the Railroad. In arranging a schedule, the contractor shall request information from the Railroad, and the Railroad shall promptly provide information, concerning the minimum lead-time required for assembling crews and materials. The contractor shall schedule adequate time for those activities. The contractor shall not make any claim against the Railroad for hindrance or delay on account of railway traffic for:

15.1 Any work the Railroad performs.

15.2 Other delay incident to or necessary for the safe maintenance of railway traffic.

15.3 Any delays due to compliance with these Railroad Requirements.

16.0 Trainman's Walkways. The contractor shall maintain along the outer side of each exterior track of multiple operated tracks, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 12 feet from the centerline of the track. Before the close of each workday, the contractor shall remove all temporary impediments to walkways and track drainage encroachments or obstructions that were allowed during work hours when flagging services were available. Whenever the contractor excavates or maintains any excavation near the walkway, the contractor shall install a handrail with 12 feet minimum clearance from the centerline of the track.

17.0 Insurance.

17.1 General Insurance Provisions. The contractor shall, at its sole cost and expense, procure and continuously maintain in force during this project, the insurance coverage required under this section 17.0 (including all subsections and paragraphs thereof) until the contractor has completed all project work on the Railroad's Property, has removed all equipment and materials from the Railroad's Property, and has cleaned and restored the Railroad's Property to the satisfaction of the Engineer and the Railroad Representative. The amount of work to be performed upon, over or under the Railroad's Property is estimated to be eight percent (8%) of the contractor's total bid for the project.

17.2 Commercial General Liability Insurance. The contractor shall maintain commercial general liability ("CGL") insurance with a limit of not less than \$5,000,000 for each occurrence and an aggregate limit of not less than \$10,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage). The policy must contain the following endorsement, which must be stated on the certificate of insurance: "Contractual Liability Railroads" ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "**Missouri & Northern Arkansas Railroad Company Property**" as the Designated Job Site.

17.3 Business Automobile Coverage Insurance. The contractor shall maintain business auto coverage written on ISO form CA 00 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less than \$5,000,000 for each accident. The policy must contain the following endorsements, which must be stated on the certificate of insurance: "Coverage For Certain Operations In Connection With Railroads" ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing "Missouri & Northern Arkansas Railroad Company Property" as the Designated Job Site; and Motor Carrier Act Endorsement - Hazardous Materials Clean Up (MCS-90) if required by law.

17.4 Workers' Compensation and Employers' Liability Insurance. The contractor shall maintain workers' compensation insurance coverage, with not less than the minimum statutory liability required under the workers' compensation laws of the State of Missouri. The contractor shall maintain Employers' Liability (Part B) insurance coverage with limits of at least \$1,000,000 for each accident, a \$1,000,000 disease policy limit, and \$1,000,000 for each employee. If the contractor is self-insured, then the contractor shall provide evidence of state approval and excess workers' compensation coverage, which must include coverage for liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable. The policy must contain the following endorsement, which must be stated on the certificate of insurance: "Alternate Employer Endorsement" ISO form WC 00 03 01 A (or a substitute form providing equivalent coverage) showing the Railroad in the schedule as the alternate employer (or a substitute form providing equivalent coverage).

17.5 Railroad Protective Liability Insurance. The contractor must maintain Railroad Protective Liability insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of the Missouri & Northern Arkansas Railroad Company, Inc. (MNA) as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate limit of \$6,000,000. The contractor must also maintain a separate Railroad Protective Liability insurance policy, written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of the Union Pacific Railroad Company (UP) as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate limit of \$6,000,000. Before commencing any work on the Railroad's Property, the contractor shall submit the original insurance policies to MNA and UP, respectively, or may submit binders stating that the required Railroad Protective Liability policy is in place until the contractor delivers the original policies to MNA and UP, respectively. The contractor shall cause the Railroad Protective Liability Insurance policies to include a description of the named insured, the work, and the job site, as follows:

17.5.1 Named Insured. The Named Insured on one of the Railroad Protective Liability Insurance policies required by subsection 17.5 of these Railroad Requirements shall be Missouri & Northern Arkansas Railroad Company, Inc. The Named Insured on the other required Railroad Protective Liability Insurance policy shall be Union Pacific Railroad Company.

17.5.2 Description and Designation. The description of the work and designation of the job site to be shown on each of the Railroad Protective Liability Insurance policies are as follows:

Rte. 96, Jasper County
Job No. J72228F
Missouri & Northern Arkansas Railroad Company
and Union Pacific Railroad Company
USDOT # 435 226P.

17.5.3 Meaning of “Railroad”. Except when the context clearly requires otherwise, whenever the word “Railroad” is used in section 17.0 of these Railroad Requirements (including all subsections and paragraphs thereof) with reference to any Railroad Protective Liability Insurance the meaning of the word shall include both MNA and UP.

17.6 Umbrella or Excess Insurance. If the contractor utilizes umbrella or excess insurance policies, these policies must “follow form” and afford no less coverage than the primary policy.

17.7 Pollution Liability Insurance. The contractor shall maintain pollution liability insurance coverage, which must be written on ISO form Pollution Liability Coverage Form Designated Sites CG 00 39 12 04 (or a substitute form providing equivalent liability coverage), with limits of at least \$5,000,000 per occurrence and an aggregate limit of \$10,000,000. If the scope of work as defined in this Project includes the disposal of any hazardous or non-hazardous materials from the job site, the contractor must furnish to the Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of \$1,000,000 per loss, and an annual aggregate of \$2,000,000.

17.8 Other Insurance Requirements.

17.8.1. Each policy required above (except railroad protective liability, workers' compensation and employers' liability) must include the Railroad as “Additional Insured” using ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to the Railroad as an additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26 and CA 20 48, provide coverage for the Railroad’s negligence whether sole or partial, active or passive.

17.8.2 Where allowable by law, the punitive damage exclusion shall be deleted, and the deletion shall be indicated on the certificate of insurance.

17.8.3 The contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against the Railroad and its agents, officers, directors and employees, except that these waivers shall not apply to punitive damages, nor to any loss, damage or injury proximately caused by the Railroad’s intentional misconduct or sole or gross negligence. The certificate of insurance shall acknowledge these waivers.

17.8.4 Prior to commencing any work on the Railroad's Property, the contractor shall furnish the Railroad with one or more certificates of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth in Section 17.0 of these Railroad Requirements (including all subsections and paragraphs thereof).

JOB SPECIAL PROVISIONS (BRIDGE)

17.8.5 The contractor shall only obtain insurance policies written by a reputable insurance company acceptable to the Railroad, or which currently has a Best's Insurance Guide Rating of "A-" and Class VII or better, and which is authorized to do business in the State of Missouri.

17.8.6 The fact that insurance is obtained by the contractor or by the Railroad on behalf of the contractor will not be deemed to release or diminish the liability of the contractor, including, without limitation, liability under the indemnity provisions contained in Section 3.0 of these Railroad Requirements. Damages recoverable by the Railroad from the contractor or any third party will not be limited by the amount of the required insurance coverage, except to the extent of any payments the Railroad has received pursuant to insurance coverage obtained and paid for by the contractor.

17.9 Evidence of Insurance. The contractor shall provide evidence of insurance as required above to the addresses shown below, for review by the Commission and approval by the Railroad.

MNA Railroad

Mr. Michael R. Morningstar
Director of Risk Management and Claims
Genesee & Wyoming Railroad Services,
Inc.
13901 Sutton Park Drive South
Suite 150
Jacksonville, FL 32224

Commission

Mr. Dave Ahlvers
State Construction & Materials Engineer
MoDOT
P.O. Box 270
Jefferson City, MO 65102

UP Railroad

Ms. Kathy Nesser
Manager - Contracts
Union Pacific Railroad Company
1400 Douglas Street STOP 1690

P.O. Box 270
Omaha, NE 68179

17.10 Except as otherwise specifically provided in these Railroad Requirements, the Railroad will not accept binders as evidence of insurance, and the contractor shall provide the Railroad with the original insurance policy.

17.11 Insurance Required of Subcontractors. If any part of the work is sublet, the contractor shall maintain and provide evidence of similar insurance, in the same amounts as required of the prime contractor, to cover the subcontractor's operations. The Railroad will accept endorsements to the prime contractor's policies specifically naming subcontractors and describing the subcontractor's operations, for this purpose.

17.12 Cancellation of Insurance. The contractor and its insurers shall not cancel any of the required insurance coverage, except by permission of the Commission and the Railroad, or after thirty (30) days' written notice to the Commission and the Railroad at the addresses shown in subsection 17.9.

18.0 Completion of Work on Railroad's Property. The contractor shall notify Engineer and Railroad's Representative when the contractor has completed its work on Railroad's Property.

19.0 Failure to Comply. If the contractor violates or fails to comply with any of these Railroad Requirements, then the Railroad Engineer may require that the contractor vacate the Railroad's property and the Engineer may withhold all monies due to the contractor until the contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

20.0 Payment for Cost of Compliance. The contractor is not entitled to any separate payment for any extra cost it may incur on account of compliance with these Railroad Requirements. The contractor shall include all such costs in the contract unit price for items properly authorized in the contract.

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- B. Galvanized Structural Steel Pile.

 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636</p>
	<p>HDR Engineering, Inc. 4435 Main Street, Suite 1000 Kansas City, MO 64111 Certificate of Authority # 000856 Consultant Phone # 816-370-2700</p>
	<p>If a seal is present on this sheet, JSP's has been electronically sealed and dated.</p>
	<p>JOB NO. J7P2228G Jasper County, MO Date Prepared: 11/2/2016</p>
<p>Only the following items of the Job Special Provisions (Bridge) are authenticated by this seal: A thru B.</p>	

JOB SPECIAL PROVISIONS (BRIDGE)

A. CONSTRUCTION REQUIREMENTS

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

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

2.1 Provisions shall be made to prevent any debris and materials from falling into the stream. Any debris and materials that falls below the bridge outside the limits mentioned previously and if determined necessary by the engineer, the debris shall be removed as approved by the engineer at the contractor's expense. Traffic under the bridge shall be maintained in accordance with the contract documents.

2.2 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. GALVANIZED STRUCTURAL STEEL PILE

1.0 Description. This job special provision contains general requirements for furnishing, coating and placing galvanized steel piles as shown on the plans and shall be in addition to the requirements of Sec 702.

2.0 Material. Structural steel piles shall be galvanized in accordance with ASTM A123 and Sec 1080. Repairs to the galvanized coating and field galvanizing shall be in accordance with ASTM A780. Zinc rich paints will not be allowed. Repairs and field galvanizing will not be required where the pile will be encased in concrete or below the limits specified in section 3.0 of this job special provision. Protective Coatings specified in Sec 702 will not be required for galvanized piles.

3.0 Construction Requirements.

3.1 Galvanizing material shall be omitted or removed for a minimum of 2 inch on either side of weld locations. The method used to omit or remove the galvanizing material shall be masking, grinding or other methods as approved by the engineer. If a weld location falls within an area where galvanizing is required, clean the weld area making sure to remove all welding slag. Then field galvanize the weld area in accordance with ASTM A780. Zinc rich paints will not be allowed.

3.2 At the contractor's option, the entire pile length may be galvanized.

3.3 All pile below the pile concrete encasement shall be galvanized down to a minimum depth of 20 feet below the finished ground line.

JOB SPECIAL PROVISIONS (BRIDGE)

4.0 Method of Measurement. Galvanized Structural Steel Pile in place will be the actual length to the nearest linear foot for that portion of the pile that remains permanently in the structure. See Sec 702 Basis of Payment for any additional length authorized by the engineer resulting from pile splices. No separate measurement will be made for pile that is not galvanized.

5.0 Basis of Payment. The accepted quantity of galvanized and non galvanized pile in place will be paid for at the contract unit price for Galvanized Structural Steel Pile. No direct payment will be made for incidental items necessary to complete the work unless specifically provided as a pay item in the contract.