Clay County Highway Department

North Home Avenue Bridge 14100071 IFB 69-20

ADDENDUM NUMBER 2



ISSUE DATE: 09-21-2020

Information to Bidders The following is provided to Bidders for information only:

- 1. Attachments to this Addendum:
- Itemized Proposal (Addendum 2)
- Revised Plan Sheet 12 of 30 (rev Date 9/21/20)
- 2. Plan Revisions were made to correct the amount of Reinforcing Steel for pay (Line 36). The Bill of Reinforcing and total steel for the bridge is unchanged, the pay breakdown between Line 36 and Line 31 has been revised due to the error.
- 3. JSP for Corral Rail has been updated to clarify that the reinforcing steel in the corral rail is included in Line 36.

Bid Documents

Itemized Bid Sheets

Replace Itemized Proposal with attached Itemized Proposal (Addendum 2).

Job Special Provisions

8.0 Corral Rail

Second Paragraph first sentence, replace "This item shall include the furnishing of all materials, labor and equipment necessary to construct the safety barrier corral rail in conformity with the lines, grades and dimensions shown on the plans and in accordance with applicable provisions of Section 703 of the Standard Specifications." with the following:

"This item shall include the furnishing of all materials with the exception of reinforcing steel, and includes all labor and equipment necessary to construct the safety barrier corral rail in conformity with the lines, grades and dimensions shown on the plans and in accordance with applicable provisions of Section 703 of the Standard Specifications. Reinforcing Steel in the Corral Rail has been included in the line item Reinforcing Steel (Epoxy)(Grade 60)."

Drawings(Revised Drawings Attached):

Replace Sheet 12 with attached revised Sheet 12 (9/21/20)

NOTE: Bidders must acknowledge receipt of this Addendum by listing the number and date, where provided, on the Bid Proposal.

CLAY COUNTY, MO N. HOME AVENUE BRIDGE 14100071 CF&S #19-1055

Unit Item Ouantity Unit Price No. Amount **ROADWAY ITEMS** 1. 201-30.00 Clearing and Grubbing 0.6 Acre 2. 202-20.10 Removal of Improvements L.S. 1 3. 203-10.00 **Class A Excavation** 395 C.Y. Embankment in Place 4. 203-55.00 132 C.Y. 5. 203-60.00 **Compacting Embankment** 527 C.Y. 203-70.75 Compacting in Cut 3.8 STA. 6. 7. 304-01.43 Type 1 Aggregate For Base 887 S.Y. (4" Thick) 8. 401-99.05 **Optional Pavement** 812 S.Y. L.F. 9. 606-10.10 Guard Rail, Type A 125 10. 606-22.00A Bridge Anchor Section, 4 Each 6.5 Ft. Posts 11. 606-23.00A Transition Section, Each 4 6.5 Ft. Posts 12. 606-66.10 End Anchor 4 Each 13. 611-30.20 Furnishing Rock Blanket 706 C.Y. (Type II) 14. 611-30.40 Placing Rock Blanket C.Y. 706 (Type II) 618-10.00 Mobilization 1 L.S. 15. 16. 627-40.00 Contractor Furnished L.S. 1 Surveying and Staking 17. 624-01.03A Permanent Erosion Control 1308 S.Y. Geotextile 18. 725-03.24A 24" Pipe Group B 50 L.F.

ITEMIZED PROPOSAL (Addendum 2)

CLAY COUNTY, MO N. HOME AVENUE BRIDGE 14100071 CF&S #19-1055

ITEMIZED PROPOSAL (Addendum 2)

					Unit	
No.		Item	Quantity	Unit	Price	Amount
19.	732-00.24A	24" or Allowed Substitute	2	Each		
		Group B Flared End Section				
20.	805-20.00A	Seeding-Warm Season	0.4	Acre		
		Mixtures				
21.	806-10.17	Temporary Seeding &	0.4	Acre		
		Mulching				
22.	806-10.19	Temporary Silt Fence	768	L.F.		
23.	806-10.05	Rock Ditch Check	60	L.F.		
24.	806-10.50	Type C Berm	127	L.F.		
25.		Traffic Control	1	L.S.		

TOTAL ROADWAY	\$
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CLAY COUNTY, MO N. HOME AVENUE BRIDGE 14100071 CF&S #19-1055

No.		Item	Quantity	Unit	Un P	nit rice	Amount
BRI	DGE NO. 141	00071					
26.	206-10.00	Class 1 Excavation	125	C.Y.			
27.	216-05.00	Removal of Bridge (1410007)	1	L.S.			
28.	702-10.10	Structural Steel Piles (10')	192	L.F.			
29.	702-70.00	Pile Point Reinforcement	8	Each			
30.	703-20.03	Class B Concrete	71.5	C.Y.			
1.	703-42.22	Slab On Concrete Beam	123	S.Y.			
52.	703-46.10	Class B-1 Concrete	143	L.F.			
		Corral Rail					
3.	705-60.65	17" Prestressed Concrete	122	L.F.			
		Spread Box Beam					
84.	715-10.01	Vertical Drain at End Bents	2	Each			
35.	716-10.00	Plain Neoprene Bearing Pad	6	Each			
86.	715-10.00	Reinforcing Steel (Epoxy)	12,170	Lbs.			
		(Grade 60)					
37.	503-10.11A	Bridge Approach Slab	106	S.Y.			
		(Minor Road)					

ITEMIZED PROPOSAL (Addendum 2)

TOTAL BRIDGE	\$
TOTAL FOR PROJECT	\$

Estimated Quantities

l tem		Total
Class 1 Excavation	cu, yard	125
Structural Steel Pile (10 in)	linear foot	192
Pile Pt Reinforcement	each	8
Class B Concrete Substructure	cu, yard	71.5
Slab on Concrete Beam (B-2)	sq. yard	123
Class B-1 Concrete (Corral Rail)	linear foot	143
17 in., P/S Conc. Spread Box Beam, 40 ft span	linear foot	122
Vertical Drain at End Bents	each	2
Plain Neoprene Bearing Pad	each	6
Removal of Existing Bridge	lump sum	1
Bridge Approach Slab (Minor Road)	sq. yard	106
Reinforcing Steel (Epoxy Coated) (excluding slab)	pound	-12,350

Foundation Data		
Bent No.	1	
Pile Type and Size	HP 10 X 42	HF
Number	4	
Approximate Length (Feet)	22	
Pile Point Reinforcement (Each)	4	
Pile Driving Verification Method	DF	
Minimum Nominal Axial Pile Compression Resistance (Kips)	498	
Hammer Energy Required (Ft. Lb.)	16,000	

Minimum energy requirement of hammer is based on plan length and design bearing value of piles.

All piles shall be driven to practical refusal.

Manufactured pile point reinforcement shall be used on all piles in this structure.

DF= FHWA-modified Gates Dynamic Formula

Minimum Nominal Axial Compressive Resistance = <u>Maximum Factored Loads</u> Resistance Factor



LOCATION SKETCH

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	26							
	4							
	DF							
	49	8						
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Estimated Quantities for Slab on Concrete Spread Box Beam *					
item	Total				
Class B-2 Concrete cu. ya	rd 49.5				
Reinforcing Steel (Epoxy Coated) pou	nd 7,210				

7,390 🔥 * Note: For "Bill of Reinforcing Steel", see Sheet No. 24.

The table of Estimated Quantities for Slab on Concrete Beam represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab or (with the horizontal dimensions as shown on the plan of the slab). Payment for prestressed panels. conventional forms, all concrete and coated reinforcing steel ▲ above construction joint will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec. 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type 1, 11, or 111.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete Beam.

Hydrologi	c Data					
Drainage Area = 2.	47 (Sq.Mi.)					
Backwater/Base Flood Data (100 Year)						
High Water Elev.	= 883.79					
Design Discharge	= 2.320 (Cfs)					
Estimated Backwater	= Negl. (F+)					
Average Velocity Thru Opening	= 7.43 (F+/S)					
Freeboa	rd					
Design Frequency	= 50 (Year)					
Design Discharge	= 1.990 (Cfs)					
Freeboard	= 4.18 (F+)					
Design High Water (Dhw) Elev.	= 883.27					
Roadway Overtopping						
Design Elev.	= 889.40					
Design Discharge	= 5,975 (Cfs)					
Design Frequency	= 3300 (Year)					

Design Specifications: 2017 AASHTO LRFD Bridge Design Specifications, 8th Edition.

For materials and construction procedures, the contractor shall follow the specifications as stated in the "Missouri Standard Specifications for Highway Construction - 2018" and current supplemental specification revisions. In addition, refer to the general and job special provisions which supercede the "Standard Specifications" for various items on this project.

35#/sq. ft., future wearing surface

Other:

Plain Neoprene Bearing Pads shall be 60 durometer and in accordance with Sec. 716.

All joint filler shall meet the requirements of Std Spec 1057.7.4.

Reinforcing Steel: All dimensions relative to placement of reinforcing steel are to the centerline of bars unless otherwise noted. Bar bending dimensions shall be as shown and noted in the bending diagrams. All reinforcing steel shall conform to the requirements of ASTM A615, Grade 60. Minimum clearance to reinforcing shall be $1 \frac{1}{2}$ unless otherwise shown.

Epoxy Coated Reinforcing: All reinforcing bars designated "Epoxy Coated" shall be coated with epoxy as set forth in the Missouri Standard Specifications. All bar supports shall be coated. Where non-coated bars come into contact with epoxy coated bars, they need not be coated.

Permanent erosion control geotextile shall be placed under the rock blanket and shall be in accordance with Sec. 1011. The cost of furnishing and Installing permanent erosion control geotextile, complete in place, shall be included in the contract unity price for rock blanket.

All exposed corners of concrete shall be chamfered 3/4".

MoDOT and FHWA may make inspections of the work and the contractor shall grant them access to all parts of the work.

For precast prestressed panel stresses, see Sheet No. 19. For prestressed box beam stresses, see Sheet No. 17.

General Notes:

Design Loading: HL-93

Earth 120#/cu. ft., equivalent fluid pressure 45#/cu. ft.

Superstructure: Simply supported non-composite for dead load Simply supported composite for live load

Design Unit Stresses:

Class B (Substructure)Concrete f'c = 3,000 psi Class B-2 Concrete (Superstructure except prestressed box beams) f'c = 4.000 psiClass B-1 Concrete (Corral Rail) f'c = 4.000 psiReinforcing Steel (Grade 60) fy = 60,000 psi Steel Pile fy = 50,000 psi

General Construction Notes:

For reinforcing bar supports, see Missouri Standard Plan Drawing 706.35, "Bar Supports for Concrete Reinforcement."

See additional notes on the bridge detail sheets.

	CFS ENGINEERS	CfSe.COM 1421 E. 104th Street, Ste. 100 KCMO 641				
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			REVISED QUANTITIES & NOTE 09/			
			Mark			
Date: 00-00-00	Reviewed by: 	Plot scale: 1:10				
Designed by: 	Dwn by: Ckd by: 	Submitted by: 	File name#9/055-SH-BR-BridgeQuantities.dgn Plot date&/21/2020 9:43:04 AM			
CLAY COUNTY MISSOURI	ICourthouse Square Liberty, Missouri 64068		N. Home Ave. Br. 14100071			
BRIDGE QUANTITIES AND GENERAL NOTES						
	Sheet reference number: 12 Sheet 12 of 30					