

# ADDENDUM No.1

## 1. PROJECT INFORMATION

PROJECT: Shawnee Ford Bridge Replacement Project (BRO-036(31))

OWNER: Franklin County, MO

PROJECT NUMBER: Project Number: BRO-036(31)

DESIGN CONSULTANT: HDR Engineering, Inc.

DATE OF ADDENDUM: 12/17/2018

## 2. NOTICE TO BIDDERS

This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Bidding and Contract Documents (Bid Documents), Drawings, and any previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.

The Bidder shall acknowledge receipt of the addenda by stapling this ADDENDUM No. 1 and any subsequent addenda to the bid as indicated by Item #8 on the BIDDER CHECKLIST.

## 3. GENERAL

This Addendum provides comments, clarifications, questions and answers as a result of the Pre Bid Meeting held December 13, 2018. Subsequent questions and changes to documents are also noted below.

## 4. ATTACHMENTS

Pre-bid Meeting Attendance Sign-in Sheet

Revised Bid Tab Sheet

Revised Bridge Plan Sheets 2 and 8 of 28

## 5. PREVIOUS ADDENDA

None

## 6. REVISIONS TO BIDDING DOCUMENTS, CONTRACT DOCUMENTS AND SPECIFICATIONS

### REVISIONS TO BIDDING DOCUMENTS

#### a. Clarify bid item:

408-10.10 Prime Coat – material may be RC 70 or MC 30 per MoDOT Listing of bid Items for Highway Construction.

#### b. Increase bid quantity for:

703-20.03 Class B Concrete (Substructure) from 90.1 CUTYD to 140.7 CUYD

## REVISIONS TO JOB SPECIAL PROVISIONS

None

## REVISIONS TO PLAN SHEETS

The following plan sheet(s) have been updated to account for the increased concrete quantity:

Bridge Plans: Sheet 2 of 28 updated Estimated Quantities Table

Sheet 8 of 28 updated Substructure Quantity table

### 7. PRE BID MEETING MINUTES (9:00AM; 12/13/2018)

#### a. Introduction

#### b. General Project Description: Read from bid documents

#### c. Bid Date: 9:00AM December 20<sup>th</sup>

Franklin County Purchasing Department; Room 004  
400 East Locust Street, Room 207  
Union, MO 63084

**NOTE:** Questions will be received until COB on December 17<sup>th</sup>, 2018.

#### d. DBE Goal: 9%

#### e. Liquidated Damages: \$1100/ day for exceeding the contract completion date.

**NOTE:** JSP F - Order of Work: there is an additional liquidated damages of \$500/day for exceeding the maximum closure period of 90 days for Shawnee Ford Road.

#### f. JSP E Tree Clearing: Potential bat tree habitat within the project limits has already been removed by the County. If the contractor negotiates an agreement to utilize adjacent property outside of County right-of-way, they will need to avoid any impacts with potential bat habitat. This would limit tree clearing between April 1<sup>st</sup> – October 31<sup>st</sup>, 2019.

#### g. JSP K Water Quality Control Measures in Consideration of Sensitive Species: There is a mussel bed located approximately 300 feet downstream of the project site. To limit disturbance to this species steps are required to limit any process that increases the turbidity of the water flowing over the mussel bed. Thus, any causeway construction within the river must be in place prior to March 15<sup>th</sup> and must remain in place until June 15<sup>th</sup>. During construction all activities within the limits of the channel must not impact the river or occur from this causeway, to include removal of the existing bridge. Turbidity curtains are required for any operations in the water.

In order to meet the contract deadlines we anticipate work to begin ahead of the usual March 15<sup>th</sup> construction season. The goal is to limit the closure time to Shawnee Ford Road, this will require as much work as possible to be completed prior to road closure and demolition of the existing bridge. The intermediate piers have been laid out to allow drilled shaft installation while the existing bridge is still in place.

#### h. Anticipated Addendum: Due to questions receive to date there will be at least one addendum addressing the following issues (Addressed earlier in this document):

- Clarification on prime/tack coat for asphalt paving. Products will be standard MoDOT products. Tack coat is not included in the current project.

- Class B Concrete (Substructure) quantity will be increased by 50.6 CY to account for intermediate pier web walls.

## **8. PRE BID QUESTIONS AND ANSWERS:**

- a. Can contractor enter the water to repair any damage to the causeway resulting from a flood event?
  - Yes, this is a reasonable request in the event this occurs. Turbidity curtains and best practices are to be utilized to limit any disruption to the stream bed during repair.
- b. During the removal of the existing bridge deck does contractor need to set up a system to catch particulates (asphalt, timber) from falling into the river?
  - Per the contract documents no items from the existing bridge are allowed to fall into the water during demolition. They are allowed to fall onto the causeway if it is in place.

## **PLEASE SEE THE FOLLOWING ATTACHMENTS:**

Pre-Bid Sign-in Sheet

Addendum No. 1 Revisions:

Revised Bid Tab  
Revised Bridge Plan sheet 2 of 28  
Revised Bridge Plan Sheet 8 of 28

## Shawnee Ford Road Bridge Replacement Project BRO-036(031)

Pre-Bid Meeting December 13, 9:00AM  
400 East Locust Street, Room 207; Union, MO.

## Sign-in Sheet


Name	Company	Email
JOSH BEHRENS	MILLSTONE WEBER	josh.bchrens@millstoneweber.com
RON WILLIAMS	FRANKLIN COUNTY	rjwilliams@franklinco.net
Gordon Raney	KozenyWagner	graney@kozenywagner.com
Brian Mulhall	KCI	BMULHALL@KCI.CONSTRUCTION.COM
Travis Skayton	Robertson Contractors, Inc.	traviss@robertsoncontractors.com
Josh Ennis	Eard C. bridge	EardCbridge@gmail.com
Michael Conner	Pace Const.	mconner@paceconstructionsthe
Donald E. Rhoe	Don Schnieders Ex.c.	drhoe@dsecompany.com
CHRIS WCHER	KJU Inc.	chris@kjuline.com
Noah Barnes	Boone Construction	noahb@booneconst.com
Ryan Porter	Lehman Construction LLC	quotes@lehmanconstructionllc.com
KEVIN KNIEBE	HDR	kevin.kniebe@hdrinc.com
Ryan Shaw	HDR	ryan.shaw@hdrinc.com

ITEMIZED BID FORM					
620-60.00C	4" White Marking Paint	LF	2320		
	<b>SUB-TOTAL PAVEMENT MARKING ITEMS</b>				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
	<b>BRIDGE ITEMS</b>				
206-10.00	Class 1 Excavation	CUYD	50		
216-05.00	Removal of Bridge	EA	1		
701-11.06	Drilled Shafts (4 ft. 0 in. Dia.)	LF	70		
701-12.05	Rock Sockets (3 ft. 6 in. Dia.)	LF	44		
701-14.00	Foundation Inspection Holes	LF	84		
701-13.00	Supplementary Television Camera Inspection	EA	4		
701-16.00	Sonic Logging Testing	EA	4		
702-10.14	Structural Steel Piles (14 in.)	LF	325		
702-70.00	Pile Point Reinforcing	EA	10		
703.-20.03	Class B Concrete (Substructure)	CUYD	140.7		
703-42.15	Safety Barrier Curb	LF	652		
703-42.21	Slab on Concrete NU-Girder (with precast panels)	SQYD	899		
705-60.23	NU53, Prestressed Concrete NU-Girder	LF	899		
706-10.60	Reinforcing Steel (Bridges)	LBS	31,210		
712-33.01	Steel Int. Diaph. For P/S Concrete Girders	EA	8		
712-36.10	Slab Drain	EA	36		
715-10.01	Vertical Drain at End Bent	EA	2		
716-10.02	Laminated Neoprene Bearing Pads	EA	6		
716-10.03	Laminated Neoprene Bearing Pads (Tapered)	EA	12		
	<b>SUBTOTAL BRIDGE ITEMS</b>				
	<b>BOX CULVERT ITEMS</b>				
206-33.00	Class 4 Excavation	CUYD	10		
216-35.00	Partial Removal of Culvert Concrete	LS	1		
703-40.40	Class B-1 Concrete (Culvert-Bridges)	CUYD	23.8		
706-10.20	Reinforcing Steel (Culverts-Bridges)	LBS	5700		
	<b>SUBTOTAL BOX CULVERT ITEMS</b>				
	<b>TOTAL</b>				


1 Revised

PROJECT NO.: BRO-036(31)

SHEET NO.  
2



HDR Engineering, Inc.  
401 S. 16th Street  
Suite 300  
St. Louis, MO 63103-2287  
314-425-8300  
Certificate of Authority: 000666



KEVIN C. KIELE  
REGISTERED PROFESSIONAL ENGINEER  
MISSOURI  
E-29417

THIS SHEET HAS BEEN  
SIGNED AND DATED  
ELECTRONICALLY

Kevin C. Kiele - P.E.  
MC# E29417

SHAWNEE FORD ROAD BRIDGE  
OVER BOURBEUSE RIVER  
FRANKLIN COUNTY, MO

DATE: 12/17/2018

GENERAL NOTES:

DESIGN SPECIFICATIONS:  
2012 AASHTO LRFD Bridge Design Specifications (6th Ed.) and 2013 Interims  
Seismic Design Category = 1  
Seismic Peak Horizontal Ground Acceleration = 0.10

DESIGN LOADING: HL-93  
Vehicle  
Future Wearing Surface = 35 lb/sf  
Earth 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf  
Superstructure: Simply-Supported, Non-Composite for dead load.  
Continuous composite for live load.

DESIGN UNIT STRESSES:  
Class B Concrete (Substructure)  
Class B-2 Concrete (Drilled Shafts & Rock Sockets)  
Class B-1 Concrete (Superstructure)  
Class B-2 Concrete (Superstructure, except Prestressed Girders and Safety Barrier Curb)  
Reinforcing Steel (Grade 60)  
Steel Pile (ASTM A709 Grade 36)  
For precast prestressed panel stresses, see Sheet No. 21  
For prestressed girder stresses, see Sheet No. 14 and 15

NEOPRENE BEARING PADS:  
Laminated Neoprene Bearing Pads (Tapered) shall be 60 durometer and shall be in accordance with Sec 716.

JOINT FILLER:  
All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

REINFORCING STEEL:  
Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

140.7

Estimated Quantities

Item	Unit		Substr.	Superstr.	Total
	Cu. Yd.	Lump Sum			
Class 1 Excavation	50	-	-	-	50
Removal of Bridge (F-282)	-	-	-	-	1
Drilled Shaft (4 ft., 0 in. Dia.)	70	-	-	-	70
Rock Sockets (3 ft., 6 in. Dia.)	44	-	-	-	44
Foundation Inspection Holes	Lin. Ft.	84	-	-	84
Sonic Logging Testing	Each	4	-	-	4
Structural Steel Pile (14 in)	Lin. Ft.	325	-	-	325
Pile Point Reinforcement	Each	10	-	-	10
Class B Concrete (Substructure)	Cu. Yd.	90.1	-	-	90.1
Safety Barrier Curb	Lin. Ft.	-	652	-	652
Slab on Concrete NU-Girder	Sq. Yd.	-	899	-	899
NU 53, Prestressed Concrete NU-Girder	Lin. Ft.	-	899	-	899
Reinforcing Steel (Bridges)	Lbs.	31,210	-	-	31,210
Slab Drain	Each	-	36	-	36
Vertical Drain at End Bents	Each	-	2	-	2
Laminated Neoprene Bearing Pad	Each	-	6	-	6
Laminated Neoprene Bearing Pad (Tapered)	Each	-	12	-	12

\* Safety barrier curb shall be cast-in-place option or slip-form option.

FOUNDATION DATA				
TYPE	DESIGN DATA	BENT NO. 1	BENT NO. 2	BENT NO. 3
Load Bearing Pile	Pile Type and Size	HP 14x73		HP 14x73
	Number	5		5
	Approximate Length per Each	33		32
	Pile Driving Verification Method	DF		DF
	Minimum Nominal Axial Pile Compression Resistance	496		496
Rock Socket	Criteria for Minimum Tip Penetration	Penetration anticipated soft geotechnical layers		Penetration anticipated soft geotechnical layers
	Hammer Energy Required	ft-lb		15,900
	Number	ed	2	
	Foundation Material		Rock	Weak Rock
	Elevation Range		653 - 648.5	668.5 - 650
Rock Socket	Minimum Nominal Axial Compressive Resistance (Side Resistance)		26	14
	Minimum Nominal Axial Compressive Resistance (Tip Resistance)		275	104

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

The contractor shall furnish plan length of pile plus 10%. However, only the portion of pile driven from the tip to the plan top will be paid for at the bid unit price.

Extending and splicing of piles is not desirable and full length piles shall be driven whenever possible and practical.

DF = FHWA-modified gates dynamic formula.

Minimum Nominal Axial Compressive Resistance =  $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Minimum Nominal Axial Compressive Resistance =  $\frac{\text{Maximum Factored Loads}}{(\text{Side Resistance} + \text{Tip Resistance})}$

ESTIMATED QUANTITIES:

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the intermediate bent concrete diaphragms, except reinforcement embedded in the beam cap, is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities for For Slab on Concrete NU-Girder		
Item	cu. yard	Total
Class B-2 Concrete	244.0	
Reinforcing Steel	pound	7,980
Reinforcing Steel (Epoxy Coated)	pound	77,710

The table of Estimated Quantities for Slab on Concrete NU-Girder 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 slab). Payment for prestressed panels, stay-in-place forms, conventional forms, all concrete and coated and uncoated reinforcing steel 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 slabs 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 I, II or III.

Class B-2 Concrete quantity is based on minimum top flange thickness and minimum joint material thickness.

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

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

GENERAL NOTES AND SUMMARY OF QUANTITIES

1 REVISD 12/17/2018

