

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: June 20, 2017
Date of Addendum: June 14, 2017

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
011	78-0293-069	BRIDGE REPLACEMENT - STEEL GIRDER	POTTAWATTAMIE	IM-NHS-029-3(69)53--03-78	20JUN011A04

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Change Proposal Line No. 0060 2408-78000000 CURB, STRUCTURAL STEEL:

From: 5,541,013.000 LB

To: 5,130,613.000 LB

If the above changes are not made, they will be made as shown here.

Replaces plan sheets 2 and 4 with the attached:

The summary of changes to Sheets 2 and 4 are:

Sheet 2:

Revise Item No. 6, Structural Steel Total in the Estimated Bridge Quantities from 5,541,013 LBS. to 5,130,613 LBS.

Revise the weight for Grade 50 Steel in the Estimate Reference Information for Item 6 from 5,539,642 LBS. to 5,129,242 LBS.

Sheet 4:

Revise Span A1, Diaphragm+Bracket+Conduit Support weight (LBS) from 183,831 and 73,803 to 38,481 and 13,953 in the Summary of Structural Steel Table for Stages 1 and 2, respectively.

Revise Span C1, Diaphragm+Bracket+Conduit Support weight (LBS) from 183,700 and 73,803 to 38,350 and 13,953 in the Summary of Structural Steel Table for Stages 1 and 2, respectively.

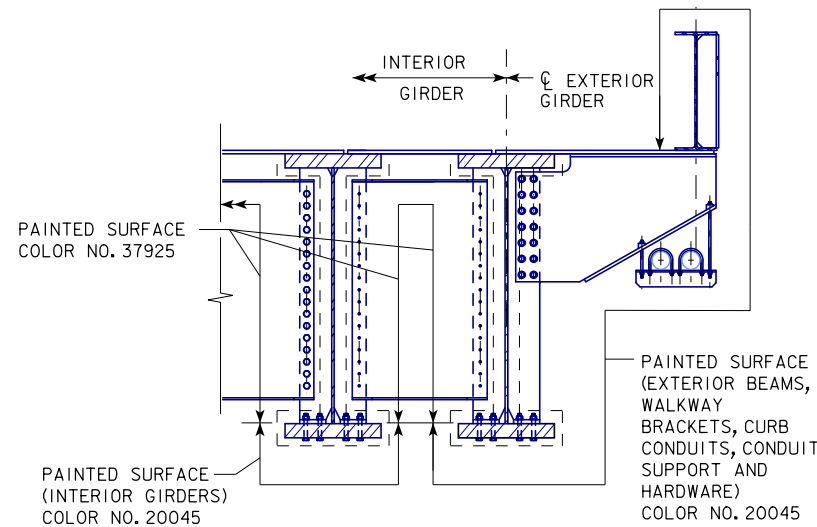
Revise the Total weight (LBS.) from 3,896,994 and 1,644,019 to 3,606,294 and 1,524,319 in the Summary of Structural Steel Table for Stages 1 and 2, respectively.

ESTIMATED BRIDGE QUANTITIES

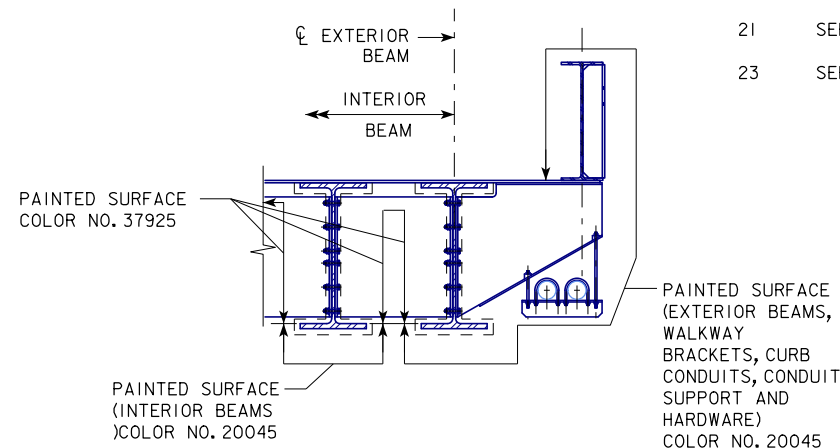
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUANTITY
1	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	1	
2	2402-2720000	EXCAVATION, CLASS 20	CY	10,586	
3	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	3,015.7	
4	2404-7775000	REINFORCING STEEL	LB	175,491	
5	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	241,513	
6	2408-7800000	STRUCTURAL STEEL	LB	5,130,613	
7	2433-0001048	CONC DRILLED SHAFT, 48" DIA	LF	862	
8	2433-0003000	DEMONSTRATION SHAFT	LF	125	
9	2499-2300002	BRIDGE DRAINAGE SYSTEM	LS	1	
10	2501-0201473	PILES, STEEL, HP 14 X 73	LF	2,200	
11	2501-0201489	PILES, STEEL, HP 14 X 89	LF	25,500	
12	2501-8400172	TEMPORARY SHORING	LS	1	
13	2507-2638620	MACADAM STONE SLOPE PROTECTION	SY	569	
14	2507-2638660	BRIDGE WING ARMORING - MACADAM STONE	SY	14	
15	2526-8285000	CONSTRUCTION SURVEY	LS	1	
16	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	118	
17	2533-4980005	MOBILIZATION	LS	1	
18	2536-6745045	REMOVAL OF ASBESTOS	LS	1	
19	2590-0000020	PROJECT MANAGEMENT	LS	1	
20	2599-9999009	CONDUIT, FURNISH AND INSTALL, RIGID GALVANIZED, 4 INCH	LF	1,265	
21	2599-9999009	STEEL PICKET FENCING	LF	725.1	
22	2599-9999010	PROGRESS SCHEDULING	LS	1	
23	2599-9999014	DECK WATERPROOFING	SF	28,330	

ITEM NO. ESTIMATE REFERENCE INFORMATION

- 3 INCLUDES CONCRETE FOR ABUTMENTS NO. A1 AND C2 STEMS, FOOTINGS, WING WALLS AND MASK WALLS. INCLUDES CONCRETE FOR PIER NO. B1, B2 AND C1 PIER CAPS AND STEMS AND FOOTING FOR PIER B2. INCLUDES FORM LINER AND AESTHETIC TREATMENTS FOR THE PIER CAPS, STEMS AND ABUTMENT WING WALLS. INCLUDES ALL PREFORMED EXPANSION JOINT FILLER REQUIRED. INCLUDES CONCRETE SEALER APPLIED TO THE EXPOSED BRIDGE SEAT SURFACE AT THE PIERS. INCLUDES FURNISHING AND PLACING SUBDRAIN (INCLUDING EXCAVATION), GRANULAR FILL AND SUBDRAIN OUTLET AT ABUTMENTS AND TOE OF BERM. INCLUDES 790 LINEAR FEET OF 1" DIA. RIGID STEEL CONDUIT AND 96 LINEAR FEET OF 2" DIA. STEEL CONDUIT IN PIERS NO. B1, B2, C1 AND ABUTMENT C2.
- 4 INCLUDES ALL UNCOATED MECHANICAL SPLICE ASSEMBLIES REQUIRED.
- 5 INCLUDES ALL EPOXY-COATED MECHANICAL SPLICE ASSEMBLIES REQUIRED.
- 6 WEIGHT INCLUDES 5,129,242 LBS. OF GRADE 50 AND 1,371 LBS. OF GRADE 36 SUPERSTRUCTURE STEEL FOR GIRDER WEBS AND FLANGES, WIDE FLANGE BEAMS, BEAM DIAPHRAGMS, BALLAST CURBS, DECK PLATES MASONRY PLATES, BEARING PLATES AND EMBEDDED ANGLES WITH WELDED STUDS. PLAIN AND LAMINATED STEEL REINFORCED NEOPRENE PADS SHALL BE CONSIDERED INCIDENTAL TO THE STRUCTURAL STEEL BID ITEM.
- 8 THE DEMONSTRATION SHAFT SHALL BE LOCATED SOUTH OF PIER B1 AS SHOWN ON DESIGN SHEET 8 AND CONSTRUCTED IN ACCORDANCE WITH ARTICLE 2433 OF THE STANDARD SPECIFICATIONS. THE TIP ELEVATION IS ESTIMATED TO BE AT ELEVATION 880.93 AND THE SOCKET LENGTH SHALL BE 17'-0". HOWEVER, THESE WILL REQUIRE ADJUSTMENT BASED ON FIELD CONDITIONS AND RESULTS OF THE EXPLORATORY BORING. ADDITIONALLY, THE REINFORCING STEEL IN THE DEMONSTRATION SHAFT WILL BE THE SAME AS THAT SHOWN FOR PIER B-1, HOWEVER, THE REINFORCING DETAILS WILL REQUIRE ADJUSTMENT BY THE CONTRACTOR FOR THE DIFFERENCE IN LENGTH BETWEEN THE PRODUCTION SHAFTS AND THE DEMONSTRATION SHAFT AS NEEDED.
- 9 MEASUREMENT WILL BE THE LUMP SUM FOR COMPONENTS OF THE BRIDGE DRAINAGE SYSTEM REQUIRED AS SPECIFIED IN THE PLANS. THE PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, EQUIPMENT AND LABOR AND FOR PERFORMANCE OF ALL WORK NECESSARY FOR FABRICATING AND INSTALLING THE BRIDGE DRAINAGE SYSTEM AS PER PLAN. INCLUDES PIPING AND PIPE SUPPORTS. SEE DESIGN SHEETS 84 THRU 85 AND 89.
- 10,11 INCLUDES FURNISHING AND INSTALLING STEEL PILE POINTS. PILE AND PILE DRIVING SHALL FOLLOW THE REQUIREMENTS OF SECTION 2501 OF THE STANDARD SPECIFICATIONS WITH THE EXCEPTION OF SECTION 2501.03.M.1-2. SEE PILE DRIVING NOTES ON DESIGN SHEET 5 FOR PILE DRIVING REQUIREMENTS.
- 12 INCLUDES COMPLETE EARTH RETENTION SYSTEM REQUIRED TO EXCAVATE AND MAINTAIN EMBANKMENT TO SUPPORT TRAIN AND VEHICULAR TRAFFIC. INCLUDES CLOSURE WALLS THAT MAY BE REQUIRED DURING STAGE 2 CONSTRUCTION. INCLUDES 4,427 SQ. FT. OF EXPOSED RETAINED EARTH FOR STAGE 1 WEST ABUTMENT, 1,434 SQ. FT. FOR STAGE 1 EAST ABUTMENT, 1,150 SQ. FT. FOR ABUT. NO. C2 STAGE 2, AND 130 SQ. FT. FOR ABUT. NO. A1 STAGE 2.
- 13 INCLUDES FURNISHING AND PLACING ENGINEERING FABRIC, MACADAM STONE, 4" x 6" TREATED TIMBERS, 1/2" DIAMETER STEEL PINS (OR REBARS), POROUS BACKFILL OR GRANULAR SUBBASE BACKFILL AT FRONT FACE OF ABUTMENT FOOTING, AND ALL REQUIRED EXCAVATING, SHAPING AND COMPACTING.
- 14 INCLUDES FURNISHING AND PLACING ENGINEERING FABRIC, MACADAM STONE, 4" x 6" TREATED TIMBERS, 1/2" DIAMETER STEEL PINS (OR REBARS), AND ALL REQUIRED EXCAVATING, SHAPING AND COMPACTING FOR WING ARMORING.
- 16 INCLUDES TEMPORARY FENCE MOUNTED TO THE TOP OF THE BARRIER. TEMPORARY FENCE SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH UPRR STANDARDS.
- 18 2% CHRYSOTILE ASBESTOS IS PRESENT IN THE GRAY CAULK UNDER THE METAL HANDRAIL BASE PLATES ON THE NORTH SIDE OF THE BRIDGE (15 BASES), 7 SQ. FT.
- 20 SEE DESIGN SHEET 95 FOR DETAILS.
- 21 SEE DESIGN SHEETS 91 -94 FOR DETAILS.
- 23 SEE DESIGN SHEETS 81 AND 84 SPECIAL PROVISION FOR DECK WATERPROOFING FOR DETAILS.



**LIMITS OF PAINTING DETAIL
SPAN BI AND B2**



**LIMITS OF PAINTING DETAIL
SPAN AI AND CI**

ROADWAY QUANTITIES SHOWN
ELSEWHERE IN THESE PLANS.

LOCATION

UPRR BR. 171 OVER I-29,
OMAHA SUBDIVISION
T-75N R-44W
SECTION 33
LAKE TOWNSHIP
POTTAWATTAMIE COUNTY
FHWA NO. 44736
FRA NO. 816679K
IOWA CROSSING NUMBER 12921
BRIDGE MAINT. NO. 7852.9x029
LATITUDE 41.249866°
LONGITUDE -95.906777°

DESIGN FOR 0° SKEW

290'-1 1/2" x 90'-2" WELDED STEEL GIRDER BRIDGE

50'-0, 100'-6, 90'-3, 50'-0

ESTIMATED QUANTITIES

STATION 101+32.08 APRIL, 2017

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 95 FILE NO. 30169 DESIGN NO. 117

SUMMARY OF CONCRETE QUANTITIES

LOCATION	ITEM	STRUCTURAL CONCRETE	
		STAGE 1	STAGE 2
ABUT. NO. A1	CAP	81.6	35.4
	BACKWALL	12.0	5.4
	WINGWALL FTG. + WINGWALL + MASKWALL	9.2	9.2
PIER NO. B1	CAP	91.7	40.7
	STEP WALL + MASKWALL	17.7	7.7
	* STEM	-	242.2
PIER NO. B2	CAP	74.7	31.1
	MASKWALL	0.7	0.7
	* STEM	189.7	87.5
	PILE CAP	111.8	51.5
PIER NO. C1	CAP	75.8	30.0
	MASKWALL	18.3	8.0
	* STEM	199.6	88.6
	PILE CAP	80.5	35.7
ABUT. NO. C2	CAP	394.2	171.0
	BACKWALL + MASKWALL	13.4	6.8
	PILE CAP	180.7	74.2
	WINGWALL FTG. + WINGWALL	269.2	269.2
TOTAL (CU. YDS.)		1820.8	1194.9

* CONCRETE QUANTITY IS CALCULATED ASSUMING THE WALL THICKNESS IS 5'-0 FOR PIER NO. B1 AND 4'-6 FOR PIERS NO. B2 AND C1 AND IGNORES THE DEDUCTION OF CONCRETE VOLUME DUE TO THE FORM LINER.

SUMMARY OF REINFORCING STEEL

LOCATION	ITEM	NON-COATED REINFORCING STEEL		EPOXY COATED REINFORCING STEEL	
		STAGE 1	STAGE 2	STAGE 1	STAGE 2
ABUT. NO. A1	CAP	5,766	2,536		
	WINGWALL + MASKWALL	1,396	1,396		
	BACKWALL	1,693	760		
PIER NO. B1	CAP + STEP WALL + MASKWALL			18,485	8,089
	STEM				18,656
	DRILLED SHAFT	53,415	21,367		
PIER NO. B2	CAP + MASKWALL			3,767	1,684
	STEM			14,490	6,974
	PILE CAP	7,632	3,640	3,782	1,796
PIER NO. C1	CAP + STEP WALL + MASKWALL			5,681	2,423
	STEM			15,244	6,974
	PILE CAP	6,424	2,956	3,466	1,572
ABUT. NO. C2	STEM + BACKWALL			37,791	17,045
	WINGWALL	15,351	15,351	36,797	36,797
	PILE CAP	24,811	10,997		
TOTAL (LBS.)		116,488	59,003	139,503	102,010

SUMMARY OF STRUCTURAL STEEL

LOCATION	ITEM	WEIGHT (LBS.)	
		STAGE 1	STAGE 2
SPAN A1	BEAMS	288,750	115,500
	DIAPHRAGM + BRACKET + CONDUIT SUPPORT	38,481	13,953
	DECK PLATE + BALLAST CURB + BALLAST STOP PLATE	87,234	42,000
	BEARINGS + MASONRY PLATES	7,000	2,884
SPAN B1	GIRDERS	1,292,637	531,450
	DIAPHRAGM + BRACKET + CONDUIT SUPPORT	46,780	21,639
	DECK PLATE + BALLAST CURB + BALLAST STOP PLATE	228,250	112,224
	BEARINGS	12,683	5,222
SPAN B2	GIRDERS	928,627	378,627
	DIAPHRAGM + BRACKET + CONDUIT SUPPORT	35,409	19,880
	DECK PLATE + BALLAST CURB + BALLAST STOP PLATE	204,971	100,778
	BEARINGS	12,683	5,222
SPAN C1	BEAMS	288,750	115,500
	DIAPHRAGM + BRACKET + CONDUIT SUPPORT	38,350	13,953
	DECK PLATE + BALLAST CURB + BALLAST STOP PLATE	87,234	42,000
	BEARINGS + MASONRY PLATES	7,000	2,884
PIER NO. B1	EMBEDDED ANGLE W/WELDED STUDS	728	302
PIER NO. C1	EMBEDDED ANGLE W/WELDED STUDS	727	301
TOTAL (LBS.)		3,606,294	1,524,319

SUMMARY OF FOUNDATIONS

LOCATION	FOUNDATION TYPE	NUMBER		LENGTH (LIN. FT.)		STAGE LENGTH (LIN. FT.)		TOTAL (LIN. FT.)
		STAGE 1	STAGE 2	STAGE 1	STAGE 2	STAGE 1	STAGE 2	
ABUT. NO. A1 - PLUMB PILES	HPI4x89	14	7	125	125	1,750	875	5,000
ABUT. NO. A1 - BATTERED PILES	HPI4x89	13	6	125	125	1,625	750	
PIER NO. B2 - BATTERED PILES	HPI4x89	44	20	100	100	4,400	2,000	6,400
PIER NO. C1 - BATTERED PILES	HPI4x89	36	16	100	100	3,600	1,600	5,200
ABUT. NO. C2 - PLUMB PILES	HPI4x89	12	7	100	100	1,200	700	8,900
ABUT. NO. C2 - BATTERED PILES	HPI4x89	45	25	100	100	4,500	2,500	
ABUT. NO. C2 - PLUMB PILES	HPI4x73	4	4	100	100	400	400	2,200
ABUT. NO. C2 - BATTERED PILES	HPI4x73	7	7	100	100	700	700	
				HPI4x73 TOTAL (LIN. FT.)				2,200
				HPI4x89 TOTAL (LIN. FT.)				25,500
PIER NO. B1	CONC. DRILLED SHAFT, 48" DIA	5	2	123.2	123.2	615.9	246.4	862.3
				TOTAL (LIN. FT.)				862

SUMMARY OF EXCAVATION

LOCATION	CLASS 20 EXCAVATION
ABUTMENT NO. A1	502
PIER NO. B1	1,300
PIER NO. B2	530
PIER NO. C1	1,908
ABUTMENT NO. C2	6,346
TOTAL (CU. YDS.)	10,586



Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10423.02

LOCATION

UPRR BR. 171 OVER I-29,
OMAHA SUBDIVISION
T-75N R-44W
SECTION 33
LAKE TOWNSHIP
POTTAWATTAMIE COUNTY
FHWA NO. 44736
FRA NO. 816679K
IOWA CROSSING NUMBER 12921
BRIDGE MAINT. NO. 7852.9x029
LATITUDE 41.249866°
LONGITUDE -95.906777°

DESIGN FOR 0° SKEW
290'-1 1/2 x 90'-2 WELDED STEEL GIRDER BRIDGE
50'-0, 100'-6, 90'-3, 50'-0
SUMMARY QUANTITIES SHEET
STATION 101+32.08 APRIL, 2017
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 3 OF 95 FILE NO. 30169 DESIGN NO. 117

DESIGN TEAM RK / RK / KMP

POTTAWATTAMIE COUNTY PROJECT NUMBER IM-NHS-029-3(69)53--03-78

SHEET NUMBER 4

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CHANGED BY ADDENDA

DATE: 6/13/2017