

# **A d d e n d u m**

Iowa Department of Transportation  
Office of Contracts

Date of Letting: February 21, 2017  
Date of Addendum: February 13, 2017

<b>B.O.</b>	<b>Proposal ID</b>	<b>Proposal Work Type</b>	<b>County</b>	<b>Project Number</b>	<b>Addendum</b>
020	94-C094-104	Bridge Replacement-PPCB	Webster	FM-C094(104)--55-94	21FEB020A01

Make the following changes to Page 2 of the PROPOSAL DETAILS:

Change the LATE START DATE from 06/19/17 to 05/30/17  
Change WORKING DAYS from 75 to 100

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Add Proposal Line No. 0035 2102-2713070 EXCAVATION CLASS 13, ROADWAY AND BORROW; 60.000 CY

Change Proposal Line No. 0300 2506-4984000 FLOWABLE MORTAR:  
From: 17.000 CY  
To: 77.000 CY

Add Proposal Line No. 0415 2595-0005150 RAILROAD PROTECTIVE LIABILITY INSURANCE FOR UNION PACIFIC RAILROAD CO.; 1.000 LUMP

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

Make the following changes to the PROPOSAL SPECIAL PROVISIONS LIST & TEXT:

Add the attached: DS-15041

DEVELOPMENTAL SPECIFICATIONS FOR  
MAINTENANCE WORK ON RAILROAD RIGHT-OF-WAY  
(UNION PACIFIC RAILROAD)  
Effective Date: May 17, 2016

Make the following changes to the PLAN:

Sheet 1 of 37 (see attached):

ADD Union Pacific Crossing  
D.O.T. Crossing #200941X

The actual crossing location is just north of the "T" intersection east of the bridge project.

Sheet 2 of 37, ESTIMATE REFERENCE INFORMATION:

Add to Note 1: The county will cut down trees within the clearing and grubbing areas due to the potential of these trees being inhabited by state and federal listed threatened/endangered bat species. The contractor will be required to remove the down trees and to grub the stumps.

Add Note 4: Includes excavation necessary to facilitate installation of sheet piling. Quantity based on 4' x 4' area around perimeter sheet piling

Sheet 3 of 37, ESTIMATE REFERENCE INFORMATION:

Add to Note 31: Includes 17 CU. YDS. to backfill concrete road pipes and 60 CU. YDS. to backfill sheet piling excavation.

Add Note 43: See DEVELOPMENTAL SPECIFICATION DS-15041 FOR MAINTENANCE WORK ON RAILROAD RIGHT-OF-WAY (UNION PACIFIC RAILROAD)

Minutes for Pre-Bid Meeting for Webster County  
FM-C094(104)--55-94, Bridge Replacement – PPCB  
210<sup>th</sup> Street over Gypsum Creek

- Letting Date is February 21, 2017, Bid Order 020. Bids must be received by 10:00 AM via BIDX.
- Requests for bidding documents must be submitted by noon the day before the letting, February 20, 2017.
- The current Eligible bidders for this project are:  
Christensen Bros., Inc.  
Dixon Construction Co.  
Godbersen-Smith Construction Co. & Subsid.  
Graves Construction Co., Inc.  
Herberger Construction Co. Inc.  
Peterson Contractors Inc.
- Contracting Authority is Webster County, Proposal Guaranty is \$37,500.00. Non-Federal Aid - Predetermined Wages Are Not In Effect.
- The Contract Periods on page 2 of the Proposal Details show the Contract has a Late Start Date of June 19, 2017 with 75 working days and \$1,000.00/day Liquidated Damages. This contract period allows for construction during the 2017 construction season with completion by late October of 2017.
- Any questions that come up that cannot be answered by the contract documents will be resolved by an addendum. Minutes to this meeting will be issued by an addendum. There are currently no questions on BIDX Q&A forum.
- Presentation of project/special requirements by the designer.
- Questions and Answers are as follows:

Q: There is no RR protective insurance.

A: This was added by the addendum.

Q: What is the status of the power lines?

A: The MidAmerican power lines will be moved Feb 13-22. MidAmerican owns both lines the north side remains and the south gets moved.

Q: What is the depth of saw cutting and will there be concerns with containment of slurry?

A: The saw cutting was clarified by the addendum, refer to plan sheet changes included in the addendum.

Q: Who owns the RR?

A: It is the Union Pacific Rail Road (UPRR)

Q: What about RR flaggers?

A: Flaggers will be per the DS-15041 that was added by the addendum.

Q: The Working Days and Late Start Date are tight, can that be changed?

A: The Working Days were increased to 100 and The Late Start Date adjusted to May 30, 2017 by the addendum.

Q: Who is doing the inspection?

A: Webster County is doing the inspection.

Q: Is a normal Temporary Stream Diversion allowed?

A: Yes.

Q: Is there an active mining operation on the north side?

A: No.

Q: The Estimate Reference Information for item #25 makes obstructions incidental, can that be changed to limit risk.

A: The addendum revised the notes for item #25 and added a bid item for Class 13 Excavation to address this issue.

Pre-Bid sign in sheet  
 Webster County, FM-C094(104)--55-94  
 Bridge Replacement – PPCB  
 210<sup>th</sup> Street over Gypsum Creek

NAME	COMPANY	EMAIL ADDRESS	PHONE & FAX #
Krandel Jack	Iowa DOT Contracts	Krandel, jack@iowadot.us	515-239-1546 515-239-1325
ANTHONY LEHRMAN	I. D. O. T. DISTRICT #1	anthony.lehrman@iowadot.us	515 239-1162
MATTHEW BEUZIE	USC	MBeuzie@USC.com	515 573-1843
RANDY WILL	WEBSTER COUNTY	engineer@webstercountyia.org	515 576 3281 515 576 0415
JEFF FADDEN	CB+A	JFADDEN@CALHOUNBURAS.COM	515-224-4344
Ryan Weidemann	Webster County	rweidemann@webstercountyia.org	515-576-3281
Brian Henderson	Webster County	bhenderson@webstercountyia.org	515-576-3281

Pre-Bid sign in sheet  
 Webster County, FM-C094(104)--55-94  
 Bridge Replacement – PPCB  
 210<sup>th</sup> Street over Gypsum Creek

NAME	COMPANY	EMAIL ADDRESS	PHONE & FAX #
JORDAN MULLER	P.C.I.	Jordan e petersoncontractors.com	319.788.4735
LUKE KROMORE	BOULDER CONTRACTING, LLC.	luke @ boulder contracting. net	319 269 8680
JUSTIN LYNCH	BOULDER CONTRACTING	justin e bouldercontracting . net	641 485 0119
DAVE DIXON	DIXON CONSTRUCTION	DAVE@DIXONCON.COM	(712) 372-4224
Brett Daniel	City of Fort Dodge	bdaniel @ fortdodgeiowa.org	515-573-5071



BRIDGE REPLACEMENT - PPCB  
LETTING DATE FEBRUARY 21, 2017

PROJECT NO. FM-C094(104)--55-94

WEBSTER COUNTY

## STANDARD ROAD PLANS

STANDARD ROAD PLANS ARE LISTED ON SHEET 6.

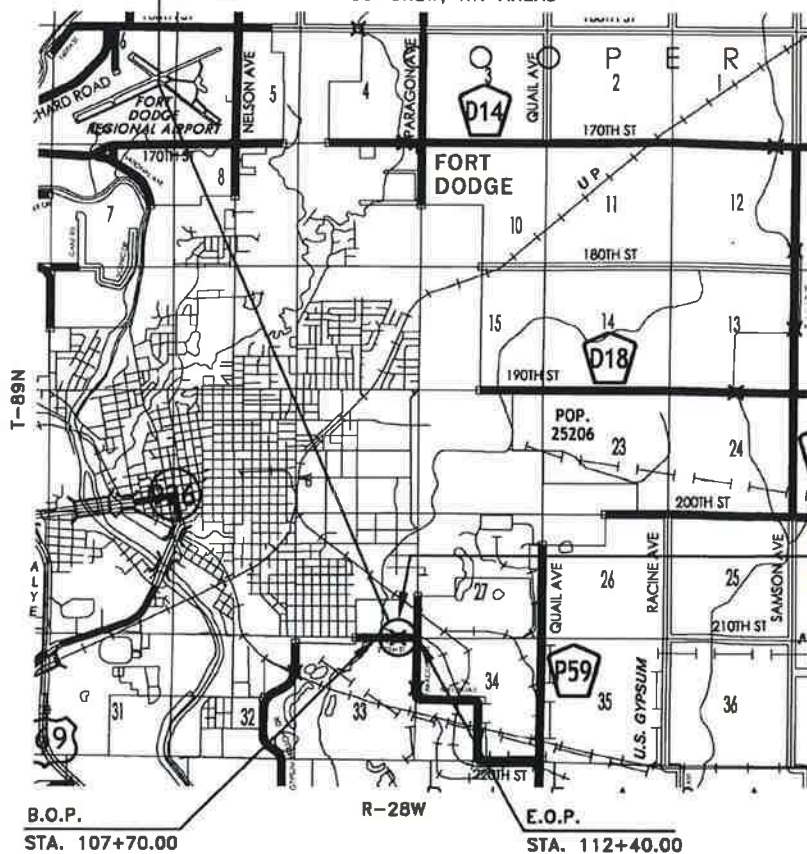
## SECTION 404 PERMIT AND CONDITIONS

281-1  
10-18-16

CONSTRUCT THIS PROJECT ACCORDING TO THE REQUIREMENTS OF U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT 14, PERMIT NO. 2015-0362. A COPY OF THIS PERMIT IS AVAILABLE FROM THE IOWA DOT WEBSITE (<http://envpermits.iowadot.gov/>) THE U.S. ARMY CORPS OF ENGINEERS RESERVES THE RIGHT TO VISIT THE SITE WITHOUT PRIOR NOTICE.

AN IOWA DNR FLOODPLAIN CONSTRUCTION PERMIT IS NOT REQUIRED FOR THIS PROJECT.

FHWA NO. 343280  
B.O.P. STA. 107+70.00  
E.O.P. STA. 112+40.00  
STATION 110+00.00  
PROPOSED 75'-0" x 30'-0" PRETENSIONED  
PRESTRESSED CONCRETE BEAM BRIDGE  
WITH 10'-0" BIKE PATH  
30' SKEW, RT. AHEAD



## PROJECT LOCATION

1 MI. 0 1 MI. 2 MI.



CALHOUN-BURNS & ASSOCIATES, INC. CONSULTING ENGINEERS  
WEST DES MOINES, IOWA 50265 (515)224-4344

JOB NO. 2007133

DESIGNED BY: EMS  
DRAWN BY: JLN  
CHECKED BY: FAC

WEBSTER COUNTY

PROJECT NO. FM-C094(104)--55-94

SHEET 1 OF 37



# PLANS OF PROPOSED IMPROVEMENT ON THE FARM TO MARKET ROAD SYSTEM WEBSTER COUNTY

PROJECT NO. FM-C094(104)--55-94  
BRIDGE REPLACEMENT - PPCB  
210TH ST./15TH AVE. S. OVER GYPSUM CREEK

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS.

THIS PROJECT IS COVERED BY THE IOWA DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2. THE CONTRACTOR SHALL CARRY OUT THE TERMS AND CONDITIONS OF GENERAL PERMIT NO. 2 AND THE STORM WATER POLLUTION PREVENTION PLAN WHICH IS A PART OF THESE CONTRACT DOCUMENTS. REFER TO SECTION 2602 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL INFORMATION.

## UTILITY CONTACTS

COMPANY	CONTACT	PHONE #	EMAIL
FRONTIER COMMUNICATIONS	TRENT FLOCKHART	515-573-1268	trent.flockhart@ftr.com
CITY OF FORT DODGE	BRETT DANIEL	515-573-5071	meterroom@fortdodgeiowa.org
MIDAMERICAN ENERGY	NICK NATION	515-574-5040	njnation@midamerican.com
MEDIACOM	MIKE LAWLER	515-571-2183	mlawler@mediacomcc.com
UNITED STATES GYPSUM COMPANY	JON CORY	515-576-4151	jcory@usg.com

## MILEAGE SUMMARY:

STA. 107+70.00 TO STA. 112+40.00 = 470.00 LIN FT. = 0.0890 MILES

2011, TRAFFIC COUNT = 1,540 V.P.D.

UNION PACIFIC CROSSING  
D.O.T. CROSSING NO. 200941X

## DRAWING APPROVAL

ALL SHOP DRAWINGS AND FALSEWORK DRAWINGS THAT REQUIRE APPROVAL SHALL BE SUBMITTED TO AND APPROVED BY THE CONTRACTOR, WHO SHALL STAMP, CERTIFY OR PROVIDE OTHER SUCH EVIDENCE ON THE DRAWINGS THAT THEY HAVE RECEIVED CONTRACTOR APPROVAL. THE APPROVED DRAWINGS SHALL THEN BE SUBMITTED TO CALHOUN-BURNS AND ASSOCIATES, INC., FOR REVIEW AND APPROVAL.

ADDRESS : 1500 30TH STREET  
WEST DES MOINES, IOWA 50266  
TELEPHONE : (515) 224-4344  
FAX : (515) 224-1385

SHOP DRAWINGS SHALL BE INDEPENDENT DRAWINGS WITH ADEQUATE DIMENSIONING FOR FABRICATION OF INDIVIDUAL PIECES OF EACH COMPONENT. PHOTOCOPIES OF PLAN DRAWINGS AND NON-CONTRACTOR APPROVED PLANS WILL BE REJECTED.

THESE DRAWINGS SHALL NOT BE SENT TO IOWA D.O.T. OFFICE OF BRIDGES AND STRUCTURES.



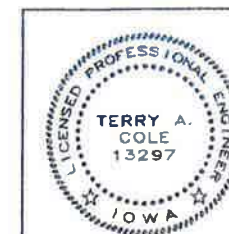
PROJECT NO. FM-C094(104)--55-94  
FHWA NO. 343280  
COUNTY ID COOPER G-33-4

## INDEX OF SHEETS

1. TITLE SHEET
- 2.-3. QUANTITY SUMMARY
4. SITUATION PLAN
5. GENERAL PLAN
6. GENERAL NOTES
7. POLLUTION PREVENTION PLAN
8. SOUNDING DATA
9. REMOVAL DETAILS
- 10.-11. WEST ABUTMENT DETAILS
- 12.-13. EAST ABUTMENT DETAILS
14. ABUTMENT DETAILS
15. ABUTMENT BACKFILL DETAILS
- 16.-19. SUPERSTRUCTURE DETAILS
- 20.-21. BEAM DETAILS
22. STEEL DIAPHRAGM DETAILS
23. NORTH OPEN RAIL DETAILS (TL-4)
- 24.-25. SOUTH OPEN RAILS DETAILS (TL-4)
26. OPEN RAILS DETAILS (TL-4)
27. FENCE DETAILS
28. STEEL HANDRAIL DETAILS
29. WING ARMORING DETAILS
30. TYPICAL SECTIONS AND TABULATIONS
31. TABULATIONS
32. SHEET PILE LAYOUT
- 33.-37. CROSS SECTIONS

## INDEX OF SEALS

SHEET NO.	NAME	TYPE
8	DAVID LOGEMANN	SOILS



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

TERRY A. COLE P.E. DATE: 2/25/16

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2016.

PAGES OF SHEETS COVERED BY THIS SEAL: 1-7, 9-37 OF 37

APPROVED  
Randall J. Will 11/15/2016  
WEBSTER COUNTY ENGINEER DATE

DATE  
BOARD OF SUPERVISORS DATE



REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	SUPER	TOTAL
1	2101-0850001	CLEARING AND GRUBBING	ACRE	-	-	0.2
2	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	-	-	484
3	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	-	-	571
4	2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW	CY	-	-	60
5	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	-	-	910
6	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	-	-	535
7	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	-	-	100
8	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	-	-	4.2
9	2301-0690210	BRIDGE APPROACH, TWO LANE	SY	-	-	496.6
10	2301-1033080	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 8 IN.	SY	-	-	347
11	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	-	-	1
12	2402-0425040	FLOODED BACKFILL	CY	-	-	153
13	2402-2720000	EXCAVATION, CLASS 20	CY	258	-	258
14	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	-	-	325
15	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	61.5	152.1	213.6
16	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	11,192	36,930	48,122
17	2407-0551475	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, D75	EACH	-	6	6
18	2408-7800000	STRUCTURAL STEEL	LB	-	1,489	1,489
19	2414-6424124	CONCRETE OPEN RAILING, TL-4	LF	-	241.0	241.0
20	2414-6444100	STEEL PIPE PEDESTRIAN HAND RAILING	LF	-	124	124
21	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	-	-	4
22	2416-1240024	CULVERT, 3000 CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	-	-	172
23	2417-0225024	APRONS, METAL, 24 IN. DIA.	EACH	-	-	4
24	2417-1040024	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 24 IN. DIA.	LF	-	-	114
25	2501-0201057	PILES, STEEL, HP 10 X 57 ; 20 @ 45'	LF	900	-	900
26	2501-5775000	PILES, STEEL SHEET	SF	-	-	2,400
27	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	-	-	300
28	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	-	-	4
29	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	-	-	4
30	2505-4021710	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, LS-625	EACH	-	-	4

10. SEE TYPICAL SECTIONS CBA-610 ON SHEET 30.  
DO NOT SKEW TRANSVERSE JOINTS. "CD" JOINTS ARE REQUIRED.  
CERTIFIED PLANT INSPECTION IS REQUIRED.  
ALL LONGITUDINAL PAVEMENT JOINTS SHALL BE CLEANED AND SEALED. SAWCUT WIDTH SHALL BE AS SHOWN ON IDOT STANDARD ROAD PLAN PV-101.
11. THE EXISTING BRIDGE AT STATION 110+00 IS A 30' x 28' STEEL I-BEAM BRIDGE WITH HIGH CONCRETE ABUTMENTS AND A CONCRETE DECK.  
AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS WAS COMPLETED AND NO SUSPECT MATERIALS WERE FOUND. IF MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE DISCOVERED DURING DEMOLITION OF THE BRIDGE, WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER NOTIFIED.  
THE LUMP SUM BID FOR "REMOVAL OF EXISTING BRIDGE" SHALL INCLUDE REMOVAL AND DISPOSAL OF THE EXISTING STEEL I-BEAMS, DECK, RAILS, BACKWALLS, WINGS AND TIMBER RETAINING WALL AT SE. SEE SHEETS 6 AND 9 FOR BRIDGE REMOVAL LIMITS AND NOTES. ALL SALVAGEABLE MATERIAL AND UNSALVAGEABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.  
BROKEN CONCRETE FROM THE EXISTING BRIDGE WITH SIMILAR GRADATION TO CLASS 'E' REVETMENT SHALL BE PLACED AT THE TOE OF THE NORTH WINGS IN FRONT OF THE EXISTING RETAINING WALL. REMAINING BROKEN CONCRETE WITH SIMILAR GRADATION TO CLASS 'E' REVETMENT MAY BE PLACED ON THE SOUTH BANKS OUTSIDE THE LIMITS SHOWN FOR CLASS 'E' REVETMENT, AS DIRECTED BY THE ENGINEER. ALL REINFORCING SHALL BE CUT OFF FLUSH WITH THE CONCRETE. H.M.A. MATERIAL IS SPECIFICALLY EXCLUDED. ALTERNATELY, THE CONTRACTOR MAY DISPOSE OF THE BROKEN CONCRETE OFF SITE AT A LOCATION PROVIDED BY THE CONTRACTOR AND NOTED TO THE ENGINEER.  
SEE HAZARDOUS MATERIALS NOTES ON SHEET 6 FOR PAINT SCRAPE SAMPLE RESULTS.
12. SEE TABULATION 104-3 ON SHEET 30.  
SS-15003 SUPPLEMENTAL SPECIFICATIONS FOR BACKFILLING AND COMPACTION OF PIPE AND REINFORCED BOX CULVERTS BY FLOODING SHALL APPLY.
13. QUANTITY IS BASED ON THE ASSUMPTION THAT CHANNEL EXCAVATION AND NECESSARY BERM CONSTRUCTION HAVE BEEN COMPLETED.  
INCLUDES COST OF USING SUITABLE MATERIAL FOR CONSTRUCTION ELSEWHERE ON THIS PROJECT. SUITABLE SOILS SHALL BE AS DEFINED BY ARTICLE 2102.02, D, 2 OF THE STANDARD SPECIFICATIONS
14. SEE TABULATION 104-3 ON SHEET 30.
15. INCLUDES COST OF PVC PIPE IN WINGS AND CONCRETE SEALER ALONG EDGES OF SLAB.  
INCLUDES COST OF FURNISHING AND PLACING SUBDRAINS (INCLUDING EXCAVATION), FLOODABLE BACKFILL, POROUS BACKFILL AND GEOTEXTILE FABRIC AT ABUTMENTS.  
NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR HEATING AND PROTECTION OF CONCRETE, IF NECESSARY.  
CERTIFIED PLANT INSPECTION IS REQUIRED  
ARTICLE 2428 REGARDING BRIDGE DECK SMOOTHNESS DOES NOT APPLY TO THIS PROJECT.
16. ALL REINFORCING SHALL BE GRADE 60.
17. INCLUDES COST OF BEARING MATERIAL, COIL TIES AND COIL RODS.
18. INCLUDES COST OF STEEL DIAPHRAGMS, SEE SHEET 22.
19. CERTIFIED PLANT INSPECTION IS REQUIRED.  
ALL STRUCTURAL CONCRETE FOR THE RAIL IS TO BE CLASS C; SUBSTITUTION OF CLASS D CONCRETE IS NOT ALLOWED.  
NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR HEATING AND PROTECTION OF CONCRETE, IF NECESSARY.
20. INCLUDES ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO CONSTRUCT THE RAILING IN ACCORDANCE WITH THE DIMENSIONS AND SPECIFICATIONS AS DICTATED IN THESE PLANS.  
SEE SHEET 28 FOR ADDITIONAL INFORMATION.
21. SEE TABULATION 104-3 AND CBA-701 ON SHEET 30 AND STANDARD ROAD PLAN DR-201.
22. SEE TABULATION 104-3 CBA-701 ON SHEET 30 AND STANDARD ROAD PLANS DR-101, DR-102 AND DR-104. ALL PIPE JOINTS SHALL BE TIED PER STANDARD ROAD PLAN DR-121.
23. SEE TABULATION 104-3 ON SHEET 30 AND STANDARD ROAD PLAN DR-203.
24. SEE TABULATION 104-3 ON SHEET 30 AND STANDARD ROAD PLANS DR-101, DR-102 AND DR-104.  
ALL PIPE SHALL BE STANDARD CORRUGATIONS, NO HELICALLY CORRUGATED PIPE WILL BE ALLOWED, ALL CONNECTING BANDS SHALL BE 24" WIDE.
25. SEE PILE NOTES ON SHEET 6.
26. SEE SHEETS 5 AND 32 FOR LIMITS. QUANTITY BASED ON PILE DEPTH OF 24 FEET.  
SHEET PILE SHALL HAVE A MINIMUM THICKNESS OF 3/8" AND A MINIMUM SECTION MODULUS OF 7.5 CUBIC INCHES PER FOOT. SHEET PILE SHALL BE INSTALLED INTERLOCKING.  
COST TO EXCAVATE FOR SHEET PILE INSTALLATION INCLUDED IN "EXCAVATION, CLASS 13, ROADWAY AND BORROW"  
INCLUDES COST TO FURNISH AND INSTALL WALERS.
27. SEE TABULATION 110-7A ON SHEET 31.
- 28-30. SEE TABULATIONS 108-8A ON SHEET 30 AND 107-23 ON SHEET 31.

STATION 110+00.00  
WEBSTER COUNTY, IOWA



TOTAL ESTIMATED QUANTITIES						
75'-0 x 30'-0 P.P.C.B. BRIDGE W/ 10' BIKE PATH						
REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	SUPER	TOTAL
31	2506-4984000	FLOWABLE MORTAR	CY	-	-	77
32	2507-2638650	BRIDGE WING ARMORING - EROSION STONE	SY	-	-	64
33	2507-3250005	ENGINEERING FABRIC	SY	-	-	850
34	2507-4011100	CONCRETE GROUT FOR REVETMENT OR GABION	CY	-	-	105
35	2507-6800061	REVTMENT, CLASS E	TON	-	-	600
36	2510-6745850	REMOVAL OF PAVEMENT	SY	-	-	556
37	2518-6910000	SAFETY CLOSURE	EACH	-	-	2
38	2519-1001000	FENCE, CHAIN LINK, VINYL COATED	LF	-	100.8	100.8
39	2526-8285000	CONSTRUCTION SURVEY	LS	-	-	1
40	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	-	-	8.28
41	2528-8445110	TRAFFIC CONTROL	LS	-	-	1
42	2533-4980005	MOBILIZATION	LS	-	-	1
43	2595-0005150	RAILROAD PROTECTIVE LIABILITY INSURANCE FOR UNION PACIFIC RAILROAD CO.	LS	-	-	1
44	2601-2634100	MULCHING	ACRE	-	-	1.0
45	2601-2638015	NATIVE GRASS SEEDING	ACRE	-	-	0.9
46	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	-	-	0.1
47	2602-0000020	SILT FENCE	LF	-	-	430
48	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	-	-	132
49	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	-	-	562
50	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	-	-	280
51	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	-	-	1
52	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	-	-	1

- 75'-0 x 30'-0 PRETENSIONED PRESTRESSED  
CONCRETE BEAM BRIDGE WITH 10'-0 BIKE PATH  
75'-0 SINGLE SPAN  
INTEGRAL ABUTMENTS
- QUANTITY SUMMARY
- STATION 110+00.00  
WEBSTER COUNTY, IOWA
- 30' SKEW, RT. AHEAD

DESIGN: AASHTO LRFD 7<sup>th</sup> EDITION, SERIES OF 2014, EXCEPT AS NOTED IN THE CURRENT IOWA BRIDGE DESIGN MANUAL. SEE SHEET 20 FOR PRESTRESSED BEAMS.

CONSTRUCTION: THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, PLUS GENERAL SUPPLEMENTAL SPECIFICATIONS; AND APPLICABLE SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS, SHALL APPLY TO THE CONSTRUCTION ON THIS PROJECT.

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6<sup>TH</sup> EDITION, SERIES 2012, EXCEPT AS NOTED IN THE CURRENT IOWA BRIDGE DESIGN MANUAL.

REINFORCING STEEL IN ACCORDANCE WITH LRFD AASHTO SECTION 5, GRADE 60.  
STRUCTURAL STEEL IN ACCORDANCE WITH LRFD AASHTO SECTION 6, ASTM A709 GRADE 36 (AASHTO M270 GRADE 36) OR ASTM A36.  
CONCRETE IN ACCORDANCE WITH LRFD AASHTO SECTION 5,  $f'_c=4,000$  PSI EXCEPT PRESTRESSED BEAM CONCRETE AS NOTED.

PRESTRESSING STEEL	SEE SHEETS 20
PRESTRESSED CONCRETE	SEE SHEETS 20

THIS DESIGN IS FOR A 75' x 30'-0" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE WITH A 10'-0" BIKE PATH ON 210<sup>TH</sup> ST./15<sup>TH</sup> AVE. S. OVER GYPSUM CREEK IN WEBSTER COUNTY, IOWA.

THE BRIDGE SUPERSTRUCTURE IS DESIGNED FOR HL-93 LOADING PLUS 20 LBS. PER SQ. FT. OF ROADWAY FOR FUTURE WEARING SURFACE. THE BRIDGE SUBSTRUCTURES ARE DESIGNED FOR HL-93 LOADING PLUS 20 LBS. PER SQ. FT. OF ROADWAY FOR FUTURE WEARING SURFACE AND BIKE PATH LIVE LOAD WAS APPLIED AT 75 LBS. PER SQUARE FOOT.

ACCESS SHALL BE MAINTAINED TO INDIVIDUAL PROPERTIES DURING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

THE PRIME CONTRACTOR SHALL EMPLOY CONTROLS TO REDUCE THE EROSIVENESS OF LAND ADJACENT TO SURFACE WATERS AND WETLANDS INCLUDING ESTABLISHMENT AND MAINTENANCE OF EROSION CONTROL DURING AND AFTER CONSTRUCTION AND REVEGETATION OF ALL DISTURBED AREAS UPON PROJECT COMPLETION. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ALL EROSION CONTROL MEASURES.

STANDARD ROAD PLANS ARE AVAILABLE FROM THE IOWA DEPARTMENT OF TRANSPORTATION WEBSITE  
<http://www.iowadot.gov/erl/index.html>.

SEE SECTION 1107.15 OF THE STANDARD SPECIFICATION REGARDING UTILITY COORDINATION

THE OVERHEAD POWER LINE AND POLES ALONG THE SOUTH SIDE OF THE ROADWAY WILL NOT BE RELOCATED DURING CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH M/DAMERICAN ENERGY COMPANY AND DETERMINE THEIR REQUIRED MINIMUM CLEARANCES BETWEEN THE POWER LINE, CONSTRUCTION EQUIPMENT AND MATERIALS.

ALL POWER POLES LOCATED WITHIN THE CONSTRUCTION LIMITS ARE TO REMAIN UNDISTURBED DURING CONSTRUCTION.

SEE UTILITY COORDINATION NOTES IN PROPOSAL

MIDAMERICAN CONTACT: NICK NATION  
PHONE NO. (515)-574-5040

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT AREAS (INCLUDING HAUL ROADS) SELECTED FOR WASTE OR DISPOSAL NOT IMPACT 1) CULTURALLY SENSITIVE SITES OR GRAVES OR 2) WETLANDS OR WATERS OF THE U.S.", INCLUDING STREAMS OR STREAM BANKS BELOW THE "ORDINARY HIGH WATER MARK", WITHOUT AN APPROVED U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE ENGINEER.

A SCRAPE SAMPLE OF THE EXISTING PAINT WAS TAKEN FROM AN AREA OF THIS BRIDGE TO GET AN INDICATION OF THE EXISTENCE AND OF THE LEVEL OF TOTAL CHROMIUM AND TOTAL LEAD. ANALYSIS OF TOTAL LEAD ON THIS SAMPLE WAS 50 PART PER MILLION (PPM). ANALYSIS TOTAL CHROMIUM ON THIS SAMPLE WAS 109 PPM. THESE ANALYSES SHOW THE EXISTENCE OF THESE TWO TOXIC CONSTITUENTS. LEVELS INDICATED BY THESE TESTS COULD CREATE CONDITIONS ABOVE REGULATORY LIMITS FOR HEALTH AND SAFETY REQUIREMENTS. NO OTHER CONSTITUENTS WERE ANALYZED. THE BIDDER SHOULD NOT RELY ON THE COUNTY'S TESTING AND ANALYSIS FOR ANY PURPOSE OTHER THAN AS AN INDICATION OF THE EXISTENCE OF THESE TWO TOXIC CONSTITUENTS.

THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS IN SUCH A MANNER THAT ANY PAINT REMOVED DURING REMOVAL IS CONTAINED, COLLECTED, AND DISPOSED OF IN ACCORDANCE WITH SECTION 2508 OF THE STANDARD SPECIFICATIONS.

BEFORE DELIVERY OF ANY SCRAP STEEL THE CONTRACTOR SHALL PROVIDE A WRITTEN NOTICE TO THE RECEIVING FACILITY. THIS NOTICE SHALL AT A MINIMUM INCLUDE:

1. A NOTICE THAT THE SCRAP STEEL IS COATED WITH PAINT THAT HAS REGULATED MATERIALS AT LEVELS THAT COULD BE HAZARDOUS TO EMPLOYEES OR THE ENVIRONMENT.
2. A COPY OF THE SCRAPE SAMPLE PROVIDED IN THE CONTRACT DOCUMENTS.
3. A SIGNATURE BLOCK FOR THE RECEIVING FACILITY TO CONFIRM THEIR RECEIPT OF THIS INFORMATION.

A COPY OF THIS NOTICE, SIGNED BY THE RECEIVING FACILITY, SHALL BE RETURNED TO THE ENGINEER BEFORE ANY SCRAP STEEL IS REMOVED FROM THE PROJECT.

ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THE ABOVE REMOVAL AND DISPOSAL REQUIREMENTS WILL BE INCIDENTAL TO "REMOVAL OF EXISTING BRIDGE."

SOUNDING AND TEST BORING DATA SHOWN ON PLANS WERE ACCUMULATED FOR DESIGNING AND ESTIMATING PURPOSES. THEIR APPEARANCE ON THE PLAN DOES NOT CONSTITUTE A GUARANTEE THAT CONDITIONS OTHER THAN THOSE INDICATED WILL NOT BE ENCOUNTERED.

THIS PROJECT USES THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHODOLOGY FOR DETERMINING PILE CONTRACT LENGTH AND NOMINAL AXIAL BEARING RESISTANCE. NOMINAL AXIAL BEARING RESISTANCES WILL BE LARGER THAN BEARING VALUES IN THE PAST, BUT CONSTRUCTION CONTROL BLOW COUNTS WILL BE APPROXIMATELY THE SAME. A WEAP ANALYSIS AND BEARING GRAPH WILL BE PROVIDED BY THE ENGINEER THAT GIVES THE RELATIONSHIP BETWEEN REQUIRED NOMINAL AXIAL BEARING RESISTANCE AND BLOW COUNT.

THE CONTRACT LENGTH OF 45 FEET FOR THE ABUTMENT PILES IS BASED ON A COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 146 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING.

THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE ABUTMENT PILES IS 108 TONS AT END OF DRIVE (EOD) OR RETAP. PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

105-4  
0-18-1

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-200	10-18-16	STEEL BEAM GUARDRAIL COMPONENTS
BA-201	10-18-16	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION (MASH TL-3)
BA-202	10-20-15	STEEL BEAM GUARDRAIL BOLTED END ANCHOR
BR-101	04-21-15	BRIDGE APPROACH SECTION (GENERAL DETAILS)
BR-102	04-21-15	BRIDGE APPROACH SECTION (TWO-LANE, ABUTTING PCC PAVEMENT)
DR-101	04-19-16	PIPE CULVERT (BEDDING AND BACKFILL)
DR-102	04-21-15	PIPE CULVERT (COVER AND CAMBER)
DR-104	04-19-16	DEPTH OF COVER TABLES FOR CONCRETE AND CORRUGATED PIPE
DR-121	10-20-15	CONNECTED PIPE JOINTS
DR-201	04-21-15	CONCRETE APRONS
DR-203	04-21-15	METAL PIPE APRONS AND BEVELED ENDS
DR-501	04-21-15	CORRUGATED METAL TYPE "A" DIAPHRAGM
DR-601	10-20-15	REINFORCED CONCRETE PIPE CULVERT
DR-632	04-21-15	CORRUGATED PIPE CULVERT LETDOWN STRUCTURE WITH DOUBLE ELBOW
EC-201	10-18-16	SILT FENCE
EC-204	04-19-16	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICES
EC-502	04-21-15	SEEDING IN RURAL AREAS
EW-301	10-20-15	GUARDRAIL GRADING
LS-625	04-19-16	STEEL BEAM GUARDRAIL TANGENT END TERMINAL (NCHRP 350 TL-3)
LS-630	10-18-16	STEEL BEAM GUARDRAIL INSTALLATION AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION (NCHRP 350 TL-3)
PM-110	04-16-13	LINE TYPES
PV-101	04-19-16	JOINTS
SI-173	04-19-16	OBJECT MARKERS
SI-211	10-18-16	OBJECT MARKER AND DELINEATOR PLACEMENT WITH GUARDRAIL
TC-252	04-19-16	ROUTES CLOSED TO TRAFFIC

ALL STRUCTURAL REINFORCING STEEL SHALL BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED. BAR CHAIRS SPACED AT NOT MORE THAN 3'-0" CENTERS IN EITHER DIRECTION SHALL BE USED TO SUPPORT ALL STRUCTURAL REINFORCING IN ACCORDANCE WITH THE SECTION 2404 OF THE STANDARD SPECIFICATIONS.

CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

ALL EXPOSED CORNERS 90 DEGREES OR SHARPER ARE TO BE FILLETED WITH A 3/4" DRESSED AND BEVELED STRIP

ALL REINFORCING BARS AND BARS NOTED AS DOWELS SUPPLIED FOR THIS STRUCTURE SHALL BE DEFORMED REINFORCEMENT UNLESS OTHERWISE NOTED OR SHOWN.

KEYWAY DIMENSIONS SHOWN ON THE PLANS ARE BASED ON NOMINAL DIMENSIONS UNLESS STATED OTHERWISE. IN ADDITION, THE BEVEL USED ON THE KEYWAY SHALL BE LIMITED TO A MAXIMUM OF 10 DEGREES FROM THE VERTICAL.

CONCRETE PAVING BLOCKS ARE NOT REQUIRED, HOWEVER, IF IT BECOMES NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE DECK OR BACKWALL FROM CONSTRUCTION EQUIPMENT, AN APPROPRIATE METHOD OF PROTECTION APPROVED BY THE ENGINEER SHALL BE PROVIDED BY THE BRIDGE CONTRACTOR. ANY DAMAGE TO THE DECK OR BACKWALL SHALL BE REPAIRED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE AUTHORIZED FOR THIS WORK.

THE CONTRACTOR'S WORK AND MATERIAL STORAGE AREA SHALL BE DEFINED BY THE CONTRACTOR AND NOTED TO THE ENGINEER. THE CONTRACTOR SHALL SHAPE, FERTILIZE, AND SEED THIS CONTRACTOR'S AREA IN ORDER TO RETURN IT TO ITS ORIGINAL CONDITION. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR "SEEDING AND FERTILIZING (RURAL)" AND "MULCHING" BID ITEMS. AREAS OUTSIDE THE CONTRACTOR'S AREA DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION, AS DETERMINED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE AUTHORIZED FOR THIS WORK.

THE EXISTING CONCRETE FOOTINGS AND RETAINING WALLS ARE TO REMAIN IN PLACE. THE CONCRETE BACKWALLS AND WINGS SHALL BE CAREFULLY REMOVED TO THE LINES INDICATED ON THE PLANS. THE REMOVAL LINE SHALL BE INITIATED WITH A MINIMUM 2 1/2" +/- DEEP SAW CUT TO FACILITATE A NEAT NON-SPALLED BREAK LINE. ANY EXPOSED REINFORCING SHALL BE CUT OFF FLUSH WITH THE REMOVAL LINE.

ALL REMOVALS SHALL BE CAREFULLY ACCOMPLISHED AND ANY CONCRETE DAMAGED BY THE CONTRACTOR THAT IS NOT TO BE REMOVED SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST

75'-0 x 30'-0 PRETENSIONED PRESTRESSED  
CONCRETE BEAM BRIDGE WITH 10'-0 BIKE PATH

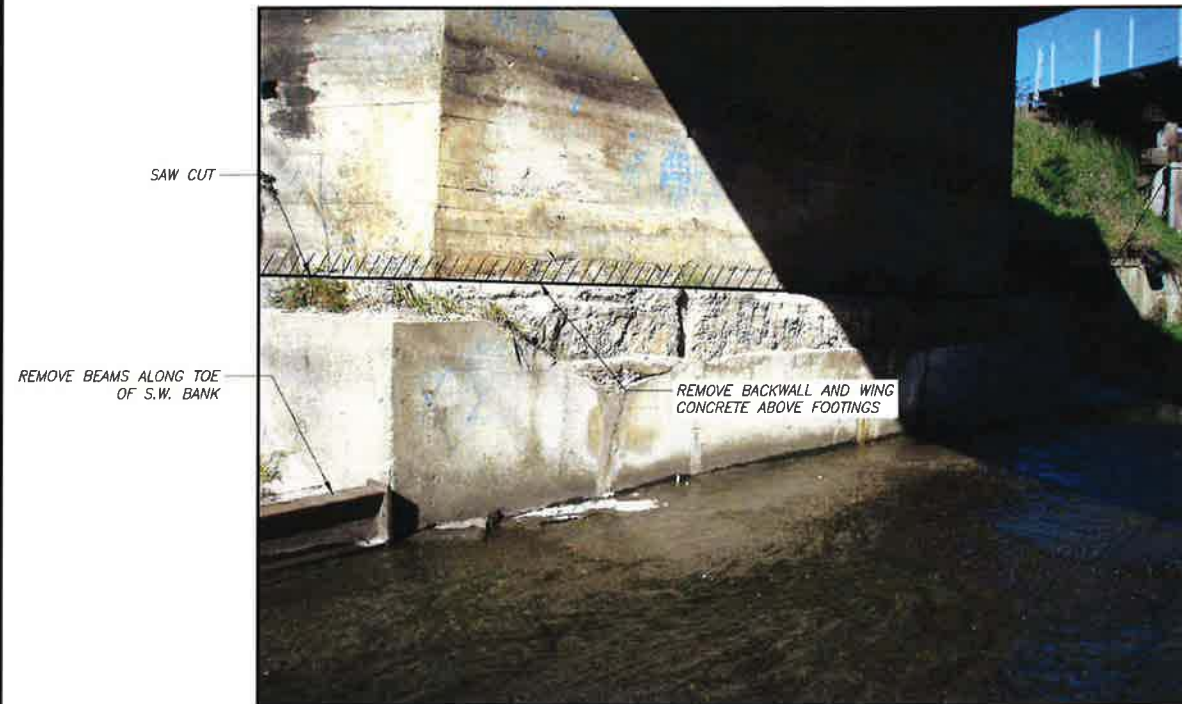
75'-0 SINGLE SPAN

## INTEGRAL ABUTMENTS

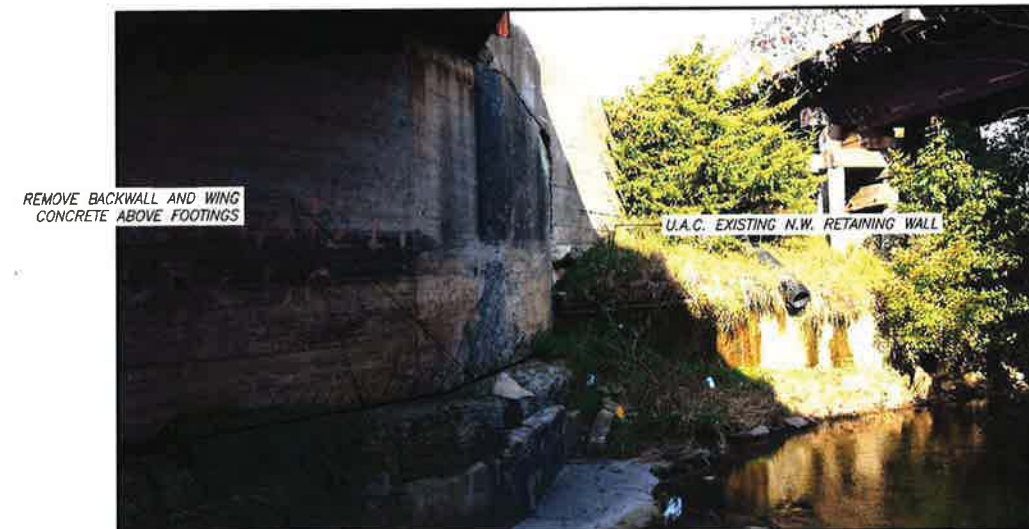
STATION 110+00.00  
WEBSTER COUNTY,

30' SKEW, RT. AHEAD  
IOWA





**WEST ABUTMENT**  
(LOOKING WEST)



**WEST ABUTMENT, NORTH END**  
(LOOKING WEST)



**EAST ABUTMENT**  
(LOOKING EAST)



**EAST ABUTMENT, SOUTH END**  
(LOOKING EAST)

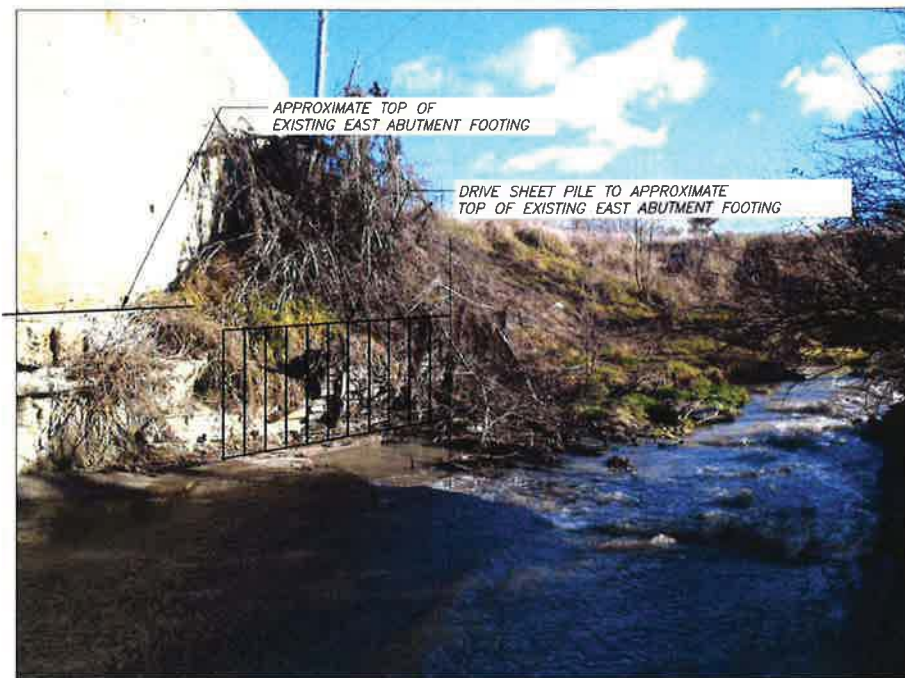
SEE "BRIDGE REMOVAL NOTES" ON SHEET 6.

75'-0 x 30'-0 PRETENSIONED PRESTRESSED  
CONCRETE BEAM BRIDGE WITH 10'-0 BIKE PATH  
75'-0 SINGLE SPAN  
INTEGRAL ABUTMENTS  
REMOVAL DETAILS

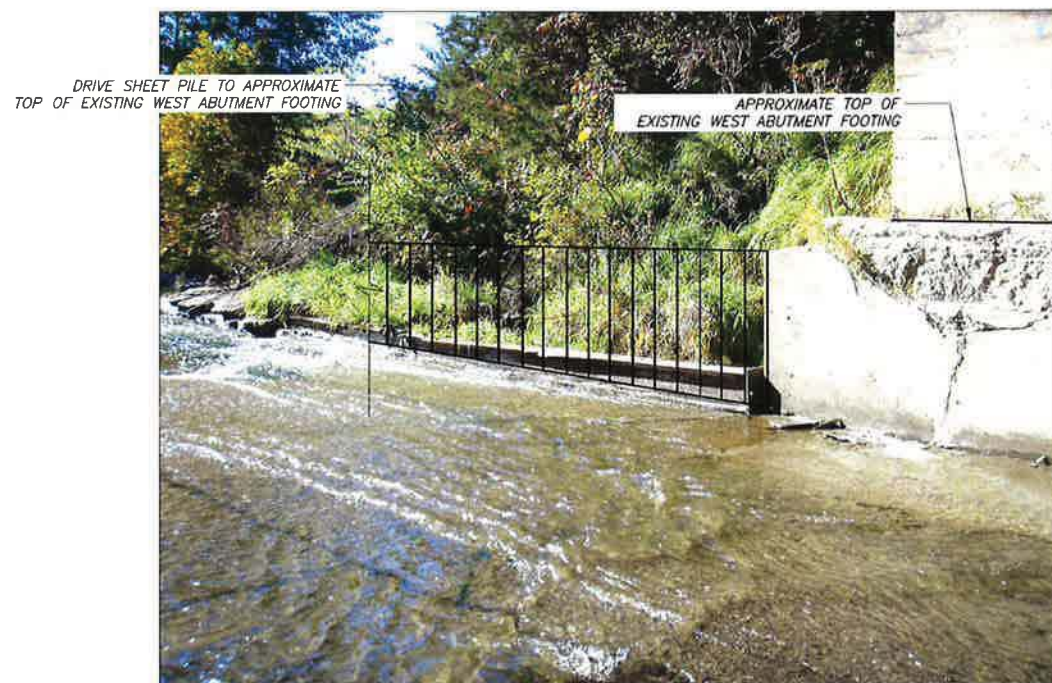
STATION 110+00.00  
WEBSTER COUNTY,

30' SKEW, RT. AHEAD  
IOWA

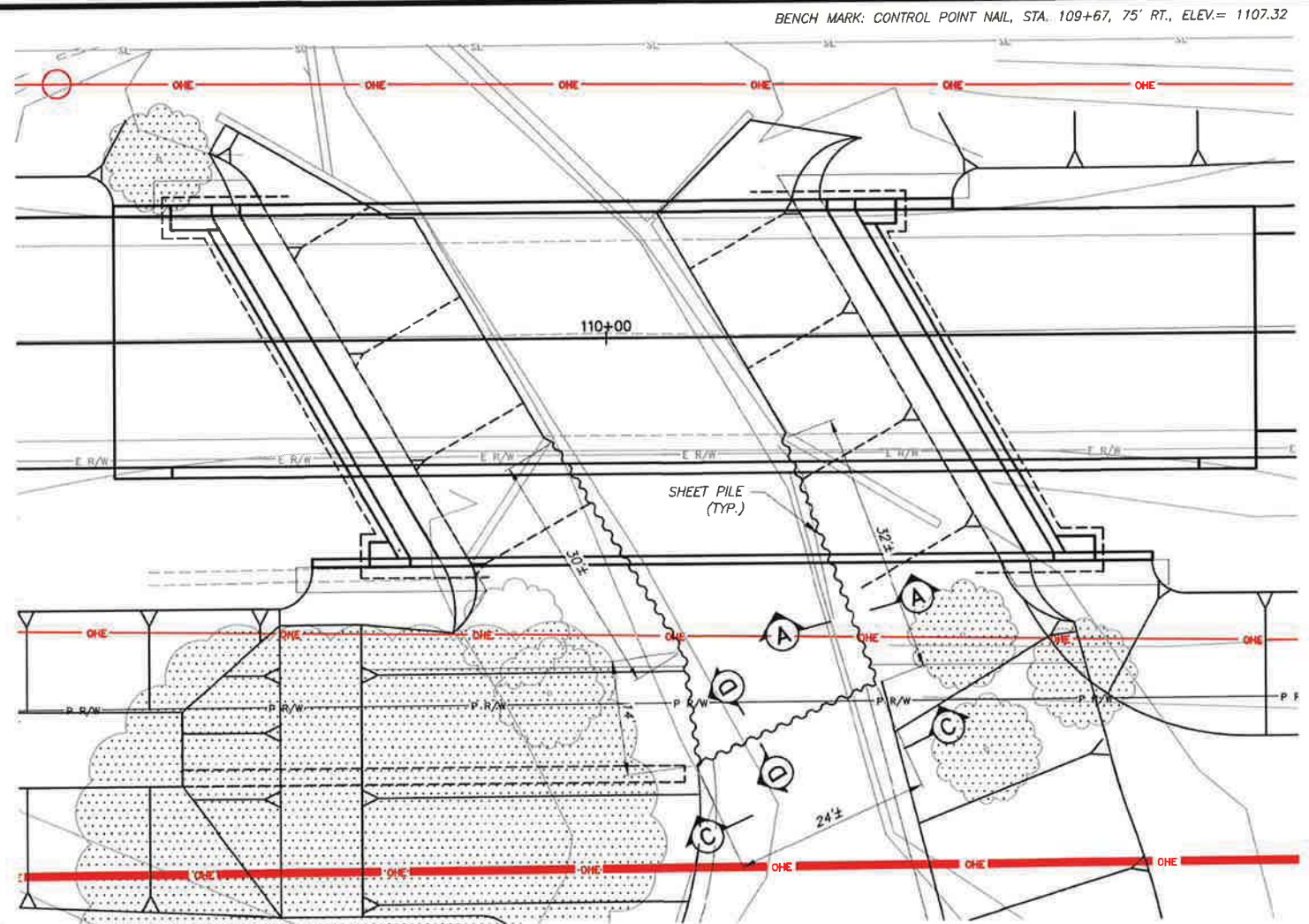




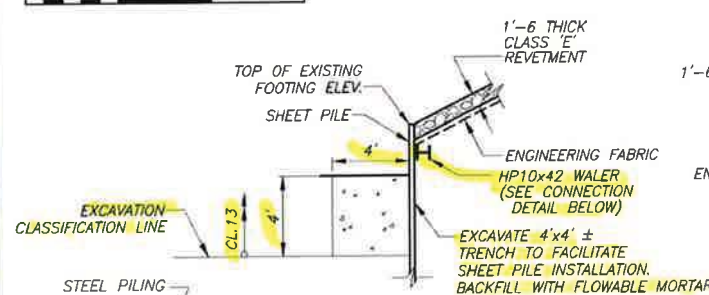
**EAST ABUTMENT, SOUTH END**  
(LOOKING EAST)



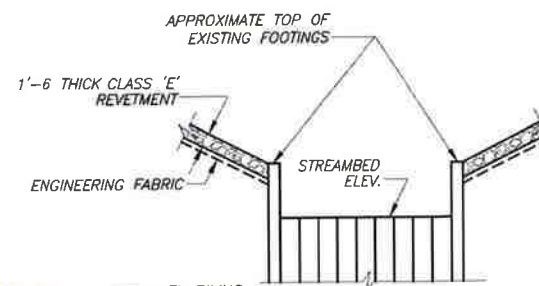
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(LOOKING WEST)



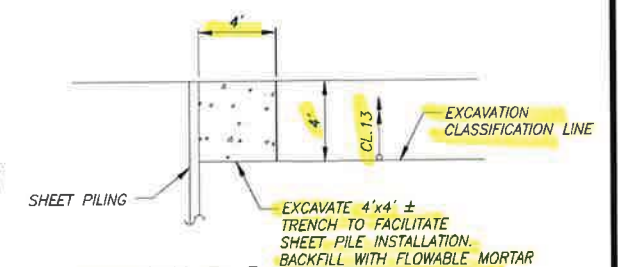
**SHEET PILE PLAN**



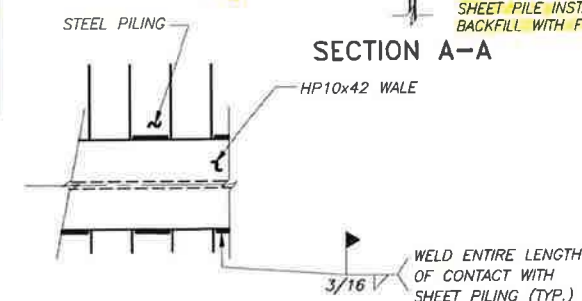
**SECTION A-A**



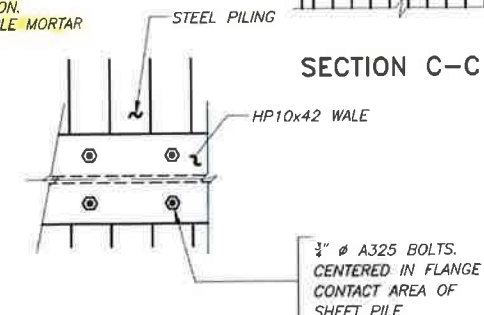
**SECTION C-C**



**SECTION D-D**



**WELDED CONNECTION DETAIL**



**BOLTED CONNECTION DETAIL**

**ALTERNATE CONNECTION DETAILS**  
(EITHER WELDED OR BOLTED ACCEPTABLE)

**75'-0 x 30'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE WITH 10'-0 BIKE PATH**  
75'-0 SINGLE SPAN INTEGRAL ABUTMENTS

**SHEET PILE LAYOUT**

STATION 110+00.00  
WEBSTER COUNTY,

30° SKEW, RT. AHEAD  
IOWA