BRIDGE REPLACEMENT - PPCB

LETTING DATE: NOVEMBER 17, 2026

PROJECT NO. BROSCHBP-C009(86)--GA-09

BREMER COUNTY

STANDARD ROAD PLANS
STANDARD ROAD PLANS ARE LISTED ON SHEET 10.

SECTION 404 PERMIT AND CONDITIONS	281-1 MODIFIED
CONSTRUCT THIS PROJECT ACCORDING TO THE REQUIREMENTS OF U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT 14. NATIONWIDE PERMIT 14 CONDITIONS CAN BE FOUND AT http://www.mvr.usace.army.mil/Missions/Regulatory/Permits/. THE U.S. ARMY CORPS OF ENGINEERS RESERVES THE RIGHT TO VISIT THE SITE WITHOUT PRIOR NOTICE.	

IOWA | DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

FARM TO MARKET SYSTEM

BREMER COUNTY

PROJECT NO. BROSCHBP-C009(86)--GA-09

BRIDGE REPLACEMENT - PPCB

ON V19, OVER QUARTER SEC RUN, S20 T91 R13

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.

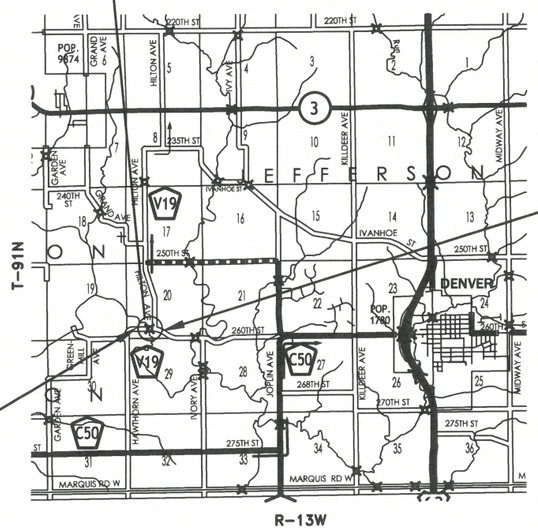
MILEAGE SUMMARY

STA. 209+50.00 TO STA. 216+00.00 = 650.00 L.F. = 0.1231 MILES

2022, TRAFFIC COUNT = 275 V.P.D.

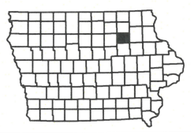
UTILITY CONTACTS				
COMPANY	UTILITY	CONTACT	PHONE #	EMAIL
MIDAMERICAN ENERGY	ELECTRIC	JORDYN WEBER	319-291-4728	JWEBER@MIDAMERICAN.COM
CENTURYLINK	COMMUNICATIONS	SADIE HULL	918-547-0147	SADIE.HULL@LUMEN.COM
WAVERLY UTILITIES	ELECTRIC/TELECOM	MATT KITTELSON	319-559-2000	-
IOWA REGIONAL UTILITIES ASSOCIATION	WATER	KIMBERLIN ANNIS	641-792-7011	LOCATES@IRUA.NET

B.O.P. STA. 209+50.00
E.O.P. STA. 216+00.00
STATION 212+60.00
PROPOSED 213'-10 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE
15° SKEW, RT. AHEAD
FHWA NO. 078920



B.O.P. STA. 209+50.00

E.O.P. STA. 216+00.00



PROJECT LOCATION

1 MI. 0 1 MI. 2 MI.

N

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, FOR REVIEW AND APPROVAL.

ADDRESS : 6775 VISTA DRIVE
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. BRIDGES AND STRUCTURES BUREAU.

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

TOTAL SHEETS 17

PROJECT NO. BROSCHBP-C009(86)--GA-09
FHWA NO. 078920
COUNTY BR. NO. 10-06

INDEX OF SHEETS

1. TITLE SHEET
2.-3. QUANTITY SUMMARY
4. SITUATION PLAN
5. GENERAL NOTES
6. POLLUTION PREVENTION PLAN
7.-8. SOUNDING DATA
9. SUPERSTRUCTURE DETAILS
10. TYPICAL SECTIONS & TABULATIONS
11.-12. TABULATIONS
13. PLAN & PROFILE
14.-17. CROSS SECTIONS

IOWA DEPARTMENT OF TRANSPORTATION STANDARDS REQUIRED	
STANDARD	LATEST REVISION
H30-01-06	04-13
H30-01A-06	04-13
H30-02-06	04-13
H30-03-06	06-12
H30-04-06	06-12
H30-12-06	04-13
H30-14-06	01-12
H30-15-06	07-15
H30-16-06	05-11
H30-17-06	-
H30-36-06	07-10
H30-37-06	07-10
H30-38-06	07-10
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H30-44-06	09-12
H30-64-06	07-10
H30-66-06	04-13
H30-87-06	09-14

THESE SHEETS MAY BE OBTAINED AT THE ELECTRONIC REFERENCE LIBRARY WEBSITE. http://erl.iowadot.gov

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
7	DAVID LOGEMANN	SOILS
BRIDGE STANDARDS	NORMAN L. McDONALD	STRUCTURAL DESIGN

LICENSED PROFESSIONAL ENGINEER
JULI A. REDMOND
17384
IOWA

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.

Juli Redmond DATE: 7/8/26
JULI A. REDMOND, P.E.

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026.

PAGES OR SHEETS COVERED BY THIS SEAL:
1-6 AND 9-17 OF 17

APPROVED 7/14/26
BREMER COUNTY ENGINEER DATE

Bob Burkhart
Corey Couch
Darwin L. Wiebenga
BOARD OF SUPERVISORS DATE

TOTAL ESTIMATED QUANTITIES: 213'–10 x 30'–6 P.P.C.B. BRIDGE

REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	2 PIERS	SUPER	TOTAL
1	2101–0850001	CLEARING AND GRUBBING	ACRE	–	–	–	1.2
2	2102–2625000	EMBANKMENT–IN–PLACE	CY	–	–	–	294
3	2102–2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	–	–	–	1,300
4	2104–2710020	EXCAVATION, CLASS 10, CHANNEL	CY	–	–	–	3,200
5	2105–8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	–	–	–	1,650
6	2312–8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	–	–	–	350
7	2401–6745625	REMOVAL OF EXISTING BRIDGE	LS	–	–	–	1
8	2402–2720000	EXCAVATION, CLASS 20	CY	181	34	–	215
9	2402–2721000	EXCAVATION, CLASS 21	CY	–	225	–	225
10	2403–0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	36.1	149.5	258.8	444.4
11	2404–7775000	REINFORCING STEEL	LB	8,145	18,067	72,902	99,114
12	2407–0551367	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, C67	EACH	–	–	10	10
13	2407–0551375	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, C75	EACH	–	–	5	5
14	2408–7800000	STRUCTURAL STEEL	LB	–	–	4,287	4,287
15	2414–6424124	CONCRETE OPEN RAILING, TL–4	LF	–	–	481.7	481.7
16	2417–1040018	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 18 IN. DIA.	LF	–	–	–	70
17	2417–1040024	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 24 IN. DIA.	LF	–	–	–	100
18	2501–0201057	PILES, STEEL, HP 10 X 57 ; 9 @ 70'; 9 @ 65';34 @ 45'	LF	1,215	1,530	–	2,745
19	2501–6335010	PREBORED HOLES ; 18 @ 10'	LF	180	–	–	180
20	2505–4008300	STEEL BEAM GUARDRAIL	LF	–	–	–	50
21	2505–4008420	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA–221	EACH	–	–	–	4
22	2505–4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	–	–	–	4
23	2505–4021722	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA–225	EACH	–	–	–	4

REF. NO. ESTIMATE REFERENCE INFORMATION

1. SEE PLAN AND PROFILE, SHEET 13, FOR LIMITS.
SELECTIVE CLEARING WILL BE REQUIRED ON THIS PROJECT. ALL DESIRABLE TREES OUTSIDE THE CONSTRUCTION AREA WILL BE SAVED. TREES AND SHRUBS WITHIN THE CONSTRUCTION LIMITS THAT DO NOT HINDER CONSTRUCTION SHALL BE SAVED UNLESS DIRECTED BY THE ENGINEER TO BE REMOVED.

2. SEE TABULATIONS CBA-100 AND CBA-101 ON SHEET 10 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
TYPE "A" COMPACTION WILL BE REQUIRED. QUANTITY DOES NOT COMPENSATE FOR SHRINKAGE.
AFTER ALL AVAILABLE ON SITE MATERIAL HAS BEEN DEPLETED; THE CONTRACTOR SHALL FURNISH ALL REMAINING MATERIAL REQUIRED.
THE CONTRACTOR SHALL FURNISH HIS OWN BORROW MATERIAL FOR "EMBANKMENT-IN-PLACE". THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH PROVISIONS OF IOWA LAW AS IT APPLIES TO REMOVAL AND REPLACEMENT OF TOPSOIL ON BORROW AREAS.

3. SEE TABULATIONS CBA-100 AND CBA-101 ON SHEET 10 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
TYPE "A" COMPACTION WILL BE REQUIRED.
EXCEPT WHERE NOTED OTHERWISE ON THE PLANS, ALL ENTRANCE AND ROADWAY CULVERTS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS PART OF "EXCAVATION, CLASS 10, ROADWAY AND BORROW".

4. SEE TABULATIONS CBA-100 AND CBA-101 ON SHEET 10 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
INCLUDES COSTS TO CLEAR THE CHANNEL TO THE SHAPE, DEPTH, AND EXTENT SHOWN IN THE "LONGITUDINAL SECTION ALONG CENTERLINE OF ROADWAY" AND THE LIMITS SHOWN ON THE SITUATION PLAN, SHEET 4.
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.

5. IN ORDER TO MEET NPDES PERMIT REQUIREMENTS TOPSOIL STRIP, SALVAGE AND SPREAD SHALL BE REQUIRED ON THIS PROJECT. QUANTITY PERTAINS TO WORK WITHIN THE PROJECT LIMITS. SIX INCHES OF TOPSOIL SHALL BE STRIPPED FROM WITHIN THE PROJECT LIMITS AND SPREAD UNIFORMLY (6" TARGET WITH 4" MIN. DEPTH) OVER ALL AREAS THAT ARE NOT COVERED BY PAVEMENT OR GRANULAR MATERIAL. AREAS SHALL BE UNDERCUT PRIOR TO PLACING TOPSOIL. CROSS-SECTIONS SHOW FINISHED GRADELINE.

6. SURFACING TO BE FURNISHED AND PLACED BY THE CONTRACTOR IN TWO PASSES (1550 AND 650 TONS /MILE).
SEE TYPICAL SECTION CBA-503 ON SHEET 10.
INCLUDES 140 TONS FOR ENTRANCES. SEE TABULATION 102-3 ON SHEET 10.

7. THE EXISTING BRIDGE AT STATION 212+80 IS A 180' x 20' CONTINUOUS STEEL I-BEAM BRIDGE WITH CONCRETE STUB ABUTMENTS, CONCRETE PEDESTAL PIERS AND A CONCRETE DECK BUILT IN 1939.
AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS WAS COMPLETED AND NO SUSPECT MATERIALS WERE FOUND. IF ADDITIONAL 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 STRUCTURE. THE STEEL I-BEAMS SHALL REMAIN THE PROPERTY OF THE COUNTY AND THE CONTRACTOR SHALL CAREFULLY REMOVE AND NEATLY STACK THESE ITEMS WITHIN THE RIGHT-OF-WAY. SEE TABULATION 110-13 ON SHEET 12. ALL REMAINING SALVAGEABLE MATERIAL AND UNSALVAGEABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. THE EXISTING STRUCTURE SHALL BE REMOVED TO AN ELEVATION AT LEAST 1 FOOT BELOW FINISHED GROUNDLINE AND TO THE EXTENT THAT IT WILL NOT INTERFERE WITH THE NEW CONSTRUCTION.
BROKEN CONCRETE FROM THE EXISTING BRIDGE WITH SIMILAR GRADATION TO CLASS 'E' REVETMENT MAY BE PLACED ON THE 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 5 FOR PAINT SCRAPE SAMPLE RESULTS.

8. 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.

9. QUANTITY IS BASED ON THE ASSUMPTION THAT CHANNEL EXCAVATION AND NECESSARY BERM CONSTRUCTION HAVE BEEN COMPLETED.

10. EAST ABUTMENT CONCRETE QUANTITY HAS BEEN INCREASED BY 0.7 C.Y. AND EAST PIER CONCRETE QUANTITY HAS BEEN INCREASED BY 0.5 C.Y. BASED ON H24-17-06.
INCLUDES COST OF TAR PAPER AND PREFORMED JOINT MATERIAL.
THE 'CONCRETE SEALER LIMITS FOR OPEN RAIL' DETAIL SHOWN IN THE BRIDGE STANDARD SHALL BE OMITTED.
THE SUBDRAIN SHOWN ON THE WING ARMORING DETAILS IN THE H STANDARDS SHALL BE OMITTED.
THE MACADAM STONE SHOWN ON THE WING ARMORING DETAILS IN THE H STANDARDS SHALL EXTEND ACROSS THE BERM AS SHOWN IN DETAIL 'B' ON THE SITUATION PLAN, SHEET 4. THE COST OF MACADAM STONE ON THE BERMS AND FOR WING ARMORING SHALL BE INCIDENTAL TO STRUCTURAL CONCRETE.
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.

11. ALL REINFORCING SHALL BE GRADE 60.
WEST PIER CAP STEP REINFORCING SHALL BE PER H30-17-06 FOR GRADE (G): 1.9%<G<=5.0%. EAST PIER CAP STEP REINFORCING SHALL BE PER H30-17-06 FOR GRADE (G): 1.9%<G<=5.0%. 290 LBS OF STEP REINFORCING HAS BEEN INCLUDED WITH THE PIER QUANTITY.
THE REINFORCING HAS BEEN INCREASED BY 4,171 LBS FOR THE INCLUSION OF HAUNCH REINFORCING. SEE SHEET 9 FOR DETAILS.

12.-13. INCLUDES COST OF BEARING MATERIAL, COIL TIES AND COIL RODS.
ON 'PIER BEARING DETAILS,' SHEET H30-44-06, DIMENSION D=1/8" FOR ALL SPANS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING STABILITY OF PRESTRESSED CONCRETE BEAMS DURING ERECTION AND CONSTRUCTION UP THROUGH THE CONCRETE BRIDGE DECK REACHING ITS FULL 28-DAY STRENGTH. THE CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY ANCHOR BRACING AT BEAM ENDS AND TEMPORARY INTERMEDIATE BRACING AS NEEDED TO ENSURE PRESTRESSED BEAM STABILITY. PARTIALLY OR FULLY INSTALLED PERMANENT BRACING AS SHOWN IN THESE DESIGN PLANS SHALL NOT BE ASSUMED SUFFICIENT TO BRACE PRESTRESSED BEAMS DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SHALL NOT BE WELDED TO PRESTRESSED BEAM STIRRUPS.
SEE MATERIALS IM 570 APPENDIX I FOR ALLOWABLE BEARING SUBSTITUTES AT INTEGRAL ABUTMENTS.

14. INCLUDES WEIGHT OF STEEL DIAPHRAGMS, SEE STANDARD SHEET H30-38-06.
INCLUDES WEIGHT OF PINTLE PLATE ASSEMBLIES, SEE STANDARD SHEET H30-44-06.

15. 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.

16.-17. SEE TABULATION 102-3 ON SHEET 10, TYPICAL SECTION CBA-700 ON SHEET 10 AND STANDARD ROAD PLANS DR-101 AND DR-104.
ALL PIPE SHALL BE STANDARD CORRUGATIONS, NO HELICALLY CORRUGATED PIPE WILL BE ALLOWED. ALL CONNECTING BANDS SHALL BE 24" WIDE.

18. SEE PILE NOTES ON SHEET 5.

19. THE BRIDGE CONTRACTOR SHALL PREBORE HOLES FOR ABUTMENT PILES. HOLES SHALL BE BORED TO THE ELEVATIONS SHOWN ON THE "LONGITUDINAL SECTION ALONG CENTERLINE ROADWAY" ON THE SITUATION PLAN. PILES SHALL BE DRIVEN THROUGH THE HOLES TO AT LEAST THE SPECIFIED DESIGN BEARING.

20.-23. SEE TABULATIONS 108-8A AND 107-23 ON SHEET 12.

213'–10 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS — **68'–3 END SPANS**

TEE PIERS — **77'–4 INTERIOR SPAN**

QUANTITY SUMMARY

STATION 212+60.00 — **15° SKEW, RT. AHEAD**

BREMER COUNTY, — **IOWA**

TOTAL ESTIMATED QUANTITIES: 213'–10 x 30'–6 P.P.C.B. BRIDGE

REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	2 PIERS	SUPER	TOTAL
24	2507–3250005	ENGINEERING FABRIC	SY	–	–	–	1,750
25	2507–6800061	REVETMENT, CLASS E	TON	–	–	–	1,200
26	2507–6875002	REVETMENT, REMOVE AND REPLACE	CY	–	–	–	25
27	2526–8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION	LS	–	–	–	1
28	2526–8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY	LS	–	–	–	1
29	2526–8285030	CONSTRUCTION SURVEY, RIGHT OF WAY	LS	–	–	–	1
30	2526–8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	–	–	–	1
31	2528–2518000	SAFETY CLOSURE	EACH	–	–	–	2
32	2528–8445110	TRAFFIC CONTROL	LS	–	–	–	1
33	2533–4980005	MOBILIZATION	LS	–	–	–	1
34	2601–2634100	MULCHING	ACRE	–	–	–	4.0
35	2601–2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	–	–	–	2.0
36	2601–2642100	STABILIZING CROP – SEEDING AND FERTILIZING	ACRE	–	–	–	2.0
37	2602–0000020	SILT FENCE	LF	–	–	–	1,170
38	2602–0000030	SILT FENCE FOR DITCH CHECKS	LF	–	–	–	150
39	2602–0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	–	–	–	1,320
40	2602–0000160	ROCK CHECK DAM	LF	–	–	–	75
41	2602–0000170	MAINTENANCE OF ROCK CHECK DAM	EACH	–	–	–	3
42	2602–0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	–	–	–	490
43	2602–0010010	MOBILIZATIONS, EROSION CONTROL	EACH	–	–	–	1
44	2602–0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	–	–	–	1

REF. NO. ESTIMATE REFERENCE INFORMATION

24. SEE SITUATION PLAN, SHEET 4, AND PLAN AND PROFILE, SHEET 13, FOR LIMITS.
ENGINEERING FABRIC SHALL BE LAPPED FOR FIELD SPLICING, THE LAPS SHALL BE A MINIMUM OF TWO FEET IN LENGTH, SHINGLE FASHION WITH UP SLOPE LAP PIECE ON TOP. THE CONTRACTOR SHALL PROVIDE A MEANS TO SECURE THE LAP DURING THE PLACEMENT OF THE REVETMENT.

25. REVETMENT IS TO BE PLACED AT A THICKNESS OF 1'-6. SEE SITUATION PLAN, SHEET 4, AND PLAN AND PROFILE, SHEET 13, FOR LIMITS.

26. THE UNIT PRICE BID FOR "REVETMENT, REMOVE AND REPLACE" SHALL INCLUDE THE COST OF LABOR, EQUIPMENT AND MATERIALS REQUIRED TO CAREFULLY REMOVE LANDSCAPING STONES/REVETMENT FROM THE EXISTING FIELD ENTRANCE AT STATION 215+12, STOCKPILE, AND CAREFULLY PLACE THE REVETMENT AROUND THE INLET AND OUTLET OF THE NEW FIELD ENTRANCE PIPE IN A SIMILAR FASHION TO THE EXISTING CONDITION. HMA MATERIAL SHALL NOT BE PLACED WITHIN THE FLOODPLAIN. MATERIAL IS TO BE PLACED AT A THICKNESS OF 1'-6 OR SIMILAR TO EXISTING. SEE PLAN AND PROFILE, SHEET 13, FOR LIMITS.
EXISTING LANDSCAPE BOULDERS FROM APPROXIMATE STA 215+50, RT. TO E.O.P., RT. SHALL NOT BE DISTURBED UNLESS IN THE WAY OF CONSTRUCTION. QUANTITY INCLUDES 10 C.Y. FOR CAREFULLY REMOVING, SALVAGING AND REPLACING BOULDERS AS REQUIRED. SEE PLAN AND PROFILE, SHEET 13, FOR LOCATION.
THE METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE BY CUBIC YARD. PLAN QUANTITY WILL BE PAY QUANTITY.

27.-30. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING AN INDEPENDENT CHECK OF ALL CONSTRUCTION STAKES PLACED FOR THE PROJECT. THIS INDEPENDENT CHECK SHALL BE SUFFICIENT TO UNDERSTAND THE PLACEMENT AND INTENT OF THE STAKES.
SEE TABULATION CBA-300 ON SHEET 11, FOR FIELD TIES TO THE SITE SURVEY.

31. SEE TABULATION 108-13A ON SHEET 10.

32. SEE TRAFFIC CONTROL PLAN ON SHEET 10.

34.-36. THE CONTRACTOR IS TO RESHAPE, FERTILIZE, SEED AND MULCH ANY AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION. THIS SHALL BE INCLUDED IN THE PRICES BID FOR "MULCHING" AND "SEEDING AND FERTILIZING (RURAL)." SEE POLLUTION PREVENTION PLAN, SHEET 6 FOR STABILIZING CROP REQUIREMENT.

37.-44. SEE POLLUTION PREVENTION PLAN, SHEET 6, AND TABULATIONS 100-17, 100-18, 100-19 AND 100-32 ON SHEET 11.

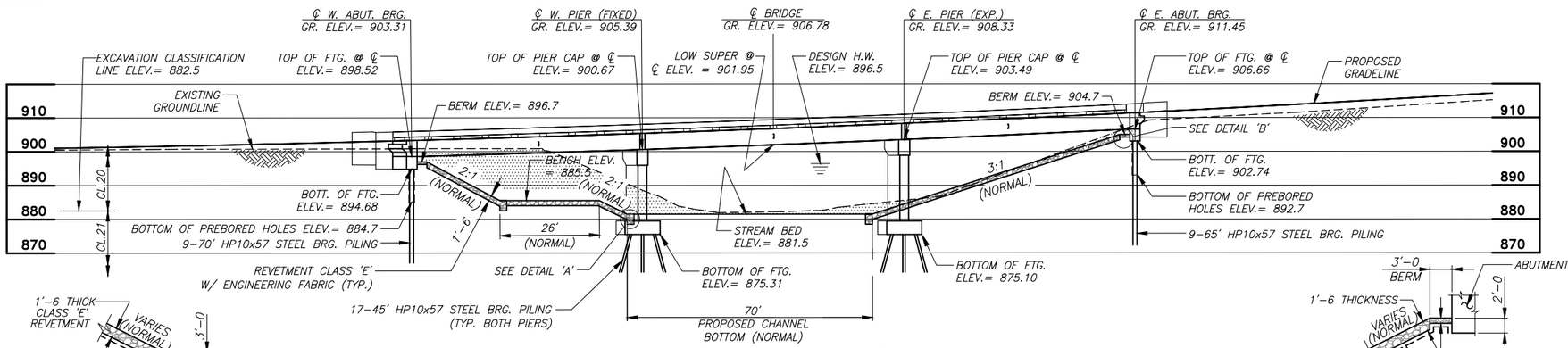
213'–10 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS — TEE PIERS
68'–3 END SPANS — 77'–4 INTERIOR SPAN

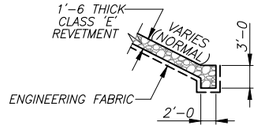
QUANTITY SUMMARY

STATION 212+60.00 — 15° SKEW, RT. AHEAD
BREMER COUNTY, — IOWA

BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81



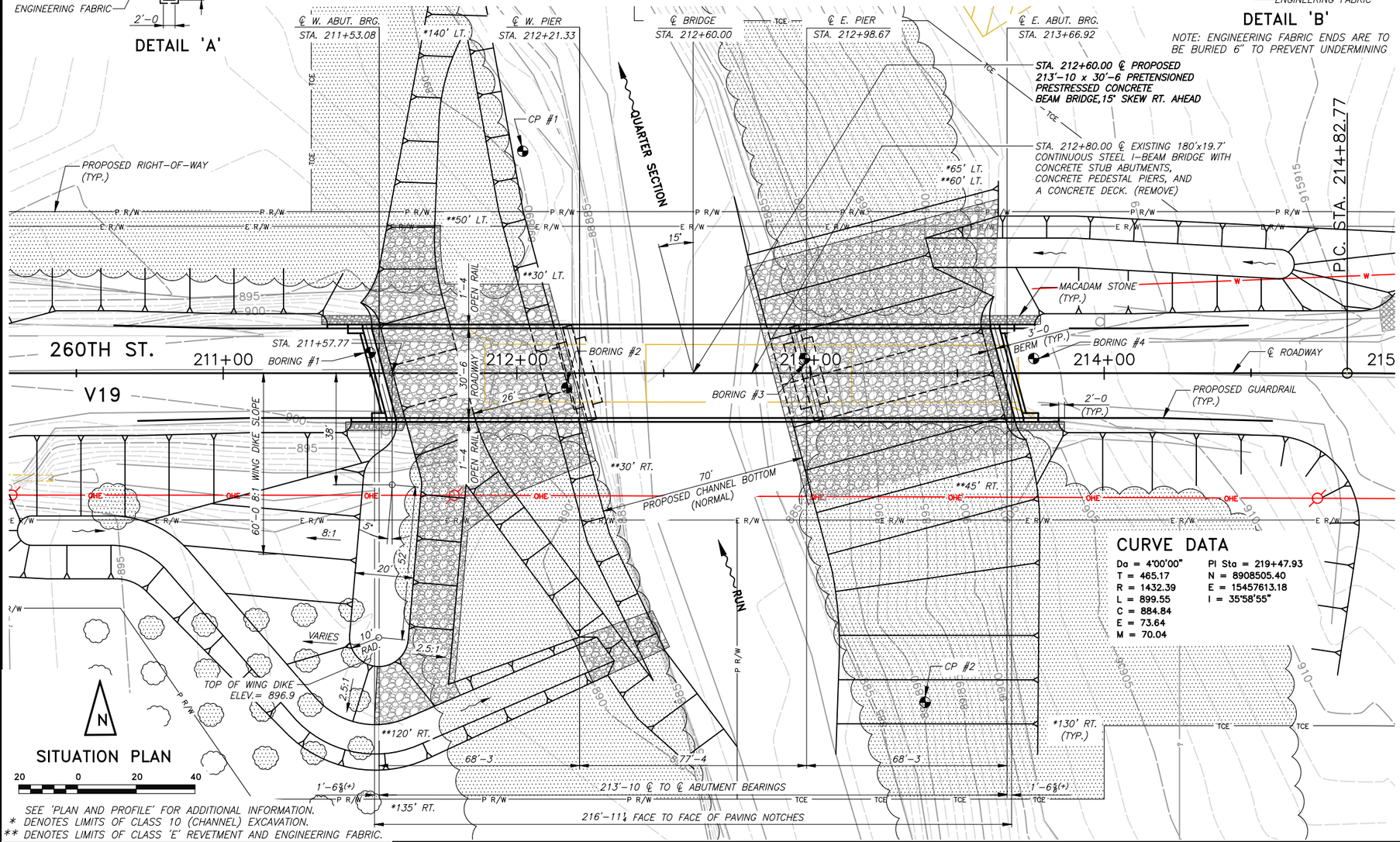
LONGITUDINAL SECTION ALONG ℄ ROADWAY



DETAIL 'A'

DETAIL 'B'

NOTE: ENGINEERING FABRIC ENDS ARE TO BE BURIED 6" TO PREVENT UNDERMINING



SITUATION PLAN

20 0 20 40

SEE 'PLAN AND PROFILE' FOR ADDITIONAL INFORMATION.
* DENOTES LIMITS OF CLASS 10 (CHANNEL) EXCAVATION.
** DENOTES LIMITS OF CLASS 'E' REVETMENT AND ENGINEERING FABRIC.

V.P.I. STA. 213+00.00
ELEV.= 903.74
L.V.C.= 600'
M.O.= 4.6500'
K= 96.77
S.S.D.= 425'
50 MPH DESIGN SPEED

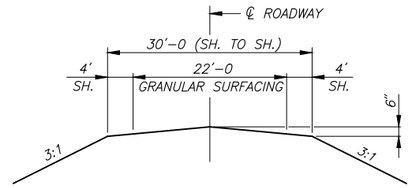
V.P.C STA. 210+00.00 ELEV.= 900.38

E.O.P./V.P.T STA. 216+00.00 ELEV.= 925.70

+1.12%

+7.32%

PROPOSED GRADE



TYPICAL APPROACH SECTION

LOCATION

BREMER COUNTY
T–91N, R–13W
SECTION 20
JACKSON TOWNSHIP
OVER QUARTER SECTION RUN

HYDRAULIC DATA

DRAINAGE AREA = 85.3 SQ. MI.
DESIGN DISCHARGE = 11,200 C.F.S.
DESIGN HIGH WATER ELEV. = 896.5
MANNING SLOPE = 0.00082 FT./FT.
BRIDGE WATERWAY AREA = 1,840 SQ. FT.
DESIGN VELOCITY = 6.1 F.P.S.
Q25 = 9,270 C.F.S. STAGE ELEV. = 895.7
Q50 = 11,200 C.F.S. STAGE ELEV. = 896.5 (DESIGN)
Q100 = 13,100 C.F.S. STAGE ELEV. = 897.3
Q200 = 16,700 C.F.S. STAGE ELEV. = 898.7
Q500 = 18,100 C.F.S. STAGE ELEV. = 899.2
EXT. H.W. ELEV. = UNKNOWN
ANTICIPATED Q100 SCOUR ELEVATION = 871.2
ANTICIPATED Q200 SCOUR ELEVATION = 869.9

CURVE DATA

Da = 4°00'00"	PI Sta = 219+47.93
T = 465.17	N = 8908505.40
R = 1432.39	E = 15457613.18
L = 899.55	I = 35°58'55"
C = 884.84	
E = 73.64	
M = 70.04	

213'–10 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS
68'–3 END SPANS

TEE PIERS
77'–4 INTERIOR SPAN

SITUATION PLAN

STATION 212+60.00
BREMER COUNTY,

15° SKEW, RT. AHEAD
IOWA

SPECIFICATIONS

DESIGN: AASHTO LRFD 4TH EDITION, SERIES OF 2007.

CONSTRUCTION: THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2023, PLUS GENERAL SUPPLEMENTAL SPECIFICATIONS; AND APPLICABLE SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS, SHALL APPLY TO THE CONSTRUCTION ON THIS PROJECT.

DESIGN STRESSES

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, SERIES 2007.

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).

CONCRETE IN ACCORDANCE WITH LRFD AASHTO SECTION 5, F'C=3,500 PSI EXCEPT PRESTRESSED BEAM CONCRETE AS NOTED.

PRESTRESSING STEEL SEE SHEETS H30-36-06

PRESTRESSED CONCRETE SEE SHEETS H30-36-06

GENERAL NOTES

THIS DESIGN IS FOR A 213'-10 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE ON COUNTY ROAD V19 OVER QUARTER SECTION RUN IN BREMER COUNTY, IOWA.

THIS BRIDGE IS DESIGNED FOR HL-93 LOADING PLUS 20 LBS. PER SQ. FT. OF ROADWAY FOR FUTURE WEARING SURFACE.

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 PLAN EW-401 IS LISTED IN TABULATION 105-4; HOWEVER, IT IS INCLUDED FOR INFORMATION PURPOSES ONLY SINCE IT IS AN OPTION. NO QUANTITIES ASSOCIATED WITH CONSTRUCTING EW-401 ARE INCLUDED IN ANY BID ITEMS.

STANDARD ROAD PLANS ARE AVAILABLE FROM THE IOWA DEPARTMENT OF TRANSPORTATION WEBSITE: http://erl.iowadot.gov.

UTILITY NOTES

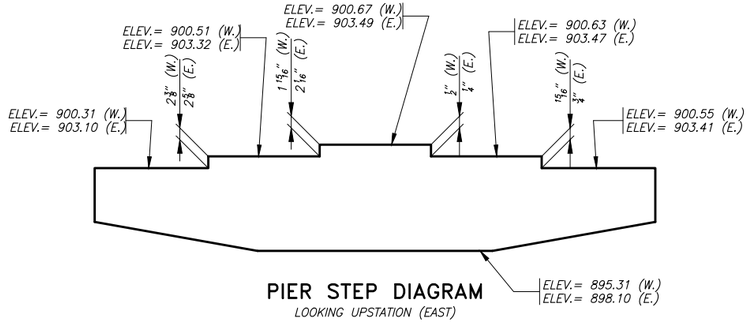
SEE SECTION 1107.15 OF THE STANDARD SPECIFICATION REGARDING UTILITY COORDINATION.

WASTE AND DISPOSAL NOTES

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.

BRIDGE COORDINATES

LOCATION	NORTH EDGE OF DECK	CENTERLINE ROADWAY	SOUTH EDGE OF DECK
WEST ABUTMENT	N = 8908528.31 E = 15456814.05	N = 8908511.69 E = 15456818.36	N = 8908495.08 E = 15456822.68
WEST PIER	N = 8908527.77 E = 15456882.30	N = 8908511.15 E = 15456886.61	N = 8908494.54 E = 15456890.93
EAST PIER	N = 8908527.16 E = 15456959.63	N = 8908510.54 E = 15456963.94	N = 8908493.93 E = 15456968.26
EAST ABUTMENT	N = 8908526.62 E = 15457027.88	N = 8908510.00 E = 15457032.19	N = 8908493.39 E = 15457036.51



PIER STEP DIAGRAM

LOOKING UPSTATION (EAST)

HAZARDOUS MATERIALS NOTES

AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS WAS COMPLETED BY:

SCOTT BROWN OF IOWA ENVIRONMENTAL SERVICES
IA LICENSE NUMBER: 19-2919I
DATE INSPECTED: 06/22/2020
PHONE: 515-279-8042

A SCRAPE SAMPLE OF THE EXISTING PAINT WAS TAKEN FROM A BEAM AND RAIL 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 THE BEAM SAMPLE WAS 296,000 PART PER MILLION (PPM). ANALYSIS OF TOTAL CHROMIUM ON THIS SAMPLE WAS 26.8 PPM. ANALYSIS OF TOTAL LEAD ON THE RAIL SAMPLE WAS 273,000 PPM. ANALYSIS OF TOTAL CHROMIUM ON THIS SAMPLE WAS 10.4 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:

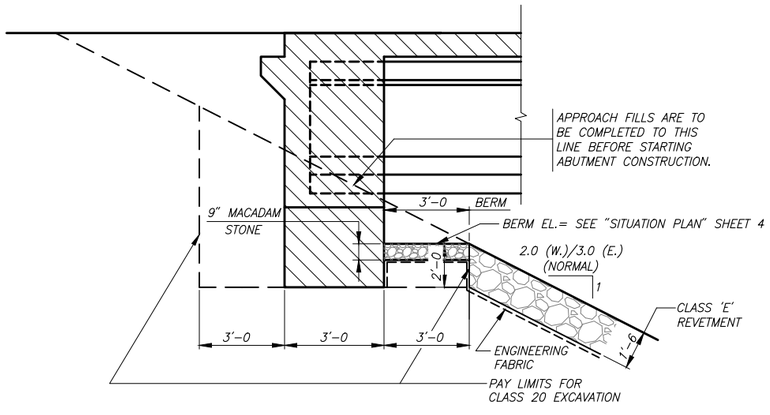
1. A NOTICE THAT THE SCRAP STEEL IS COATED WITH PAINT THAT HAS REGULATED MATERIALS AT LEVELS THAT COULD BE HAZARDOUS TO EMPLOYEES OR THE ENVIRONMENT.
2. A COPY OF THE SCRAPE SAMPLE PROVIDED IN THE CONTRACT DOCUMENTS.
3. A SIGNATURE BLOCK FOR THE RECEIVING FACILITY TO CONFIRM THEIR RECEIPT OF THIS INFORMATION.

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.

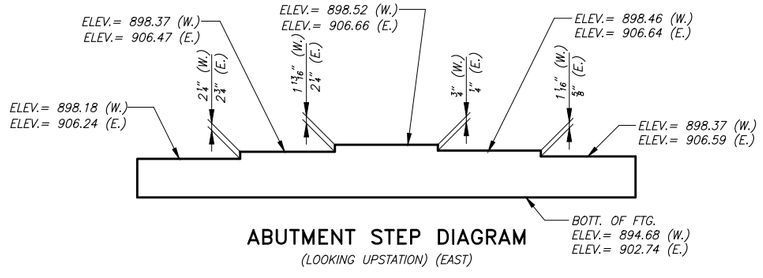
ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THE ABOVE REMOVAL AND DISPOSAL REQUIREMENTS WILL BE INCIDENTAL TO "REMOVAL OF EXISTING BRIDGE."

WING	ELEV. A	ELEV. B	ELEV. C
NW	902.94	902.73	902.55
SW	903.16	902.94	902.75
NE	910.87	911.27	911.62
SE	911.27	911.67	912.02

SEE SHEET H30-14-06 FOR LOCATION OF ELEV. A, B & C.
ELEVATIONS SHOWN ARE AT OUTSIDE FACE.



ABUTMENT EXCAVATION DETAIL



ABUTMENT STEP DIAGRAM

(LOOKING UPSTATION) (EAST)

PILE NOTES

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. 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.

WEST ABUTMENT PILE

THE CONTRACT LENGTH OF 70 FEET FOR THE WEST ABUTMENT PILES IS BASED ON A NON-COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 127 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A NON-COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF PREBORE.

THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE WEST ABUTMENT PILES IS 115 TONS AT END OF DRIVE (EOD) OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

EAST ABUTMENT PILE

THE CONTRACT LENGTH OF 65 FEET FOR THE EAST ABUTMENT PILES IS BASED ON A NON-COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 127 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55 FOR SOIL AND 0.70 FOR ROCK END BEARING.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A NON-COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55 FOR SOIL AND 0.70 FOR ROCK END BEARING. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF PREBORE.

THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE WEST ABUTMENT PILES IS 94 TONS AT END OF DRIVE (EOD) OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

PIER PILE

THE CONTRACT LENGTH OF 45 FEET FOR THE PIER PILES IS BASED ON A NON-COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 143 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55 FOR SOIL AND 0.70 FOR ROCK END BEARING.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A NON-COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55 FOR SOIL AND 0.70 FOR ROCK END BEARING. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF FOOTING. DESIGN SCOUR (100 YEAR) WAS ASSUMED TO AFFECT THE UPPER 4 FEET OF EMBEDDED PILE LENGTH AND CAUSE 11 KIPS OF DRIVING RESISTANCE.

THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE PIER PILES IS 106 TONS AT END OF DRIVE (EOD) OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

CONCRETE AND REINFORCING STEEL NOTES

ALL 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 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 REQUIRED AND ARE TO REMAIN IN PLACE AFTER CONSTRUCTION.

CONTRACTOR'S WORK AREA

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.

213'-10 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS
68'-3 END SPANS

TEE PIERS
77'-4 INTERIOR SPAN

GENERAL NOTES

STATION 212+60.00

15° SKEW, RT. AHEAD

BREMER COUNTY,

IOWA

POLLUTION PREVENTION PLAN

THIS PROJECT IS REGULATED BY THE REQUIREMENTS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES (DNR) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NO. 2 OR AN IOWA DEPARTMENT OF NATURAL RESOURCES (DNR) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) INDIVIDUAL STORM WATER PERMIT. THE CONTRACTOR SHALL CARRY OUT THE TERMS AND CONDITIONS OF THIS PERMIT AND THE POLLUTION PREVENTION PLAN (PPP).

THIS BASE PPP INCLUDES INFORMATION ON ROLES AND RESPONSIBILITIES, PROJECT SITE DESCRIPTION, CONTROLS, MAINTENANCE PROCEDURES, INSPECTION REQUIREMENTS, NON-STORM WATER CONTROLS, POTENTIAL SOURCES OF OFF RIGHT-OF-WAY POLLUTION, AND DEFINITIONS. THIS PLAN REFERENCES OTHER DOCUMENTS RATHER THAN REPEATING THE INFORMATION CONTAINED IN THE DOCUMENTS. A COPY OF THIS BASE POLLUTION PREVENTION PLAN, AMENDED AS NEEDED DURING CONSTRUCTION, WILL BE READILY AVAILABLE FOR REVIEW.

ALL CONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER THAT CONTROLS POLLUTANTS, MINIMIZES EROSION, AND PREVENTS SEDIMENTS FROM ENTERING WATERS OF THE STATE AND LEAVING THE HIGHWAY RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND IMPLEMENTATION OF THE PPP FOR THEIR ENTIRE CONTRACT. THIS RESPONSIBILITY SHALL BE FURTHER SHARED WITH SUBCONTRACTORS WHOSE WORK IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THIS PPP.

I. ROLES AND RESPONSIBILITIES
- A. DESIGNER:
  1. PREPARES BASE PPP INCLUDED IN THE PROJECT PLAN.
- B. OWNER
  1. PREPARES NOTICE OF INTENT (NOI) SUBMITTED TO IOWA DNR.
  2. IS SIGNATURE AUTHORITY ON THE BASE PPP.
- C. CONTRACTOR:
  1. SIGNS A CO-PERMITTEE CERTIFICATION STATEMENT ADHERING TO THE REQUIREMENTS OF THE NPDES PERMIT AND THIS PPP. ALL CO-PERMITTEES ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE IOWA ADMINISTRATIVE CODE TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PPP.
  2. DESIGNATES A WATER POLLUTION CONTROL MANAGER (WPCM), WHO HAS THE DUTIES AND RESPONSIBILITIES AS DEFINED IN SPECIFICATIONS SECTION 2602 OF THE STANDARD SPECIFICATIONS.
  3. SUBMITS AN EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND ECIP UPDATES ACCORDING TO SPECIFICATIONS SECTION 2602 OF THE STANDARD SPECIFICATIONS.
  4. INSTALLS AND MAINTAINS APPROPRIATE CONTROLS. THIS WORK MAY BE SUBCONTRACTED AS DOCUMENTED THROUGH SUBCONTRACTOR REQUEST FORMS (FORM 830231).
  5. SUPERVISES AND IMPLEMENTS GOOD HOUSEKEEPING PRACTICES ACCORDING TO PARAGRAPH III, C, 2.
  6. CONDUCTS JOINT REQUIRED INSPECTIONS OF THE SITE WITH INSPECTION STAFF. WHEN CONTRACTOR IS NOT MOBILIZED ON SITE, CONTRACTOR MAY DELEGATE THIS RESPONSIBILITY TO A TRAINED OR CERTIFIED SUBCONTRACTOR. CONTRACTING AUTHORITY ALSO MAY WAIVE JOINT INSPECTION REQUIREMENT DURING WINTER SHUTDOWN. IN BOTH CIRCUMSTANCES, WPCM (OR TRAINED OR CERTIFIED DELEGATE FROM THE CONTRACTOR) IS STILL RESPONSIBLE TO REVIEW AND SIGN INSPECTION REPORTS.
  7. COMPLIES WITH TRAINING AND CERTIFICATION REQUIREMENTS OF SECTION 2602 OF THE STANDARD SPECIFICATIONS.
  8. SUBMITS AMENDED PPP SITE MAP ACCORDING TO SECTION 2602 OF THE STANDARD SPECIFICATIONS.
- D. SUBCONTRACTORS:
  1. SIGN A CO-PERMITTEE CERTIFICATION STATEMENT ADHERING TO THE REQUIREMENTS OF THE NPDES PERMIT AND THIS PPP IF RESPONSIBLE FOR SEDIMENT OR EROSION CONTROLS; INVOLVED IN LAND DISTURBING ACTIVITIES; OR PERFORMING WORK THAT IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THIS PPP. SUBCONTRACTED WORK ITEMS ARE IDENTIFIED IN SUBCONTRACTOR REQUEST FORMS (FORM 830231). ALL CO-PERMITTEES ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE IOWA ADMINISTRATIVE CODE TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PPP.
  2. IMPLEMENT GOOD HOUSEKEEPING PRACTICES ACCORDING TO PARAGRAPH III, C, 2.
- E. RCE/PROJECT ENGINEER:
  1. IS PROJECT STORM WATER MANAGER.
  2. TAKES ACTIONS NECESSARY TO ENSURE COMPLIANCE WITH STORM WATER REQUIREMENTS INCLUDING, WHERE APPROPRIATE, ISSUING STOP WORK ORDERS, AND DIRECTING ADDITIONAL INSPECTIONS AT CONSTRUCTION PROJECT SITES THAT ARE EXPERIENCING PROBLEMS WITH ACHIEVING PERMIT COMPLIANCE.
  3. ORDERS THE TAKING OF MEASURES TO CEASE, CORRECT, PREVENT, OR MINIMIZE THE CONSEQUENCES OF NON-COMPLIANCE WITH THE STORM WATER REQUIREMENTS OF THE APPLICABLE PERMIT.
  4. SUPERVISES ALL WORK NECESSARY TO MEET STORM WATER REQUIREMENTS AT THE PROJECT, INCLUDING WORK PERFORMED BY CONTRACTORS AND SUBCONTRACTORS.
  5. REQUIRES EMPLOYEES, CONTRACTORS, AND SUBCONTRACTORS TO TAKE APPROPRIATE RESPONSIVE ACTION TO COMPLY WITH STORM WATER REQUIREMENTS, INCLUDING REQUIRING ANY SUCH PERSON TO CEASE OR CORRECT A VIOLATION OF STORM WATER REQUIREMENTS, AND TO ORDER OR RECOMMEND SUCH OTHER ACTIONS AS NECESSARY TO MEET STORM WATER REQUIREMENTS.
  6. IS FAMILIAR WITH THE PROJECT PPP AND STORM WATER SITE MAP.
  7. IS THE POINT OF CONTACT FOR THE PROJECT FOR REGULATORY OFFICIALS, INSPECTOR, CONTRACTORS, AND SUBCONTRACTORS REGARDING STORM WATER REQUIREMENTS.
  8. IS SIGNATURE AUTHORITY ON NOTICE OF DISCONTINUATION.
  9. MAINTAINS AN UP-TO-DATE RECORD OF CONTRACTORS, SUBCONTRACTORS, AND SUBCONTRACTED WORK ITEMS THROUGH SUBCONTRACTOR REQUEST FORMS (FORM 830231).
  10. MAKES INFORMATION TO DETERMINE PERMIT COMPLIANCE AVAILABLE TO THE DNR UPON THEIR REQUEST.
- F. INSPECTOR:
  1. UPDATES PPP THROUGH FIELDBOOK ENTRIES AND STORM WATER SITE INSPECTION REPORTS IF THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE WHICH HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS FROM THE PROJECT.
  2. MAKES INFORMATION TO DETERMINE PERMIT COMPLIANCE AVAILABLE TO THE DNR UPON THEIR REQUEST.
  3. CONDUCTS JOINT REQUIRED INSPECTIONS OF THE SITE WITH THE CONTRACTOR/SUBCONTRACTOR.
  4. COMPLETES AN INSPECTION REPORT AFTER EACH INSPECTION.
  5. IS SIGNATURE AUTHORITY ON STORM WATER INSPECTION REPORTS.

II. PROJECT SITE DESCRIPTION
- A. THIS POLLUTION PREVENTION PLAN (PPP) IS FOR THE CONSTRUCTION OF A 213'-10 X 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE ON COUNTY ROAD V19 OVER QUARTER SECTION RUN IN BREMER COUNTY, IOWA.
- B. THIS PPP COVERS APPROXIMATELY 3.0 ACRES WITH AN ESTIMATED 2.8 ACRES BEING DISTURBED. THE PORTION OF THE PPP COVERED BY THIS CONTRACT HAS 2.8 ACRES DISTURBED.
- C. THE PPP IS LOCATED IN AN AREA OF THREE SOIL ASSOCIATIONS (KENYON-CLYDE-FLOYD, ROCKTON AND SPARTA-CHELSEA). THE ESTIMATED WEIGHTED AVERAGE RUNOFF COEFFICIENT NUMBER FOR THIS PPP AFTER COMPLETION WILL BE 0.23.
- D. STORM WATER SITE MAP - MULTIPLE SOURCES OF INFORMATION COMPRISE THE BASE STORM WATER SITE MAP INCLUDING:
  1. DRAINAGE PATTERNS – SITUATION PLAN AND PLAN AND PROFILE.
  2. PROPOSED SLOPES – CROSS SECTIONS.
  3. AREAS OF SOIL DISTURBANCE – CONSTRUCTION LIMITS SHOWN ON SITUATION PLAN AND PLAN AND PROFILE.
  4. LOCATION OF STRUCTURAL CONTROLS – TABULATIONS.
  5. LOCATIONS OF NON-STRUCTURAL CONTROLS – TABULATIONS.
  6. LOCATIONS OF STABILIZATION PRACTICES – GENERALLY WITHIN CONSTRUCTION LIMITS SHOWN ON SITUATION PLAN AND PLAN AND PROFILE.
  7. SURFACE WATERS (INCLUDING WETLANDS) – PROJECT LOCATION MAP AND SITUATION PLAN AND PLAN AND PROFILE.
  8. LOCATIONS WHERE STORM WATER IS DISCHARGED – SITUATION PLAN AND PLAN AND PROFILE.
- E. THE BASE STORM WATER SITE MAP IS AMENDED BY CONTRACT MODIFICATIONS AND PROGRESS PAYMENTS (FIELDBOOK ENTRIES) OF COMPLETED EROSION CONTROL WORK. ALSO, DUE TO PROJECT PHASING, EROSION AND SEDIMENT CONTROLS SHOWN ON PROJECT PLANS MAY NOT BE INSTALLED UNTIL NEEDED, BASED ON SITE CONDITIONS. FOR EXAMPLE, SILT FENCE DITCH CHECKS WILL TYPICALLY NOT BE INSTALLED UNTIL THE DITCH HAS BEEN INSTALLED. INSTALLED LOCATIONS WILL BE DOCUMENTED BY FIELDBOOK ENTRIES AND AMENDED PPP SITE MAP.
- F. RUNOFF FROM THIS WORK WILL FLOW INTO QUARTER SECTION RUN.

III. CONTROLS
- A. THE CONTRACTOR'S ECIP SPECIFIED IN ARTICLE 2602.03 OF THE STANDARD SPECIFICATIONS FOR ACCOMPLISHMENT OF STORM WATER CONTROLS SHOULD CLEARLY DESCRIBE THE INTENDED SEQUENCE OF MAJOR ACTIVITIES AND FOR EACH ACTIVITY DEFINE THE CONTROL MEASURE AND THE TIMING DURING THE CONSTRUCTION PROCESS THAT THE MEASURE WILL BE IMPLEMENTED.
- B. PRESERVE VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.
- C. SECTIONS 2601 AND 2602 OF THE STANDARD SPECIFICATIONS DEFINE REQUIREMENTS TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES. ACTUAL QUANTITIES USED AND INSTALLED LOCATIONS MAY VARY FROM THE BASE PPP AND AMENDMENT OF THE PLAN WILL BE DOCUMENTED VIA FIELDBOOK ENTRIES, AMENDED PPP SITE MAP, OR BY CONTRACT MODIFICATION. ADDITIONAL EROSION AND SEDIMENT CONTROL ITEMS MAY BE REQUIRED AS DETERMINED BY THE INSPECTOR AND/OR CONTRACTOR DURING STORM WATER SITE INSPECTIONS. IF THE WORK INVOLVED IS NOT APPLICABLE TO ANY CONTRACT ITEMS, THE WORK WILL BE PAID FOR ACCORDING TO ARTICLE 1109.03 PARAGRAPH B OF THE STANDARD SPECIFICATIONS.
  1. EROSION AND SEDIMENT CONTROLS
     - a. STABILIZATION PRACTICES
       1) SITE PLANS WILL ENSURE THAT EXISTING VEGETATION OR NATURAL BUFFERS ARE PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED.
       2) INITIALIZE STABILIZATION OF DISTURBED AREAS IMMEDIATELY AFTER CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE:
          a) PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR
          b) TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
       3) STAGED PERMANENT AND/OR TEMPORARY STABILIZING SEEDING AND MULCHING SHALL BE COMPLETED AS THE DISTURBED AREAS ARE COMPLETED. INCOMPLETE AREAS SHALL BE STABILIZED ACCORDING TO PARAGRAPH III, C, 1, a, 2, b ABOVE.
       4) PERMANENT AND TEMPORARY STABILIZATION PRACTICES TO BE USED FOR THIS PROJECT ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION LOCATED IN THE PLANS. TYPICAL DRAWINGS DETAILING CONSTRUCTION OF THE PRACTICES TO BE USED ON THIS PROJECT ARE REFERENCED IN THE STANDARD ROAD PLANS TABULATION.
       5) PRESERVATION OF EXISTING VEGETATION WITHIN RIGHT-OF-WAY OR EASEMENTS WILL ACT AS VEGETATIVE BUFFER STRIPS.
       6) PRESERVATION OF TOPSOIL: BID ITEMS TO BE USED FOR THIS PROJECT ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION LOCATED IN THE PLANS. ADDITIONAL INFORMATION MAY BE FOUND IN TABULATIONS OF THE PLANS OR IS REFERENCED IN STANDARD SECTION 2105 OF THE STANDARD SPECIFICATIONS.
     - b. STRUCTURAL PRACTICES
       1) STRUCTURAL PRACTICES WILL BE IMPLEMENTED TO DIVERT FLOWS FROM EXPOSED SOILS AND DETAIN OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. ADDITIONALLY, STRUCTURAL PRACTICES MAY INCLUDE: SILT BASINS THAT PROVIDE 3600 CUBIC FEET OF STORAGE PER ACRE DRAINED OR EQUIVALENT SEDIMENT CONTROLS, OUTLET STRUCTURES THAT WITHDRAW WATER FROM SURFACE WHEN DISCHARGING BASINS, AND CONTROLS TO DIRECT STORM WATER TO VEGETATED AREAS.
       2) STRUCTURAL PRACTICES TO BE USED FOR THIS PROJECT ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION, AS WELL AS ALL OTHER ITEM SPECIFIC TABULATIONS. TYPICAL DRAWINGS DETAILING CONSTRUCTION OF THE DEVICES TO BE USED ON THIS PROJECT CAN BE FOUND IN THE PLANS OR ARE REFERENCED IN THE STANDARD ROAD PLANS TABULATION.
     - c. STORM WATER MANAGEMENT
       1) MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED. THIS MAY INCLUDE VELOCITY DISSIPATION DEVICES AT DISCHARGE LOCATIONS AND ALONG LENGTH OF OUTFALL CHANNEL AS NECESSARY TO PROVIDE A NON-EROSION VELOCITY FLOW FROM STRUCTURE TO WATER COURSE. IF INCLUDED WITH THIS PROJECT, THESE ITEMS ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION, AS WELL AS ALL OTHER ITEM SPECIFIC TABULATIONS. TYPICAL DRAWINGS DETAILING CONSTRUCTION OF THE PRACTICES TO BE USED ON THIS PROJECT ARE REFERENCED IN THE STANDARD ROAD PLANS TABULATION. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CLEAN WATER ACT.
  2. OTHER CONTROLS
     - a. CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTES SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENTAL LAWS, RULES AND REGULATIONS, THE MORE RESTRICTIVE APPLICABLE LAWS, RULES OR REGULATIONS SHALL APPLY.
       1) VEHICLE ENTRANCES AND EXITS - CONSTRUCT AND MAINTAIN ENTRANCES AND EXITS TO PREVENT TRACKING OF SEDIMENTS ONTO ROADWAYS.
       2) MATERIAL DELIVERY, STORAGE AND USE - IMPLEMENT PRACTICES TO PREVENT DISCHARGE OF CONSTRUCTION MATERIALS DURING DELIVERY, STORAGE, AND USE.
       3) STOCKPILE MANAGEMENT - INSTALL CONTROLS TO REDUCE OR ELIMINATE POLLUTION OF STORM WATER FROM STOCKPILES OF SOIL AND PAVING.
       4) WASTE DISPOSAL - DO NOT DISCHARGE ANY MATERIALS, INCLUDING BUILDING MATERIALS, INTO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
       5) SPILL PREVENTION AND CONTROL - IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES TO CONTAIN AND CLEAN-UP SPILLS AND PREVENT MATERIAL DISCHARGES TO THE STORM DRAIN SYSTEM AND WATERS OF THE STATE.
       6) CONCRETE RESIDUALS AND WASHOUT WASTES - WASTE SHALL NOT BE DISCHARGED TO A SURFACE WATER AND IS NOT ALLOWED TO ADVERSELY AFFECT A WATER OF THE STATE. DESIGNATE TEMPORARY CONCRETE WASHOUT FACILITIES FOR RINSING OUT CONCRETE TRUCKS. PROVIDE DIRECTIONS TO TRUCK DRIVERS WHERE DESIGNATED WASHOUT FACILITIES ARE LOCATED. DESIGNATED WASHOUT AREAS SHOULD BE LOCATED AT LEAST 50 FEET AWAY FROM STORM DRAINS, STREAMS OR OTHER WATER BODIES. CARE SHOULD BE TAKEN TO ENSURE THESE FACILITIES DO NOT OVERFLOW DURING STORM EVENTS.
       7) CONCRETE GROOVING/GRINDING SLURRY – DO NOT DISCHARGE SLURRY TO A WATERBODY OR STORM DRAIN. SLURRY MAY BE APPLIED ON FORESLOPES OR REMOVED FROM THE PROJECT.
       8) VEHICLE AND EQUIPMENT STORAGE AND MAINTENANCE AREAS - PERFORM ON SITE FUELING AND MAINTENANCE IN ACCORDANCE WITH ALL ENVIRONMENT LAWS SUCH AS PROPER STORAGE OF ONSITE FUELS AND PROPER DISPOSAL OF USED ENGINE OIL OR OTHER FLUIDS ON SITE. EMPLOY WASHING PRACTICES THAT PREVENT CONTAMINATION OF SURFACE AND GROUND WATER FROM WASH WATER. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
       9) LITTER MANAGEMENT - ENSURE EMPLOYEES PROPERLY DISPOSE OF LITTER. MINIMIZE EXPOSURE OF TRASH IF EXPOSURE TO PRECIPITATION OR STORM WATER WOULD RESULT IN A DISCHARGE OF POLLUTANTS.
       10) DEWATERING – PROPERLY TREAT WATER TO REMOVE SUSPENDED SEDIMENT BEFORE IT RE-ENTERS A WATERBODY OR DISCHARGES OFF-SITE. MEASURES ARE ALSO TO BE TAKEN TO PREVENT SCOUR EROSION AT DEWATERING DISCHARGE POINT.
  3. APPROVED STATE OR LOCAL PLANS
     DURING THE COURSE OF THIS CONSTRUCTION, IT IS POSSIBLE THAT SITUATIONS WILL ARISE WHERE UNKNOWN MATERIALS WILL BE ENCOUNTERED. WHEN SUCH SITUATIONS ARE ENCOUNTERED, THEY WILL BE HANDLED ACCORDING TO ALL FEDERAL, STATE, AND LOCAL REGULATIONS IN EFFECT AT THE TIME.

IV. MAINTENANCE PROCEDURES
THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN PROPER WORKING ORDER, INCLUDING CLEANING, REPAIRING, OR REPLACING THEM THROUGHOUT THE CONTRACT PERIOD. THIS SHALL BEGIN WHEN THE FEATURES HAVE LOST 50% OF THEIR CAPACITY.

V. INSPECTION REQUIREMENTS
- A. INSPECTIONS SHALL BE MADE JOINTLY BY THE CONTRACTOR AND THE CONTRACTING AUTHORITY AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. STORM WATER SITE INSPECTIONS WILL INCLUDE:
  1. DATE OF THE INSPECTION.
  2. SUMMARY OF THE SCOPE OF THE INSPECTION.
  3. NAME AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION.
  4. REVIEW OF EROSION AND SEDIMENT CONTROL MEASURES WITHIN DISTURBED AREAS FOR THE EFFECTIVENESS IN PREVENTING IMPACTS TO RECEIVING WATERS.
  5. MAJOR OBSERVATIONS RELATED TO THE IMPLEMENTATION OF THE PPP.
  6. IDENTIFICATION OF CORRECTIVE ACTIONS REQUIRED TO MAINTAIN OR MODIFY EROSION AND SEDIMENT CONTROL MEASURES.
- B. INCLUDE STORM WATER SITE INSPECTION REPORTS IN THE AMENDED PPP. INCORPORATE ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DETERMINED AS A RESULT OF THE INSPECTION. IMMEDIATELY BEGIN CORRECTIVE ACTIONS ON ALL DEFICIENCIES FOUND WITHIN 3 CALENDAR DAYS OF THE INSPECTION AND COMPLETE WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. IF IT IS DETERMINED THAT MAKING THE CORRECTIONS LESS THAN 72 HOURS AFTER THE INSPECTION IS IMPRACTICABLE, IT SHOULD BE DOCUMENTED WHY IT IS IMPRACTICABLE AND INDICATE AN ESTIMATED DATE BY WHICH THE CORRECTIONS WILL BE MADE.

VI. NON-STORM WATER DISCHARGES
THIS INCLUDES SUBSURFACE DRAINS (I.E. LONGITUDINAL AND STANDARD SUBDRAINS) AND SLOPE DRAINS. THE VELOCITY OF THE DISCHARGE FROM THESE FEATURES MAY BE CONTROLLED BY THE USE OF HEADWALLS OR BLOCKS, CLASS A STONE, EROSION STONE OR OTHER APPROPRIATE MATERIALS. THIS ALSO INCLUDES UNCONTAMINATED GROUNDWATER FROM DEWATERING OPERATIONS, WHICH WILL BE CONTROLLED AS DISCUSSED IN SECTION III OF THE PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION
SILTS, SEDIMENT, AND OTHER FORMS OF POLLUTION MAY BE TRANSPORTED ONTO HIGHWAY RIGHT-OF-WAY (ROW) AS A RESULT OF A STORM EVENT. POTENTIAL SOURCES OF POLLUTION LOCATED OUTSIDE HIGHWAY ROW ARE BEYOND THE CONTROL OF THIS PPP. POLLUTION WITHIN HIGHWAY ROW WILL BE CONVEYED AND CONTROLLED PER THIS PPP.

VIII. DEFINITIONS
- A. BASE PPP - INITIAL POLLUTION PREVENTION PLAN.
- B. AMENDED PPP – BASE PPP AMENDED DURING CONSTRUCTION. MAY INCLUDE PLAN REVISIONS OR CONTRACT MODIFICATIONS FOR NEW ITEMS, STORM WATER SITE INSPECTION REPORTS, FIELDBOOK ENTRIES MADE BY THE INSPECTOR, AMENDED PPP SITE MAP BY THE CONTRACTOR, ECIP, NOI, CO-PERMITTEE CERTIFICATIONS, AND SUBCONTRACTOR REQUEST FORMS. ITEMS AMENDING THE PPP ARE STORED ELECTRONICALLY AND ARE READILY AVAILABLE UPON REQUEST.
- C. FIELDBOOK ENTRIES – THIS CONTAINS THE INSPECTOR'S DAILY DIARY AND BID ITEM POSTINGS.
- D. CONTROLS - METHODS, PRACTICES, OR MEASURES TO MINIMIZE OR PREVENT EROSION, CONTROL SEDIMENTATION, CONTROL STORM WATER, OR MINIMIZE CONTAMINANTS FROM OTHER TYPES OF WASTE OR MATERIALS. ALSO CALLED BEST MANAGEMENT PRACTICES (BMPS).
- E. SIGNATURE AUTHORITY - REPRESENTATIVE AUTHORIZED TO SIGN VARIOUS STORM WATER DOCUMENTS.

CERTIFICATION STATEMENT

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE

LANDON MOORE
PRINTED OR TYPED NAME

POLLUTION PREVENTION PLAN

BREMER COUNTY, IOWA

BORING LOG NO. 1 STATION 211+50, 7'LT | CBA Job No.: 2020166 | Project No.: 201444

Project: 260th Street (V19) Bridge (10-06) Over Quarter Section Run, Sec.20, Jackson Twp. Bremer County, Iowa

Client: Calhoun-Burns & Associates, Inc. 1500 30th Street West Des Moines, Iowa 50266

Surface Elevation: 900.1' | Date Drilled: 2/22/2021 | Drilling Method: HSA

Datum: CL East Abutment, Elevation = 909.27' | Drilling Depth, ft.: 56 | Page: 1 of 1

Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description*	Graphic Log	USCS	Water Level Depth	Elevation ft.
900	0							CRUSHED ROCK WITH FINES (9"±)				0.8
								Brown very sandy clay, damp with sand and crushed rock layers		CL		899.3
		1	SSA	30	6.2			FILL				5.5
								Brown silty fine to medium sand, damp		SP-SM		894.6
888	12	2	SSA	9	2.1			Light brown fine to coarse sand after 8'		SW		
		3	SSA	7	5.9			Brown fine to medium sand 14.5' to 17'		SP		
		4	SSA	9				Brown medium to coarse sand with gravel, saturated after 17'		SW	▽	
876	24	5	SSA	3				GRANULAR ALLUVIUM (Silty Sand)				
		6	SSA	9								34
864	36	7	SSA	45				Brown fine to medium sand with silt, trace gravel, saturated		SP-SM		866.1
		8	SSA	48				GRANULAR ALLUVIUM (Granular Material)				
		9	SSA	59								
852	48	10	SSA	100								
		11	SSA	51								56
								End of Boring				844.1
840	60											
828	72											
816	84											

*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

Water Level Observation: Time: at completion ____ hrs. ____ days; Depth to water: 17 ft. ____ ft. ____ ft.

ALLENDER BUTZKE ENGINEERS, INC.
Geotechnical - Environmental - Construction Q.C.

BORING LOG NO. 2 STATION 212+17, 5'RT | CBA Job No.: 2020166 | Project No.: 201444

Project: 260th Street (V19) Bridge (10-06) Over Quarter Section Run, Sec.20, Jackson Twp. Bremer County, Iowa

Client: Calhoun-Burns & Associates, Inc. 1500 30th Street West Des Moines, Iowa 50266

Surface Elevation: 901.9' | Date Drilled: 2/23/2021 | Drilling Method: HSA

Datum: CL East Abutment, Elevation = 909.27' | Drilling Depth, ft.: 69.8 | Page: 1 of 1

Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description*	Graphic Log	USCS	Water Level Depth	Elevation ft.
900	0							REINFORCED PCC (7"±)				0.6
								AIR TO STREAM BED				901.3
888	12											18
		1	SSA	3				Brown clayey fine to medium sand, saturated		SP-SC	▽	883.9
								GRANULAR ALLUVIUM (Silty Sand)		SW		
876	24	2	SSA	3				Brown medium to coarse sand with gravel after 24'		SP		29
		3	SSA	21				Brown medium sand, trace gravel, saturated				872.9
		4	SSA	29				GRANULAR ALLUVIUM (Coarse Sand)				
864	36	5	SSA	61								
		6	SSA	31								
	48							Limestone fragements near 48'				52
852		7	SSA	16				Gray clay shale, moist				849.9
		8	SSA	21	16.2			WEATHERED BEDROCK (Cohesive Material)				
	60	9	SSA	30	15.8							
840		10	SSA	100	15.2							65
								Maroon-brown clay shale, moist BEDROCK				836.9 69.8
828	72	11	SSA	150	12.1			End of Boring				832.1
816	84											

*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

Water Level Observation: Time: at completion ____ hrs. ____ days; Depth to water: 21 ft. ____ ft. ____ ft.

ALLENDER BUTZKE ENGINEERS, INC.
Geotechnical - Environmental - Construction Q.C.

SOUNDING DATA

(SEE "SITUATION PLAN", SHEET 4 FOR BORING LOCATIONS)

LICENSED PROFESSIONAL ENGINEER — DAVID LOGEMANN 12394 — IOWA

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.

DAVID LOGEMANN, P.E. DATE: 8/7/26

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027.

PAGES OR SHEETS COVERED BY THIS SEAL: SHEET 7 & 8 OF 17

213'–10 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS — 68'–3 END SPANS

TEE PIERS — 77'–4 INTERIOR SPAN

SOUNDING DATA

STATION 212+60.00 — 15° SKEW, RT. AHEAD

BREMER COUNTY, — IOWA

BORING LOG NO. 3 STATION 212+98, 5'LT | CBA Job No.: 2020166 | Project No.: 201444

Project: 260th Street (V19) Bridge (10-06) Over Quarter Section Run, Sec.20, Jackson Twp. Bremer County, Iowa

Client: Calhoun-Burns & Associates, Inc. 1500 30th Street West Des Moines, Iowa 50266

Surface Elevation: 905.0' | Date Drilled: 2/23/2021 | Drilling Method: HSA

Datum: CL East Abutment, Elevation = 909.27' | Drilling Depth, ft.: 69.6 | Page: 1 of 1

Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description*	Graphic Log	USCS	Water Level Depth	Elevation ft.
	0							REINFORCED PCC (7"±)				0.6
900												904.4
	12							AIR TO STREAM BED				
888												20.5
	24	1	SSA	6				Dark brown silty fine to medium sand with gravel, saturated		SP-SM	▽	884.5
								GRANULAR ALLUVIUM (Silty Sand)				27
876		2	SSA	19						SP		878
	36	3	SSA	24				Brown fine to medium sand, trace gravel, saturated GRANULAR ALLUVIUM (Coarse Sand)				
864		4	SSA	29								42
		5	SSA	16	20.8			Dark brown lean clay, very moist COHESIVE ALLUVIUM (Firm Silty Clay)		CL		863
	48				14.8							47
		6	SSA	18	18.5			Limestone fragements after 45.5'				858
852		7	SSA	30	17.7			Gray clay shale, moist WEATHERED BEDROCK (Cohesive Material)				
	60	8	SSA	35	17.2							64
840		9	SSA	82	14.3			Gray clay shale, moist BEDROCK				841
												69.6
	72	10	SSA	50/1.5"	11.3			End of Boring				835.4
828												
	84											

*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

Water Level Observation

Time: at completion ____ hrs. ____ days

Depth to water: 21.5 ft. ____ ft. ____ ft.

ALLENDER BUTZKE ENGINEERS, INC.

Geotechnical - Environmental - Construction Q.C.

BORING LOG NO. 4 STATION 213+76, 5'RT | CBA Job No.: 2020166 | Project No.: 201444

Project: 260th Street (V19) Bridge (10-06) Over Quarter Section Run, Sec.20, Jackson Twp. Bremer County, Iowa

Client: Calhoun-Burns & Associates, Inc. 1500 30th Street West Des Moines, Iowa 50266

Surface Elevation: 908.5' | Date Drilled: 2/22/2021 | Drilling Method: HSA

Datum: CL East Abutment, Elevation = 909.27' | Drilling Depth, ft.: 65.8 | Page: 1 of 1

Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description*	Graphic Log	USCS	Water Level Depth	Elevation ft.
	0							CRUSHED ROCK WITH FINES (8"±)				0.7
		1	SSA	25	7.8			Dark brown silty fine to medium sand, moist		SP-SM		907.8
								FILL				7
900		2	SSA	10	4.8			Brown-light brown silty fine to medium sand, damp to moist GRANULAR ALLUVIUM (Silty Sand)		SP-SM		901.5
	12	3	SSA	4	14.5			Clay seam 14.5' to 16'				20
888		4	SSA	18				Brown fine to medium sand, moist		SP	▽	888.5
	24	5	SSA	23				GRANULAR ALLUVIUM (Coarse Sand)				
		6	SSA	23				Saturated after 28'				32.5
876		7	SSA	25	10.7			Light brown fractured limestone, moist				876
	36	8	SSA	37	5.8							
		9	SSA	40	7.4			WEATHERED BEDROCK (Cohesive Material)				
864	48	10	SSA	25	21.9			Hard limestone layer from 46.5' to 48' Gray clay shale, moist after 48'				54
		11	SSA	49	18.9			Gray clay shale, moist				854.5
852	60	12	SSA	54	19.5			BEDROCK				65.8
		13	SSA	112	18.1			End of Boring				842.7
840	72											
828	84											

*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

Water Level Observation

Time: at completion ____ hrs. ____ days

Depth to water: 25 ft. ____ ft. ____ ft.

ALLENDER BUTZKE ENGINEERS, INC.

Geotechnical - Environmental - Construction Q.C.

SOUNDING DATA

(SEE "SITUATION PLAN", SHEET 4 FOR BORING LOCATIONS)

213'-10 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS
68'-3 END SPANS

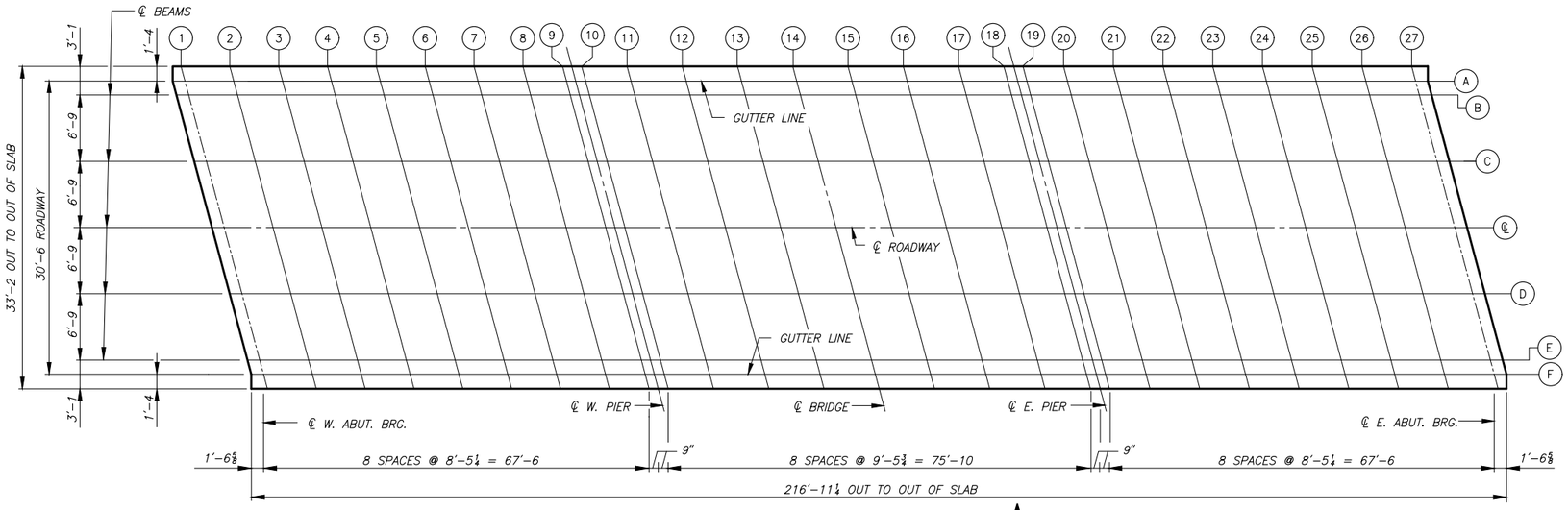
TEE PIERS
77'-4 INTERIOR SPAN

SOUNDING DATA

STATION 212+60.00
BREMER COUNTY,

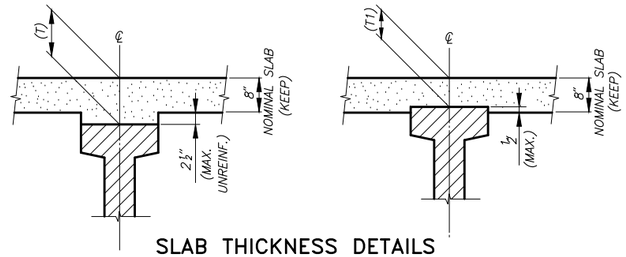
15° SKEW, RT. AHEAD
IOWA

BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81



TOP OF SLAB ELEVATIONS

LOCATION	℄ W. ABUT. BRG. 1	2	3	4	5	6	7	8	℄ W. BRG. W. PIER 9	℄ E. BRG. W. PIER 10	11	12	13	℄ BRIDGE 14	15	16	17	℄ W. BRG. E. PIER 18	℄ E. BRG. E. PIER 19	20	21	22	23	24	25	26	℄ E. ABUT. BRG. 27	LOCATION
Ⓐ	902.92	903.14	903.38	903.62	903.87	904.13	904.39	904.67	904.95	905.00	905.32	905.65	906.00	906.35	906.71	907.08	907.46	907.85	907.91	908.27	908.63	909.00	909.38	909.77	910.16	910.56	910.97	Ⓐ
Ⓑ	902.97	903.20	903.43	903.68	903.93	904.18	904.45	904.72	905.00	905.05	905.38	905.71	906.06	906.41	906.77	907.14	907.52	907.91	907.97	908.33	908.69	909.06	909.44	909.83	910.22	910.62	911.03	Ⓑ
Ⓒ	903.16	903.39	903.62	903.87	904.12	904.38	904.65	904.92	905.20	905.25	905.58	905.92	906.26	906.62	906.98	907.35	907.74	908.13	908.19	908.55	908.91	909.28	909.66	910.05	910.45	910.85	911.26	Ⓒ
℄	903.31	903.54	903.78	904.02	904.28	904.54	904.81	905.08	905.36	905.42	905.74	906.08	906.43	906.78	907.15	907.52	907.91	908.30	908.37	908.72	909.09	909.47	909.85	910.24	910.63	911.03	911.45	℄
Ⓓ	903.25	903.49	903.73	903.98	904.23	904.49	904.76	905.04	905.33	905.38	905.71	906.05	906.40	906.75	907.12	907.50	907.88	908.28	908.34	908.70	909.07	909.45	909.83	910.22	910.62	911.02	911.43	Ⓓ
Ⓔ	903.16	903.40	903.64	903.89	904.15	904.41	904.68	904.96	905.25	905.30	905.63	905.97	906.32	906.68	907.05	907.43	907.82	908.21	908.28	908.64	909.01	909.39	909.77	910.16	910.56	910.97	911.38	Ⓔ
Ⓕ	903.14	903.37	903.61	903.86	904.12	904.39	904.66	904.94	905.22	905.28	905.61	905.95	906.30	906.66	907.03	907.41	907.80	908.19	908.26	908.62	908.99	909.37	909.75	910.15	910.55	910.95	911.37	Ⓕ

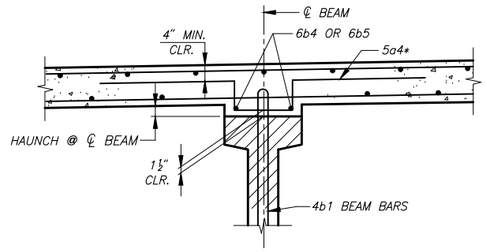


SLAB THICKNESS DETAILS

NOTE: THE SLAB THICKNESS (T) AT BEAMS IS BASED ON THE ANTICIPATED BEAM CAMBER REMAINING AFTER PLACING THE SLAB, BUT IS NOT GUARANTEED FOR CONSTRUCTION. IF BEAM IS UNDER CAMBERED, INCREASE SLAB THICKNESS (T) AT BEAMS TO COMPENSATE. IF BEAM IS OVER CAMBERED, THE SLAB THICKNESS (T) MAY BE DECREASED A MAXIMUM OF 1/2" EMBEDMENT AT THE BEAM (T1). IF MORE THAN 1/2" EMBEDMENT IS REQUIRED, OR IF THE HAUNCH EXCEEDS 2½" AND IS NOT REINFORCED, THE GRADE LINE IS TO BE REVISED. THE ABOVE DIAGRAMS DO NOT APPLY TO THE CANTILEVERED SLAB SIDE OF THE EXTERIOR BEAM.

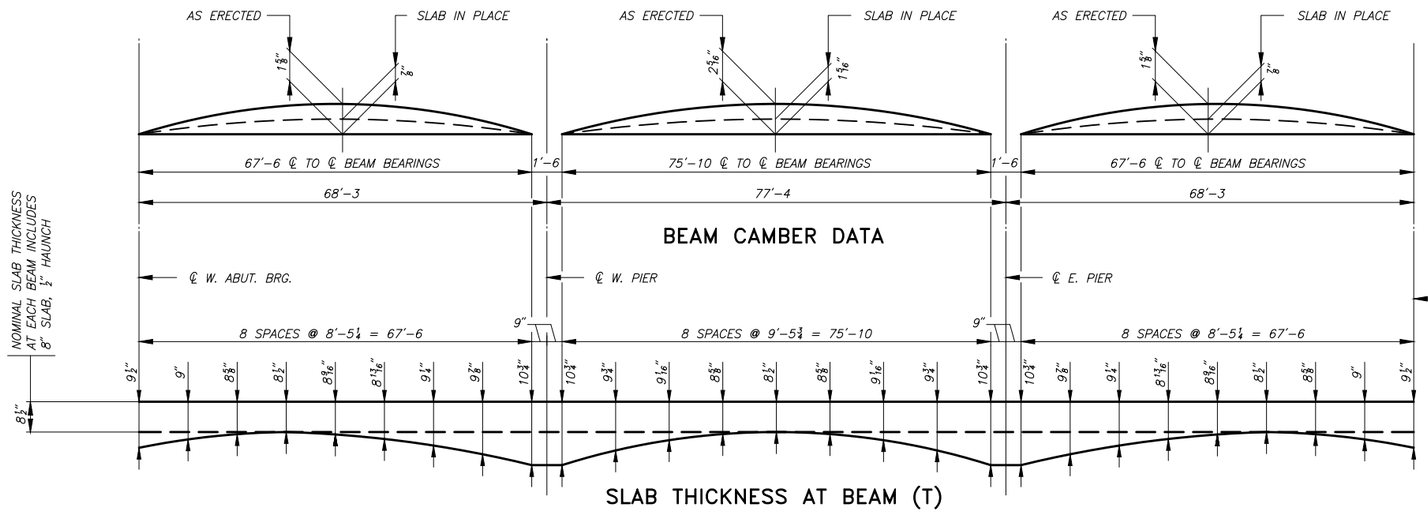
HAUNCH REINFORCING

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
5a4	SLAB HAUNCH, TRANSVERSE	⌐¬	480	4'-11	2,463
6b4	SLAB HAUNCH, LONGITUDINAL	—	40	22'-2	1,332
6b5	SLAB HAUNCH, LONGITUDINAL	—	20	12'-6	376
INCLUDE WITH SUPERSTRUCTURE REINFORCING				TOTAL (LBS.)	4,171



SECTION THRU SLAB HAUNCH

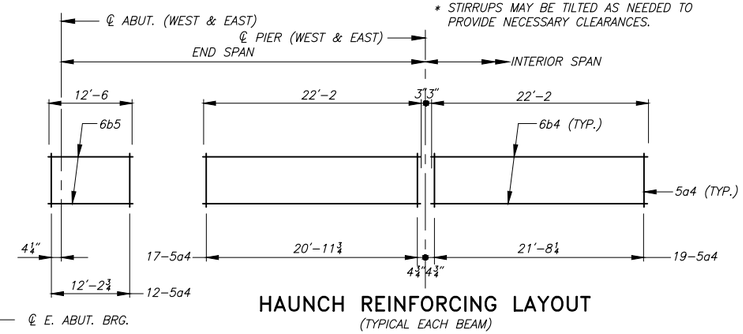
NOTE: TYPICAL EACH BEAM LINE WHERE HAUNCH EXCEEDS 2½". SEE "HAUNCH REINFORCING LAYOUT" FOR PLACEMENT LOCATIONS. IF HAUNCH EXCEEDS 4", GRADELINE IS TO BE REVISED.



BEAM CAMBER DATA

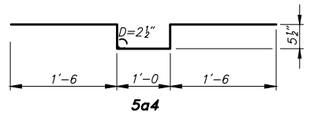
SLAB THICKNESS AT BEAM (T)

NOTE : HAUNCH THICKNESSES ARE SHOWN FOR ESTIMATING ONLY AND ARE NOT GUARANTEED FOR CONSTRUCTION.



* STIRRUPS MAY BE TILTED AS NEEDED TO PROVIDE NECESSARY CLEARANCES.

NOTE: 1-5a4 BAR IS TO BE PLACED ADJACENT TO 4b1 BEAM TIE BARS THAT EXTEND FROM THE BEAMS INTO SLAB IN THE AREA SHOWN.



HAUNCH REINFORCING LAYOUT

(TYPICAL EACH BEAM)

213'-10 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS — **TEE PIERS**
68'-3 END SPANS — **77'-4 INTERIOR SPAN**

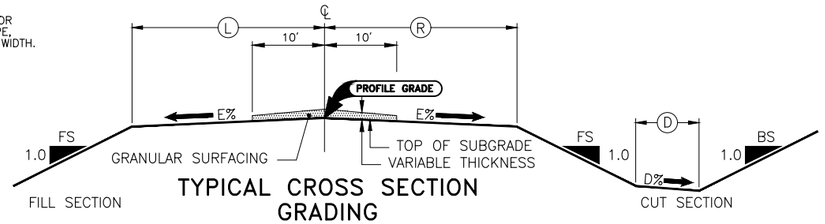
SUPERSTRUCTURE DETAILS

STATION 212+60.00 — **15° SKEW, RT. AHEAD**
BREMER COUNTY, — **IOWA**

BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81

CBA–503

NOTE:
SEE CROSS SECTIONS FOR VARIATIONS IN FORESLOPE, BACKSLOPE, AND DITCH WIDTH.

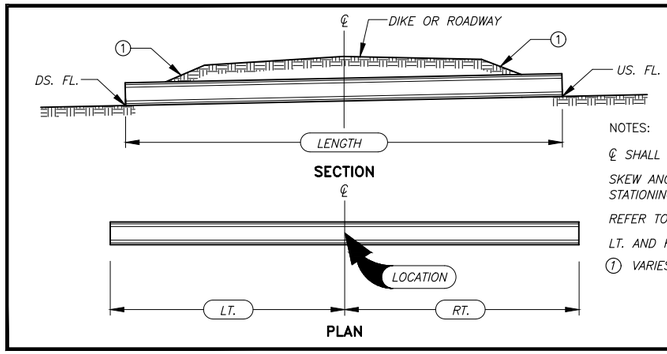


TYPICAL CROSS SECTION GRADING

NOTE:
NORMAL SECTIONS SHOWN MAY BE MODIFIED APPROPRIATELY IN AREAS OF SUPERELEVATION CURVES OR OTHER LOCATIONS SPECIFICALLY DESIGNATED BY THE ENGINEER. SEE CROSS SECTIONS AND STANDARD ROAD PLAN EW–301 FOR MODIFICATION AND/OR ADDITIONAL INFORMATION.

LOCATION			L	R	E%	FS	D%	BS	D_L	D_R
ROAD IDENT.	STATION TO STATION		Feet	Feet					Feet	Feet
V19/260TH ST.	209+50.00	210+00.00	TRANSITION FROM EXISTING							
V19/260TH ST.	210+00.00	BRIDGE	15.0	15.0	3.33	3	2	2	–	10
V19/260TH ST.	BRIDGE	215+75.00	15.0	15.0	3.33	3	2	3	10	–
V19/260TH ST.	215+75.00	216+00.00	TRANSITION TO EXISTING							

CBA–700



NOTES:

℄ SHALL BE ℄ OF ROADWAY, DIKE, SURVEY, OR OTHER; AS DETAILED ON PLANS.

SKEW ANGLE IS THE ANGLE WHICH ONE END OF THE PIPE IS AHEAD (BY STATIONING) OF LINE PERPENDICULAR TO THE ℄ (EXAMPLE SKEW RT. AHEAD 30°).

REFER TO TABULAR LISTING AND OTHER PLANS FOR ADDITIONAL INFORMATION.

LT. AND RT. ARE LOOKING TOWARD MAINLINE ON EW–501.

(1) VARIES

ENTRANCE PIPE CULVERT

102_03
10/15/24

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.
(1) Refer to MI-210.
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Line No.	Station	Side	Access Type	Descriptor	Case	Curb Type	Curb Length (1) (LF)	Width (FT)	PR (1) (2) (FT)	SR (2) (FT)	Pipe Culvert (H) (3) (FT)	Pipe Culvert Size (3) (IN)	Pipe Culvert Length (3) (LF)	Pipe Culvert Lt. (3) (LF)	Pipe Culvert Rt. (3) (LF)	Pipe Culvert Aprons (3) (No.)	Driveway Surface Type	Driveway Surface Area (SY)	Driveway Surfacing Material (TON)	Remarks
1.0	210+00.00	Right	C					20.0		25.0	6.3	24.0	100.0	50.00	54.00		Granular	130.0	30.000	6:1 SIDESLOPES, TAPER WIDTH TO MATCH EXISTING AT 75' RT
2.0	215+10.00	Right	D					30.0		30.0							Granular	335.0	90.000	6:1 SIDESLOPES
3.0	215+12.00	Left	D					20.0		15.0	2.4	18.0	70.0	18.00	52.00		Granular	65.0	20.000	6:1 SIDESLOPES

105_04
10/20/26

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
BA-200	10-20-26	Steel Beam Guardrail Components
BA-202	10-20-26	Steel Beam Guardrail Bolted End Anchor
BA-221	10-18-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-2)
BA-225	10-17-23	Steel Beam Guardrail Tangent End Terminal (MASH TL-2)
DR-101	04-18-17	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
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-302	10-18-22	Rock Check Dam
EW-210	10-20-15	Standard Wing Dikes
EW-301	10-20-26	Guardrail Grading
EW-401	10-20-15	Temporary Stream Crossing, Causeway, or Equipment Pad
EW-501	10-17-23	Rural Entrance
LS-635	10-18-22	Steel Beam Guardrail Installation At Concrete Barrier Or Bridge Rail End Section (MASH TL-2)
SI-173	04-19-16	Object Markers
SI-211	10-18-22	Object Marker and Delineator Placement with Guardrail
TC-252	10-20-26	Routes Closed to Traffic

CBA-100

SUMMARY OF ROADWAY EXCAVATION

STATION	AREAS		RAW VOLUMES			
	CUT	FILL	CUT	ADD'L CUT	FILL	ADD'L FILL
	SF	SF	CY	CY	CY	CY
209+50	0	0				
210+00	228	50	211		46	610
210+40	112	55	252		78	275
211+30	51	193	272		413	625
BRIDGE	-	-	-	185	-	164
213+90	52	122	-	67	-	104
214+80	37	72	148		323	95
215+10	68	45	58		65	263
215+75	15	15	100		72	
216+00	0	0	7		7	
SUBTOTALS			1,048	252	1,004	2,136
TOTALS			1,300		3,140	

SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION.

CBA-101

SUMMARY OF EARTHWORK QUANTITIES

EXCAVATION TYPE	RAW CUT CY	RAW FILL CY	WASTE ** CY	USABLE CUT CY	SHRINKAGE FACTOR	FILL +35% SHRINKAGE CY	PAYMENT QUANTITY CY
CLASS 10, ROADWAY AND BORROW	1,300	3,140	0	1,300	35%	4,239	1,300
CLASS 10, CHANNEL	3,200	250	320	2,880	35%	338	3,200
TOTALS			320	4,180		4,577	
EMBANKMENT IN PLACE (EIP)	EIP = (4577 - 4180) / 1.35 SHRINK =						294

*** ASSUMES SOME MATERIAL WILL BE UNSUITABLE OR EXCESS AND WILL NEED TO BE WASTED ON SITE.*

108_13A
3/27/25

SAFETY CLOSURES

Station	Road Closure Qty.	Hazard Closure Qty.	Remarks
208+50.00	1		WEST END
216+10.00	1		EAST END

TRAFFIC CONTROL PLAN

1. ROUTE WILL BE CLOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC DURING CONSTRUCTION.
2. TRAFFIC CONTROL ON THE PROJECT SHALL BE IN ACCORDANCE WITH STANDARD ROAD PLAN TC–252.
3. TRAFFIC WILL BE MAINTAINED ON A DETOUR ROUTE, BREMER COUNTY WILL PROVIDE, MAINTAIN AND REMOVE DETOUR ROUTE.
4. BREMER COUNTY MAINTENANCE SHALL SALVAGE EXISTING ROAD MARKERS AFTER THE ROAD IS CLOSED.

213'–10 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS **TEE PIERS**
68'–3 END SPANS **77'–4 INTERIOR SPAN**

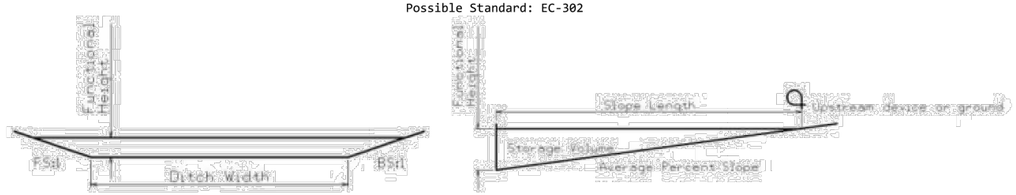
TYPICAL SECTIONS & TABULATIONS

STATION 212+60.00 **15° SKEW, RT. AHEAD**
BREMER COUNTY, **IOWA**

100_32
8/15/22

ROCK CHECK DAM

Possible Standard: EC-302



* The functional height used in the volume equation is 90% of effective height. Effective height is 2 feet as shown in EC-302.
* Volume equation: [0.5*Spacing*(0.5*H2*FS+DW*H+0.5*H2*BS)]

Basin No.	Station	Side	Offset	Installation (LF)	Maintenance (Each)	Removal (Each)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope	Volume (CF)	Remarks
4	215+40.00	Left		25.0	1		3.0	3.0	10.0	9.0	277.20	NE DITCH
4	215+60.00	Left		25.0	1		3.0	3.0	10.0	10.0	277.20	NE DITCH
4	215+80.00	Left		25.0	1		3.0	3.0	10.0	10.0	277.20	NE DITCH
Total				75.0	3						831.60	

100_17
8/15/22

TABULATION OF SILT FENCES

Refer to EC-201

Station From	Station To	Side	Length (FT)	Remarks
209+50.00	211+50.00	Left	220.00	TOE OF NW FORESLOPE
211+55.00	211+70.00	Left	110.00	TOP OF NW BANK
211+85.00	212+45.00		275.00	BENCH, TOP OF WEST BANK, BOTH
211+85.00	212+20.00	Right	70.00	TOP OF SW BANK
212+30.00	212+60.00	Right	65.00	TOP OF SW BANK
213+80.00	213+85.00	Right	100.00	TOP OF SE BANK
213+80.00	214+75.00	Right	170.00	TOE OF SE FORESLOPE & ENTRANCE
215+35.00	216+00.00	Right	160.00	TOE OF SE FORESLOPE & ENTRANCE
Total			1170.00	

100_19
10/15/24

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

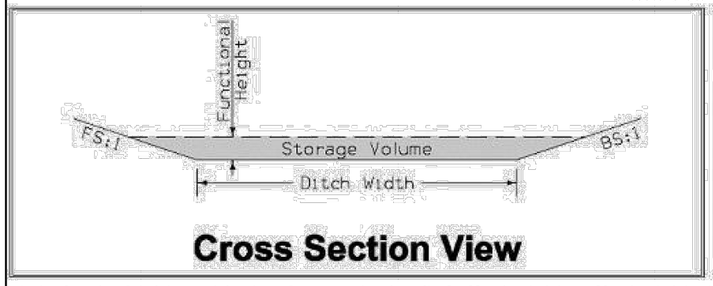
Possible Standards: EC-204

Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
211+85.00	212+65.00		Perimeter and Slope	12 inch	290.00	TOE OF WEST BANK
212+75.00	213+10.00		Perimeter and Slope	12 inch	200.00	TOE OF EAST BANK
Total					490.00	

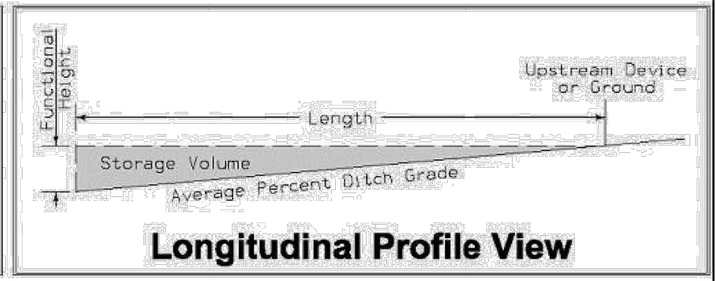
100_18
8/15/22

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
1	Type 1	210+60.00	Right	20.0	20.0		3.0	2.0	10.0	0.5	2825.55	SW DITCH
1	Type 1	212+15.00	Right	20.0	20.0		3.0	2.0	10.0	0.5	2825.55	SW DITCH
2	Type 1	213+70.00	Left	22.0	22.0		3.0	3.0	10.0	8.0	188.40	NE DITCH
2	Type 1	213+90.00	Left	22.0	22.0		3.0	3.0	10.0	8.0	188.40	NE DITCH
2	Type 1	214+10.00	Left	22.0	22.0		3.0	3.0	10.0	8.0	188.40	NE DITCH
2	Type 1	214+30.00	Left	22.0	22.0		3.0	3.0	10.0	8.0	188.40	NE DITCH
2	Type 1	214+50.00	Left	22.0	22.0		3.0	3.0	10.0	8.0	188.40	NE DITCH
Total				150.0	150.0						6593.10	

107_22
8/15/22

WING DIKES

Refer to Standard Road Plan EW-210.

Station	Top Elevation	Length (FT)	Bridge Skew	Earthwork (CY)
211+57.77	896.70	52.0	15.0	625.0

SURVEY CONTROL POINTS

CBA-300

Description	Northing	Easting	Approx. Station	Approx. Offset	Elevation
CP1	*8908586.87*	*15456867.88*	*212+02*	*76' LT.*	*889.72*
CP2	*8908398.19*	*15457003.40*	*213+39*	*112' RT.*	*890.23*
ROAD P.I., #4 SQ. BAR	*8908505.40*	*15457613.18*	*219+47*	*74' LT.*	*950.22*
ROAD P.I., #5 REBAR	*8907837.95*	*15458517.31*	*230+41*	*58' RT.*	*980.67*
Coordinate System				**Vertical Datum**	
(NAD83(2011)) IOWA RCS ZONE 5 (WATERLOO)				*NAVD88*	

213'-10 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS
68'-3 END SPANS

TEE PIERS
77'-4 INTERIOR SPAN

TABULATIONS

STATION 212+60.00
BREMER COUNTY,

15° SKEW, RT. AHEAD
IOWA

108_08A
4/25/25

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-209, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

(1) Lane(s) to which the obstacle is adjacent.
(2) Not a bid item. Incidental to guardrail installation.

Direction of Travel (1)	Side	Station	Offset (FT)	Barrier Transition Section	Barrier Transition Section (EA)	End Terminal	End Terminal Count (EA)	VT1 (LF)	VF (LF)	VT2 (LF)	ET (LF)	BA-211 Station	BA-211 (Type)	SI-211 (Type) (2)	Delineator SI-172 Type 1 (EA) (2)	Object Marker Type 2 (EA) (2)	Object Marker Type 3 Lt (EA)(2)	Object Marker Type 3 Rt (EA)(2)	Bolted End Anchor BA-202 (Type)	Bolted End Anchor BA-202 (EA)	Post Adapter BA-210 (EA)	Steel Beam Guardrail BA-200 (LF)	Remarks
WB	Left	211+35.51	15.8	BA-221	1	BA-225	1	37.500			35.20			3			1		A	1		12.5	WEST END, LT.
EB	Right	211+43.55	15.8	BA-221	1	BA-225	1	37.500			35.20			3				1	A	1		12.5	WEST END, RT.
WB	Left	213+76.45	15.8	BA-221	1	BA-225	1	37.500			35.20			3				1	A	1		12.5	EAST END, LT.
EB	Right	213+84.49	15.8	BA-221	1	BA-225	1	37.500			35.20			3			1		A	1		12.5	EAST END, RT.

107_23
8/15/22

GRADING FOR GUARDRAIL INSTALLATIONS

Refer to EW-301.

(1) Lane(s) to which the installation is adjacent.

Direction of Traffic (1)	Station	Side	Foreslope at Guardrail	X1 (FT)	Y1 (FT)	X2 (FT)	Y2 (FT)	X3 (FT)	Y3 (FT)	X4 (FT)	Y4 (FT)	Z (FT)	Excavation Class 10 (CY)	Embankment-in-Place (CY)	Remarks
WB	211+35.51	Left	3:1	36.9	5.3					72.0	6.3	43.6	90.0		WEST END, LT., LS-635
EB	211+43.55	Right	3:1	36.9	5.3					72.0	6.3	43.6	185.0		WEST END, RT., LS-635
WB	213+76.45	Left	3:1	36.9	5.3					72.0	6.3	43.6	35.0		EAST END, LT., LS-635
EB	213+84.49	Right	3:1	36.9	5.3					72.0	6.3	43.6	60.0		EAST END, RT., LS-635

110_13
8/15/22

DELIVERY AND STOCKPILING

Line No.	Item Description	Quantity	Quantity Units	Delivery Location	Contact Name	Contact Number	Remarks
1.0	2 - WF30X118	361	LF	ON SITE	LANDON MOORE	319-352-4302	STOCKPILE WITHIN R.O.W.
2.0	2 - WF27X91	361	LF	ON SITE	LANDON MOORE	319-352-4302	STOCKPILE WITHIN R.O.W.
Total		722					

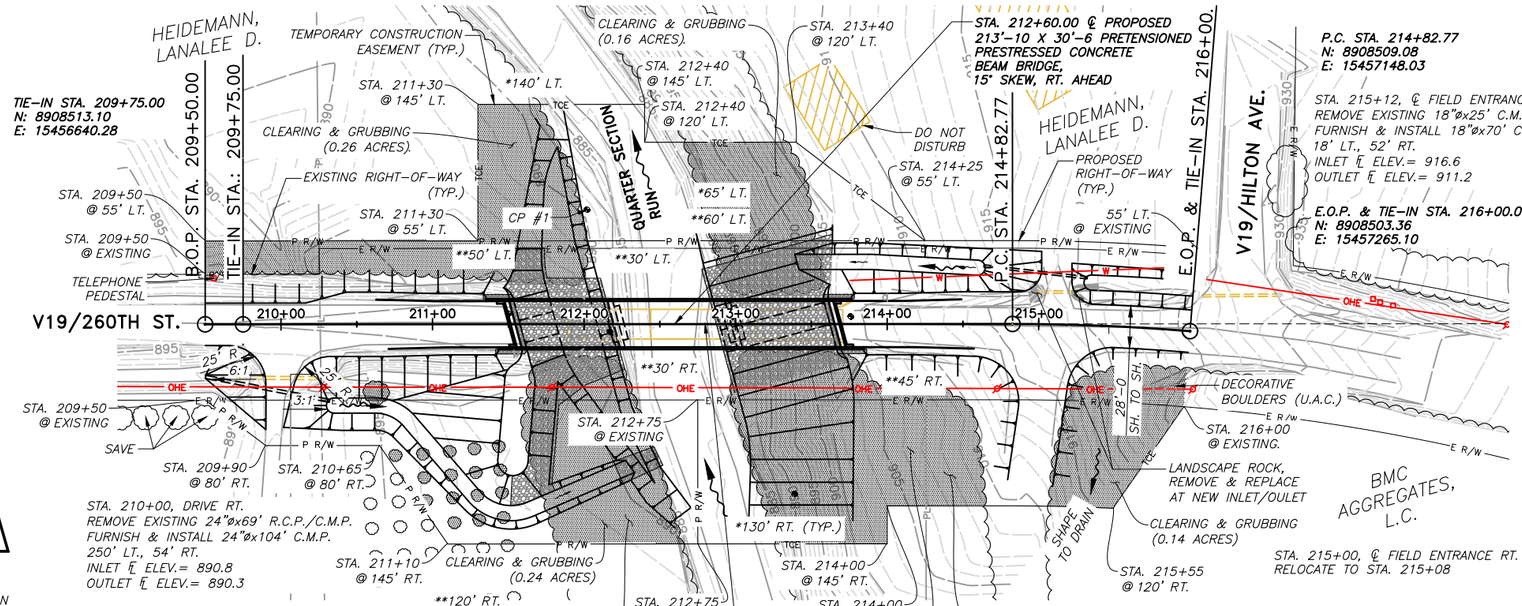
213'-10 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS — TEE PIERS
68'-3 END SPANS — 77'-4 INTERIOR SPAN

TABULATIONS

STATION 212+60.00 — 15° SKEW, RT. AHEAD
BREMER COUNTY, — IOWA

BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81



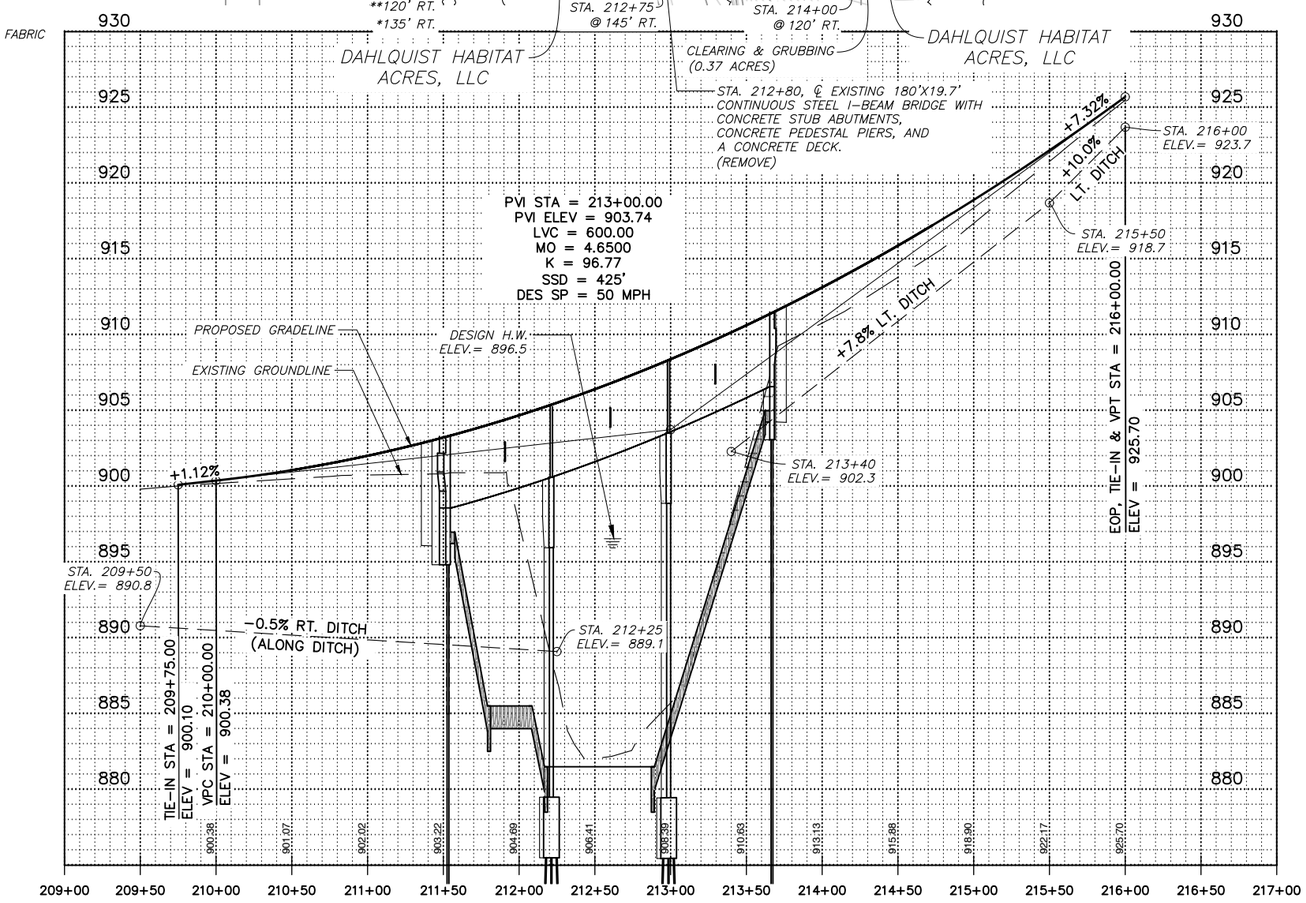
CURVE DATA

Da = 4°00'00"	PI Sta = 219+47.93
T = 465.17	N = 8908505.40
R = 1432.39	E = 15457613.18
L = 899.55	I = 35°58'55"
C = 884.84	
E = 73.64	
M = 70.04	

PLAN AND PROFILE

50 0 50 100

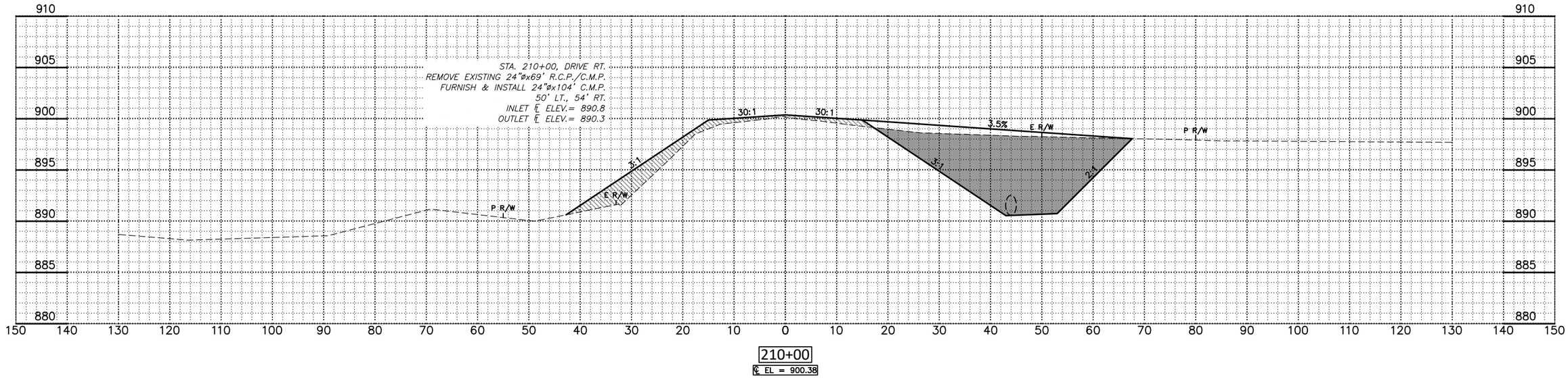
SEE 'SITUATION PLAN' FOR ADDITIONAL INFORMATION
* DENOTES LIMITS OF CLASS 10 (CHANNEL) EXCAVATION.
** DENOTES LIMITS OF CLASS 'E' REVETMENT AND ENGINEERING FABRIC



PLAN AND PROFILE

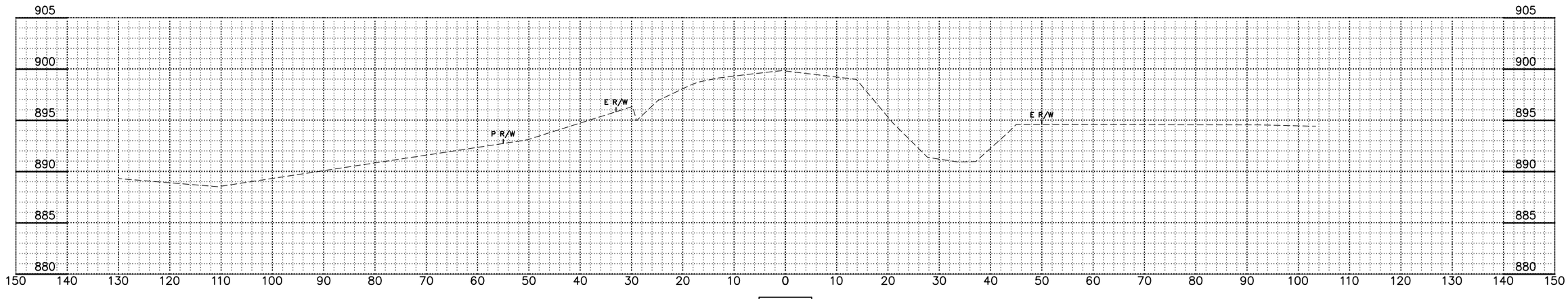
BREMER COUNTY, IOWA

BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81



210+00

℄ EL = 900.38



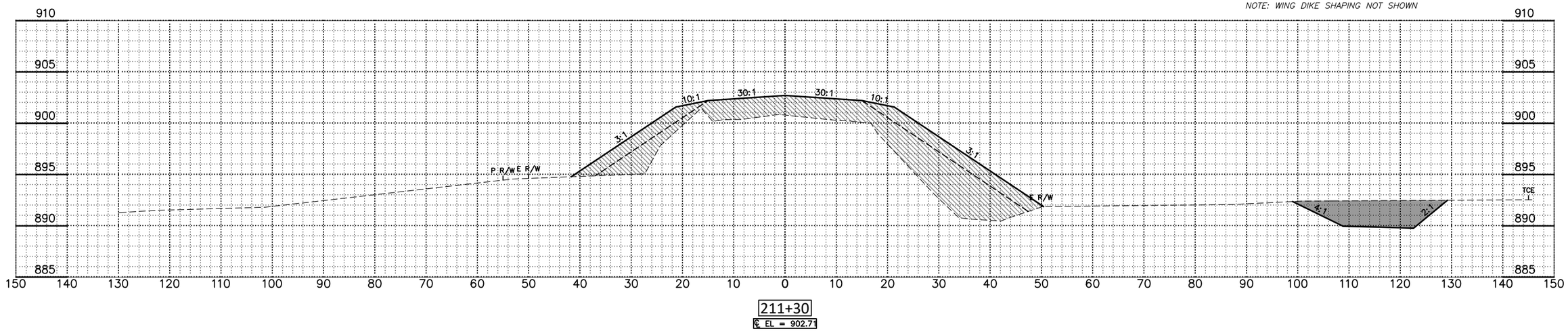
209+50

CROSS SECTIONS

BREMER COUNTY, IOWA

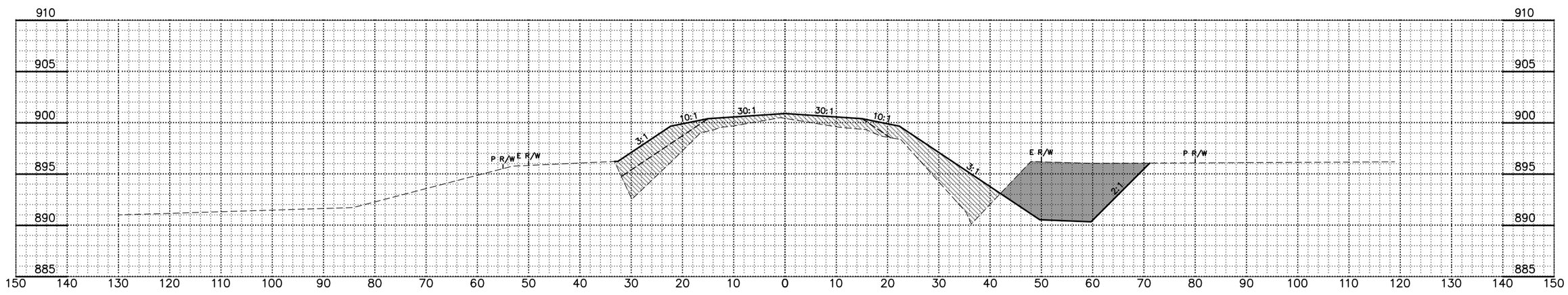
BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81

NOTE: WING DIKE SHAPING NOT SHOWN



211+30

℄ EL = 902.71



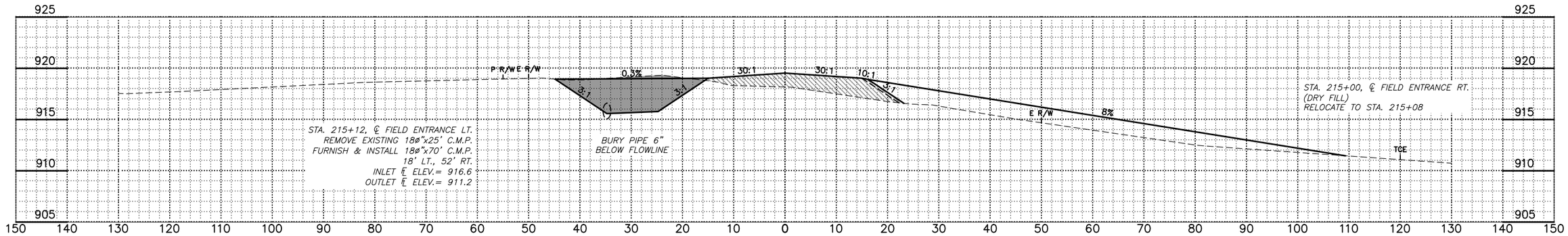
210+40

℄ EL = 900.91

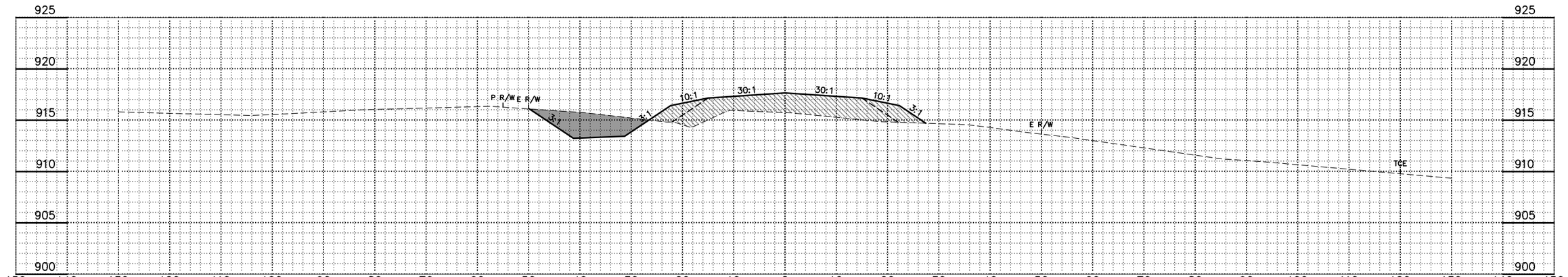
CROSS SECTIONS

BREMER COUNTY, IOWA

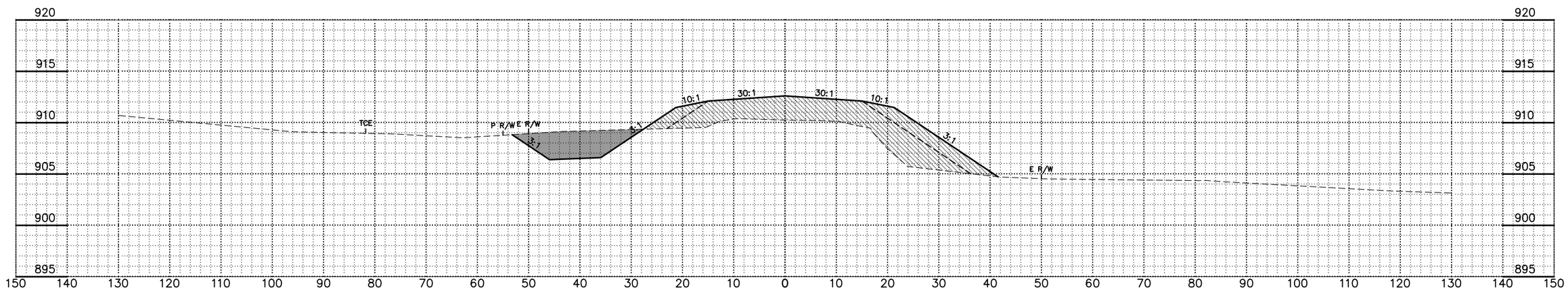
BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81



215+10
℄ EL = 919.53



214+80
℄ EL = 917.66

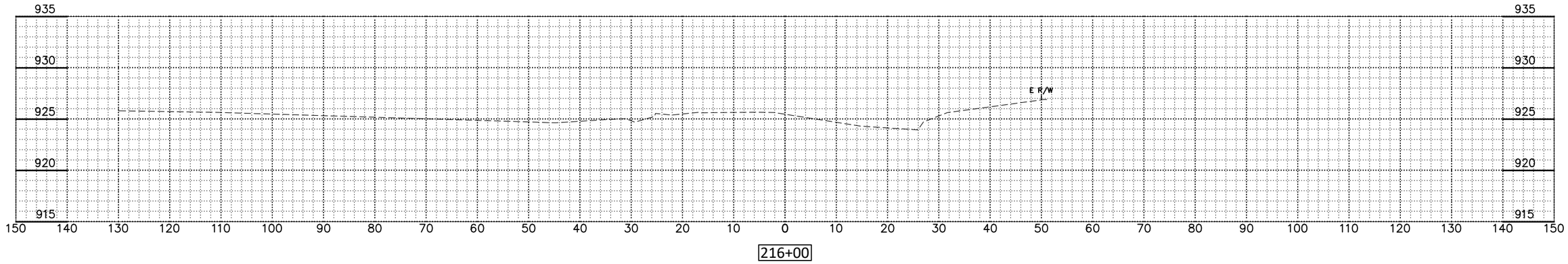


213+90
℄ EL = 912.61

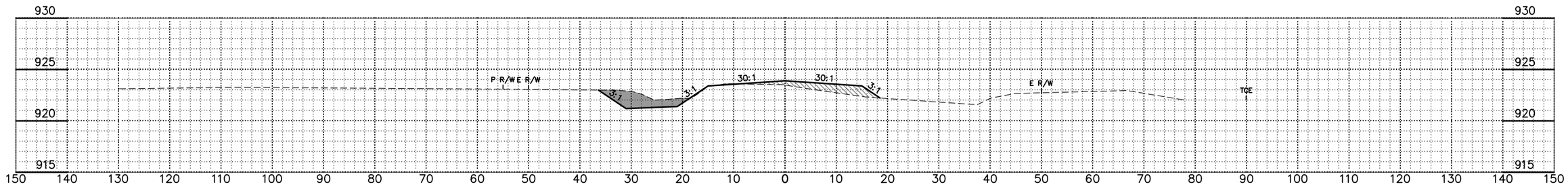
CROSS SECTIONS

BREMER COUNTY, IOWA

BENCH MARK: PT 1000, CONC. MONU, STA. 230+56, 15' LT. ELEV.= 981.81



216+00



215+75

℄ EL = 923.90

CROSS SECTIONS

BREMER COUNTY, IOWA