

BRIDGE REPLACEMENT - CCS
LETTING DATE: NOVEMBER 17, 2026

PROJECT NO. BROS-C068(100)--8J-68

MONROE COUNTY

TOTAL SHEETS
13

STANDARD ROAD PLANS

STANDARD ROAD PLANS ARE LISTED ON SHEET 8.

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.



PLANS OF PROPOSED IMPROVEMENT ON THE SECONDARY ROAD SYSTEM MONROE COUNTY

PROJECT NO. BROS-C068(100)--8J-68
BRIDGE REPLACEMENT - CCS
ON 535TH TRL, OVER CREEK, FROM 250TH ST. N APPROX.
0.7 MILES TO BRIDGE S15 T71 R19

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. 14+60.00 TO STA. 18+20.00 = 360.00 LIN.FT. = 0.0682 MILES

2022, TRAFFIC COUNT = 30 V.P.D.

UTILITY CONTACTS

COMPANY	UTILITY	CONTACT	PHONE #	EMAIL
WINDSTREAM TELEPHONE	COMMUNICATIONS	NICK COATNEY	641-436-1364	NICHOLAS.COATNEY@GOKINETIC.COM
RATHBUN REGIONAL WATER	WATER	CODY HEIDENWITH	641-647-1096	CHEIDENWITH@GMAIL.COM

PROJECT NO. BROS-C068(100)--8J-68
FHWA NO. 252340
COUNTY BR. NO. P-15-01-30-60

INDEX OF SHEETS

1. TITLE SHEET
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4. GENERAL NOTES
5. POLLUTION PREVENTION PLAN
6. SOUNDING DATA
7. SUPERSTRUCTURE DETAILS
- 8.-9. TABULATIONS
- 10.-13. CROSS SECTIONS

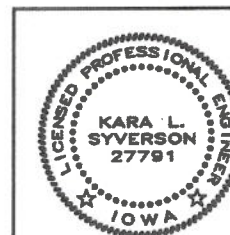
IOWA DEPARTMENT OF TRANSPORTATION STANDARDS REQUIRED

STANDARD	LATEST REVISION
J24-01-06	08-22
J24-02-08	08-22
J24-03-06	08-22
J24-20-08	08-22
J24-21-06	08-22
J24-23-06	08-22
J24-24-08	08-22
J24-35-06	08-22
J24-39-06	08-22
J24-40-06	08-22
J24-41-06	08-22
J24-43-06	08-22
P10L	06-25

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

INDEX OF SEALS

SHEET NO.	NAME	TYPE
BRIDGE STANDARDS	JAMES S. NELSON	STRUCTURAL DESIGN
P10L	JAMES S. NELSON	STRUCTURAL DESIGN
6	DAVID LOGEMANN	SOILS



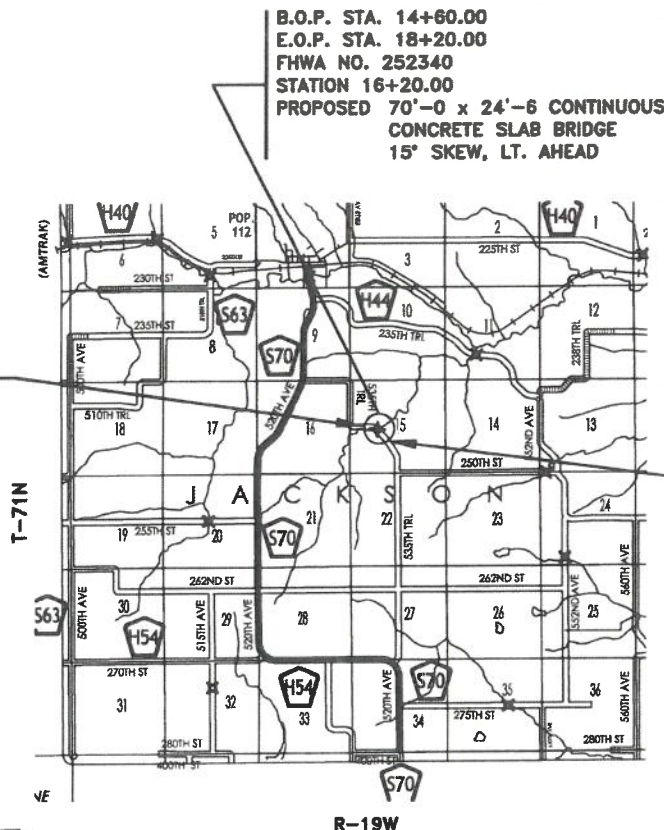
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Kara Syverson DATE: 7/7/2026
KARA L. SYVERSON, P.E.

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027.
PAGES OR SHEETS COVERED BY THIS SEAL:
1-5 AND 7-13 OF 13

APPROVED *David E. Silly* 8/4/2026
MONROE COUNTY ENGINEER DATE

Michael R. Beary 8/4/2026
8/4/2026
8/4/2026
BOARD OF SUPERVISORS DATE



PROJECT LOCATION

1 MI. 0 1 MI. 2 MI.

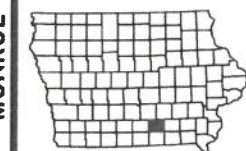


DRAWING APPROVAL

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.



TOTAL ESTIMATED QUANTITIES: 70'-0 x 24'-6 C.C.S. BRIDGE							
REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	2 PIERS	SUPER	TOTAL
1	2101-0850001	CLEARING AND GRUBBING	ACRE	-	-	-	0.6
2	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	-	-	-	735
3	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	-	-	-	631
4	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	-	-	-	450
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	-	-	-	650
6	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	-	-	-	115
7	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	-	-	-	1
8	2402-2720000	EXCAVATION, CLASS 20	CY	117	-	-	117
9	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	18.8	-	108.4	127.2
10	2404-7775000	REINFORCING STEEL	LB	2,734	-	31,515	34,249
11	2414-6424124	CONCRETE OPEN RAILING, TL-4	LF	-	-	162.2	162.2
12	2501-0201042	PILES, STEEL, HP 10 X 42; 10 @ 45', 12 @ 60'	LF	450	720	-	1,170
13	2501-5478042	CONCRETE ENCASEMENT OF STEEL H PILES, HP 10 X 42 (P10L TYPE 3); 12 @ 14'	LF	-	168	-	168
14	2505-4008300	STEEL BEAM GUARDRAIL	LF	-	-	-	50
15	2505-4008420	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-221	EACH	-	-	-	4
16	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	-	-	-	4
17	2505-4021722	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-225	EACH	-	-	-	4
18	2507-3250005	ENGINEERING FABRIC	SY	-	-	-	800
19	2507-6800061	REVTMENT, CLASS E	TON	-	-	-	525
20	2526-8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY	LS	-	-	-	1
21	2526-8285030	CONSTRUCTION SURVEY, RIGHT-OF-WAY	LS	-	-	-	1
22	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	-	-	-	1
23	2528-2518000	SAFETY CLOSURE	EACH	-	-	-	2
24	2528-8445110	TRAFFIC CONTROL	LS	-	-	-	1
25	2533-4980005	MOBILIZATION	LS	-	-	-	1
26	2601-2634100	MULCHING	ACRE	-	-	-	1.6
27	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	-	-	-	0.8
28	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	-	-	-	0.8
29	2602-0000020	SILT FENCE	LF	-	-	-	545
30	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	-	-	-	175
31	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	-	-	-	720
32	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	-	-	-	335
33	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	-	-	-	1
34	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	-	-	-	1

REF. NO. ESTIMATE REFERENCE INFORMATION

1.

SEE SITUATION PLAN, SHEET 3, 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 TABULATION CBA-101 ON SHEET 8 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
TYPE "A" COMPACTION WILL BE REQUIRED.
3.

SEE TABULATION CBA-101 ON SHEET 8 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
INCLUDES ALL COST TO REMOVE UNSUITABLE OR EXCESS MATERIAL FROM SITE. THE UNSUITABLE OR EXCESS MATERIAL SHALL BE WASTED AT A LOCATION PROVIDED BY THE CONTRACTOR AND NOTED TO THE ENGINEER.
4.

SEE TABULATION CBA-101 ON SHEET 8 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 3.
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 (1400 AND 600 TONS /MILE).
7.

THE EXISTING BRIDGE AT STATION 16+17 IS A 62' x 20' TIMBER STRINGER BRIDGE WITH HIGH TIMBER ABUTMENTS, TIMBER BENT PIERS AND A TIMBER DECK BUILT IN 1959.
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. ALL 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.

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.

INCLUDES COST OF TAR PAPER.
THE SUBDRAIN SHOWN ON THE WING ARMORING DETAILS IN THE J STANDARDS SHALL BE OMITTED.
THE MACADAM STONE SHOWN ON THE WING ARMORING DETAILS IN THE J STANDARDS SHALL EXTEND ACROSS THE BERM AS SHOWN IN DETAIL 'B' ON THE SITUATION PLAN, SHEET 3. 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.
10.

ALL REINFORCING SHALL BE GRADE 60.
11.

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.
12.

SEE PILE NOTES ON SHEET 4.
PILE POINTS SHALL NOT BE UTILIZED FOR THIS PROJECT.
13.

CERTIFIED PLANT INSPECTION IS REQUIRED.
NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR HEATING AND PROTECTION OF CONCRETE, IF NECESSARY.
CAP STEEL IS REQUIRED.
- 14-17.

SEE TABULATIONS 108-8A AND 107-23 ON SHEET 9.
19.

REVTMENT IS TO BE PLACED AT A THICKNESS OF 1'-6. SEE SITUATION PLAN, SHEET 3 FOR LIMITS.
- 20-22.

SEE TABULATION CBA-300 ON SHEET 8 FOR FIELD TIES TO THE SITE SURVEY.
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.
24.

SEE TRAFFIC CONTROL PLAN ON SHEET 8.
- 26-28.

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 5 FOR STABILIZING CROP REQUIREMENT.
- 29-34.

SEE POLLUTION PREVENTION PLAN, SHEET 5, AND TABULATIONS 100-17, 100-18 AND 100-19 ON SHEET 8.

70'-0 x 24'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

INTEGRAL ABUTMENTS
21'-0 END SPANS

P10L PIERS
28'-0 INTERIOR SPAN

QUANTITY SUMMARY

STATION 16+20.00
MONROE COUNTY,

15' SKEW, LT. AHEAD
IOWA

SPECIFICATIONS

DESIGN: AASHTO LRFD 3rd EDITION, SERIES OF 2004, WITH INTERIM 2005.
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, 3rd EDITION, SERIES 2004, WITH INTERIM 2005.
REINFORCING STEEL IN ACCORDANCE WITH LRFD AASHTO SECTION 5, GRADE 60.
CONCRETE IN ACCORDANCE WITH LRFD AASHTO SECTION 5, F'C=3,500 PSI.

GENERAL NOTES

THIS DESIGN IS FOR A 70' x 24'-6 CONTINUOUS CONCRETE SLAB BRIDGE ON 535TH TRAIL OVER BEE BRANCH CREEK IN MONROE 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://eri.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.

HAZARDOUS MATERIALS NOTES

AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS WAS COMPLETED BY:
SCOTT BROWN OF IOWA ENVIRONMENTAL SERVICES
IA LICENSE NUMBER: 23-110451
DATE INSPECTED: 03/17/2025
PHONE: 515-279-8042

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.

ABUTMENT PILE

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 70 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.77. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF FOOTING.
THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE ABUTMENT PILES IS 46 TONS AT END OF DRIVE (EOD). IF RETAPS ARE NECESSARY TO ACHIEVE BEARING, THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE IS 54 TONS AT ONE-DAY OR LATER 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 60 FEET FOR THE PIER PILES IS BASED ON A COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 102 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.76. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF ENCASEMENT. DESIGN SCOUR (50-YEAR) WAS ASSUMED TO AFFECT THE UPPER 2 FEET OF EMBEDDED PILE LENGTH AND CAUSE 3 KIPS OF DRIVING RESISTANCE.
THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE PIER PILES IS 68 TONS AT END OF DRIVE (EOD). IF RETAPS ARE NECESSARY TO ACHIEVE BEARING, THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE IS 80 TONS AT ONE-DAY OR LATER 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.
TOP AND BOTTOM REINFORCING STEEL IS TO BE SUPPORTED AS NOTED ON STANDARD J24-02-06 AND J24-20-06.
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.

70'-0 x 24'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

INTEGRAL ABUTMENTS P10L PIERS
21'-0 END SPANS 28'-0 INTERIOR SPAN

GENERAL NOTES

STATION 16+20.00 15' SKEW, LT. AHEAD
MONROE 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 70'-0" X 24'-6" CONTINUOUS CONCRETE SLAB BRIDGE ON 535TH TRL OVER BEE BRANCH CREEK IN MONROE COUNTY, IOWA.
- B. THIS PPP COVERS APPROXIMATELY 1.1 ACRES WITH AN ESTIMATED 1.1 ACRES BEING DISTURBED. THE PORTION OF THE PPP COVERED BY THIS CONTRACT HAS 1.1 ACRES DISTURBED.
- C. THE PPP IS LOCATED IN AN AREA OF ONE SOIL ASSOCIATION(S) (GRUNDY-HAIG-ARISPE-GARA). THE ESTIMATED WEIGHTED AVERAGE RUNOFF COEFFICIENT NUMBER FOR THIS PPP AFTER COMPLETION WILL BE 0.32.
- D. STORM WATER SITE MAP - MULTIPLE SOURCES OF INFORMATION COMPRISE THE BASE STORM WATER SITE MAP INCLUDING:
 - 1. DRAINAGE PATTERNS – SITUATION PLAN.
 - 2. PROPOSED SLOPES – CROSS SECTIONS.
 - 3. AREAS OF SOIL DISTURBANCE – CONSTRUCTION LIMITS SHOWN ON SITUATION PLAN.
 - 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.
 - 7. SURFACE WATERS (INCLUDING WETLANDS) – PROJECT LOCATION MAP AND SITUATION PLAN.

- 8. LOCATIONS WHERE STORM WATER IS DISCHARGED – SITUATION PLAN.
- 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 BEE BRANCH CREEK.

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.

Jeremiah E. Selfby - Monroe County Engineer

SIGNATURE

Jeremiah E. Selfby - Monroe County Engineer

PRINTED OR TYPED NAME

POLLUTION PREVENTION PLAN

MONROE COUNTY,

IOWA

BORING LOG NO. 3		STATION 15+80, 3.5'RT		CBA Job No.: 968-002		Project No.: 261147							
Project: 535th Trail Bridge over Branch of Bee Creek, Sec. 15, Jackson Twp Monroe County, Iowa				Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA									
Surface Elevation: 888.4'				Date Drilled: 4/1/2026		Drilling Method: HSA							
Datum: BM at Exist S Abut Elev = 888.52'				Drilling Depth, ft.: 60		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 ft.	Elevation ft.
	0							Crushed Rock (9"±)				0.8	
								Dark brown sandy lean clay, trace gravel, moist		CL		887.6	
880	10							FILL				8	
								Very dark brown sandy lean clay, moist to very moist		CL		880.4	
								COHESIVE ALLUVIUM (Stiff Silty Clay)				16	
								Moisture seepage near 16'				872.4	
870	20							Gray sandy lean to fat clay, trace gravel, moist		CL-CH			
								GLACIAL TILL (Firm Glacial Clay)				28	
860	30							Dark gray sandy lean to fat clay, trace gravel, moist		CL-CH		860.4	
								GLACIAL TILL (Very Firm Sandy Glacial Clay)				52	
850	40							Dark gray silty fine sand, saturated		SM		836.4	
								GLACIAL OUTWASH (Granular Material)				60	
840	50							End of Boring				828.4	
830	60												
*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: 16.5 ft. ft. ft.													
ALLENDER BUTZKE ENGINEERS, INC.													
Geotechnical - Environmental - Construction Q.C.													

BORING LOG NO. <u>2</u>		STATION <u>16+08, 4'LT</u>		CBA Job No.: <u>968-002</u>		Project No.: <u>261147</u>	
Project: <u>535th Trail Bridge over</u> <u>Branch of Bee Creek, Sec. 15, Jackson Twp</u> <u>Monroe County, Iowa</u>				Client: <u>Calhoun-Burns & Associates</u> <u>6775 Vista Drive</u> <u>West Des Moines, IA</u>			
Surface Elevation: <u>888.6'</u> Datum: <u>BM at Exist S Abut Elev = 888.52'</u>				Date Drilled: <u>4/1/2026</u> Drilling Depth, ft.: <u>60.5</u>			
				Drilling Method: <u>HSA</u> Page: <u>1</u> of <u>1</u>			

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 ft.	Elevation ft.
	0							Wooden Bridge Deck (4"±)				0.3	
								Air				888.3	
880	10												
		1	SSA	3	22.4			Brown-gray silty fine to medium sand, saturated GRANULAR ALLUVIUM (Silty Sand)		SM		14.5	
	20											874.1	
		2	SSA	12	17.3			Brown-gray sandy lean to fat clay, trace gravel, moist to very moist Very sandy after 23' GLACIAL TILL (Firm Glacial Clay)		CL-CH		18	
												870.6	
860	30	3	SSA	10	16.8								
		4	SSA	18	14.4			Dark gray sandy lean to fat clay, trace gravel, moist		CL-CH		31	
												857.6	
850	40	5	SSA	20	14.0			GLACIAL TILL (Very Firm Sandy Glacial Clay)					
		6	SSA	24	12.5								
840	50	7	SSA	26	15.4								
		8	SSA	76				Dark gray silty fine sand, saturated GLACIAL OUTWASH (Granular Material)		SM		53	
												835.6	
830	60	9	SSA	86									
												60.5	
								End of Boring				828.1	

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

BORING LOG NO. <u>1</u>		STATION <u>16+57.3'LT</u>		CBA Job No.: <u>968-002</u>		Project No.: <u>261147</u>	
Project: <u>535th Trail Bridge over</u> <u>Branch of Bee Creek, Sec. 15, Jackson Twp</u> <u>Monroe County, Iowa</u>				Client: <u>Calhoun-Burns & Associates</u> <u>6775 Vista Drive</u> <u>West Des Moines, IA</u>			
Surface Elevation: <u>887.9'</u> Date: <u>BM at Exist S Abut Elev = 888.52'</u>				Date Drilled: <u>4/1/2026</u> Drilling Depth, ft.: <u>61</u>		Drilling Method: <u>HSA</u> Page: <u>1</u> of <u>1</u>	

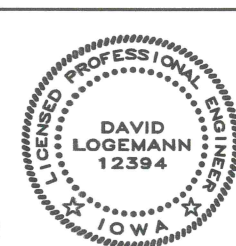
Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description *	Graphic Log	USCS	Water Level	Depth Elevation ft.
0								Crushed Rock (6"±)				0.5
		1	SSA	5	18.9			Dark brown sandy lean clay with wood and brick mixed in, moist FILL		CL		887.4
880												8
	10	2	SSA	6	23.4			Dark brown sandy lean clay, moist to very moist COHESIVE ALLUVIUM (Stiff Silty Clay)		CL		879.9
												12
		3	SSA	6	26.6			Dark gray silty fine sand, very moist GRANULAR ALLUVIUM (Silty Sand)		SM		875.9
870												
	20	4	SSA	3				Gray silty fine to medium sand, saturated after 18'				23
		5	SSA	5	27.2			Gray sandy lean to fat clay, trace gravel, moist		CL-CH		864.9
860												
	30	6	SSA	9	28.4			GLACIAL TILL (Firm Glacial Clay)				
		7	SSA	9	16.5			Very sandy after 33'				
850												
	40	8	SSA	11	20.9			Brown-gray silty fine to medium sand after 37'		SM		40
		9	SSA	22	15.1			Dark gray sandy lean to fat clay, trace gravel, moist		CL-CH		847.9
840												
	50	10	SSA	25	15.4			GLACIAL TILL (Very Firm Sandy Glacial Clay)				
		11	SSA	25	15.6							
830												
	60	12	SSA	29	17.2							61
								End of Boring				826.9
820												

*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: <u>18</u> ft. <u>±</u> ft. <u>±</u> ft. <u>±</u>	ALLENDER BUTZKE ENGINEERS, INC. Geotechnical - Environmental - Construction Q.C.
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SOUNDING DATA

(SEE "SITUATION PLAN", SHEET 3, FOR BORING LOCATIONS)



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.

DATE: 9/14/26

DAVID LOGEMANN, P.E.

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027

PAGES OR SHEETS COVERED BY THIS SEAL:

6 OF 13

70'-0 x 24'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

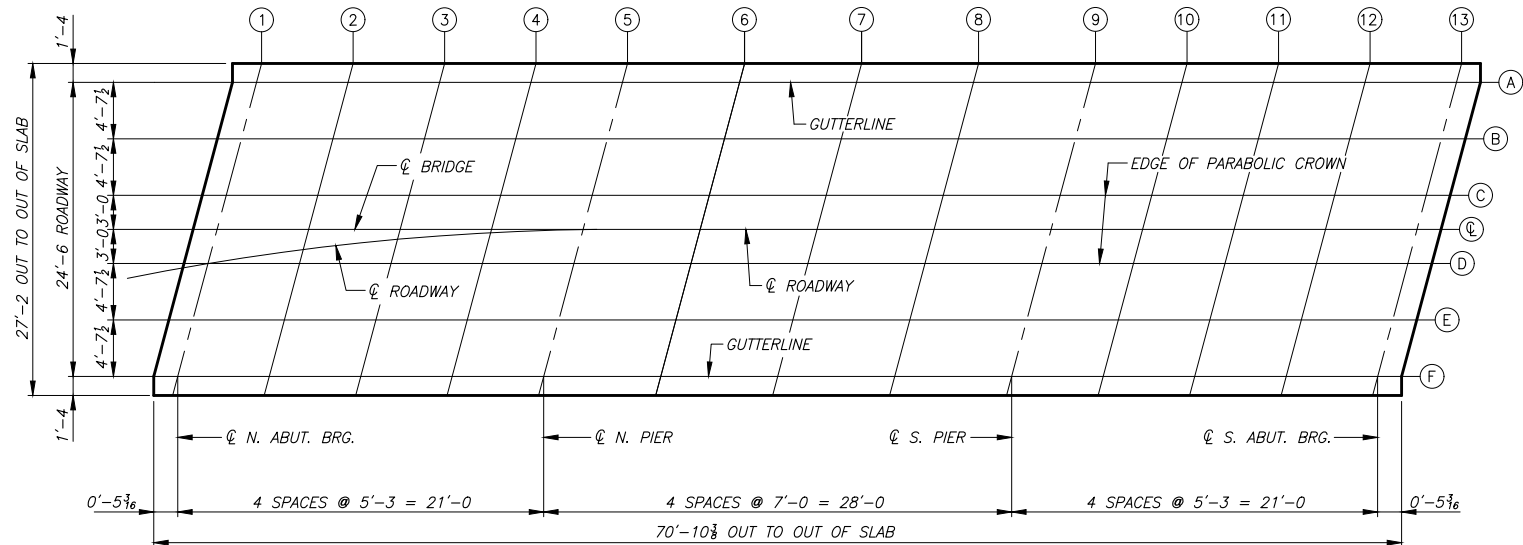
INTEGRAL ABUTMENTS
21'-0" END SPANS

P10L PIERS
28'-0" INTERIOR SPAN

SOUNDING DATA

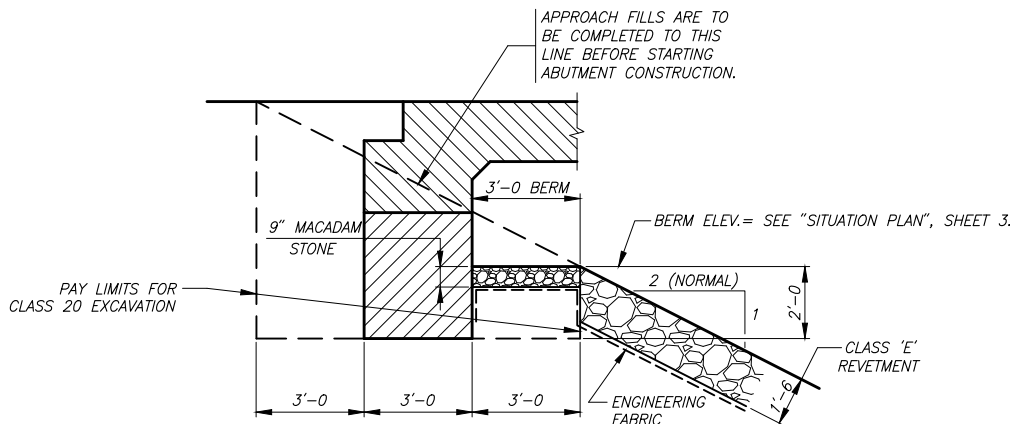
STATION 16+20.00
MONROE COUNTY,

15' SKEW, LT. AHEAD
IOWA



TOP OF SLAB ELEVATIONS

	CL N. ABUT. BRG.				CL BEARING N. PIER				CL BEARING S. PIER				CL S. ABUT. BRG.		
LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13		LOCATION
A	887.53	887.53	887.52	887.51	887.49	887.46	887.42	887.37	887.31	887.25	887.20	887.13	887.06		A
B	887.63	887.63	887.62	887.61	887.60	887.57	887.53	887.48	887.42	887.37	887.31	887.25	887.18		B
C	887.72	887.72	887.72	887.71	887.69	887.66	887.63	887.58	887.52	887.47	887.41	887.35	887.29		C
CL	887.75	887.75	887.75	887.74	887.72	887.70	887.66	887.61	887.56	887.51	887.45	887.39	887.33		CL
D	887.72	887.72	887.72	887.71	887.70	887.67	887.63	887.59	887.53	887.49	887.43	887.37	887.31		D
E	887.63	887.63	887.63	887.62	887.61	887.59	887.55	887.51	887.45	887.41	887.35	887.30	887.23		E
F	887.52	887.53	887.53	887.52	887.51	887.49	887.46	887.42	887.36	887.32	887.27	887.21	887.15		F

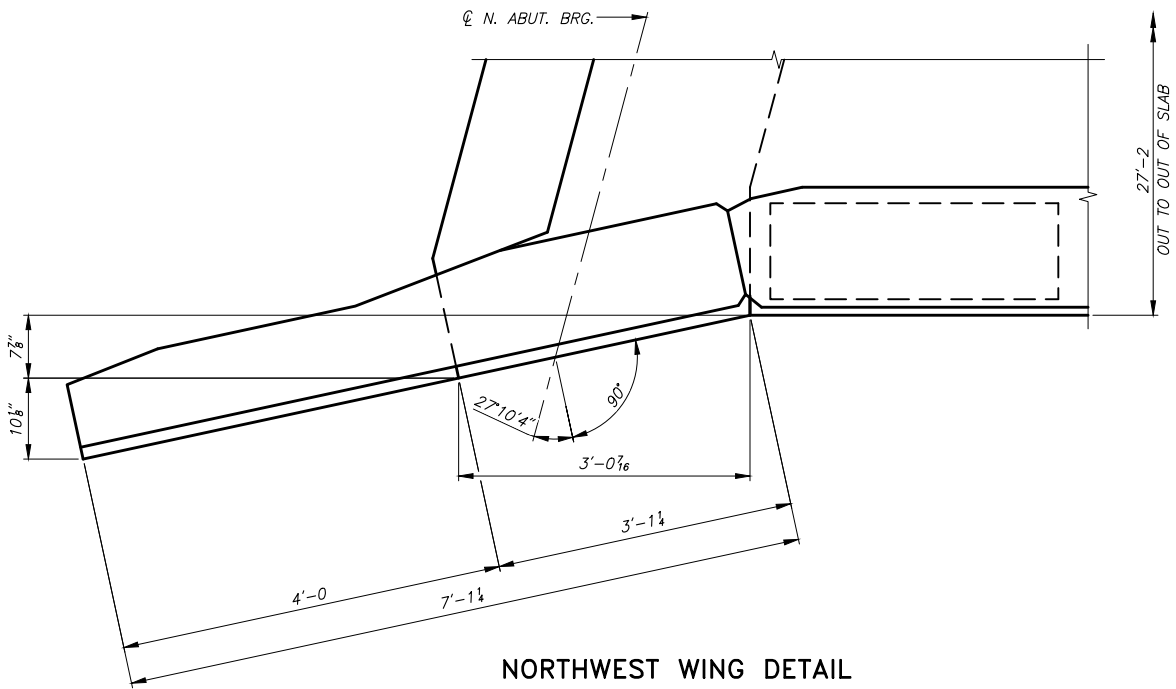


ABUTMENT EXCAVATION DETAIL

BRIDGE COORDINATES			
LOCATION	EAST EDGE OF DECK	C.L. APPROACH ROADWAY	WEST EDGE OF DECK
NORTH ABUTMENT	N = 6212544.98	N = 6212551.02	N = 6212557.51
	E = 22697346.73	E = 22697359.11	E = 22697372.42
NORTH PIER	N = 6212529.33	N = 6212535.49	N = 6212541.66
	E = 22697360.92	E = 22697373.55	E = 22697386.20
SOUTH PIER	N = 6212508.20	N = 6212514.36	N = 6212520.53
	E = 22697379.29	E = 22697391.93	E = 22697404.57
SOUTH ABUTMENT	N = 6212492.35	N = 6212498.52	N = 6212504.68
	E = 22697393.06	E = 22697405.70	E = 22697418.34

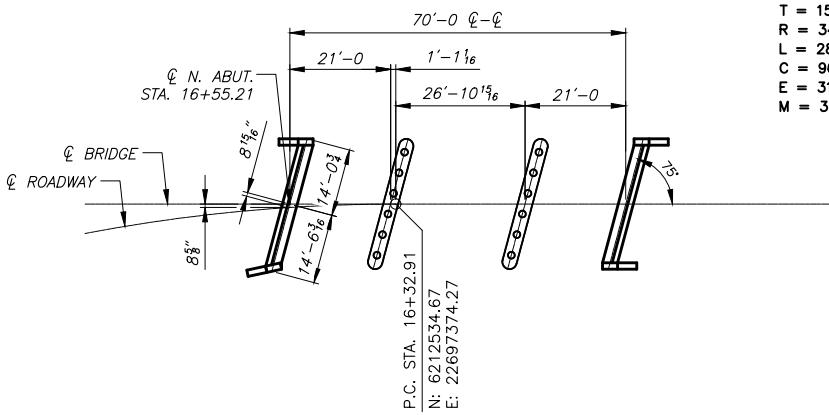
CURVE DATA

Da = 16°36'27" PI Sta = 17+83.66
T = 150.75 N = 6212648.44
R = 345.00 E = 22697275.37
L = 284.24 I = 47°12'20"
C = 96.78
E = 31.50
M = 3.41



NORTHWEST WING DETAIL

NOTE: SKEW END OF ABUTMENT AND
EDGE OF SLAB AT NORTHWEST
WING AS SHOWN.



NORTH ABUTMENT STAKING DIAGRAM



NOTE: WINGS NOT SHOWN. SEE NW WING
DETAIL FOR ADDITIONAL INFORMATION.

70'-0 x 24'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

INTEGRAL ABUTMENTS
21'-0 END SPANS

P10L PIERS
28'-0 INTERIOR SPAN

SUPERSTRUCTURE DETAILS

STATION 16+20.00
MONROE COUNTY,

15' SKEW, LT. AHEAD
IOWA

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)
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EW-301	10-20-26	Guardrail Grading
EW-401	10-20-15	Temporary Stream Crossing, Causeway, or Equipment Pad
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-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	735	310	181	554	35%	419	735
CLASS 10, CHANNEL	450	100	450	0	35%	135	450
TOTALS			631	554		554	
** ASSUMES SOME MATERIAL WILL BE EXCESS AND WILL NEED TO BE WASTED OFF SITE.							
108_13A 3/27/25							
SAFETY CLOSURES							
Station	Road Closure Qty.	Hazard Closure Qty.	Remarks				
13+50.00	1		SOUTH END				
19+20.00	1		NORTH END, SOUTH OF FIELD ENTRANCE				

SURVEY CONTROL POINTS						CBA-300
Description	Northing	Easting	Approx. Station	Approx. Offset	Elevation	
CP2	6212194.51	22697686.19	11+72	12' RT.	887.98	
CP1	6212669.52	22697119.72	19+23	16' RT.	884.55	
Coordinate System					Vertical Datum	
(NAD83(2011)) IOWA RCS ZONE 12 (RED OAK-OTTUMWA)					NAVD88	

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. A DETOUR ROUTE WILL NOT BE ESTABLISHED FOR THIS PROJECT.	
4. MONROE COUNTY MAINTENANCE SHALL SALVAGE EXISTING ROAD MARKERS AFTER THE ROAD IS CLOSED.	

100_18

8/15/22

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201

* 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: $[0.5 \times \text{Spacing} \times (0.5 \times H^2 \times FS + DW \times H + 0.5 \times H^2 \times BS)]$

Line No.	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
1.0	1	Type 1	14+70.00	Left	21.0	21.0		3.0	3.0	9.0	4.2	306.25	SW DITCH
2.0	1	Type 1	15+05.00	Left	22.0	22.0		3.0	3.0	10.0	4.2	329.70	SW DITCH
3.0	1	Type 1	15+40.00	Left	22.0	22.0		3.0	3.0	10.0	4.2	329.70	SW DITCH
4.0	1	Type 1	15+75.00	Left	22.0	22.0		3.0	3.0	10.0	4.2	329.70	SW DITCH
5.0	1	Type 1	16+10.00	Left	22.0	22.0		3.0	3.0	10.0	4.2	329.70	SW DITCH
6.0	2	Type 1	16+35.00	Right	22.0	22.0		3.0	3.0	10.0	2.0	706.50	NE DITCH
7.0	2	Type 1	17+00.00	Right	22.0	22.0		3.0	3.0	10.0	2.0	706.50	NE DITCH
8.0	2	Type 1	17+65.00	Right	22.0	22.0		3.0	3.0	10.0	2.0	706.50	NE DITCH

Total 175.0 175.0

100_19 10/15/24							
PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE							
Possible Standards: EC-204							
Line No.	Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
1.0	16+00.00	16+50.00		Perimeter and Slope	12 inch	170.00	BOTH SIDES, TOE OF SOUTH STREAM BANK
2.0	16+15.00	16+65.00		Perimeter and Slope	12 inch	165.00	BOTH SIDES, TOE OF NORTH STREAM BANK
Total						335.00	

100_17 8/15/22					
TABULATION OF SILT FENCES					
Refer to EC-201					
Line No.	Station From	Station To	Side	Length (FT)	Remarks
1.0	14+60.00	15+80.00	Right	145.00	TOE OF SE FORESLOPE
2.0	15+80.00	15+90.00	Right	70.00	TOP OF SE STREAM BANK
3.0	16+20.00	16+45.00	Left	60.00	TOP OF SW STREAM BANK
4.0	16+30.00	16+30.00	Right	35.00	TOP OF NE STREAM BANK
5.0	16+60.00	16+90.00	Left	70.00	TOP OF NW STREAM BANK
6.0	16+60.00	18+20.00	Left	165.00	TOE OF NW FORESLOPE
Total				545.00	

70'-0 x 24'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

INTEGRAL ABUTMENTS
21'-0 END SPANS

P10L PIERS
28'-0 INTERIOR SPAN

TABULATIONS

STATION 16+20.00
MONROE COUNTY,

15' SKEW, LT. AHEAD
IOWA

*FROM BRIDGE CENTERLINE

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.

Line No.	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
1.0	NB	Right	15+76.23	12.8	BA-221	1	BA-225	1	37.500			35.17			1		2		1	A	1		12.5	SOUTH END, RT., LS-635
2.0	SB	Left	15+82.66	12.8	BA-221	1	BA-225	1	37.500			35.17			1		2	1		A	1		12.5	SOUTH END, LT., LS-635
3.0	NB	Right	16+56.52	12.8*	BA-221	1	BA-225	1	37.500			35.17			1		2	1		A	1		12.5	NORTH END, RT., LS-635
4.0	SB	Left	16+65.02	12.8*	BA-221	1	BA-225	1	37.500			35.17			1		2		1	A	1		12.5	NORTH END, LT., LS-635

*DOES NOT INCLUDE SHRINK FACTOR. INCLUDED IN CLASS 10 ROADWAY AND BORROW.

107_23
8/15/22

GRADING FOR GUARDRAIL INSTALLATIONS

Refer to EW-301.

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

Line No.	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
1.0	NB	15+76.23	Right	3:1	36.9	3.3					72.0	4.3	36.2	31.0		SOUTH END, RT.
2.0	SB	15+82.66	Left	3:1	36.9	3.3					72.0	4.3	36.2	7.0		SOUTH END, LT.
3.0	NB	16+56.52	Right	3:1	36.9	8.5					72.0	16.9	99.0	70.0		NORTH END, RT.
4.0	SB	16+65.02	Left	3:1	36.9	5.7					72.0	5.0	25.4	35.0		NORTH END, LT.

70'-0 x 24'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

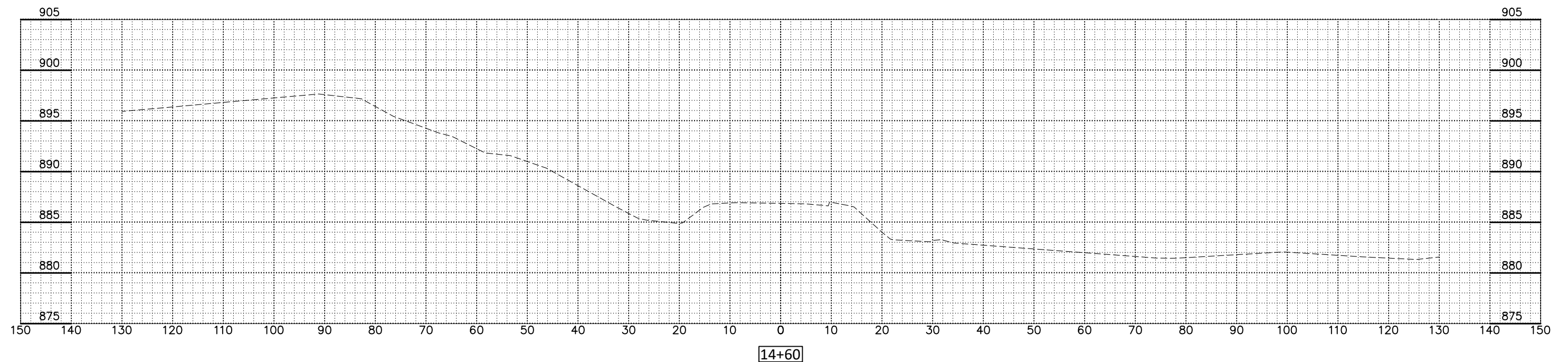
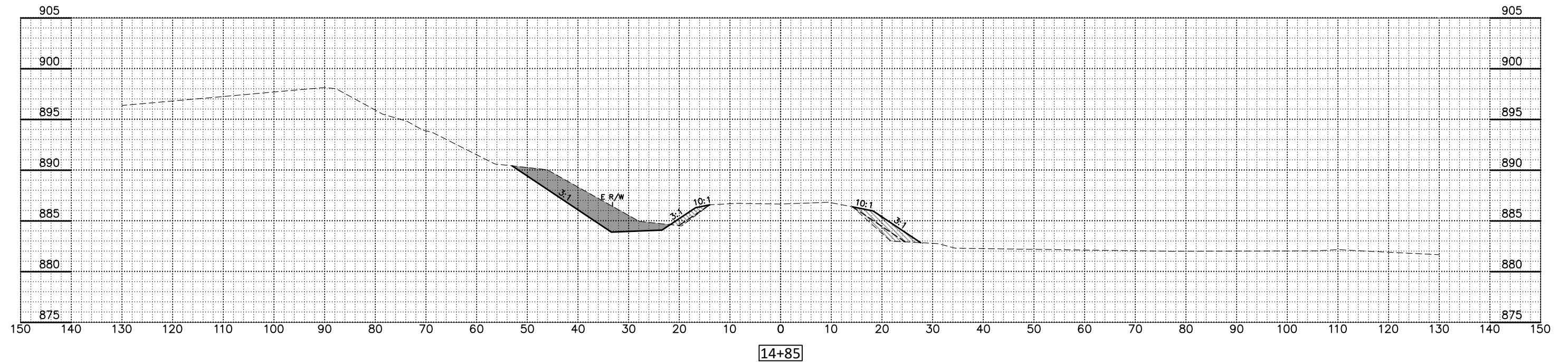
INTEGRAL ABUTMENTS
21'-0 END SPANS

P10L PIERS
28'-0 INTERIOR SPAN

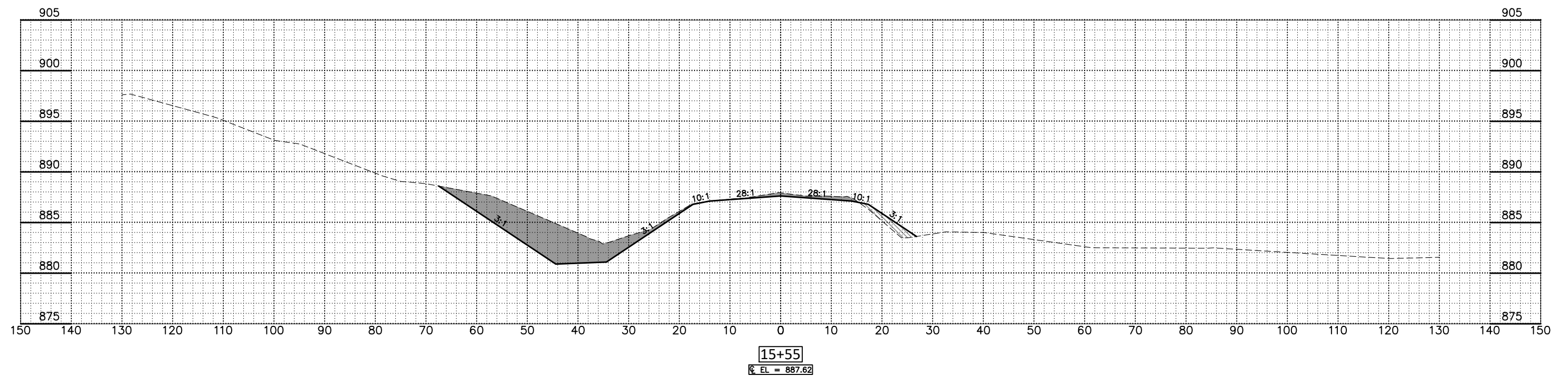
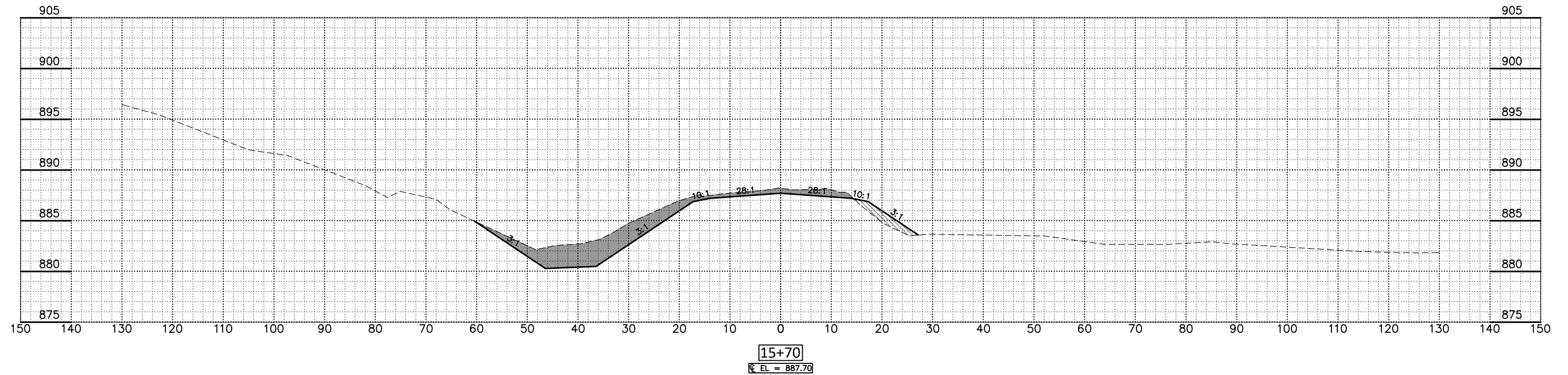
TABULATIONS

STATION 16+20.00
MONROE COUNTY,

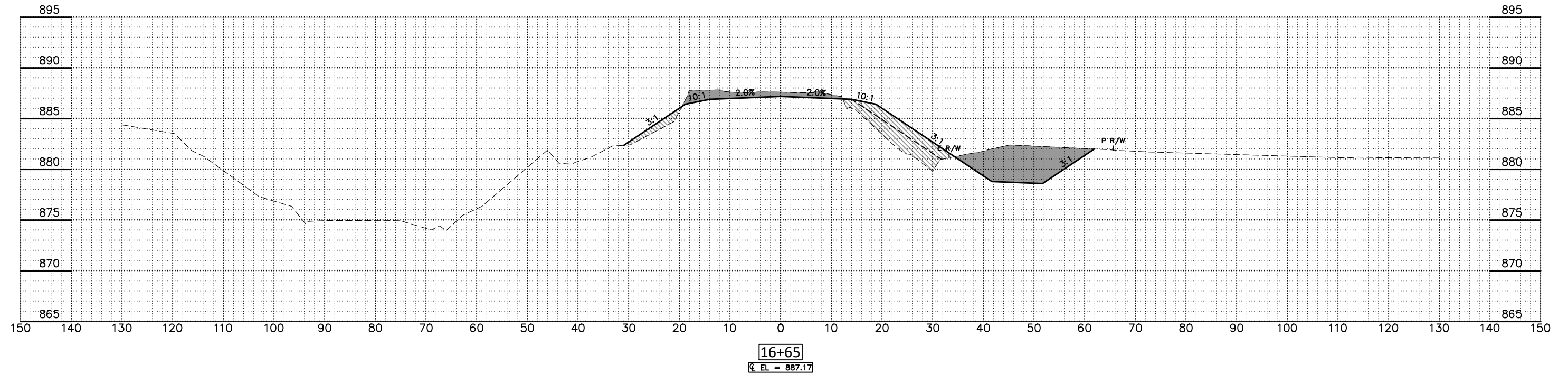
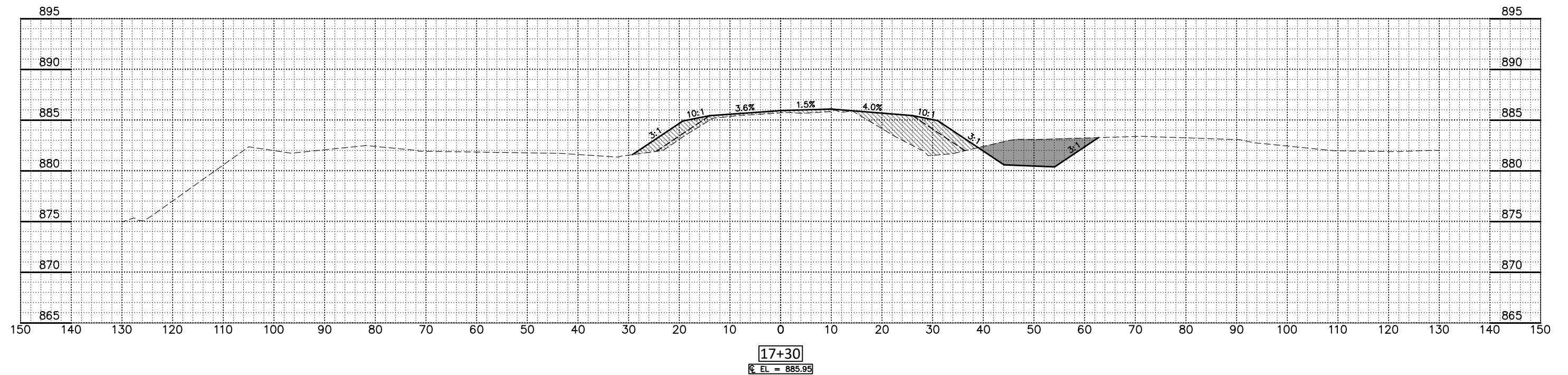
15' SKEW, LT. AHEAD
IOWA



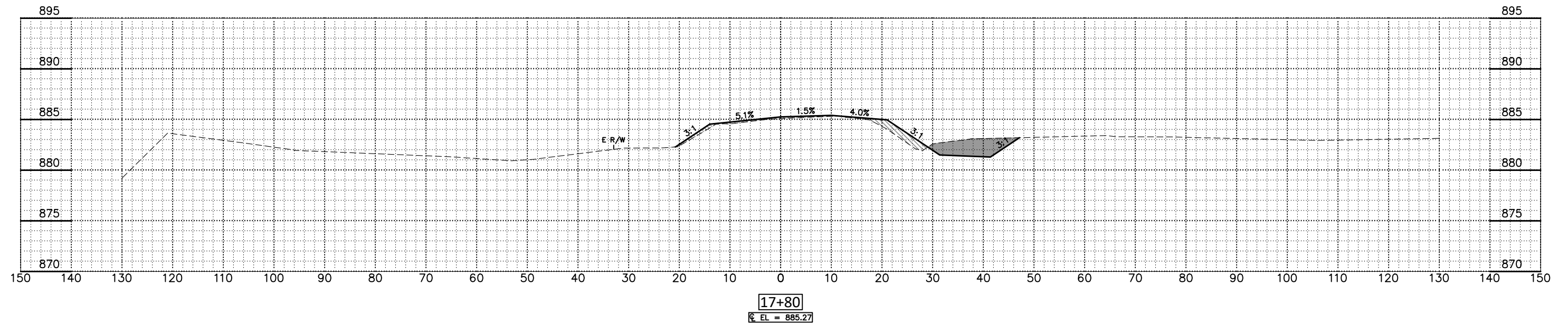
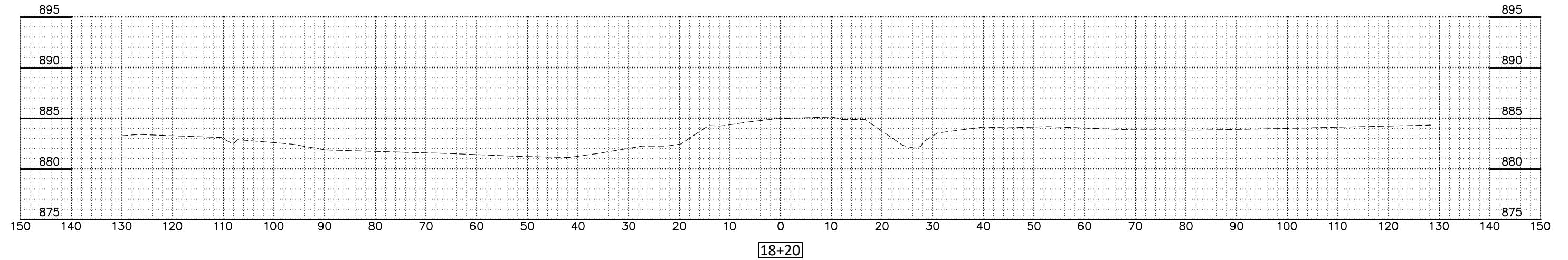
CROSS SECTIONS
MONROE COUNTY, IOWA



CROSS SECTIONS
 MONROE COUNTY, IOWA



CROSS SECTIONS
 MONROE COUNTY, IOWA



CROSS SECTIONS
MONROE COUNTY, IOWA