BRIDGE NEW – CCS

Letting Date Dec. 15, 2026

SAC COUNTY

BROS-C081(98)--8J-81

IOWA ONE CALL
1-800-292-8989 811
www.iowaonecall.com

UTILITIES

CORNBELT TELEPHONE	712-664-2221	LARRY NEPPL
MIDAMERICAN (ELEC.)	712-749-7116	MARK WITTROCK
FRONTIER COMM.	515-573-1268	
IOWA ONE CALL	800-292-8989	

THIS PROJECT IS COVERED BY THE CORPS OF ENGINEERS NATIONWIDE 404 PERMIT #14 LESS THAN 0.1 ACRES OF W.U.S. WILL BE FILLED. NO PCN REQUIRED. CEMVR-RD-2026-324.

IOWA

DEPARTMENT OF TRANSPORTATION

PROJECT DEVELOPMENT DIVISION

PLANS OF PROPOSED IMPROVEMENT ON THE

SECONDARY ROAD SYSTEM
SAC COUNTY
BRIDGE NEW – CCS

40' x 30' SINGLE SPAN CONCRETE SLAB BRIDGE

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS

PROJECT LOCATION: ON 265th ST., Over small stream, S29 T88 R36

Scales: As Noted

Project No. BROS-C081(98)--8J-81

INDEX OF SHEETS

No.	Description
1.	TITLE SHEET
2.	ESTIMATED QUANTITIES, REFERENCE NOTES
3.	GENERAL NOTES, TABULATIONS
4.	SLAB ELEVATIONS, TYPICAL SECTIONS
5.	HYDRAULIC DATA, SITUATION PLAN
6.	BEARING LOGS
7.	PLAN & PROFILE

MILEAGE SUMMARY

Div.	Location	Lin.Ft.	Miles
1	STATION 4+00 TO 11+00	700	0.133
	BRIDGE AT STATION 8+03	-40	-0.007
	TOTAL NET LENGTH	660	0.125

STANDARD ROAD PLANS

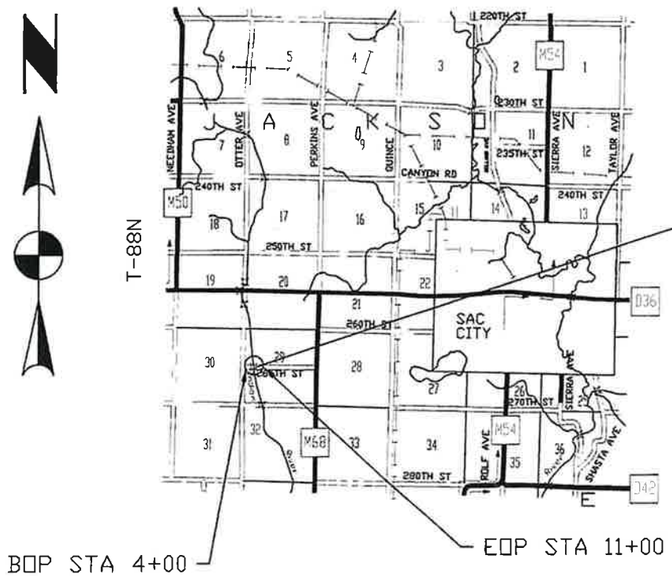
The following Standard Plans shall be considered applicable to construction work on this project.

Identification	Date	Identification	Date	Identification	Date
DR-305	04-19-22	EW-101	10-17-17	SI-173	04-19-16
EC-204	10-19-21	EW-202	04-19-16	TC-252	10-20-26
EC-502	04-21-15	EW-501	10-17-23		

LRFD BRIDGE STANDARDS

(May be obtained at http://iowadot.gov/bridge)

Standard	Date Issued	Latest Revision	Standard	Date Issued	Latest Revision
J30S-01-25	07-2025		J30S-24-25	07-2025	
J30S-02-25	07-2025		J30S-25-25	07-2025	
J30S-07-25	07-2025		J30S-28-25	07-2025	
J30S-08-25	07-2025		J30S-29-25	07-2025	
J30S-11-25	07-2025		J30S-34-25	07-2025	
J30S-12-25	07-2025		J30S-35-25	07-2025	
J30S-13-25	07-2025		J30S-42-25	07-2025	
J30S-20-25	07-2025				
J30S-22-25	07-2025				



PROJECT NO. BROS-C081(98)--8J-81

STATION 8+03 FHWA NO. 300900

SAC COUNTY

DRAWING APPROVAL

ALL SHOP DRAWINGS AND FALSE WORK DRAWINGS THAT REQUIRE APPROVAL SHALL BE SUBMITTED TO AND APPROVED BY THE CONTRACTOR, WHO SHALL THEN SUBMIT THEM TO THE SAC COUNTY ENGINEER, FOR REVIEW AND APPROVAL.

ADDRESS: 499 NORTH 19th STREET
SAC CITY, IOWA 50583
TELEPHONE: (712) 662-7687

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

2019 AADT 20 V.P.D.

Approved Sac County Board of Supervisors

LICENSED PROFESSIONAL ENGINEER
NICK BUSE
25358
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.

NICK BUSE — DATE 9/1/2026

LICENSE NUMBER: 25358

My license renewal date is December 31, 2026

Pages or sheets covered by this seal: ALL SHEETS

REVISED :

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL
1	2102-2625000	EMBANKMENT-IN-PLACE	CY	1803
2	2102-2713090	EXCAVATION, CL 13, WASTE	CY	10
3	2104-2710020	EXCAVATION, CL 10, CHANNEL	CY	168
4	2401-6745625	RMVL OF EXISTING BRIDGE	LS	1
5	2402-0425030	GRANULAR BACKFILL	CY	356
6	2402-2720000	EXCAVATION, CL 20	CY	356
7	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	113.8
8	2404-7775000	REINFORCING STEEL	LBS	143
9	2404-7775005	REINFORCING STEEL EPOXY COATED	LBS	26,812
10	2414-6424124	CONCRETE OPEN RAIL, TL-4	LF	86
11	2501-0201042	PILE, STEEL, HP 10X42 14@75'	LF	1050
12	2501-5775000	PILE, STEEL SHEET	SF	4488
13	2502-8212108	SUBDRAIN, PLASTIC PIPE, 8 IN.	LF	20
14	2502-8215112	SUBDRAIN, CMP, 12 IN.	LF	20
15	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36"	LF	156
16	2507-6800061	REVETMENT, CLASS E	TON	70
17	2524-9100010	OBJECT MARKERS, TYPE 3	EACH	4
18	2526-8285040	CONSTRUCTION SURVEY , LOCATION SURVEY	LS	1
19	2528-2518000	SAFETY CLOSURE	EACH	2
20	2528-8445110	TRAFFIC CONTROL	LS	1
21	2533-4980005	MOBILIZATION	LS	1
22	2601-2636070	HYDRAULIC SEEDING	ACRE	0.4
23	2602-0000312	PERIMETER+SLOPE SEDIMENT CNTL DEVICE, 12"	LF	100

GENERAL NOTES

TEMPORARY EROSION CONTROL TO BE DONE BY THE CONTRACTOR.

ALL UNSALVAGEABLE MATERIAL AND RUBBLE BECOME PROPERTY OF THE CONTRACTOR AND REMOVED FROM SITE.

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

REINFORCING STEEL IS TO BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED.

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

UTILITY COMPANIES WHOSE FACILITIES ARE KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE CONTRACTOR OF THE CONSTRUCTION STARTING DATE.

THE CONTRACTOR 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. 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.

TOP AND BOTTOM DECK REINFORCING STEEL IS TO BE SUPPORTED AS NOTED ON I.D.O.T. BRIDGE STANDARD J30S-07-25 & J30S-08-25.

THE CONTRACTOR IS 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". THIS WORK WILL BE PAID FOR AS EXCAVATION CLASS 10, CHANNEL.

REFERENCE NOTES:

1. EMBANKMENT IN-PLACE: TYPE “A” COMPACTION REQUIRED, SECTION 2107 OF THE IDOT STANDARD SPECIFICATION SHALL APPLY. 1803 CUBIC YARDS OF FILL IS REQUIRED FOR THE EMBANKMENT IN-PLACE @ 25% COMPACTION/SHRINKAGE. OF THIS 180 CUBIC YARDS WILL COME FROM DITCH EXCAVATION AND 356 CUBIC YARDS WILL COME FROM CLASS 10 CHANNEL AND CLASS 20 EXCAVATION. THE REMAINING 1447.0 CUBIC YARDS WILL COME FROM A CONTRACTOR SUPPLIED BORROW.

2. UNSUITABLE MATERIAL SHALL BE WASTED AT THE SITE AT THE DIRECTION OF THE ENGINEER.

3. UNSUITABLE CLASS 10 CHANNEL SHALL BE WASTED AT THE SITE AT THE DIRECTION OF THE ENGINEER.

4. THE LUMP SUM BID FOR “REMOVAL OF EXISTING BRIDGE” SHALL INCLUDE REMOVAL OF EXISTING 25'x20' STEEL I-BEAM AND TIMBER BRIDGE WITH TIMBER ABUTMENTS AND DECK.

REMOVE BOTH ABUTMENTS AND WINGS TO AN ELEVATION AS TO ALLOW PLACEMENT OF REVETMENT STONE AND TO THE EXTENT THAT IT WILL NOT INTERFERE WITH THE NEW CONSTRUCTION.

THE REMAINING STRUCTURE IS TO BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE THEIR RESPONSIBILITY TO REMOVE FROM THE SITE.

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.

5. INCLUDED COST OF FURNISHING AND PLACING SUBDRAINS (INCLUDING EXCAVATION), GEOTEXTILE FABRIC, GRANULAR BACKFILL, POROUS BACKFILL AND FLOODING THE ABUTMENTS. SEE BRIDGE STANDARD J30S-42-25

6. UNSUITABLE CLASS 20 SHALL BE WASTED AT THE SITE AT THE DIRECTION OF THE ENGINEER. CLASS 20 EXCAVATION QUANTITIES FOR THE ABUTMENTS ARE BASED ON THE ASSUMPTION THAT THE CHANNEL EXCAVATION HAS BEEN COMPLETED WITH THE LIMITS SHOWN IN THE “SITUATION PLAN”.

7. ALL STRUCTURAL CONCRETE FOR THE BRIDGE DECK IS TO BE CLASS “C”, SUBSTITUTION OF CLASS “D” CONCRETE IS NOT ALLOWED. CERTIFIED PLANT INSPECTION IS REQUIRED.

8. ALL REINFORCING SHALL BE GRADE 60.

9. REINFORCING STEEL SHALL BE GRADE 60 EPOXY COATED.

11. THE ABUTMENT PILES ARE TO BE HP10x42 x 75'. MINIMUM BEARING CAPACITY IS TO BE 92 TONS PER PILE

12. SEE SHEET 5 FOR DETAILS

15. FOR REMOVAL OF EXISTING CMP SEE SHEET 5 FOR LOCATIONS

16. REVETMENT IS TO BE PLACED AT A THICKNESS OF 1'-6”. THE UNIT PRICE SHALL INCLUDE ALL COST OF MATERIAL, LABOR AND EQUIPMENT REQUIRED TO PLACE CLASS E REVETMENT STONE ON CHANNEL BANKS IN ACCORDANCE WITH SECTION 2507 OF THE STANDARD SPECIFICATIONS.

18. INCLUDES CONSTRUCTION SURVEY FOR ALL ROADWAY SECTIONS. 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.

19. SIGNING FOR TEMPORARY ROAD CLOSURES IN RURAL AREAS SHALL APPLY (TC-252)

20. THE LUMP SUM BID PRICE SHALL INCLUDE THE FURNISHING, PLACING, MAINTAINING AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, EXCEPT SAFETY CLOSURES, AS PER TC-252 SITUATION (RURAL) BY THE CONTRACTOR.

22. THE CONTRACTOR IS TO RESHAPE, FERTILIZE, SEED AND MULCH ANY AREA DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION. THIS SHALL BE INCLUDED IN THE BID PRICE FOR “HYDRAULIC SEEDING”.

23. SEE TABULATION SHEET 3. CONTRACTOR TO FURNISH AND PLACE ALL MATERIAL NEEDED FOR THE SILT FENCE BID ITEM.

DESIGN FOR
40'x30' SIMPLE SPAN CONCRETE SLAB BRIDGE
ESTIMATE OF QUANTITIES AND
NOTES, AND TYPICAL CROSS-SECTION
STA 8+03 0° SKEW

SAC COUNTY

IOWA DEPARTMENT OF TRANSPORTATION–HIGHWAY DIVISION

SAC COUNTY | PROJECT NUMBER | BROS-C081(98)--8J-81

STATE	FHWA REGION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	7	2026	2	7

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

Designer Info

Possible Standards: EC-204

This Data Entry Sheet fills Tab 100-19 effective 10-19-21

Location			Perimeter and Slope			Ditch Check		Remarks
			Length of Installation			Length of Installation		
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	
7+00.00		RT				25.0		
7+00.00		LT				25.0		
9+00.00		RT				25.0		
9+00.00		LT				25.0		

102-3
10-16-18

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.

Location		Type	Length of Opening (1)			W (1)(2)	PR (1)(2)	SR (2)	Pipe Culvert (3)					Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1¼" Dropped Curb	3" Dropped Curb				H	Size	Pipe Length	Lt.	Rt.		HMA	PCC		
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON	
7+69.30	LT	FIELD ENT / Berm								18	40							Remove Only
7+71.79	RT	FIELD ENT / Berm								24	40							Remove Only
8+34.62	LT	FIELD ENT / Berm								24	40							Remove Only
8+35.06	RT	FIELD ENT / Berm								12	37							Remove Only

PROJECT TRAFFIC CONTROL PLAN BY CONTRACTOR

THIS ROAD WILL BE CLOSED TO THROUGH TRAFFIC DURING CONSTRUCTION. LOCAL TRAFFIC TO ADJACENT PROPERTIES WILL BE MAINTAINED AS PROVIDED FOR IN ARTICLE 1107.08, CURRENT STANDARD SPECIFICATIONS. TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND PAVEMENT MARKINGS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC) CHAPTER 130.

HAZARDOUS MATERIAL NOTES

AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIAL WAS COMPLETED BY:
ROGER C. NIELSON OF AUGUST ENTERPRISES, LLC
IA LICENSE NUMBER: IA22-8827
DATE INSPECTED: 12/29/2022
PHONE: 515-386-3477

NO SUSPECT MATERIALS WERE FOUND IN THE SAMPLES TAKEN. IF ADDITIONAL MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE DISCOVERED DURING DEMOLITION OF THE BRIDGE, WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER NOTIFIED.

West Abutment Pile Notes

THE CONTRACT LENGTH OF 75 FEET FOR THE WEST ABUTMENT PILES IS BASED ON A COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 101 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.6.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A 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 FOOTING.

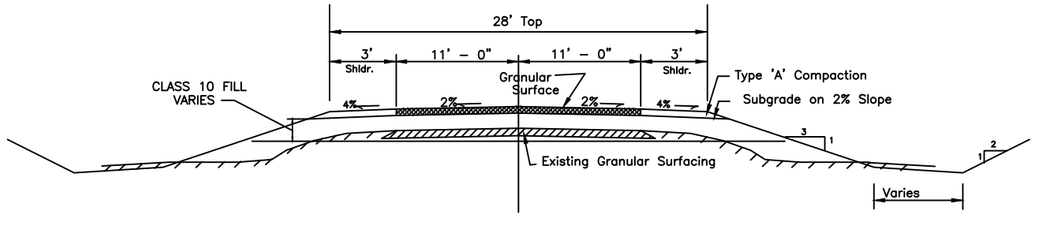
THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR WEST ABUTMENT PILES IS 92 TONS AT END OF DRIVE OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. IN NO CASE SHALL A PILE BE EMBEDDED LESS THAN xxx FEET. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.

East Abutment Pile Notes

THE CONTRACT LENGTH OF 75 FEET FOR THE WEST ABUTMENT PILES IS BASED ON A COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 101 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.6.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A 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 FOOTING.

THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR WEST ABUTMENT PILES IS 92 TONS AT END OF DRIVE OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. IN NO CASE SHALL A PILE BE EMBEDDED LESS THAN xxx FEET. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.

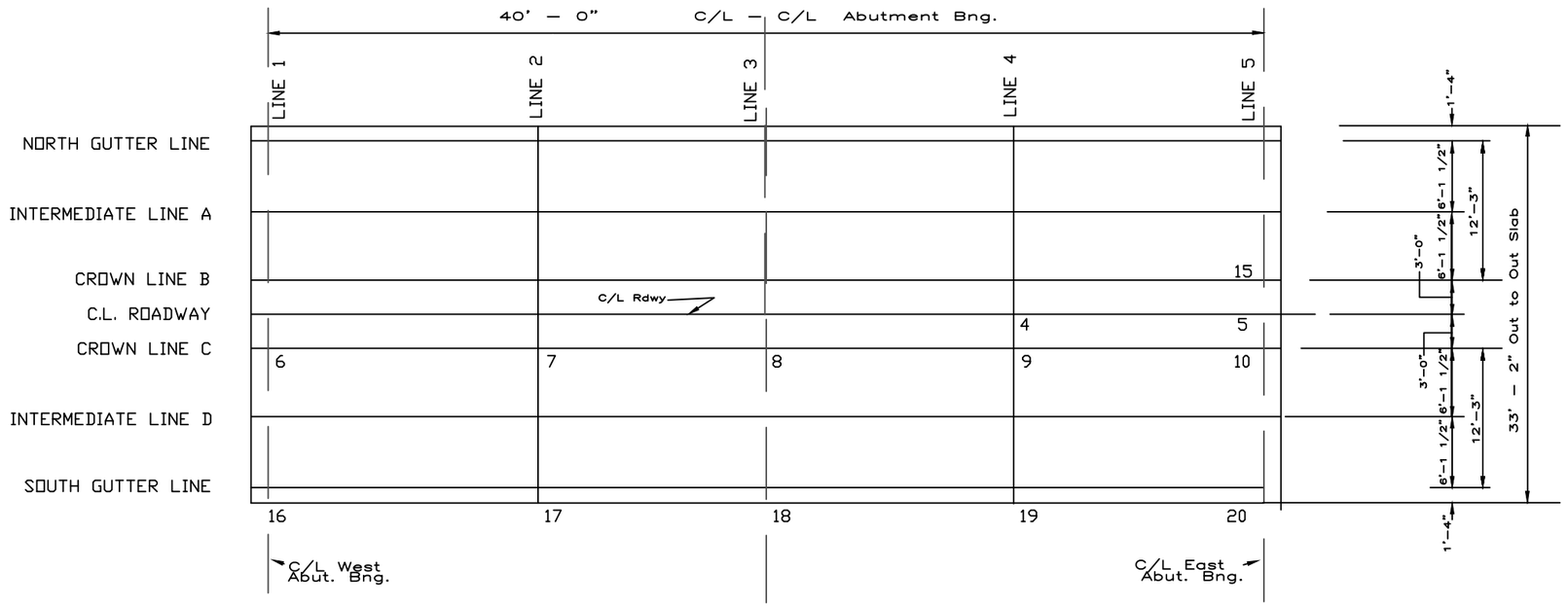


TYPICAL CROSS SECTION

FROM STA 4+00 TO 7+81.5
&
FROM STA 8+24.5 TO 11+00

DATE : 3-12-2026 REV. :

TOP OF SLAB ELEVATIONS					
LOCATION	C.L. W. ABUT. BRG.				C.L. E. ABUT. BRG.
	LINE 1	LINE 2	LINE 3	LINE 4	LINE 5
NORTH GUTTER LINE	1286.23	1286.26	1286.27	1286.28	1286.27
INTERMEDIATE LINE A	1286.35	1286.38	1286.40	1286.40	1286.39
CROWN LINE B	1286.47	1286.50	1286.52	1286.52	1286.51
C.L. APPROACH ROADWAY	1286.51	1286.53	1286.55	1286.55	1286.54
CROWN LINE C	1286.47	1286.50	1286.52	1286.52	1286.51
INTERMEDIATE LINE D	1286.35	1286.38	1286.40	1286.40	1286.39
SOUTH GUTTER LINE	1286.23	1286.26	1286.27	1286.28	1286.27



ALL ELEVATIONS ARE ON THE FORM CAMBER

TOP SLAB ELEVATIONS

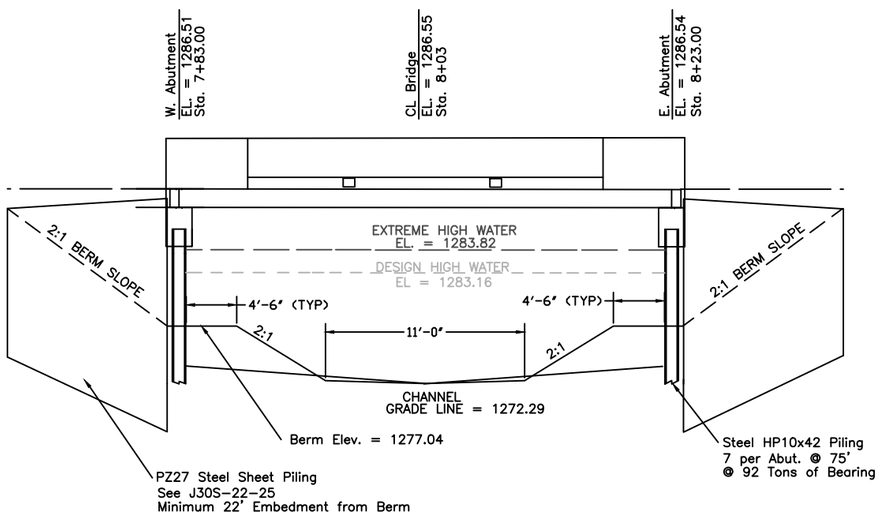
HIGH ABUTMENT DETAILS

See Iowa D.O.T. Standard J30S–20–25

DESIGN FOR
40' X 30' SINGLE SPAN CONCRETE
SLAB BRIDGE WITH OPEN RAIL
TOP OF DECK SLAB ELEVATIONS AND MISC. DETAILS
STA 8+03 0° SKEW
SAC COUNTY
IOWA DEPARTMENT OF TRANSPORTATION–HIGHWAY DIVISION

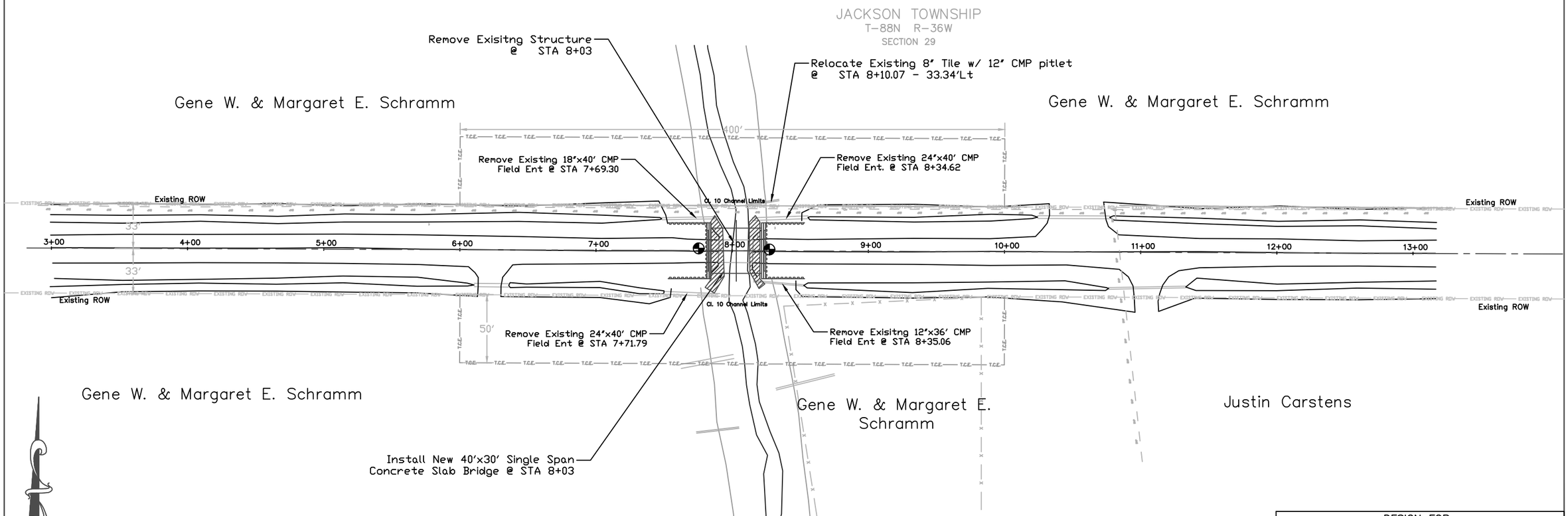
SAC COUNTY

PROJECT NUMBER	STATE	FHWA REGION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
BROS–SWAP–C081(98)––8J–81	IOWA	7	2027	4	7



HYDRAULIC DATA

DRAINAGE AREA	11.7	SQ. MI..
DESIGN DISCHARGE Q25	772	C.F.S.
DESIGN HIGH-WATER	1283.16	
SITE SLOPE		FT./MI.
BASIN SLOPE (10%-85%)	10.6	FT./MI.
BRIDGE WATERWAY AREA	369.6	SQ. FT..
DESIGN VELOCITY	2.09	F.P.S.
Q10 548 C.F.S.	STAGE	1282.60
Q50 913 C.F.S.	STAGE	1283.45
Q100 1123 C.F.S.	STAGE	1283.82
Q500 C.F.S.	STAGE	



SITUATION PLAN

LOCATION: Drainage Dist. No. 71 Open Ditch,
SW 1/4 of the NW 1/4 of Section 29 - T87N - R36W
Jackson Twp. Sac County, Ia.

Bench Mark
Top Bolt in NW Wing Wall
@ STA 7+85.42 - Lt 15.25'
ELEV = 1285.00

RIP RAP AREA

SOIL BORING LOCATIONS
2) East Abutment
1) West Abutment

DESIGN FOR
40' X 30' SIMPLE SPAN CONCRETE
SLAB BRIDGE WITH OPEN RAIL
HIGH ABUTMENTS
STA 8+03 0° SKEW

SAC COUNTY
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION

BROS-C081(98)--8J-81

SAC COUNTY

LOG OF EXPLORATORY BORING

Sheet 1 of 1

Job Number: G5666S
Project: JA-2915 Bridge Replacement
Date Started: 4/5/19
Date Completed: 4/5/19

Boring No.: S-1
Boring Location: Sac County, IA
Drill Type: Hollow Stem
Ground Elev.: 99.6

Shelby Tube | Standard Split Spoon | Water Level ATD
Modified California | Grab Sample | Water Level After 24-Hours

Depth in Feet	SOIL DESCRIPTION	USCS	Blow Counts SPT (N) Blows/Foot	Moisture Content, %	Dry Density (PCF)	% Saturation	Hand Penetrometer (TSF)	Unconfined Comp. Strength (TSF)	Liquid Limit %	Plastic Limit %	Plasticity Index %	Cone Penetrometer (Blows per 1-3/4")
	12-Inch Gravel Layer		2-2-3 N= 5									
	STIFF SILTY CLAY, Dark Gray, Fill											
5	STIFF SILTY CLAY, Dark Gray	CL	2-3-4 N= 7									
10	CLAYEY SAND, Yellow Brown (Cobble/Possible Boulders)	SC	3-6-7 N= 13									
15	FIRM GLACIAL CLAY, Medium Gray	CL	5-6-7 N= 13									
20			2-3-5 N= 8									
25	(Cobbles/Possible Boulders)		3-5-6 N= 11									
30			3-4-5 N= 9									
35	FIRM - VERY FIRM GLACIAL CLAY, Medium Gray	CL	7-7-8 N= 15									
40			5-6-7 N= 13									
45			4-5-6 N= 11									
50	VERY FIRM SANDY GLACIAL CLAY, Medium Gray	CL	8-11-15 N= 26									
55			4-6-8 N= 14									
60	(Cobbles/Possible Boulders)		8-15-25 N= 40									
65	(Sand Lenses)		11-12-14 N= 26									
70			6-9-14 N= 23									
75			5-10-16 N= 26									
	END OF BORING AT 76.5 FEET FREE WATER WAS ENCOUNTERED AT 18.2 FEET AT TIME OF DRILLING											

LOG OF BORING G5666S.GPJ CERTIFIED TESTING.GDT 4/10/19

LOG OF EXPLORATORY BORING

Sheet 1 of 1

Job Number: G5666S
Project: JA-2915 Bridge Replacement
Date Started: 4/4/19
Date Completed: 4/4/19

Boring No.: S-2
Boring Location: Sac County, IA
Drill Type: Hollow Stem
Ground Elev.: 99.8

Shelby Tube | Standard Split Spoon | Water Level ATD
Modified California | Grab Sample | Water Level After 24-Hours

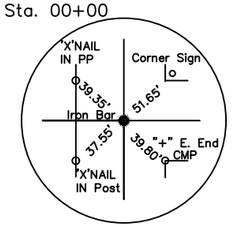
Depth in Feet	SOIL DESCRIPTION	USCS	Blow Counts SPT (N) Blows/Foot	Moisture Content, %	Dry Density (PCF)	% Saturation	Hand Penetrometer (TSF)	Unconfined Comp. Strength (TSF)	Liquid Limit %	Plastic Limit %	Plasticity Index %	Cone Penetrometer (Blows per 1-3/4")
	12-Inch Gravel Layer		4-3-3 N= 6									
	STIFF SANDY CLAY, Dark Brown and Light Brown, Fill		5-3-4 N= 7									
10	(Light Gray)		2-3-4 N= 7									
15	GRAVELLY SAND, Light Gray	SP	5-6-8 N= 14									
20	FIRM SILTY CLAY, Medium Gray	CL	7-5-5 N= 10									
25	FIRM GLACIAL CLAY, Medium Gray	CL	4-6-9 N= 15									
30			3-4-4 N= 8									
35			4-5-6 N= 11									
40			3-5-6 N= 11									
45	VERY FIRM GLACIAL CLAY, Dark Gray	CL	5-8-9 N= 17									
50			6-9-9 N= 18									
55	(Cobbles/Possible Boulders)		5-9-9 N= 18									
60	GLACIAL MATERIAL, Dark Gray	CL	7-18-22 N= 40									
65	(Cobbles/Possible Boulders)		36-16-18 N= 34									
70	VERY FIRM GLACIAL CLAY, Dark Gray	CL	10-12-13 N= 25									
75			7-14-13 N= 27									
	END OF BORING AT 76.5 FEET FREE WATER WAS ENCOUNTERED AT 15 FEET AT TIME OF DRILLING											

LOG OF BORING G5666S.GPJ CERTIFIED TESTING.GDT 4/10/19

DESIGN FOR
40' x 30' SIMPLE SPAN CONCRETE SLAB BRIDGE
STA 8+03 0° SKEW

SAC COUNTY
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION

Ref. To PI West Cor.
Sec. 32–88–36 Cook
Sta. 00+00



JACKSON TOWNSHIP
T–88N R–36W
SECTION 29

Remove Existing Structure @ STA 8+03

Remove Existing 18" CMP Field Ent. @ STA 7+69.30

Relocate Existing 8" Tile w/ 12" CMP outlet @ STA 8+10.07 – 33' LT

Remove Existing 24" CMP Field Ent. @ STA 8+34.62

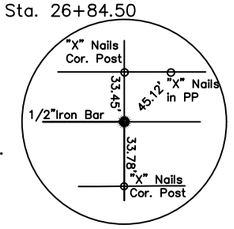
400'

50'

Gene & Margaret E. Schramm

Gene & Margaret E. Schramm

Ref. To PI Center
Sec. 29–88–36 Jackson
Sta. 26+84.50



Exisitng ROW
33'
33'
Exisitng ROW

CL. 10 Channel Limits

Install New 40'x30' Simple Span Conc. Bridge @ STA 8+03

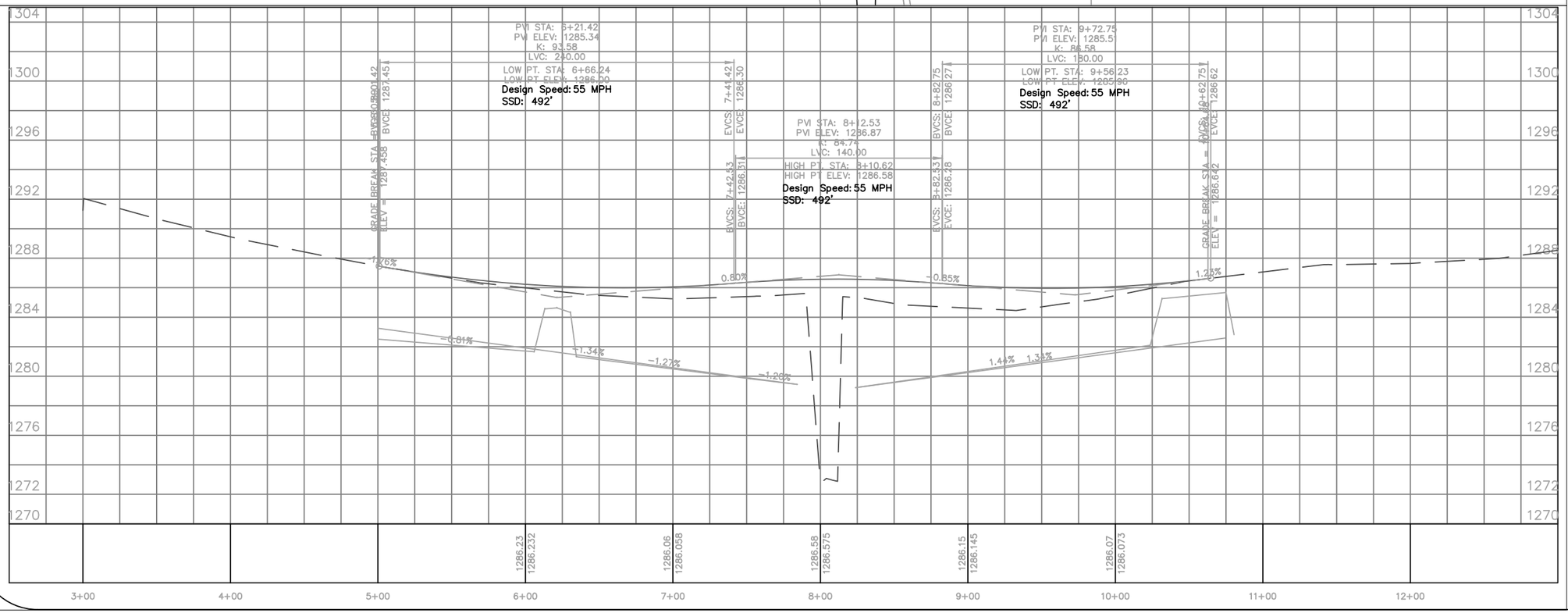
Remove Existing 18" CMP Field Ent. @ STA 7+71.79

Rip Rap (Typ.)

Remove Existing 12" CMP Field Ent. @ STA 8+35.06

Justin Carstens

BM STA 7+85.42 – LT 15.25
Top Bolt in NW Wing Wall
Elev. = 1285.00



General Notes

0 40' 80'

No.	Revision/Issue	Date

Firm Name and Address

Project Name and Address
Sac County Engineer's Office
499 N. 19th St.
Sac City, IA 50583
BROS–C081(98)– –8J–81

Project	Sheet
JA–2915	7
Date 7/8/2026	
Scale 1" = 40'	