

06-17-2022 LETTING ITEM 200

DESIGN DESIGNATION

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
ADT (WASHINGTON STREET ROAD): 250
DESIGN SPEED: 40 MPH
VARIANCES GRANTED: NONE

COMMITMENTS:

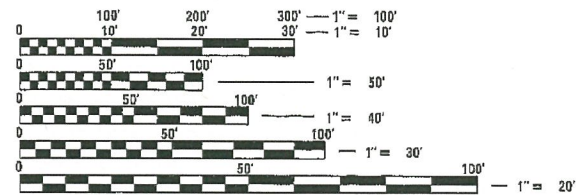
- (1) TREES THREE INCHES OR GREATER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1 THROUGH SEPTEMBER 30 OF ANY GIVEN YEAR.
- (2) THE BRIDGE BAT ASSESSMENT EXPIRES 9/23/2023. A VALID ASSESSMENT IS REQUIRED PRIOR TO PERFORMING ANY WORK BELOW THE EXISTING DECK SURFACE.

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL DATA
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5-6 SCHEDULE OF QUANTITIES
- 7 ALIGNMENT, TIES, HORIZONTAL LAYOUT AND R.O.W.
- 8 PLAN AND PROFILE
- 9 EROSION CONTROL PLAN
- 10-17 BRIDGE PLANS
- 18-23 CROSS SECTIONS

LIST OF STANDARDS

SEE SHEET NO. 2



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

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OF THE STATE OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

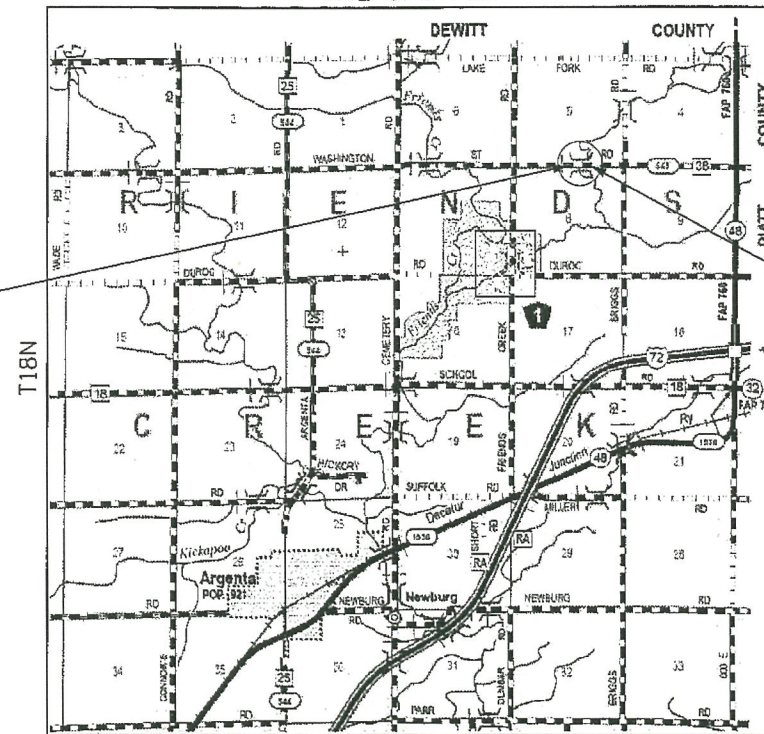
PLANS FOR PROPOSED
LOCAL AGENCY IMPROVEMENT

STP - BRIDGE PROGRAM
CH 38 (WASHINGTON STREET ROAD) OVER FRIENDS CREEK
SECTION 13-00261-00-BR
MACON COUNTY
BRIDGE REPLACEMENT
PROJECT NO. YK3P(693)
JOB NO. C-97-007-22

R4E 3rd P.M.

BEGIN IMPROVEMENT
STA. 9+32.00

END IMPROVEMENT
STA. 13+50.00



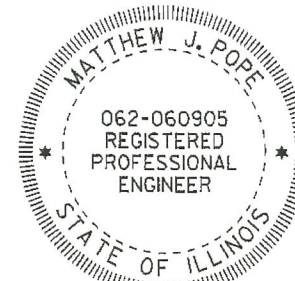
LOCATION MAP

APPROXIMATE SCALE
scale 1 0 1 miles

TOTAL AND NET LENGTH OF IMPROVEMENT = 418.00 FT. = 0.079 MILE

EXISTING STRUCTURE
NUMBER 058-3185

PROPOSED STRUCTURE
NUMBER 058-3416



Matthew J. Pope

SIGNATURE DATE: 3 / 30 / 2022
ILL. REG. P.E. NO. 062-060905
EXPIRES: 11 / 30 / 2023

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95920	



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED MARCH 31, 2022
[Signature]
COUNTY ENGINEER

PASSED 04/18/22
[Signature]
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW
04/18/22
[Signature]
REGION FOUR ENGINEER

AECOM 345 EAST ASH AVENUE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED JANUARY 1, 2022, THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. ALL ELEVATIONS ARE BASED ON NAVD 88 (NORTH AMERICAN VERTICAL DATUM OF 1988).
3. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
4. THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER.
5. ALL TREES WITHIN THE RIGHT-OF-WAY THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.
6. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT EQUAL TO 1/2 INCH OR MORE.
7. DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION ACTIVITIES. TEMPORARY STABILIZATION OF WORK AREAS IS REQUIRED FOR ALL AREAS REMAINING UNDISTURBED FOR 14 DAYS, UNLESS WORK RESUMES PRIOR TO 21 DAYS. TEMPORARY STABILIZATION MUST BE APPROVED BY THE ENGINEER.
8. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY OTHER CONSTRUCTION WORK AT THE SITE. LAYOUT OF EROSION CONTROL ITEMS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
9. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT AREA ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER AND MUST NOT CONFLICT WITH EXISTING SIDE ROADS, INTERSECTIONS, DRIVEWAYS, OR DRAINAGE. ALL OPERATIONS SHALL BE SUBJECT TO REGULATORY REQUIREMENTS PERMITTED FOR THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.
10. ALL FIELD TILES ENCOUNTERED SHALL BE CAREFULLY PRESERVED AND REPAIRED OR CONNECTED TO THE PROPOSED DRAINAGE STRUCTURES OR DITCHES AS DIRECTED BY THE ENGINEER. PAYMENT OF THIS WORK SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS OR AS DIRECTED BY THE ENGINEER.
11. LAYOUT OF RIPRAP PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
12. PAVEMENT REMOVAL SHALL INCLUDE THE EXISTING AGGREGATE BASE COURSE AND OIL & CHIP SURFACE TREATMENT.
13. THE MACON COUNTY HIGHWAY DEPARTMENT WILL BE RESPONSIBLE FOR THE CONSTRUCTION LAYOUT.

HIGHWAY STANDARDS

STANDARD 000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
STANDARD 001001-02	AREAS OF REINFORCEMENT BARS
STANDARD 001006	DECIMAL OF AN INCH AND OF A FOOT
STANDARD 280001-07	TEMPORARY EROSION CONTROL SYSTEMS
STANDARD 515001-04	NAME PLATE FOR BRIDGES
STANDARD 542001-06	CONCRETE END SECTIONS FOR PIPE CULVERTS 15" THRU 84" DIAMETER
STANDARD 542411	SLOPED METAL END SECTIONS FOR PIPE CULVERTS 15" THRU 60" DIAMETER
STANDARD 630001-12	STEEL PLATE BEAM GUARDRAIL
STANDARD 630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
STANDARD 631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
STANDARD 701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
STANDARD 701901-08	TRAFFIC CONTROL DEVICES
STANDARD 725001-01	OBJECT AND TERMINAL MARKERS
STANDARD BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
STANDARD BLR 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

APPLICATION RATES

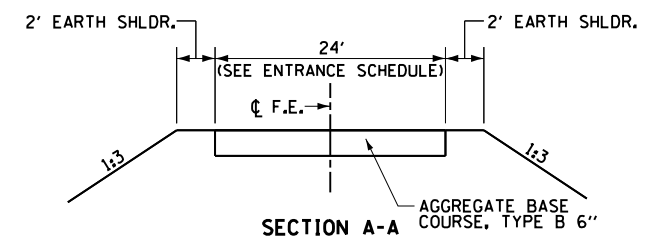
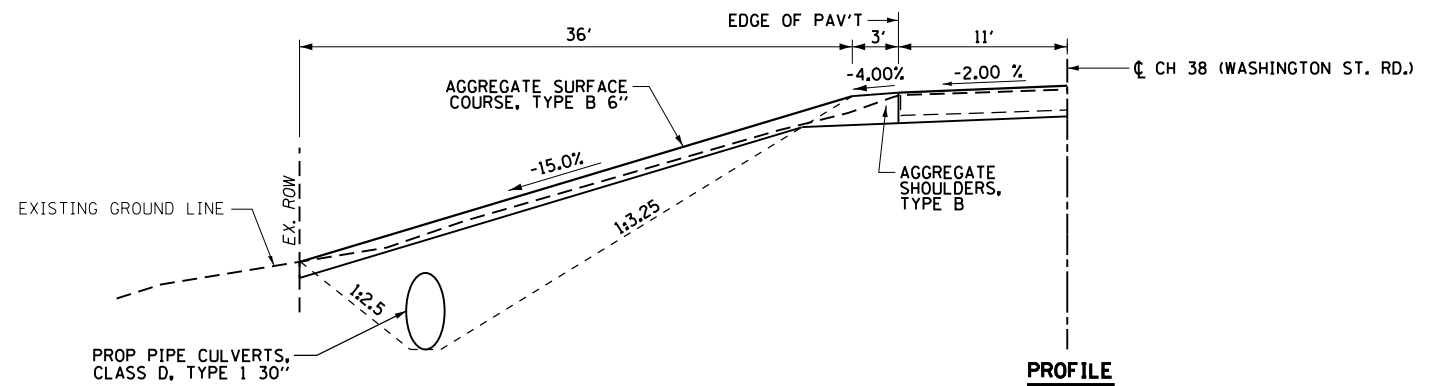
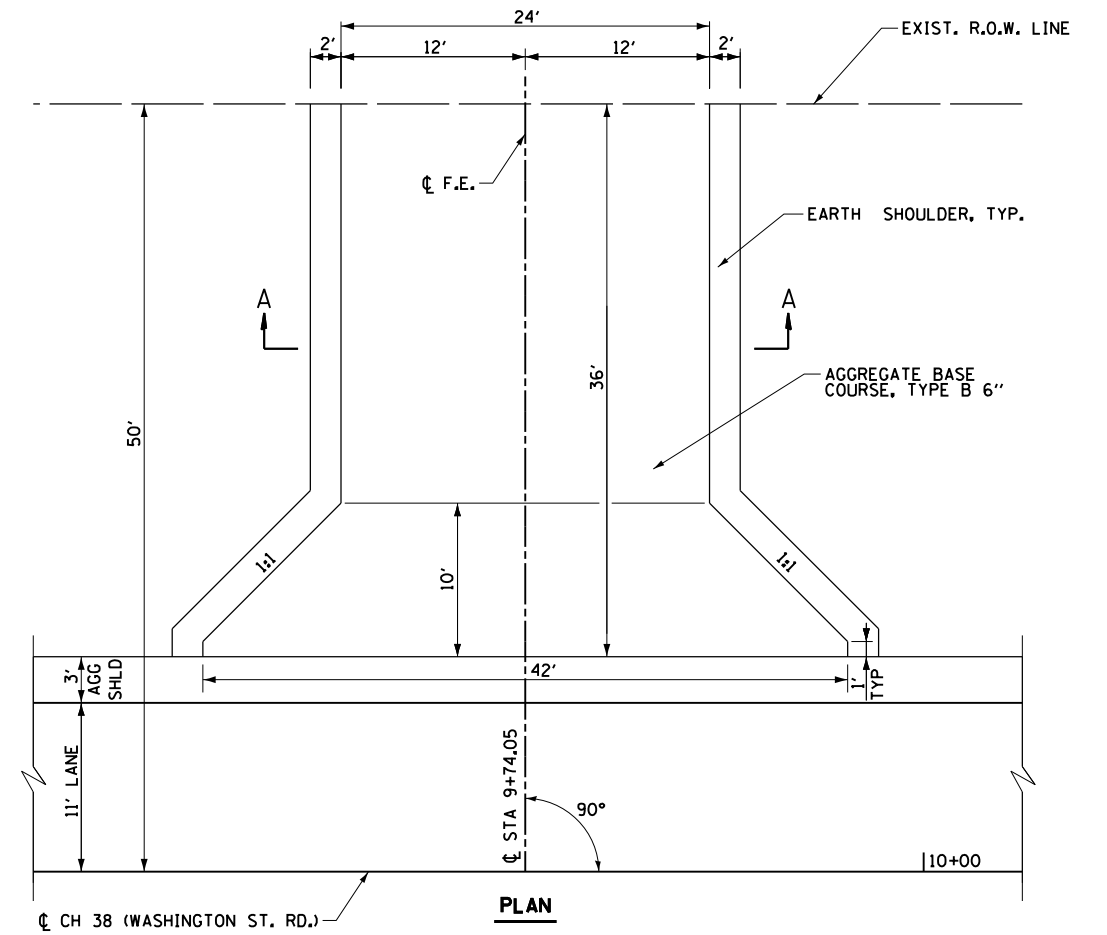
AGG BASE COURSE	2.05	TONS/CU YD
STONE RIPRAP	1.50	TONS/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.25	LBS/SQ FT (ON AGG BASE COURSE)
BITUMINOUS MATERIALS (COVER AND SEAL COAT)	0.25	LBS/SQ FT
COVER COAT AGGREGATE	25	LBS/SQ YD
SEAL COAT AGGREGATE	25	LBS/SQ YD
FERTILIZER NUTRIENTS	90	LBS/ACRE
TEMPORARY EROSION CONTROL SEEDING	100	LBS/ACRE (2 APPLICATIONS)

BITUMINOUS MIXTURE REQUIREMENTS

LOCATION	OVERLAY
MIX USE	SURFACE
AC/PG	PG 64-22**
RAP %	**
DESIGN VOIDS	4.0% @ N=50
MIXTURE COMPOSITION (GRAD. MIXTURE)	IL-9.5
FRICTION	MIX C

** TO BE DETERMINED BY CONTRACTOR (SEE IDOT STD. SPEC. SECTION 1031). FOR MIXTURES CONTAINING A MINIMUM OF 15% RAP, HIGH AND LOW TEMPERATURE GRADES SHOULD BE REDUCED BY ONE GRADE EQUIVALENT TO PG 58-28.

FIELD ENTRANCE DETAILS - AGG. F.E. LT. STA. 9+74.05



FILE NAME =	USER NAME = matt.pope	DESIGNED - MJP	REVISED -
S:\60619037 CH 38 Washington St over Friends Creek\900_CAD_GIS\910_CAD\60619037.GD&data.dgn		DRAWN - MJP	REVISED -
Default	PLOT SCALE = 100.0000' / in.	CHECKED - TDN	REVISED -
	PLOT DATE = 3/30/2022	DATE - 3/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL DATA	
CH 38 (WASHINGTON ST RD) OVER FRIENDS CREEK	
SCALE: N.T.S.	SHEET 1 OF 1 SHEETS STA. TO STA.

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	2
CONTRACT NO. 95920				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.1
20200100	EARTH EXCAVATION	CU YD	184
20300100	CHANNEL EXCAVATION	CU YD	474
20400800	FURNISHED EXCAVATION	CU YD	43
25000200	SEEDING, CLASS 2	ACRE	0.30
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	31
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	31
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	31
25100630	EROSION CONTROL BLANKET	SQ YD	1,465
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	63
28000305	TEMPORARY DITCH CHECKS	FOOT	70
28000400	PERIMETER EROSION BARRIER	FOOT	713
28000500	INLET AND PIPE PROTECTION	EACH	1
28100207	STONE RIPRAP, CLASS A4	TON	380
28200200	FILTER FABRIC	SQ YD	455
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	107
35102400	AGGREGATE BASE COURSE, TYPE B 12"	SQ YD	740
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	37
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	31
44000100	PAVEMENT REMOVAL	SQ YD	774
48101200	AGGREGATE SHOULDERS, TYPE B	TON	185
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50104650	SLOPE WALL REMOVAL	SQ YD	615
50105220	PIPE CULVERT REMOVAL	FOOT	38
50300225	CONCRETE STRUCTURES	CU YD	38.4
50300280	CONCRETE ENCASEMENT	CU YD	14.2
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	3,167

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4,860
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	227
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	495
51202305	DRIVING PILES	FOOT	495
51203200	TEST PILE METAL SHELLS	EACH	3
51500100	NAME PLATES	EACH	1
542D0235	PIPE CULVERTS, CLASS D, TYPE 1 30"	FOOT	54
54213465	END SECTIONS 30"	EACH	2
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	353
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	679
* 59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	44.6
Δ 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	100
Δ 63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	125
Δ 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
Δ 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
Δ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	405
67100100	MOBILIZATION	LSUM	1
72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	8
Δ 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	2
Δ 72501100	TERMINAL MARKER - POST MOUNTED	EACH	2
* LR403200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1
* LR403400	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	TON	2
* LR403500	COVER COAT AGGREGATE	TON	10
* LR403600	SEAL COAT AGGREGATE	TON	10
* X0323586	PIPE DRAIN REMOVAL	FOOT	90
* X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	LSUM	1

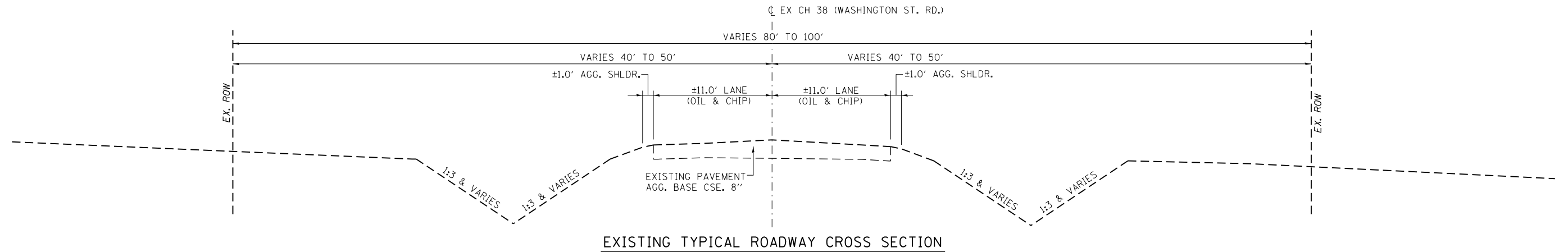
* SEE SPECIAL PROVISIONS Δ SPECIALTY ITEMS

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	PLOT DATE = 3/30/2022	CHECKED - TDN	REVISED -
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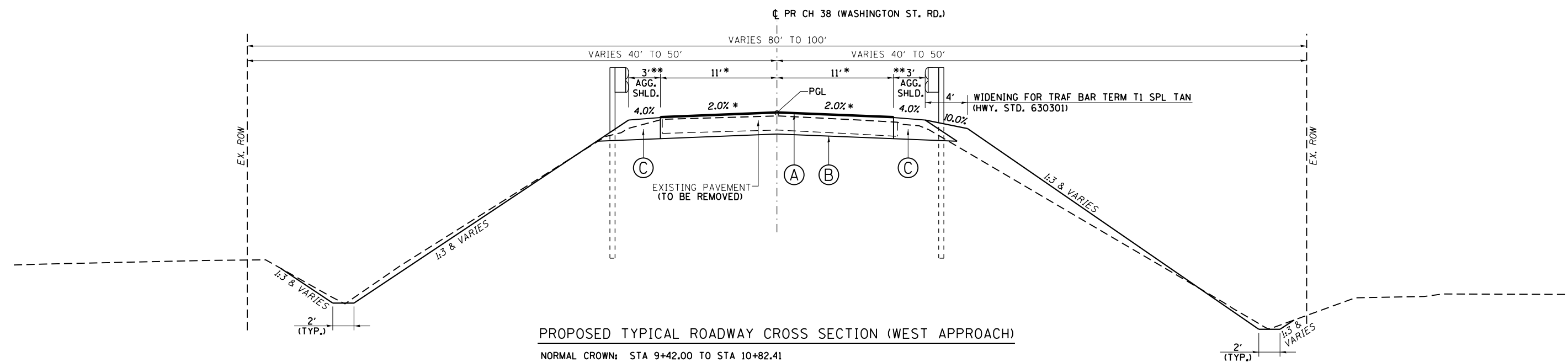
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES	
CH 38 (WASHINGTON ST RD) OVER FRIENDS CREEK	
SCALE: N.T.S.	SHEET 1 OF 1 SHEETS STA. TO STA.

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	3
			CONTRACT NO. 95920	
[ILLINOIS] FED. AID PROJECT				

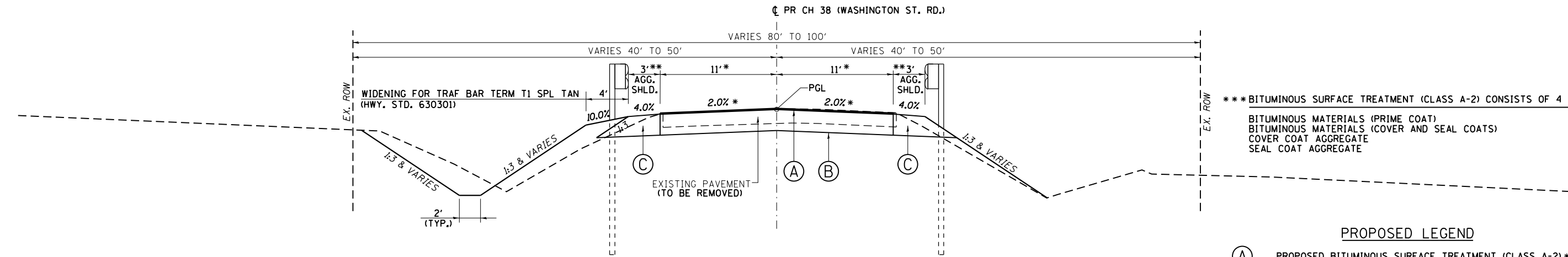


EXISTING TYPICAL ROADWAY CROSS SECTION



PROPOSED TYPICAL ROADWAY CROSS SECTION (WEST APPROACH)

NORMAL CROWN: STA 9+42.00 TO STA 10+82.41
 * TRANSITION FROM EXISTING TO PROPOSED (WIDTH AND CROWN): STA 9+32.00 TO STA 9+42.00
 PROPOSED BRIDGE OMISSION: STA 10+82.41 TO STA 11+97.58
 ** 10' TRAVELED WAY WITH 4' SHOULDER TO MEET DESIGN CRITERIA OF BLRS FIGURE 32-2B, NOTE 4(A)



PROPOSED TYPICAL ROADWAY CROSS SECTION (EAST APPROACH)

NORMAL CROWN: STA 11+97.58 TO STA 13+40.00
 * TRANSITION FROM PROPOSED TO EXISTING (WIDTH AND CROWN): STA 13+40.00 TO STA 13+50.00
 PROPOSED BRIDGE OMISSION: STA 10+82.41 TO STA 11+97.58
 ** 10' TRAVELED WAY WITH 4' SHOULDER TO MEET DESIGN CRITERIA OF BLRS FIGURE 32-2B, NOTE 4(A)

*** BITUMINOUS SURFACE TREATMENT (CLASS A-2) CONSISTS OF 4 PAY ITEMS:
 BITUMINOUS MATERIALS (PRIME COAT)
 BITUMINOUS MATERIALS (COVER AND SEAL COATS)
 COVER COAT AGGREGATE
 SEAL COAT AGGREGATE

- PROPOSED LEGEND**
- (A) PROPOSED BITUMINOUS SURFACE TREATMENT (CLASS A-2) ***
 - (B) PROPOSED AGGREGATE BASE COURSE, TYPE B 12"
 - (C) PROPOSED AGGREGATE SHOULDERS, TYPE B (12" THICK)

FILE NAME =	USER NAME = matt.pope	DESIGNED - MJP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS		RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S:\60619037 CH 38 Washington St over Friends Creek\900_CAD_GIS\910_CAD\60619037_TypSec.dgn	DRAWN - MJP	REVISIONS	CH 38		13-00261-00-BR	MACON	23	4			
Default	PLOT SCALE = 10.0000' / in.	CHECKED - TDN	REVISIONS		CH 38 (WASHINGTON ST RD) OVER FRIENDS CREEK			CONTRACT NO. 95920			
	PLOT DATE = 3/30/2022	DATE - 3/30/2022	REVISIONS		SCALE: N.T.S.	SHEET 1 OF 1 SHEETS	STA. 9+32.00 TO STA. 13+50.00	ILLINOIS FED. AID PROJECT			

EARTHWORK SCHEDULE					
LOCATION	EARTH EXCAVATION	*EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	**CHANNEL EXCAVATION	EMBANKMENT	EARTHWORK BALANCE WASTE (+) AND SHORTAGE (-) (FURNISHED EXCAVATION)
	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)
STA. 9+32.00 TO STA. 10+82.41	84	63		104	-41
STA. 10+85 TO 11+02.95 - WEST ABUT. PIER STA. 10+85 TO 11+02.95			216		
STA. 11+76.21 TO 11+95 EAST ABUT.			34		
STA. 11+97.58 TO STA. 13+50.00	100	75	224	77	-2
TOTALS	184	138	474	181	-43

*SHRINKAGE FACTOR FOR EARTH EXCAVATION = 25%

**CHANNEL EXCAVATION IS ASSUMED TO BE UNSUITABLE MATERIAL

EROSION CONTROL SCHEDULE					
STATION	STATION	OFFSET	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER	
			FOOT	FOOT	
9+32	11+13	LT		181	
9+32	11+11	RT		179	
9+82		RT	8		
10+15		LT	8		
10+82.41		LT	8		
10+82.41		RT	7		
11+78	12+00	RT		32	
11+89	12+25	LT		46	
11+97.58		LT	7		
12+00	13+50	RT		150	
12+14		LT	8		
12+25	13+50	LT		125	
12+30		LT	8		
12+72		LT	8		
13+14		LT	8		
TOTALS			70	713	

LANDSCAPING SCHEDULE									
STATION	STATION	OFFSET	AREA	SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET	* TEMPORARY EROSION CONTROL SEEDING
			SQ FT	ACRE	POUND	POUND	POUND	SQ YD	POUND
9+32.00	9+62.05	LT	689	0.016	2	2	2	77	4
9+86.05	10+82.41	LT	3,040	0.070	7	7	7	338	14
9+32.00	10+82.41	RT	4,853	0.112	11	11	11	540	23
11+97.58	13+50.00	LT	3,149	0.073	7	7	7	350	15
11+97.58	13+50.00	RT	1,440	0.034	4	4	4	160	7
TOTALS				0.3	31	31	31	1,465	63

*ASSUMED 2 APPLICATIONS OF TEMPORARY EROSION CONTROL SEEDING

SIGNING SCHEDULE					
STATION	OFFSET	DESCRIPTION	LENGTH	WIDTH	REMOVE SIGN PANEL - TYPE 1
			INCH	INCH	SQ FT
9+99	15' LT	TERMINAL MARKER - POST MOUNTED	20	12	2
9+75	15' RT	TERMINAL MARKER - POST MOUNTED	20	12	2
12+93	15' RT	TERMINAL MARKER - POST MOUNTED	20	12	2
12+92	15' LT	TERMINAL MARKER - POST MOUNTED	20	12	2
TOTALS					8

PAVEMENT SCHEDULE													
STATION	STATION	LENGTH	AVERAGE PAVEMENT WIDTH	AVERAGE SHOULDER AREA (LT)	AVERAGE SHOULDER AREA (RT)	AREA	AGGREGATE BASE COURSE, TYPE B 12"	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	COVER COAT AGGREGATE	SEAL COAT AGGREGATE	AGGREGATE SHOULDERS, TYPE B	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50
		FOOT	FOOT	SQ FT	SQ FT	SQ FT	SQ YD	TON	TON	TON	TON	TON	TON
9+32.00	9+42.00	10.00	22.06*	3.23	2.98	30	25	0.03	0.06	0.32	0.32	4.72	
9+42.00	10+82.41	140.41	22.00	4.02	3.91	550	343	0.39	0.78	4.29	4.29	84.58	
10+82.41	11+97.58	115.17	28.00										31
11+97.58	13+40.00	142.42	22.00	4.08	4.33	616	348	0.39	0.79	4.35	4.35	90.86	
13+40.00	13+50.00	10.00	21.74**	3.13	3.22	33	24	0.03	0.06	0.30	0.30	4.82	
TOTALS							740	1	2	10	10	185	

* WIDTH VARIES FROM 22.12' AT 9+32 TO 22' AT 9+42

** WIDTH VARIES FROM 22' AT 13+40 TO 21.48' AT 13+50

PAVEMENT REMOVAL SCHEDULE				
STATION	STATION	LENGTH	AREA	PAVEMENT REMOVAL
		FOOT	SQ FT	SQ YD
9+32.00	10+82.41	150.41	3,437	382
11+97.58	13+50.00	152.42	3,523	392
TOTALS				774

PIPE CULVERT SCHEDULE						
STATION	STATION	OFFSET	PIPE CULVERT REMOVAL	PIPE CULVERTS, CLASS D, TYPE 1 30"	END SECTIONS 30"	INLET AND PIPE PROTECTION
			FOOT	FOOT	EACH	EACH
9+54.10	9+91.50	40.75' LT	38			
9+47.69	10+01.67	41.75' LT		54		
9+47.69		42.59' LT			1	1
	10+01.67	40.86' LT			1	
TOTALS			38	54	2	1

PIPE DRAIN REMOVAL SCHEDULE			
STATION	STATION	OFFSET	PIPE DRAIN REMOVAL
			FOOT
10+85.00	11+15.00	35' LT	30
10+85.00	11+15.00	38' RT	30
11+65.00	11+95.00	31' LT	30
TOTALS			90

NOTE: INFORMATION TAKEN FROM 1972 EXISTING BRIDGE PLANS.

GUARDRAIL SCHEDULE									
STATION	STATION	OFFSET	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 5A	TRAFFIC BARRIER TERMINAL, TYPE 2	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL TANGENT)	TERMINAL MARKER - DIRECT APPLIED	TERMINAL MARKER - POST MOUNTED
			(FOOT)	(FOOT)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)
WEST APPROACH GUARDRAIL									
9+70.16	10+20.16	RT					1	1	
10+20.16	10+70.16	RT	50						
10+70.16	10+83.41	RT			1				
10+07.66	10+20.16	LT				1			1
10+20.16	10+70.16	LT		50					
10+70.16	10+83.41	LT			1				
EAST APPROACH GUARDRAIL									
11+96.58	12+09.83	LT			1				
12+09.83	12+59.83	LT	50						
12+59.83	13+09.83	LT					1	1	
11+96.58	12+09.83	RT			1				
12+09.83	12+84.83	RT		75					
12+84.83	12+97.33	RT				1			1
TOTALS			100	125	4	2	2	2	2

GUARDRAIL REMOVAL SCHEDULE			
STATION	STATION	OFFSET	GUARDRAIL REMOVAL
			FOOT
9+75	10+89	RT	114
10+00	10+89	LT	89
11+91	12+92	LT	101
11+91	12+92	RT	101
TOTALS			405

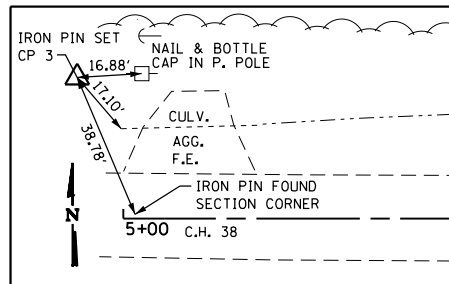
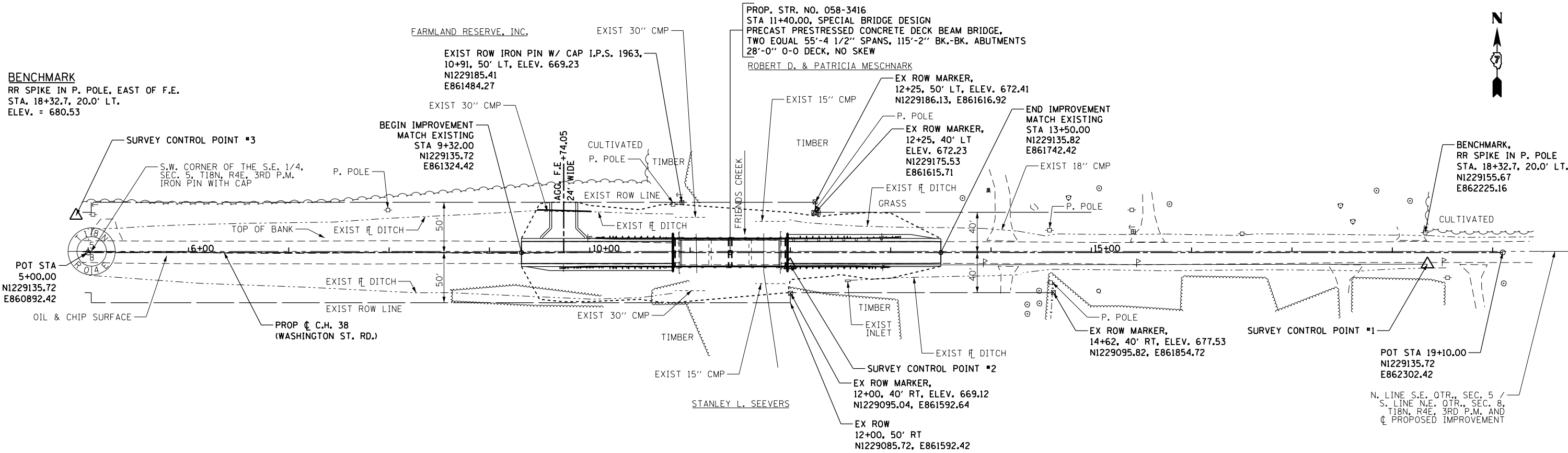
ENTRANCE SCHEDULE								
STATION	OFFSET	ENTRANCE TYPE	LENGTH	WIDTH	AREA	THICKNESS	AGGREGATE BASE COURSE, TYPE B 6"	AGGREGATE FOR TEMPORARY ACCESS
			FOOT	FOOT	SQ FT	INCHES	SQ YD	TON
9+74.05	LT	FE	36.00	24.00	963	6	107	37
TOTALS							107	37

STONE RIPRAP SCHEDULE											
STATION	STATION	OFFSET	OFFSET	LOCATION	LENGTH	* WIDTH	RIPRAP THICKNESS	FILTER FABRIC	APPLICATION RATE	STONE RIPRAP CLASS A4	
							(FOOT)	(SQ YD)	(TON/CU YD)	(TON)	
10+83.41	10+85.00	14.67' LT	46' LT	W. ABUT.	31.33	* 1.59	1.33	6.2	1.50	4.2	
10+83.41	10+85.00	14.67' RT	48' RT	W. ABUT.	33.33	* 1.59	1.33	6.6	1.50	4.4	
10+85.00	10+95.04	46' LT	48' RT	W. ABUT.	94.00	* 10.04	1.33	117.2	1.50	78.2	
10+95.04	11+02.95	46' LT	48' RT	W. ABUT.	94.00	7.91	VARIES	82.6	1.50	92.7	
11+35.00	11+45.00	24.67' LT	24.67' RT	PIER	49.33	10.00	16" & VARIES	54.8	1.50	41.1	
11+76.21	11+84.97	40' LT	40' RT	E. ABUT.	80.00	8.76	VARIES	77.9	1.50	85.8	
11+84.97	11+95.00	40' LT	40' RT	E. ABUT.	80.00	* 10.04	1.33	99.8	1.50	66.6	
11+95.00	11+96.58	14.67' LT	40' LT	E. ABUT.	25.33	* 1.58	1.33	5.0	1.50	3.4	
11+95.00	11+96.58	14.67' RT	40' RT	E. ABUT.	25.33	* 1.58	1.33	5.0	1.50	3.4	
TOTALS								455		380	

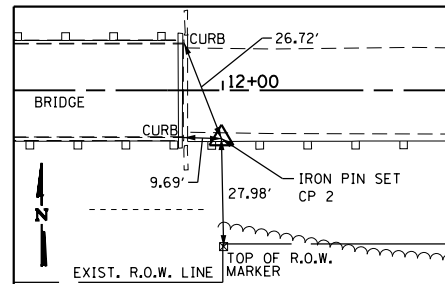
* HORIZONTAL WIDTH OF 2:1 SLOPES; MULTIPLY BY 1.118 FOR DIMENSION ALONG 2:1 SLOPE

TREE REMOVAL SCHEDULE			
STATION	STATION	OFFSET	TREE REMOVAL, ACRES
			ACRE
9+32	10+13	50' RT	0.05
10+62	11+00	50' RT	0.05
TOTALS			0.10

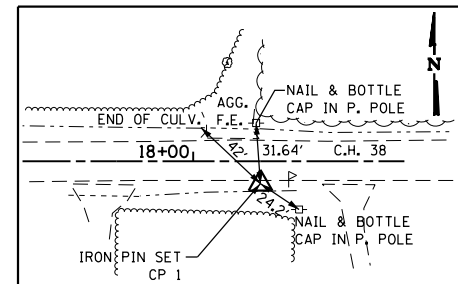
BENCHMARK
RR SPIKE IN P. POLE, EAST OF F.E.
STA. 18+32.7, 20.0' LT.
ELEV. = 680.53



TIE POINTS
SURVEY CONTROL POINT 3
N: 1229172.51, E: 860880.42
ELEVATION 677.71
STA 4+87.97, 36.79' LT



TIE POINTS
SURVEY CONTROL POINT 2
N: 1229123.20, E: 861592.07
ELEVATION 675.51
STA 11+99.62, 12.52' RT



TIE POINTS
SURVEY CONTROL POINT 1
N: 1229124.06, E: 862227.43
ELEVATION 678.81
STA 18+35.00, 11.67' RT

ALIGNMENT COORDINATES - CH 38 (WASHINGTON STREET RD.)			
CH 38	STATION	N	E
POT	5+00.00	1229135.72	860892.42
BK. W. ABUT.	10+82.41	1229135.72	861474.83
C. L. BRIDGE	11+40.00	1229135.72	861532.42
BK. E. ABUT.	11+97.58	1229135.72	861590.00
POT	19+10.00	1229135.72	862302.42



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		DRAWN - MJP	REVISED -
		CHECKED - TDN	REVISED -
		DATE - 3/30/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ALIGNMENT, TIES, HORIZONTAL LAYOUT AND R.O.W.
CH 38 (WASHINGTON ST RD) OVER FRIENDS CREEK**

SCALE: SHEET 1 OF 1 SHEETS STA. 5+00.00 TO STA. 19+10.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	7
CONTRACT NO. 95920				
ILLINOIS FED. AID PROJECT				

STRUCTURE NO. 058-3185

EXIST. 3-SPAN PRECAST CONCRETE CHANNEL BEAM SUPERSTRUCTURE ON SPILL-THRU CONCRETE ABUTMENTS AND CONCRETE PILE BENT PIERS 101'-10" BK.-BK. ABUTMENTS 26'-3" O.-O. DECK

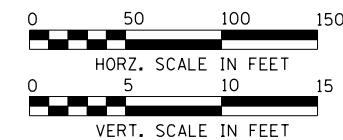
BENCHMARK

RR SPIKE IN P. POLE, EAST OF F.E. STA. 18+32.7, 20.0' LT. ELEV. = 680.53

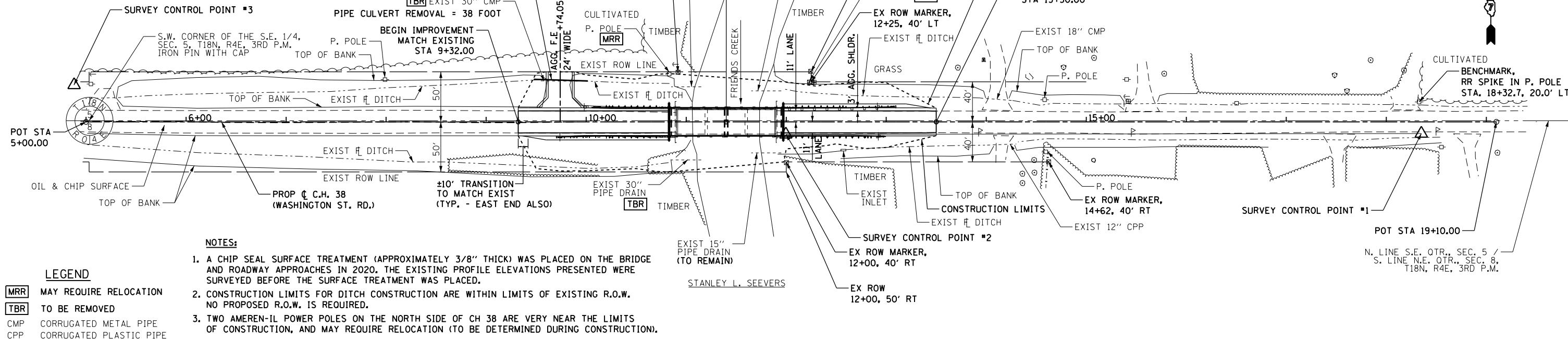
FARMLAND RESERVE, INC.

PROP. 30" DIA. PIPE CULVERT STA. 9+74.05, 41.75' LT
P CUL CL D 1 30 = 54 FOOT
USFL = 667.83 (STA. 9+47.69, 42.59' LT)
DSFL = 667.03 (STA. 10+01.67, 40.86' LT)
END SECTIONS 30" = 2 EACH
INLET AND PIPE PROTECTION = 1 EACH

PROP. STR. NO. 058-3416
STA 11+40.00, SPECIAL BRIDGE DESIGN
PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE,
TWO EQUAL 55'-4 1/2" SPANS, 115'-2" BK.-BK. ABUTMENTS
28'-0" O-O DECK, NO SKEW

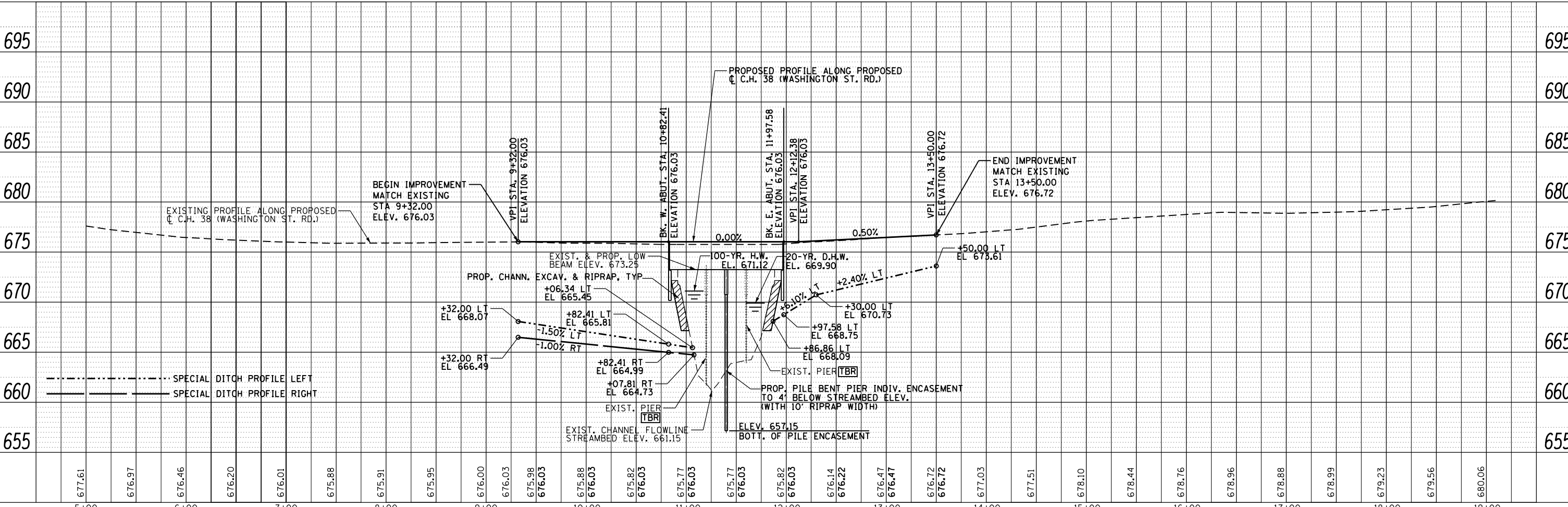


DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	
CHECKED	
FILE NAME	



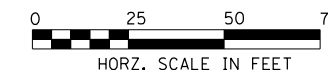
- NOTES:**
- A CHIP SEAL SURFACE TREATMENT (APPROXIMATELY 3/8" THICK) WAS PLACED ON THE BRIDGE AND ROADWAY APPROACHES IN 2020. THE EXISTING PROFILE ELEVATIONS PRESENTED WERE SURVEYED BEFORE THE SURFACE TREATMENT WAS PLACED.
 - CONSTRUCTION LIMITS FOR DITCH CONSTRUCTION ARE WITHIN LIMITS OF EXISTING R.O.W. NO PROPOSED R.O.W. IS REQUIRED.
 - TWO AMEREN-IL POWER POLES ON THE NORTH SIDE OF CH 38 ARE VERY NEAR THE LIMITS OF CONSTRUCTION, AND MAY REQUIRE RELOCATION (TO BE DETERMINED DURING CONSTRUCTION).

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PROFILE	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	
CHECKED	
FILE NAME	



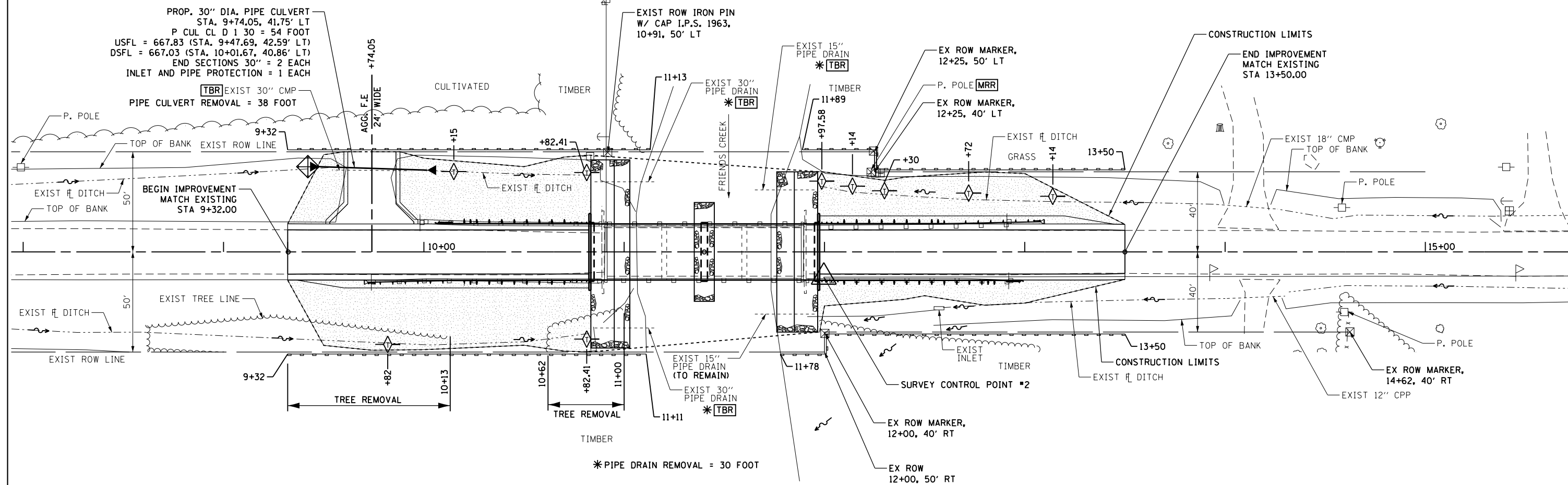
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S:\60619037 CH 38 Washington St over Friends Creek\900_CAD_GIS\910_CAD\60619037_Plan_Prof_sht.20.dgn		DRAWN -	MJP	REVISED -				CH 38	13-00261-00-BR	MACON	23	8
Default		CHECKED -	TDN	REVISED -				CONTRACT NO. 95920				
		DATE -	3/30/22	REVISED -				ILLINOIS FED. AID PROJECT				

SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 5+00.00 TO STA. 19+10.00



ROBERT D. & PATRICIA MESCHNARK
10842 E. WASHINGTON STREET RD.

FARMLAND RESERVE, INC.



NOTES:

- PERIMETER EROSION BARRIER IS SHOWN ALONG RIGHT-OF-WAY LINES. THE ACTUAL LOCATION OF BARRIER MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS, AS DIRECTED BY THE ENGINEER.
- FOR RIPRAP DETAILS AT BRIDGE, ALSO SEE GP&E SHEET IN BRIDGE PLANS.

STANLEY L. SEEVERS
10669 E. WASHINGTON STREET RD.

LEGEND

- TEMPORARY DITCH CHECKS
- PERIMETER EROSION BARRIER
- STONE RIPRAP, CLASS A4
- SEEDING, CLASS 2 & EROSION CONTROL BLANKET
- INLET AND PIPE PROTECTION
- EXISTING R.O.W.
- CONSTRUCTION LIMITS
- FLOW ARROW
- MAY REQUIRE RELOCATION
- TO BE REMOVED

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

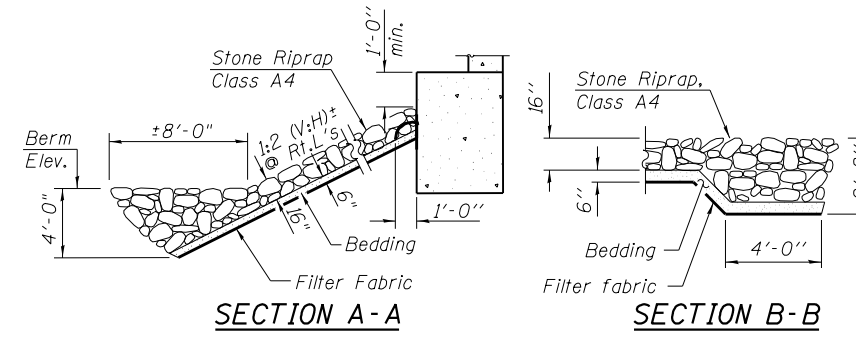
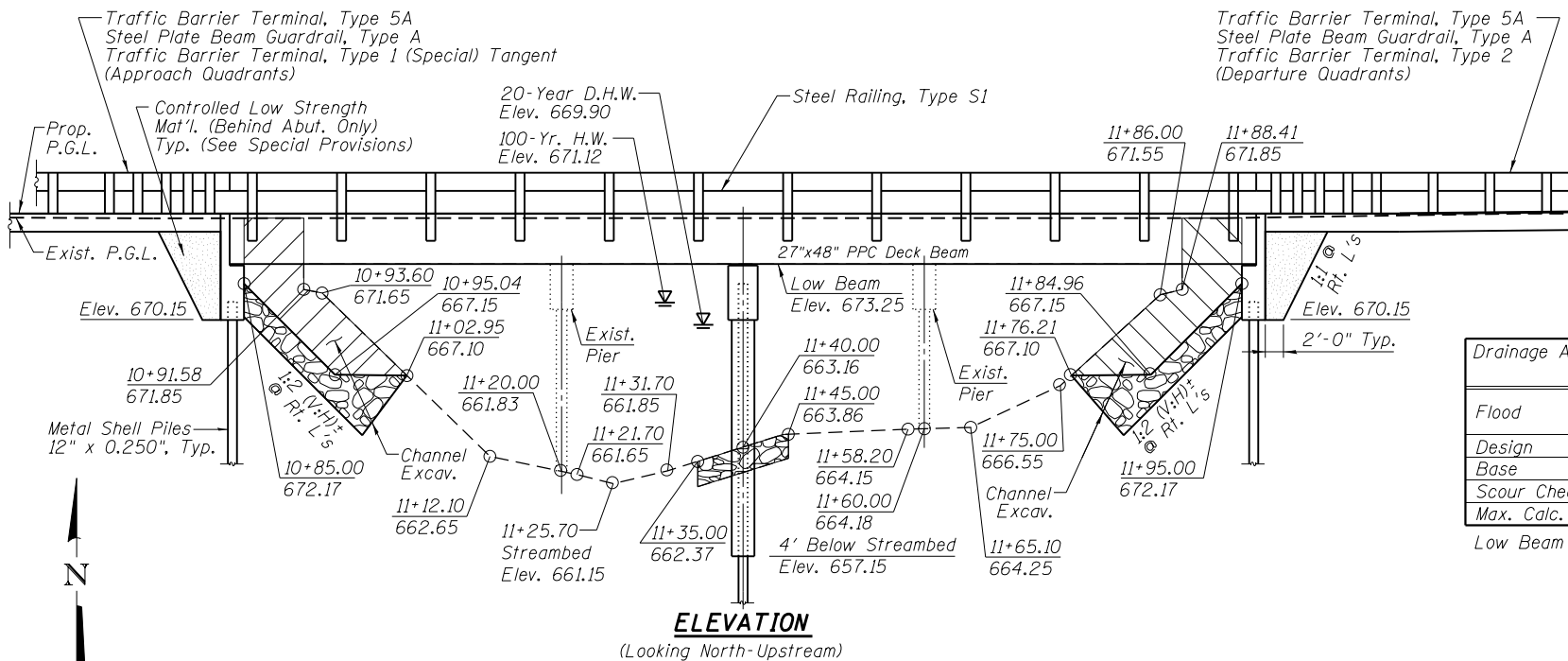
**EROSION CONTROL PLAN
CH 38 (WASHINGTON ST RD) OVER FRIENDS CREEK**

SCALE: 1" = 25' SHEET 1 OF 1 SHEETS STA. 9+32.00 TO STA. 13+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	9
CONTRACT NO. 95920				
ILLINOIS FED. AID PROJECT				

Benchmark: RR Spike in Power Pole, East of F.E., 20.0' Lt. Sta. 18+32.7 = Elev. 680.53.

Existing Structure: Originally constructed in 1972, and re-constructed in 1985, the existing structure is a three-span precast concrete channel beam superstructure on spill-through concrete abutments and concrete pile bent piers, with concrete slopewalls. The structure is ±101'-10" face to face of abutments and ±26'-3" out to out of deck. Existing structure is to be removed and replaced. Existing roadway will be closed during construction.



STONE RIPRAP ANCHOR DETAIL

WATERWAY INFORMATION

Drainage Area = 39.23 Sq. Mi. Existing Low Grade Elev. 675.77 @ Sta. 11+00.00
Proposed Low Grade Elev. 676.03 @ Sta. 9+46.05

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	2,704	506	568	669.90	0.47	0.45	670.37	670.35
Base	100	4,030	644	736	671.12	0.78	0.75	671.90	671.87
Scour Check	200	4,355	663	759	671.27	0.83	0.83	672.10	620.60
Max. Calc.	500	5,330	717	823	671.66	0.96	0.92	672.62	672.58

Low Beam Elev. (Prop.) = 673.25

DESIGN SCOUR ELEVATION TABLE

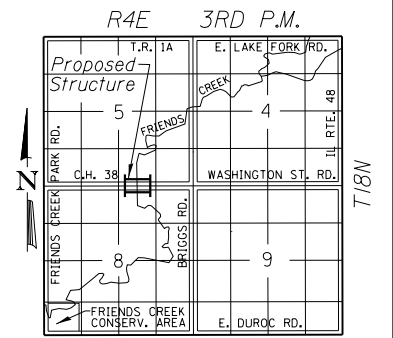
Event/Limit State	Design Scour Elev. (ft.)			Item I13
	West Abut.	Pier	East Abut.	
Design	670.15	657.15	670.15	5
Check	670.15	657.15	670.15	

GENERAL NOTES

Layout of Stone Riprap, Class A4 may be varied in the field to suit ground conditions as directed by the Engineer.
See Proposal for Boring Data.
The Contractor shall drive one Metal Shell Test Pile in a permanent location at the East Abutment and Pier as directed by the Engineer before ordering the remainder of piles.
Excavation required for abutment construction shall be included in Concrete Structures. No additional compensation will be provided for Structure Excavation.
Individual Concrete Encasement at Pier Piles allows for tremie placement of concrete instead of a Cofferdam. Contractor shall assess the channel conditions at time of construction to ensure that tremie method is feasible.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd		474	474
Stone Riprap, Class A4	Ton		380	380
Filter Fabric	Sq Yd		455	455
Hot-Mix Asphalt Surface Course, IL-9.5, Mix "C", N50	Ton	31		31
Removal of Existing Structures	Each		1	1
Slope Wall Removal	Sq Yd		615	615
Concrete Structures	Cu Yd		38.4	38.4
Concrete Encasement	Cu Yd		14.2	14.2
PPC Deck Beams (27" Depth)	Sq Ft	3,167		3,167
Reinforcement Bars, Epoxy Coated	Pound		4,860	4,860
Steel Railing, Type S1	Foot	227		227
Furnishing Metal Shell Piles 12" x 0.250"	Foot		495	495
Driving Piles	Foot		495	495
Test Piles Metal Shells	Each		3	3
Name Plates	Each		1	1
Portland Cement Mortar Fairing Course	Foot	679		679
Waterproofing Membrane System	Sq Yd	353		353
Controlled Low-Strength Material	Cu Yd		44.6	44.6



DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications - 9th Edition

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

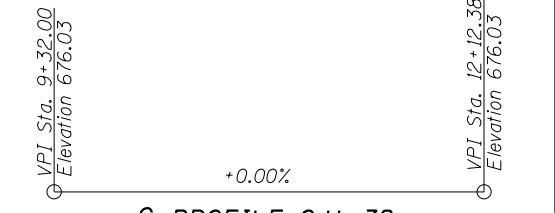
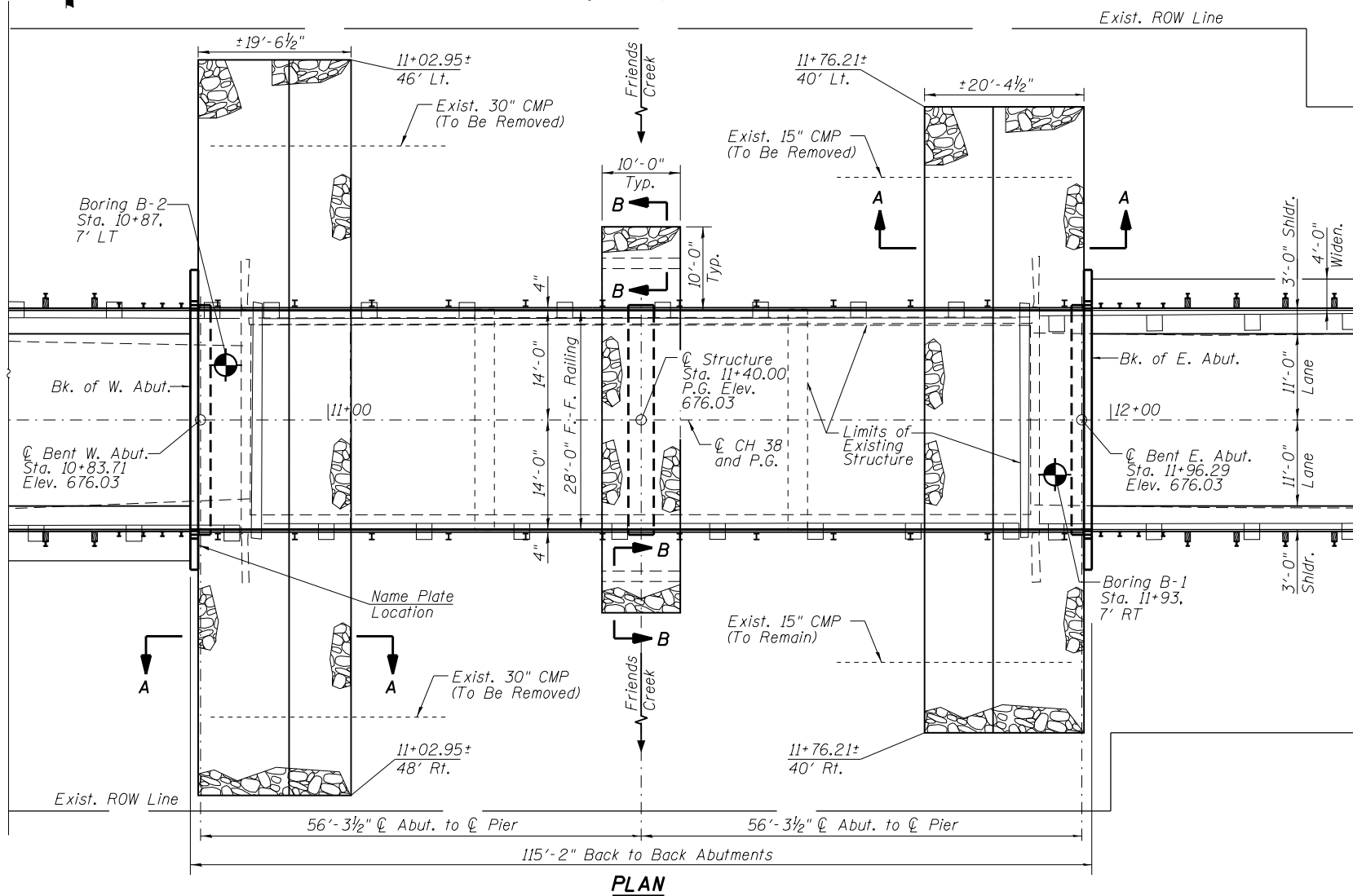
DESIGN STRESSES

FIELD UNITS
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinforcement)
n = 9

PPC UNITS
f'ci = 5,000 p.s.i.
f'c = 6,000 p.s.i.
f's = 270,000 p.s.i.
f'si = 201,960 p.s.i.

SEISMIC DATA

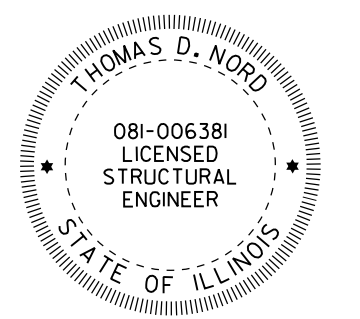
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.141 g
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.248 g
Soil Site Class = D



**FRIENDS CREEK
BUILT 2022 BY
MACON COUNTY
SEC. 13-00261-00-BR
F.A.S. 548 C.H. 38 STA. 11+40
STR. NO. 058-3416 LOADING HL-93
SMITH BRIDGE**

NAME PLATE

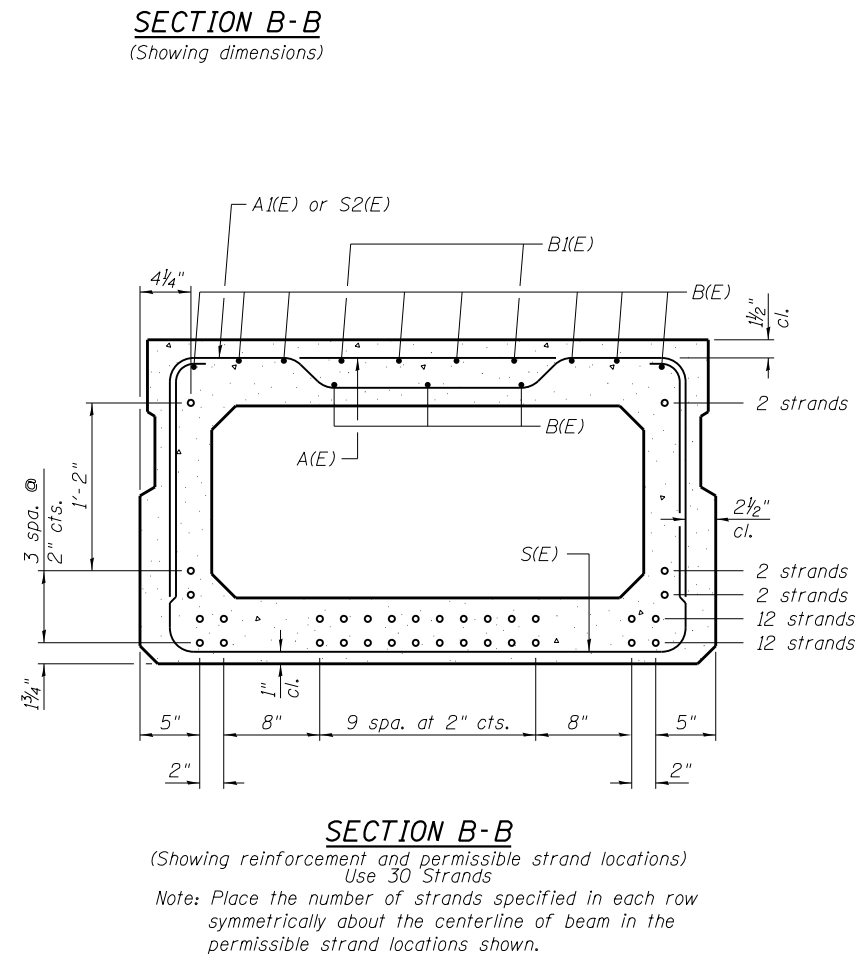
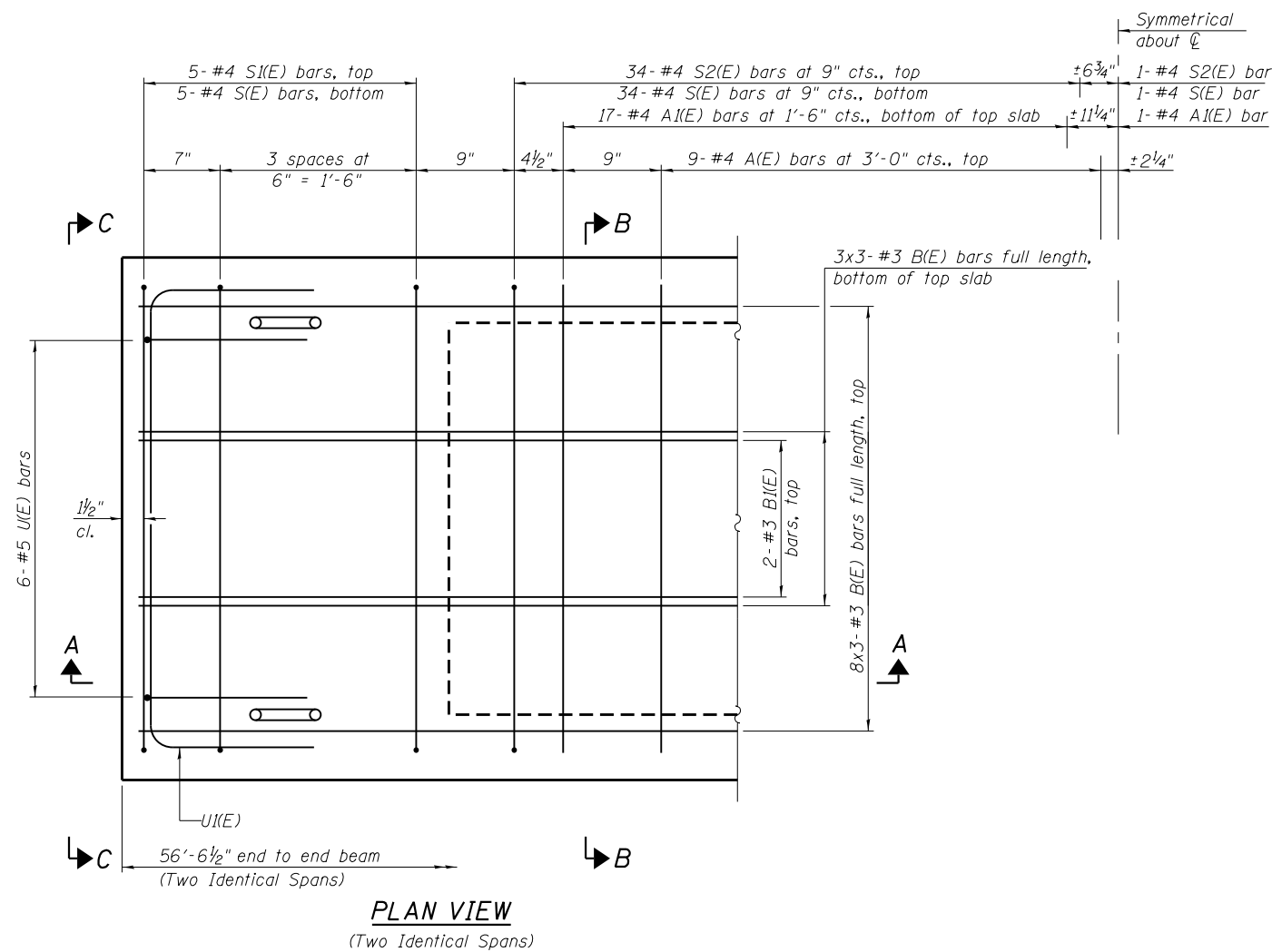
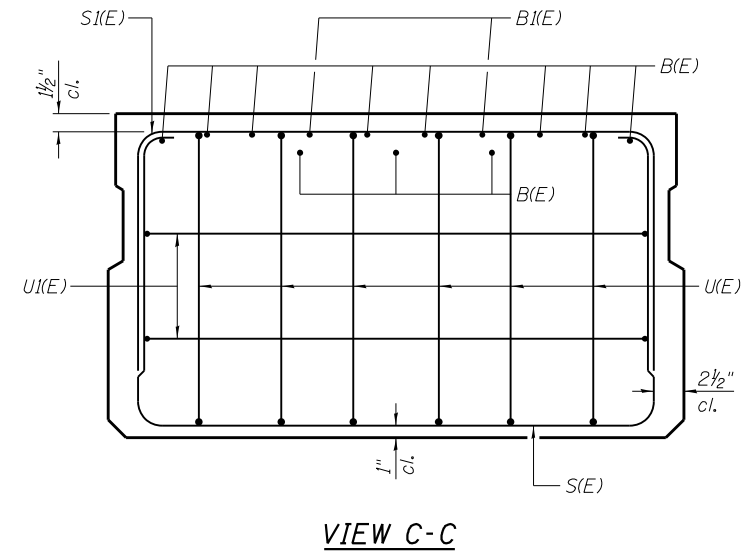
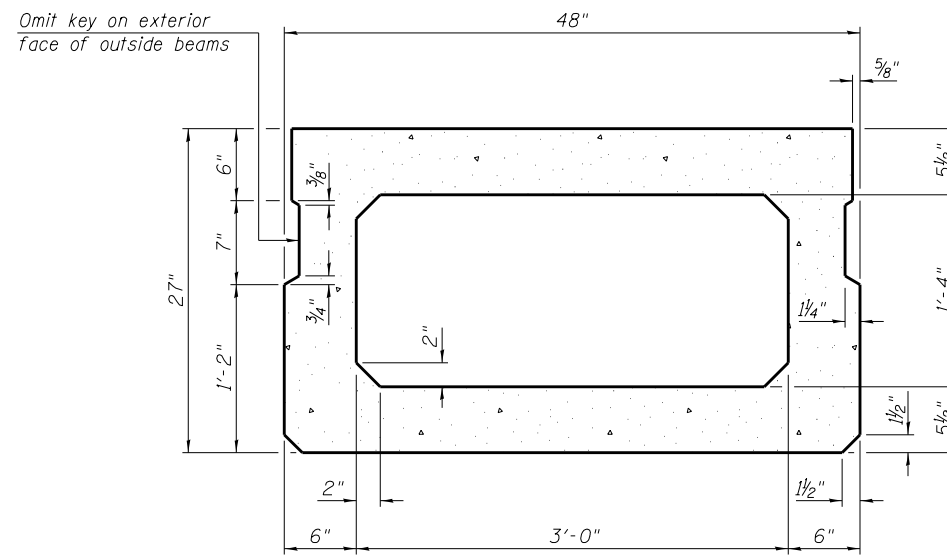
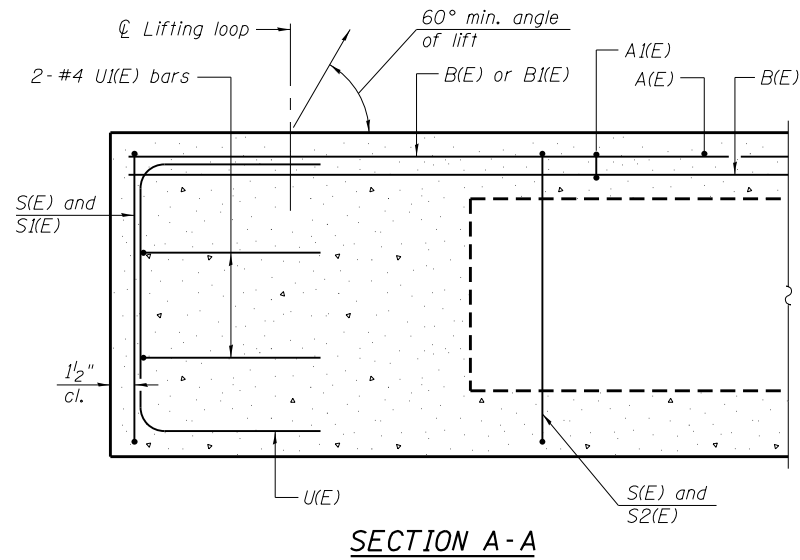
See Std. 515001



Thomas D. Nord

THOMAS D. NORD
SIGNATURE DATE: 3/30/2022
ILL. STRUCTURAL NO. 081-006381
EXP. DATE: 11/30/2022

CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH REQUIREMENTS OF THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.



BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	18	#4	3'-7"	—
A(E)	35	#4	3'-10"	—
B(E)	33	#3	19'-10"	—
B(E)	4	#3	10'-0"	—
S(E)	79	#4	8'-5"	⌈
S(E)	10	#4	6'-11"	⌈
S2(E)	69	#4	7'-2"	⌈
U(E)	12	#5	4'-6"	⌈
U(E)	4	#4	6'-0"	⌈

Note:
See sheets 3 & 4 of 8 for additional details and Bill of Material.

Note:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP
#3 bar = 1'-6"

PD-2748-0

1-1-2020

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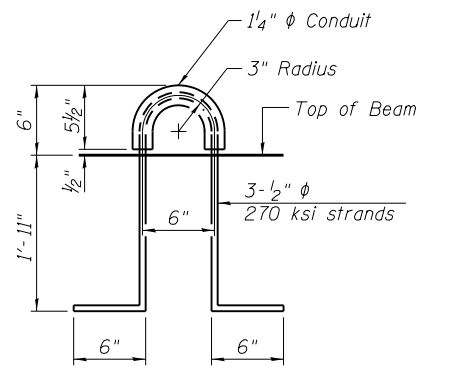
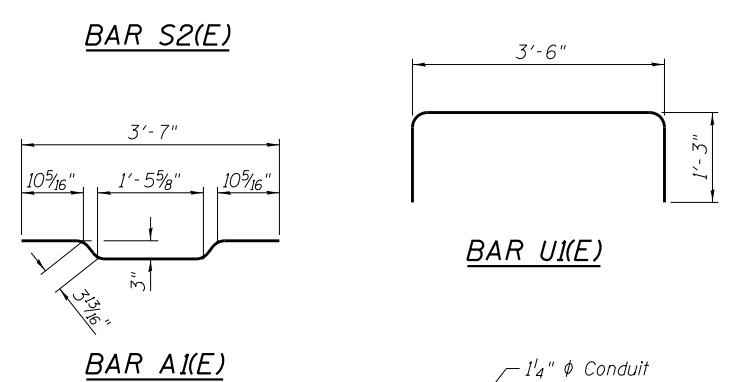
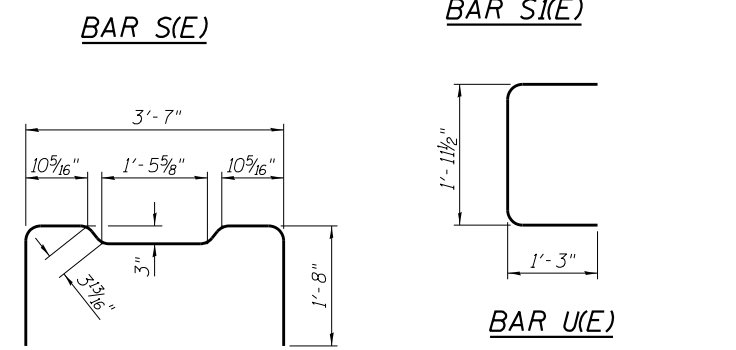
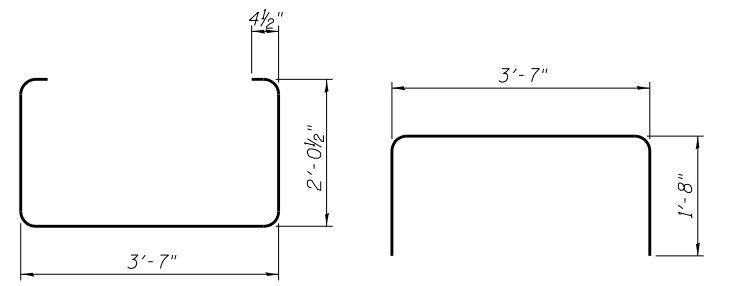
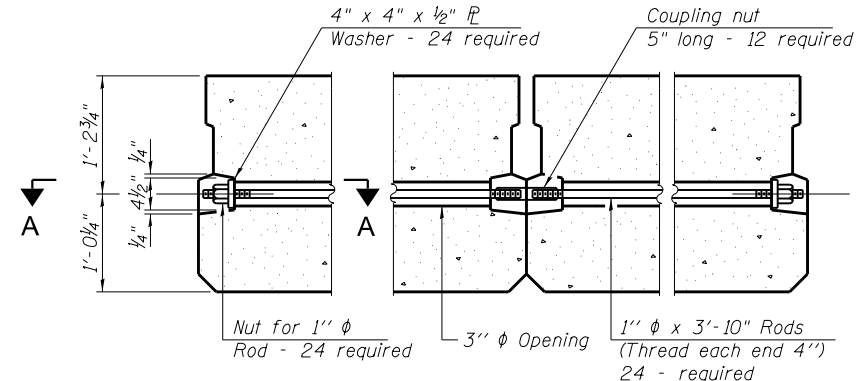
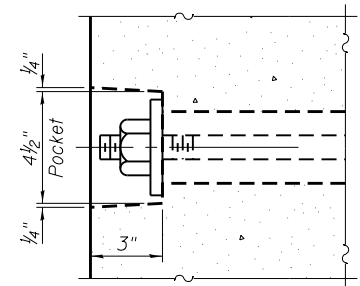
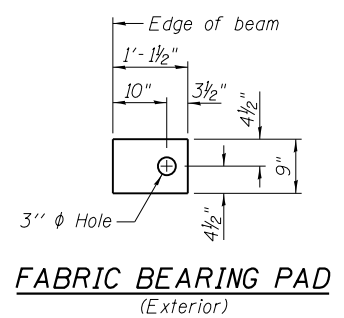
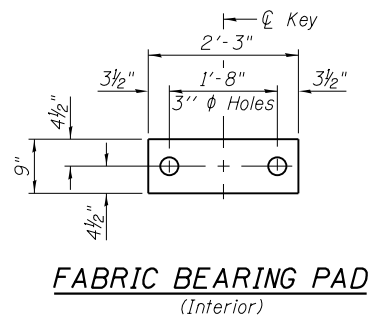
AECOM 345 EAST ASH AVE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

27" x 48" PPC DECK BEAM, SPANS 1 & 2
STRUCTURE NO. 058-3416

SHEET 2 OF 8 SHEETS

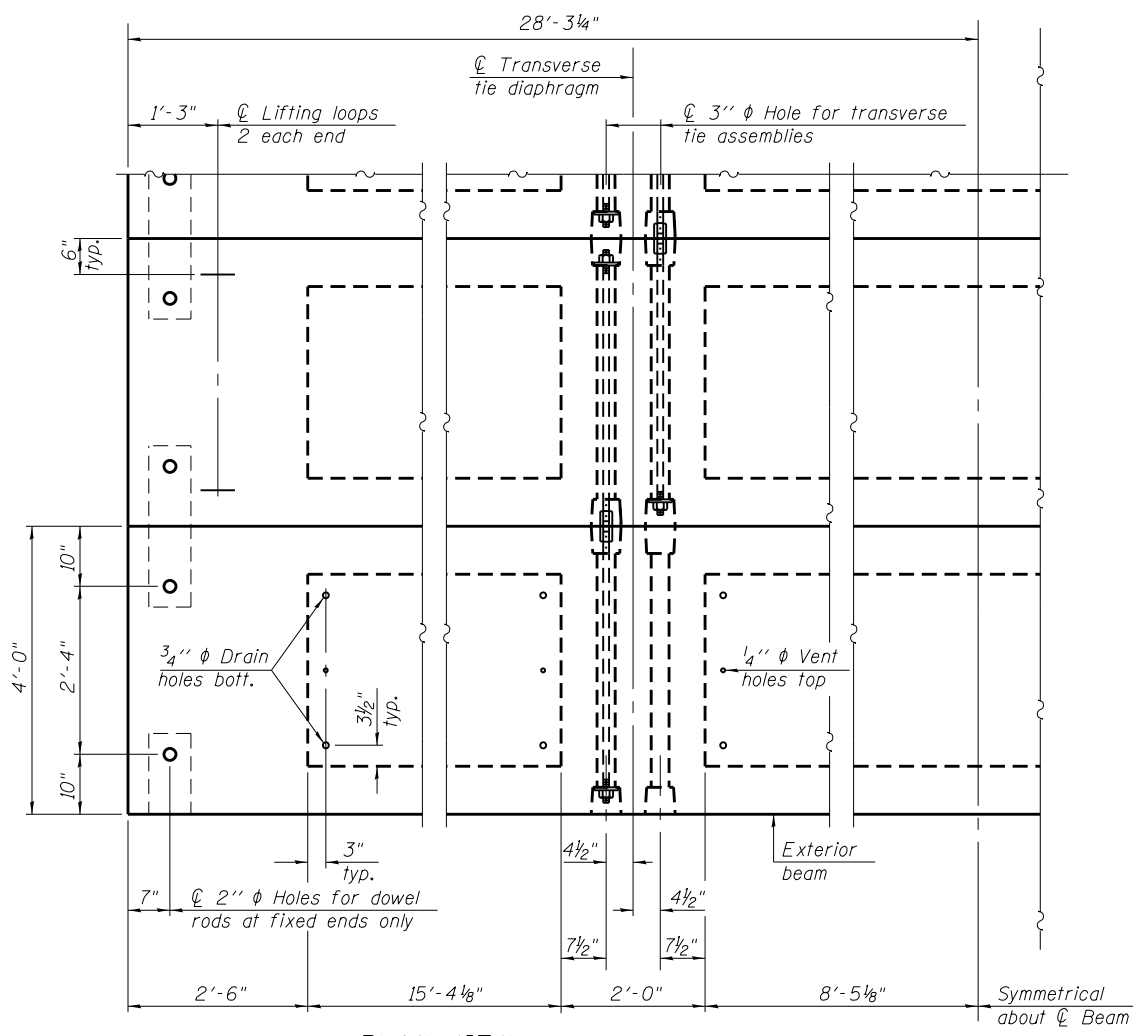
RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	11
			CONTRACT NO. 95920	
ILLINOIS FED. AID PROJECT				



Notes:
 All bearing pads shall be 1" thick.
 Omit holes when using expansion bearings.
 Expansion bearing pad shall be bonded to the substructure.

SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW
 (Two Identical Spans)

Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	3167
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PDD-2748-0 1-1-2020

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AECOM 345 EAST ASH AVE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

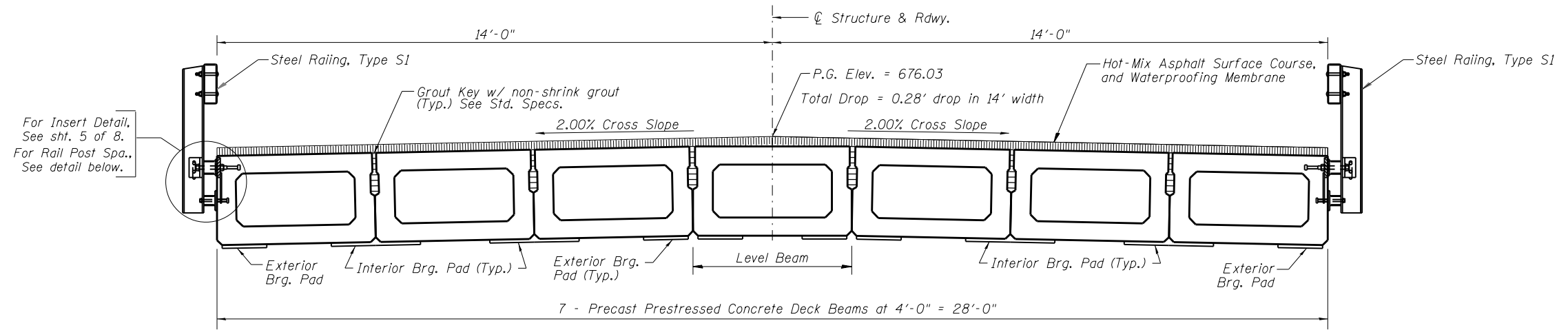
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

27" x 48" PPC DECK BEAM DETAILS, SPANS 1 & 2
 STRUCTURE NO. 058-3416

SHEET 3 OF 8 SHEETS

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	12
			CONTRACT NO. 95920	

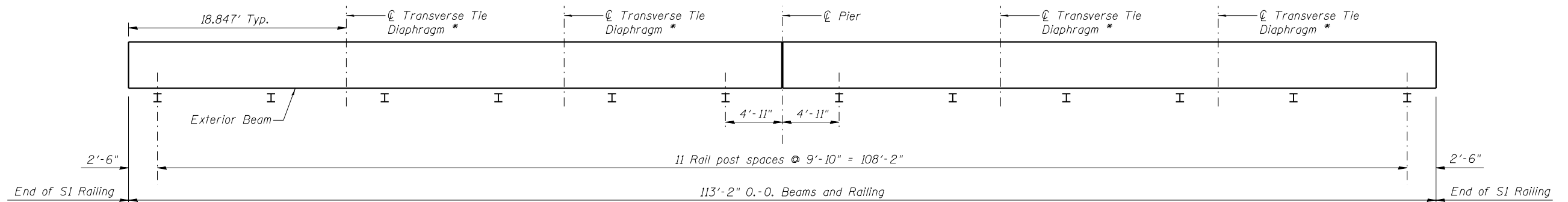
ILLINOIS FED. AID PROJECT



SUPERSTRUCTURE CROSS SECTION

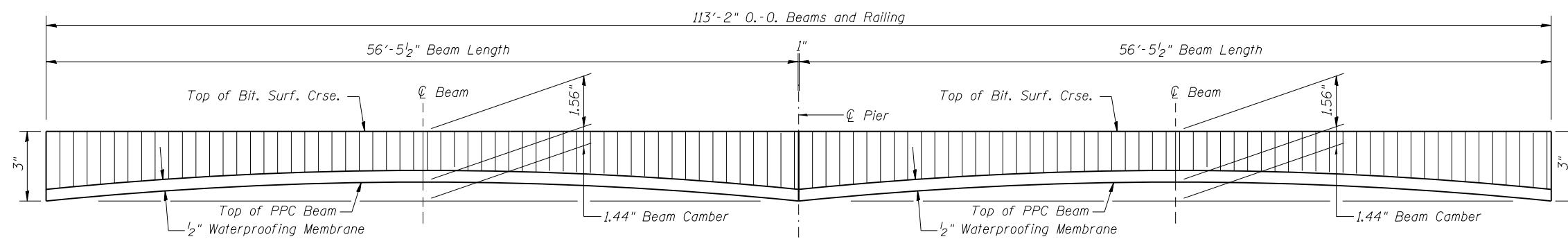
(See sheets 2 & 3 of 8 for Superstructure)

* See Sheet 3 of 8 for Transverse Tie Spacing



PLAN VIEW - EXTERIOR BEAMS

(Showing Rail Post Spacing)



HOT-MIX ASPHALT WEARING SURFACE (HMA) PROFILE

(Includes Wearing Surface, Waterproofing Membrane, and Beam Camber)

FILE NAME =	DESIGNED - MJP	REVISED -
60619037_SUPER_DETAILS.dgn	DRAWN - MJP	REVISED -
PLOT DATE = 3/30/2022	CHECKED - TDN	REVISED -
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AECOM 345 EAST ASH AVE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

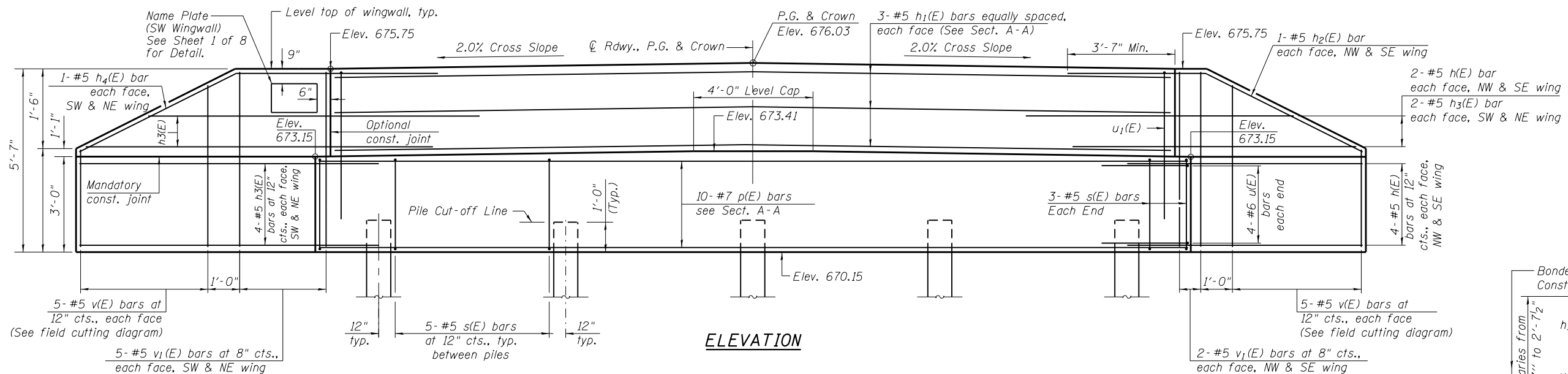
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-3416**

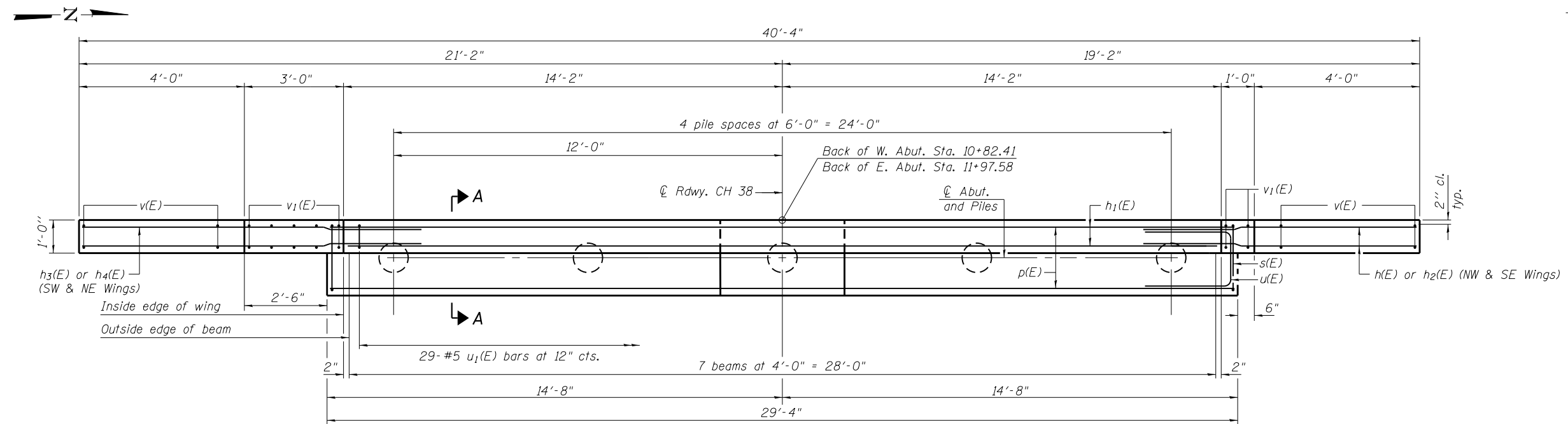
SHEET 4 OF 8 SHEETS

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CH 38	13-00261-00-BR	MACON	23	13
CONTRACT NO. 95920				

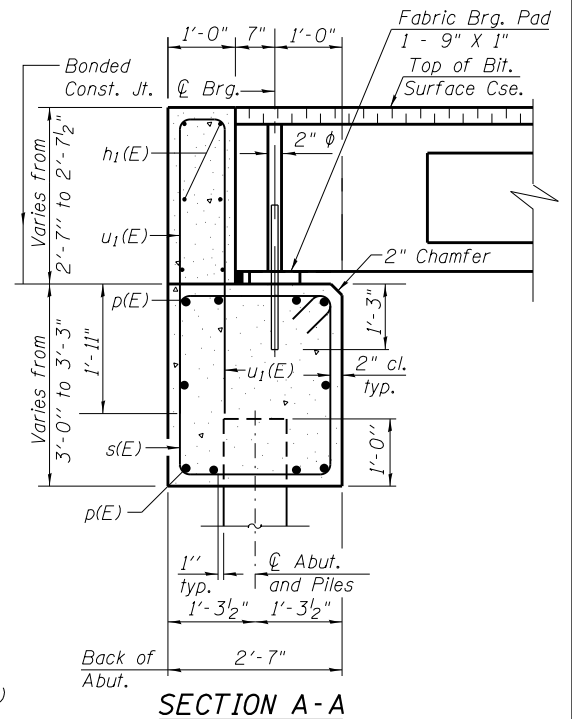
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ELEVATION



PLAN

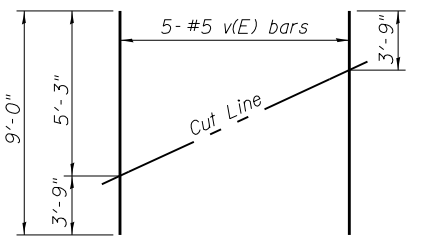


SECTION A-A

PILE DATA

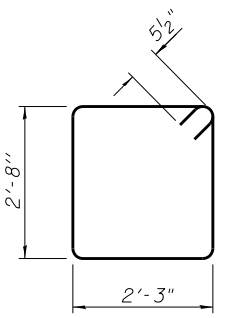
West Abutment
 Type: Metal Shell 12" ϕ x 0.25" walls
 Nominal Required Bearing: 237 kips
 Factored Resistance Available: 130 kips
 Est. Length: 30 ft.
 No. Production Piles: 4
 No. Test Piles: 1

East Abutment
 Type: Metal Shell 12" ϕ x 0.25" walls
 Nominal Required Bearing: 237 kips
 Factored Resistance Available: 130 kips
 Est. Length: 35 ft.
 No. Production Piles: 4
 No. Test Piles: 1

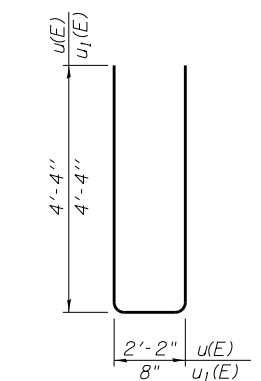


FIELD CUTTING DIAGRAM

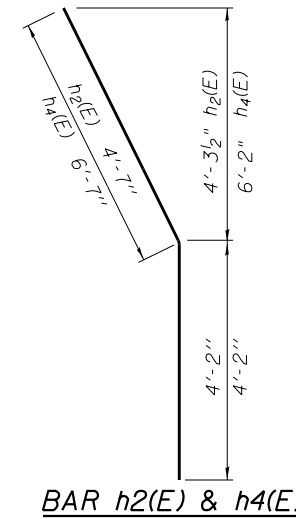
Order v(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s(E)



BARS u(E) & u1(E)



BAR h2(E) & h4(E)

- NOTES**
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
 - 1" dia. x 2'-6" dowel rods in 1/2" dia. holes drilled in cap (2 each beam). Dowel rods to be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to grouting the shear keys. The grout shall be an approved non-shrink grout.
 - Reinforcement bars designated (E) shall be Epoxy coated.
 - Space reinforcement in cap to miss dowel rods.
 - For pile details, see Sheet 8 of 8.

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi

BILL OF MATERIAL TWO ABUTMENTS

Bar	No.	Size	Length	Shape
h(E)	24	#5	7'-6"	—
h1(E)	12	#5	28'-0"	—
h2(E)	4	#5	8'-9"	—
h3(E)	24	#5	9'-6"	—
h4(E)	4	#5	10'-9"	—
p(E)	20	#7	29'-0"	—
s(E)	52	#5	10'-9"	□
u(E)	16	#6	10'-10"	□
u1(E)	58	#5	9'-4"	□
v(E)	20	#5	9'-0"	—
v1(E)	28	#5	5'-3"	—
Concrete Structures		Cu. Yd.	27.3	
Reinforcement Bars, Epoxy Coated		Pound	3,800	
Furnishing Metal Shell Piles 12" x 0.250"		Foot	260	
Driving Piles		Foot	260	
Test Pile Metal Shells		Each	2	

AD-SB-0 6-15-2019

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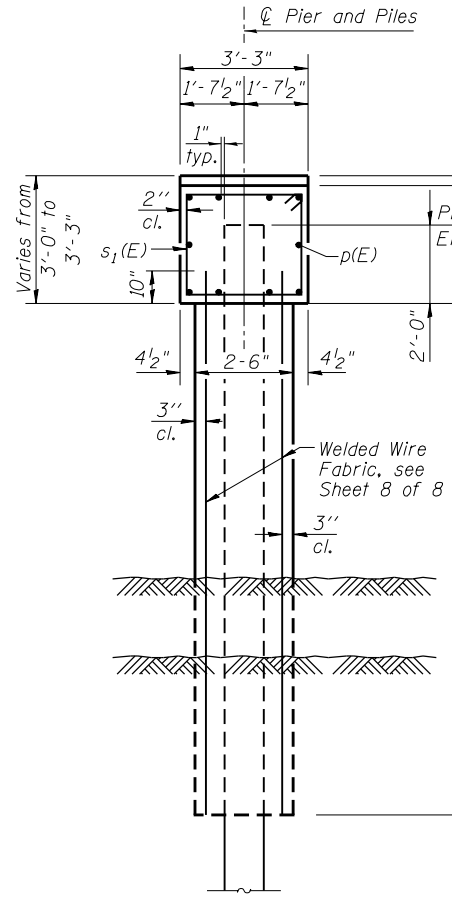
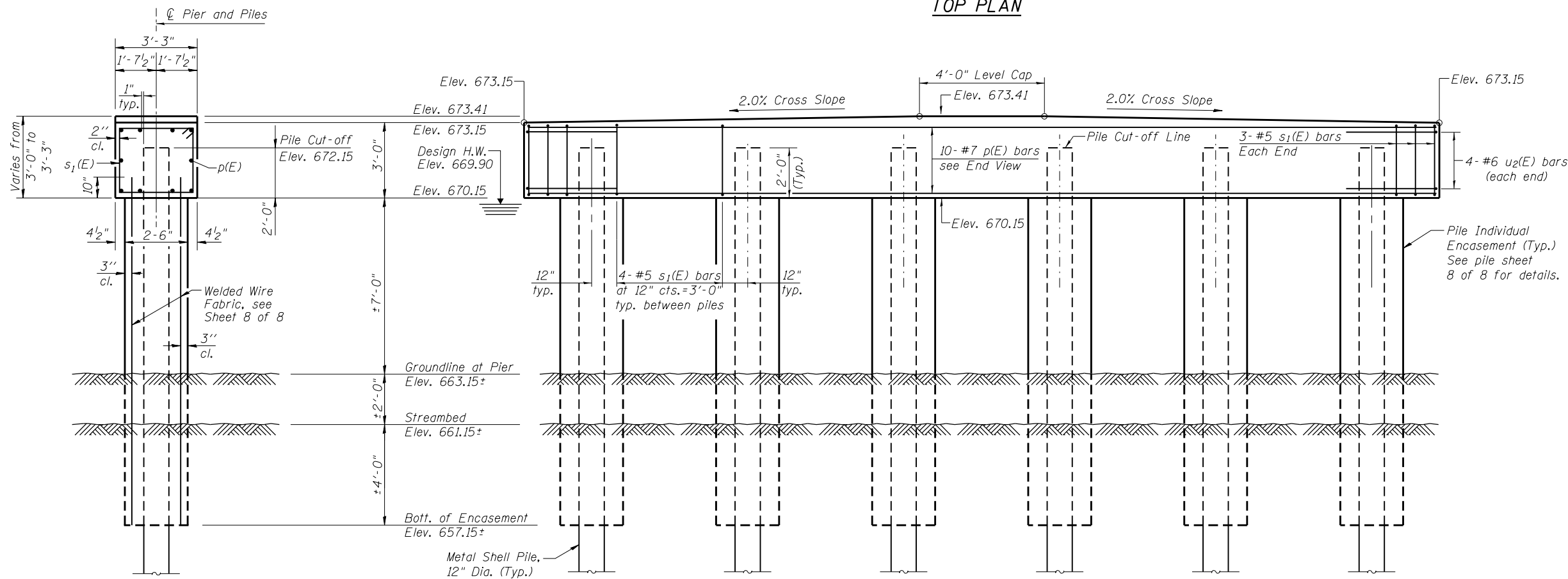
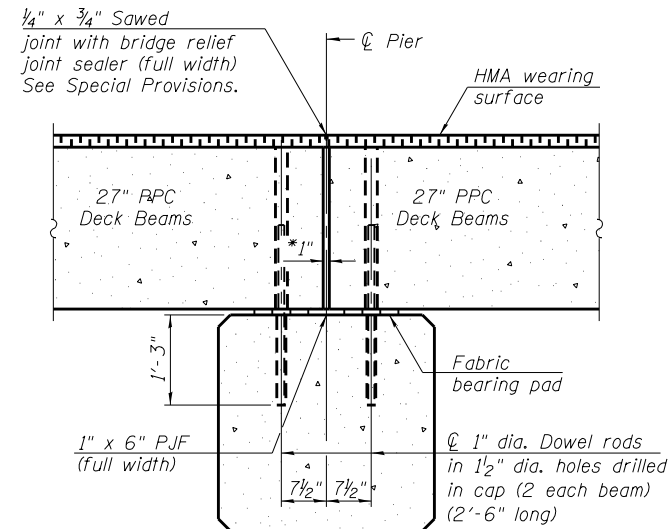
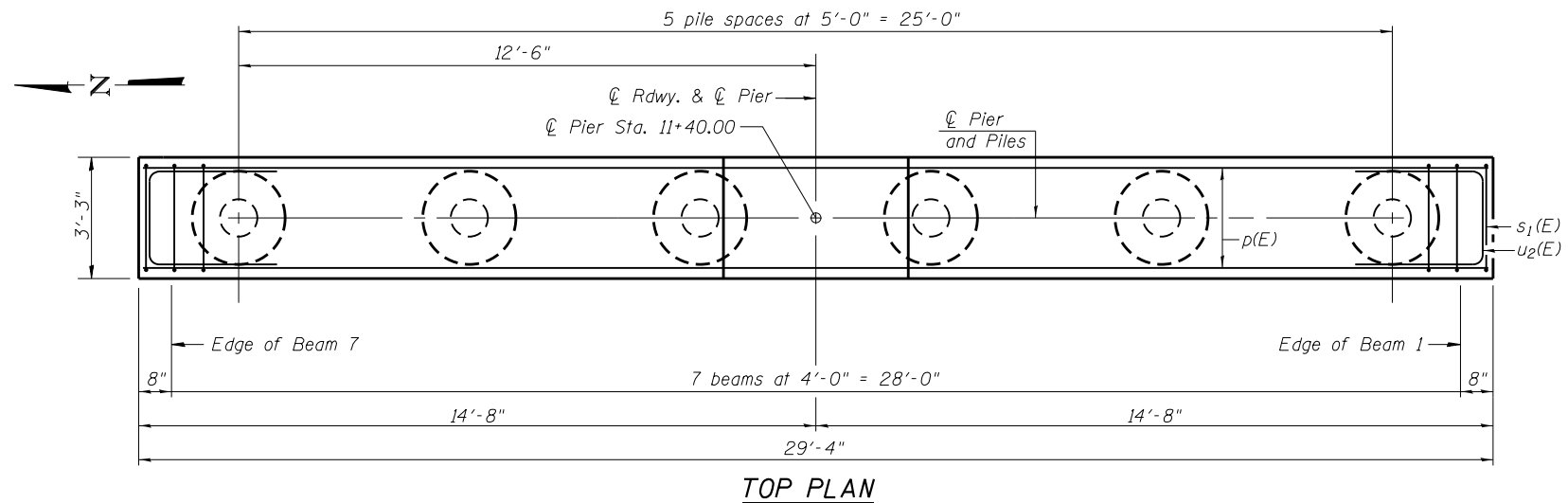
AECOM 345 EAST ASH AVE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WEST AND EAST ABUTMENTS
 STRUCTURE NO. 058-3416

SHEET 6 OF 8 SHEETS

RT. CH 38	SECTION 13-00261-00-BR	COUNTY MACON	TOTAL SHEETS 23	SHEET NO. 15
			CONTRACT NO. 95920	
ILLINOIS FED. AID PROJECT				



SECTION THRU PIER

NOTES

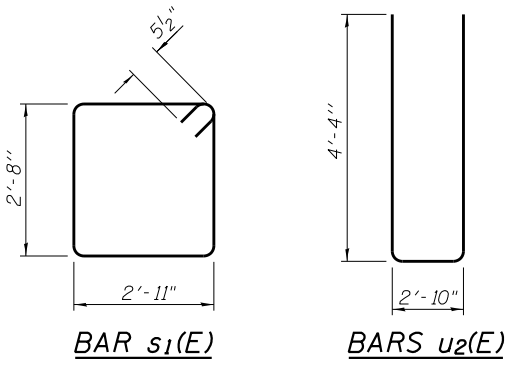
- For the portions of the concrete encasements which are underwater, concrete may be tremied under water into forms according to article 503.08 of the standard specifications to an elevation of 1'-0" above the water line at the time of construction. Cofferdams are not required for this work.
- 1" dia. x 2'-6" dowel rods in 1 1/2" dia. holes drilled in cap (2 each beam). Dowel rods to be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to grouting the shear keys. The grout shall be an approved non-shrink grout.
- Reinforcement bars designated (E) shall be Epoxy coated.
- Space reinforcement in cap to miss dowel rods.
- For pile details, see sheet 8 of 8.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p(E)	10	#7	29'-0"	—
s1(E)	26	#5	12'-1"	□
u2(E)	8	#6	11'-6"	⊔
Concrete Structures		Cu. Yd.		11.1
Reinforcement Bars, Epoxy Coated		Pound		1,060
Furnishing Metal Shell Piles 12" x 0.250"		Foot		235
Driving Piles		Foot		235
Test Pile Metal Shells		Each		1
Concrete Encasement		Cu. Yd.		14.2

PILE DATA

Pier
 Type: Metal Shell 12" φ x 0.25" walls
 Nominal Required Bearing: 330 kips
 Factored Resistance Available: 182 kips
 Est. Length: 47 ft.
 No. Production Piles: 5
 No. Test Piles: 1



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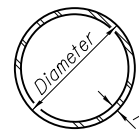
AECOM 345 EAST ASH AVE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER
STRUCTURE NO. 058-3416

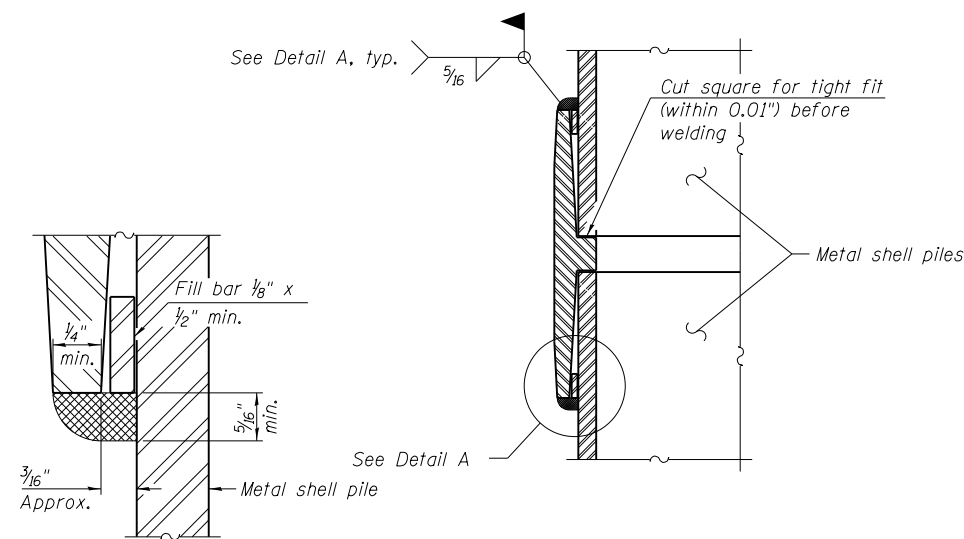
SHEET 7 OF 8 SHEETS

RT. 38	SECTION 13-00261-00-BR	COUNTY MACON	TOTAL SHEETS 23	SHEET NO. 16
			CONTRACT NO. 95920	
ILLINOIS FED. AID PROJECT				

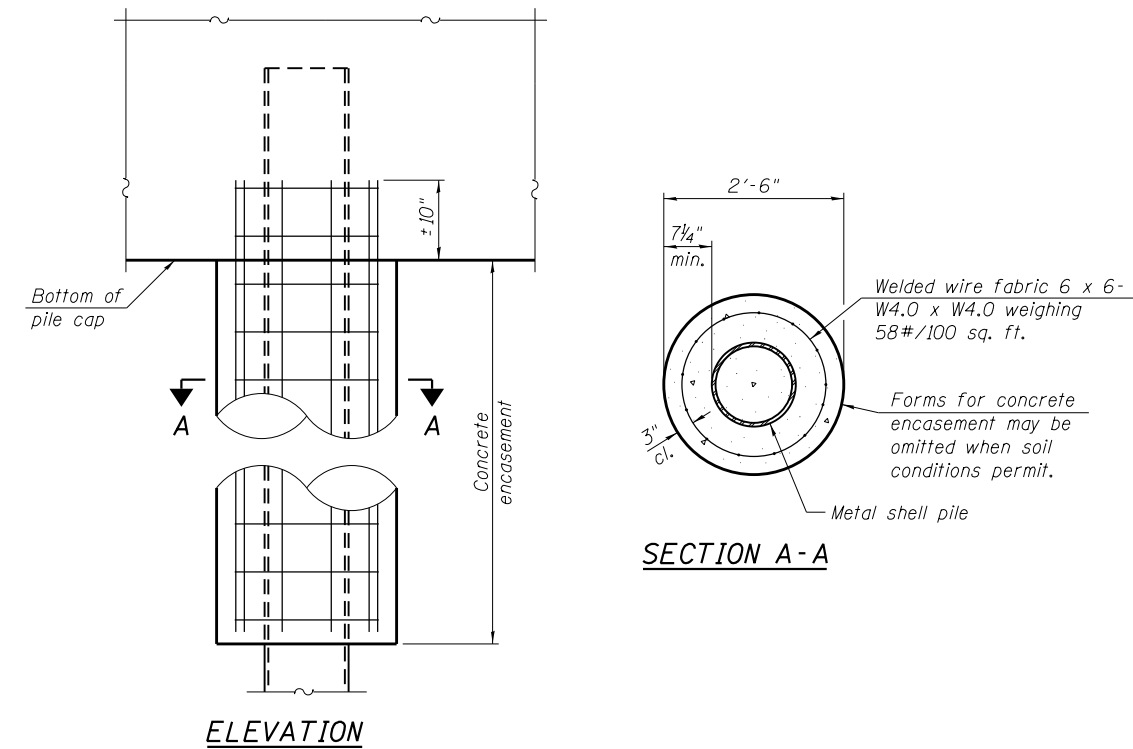


METAL SHELL PILE TABLE

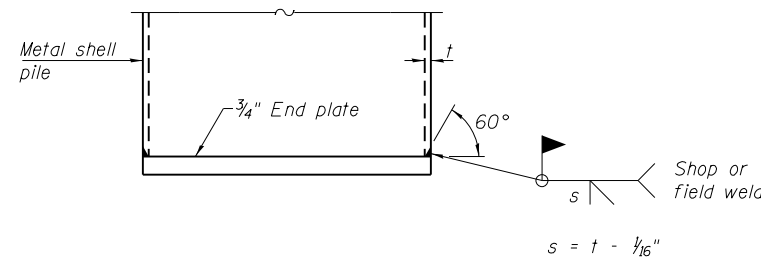
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A



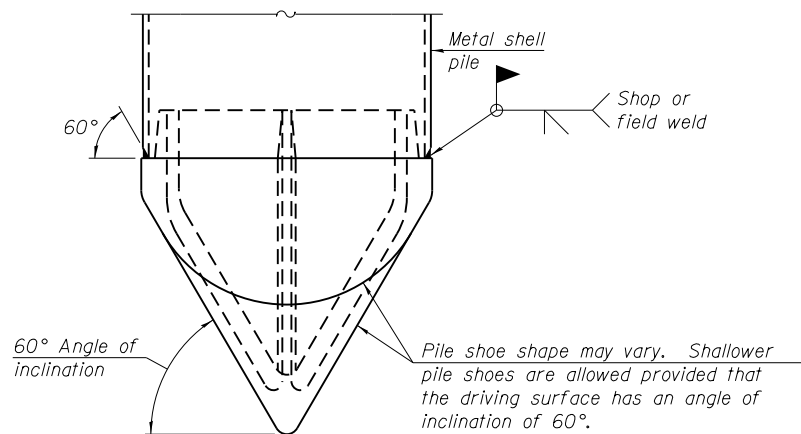
INDIVIDUAL PILE CONCRETE ENCASUREMENT
(When specified)



END PLATE ATTACHMENT

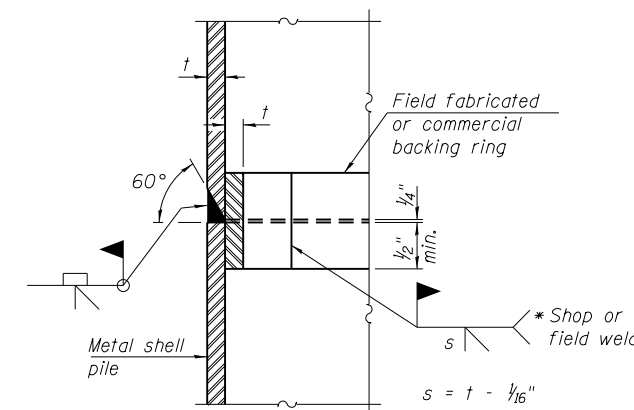
WELDED COMMERCIAL SPLICE

Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.



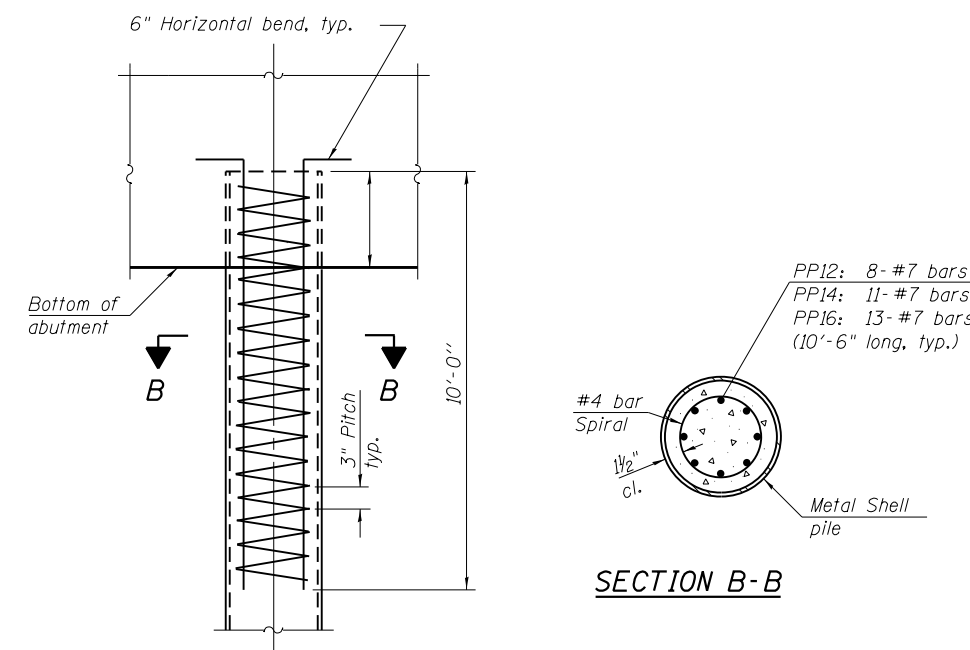
PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION

REINFORCEMENT AT ABUTMENTS
(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS 1-1-2020

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DECATUR, ILLINOIS 62526
PH. 217-875-4800

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS
STRUCTURE NO. 058-3416**

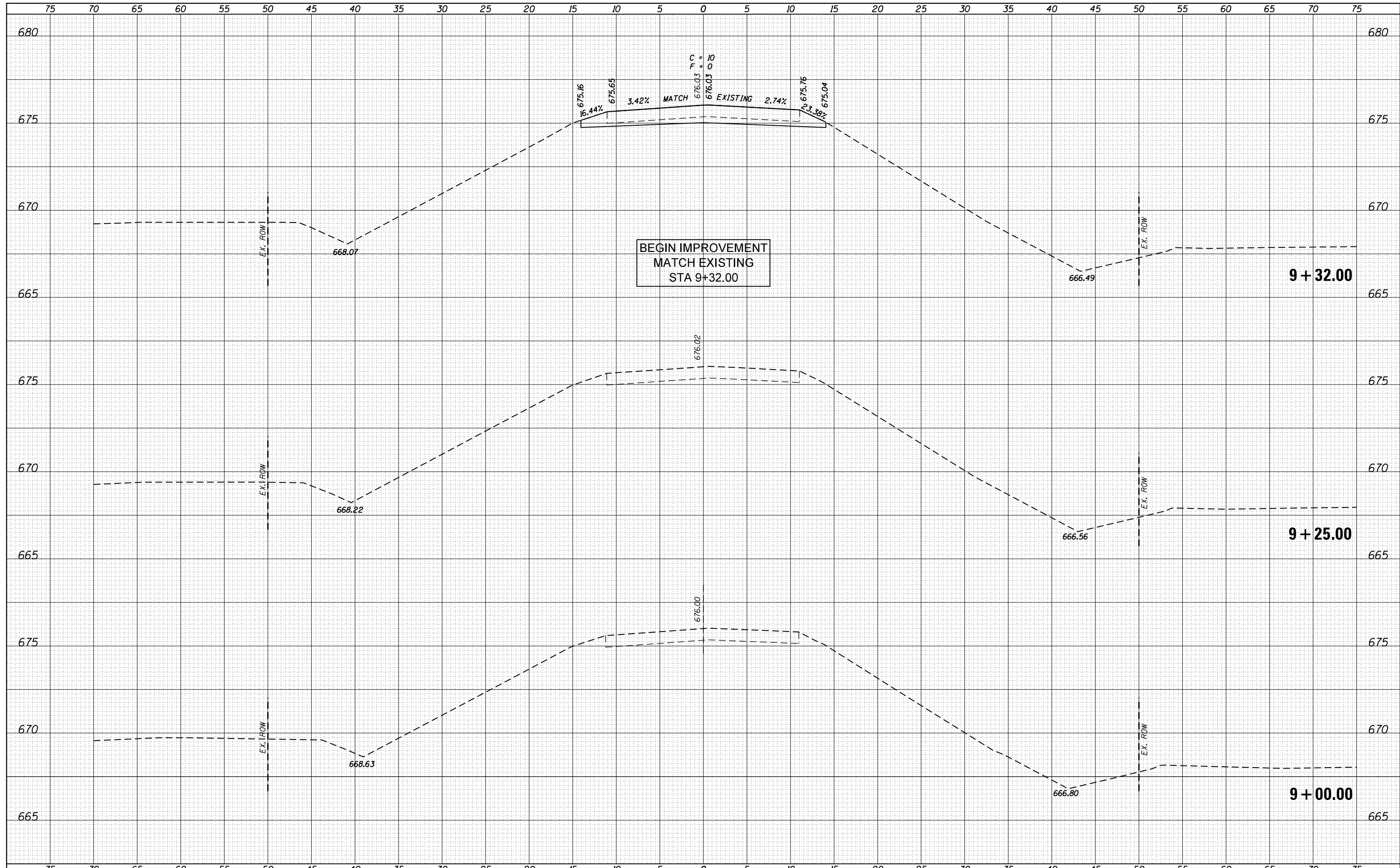
SHEET 8 OF 8 SHEETS

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 38	13-00261-00-BR	MACON	23	17
			CONTRACT NO. 95920	

ILLINOIS FED. AID PROJECT

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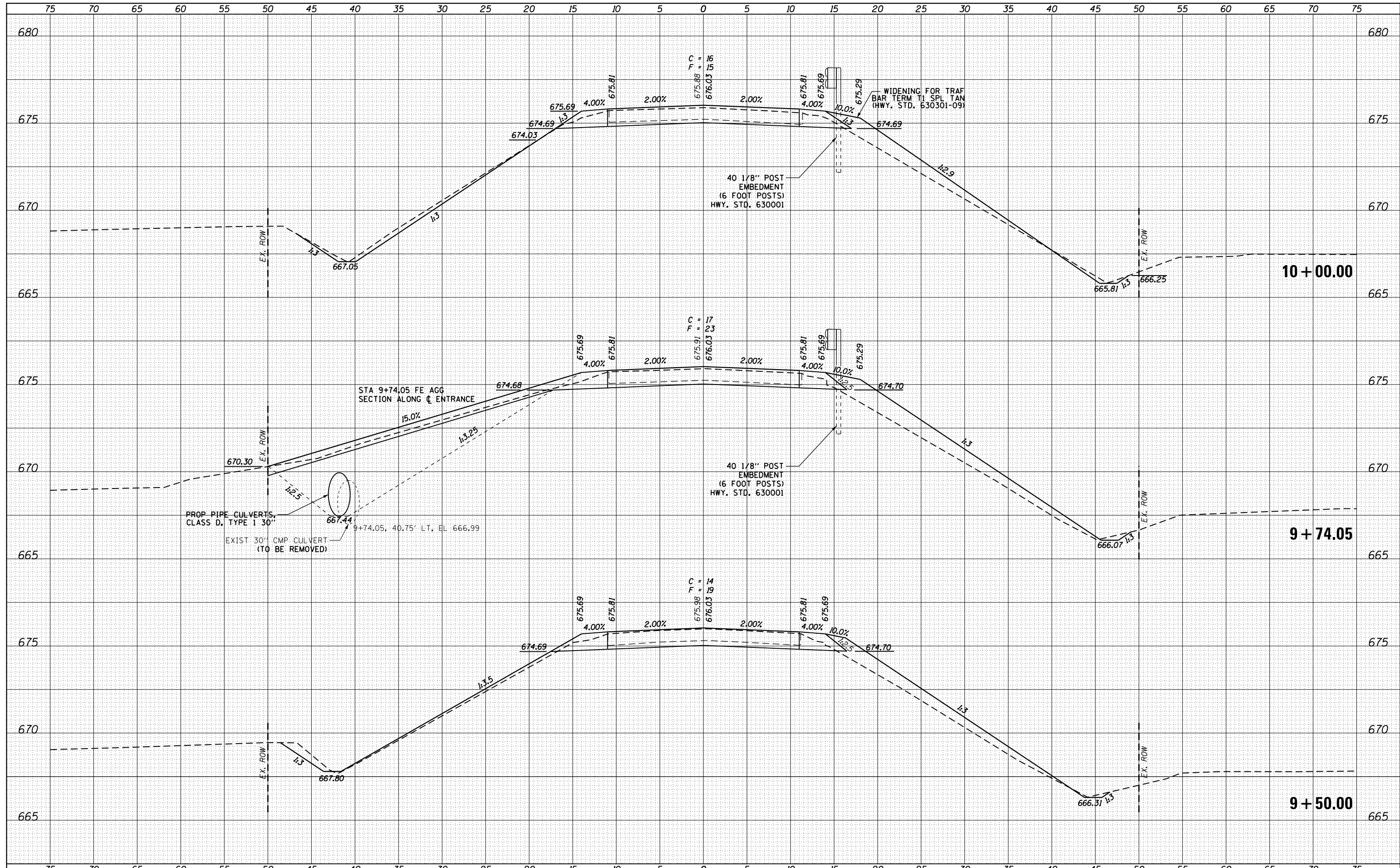
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		DATE - 3/30/2022	REVISED -		ILLINOIS FED. AID PROJECT							

DATE	
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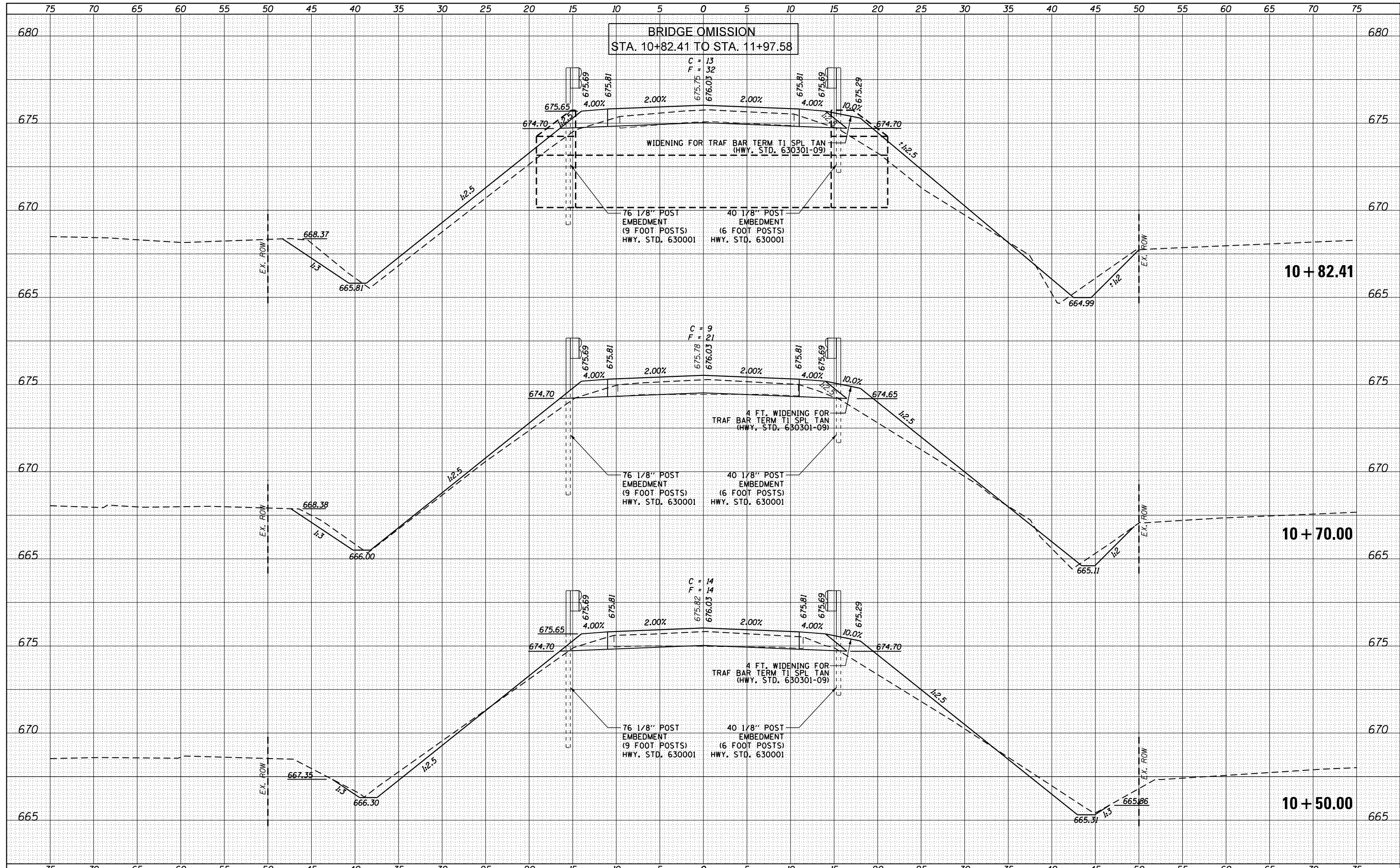
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		DATE - 3/30/2022	REVISED -		ILLINOIS FED. AID PROJECT								

DATE	
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FINAL SURVEY	
SURVEYED	
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NOTE BOOK	
AREAS	
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BRIDGE OMISSION
STA. 10+82.41 TO STA. 11+97.58

C = 13
F = 32

C = 9
F = 21

C = 14
F = 14

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
CH 38 (WASHINGTON ST RD) OVER FRIENDS CREEK

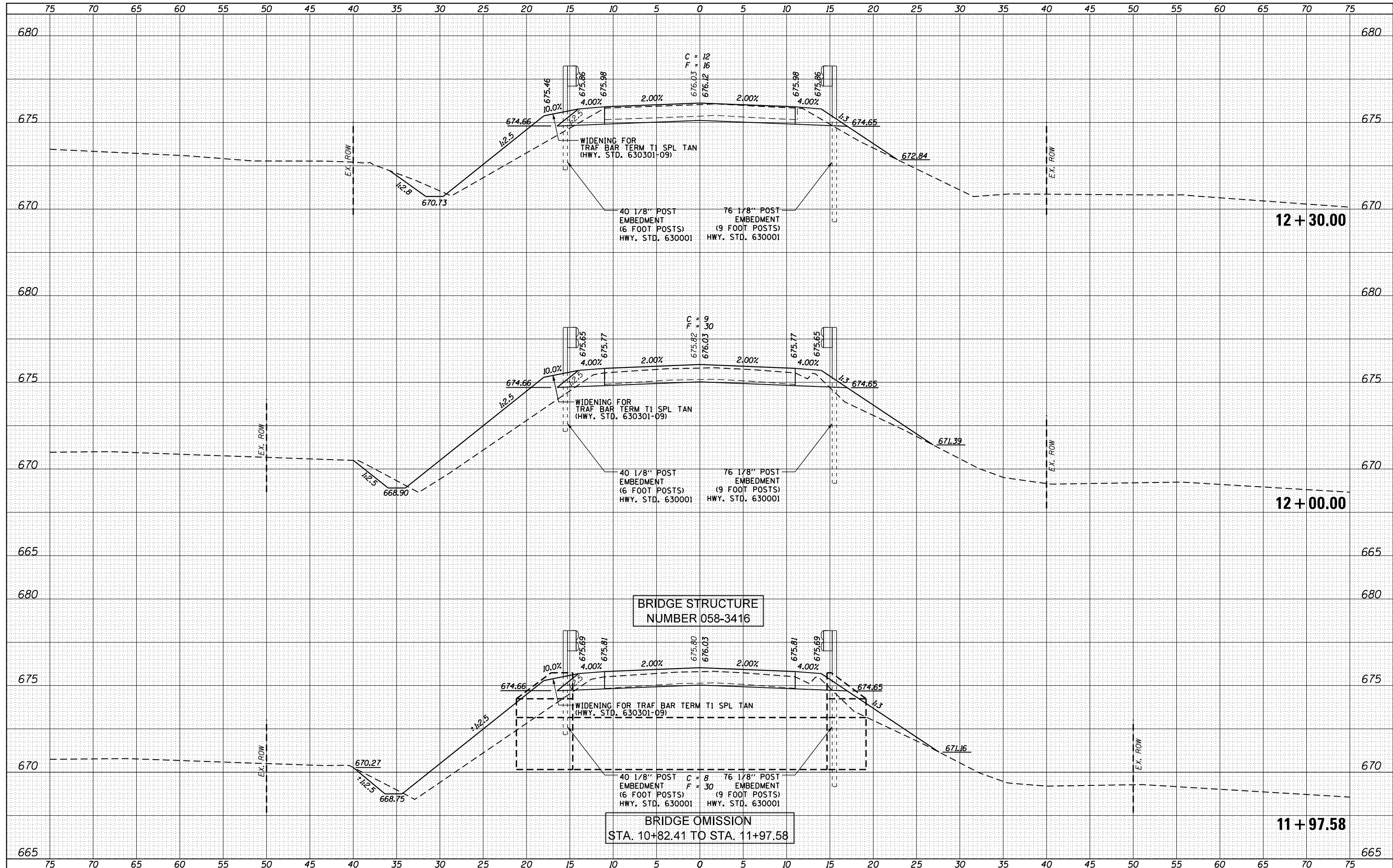
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CH 38	13-00261-00-BR	MACON	23	20
CONTRACT NO. 95920				
ILLINOIS FED. AID PROJECT				

SCALE: 1" = 5' SHEET 3 OF 6 SHEETS STA. 10+50.00 TO STA. 10+82.41

DATE	
BY	
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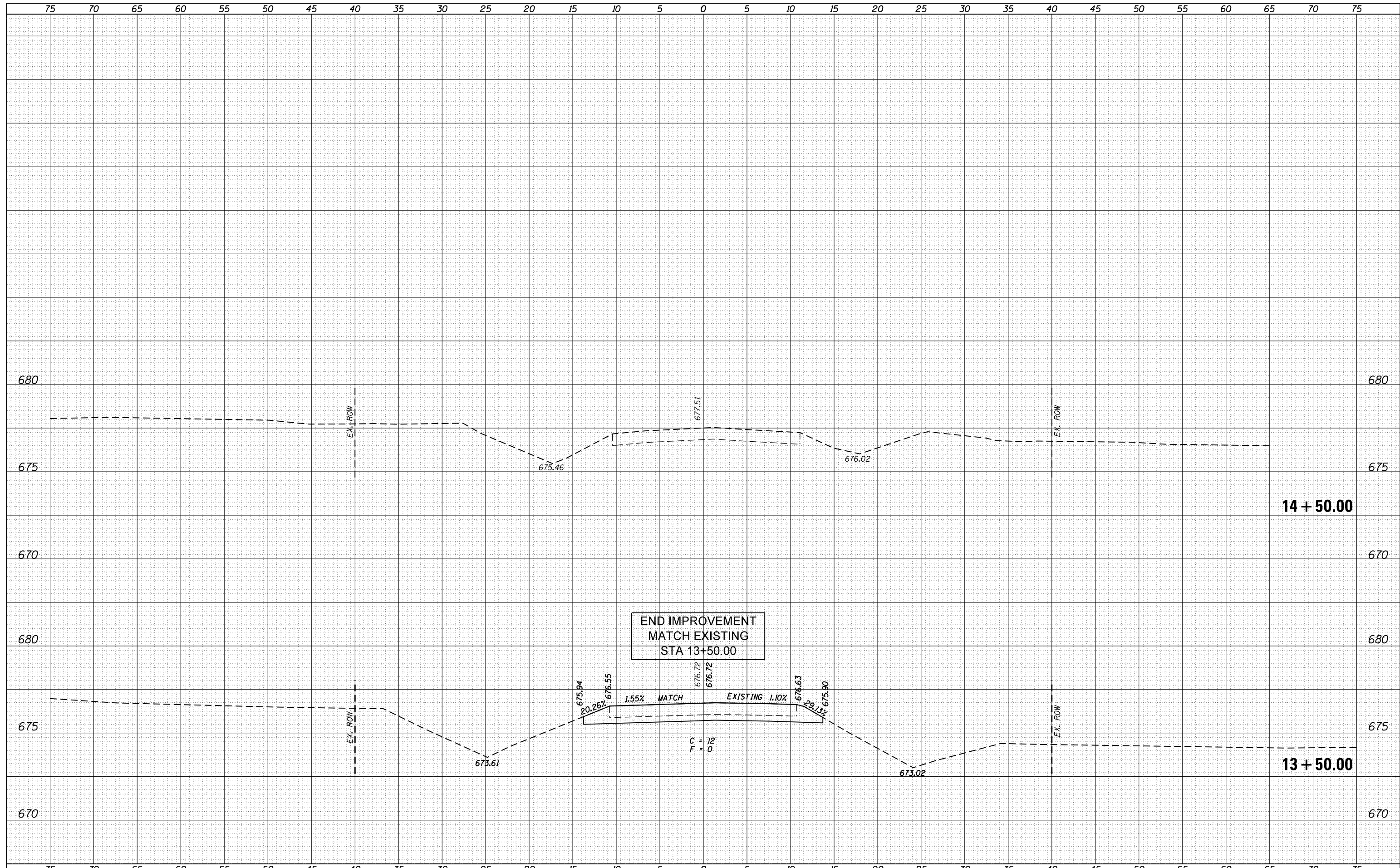
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