

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAS ROUTE 735 (SHIPMAN BLACKTOP)
SECTION (7)B-2
PROJECT : ACRS-0735(112)
STRUCTURE REPLACEMENT OVER COOP CREEK
MACOUPIN COUNTY

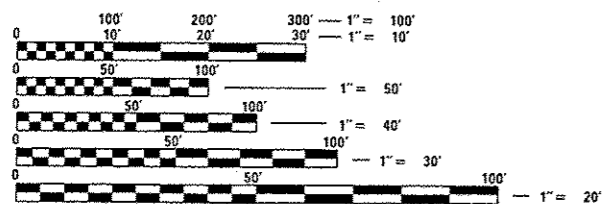
C-96-040-15

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	171B-2	MACOUPIN	57	1
ILLINOIS			CONTRACT NO. 72686	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FUNCTIONAL CLASSIFICATION -
MAJOR COLLECTOR (NON-URBAN)
POSTED & DESIGN SPEED = 55 MPH
2015 ADT = 1,400
2029 ADT = 1,650
TRUCK % = 18%

PROJECT IS LOCATED IN
HILLARD TOWNSHIP IN
UNINCORPORATED MACOUPIN COUNTY

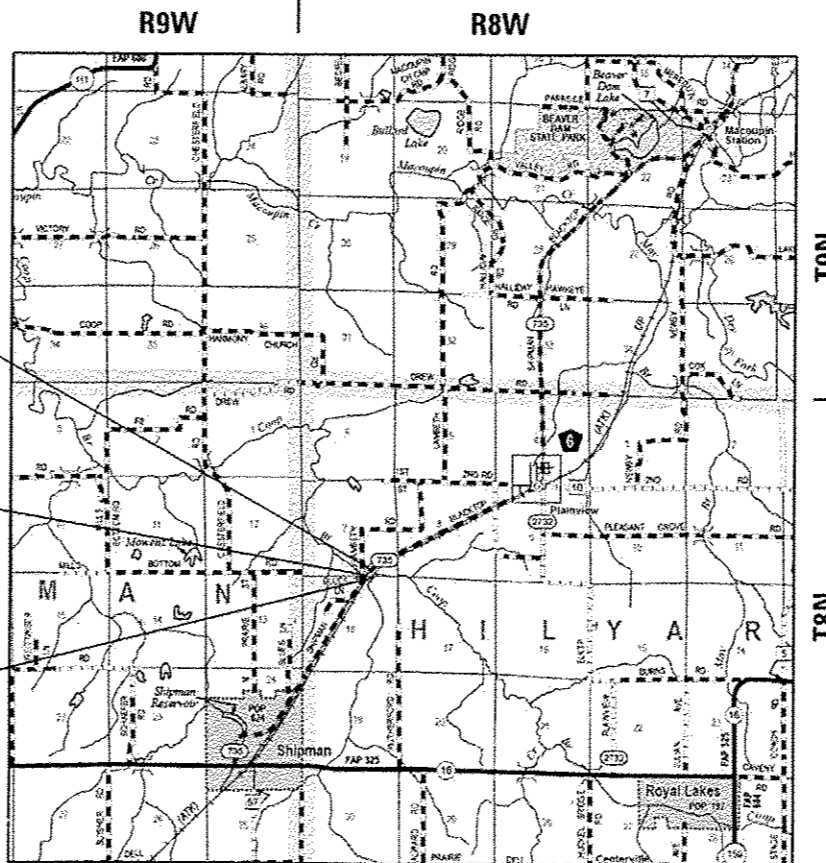


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: JAY EDWARDS, PE, (217) 785-0597
PROJECT MANAGER: FRANK SHIMKUS, (217) 785-9102

CONTRACT NO. 72686



BEGIN IMPROVEMENT
STA. 651 + 00.00

BRIDGE REPLACEMENT
STA 655 + 71.44
EXIST SN 059-0029
PROP SN 059-0511

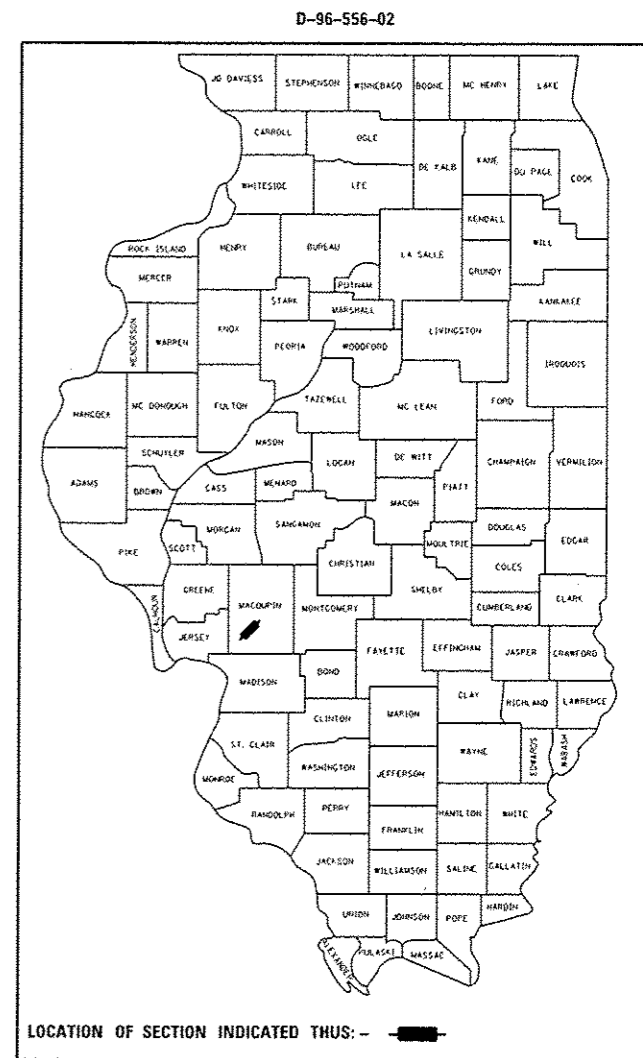
END IMPROVEMENT
STA. 659 + 25.00



SCALE IN MILES
GROSS LENGTH = 825.00 FT. = 0.156 MILE
NET LENGTH = 825.00 FT. = 0.156 MILE



LOCATION MAP



SIGNATURE: *Shelley L. Dintelmann*
DATE SIGNED: 8/10/16
LICENSE EXPIRES: 11/30/2017

THE SEAL SHOWN ABOVE IS VALID FOR THE FOLLOWING SHEETS ON THESE PLANS WHICH WERE PREPARED UNDER MY DIRECTION SHEETS 1-23, 45, 47-57

EFK Moen, LLC
Civil Engineering Design

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED August 12, 2016
Jeffrey M. Southsam
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
Sept 30, 2016
Muhammad M. Addis, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT
Sept 30, 2016
Cher Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

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HIGHWAY STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
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- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
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- 515001-03 NAME PLATE FOR BRIDGES
- 610001-06 SHOULDER INLET WITH CURB
- 630001-10 STEEL PLATE BEAM GUARDRAIL
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- 631031-14 TRAFFIC BARRIER TERMINAL, TYPE 6
- 666001-01 RIGHT-OF-WAY MARKERS
- 667101-02 PERMANENT SURVEY MARKERS
- 701001-02 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
- 701006-05 OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
- 701011-04 OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701306-03 LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
- 701901-05 TRAFFIC CONTROL DEVICES
- 725001 OBJECT AND TERMINAL MARKERS
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 781001-04 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
- 782006 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR 22-7 TYP. APPL. OF T.C.D. FOR RURAL LOC. HWYS. (2-LANE 2 WAY RURAL TRAFF.) (RD. CLOSED TO THRU TRAFF.)

RATES OF APPLICATION

- STONE DUMPED RIPRAP 1.50 TON / CU YD
- HOT-MIX ASPHALT:
 - BITUMINOUS MATERIALS (TACK COAT) 0.05 POUND / SQ FT (ON PAVEMENT)
 - SURFACE / BINDER (112 LBS) 0.056 TON / SQ YD / IN
- SEEDING:
 - NITROGEN FERTILIZER NUTRIENT 90 LBS / ACRE
 - PHOSPHORUS FERTILIZER NUTRIENT 90 LBS / ACRE
 - POTASSIUM FERTILIZER NUTRIENT 90 LBS / ACRE
 - AGRICULTURAL GROUND LIMESTONE 2 TON / ACRE
 - MULCH 2 TON / ACRE

GENERAL NOTES

1. AVAILABILITY OF ELECTRONIC FILES MICROSTATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR AFTER CONTRACT AWARD. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED CONTRACT PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.
2. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
3. THE THICKNESS OF THE HMA MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA MIXTURE IS PLACED.
4. THE FIELD/RESIDENT ENGINEER SHALL CONTACT THE PROJECT ENGINEER COVERING ANY MAJOR PLAN CHANGES TO MAKE SURE NO PREVIOUS COMMITMENTS (NOT LISTED) WERE MADE AFFECTING THE DESIGN, AND TO ALLOW IMPROVED DESIGN FOR THE FUTURE.
5. THE CONTRACTOR WILL BE REQUIRED TO REPAIR THOSE AREAS THAT ARE DAMAGED AS A PART OF THE EXECUTION OF THE CONTRACT OR AS OTHERWISE DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE MEASURED FOR PAYMENT. THE COST OF SEEDING, FERTILIZING AND MULCHING AREAS OF TURF THAT ARE DAMAGED, WILL BE CONSIDERED INCLUDED IN THE COST OF THE VARIOUS WORK ITEMS RELATED TO THE OPERATIONS CAUSING THE DAMAGE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS, AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. NUMBER IS 1-800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.
7. ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE SEEDED, FERTILIZED, AND MULCHED AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.
8. EXISTING RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE REMOVED PRIOR TO HOT-MIX ASPHALT SURFACE REMOVAL AND/OR RESURFACING.
9. NO PASSING ZONES SHALL BE FIELD VERIFIED BY OPERATIONS (217) 785-5312, 14 DAYS PRIOR TO FINAL PAVEMENT MARKINGS.
10. NOTICE 21 DAYS BEFORE ROAD CLOSED.
11. ALL SAWCUTTING NECESSARY TO REMOVE EXISTING PAVEMENT WILL BE INCIDENTAL AND WILL BE CONSIDERED INCLUDED IN THE COST OF PAVEMENT ITEMS.

HMA MIXTURE REQUIREMENT TABLE:

LOCATIONS:	SHIPMAN BLACKTOP ROAD	
MIXTURE USE(S)	HMA SURFACE COURSE	BINDER COURSE
PG	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4% @ N=50	4% @ N=50
MIXTURE COMPOSITION (MIXTURE GRADATIONS)	IL-9.5	IL-19.0
FRICTION AGGREGATE	MIX "C"	N/A
QUALITY MANAGEMENT	QC/OA	QC/OA
SUBLOT SIZE	N/A	N/A

COMMITMENTS

NO COMMITMENTS

UTILITIES

- COMMUNICATIONS:
 - ATTN: NET WORK RELOCATIONS DEPT LEVEL (3) COMMUNICATIONS, LLC 1025 ELDRADO BLVD 33A-523 BROOMFIELD, CO 80021 PHONE: 720-888-3813
- ELECTRIC:
 - MJM ELECTRICAL COOPERATIVE 264 N EAST ST PO BOX 80 CARLINVILLE, IL 62626 PHONE: 800-648-4729 PHONE: 217-854-3137
- FIBER OPTIC:
 - MCI DEPT 42864 LOC 107 OSP NATIONAL SUPPORT / INVESTIGATIONS ATTN: INVESTIGATIONS 2400 N GLENNVILLE RICHARDSON, TX 75082 PHONE: 972-729-6016
 - SPRINT COMMUNICATIONS LP 5600 N RIVER RD ROSEMONT, IL 60018 PHONE: 847-318-3437
 - 360 NETWORKS (USA) INC C/O LEDCOR TECHNICAL SERVICES, INC 9330 CORPORATE DR SUITE 407 SELMA, TX 78154 PHONE: 210-651-9901
- GAS:
 - N/A
- SEWER:
 - N/A
- TELEPHONE:
 - FRONTIER COMMUNICATIONS OF ILLINOIS 225 N BROAD CARLINVILLE, IL 62626 PHONE: 217-854-4013 FAX: 217-854-5361
 - AT&T 866 ROCK CREEK RD #1 PLANO, IL 60545-9571 PHONE: 630-552-4590
 - ILLINOIS CONSOLIDATED TELEPHONE CO 1000 S SPRESSER ST TAYLORVILLE, IL 62568-1955 PHONE: 217-824-9909 FAX: 217-824-3400
- WATER:
 - MIDWEST ENVIRONMENTAL CENTRAL MACOUPIN CITY WATER DEPT 906 E PRAIRIE JERSEYVILLE, IL 62052 PHONE: 618-498-9395

DISTRICT SIX

EXAMINED July 26th 20 16

Jim C. Ryan

OPERATIONS ENGINEER

EXAMINED July 27 20 16

Ron Chambers

PROJECT IMPLEMENTATION ENGINEER

EXAMINED July 26 20 16

Jeffrey P. Meyer

PROGRAM DEVELOPMENT ENGINEER

EFK Moen, LLC
Civil Engineering Design

FILE NAME: #FILES	USER NAME: jordan	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STANDARDS AND GENERAL NOTES	F.A.S. RTE. 735	SECTION (7)B-2	COUNTY MACOUPIN	TOTAL SHEETS 57	SHEET NO. 2		
Default	PLOT SCALE = 48.0000' / in.	CHECKED - SLD	REVISED -			SCALE: N/A	SHEET 1 OF 1 SHEETS	STA. TO STA.	[ILLINOIS] FED. AID PROJECT			
	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -									

6-00250-0100	
CONSTRUCTION CODE	
80% FED 20% STATE	80% FED 20% STATE
ROADWAY	BRIDGE
0004	0011
RURAL	RURAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE
20100500	TREE REMOVAL, ACRES	ACRE	0.25	0.25	
20200100	EARTH EXCAVATION	CU YD	1960	1960	
20300100	CHANNEL EXCAVATION	CU YD	1430	1430	
20400800	FURNISHED EXCAVATION	CU YD	3430	3430	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	5949	5949	
25000200	SEEDING, CLASS 2	ACRE	1.50	1.50	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	135	135	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	135	135	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	135	135	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	3	3	
25100115	MULCH, METHOD 2	ACRE	1.50	1.50	
25100630	EROSION CONTROL BLANKET	SO YD	155	155	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	150	150	
28000315	AGGREGATE DITCH CHECKS	TON	44	44	

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* SPECIALTY ITEM

EFK Moen, LLC
Civil Engineering Design

FILE NAME :	USER NAME : jordan	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
*FILE#		DRAWN - JRD	REVISED -				735	(7)B-2	MACOUPIN	57	3	
Default	PLOT SCALE : 100.0000 / in	CHECKED - SLD	REVISED -		SCALE: N/A	SHEET 1	OF 5 SHEETS	CONTRACT NO. 72686				
	PLOT DATE : 8/11/2016	DATE - 8/12/2016	REVISED -		ILLINOIS FED. AID PROJECT							

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	6-00250-0100	
				CONSTRUCTION CODE	
				80% FED 20% STATE	80% FED 20% STATE
				ROADWAY 0004 RURAL	BRIDGE 0011 RURAL
28000400	PERIMETER EROSION BARRIER	FOOT	906	906	
28100107	STONE RIPRAP, CLASS A4	SQ YD	188	188	
28100109	STONE RIPRAP, CLASS A5	SQ YD	1448	406	1042
28100809	STONE DUMPED RIPRAP, CLASS A5	TON	1097	1097	
28200200	FILTER FABRIC	SQ YD	1529	406	1123
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1034	1034	
40603080	HOT-MIX ASPHALT BINDER COURSE, 1L-19.0, N50	TON	697	697	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	193	193	
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	74	74	
44000100	PAVEMENT REMOVAL	SQ YD	345	345	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	95	95	
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1	1	
50200100	STRUCTURE EXCAVATION	CU YD	166		166

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* SPECIALTY ITEM

EFK Moen, LLC
Civil Engineering Design

FILE NAME :	USER NAME : jdardeen	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT DATE * 8/11/2016	CHECKED - SLO	REVISED -		735	(718)-2	MACOUPIN	57	4			
	DATE - 8/12/2016	REVISED -			CONTRACT NO. 72686			[ILLINOIS] FED. AID PROJECT				

SCALE: N/A SHEET 2 OF 5 SHEETS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	6-00250-0100	
				CONSTRUCTION CODE	
				80% FED 20% STATE	80% FED 20% STATE
				ROADWAY	BRIDGE
				0004	0011
				RURAL	RURAL
50300225	CONCRETE STRUCTURES	CU YD	71.2		71.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	140.2		140.2
50300260	BRIDGE DECK GROOVING	SQ YD	510		510
50300300	PROTECTIVE COAT	SQ YD	664		664
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	105.8		105.8
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	1116		1116
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	75350		75350
51201600	FURNISHING STEEL PILES HP12X53	FOOT	455		455
51202305	DRIVING PILES	FOOT	455		455
51203600	TEST PILE STEEL HP12X53	EACH	2		2
51500100	NAME PLATES	EACH	1		1
52100520	ANCHOR BOLTS, 1"	EACH	24		24
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	76		76

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* SPECIALTY ITEM

EFK·Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = jordan	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILES	PLDT SCALE = 100.0000' / 1"	DRAWN - JRD	REVISED -				735	171B-2	MACOUPIN	57	5
Default	PLDT DATE = 8/11/2016	CHECKED - SLD	REVISED -		SCALE: N/A	SHEET 3 OF 5 SHEETS		CONTRACT NO. 72686		ILLINOIS FED. AID PROJECT	
		DATE - 8/12/2016	REVISED -								

6-00250-0100	
CONSTRUCTION CODE	
80% FED 20% STATE	80% FED 20% STATE
ROADWAY	BRIDGE
0004	0011
RURAL	RURAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE
60100945	PIPE DRAINS 12"	FOOT	28	28	
61000335	TYPE G INLET BOX, STANDARD 610001	EACH	2	2	
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	225	225	
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	405	405	
66201120	CONCRETE SHOULDER CURB	FOOT	15	15	
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	6	6	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1	
70101835	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22	L SUM	1	1	
19 * 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	

* SPECIALTY ITEM

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FILE NAME :	USER NAME : jdardeen	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILES :		DRAWN - JRD	REVISED -				735	17B-2	MACOUPIN	57	6
Default	PLOT SCALE * 100.0000 / in.	CHECKED - SLD	REVISED -		SCALE: N/A	SHEET 4 OF 5 SHEETS		CONTRACT NO. 72686		ILLINOIS FED. AID PROJECT	
	PLOT DATE * 8/11/2016	DATE - 8/12/2016	REVISED -								

6-00250-0100	
CONSTRUCTION CODE	
80% FED 20% STATE	80% FED 20% STATE
ROADWAY	BRIDGE
0004	0011
RURAL	RURAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	2572	2572	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	9	9	
<i>78200005</i>	GUARDRAIL MARKERS, TYPE A	EACH	16	16	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	11	11	
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	224	224	
X4402720	GUTTER REMOVAL (SPECIAL)	FOOT	64	64	
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	186		186
X6060097	CLASS SI CONCRETE (OUTLET), SPECIAL	CU YD	5.1	5.1	
X6660410	REMOVE RIGHT-OF-WAY MARKERS	EACH	1	1	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0.5
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	135		135
<i>φ</i> Z0076600	TRAINEES	Hour	1000	1000	
<i>φ</i> Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	Hour	1000	1000	

* SPECIALTY ITEM *φ* 0042

EFK·Moen, LLC
Civil Engineering Design

FILE NAME :	USER NAME : jordan	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILES :	PLLOT SCALE = 100.0000' / 1"	DRAWN - JRD	REVISED -					735	171B-2	MACOUPIN	57	7
Default:	PLLOT DATE = 8/11/2016	CHECKED - SLD	REVISED -		SCALE: N/A	SHEET 5 OF 5 SHEETS			CONTRACT NO. 72686			
		DATE - 8/12/2016	REVISED -		ILLINOIS FED. AID PROJECT							

EARTHWORK SCHEDULE												
			20200100	20400800	FOR INFORMATION ONLY						20300100	
			EARTH EXCAVATION (CU YD)	FURNISH EXCAVATION (CU YD)	EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) SHORTAGE (-) (CU YD)	RIPRAP CL A4 EXCAVATION MATERIAL (CU YD)	RIPRAP CL A4 EXCAVATION ADJUSTED FOR 25% SHRINKAGE (CU YD)	STRUCTURE EXCAVATION (CU YD)	STRUCTURE EXCAVATION ADJUSTED FOR 25% SHRINKAGE (CU YD)	CHANNEL EXCAVATION (CU YD)
STATION	STATION	STATION										
650+50.00	655+12.60	LT/RT	1,545	3,010	1,160	4,170	-3,010					
656+30.01	660+00.00	LT/RT	415	630	310	940	-630					
655+24.94	656+17.94	LT/RT					125			166	125	
651+59.00	653+50.00	LT					40	56	40			
651+00.00	653+00.00	RT					45	59	45			
655+24.94	656+17.94	LT/RT										1,430
TOTALS			1,960	3,430	1,470	5,110	-3,430	115	85	166	125	1,430

NOTES:

- RIPRAP EXCAVATION IS NOT A PAY ITEM AND IT IS INCLUDED IN THE COST OF STONE RIPRAP
- THE EARTHWORK SCHEDULE HAS ASSUMED THAT ONLY RIPRAP CL A4 AND STRUCTURE EXCAVATION MAY BE USED AS EMBANKMENT.

PAVEMENT & OUTLET SCHEDULE									
				40603310	40603080	42000070	40600290	X6060097	
				HMA SURFACE COURSE MIX "C", N50 (TON)	HMA BINDER COURSE IL-19.0 N50 (TON)	PAVEMENT CONNECTOR (HMA) BR APP SLAB (SQ YD)	BITUMINOUS MATERIALS (TACK COAT) (POUND)	CLASS SI CONCRETE OUTLET SPECIAL (CU YD)	
LOCATION	ROADWAY	STATION	STATION	SIDE					
SHIPMAN BLACKTOP		651+00.00	654+84.94	LT	55.5		297.4		
SHIPMAN BLACKTOP		656+57.94	659+25.00	LT	39.9		213.6		
SHIPMAN BLACKTOP		651+00.00	654+84.94	RT	57.6		308.8		
SHIPMAN BLACKTOP		656+57.94	659+25.00	RT	39.9		213.6		
SHIPMAN BLACKTOP		654+84.94	654+94.94	LT		18.0			
SHIPMAN BLACKTOP		656+47.94	656+57.94	LT		19.0			
SHIPMAN BLACKTOP		654+84.94	654+94.94	RT		18.0			
SHIPMAN BLACKTOP		656+47.94	656+57.94	RT		19.0			
SHIPMAN BLACKTOP		651+00.00	654+84.94	LT & RT		507.0			
SHIPMAN BLACKTOP		656+57.94	659+25.00	LT & RT		190.0			
SHIPMAN BLACKTOP		651+00.00	651+59.00	LT				5.1	
TOTALS					193	697	74	1,034	5.1

GUARDRAIL SCHEDULE										
				63200310	63100167	63000001	63100085	72501000	78200410	48101200
				GUARDRAIL REMOVAL LENGTH (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT (EACH)	STEEL BEAM GUARDRAIL TYPE A, 6' POSTS (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 6 (EACH)	TERMINAL MARKER D A (EACH)	GUARDRAIL MARKER TYPE A (EACH)	AGGREGATE SHOULDERS TYPE B (TON)
LOCATION	ROADWAY	STATION	STATION	SIDE						
SHIPMAN BLACKTOP		654+52.46	655+53.51	LT	100.90					
SHIPMAN BLACKTOP		655+94.12	656+95.48	LT	101.40					
SHIPMAN BLACKTOP		654+52.80	655+53.80	RT	101.20					
SHIPMAN BLACKTOP		655+94.56	656+95.09	RT	100.60					
SHIPMAN BLACKTOP		654+18.36	655+12.44	LT		1	1	1	4	
SHIPMAN BLACKTOP		656+30.44	658+36.68	LT		1	1	1	4	
SHIPMAN BLACKTOP		653+07.18	655+12.44	RT		1	1	1	4	
SHIPMAN BLACKTOP		656+30.44	657+24.18	RT		1	1	1	4	
SHIPMAN BLACKTOP		653+84.31	655+23.94	LT						17.2
SHIPMAN BLACKTOP		656+18.94	658+70.68	LT						30.3
SHIPMAN BLACKTOP		652+73.23	655+23.94	RT						30.2
SHIPMAN BLACKTOP		656+18.94	657+58.18	RT						17.2
					405	4	225	4	16	95

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FILE NAME =	USER NAME = jdardeen	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILE		DRAWN - JRD	REVISED -					735	(7)B-2	MACOUPIN	57	8
Default	PLOT SCALE = 48.0000' / in.	CHECKED - SLD	REVISED -		SCALE: N/A	SHEET 1 OF 3 SHEETS	STA.	TO STA.	CONTRACT NO. 72686			
	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -		ILLINOIS FED. AID PROJECT							

EROSION CONTROL SCHEDULE						28000400	28000315	25100630	28100107	28100109	28200200
						PERIMETER EROSION BARRIER (FOOT)	AGGREGATE DITCH CHECKS (TON)	EROSION CONTROL BLANKET (SQ YD)	STONE RIPRAP CLASS A4 (SQ YD)	STONE RIPRAP CLASS A5 (SQ YD)	FILTER FABRIC (SQ YD)
ROADWAY	STATION	OFFSET	STATION	OFFSET							
SHIPMAN BLACKTOP	651+00.00	18.0' LT.	651+88.00	50.7' LT.		95					
SHIPMAN BLACKTOP	656+28.94	19.0' LT.	660+00.00	14.4' LT.		410					
SHIPMAN BLACKTOP	656+28.94	19.0' RT.	659+87.81	15.3' RT.		401					
SHIPMAN BLACKTOP	653+55.11	62.0' LT.					7.2				
SHIPMAN BLACKTOP	654+27.81	63.2' LT.					7.2				
SHIPMAN BLACKTOP	655+00.00	61.5' LT.					7.2				
SHIPMAN BLACKTOP	653+05.75	72.3' RT.					7.2				
SHIPMAN BLACKTOP	654+03.12	66.3' RT.					7.2				
SHIPMAN BLACKTOP	655+00.00	62.5' RT.					7.2				
SHIPMAN BLACKTOP	657+50.00	49.6' LT.	659+00.00	28.0' LT.			155				
SHIPMAN BLACKTOP	651+59.00	25.3' LT.	653+50.00	61.8' LT.				91			
SHIPMAN BLACKTOP	651+00.00	26.5' RT.	653+00.00	72.8' RT.				97			
SHIPMAN BLACKTOP	655+00.00	9' - 70.6' LT.	655+50.55	42.6' LT.					99	99	
SHIPMAN BLACKTOP	656+28.94	19' - 47' LT.	656+57.94	9' - 47.4' LT.					96	96	
SHIPMAN BLACKTOP	655+00.00	9' - 72.7' RT.	655+13.94	2.6' - 80' RT.					113	113	
SHIPMAN BLACKTOP	656+28.94	9' - 47.5' RT.	656+57.94	9' - 48.5' RT.					98	98	
TOTALS						906	44	155	188	406	406

SEEDING SCHEDULE											
				25000200	25000400	25000500	25000600	21101615	25100115	28000250	25000700
				SEEDING CL 2 (ACRE)	NITROGEN FERTILIZER NUTRIENT (POUND)	PHOSPHORUS FERTILIZER NUTRIENT (POUND)	POTASSIUM FERTILIZER NUTRIENT (POUND)	TOPSOIL FURNISH & PLACE 4" (SQ YD)	MULCH METHOD 2 (ACRE)	TEMP EROS CONTROL SEEDING (POUND)	AGRICULTURAL GROUND LIMESTONE (TON)
ROADWAY	STATION	STATION	SIDE								
SHIPMAN BLACKTOP	650+50	655+00.00	LT	0.50	45.0	45.0	45.0	1,947	0.50	50	1.0
SHIPMAN BLACKTOP	656+57.94	660+00	LT	0.21	18.9	18.9	18.9	743	0.21	21	0.4
SHIPMAN BLACKTOP	650+50	655+00.00	RT	0.56	50.4	50.4	50.4	2,324	0.56	56	1.1
SHIPMAN BLACKTOP	656+57.94	660+00	RT	0.23	20.7	20.7	20.7	935	0.23	23	0.5
TOTALS				1.50	135	135	135	5,949	1.50	150	3

STONE DUMPED RIPRAP SCHEDULE				
			28100809	NOTES
			STONE DUMPED RIPRAP CLASS A5 (TON)	
ROADWAY	STATION	SIDE		
SHIPMAN BLACKTOP	655+71.44	RT.	1,097	SEE DETAIL
TOTALS			1,097	

DRAINAGE SCHEDULE						
			61000335	60100945	66201120	
			TYPE G INLET BOX STANDARD 610001 (EACH)	PIPE DRAINS 12" (FOOT)	CONCRETE SHOULDER CURB (FOOT)	
ROADWAY	STATION	OFFSET				
SHIPMAN BLACKTOP	656+53.88	15.29' LT.	1	14.0	7.5	
SHIPMAN BLACKTOP	0+00.00	15.29' RT.	1	14.0	7.5	
TOTALS			2	28	15	

REMOVAL OF EXISTING STRUCTURE			
			50100400
			REM OF EX STRUC NO 2 (EACH)
ROADWAY	STATION	OFFSET	
SHIPMAN BLACKTOP	655+71.44	RT	1
TOTALS			1

NOTE: CONCRETE REMOVAL IN WATERWAY DOWNSTREAM

PAINT PAVEMENT MARKING SCHEDULE				78001120	78100100	78300200	REMARKS
LOCATION				PAINT PMT MARKING LINE 5" (FOOT)	RAISED REFL PAVT MRK (EACH)	RAISED REFL PAVT MRK REMOVAL (EACH)	
ROADWAY	STATION	STATION	SIDE				
SHIPMAN BLACKTOP	651+00	659+25	LT	824			WHITE EDGE LINE
SHIPMAN BLACKTOP	651+00	659+25	RT	827			WHITE EDGE LINE
SHIPMAN BLACKTOP	651+00	658+11	CL	180			YELLOW CENTERLINE (SKIP-DASH)
SHIPMAN BLACKTOP	651+00	658+11	CL	711			YELLOW CENTERLINE (SOLID)
SHIPMAN BLACKTOP	658+11	659+25	CL	30			YELLOW CENTERLINE (SKIP-DASH)
SHIPMAN BLACKTOP	651+20		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	652+00		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	652+80		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	653+60		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	654+40		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	655+20		CL			1	TWO-WAY AMBER
SHIPMAN BLACKTOP	656+00		CL			1	TWO-WAY AMBER
SHIPMAN BLACKTOP	656+80		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	657+60		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	658+40		CL		1	1	TWO-WAY AMBER
SHIPMAN BLACKTOP	659+20		CL		1	1	TWO-WAY AMBER
TOTALS				2,572	9	11	

PAVEMENT & GUTTER REMOVAL SCHEDULE					X4402720	44000100	X4401198
LOCATION					GUTTER REMOVAL (SPECIAL) (FOOT)	PAVEMENT REMOVAL (SQ YD)	HMA SURF REMOVAL VAR. DEPTH (SQ YD)
ROADWAY	STATION	OFFSET	STATION	OFFSET			
SHIPMAN BLACKTOP	651+00.00	10.7' LT.	651+58.86	34.2' LT.	64		
SHIPMAN BLACKTOP	651+00.00	10' -11.9' RT.	652+97.46	10' RT.		22	
SHIPMAN BLACKTOP	654+84.94	12.2' LT. -8.1' RT.	655+53.95	11.5' LT. -8.9' RT.		167	
SHIPMAN BLACKTOP	655+93.78	10.9' LT. -9.3' RT.	656+57.94	10.9' LT. -9.5' RT.		156	
SHIPMAN BLACKTOP	651+45.00	9' LT. -10' RT.	651+90.00	9.4' LT. -10' RT.			96
SHIPMAN BLACKTOP	656+94.00	11' LT. -9.6' RT.	657+50.00	10.9' LT. -9.5' RT.			128
TOTAL					64	345	224

RIGHT-OF-WAY MARKERS SCHEDULE				X6660410	66600105
LOCATION				REMOVE ROW MARKERS (EACH)	FURN & ERECT ROW MARKERS (EACH)
ROADWAY	STATION	OFFSET			
SHIPMAN BLACKTOP	651+02.86	50.00' RT.		1	
SHIPMAN BLACKTOP	651+00.00	65.00' RT.			1
SHIPMAN BLACKTOP	652+50.00	80.00' RT.			1
SHIPMAN BLACKTOP	655+35.00	80.00' RT.			1
SHIPMAN BLACKTOP	655+35.00	146.00' RT.			1
SHIPMAN BLACKTOP	655+05.00	146.00' RT.			1
SHIPMAN BLACKTOP	655+05.00	50.00' RT.			1
				1	6

TREE REMOVAL SCHEDULE					20100500
LOCATION					TREE REMOVAL (ACRE)
ROADWAY	STATION	STATION	SIDE		
SHIPMAN BLACKTOP	651+61	655+40	LT		0.14
SHIPMAN BLACKTOP	653+13	655+06	RT		0.11
TOTAL					0.25

NOTE: SEE REMOVAL PLANS

FILE NAME =	USER NAME = jdardeen	DESIGNED - JRD	REVISED -
FILE		DRAWN - JRD	REVISED -
Default	PLOT SCALE = 48.0000' / in.	CHECKED - SLD	REVISED -
	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

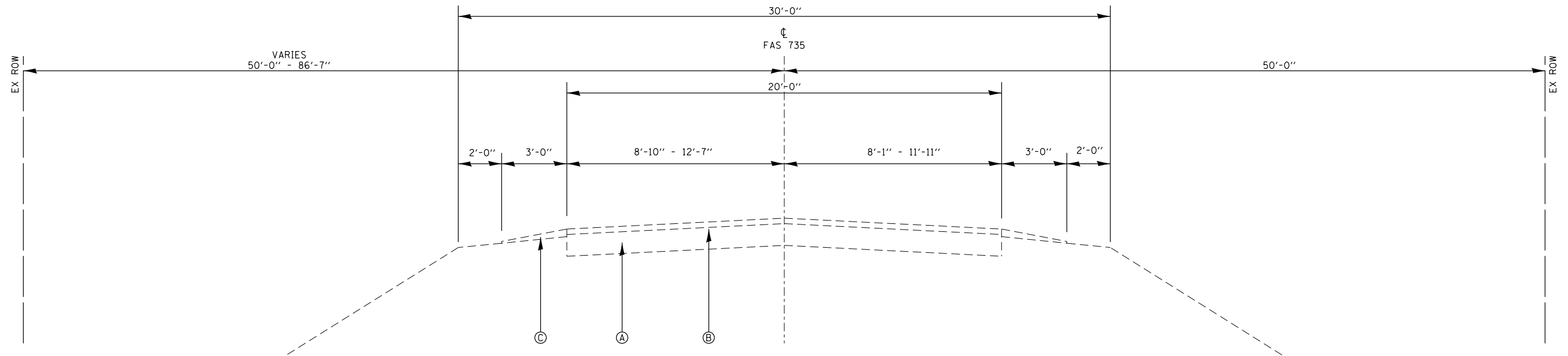
SCHEDULE OF QUANTITIES			
SCALE: N/A	SHEET 3	OF 3 SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	10
CONTRACT NO. 72686			ILLINOIS FED. AID PROJECT	

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LEGEND

- EXISTING:
 (A) AGGREGATE BASE, 12"
 (B) BITUMINOUS SURFACE, 3"
 (C) AGGREGATE SHOULDER



1 **EXISTING TYPICAL SECTION**
FAS 735 (SHIPMAN BLACKTOP)
 STA. 651+00.00 - STA. 659+25.00

EFK Moen, LLC
 Civil Engineering Design

FILE NAME = *FILE*	USER NAME = jdardeen	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING TYPICAL SECTION			F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 10.0000' / in.	DRAWN - JRD	REVISED -		735	(7)B-2	MACOUPIN	57	11			
PLOT DATE = 8/11/2016	CHECKED - SLD	REVISED -	REVISED -		SCALE: N.T.S. SHEET NO. 1 OF 2 SHEETS STA. 651+00.00 TO STA. 659+25.00			CONTRACT NO. 72686				
	DATE - 8/12/2016	REVISED -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

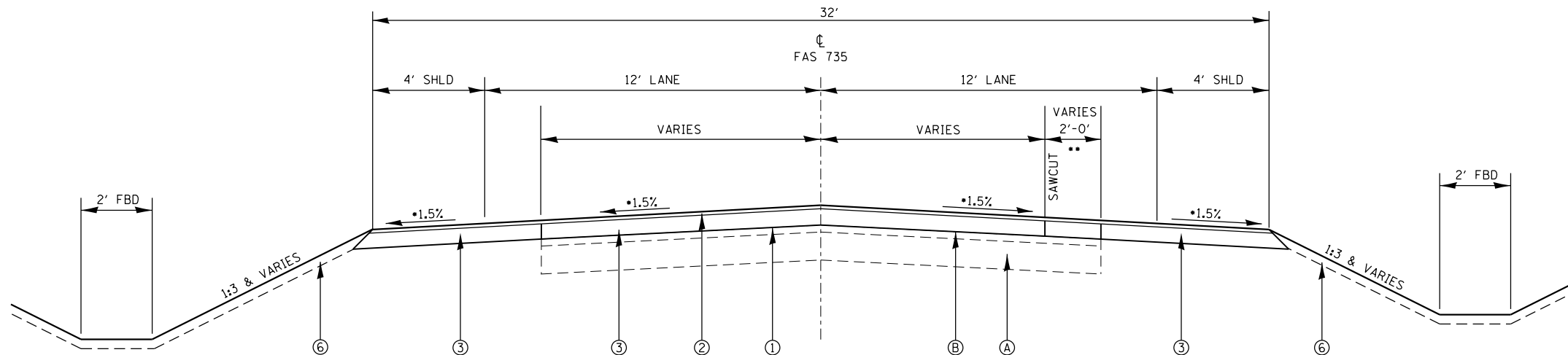
LEGEND

EXISTING:

- (A) AGGREGATE BASE, 12"
- (B) BITUMINOUS SURFACE, 3"

PROPOSED:

- (1) HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH (SEE REMOVAL PLAN)
- (2) HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 1 1/2"
- (3) BINDER COURSE, VARIABLE - OVER EXISTING PAVEMENT BINDER COURSE, VARIABLE (MIN. 6 1/2") - WIDENING
- (4) STEEL PLATE BEAM GUARDRAIL, TYPE A OR TRAFFIC BARRIER TERMINALS
- (5) AGGREGATE SHOULDERS, TYPE B
- (6) TOPSOIL FURNISH AND PLACE, 4"

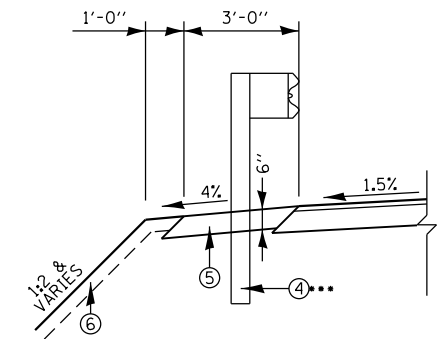


**2 PROPOSED TYPICAL SECTION
FAS 735 (SHIPMAN BLACKTOP)**

STA. 651+45.00 - STA. 657+50.00
(BRIDGE OMISSION FROM STA. 655+24.94 - STA. 656+17.94)
PAVEMENT CONNECTOR FOR BRIDGE APPROACH SLAB
FROM STA. 654+84.94 - STA. 654+94.94 & STA. 656+47.94 - STA. 656+57.94
(SEE STANDARD 420406 FOR ADDITIONAL DETAILS OF
PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB)

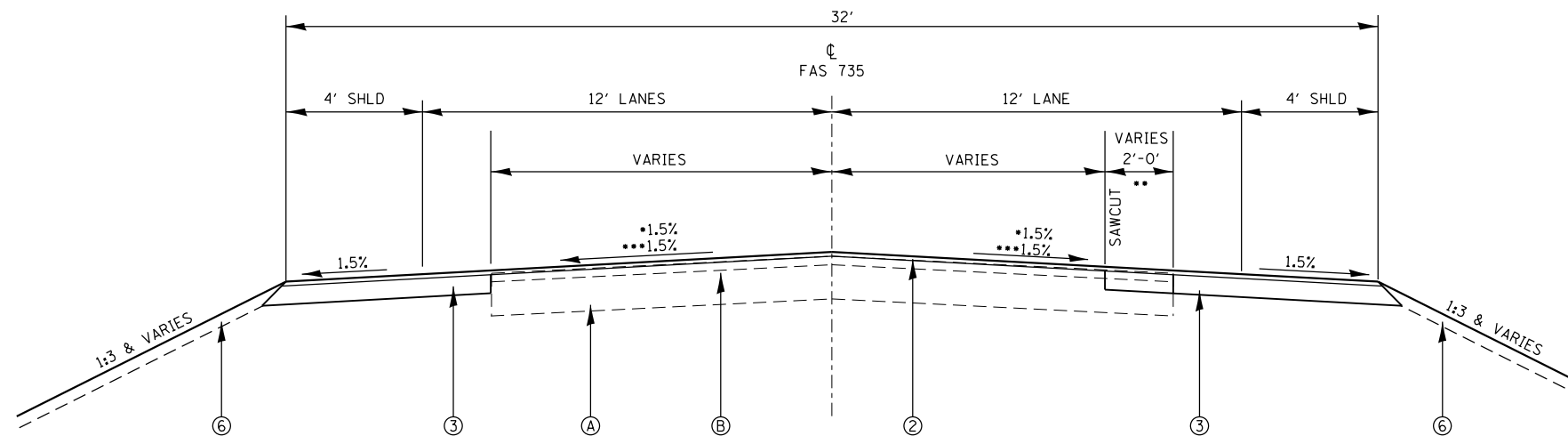
NOTE:

- LIMITS OF SUPERELEVATION
STA. 651+45.00 - STA. 655+23.94
(SEE SUPERELEVATION TRANSITION DETAIL
AND CROSS SECTIONS)
- STA. 651+45.00 TO STA. 652+97.68



**PROPOSED TYPICAL SECTION
GUARDRAIL AND TRAFFIC BARRIER TERMINALS
ADJACENT TO SHOULDER**

- PROPOSED GUARDRAIL AND TRAFFIC BARRIER TERMINALS
LT STA. 654+18.36 - LT STA. 655+12.44
LT STA. 656+30.44 - LT STA. 658+36.68
RT STA. 653+07.18 - RT STA. 655+12.44
RT STA. 656+30.44 - RT STA. 657+24.18



**3 PROPOSED TYPICAL SECTION
FAS 735 (SHIPMAN BLACKTOP)**

STA. 651+00.00 - STA. 651+45.00
STA. 657+50.00 - STA. 659+25.00

NOTE:

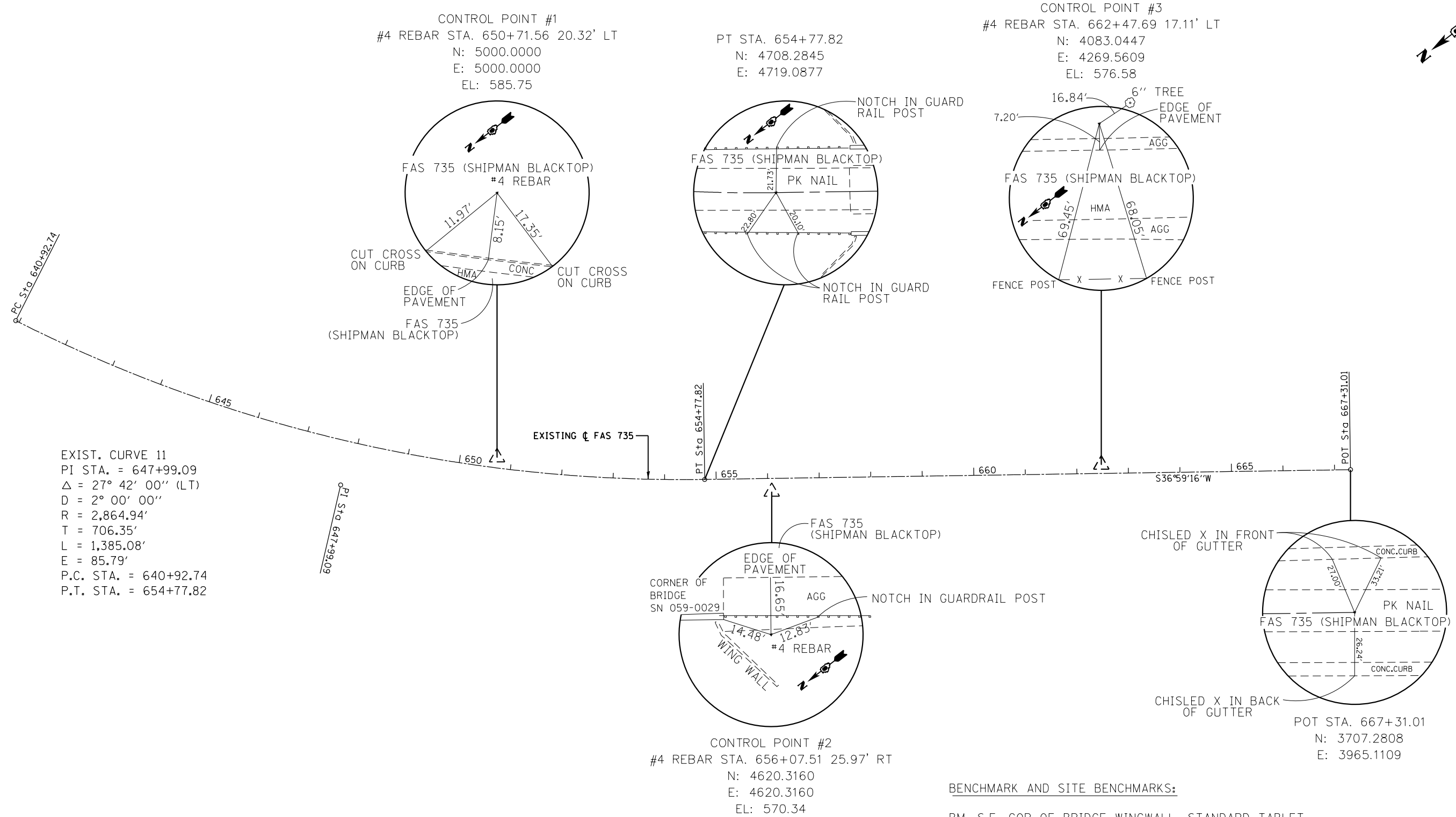
- LIMITS OF SUPERELEVATION
STA. 651+00.00 - STA. 651+45.00
(SEE SUPERELEVATION TRANSITION DETAIL
AND CROSS SECTIONS)
- STA. 651+00.00 TO STA. 651+45.00
- TRANSITION TO MATCH EXISTING
SLOPE IN 50'

NOTES:

1. SEE THE BRIDGE PLANS FOR BRIDGE APPROACH SLAB DETAILS
(STA. 654+94.94 - STA. 655+24.94 & STA. 656+17.94 - STA. 656+47.94)
2. SEE PLAN AND CROSS SECTIONS FOR TREATMENT OUTSIDE SHOULDER LIMITS

FILE NAME =	USER NAME = jdardeen	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TYPICAL SECTIONS			F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FILE		DRAWN - JRD	REVISED -					735	(7)B-2	MACOUPIN	57	12	
	PLOT SCALE = 10.0000' / in.	CHECKED - SLD	REVISED -		SCALE: N.T.S.			SHEET NO. 2 OF 2 SHEETS			STA. 651+00.00 TO STA. 659+25.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -								CONTRACT NO. 72686		

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EXIST. CURVE 11
 PI STA. = 647+99.09
 $\Delta = 27^\circ 42' 00''$ (LT)
 $D = 2^\circ 00' 00''$
 $R = 2,864.94'$
 $T = 706.35'$
 $L = 1,385.08'$
 $E = 85.79'$
 P.C. STA. = 640+92.74
 P.T. STA. = 654+77.82

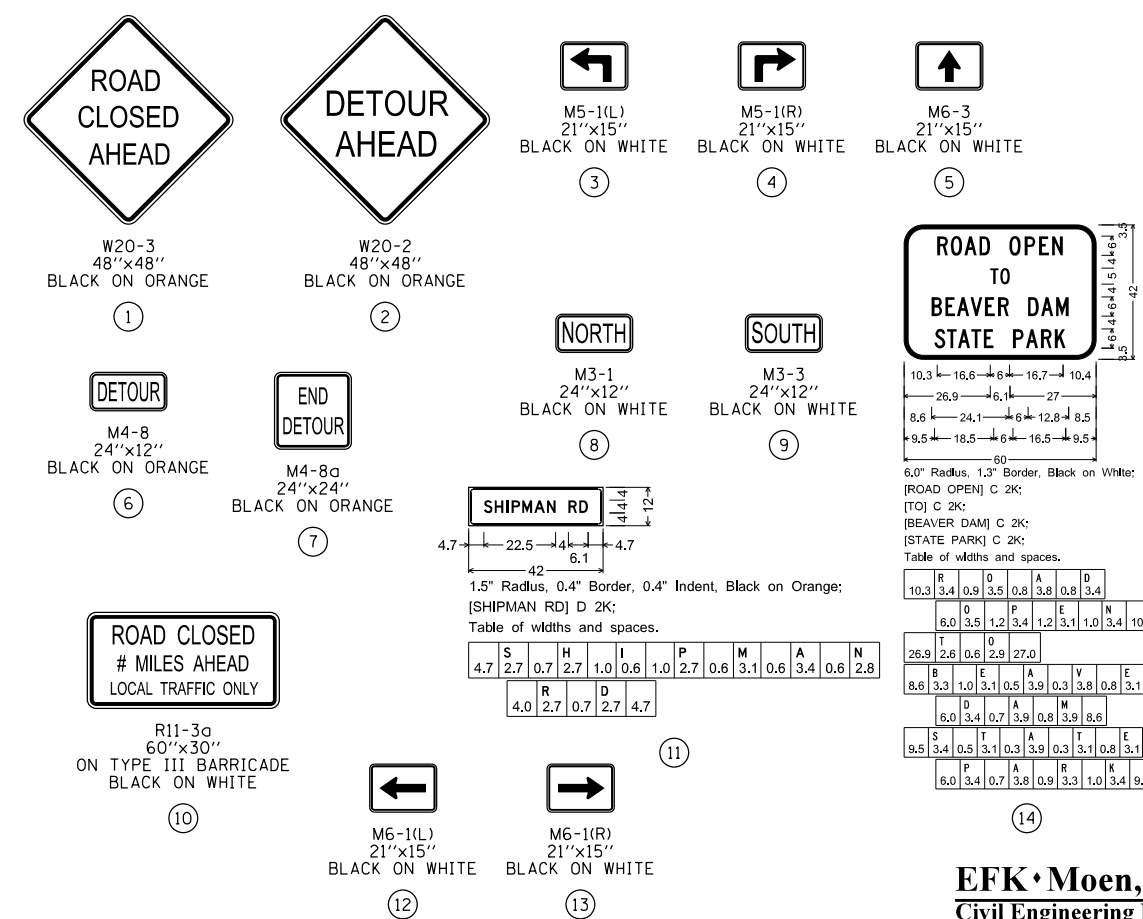
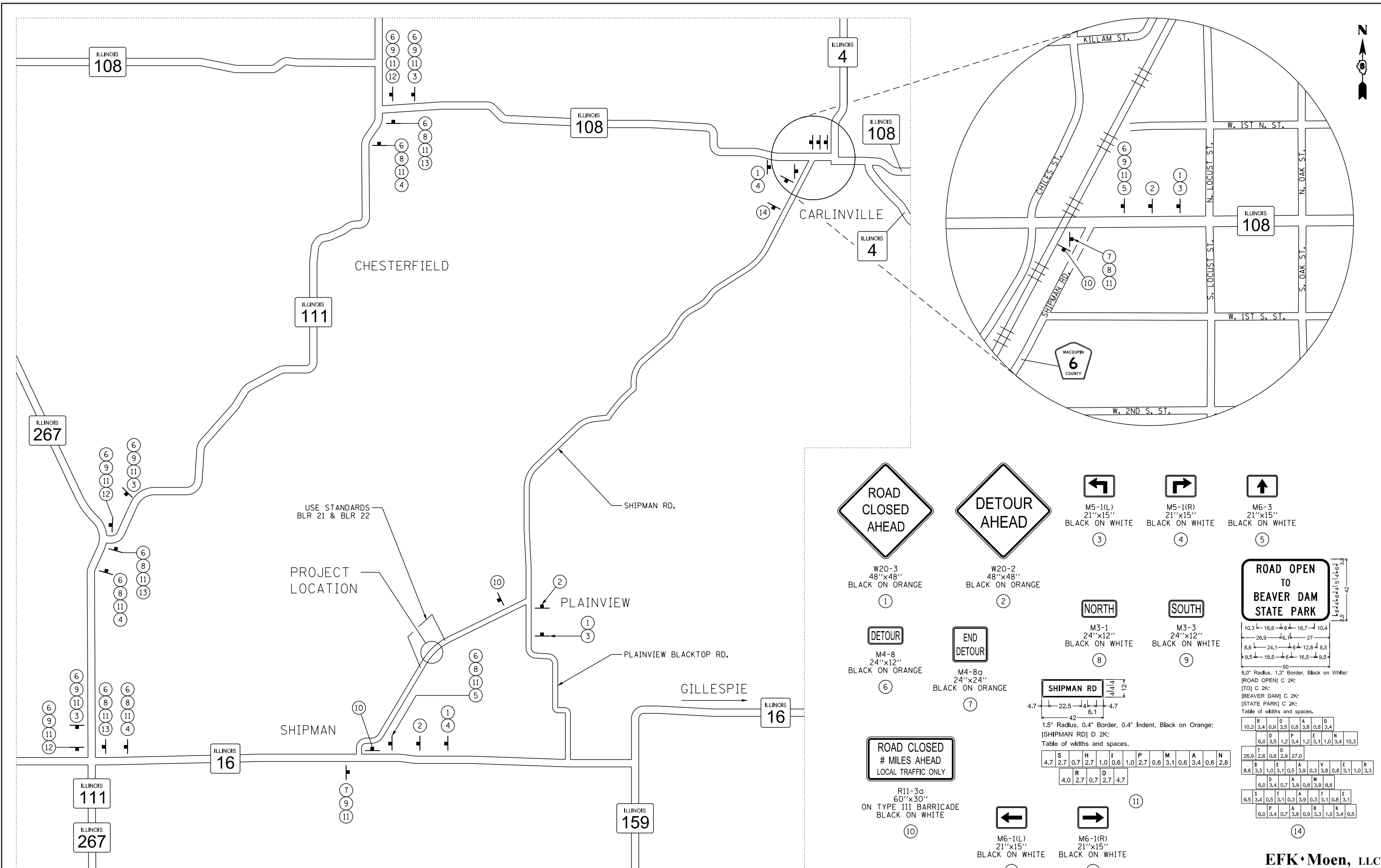
BENCHMARK AND SITE BENCHMARKS:

BM. S.E. COR OF BRIDGE WINGWALL, STANDARD TABLET DESCRIPTION SAYS TABLET IS STAMPED "6 JXS 1980" TABLET FOUND HAD NO NUMBERS OR ELEVATION STAMPED ON IT. NAVD 29' ELEVATION = 571.58

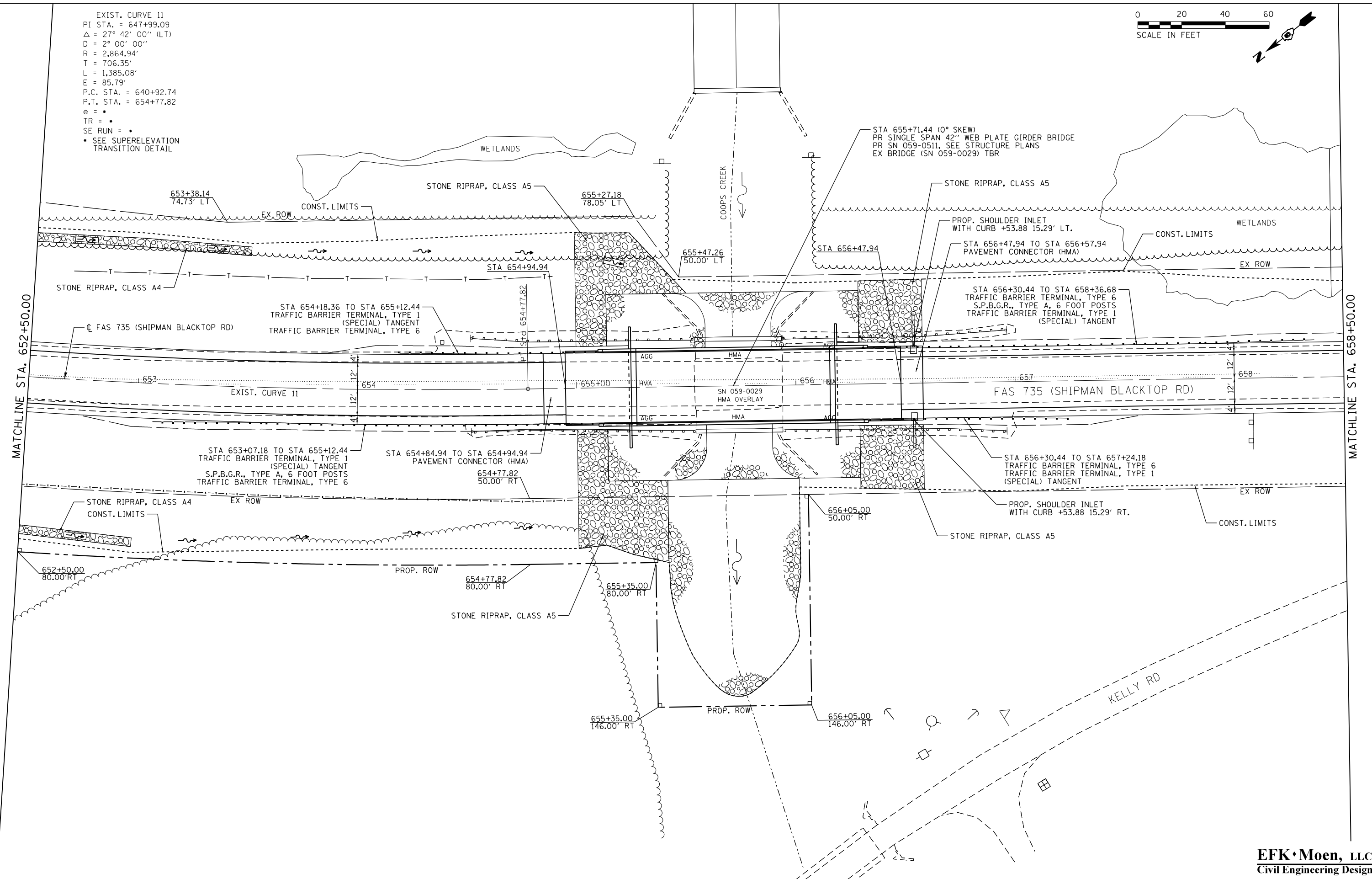
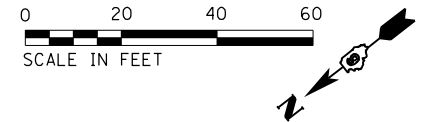
SITE BM. WS # 1 SET CHISLED SQUARE ON S.E. ABUTMENT OF OLD TOWNSHIP RD. BRIDGE STA. 656+31.7 @ 198.9' RT. NAVD 29' ELEVATION = 564.536

SITE BM. WS # 2 SET CHISLED SQUARE ON TOP CENTER OF WEST HEADWALL. STA. 663+94.0 33.9' RT. NAVD 29' ELEVATION = 570.485

STATION	OFFSET	NORTHING	EASTING	ELEVATION	NOTES
PC 640+92.74	0.00	N 5574.4907	E 5782.5944		
PT 654+77.82	0.00	N 4708.2845	E 4719.0877		PK NAIL
POT 667+31.01	0.00	N 3707.2802	E 3965.1109		PK NAIL
TBM 656+31.7	198.9 RT.	N 4705.0349	E 4467.6302	564.536	
TBM 663+94.0	33.9' RT.	N 3996.8660	E 4140.7923	570.485	



EXIST. CURVE 11
 PI STA. = 647+99.09
 $\Delta = 27^\circ 42' 00''$ (LT)
 $D = 2^\circ 00' 00''$
 $R = 2,864.94'$
 $T = 706.35'$
 $L = 1,385.08'$
 $E = 85.79'$
 P.C. STA. = 640+92.74
 P.T. STA. = 654+77.82
 $e = \cdot$
 $TR = \cdot$
 $SE\ RUN = \cdot$
 • SEE SUPERELEVATION
 TRANSITION DETAIL



FILE NAME =
 FILE
 Default

USER NAME = jdardeen
 PLOT SCALE = 40.0000' / in.
 PLOT DATE = 8/11/2016

DESIGNED - JRD
 DRAWN - MSK
 CHECKED - SLD
 DATE - 8/12/2016

REVISED -
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 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

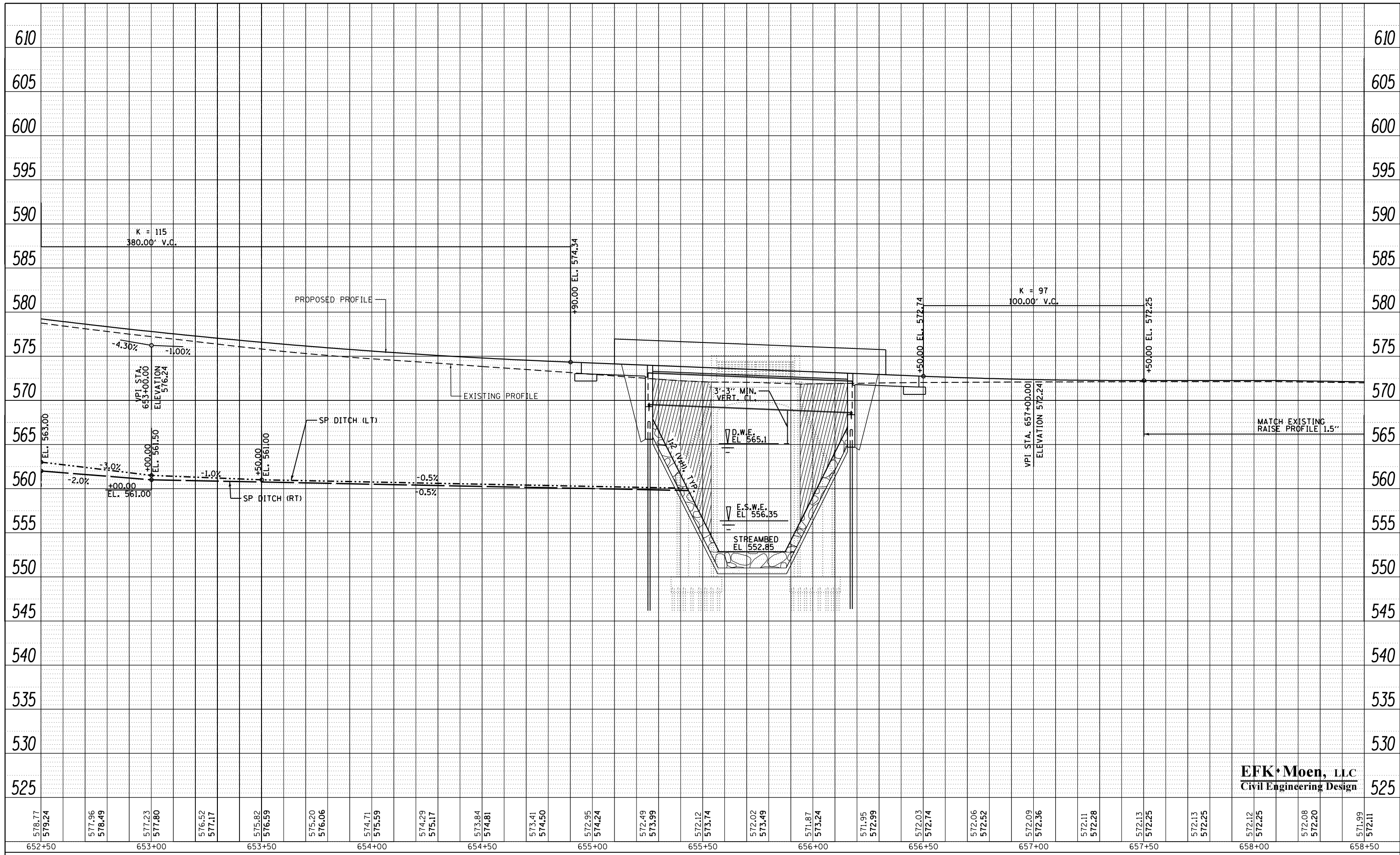
PLAN
 SCALE: 1"=20'
 SHEET 2 OF 4 SHEETS
 STA. 652+50.00 TO STA. 658+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	16
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

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PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	ALIGNMENT CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CARD FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	ALIGNMENT CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CARD FILE NAME		



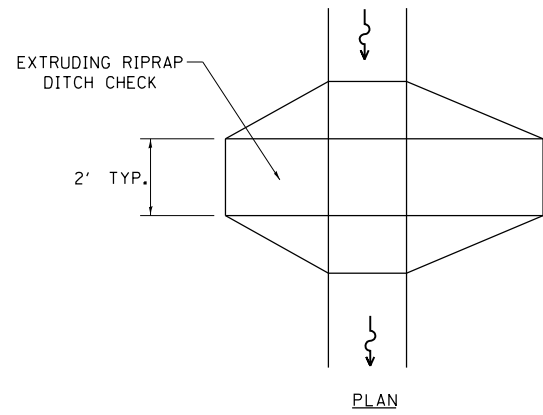
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FILE NAME =	USER NAME = jdardean	DESIGNED - JRD	REVISED -
*FILE#		DRAWN - JRD	REVISED -
Default	PLOT SCALE = 40.0000' / in.	CHECKED - SLD	REVISED -
	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -

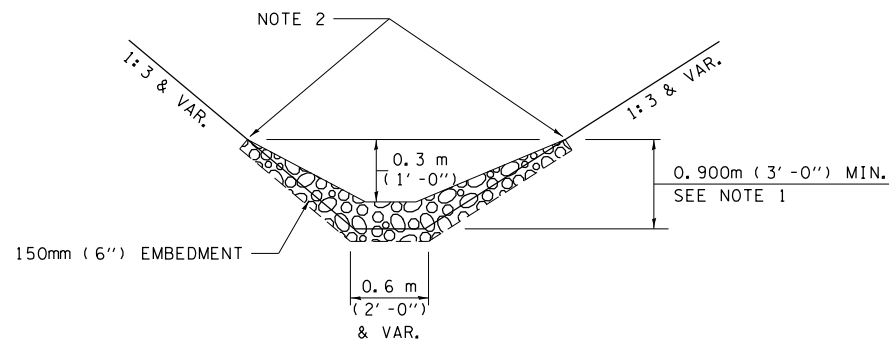
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE			
SCALE: 1"=20'	SHEET 3	OF 4	SHEETS
STA. 652+50.00		TO STA. 658+50.00	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	17
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				



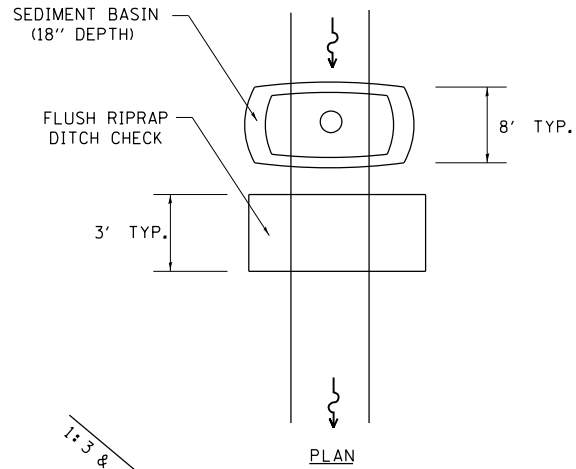
PLAN



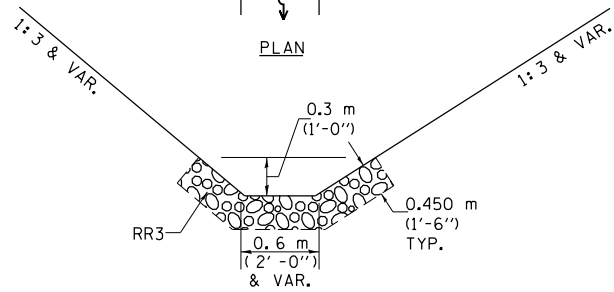
ELEVATION

OPTION 1

(EXTRUDING DITCH CHECK)
RECOMMENDED FOR AREAS
W/ RIPRAP DITCH LINING



PLAN



ELEVATION

OPTION 2

(FLUSH DITCH CHECK)
RECOMMENDED FOR AREAS
W/O RIPRAP DITCH LINING

STONE DUMPED RIPRAP DITCH CHECK

OPTIONS 1 & 2 OR
AS DIRECTED BY THE ENGINEER

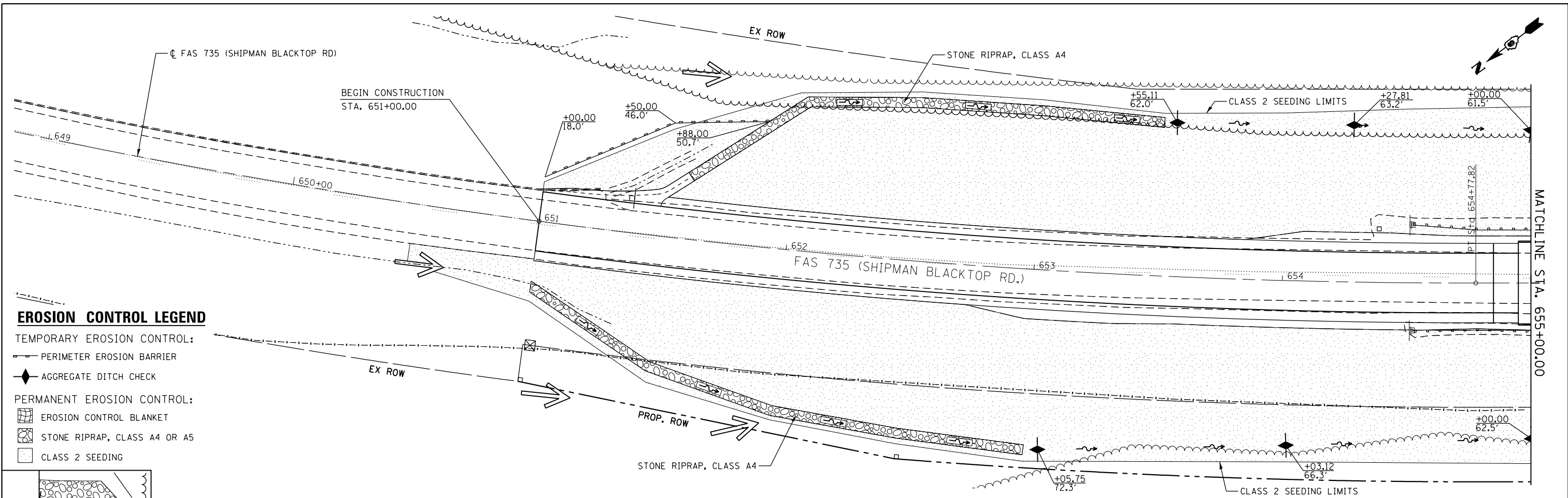
NOTE 1: RIPRAP SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 0.3m (1') OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE RIPRAP.

NOTE 2: ENDS SHALL BE TIED INTO SLOPES.

LEGEND FOR STORM WATER POLLUTION PREVENTION PLAN	
ITEM	SYMBOL
AGGREGATE DITCH CHECKS	
INLET PIPE PROTECTION	
PERIMETER EROSION BARRIER	
SEDIMENT BASINS	
EARTH EXCAVATION FOR EROSION CONTROL AGGREGATE (EROSION CONTROL)	
PRESERVE EXISTING TREES, WOODLANDS, AND UNDERSTORY (OUTSIDE CONSTRUCTION LIMITS)	
ITEM PLACED AT BEGINNING OF CONSTRUCTION (Requirement)	* ITEM *
ITEM PLACED AS DIRECTED BY ENGINEER (When required by situation)	ITEM
DIRECTION OF OVERLAND FLOW	

GENERAL NOTES:
All items shall be constructed as shown on this sheet, on Standard 280001, and as directed by the Engineer.

FILE NAME = SWPPLAN.DGN	USER NAME = jdardeen	DESIGNED -	REVISED - AUG 2007 (JCN)	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STORM WATER POLLUTION PREVENTION PLAN	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	PLOT SCALE = 48.000' / in.	DRAWN - CADD	REVISED - OCT 2010 (JCN)			735	(7)B-2	MACOUPIN	57	20	
	PLOT DATE = 8/11/2016	CHECKED - JCN	REVISED - MAY 2012 (JPM)			CONTRACT NO. 72686					
		DATE - APRIL 5, 1999	REVISED -			ILLINOIS FED. AID PROJECT					
SCALE:		SHEET 1 OF 1 SHEETS		STA. TO STA.							



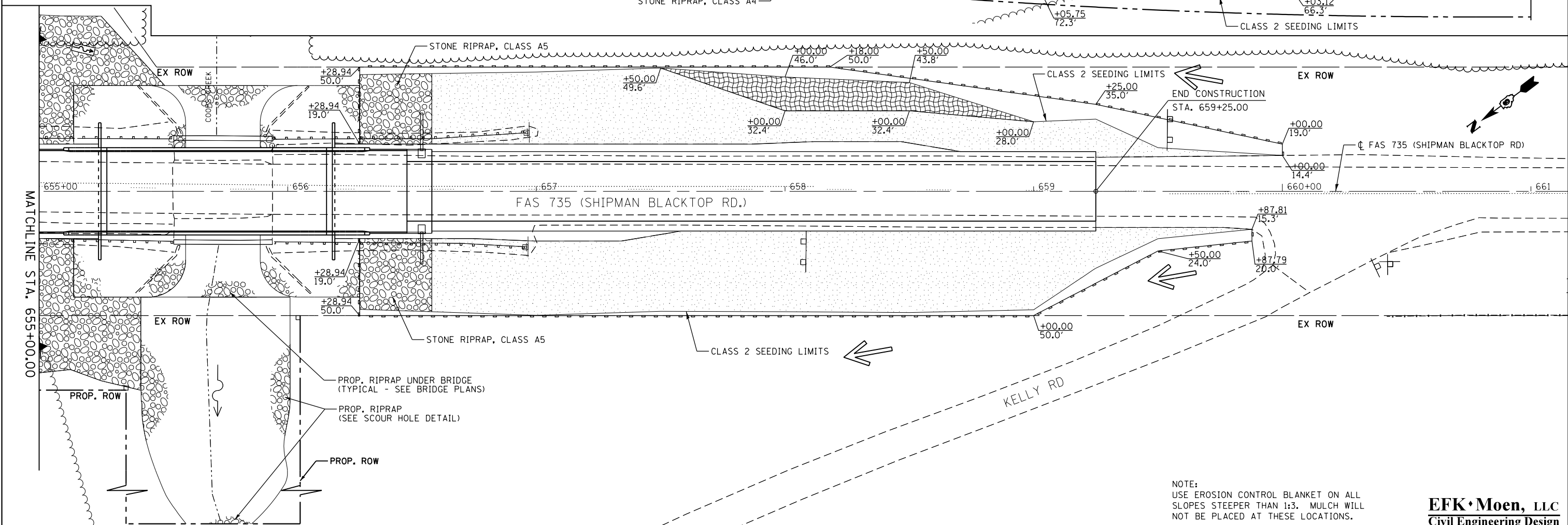
EROSION CONTROL LEGEND

TEMPORARY EROSION CONTROL:

- PERIMETER EROSION BARRIER
- ◆ AGGREGATE DITCH CHECK

PERMANENT EROSION CONTROL:

- ▨ EROSION CONTROL BLANKET
- ▨ STONE RIPRAP, CLASS A4 OR A5
- ▨ CLASS 2 SEEDING



NOTE:
USE EROSION CONTROL BLANKET ON ALL SLOPES STEEPER THAN 1:3. MULCH WILL NOT BE PLACED AT THESE LOCATIONS.

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Civil Engineering Design

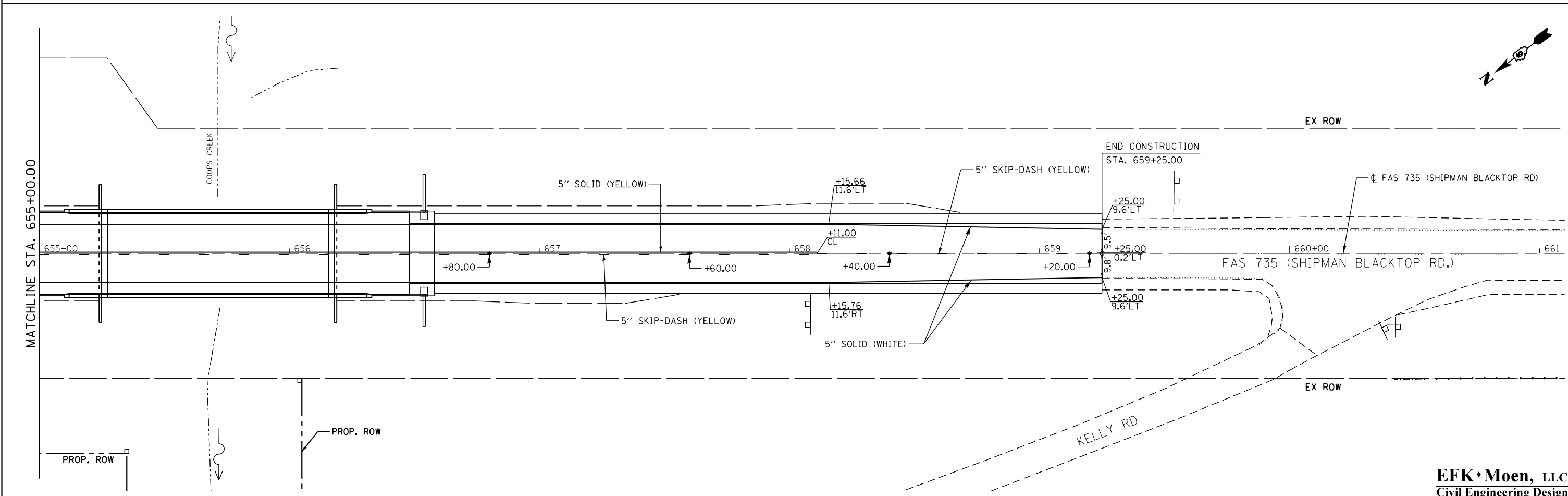
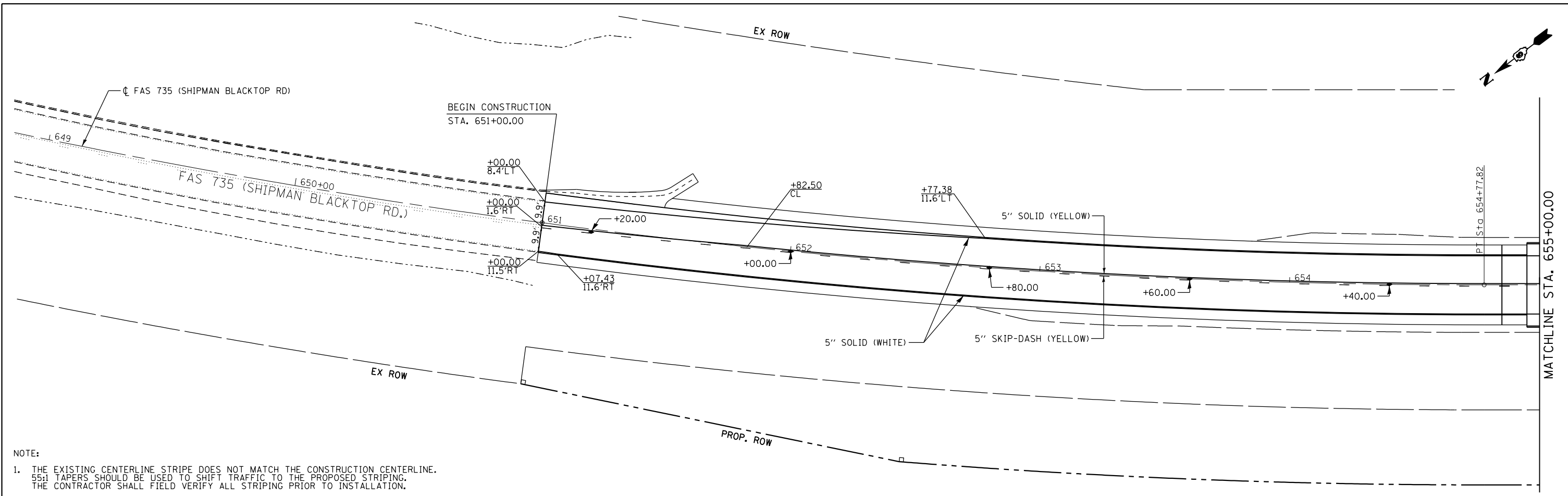
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	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. 651+00.00 TO STA. 659+25.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	21
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				



FILE NAME =	USER NAME = jdardeen	DESIGNED - JRD	REVISED -
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	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

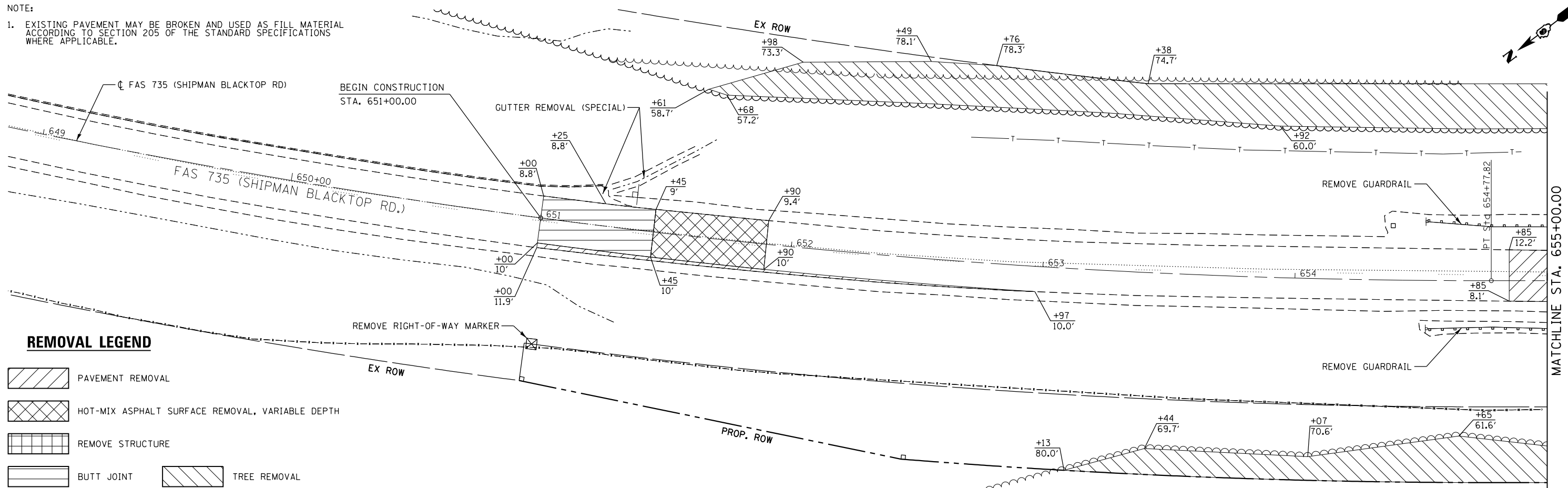
PAVEMENT MARKING PLAN			
SCALE: 1"=20'	SHEET 1 OF 1 SHEETS	STA. 649+00.00 TO STA. 661+00.00	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	22
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				



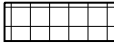
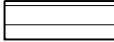

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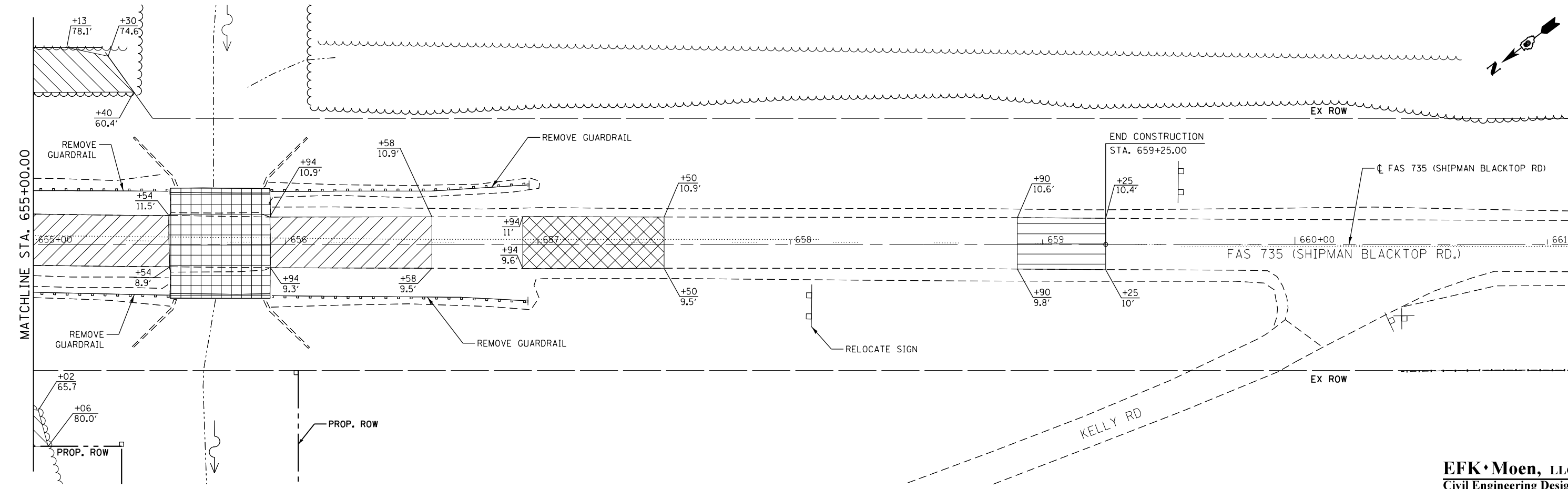
NOTE:

1. EXISTING PAVEMENT MAY BE BROKEN AND USED AS FILL MATERIAL ACCORDING TO SECTION 205 OF THE STANDARD SPECIFICATIONS WHERE APPLICABLE.



REMOVAL LEGEND

-  PAVEMENT REMOVAL
-  HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
-  REMOVE STRUCTURE
-  BUTT JOINT
-  TREE REMOVAL



FILE NAME =	USER NAME = jdardeen	DESIGNED - JRD	REVISED -
*FILE#		DRAWN - JRD	REVISED -
Default	PLOT SCALE = 48.0000' / in.	CHECKED - SLD	REVISED -
	PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REMOVAL PLAN

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. 649+00.00 TO STA. 661+00.00

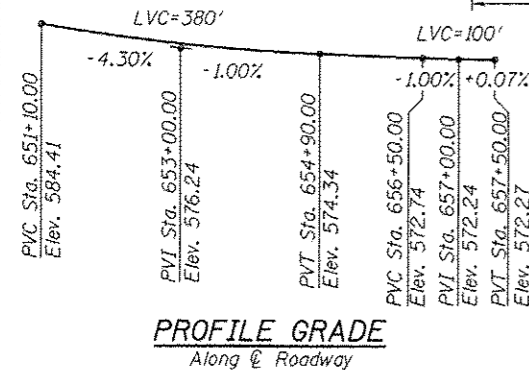
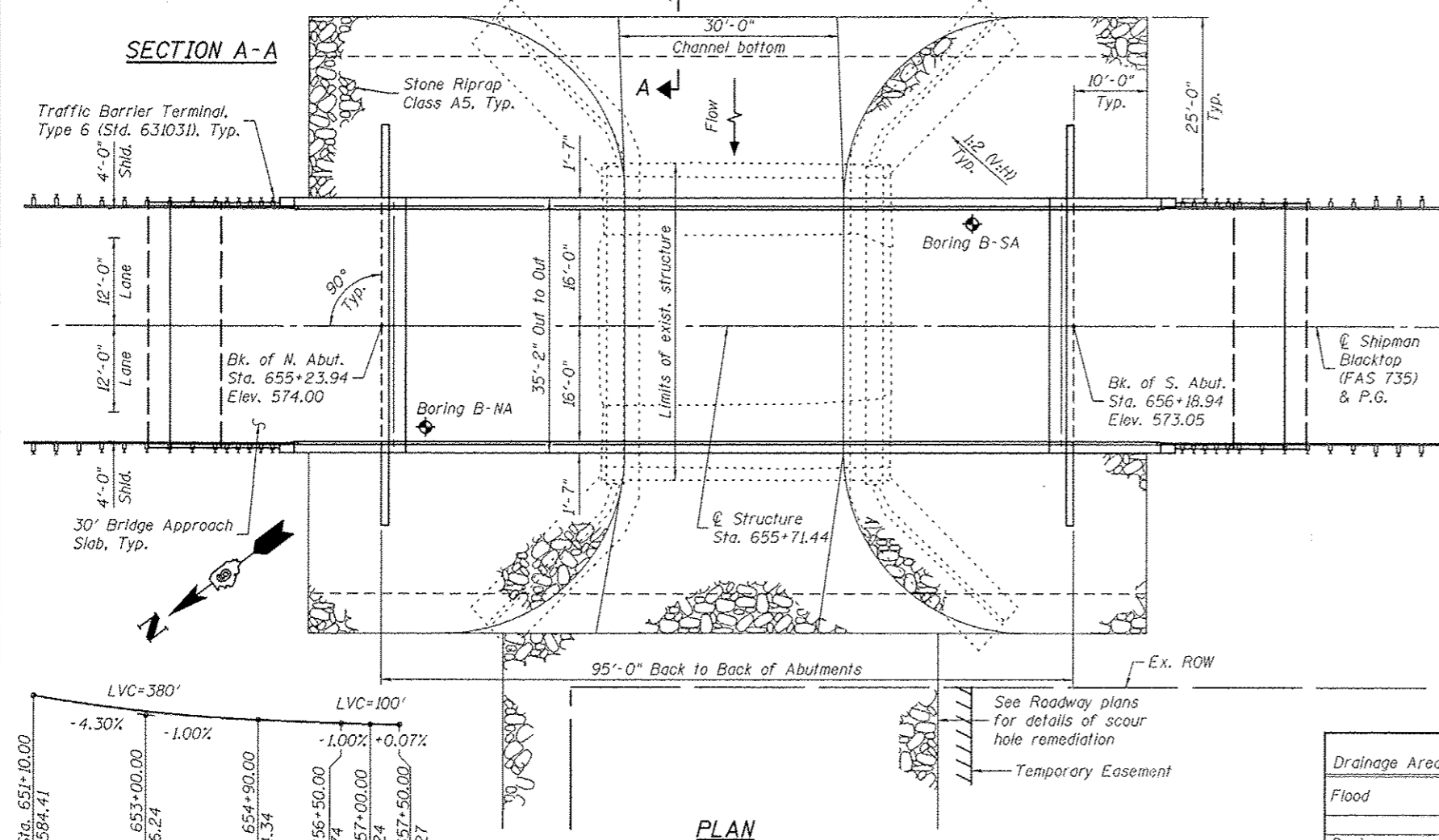
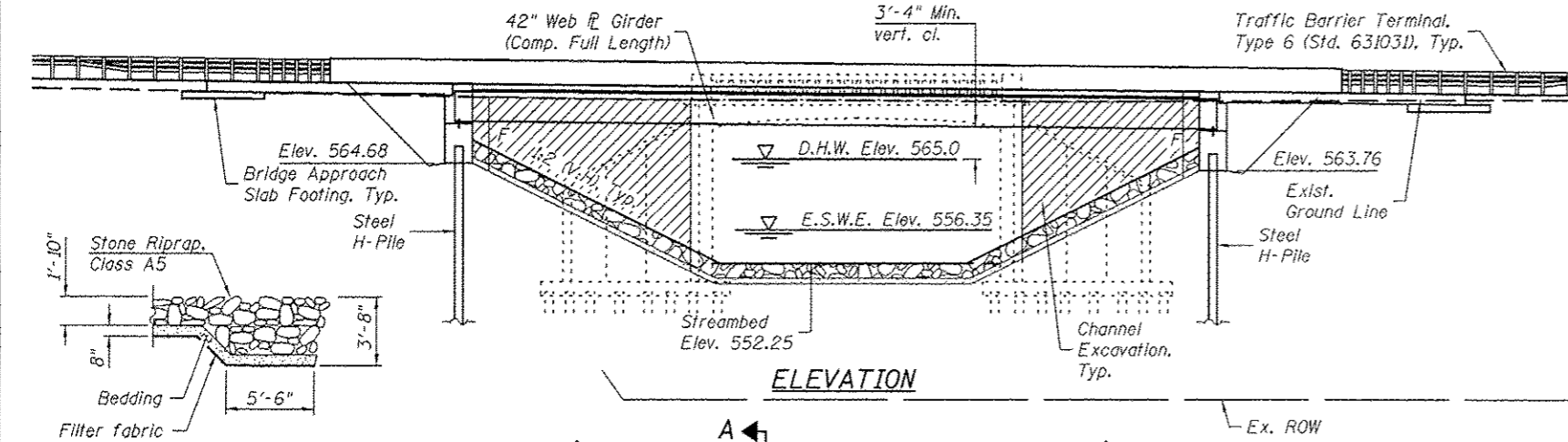
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	23
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

EFK·Moen, LLC
Civil Engineering Design

Benchmark: WS-1. Chiseled "□" on southeast abutment of old Township Road bridge; Sta. 656+31.7, 198.9' Rt., Elev. 564.54

Existing Structure: S.N. 059-0029 has an estimated construction date of 1935. The three sided rigid frame structure is 40'-0" bk.-bk. of sidewalks and 43'-6" out to out of deck. Abutments and vertical cantilever wing walls are supported by untreated timber pile footings. Structure to be removed and replaced. Road to be closed during construction of the bridge.

Salvage: None



INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Top of Slab Elevations (Sheet 1 of 2)
4. Top of Slab Elevations (Sheet 2 of 2)
5. Top of Approach Slab Elevations
6. Superstructure
7. Superstructure Details
8. Concrete Parapet Slipforming Option
9. Integral Abutment Diaphragm Details
10. Bridge Approach Slab Details (Sheet 1 of 2)
11. Bridge Approach Slab Details (Sheet 2 of 2)
12. Framing Plan
13. Structural Steel Details
14. North Abutment
15. South Abutment
16. HP Pile Details
17. Boring Logs (Sheet 1 of 2)
18. Boring Logs (Sheet 2 of 2)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		1042	1042
Filter Fabric	Sq. Yd.		1123	1123
Removal of Existing Structures No. 1	Each			1
Structure Excavation	Cu. Yd.		166	166
Concrete Structures	Cu. Yd.		71.2	71.2
Concrete Superstructure	Cu. Yd.	140.2		140.2
Bridge Deck Grooving	Sq. Yd.	510		510
Protective Coat	Sq. Yd.	664		664
Concrete Superstructure (Approach Slab)	Cu. Yd.	105.8		105.8
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	1116		1116
Reinforcement Bars, Epoxy Coated	Pound	62420	12930	75350
Furnishing Steel Piles HP12x53	Foot		455	455
Driving Piles	Foot		455	455
Test Pile Steel HP12x53	Each		2	2
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		24	24
Geocomposite Wall Drain	Sq. Yd.		76	76
Granular Backfill for Structures	Cu. Yd.		186	186
Pipe Underdrains for Structures 4"	Foot		135	135

APPROVED
For Structural Adequacy Only

Chris Linneman
Engineer of Bridges & Structures



Signed: *[Signature]*
Date: 8/10/2016
License Expires: 11/30/2016

LOADING HL-93

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

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 Interims

DESIGN STRESSES

FIELD UNITS

- f'c = 3,500 psi
- f'c = 4,000 psi (Superstructure Concrete)
- fy = 60,000 psi (Reinforcement)
- fy = 50,000 psi (M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.279g
Design Spectral Acceleration at 0.2 sec. (SDs) = 0.630g
Soil Site Class = E

DESIGN SCOUR ELEVATION TABLE

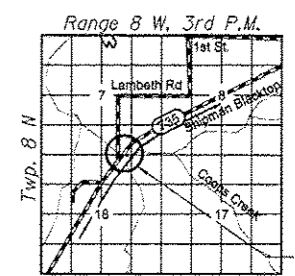
Event / Limit	Design Scour Elevations (ft.)			Item 113
	N. Abut.	S. Abut.	Item 113	
State				
Q100	564.7	563.8		
Q200	564.7	563.8		
Design	564.7	563.8		8
Check	564.7	563.8		

WATERWAY INFORMATION

Drainage Area = 21.3 sq. mi. Exist. Low Grade Elev. 571.6 @ Sta. 640+93
Prop. Low Grade Elev. 571.8 @ Sta. 659+25

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	10	3358	382	595	563.7	1.2	0.0	564.8	563.7
Design Base	50	5456	426	696	565.0	3.2	0.3	568.2	565.3
Scour Check	100	6409	438	724	565.3	4.7	0.5	570.0	565.8
Overtop Exist.	200	6961	444	738	565.5	5.5	0.6	571.0	566.1
Overtop Prop.	>500								
Max. Calc.	500	8773	459	775	565.9	8.4	1.2	574.3	567.1

10-year existing velocity = 10.0 ft/s
10-year proposed velocity = 6.7 ft/s



LOCATION SKETCH

GENERAL PLAN & ELEVATION
SHIPMAN BLACKTOP OVER
COOPS CREEK
F.A.S. RTE. 735 - SEC. (7)B-2
MACOUPIN COUNTY
STATION 655+71.44
STRUCTURE NO. 059-0511

PRINT DATE: 8/10/2016 10:52:26 AM Y:\15040-01\6 W01Shipman\DKN\Bridg\Final\Plot\sheet s\059-0511-72686-001-0PE.dgn

EFK Moen, LLC
Civil Engineering Design
303 Fountains Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4289

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PLOT SCALE = 012' = 1"	CHECKED - CTW	REVISD -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

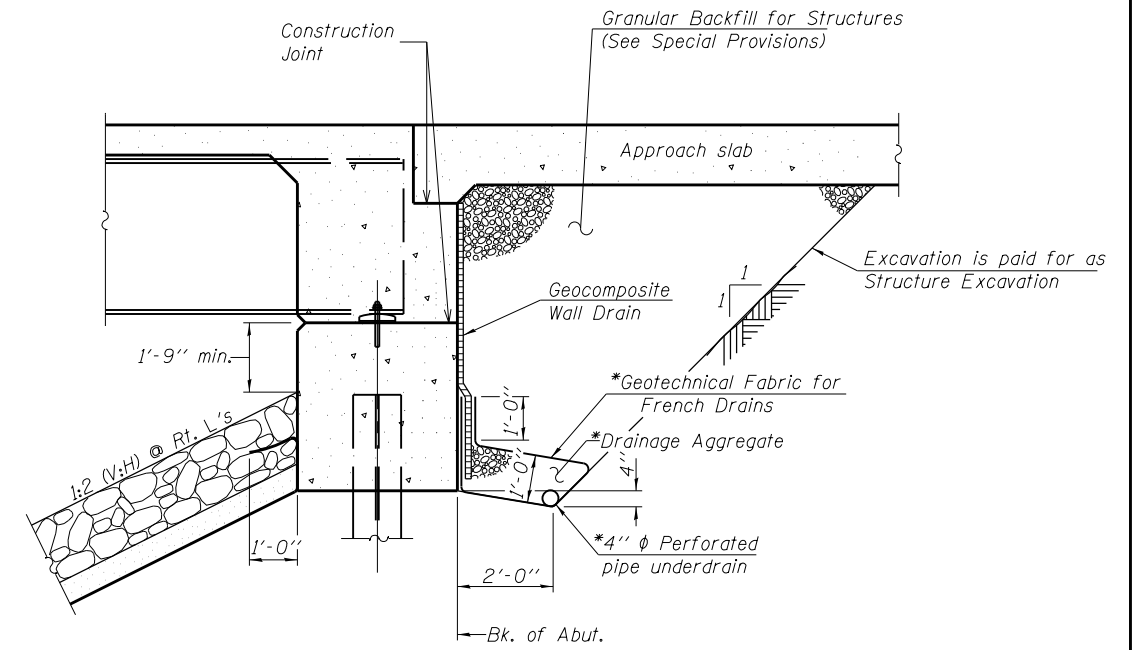
GENERAL PLAN & ELEVATION
STRUCTURE NO. 059-0511
SHEET NO. 1 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	24

CONTRACT NO. 72686
ILLINOIS FED. AID PROJECT

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts $\frac{3}{4}$ in. dia., holes $\frac{15}{16}$ in. dia., unless otherwise noted.
2. Calculated weight of Structural Steel = 99,910 lbs. (Grade 50W)
3. All structural steel shall be AASHTO M 270 Grade 50W
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 1'-6" in. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
8. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
9. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
10. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.



SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

STATION 655+71.44
BUILT 20__ BY
STATE OF ILLINOIS
F.A.S. RTE. 735 SEC. (7)B-2
LOADING HL-93
STRUCTURE NO. 059-0511

NAME PLATE
See Std. 515001

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EFK•Moen, LLC
Civil Engineering Design
303 Fountains Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4250

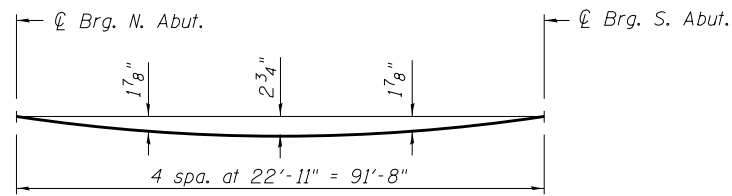
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PLOT DATE = 8/10/2016	DATE - 8/10/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 059-0511**

SHEET NO. 2 OF 18 SHEETS

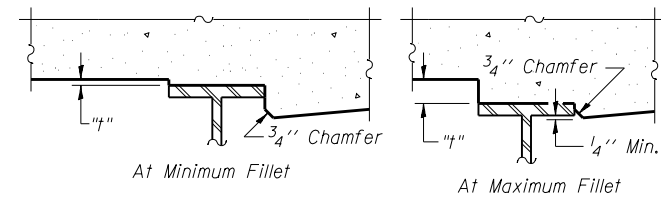
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	25
CONTRACT NO. 72686			ILLINOIS FED. AID PROJECT	



DEAD LOAD DEFLECTION DIAGRAM

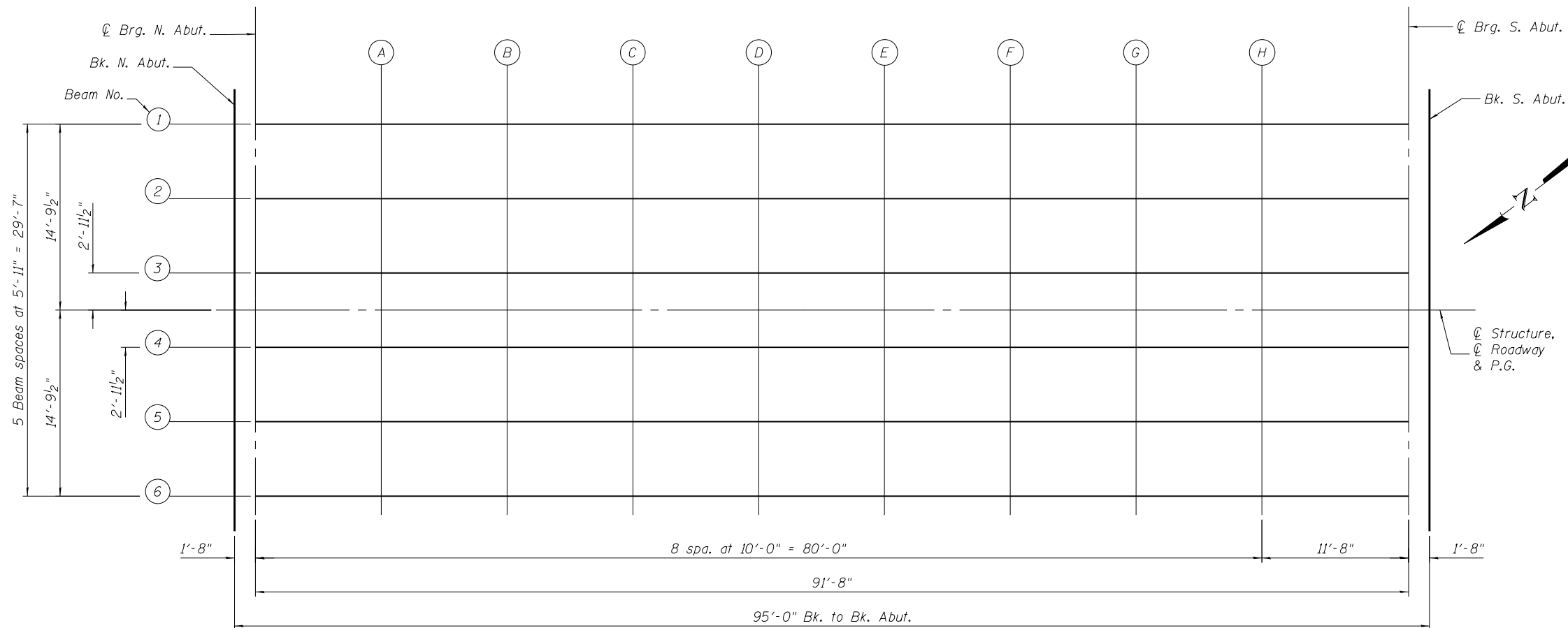
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 4 of 18.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 4 of 18, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

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E-S 7-1-10

EFK Moen, LLC
Civil Engineering Design
303 Fountains Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME = ja	DESIGNED - CDL	REVISED -
PLOT SCALE = 1/8" = 1'-0"	CHECKED - CTW	REVISED -
PLOT DATE = 8/10/2016	DRAWN - JAA	REVISED -
	DATE - 8/10/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 1 OF 2)
STRUCTURE NO. 059-0511**

SHEET NO. 3 OF 18 SHEETS

F.A.S. RTE. 735	SECTION (7)B-2	COUNTY MACOUPIN	TOTAL SHEETS 57	SHEET NO. 26
CONTRACT NO. 72686				ILLINOIS FED. AID PROJECT

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	655+23.94	-14.79	573.75	573.75
☉ Brg N. Abut.	655+25.61	-14.79	573.73	573.73
A	655+35.61	-14.79	573.63	573.71
B	655+45.61	-14.79	573.53	573.68
C	655+55.61	-14.79	573.43	573.63
D	655+65.61	-14.79	573.33	573.56
E	655+75.61	-14.79	573.23	573.46
F	655+85.61	-14.79	573.13	573.33
G	655+95.61	-14.79	573.03	573.19
H	656+05.61	-14.79	572.93	573.02
☉ Brg S. Abut.	656+17.27	-14.79	572.82	572.82
Bk. S. Abut.	656+18.94	-14.79	572.80	572.80

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	655+23.94	-8.88	573.86	573.86
☉ Brg N. Abut.	655+25.61	-8.88	573.84	573.84
A	655+35.61	-8.88	573.74	573.82
B	655+45.61	-8.88	573.64	573.79
C	655+55.61	-8.88	573.54	573.74
D	655+65.61	-8.88	573.44	573.66
E	655+75.61	-8.88	573.34	573.57
F	655+85.61	-8.88	573.24	573.44
G	655+95.61	-8.88	573.14	573.30
H	656+05.61	-8.88	573.04	573.13
☉ Brg S. Abut.	656+17.27	-8.88	572.92	572.92
Bk. S. Abut.	656+18.94	-8.88	572.91	572.91

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	655+23.94	-2.96	573.96	573.95
☉ Brg N. Abut.	655+25.61	-2.96	573.94	573.93
A	655+35.61	-2.96	573.84	573.91
B	655+45.61	-2.96	573.74	573.88
C	655+55.61	-2.96	573.64	573.83
D	655+65.61	-2.96	573.54	573.76
E	655+75.61	-2.96	573.44	573.66
F	655+85.61	-2.96	573.34	573.53
G	655+95.61	-2.96	573.24	573.39
H	656+05.61	-2.96	573.14	573.22
☉ Brg S. Abut.	656+17.27	-2.96	573.02	573.02
Bk. S. Abut.	656+18.94	-2.96	573.01	573.00

☉ ROADWAY, ☉ STRUCTURE & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	655+23.94	0.00	574.00	574.00
☉ Brg N. Abut.	655+25.61	0.00	573.98	573.98
A	655+35.61	0.00	573.88	573.96
B	655+45.61	0.00	573.78	573.92
C	655+55.61	0.00	573.68	573.87
D	655+65.61	0.00	573.58	573.80
E	655+75.61	0.00	573.48	573.70
F	655+85.61	0.00	573.38	573.58
G	655+95.61	0.00	573.28	573.43
H	656+05.61	0.00	573.18	573.27
☉ Brg S. Abut.	656+17.27	0.00	573.06	573.06
Bk. S. Abut.	656+18.94	0.00	573.05	573.05

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	655+23.94	2.96	573.96	573.95
☉ Brg N. Abut.	655+25.61	2.96	573.94	573.93
A	655+35.61	2.96	573.84	573.91
B	655+45.61	2.96	573.74	573.88
C	655+55.61	2.96	573.64	573.83
D	655+65.61	2.96	573.54	573.76
E	655+75.61	2.96	573.44	573.66
F	655+85.61	2.96	573.34	573.53
G	655+95.61	2.96	573.24	573.39
H	656+05.61	2.96	573.14	573.22
☉ Brg S. Abut.	656+17.27	2.96	573.02	573.02
Bk. S. Abut.	656+18.94	2.96	573.01	573.00

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	655+23.94	8.88	573.86	573.86
☉ Brg N. Abut.	655+25.61	8.88	573.84	573.84
A	655+35.61	8.88	573.74	573.82
B	655+45.61	8.88	573.64	573.79
C	655+55.61	8.88	573.54	573.74
D	655+65.61	8.88	573.44	573.66
E	655+75.61	8.88	573.34	573.57
F	655+85.61	8.88	573.24	573.44
G	655+95.61	8.88	573.14	573.30
H	656+05.61	8.88	573.04	573.13
☉ Brg S. Abut.	656+17.27	8.88	572.92	572.92
Bk. S. Abut.	656+18.94	8.88	572.91	572.91

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	655+23.94	14.79	573.75	573.75
☉ Brg N. Abut.	655+25.61	14.79	573.73	573.73
A	655+35.61	14.79	573.63	573.71
B	655+45.61	14.79	573.53	573.68
C	655+55.61	14.79	573.43	573.63
D	655+65.61	14.79	573.33	573.56
E	655+75.61	14.79	573.23	573.46
F	655+85.61	14.79	573.13	573.33
G	655+95.61	14.79	573.03	573.19
H	656+05.61	14.79	572.93	573.02
☉ Brg S. Abut.	656+17.27	14.79	572.82	572.82
Bk. S. Abut.	656+18.94	14.79	572.80	572.80

E-S 7-1-10

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STATE OF ILLINOIS
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TOP OF SLAB ELEVATIONS (SHEET 2 OF 2)
STRUCTURE NO. 059-0511

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	27
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

SHEET NO. 4 OF 18 SHEETS

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EAST EDGE OF SHOULDER

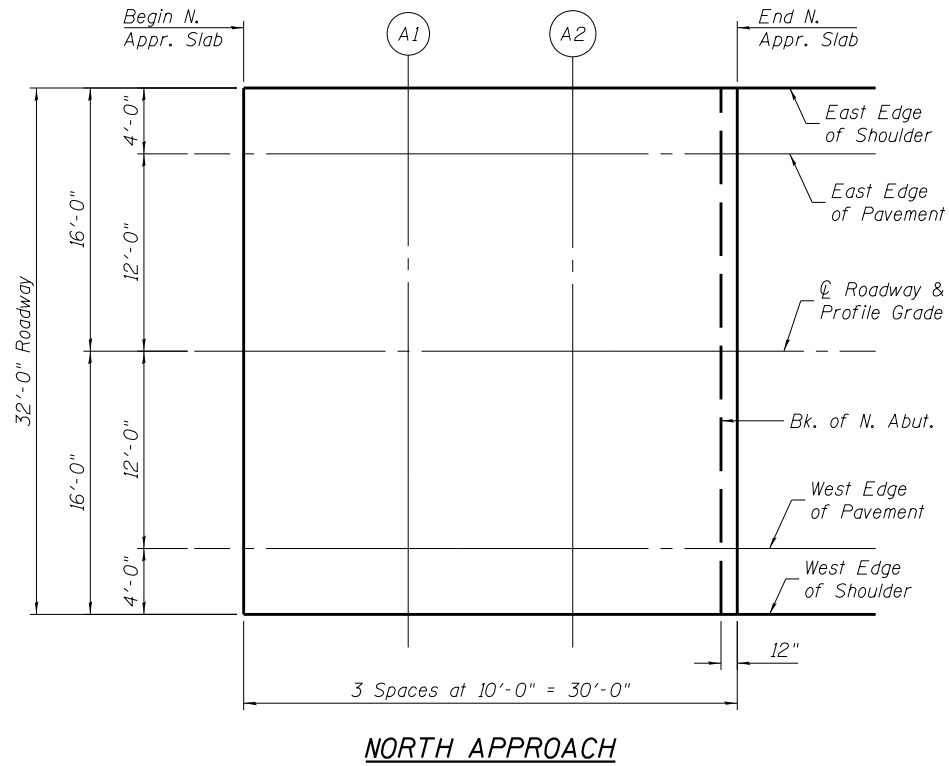
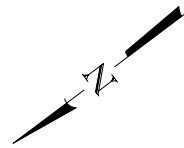
Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	654+94.94	-16.00	574.02
A1	655+04.94	-16.00	573.92
A2	655+14.94	-16.00	573.82
End N. Appr. Slab	655+24.94	-16.00	573.72
Begin S. Appr. Slab	656+17.94	-16.00	572.79
A3	656+27.94	-16.00	572.69
A4	656+37.94	-16.00	572.59
End S. Appr. Slab	656+47.94	-16.00	572.49

EAST EDGE OF PAVEMENT

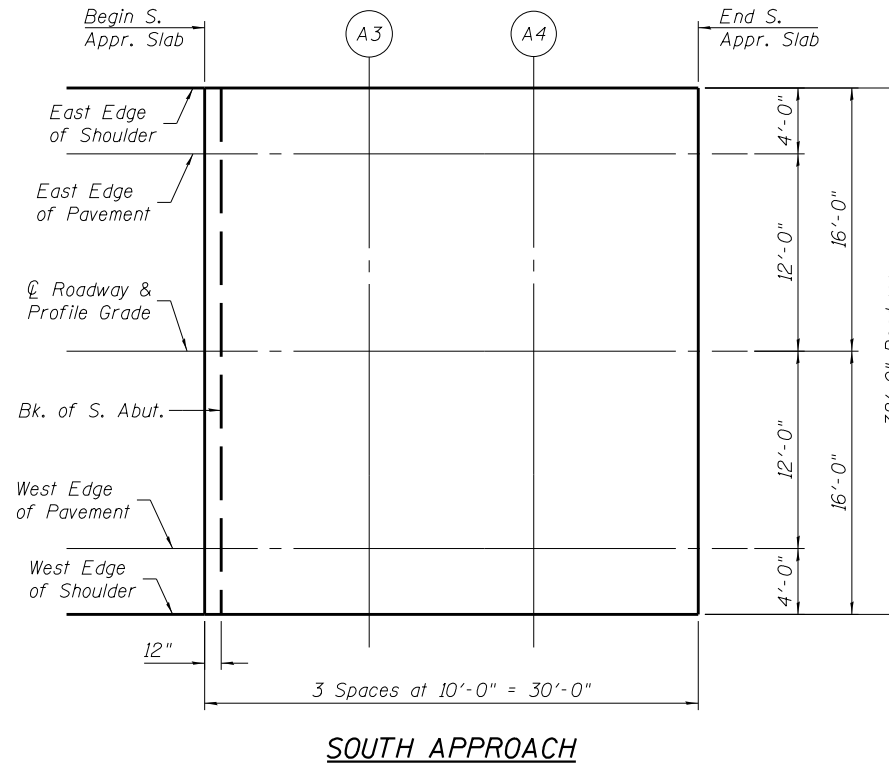
Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	654+94.94	-12.00	574.10
A1	655+04.94	-12.00	574.00
A2	655+14.94	-12.00	573.90
End N. Appr. Slab	655+24.94	-12.00	573.80
Begin S. Appr. Slab	656+17.94	-12.00	572.87
A3	656+27.94	-12.00	572.77
A4	656+37.94	-12.00	572.67
End S. Appr. Slab	656+47.94	-12.00	572.57

☉ ROADWAY AND PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	654+94.94	0.00	574.29
A1	655+04.94	0.00	574.19
A2	655+14.94	0.00	574.09
End N. Appr. Slab	655+24.94	0.00	573.99
Begin S. Appr. Slab	656+17.94	0.00	573.06
A3	656+27.94	0.00	572.96
A4	656+37.94	0.00	572.86
End S. Appr. Slab	656+47.94	0.00	572.76



NORTH APPROACH



SOUTH APPROACH

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	654+94.94	12.00	574.25
A1	655+04.94	12.00	574.10
A2	655+14.94	12.00	573.95
End N. Appr. Slab	655+24.94	12.00	573.80
Begin S. Appr. Slab	656+17.94	12.00	572.87
A3	656+27.94	12.00	572.77
A4	656+37.94	12.00	572.67
End S. Appr. Slab	656+47.94	12.00	572.57

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Slab	654+94.94	16.00	574.16
A1	655+04.94	16.00	574.02
A2	655+14.94	16.00	573.87
End N. Appr. Slab	655+24.94	16.00	573.72
Begin S. Appr. Slab	656+17.94	16.00	572.79
A3	656+27.94	16.00	572.69
A4	656+37.94	16.00	572.59
End S. Appr. Slab	656+47.94	16.00	572.49

E-AS

7-1-10

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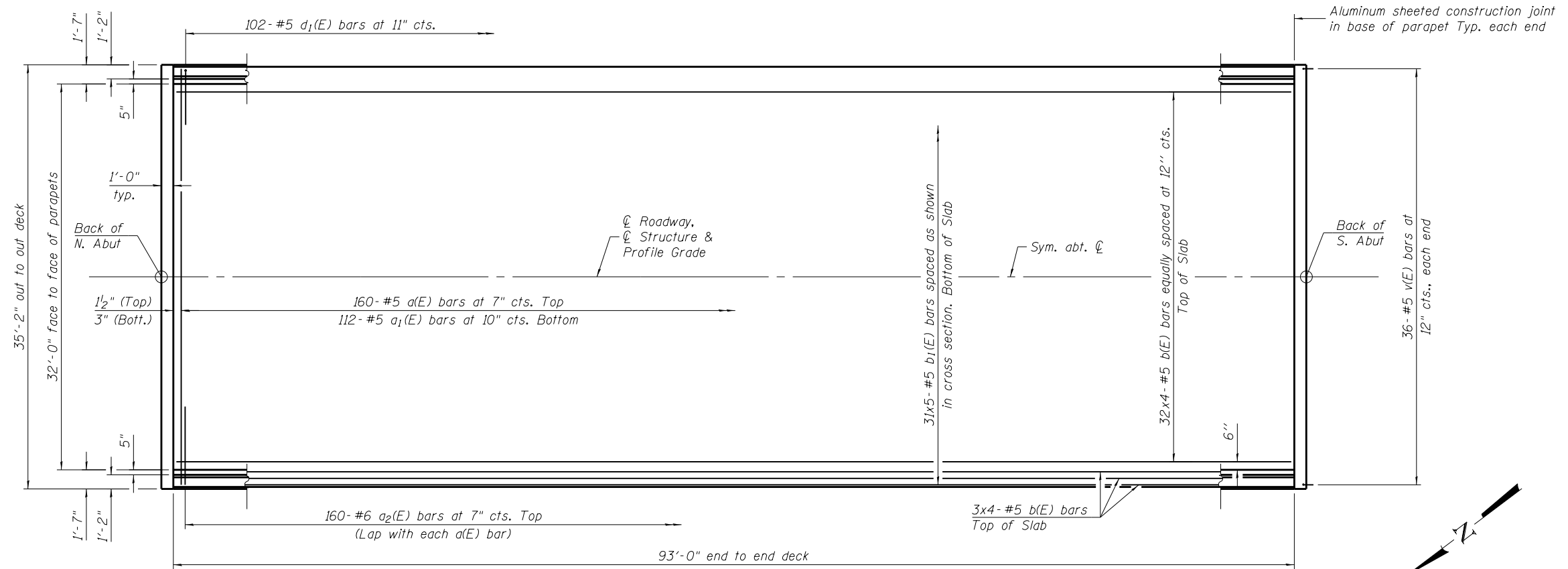
TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 059-0511

SHEET NO. 5 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	28
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

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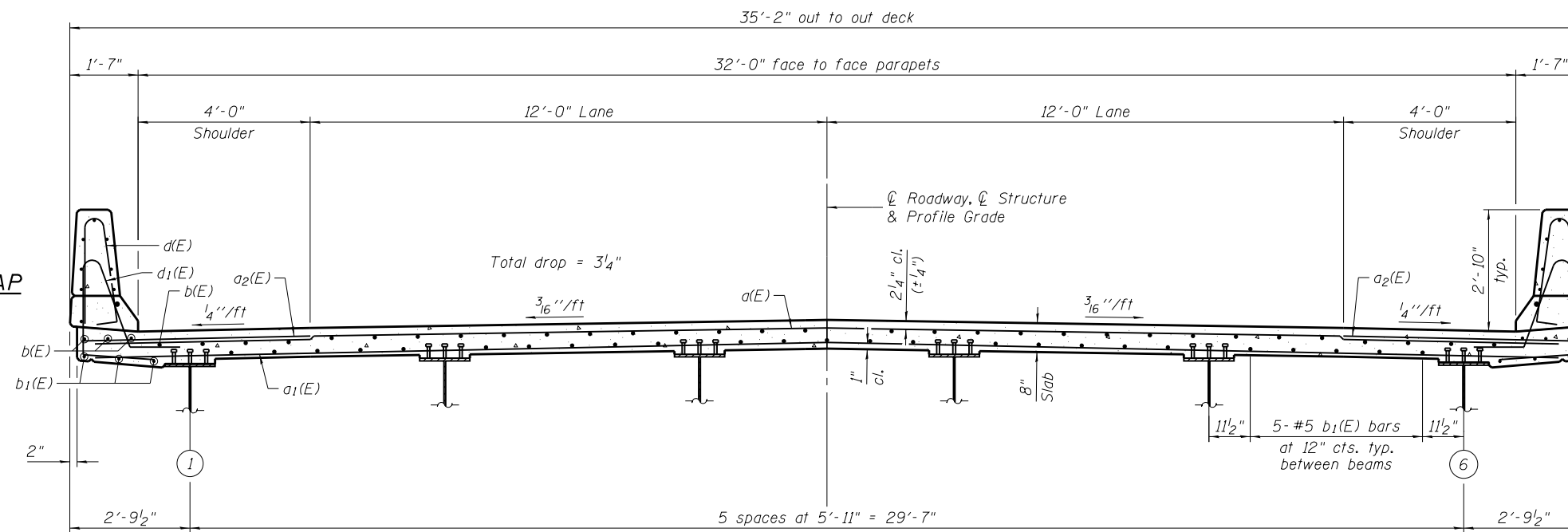
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PLAN

MINIMUM BAR LAP

#5 bar = 3'-0"



CROSS SECTION
(Looking South)

Notes:
See Sheet 7 of 18 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 7 of 18 for parapet reinforcement.

SI-1-0

6-8-15

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PLOT DATE = 8/10/2016	DRAWN - JAA	REVISED -
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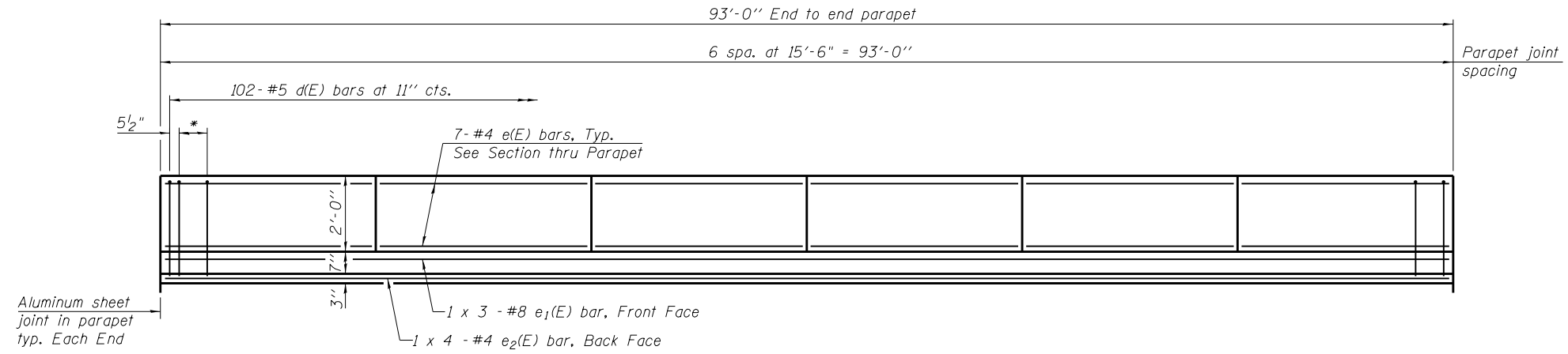
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SUPERSTRUCTURE
STRUCTURE NO. 059-0511

SHEET NO. 6 OF 18 SHEETS

F.A.S. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	29
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

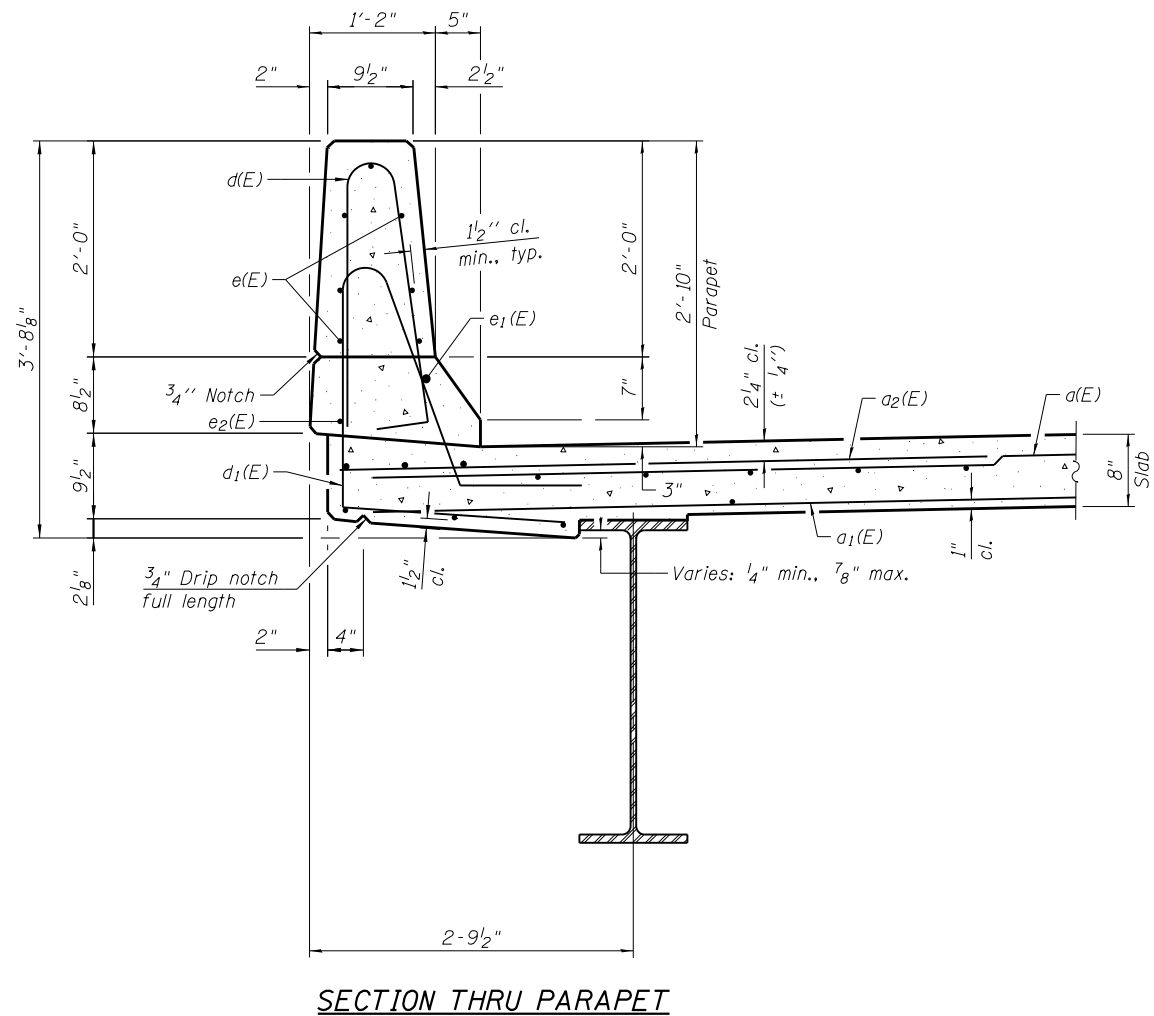
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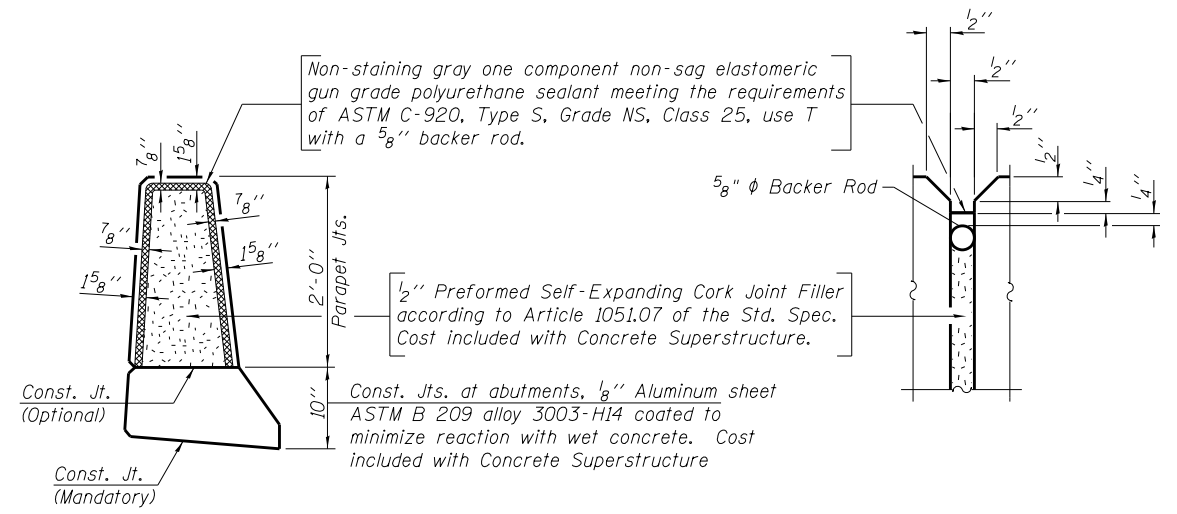
MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-5"
#8 bar = 5'-11"

INSIDE ELEVATION OF PARAPET

* Additional 4-#4 d(E) bars at 11" cts. between d(E) bars; Typical at parapet ends.



SECTION THRU PARAPET

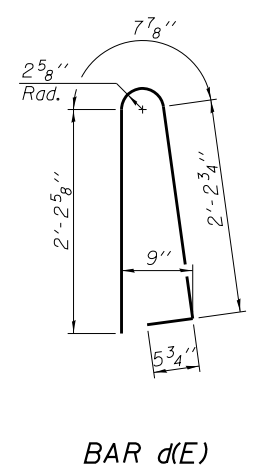


PARAPET JOINT DETAILS

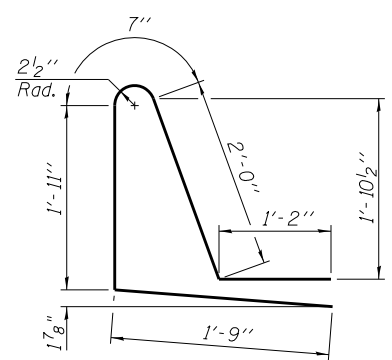
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	160	#5	34'-6"	—
a1(E)	112	#5	34'-0"	—
a2(E)	320	#6	6'-6"	—
b(E)	152	#5	25'-6"	—
b1(E)	155	#5	21'-0"	—
d(E)	220	#5	5'-7"	⌒
d1(E)	204	#5	7'-5"	⌒
e(E)	84	#4	15'-4"	—
e1(E)	6	#8	34'-10"	—
e2(E)	8	#4	25'-0"	—
m(E)	10	#6	34'-10"	—
m1(E)	40	#6	5'-6"	—
m2(E)	16	#6	2'-5"	—
m3(E)	48	#5	4'-0"	—
s(E)	72	#5	8'-4"	⌒
s1(E)	72	#5	11'-2"	⌒
v(E)	72	#5	3'-1"	⌒
Concrete Superstructure			Cu. Yds.	133.5
Bridge Deck Grooving			Sq. Yds.	310
Protective Coat			Sq. Yds.	442
Reinforcement Bars, Epoxy Coated			Pound	27,510

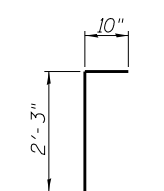
Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.



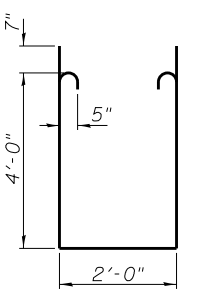
BAR d(E)



BAR d1(E)



BAR v(E)



BAR s1(E)

SI-DI-0

6-8-15

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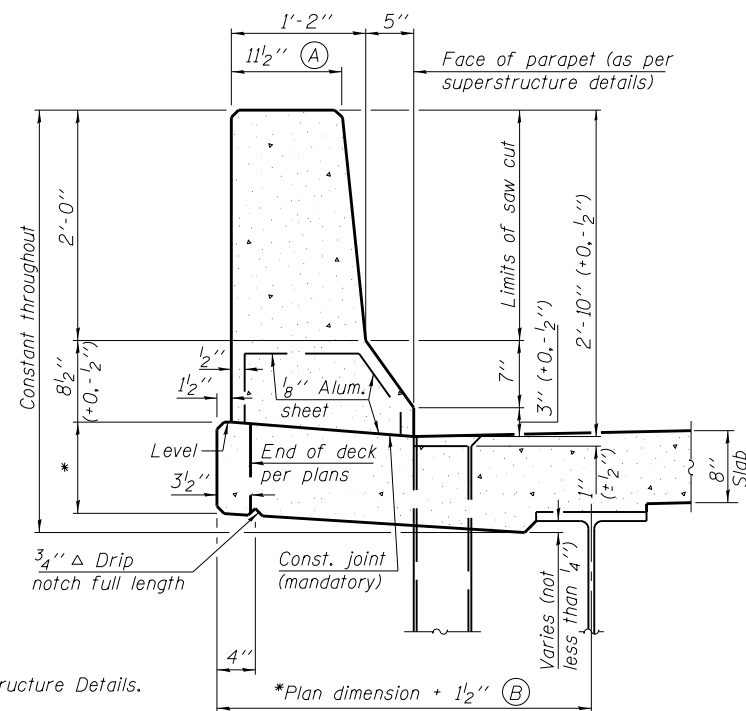
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 059-0511

SHEET NO. 7 OF 18 SHEETS

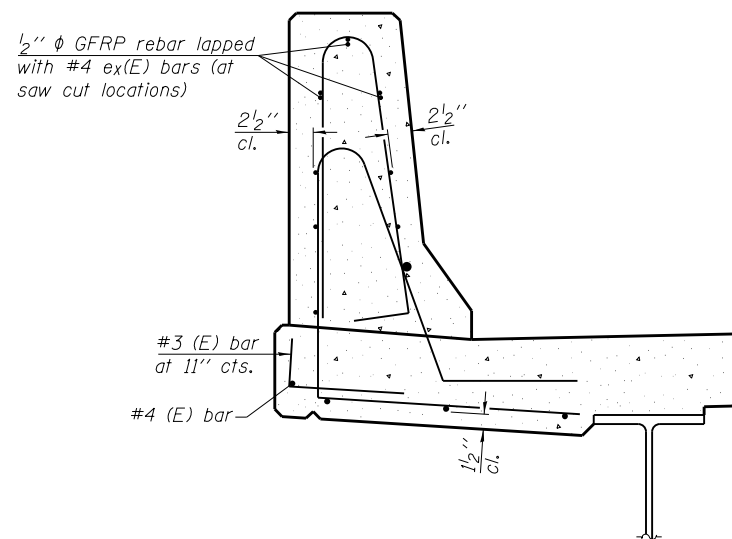
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	30
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler. Steel superstructure shown. Other superstructure types similar.

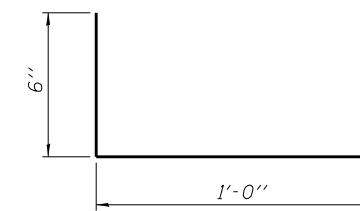


34" F SHAPE PARAPET SECTION
(Showing dimensions)

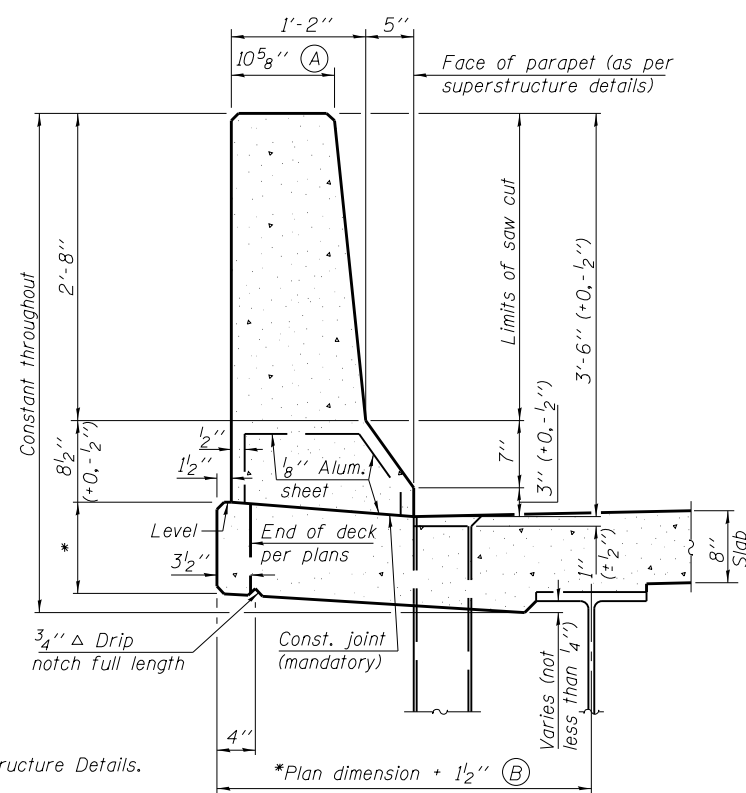


SECTION

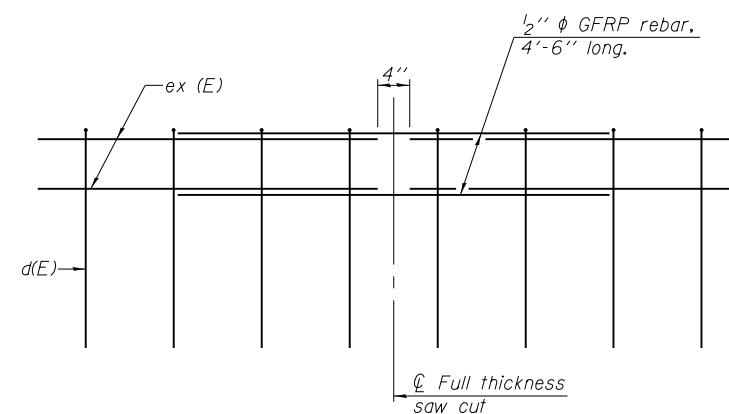
(34" parapet shown - 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR

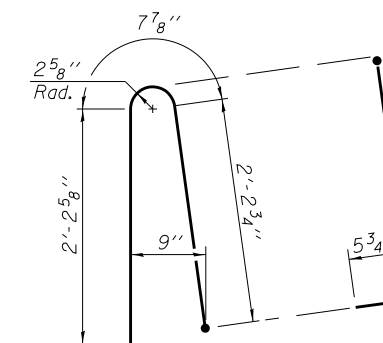


42" F SHAPE PARAPET SECTION
(Showing dimensions)

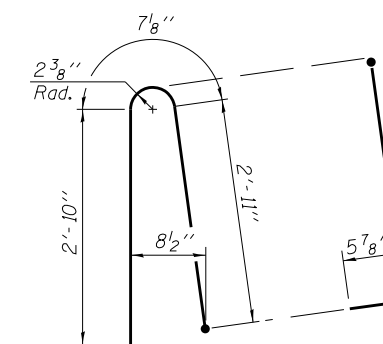


GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)



ALTERNATE BAR d(E)
(For 34" parapet when conduit is present)



ALTERNATE BAR d(E)
(For 42" parapet when conduit is present)

SFP 34-42

8-16-12

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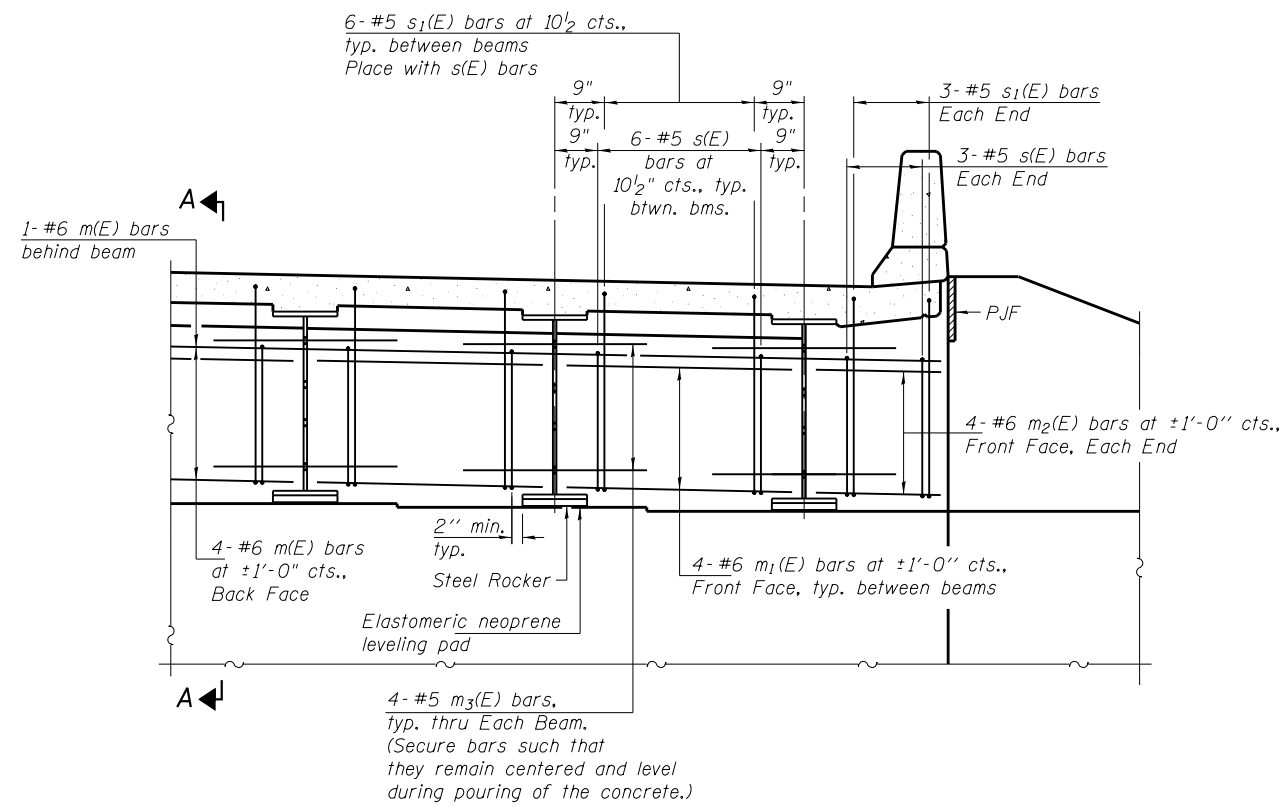
CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 059-0511

SHEET NO. 8 OF 18 SHEETS

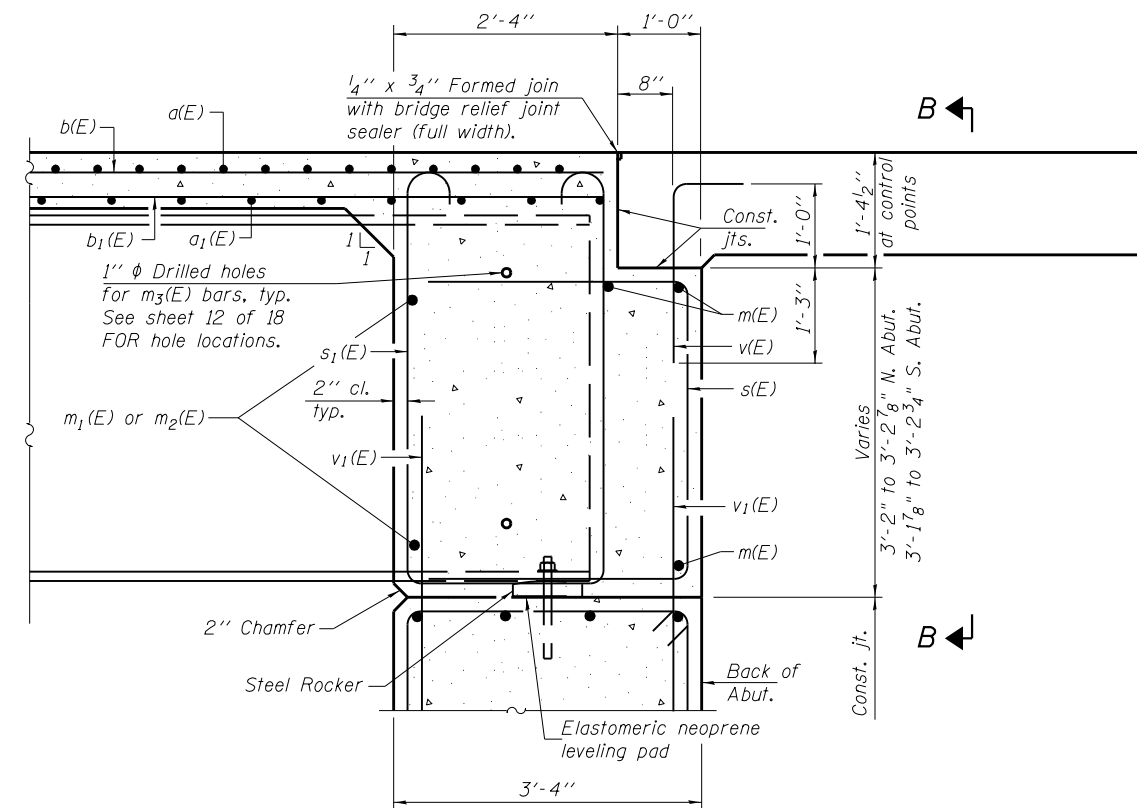
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	31
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

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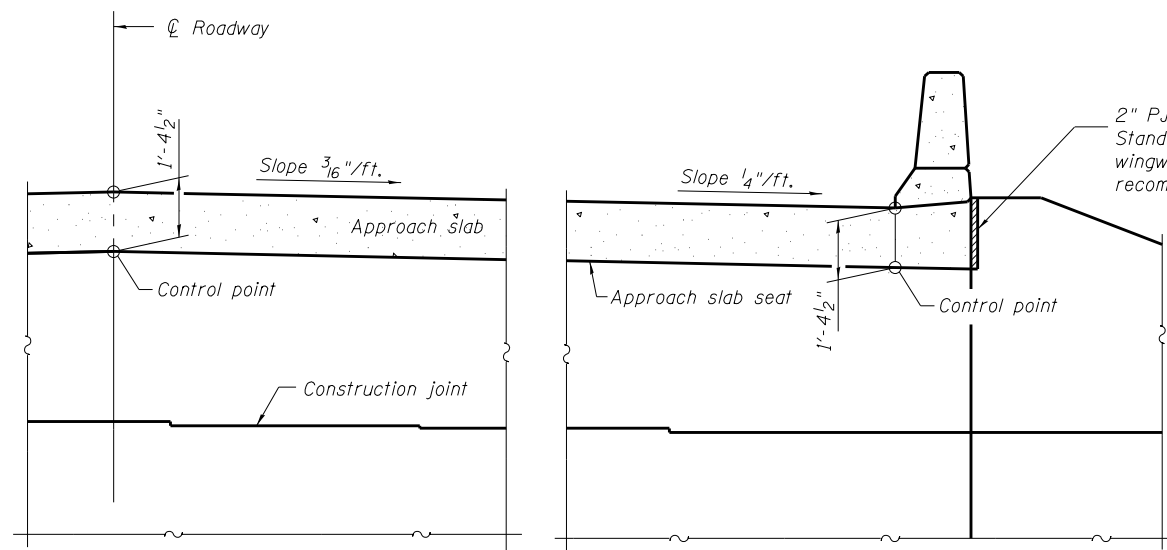
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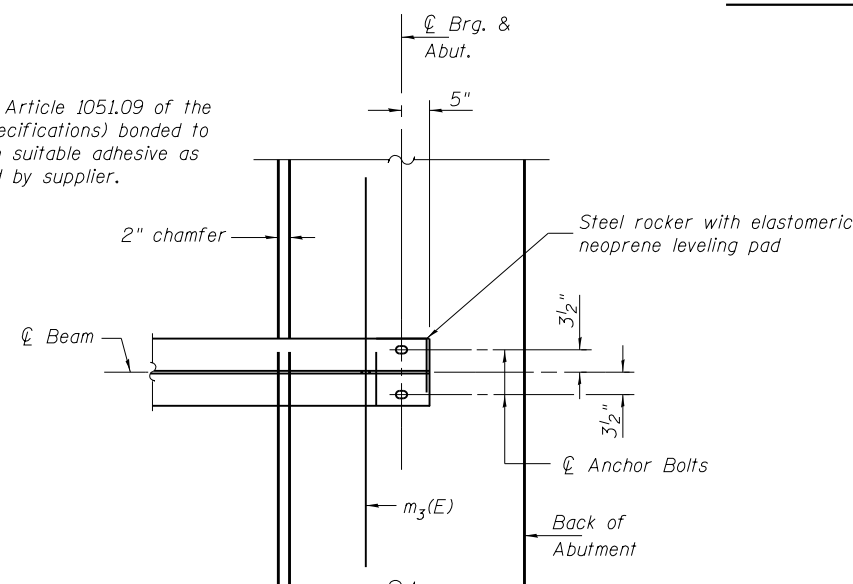
DIAPHRAGM ELEVATION AT ABUTMENT



SECTION A-A



SECTION B-B



PARTIAL PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:
 Reinforcement bars in diaphragm are billed with superstructure on sheet 7 of 18.
 Concrete in diaphragm is included with Concrete Superstructure on sheet 7 of 18.
 For details of bars s(E), s1(E) and v(E) see sheet 7 of 18.
 The approach slab seat shall have a constant slope determined from the control points shown.
 For bearing details see sheet 13 of 18.

DSI-40-0

8-31-12

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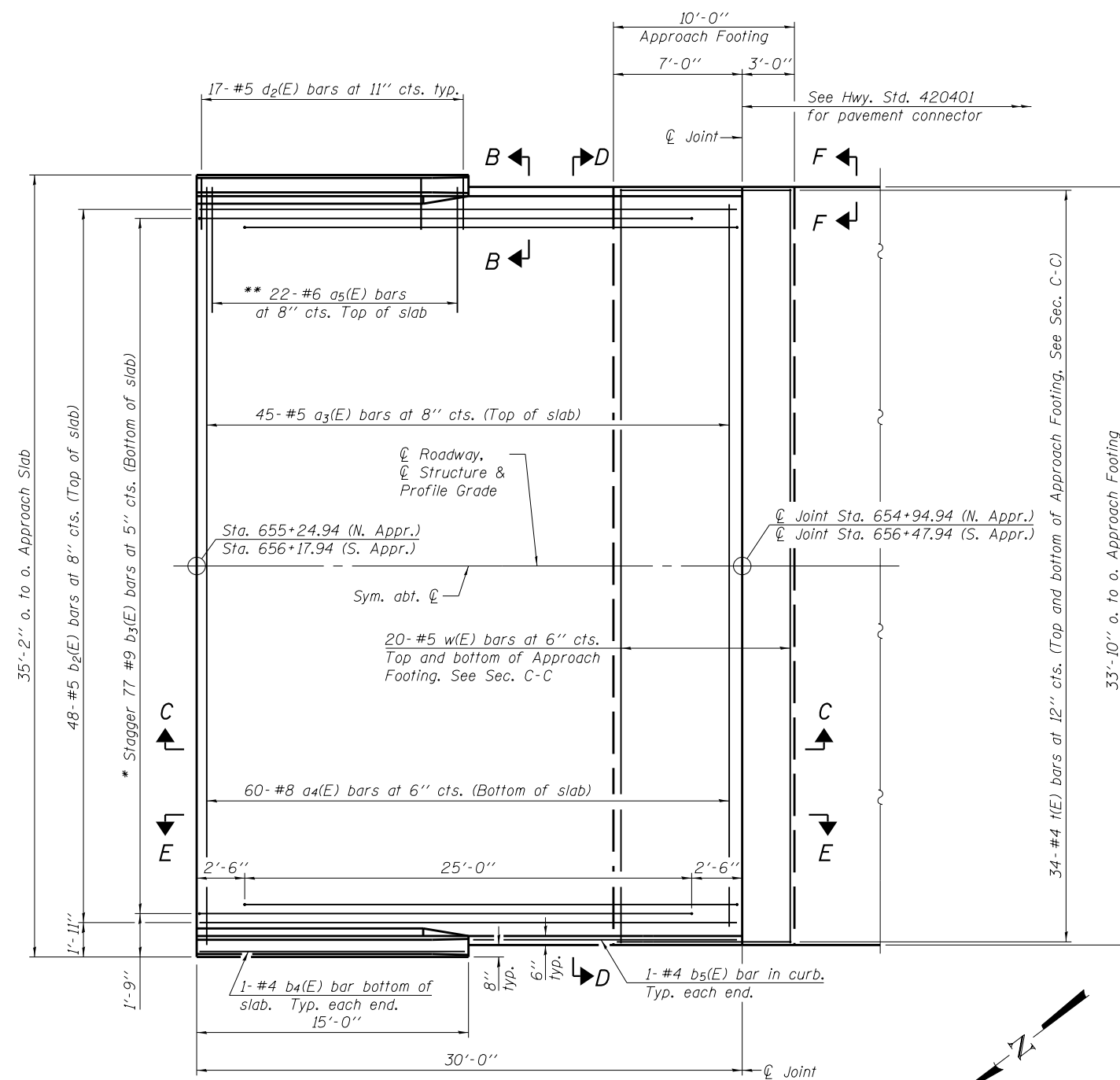
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 059-0511

SHEET NO. 9 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	32
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

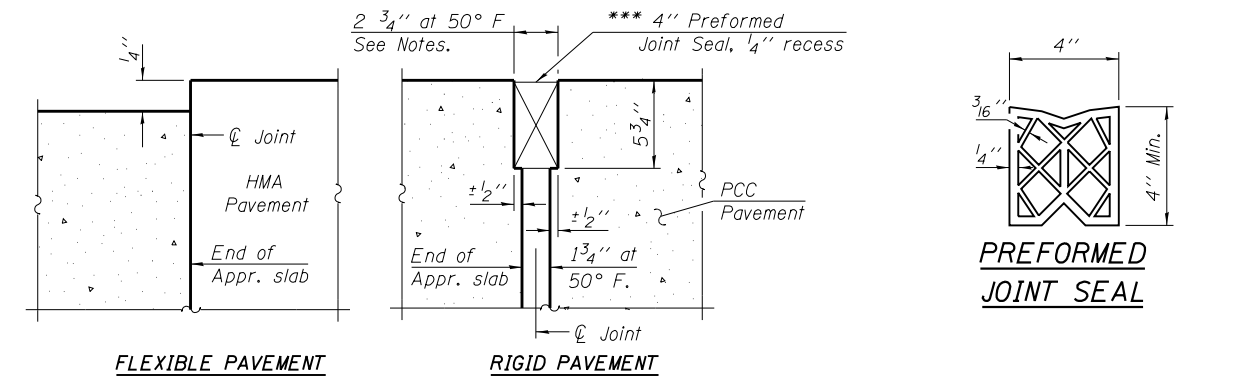
Notes:
 See sheet 11 of 18 for Sections C-C & D-D and View E-E.
 a3(E) and a4(E) bar spacings measured along C.Rdwy.
 The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be $1\frac{1}{2}$ " for installation purposes.



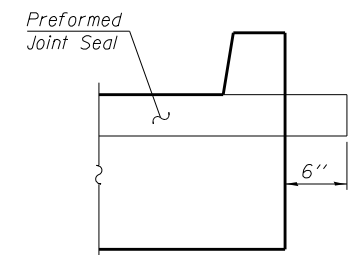
PLAN

(South approach shown, north approach similar)
 * Tilt #9 b3(E) bars as required to maintain clearance.
 ** Space between a3(E) bars, typ. ea. parapet.

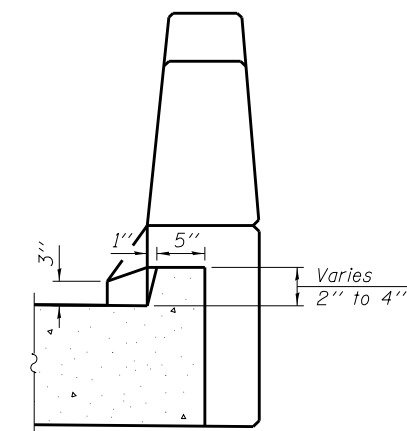
*** Cost included with Concrete Superstructure (Approach Slab).



DETAIL A



VIEW F-F



VIEW B-B

BA-0 01-29-16

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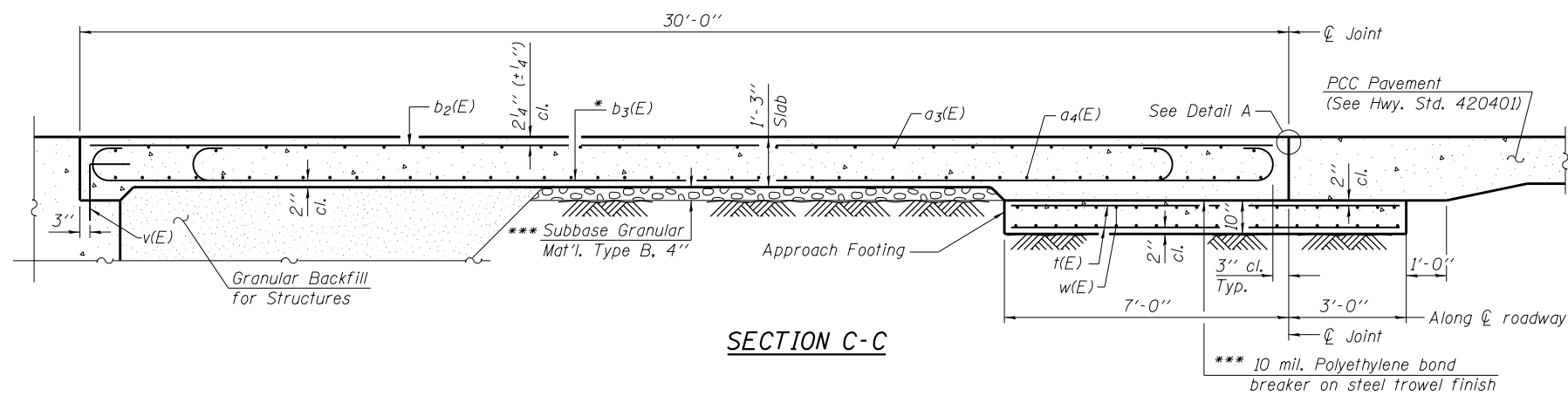
BRIDGE APPROACH SLAB DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 059-0511

SHEET NO. 10 OF 18 SHEETS

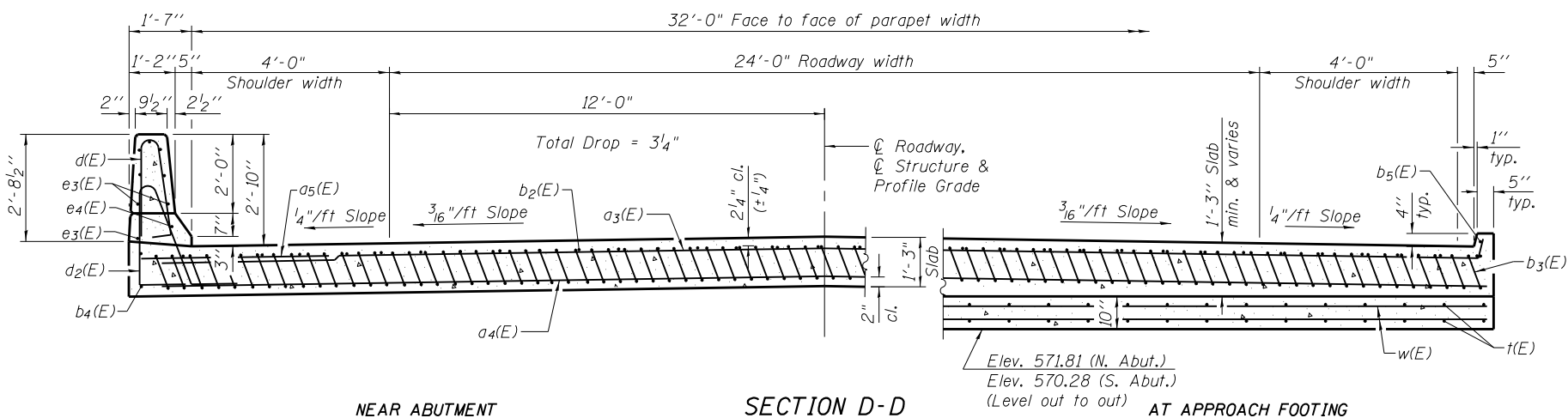
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	33
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

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SECTION C-C

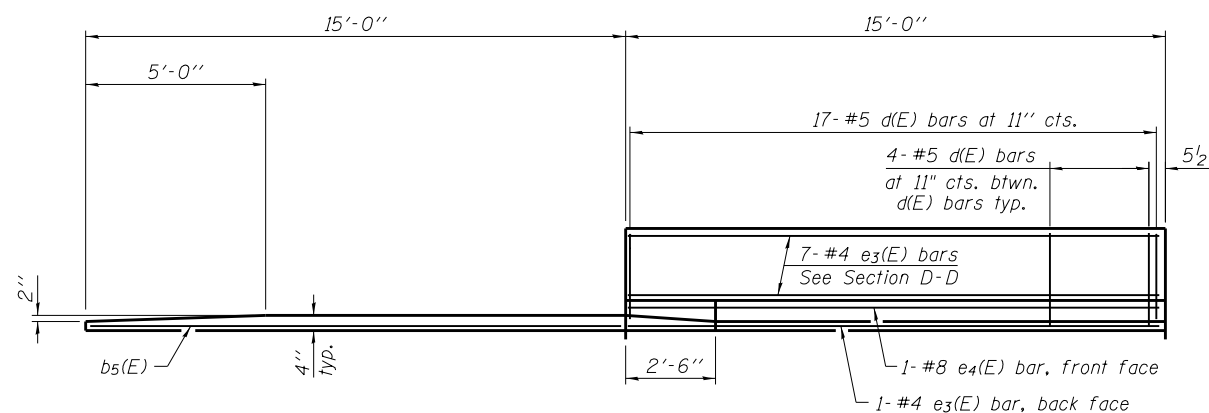


NEAR ABUTMENT

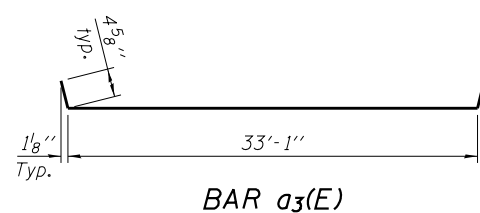
SECTION D-D

AT APPROACH FOOTING

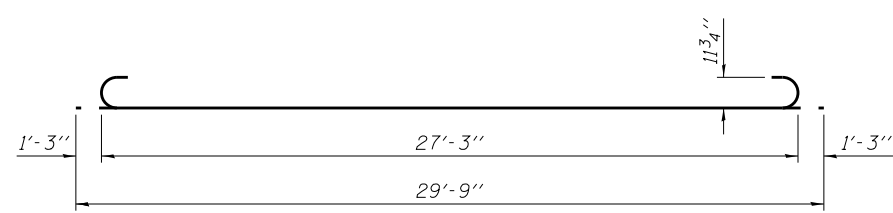
(See Plan for dimensions not shown)



VIEW E-E



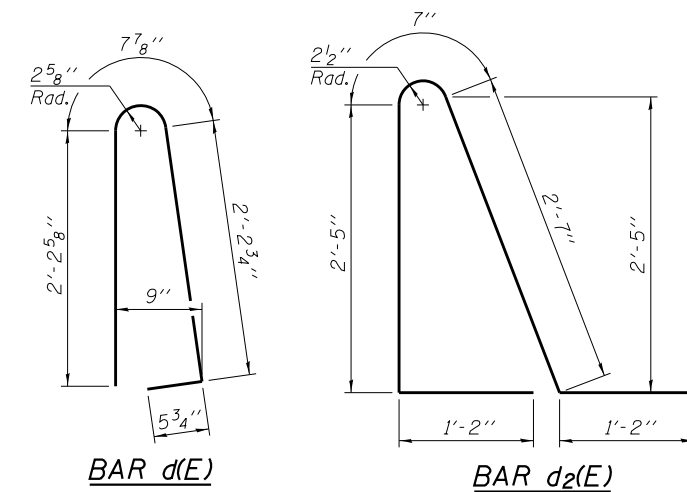
BAR a3(E)



BAR b3(E)

Notes:

See sheet 10 of 18 for Detail A and View B-B.
 Parapet concrete shall be paid for as Concrete Superstructure.
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 7 of 18.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 18.
 For additional parapet details, see sheet 7 of 18.



* Tilt #9 b3(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure (Approach Slab).

**TWO APPROACHES
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a3(E)	90	#5	33'-10"	—
a4(E)	120	#8	33'-6"	—
a5(E)	88	#6	6'-6"	—
b2(E)	96	#5	29'-8"	—
b3(E)	154	#9	29'-9"	—
b4(E)	4	#4	14'-8"	—
b5(E)	4	#4	14'-7"	—
d(E)	84	#5	5'-7"	—
d2(E)	68	#5	7'-11"	—
e3(E)	32	#4	14'-8"	—
e4(E)	4	#8	14'-8"	—
t(E)	136	#4	9'-8"	—
w(E)	80	#5	33'-6"	—
Concrete Structures		Cu. Yd.	20.8	
Concrete Superstructure		Cu. Yd.	6.7	
Concrete Superstructure (Approach Slab)		Cu. Yd.	105.8	
Bridge Deck Grooving		Sq. Yd.	200	
Protective Coat		Sq. Yd.	222	
Reinforcement Bars, Epoxy Coated		Pound	38,580	

BA-0 01-29-16

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 Civil Engineering Design
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 Fairview Heights, IL 62208
 Phone 618-206-4250

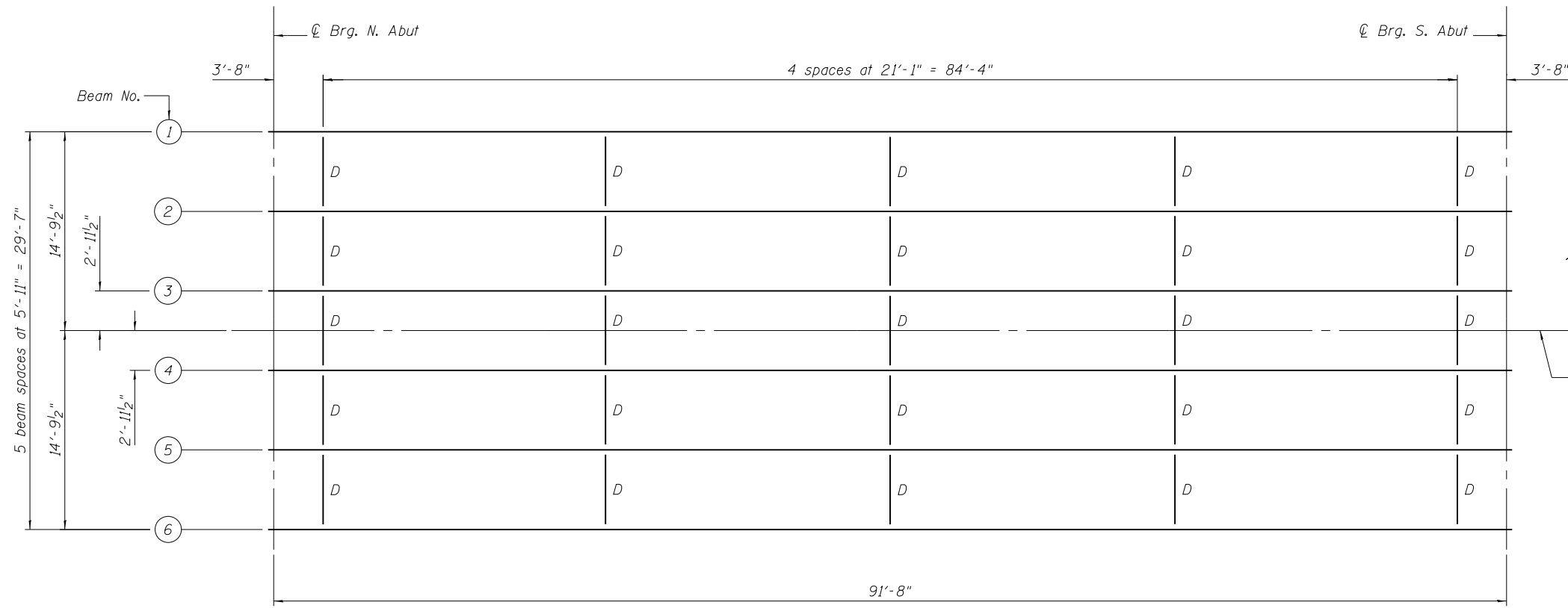
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	DATE - 8/10/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

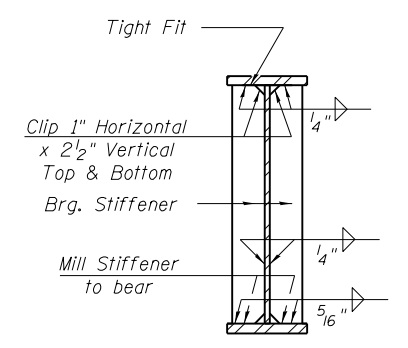
**BRIDGE APPROACH SLAB DETAILS (SHEET 2 OF 2)
STRUCTURE NO. 059-0511**

SHEET NO. 11 OF 18 SHEETS

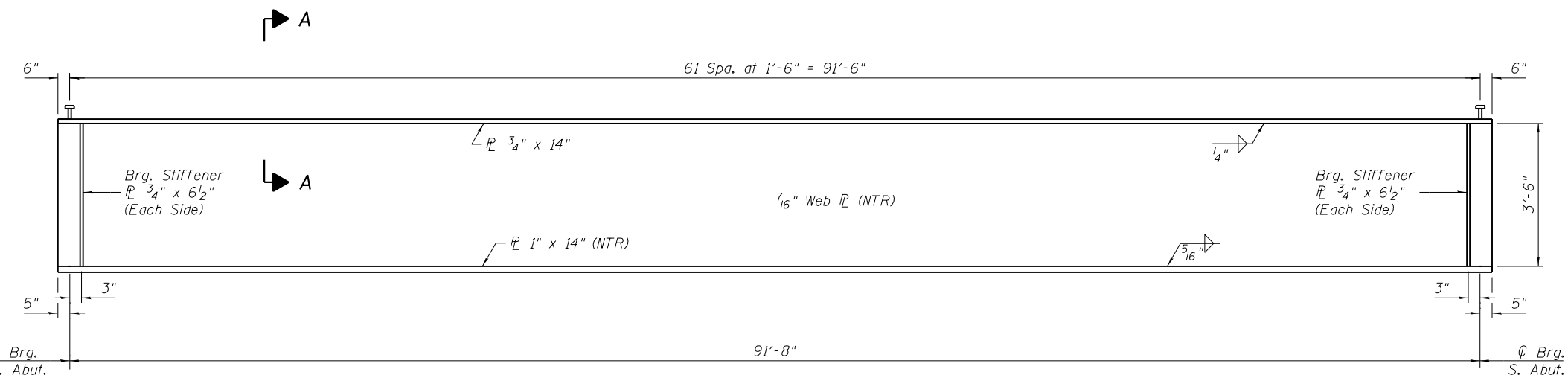
F.A.S. RTE. 735	SECTION (7)B-2	COUNTY MACOUPIN	TOTAL SHEETS 57	SHEET NO. 34
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				



FRAMING PLAN

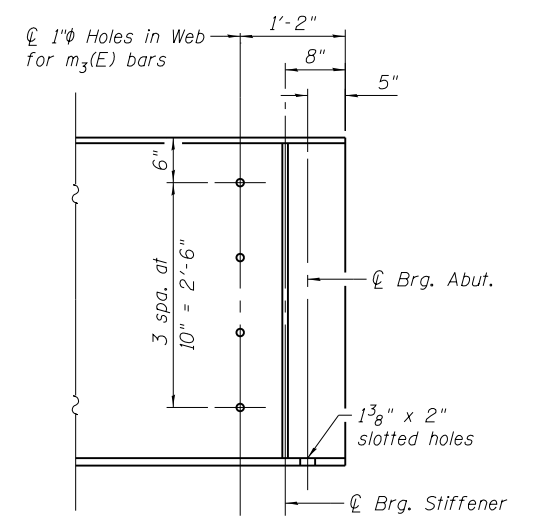


SECTION AT ABUTMENT

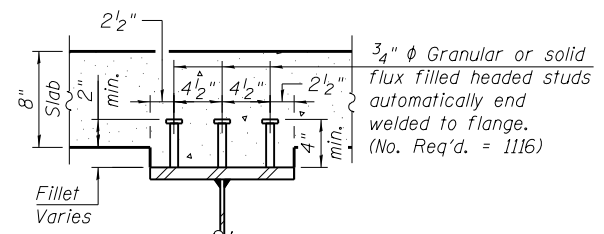


GIRDER ELEVATION

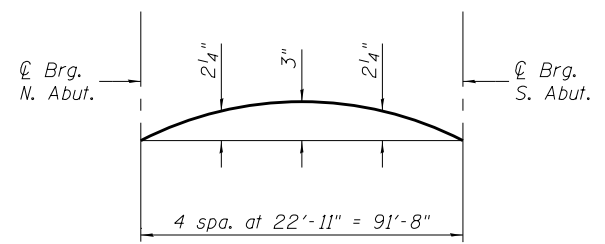
"NTR" denotes plates to which notch toughness requirements are applicable.



GIRDER END ELEVATION



SECTION A-A



CAMBER DIAGRAM

TOP OF WEB ELEVATIONS*		
Location	℄ Brg. N. Abut.	℄ Brg. S. Abut.
Girder 1	572.94	572.03
Girder 2	573.05	572.13
Girder 3	573.14	572.23
Girder 4	573.14	572.23
Girder 5	573.05	572.13
Girder 6	572.94	572.03

* For fabrication only

Notes:
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 All Structural Steel shall be AASHTO M270 Grade 50W.

G-1 7-1-10

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PLOT DATE = 8/10/2016	DRAWN - JAA	REVISED -
	DATE - 8/10/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 059-0511
 SHEET NO. 12 OF 18 SHEETS

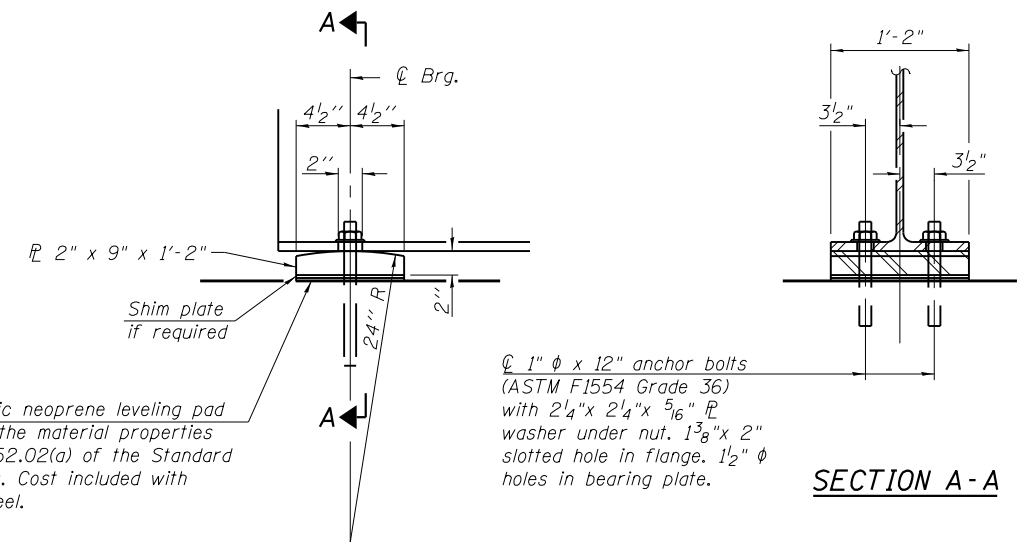
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	35
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

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INTERIOR GIRDER MOMENT TABLE		
		0.5 Span
I_s	(in ⁴)	13835
$I_c(n)$	(in ⁴)	34482
$I_c(3n)$	(in ⁴)	25523
$I_c(cr)$	(in ⁴)	-
S_s	(in ³)	684.4
$S_c(n)$	(in ³)	922.4
$S_c(3n)$	(in ³)	850.6
$S_c(cr)$	(in ³)	-
DC1	(k/')	0.79
M_{DC1}	('k)	828
DC2	(k/')	0.15
M_{DC2}	('k)	158
DW	(k/')	0.30
M_{DW}	('k)	315
LLDF		0.494
$M_{\xi + IM}$	('k)	1233
M_u (Strength I)	('k)	386.3
$\phi_r M_n$	('k)	467.2
f_s DC1	(ksi)	14.5
f_s DC2	(ksi)	2.2
f_s DW	(ksi)	4.4
f_s ($\xi + IM$)	(ksi)	16.0
f_s (Service II)	(ksi)	42.0
$0.95R_n F_y f$	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	-
$\phi_r F_n$	(ksi)	-
V_f	(k)	24.0

GIRDER REACTION TABLE		
	Abutment	
	Interior	Exterior
LLDF	0.664	0.520
OCF	-	1.0
R_{DC1}	(k) 36.9	35.3
R_{DC2}	(k) 6.9	6.9
R_{DW}	(k) 13.8	13.8
R_{ξ}	(k) 62.4	48.9
R_{IM}	(k) 14.2	11.1
R_{Total}	(k) 134.2	116.0

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).
- $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in⁴ and in³).
- $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).
- $I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_{\xi + IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
- $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\xi + IM}$
- $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
- f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
- M_{DC1} / S_{nc}
- f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
- $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.
- f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
- $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.
- f_s ($\xi + IM$): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
- $M_{\xi + IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.
- f_s (Service II): Sum of stresses as computed below (ksi).
- $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (\xi + IM)$
- $0.95R_n F_y f$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
- f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
- $1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (\xi + IM)$
- $\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
- V_f : Maximum factored shear range in span computed according to Article 6.10.10.
- LLDF: Live Load Distribution Factor
- OCF: Obtuse Correction Factor

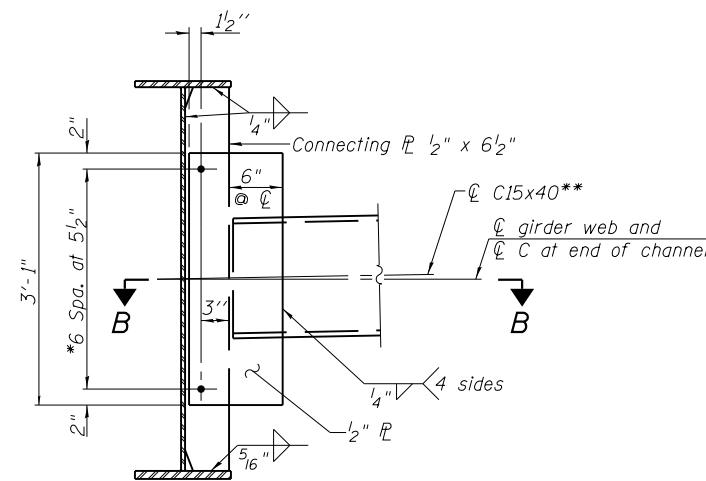


ELEVATION AT ABUTMENT

FIXED BEARING
(12 Required)

Notes:

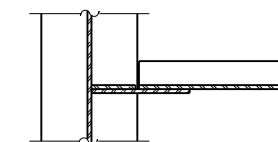
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
- Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- All Structural Steel shall be AASHTO M270 Grade 50W.



INTERIOR DIAPHRAGM - D
(25 Required)

Note:

- Two hardened washers required for each set of oversized holes.
- *3/4" ϕ HS bolts, 15/16" ϕ holes
- **Alternate channels C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C15x40 sections. The alternate, if utilized, shall be provided at no extra cost to the department.



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	24

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USER NAME = ja	DESIGNED - CDL	REVISED -
PLOT SCALE = 0:2.0000 '1' = 1"	CHECKED - CTW	REVISED -
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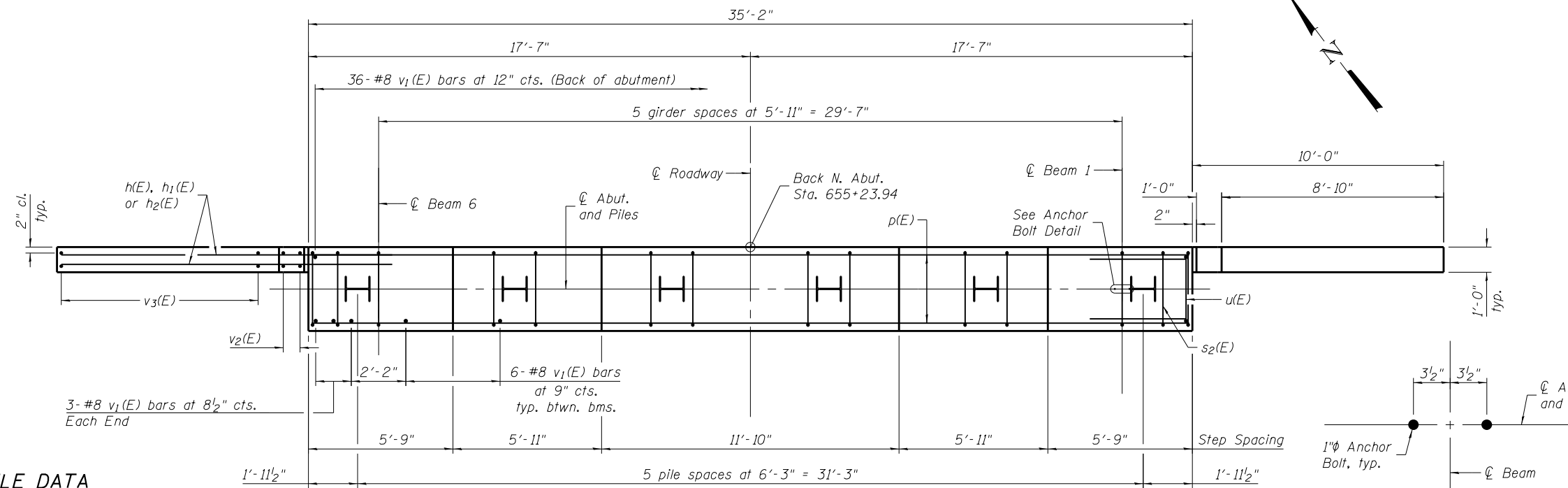
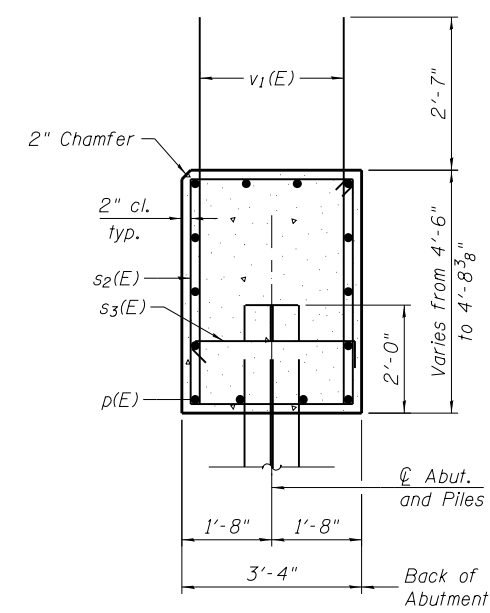
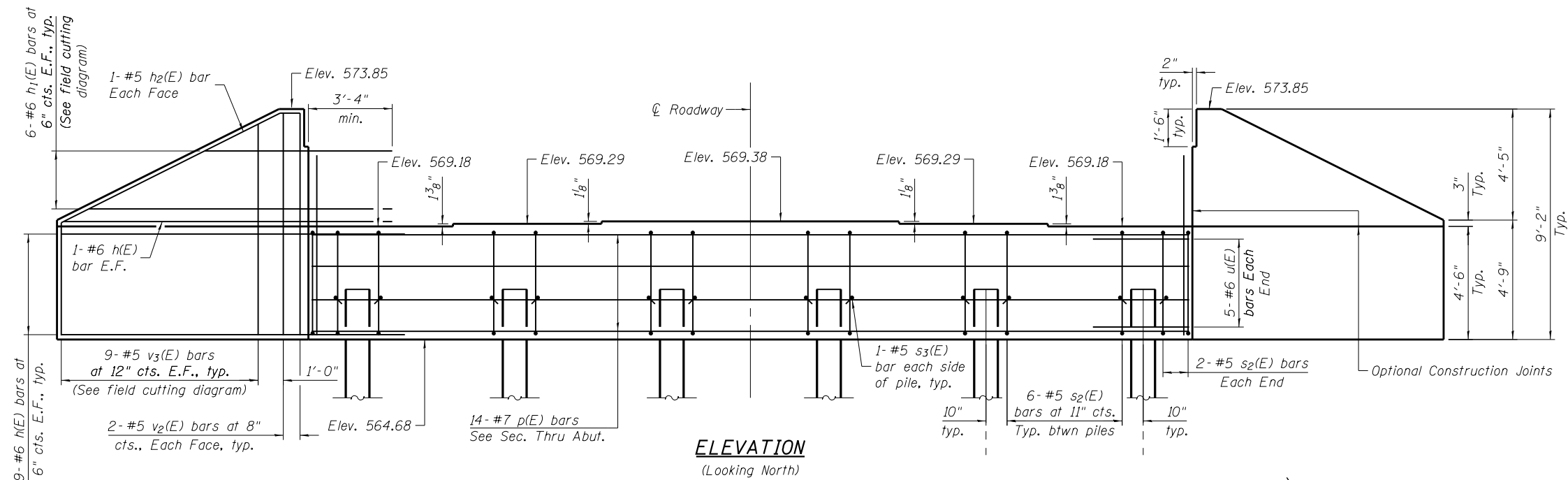
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 059-0511

SHEET NO. 13 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	36
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72686	

Notes:
Four steps monolithically with cap.



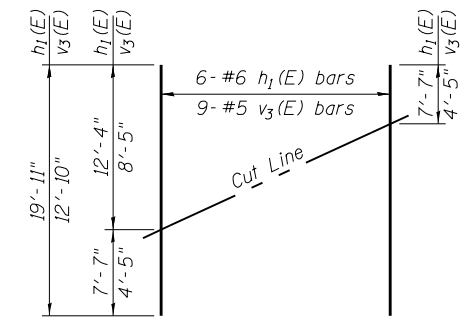
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#6	13'-2"	—
h1(E)	12	#6	19'-11"	—
h2(E)	4	#5	10'-6"	—
p(E)	14	#7	34'-10"	—
s2(E)	34	#5	15'-3"	□
s3(E)	12	#5	4'-0"	┌
u(E)	10	#6	10'-7"	□
v1(E)	72	#8	7'-2"	—
v2(E)	8	#5	8'-10"	—
v3(E)	18	#5	12'-10"	—
Structure Excavation		Cu. Yd.	81.0	
Concrete Structures		Cu. Yd.	25.2	
Reinforcement Bars, Epoxy Coated		Pound	4,630	
Furnishing Steel Piles, HP 12x53		Foot	225	
Driving Piles		Foot	225	
Test Pile, Steel HP 12x53		Each	1	

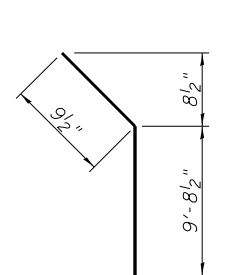
For details of piles see sheet 16 of 18.

PILE DATA

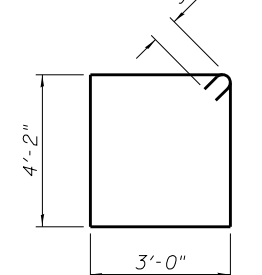
Type: Steel HP 12x53
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 45 ft
No. Production Piles: 5
No. Test Piles: 1



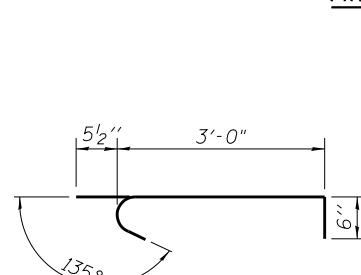
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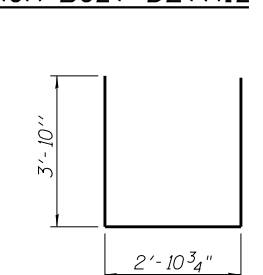
BAR s2(E)



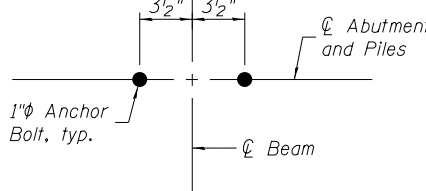
BAR s3(E)



BAR u(E)



ANCHOR BOLT DETAIL



AI-40-0

8-31-12

EFK Moen, LLC
Civil Engineering Design
303 Fountains Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4250

USER NAME	DESIGNED	REVISIONS
ja	CDL	-
	CTW	-
	JAA	-
		-

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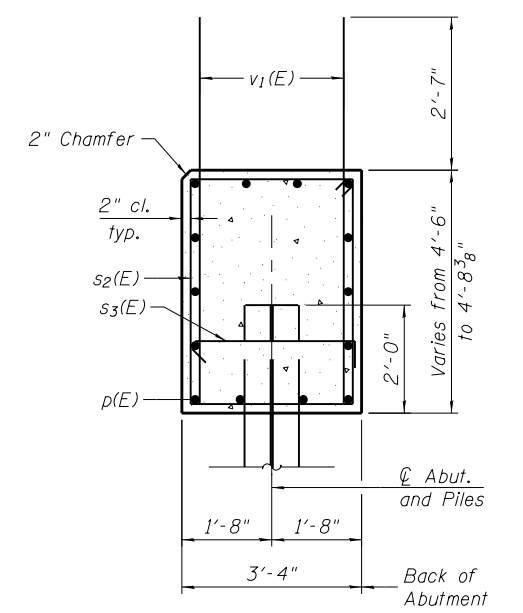
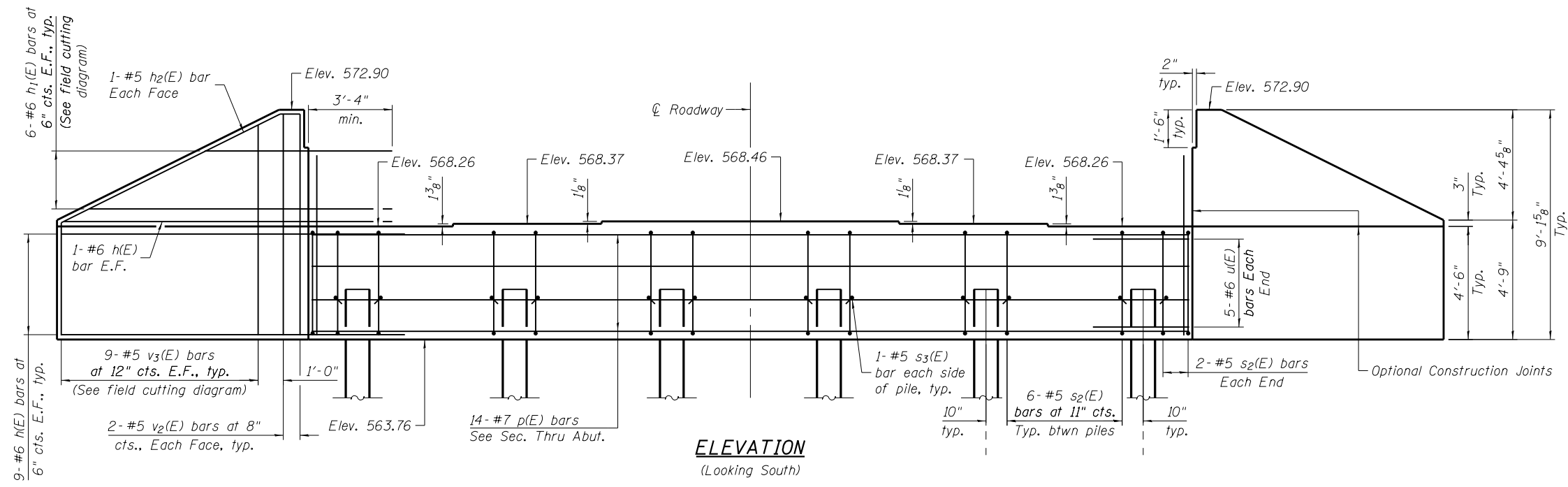
NORTH ABUTMENT
STRUCTURE NO. 059-0511

SHEET NO. 14 OF 18 SHEETS

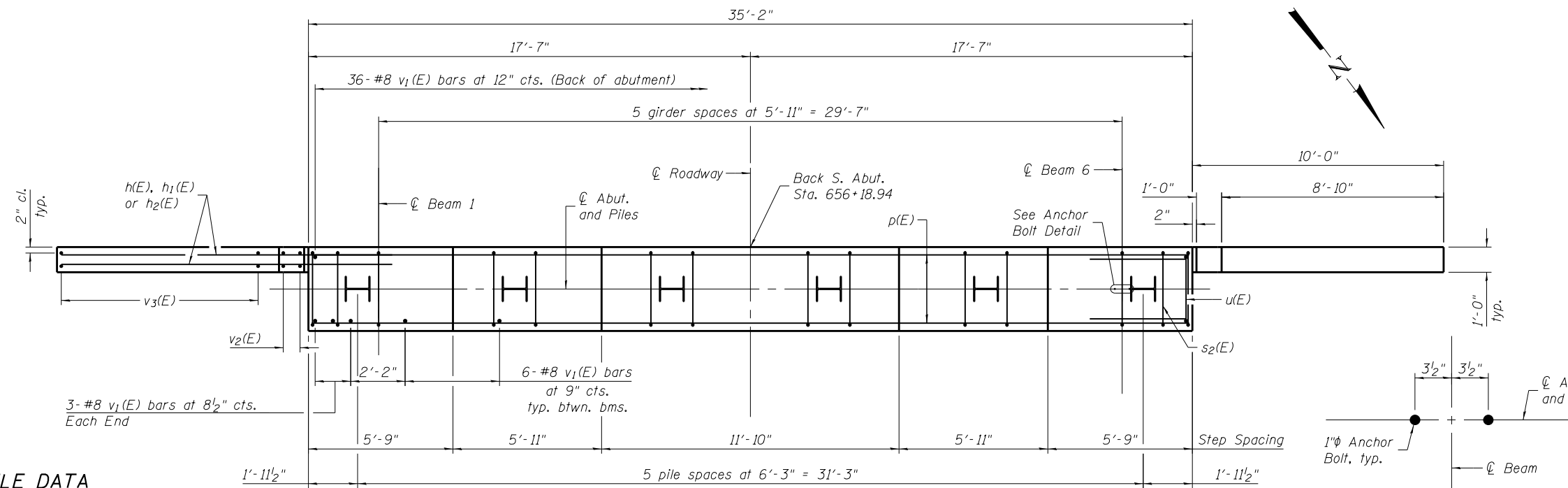
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	37
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

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Notes:
Four steps monolithically with cap.

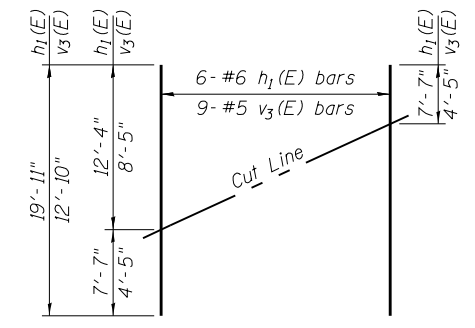


SEC. THRU ABUT



PILE DATA

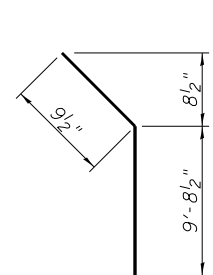
Type: Steel HP 12x53
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 46 ft
No. Production Piles: 5
No. Test Piles: 1



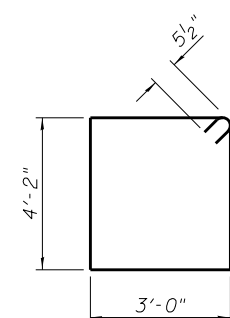
FIELD CUTTING DIAGRAM

Order h1(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.

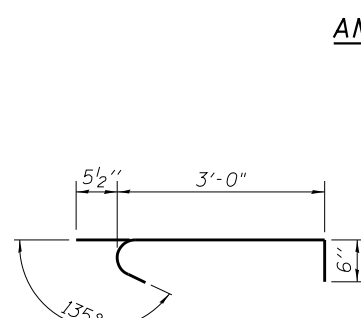
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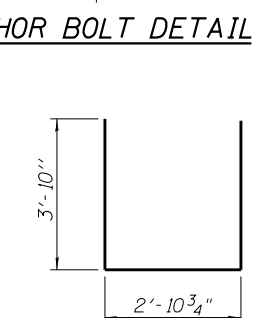
BAR h2(E)



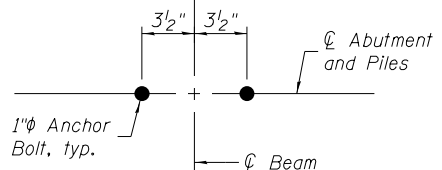
BAR s2(E)



BAR s3(E)



BAR u(E)



ANCHOR BOLT DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#6	13'-2"	—
h1(E)	12	#6	19'-11"	—
h2(E)	4	#5	10'-6"	—
p(E)	14	#7	34'-10"	—
s2(E)	34	#5	15'-3"	□
s3(E)	12	#5	4'-0"	□
u(E)	10	#6	10'-7"	□
v1(E)	72	#8	7'-2"	—
v2(E)	8	#5	8'-10"	—
v3(E)	18	#5	12'-10"	—
Structure Excavation		Cu. Yd.	85.0	
Concrete Structures		Cu. Yd.	25.2	
Reinforcement Bars, Epoxy Coated		Pound	4,630	
Furnishing Steel Piles, HP 12x53		Foot	230	
Driving Piles		Foot	230	
Test Pile, Steel HP 12x53		Each	1	

For details of piles see sheet 16 of 18.

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EFK Moen, LLC
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303 Fountains Parkway, Suite 240
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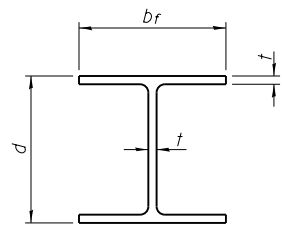
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 059-0511

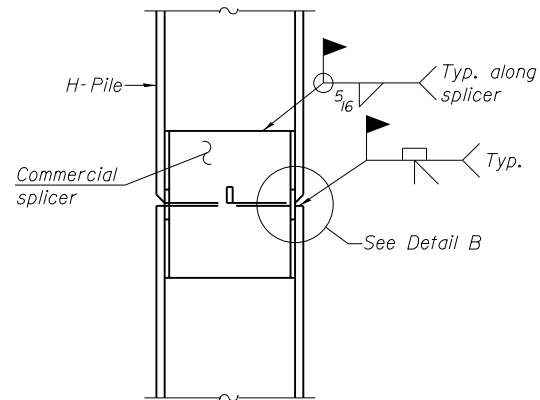
SHEET NO. 15 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	38
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72686	

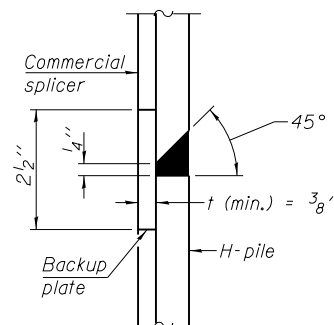


STEEL PILE TABLE

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

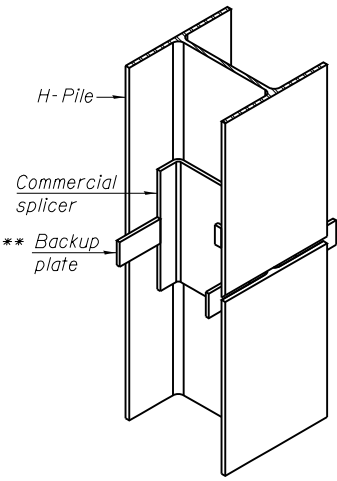


ELEVATION

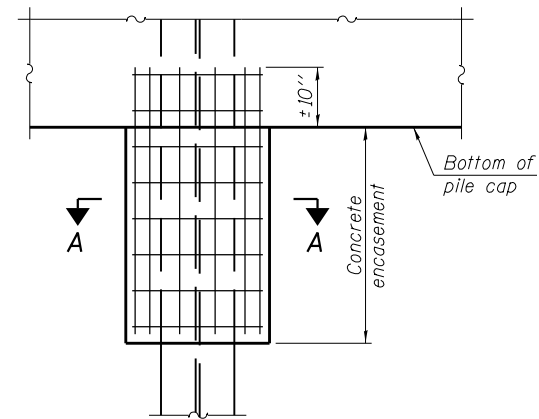


DETAIL "B"

WELDED COMMERCIAL SPLICE

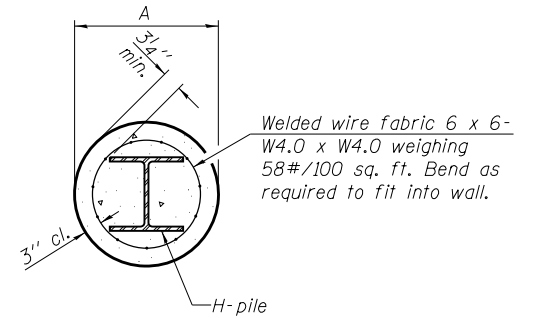


ISOMETRIC VIEW



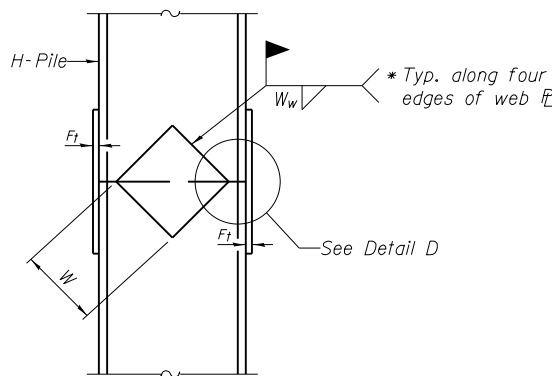
ELEVATION

PILE ENCASEMENT

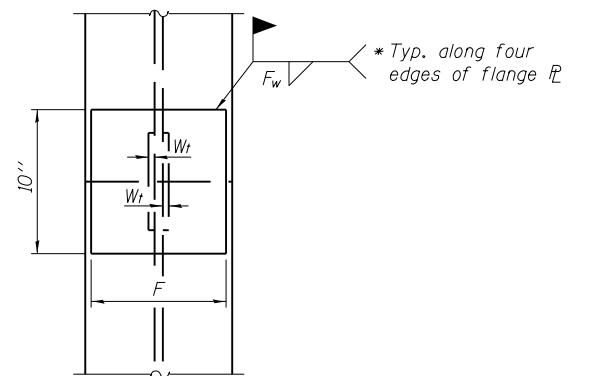


SECTION A-A

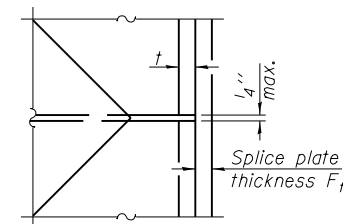
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



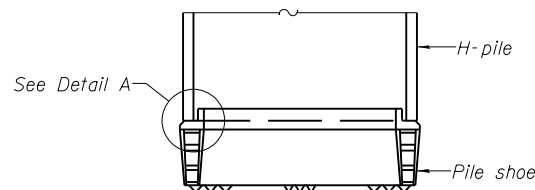
END VIEW



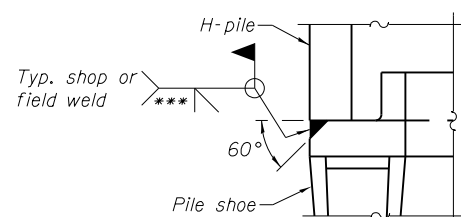
DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

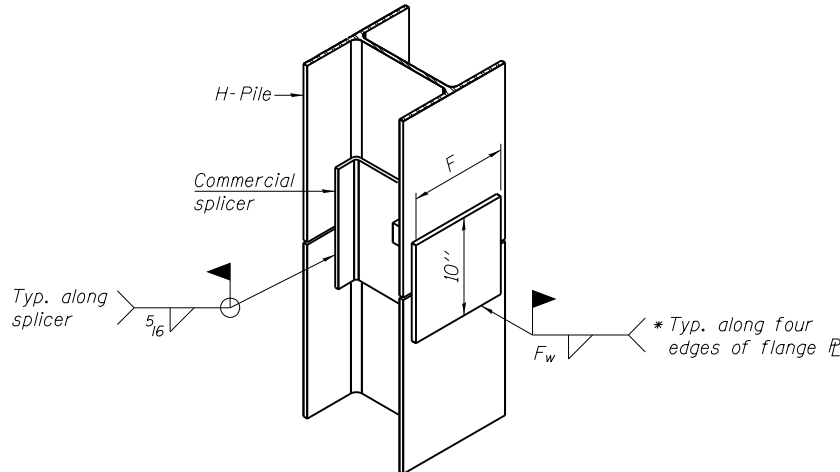


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

PRINT DATE: 8/10/2016 12:20:18 PM Y:\5040\0106_W01Shipman\DGN\Bridg\Final\Plotsheets\0590511-72686-016-Pile_Details.dgn

EFK•Moen, LLC
Civil Engineering Design
303 Fountains Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4250

1-27-12

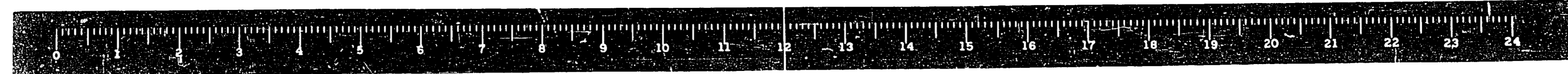
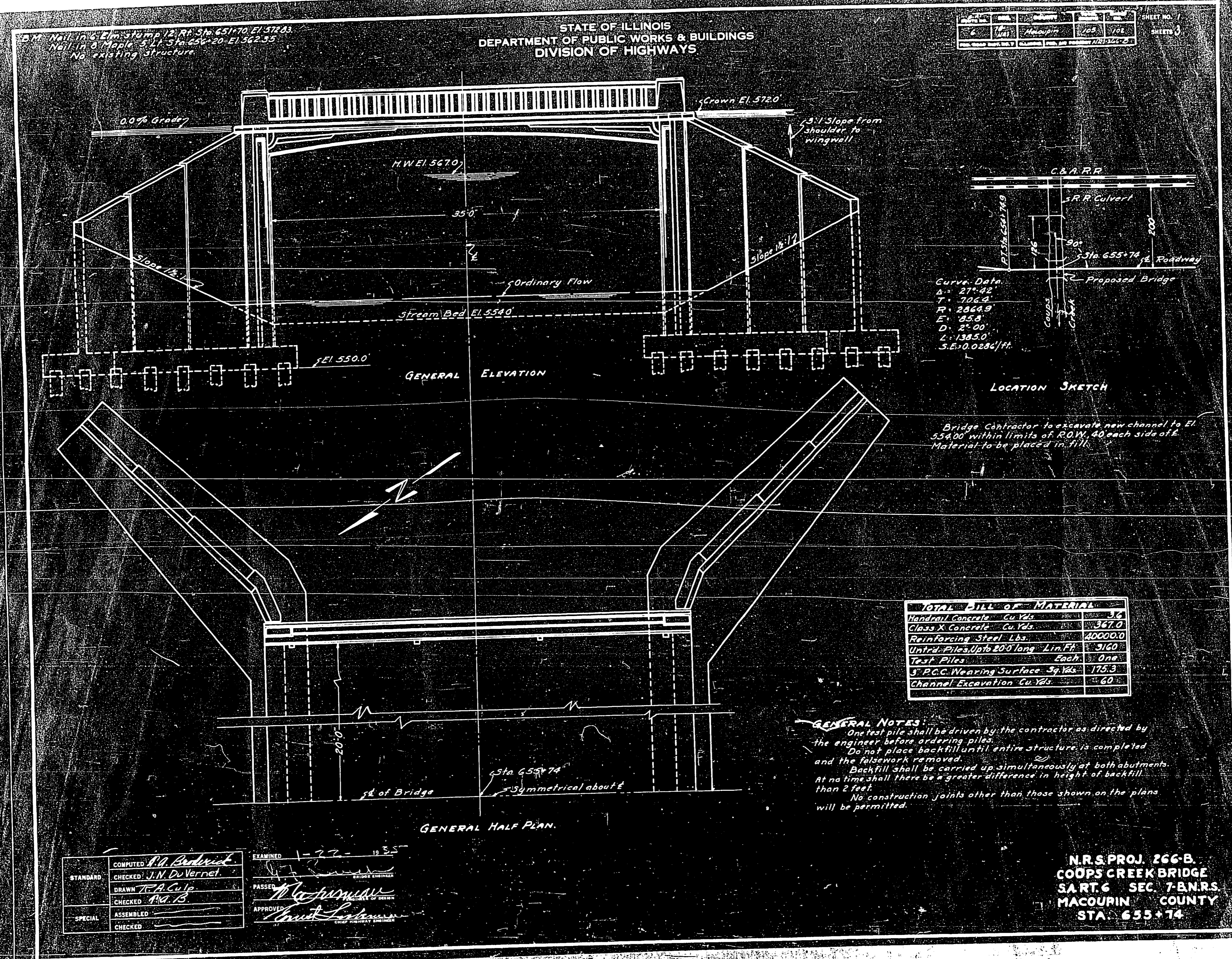
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	DATE - 8/10/2016	REVISED -

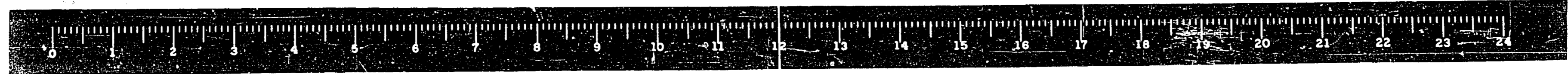
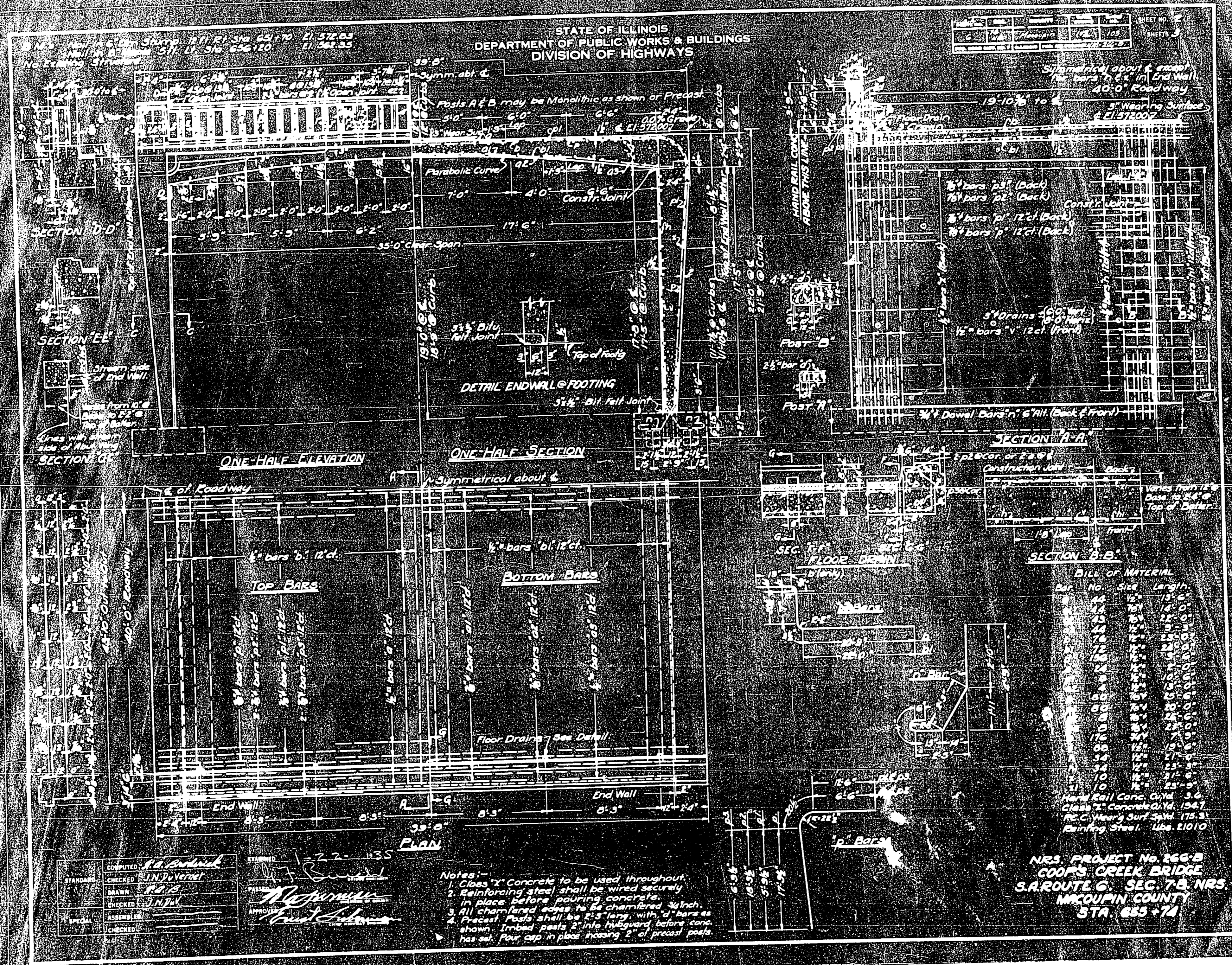
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

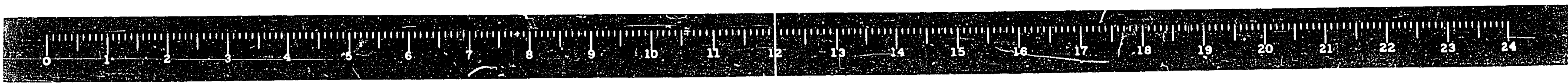
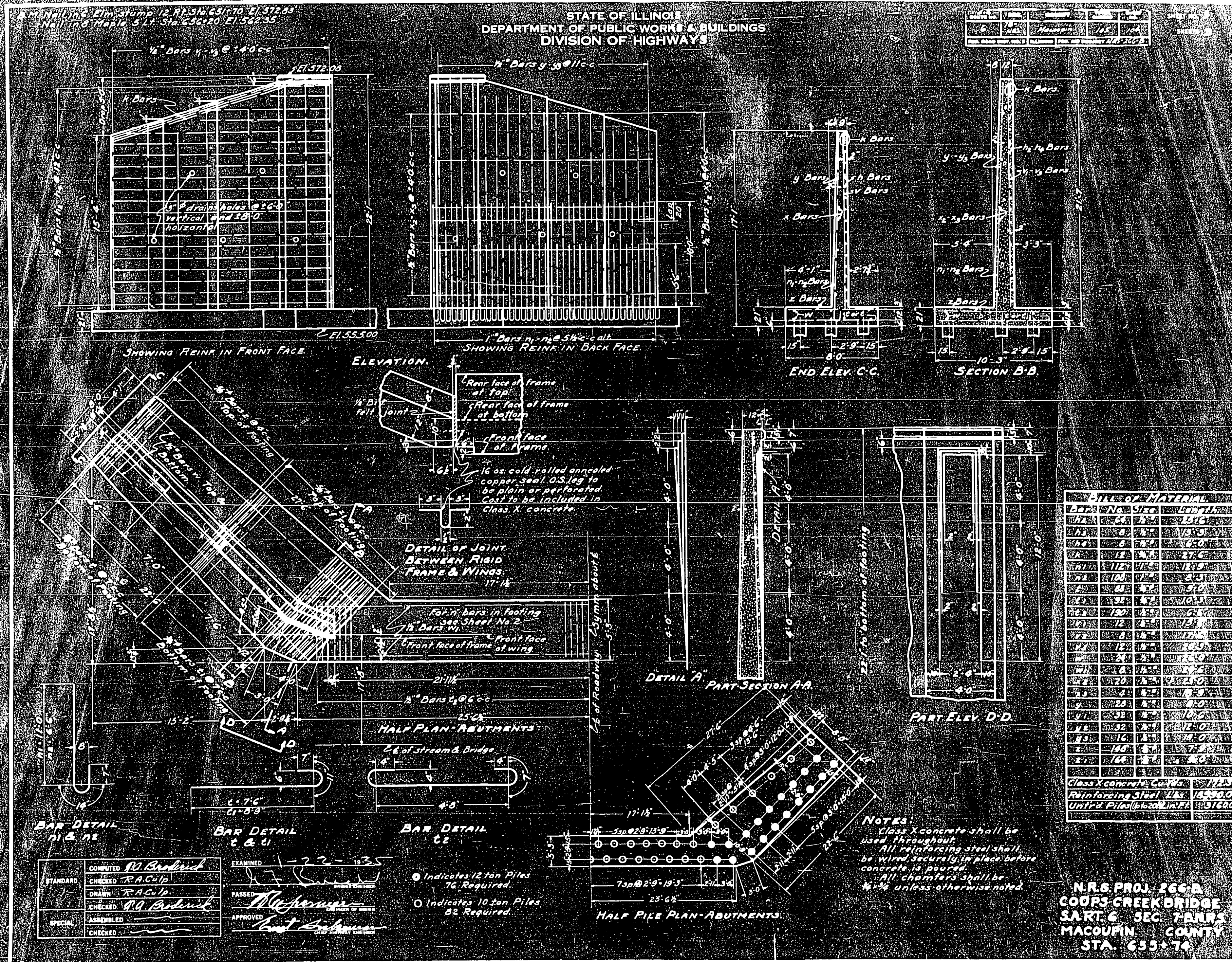
HP PILE DETAILS
STRUCTURE NO. 059-0511

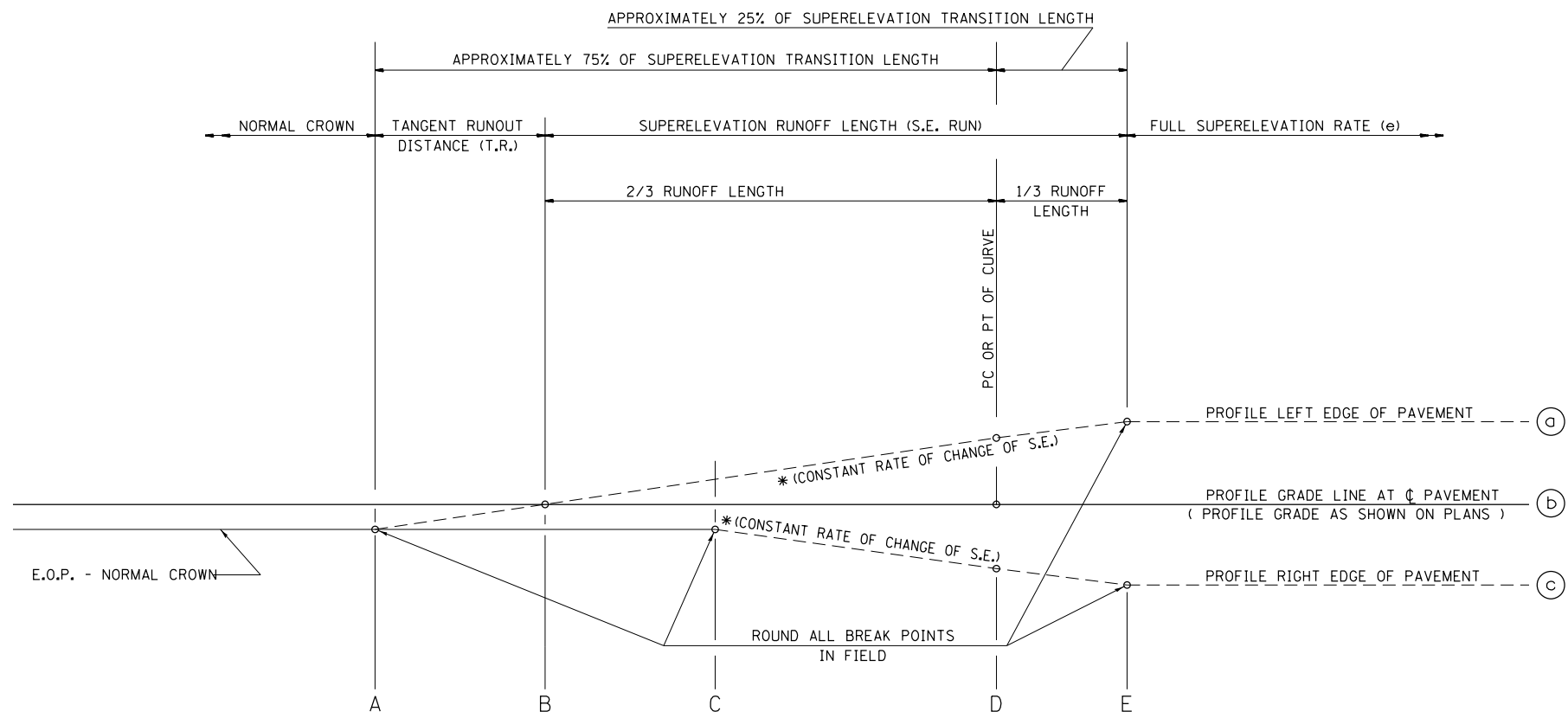
SHEET NO. 16 OF 18 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	39
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				



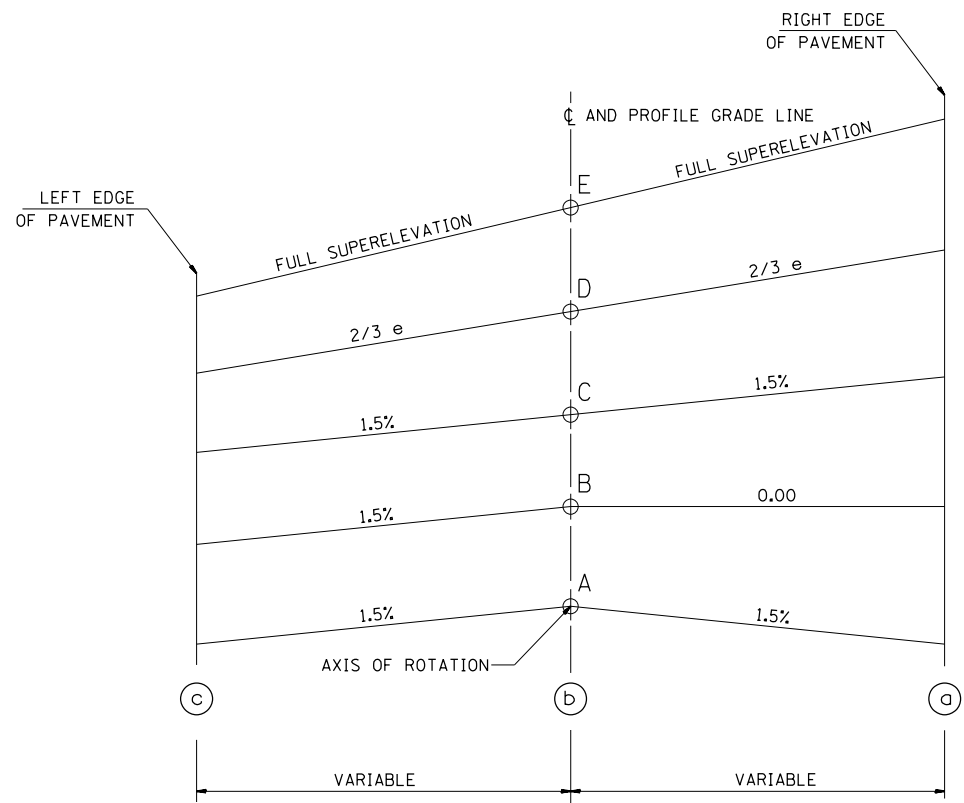






SEE PLANS FOR CURVE DATA INFORMATION
 CURVE DATA
 P.I. STA=
 Δ =
 R=
 T=
 L=
 E=
 e= SUPERELEVATION RATE IN PERCENT
 T.R.= TANGENT RUNOUT DISTANCE
 S.E. RUN= SUPERELEVATION RUNOFF LENGTH
 P.C. STA=
 P.T. STA=

TYPICAL PROFILE - S.E. TRANSITION



TYPICAL CROSS SECTION - S.E. TRANSITION

TABLE OF SUPERELEVATION BREAK POINT LOCATIONS								
CURVE NO.	e	A	B	C	D	E	TRANSITION	
11	4%	EXISTING BREAK POINTS BEYOND PROJECT LIMITS						
		655+23.94	654+85.54	654+47.18	654+17.34	653+83.24	Trans. Out	

A-A:
 BACK OF
 NORTH ABUTMENT

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	PLOT DATE = 8/11/2016	CHECKED - SLD	REVISED -
		DATE - 8/12/2016	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUPERELEVATION TRANSITION
 DETAIL FOR TWO LANE HIGHWAY

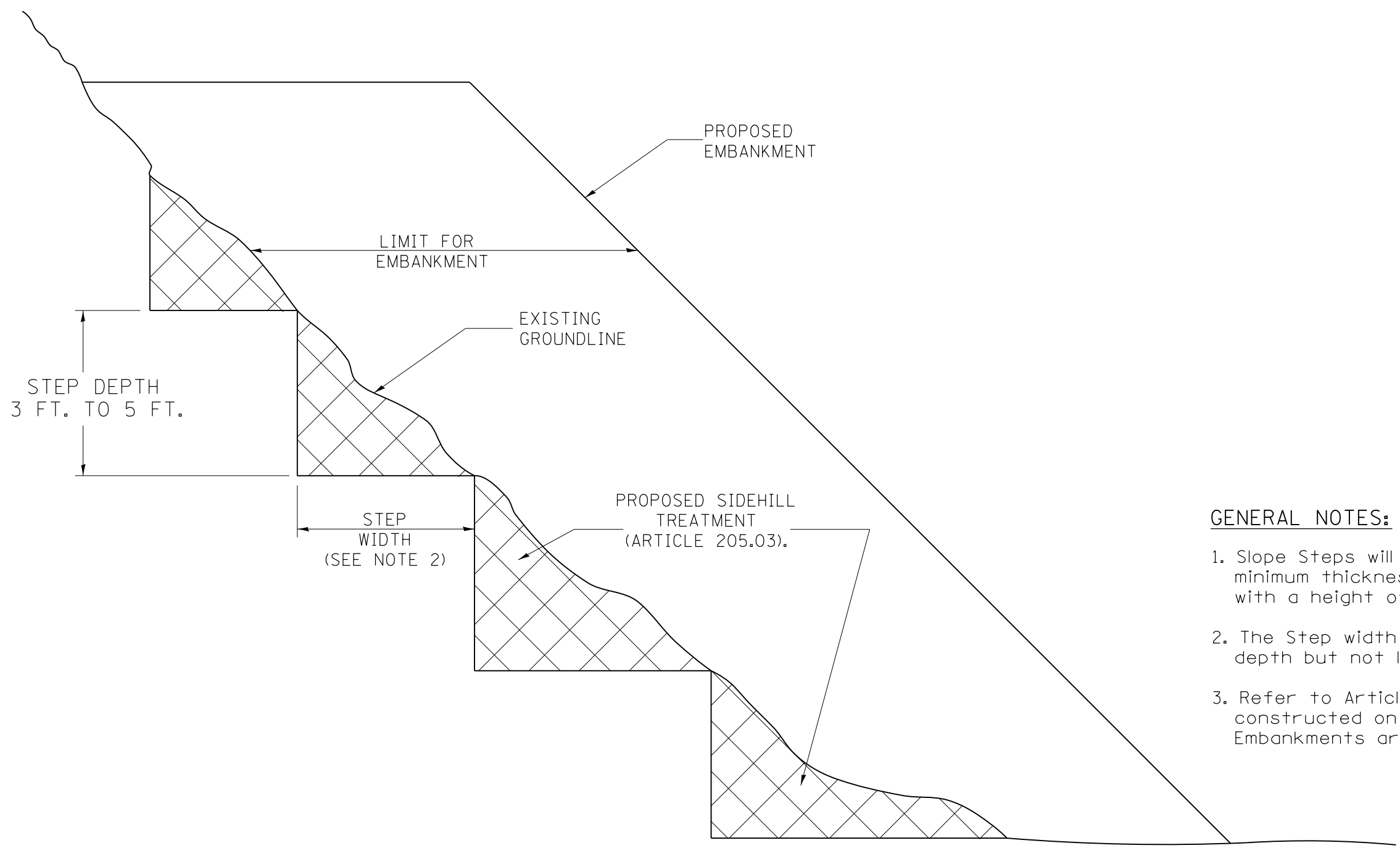
SCALE: N.T.S. SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	45
CONTRACT NO. 72686				
ILLINOIS FED. AID PROJECT				

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SLOPE STEPS DETAIL

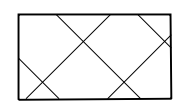
TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12 (300) minimum thickness "silver fills" and on a fills with a height of 10' (3.0 m).
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:

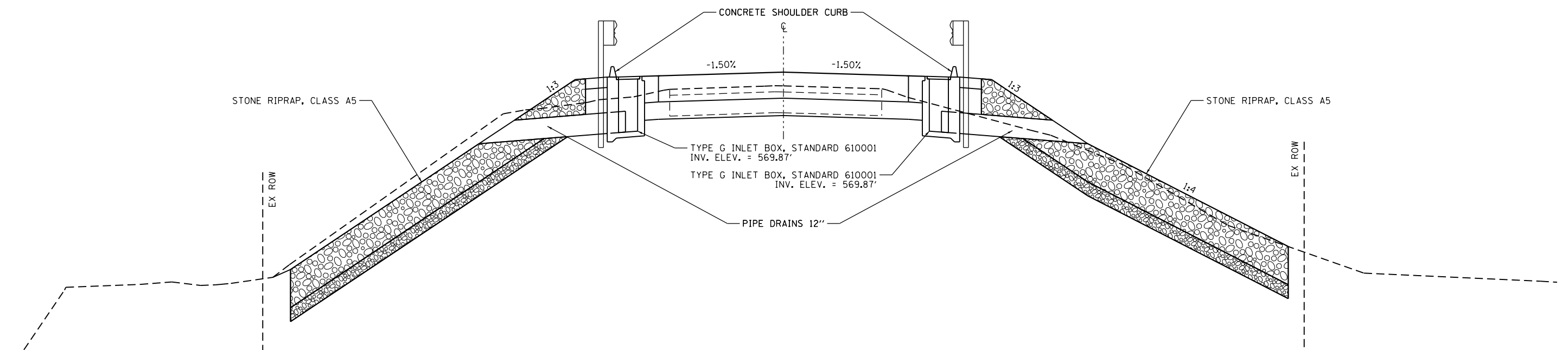
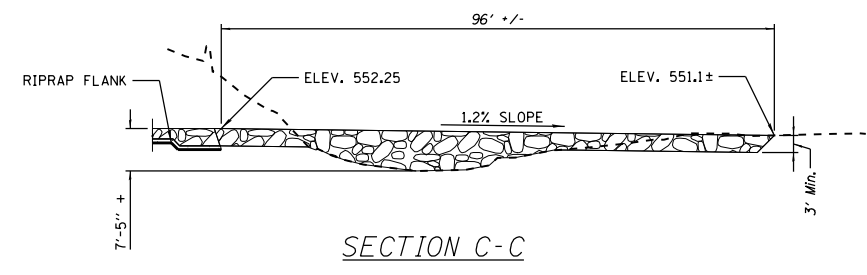
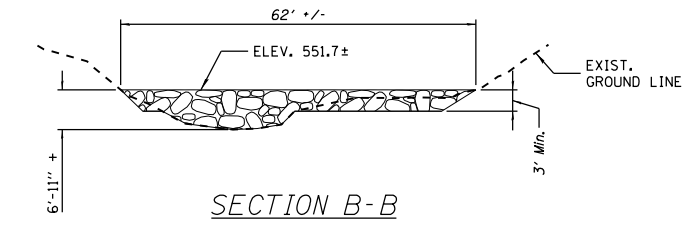
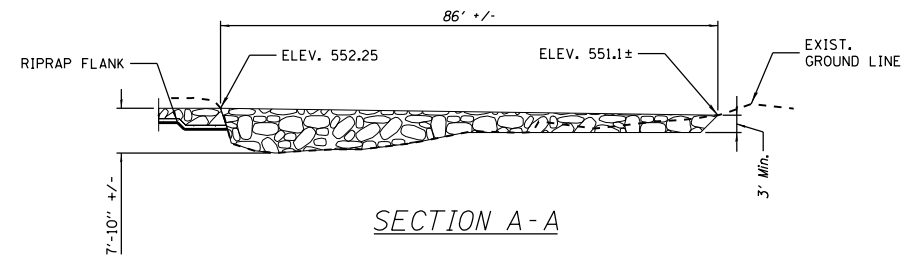
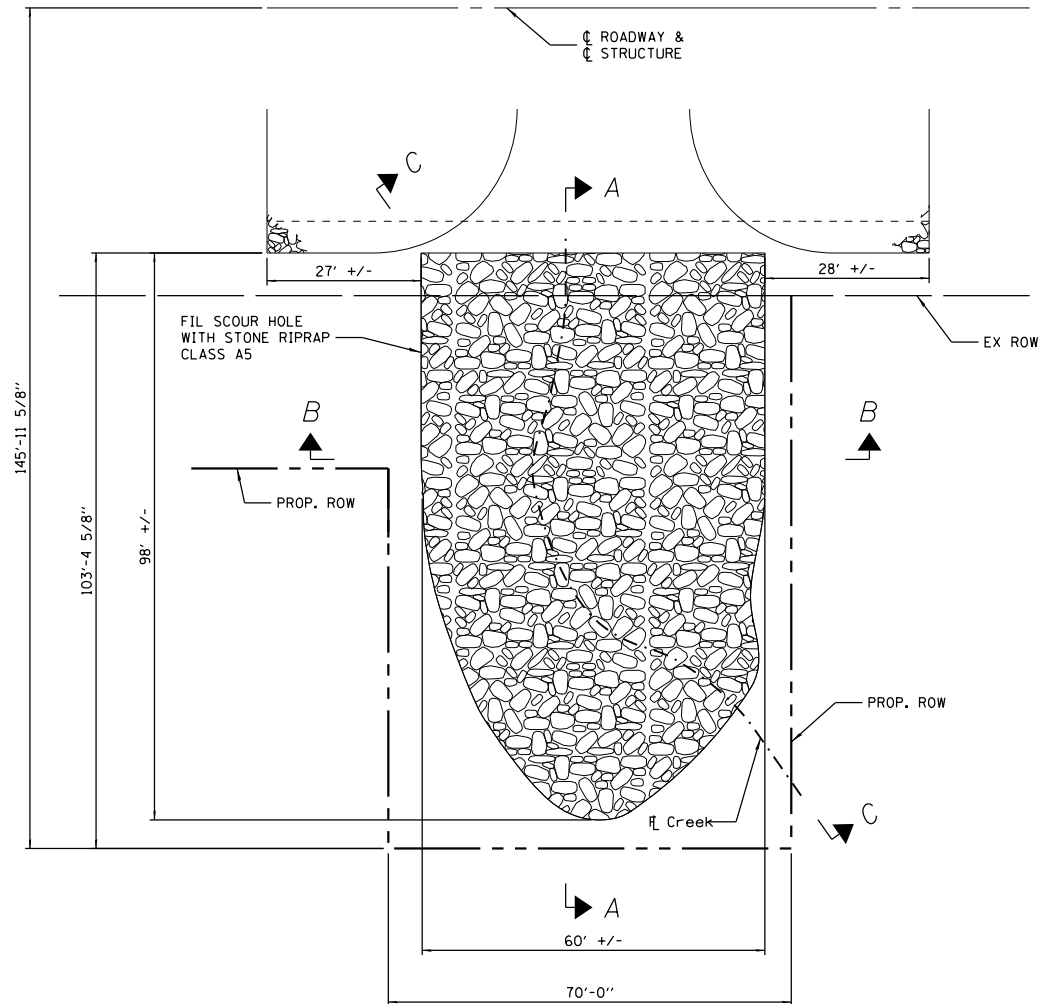


STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFACATION).

All dimensions are in inches
(millimeters) unless otherwise noted.

FILE NAME = SLOPESTEP.DGN	USER NAME = jdardeen	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SLOPE STEPS DETAIL	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		DATE -	REVISED -			ILLINOIS FED. AID PROJECT		CONTRACT NO. 72686		

PLAN OF EXISTING SCOUR HOLE REMEDIATION



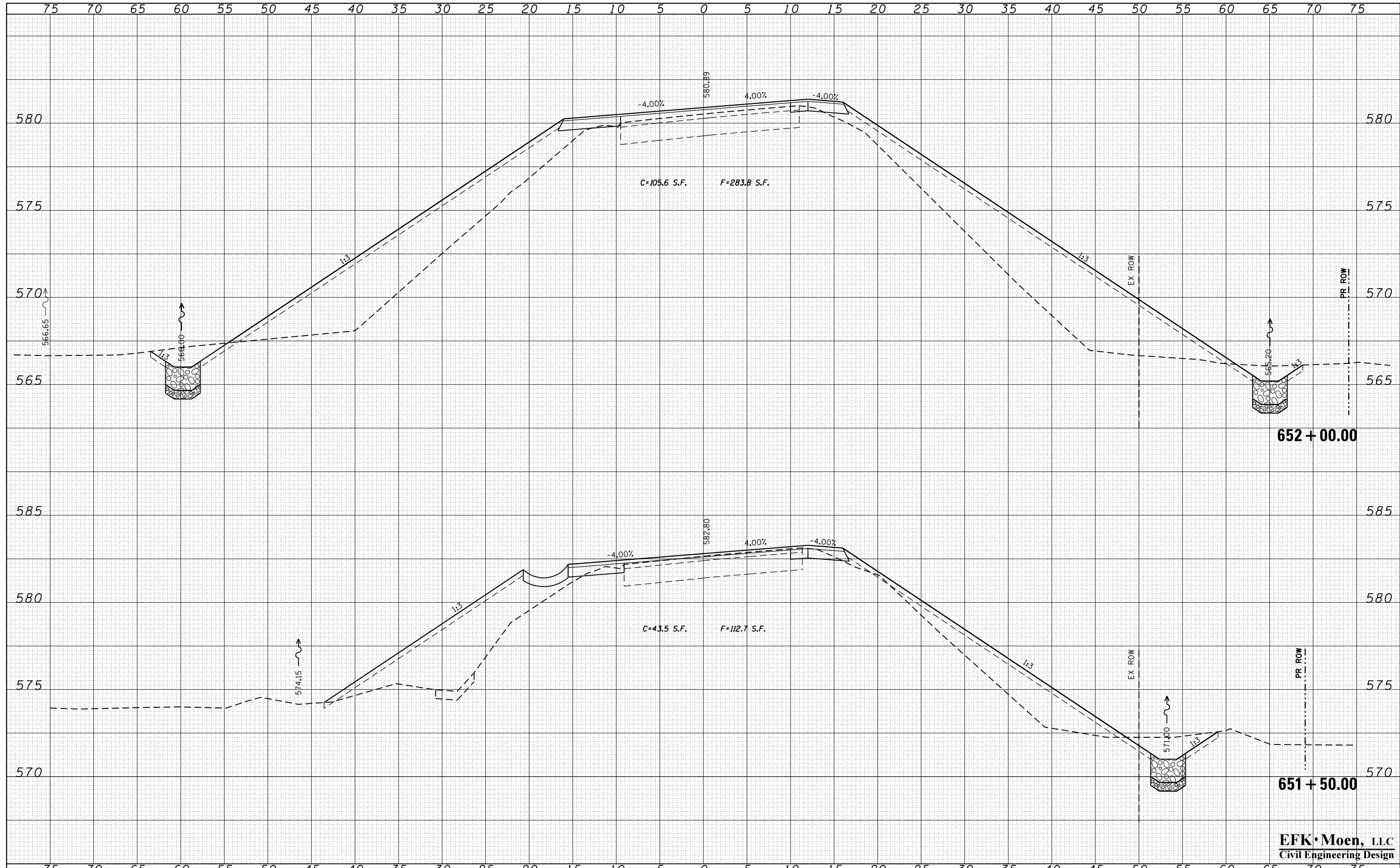
TYPE G INLET BOX DETAIL (STA. 656+53.88)

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FILE NAME =	USER NAME = jdardeen	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCOUR HOLE & SHOULDER INLET SECTION DETAILS			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILE		DRAWN - SJF	REVISED -					735	(7)B-2	MACOUPIN	57	47
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DATE	
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FINISHED SURVEY	
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ORIGINAL SURVEY	
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DESIGNED -	JRD
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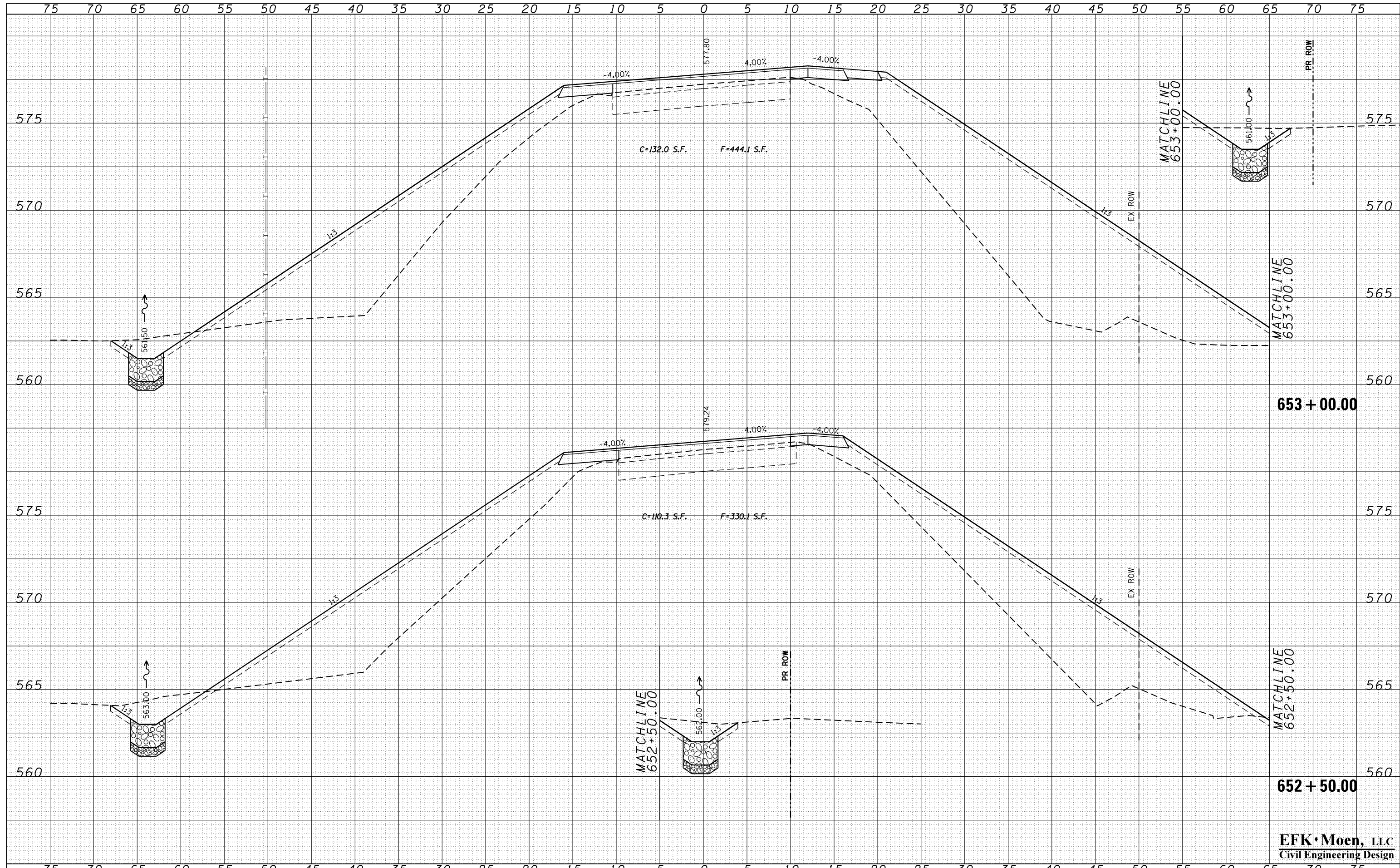
CROSS SECTIONS			
SCALE: 5'H : 2.5V	SHEET NO. 2 OF 10 SHEETS	STA. 651+50.00	TO STA. 652+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	49
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 72686	

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Civil Engineering Design

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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



FILE NAME =
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DESIGNED - JRD
DRAWN - MSK
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DATE - 8/12/2016
PLOT SCALE = 10.0000' / 1"
PLOT DATE = 8/11/2016

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

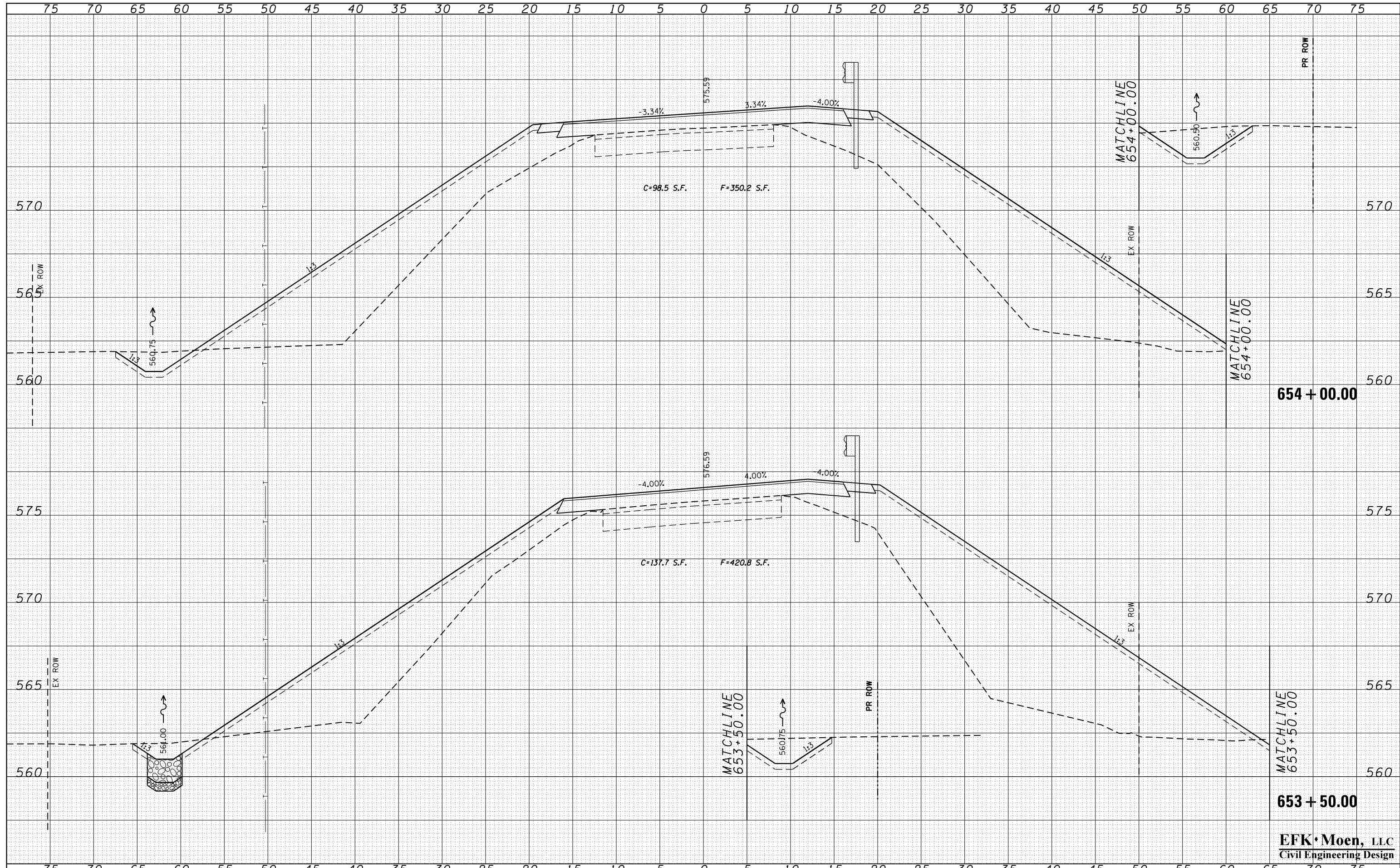
CROSS SECTIONS
SCALE: 5'H : 2.5V
SHEET NO. 3 OF 10 SHEETS
STA. 652+50.00 TO STA. 653+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	50
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 72686	

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NOTE BOOK	PLOTTED
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

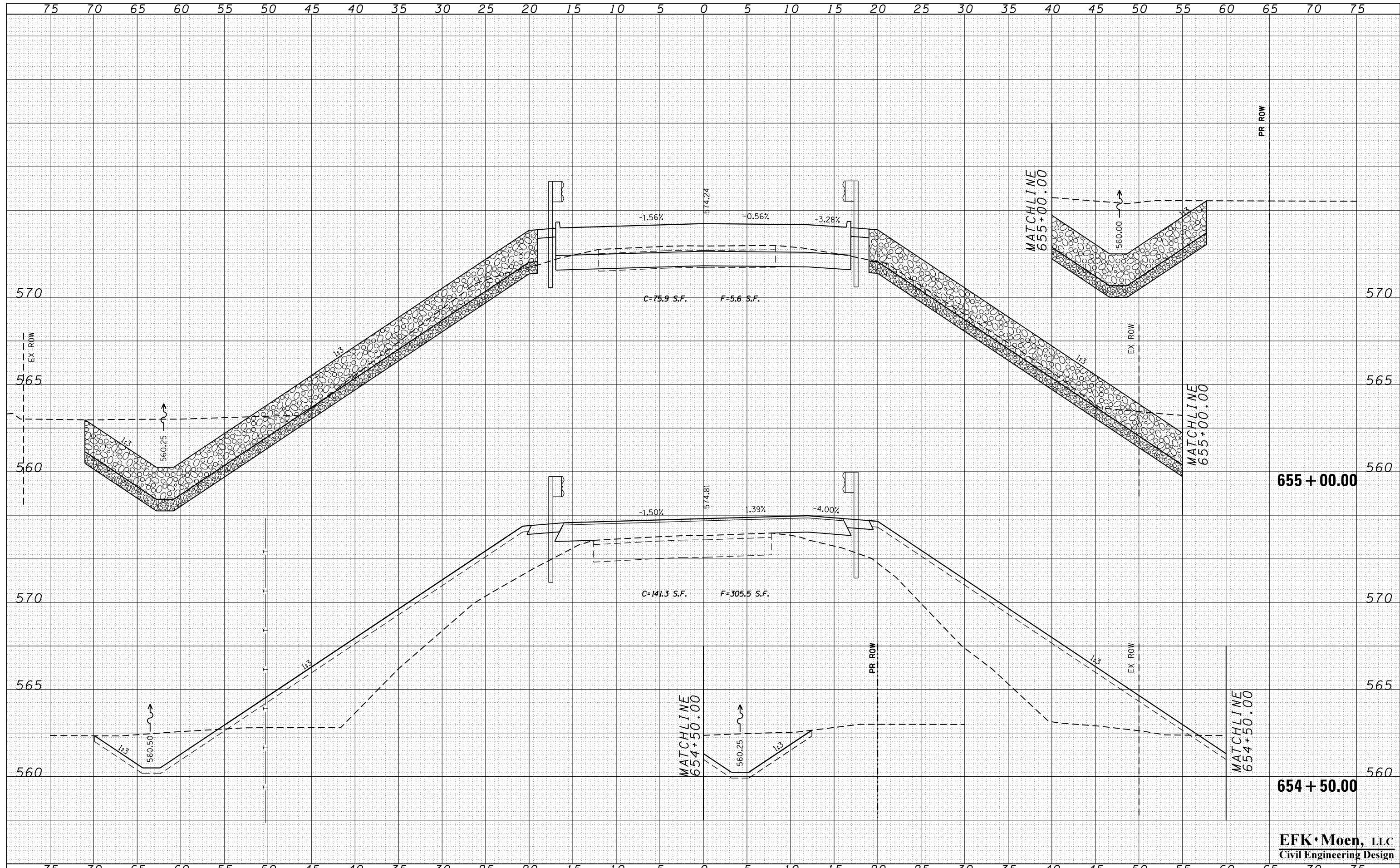
CROSS SECTIONS
SCALE: 5'H : 2.5V
SHEET NO. 4 OF 10 SHEETS
STA. 653+50.00 TO STA. 654+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	51
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 72686	

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ORIGINAL SURVEY	
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NOTE BOOK	
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

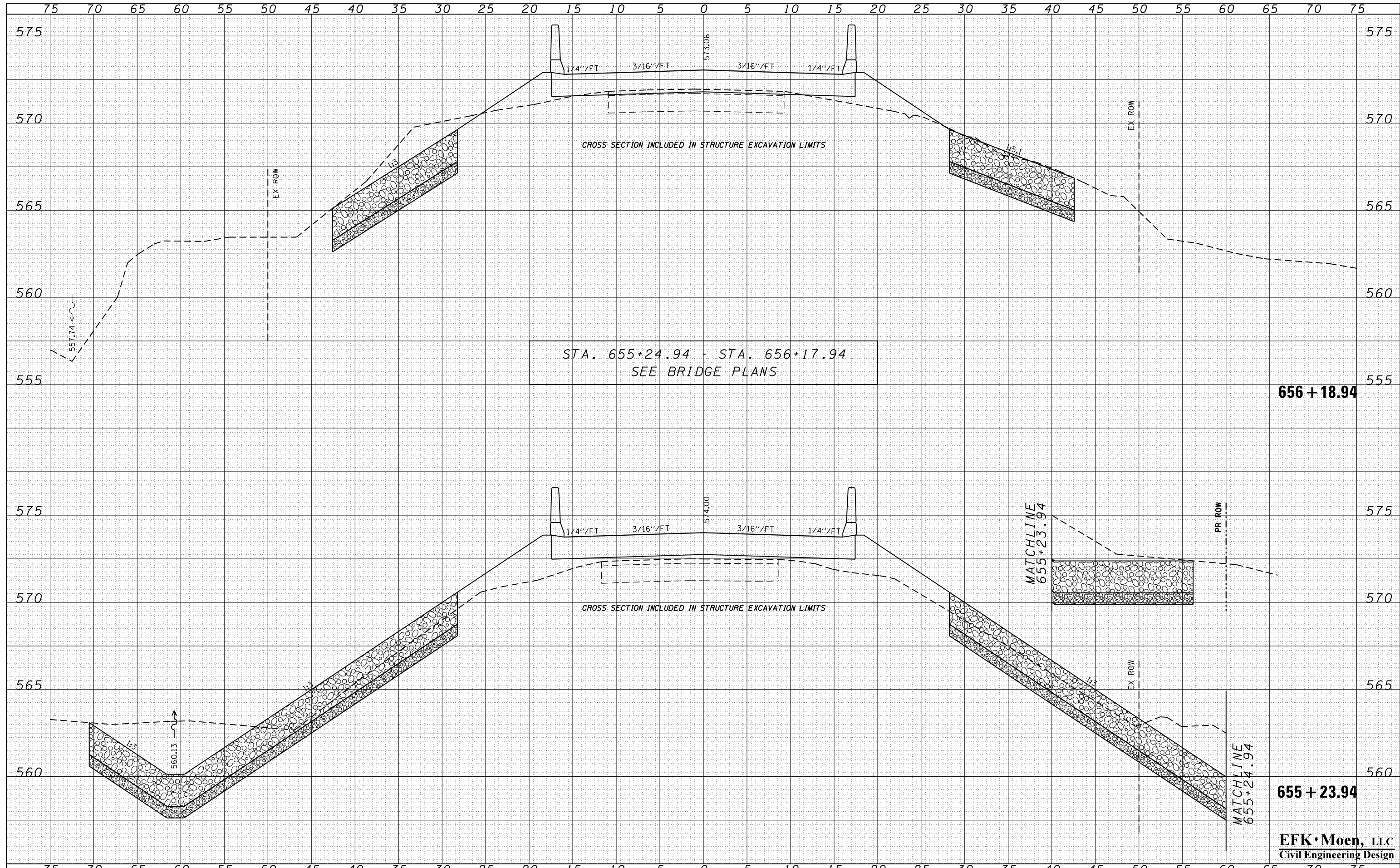
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735	(7)B-2	MACOUPIN	57	52
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 72686	

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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	AREAS CHECKED

DATE	
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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DESIGNED - JRD	REVISD -
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DATE - 8/12/2016	REVISD -

**STATE OF ILLINOIS
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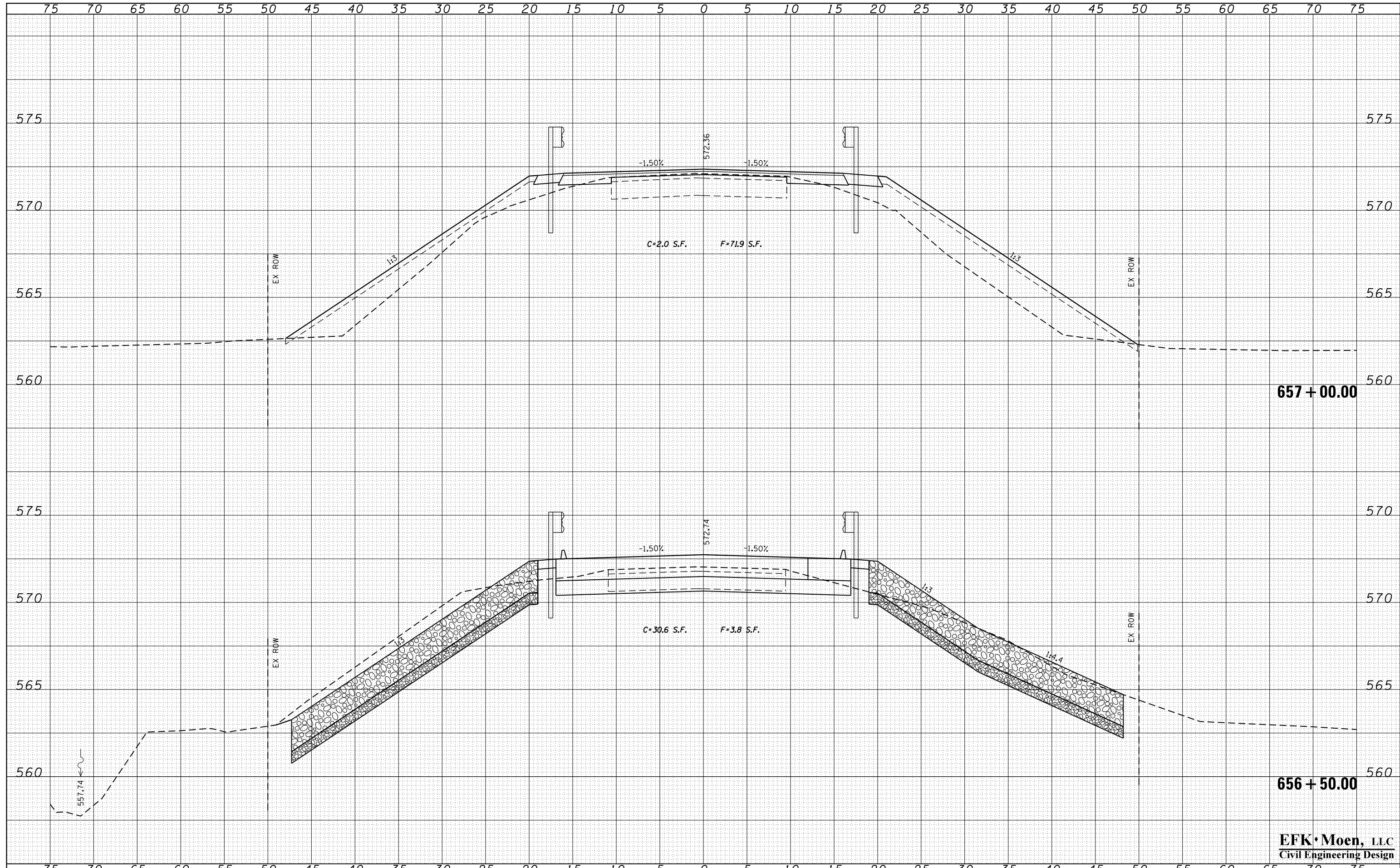
CROSS SECTIONS	
SCALE: 5'H : 2.5V	SHEET NO. 6 OF 10 SHEETS
STA. 655+24.94	TO STA. 656+17.94

F.A.S. RTE. 735	SECTION (7)B-2	COUNTY MACOUPIN	TOTAL SHEETS 57	SHEET NO. 53
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 72686		

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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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ORIGINAL SURVEY	SURVEYED
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

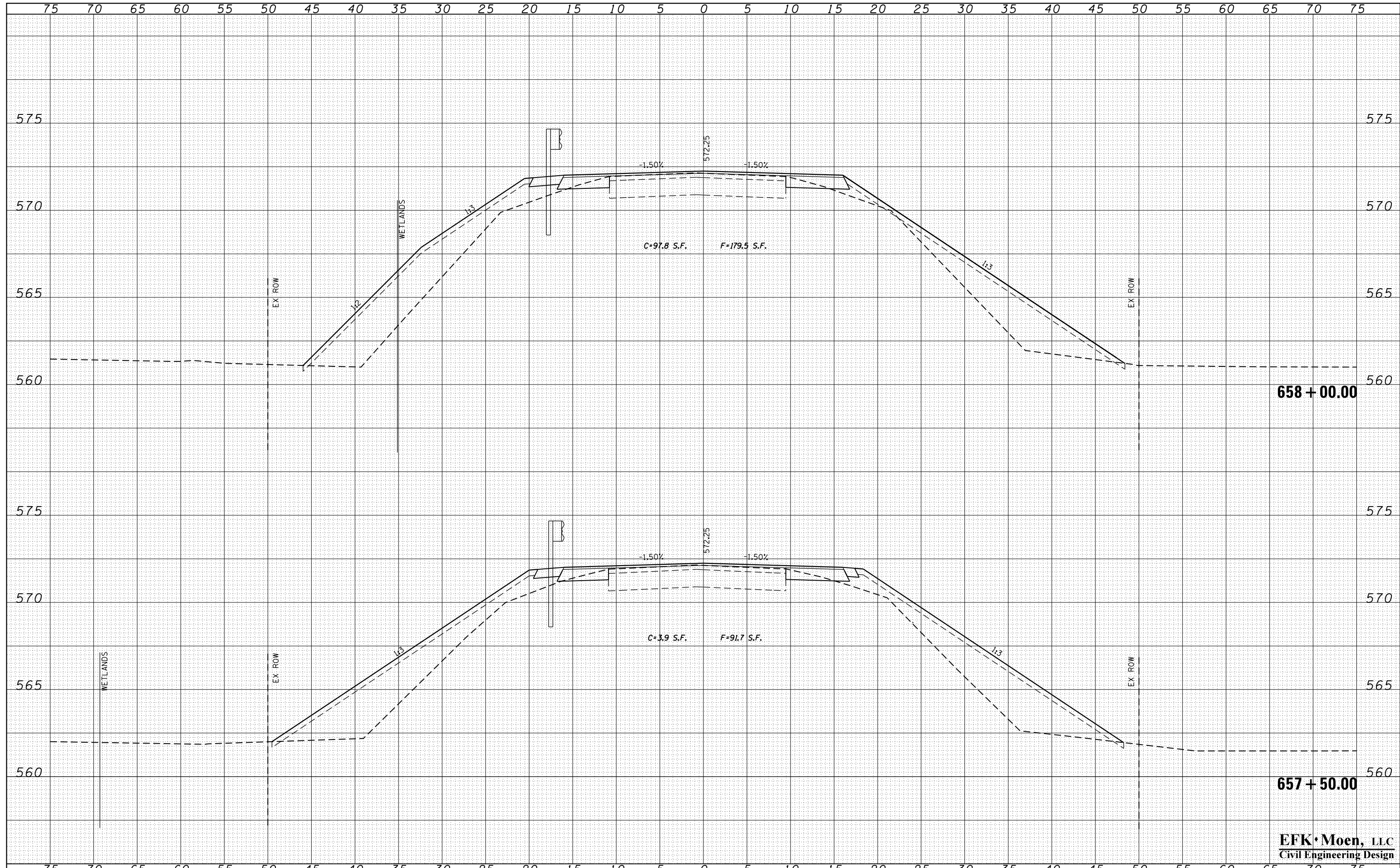
SCALE: 5'H : 2.5V SHEET NO. 7 OF 10 SHEETS STA. 656+50.00 TO STA. 657+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	54
CONTRACT NO. 72686				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
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CROSS SECTIONS

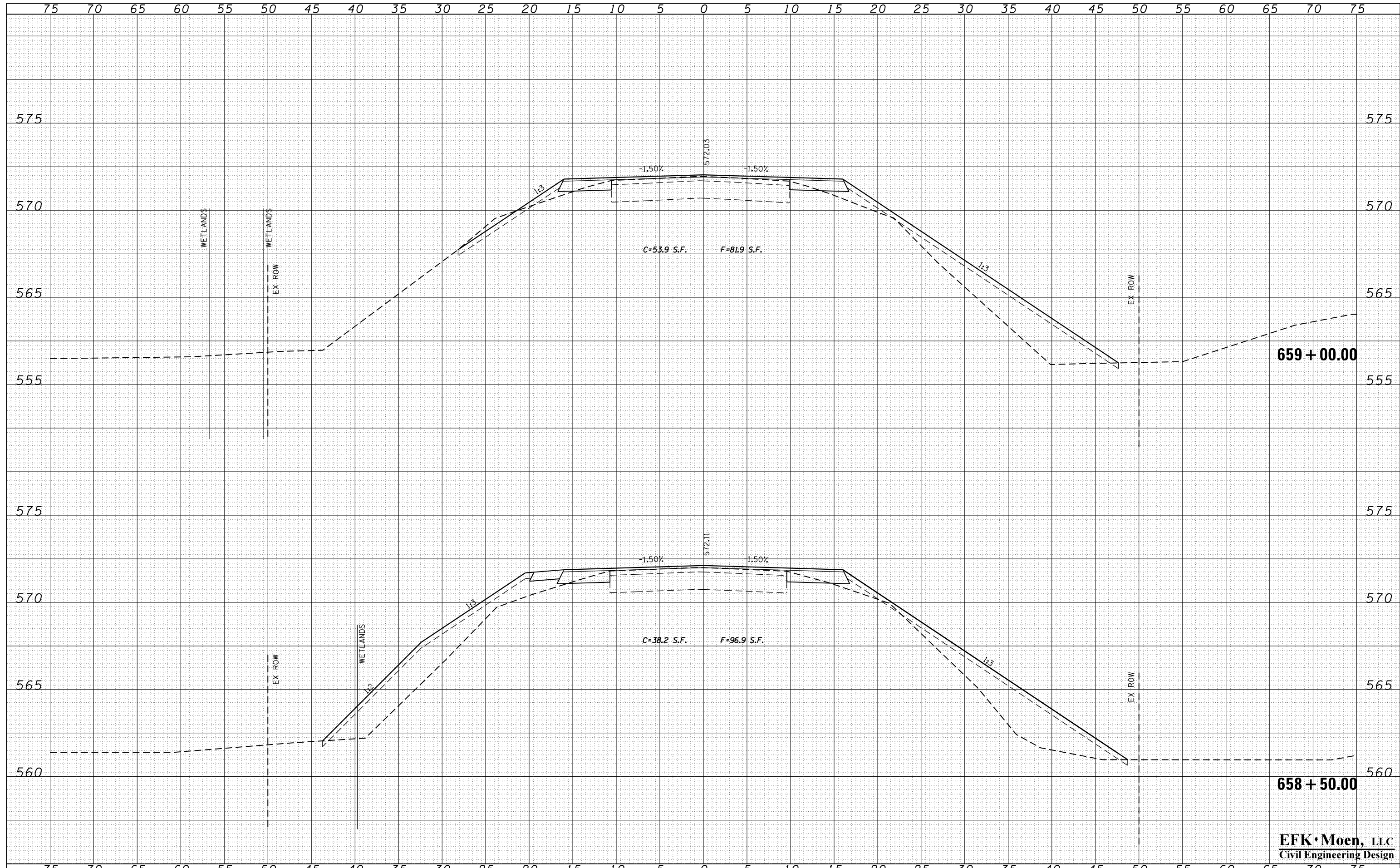
SCALE: 5'H : 2.5V SHEET NO. 8 OF 10 SHEETS STA. 657+50.00 TO STA. 658+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	55
CONTRACT NO. 72686				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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	CHECKED

DATE	
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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PLOT DATE = 8/11/2016	DATE - 8/12/2016	REVISED -

**STATE OF ILLINOIS
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CROSS SECTIONS

SCALE: 5'H : 2.5V SHEET NO. 9 OF 10 SHEETS STA. 658+50.00 TO STA. 659+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
735	(7)B-2	MACOUPIN	57	56
FED. ROAD DIST. NO.				ILLINOIS FED. AID PROJECT
CONTRACT NO. 72686				

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