

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	1
		ILLINOIS	CONTRACT NO. 74350	

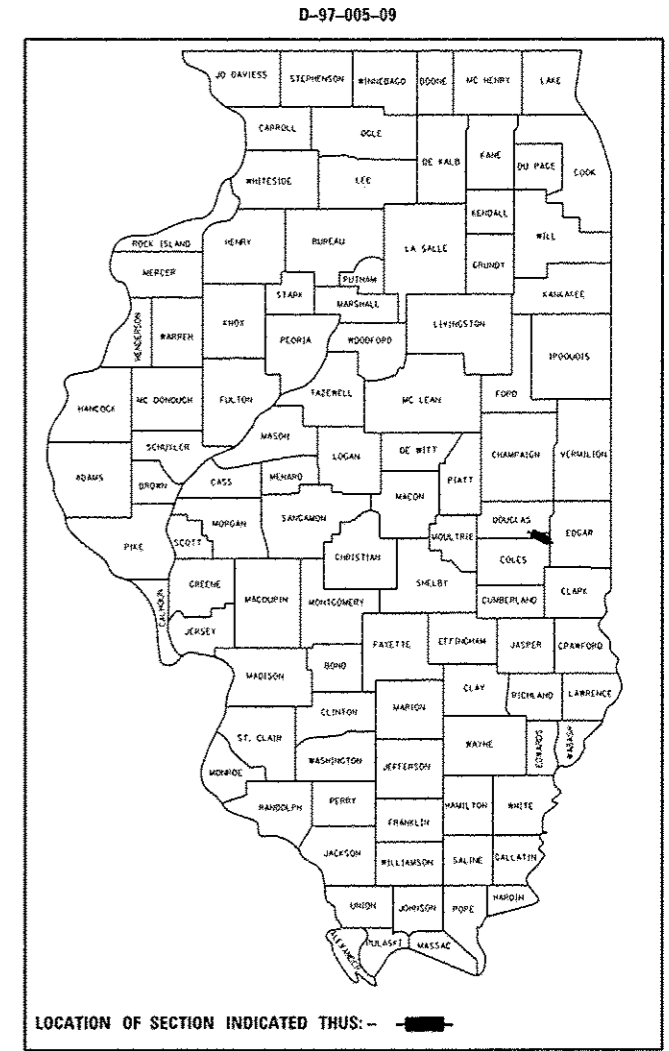
FOR INDEX OF SHEETS, SEE SHEET NO. 2

**PROPOSED
HIGHWAY PLANS**

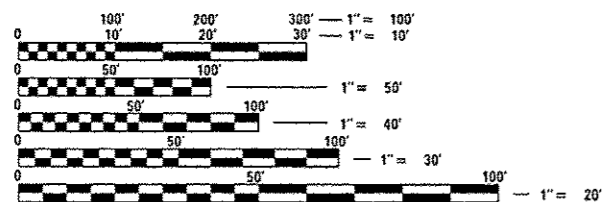
FAP ROUTE 749 (IL133)
SECTION (122BR)B-1
PROJECT ACF-0749 (026)
BRIDGE REPLACEMENT
COLES COUNTY

ADT (2013) = 2050

C-97-028-09

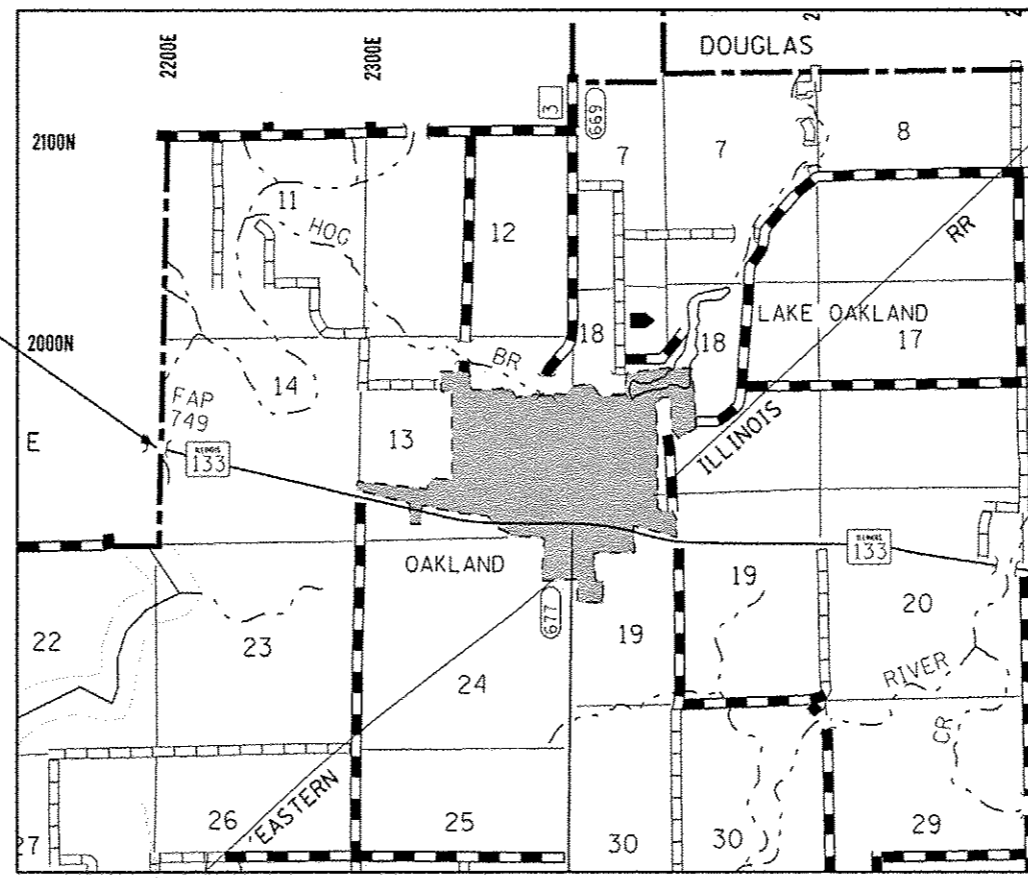


LOCATION OF PROPOSED
BRIDGE REPLACEMENT



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



GROSS LENGTH = 1515 FT. = 0.29 MILE
NET LENGTH = 1515 FT. = 0.29 MILE

PROJECT ENGINEER: MARK DAUGHERTY
PROJECT MANAGER: BRIAN LEWIS

CONTRACT NO. 74350

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 13, 2014
Royce C. Dishell, P.E.
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Oct 17, 2014
John D. Baranzelli, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

Oct 17, 2014
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2012; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" INDICATED ON THE CHECK SHEET, AND "THE SPECIAL PROVISIONS" INCLUDED IN THE PROPOSAL.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF REPLACING THE EXISTING STRUCTURE WITH A NEW BRIDGE ON NEW PIERS AND ABUTMENTS, CONSTRUCTION OF BRIDGE APPROACH PAVEMENTS, GUARDRAIL, FULL-DEPTH HOT-MIX ASPHALT PAVEMENT, EARTHWORK, SEEDING AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

COST OF REMOVAL OF RIPRAP NEAR ABUTMENTS SHALL BE INCLUDED IN THE BID PRICE FOR EARTH EXCAVATION.

PIPE UNDERDRAINS FOR STRUCTURES SHALL EXTEND TO THE BOTTOM OF THE EMBANKMENT SLOPE AND TERMINATE WITH A PCC END SECTION.

THE RESIDENT ENGINEER SHALL CONTACT THE DISTRICT 7 CHIEF OF SURVEYS TO GET THE LOCATIONS FOR INSTALLATION OF THE PERMANENT SURVEY MARKERS. DISTRICT 7 CONSTRUCTION PERSONNEL SHALL CROSS TIE AND RECORD THE ELEVATION OF THE PERMANENT SURVEY MARKERS, TYPE 2 AND GIVE THE INFORMATION TO THE CHIEF OF SURVEYS. THE TYPE 2 MARKERS SHALL BE CAST-IN-PLACE.

CONTACT DISTRICT 7 OPERATIONS THREE WEEKS PRIOR TO PLANTING TREES.

AGGREGATE SHOULDERS SHALL BE CRUSHED STONE, CRUSHED CONCRETE, OR RAP.

COST OF EXCAVATION FOR AGGREGATE BASE COURSE SHALL BE INCLUDED IN THE UNIT PRICE FOR AGGREGATE BASE COURSE.

ALL ELEVATIONS SHOWN IN PLANS ARE BASED ON U. S. G. S. DATUM.

THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM INFORMATION FURNISHED BY THE UTILITY OWNERS AND MUST BE CONSIDERED APPROXIMATE. FIELD MARKINGS OF ACILITIES IN CRITICAL AREAS MAY BE OBTAINED BY PROVIDING A MINIMUM OF 96 HOURS ADVANCE NOTICE THROUGH THE J. U. L. I. E. SYSTEM BY CALLING 800-892-0123.

THE CONTRACTOR SHALL PROVIDE INTERNET ACCESS TO THE BITUMINOUS PLANT QUALITY CONTROL LAB SO THAT BITUMINOUS PLANT REPORTS CAN BE E-MAILED TO THE DISTRICT HEADQUARTERS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICES FOR OTHER ITEMS IN THE CONTRACT.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

APPLICATION	AC/PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE
HMA SURFACE COURSE MIX "C" N70	PG 64-22	4.0% @Ndesign=70	IL - 9.5	MIXTURE C
HMA BINDER COURSE IL-19.0 N70	PG 64-22	4.0% @Ndesign=70	IL - 19.0	N/A
PAVEMENT (FD) (BINDER)	PG 64-22	4.0% @Ndesign=70	IL - 19.0	N/A
PAVEMENT (FD) (SURFACE)	PG 64-22	4.0% @Ndesign=70	IL - 9.5	MIXTURE C
HMA SHLDRS (TOP LIFT)	PG 64-22	4.0% @Ndesign=30	IL - 9.5L	MIXTURE C
HMA SHLDRS (BOTTOM LIFT)	PG 64-22	4.0% @Ndesign=30	IL - 19.0L	N/A
INCIDENTAL HMA	PG 64-22	4.0% @Ndesign=70	IL - 9.5	MIXTURE C

INDEX OF SHEETS

SHEET NO	TITLE
1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS
3-6	SUMMARY OF QUANTITIES
7	TYPICAL SECTIONS
8	PAVING SCHEDULE
9	MISCELLANEOUS SCHEDULES
10-12	PLAN AND PROFILE SHEETS
13	DETOUR TRAFFIC CONTROL
14-15	EROSION CONTROL
16	RIGHT OF WAY
17	BRIDGE APP. CONNECTOR
18-48	BRIDGE PLANS
49-60	CROSS SECTIONS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
202001-01	EARTH MEDIAN DITCH CHECK
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
482001-02	BITUMINOUS SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630001-10	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/BIT STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
631031-12	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
666001-01	RIGHT-OF-WAY MARKERS
667101-02	PERMANENT SURVEY MARKERS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701901-03	TRAFFIC CONTROL DEVICES
780001-04	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
BLR-21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

FILE NAME: c:\pwork\p\p\dot\stef\enkh\081179\1\07	USER NAME: stef\enkh	DESIGNED: -	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & INDEX OF SHEETS	F.A.P. RATE: 749	SECTION: 1228RIB-1	COUNTY: Coles	TOTAL SHEETS: 60	SHEET NO.: 2	
Default	4359-shitgenote.dgn	DRAWN: -	REVISED: -			SCALE: SHEET OF SHEETS STA. TO STA.	CONTRACT NO. 74350				
	PLOT SCALE: 1/8"=1'-0"	CHECKED: -	REVISED: -			ILLINOIS FED. AID PROJECT					
	PLOT DATE: 8/13/2014	DATE: -	REVISED: -								

80/20 FED/ST

80/20 FED/ST

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
20100500	TREE REMOVAL, ACRES	ACRE	0.45	0.45		
20200100	EARTH EXCAVATION	CU YD	2053	2053		
20300100	CHANNEL EXCAVATION	CU YD	2211	2211		
20400800	FURNISHED EXCAVATION	CU YD	4065	4065		
20600110	GRANULAR EMBANKMENT, SPECIAL	TON	2783	2783		
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	701	701		
* 25000200	SEEDING, CLASS 2	ACRE	2	2		
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	180	180		
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	180	180		
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	180	180		
* 25100115	MULCH, METHOD 2	ACRE	2	2		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	200	200		
28000305	TEMPORARY DITCH CHECKS	FOOT	360	360		
28000315	AGGREGATE DITCH CHECKS	TON	92	92		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
28000500	INLET AND PIPE PROTECTION	EACH	1	1		
28100105	STONE RIPRAP, CLASS A3	SQ YD	2087	2087		
28100707	STONE DUMPED RIPRAP, CLASS A4	SQ YD	2352.4	2352.4		
28100107	STONE RIPRAP, CLASS A4	SQ YD	2411	2411		
28200200	FILTER FABRIC	SQ YD	4855.4	4855.4		
35102000	AGGREGATE BASE COURSE, TYPE B 8"	SQ YD	12	12		
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	5330	5330		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	303	303		
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	251	251		
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	90	90		
40701896	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 3/4"	10 SQ YD	2057	2057		
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	10	10		
44004000	PAVED DITCH REMOVAL	FOOT	1824	1824		
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	674	674		

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14 * SPECIALTY ITEM

80/20 FED/ST

80/20 FED/ST

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SO YD	1481	1481		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1		
50104400	CONCRETE HEADWALL REMOVAL	EACH	3	3		
50105220	PIPE CULVERT REMOVAL	FOOT	125	125		
50200100	STRUCTURE EXCAVATION	CU YD	80	80		
50200300	COFFERDAM EXCAVATION	CU YD	19	19		
50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1	1		
50300225	CONCRETE STRUCTURES	CU YD	150.1	150.1		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	449.4	449.4		
50300260	BRIDGE DECK GROOVING	SO YD	1346	1346		
50300280	CONCRETE ENCASEMENT	CU YD	6.6	6.6		
50300300	PROTECTIVE COAT	SQ YD	1753	1753		
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1		
50500505	STUD SHEAR CONNECTORS	EACH	3006	3006		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
50800105	REINFORCEMENT BARS	POUND	9340	9340		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	126090	126090		
50800515	BAR SPLICERS	EACH	180	180		
50800530	MECHANICAL SPLICERS	EACH	72	72		
51201800	FURNISHING STEEL PILES HPI4X73	FOOT	325	325		
51202305	DRIVING PILES	FOOT	325	325		
51203800	TEST PILE STEEL HPI4X73	EACH	2	2		
51204650	PILE SHOES	EACH	12	12		
51500100	NAME PLATES	EACH	1	1		
* 51603000	DRILLED SHAFT IN SOIL	CU YD	18	18		
* 51604000	DRILLED SHAFT IN ROCK	CU YD	22.3	22.3		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	78	78		
52100520	ANCHOR BOLTS, 1"	EACH	24	24		
52100530	ANCHOR BOLTS, 1 1/4"	EACH	12	12		

* SPECIALTY ITEM

FILE NAME =	USER NAME = teanleych	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\pwork\teanleych\0217991\0277	039-ahc-eqa.dgn	DRAWN -	REVISED -			749	(1228)B-1	Coles	60	4	
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	PLOT DATE = 8/21/2014	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

80/20 FED/ST

80/20 FED/ST

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
54215550	METAL END SECTIONS 15"	EACH	2	2		
54200220	PIPE CULVERTS, CLASS D, TYPE I 15"	FOOT	62	62		
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	118	118		
60500040	REMOVING MANHOLES	EACH	1	1		
60500060	REMOVING INLETS	EACH	1	1		
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	425	425		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3	3		
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1	1		
63200310	GUARDRAIL REMOVAL	FOOT	850	850		
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	6	6		
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	5	5		
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	2	2		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	20	20		
* 66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	1		
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10	10		
67100100	MOBILIZATION	L SUM	1	1		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	152	152		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	51	51		
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	4570	4570		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	16	16		
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	5	5		
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	13	13		
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		

13 * SPECIALTY ITEM

13

FILE NAME :	USER NAME : teanleych	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RATE:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
g:\pwork\p\idost\teanleych\0811794\1077	358-shr-eaq.dgn	DRAWN -	REVISED -			749	122BRIB-1	Colos	60	5	
Default	PLOT SCALE * 100.0000' / 1"	CHECKED -	REVISED -			CONTRACT NO. 74350		ILLINOIS FED. AID PROJECT			
	PLOT DATE * 8/21/2014	DATE -	REVISED -			SCALE:	SHEET OF SHEETS	STA. TO STA.			

80/20 FED/ST

80/20 FED/ST

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
* A2001020	TREE, ACER RUBRUM (RED MAPLE), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	9	9		
* A2001720	TREE, ACER SACCHARUM (SUGAR MAPLE), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	7	7		
* A2006520	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	5	5		
* A2007620	TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	10	10		
* B2001116	TREE, CERCIS CANADENSIS (EASTERN REDBUD), 2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	12	12		
* D2002972	EVERGREEN, PINUS STROBUS (EASTERN WHITE PINE), 6' HEIGHT, BALLED AND BURLAPPED	EACH	6	6		
X0321816	OSTERBERG LOAD CELL TEST	EACH	1	1		
X4201410	BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL)	SO YD	102	102		
X5030305	CONCRETE WEARING SURFACE, 5"	SO YD	229.8	229.8		
X5040100	PRECAST BRIDGE APPROACH SLAB	SO FT	2030	2030		
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	264	264		
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	28	28		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0011		
Z0001495	BRIDGE APPROACH SHOULDER REMOVAL	SO YD	20	20		
Z0004552	APPROACH SLAB REMOVAL	SO YD	146	146		
Z0016702	DETOUR SIGNING	L SUM	1	1		
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	4	4		
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	174	174		
Z0076600	TRAINEES	HOOR	500	500		

|| * SPECIALTY ITEM

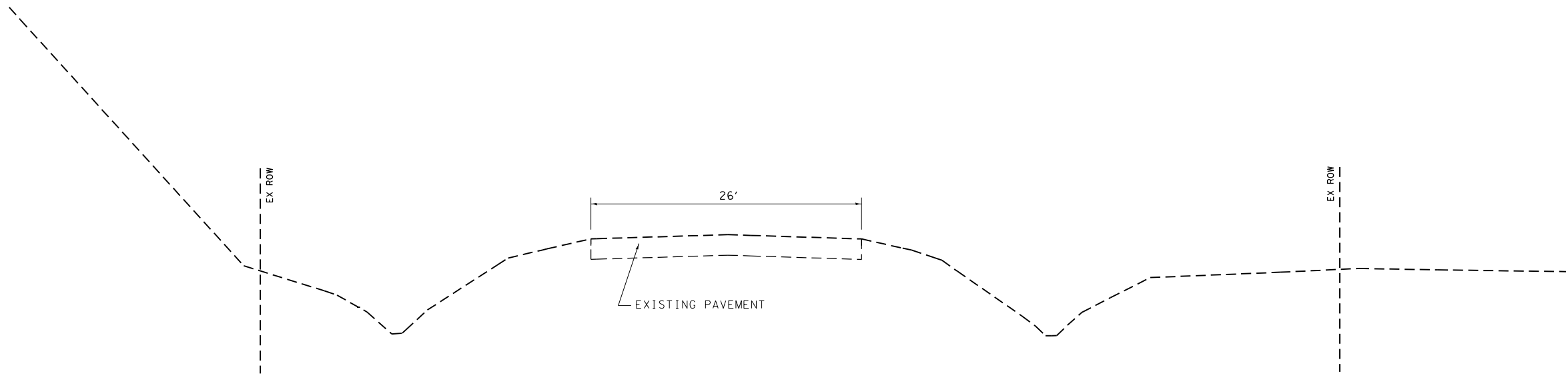
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Default	PLOT DATE = 8/21/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

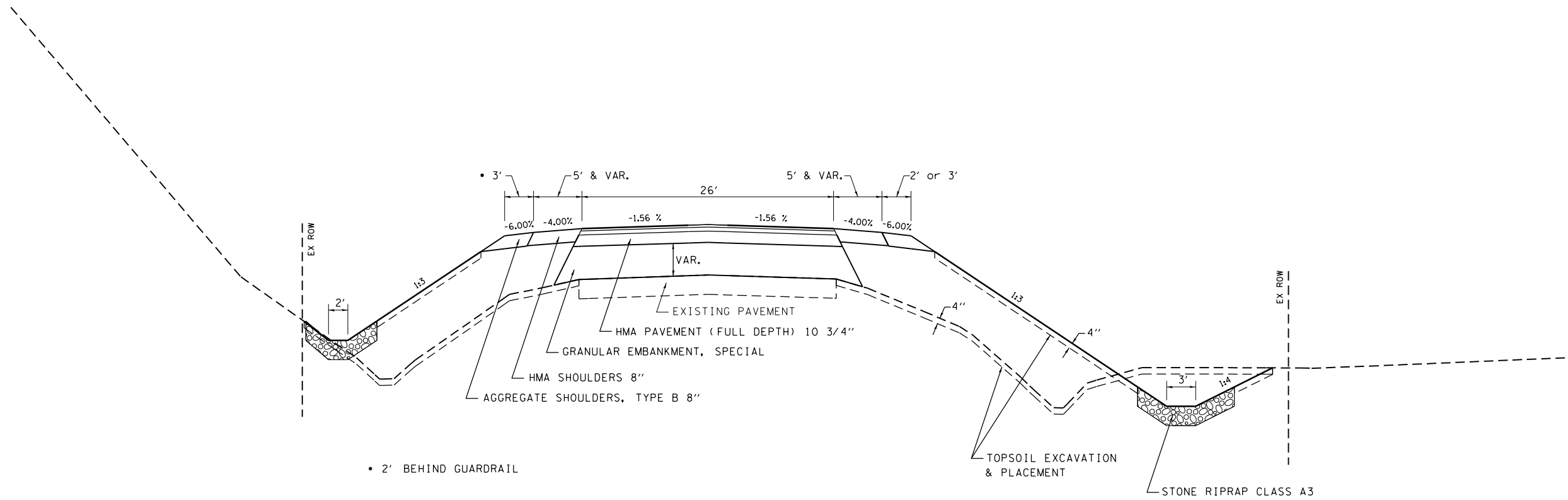
SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRIB-1)	Colos	60	6
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION
STA 707+00 TO STA 722+15



PROPOSED TYPICAL SECTION
STA 708+95 TO STA 711+07.5
STA 715+10.5 TO STA 720+45

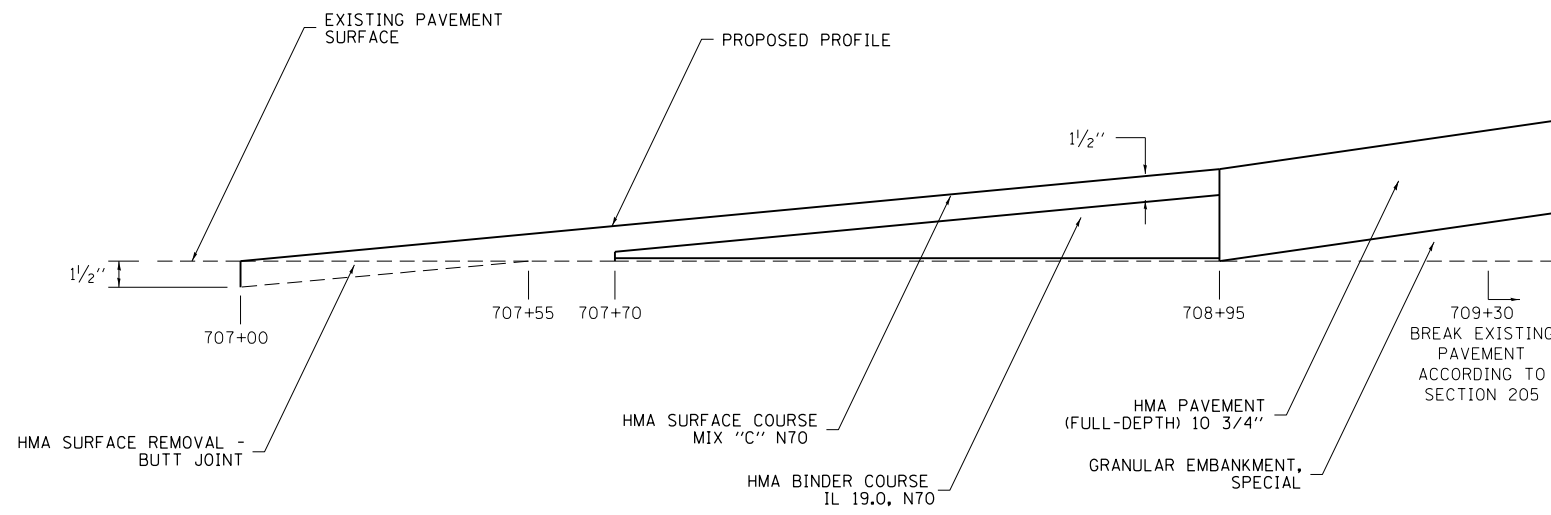
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	PLOT DATE = 8/13/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

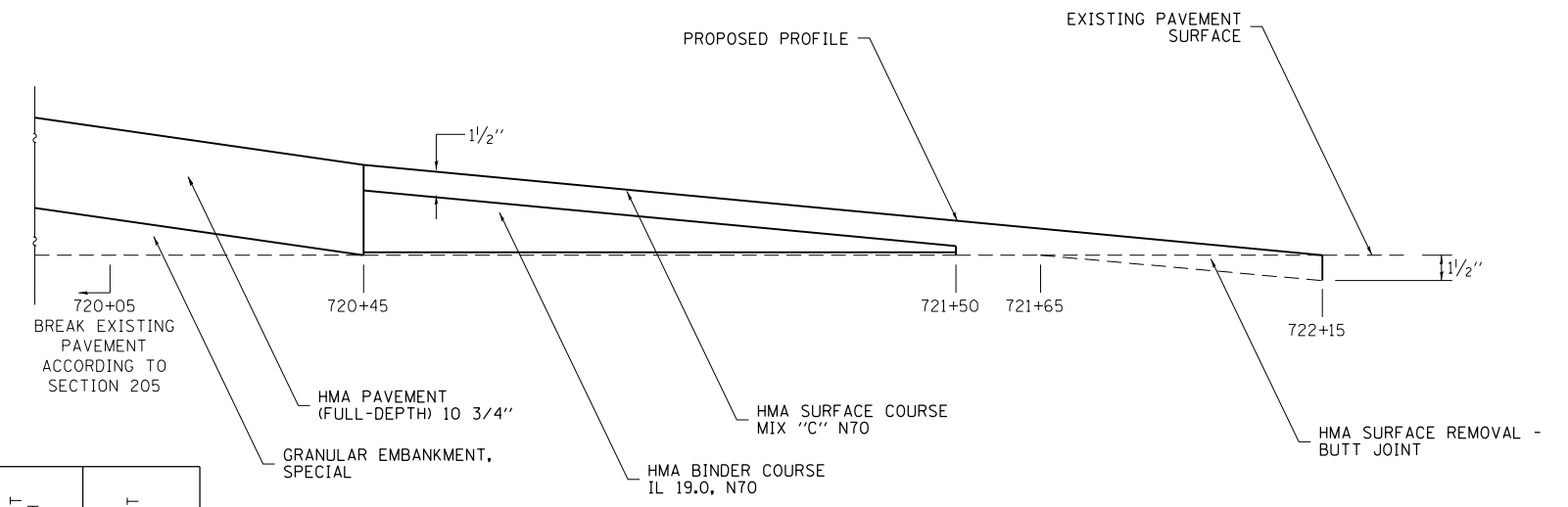
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SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	Coles	60	7
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	



WEST END

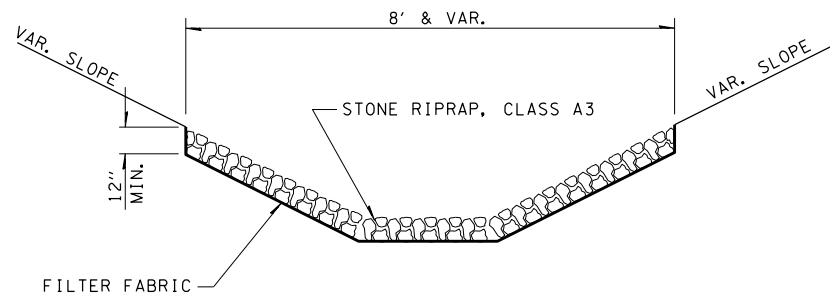


EAST END

STATION TO STATION	LENGTH FT	WIDTH FT	AREA SQ YD	BITUMINOUS MATERIAL (PRIME COAT)	GRANULAR EMBANKMENT, SPECIAL	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	HOT-MIX ASPHALT PAVEMENT (FULL DEPTH) 10 3/4 INCH	BRIDGE APPROACH PAVEMENT CONNECTOR (SPECIAL)
				POUND	TON	TON	TON	SQ YD	SQ YD	SQ YD
STA 70700 TO STA 70755	55	26	159	72			13.6	159		
STA 70755 TO STA 70770	15	26	43	20			3.7			
STA 70770 TO STA 70895	125	26	361	163		95.0	30.8			
STA 70895 TO STA 71090.0	195	26	563	1268	388				563	
STA 71090 TO STA 71107.5	17.5	26	51	114	84					51
BRIDGE OMISSION										
STA 71510.5 TO STA 71528.0	17.5	26	51	114	152					51
STA 71528 TO STA 72045	517	26	1494	3361	2159				1494	
STA 72045 TO STA 72150	105	26	303	137		80.0	25.9			
STA 72150 TO STA 72165	15	26	43	20			3.7			
STA 72165 TO STA 72215	50	26	144	65			12.3	144		
TOTAL QUANTITIES	1112		3212	5330	2783	175	90	303	2057	102

* DOES NOT INCLUDE 76 TON FOR P. R. A. (SEE SHEET 10)

FILE NAME =	USER NAME = steffenmk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVING DETAILS AND SCHEDULE			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\pwork\pwork\stevfenmk\d0117991\0774350-shd-details.dgn	DRAWN -	REVISED -	749					(122BRIB-1)	Coles	60	8	
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -	CONTRACT NO. 74350									
PLOT DATE = 8/13/2014	DATE -	REVISED -	ILLINOIS FED. AID PROJECT									
				SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.				



DETAIL OF RIPRAP, CLASS A3

GUARDRAIL SCHEDULE	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)	TRAFFIC BARRIER TERMINAL, TYPE 6	GUARDRAIL MARKER, TYPE A	TERMINAL MARKER, DIRECT APPLIED	NOTES
	FT	EACH	EACH	EACH	EACH	EACH	
LT STA 709+45 TO STA 709+95		1				1	
LT STA 709+95 TO STA 710+70	75			1	3		
LT STA 710+70 TO STA 711+13							
RT STA 709+52 TO STA 710+02	87.5		1		3	1	1: 25 FLARE
RT STA 710+02 TO STA 710+89				1			
LT STA 714+86 TO STA 715+29				1			
LT STA 715+29 TO STA 717+17	187.5				4		
LT STA 717+17 TO STA 717+67		1				1	
RT STA 715+05 TO STA 715+48				1			
RT STA 715+48 TO STA 716+23	75				3		
RT STA 716+23 TO STA 716+73		1				1	
TOTALS	425	3	1	4	13	4	

LOCATION	EARTH EXCAVATION CU. YD.	EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE CU. YD.	EMBANKMENT CU. YD.	EARTHWORK BALANCE WASTE(+) SHORTAGE(-) CU. YD.	TOPSOIL EXCAVATION AND PLACEMENT CU. YD.
STA 707+00 TO 711+80	1106	830	2658	-1829	344
STA 714+70 TO 722+00	947	710	4605	-3895	357
STRUCTURE EXCAVATION	80	60		60	
CHANNEL EXCAVATION	2211	1658		1658	
TOTALS	4344	3258	7263	-4005	701

AGGREGATE SHOULDERS, TYPE B 8"	
LT STA 707+00 TO 709+51	84 SQ YD
LT STA 709+51 TO 711+28	39 SQ YD
RT STA 707+00 TO 709+00	67 SQ YD
RT STA 709+40 TO 711+50	47 SQ YD
LT STA 714+71 TO 717+61	64 SQ YD
LT STA 717+61 TO 722+15	151 SQ YD
RT STA 714+90 TO 716+65	39 SQ YD
RT STA 716+65 TO 722+15	183 SQ YD
TOTAL	674 SQ YD

PIPE CULVERT REMOVAL	
31' RT STA 708+93 TO 31' RT STA 709+55	62 FOOT
14' LT STA 711+36 TO 14' RT STA 711+53	33 FOOT
15' RT STA 711+53 TO 44' RT STA 711+49	30 FOOT
TOTAL	125 FOOT

CONCRETE HEADWALL REMOVAL	
31' RT STA 708+93	1 EACH
31' RT STA 709+55	1 EACH
44' RT STA 711+49	1 EACH

PAVED DITCH REMOVAL	
LT STA 709+12 TO 711+60	258 FOOT
RT STA 710+24 TO 712+14	193 FOOT
LT STA 714+96 TO 722+00	704 FOOT
RT STA 715+31 TO 722+00	669 FOOT
TOTAL	1824 FOOT

TREE REMOVAL	
RT STA 707+00 TO 707+50	0.04 ACRE
RT STA 711+00 TO 711+68	0.06 ACRE
RT STA 715+00 TO 719+35	0.32 ACRE
RT STA 720+48 TO 721+00	0.03 ACRE
TOTAL	0.45 ACRE

REMOVING INLETS	
14' LT STA 711+36	1 EACH

REMOVING MANHOLES	
14' RT STA 711+53	1 EACH

FURNISHING AND ERECTING RIGHT OF WAY MARKERS	
57.00' LT STA 710+70	1 EACH
85.00' LT STA 715+00	1 EACH
65.00' LT STA 716+27.63	1 EACH
90.00' RT STA 716+42	1 EACH
60.00' RT STA 717+50	1 EACH
46.74' LT STA 719+50	1 EACH
TOTAL	6 EACH

HOT-MIX ASPHALT SHOULDERS, 8"	
LT STA 707+00 TO 709+51	139 SQ YD
LT STA 709+51 TO 711+28	118 SQ YD
RT STA 707+00 TO 709+00	111 SQ YD
RT STA 709+40 TO 711+50	245 SQ YD
LT STA 714+71 TO 717+61	193 SQ YD
LT STA 717+61 TO 722+15	252 SQ YD
RT STA 714+90 TO 716+65	117 SQ YD
RT STA 716+65 TO 722+15	306 SQ YD
TOTAL	1481 SQ YD

PIPE CULVERTS, CLASS D, TYPE 1 15"	
32' RT STA 708+94 TO 40' RT STA 709+56	62 FOOT

GUARDRAIL REMOVAL	
LT STA 710+14 TO 711+41	125 FOOT
RT STA 709+56 TO 711+59	200 FOOT
LT STA 714+62 TO 716+75	213 FOOT
RT STA 714+84 TO 717+92	312 FOOT
TOTAL	850 FOOT

FILTER FABRIC	
LT STA 709+12 TO 711+60	303 SQ YD
RT STA 709+55 TO 712+14	374 SQ YD
LT STA 714+96 TO 722+00	860 SQ YD
RT STA 715+31 TO 722+00	966 SQ YD
TOTAL	2503 SQ YD

STONE RIPRAP, CLASS A3	
LT STA 709+12 TO 711+60	248 SQ YD
RT STA 709+55 TO 712+14	317 SQ YD
LT STA 714+96 TO 722+00	704 SQ YD
RT STA 715+31 TO 722+00	818 SQ YD
TOTAL	2087 SQ YD

BRIDGE APPROACH SHOULDER REMOVAL	
LT STA 711+29 TO 711+42	5 S. Y.
RT STA 711+45 TO 711+58	5 S. Y.
LT STA 714+61 TO 714+74	5 S. Y.
RT STA 714+76 TO 714+90	5 S. Y.
TOTAL	20 S. Y.

APPROACH SLAB REMOVAL	
C. L. STA 711+23 TO 711+50	73 S. Y.
C. L. STA 714+69 TO 714+96	73 S. Y.
TOTAL	146 S. Y.

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		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

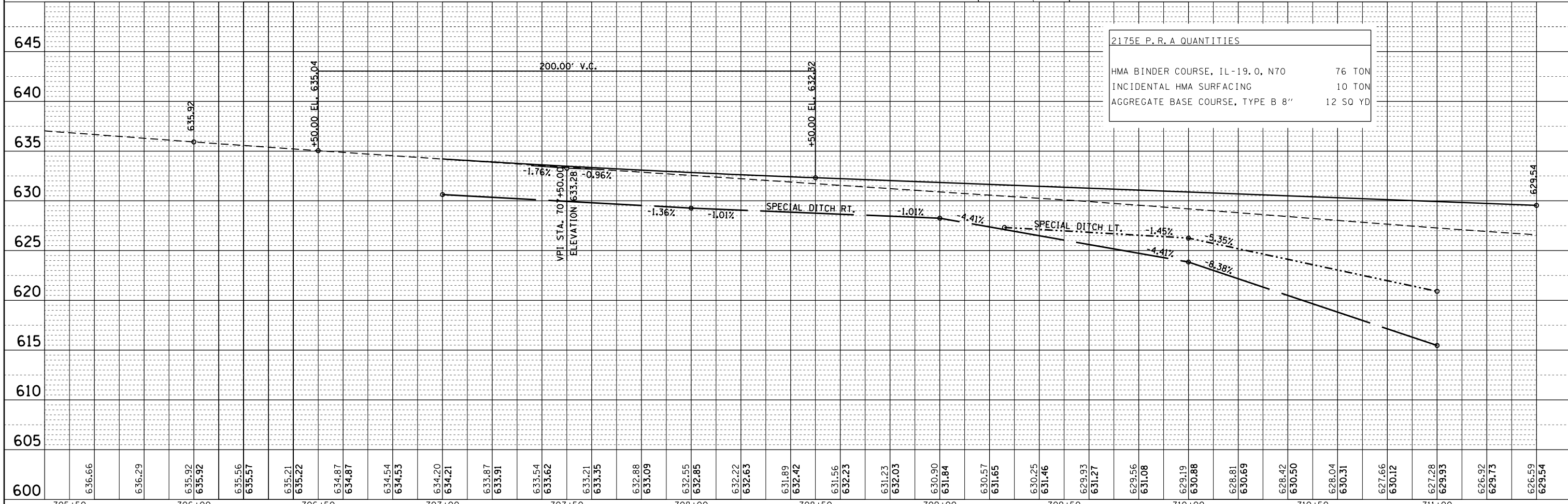
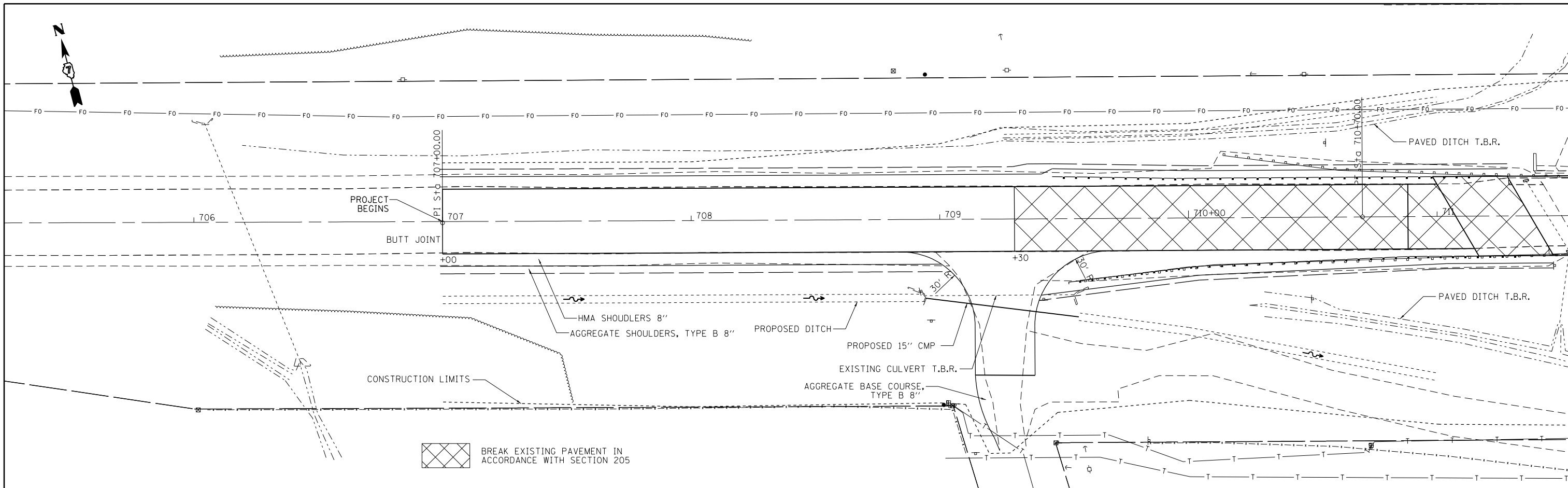
SCHEDULES AND DETAILS

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRIB-1)	Coles	60	9
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74350	

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

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



2175E P. R. A QUANTITIES	
HMA BINDER COURSE, IL-19.0, N70	76 TON
INCIDENTAL HMA SURFACING	10 TON
AGGREGATE BASE COURSE, TYPE B 8"	12 SQ YD

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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

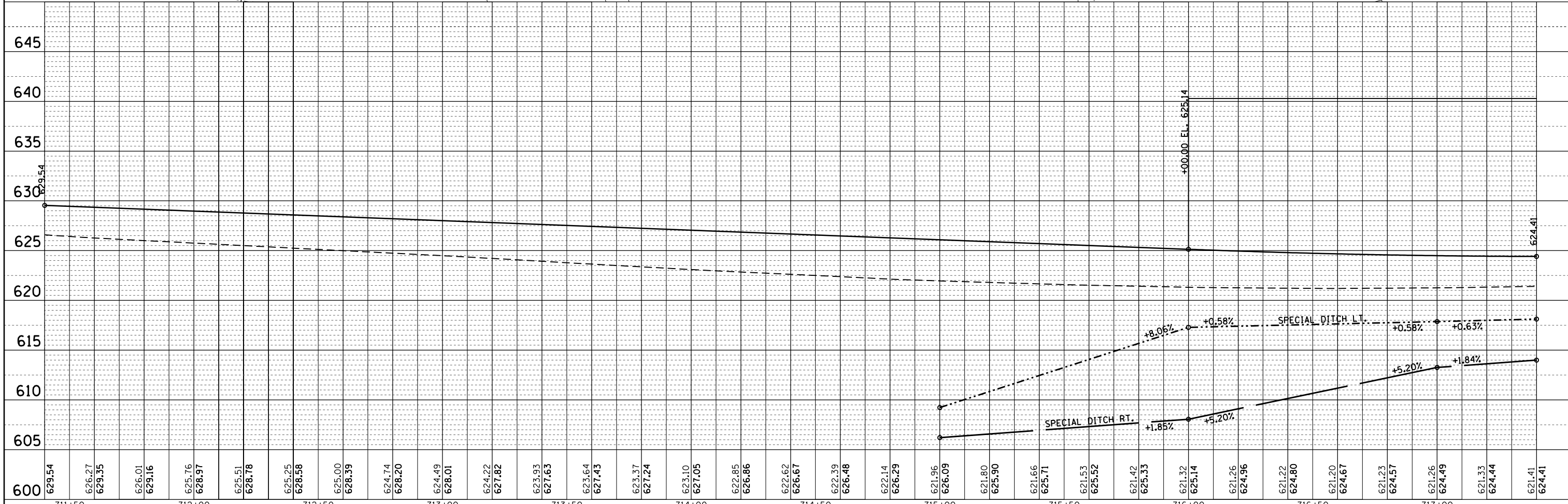
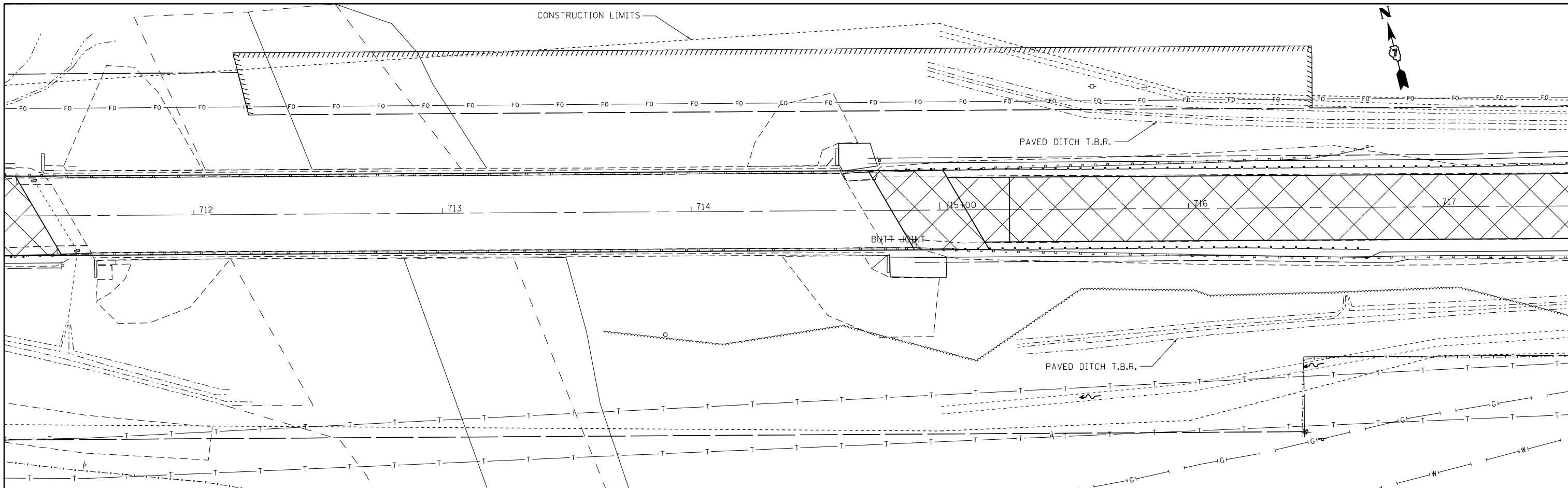
PLAN & PROFILE

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRIB-1)	Coles	60	10
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

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

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
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	FILE NAME		



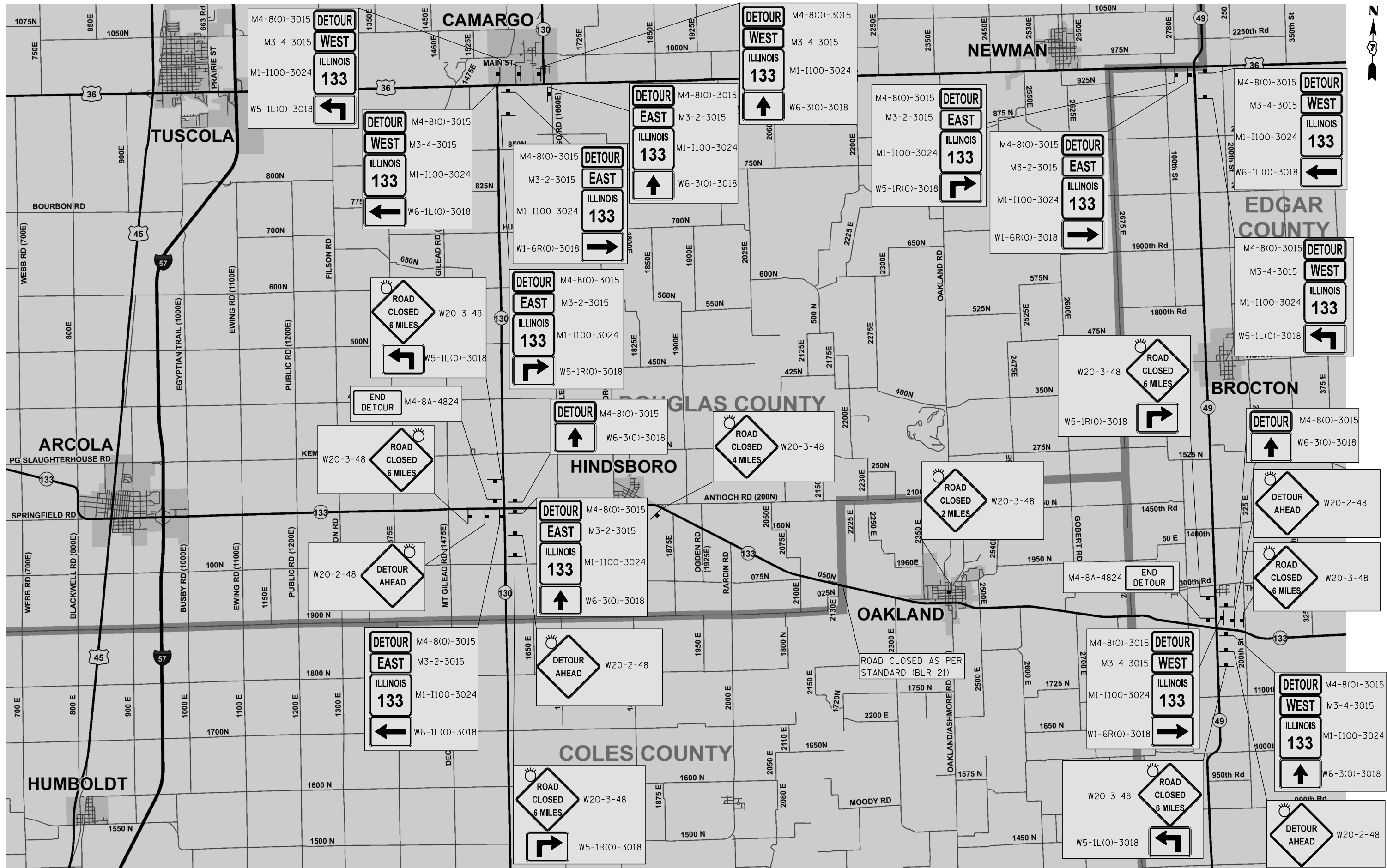
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

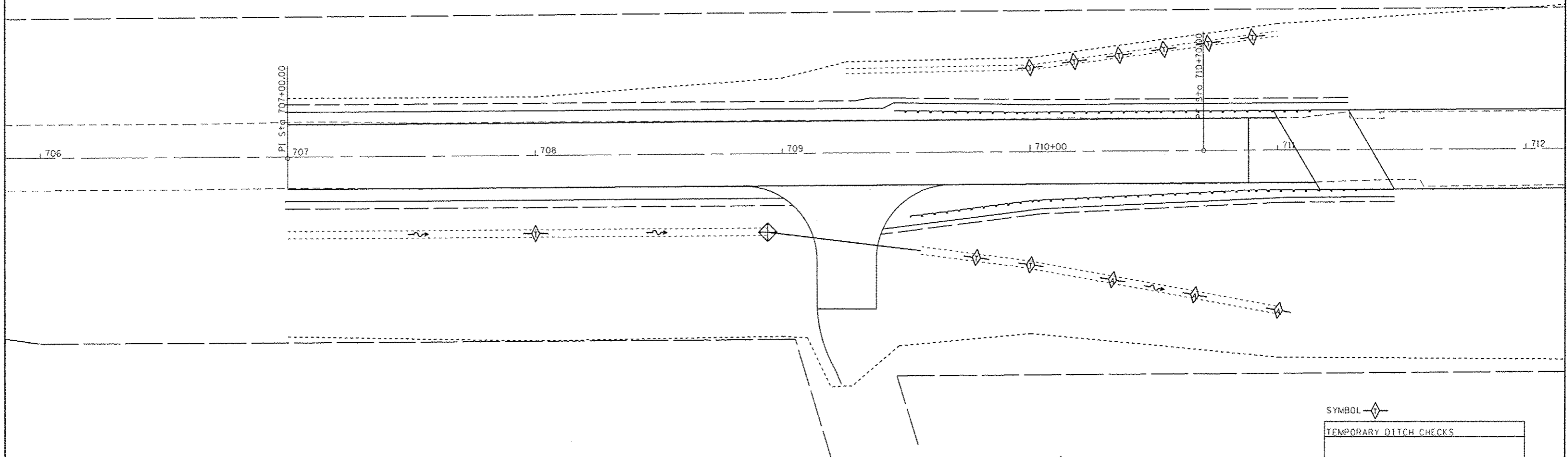
PLAN & PROFILE

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRIB-1	Coles	60	11
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	



FILE NAME =	USER NAME = steffenk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR MAP			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 100.0000' / in.		CHECKED -	REVISED -					CONTRACT NO. 74350				
PLOT DATE = 8/13/2014		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
								SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.



SYMBOL

INLET & PIPE PROTECTION	
RT STA 708+94	1 EACH
TOTAL	1 EACH

SYMBOL

AGGREGATE DITCH CHECKS	
RT STA 710+33	15.3 TON
RT STA 710+66	15.3 TON
RT STA 711+00	15.3 TON
TOTAL	46 TON

SYMBOL

TEMPORARY DITCH CHECKS	
RT STA 708+00	10 FOOT
RT STA 709+78	10 FOOT
RT STA 710+00	10 FOOT
LT STA 710+00	10 FOOT
LT STA 710+18	10 FOOT
LT STA 710+36	10 FOOT
LT STA 710+54	10 FOOT
LT STA 710+72	10 FOOT
LT STA 710+90	10 FOOT
TOTAL	90 FOOT

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL
STA 706+00 TO STA 712+00**

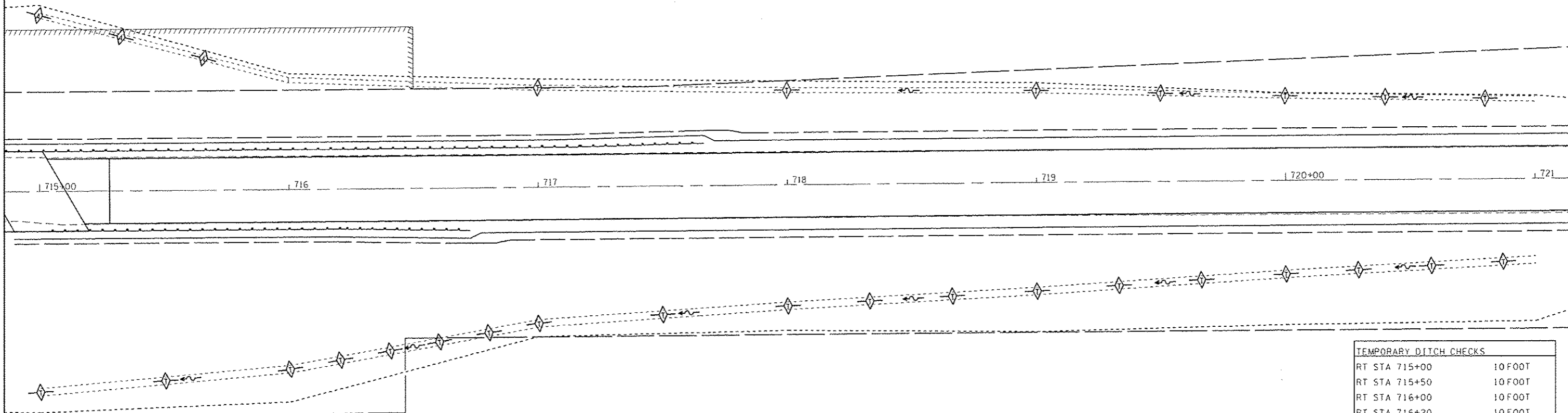
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRB-1)	Coles	60	14
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74350	



SYMBOL

TEMPORARY DITCH CHECKS	
LT STA 716+00	10 FOOT
LT STA 717+00	10 FOOT
LT STA 718+00	10 FOOT
LT STA 719+00	10 FOOT
LT STA 719+50	10 FOOT
LT STA 720+00	10 FOOT
LT STA 720+40	10 FOOT
LT STA 720+80	10 FOOT
TOTAL	80 FOOT



SYMBOL

AGGREGATE DITCH CHECKS	
LT STA 715+00	15.3 TON
LT STA 715+33	15.3 TON
LT STA 715+66	15.3 TON
TOTAL	46 TON

TEMPORARY DITCH CHECKS	
RT STA 715+00	10 FOOT
RT STA 715+50	10 FOOT
RT STA 716+00	10 FOOT
RT STA 716+20	10 FOOT
RT STA 716+40	10 FOOT
RT STA 716+60	10 FOOT
RT STA 716+80	10 FOOT
RT STA 717+00	10 FOOT
RT STA 717+50	10 FOOT
RT STA 718+00	10 FOOT
RT STA 718+33	10 FOOT
RT STA 718+66	10 FOOT
RT STA 719+00	10 FOOT
RT STA 719+33	10 FOOT
RT STA 719+66	10 FOOT
RT STA 720+00	10 FOOT
RT STA 720+29	10 FOOT
RT STA 720+58	10 FOOT
RT STA 720+87	10 FOOT
TOTAL	190 FOOT

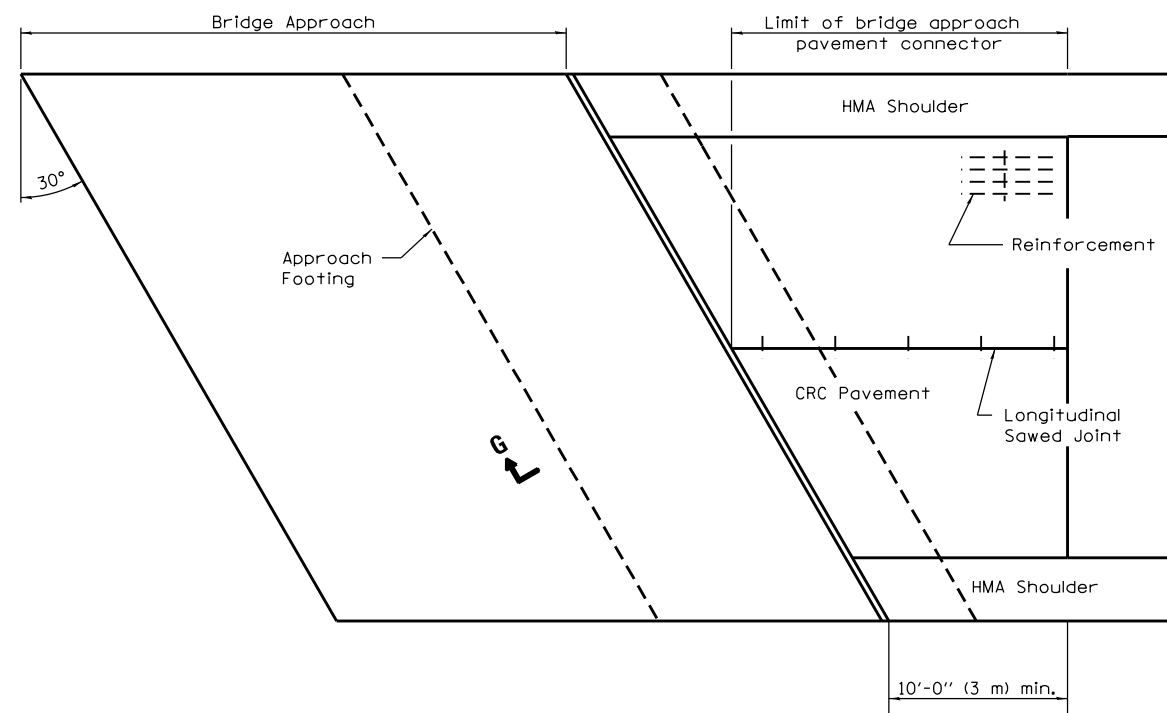
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	PLOT DATE = 8/13/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

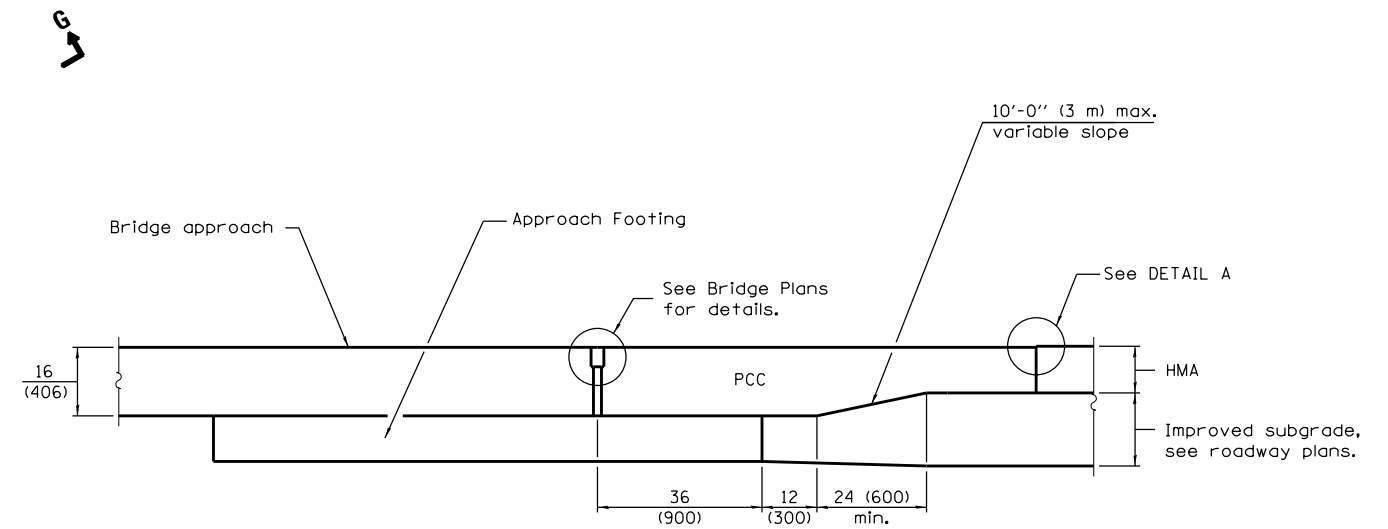
**EROSION CONTROL
STA 715+00 TO STA 721+00**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

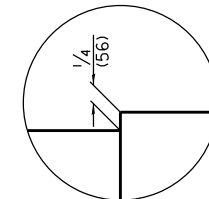
F.A.P. RTE. 749	SECTION (122BRB-1)	COUNTY Colos	TOTAL SHEETS 60	SHEET NO. 15
CONTRACT NO. 74350				ILLINOIS FED. AID PROJECT



PLAN



SECTION G-G



DETAIL A

GENERAL NOTES

See Standard 421001 for reinforcement details not shown. Choose bars based on thickness of thinner section.

See Standard 420001 for joint details not shown.

See plans for details of bridge approach, approach footing and preformed joint seal.

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

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		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH
PAVEMENT CONNECTOR (SPECIAL)**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	Coles	60	17
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

Benchmark: Chiseled "□" on Northwest wingwall, 18' Rt. Sta. 711+59.42, Elev. 626.58.
 Chiseled "□" on Southeast wingwall, 18.50' Rt. Sta. 714+78.50, Elev. 622.32.

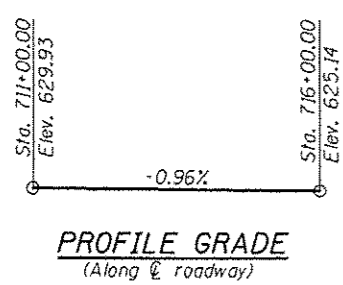
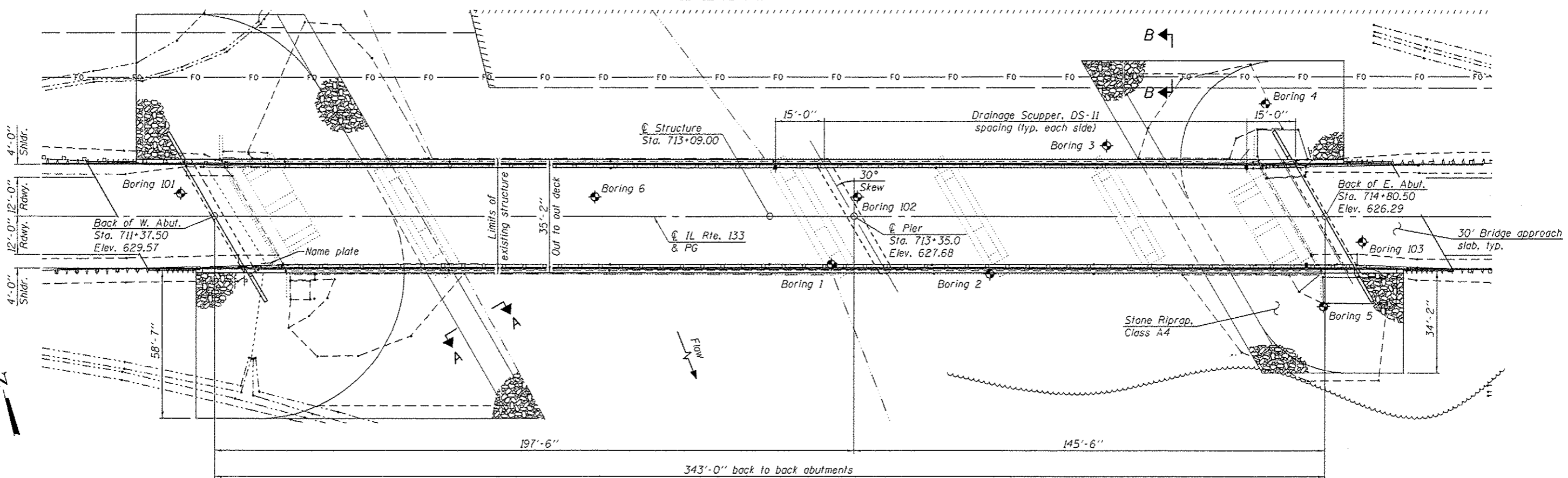
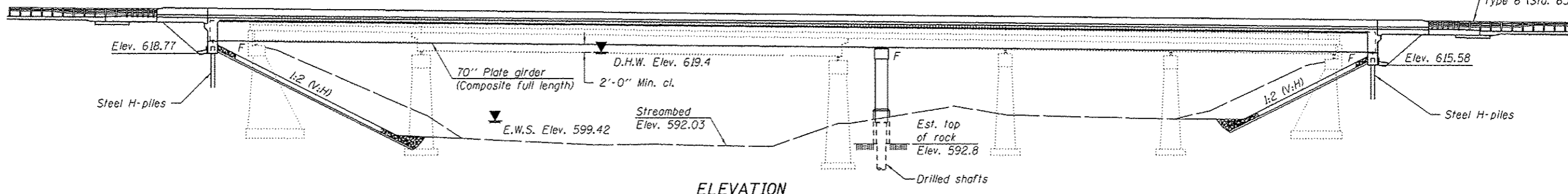
Existing structure: Struct. No. 015-0030 built in 1932 as IL 133 over the Embarras River at Sta. 713+09.57, Sec. (122BR)B-1. The five span structure consisted of one steel truss span at 122'-2 3/4" and 4 R.C. T-beam spans. Abutments and piers supported by untreated timber piles. Superstructure replacement and widening to 36'-0" out to out in 1963 with steel plate girders. Traffic is to be detoured during removal and replacement of existing structure.

No Salvage.

STATION 713+09.00
 BUILT 20 BY
 STATE OF ILLINOIS
 F.A.P. RTE. 749 SEC. (122BR)B-1
 LOADING HL-93
 STRUCTURE NO. 015-0076

NAME PLATE
 See Std. 515001

Traffic Barrier Terminal,
 Type 6 (Std. 63103), typ.



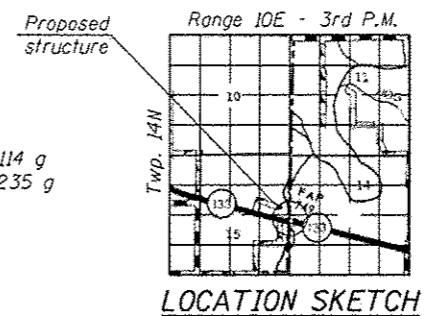
EXPIRES 11-30-2014

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
 FIELD UNITS
 f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)
 fy = 50,000 psi (Structural steel)

SEISMIC DATA
 Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S₀₁) = 0.114 g
 Design Spectral Acceleration at 0.2 sec. (S₀₅) = 0.235 g
 Soil Site Class = C

DESIGN SPECIFICATIONS
 2010 AASHTO LFRD Bridge Design Specifications, 5th Edition with 2010 Interims



GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 133 OVER
EMBARRAS RIVER
 F.A.P. ROUTE 749 SEC. (122BR)B-1
 COLES COUNTY
 STATION 713+09.00
 STRUCTURE NO. 015-0076

DESIGNED - <i>[Signature]</i>	EXAMINED - <i>[Signature]</i>	DATE - 10/16/2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.P. RTE. 749	SECTION (122BR)B-1	COUNTY COLES	TOTAL SHEETS 60	SHEET NO. 18	
CHECKED - <i>[Signature]</i>	PASSED - <i>[Signature]</i>	REVISED		SHEET NO. 1 OF 31 SHEETS	CONTRACT NO. 74350				
DRAWN - h.f. duong	ACTING ENGINEER OF BRIDGE DESIGN	REVISED		ILLINOIS FED. AID PROJECT					
CHECKED - <i>[Signature]</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED							

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.
 Bolts 7/8" φ, holes 15/16" φ, unless otherwise noted.
 Calculated weight of Structural Steel = 720040 lbs (AASHTO M270 Grade 50).
 36830 lbs (AASHTO M270 Grade 36).

No field welding is permitted except as specified in the contract documents.
 Reinforcement bars designated (E) shall be epoxy coated.
 If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all steel surfaces shall be gray, Munsell No. 5B 7/1.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

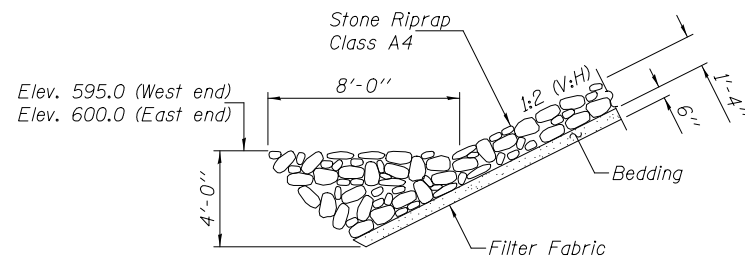
The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

TOTAL BILL OF MATERIAL

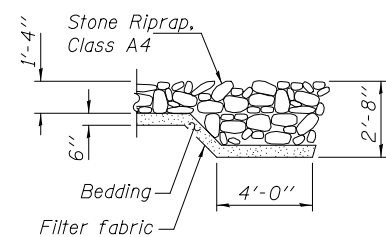
ITEM	UNIT	SUPER	SUB	TOTAL
Granular Backfill for Structures	Cu. Yd.		264	264
Stone Riprap, Class A4	Sq. Yd.		2411	2411
Filter Fabric	Sq. Yd.		2411	2411
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		80	80
Concrete Structures	Cu. Yd.		150.1	150.1
Concrete Superstructure	Cu. Yd.	449.4		449.4
Bridge Deck Grooving	Sq. Yd.	1346		1346
Concrete Encasement	Cu. Yd.		6.6	6.6
Protective Coat	Sq. Yd.	1753		1753
Concrete Wearing Surface, 5"	Sq. Yd.	229.8		229.8
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3006		3006
Reinforcement Bars	Pound		9340	9340
Reinforcement Bars, Epoxy Coated	Pound	104760	21330	126090
Bar Splicers	Each		180	180
Furnishing Steel Piles HP14x73	Foot		325	325
Driving Piles	Foot		325	325
Test Pile Steel HP14x73	Each		2	2
Pile Shoes	Each		12	12
Name Plates	Each	1		1
Drilled Shaft in Soil	Cu. Yd.		18.0	18.0
Drilled Shaft in Rock	Cu. Yd.		22.3	22.3
Preformed Joint Strip Seal	Foot	78.0		78.0
Anchor Bolts 1"	Each		24	24
Anchor Bolts 1 1/4"	Each		12	12
Geocomposite Wall Drain	Sq. Yd.		118	118
Pipe Underdrains for Structures 4"	Foot		174	174
Drainage Scuppers, DS-11	Each	4		4
Precast Bridge Approach Slab	Sq. Ft.	2030		2030
Mechanical Splicers	Each		72	72

INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 General Data
- 3-6 Top of Slab Elevations
- 7 Top of West Approach Slab Elevations
- 8 Top of East Approach Slab Elevations
- 9 Superstructure
- 10 Superstructure Details
- 11 Integral Abutment Diaphragm Details
- 12-15 Bridge Approach Slab Details
- 16 Drainage Scupper, DS-11
- 17 Structural Steel
- 18 Structural Steel Details
- 19 Bearing Details
- 20 West Abutment
- 21 East Abutment
- 22 Pier
- 23 Steel H-Pile Details
- 24 Bar Splicer Assembly & Mechanical Splicer Details
- 25 Concrete Parapet Slipforming Option
- 26-31 Soil Boring Logs



SECTION A-A



SECTION B-B

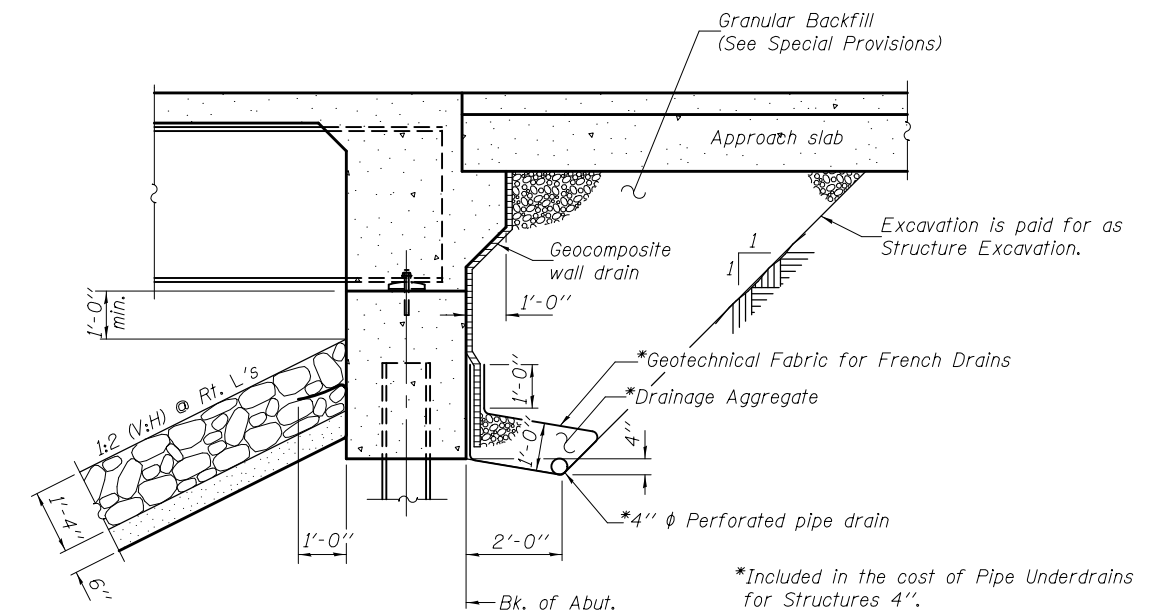
DESIGN SCOUR ELEVATION TABLE

Design scour elevation (ft.)	W. Abut.	Pier	E. Abut.
	618.77	587.50	615.58

WATERWAY INFORMATION

		Existing Low Grade Elev. 621.2 @ Sta. 716+50		Proposed Low Grade Elev. 624.4 @ Sta. 717+50					
Flood	Freq. Yr.	Q	Opening	Nat. H.W.E.	Head - Ft.	Headwater El.			
		C.F.S.	Sq. Ft.	Exist. Prop.	Exist. Prop.	Exist. Prop.			
Design	10	16596	3573	4424	616.0	0.1	0.0	616.1	616.0
Base	50	16767	4198	5361	619.4	0.2	0.1	619.6	619.5
Overtopping	100	18978	4300	5644	620.7	0.4	0.2	621.1	620.9
Max. Calc.	100	18978	4300	—	620.7	0.4	—	621.1	—
	500	24470	4310	5796	623.4	0.5	0.3	623.9	623.7

10 year velocity through existing bridge = 4.6 ft/s
 10 year velocity through proposed bridge = 3.8 ft/s



SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

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 60110).

DESIGNED - Justin T. Belue
 CHECKED - David H. Richter
 DRAWN - h.t. duong
 CHECKED - JTB/DHR

EXAMINED - *Joanne F. [Signature]*
 PASSED - *Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

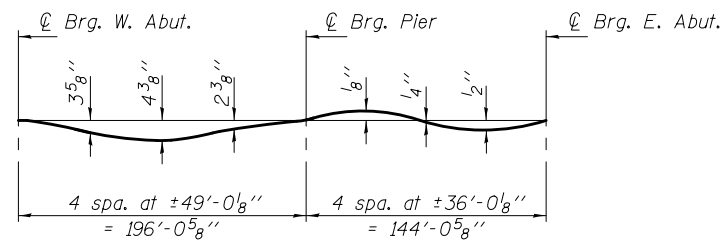
DATE - OCTOBER 16, 2014
 REVISED
 REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
 STRUCTURE NO. 015-0076**

SHEET NO. 2 OF 31 SHEETS

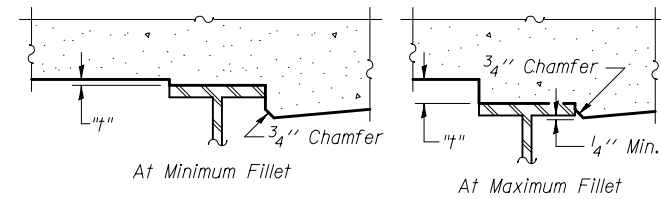
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	19
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				



DEAD LOAD DEFLECTION DIAGRAM

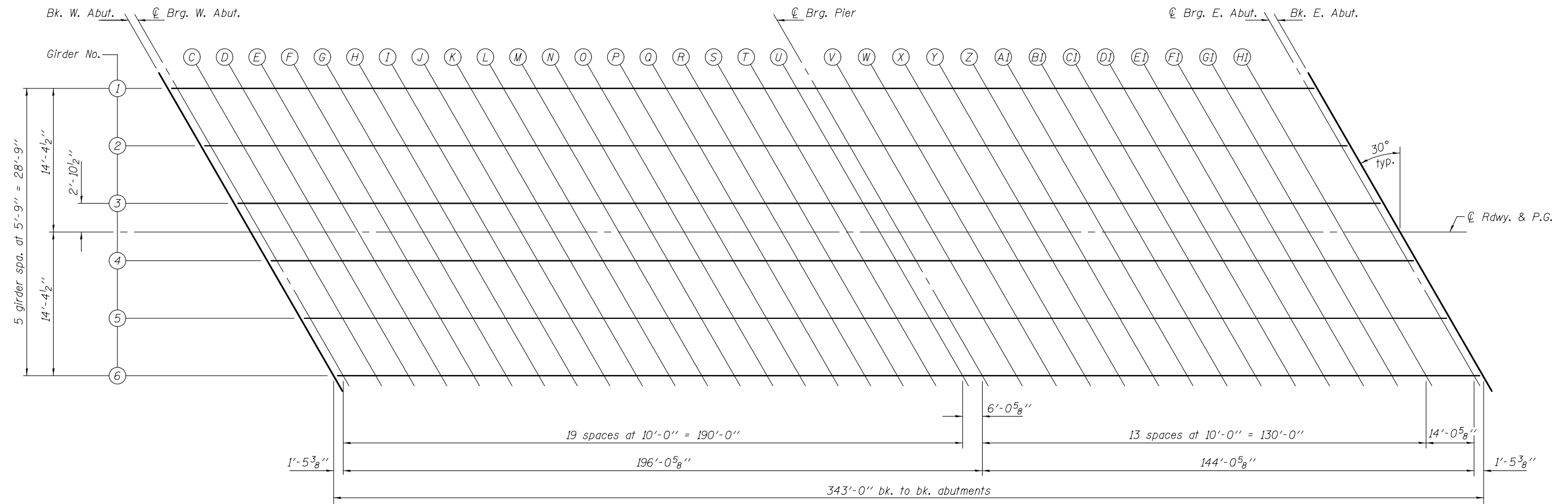
(Includes weight of concrete only.)

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 sheets 4 thru 6 of 31.



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 sheets 4 thru 6 of 31, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - OCTOBER 16, 2014
CHECKED - David H. Richter	PASSED - <i>Carl [Signature]</i>	REVISED
DRAWN - h.t. duong		REVISED
CHECKED - JTB/DHR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 015-0076

SHEET NO. 3 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	20
CONTRACT NO. 74350				

ILLINOIS FED. AID PROJECT

GIRDER 1

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. W. Abut., C Brg. W. Abut., C-H, I-U, C Brg. Pier, V-HI, C Brg. E. Abut., and Bk. E. Abut.

GIRDER 2

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. W. Abut., C Brg. W. Abut., C-U, C Brg. Pier, V-HI, C Brg. E. Abut., and Bk. E. Abut.

GIRDER 3

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. W. Abut., C Brg. W. Abut., C-U, C Brg. Pier, V-HI, C Brg. E. Abut., and Bk. E. Abut.

DESIGNED - Justin T. Belue
CHECKED - David H. Richter
DRAWN - h.t. duong
CHECKED - JTB/DHR

EXAMINED - [Signature]
PASSED - [Signature]

DATE - OCTOBER 16, 2014
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 015-0076
SHEET NO. 4 OF 31 SHEETS

F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
749 (122BR)B-1 COLES 60 21
CONTRACT NO. 74350
ILLINOIS FED. AID PROJECT

☉ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	711+37.50	0.00	629.57	629.57
☉ Brg. W. Abut.	711+38.95	0.00	629.56	629.56
C	711+48.95	0.00	629.46	629.52
D	711+58.95	0.00	629.37	629.49
E	711+68.95	0.00	629.27	629.45
F	711+78.95	0.00	629.18	629.42
G	711+88.95	0.00	629.08	629.38
H	711+98.95	0.00	628.98	629.30
I	712+08.95	0.00	628.89	629.22
J	712+18.95	0.00	628.79	629.14
K	712+28.95	0.00	628.70	629.05
L	712+38.95	0.00	628.60	628.96
M	712+48.95	0.00	628.51	628.83
N	712+58.95	0.00	628.41	628.70
O	712+68.95	0.00	628.31	628.57
P	712+78.95	0.00	628.22	628.44
Q	712+88.95	0.00	628.12	628.31
R	712+98.95	0.00	628.03	628.17
S	713+08.95	0.00	627.93	628.04
T	713+18.95	0.00	627.84	627.90
U	713+28.95	0.00	627.74	627.76
☉ Brg. Pier	713+35.00	0.00	627.68	627.68
V	713+45.00	0.00	627.59	627.58
W	713+55.00	0.00	627.49	627.48
X	713+65.00	0.00	627.40	627.38
Y	713+75.00	0.00	627.30	627.29
Z	713+85.00	0.00	627.20	627.20
A1	713+95.00	0.00	627.11	627.12
B1	714+05.00	0.00	627.01	627.04
C1	714+15.00	0.00	626.92	626.95
D1	714+25.00	0.00	626.82	626.85
E1	714+35.00	0.00	626.73	626.76
F1	714+45.00	0.00	626.63	626.67
G1	714+55.00	0.00	626.54	626.56
H1	714+65.00	0.00	626.44	626.45
☉ Brg. E. Abut.	714+79.05	0.00	626.31	626.31
Bk. E. Abut.	714+80.50	0.00	626.29	626.29

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	711+39.16	2.88	629.51	629.51
☉ Brg. W. Abut.	711+40.61	2.88	629.50	629.50
C	711+50.61	2.88	629.40	629.46
D	711+60.61	2.88	629.31	629.43
E	711+70.61	2.88	629.21	629.39
F	711+80.61	2.88	629.11	629.36
G	711+90.61	2.88	629.02	629.32
H	712+00.61	2.88	628.92	629.24
I	712+10.61	2.88	628.83	629.16
J	712+20.61	2.88	628.73	629.07
K	712+30.61	2.88	628.64	628.99
L	712+40.61	2.88	628.54	628.90
M	712+50.61	2.88	628.44	628.77
N	712+60.61	2.88	628.35	628.64
O	712+70.61	2.88	628.25	628.51
P	712+80.61	2.88	628.16	628.38
Q	712+90.61	2.88	628.06	628.25
R	713+00.61	2.88	627.97	628.11
S	713+10.61	2.88	627.87	627.98
T	713+20.61	2.88	627.78	627.84
U	713+30.61	2.88	627.68	627.70
☉ Brg. Pier	713+36.66	2.88	627.62	627.62
V	713+46.66	2.88	627.53	627.52
W	713+56.66	2.88	627.43	627.42
X	713+66.66	2.88	627.34	627.32
Y	713+76.66	2.88	627.24	627.23
Z	713+86.66	2.88	627.14	627.14
A1	713+96.66	2.88	627.05	627.06
B1	714+06.66	2.88	626.95	626.97
C1	714+16.66	2.88	626.86	626.88
D1	714+26.66	2.88	626.76	626.79
E1	714+36.66	2.88	626.67	626.70
F1	714+46.66	2.88	626.57	626.61
G1	714+56.66	2.88	626.47	626.50
H1	714+66.66	2.88	626.38	626.39
☉ Brg. E. Abut.	714+80.71	2.88	626.24	626.24
Bk. E. Abut.	714+82.16	2.88	626.23	626.23

DESIGNED - Justin T. Belue
 CHECKED - David H. Richter
 DRAWN - h.t. duong
 CHECKED - JTB/DHR

EXAMINED  DATE - OCTOBER 16, 2014
 PASSED  ACTING ENGINEER OF BRIDGES AND STRUCTURES
 REVISED
 REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 015-0076**
 SHEET NO. 5 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	22
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	711+42.48	8.63	629.39	629.39
⊘ Brg. W. Abut.	711+43.93	8.63	629.38	629.38
C	711+53.93	8.63	629.28	629.34
D	711+63.93	8.63	629.18	629.31
E	711+73.93	8.63	629.09	629.27
F	711+83.93	8.63	628.99	629.24
G	711+93.93	8.63	628.90	629.20
H	712+03.93	8.63	628.80	629.12
I	712+13.93	8.63	628.71	629.03
J	712+23.93	8.63	628.61	628.95
K	712+33.93	8.63	628.51	628.87
L	712+43.93	8.63	628.42	628.78
M	712+53.93	8.63	628.32	628.65
N	712+63.93	8.63	628.23	628.52
O	712+73.93	8.63	628.13	628.39
P	712+83.93	8.63	628.04	628.26
Q	712+93.93	8.63	627.94	628.13
R	713+03.93	8.63	627.85	627.99
S	713+13.93	8.63	627.75	627.85
T	713+23.93	8.63	627.65	627.72
U	713+33.93	8.63	627.56	627.58
⊘ Brg. Pier	713+39.98	8.63	627.50	627.50
V	713+49.98	8.63	627.40	627.40
W	713+59.98	8.63	627.31	627.30
X	713+69.98	8.63	627.21	627.20
Y	713+79.98	8.63	627.12	627.11
Z	713+89.98	8.63	627.02	627.02
A1	713+99.98	8.63	626.93	626.94
B1	714+09.98	8.63	626.83	626.85
C1	714+19.98	8.63	626.74	626.76
D1	714+29.98	8.63	626.64	626.67
E1	714+39.98	8.63	626.54	626.58
F1	714+49.98	8.63	626.45	626.48
G1	714+59.98	8.63	626.35	626.38
H1	714+69.98	8.63	626.26	626.27
⊘ Brg. E. Abut.	714+84.03	8.63	626.12	626.12
Bk. E. Abut.	714+85.48	8.63	626.11	626.11

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	711+45.80	14.38	629.26	629.26
⊘ Brg. W. Abut.	711+47.25	14.38	629.24	629.24
C	711+57.25	14.38	629.15	629.21
D	711+67.25	14.38	629.05	629.17
E	711+77.25	14.38	628.95	629.14
F	711+87.25	14.38	628.86	629.10
G	711+97.25	14.38	628.76	629.06
H	712+07.25	14.38	628.67	628.98
I	712+17.25	14.38	628.57	628.90
J	712+27.25	14.38	628.48	628.82
K	712+37.25	14.38	628.38	628.74
L	712+47.25	14.38	628.28	628.65
M	712+57.25	14.38	628.19	628.52
N	712+67.25	14.38	628.09	628.39
O	712+77.25	14.38	628.00	628.26
P	712+87.25	14.38	627.90	628.12
Q	712+97.25	14.38	627.81	627.99
R	713+07.25	14.38	627.71	627.86
S	713+17.25	14.38	627.62	627.72
T	713+27.25	14.38	627.52	627.58
U	713+37.25	14.38	627.42	627.45
⊘ Brg. Pier	713+43.30	14.38	627.37	627.37
V	713+53.30	14.38	627.27	627.27
W	713+63.30	14.38	627.18	627.17
X	713+73.30	14.38	627.08	627.07
Y	713+83.30	14.38	626.98	626.97
Z	713+93.30	14.38	626.89	626.89
A1	714+03.30	14.38	626.79	626.80
B1	714+13.30	14.38	626.70	626.72
C1	714+23.30	14.38	626.60	626.63
D1	714+33.30	14.38	626.51	626.54
E1	714+43.30	14.38	626.41	626.45
F1	714+53.30	14.38	626.31	626.35
G1	714+63.30	14.38	626.22	626.24
H1	714+73.30	14.38	626.12	626.14
⊘ Brg. E. Abut.	714+87.35	14.38	625.99	625.99
Bk. E. Abut.	714+88.80	14.38	625.98	625.98

DESIGNED - Justin T. Belue
 CHECKED - David H. Richter
 DRAWN - h.t. duong
 CHECKED - JTB/DHR

EXAMINED *Joanne F. [Signature]* DATE - OCTOBER 16, 2014
 ACTING ENGINEER OF BRIDGE DESIGN
 PASSED *Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES
 REVISED
 REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 015-0076**

SHEET NO. 6 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	23
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
West end of W. Appr. Slab	710+98.26	-16.00	629.68
A	711+08.26	-16.00	629.58
B	711+18.26	-16.00	629.48
East end of W. Appr. Slab	711+28.26	-16.00	629.39

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West end of W. Appr. Slab	711+00.57	-12.00	629.74
A	711+10.57	-12.00	629.64
B	711+20.57	-12.00	629.55
East end of W. Appr. Slab	711+30.57	-12.00	629.45

☉ ROADWAY & PROFILE GRADE

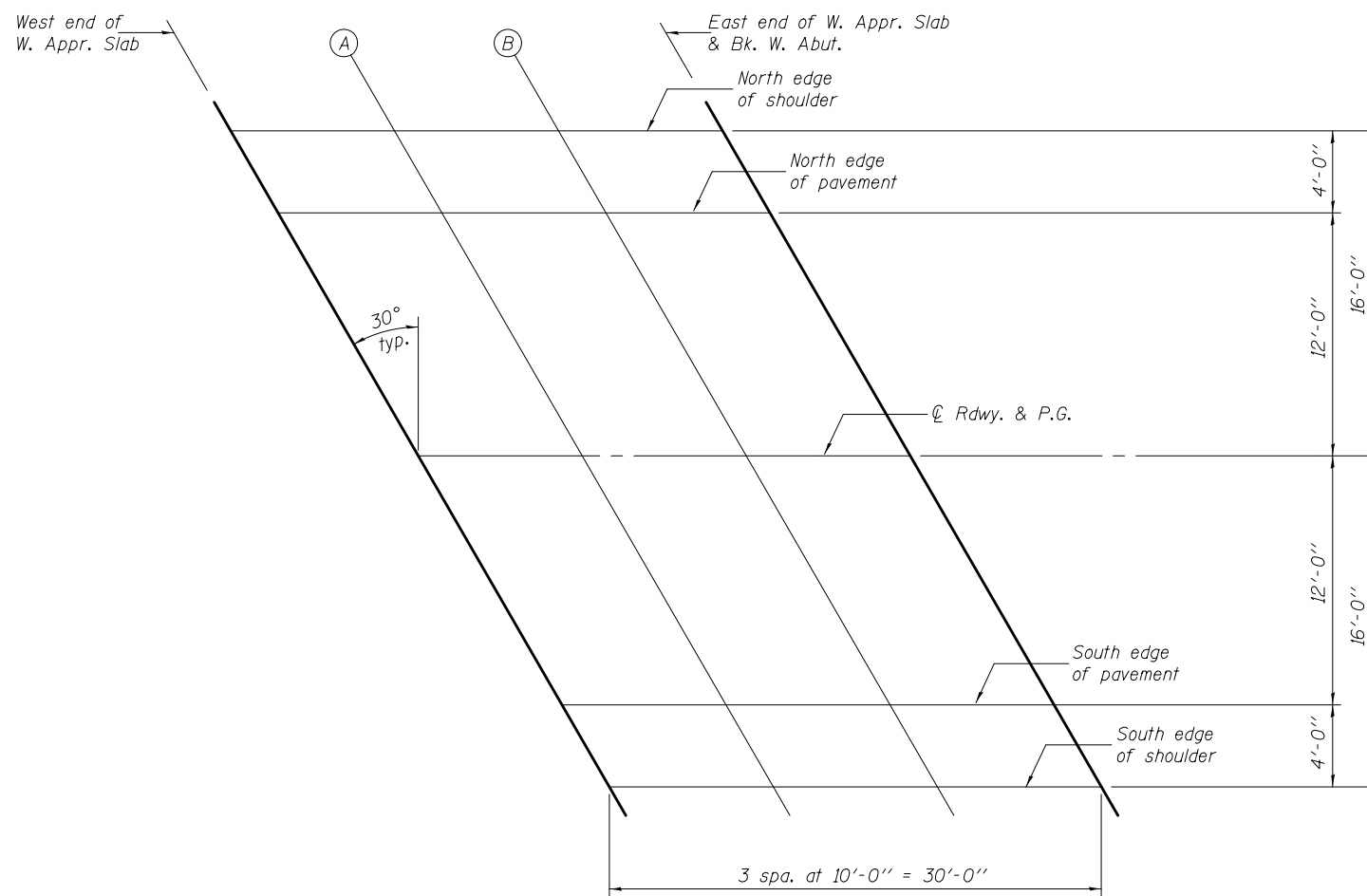
Location	Station	Offset	Theoretical Grade Elevations
West end of W. Appr. Slab	711+07.50	0.00	629.86
A	711+17.50	0.00	629.76
B	711+27.50	0.00	629.67
East end of W. Appr. Slab	711+37.50	0.00	629.57

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West end of W. Appr. Slab	711+14.43	12.00	629.60
A	711+24.43	12.00	629.51
B	711+34.43	12.00	629.41
East end of W. Appr. Slab	711+44.43	12.00	629.32

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
West end of W. Appr. Slab	711+16.74	16.00	629.50
A	711+26.74	16.00	629.40
B	711+36.74	16.00	629.31
East end of W. Appr. Slab	711+46.74	16.00	629.21



PLAN

DESIGNED - Justin T. Belue
 CHECKED - David H. Richter
 DRAWN - h.t. duong
 CHECKED - JTB/DHR

EXAMINED *Joanne F. [Signature]*
 ACTING ENGINEER OF BRIDGE DESIGN
 PASSED *Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 16, 2014
 REVISED
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
 STRUCTURE NO. 015-0076

SHEET NO. 7 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	24
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF SHOULDER

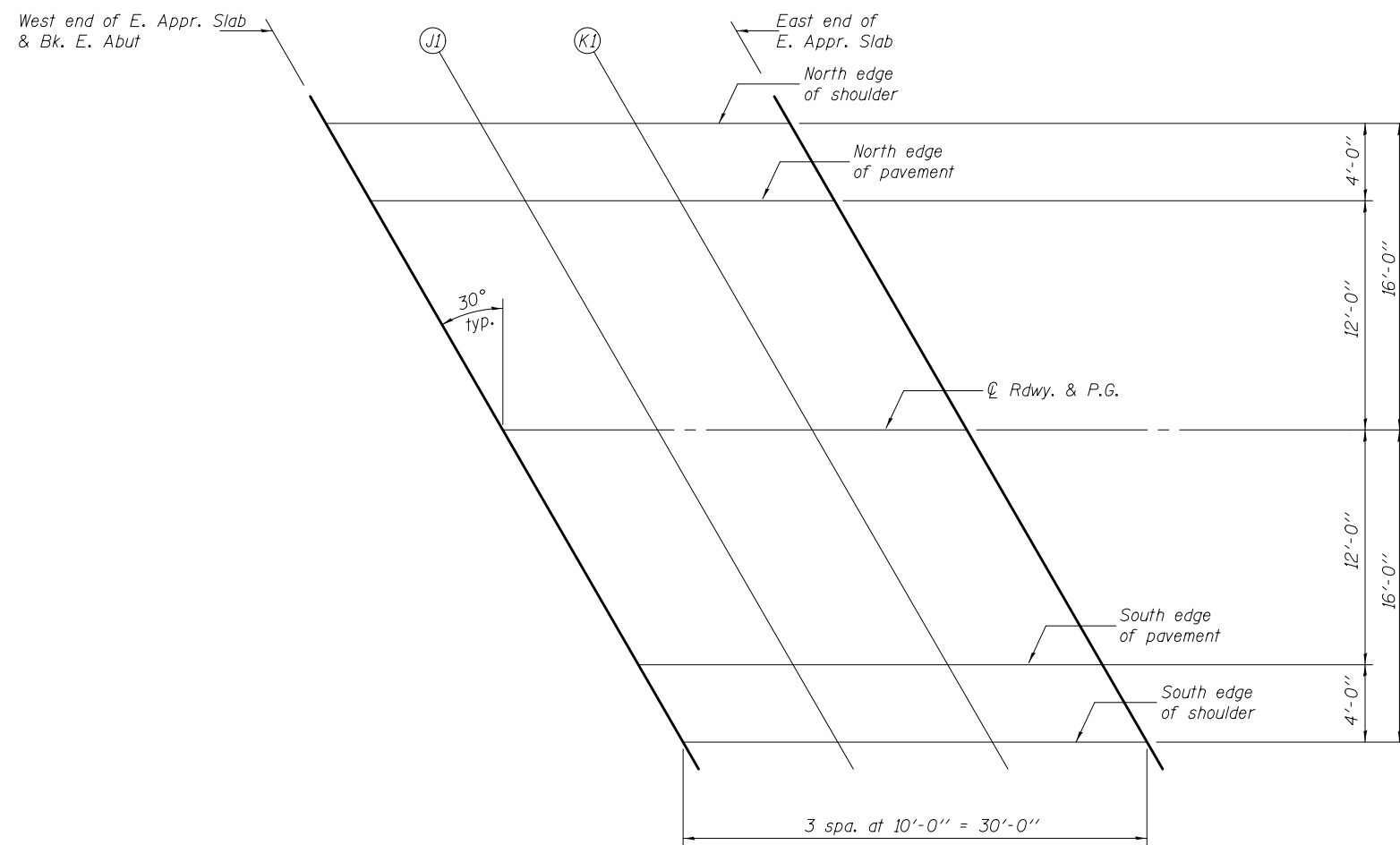
Location	Station	Offset	Theoretical Grade Elevations
West end of E. Appr. Slab	714+71.26	-16.00	626.11
J1	714+81.26	-16.00	626.01
K1	714+91.26	-16.00	625.92
East end of E. Appr. Slab	715+01.26	-16.00	625.82

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West end of E. Appr. Slab	714+73.57	-12.00	626.17
J1	714+83.57	-12.00	626.07
K1	714+93.57	-12.00	625.98
East end of E. Appr. Slab	715+03.57	-12.00	625.88

☉ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
West end of E. Appr. Slab	714+80.50	0.00	626.29
J1	714+90.50	0.00	626.20
K1	715+00.50	0.00	626.10
East end of E. Appr. Slab	715+10.50	0.00	626.00



SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
West end of E. Appr. Slab	714+87.43	12.00	626.04
J1	714+97.43	12.00	625.94
K1	715+07.43	12.00	625.85
East end of E. Appr. Slab	715+17.43	12.00	625.75

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
West end of E. Appr. Slab	714+89.74	16.00	625.93
J1	714+99.74	16.00	625.84
K1	715+09.74	16.00	625.74
East end of E. Appr. Slab	715+19.74	16.00	625.65

PLAN

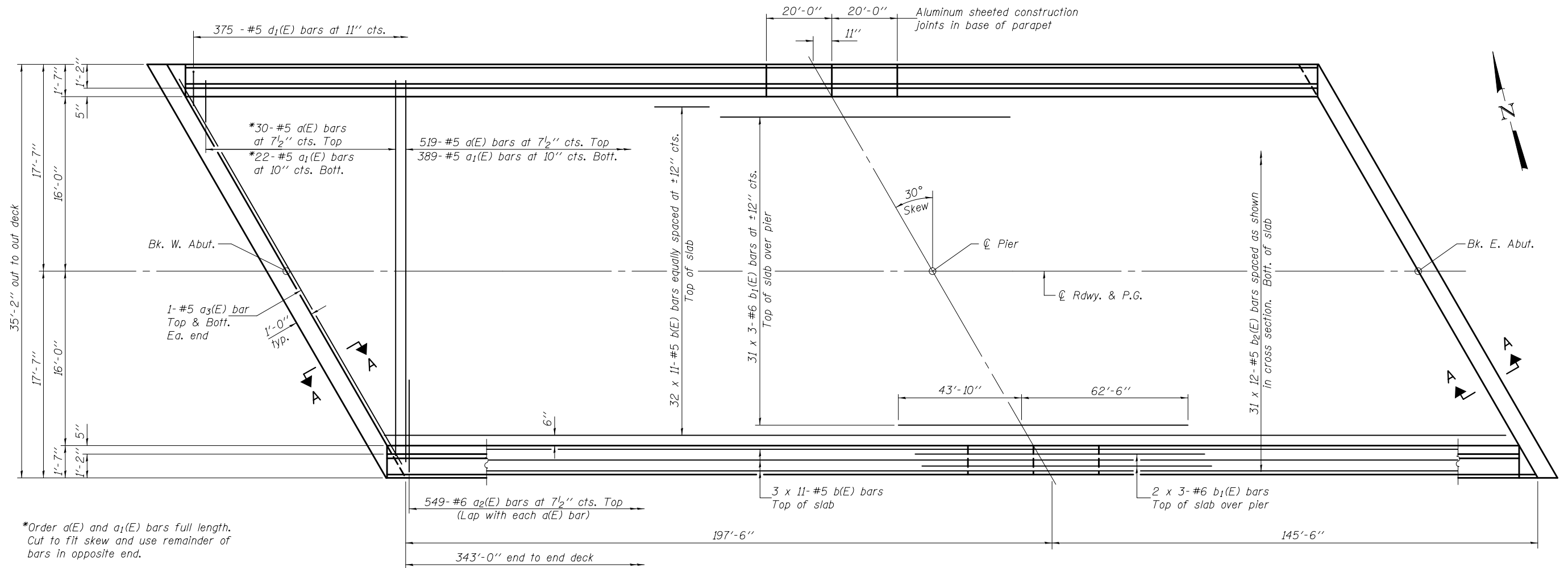
DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - OCTOBER 16, 2014
CHECKED - David H. Richter	PASSED - <i>Carl [Signature]</i>	REVISED
DRAWN - h.t. duong	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED
CHECKED - JTB/DHR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 015-0076

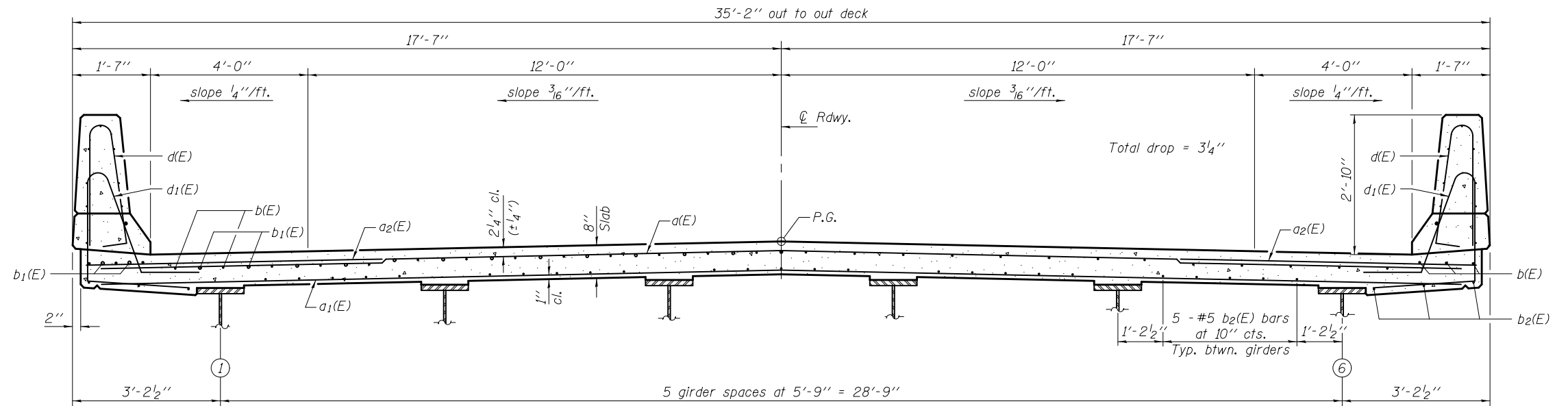
SHEET NO. 8 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	25
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				



PLAN

*Order a(E) and a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



CROSS SECTION
(Looking East)

Notes:
See sheet 10 of 31 for superstructure details and Bill of Material.
Bars indicated thus 31 x 3-#5 etc. indicates 31 lines of bars with 3 lengths per line.
See sheet 10 of 31 for parapet reinforcement.

MIN. BAR LAPS

#5 bar = 2'-7"
#6 bar = 3'-1"

DESIGNED - Justin T. Belue
CHECKED - David H. Richter
DRAWN - h.t. duong
CHECKED - JTB/DHR

EXAMINED
PASSED
ACTING ENGINEER OF BRIDGE DESIGN
ACTING ENGINEER OF BRIDGES AND STRUCTURES

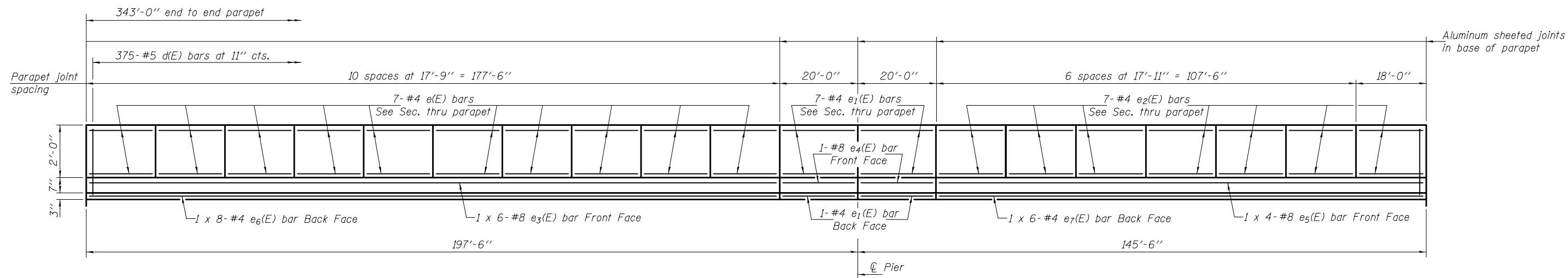
DATE - OCTOBER 16, 2014
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

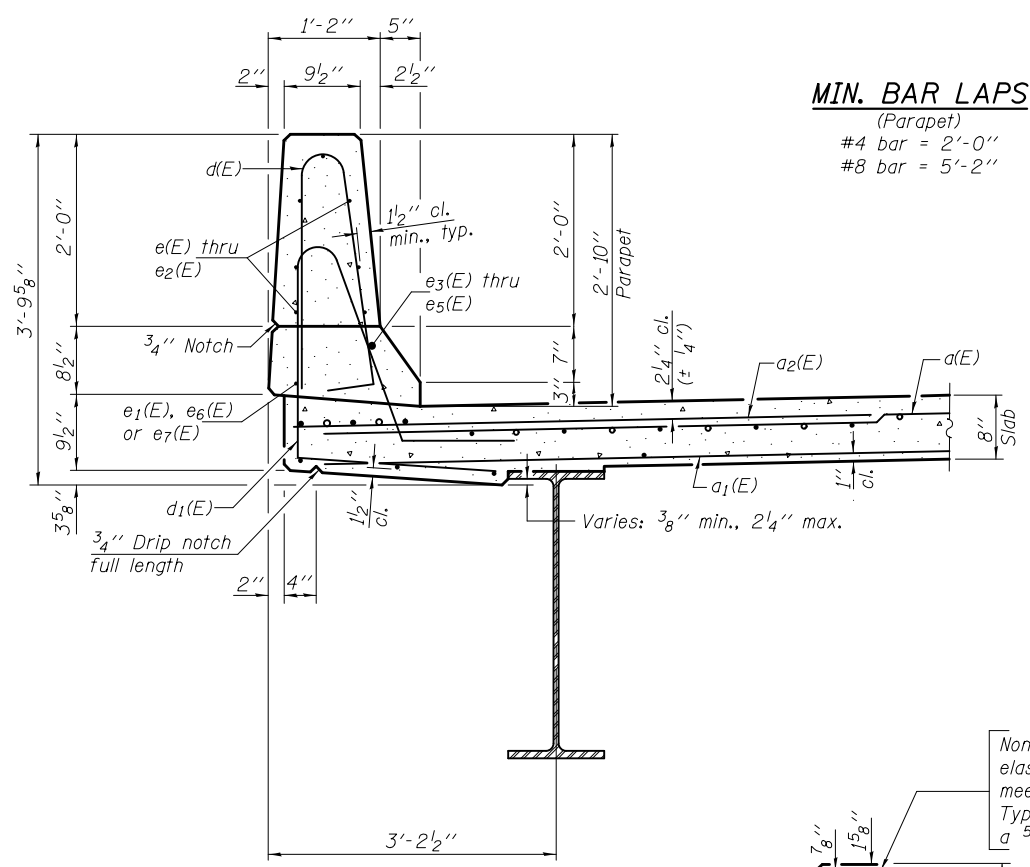
SUPERSTRUCTURE
STRUCTURE NO. 015-0076

SHEET NO. 9 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	26
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

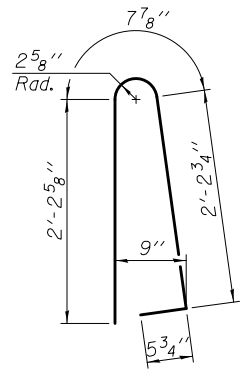


INSIDE ELEVATION OF NORTH PARAPET
(Looking North; South parapet similar)

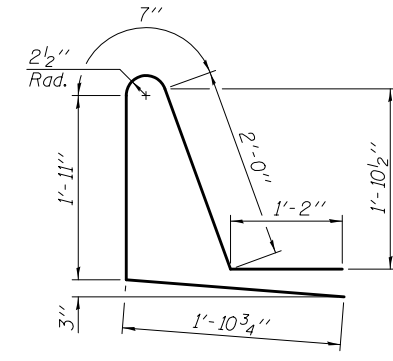


SECTION THRU PARAPET

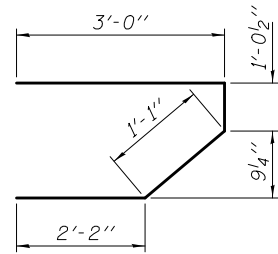
MIN. BAR LAPS
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



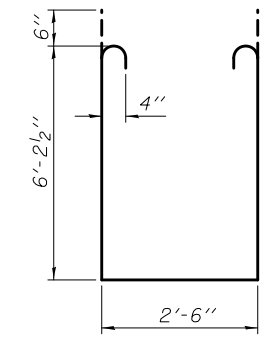
BAR d(E)



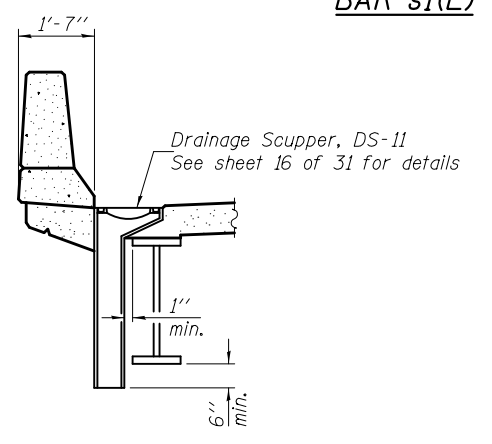
BAR d1(E)



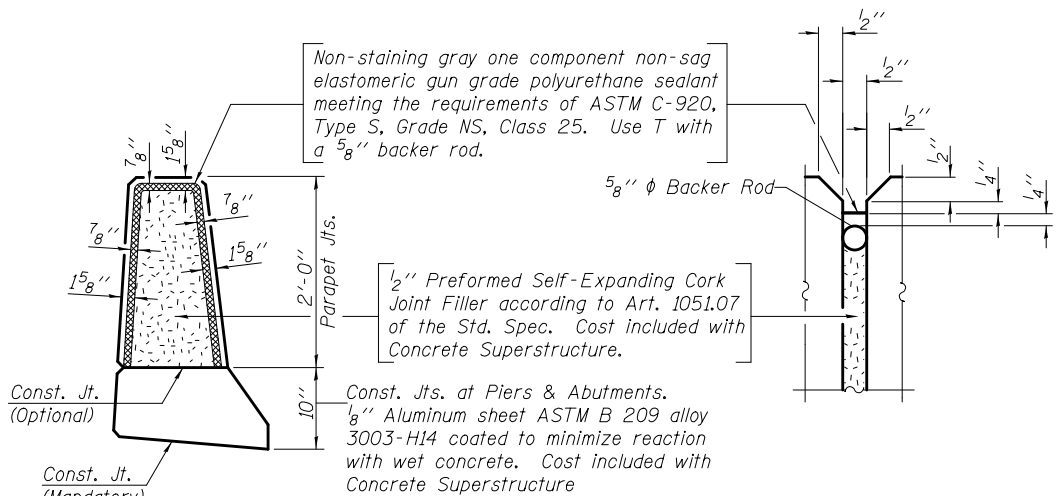
BAR s(E)



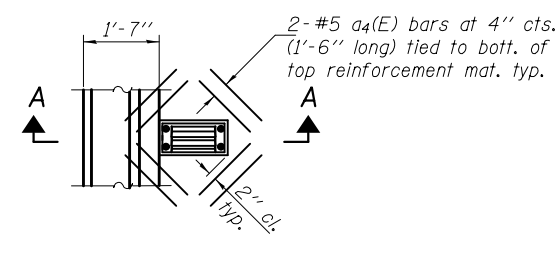
BAR s1(E)



SECTION A-A



PARAPET JOINT DETAILS



PLAN

Note: Cut longitudinal reinforcement to clear drainage scuppers.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	549	#5	34'-6"	—
a1(E)	411	#5	33'-6"	—
a2(E)	1098	#6	6'-6"	—
a3(E)	4	#5	39'-10"	—
a4(E)	32	#5	1'-6"	—
b(E)	418	#5	33'-6"	—
b1(E)	105	#6	37'-6"	—
b2(E)	372	#5	31'-0"	—
d(E)	750	#5	5'-7"	⌒
d1(E)	750	#5	7'-7"	⌒
e(E)	140	#4	17'-6"	—
e1(E)	32	#4	19'-9"	—
e2(E)	98	#4	17'-8"	—
e3(E)	12	#8	33'-11"	—
e4(E)	4	#8	19'-9"	—
e5(E)	8	#8	35'-3"	—
e6(E)	16	#4	23'-11"	—
e7(E)	12	#4	22'-7"	—
m(E)	10	#6	39'-11"	—
m1(E)	8	#6	9'-2"	—
m2(E)	16	#6	10'-0"	—
m3(E)	10	#6	6'-2"	—
m4(E)	4	#6	3'-3"	—
s(E)	72	#5	7'-4"	⌒
s1(E)	62	#4	15'-11"	⌒
Reinforcement Bars, Epoxy Coated		Pound	95870	
Concrete Superstructure		Cu. Yds.	442.7	

Bars indicated thus 1 x 6-#5 etc. indicates 1 line of bars with 6 lengths per line.

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DRAWN - h.t. duong		REVISED
CHECKED - JTB/DHR		

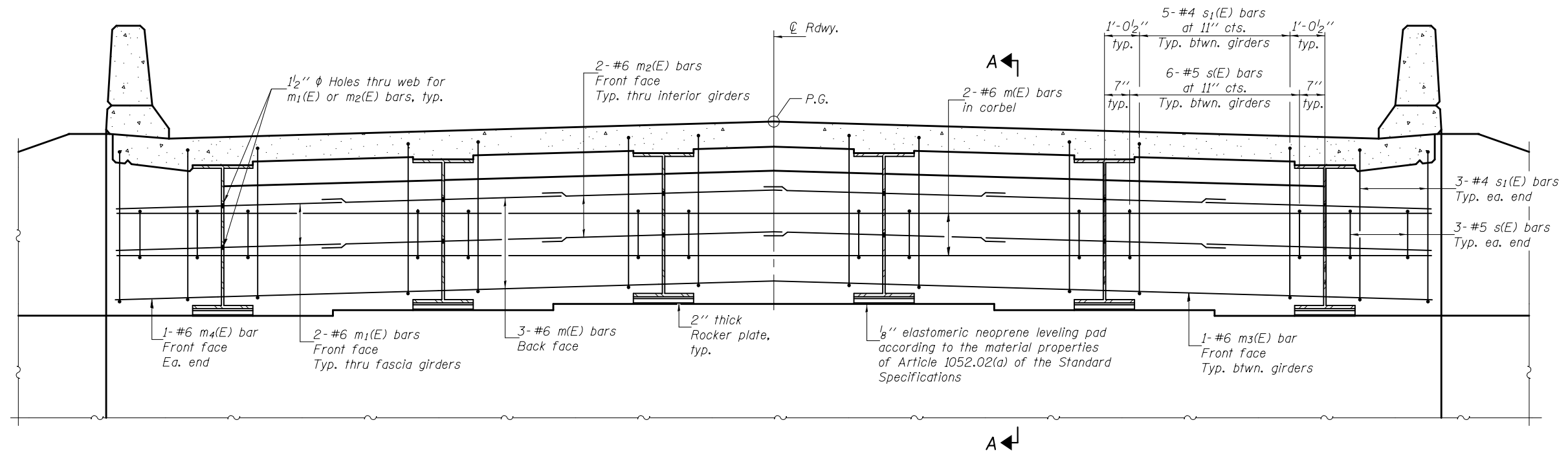
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 015-0076

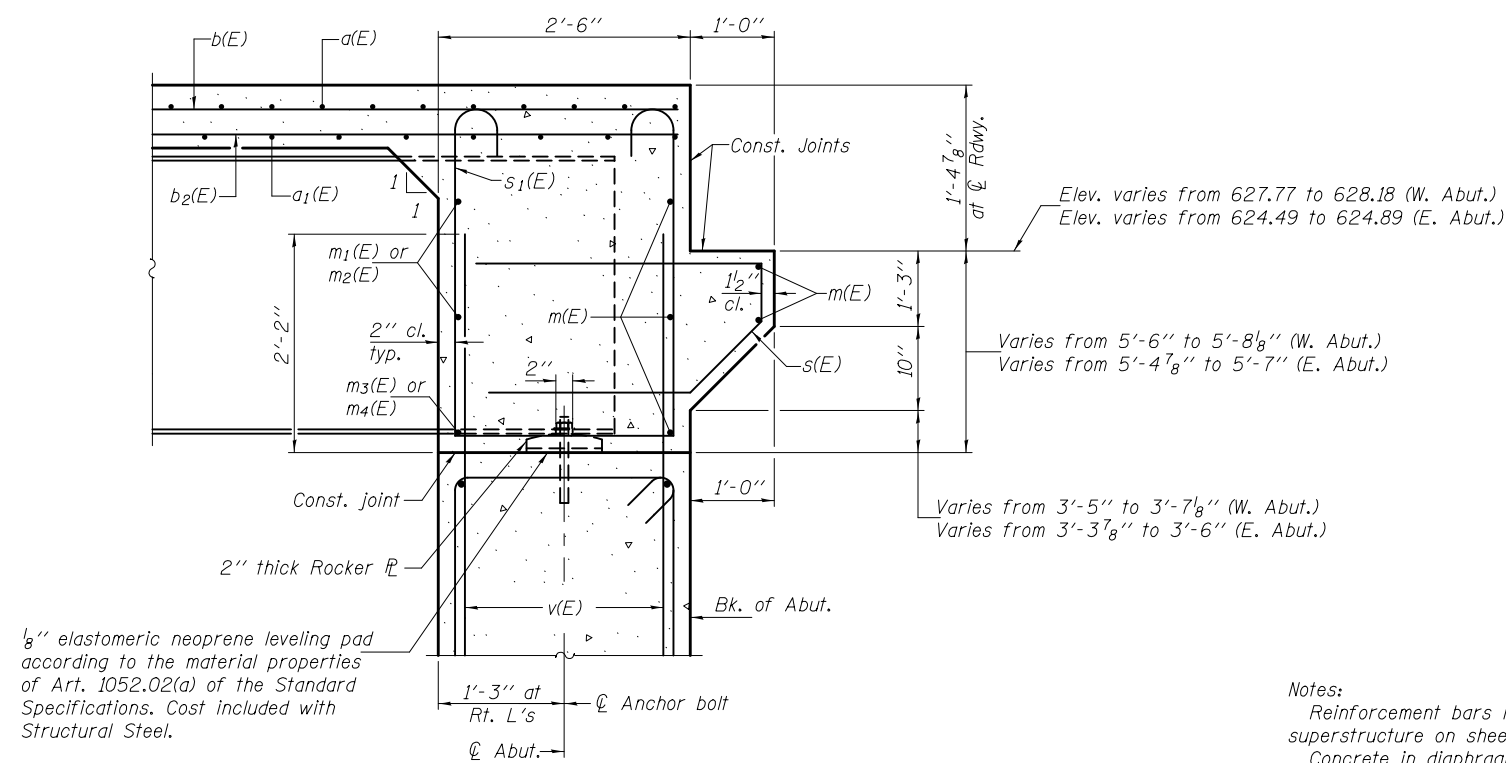
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRIB-1)	COLES	60	27
CONTRACT NO. 74350				

SHEET NO. 10 OF 31 SHEETS

ILLINOIS FED. AID PROJECT

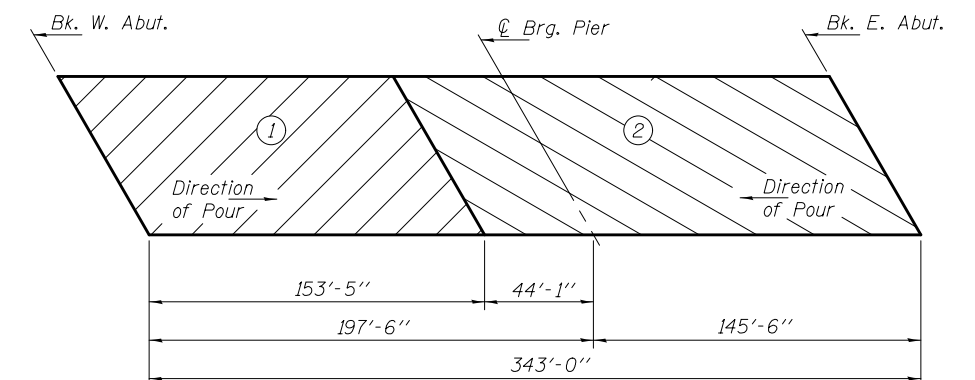


DIAPHRAGM ELEVATION AT EAST ABUTMENT
(Looking East - West abutment similar)



SECTION A-A

Dimensions at right angles to abutment, except as shown.



DECK POURING SEQUENCE

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 31.
Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 31.
For details of bars s(E) & s1(E) see sheet 10 of 31.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP
#6 bar = 3'-4"

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DRAWN - h.t. duong	
CHECKED - JTB/DHR	

DATE - OCTOBER 16, 2014
REVISIONS
REVISIONS

ACTING ENGINEER OF BRIDGES AND STRUCTURES

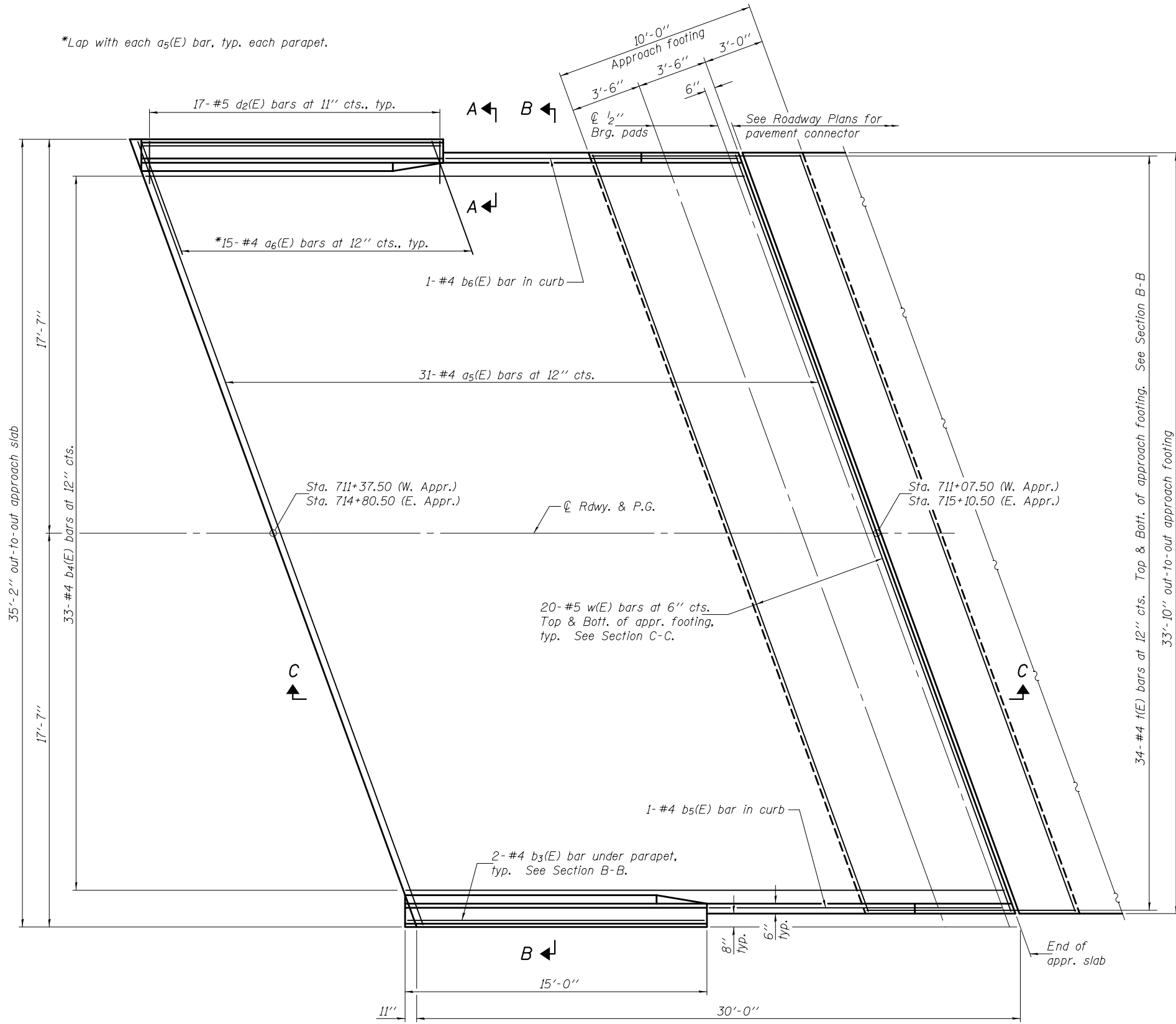
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 015-0076**

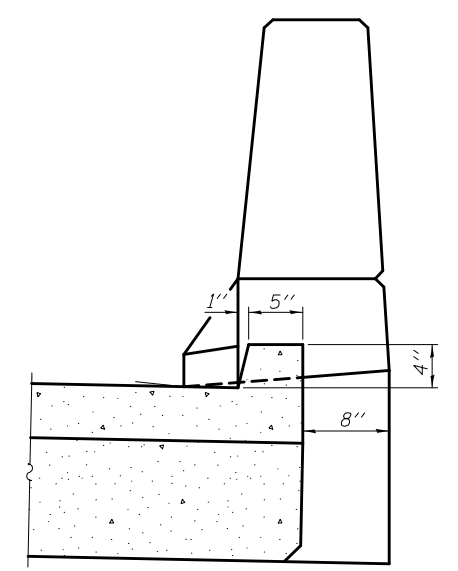
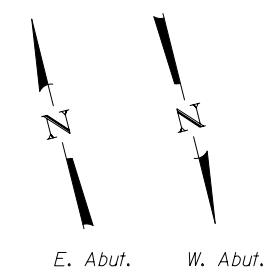
SHEET NO. 11 OF 31 SHEETS

F.A.P. RTE. 749	SECTION (122BRIB-1)	COUNTY COLES	TOTAL SHEETS 60	SHEET NO. 28
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

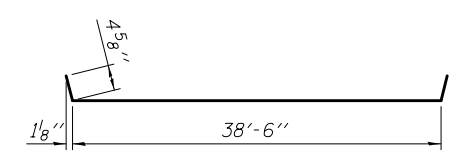
*Lap with each $a_5(E)$ bar, typ. each parapet.



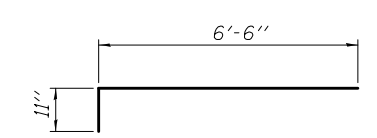
PLAN
(Showing wearing surface)



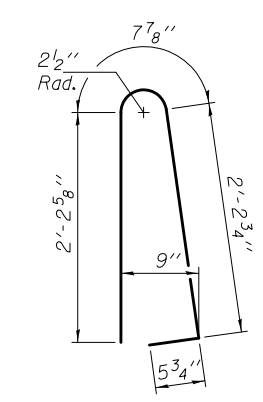
SECTION A-A



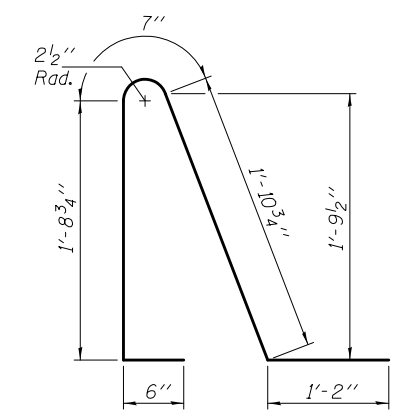
BAR $a_5(E)$



BAR $a_6(E)$



BAR $d(E)$



BAR $d_2(E)$

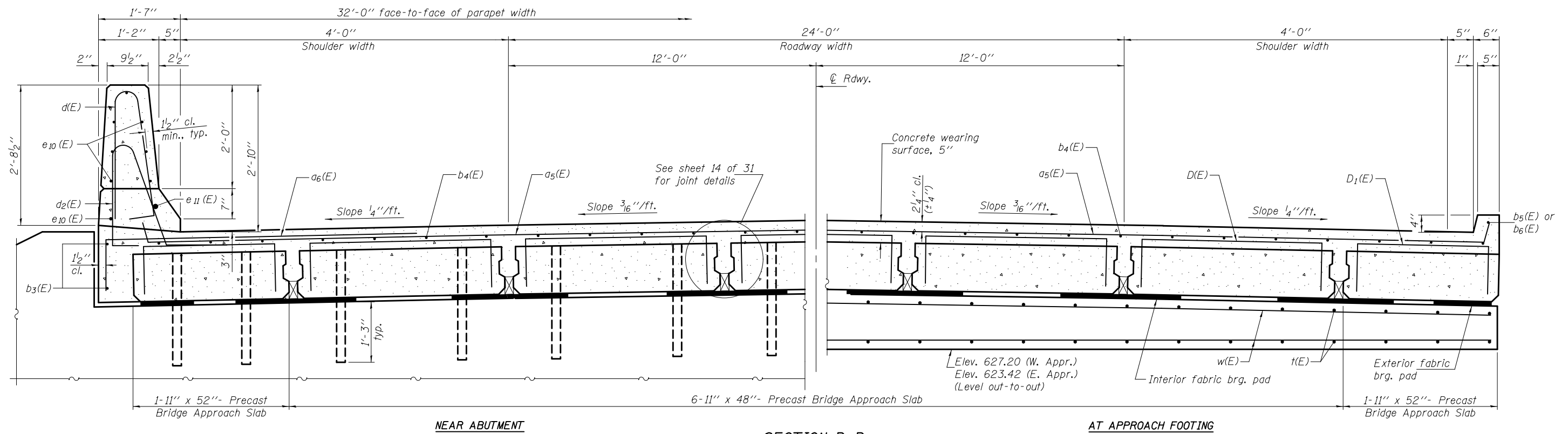
DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - OCTOBER 16, 2014
CHECKED - David H. Richter	ACTING ENGINEER OF BRIDGE DESIGN	
DRAWN - h.t. duong	PASSED - <i>Carl [Signature]</i>	REVISED
CHECKED - JTB/DHR	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

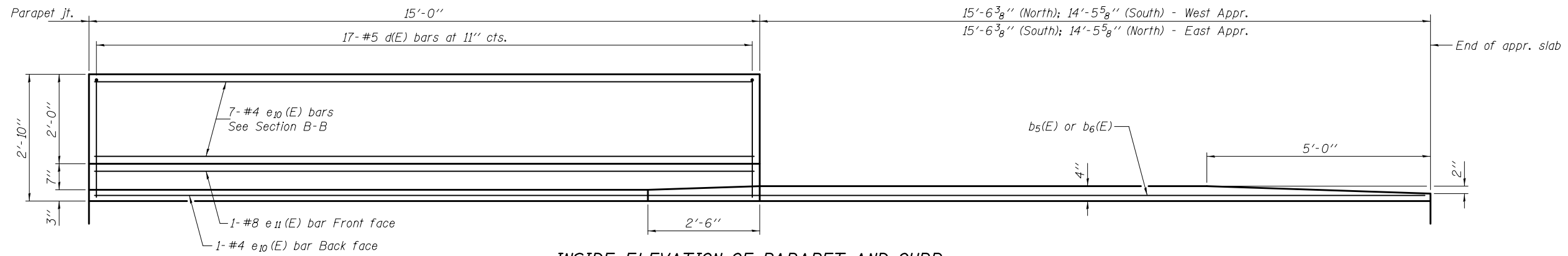
PRECAST BRIDGE APPROACH SLAB
STRUCTURE NO. 015-0076

SHEET NO. 12 OF 31 SHEETS

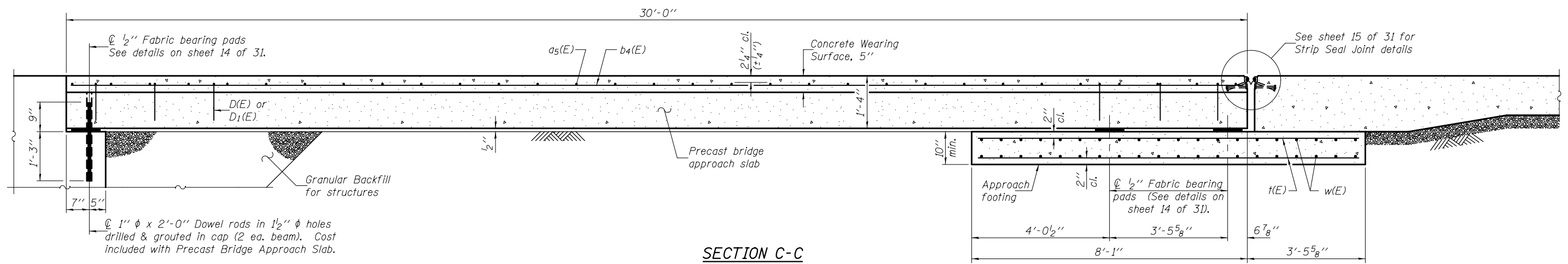
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749	(122BR)B-1	COLES	60	29
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				



SECTION B-B

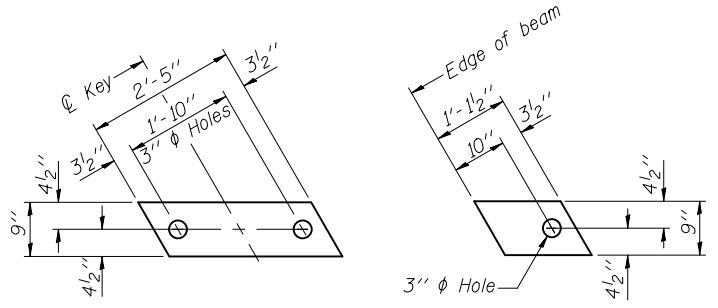


INSIDE ELEVATION OF PARAPET AND CURB



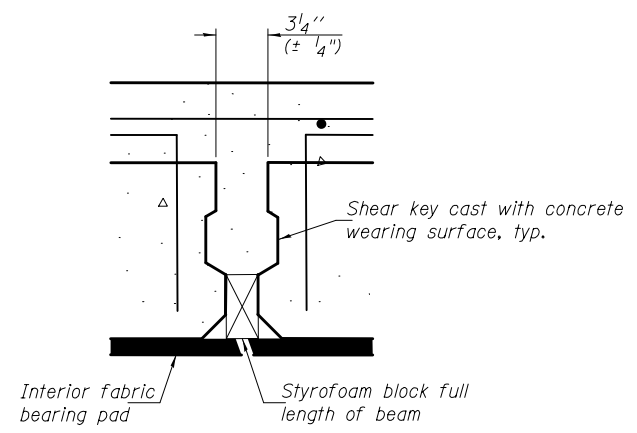
SECTION C-C

DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - OCTOBER 16, 2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PRECAST BRIDGE APPROACH SLAB STRUCTURE NO. 015-0076	F.A.P. RTE. 749	SECTION (122BRIB-1)	COUNTY COLES	TOTAL SHEETS 60	SHEET NO. 30	
CHECKED - David H. Richter	PASSED - <i>Carl [Signature]</i>	REVISED			CONTRACT NO. 74350					
DRAWN - h.t. duong	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED			ILLINOIS FED. AID PROJECT					
CHECKED - JTB/DHR					SHEET NO. 13 OF 31 SHEETS					

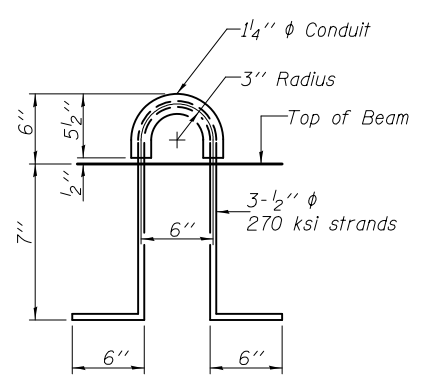


INTERIOR **EXTERIOR**
FABRIC BEARING PAD

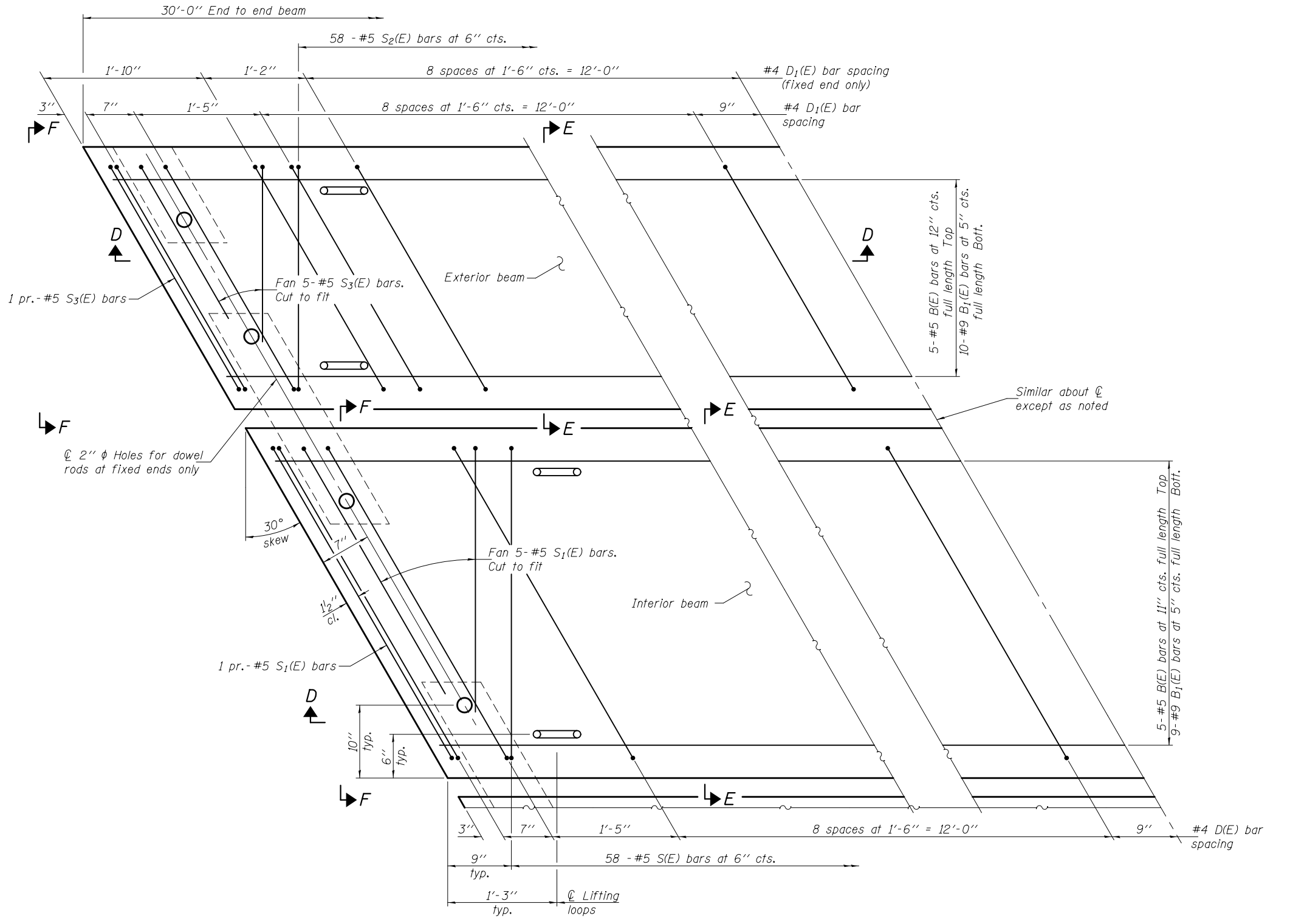
Notes:
All bearing pads shall be 1/2" thick.
Omit holes for fabric bearing pads at approach slab footing end of beams.
Expansion bearing pad shall be bonded to the approach slab footing.



SECTION THRU SHEAR KEY JOINT



LIFTING LOOP DETAIL



PLAN VIEW
(showing precast bridge approach beams)

BA-P-R

8-31-12

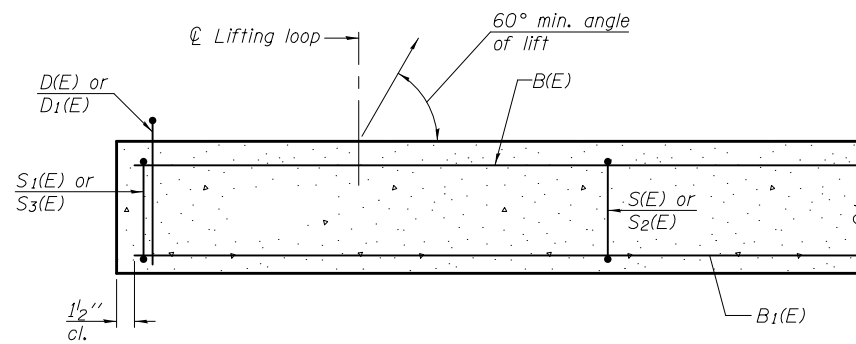
DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - OCTOBER 16, 2014
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DRAWN - h.t. duong	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED
CHECKED - JTB/DHR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

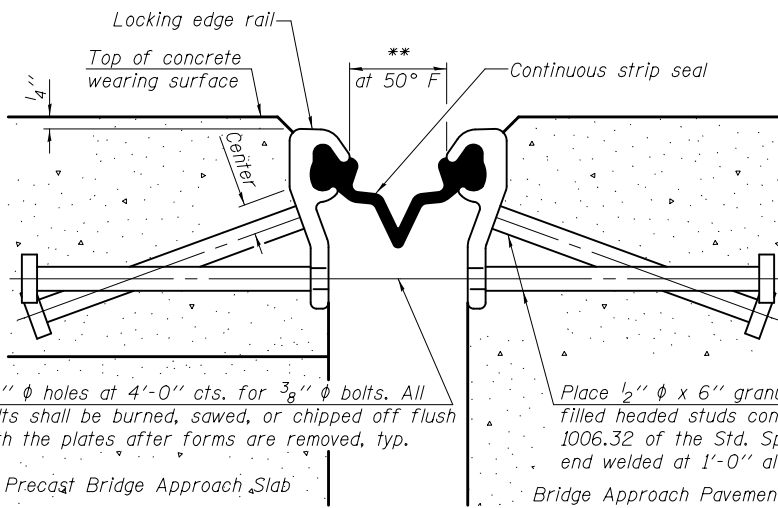
PRECAST BRIDGE APPROACH SLAB
STRUCTURE NO. 015-0076

SHEET NO. 14 OF 31 SHEETS

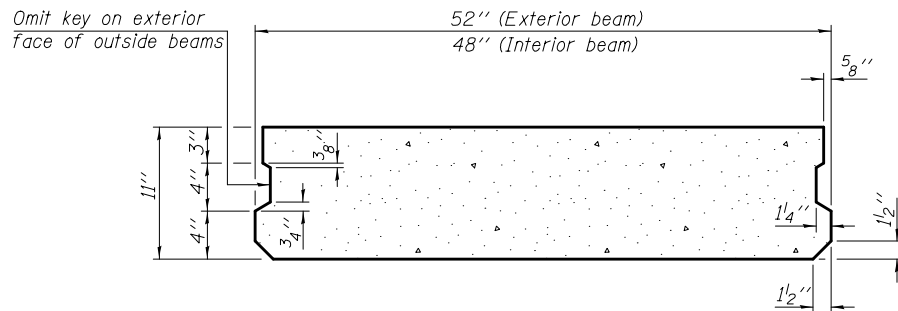
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	31
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				



SECTION D-D



SECTION THRU STRIP SEAL JOINT
(at rt. angles)



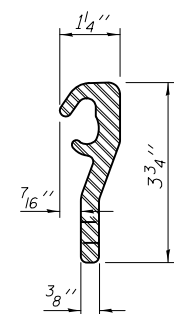
SECTION E-E
(Showing dimensions)

$\frac{7}{16}$ " ϕ holes at 4'-0" cts. for $\frac{3}{8}$ " ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

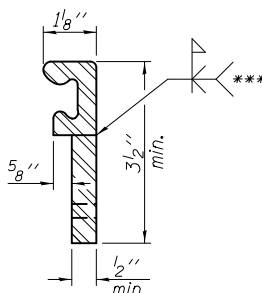
Place $\frac{1}{2}$ " ϕ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

Precast Bridge Approach Slab

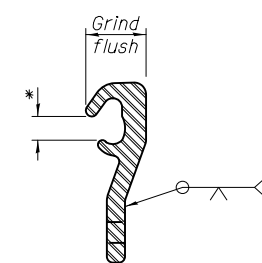
Bridge Approach Pavement Connector



ROLLED (EXTRUDED) RAIL

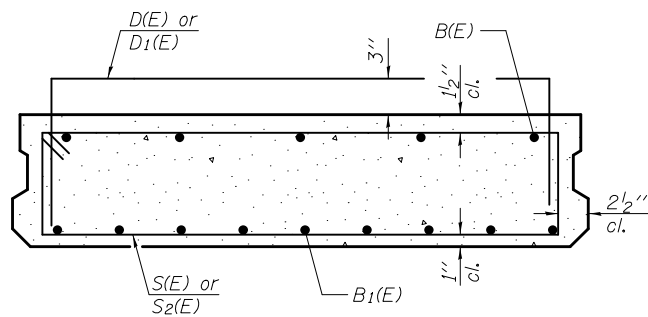


WELDED RAIL



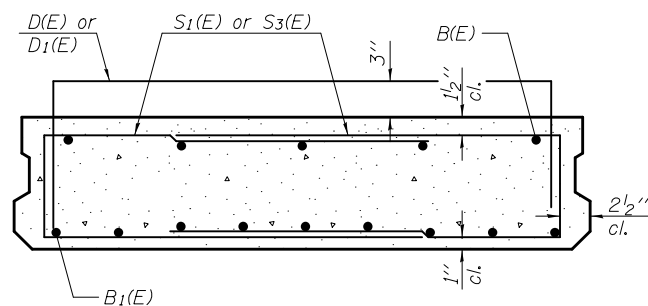
LOCKING EDGE RAIL SPLICE

Rolled rail shown, welded rail similar.

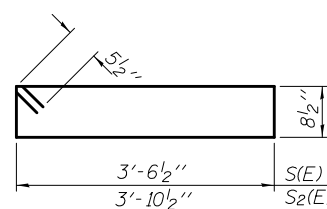


SECTION E-E
(Showing reinforcement)

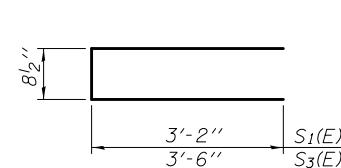
*Omit weld at seal opening.
**The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1 1/2" for installation purposes.
***Back gouge not required if complete joint penetration is verified by mock-up.



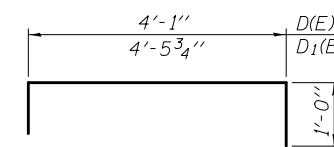
VIEW F-F
(Showing reinforcement)



BARS S(E) & S2(E)



BARS S1(E) & S3(E)



BARS D(E) & D1(E)

BAR LIST EACH INTERIOR BEAM
(For information only)

Bar	No.	Size	Length	Shape
B(E)	5	#5	29'-8"	—
B1(E)	9	#9	29'-8"	—
D(E)	22	#4	6'-1"	□
S(E)	58	#5	9'-5"	▬
S1(E)	14	#5	7'-1"	▬

BAR LIST EACH EXTERIOR BEAM
(For information only)

Bar	No.	Size	Length	Shape
B(E)	5	#5	29'-8"	—
B1(E)	10	#9	29'-8"	—
D1(E)	31	#4	6'-6"	□
S2(E)	58	#5	10'-1"	▬
S3(E)	14	#5	7'-9"	▬

Notes:

The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.
Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.
Parapet concrete shall be paid for as Concrete Superstructure.
Parapet and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

Approach footing concrete shall be paid for as Concrete Structures.
The top surface of precast bridge approach slabs shall be roughened to a depth of 1/4" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."

After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.

A minimum 2 1/2" ϕ lifting pins shall be used to engage the lifting loops during handling.

Compressive strength of precast concrete, f'c shall be 6,000 psi.
For additional parapet details, see sheet 10 of 31.

Any concrete poured monolithically with the wearing surface, such as curbs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5'.

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The strip seal shall extend 6" beyond the edge of the approach slab on each end. The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a5(E)	62	#4	39'-4"	▬
a6(E)	60	#4	7'-5"	▬
b3(E)	8	#4	14'-8"	▬
b4(E)	66	#4	29'-8"	▬
b5(E)	2	#4	14'-3"	▬
b6(E)	2	#4	15'-4"	▬
d(E)	68	#5	5'-7"	▬
d2(E)	68	#5	5'-11"	▬
e10(E)	32	#4	14'-8"	▬
e11(E)	4	#8	14'-8"	▬
f(E)	136	#4	11'-4"	▬
w(E)	80	#5	38'-8"	▬
Concrete Superstructure		Cu. Yd.	6.7	
Concrete Structures		Cu. Yd.	28.3	
Reinforcement Bars, Epoxy Coated		Pound	8890	
Precast Bridge Approach Slab		Sq. Ft.	2030	
Concrete Wearing Surface, 5'		Sq. Yd.	229.8	
Preformed Joint Strip Seal		Foot	78.0	

BA-P-R

12-12-12

(Beams: 36" min. width; 72" max. width)

DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - OCTOBER 16, 2014
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DRAWN - h.t. duong		REVISED -
CHECKED - JTB/DHR		

ACTING ENGINEER OF BRIDGES	ACTING ENGINEER OF BRIDGES AND STRUCTURES
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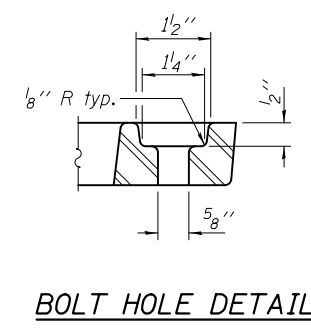
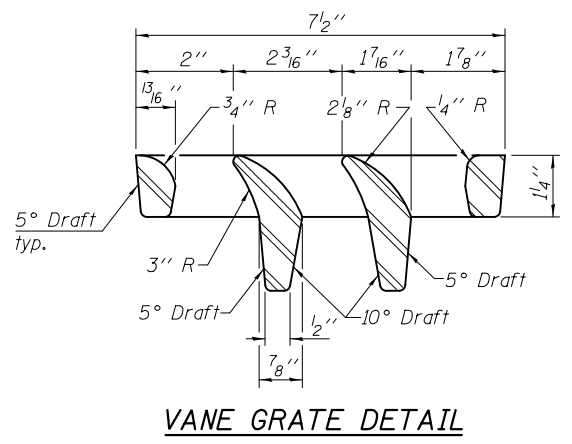
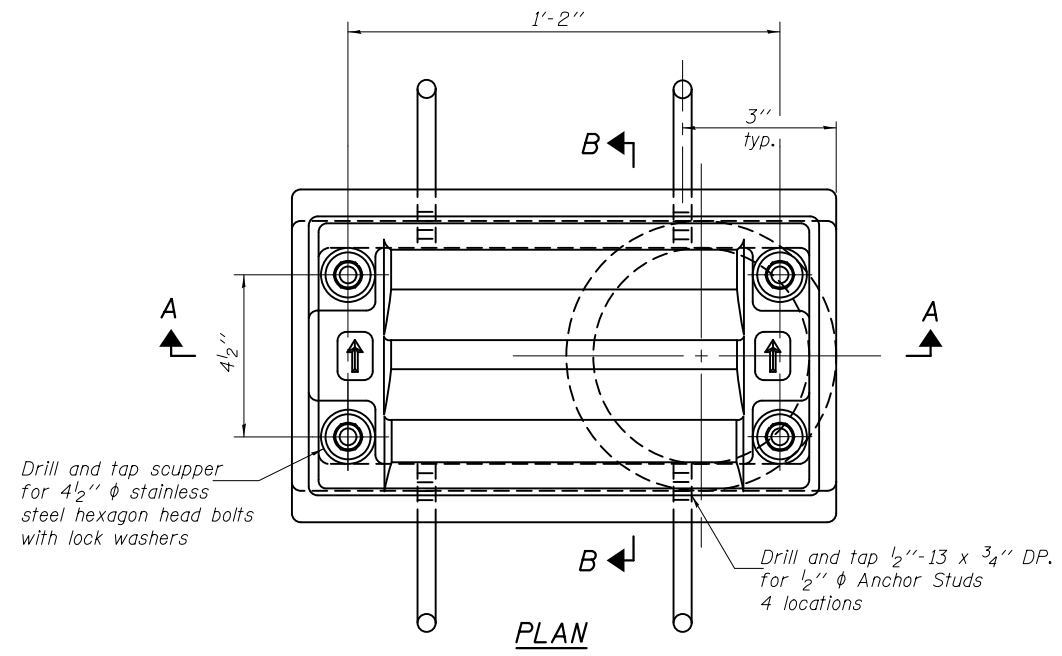
DATE - OCTOBER 16, 2014	REVISED -
	REVISED -

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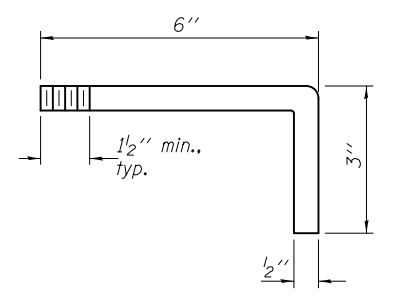
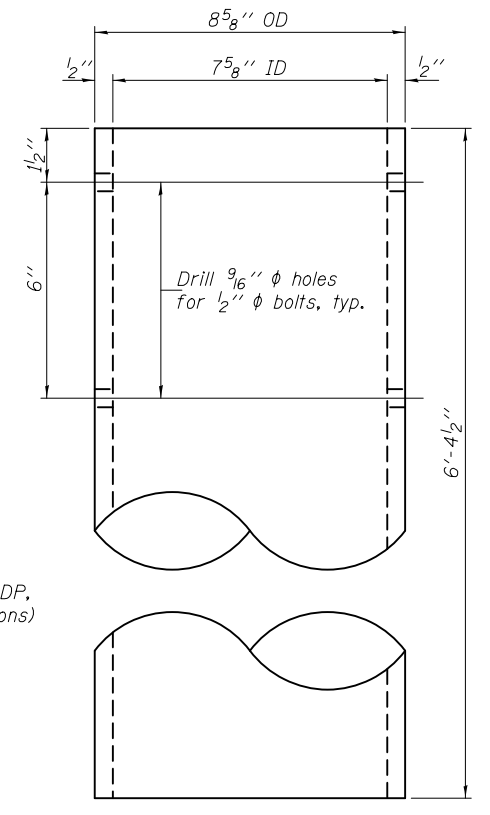
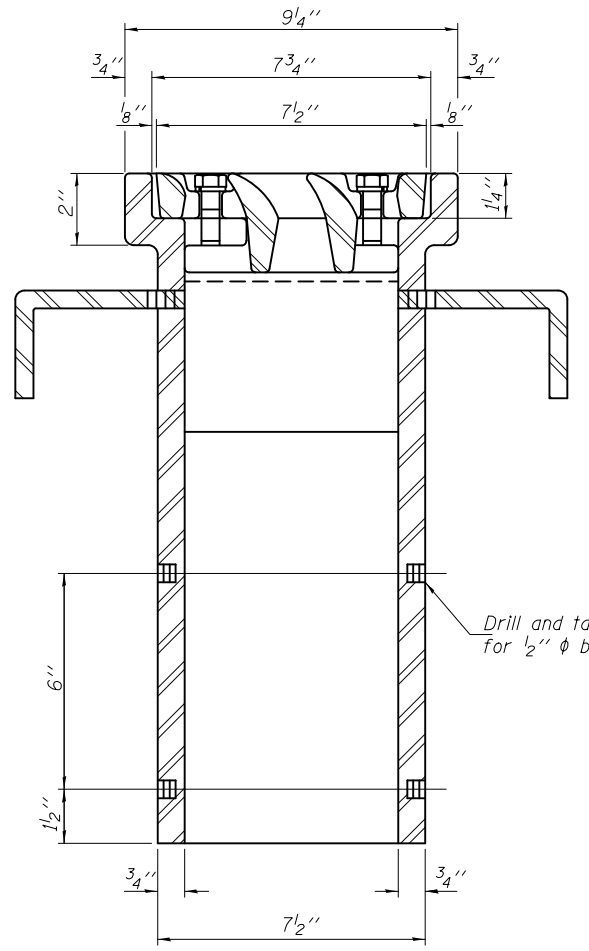
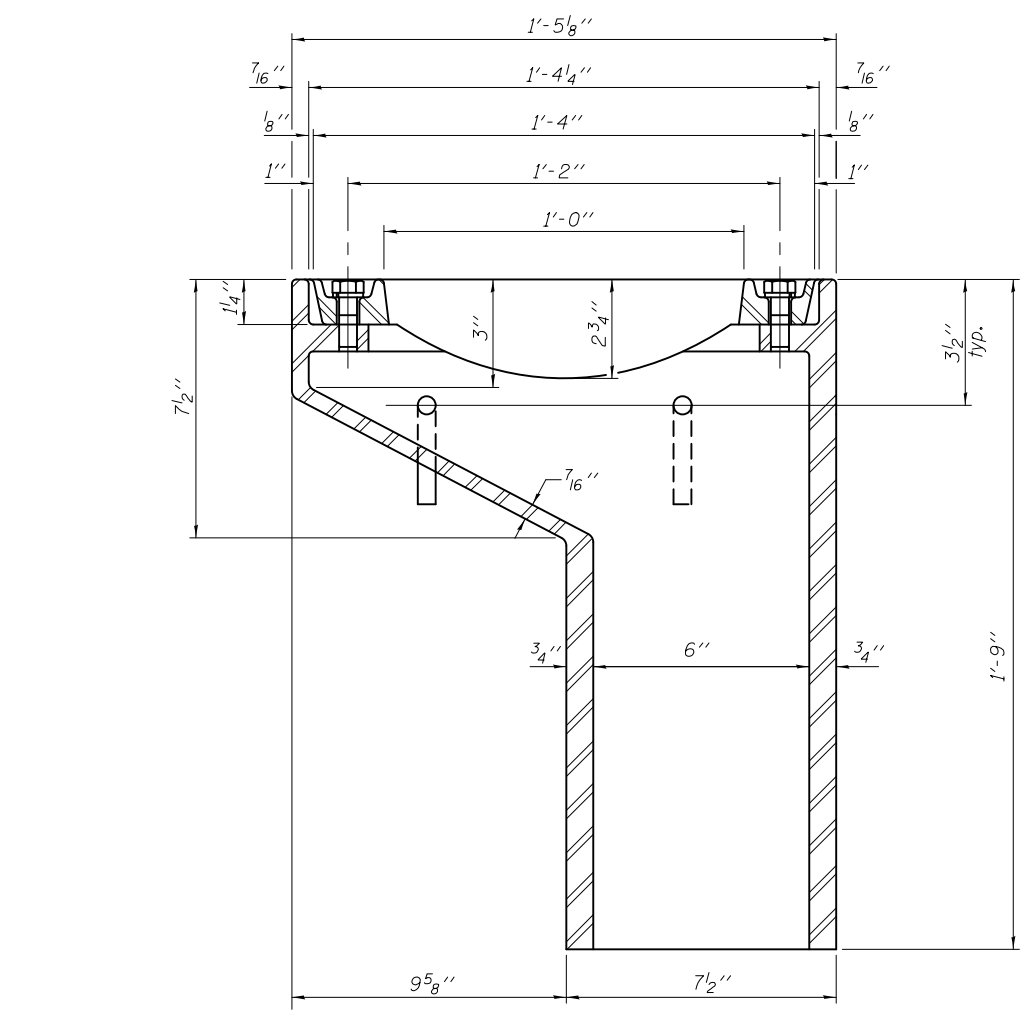
PRECAST BRIDGE APPROACH SLAB
STRUCTURE NO. 015-0076

SHEET NO. 15 OF 31 SHEETS

F.A.P. RTE. 749	SECTION 122BRIB-1	COUNTY COLES	TOTAL SHEETS 60	SHEET NO. 32
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	



Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



SECTION A-A
 See sheet 10 of 31 for scupper location relative to parapet.

SECTION B-B

DOWNSPOUT

ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DS-11

7-1-10

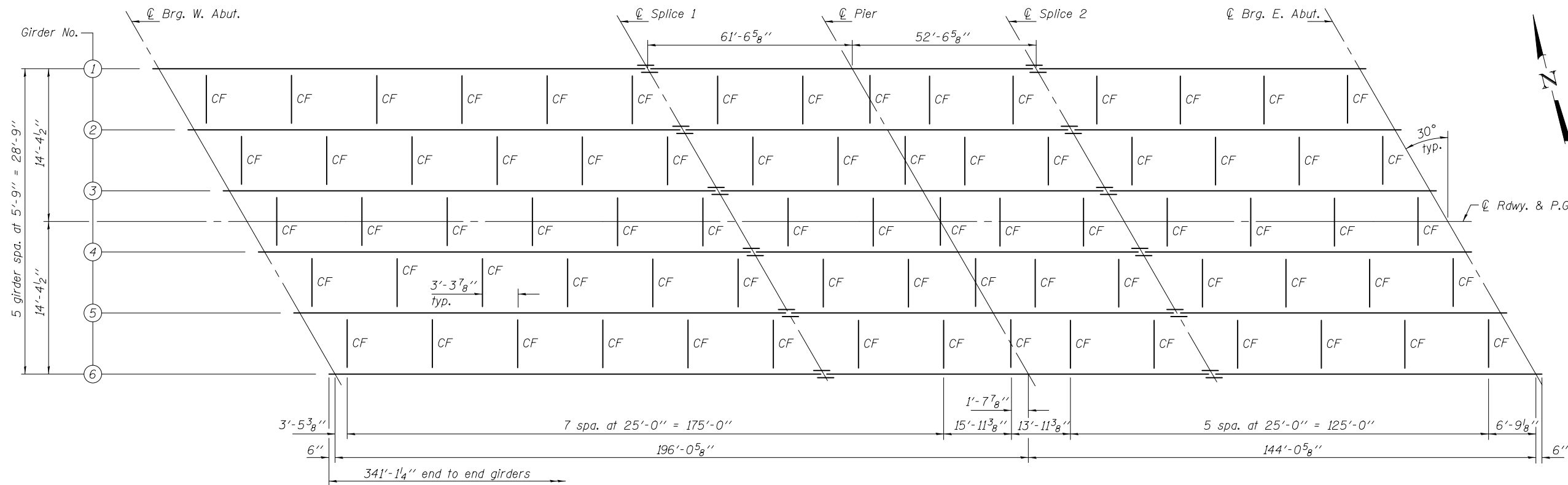
DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - OCTOBER 16, 2014
CHECKED - David H. Richter	PASSED - <i>Carl [Signature]</i>	REVISED
DRAWN - h.t. duong		REVISED
CHECKED - JTB/DHR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

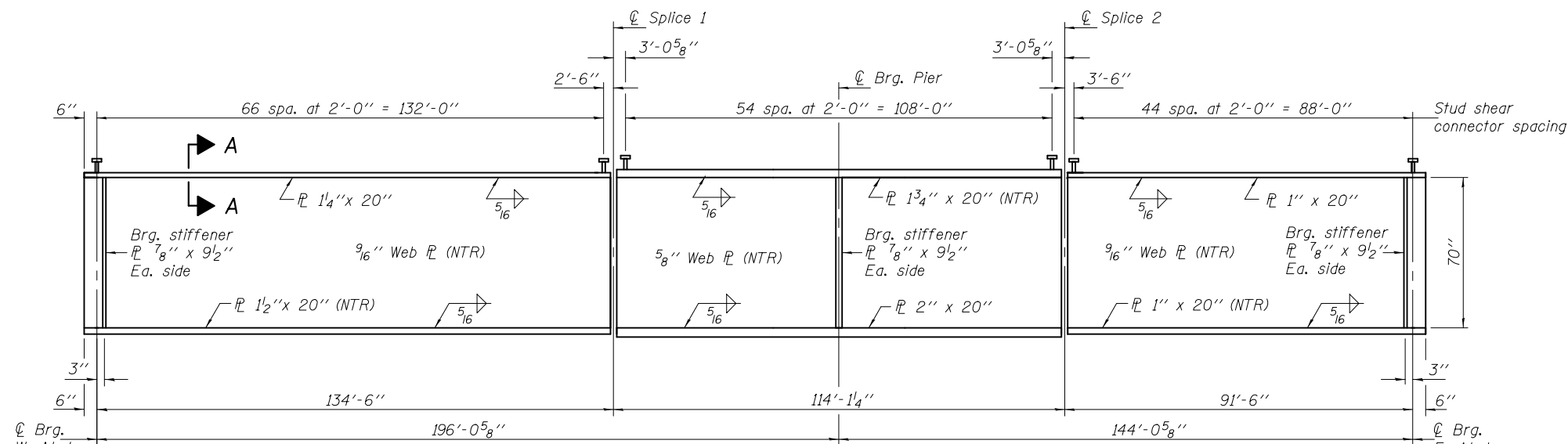
DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 015-0076

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	33
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

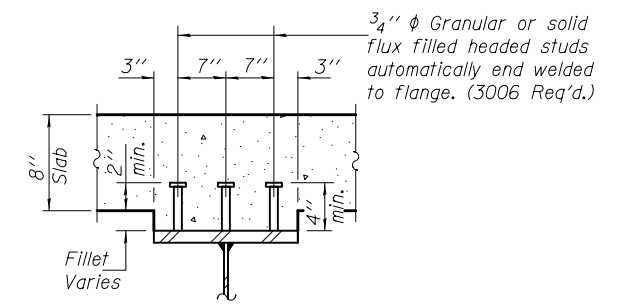
SHEET NO. 16 OF 31 SHEETS



PLAN

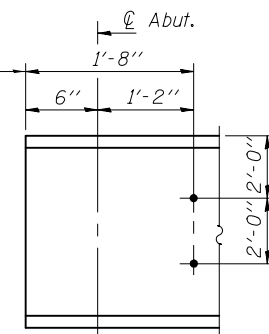


GIRDER ELEVATION



SECTION A-A

∅ 1 1/2" φ holes in girder for m₁(E) thru m₂(E) bars. Typ. for all girders. See sheet 11 of 31.



END OF GIRDER ELEVATION

Notes: Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
 All girder plates, including bearing stiffeners shall be AASHTO M 270 Grade 50.

DESIGNED - Justin T. Belue
 CHECKED - David H. Richter
 DRAWN - h.t. duong
 CHECKED - JTB/DHR

EXAMINED
 PASSED
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 16, 2014
 REVISED
 REVISED

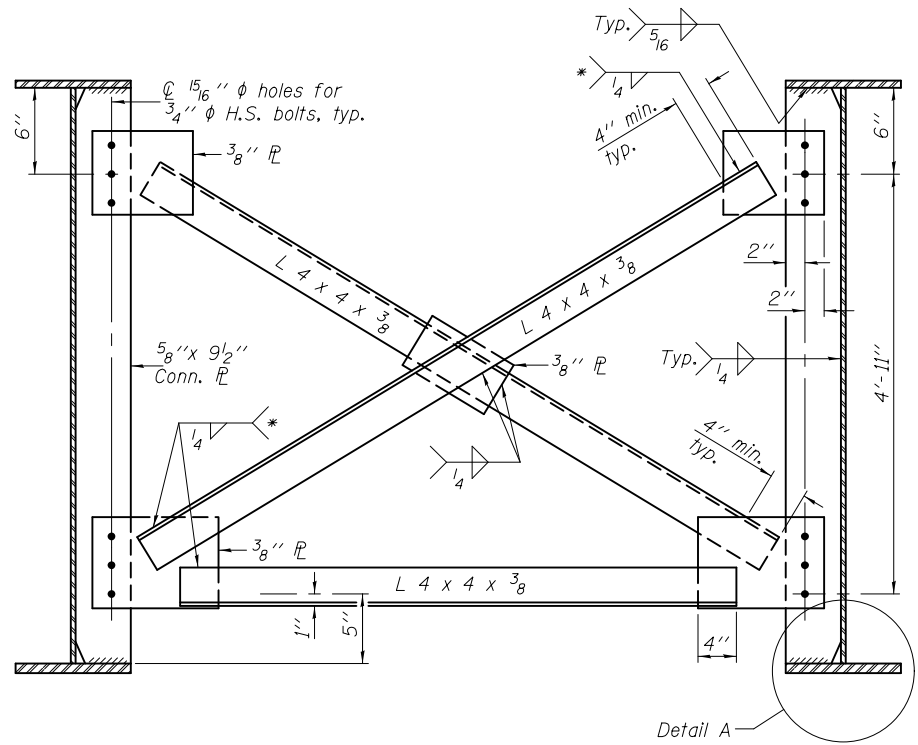
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL
 STRUCTURE NO. 015-0076**

SHEET NO. 17 OF 31 SHEETS

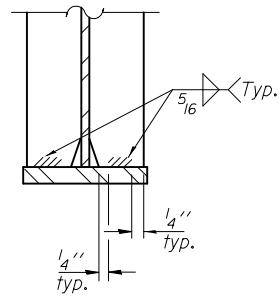
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	34
CONTRACT NO. 74350				

ILLINOIS FED. AID PROJECT

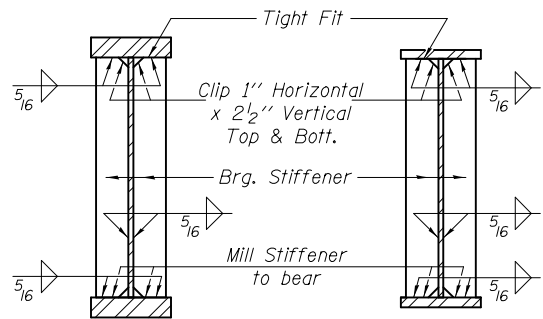


CROSS FRAME, CF
(75 Required)

*Fillet weld angles along 3 sides on one face of gusset plate.

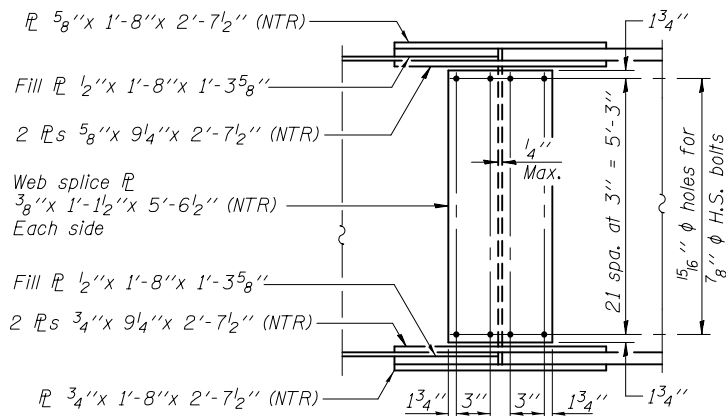


DETAIL A

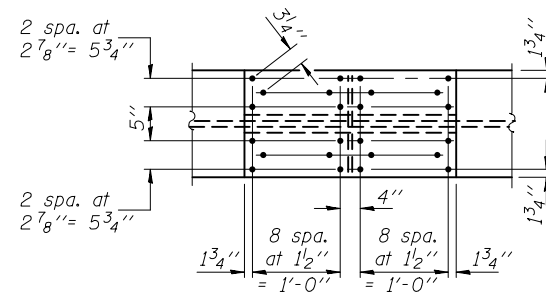


SECTION AT PIER

SECTION AT ABUTMENT

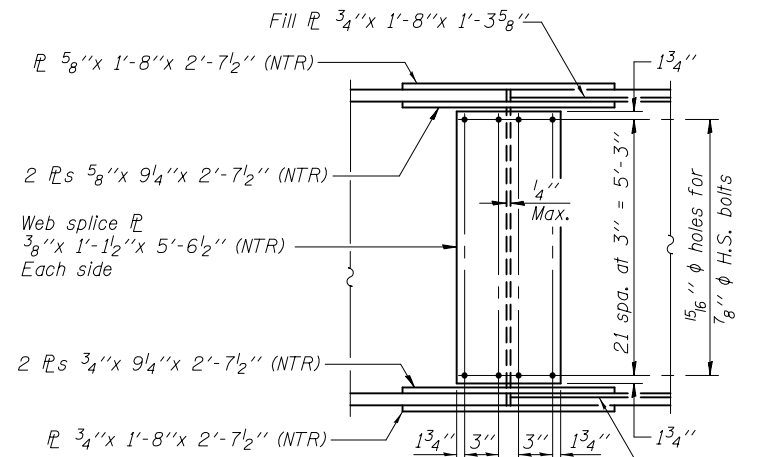


ELEVATION

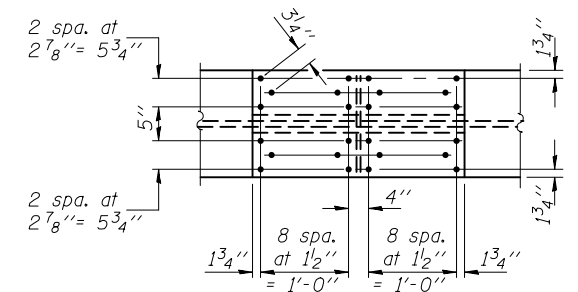


PLAN - TOP & BOTT. FLANGES

SPLICE 1

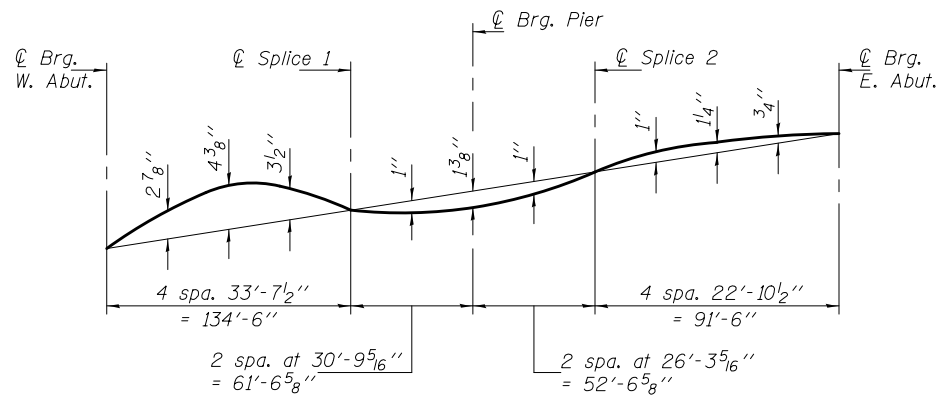


ELEVATION



PLAN - TOP & BOTT. FLANGES

SPLICE 2



CAMBER DIAGRAM

Notes: Two hardened washers shall be required for all oversized holes in cross frames.
All splice plates except filler plates shall be AASHTO M 270 Grade 50.

DESIGNED - Justin T. Belue
CHECKED - David H. Richter
DRAWN - h.t. duong
CHECKED - JTB/DHR

EXAMINED
PASSED
ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 16, 2014
REVISED
REVISED

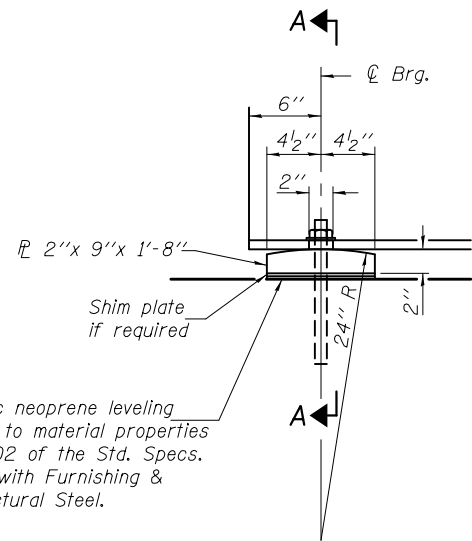
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STUCTURE NO. 015-0076

SHEET NO. 18 OF 31 SHEETS

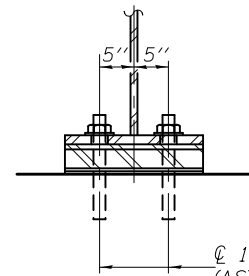
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRIB-1)	COLES	60	35
CONTRACT NO. 74350				

ILLINOIS FED. AID PROJECT

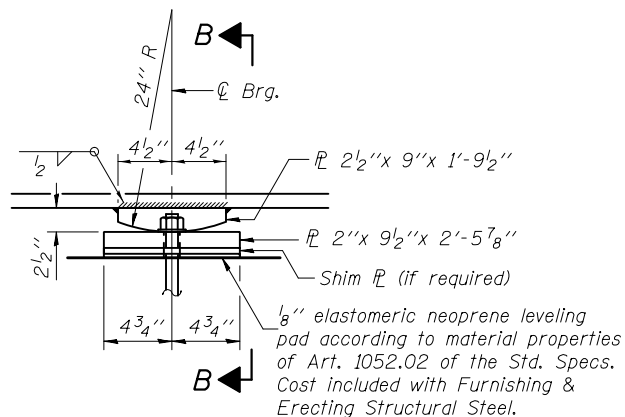


ELEVATION AT ABUTMENT

FIXED BEARING
(12 Required)

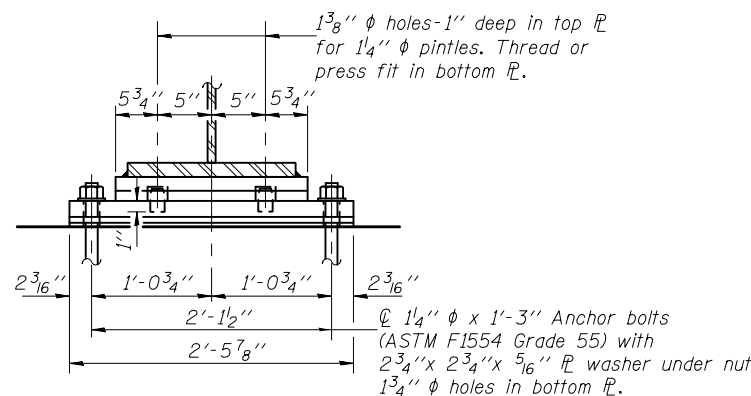


SECTION A-A



ELEVATION AT PIER

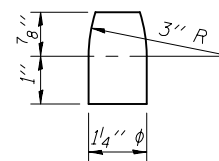
FIXED BEARING
(6 Required)



SECTION B-B

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴)	85807	114486	66491
$I_c(n)$	(in ⁴)	154636	189778	124272
$I_c(3n)$	(in ⁴)	116882	146924	93597
$I_c(cr)$	(in ⁴)	—	124743	—
S_s	(in ³)	2482	3230	1847
$S_c(n)$	(in ³)	3004	—	2312
$S_c(3n)$	(in ³)	2769	—	2111
$S_c(cr)$	(in ³)	—	3327	—
DC1	(k/')	0.975	1.09	0.931
M _{DC1}	(k)	2923	4162	691
DC2	(k/')	0.15	0.15	0.15
M _{DC2}	(k)	442	624	124
DW	(k/')	0.288	0.288	0.288
M _{DW}	(k)	849	1198	238
$M_{\xi} + IM$	(k)	2562	2629	1802
M_u (Strength I)	(k)	9963	12380	4529
$\phi_r M_n$	(k)	13644	—	11565
f_s DC1	(ksi)	14.13	15.46	4.49
f_s DC2	(ksi)	1.92	2.25	0.70
f_s DW	(ksi)	3.68	4.32	1.35
f_s ($\xi + IM$)	(ksi)	10.23	9.48	9.35
f_s (Service II)	(ksi)	33.03	34.36	18.71
$0.95R_n F_{yf}$	(ksi)	47.50	47.50	47.50
f_s (Total)(Strength I)	(ksi)	43.49	45.22	24.89
$\phi_r F_n$	(ksi)	—	50.00	—
V_r	(k)	29.58	27.22	28.72

INTERIOR GIRDER REACTION TABLE				
		W. Abut.	Pier	E. Abut.
R _{DC1}	(k)	76.4	223.8	39.1
R _{DC2}	(k)	11.5	33.0	6.5
R _{DW}	(k)	22.1	63.4	12.4
$R_{\xi} + IM$	(k)	102.3	188.0	83.7
R _{Total}	(k)	212.3	508.2	141.7



PINTLE

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 computed 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 $M_{\xi} + IM$ / $S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).

$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (\xi + IM)$

$0.95R_n F_{yf}$: 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_r : Maximum factored shear range in span computed according to Article 6.10.10.

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.

Anchor bolts at fixed bearings 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.

All bearing plates and pintles shall conform to the requirements of AASHTO M270 Grade 50.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

***TOP OF WEB ELEVATIONS**

Location	C Brg. W. Abut.	C Splice 1	C Brg. Pier	C Splice 2	C Brg. E. Abut.
Girder 1	628.57	627.55	626.65	626.09	625.33
Girder 2	628.64	627.62	626.72	626.16	625.40
Girder 3	628.69	627.68	626.77	626.21	625.46
Girder 4	628.67	627.65	626.74	626.18	625.42
Girder 5	628.55	627.53	626.62	626.06	625.30
Girder 6	628.41	627.39	626.49	625.93	625.17

*For fabrication use only.

SHIM PLATE TABLE

Location	W. Abut.	Pier	E. Abut.
Girder 3	5/8"	5/8"	3/4"
Girder 4	3/8"	1/4"	1/4"

DESIGNED - Justin T. Belue
CHECKED - David H. Richter
DRAWN - h.t. duong
CHECKED - JTB/DHR

EXAMINED - *Joanne F. [Signature]*
PASSED - *Carl [Signature]*
ACTING ENGINEER OF BRIDGE DESIGN
ACTING ENGINEER OF BRIDGES AND STRUCTURES

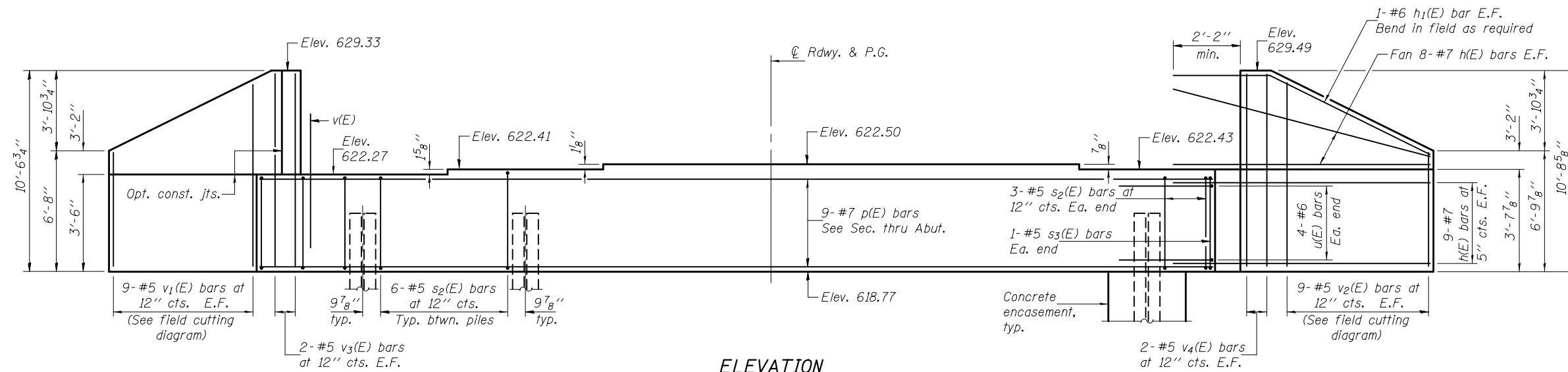
DATE - OCTOBER 16, 2014
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

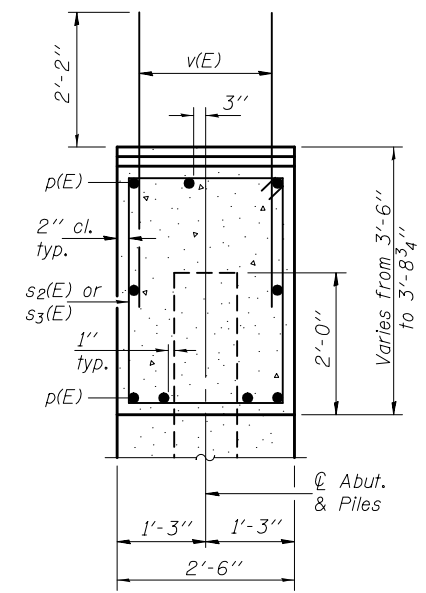
BEARING DETAILS
STRUCTURE NO. 015-0076

SHEET NO. 19 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BRIB-1	COLES	60	36
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				



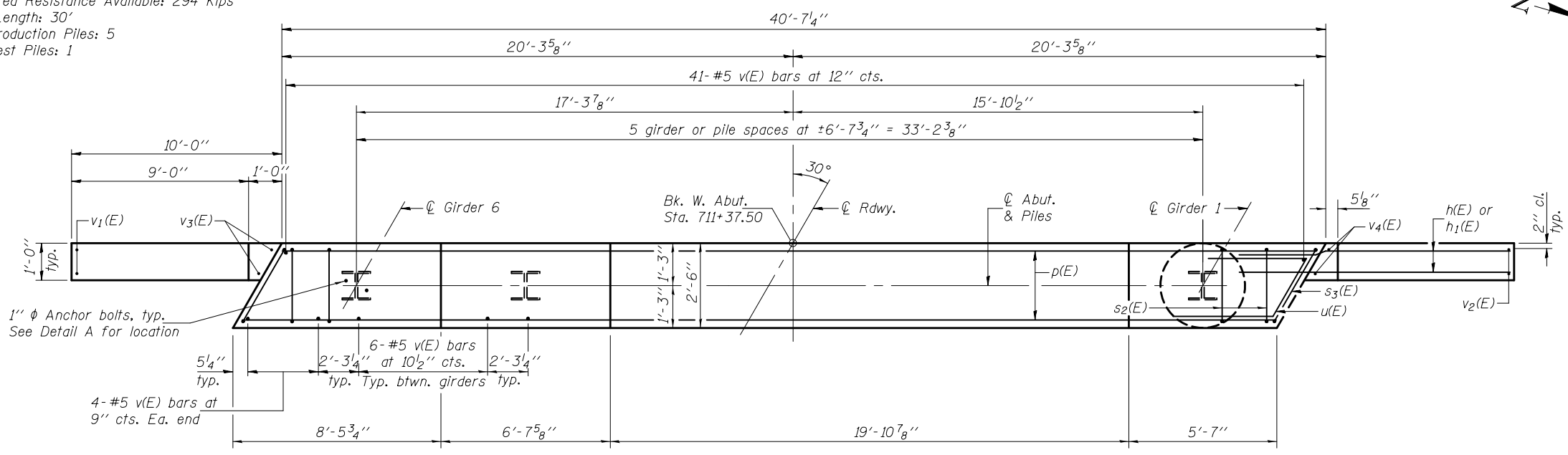
ELEVATION
(Looking west)



SEC. THRU ABUT.

PILE DATA

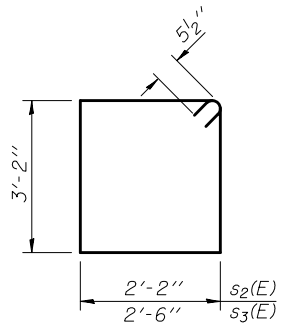
Type: Steel HP14x73 with Pile Shoes
 Nominal Required Bearing: 578 Kips
 Factored Resistance Available: 294 Kips
 Est. Length: 30'
 No. Production Piles: 5
 No. Test Piles: 1



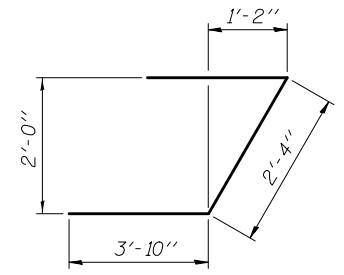
PLAN

1" ϕ Anchor bolts, typ.
 See Detail A for location

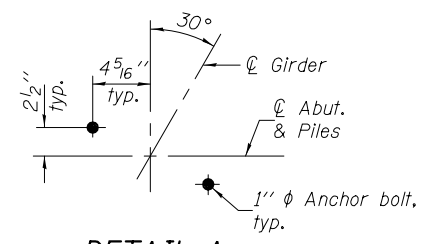
Notes: Pour steps monolithically with cap.
 For details of piles and concrete encasement,
 see sheet 23 of 31.



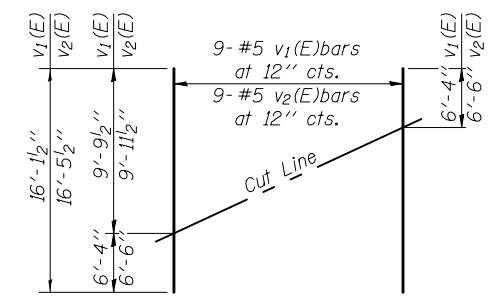
BARS s₂(E) & s₃(E)



BAR u(E)



DETAIL A

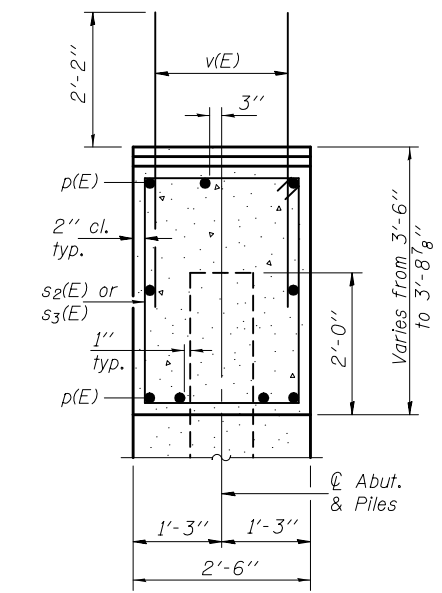
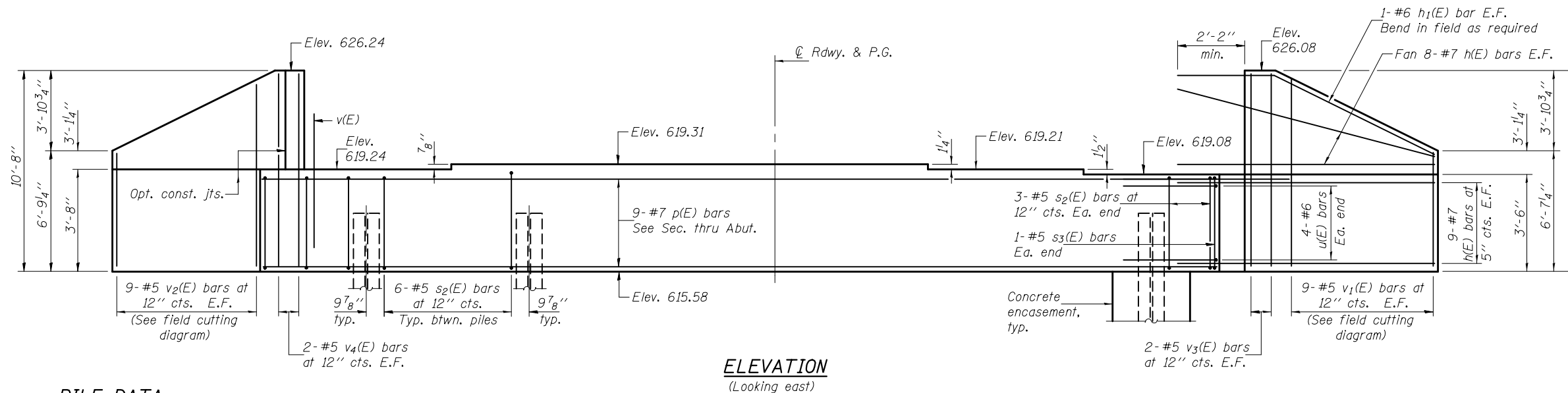


FIELD CUTTING DIAGRAM

Order v₁(E) & v₂(E) full length. Cut as shown and use remainder of bars in opposite face.

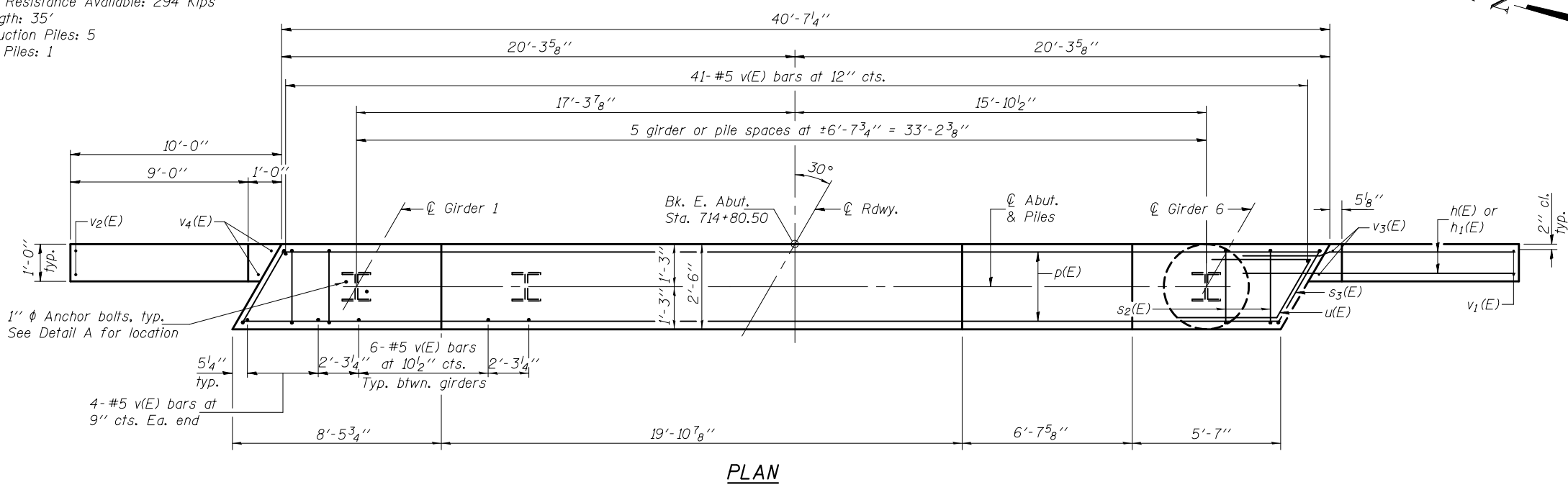
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	68	#7	12'-8"	—
h ₁ (E)	4	#6	12'-10"	—
p(E)	9	#7	40'-3"	—
s ₂ (E)	36	#5	11'-7"	□
s ₃ (E)	2	#5	12'-3"	□
u(E)	8	#6	10'-0"	┘
v(E)	79	#5	4'-4"	—
v ₁ (E)	9	#5	16'-2"	—
v ₂ (E)	9	#5	16'-6"	—
v ₃ (E)	4	#5	10'-2"	—
v ₄ (E)	4	#5	10'-4"	—
Structure Excavation	Cu. Yd.		38	
Concrete Structures	Cu. Yd.		20.4	
Reinforcement Bars, Epoxy Coated	Pound		3910	
Furnishing Steel Piles HP14x73	Foot		150	
Driving Piles	Foot		150	
Test Pile Steel HP14x73	Each		1	
Pile Shoes	Each		6	
Concrete Encasement	Cu. Yd.		3.3	
Anchor Bolts, 1"	Each		12	



PILE DATA

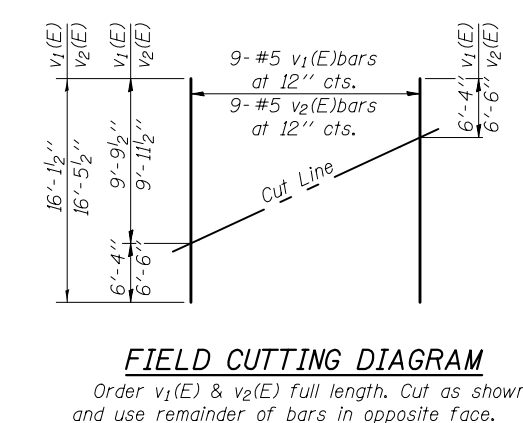
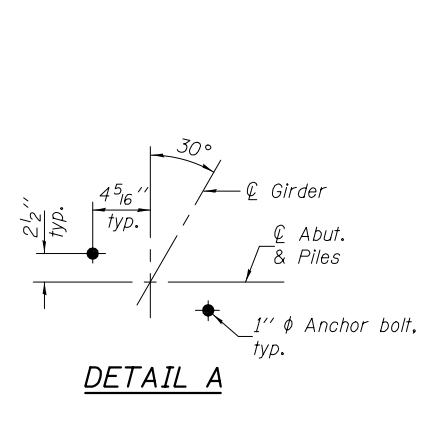
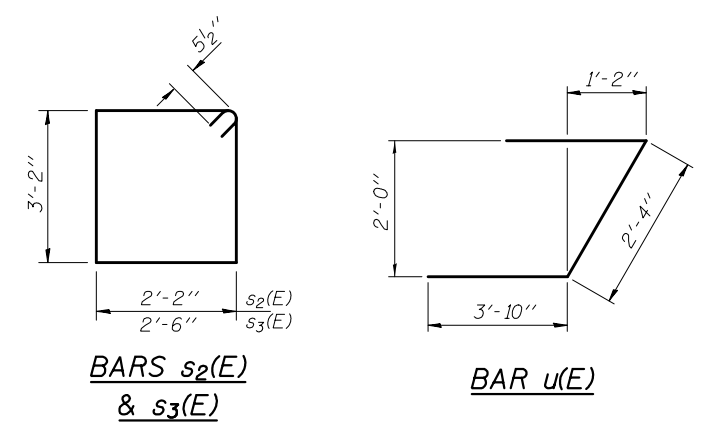
Type: Steel HP14x73 with Pile Shoes
 Nominal Required Bearing: 578 Kips
 Factored Resistance Available: 294 Kips
 Est. Length: 35'
 No. Production Piles: 5
 No. Test Piles: 1

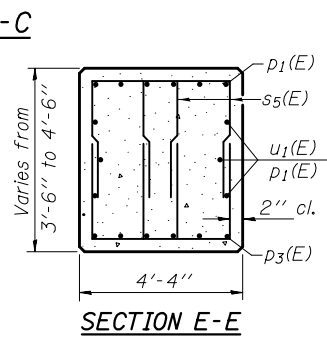
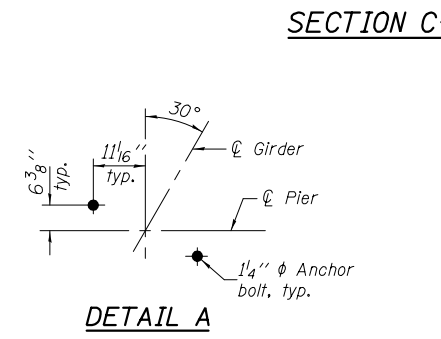
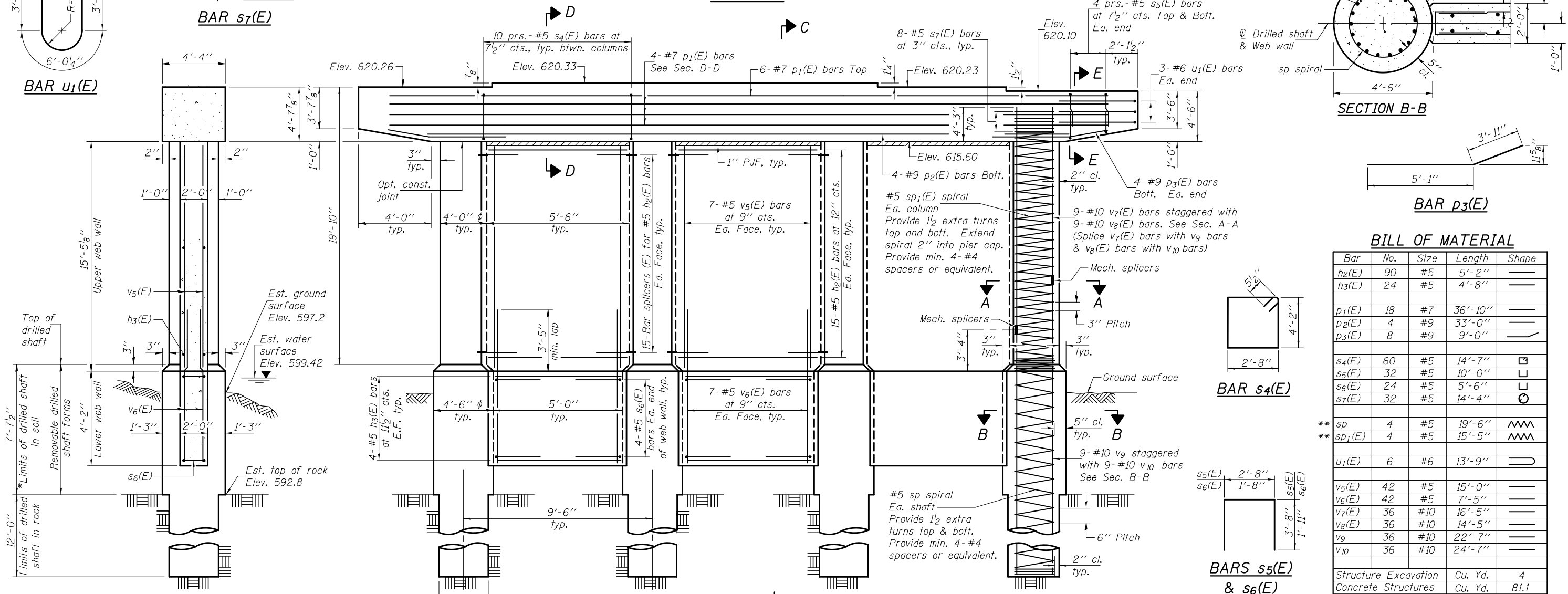
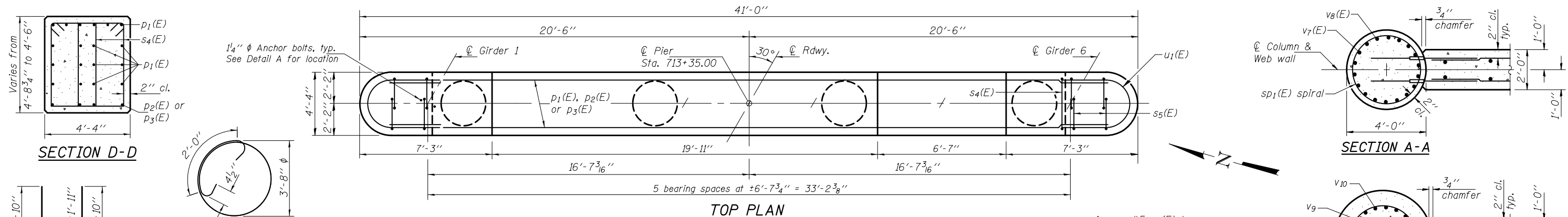


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	68	#7	12'-8"	—
h ₁ (E)	4	#6	12'-10"	—
p(E)	9	#7	40'-3"	—
s ₂ (E)	36	#5	11'-7"	□
s ₃ (E)	2	#5	12'-3"	□
u(E)	8	#6	10'-0"	┘
v(E)	79	#5	4'-4"	—
v ₁ (E)	9	#5	16'-2"	—
v ₂ (E)	9	#5	16'-6"	—
v ₃ (E)	4	#5	10'-2"	—
v ₄ (E)	4	#5	10'-4"	—
Structure Excavation	Cu. Yd.		38	
Concrete Structures	Cu. Yd.		20.3	
Reinforcement Bars, Epoxy Coated	Pound		3910	
Furnishing Steel Piles HP14x73	Foot		175	
Driving Piles	Foot		175	
Test Pile Steel HP14x73	Each		1	
Pile Shoes	Each		6	
Concrete Encasement	Cu. Yd.		3.3	
Anchor Bolts, 1"	Each		12	

Notes: Pour steps monolithically with cap.
 For details of piles and concrete encasement, see sheet 23 of 31.



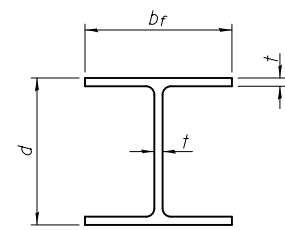


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2(E)	90	#5	5'-2"	—
h3(E)	24	#5	4'-8"	—
p1(E)	18	#7	36'-10"	—
p2(E)	4	#9	33'-0"	—
p3(E)	8	#9	9'-0"	—
s4(E)	60	#5	14'-7"	□
s5(E)	32	#5	10'-0"	□
s6(E)	24	#5	5'-6"	□
s7(E)	32	#5	14'-4"	○
sp	4	#5	19'-6"	⋈
sp1(E)	4	#5	15'-5"	⋈
u1(E)	6	#6	13'-9"	U
v5(E)	42	#5	15'-0"	—
v6(E)	42	#5	7'-5"	—
v7(E)	36	#10	16'-5"	—
v8(E)	36	#10	14'-5"	—
v9	36	#10	22'-7"	—
v10	36	#10	24'-7"	—
Structure Excavation		Cu. Yd.	4	
Concrete Structures		Cu. Yd.	81.1	
Reinforcement Bars		Pound	9340	
Reinforcement Bars, Epoxy Coated		Pound	13510	
Drilled Shaft in Soil		Cu. Yd.	18.0	
Drilled Shaft in Rock		Cu. Yd.	22.3	
Anchor Bolts, 1/4"		Cu. Yd.	12	

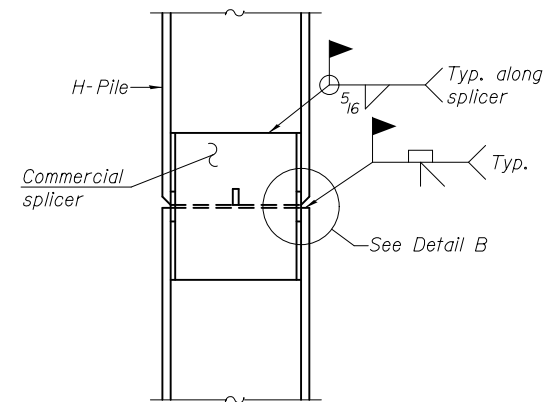
- Construction Sequence for Web Wall:**
- Excavate between shafts to elevation of web wall base and set lower web wall forms through water to bear on the circular edge of drilled shafts. Secure in place with fill, struts or tie forms together as required.
 - Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
 - If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and taint concrete out the top of the forms.
 - Construct columns.
 - Construct upper web walls.

*If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.

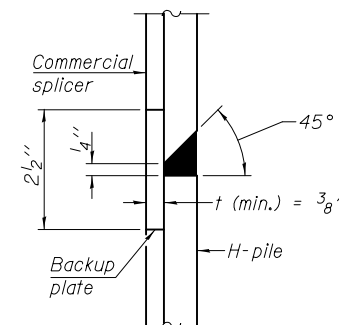


STEEL PILE TABLE

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"

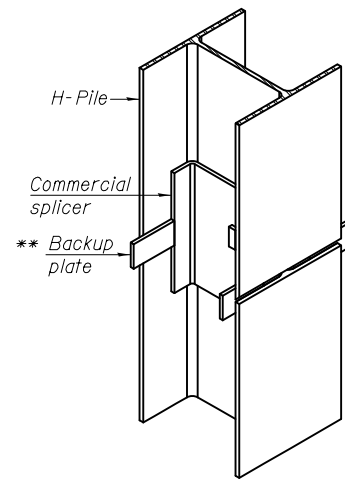


ELEVATION

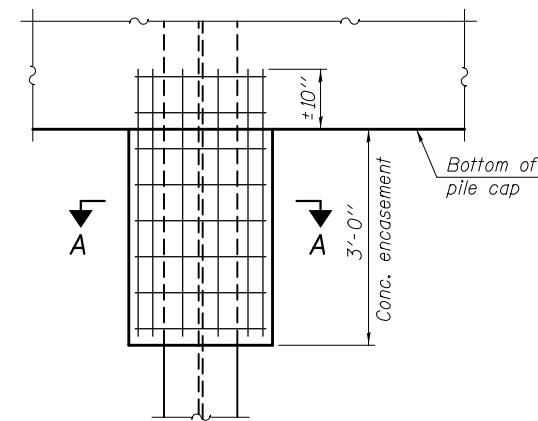


DETAIL "B"

WELDED COMMERCIAL SPLICE

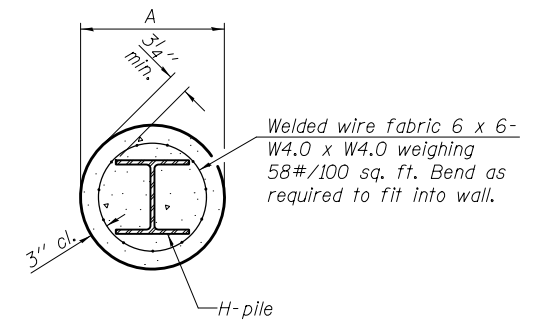


ISOMETRIC VIEW



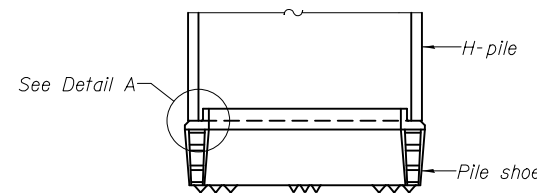
ELEVATION

PILE ENCASEMENT

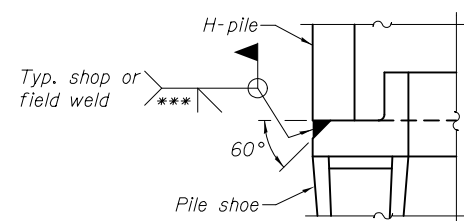


SECTION A-A

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

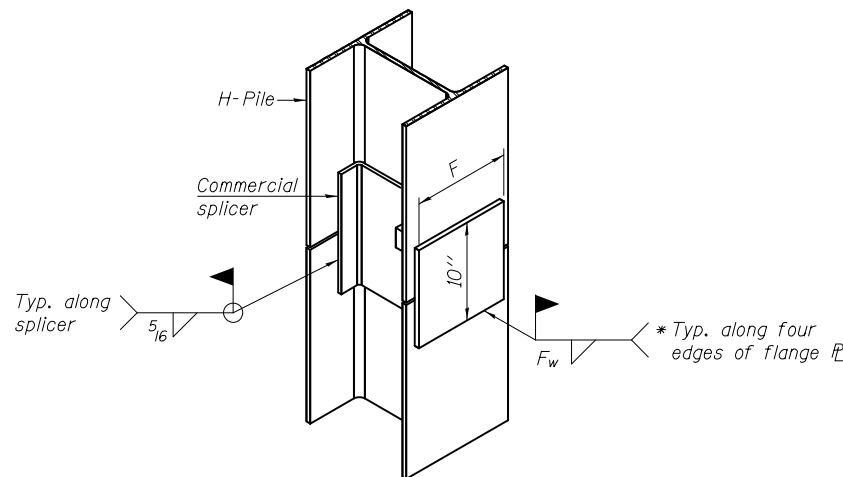


ELEVATION



DETAIL A

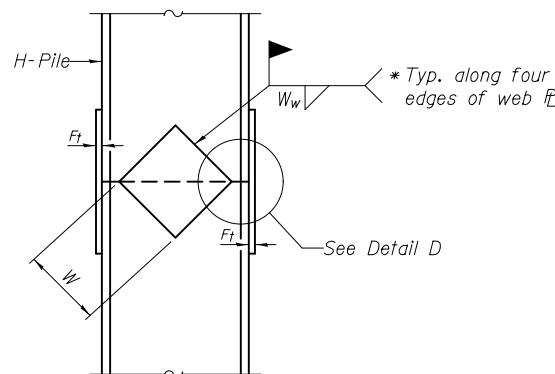
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

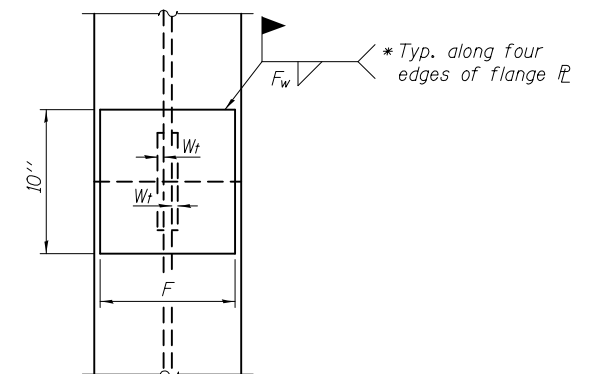
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



ELEVATION

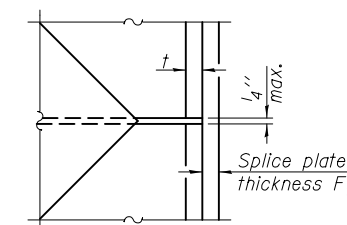
DETAIL D

WELDED PLATE FIELD SPLICE



END VIEW

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"



DETAIL D

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

F-HP 1-27-12

DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>
CHECKED - David H. Richter	PASSED - <i>Carl [Signature]</i>
DRAWN - h.t. duong	
CHECKED - JTB/DHR	

DATE - OCTOBER 16, 2014
REVISIONS
REVISIONS

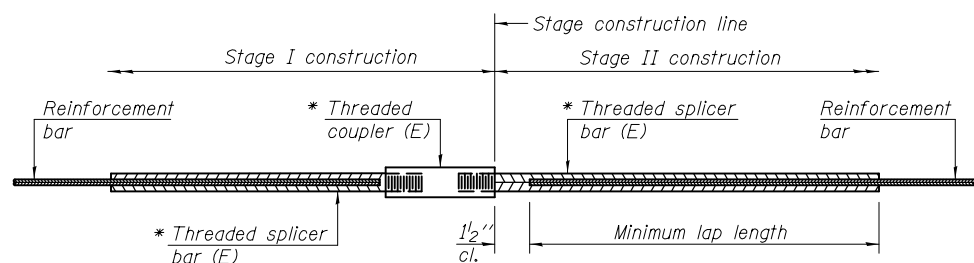
DATE - OCTOBER 16, 2014
REVISIONS
REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 015-0076

SHEET NO. 23 OF 31 SHEETS

F.A.P. RTE. 749	SECTION (122BR)B-1	COUNTY COLES	TOTAL SHEETS 60	SHEET NO. 40
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	



STANDARD BAR SPLICER ASSEMBLY

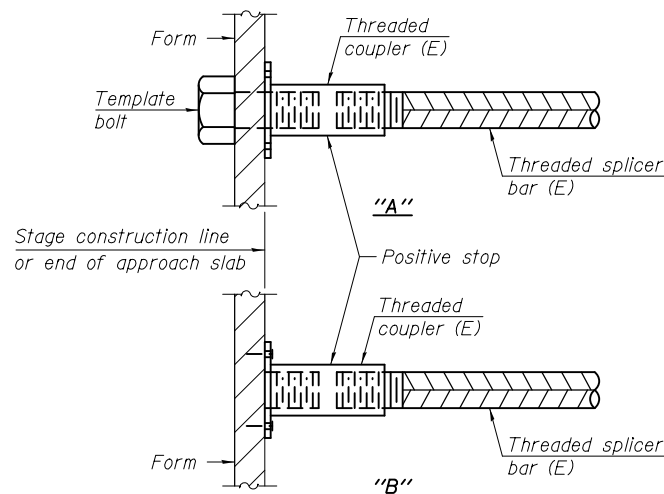
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

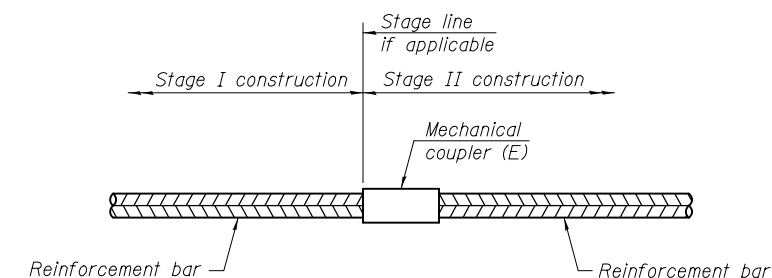
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Pier	#5	180	3



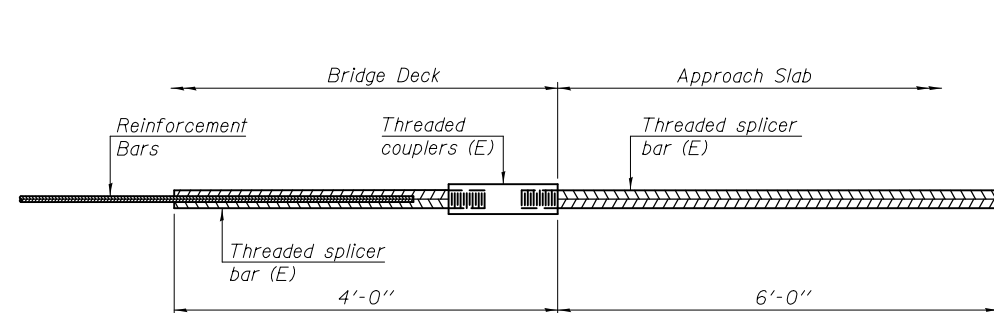
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



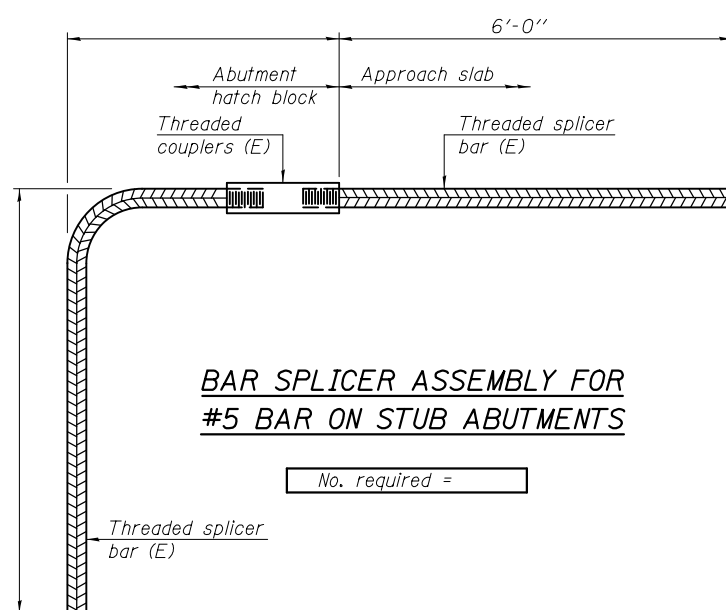
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier	#10	72



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-27-12

DESIGNED - Justin T. Belue	EXAMINED - <i>Joanne F. [Signature]</i>
CHECKED - David H. Richter	PASSED - <i>Carl [Signature]</i>
DRAWN - h.t. duong	
CHECKED - JTB/DHR	

DATE - OCTOBER 16, 2014
REVISOR -
REVISION -

DATE - OCTOBER 16, 2014
REVISOR -
REVISION -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

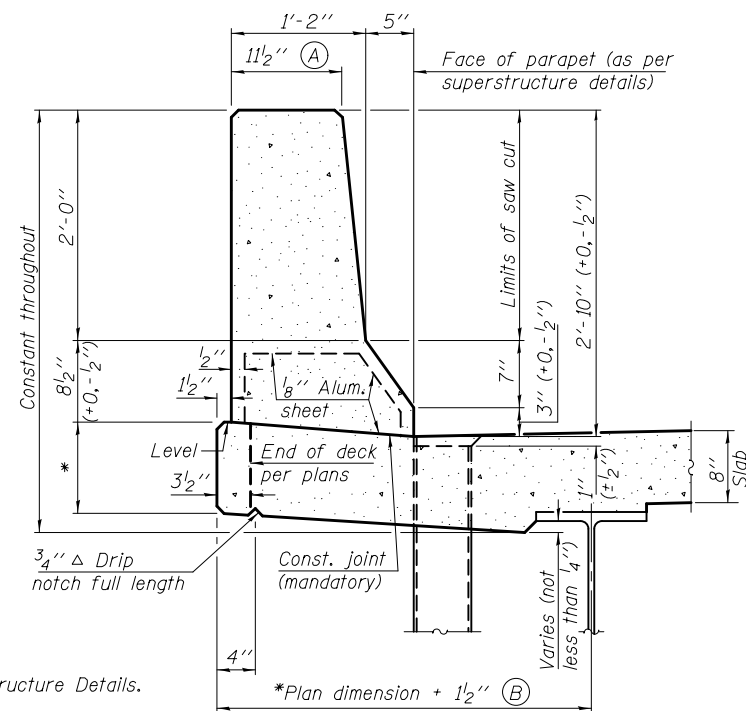
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 015-0076

SHEET NO. 24 OF 31 SHEETS

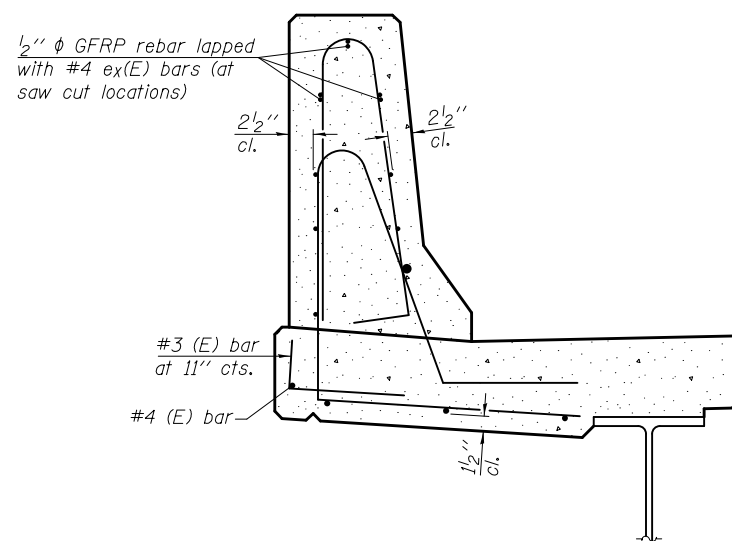
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	41
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

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.

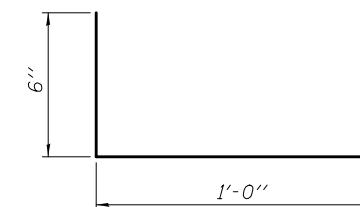


34" F SHAPE PARAPET SECTION
(Showing dimensions)

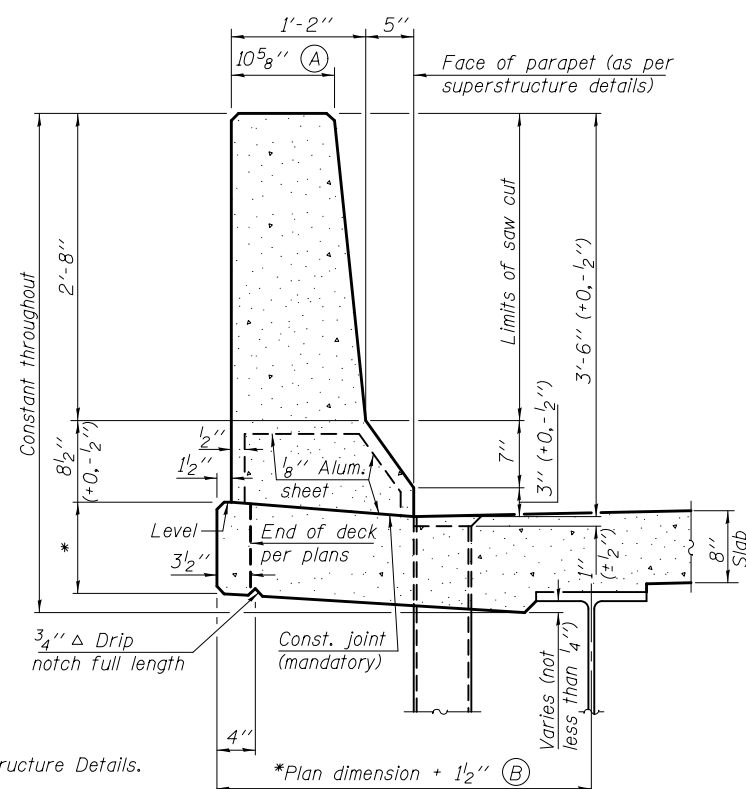


SECTION

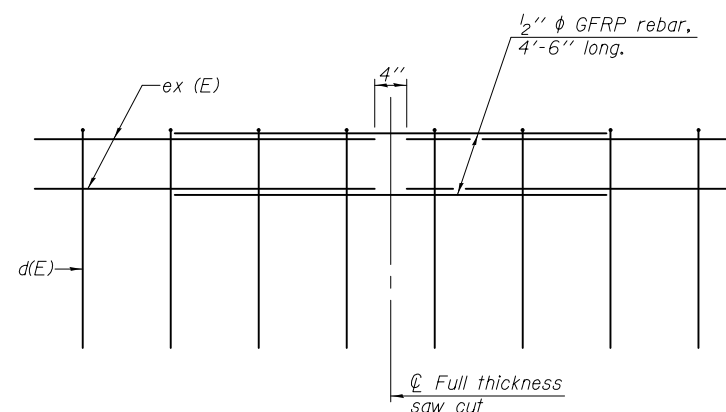
(34" parapet shown - 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR

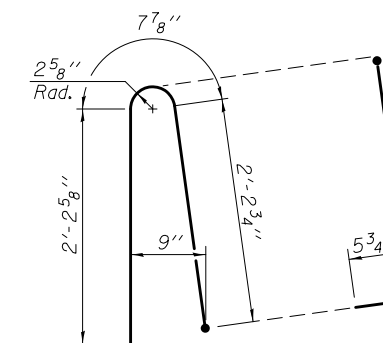


42" F SHAPE PARAPET SECTION
(Showing dimensions)

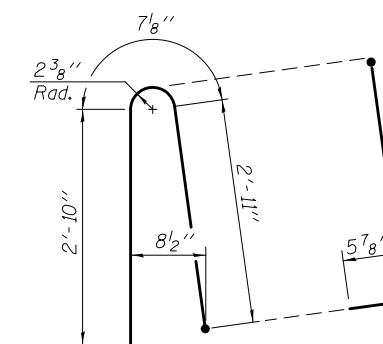


GFRP REBAR STIFFENING DETAIL

(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

DESIGNED - Justin T. Belue
CHECKED - David H. Richter
DRAWN - h.t. duong
CHECKED - JTB/DHR

EXAMINED - *Joanne F. Joffe*
PASSED - *Carl Pung*
ACTING ENGINEER OF BRIDGE DESIGN
ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 16, 2014
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 015-0076**

SHEET NO. 25 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	42
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

Page 1 of 1

Date 10/16/14

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

ROUTE FAP 749 (IL 133) DESCRIPTION Embarras River LOGGED BY G. Benson

SECTION (122BR)B-1 LOCATION W 12 - Sec 14, E 12 - Sec 15, SEC., TWP. 14 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD _____ HAMMER TYPE _____

STRUCT. NO. 015-0030
Station 713+10

BORING NO. 5 (1961)
Station 714+80
Offset 28.0ft Rt
Ground Surface Elev. 611.30 ft

Description	Elev. (ft)	Bulge (ft)	Shear (tsf)	Penetrometer (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (Hrs.)	Bulge (ft)	Shear (tsf)	Penetrometer (%)
Medium, brown, SILTY CLAY (fill).	590.80												
Very dense, gray, SHALEY SANDSTONE.	586.80												
Extent of exploration.	-25												
Medium, brown, SANDY CLAY.	604.30												
Loose, brown, SANDY CLAY.	601.80												
Medium, gray, SANDY LOAM.	596.80												
Weak, gray-blue, weathered, SANDY SHALE.	594.30												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)

Page 1 of 1

Date 10/16/14

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

ROUTE FAP 749 (IL 133) DESCRIPTION Embarras River LOGGED BY G. Benson

SECTION (122BR)B-1 LOCATION W 12 - Sec 14, E 12 - Sec 15, SEC., TWP. 14 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD _____ HAMMER TYPE _____

STRUCT. NO. 015-0030
Station 713+10

BORING NO. 6 (1961)
Station 712+55
Offset 6.0ft Lt
Ground Surface Elev. 592.10 ft

Description	Elev. (ft)	Bulge (ft)	Shear (tsf)	Penetrometer (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (Hrs.)	Bulge (ft)	Shear (tsf)	Penetrometer (%)
Loose, SAND and GRAVEL.	589.10												
Very dense, gray-blue, SANDY SHALE.	580.60												
Extent of exploration.	-15												

Note: No blow counts were taken; This was bored through bridge floor and could not raise derrick on drill.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)

DESIGNED -	EXAMINED -	DATE - OCTOBER 16, 2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 015-0076	F.A.P. RTE. 749	SECTION (122BR)B-1	COUNTY COLES	TOTAL SHEETS 60	SHEET NO. 45	
CHECKED -	PASSED -	REVISED -			CONTRACT NO. 74350					
DRAWN -		REVISED -			SHEET NO. 28 OF 31 SHEETS					
CHECKED -					ILLINOIS FED. AID PROJECT					



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 5/10/10

ROUTE FAP 749 (IL 133) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION (122BR)B-1 LOCATION W 12 - Sec 14, E 12 - Sec 15, SEC., TWP. 14 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 015-0030
Station 713+10
BORING NO. 102 (2010)
Station 713+36
Offset 6.0ft Lt
Ground Surface Elev. 623.83 ft

Surface Water Elev. 596.00 ft
Stream Bed Elev. 593.00 ft
Groundwater Elev.:
First Encounter 594.3 ft
Upon Completion 596.8 ft
After 24 Hrs. 598.8 ft

DEPTH (ft)	SOIL DESCRIPTION	MOISTURE (%)	UNCONF. COMP. STRENGTH (tsf)	FAILURE MODE	REMARKS
0	1 1/2" asphalt on 7" bridge deck.				
0	Air.				
5	Air.				
25	Soft, very damp, dark gray, SILTY LOAM w/wood chunk.				
30	Medium, wet, gray, fine grained, SAND, 3% passing #200 sieve.				
35	Gray, SANDSTONE.				
35	Very dense, moist, brown, SANDY CLAY SHALE.				
35	Borehole continued with rock coring.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Page 2 of 2

Date 5/10/10

ROUTE FAP 749 (IL 133) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION (122BR)B-1 LOCATION W 12 - Sec 14, E 12 - Sec 15, SEC., TWP. 14 N, RNG. 10 E, 3 PM

COUNTY Coles CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 015-0030
Station 713+10
BORING NO. 102 (2010)
Station 713+36
Offset 6.0ft Lt
Ground Surface Elev. 623.83 ft

CORING BARREL TYPE & SIZE NW, conv split inner bit
Core Diameter 2.06 in
Top of Rock Elev. 592.83 ft
Begin Core Elev. 588.83 ft

DEPTH (ft)	ROCK DESCRIPTION	ROCK QV (%)	ROCK RY (%)	CORE DIAM (in)	REMARKS
78	Gray, slightly weathered, SANDY CLAY SHALE.				
78	Rock core B102C1 from 37.0' to 37.5' depth = 35.3 tsf.				
98	Gray, moderately weathered, SANDY CLAY SHALE.				
98	Gray, slightly weathered, SANDY CLAY SHALE.				
98	Rock core B102C2 from 44.5' to 45.0' depth = 23.3 tsf.				
100	Gray, weathered, SANDY CLAY SHALE.				
100	Rock core B102C3 from 46.1' to 46.5' depth = 1.6 tsf. This core exhibited a slickensided diagonal shear plane failure.				
50	Extent of exploration.				
50	Benchmark: Chiseled square on SE wingwall of existing structure, BM 1624 714+78.5, 18.5' Rt, Elev = 622.32'.				

Color pictures of the cores Available upon request
Cores will be stored for examination until 05/10/15
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens > 4" to total length of core run BBS, form 138 (Rev. 8-99)

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

EXAMINED
PASSED
ACTING ENGINEER OF BRIDGE DESIGN
ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - OCTOBER 16, 2014
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SOIL BORING LOGS
STRUCTURE NO. 015-0076**
SHEET NO. 30 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	COLES	60	47
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

Illinois Department of Transportation
 Division of Highways
 Illinois Department of Transportation

SOIL BORING LOG Page 1 of 3
 Date 5/11/10

ROUTE FAP 749 (IL 133) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION (122BR)B-1 LOCATION W 12 - Sec 14, E 12 - Sec 15, SEC., TWP. 14 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 015-0030
 Station 713+10

BORING NO. 103 (2010)
 Station 714+92
 Offset 8.0ft Rt
 Ground Surface Elev. 621.77 ft

DEPTH (ft)	B	U	M	DESCRIPTION	DEPTH (ft)	B	U	M
0				3 5/8" asphalt on 11 1/4" concrete pavement.	0	1	1.2	27
620.57				Crushed stone subbase.	3	3	B	
619.57				Stiff, damp, brown, CLAY TILL, fill.	0	0		
					1	0.1	30	
					2	B		
					25			
614.77				Stiff, damp, dark gray, SILTY CLAY w/organics.	0	0		
					1	1.6	25	
					3	B		
614.77				Stiff, damp, brown, CLAY LOAM TILL, fill.	0	0		
					0	0.4	20	
					1	B		
612.27				Medium, damp, gray, CLAY LOAM, fill.	0	0		
					0	0.8	31	
					1	B		
609.77				Soft, very damp, brown, CLAY LOAM.	0	0		
					1	0.3	16	
					1	B		
607.27				Gray, SILTY LOAM.	0	0		
					0	0.6	15	
					1	B		
606.47				Stiff, damp, brown, CLAY LOAM TILL.	0	0		
					1	1.3	14	
					1	B		
604.77				Soft to medium, damp, brown, CLAY LOAM.	0	0		
					0	0.5	12	
					2	B		
602.27					1			
					20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
 Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
 Division of Highways
 Illinois Department of Transportation

SOIL BORING LOG Page 2 of 3
 Date 5/11/10

ROUTE FAP 749 (IL 133) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION (122BR)B-1 LOCATION W 12 - Sec 14, E 12 - Sec 15, SEC., TWP. 14 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 015-0030
 Station 713+10

BORING NO. 103 (2010)
 Station 714+92
 Offset 8.0ft Rt
 Ground Surface Elev. 621.77 ft

DEPTH (ft)	B	U	M	DESCRIPTION	DEPTH (ft)	B	U	M
581.47				Borehole continued with rock coring.	502"			9
					502"			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
 Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
 Division of Highways
 Illinois Department of Transportation

ROCK CORE LOG Page 3 of 3
 Date 5/11/10

ROUTE FAP 749 (IL 133) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION (122BR)B-1 LOCATION W 12 - Sec 14, E 12 - Sec 15, SEC., TWP. 14 N, RNG. 10 E, 3 PM

COUNTY Coles CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 015-0030
 Station 713+10

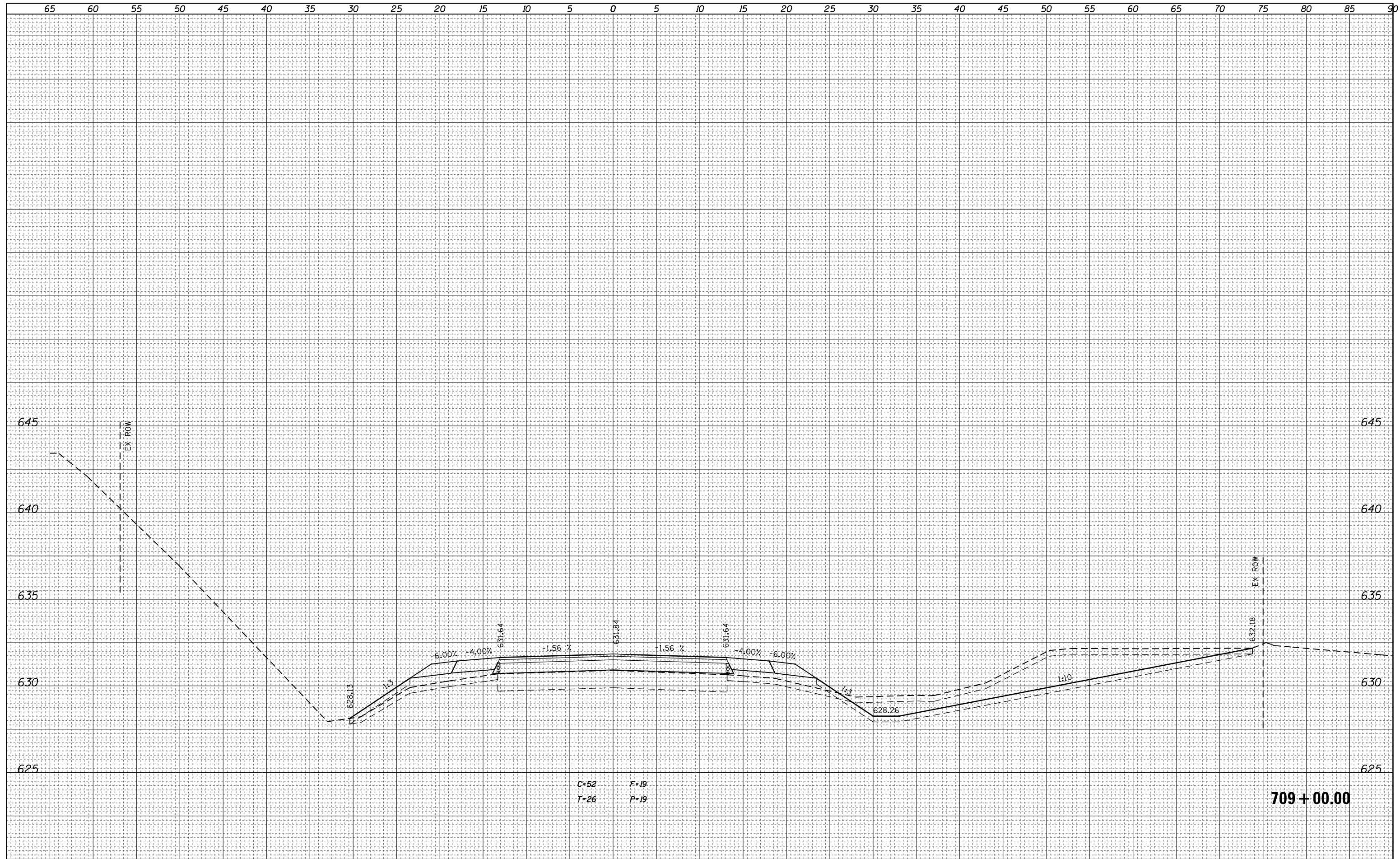
BORING NO. 103 (2010)
 Station 714+92
 Offset 8.0ft Rt
 Ground Surface Elev. 621.77 ft

DEPTH (ft)	DESCRIPTION	DEPTH (ft)	REMARKS	UCS (tsf)	ROD
581.47	Gray, weathered, SILTY CLAY SHALE.	103C1	73	39	1.5
	Rock core B103C1 from 41.0' to 41.5' depth = 13.4 tsf.				
576.47	Gray, weathered, SILTY CLAY SHALE.	103C2	55	45	1.6
	Rock core B103C2 from 47.0' to 47.5' depth = 7.4 tsf.				
571.47	Gray, weathered, SILTY CLAY SHALE.	103C3	100	25	1.9
	Majority of sample split vertically, see notes on Field Rock Core Log.				
568.57	Blueish gray, SILTY CLAY.				
567.47	Blueish gray, weathered, SILTY CLAY SHALE.				
566.47	Extent of exploration.				
	Benchmark: Chiseled square on SE wingwall of existing structure, BM 1624 714+78.5, 18.5' Rt, Elev = 622.32'.				

Color pictures of the cores Available upon request
 Cores will be stored for examination until 05/10/15
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
 ROD is the ratio of the total length of sound core specimens > 4" to total length of core run BBS, form 138 (Rev. 8-99)

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 DEPARTMENT OF TRANSPORTATION**

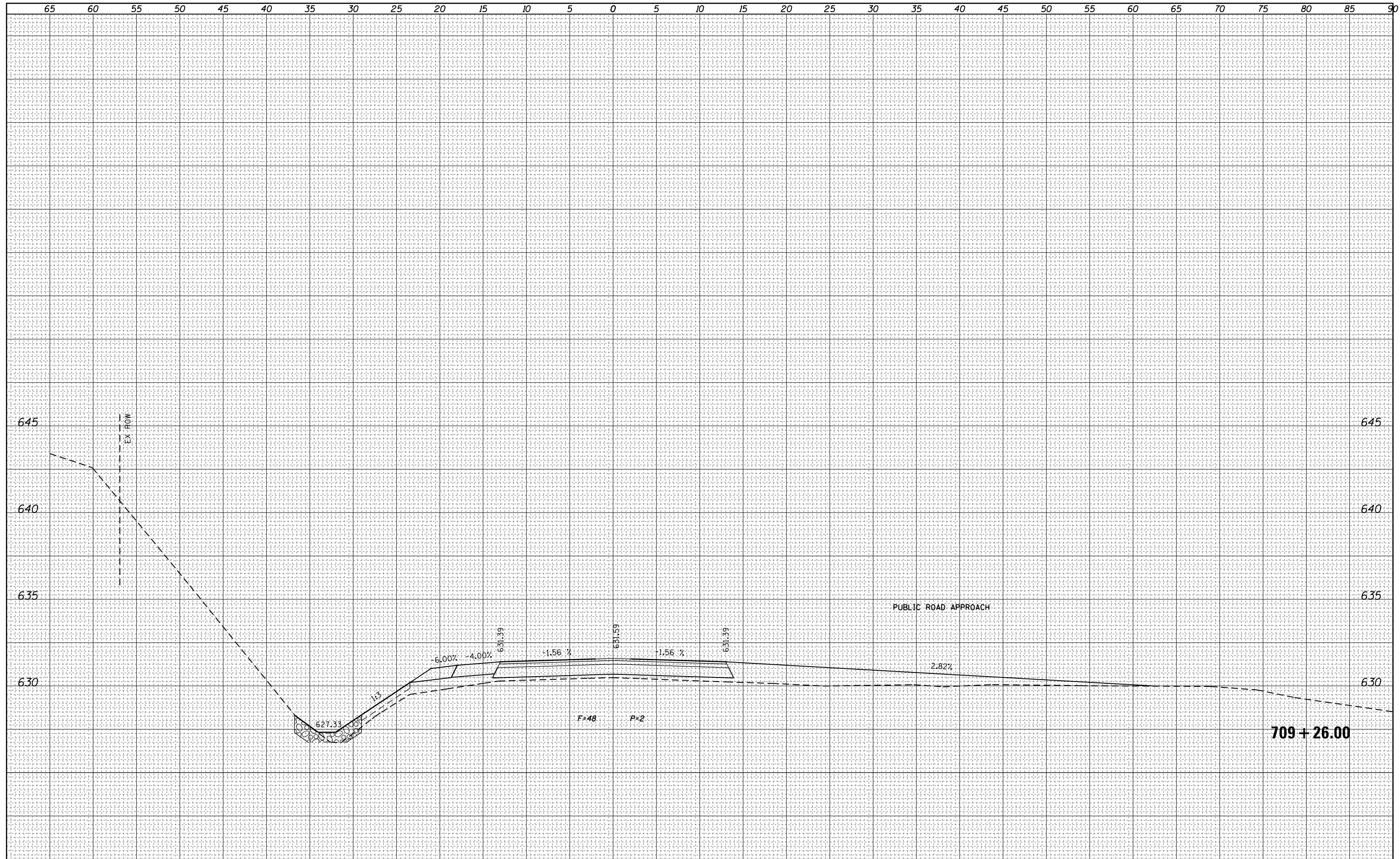
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749	(122BRIB-1	Coles	60	51
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

709+00.00

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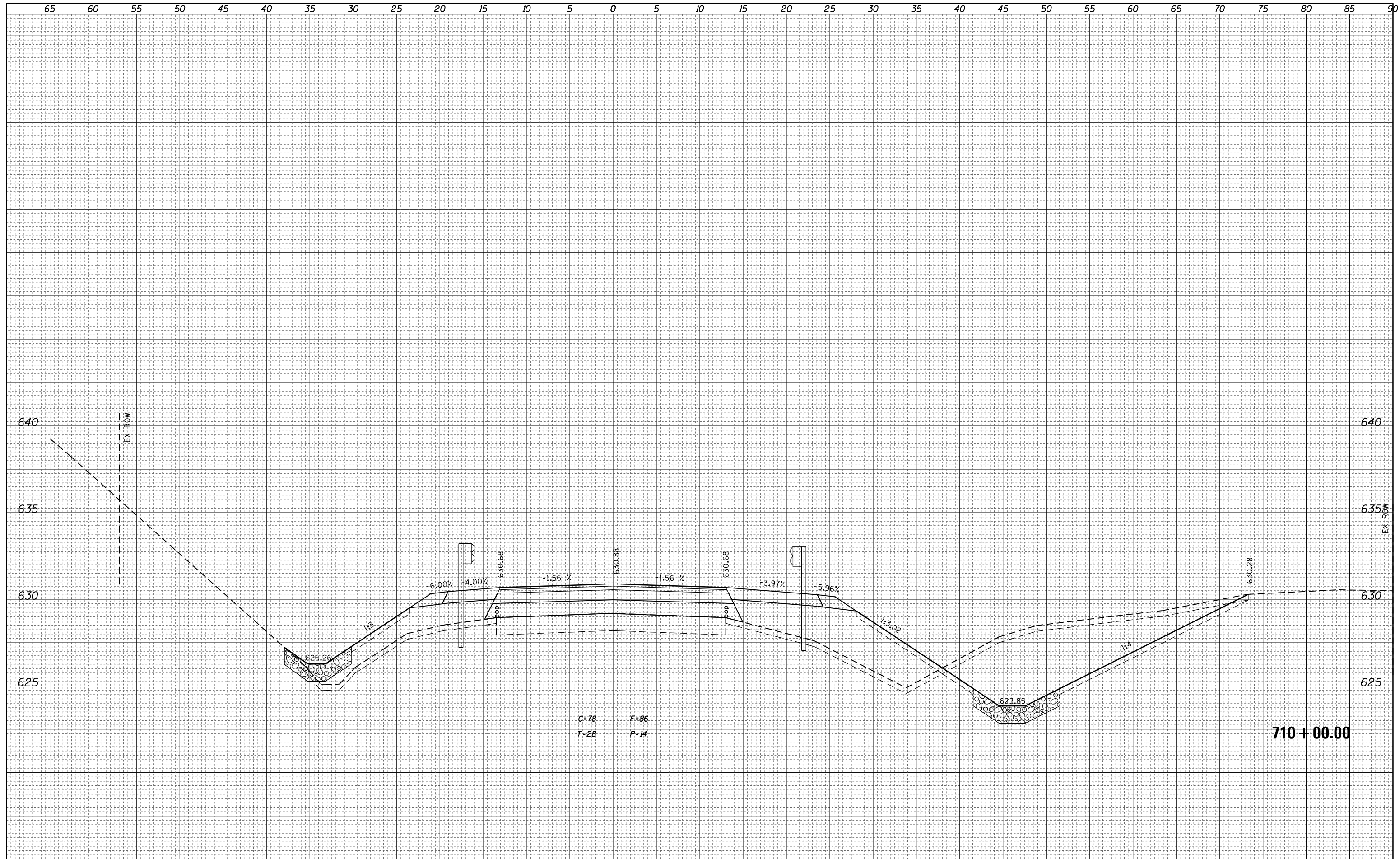
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749	(122BR)B-1	Coles	60	52
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

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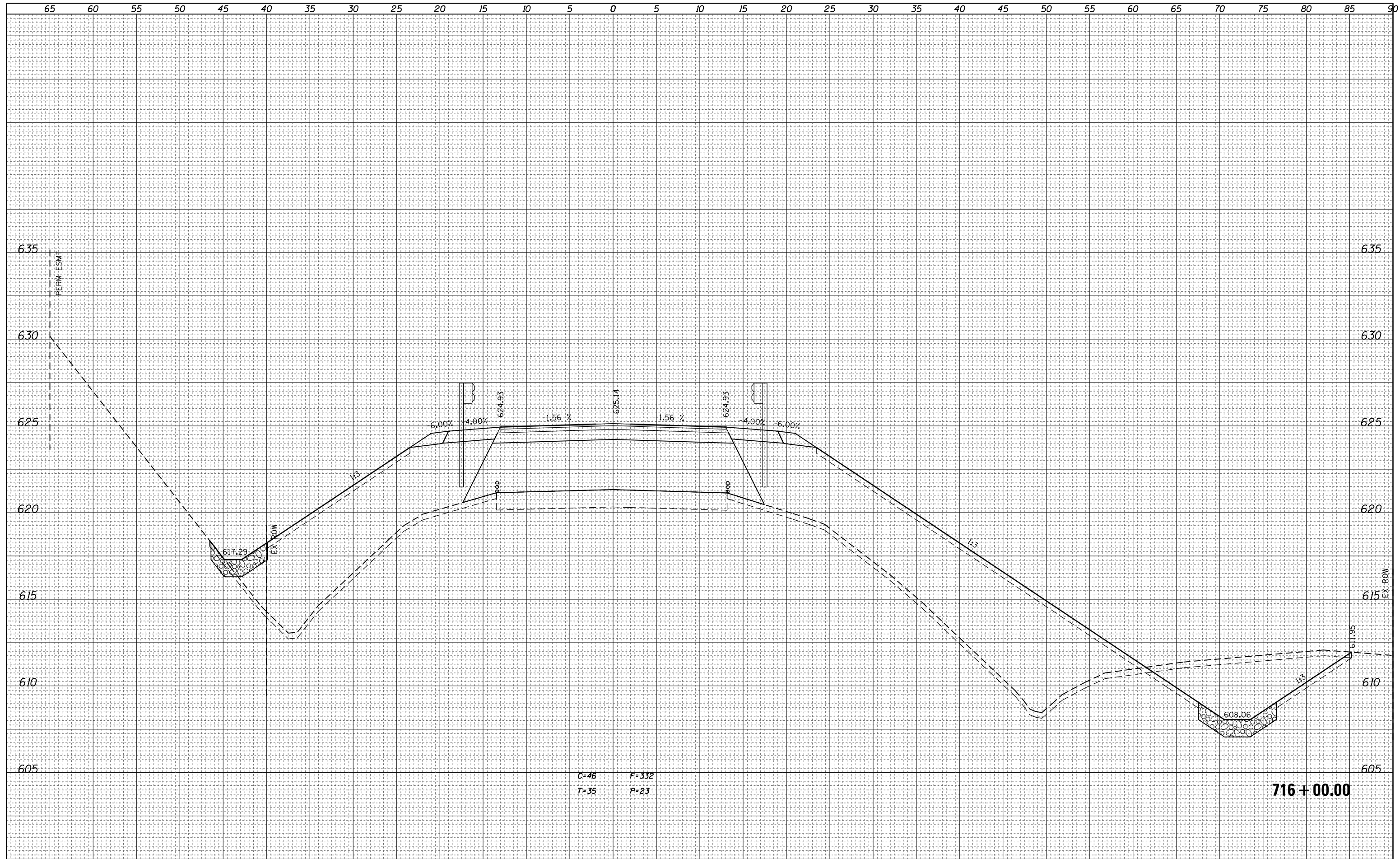
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749	(122BRIB-1	Coles	60	53
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

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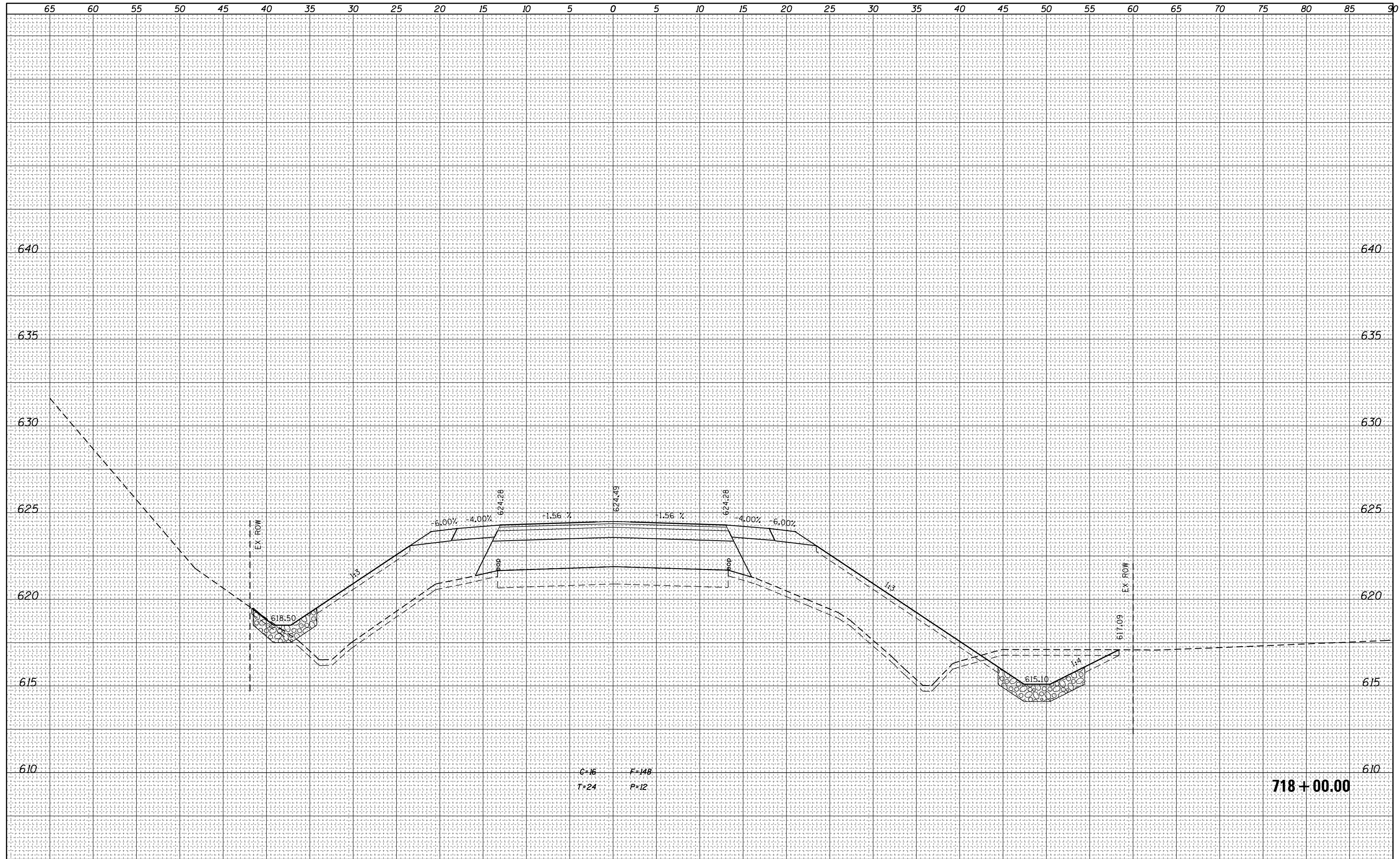
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749	(122BRIB-1	Coles	60	56
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

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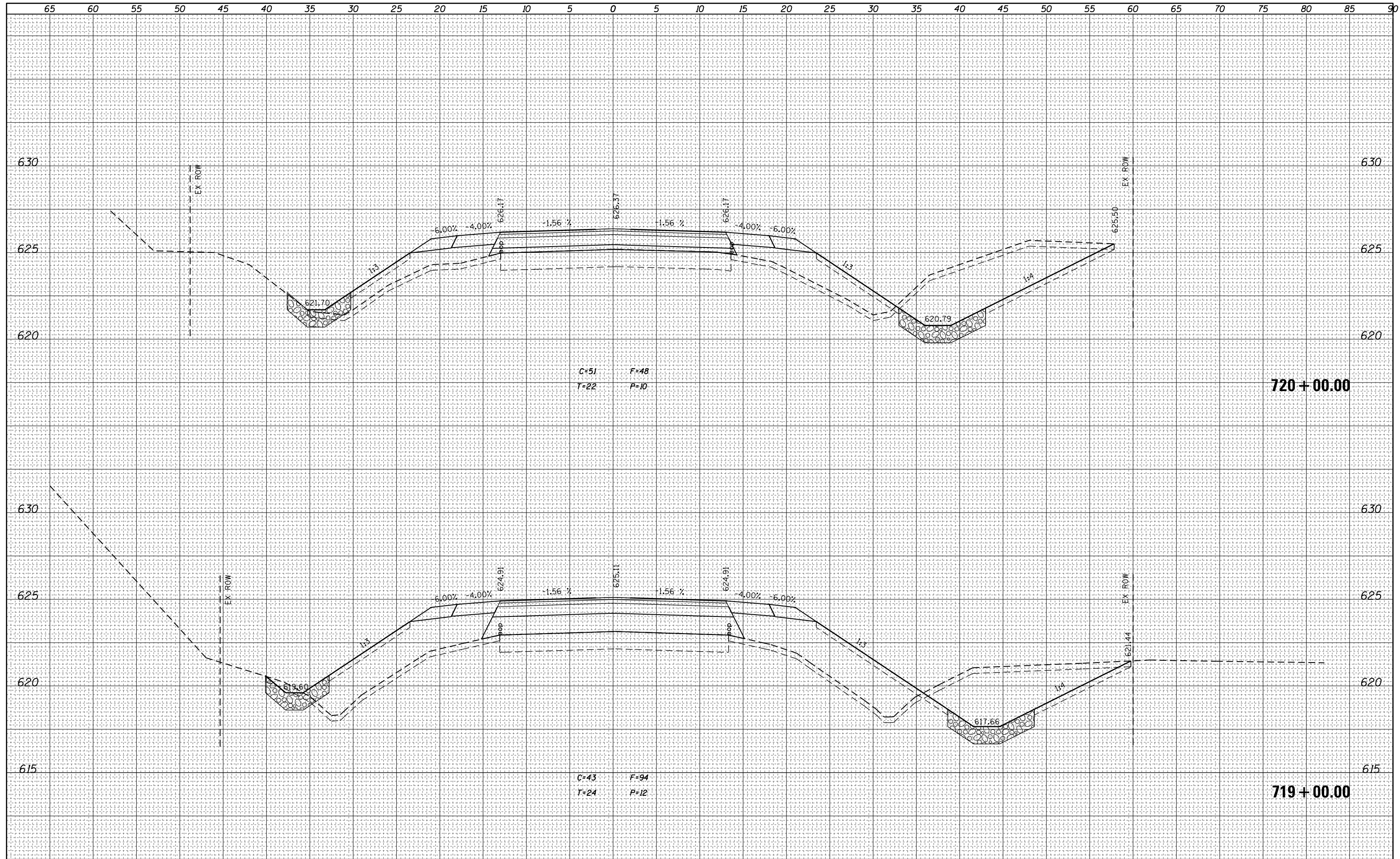
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749	(122BR)B-1	Coles	60	58
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	

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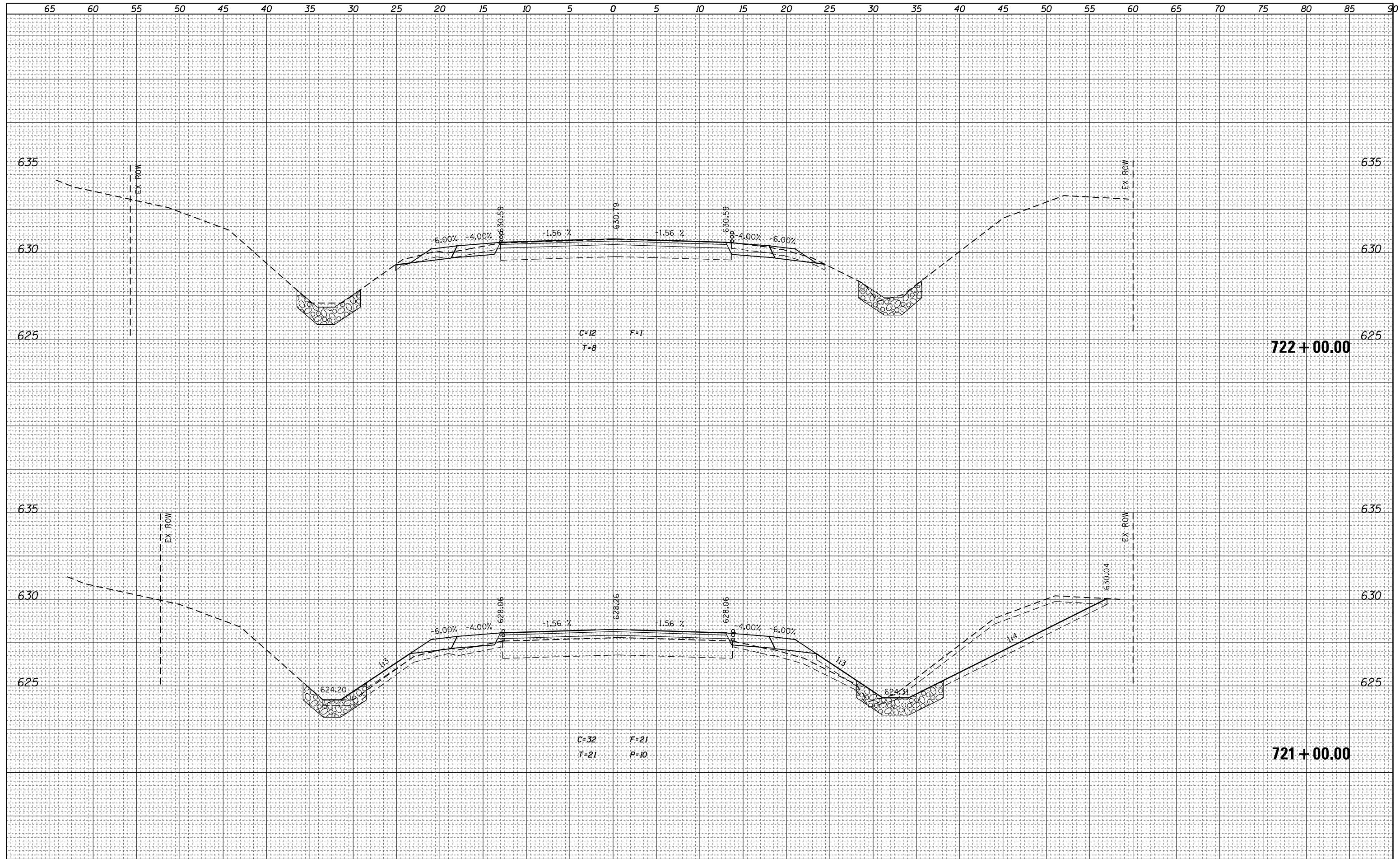
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749	(122BR)B-1	Coles	60	59
CONTRACT NO. 74350				
ILLINOIS FED. AID PROJECT				

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CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 721+00.00 TO STA. 722+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR)B-1	Coles	60	60
CONTRACT NO. 74350			ILLINOIS FED. AID PROJECT	