

022

01-18-2019 LETTING ITEM 022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.P. ROUTE 91 (IL RTE. 16)
SECTION (4)RS-4
PROJECT STP-87NZ(832)
RESURFACING (3P)
COLES COUNTY

C-97-092-07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	COLES	57	1
ILLINOIS			CONTRACT NO. 74261	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PAVING OMISSIONS:

STA. 488 + 68 TO STA. 489 + 42 (SN#) 015-0020

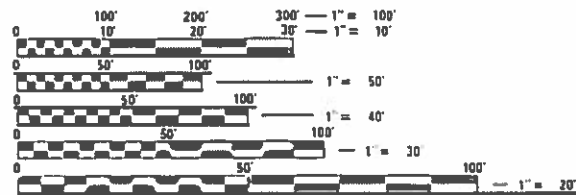
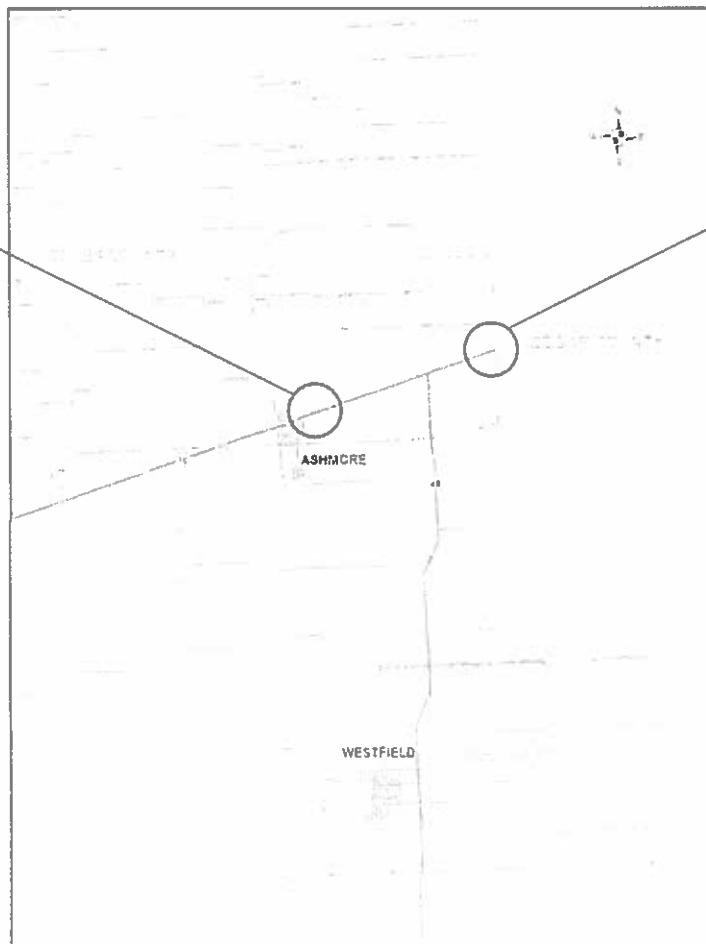
STA. 523 + 16 TO STA. 524 + 17 (SN#) 015-0021

ADT = 3,150 (2017)



PROJECT BEGINS:
STA. 432 + 48

PROJECT ENDS:
STA. 600 + 30



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

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

PROJECT ENGINEER: TOM RONAN
PROJECT MANAGER: KELLEN KOCHER
PHONE: (217) 342-8314
CONTRACT NO. 74261

GROSS LENGTH = 16,804 FT. = 3.18 MILES
NET LENGTH = 16,629 FT. = 3.15 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 18 2018
Jeffrey M. South
REGIONAL ENGINEER

Dec 7 2018
Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

Dec 7 2018
Paul P. Chif
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

INDEX OF SHEETS

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37-57	STRUCTURE PLANS 015-0020/0021

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 57 :

STD. NO.	DESCRIPTION
000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
406201-01	MAILBOX TURNOUT
442201-03	CLASS C AND D PATCHES
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
642006	SHOULDER RUMBLE STRIPS, 8 INCH
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701311-03	LANE CLOSURE 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-17	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS >= 45MPH
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

THE MATERIAL USED FOR AGGREGATE WEDGE SHOULDERS, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE, OR RAP. THE MATERIAL USED FOR AGGREGATE SURFACE COURSE, TYPE B SHALL BE CRUSHED STONE.

RUMBLE STRIPS SHALL BE OMITTED AT MAILBOX TURNOUTS 60' BOTH SIDES OF THE MAILBOX. THESE RUMBLE STRIPS WILL NOT BE MEASURED FOR PAYMENT.

THE HOT MIX ASPHALT QUALITY CONTROL FOR PERFORMANCE (BMPR) SPECIAL PROVISION SHALL APPLY TO THE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 LAID ON THE TWO THROUGH LANES. THE QUALITY CONTROL FOR PERFORMANCE SPECIFICATION WILL NOT APPLY TO THE SURFACE COURSE LAID ON TOP OF THE HOT-MIX ASPHALT SHOULDERS.

WHEN APPLYING SHORT TERM PAVEMENT MARKINGS, TEMPORARY TAPE SHALL BE USED ON THE SURFACE COURSE AND PAINT SHALL BE USED ON MILLED SURFACES.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

APPLICATION	AC/PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	QUALITY MANAGEMENT
HMA SURFACE COURSE, MIX "C", N70 (1 1/2")	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	OCP
HMA LEVEL BINDER, MACHINE METHOD, N70FG, (3/4")	PG 64-22	4.0% @ N=70	IL - 9.5FG	N/A	OCP
INCIDENTAL HOT-MIX ASPHALT SURFACING	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	QC/OA
CLASS "D" PATCHING	PG 64-22	4.0% @ N=70	IL - 19.0	N/A	QC/OA
PARTIAL DEPTH PAVEMENT PATCHING	PG 64-22	4.0% @ N=70	IL - 9.5	N/A	QC/OA
HMA SHOULDERS, 6 1/2" (TOP LIFT - 2 1/2")	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	QC/OA
HMA SHOULDERS, 6 1/2" (BOTTOM LIFT - 4")	PG 64-22	4.0% @ N=70	IL - 19.0	N/A	QC/OA

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

AGGREGATE WEDGE SHOULDER	2.05 TONS/CU YD
AGGREGATE SURFACE COURSE	2.05 TONS/CU YD
HOT-MIX ASPHALT	112 LBS/SQ YD/IN

FOR THE LEVELING BINDER (MACHINE METHOD) IL-9.5FG, N70 MIX THE TOTAL PAY FACTOR FOR THE DENSITY WILL BE 100.0 AFTER A ROLLING PATTERN IS APPROVED BY THE DISTRICT ON THE FIRST DAY OF PRODUCTION. THE USE OF A VIBRATORY ROLLER IN DYNAMIC MODE WILL NOT BE ALLOWED WHEN CONSTRUCTING LEVEL BINDER (MACHINE METHOD)

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND GENERAL NOTES

USER NAME = steffenmk	DESIGNED -	REVISED -	SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100,0000 ' / in.	DRAWN -	REVISED -		91	(4)R5-4	Coles	57	2
PLOT DATE = 10/19/2018	CHECKED -	REVISED -		CONTRACT NO. 74261				
	DATE -	REVISED -		ILLINOIS FED. AID PROJECT				

80% FED
20% STATE

80% FED
20% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0005	0047	
20200100	EARTH EXCAVATION	CU YD	67.9	67.9		
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	15.2	15.2		
20300100	CHANNEL EXCAVATION	CU YD	70		70	
20400800	FURNISHED EXCAVATION	CU YD	158.1	158.1		
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	105		105	
35650500	BASE COURSE WIDENING 10"	SO YD	410.7	410.7		
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	57	57		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	68505	68505		
40600637	LEVELING BINDER (MACHINE METHOD), IL-9.5FG, N70	TON	2131	2131		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	327	327		
40600990	TEMPORARY RAMP	SO YD	109	109		
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	5074	5074		
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	218	218		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0005	0047	
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SO YD	50418	50418		
44201835	CLASS D PATCHES, TYPE I, 16 INCH	SO YD	36	36		
44201839	CLASS D PATCHES, TYPE II, 16 INCH	SO YD	1107	1107		
44201843	CLASS D PATCHES, TYPE III, 16 INCH	SO YD	164	164		
44201845	CLASS D PATCHES, TYPE IV, 16 INCH	SO YD	1044	1044		
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	385	385		
48203023	HOT-MIX ASPHALT SHOULDERS, 6 1/2"	SO YD	9474	9474		
50102400	CONCRETE REMOVAL	CU YD	37.6	2.6	35	
50300100	FLOOR DRAINS	EACH	28		28	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	43.4		43.4	
50300260	BRIDGE DECK GROOVING	SO YD	533		533	
50300300	PROTECTIVE COAT	SO YD	39		39	
50800105	REINFORCEMENT BARS	POUND	151	151		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1340		1340	

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PLOT DATE = 10/19/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: N/A SHEET 1 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	3
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

80% FED
20% STATE

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SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0005	0047	
50800515	BAR SPLICERS	EACH	16		16	
50800530	MECHANICAL SPLICERS	EACH	116		116	
50900200	STEEL RAILING, TYPE 2399	FOOT	360		360	
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	1	1		
54001002	BOX CULVERT END SECTIONS, CULVERT NO. 2	EACH	1	1		
54001003	BOX CULVERT END SECTIONS, CULVERT NO. 3	EACH	1	1		
54002080	EXPANSION BOLTS 3/4 INCH X 18 INCH	EACH	36	36		
54010402	PRECAST CONCRETE BOX CULVERTS 4' X 2'	FOOT	8.5	8.5		
54010605	PRECAST CONCRETE BOX CULVERTS 6' X 5'	FOOT	4	4		
54011208	PRECAST CONCRETE BOX CULVERTS 12' X 8'	FOOT	8	8		
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	662.5	662.5		
* 63000350	LONG-SPAN GUARDRAIL OVER CULVERT, 12 FT 6 IN SPAN	FOOT	12.5	12.5		
* 63000360	LONG-SPAN GUARDRAIL OVER CULVERT, 18 FT 9 IN SPAN	FOOT	18.75	18.75		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0005	0047	
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	8		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	12	12		
63200310	GUARDRAIL REMOVAL	FOOT	1202	1202		
64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	32061	32061		
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4		4	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4		
67100100	MOBILIZATION	LSUM	1	0.8	0.2	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2		2	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1	1		
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	LSUM	1	1		
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		

* SPECIALTY ITEM

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PLOT DATE = 10/19/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A SHEET 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	4
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

80% FED
20% STATE

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20% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0005	0047	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	9	9		*
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	2		*
70300100	SHORT TERM PAVEMENT MARKING	FOOT	6316	6316		*
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	702	702		*
70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	62.4	62.4		*
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	47236	47236		
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	274	274		
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	330	330		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	736	736		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	736	736		
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4		
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	12	12		
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	78	78		*

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0005	0047	
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	9125	9125		
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	274	274		
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	596	596		
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	38111	38111		
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	288	288		
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	40	40		
X0326440	SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL)	SQ YD	937	937		
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	444		444	
X1700035	CLASS SI CONCRETE	CU YD	2.1	2.1		
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.5	0.5		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28		
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	16213	16213		
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	218		218	
* X7830060	GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS	SQ FT	78	78		

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	5
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING SCHEDULE			LENGTH	PAINT PAVEMENT MARKING - LINE 4"	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS AND SYMBOLS	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	GROOVING FOR RECESSED PAVEMENT MARKING 5"	TEMPORARY PAVEMENT MARKING - LINE 4"	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	GROOVING FOR RECESSED PAVEMENT MARKING 7"	TEMPORARY PAVEMENT MARKING - LINE 6"	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	GROOVING FOR RECESSED PAVEMENT MARKING 13"	TEMPORARY PAVEMENT MARKING - LINE 12"	SHORT-TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKERS
STATION	TO	STATION	FOOT	FOOT	SQ FT	SQ FT	SQ FT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	EACH
432+48	TO	441+60	912	2052	-	-	-	-	-	2052	-	-	-	-	-	-	274	30.4	12
441+60	TO	448+97	737	2395	-	-	-	-	-	2395	-	-	-	-	-	-	221	24.5	10
448+97	TO	451+44	247	556	-	-	-	-	-	556	-	-	-	-	-	-	74	8.3	4
451+44	TO	459+76	832	2704	-	-	-	-	-	2704	-	-	-	-	-	-	250	27.7	11
459+76	TO	462+33	257	578	-	-	-	-	-	578	-	-	-	-	-	-	77	8.5	4
462+33	TO	467+72	539	1752	-	-	-	-	-	1752	-	-	-	-	-	-	162	18.0	7
467+72	TO	474+64	692	1557	-	-	-	-	-	1557	-	-	-	-	-	-	208	23.1	9
474+64	TO	479+80	516	1607	-	-	-	-	-	1607	-	-	-	-	-	-	155	17.2	7
479+80	TO	532+41	5261	11837	-	-	-	-	-	11837	-	-	-	-	-	-	1578	175.3	64
532+41	TO	534+84	243	790	-	-	-	-	-	790	-	-	-	-	-	-	73	8.1	4
534+84	TO	536+00	116	464	-	-	-	-	-	464	-	-	-	-	-	-	35	3.9	2
536+00	TO	554+56.5	1857	-	78	78	78	9125	9125	9125	274	274	274	330	330	330	1838	204.2	95
554+56.5	TO	556+34	178	710	-	-	-	-	-	710	-	-	-	-	-	-	53	5.9	3
556+34	TO	568+52	1218	3959	-	-	-	-	-	3959	-	-	-	-	-	-	366	40.7	16
568+52	TO	600+30	3178	7151	-	-	-	-	-	7151	-	-	-	-	-	-	954	106.0	40
WHITE TOTAL			-	29781	78	-	-	3419	-	-	274	-	-	-	-	-	-	-	-
YELLOW TOTALS			-	8330	-	-	-	5706	-	-	-	-	-	330	-	-	-	-	-
TOTALS			-	38111	78	78	78	9125	9125	47236	274	274	274	330	330	330	6316	702	288

* THE RAISED REFLECTIVE PAVEMENT MARKERS CONSIST OF 8 ONE-WAY CRYSTAL, 56 ONE-WAY AMBER AND 224 TWO-WAY AMBER MARKERS.

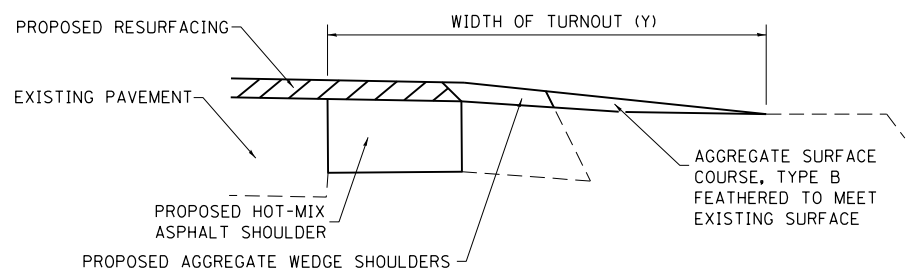
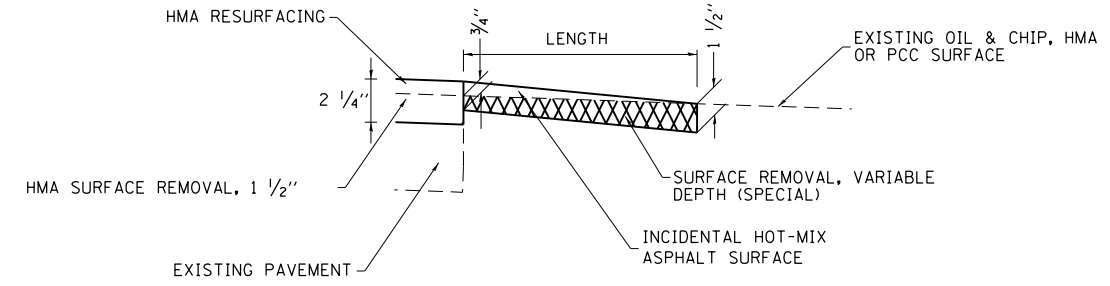
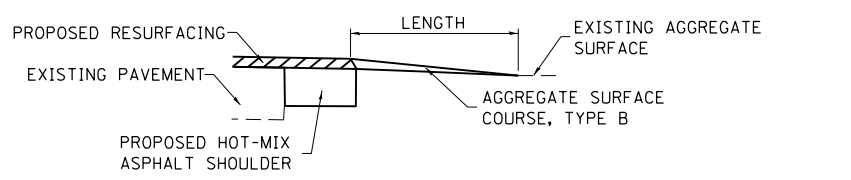
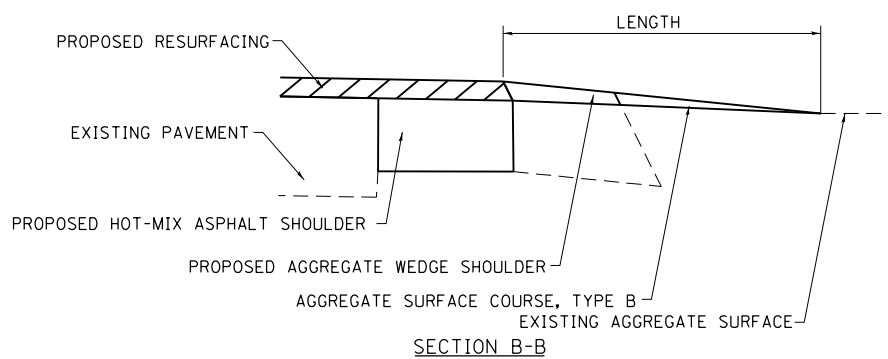
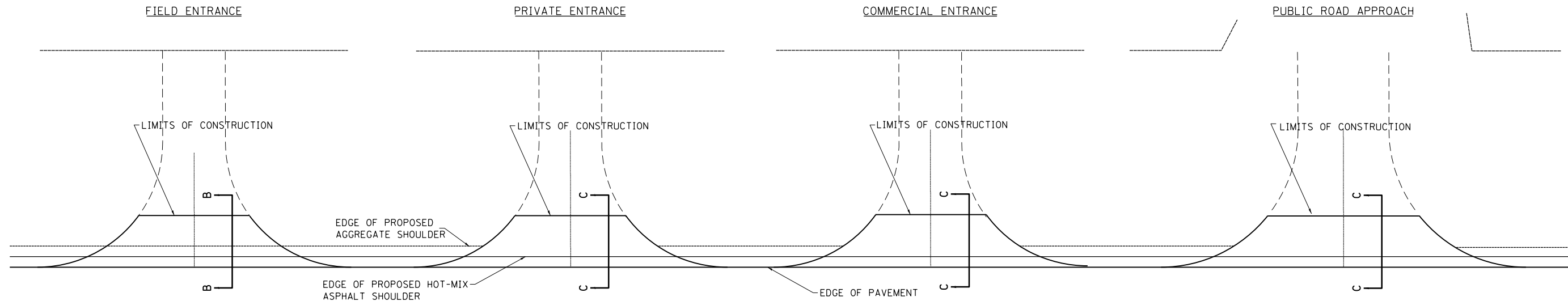
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES			
SCALE: N/A	SHEET 2	OF 2 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	COLES	57	10
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



TYPICAL SECTION AT MAILBOX TURNOUT
NOTE: SEE STANDARD 406201 FOR MAILBOX TURNOUT DETAILS

NOTES
LENGTH = 10' UNLESS OTHERWISE NOTED ON PLANS
THE COST OF THE BITUMINOUS MATERIALS (TACK COAT) FOR ENTRANCES AND PUBLIC ROAD APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

SIDE	STATION	TYPE	SURFACE REMOVAL VARIABLE DEPTH (SPECIAL)		
			SO YD	TON	TON
RT	433+11	MBT	-	-	4.0
RT	434+17	CE	43.3	6.3	-
LT	434+39	CE	50.0	6.3	-
RT	437+23	PE	25.0	3.2	-
RT	437+54	MBT	45.6	5.7	8.0
RT	438+88	PE	33.3	4.2	-
LT	439+46	PE	41.7	5.3	-
RT	440+02	PE	25.0	3.2	-
RT	440+30	MBT	30.6	3.9	8.0
RT	443+01	FE	-	-	3.6
RT	450+03	PE	32.8	12.4	-
RT	450+21	MBT	27.8	10.5	8.0
RT	452+61	FE	-	-	3.0
LT	455+16	FE	-	-	2.8
RT	470+07	FE	-	-	2.4
RT	474+69	FE	44.4	16.8	-
LT	474+69	PRA	55.6	21.0	-
RT	490+83	FE	27.8	4.6	-
RT	502+31	FE	38.9	4.9	-
LT	502+99	FE	-	-	2.0
RT	506+66	FE	-	-	2.0
RT	516+50	FE	33.3	12.6	-
RT	530+24	FE	-	-	2.4
RT	544+29	PRA	179.4	67.8	-
LT	544+29	PRA	50.0	8.2	-
RT	554+89	FE	27.8	3.5	-
RT	559+41	PE	44.4	5.6	-
LT	559+68	FE	-	-	2.4

FE=FIELD ENTRANCE PRA - PUBLIC ROAD APPROACH
PE=PRIVATE ENTRANCE MBT - MAILBOX TURNOUT
CE=COMMERCIAL ENTRANCE

SIDE	STATION	TYPE	SURFACE REMOVAL VARIABLE DEPTH (SPECIAL)		
			SO YD	TON	TON
LT	568+96	FE	-	-	4.3
RT	570+82	CE	38.9	6.4	-
LT	573+01	FE	-	-	4.0
RT	600+03	FE	41.7	5.3	-
TOTALS:			937	218	57

SIDE	STATION	TYPE	SURFACE REMOVAL VARIABLE DEPTH (SPECIAL)		
			SO YD	TON	TON

SIDE	STATION	TYPE	SURFACE REMOVAL VARIABLE DEPTH (SPECIAL)		
			SO YD	TON	TON

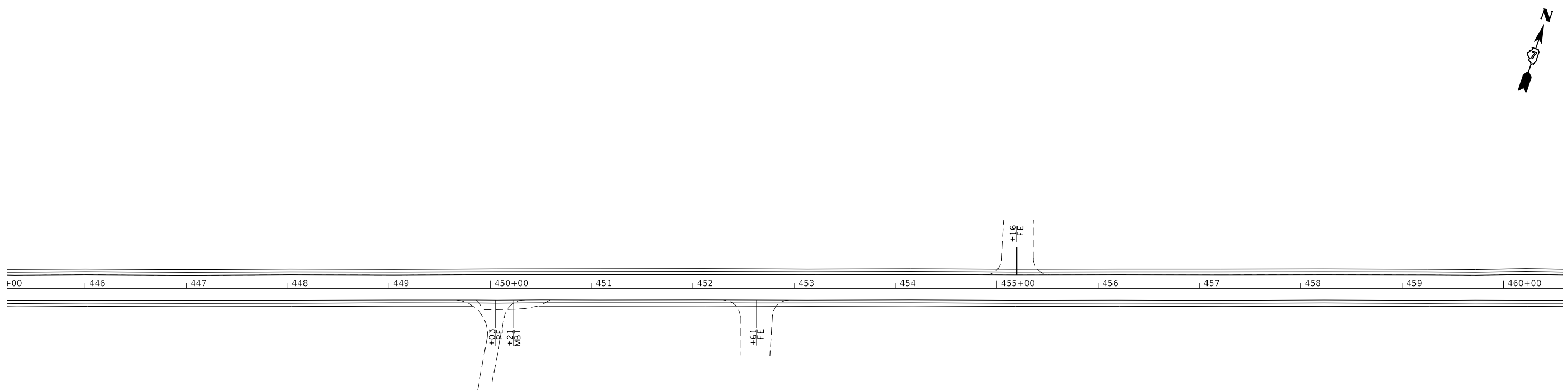
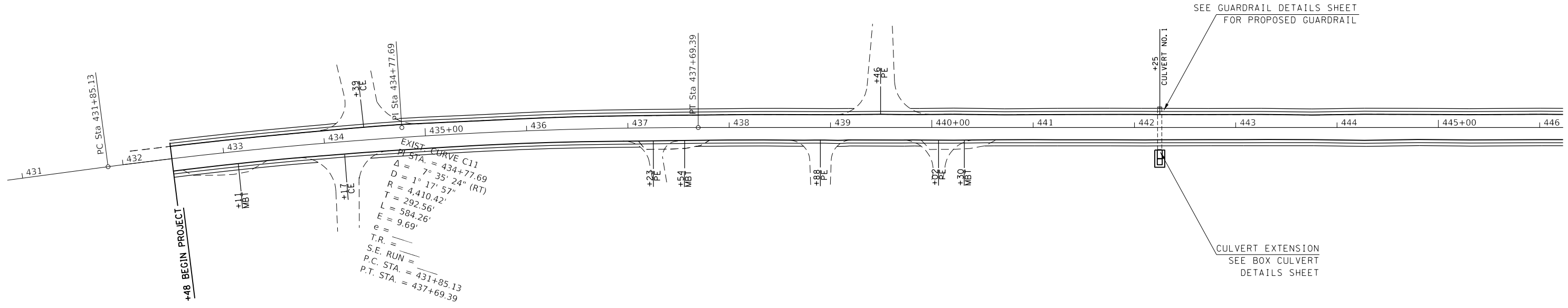
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		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ENTRANCE SCHEDULE AND MAILBOX TURNOUT DETAILS
SHOULDERS (PROPOSED)

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	11
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 74261	



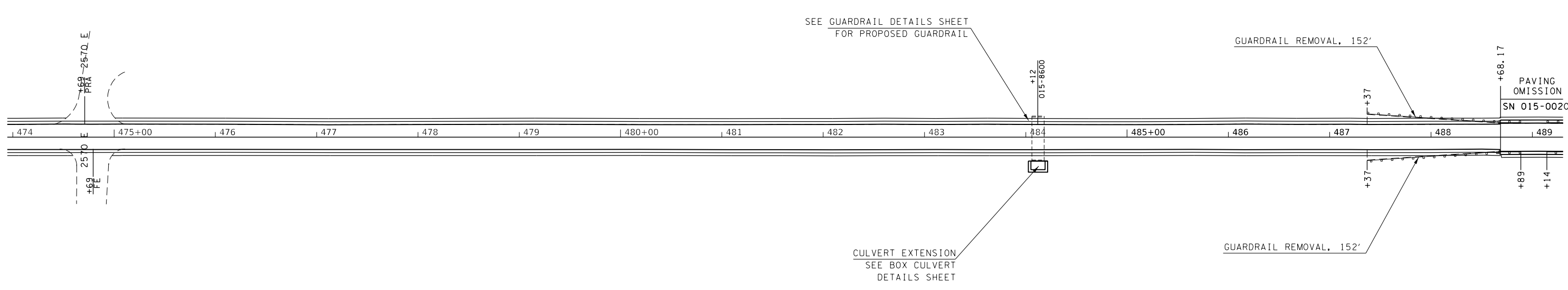
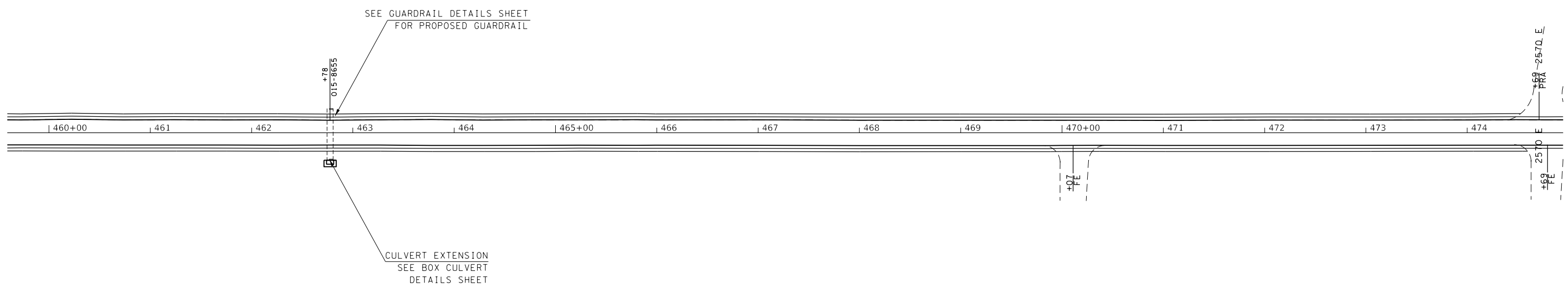
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PLOT DATE = 10/19/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET
 SCALE: SHEET 1 OF 6 SHEETS STA. 432+24 TO STA. 459+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)R5-4	Coles	57	12
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



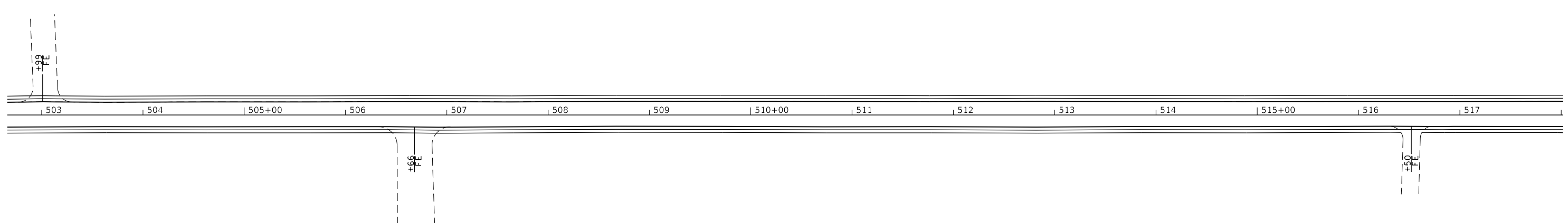
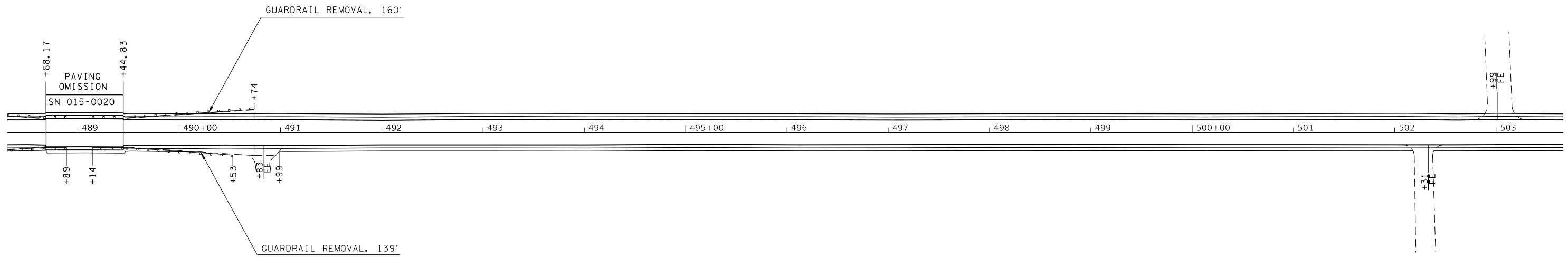
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PLOT DATE = 10/19/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET
 SCALE: SHEET 2 OF 6 SHEETS STA. 459+00 TO STA. 488+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	13
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



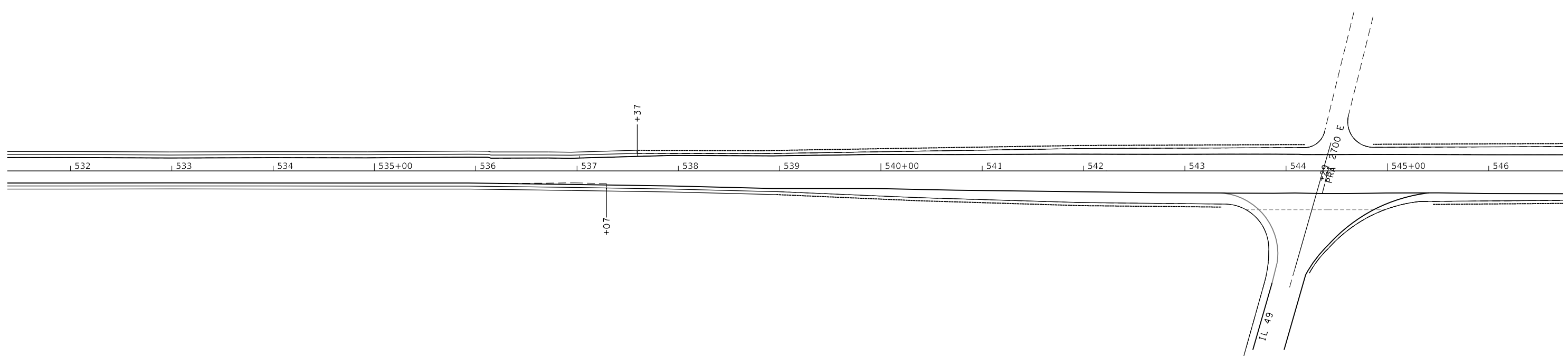
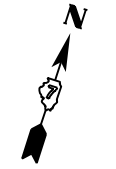
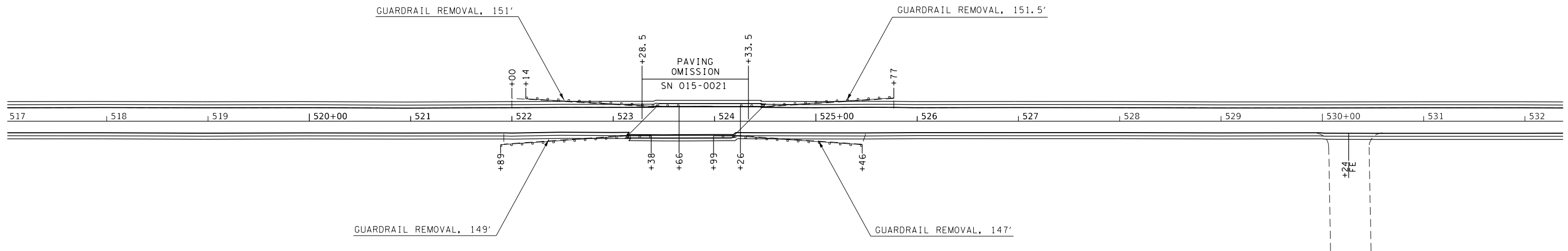
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET
 SCALE: SHEET 3 OF 6 SHEETS STA. 488+00 TO STA. 517+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	14
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



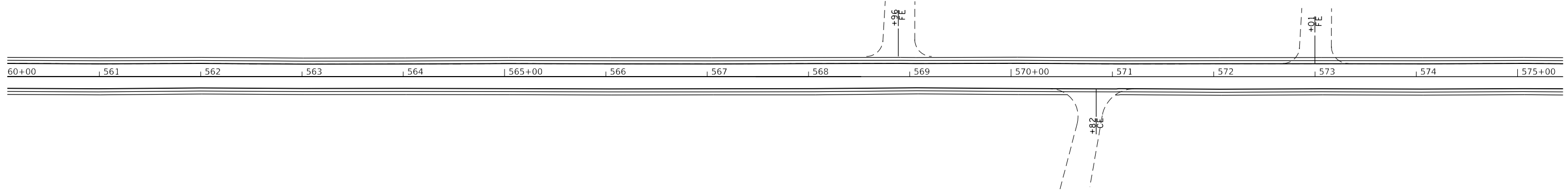
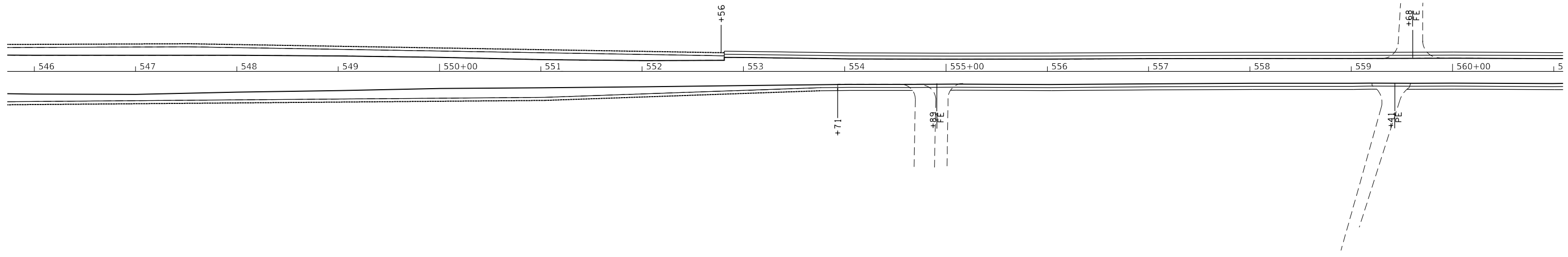
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET
 SCALE: SHEET 4 OF 6 SHEETS STA. 517+00 TO STA. 545+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)R5-4	Coles	57	15
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



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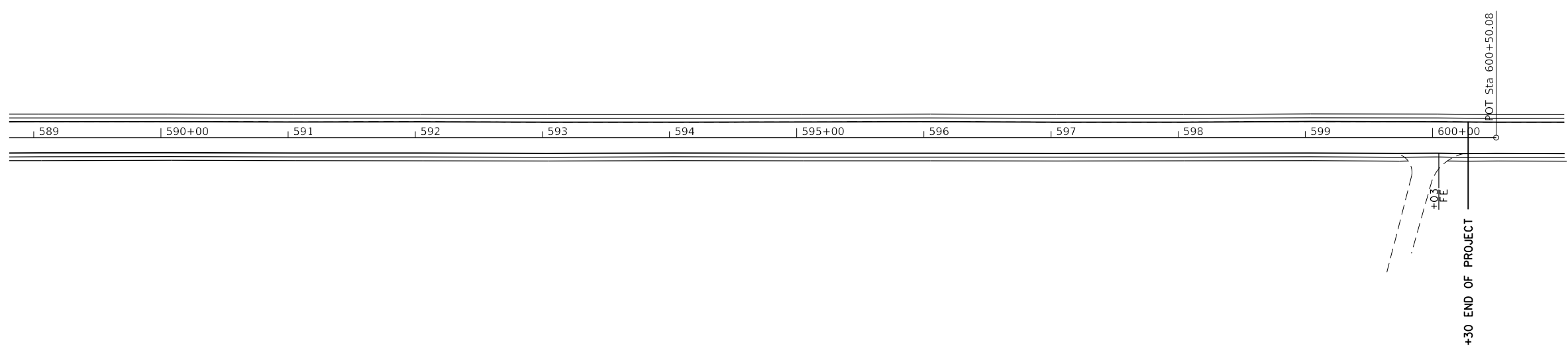
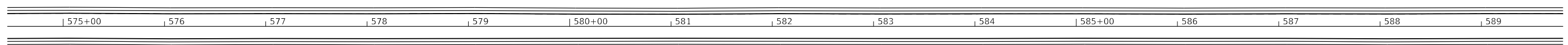
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PLOT DATE = 10/19/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN SHEET

SCALE: SHEET 5 OF 6 SHEETS STA. 545+00 TO STA. 574+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	16
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



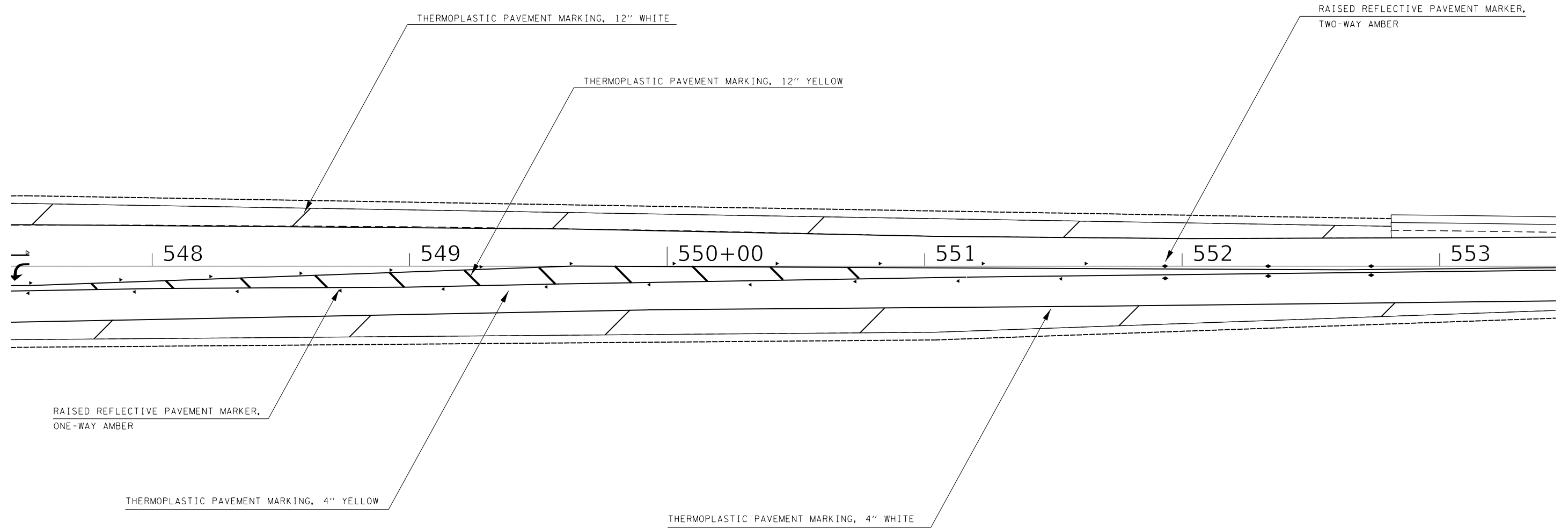
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET
 SCALE: SHEET 6 OF 6 SHEETS STA. 574+00 TO STA. 600+28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	17
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



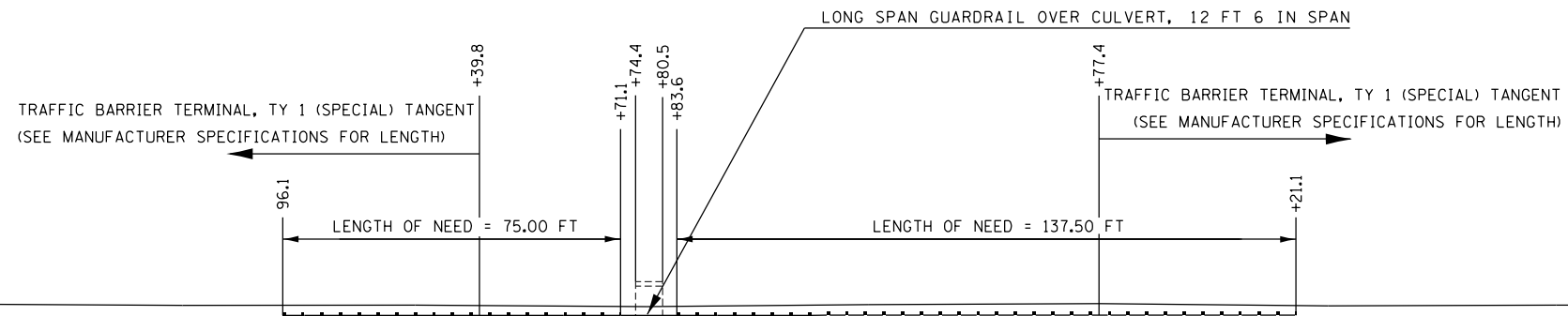
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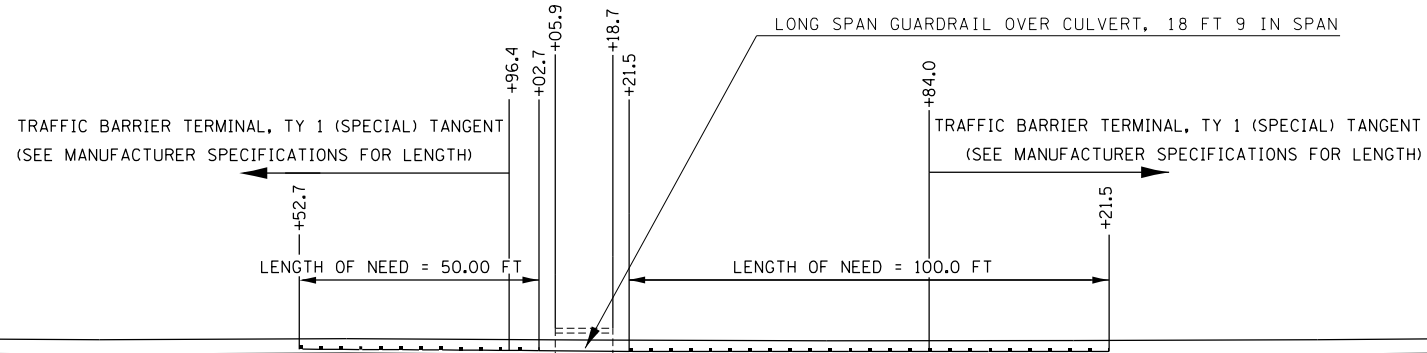
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN	
SCALE:	SHEET 3 OF 3 SHEETS STA. 547+00 TO STA. 552+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	COLES	57	24
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				



460+00 461 462 463 464 465+00



482 483 484 485+00 486 487

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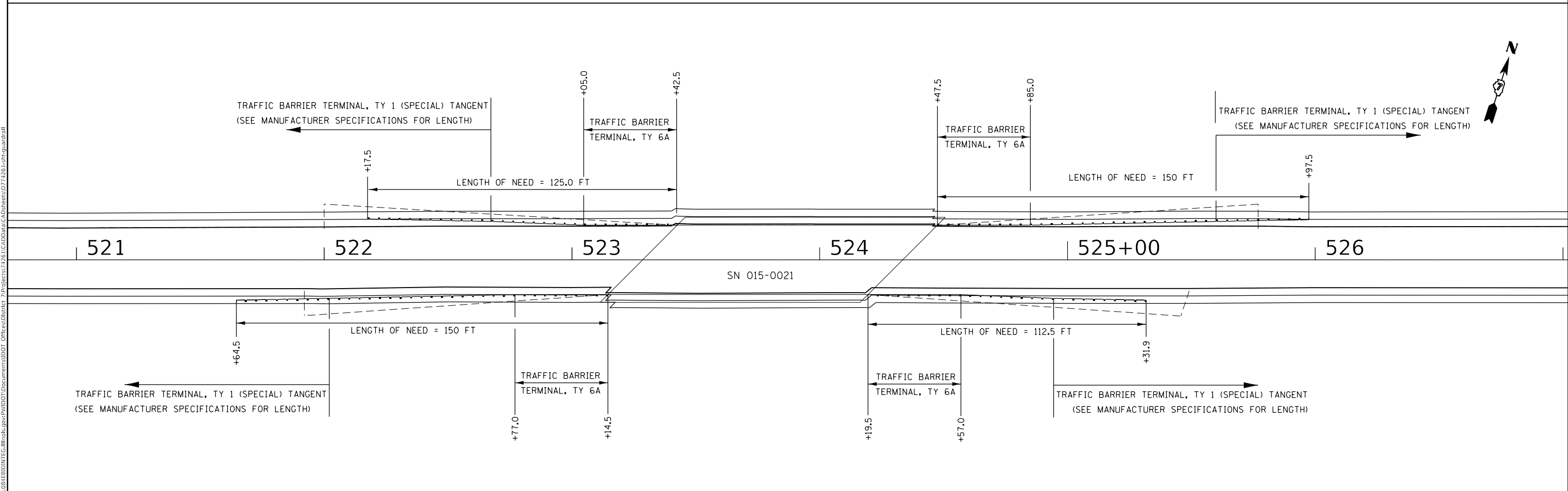
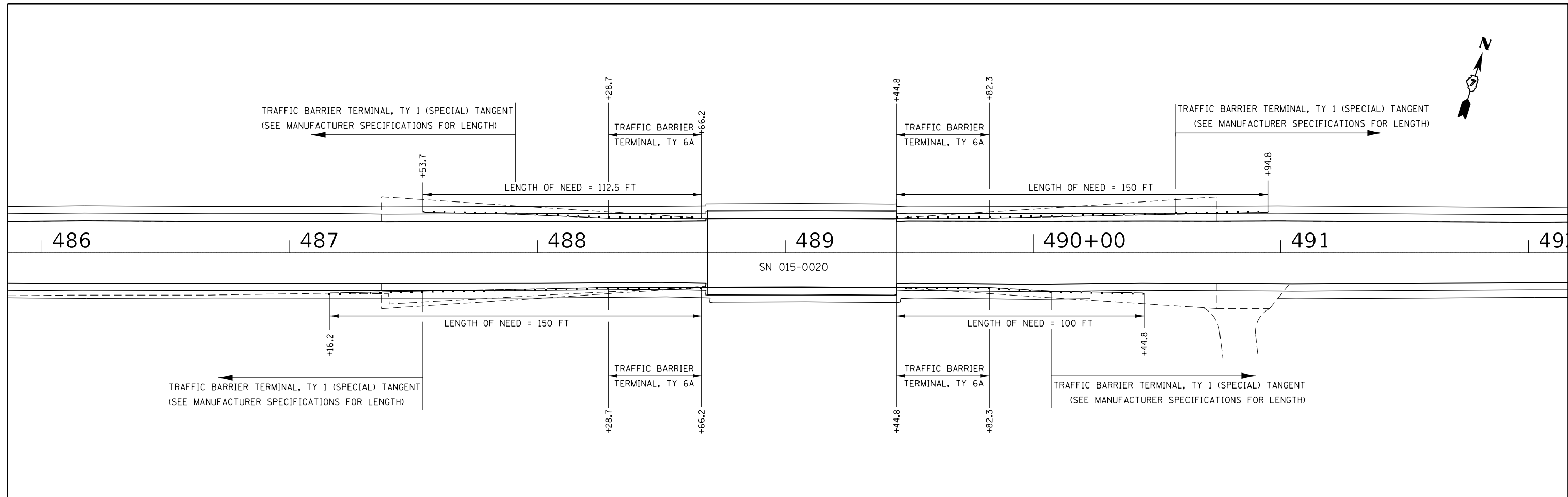
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GUARDRAIL DETAILS

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	COLES	57	25
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

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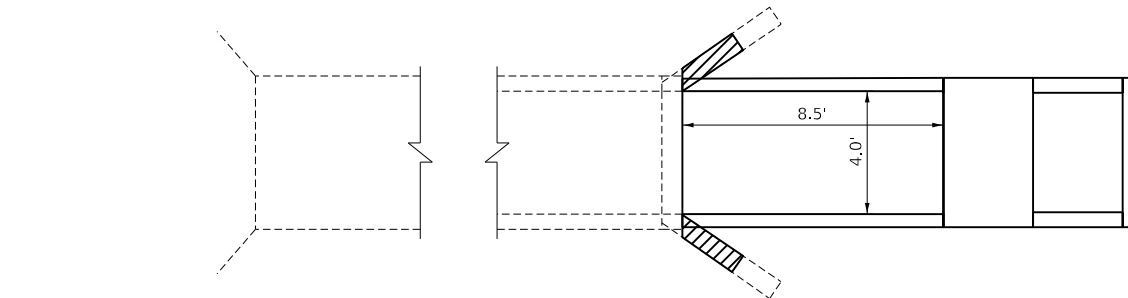
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

GUARDRAIL DETAILS			
SCALE: 1" = 20'	SHEET 2	OF 2 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	COLES	57	26
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

 - CONCRETE REMOVAL

CULVERT NO. 1
STA. 442+25
EXISTING 4' x 2' RC BOX CULVERT
0° SKEW



LEFT

EXISTING CONCRETE BOX CULVERT 4' X 2'

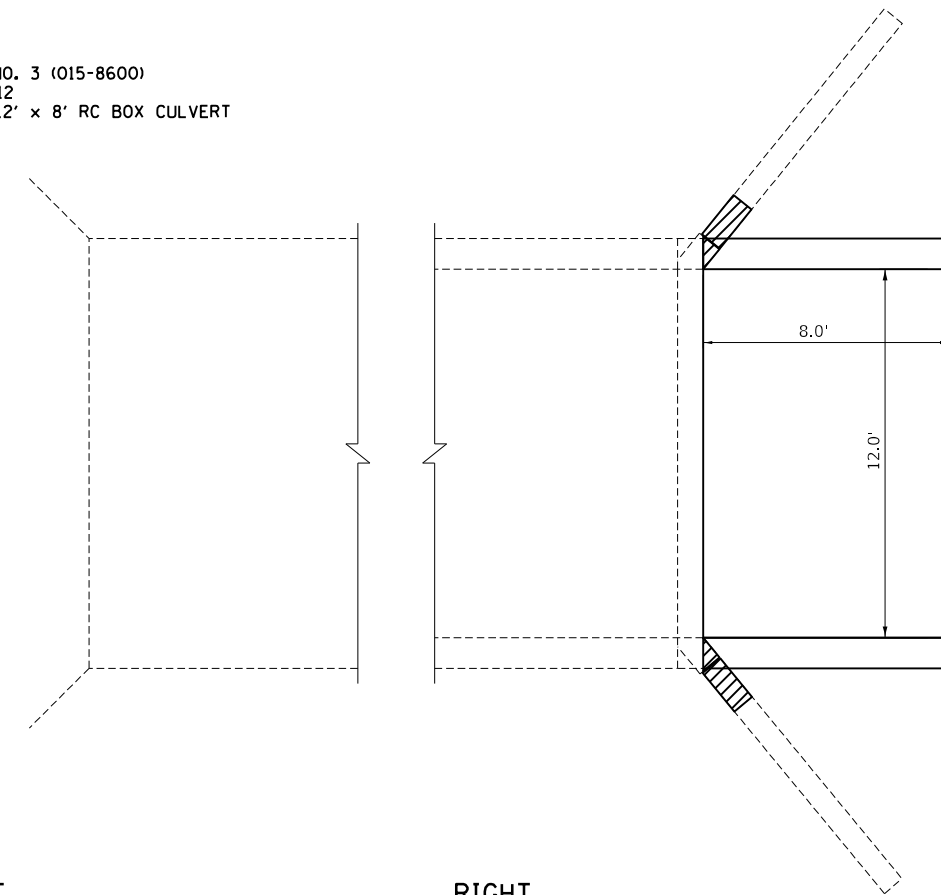
RIGHT

- PRECAST CONCRETE BOX CULVERT 4' X 2' - 8.5 FOOT
- CONCRETE REMOVAL - 0.4 CU YD
- BOX CULVERT END SECTION, CULVERT NO. 1 - 1 EACH
- EXPANSION BOLTS - 3/4 INCH - 8 EACH
- REINFORCEMENT BARS - 31 POUND
- CONCRETE COLLAR - 0.4 CY
- EARTH EXCAVATION - 4.8 CY
- REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL - 6.0 CY
- ROCK FILL-REPLACEMENT - 2.7 CY
- FURNISHED EXCAVATION - 25.4 CY
- DESIGN FILL HEIGHT - < 2'

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
PRECAST CONCRETE BOX CULVERTS 4'X2'	FOOT	8.5
PRECAST CONCRETE BOX CULVERTS 6'X5'	FOOT	4
PRECAST CONCRETE BOX CULVERTS 12'X8'	FOOT	8
BOX CULVERT END SECTION CULVERT NO. 1	EACH	1
EXPANSION BOLTS	EACH	36
REINFORCEMENT BARS	Ibs	151
CLASS SI CONCRETE (CONCRETE COLLAR)	CU YD	2.1
CONCRETE REMOVAL	CU YD	2.6
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS FOR STRUCTURES	CU YD	15.2
EARTH EXCAVATION	CU YD	67.9
FURNISHED EXCAVATION	CU YD	158.1
ROCK FILL	TON	14.6

CULVERT NO. 3 (015-8600)
STA. 484+12
EXISTING 12' x 8' RC BOX CULVERT
0° SKEW



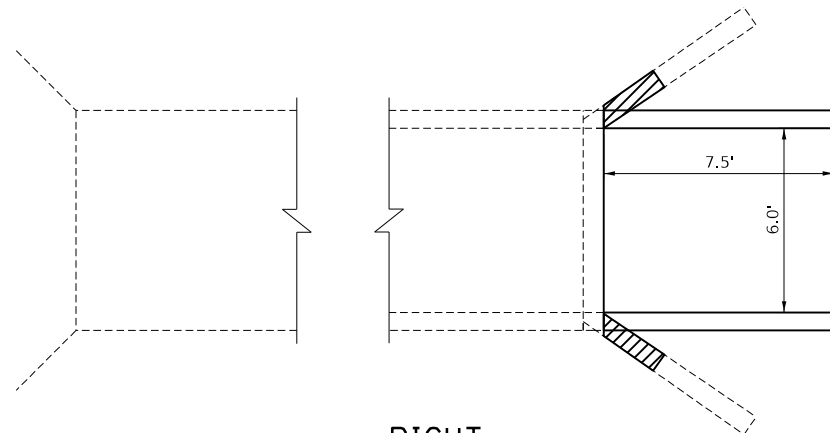
LEFT

EXISTING CONCRETE BOX CULVERT 12' X 8'

RIGHT

- PRECAST CONCRETE BOX CULVERT 12' X 8' - 8.0 FOOT
- CONCRETE REMOVAL - 1.4 CU YD
- EXPANSION BOLTS - 3/4 INCH - 18 EACH
- REINFORCEMENT BARS - 74 POUND
- CONCRETE COLLAR - 1.1 CY
- EARTH EXCAVATION - 61.0 CY
- REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL - 6.7 CY
- ROCK FILL-REPLACEMENT - 3.2 CY
- FURNISHED EXCAVATION - 96.4 CY
- DESIGN FILL HEIGHT - < 2'

CULVERT NO. 2 (015-8655)
STA. 462+78
EXISTING 6' x 5' RC BOX CULVERT
0° SKEW



LEFT

EXISTING CONCRETE BOX CULVERT 6' X 5'

RIGHT

- PRECAST CONCRETE BOX CULVERT 6' X 5' - 4 FOOT
- CONCRETE REMOVAL - 0.8 CU YD
- EXPANSION BOLTS - 3/4 INCH - 10 EACH
- REINFORCEMENT BARS - 46 POUND
- CONCRETE COLLAR - 0.6 CY
- EARTH EXCAVATION - 2.1 CY
- REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL - 2.5 CY
- ROCK FILL-REPLACEMENT - 1.2 CY
- FURNISHED EXCAVATION - 36.3 CY
- DESIGN FILL HEIGHT - < 2'

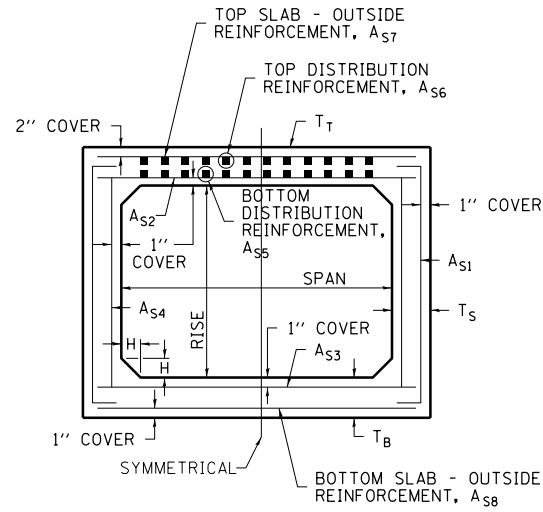
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOX CULVERT DETAILS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	4RS-4	COLES	57	27
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

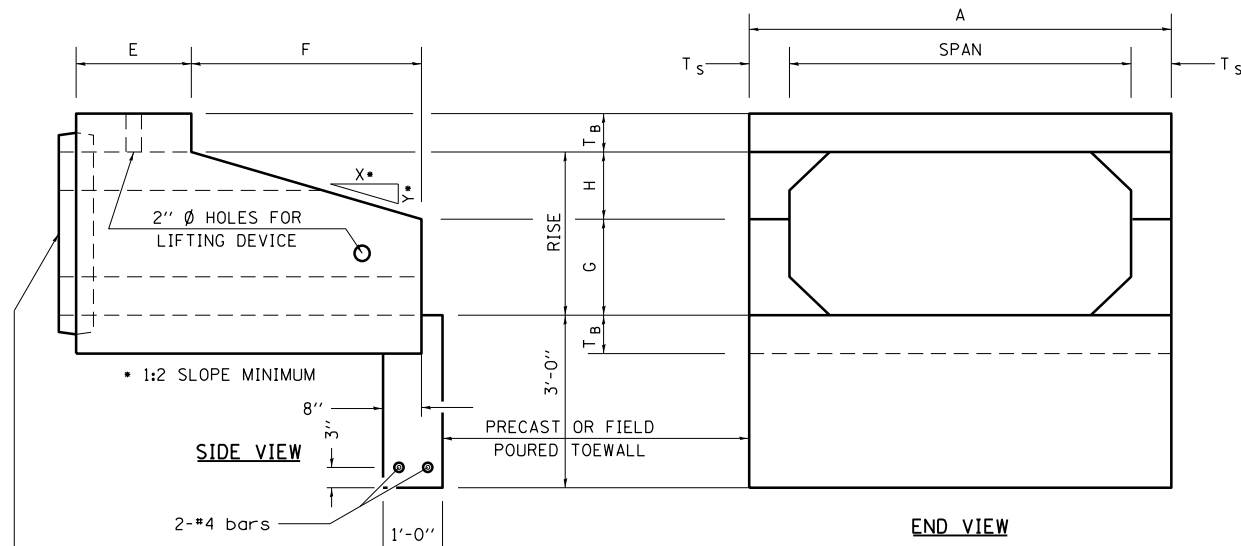
DETAIL OF PRECAST CONCRETE BOX CULVERT END SECTION



CROSS SECTION

AASHTO DESIGNATION M273 (WITH LESS THAN 2' OF COVER)

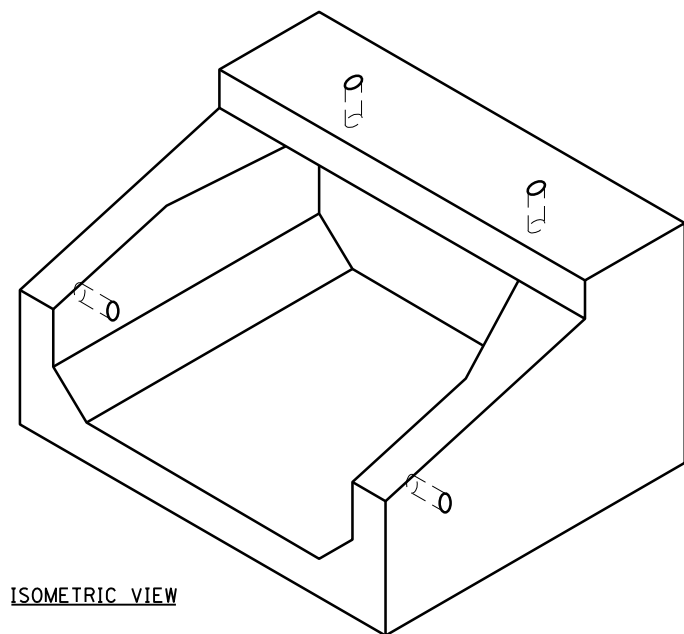
DESIGN LOADING:
TABLE 1 = HS20
TABLE 2 = INTERSTATE LOADING



SIDE VIEW

END VIEW

END CONNECTION TO FIT PRECAST BOX CULVERT (BELL OR SPIGOT MAY BE OMITTED WHEN COLLARING TO AN EXISTING BOX OR HEADWALL).



ISOMETRIC VIEW

CULVERT SIZE BOX SECTION S x R (FT)	DIMENSIONS*									SLOPE Y: X
	THICKNESS			A	B	E	F	G	H	
	T _t	T _b	T _s	FT - IN	FT - IN	FT - IN	FT - IN	FT - IN	FT - IN	
3 x 2	7	6	4	3 - 8	3 - 1	3 - 0	3 - 0	1 - 0	1 - 0	1:3
3 x 3	7	6	4	3 - 8	4 - 1	2 - 0	4 - 0	1 - 8	1 - 4	1:3
4 x 2	7.5	6	5	4 - 10	3 - 1.5	3 - 0	3 - 0	1 - 0	1 - 0	1:3
4 x 3	7.5	6	5	4 - 10	4 - 1.5	2 - 0	4 - 0	1 - 8	1 - 4	1:3
4 x 4	7.5	6	5	4 - 10	5 - 1.5	2 - 0	4 - 0	2 - 0	2 - 0	1:2
5 x 3	8	7	6	6 - 0	4 - 3	2 - 0	4 - 0	1 - 8	1 - 4	1:3
5 x 4	8	7	6	6 - 0	5 - 3	2 - 0	4 - 0	2 - 0	2 - 0	1:2
5 x 5	8	7	6	6 - 0	6 - 3	2 - 0	4 - 0	3 - 0	2 - 0	1:2
6 x 3	8	7	7	7 - 2	4 - 3	2 - 0	4 - 0	1 - 8	1 - 4	1:3
6 x 4	8	7	7	7 - 2	5 - 3	2 - 0	4 - 0	2 - 0	2 - 0	1:2
6 x 5	8	7	7	7 - 2	6 - 3					
6 x 6	8	7	7	7 - 2	7 - 3	2 - 0	6 - 0	3 - 0	3 - 0	1:2
7 x 4	8	8	8	8 - 4	5 - 4	2 - 0	4 - 0	2 - 0	2 - 0	1:2
7 x 5	8	8	8	8 - 4	6 - 4					
7 x 6	8	8	8	8 - 4	7 - 4					
7 x 7	8	8	8	8 - 4	8 - 4					
8 x 4	8	8	8	9 - 4	5 - 4	2 - 0	4 - 0	2 - 0	2 - 0	1:2
8 x 5	8	8	8	9 - 4	6 - 4					
8 x 6	8	8	8	9 - 4	7 - 4					
8 x 7	8	8	8	9 - 4	8 - 4					
8 x 8	8	8	8	9 - 4	9 - 4					
9 x 5	9	9	9	10 - 6	6 - 6					
9 x 6	9	9	9	10 - 6	7 - 6					
9 x 7	9	9	9	10 - 6	8 - 6					
9 x 8	9	9	9	10 - 6	9 - 6					
9 x 9	9	9	9	10 - 6	10 - 6					
10 x 5	10	10	10	11 - 8	6 - 8					
10 x 6	10	10	10	11 - 8	7 - 8					
10 x 7	10	10	10	11 - 8	8 - 8					
10 x 8	10	10	10	11 - 8	9 - 8					
10 x 9	10	10	10	11 - 8	10 - 8					
10 x 10	10	10	10	11 - 8	11 - 8					
11 x 4	11	11	11	12 - 10	5 - 10					
11 x 6	11	11	11	12 - 10	7 - 10					
11 x 8	11	11	11	12 - 10	9 - 10					
11 x 10	11	11	11	12 - 10	11 - 10					
11 x 11	11	11	11	12 - 10	12 - 10					
12 x 4	12	12	12	14 - 0	6 - 0					
12 x 6	12	12	12	14 - 0	8 - 0					
12 x 8	12	12	12	14 - 0	10 - 0					
12 x 10	12	12	12	14 - 0	12 - 0					
12 x 12	12	12	12	14 - 0	14 - 0					

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 540.06 OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED IN ACCORDANCE WITH ARTICLE 504.06 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE TERMS A_{s1}, A_{s2}, A_{s3}, ETC. DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M273.

REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO AASHTO SPECIFICATIONS M55 OR M221. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY CONSIST OF WELDED WIRE FABRIC OR DEFORMED BILLET STEEL BARS CONFORMING TO AASHTO M31, GRADE 60, AND SHALL BE A706 STEEL.

LIFTING HOLES SHALL BE FILLED IN ACCORDANCE WITH 540.02 OR PROJECT SPECIAL PROVISIONS.

DESIGN FILL HEIGHT (F):

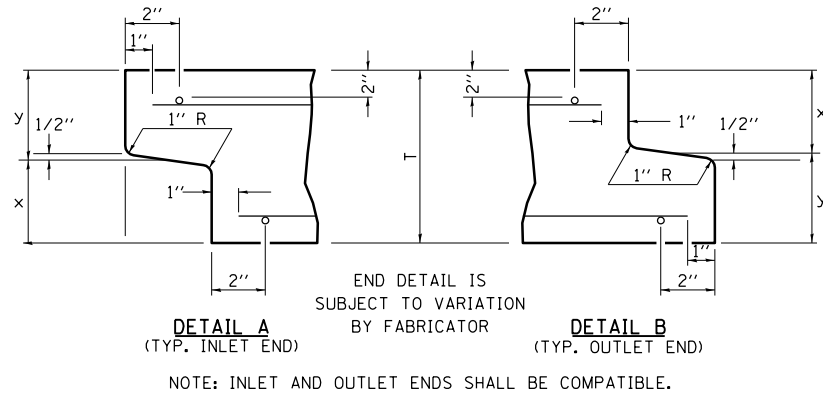
MAXIMUM FILL HEIGHT (f_{max}) AND MINIMUM FILL HEIGHT (f_{min}) ARE MEASURED BETWEEN THE EXTREME EDGES OF SHOULDER.

f _{max} /f _{min} (FT)	F (FT)	AASHTO
f _{min} < 2'	< 2'	M273
2' ≤ f _{min} < 3'	2'	M259
3' ≤ f _{min} < 4'	3'	M259
f _{min} ≥ 4'	f _{max}	M259

DESIGN FILL HEIGHTS APPLY TO ENTIRE CULVERT, INCLUDING EXTENSIONS AND END SECTIONS.

* "T" MAY BE LARGER THAN SHOWN ON TABLE, PER AASHTO SPECIFICATIONS.

DETAIL OF PRECAST CONCRETE BOX CULVERT M273



AASHTO DESIGNATION M273 (WITH LESS THAN 2' OF COVER)

DESIGN LOADING:
TABLE 1 = HS20
TABLE 2 = INTERSTATE LOADING

CULVERT SIZE (FEET)		DIMENSIONS * (INCHES)		
SPAN	RISE	T _T	T _B	T _S
3	2	7	6	4
3	3	7	6	4
4	2	7 1/2	6	5
4	3	7 1/2	6	5
4	4	7 1/2	6	5
5	3	8	7	6
5	4	8	7	6
5	5	8	7	6
6	3	8	7	7
6	4	8	7	7
6	5	8	7	7
6	6	8	7	7
7	4	8	8	8
7	5	8	8	8
7	6	8	8	8
7	7	8	8	8
8	4	8	8	8
8	5	8	8	8
8	6	8	8	8
8	7	8	8	8
8	8	8	8	8
9	5	9	9	9
9	6	9	9	9
9	7	9	9	9
9	8	9	9	9
9	9	9	9	9
10	5	10	10	10
10	6	10	10	10
10	7	10	10	10
10	8	10	10	10
10	9	10	10	10
10	10	10	10	10
11	4	11	11	11
11	6	11	11	11
11	8	11	11	11
11	10	11	11	11
11	11	11	11	11
12	4	12	12	12
12	6	12	12	12
12	8	12	12	12
12	10	12	12	12
12	12	12	12	12

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 540.06 OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED IN ACCORDANCE WITH ARTICLE 504.06 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE TERMS A_{s1}, A_{s2}, ETC. DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M273.

REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO AASHTO SPECIFICATIONS M55 OR M221. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY CONSIST OF WELDED WIRE FABRIC OR DEFORMED BARS CONFORMING TO AASHTO M31, GRADE 60, AND SHALL BE A706.

LIFTING HOLES SHALL BE FILLED IN ACCORDANCE WITH 540.02 OR PROJECT SPECIAL PROVISIONS.

DRAINAGE OPENINGS SHALL BE PROVIDED IN ACCORDANCE WITH ARTICLE 503.11 OF THE STANDARD SPECIFICATIONS. LOCATION AND SPACING OF THE OPENINGS SHALL BE SHOWN ON THE SHOP DRAWINGS.

THE P.C.C. PAVEMENT PATCH REINFORCED WITH PAVEMENT FABRIC (STANDARD 420701) WILL BE CONSTRUCTED OVER THE CULVERT. THE PATCH SHALL BE FULL PAVEMENT WIDTH, AND THE LENGTH SHALL EXTEND 2' BEYOND EACH SIDE OF THE CULVERT.

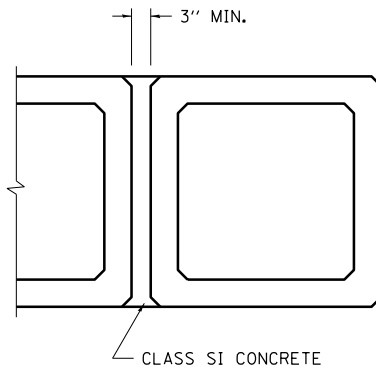
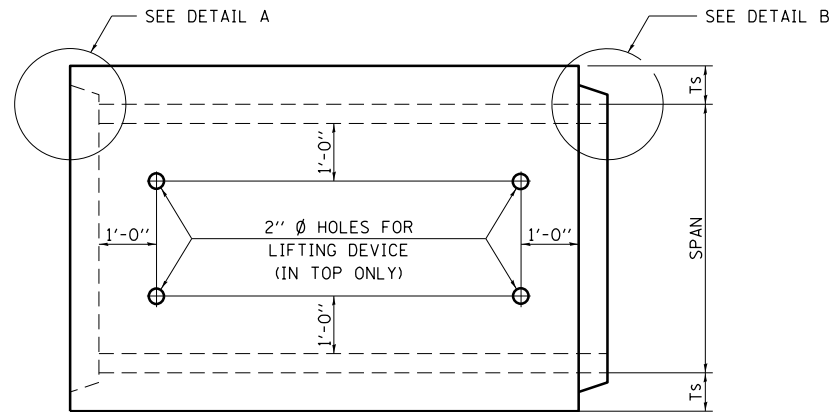
DESIGN FILL HEIGHT (F):

MAXIMUM FILL HEIGHT (f_{max}) AND MINIMUM FILL HEIGHT (f_{min}) ARE MEASURED BETWEEN THE EXTREME EDGES OF SHOULDER.

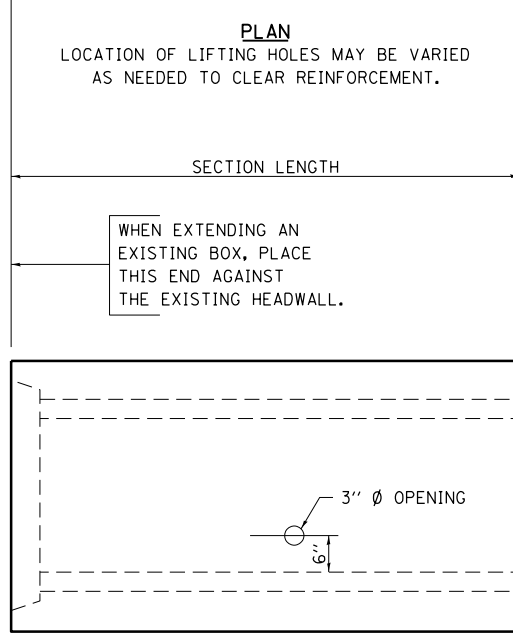
f _{max} /f _{min} (FT)	F (FT)	AASHTO
f _{min} < 2'	< 2'	M273
2' ≤ f _{min} < 3'	2'	M259
3' ≤ f _{min} < 4'	3'	M259
f _{min} ≥ 4'	f _{max}	M259

DESIGN FILL HEIGHTS APPLY TO ENTIRE CULVERT, INCLUDING EXTENSIONS AND END SECTIONS.

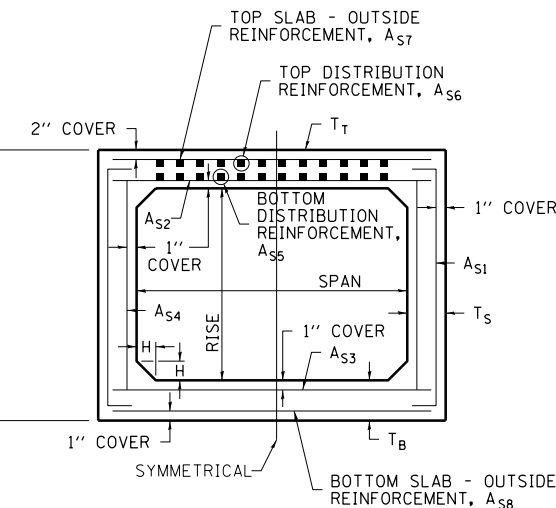
* "T" MAY BE LARGER THAN SHOWN ON TABLE, PER AASHTO SPECIFICATIONS.



MULTIPLE UNIT PLACEMENT

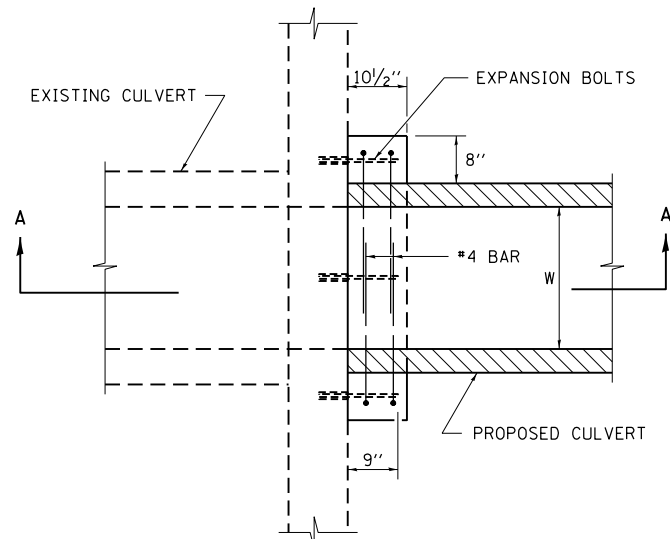


ELEVATION

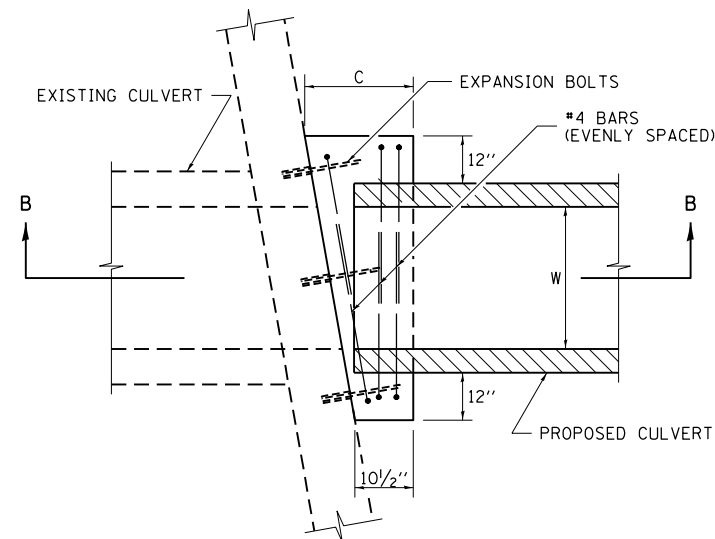


CROSS SECTION

DETAIL OF CONCRETE COLLAR FOR BOX CULVERT EXTENSIONS



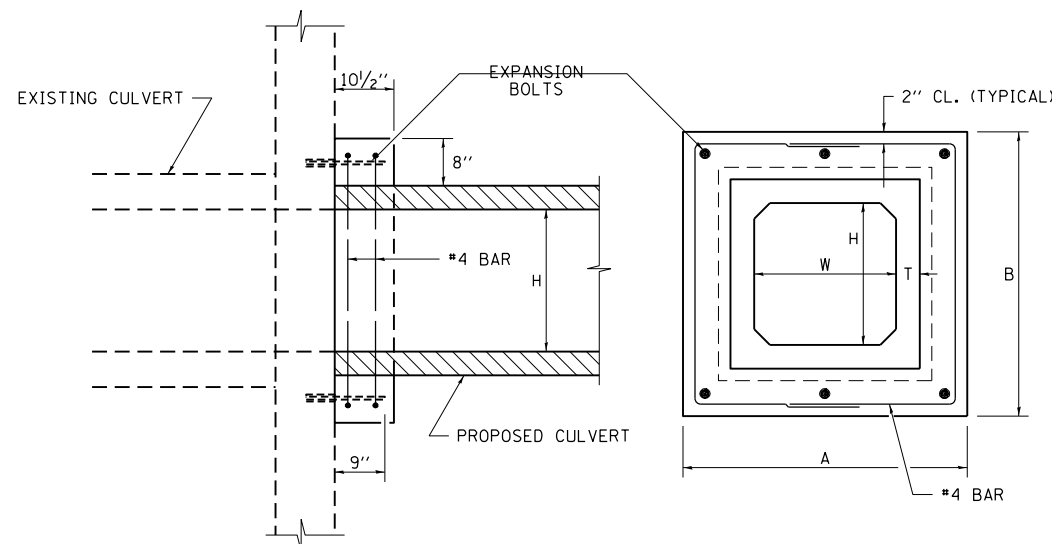
PLAN VIEW
(RIGHT ANGLE CULVERT)



PLAN VIEW
(SKEWED CULVERT)

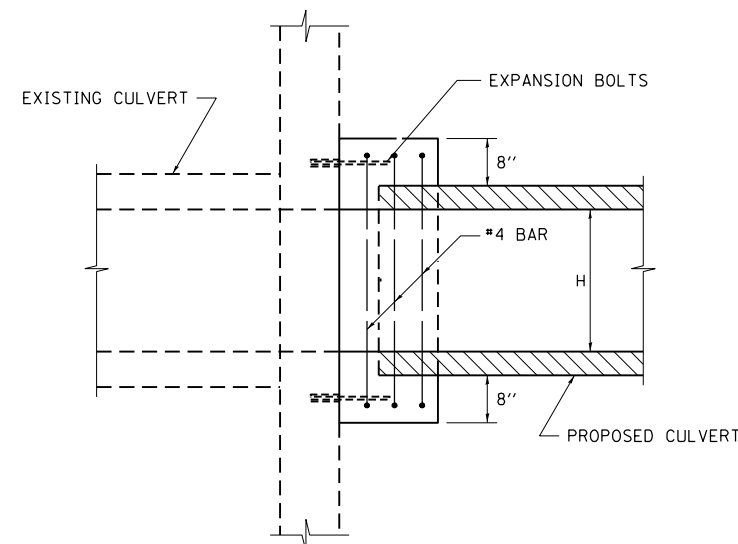
SIDE	STATION	DIMENSIONS									REINFORCEMENT BARS			CONCRETE COLLAR (CU YD)	3/4" EXPANSION BOLTS	EXPANSION BOLT SPACING	
		A	B	C	W	H	T _r	T _b	T _s	G	J	L	NUMBER BARS EA				POUND
RT.	442+25	74	53.5	-	48	24	7.5	6	5	50	45	140	4	31	0.4	8	13"
RT.	462+78	102	91	-	72	60	8	7	7	87	59	205	4	46	0.6	10	16"
RT.	484+12	184	136	-	144	96	12	12	12	132	100	332	4	74	1.1	18	18"
TOTALS													151	2.1	36		

NOTE: EXPANSION BOLTS SHALL CONSIST OF SELF-DRILLING EXPANSION SHIELDS AND HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO THE NEW CONCRETE.

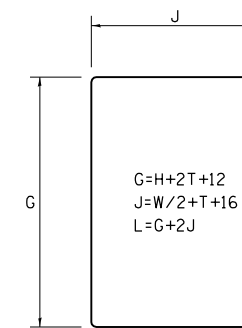


SECTION A-A

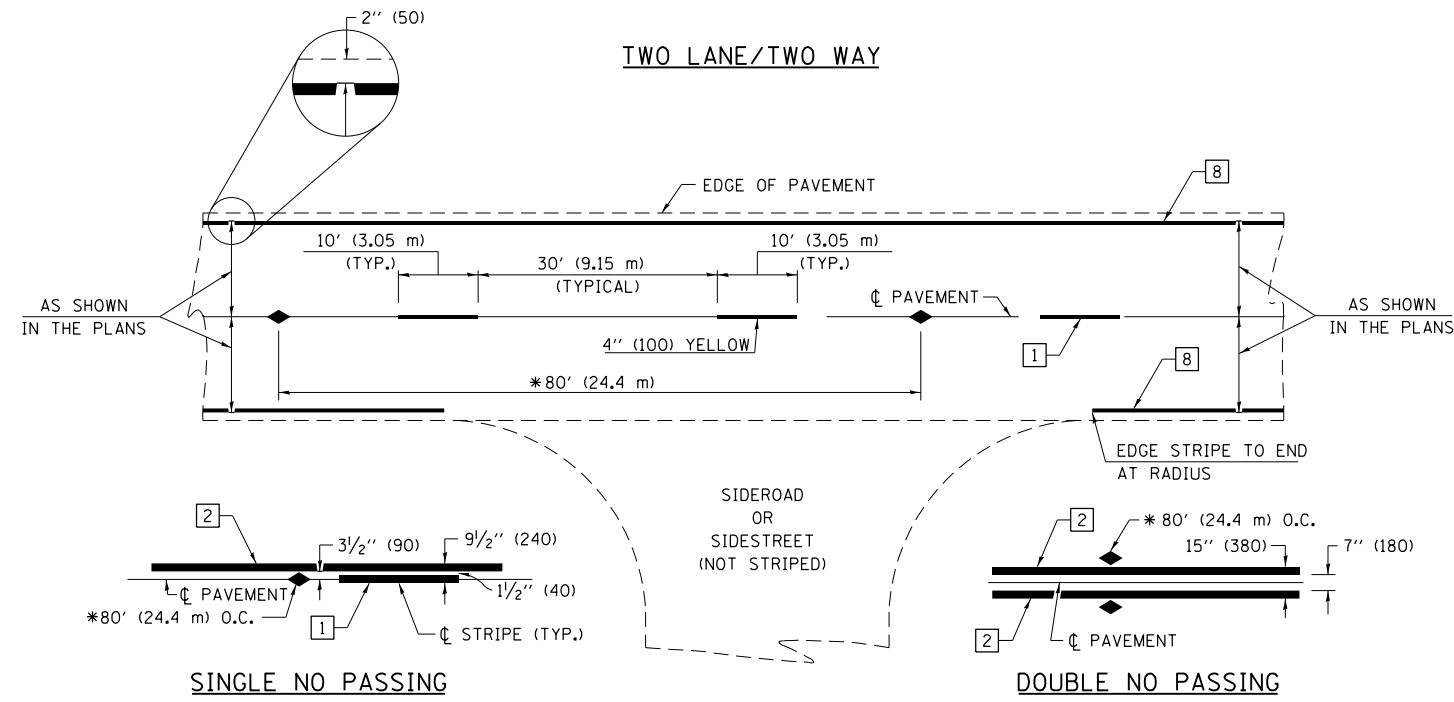
END VIEW



SECTION B-B



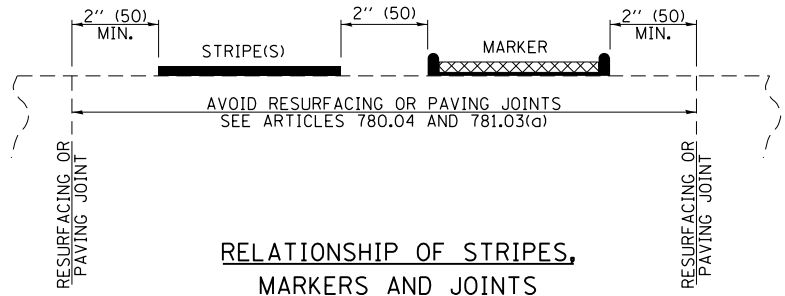
BAR DETAIL



* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

PAVEMENT MARKING LEGEND

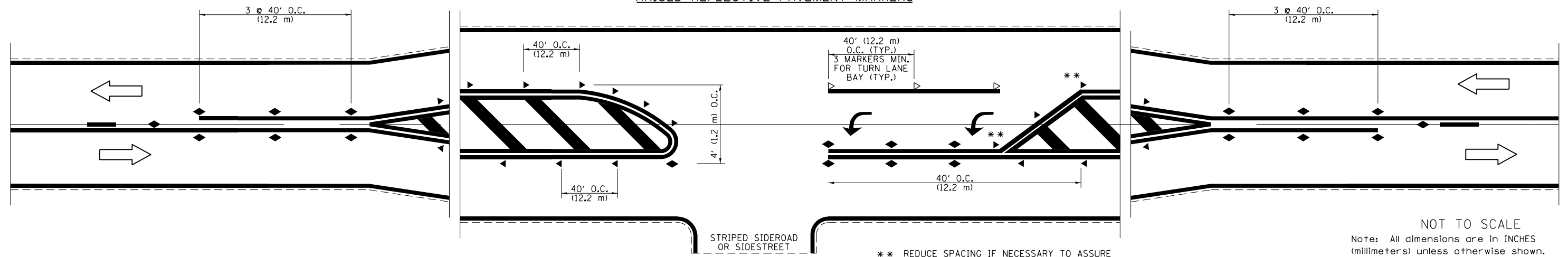
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE



TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

RAISED REFLECTIVE PAVEMENT MARKERS



NOT TO SCALE
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

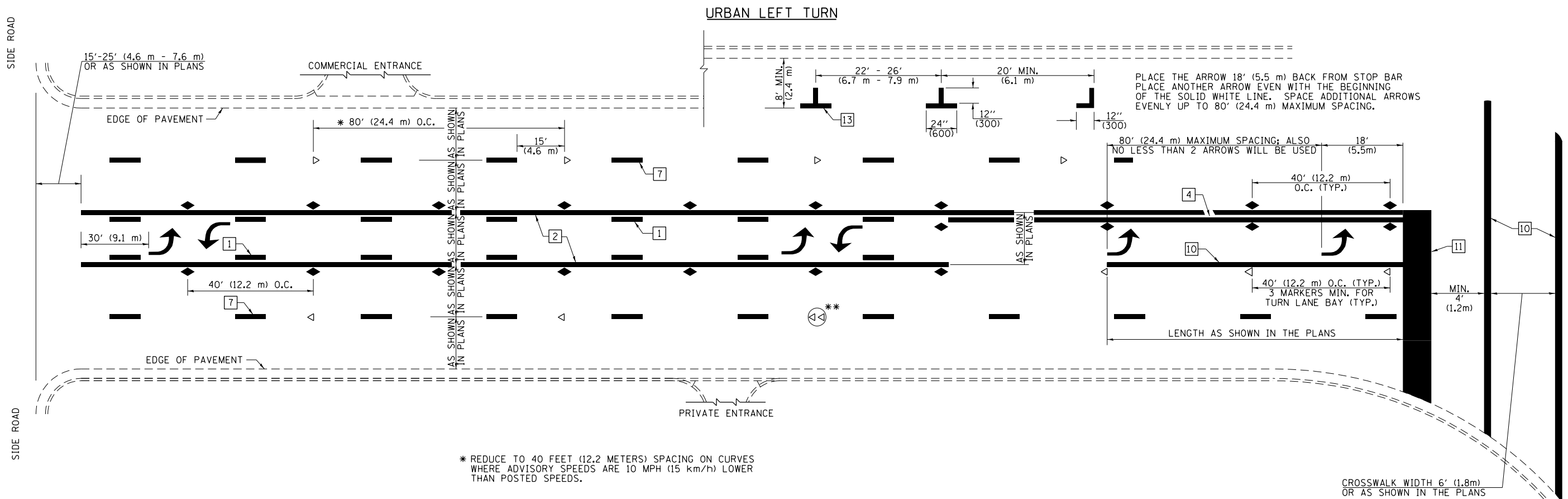
FILE NAME =	USER NAME = steffenmk	DESIGNED -	REVISED -
pw:\IL\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\DOT Offices\District 7\Projects\74261\Drawings\CAD\Sheets\0774261-shr-pav\m...		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS
(RURAL & URBAN APPLICATIONS)**

DISTRICT 7 DETAIL NO. 7800001				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	COLES	57	33
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.



* REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

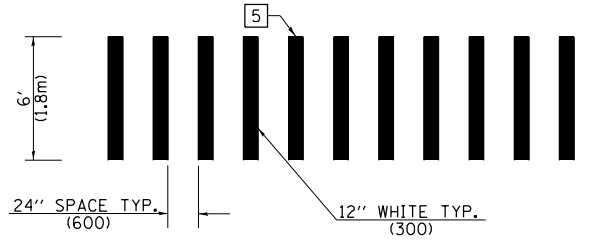
** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

PAVEMENT MARKING LEGEND

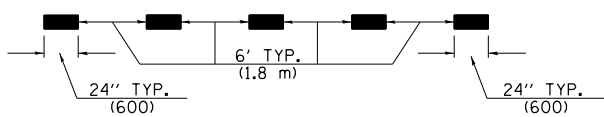
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE

GENERAL NOTES

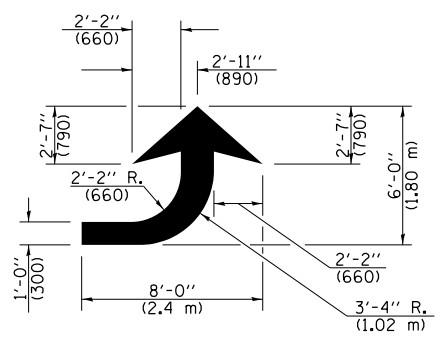
1. TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
2. THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
3. THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER.
4. USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)
5. LANE LINE EXTENSIONS SHALL BE THE SAME COLOR AND WIDTH AS THE LANE LINE BEING EXTENDED.



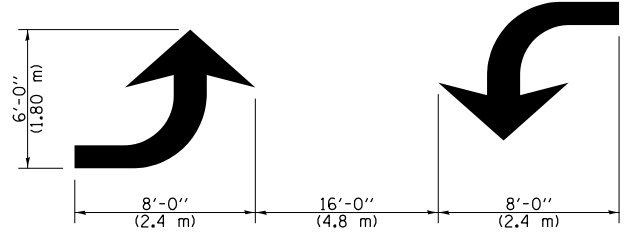
**CROSSWALK DETAIL
(DECATUR CITY LIMITS ONLY)**



LANE LINE EXTENSIONS



LEFT ARROW
REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m²)
(WHITE)



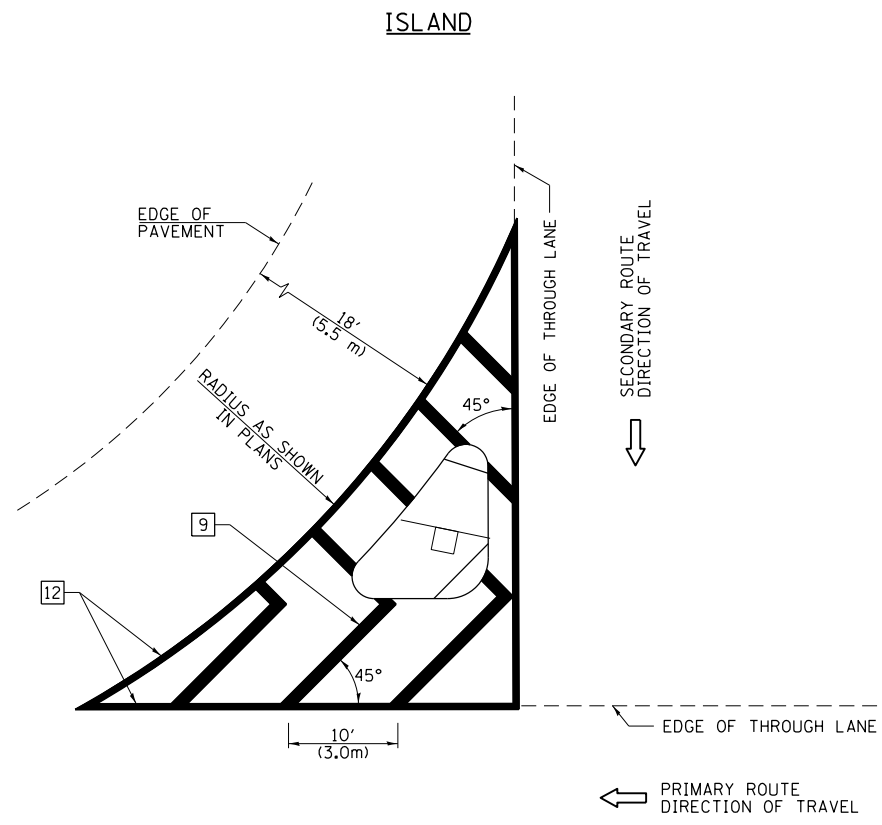
**TYPICAL DOUBLE
TURN ARROWS (WHITE)**

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 7800001

FILE NAME =	USER NAME = steffenmk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\11\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 7\Projects\74261\Drawings\CAD\Sheets\0774261-sht-pav\smar	PLotted SCALE = 48.0000' / in.	CHECKED -	REVISED -				91	(4)RS-4	COLES	57	34
PLotted DATE = 10/19/2018	DATE -	REVISED -	REVISED -				CONTRACT NO. 74261				
							ILLINOIS FED. AID PROJECT				

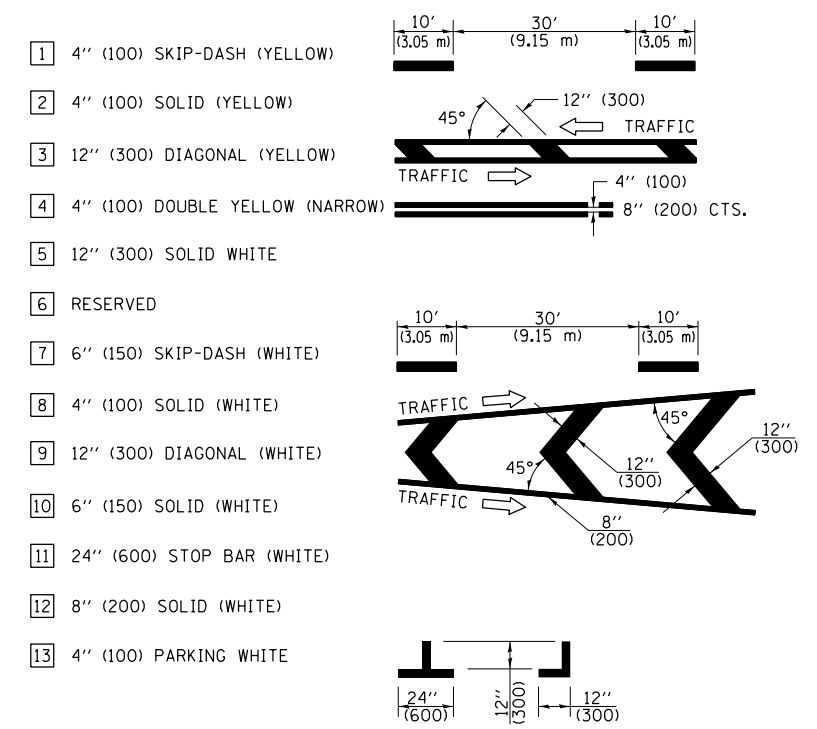


GENERAL NOTES

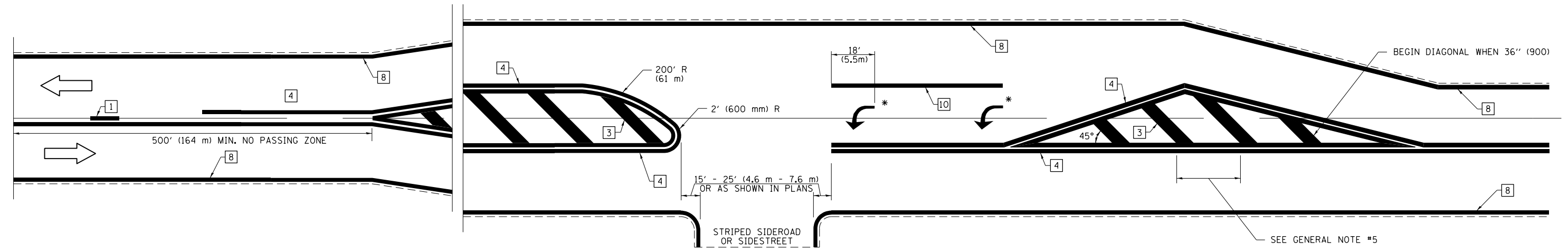
1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:

< 30 MPH (< 50 km/h)	15' (4.5 m)
30-45 MPH (50-75 km/h)	20' (6.0 m)
> 45 MPH (> 75 km/h)	30' (9.0 m)

PAVEMENT MARKING LEGEND



RURAL LEFT TURN STRIPING



* PLACE AN ARROW 18' (5.5 m) BACK FROM STOP BAR. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE
 Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 7800001

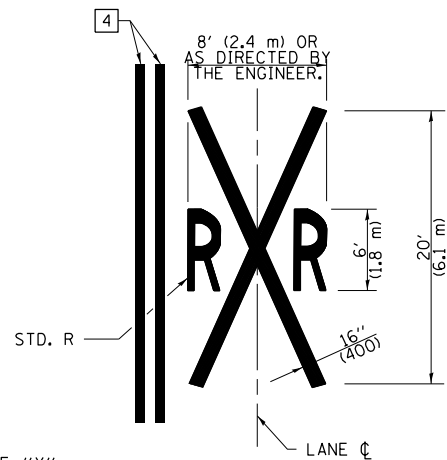
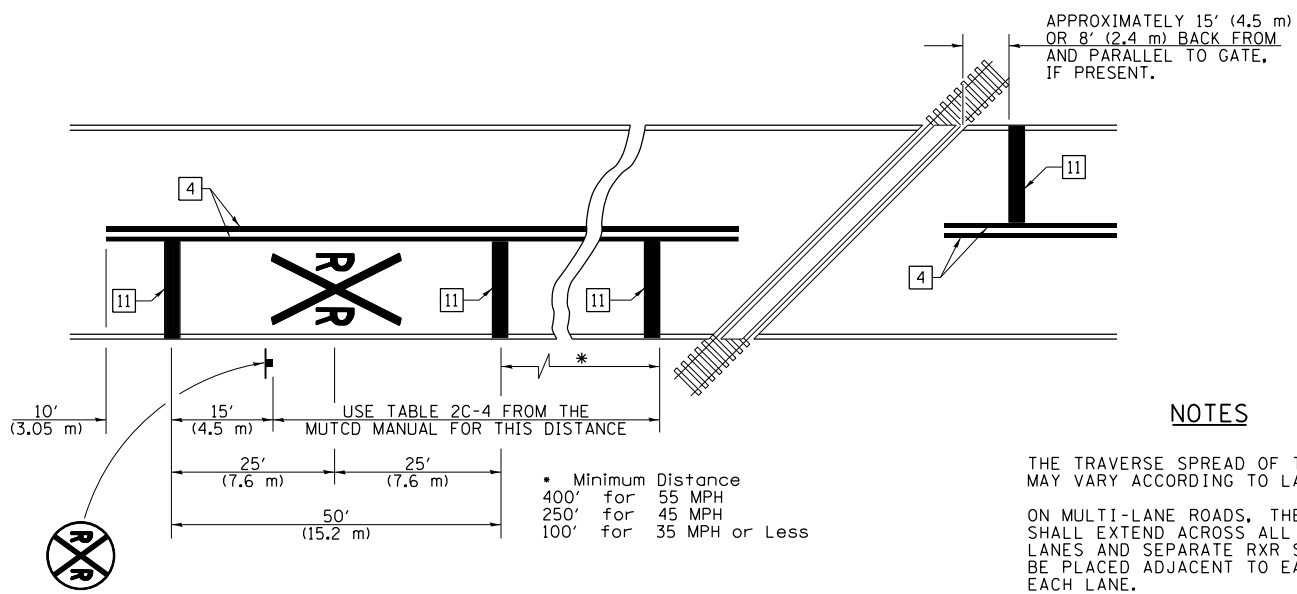
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	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISOR -
	PLOT DATE = 10/19/2018	DATE -	REVISOR -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS
 (RURAL & URBAN APPLICATIONS)**
 SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	COLES	57	35
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING



NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

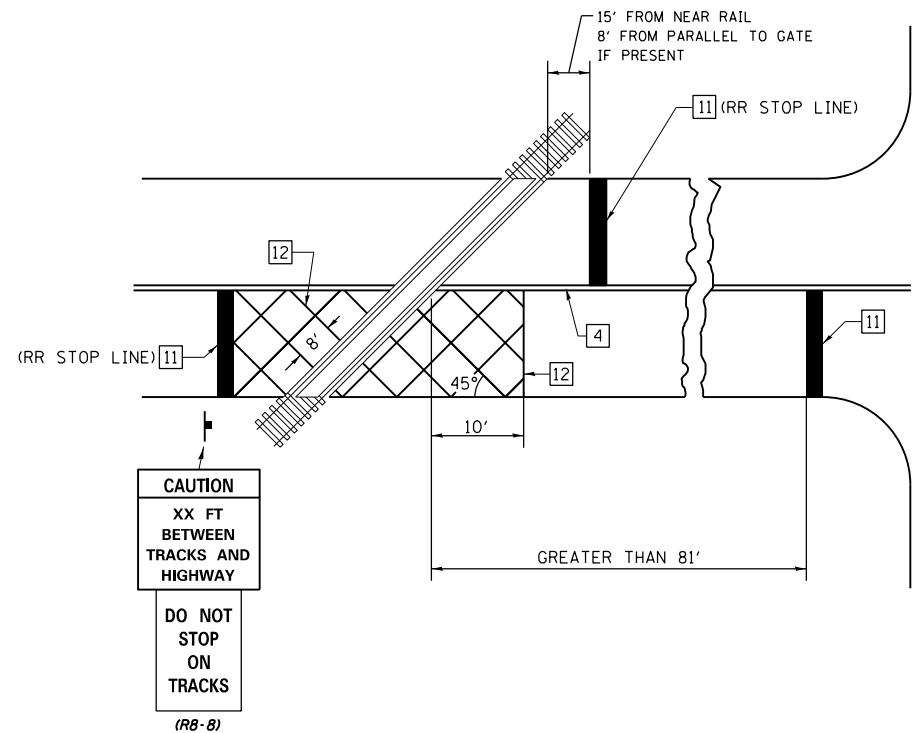
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE R X R SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

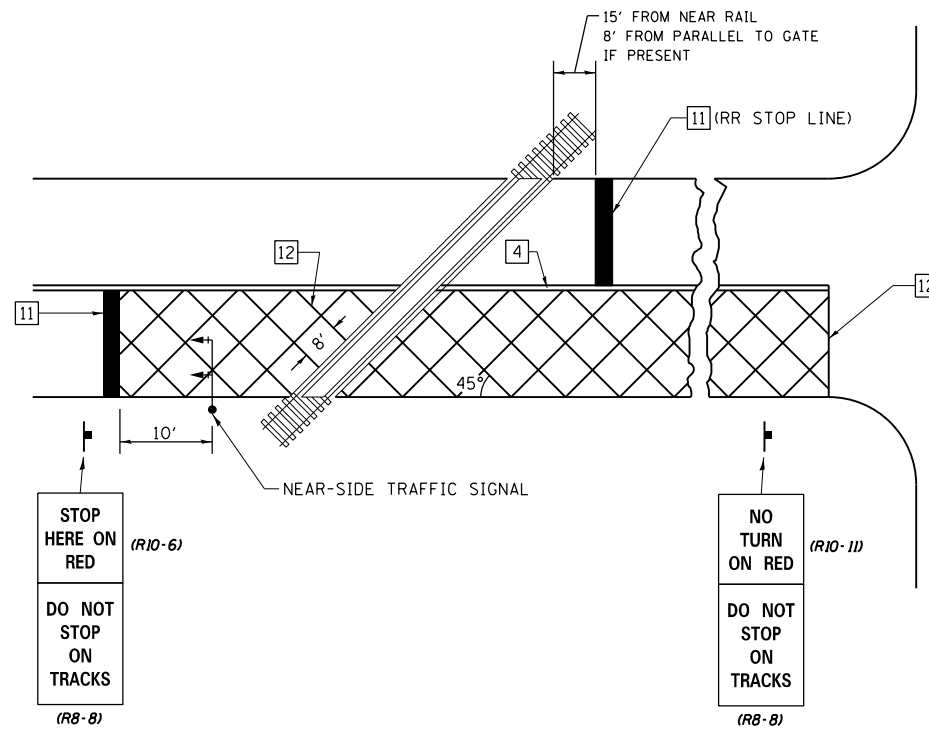
PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE

RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

NOT TO SCALE

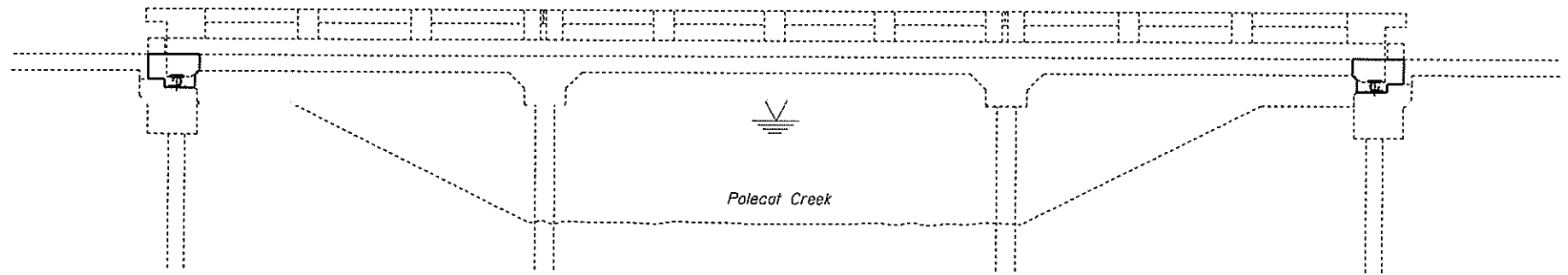
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 7800001

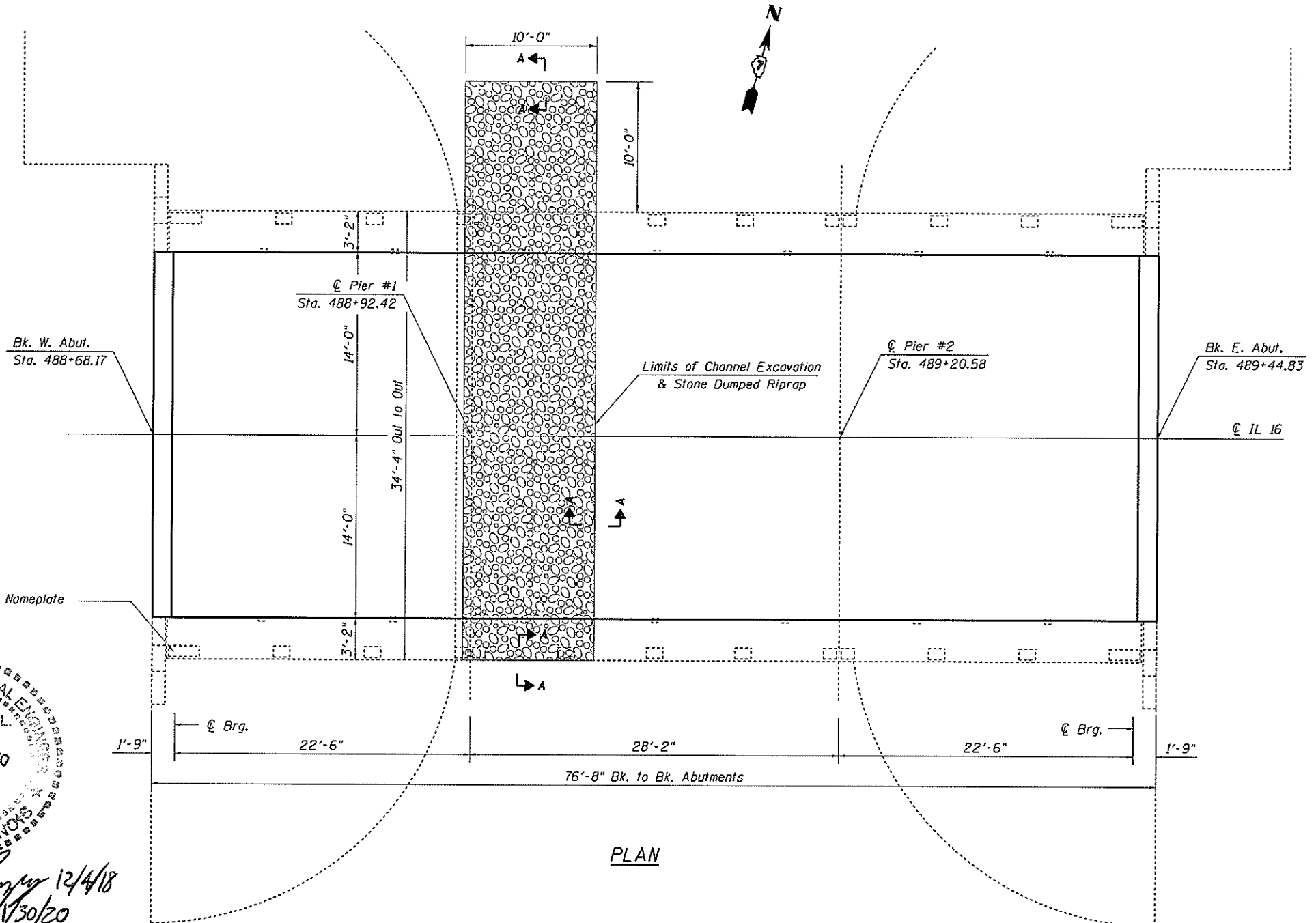
FILE NAME =	USER NAME = steffenmk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\11\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 7\Projects\74261\DRAWING\CADsheets\0774261-shr-pav\mtr	DESIGNED -	REVISED -	91			(4)RS-4	COLES	57	36	
PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -	CONTRACT NO. 74261							
PLOT DATE = 10/19/2018	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

The existing three span continuous reinforced concrete slab structure was constructed in 1958 as section 4BR at Sta. 489+06.50, SN. 015-0020 carries FAP 91 (IL 16) over Polecat Creek. The proposed project consists of bridge deck patching, new concrete wearing surface, expansion joint elimination, curb repair, and new bridge rail.



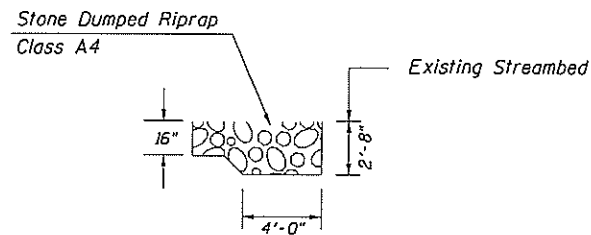
ELEVATION



PLAN

CHANNEL IMPROVEMENTS

ITEM	UNIT	QUANTITY
Stone Dumped Riprap, Class A4	Ton	50
Channel Excavation	Cu. Yd.	33



SECTION A-A



David Carl Puzey 12/4/18 Expires 11/30/20

FILE NAME =	USER NAME = steffennk	DESIGNED - KLB	REVISED - SAK 9/20/2017
p:\1\1084EBIDINTEG.illinois.gov\PI\DOT\Documents\DOT Offices\District 7\Projects\742	DRAWN = CABshook	CHECKED - MEA	REVISED -
		DATE - 04/16/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN, ELEVATION & CHANNEL IMPROVEMENTS			
SN. 015-0020			
SCALE:	SHEET 1	OF 21 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Colias	57	37
CONTRACT NO. 74261				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement Bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.

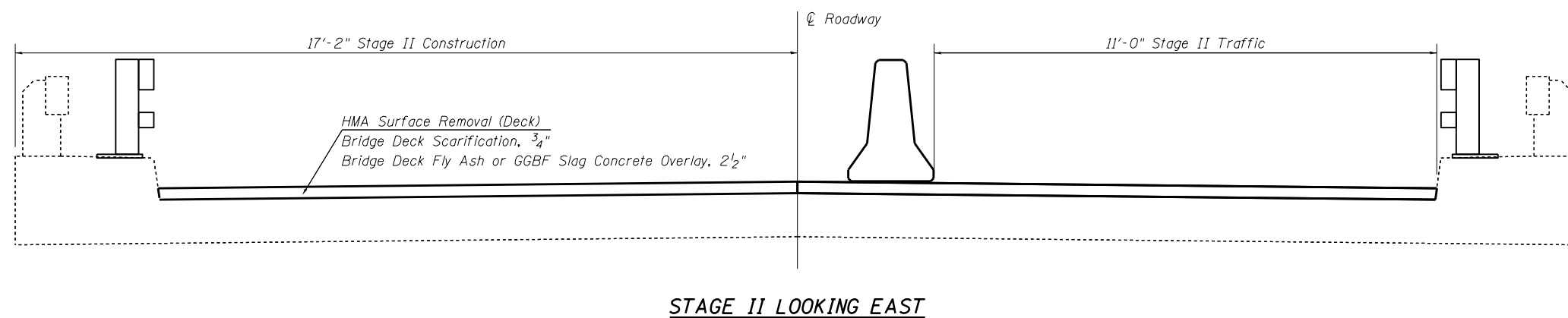
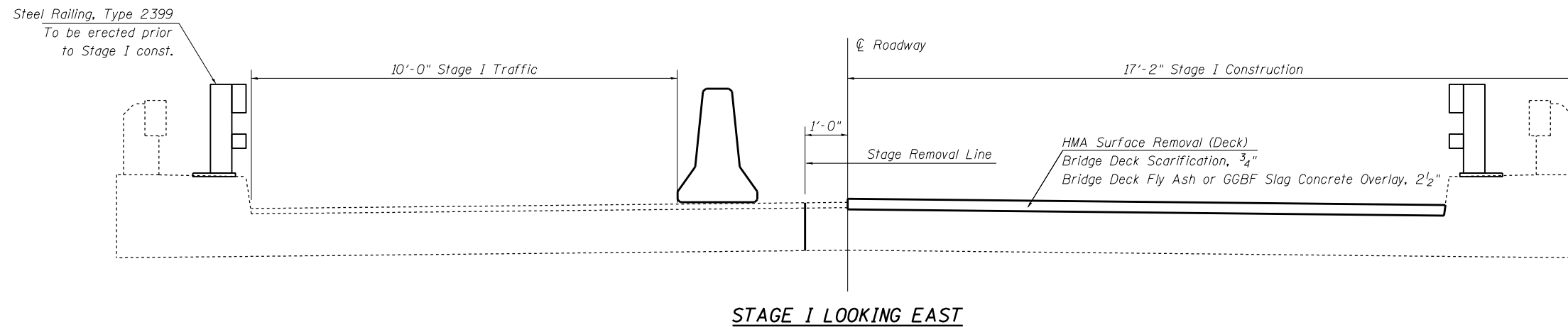
Prior to pouring the new concrete deck, all heavy and loose rust, loose mill scale and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with the concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Synthetic fibers should be added to the bridge Deck Fly Ash or GGBF Slag Overlay, 2'-1 1/2". See Special Provisions.

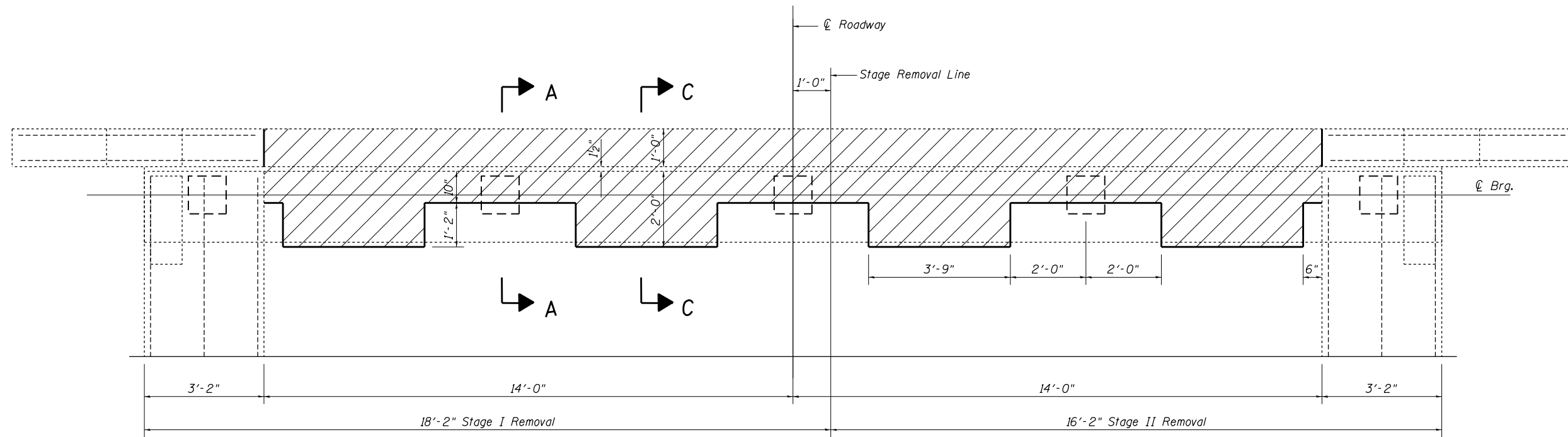
Protective Coat shall be applied to areas of new Concrete Superstructure at the ends of the deck and on the curbs.

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	13.2
Concrete Superstructure	Cu. Yd.	16.2
Reinforcement Bars, Epoxy Coated	Pound	580
Bar Splicers	Each	8
Protective Coat	Sq Yd	18
Structural Repair of Concrete (Depth ≤5")	Sq Ft	71
HMA Surface Removal (Deck)	Sq Yd	223
Bridge Deck Scarification, 3/4"	Sq Yd	223
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2 1/2"	Sq Yd	227
Bridge Deck Grooving	Sq Yd	227
Mechanical Splicers	Each	60
Steel Railing, Type 2399	Foot	154
Stone Dumped Riprap, Class A4	Ton	50
Channel Excavation	Cu Yd	33
Floor Drains	Each	14
Deck Slab Repair (Full Depth, Type I)	Sq Yd	1
Deck Slab Repair (Full Depth, Type II)	Sq Yd	5

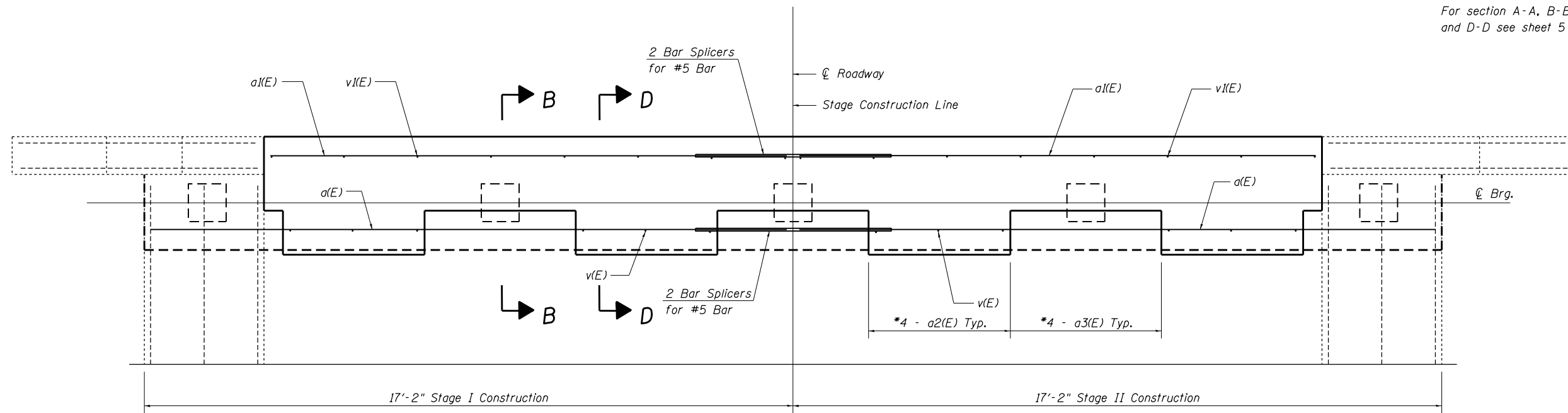


Hatching indicates removal.



EXISTING PARTIAL PLAN
(West Abutment shown; East Abutment similar by rotation)

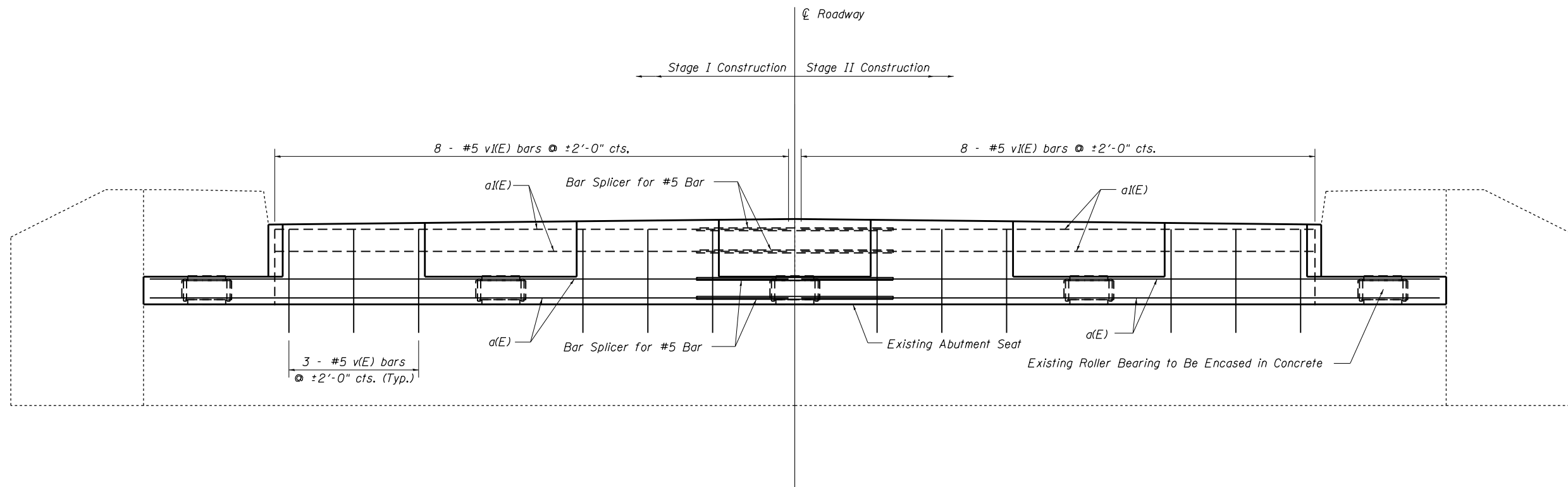
For section A-A, B-B, C-C and D-D see sheet 5 of 21.



PROPOSED PARTIAL PLAN
(West Abutment shown; East Abutment similar by rotation)

* #5 a2(E) and a3(E) bars spliced to the existing longitudinal reinforcement with mechanical splicers @ ±1'-2" cts.

FILE NAME =	USER NAME = steffenk	DESIGNED - KLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXPANSION JOINT ELIMINATION DETAILS SN. 015-0020			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG\illinois.gov\PWIDOT\Documents\IDOT Offices\District 7\Projects\74261\Drawings\CAD\sheet\774261-shr-structure-revised.dwg		CHECKED - MEA	REVISED -					91	(4)RS-4	Coles	57	39
PLOT SCALE = 40.0000' / in.		DATE - 04/16/12	REVISED -		CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT				
PLOT DATE = 10/19/2018					SCALE:	SHEET 3	OF 21 SHEETS	STA.	TO STA.			

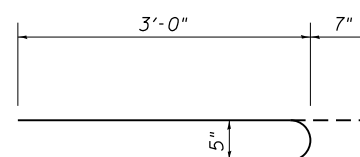


SECTION THRU END OF SLAB
(West Abutment shown; East Abutment similar by rotation)

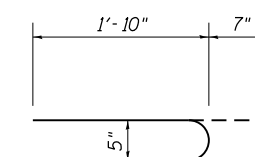
BILL OF MATERIAL

PER ABUTMENT

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a (E)	2	2	4	#5	16'-10"	—
a1(E)	2	2	4	#5	13'-8"	—
a2(E)	8	8	16	#5	3'-7"	—
a3(E)	7	7	14	#5	2'-5"	—
v (E)	6	6	12	#5	2'-9"	—
v1(E)	8	8	16	#5	2'-0"	—
REINFORCEMENT BARS (EPOXY COATED)					POUND	290
CONCRETE REMOVAL					CU YD	3.1
CONCRETE SUPERSTRUCTURE					CU YD	4.6



Bar a2(E)



Bar a3(E)

FILE NAME =	USER NAME = steffenk	DESIGNED - KLB	REVISED - SAK 9/20/2017
pw:\IL\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\DOT Offices\District 7\Projects\74261\Drawings\CAD\sheet\74261-shr-structure-REVISION			
	PLOT SCALE = 40.0000' / in.	CHECKED - MEA	REVISED -
	PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT ELIMINATION DETAILS
SN. 015-0020**

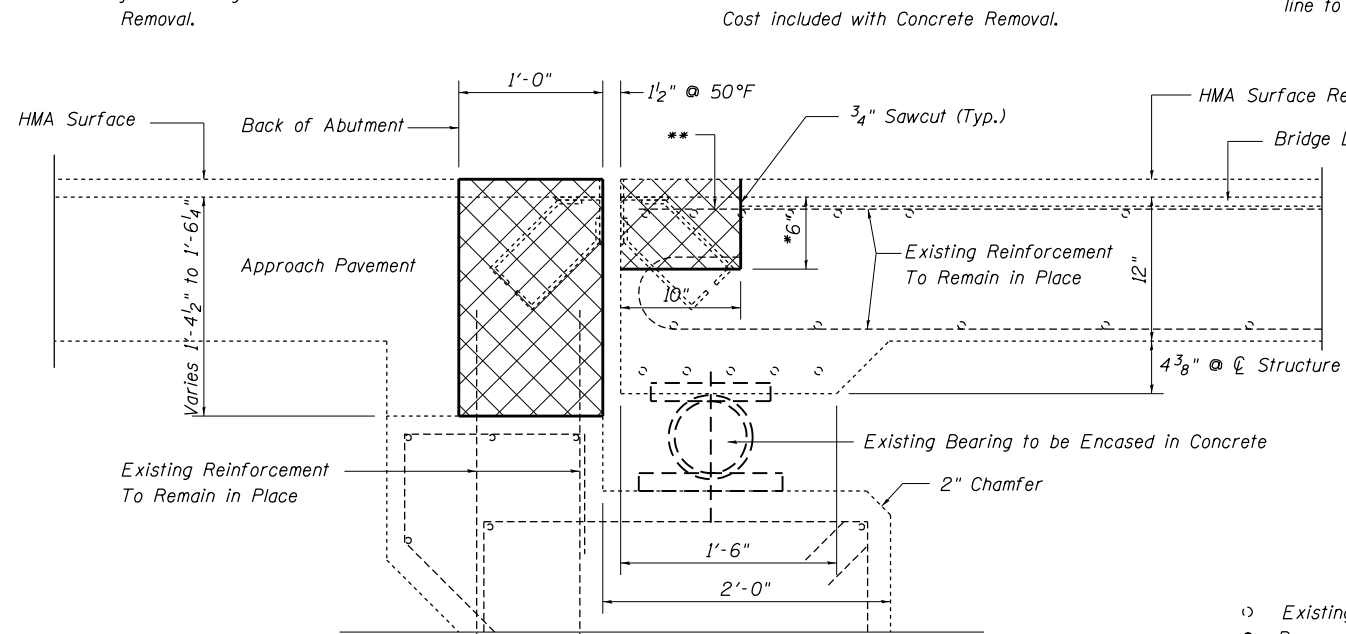
SCALE: SHEET 4 OF 21 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	40
CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT	

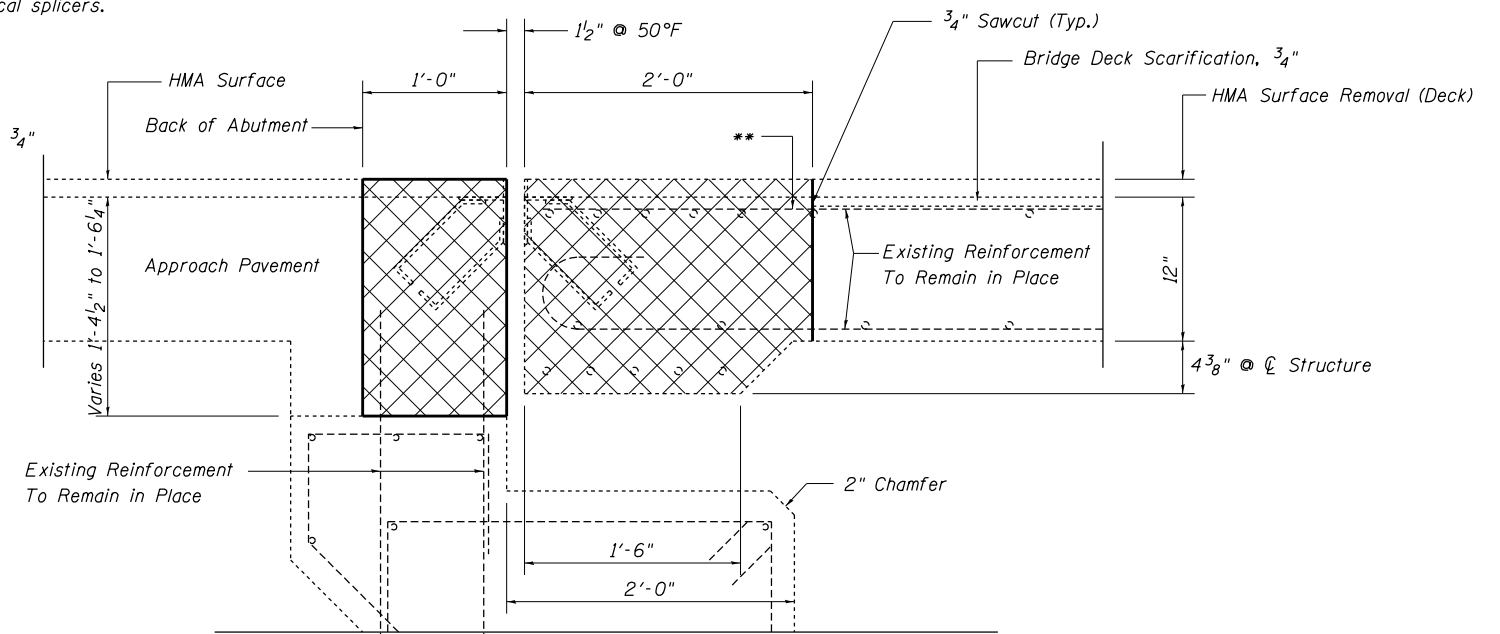
Cost of the removal of the existing expansion joint and angles shall be included with Concrete Removal.

*The existing expansion joint studs may need to be cut at the limits of the concrete removal. Cost included with Concrete Removal.

**Cut existing reinforcement 6" from removal line to allow for mechanical splicers.



SECTION A-A
(Dimensions at Rt. L's to end of deck)

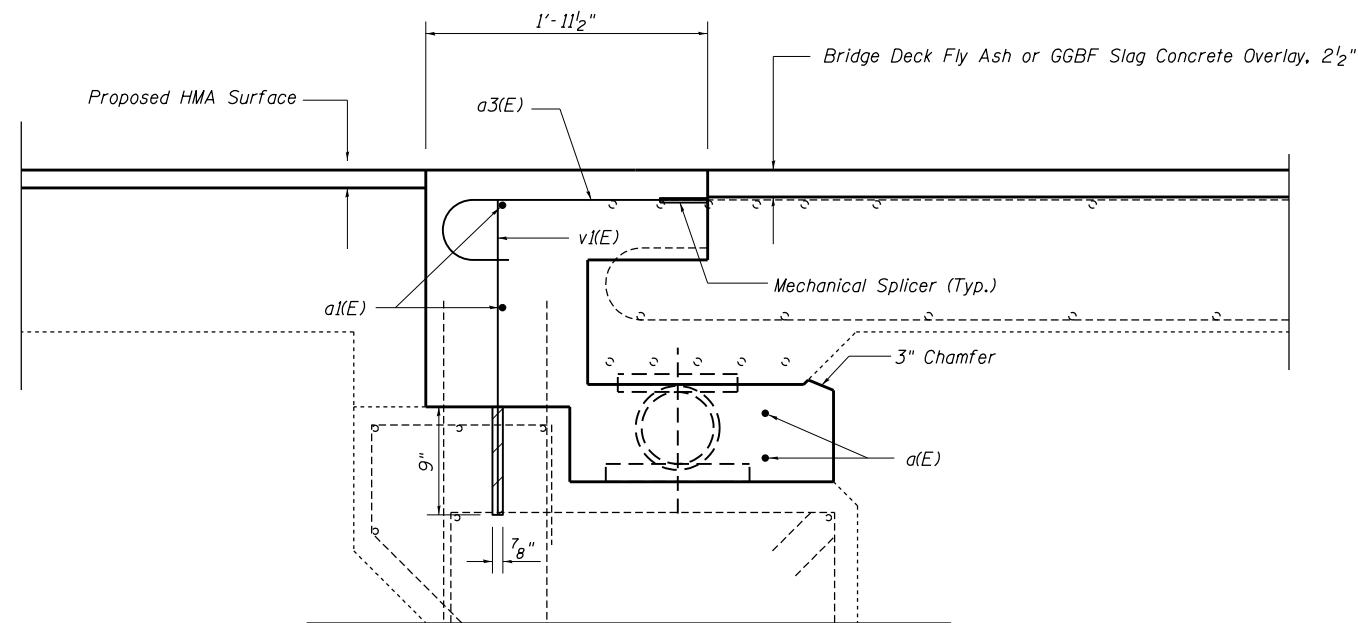


SECTION C-C
(Dimensions at Rt. L's to end of deck)

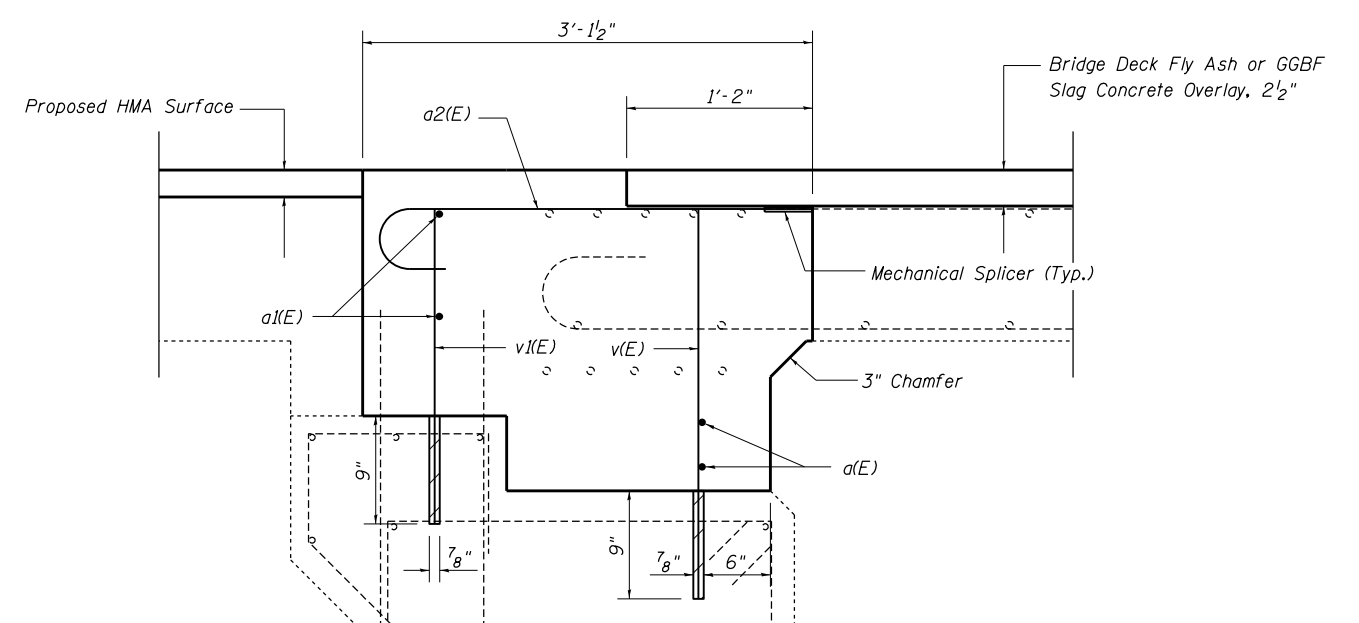
○ Existing Reinforcement
● Proposed Reinforcement

Epoxy Grout

Concrete Removal



SECTION B-B
(Dimensions at Rt. L's to end of deck)



SECTION D-D
(Dimensions at Rt. L's to end of deck)

Epoxy grout #5 v(E) and v1(E) bars per Article 584 of the Standard Specifications. Cost included with the cost of REINFORCEMENT BARS, EPOXY COATED.

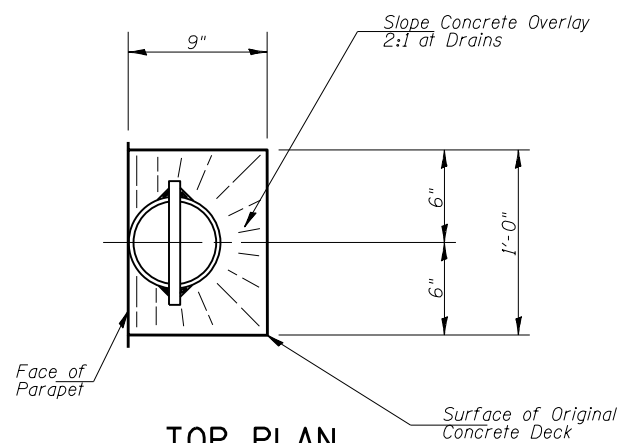
FILE NAME =	USER NAME = steffenk	DESIGNED - KLB	REVISED - SAK 9/20/2017
pw:\IL\084EBID\INTEG\illinois.gov\PWIDOT\Documents\DOT Offices\District 7\Projects\74261\Drawings\CAD\sheet\774261-shr-structure-REVISION			
PLOT SCALE = 40.0000' / in.	CHECKED - MEA	REVISION	REVISED -
PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISION	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

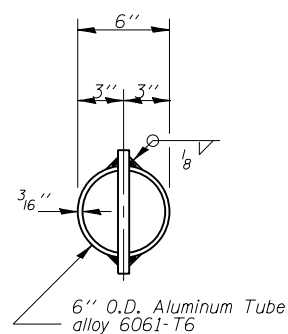
EXPANSION JOINT ELIMINATION DETAILS
SN. 015-0020

SCALE: SHEET 5 OF 21 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	41
CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT	

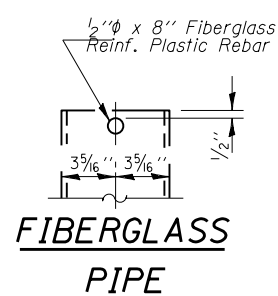


TOP PLAN

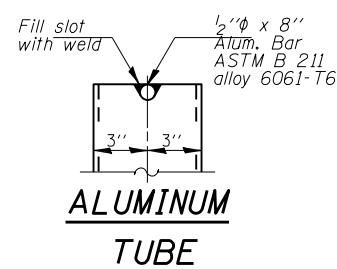


TOP PLAN

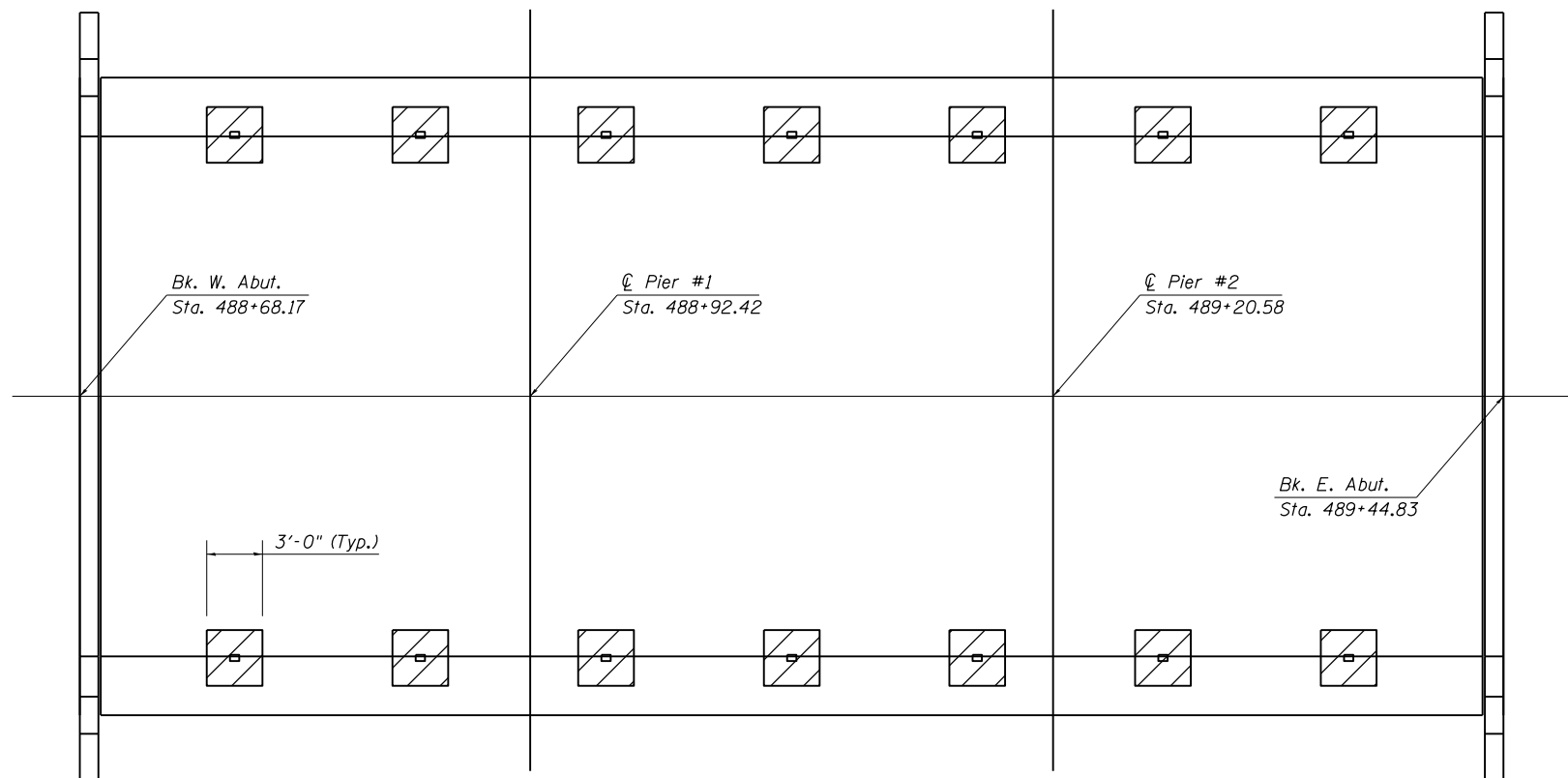
(Showing Aluminum Tube)



**FIBERGLASS
PIPE**



**ALUMINUM
TUBE**



Deck Drain to be Replaced = 14.0 Each

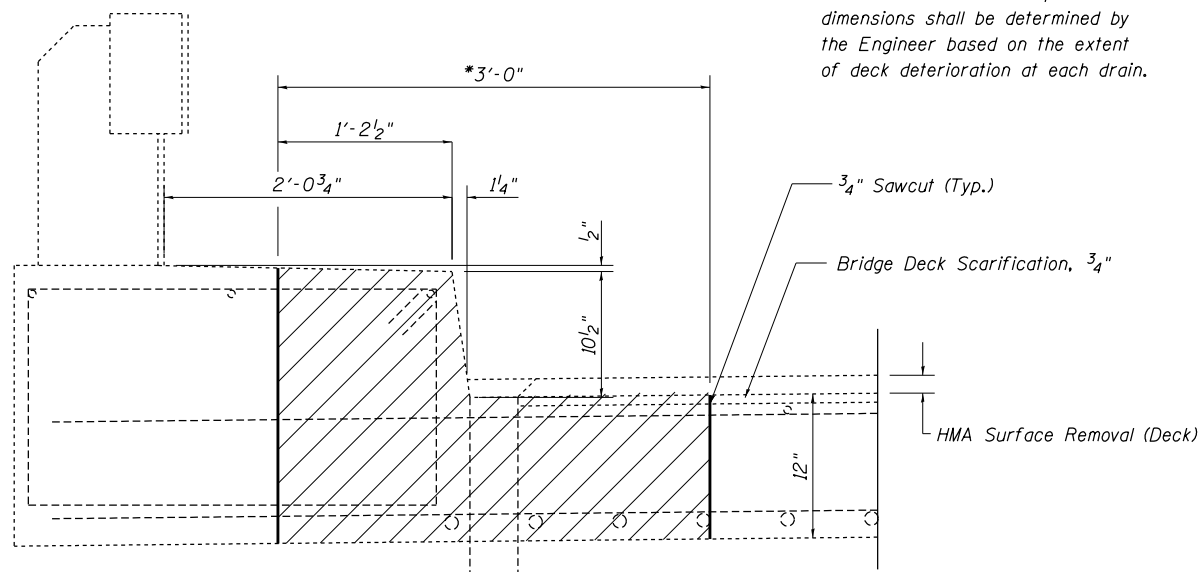
BILL OF MATERIAL

Concrete Removal	Cu Yd	7.0
Concrete Superstructure	Cu Yd	7.0
Floor Drains	Each	14

Note: See "Total Bill of Materials" for structure quantities.

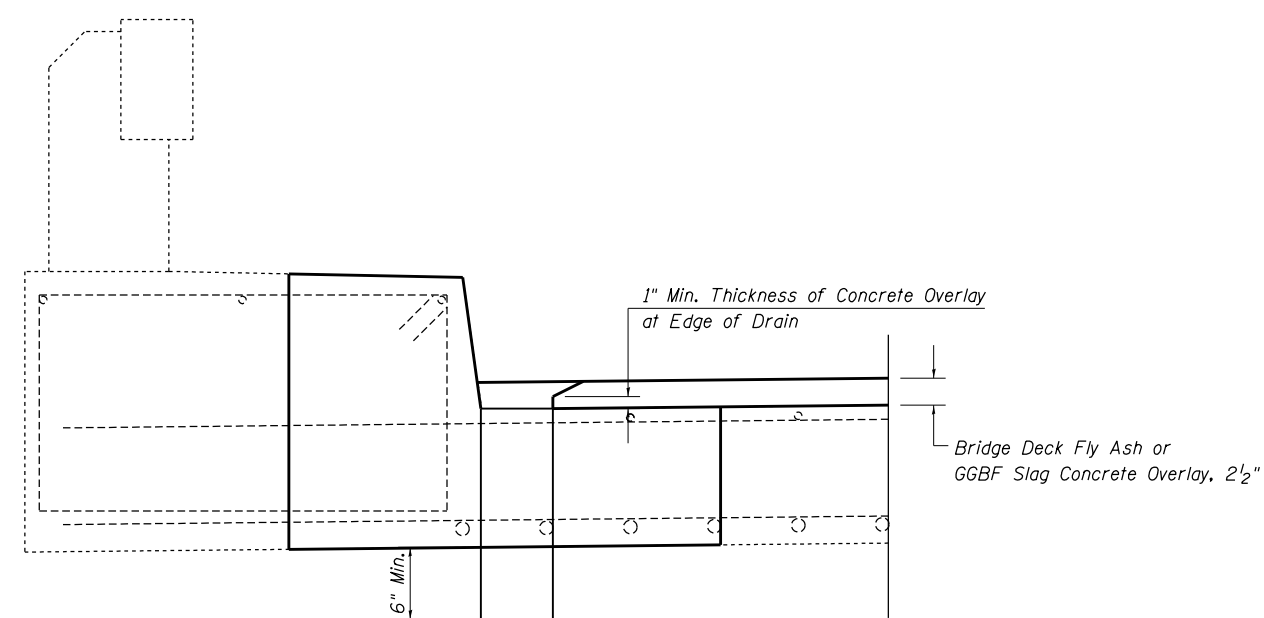
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. Galvanize clamping device according to AASHTO M 242. Cost of clamping device and galvanizing included with Floor Drains.

* Concrete removal and replacement dimensions shall be determined by the Engineer based on the extent of deck deterioration at each drain.



**SECTION THRU EXISTING
FLOOR DRAINS**

Hatching indicates removal. Cost included with Concrete Removal.



**SECTION THRU PROPOSED
FLOOR DRAINS**

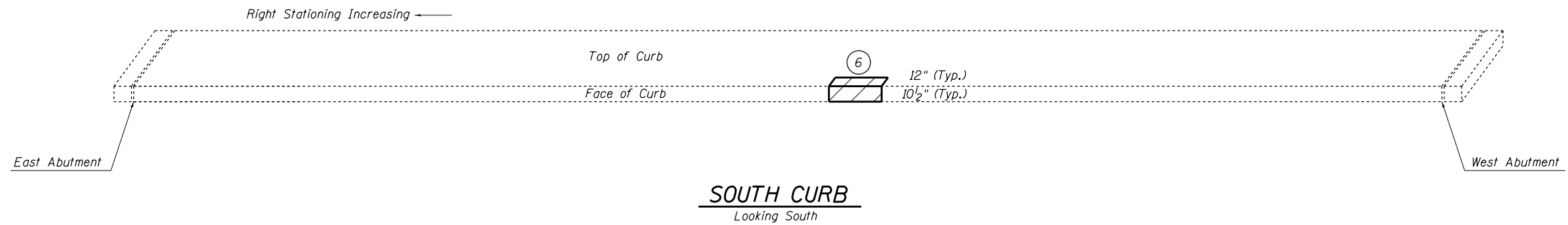
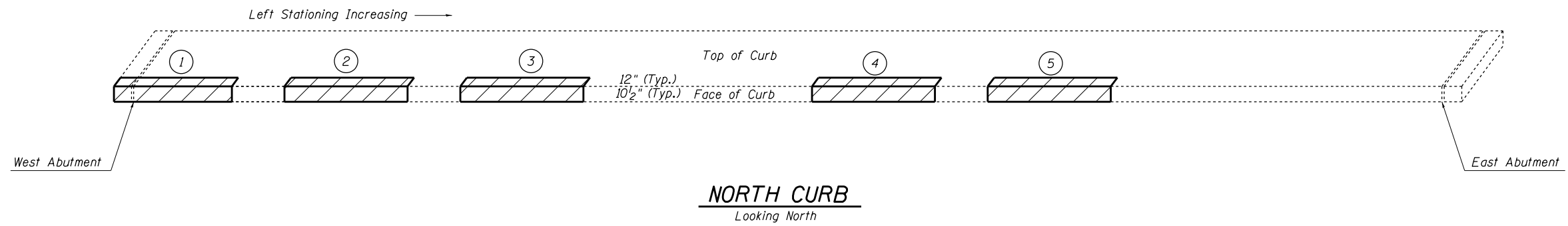
FILE NAME =	USER NAME = steffennk	DESIGNED - KLB	REVISED - SAK 9/20/2017
p:\11\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\DOT Offices\District 7\Projects\74261\Drawings\CAD\Sheet\774261-shr-structure-revised.dwg		CHECKED - MEA	REVISED -
		DATE - 04/16/12	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FLOOR DRAIN DETAILS
SN. 015-0020**

SCALE: SHEET 7 OF 21 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	43
CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT	



STRUCTURAL REPAIR

Cost included in STRUCTURAL REPAIR
OF CONCRETE (DEPTH ≤ 5")

PATCH NUMBER	STATION	AREA SQ FT
1	LT STA 488+68 TO 488+75	13
2	LT STA 488+78 TO 488+85	13
3	LT STA 488+88 TO 488+95	13
4	LT STA 489+08 TO 489+15	13
5	LT STA 489+18 TO 489+25	13
6	RT STA 488+92 TO 488+95	6
	TOTAL	71



Structural Repair of Concrete (Depth ≤ 5")

FILE NAME =	USER NAME = steffenmk	DESIGNED - KLB	REVISED - SAK 9/20/2017
pw:\IL\084EBIDINTEG\illinois.gov\PIDOT\Documents\DOT Offices\District 7\Projects\74261\DRAWING\CAD\sheet\774261-shr-structure-repair.dwg		DRAWN - KLB	REVISION -
	PLOT SCALE = 48.0000' / in.	CHECKED - MEA	REVISED -
	PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISED -

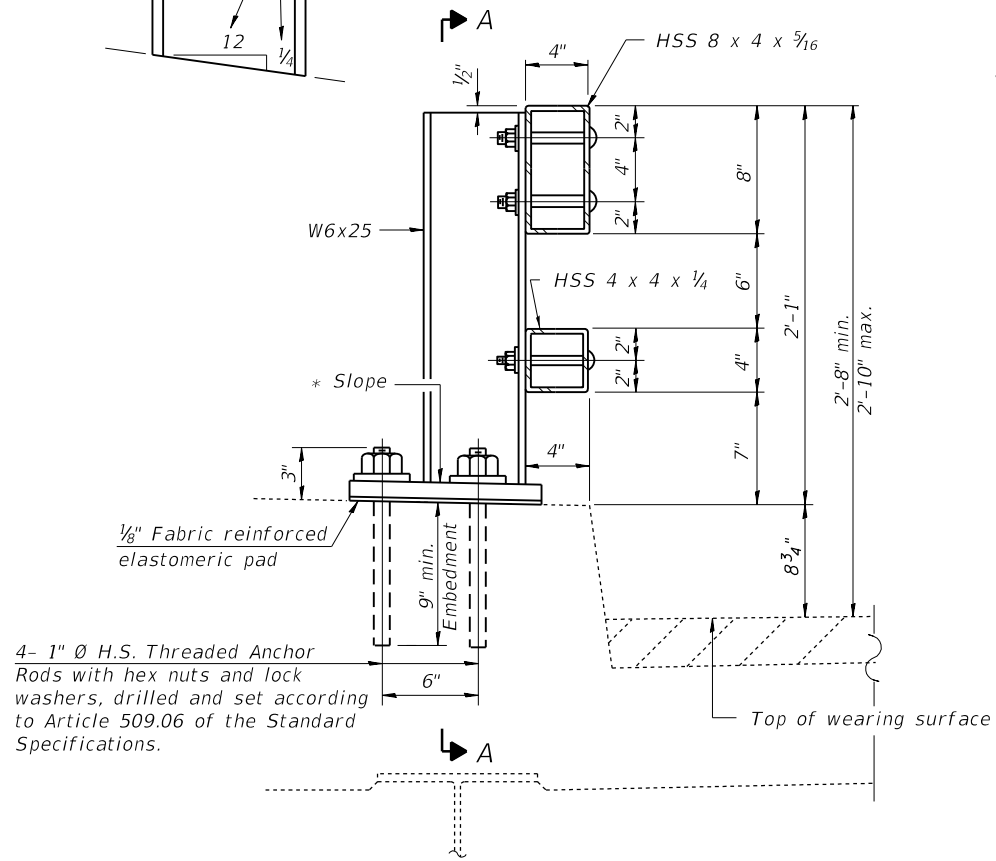
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL REPAIR - CURB
SN. 015-0020

SCALE: SHEET 8 OF 21 SHEETS STA. TO STA.

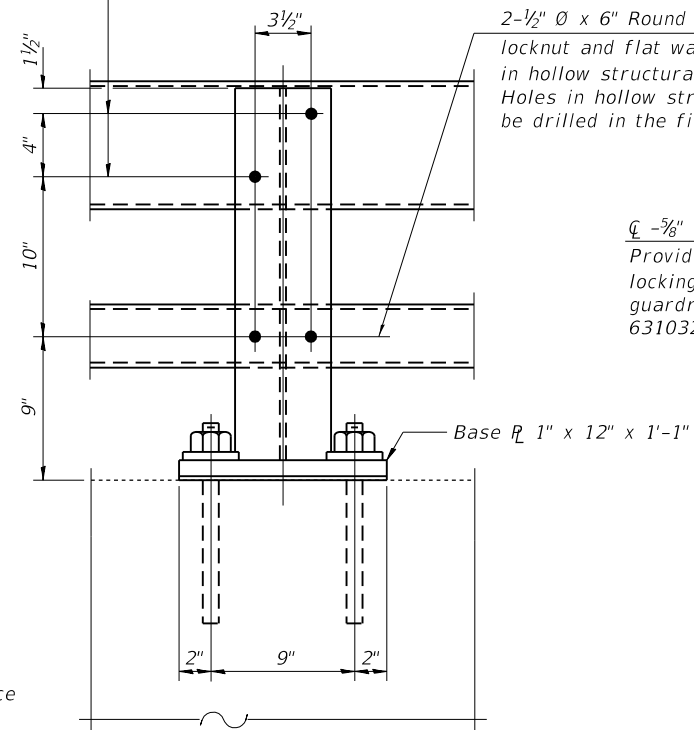
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	44
CONTRACT NO.			74261	
ILLINOIS FED. AID PROJECT				

* Cut bottom end of post to curb slope.



SECTION AT RAIL POST

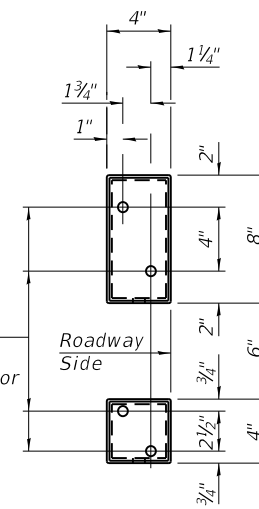
2-3/4" Ø x 6" Round Head Bolts with locknut and flat washer. 7/8" Ø Holes in tubing and posts. Holes in hollow structural section may be drilled in the field.



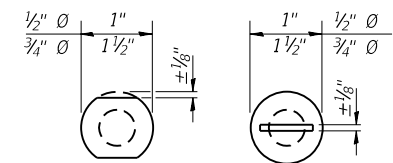
SECTION A-A

2-1/2" Ø x 6" Round Head Bolts with locknut and flat washer. 5/8" Ø Holes in hollow structural section and post. Holes in hollow structural section may be drilled in the field.

4 - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.

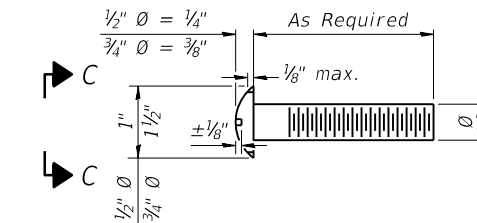


VIEW B-B



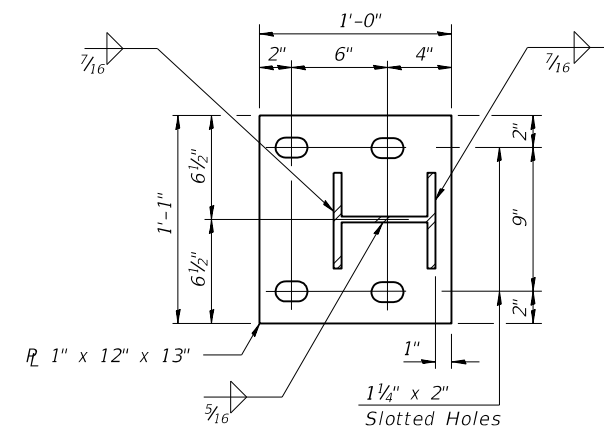
Without Slot or Recess With Slot (shown) or Approved Recess

VIEW C-C

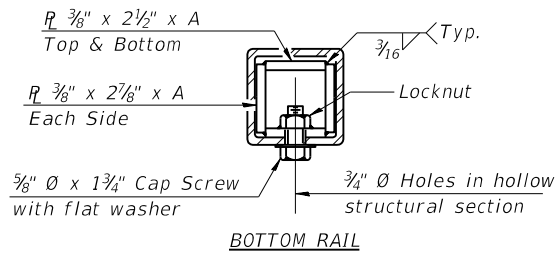


DETAIL OF 1/2" Ø & 3/4" Ø ROUND HEAD BOLTS

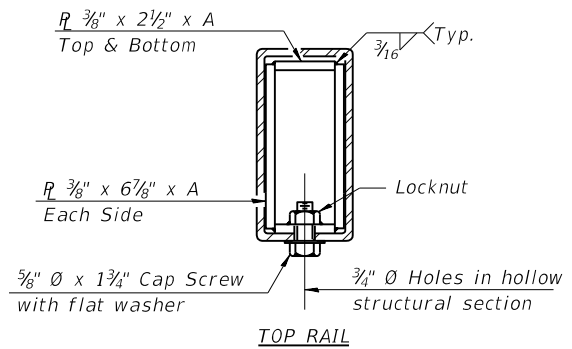
Notes:
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



BASE PLATE DETAIL

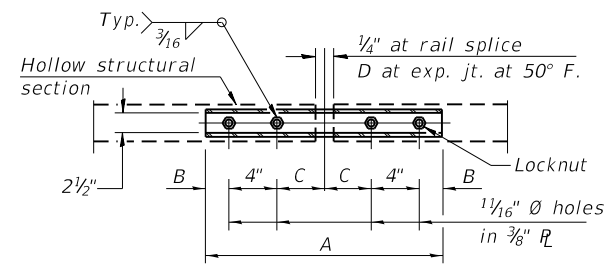


BOTTOM RAIL

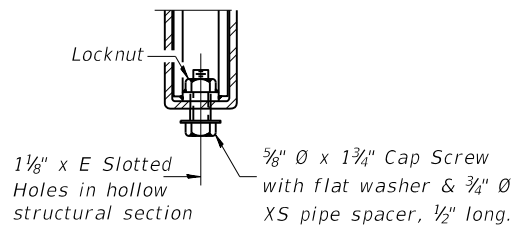


TOP RAIL

SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE R TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

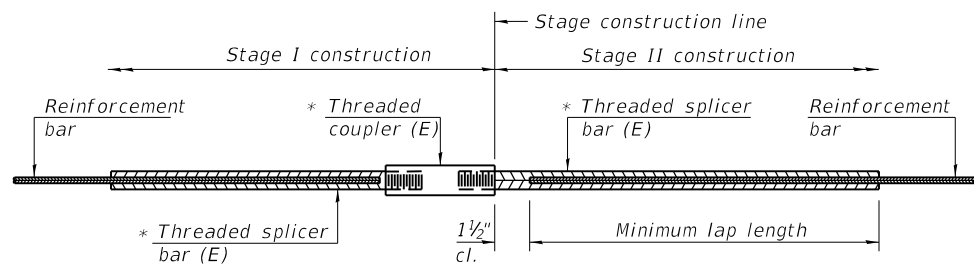
SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/2"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	154.0

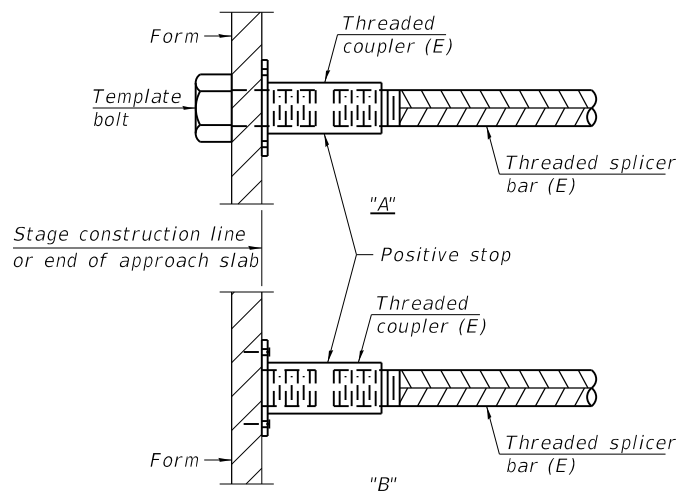


STANDARD BAR SPLICER ASSEMBLY

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

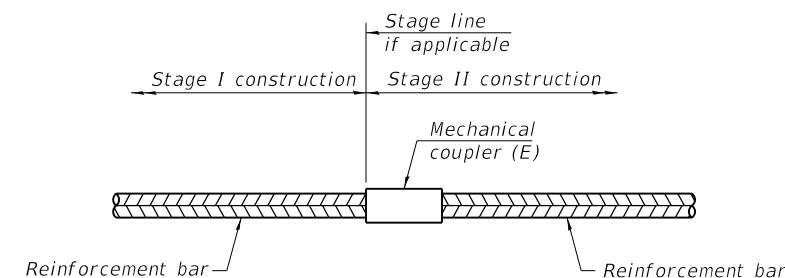
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
W. Abut.	#5	4	3'-4"
E. Abut.	#5	4	3'-4"



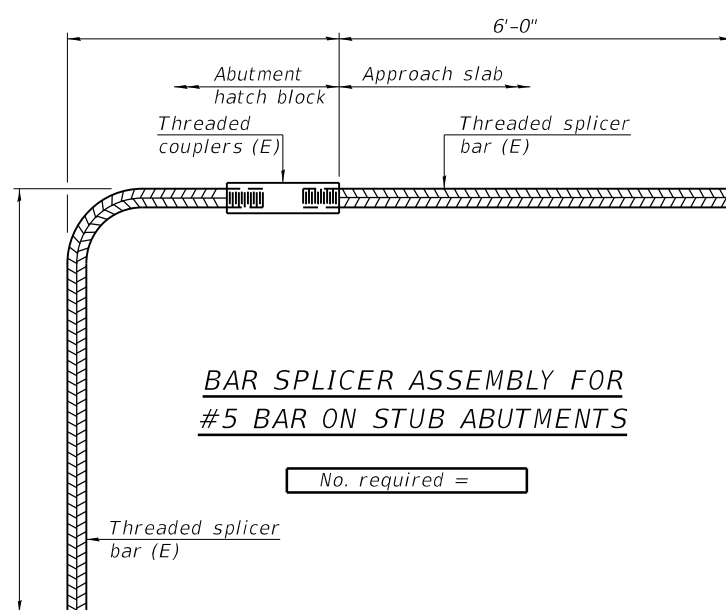
INSTALLATION AND SETTING METHODS

"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
Abutments	#5	60



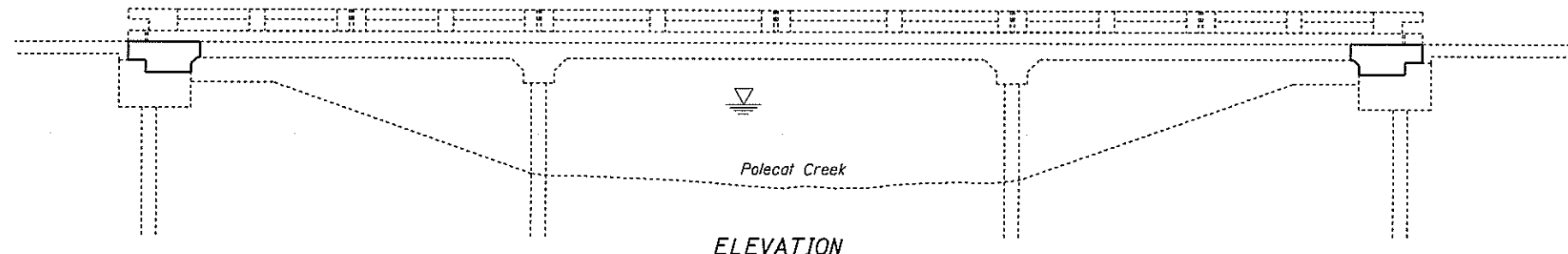
NOTES

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.

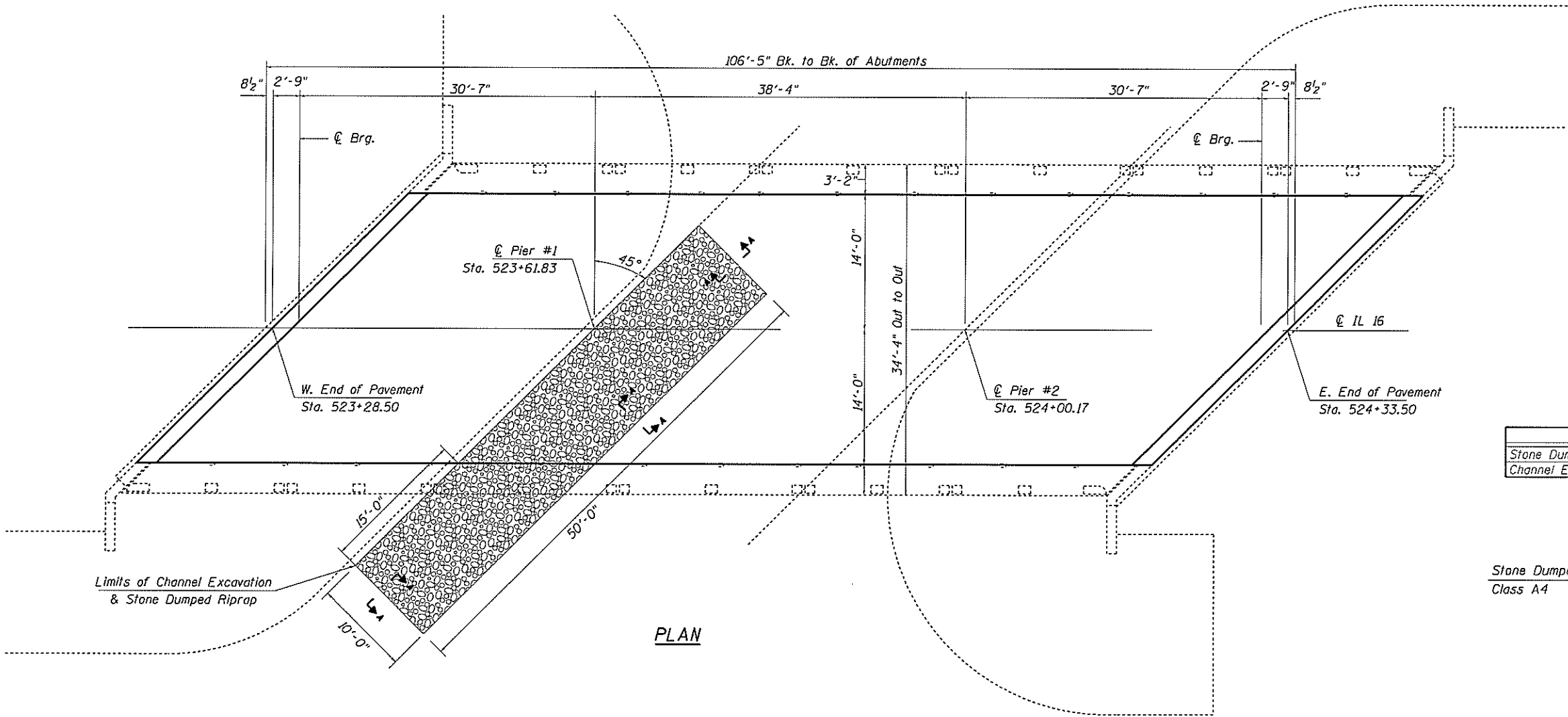
BSD-1 2-17-2017

FILE NAME =	USER NAME = steffenmk	DESIGNED - KLB	REVISED - SAK 9/20/2017	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 015-0020	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\11\084EBID\INTEG.illinois.gov\PI\DOT\Documents\DOT Offices\District 7\Projects\74261\DRAWING\CAD\sheet\KLB\74261-sh1-structure-REVISED.dgn	DESIGNED - KLB	REVISED - DPM 10/03/2017	91			(4)RS-4	Coles	57	46	
PLOT SCALE = 40.0000' / in.	CHECKED - MEA	REVISED -	CONTRACT NO. 74261							
PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISED -	SCALE:	SHEET 10	OF 21 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

The existing three span continuous reinforced concrete slab structure was constructed in 1958 as section 4BR at Sta. 523+81. SN. 015-0021 carries FAP 91 (IL 16) over Polecat Creek. The proposed project consists of bridge deck patching, new concrete wearing surface, expansion joint elimination, curb repair, and new bridge rail.



ELEVATION



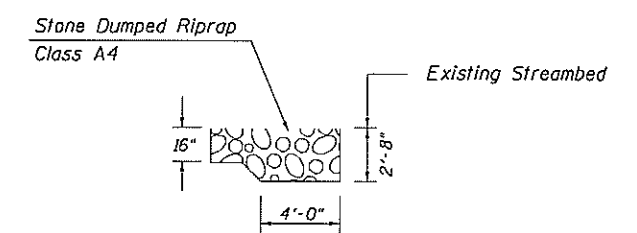
PLAN



Dr. Carl Puzey 12/4/18 Expires 1/30/20

CHANNEL IMPROVEMENTS

ITEM	UNIT	QUANTITY
Stone Dumped Riprap, Class A4	Ton	55
Channel Excavation	Cu. Yd.	37



SECTION A-A

FILE NAME =	USER NAME = staffernk	DESIGNED - KLB	REVISED - SAK 9/20/2017	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION SN. 015-0021			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
p:\IL\084EBI01\TEG.illinois.gov\PI\DOT\Documents\IDOT Offices\District 7\Projects\74210\DRAWN\CAD\shoe\KLB\774261-sht-structure-		DRAWN - KLB	REVISED -		91	(4)RS-4	Coles	57	47			
PLOT SCALE = 48.0000' / in.		CHECKED - MEA	REVISED -		SCALE: SHEET 11 OF 21 SHEETS STA. TO STA.			CONTRACT NO. 74261				
PLOT DATE = 10/19/2018		DATE - 04/16/12	REVISED -		ILLINOIS FED. AID PROJECT							

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement Bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.

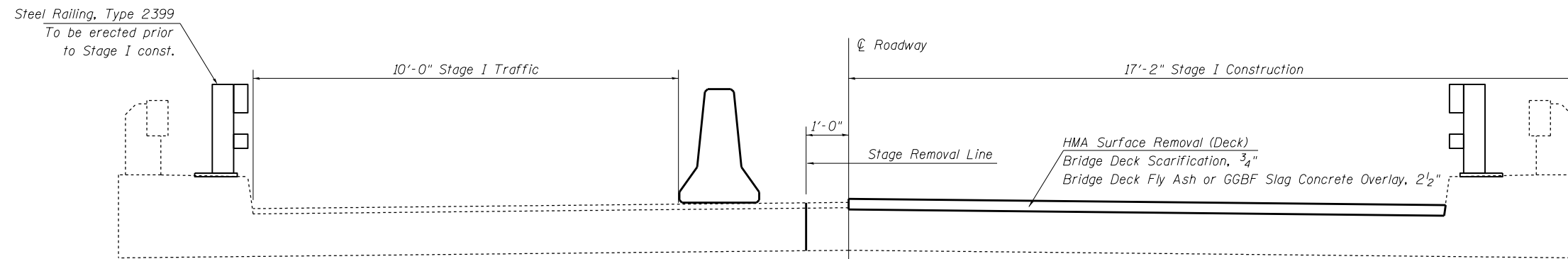
Prior to pouring the new concrete deck, all heavy and loose rust, loose mill scale and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with the concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Synthetic fibers should be added to the bridge Deck Fly Ash or GGBF Slag Overlay, 2'-1 1/2". See Special Provisions.

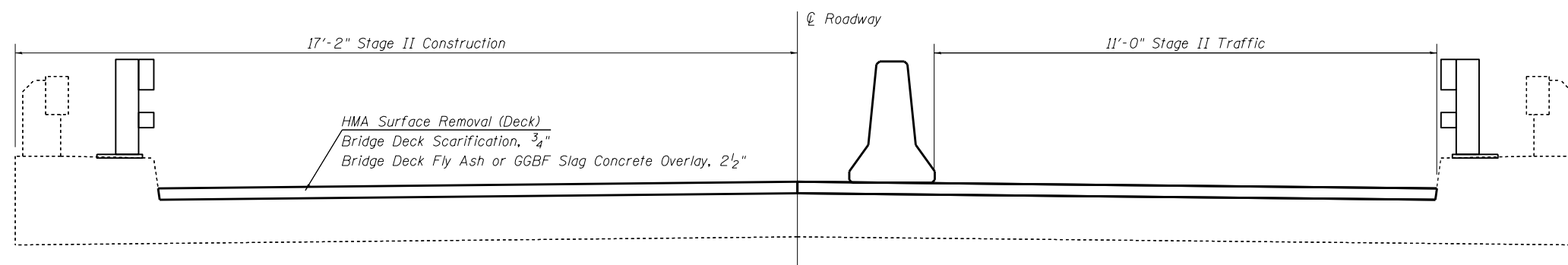
Protective Coat shall be applied to areas of new Concrete Superstructure at the ends of the deck and on the curbs.

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	21.8
Concrete Superstructure	Cu. Yd.	27.2
Reinforcement Bars, Epoxy Coated	Pound	760
Bar Splicers	Each	8
Protective Coat	Sq Yd	21
Structural Repair of Concrete (Depth ≤5")	Sq Ft	159
HMA Surface Removal (Deck)	Sq Yd	301
Bridge Deck Scarification, 3/4"	Sq Yd	301
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2 1/2"	Sq Yd	306
Bridge Deck Grooving	Sq Yd	306
Mechanical Splicers	Each	56
Deck Slab Repair (Full Depth, Type I)	Sq Yd	2
Deck Slab Repair (Full Depth, Type II)	Sq Yd	8
Steel Railing, Type 2399	Foot	206
Stone Dumped Riprap, Class A4	Ton	55
Channel Excavation	Cu Yd	37
Floor Drains	Each	14

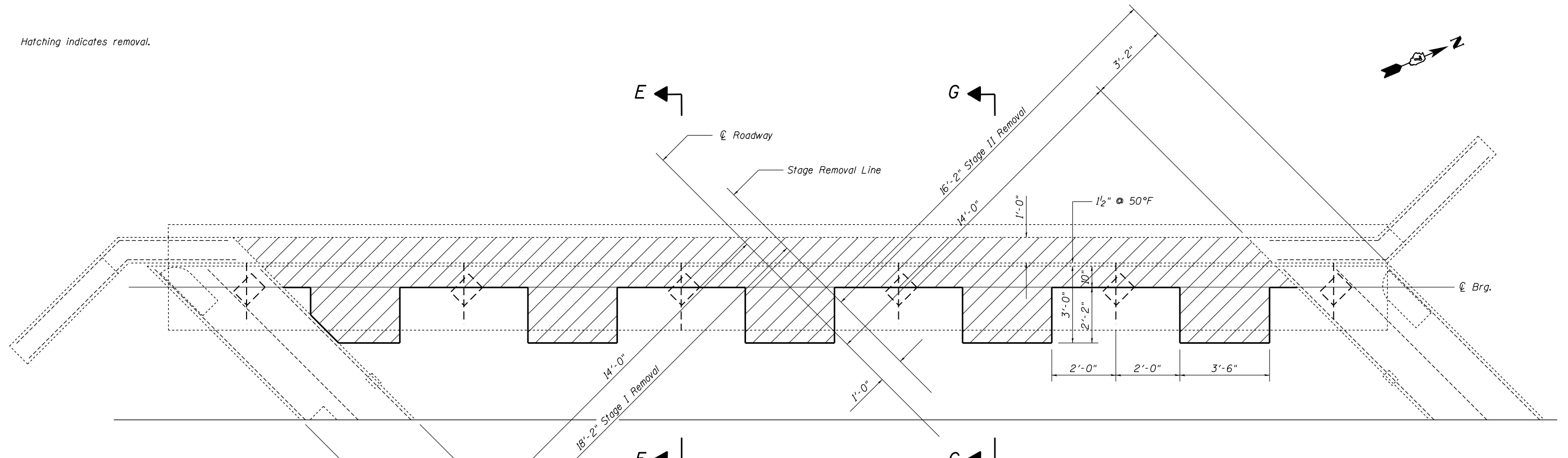


STAGE I LOOKING EAST



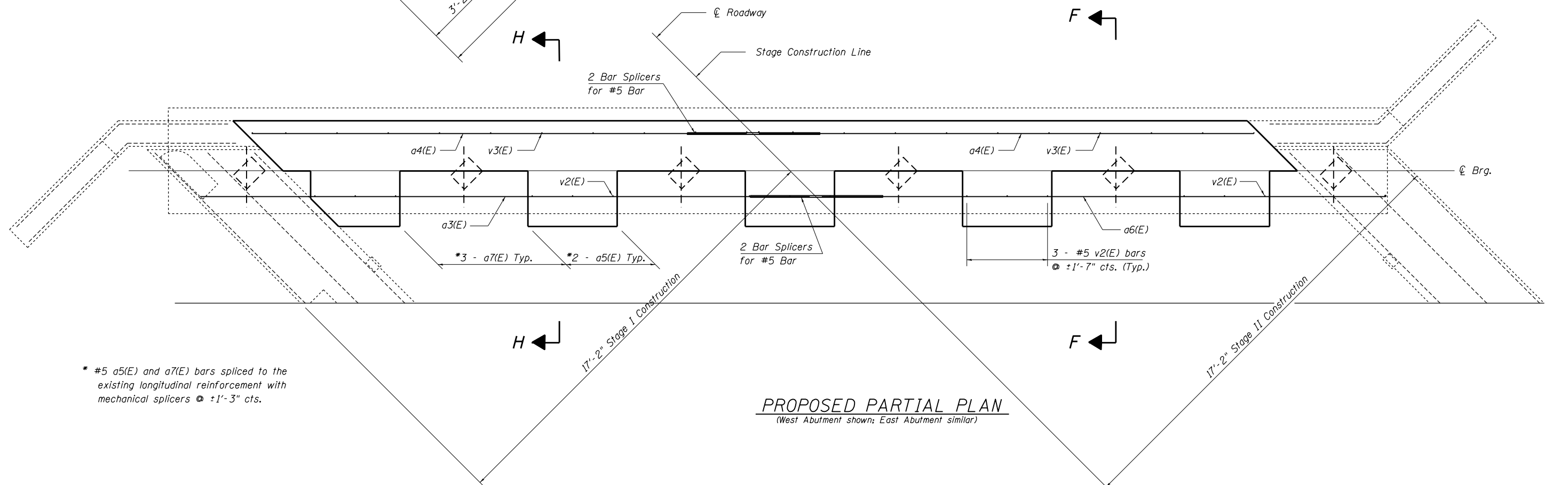
STAGE II LOOKING EAST

Hatching indicates removal.



EXISTING PARTIAL PLAN
(West Abutment shown; East Abutment similar)

For section E-E, F-F, G-G and H-H see sheet 15 of 21.



PROPOSED PARTIAL PLAN
(West Abutment shown; East Abutment similar)

* #5 a5(E) and a7(E) bars spliced to the existing longitudinal reinforcement with mechanical splicers @ ±1'-3" cts.

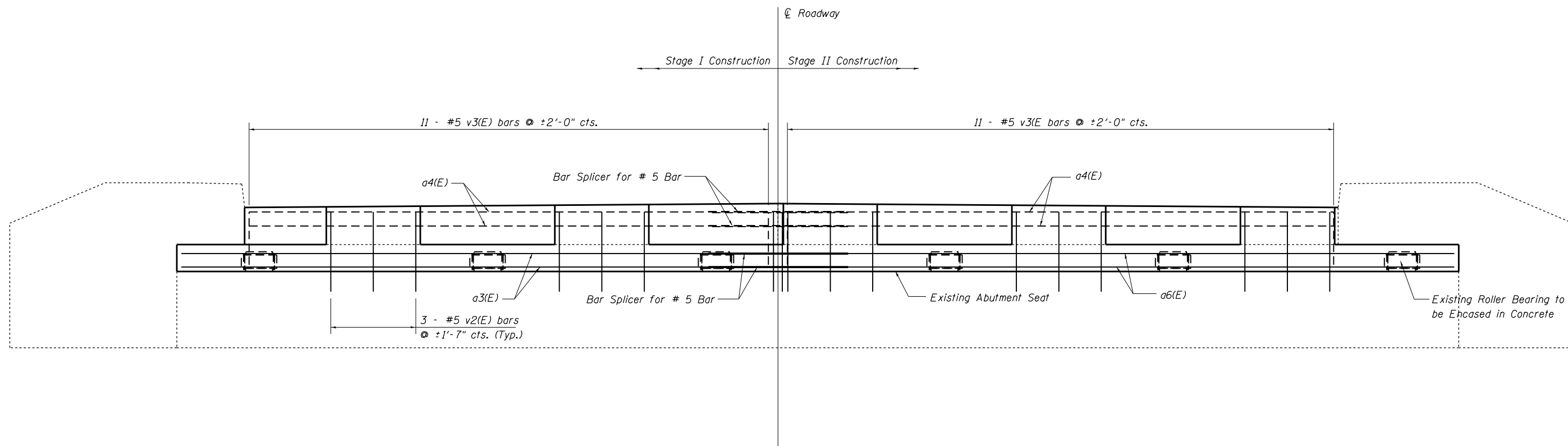
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PLOT SCALE = 40.0000' / in.	CHECKED - MEA	REVISOR -	REVISOR -
PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISOR -	REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT ELIMINATION DETAILS
SN. 015-0021

SCALE: SHEET 13 OF 21 SHEETS STA. TO STA.

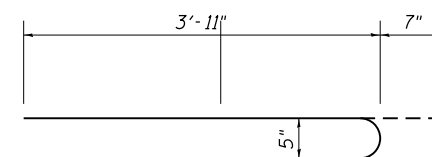
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	49
CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT	



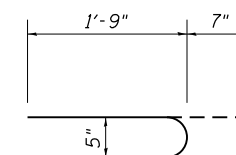
SECTION THRU END OF SLAB
(West Abutment shown; East Abutment similar)

BILL OF MATERIAL
PER ABUTMENT

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a3(E)	2		2	#5	23'-9"	—
a4(E)	2	2	4	#5	19'-4"	—
a5(E)	6	9	15	#5	4'-6"	⌋
a6(E)		2	2	#5	22'-0"	—
a7(E)	6	7	13	#5	2'-4"	⌋
v2(E)	6	9	15	#5	3'-2"	—
v3(E)	11	11	22	#5	2'-2"	—
REINFORCEMENT BARS (EPOXY COATED)					POUND	380
CONCRETE REMOVAL					CU YD	6.7
CONCRETE SUPERSTRUCTURE					CU YD	9.4



Bar a5(E)



Bar a7(E)

FILE NAME =	USER NAME = steffenmk	DESIGNED - KLB	REVISED -
p:\11\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 7\Projects\74261\Drawings\CAD\Sheet\74261-shr-structure-revised.dgn		DRAWN - KLB	REVISION -
	PLOT SCALE = 40.0000' / in.	CHECKED - MEA	REVISED -
	PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

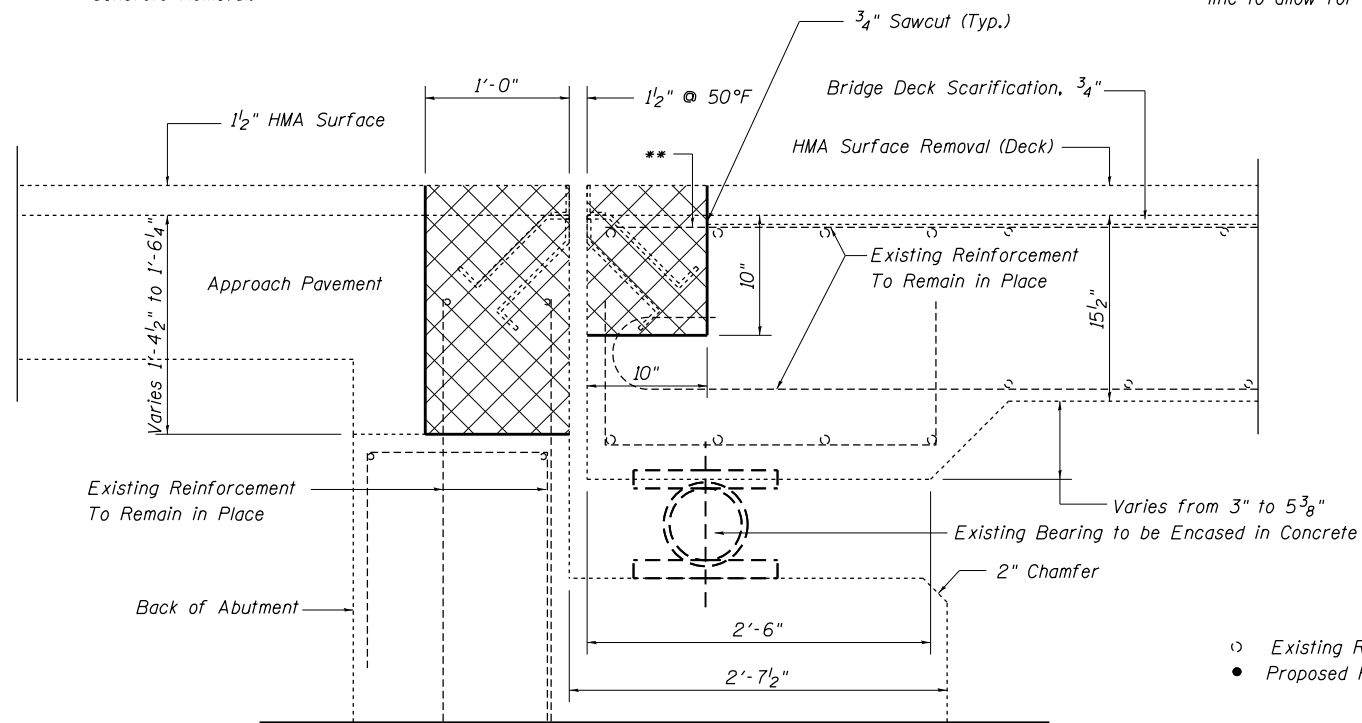
EXPANSION JOINT ELIMINATION DETAILS
SN. 015-0021

SCALE: SHEET 14 OF 21 SHEETS STA. TO STA.

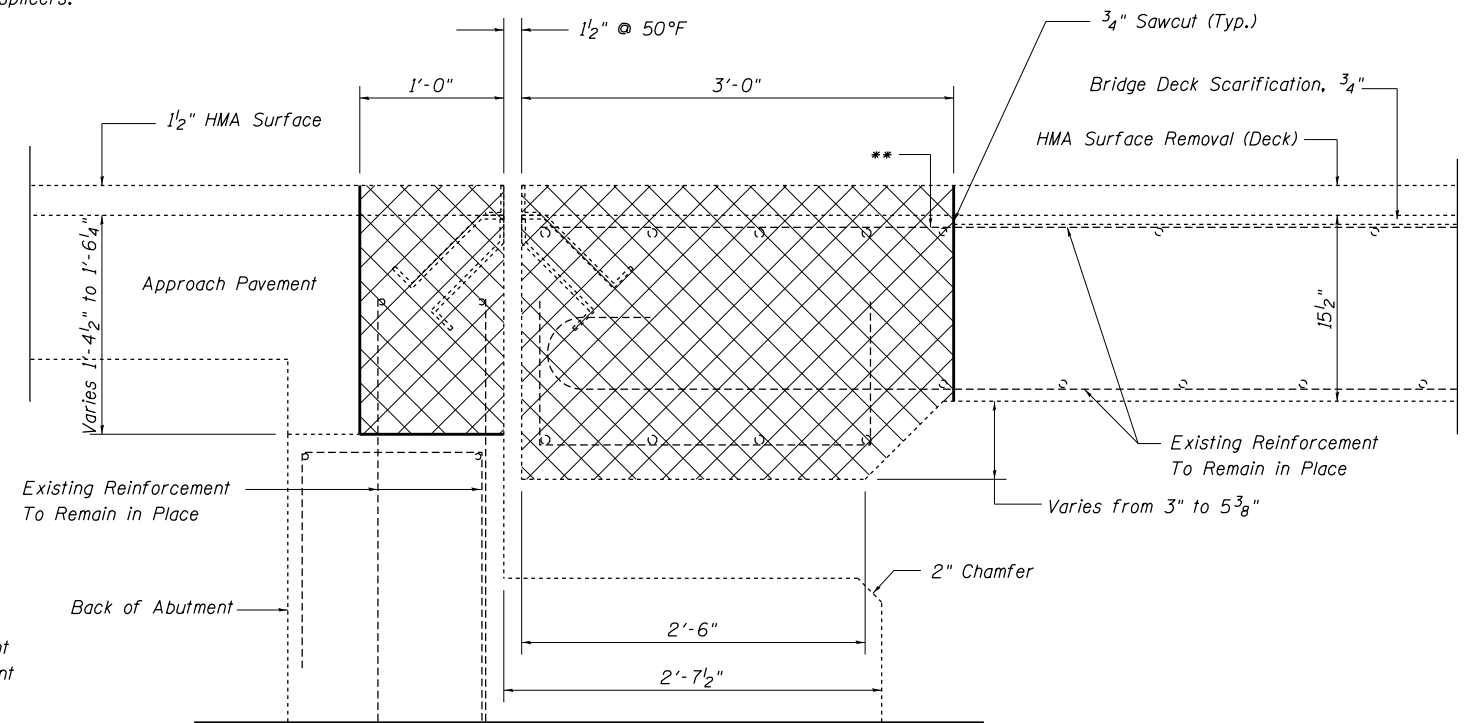
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	50
CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT	

Cost of the removal of the existing expansion joint and angles shall be included with Concrete Removal.

**Cut existing reinforcement 6" from removal line to allow for mechanical splicers.



SECTION E-E
(Dimensions at Rt. L's to end of deck)

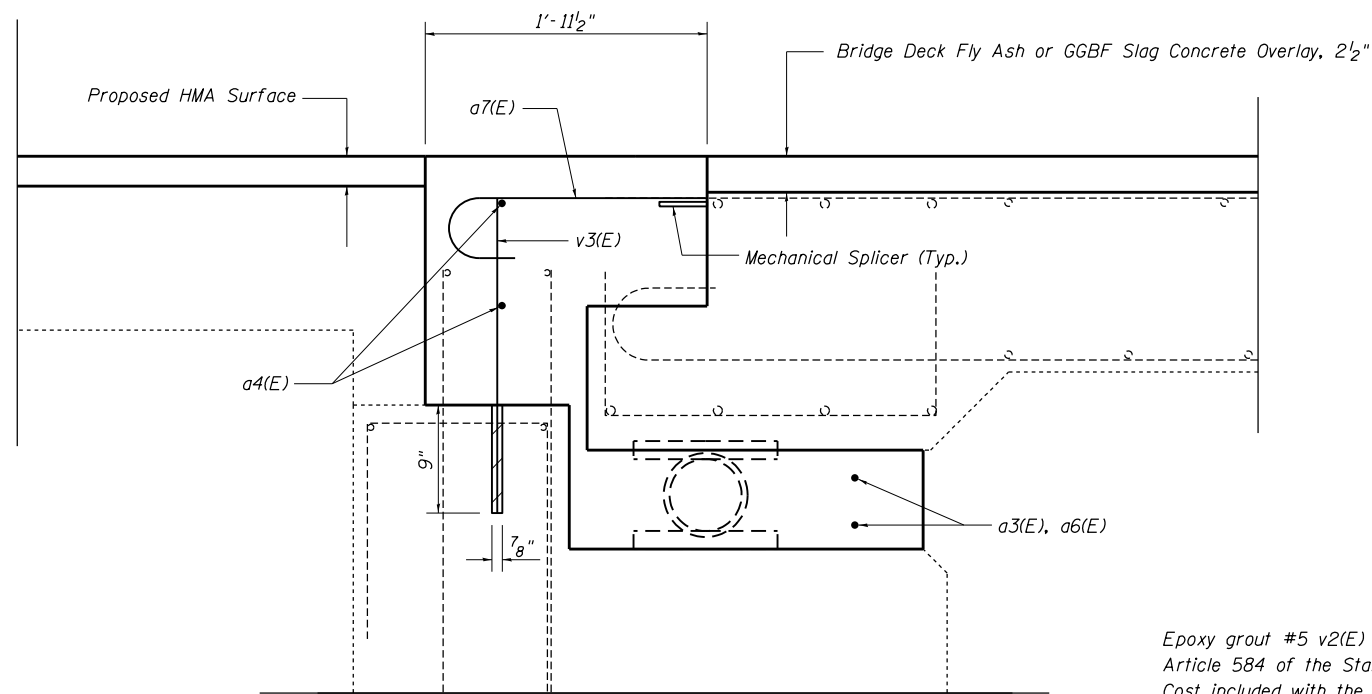


SECTION G-G
(Dimensions at Rt. L's to end of deck)

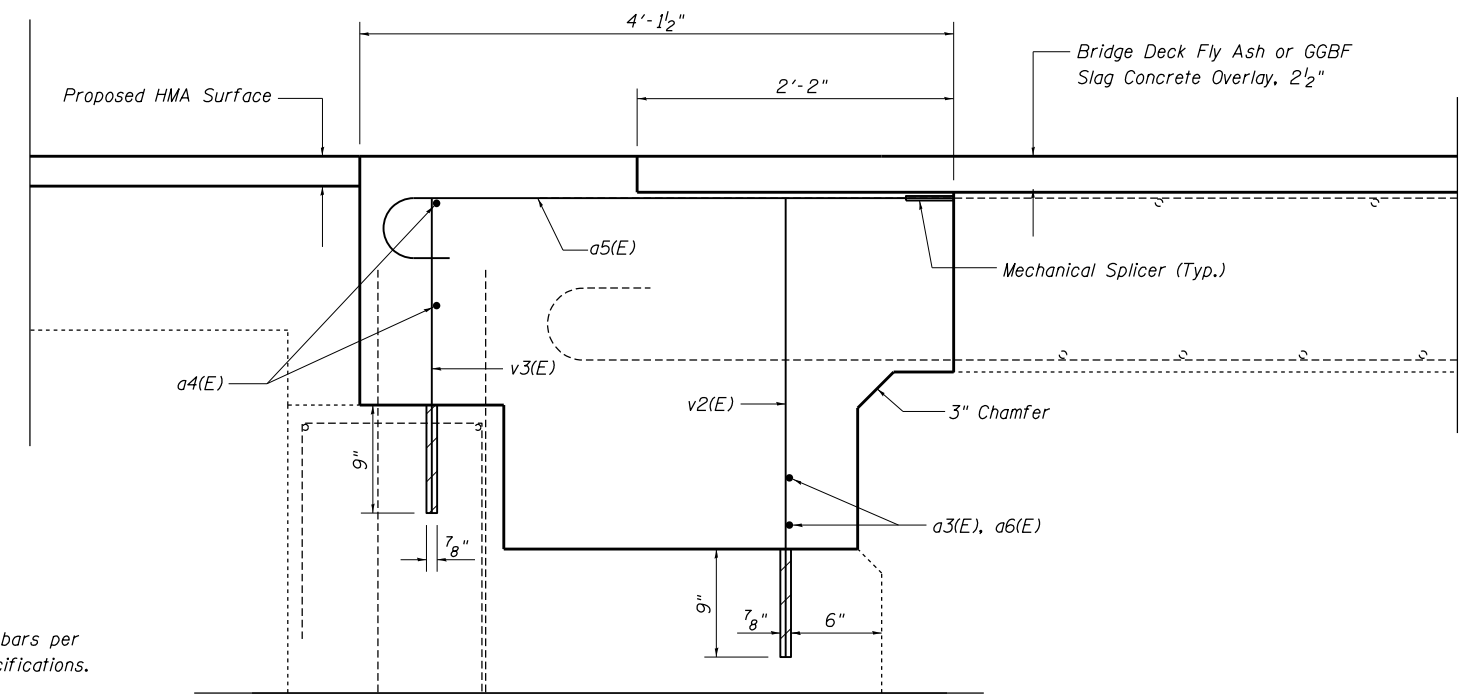
○ Existing Reinforcement
● Proposed Reinforcement

Epoxy Grout

Concrete Removal



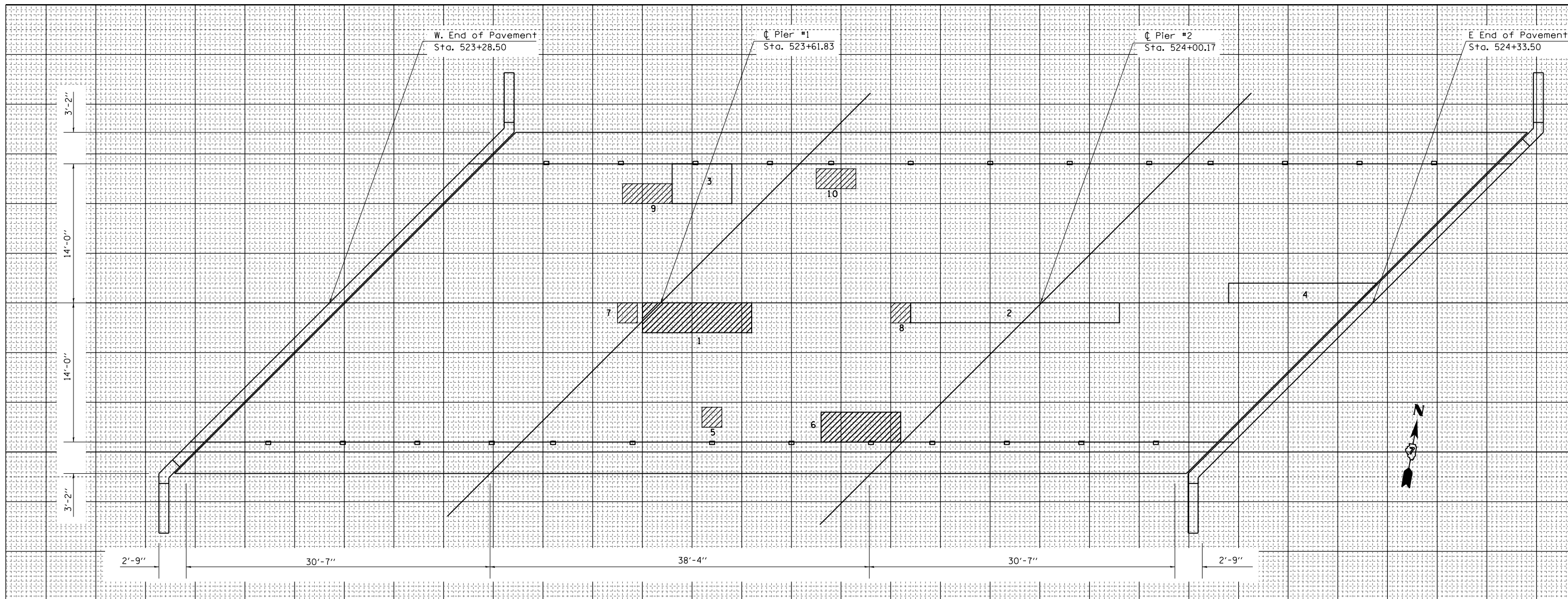
SECTION F-F
(Dimensions at Rt. L's to end of deck)



SECTION H-H
(Dimensions at Rt. L's to end of deck)

Epoxy grout #5 v2(E) and v3(E) bars per Article 584 of the Standard Specifications. Cost included with the cost of REINFORCEMENT BARS, EPOXY COATED.

FILE NAME =	USER NAME = steffennk	DESIGNED - KLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXPANSION JOINT ELIMINATION DETAILS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\IDOT Offices\District 7\Projects\74261\DRAWING\CAD\sheet\74261-shr-structure-REVISION		CHECKED - MEA	REVISED -		SN. 015-0021			91	(4)RS-4	Coles	57	51
PLOT SCALE = 40.0000' / in.		DATE - 04/16/12	REVISED -		SCALE:	SHEET 15	OF 21 SHEETS	STA.	TO STA.	CONTRACT NO. 74261		
PLOT DATE = 10/19/2018					ILLINOIS FED. AID PROJECT							



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SO FT	SO FT	SO FT
1	11.0 x 3.0			33.0
2	21.0 x 2.0	42.0		
3	6.0 x 4.0	24.0		
4	14.0 x 2.0	28.0		
5	2.0 x 2.0		4.0	
6	8.0 x 3.0			24.0
7	2.0 x 2.0		4.0	
8	2.0 x 2.0		4.0	
9	2.0 x 5.0			10.0
10	4.0 x 2.0			8.0
	TOTAL	94	12	75

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SO FT	SO FT	SO FT
	PARTIAL DEPTH			
	94 / 9 = 10.4			
	USE 10 SQ YD			
	FOR INFORMATION ONLY			
	FULL DEPTH, TYPE 1			
	2 / 9 = 1.3			
	USE 2 SQ YD			
	FULL DEPTH, TYPE 2			
	75 / 9 = 8.3			
	USE 8 SQ YD			

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SO FT	SO FT	SO FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SO FT	SO FT	SO FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SO FT	SO FT	SO FT

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND

□ PARTIAL DEPTH (FOR INFORMATION ONLY)

▨ FULL DEPTH

DATE OF SURVEY: 11/15/11
SURVEY BY: MEA, KLB, ESS
UPDATED: 2017 by DPM

BRIDGE DECK PATCHING
COLES COUNTY
LOCATION

SN 015-0021

021

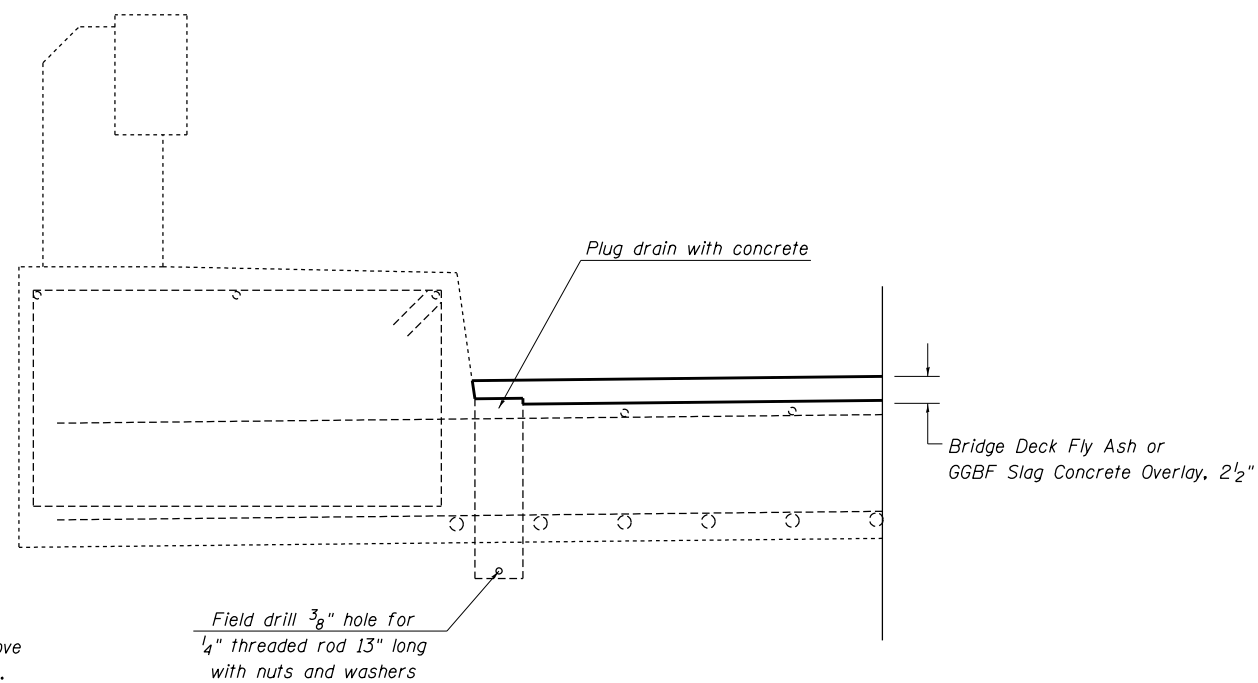
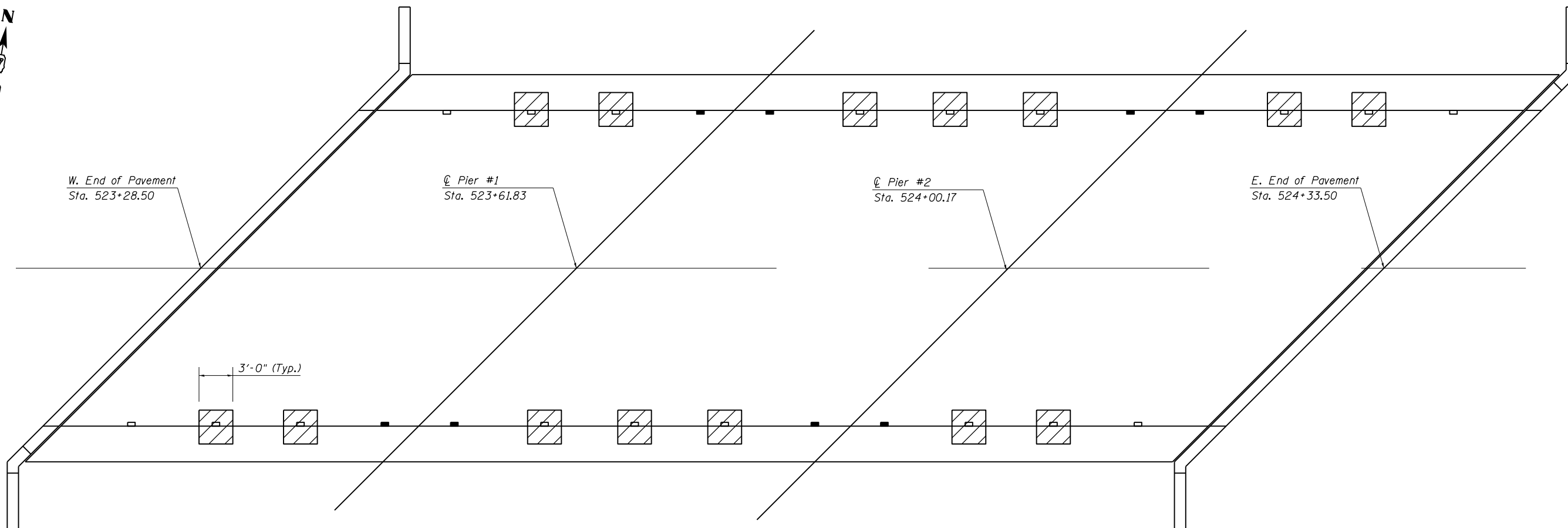
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		DATE - 04/16/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE DECK PATCHING
SN. 015-0021

SCALE: SHEET NO. 16 OF 21 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	52
CONTRACT NO. 74261				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



If extension present, remove prior to plugging the drain.

DRAINS TO BE PLUGGED DETAIL

- Deck Drain to be Plugged = 8.0 Each
Cost included with Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2 1/2"
- Deck Drain Previously Plugged
- ▨ Deck Drain to be Replaced = 14.0 Each

BILL OF MATERIAL

Concrete Removal	Cu Yd	8.4
Concrete Superstructure	Cu Yd	8.4
Floor Drains	Each	14

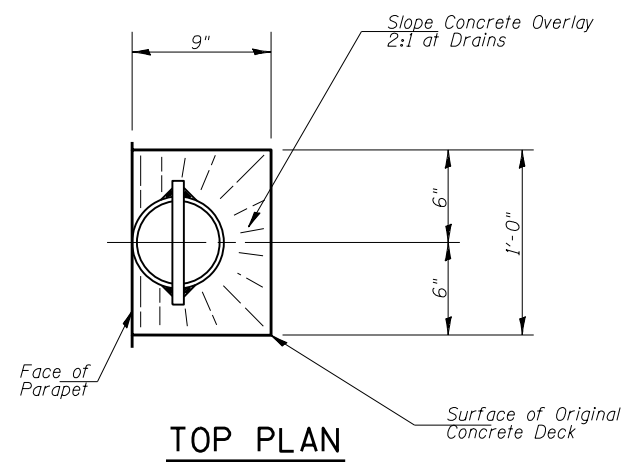
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	PLOT SCALE = 40.0000' / in.	DATE - 04/16/12	REVISED -
	PLOT DATE = 10/19/2018		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FLOOR DRAIN PLAN
SN. 015-0021**

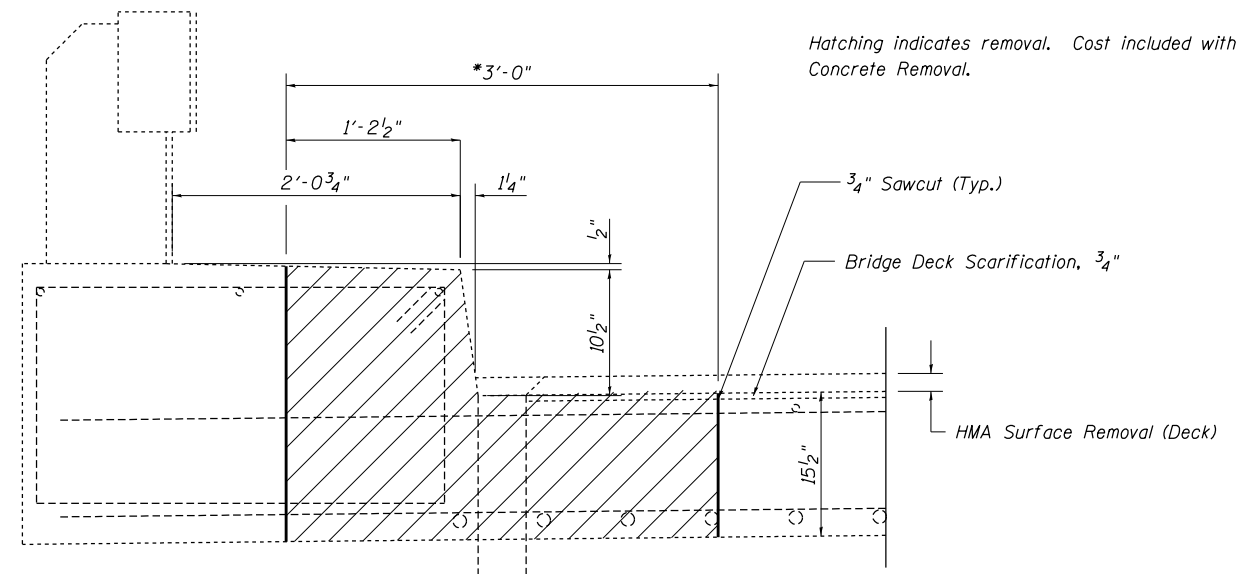
SCALE: SHEET 17 OF 21 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	53
CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT	

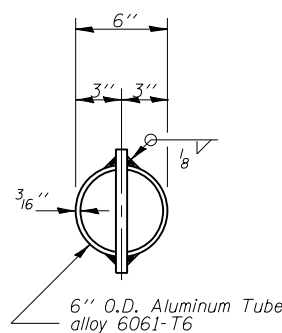


TOP PLAN

* Concrete removal and replacement dimensions shall be determined by the Engineer based on the extent of deck deterioration at each drain.



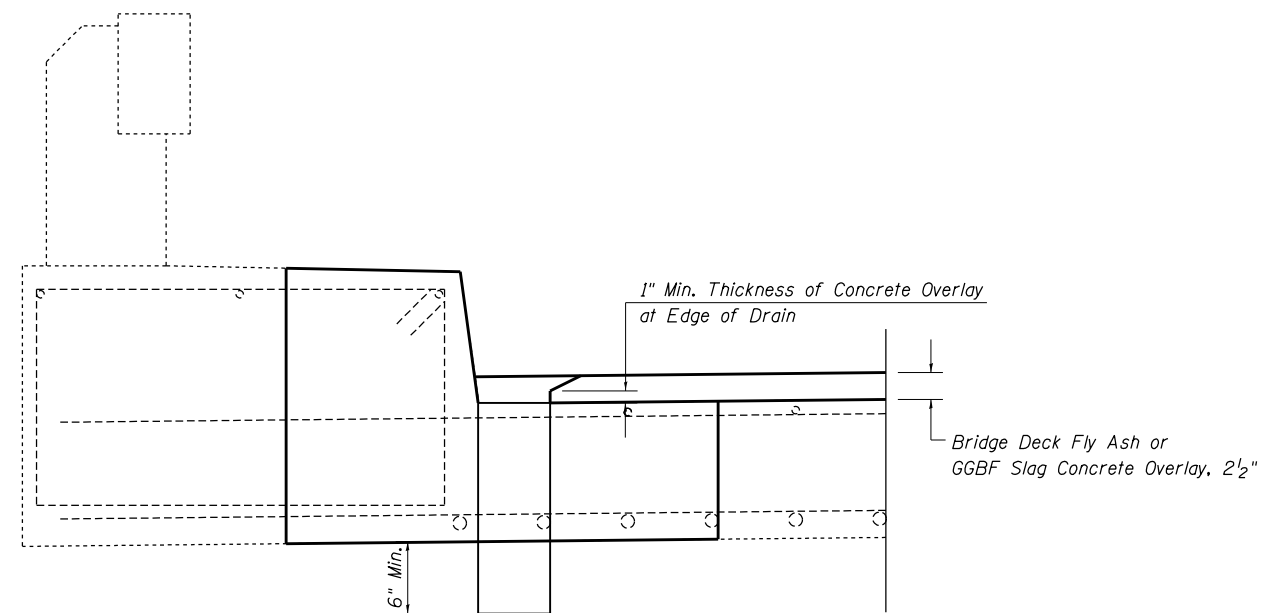
SECTION THRU EXISTING FLOOR DRAINS



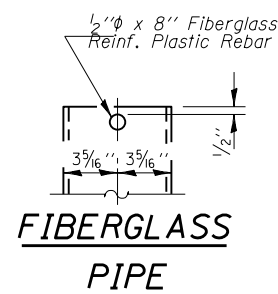
TOP PLAN
(Showing Aluminum Tube)

Note: See Sheet 17 of 21 for Floor Drain and Plug Existing Deck Drain locations. See "Total Bill of Materials" for structure quantities.

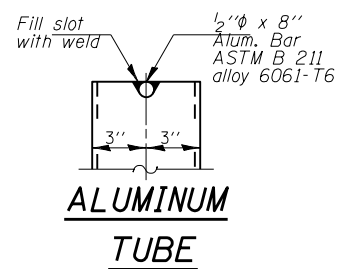
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. Galvanize clamping device according to AASHTO M 232. Cost of clamping device and galvanizing included with Floor Drains.



SECTION THRU PROPOSED FLOOR DRAINS



FIBERGLASS PIPE



ALUMINUM TUBE

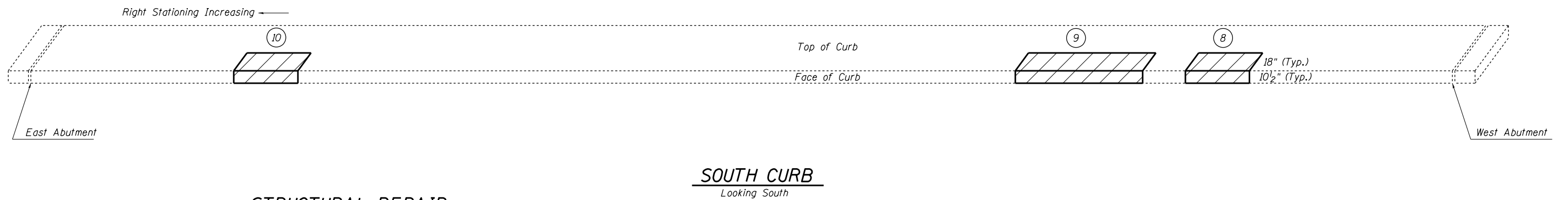
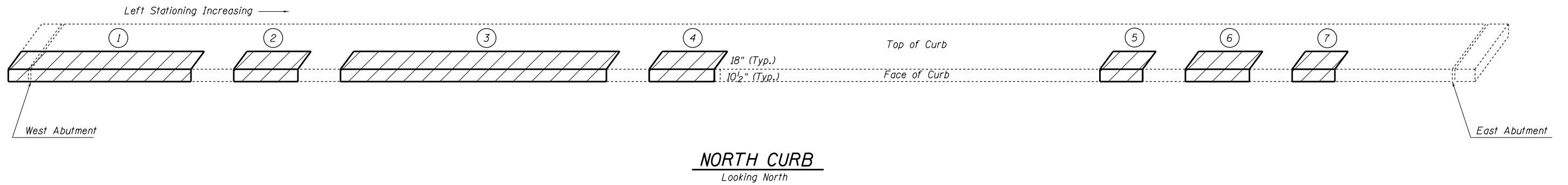
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PLOT SCALE = 40.0000' / in.	CHECKED - MEA	REVISIONS -	REVISIONS -
PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISIONS -	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FLOOR DRAIN DETAILS
SN. 015-0021**

SCALE: SHEET 18 OF 21 SHEETS STA. TO STA.

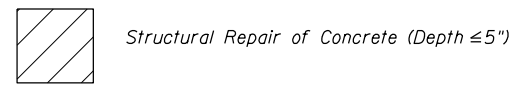
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(4)RS-4	Coles	57	54
CONTRACT NO. 74261			ILLINOIS FED. AID PROJECT	

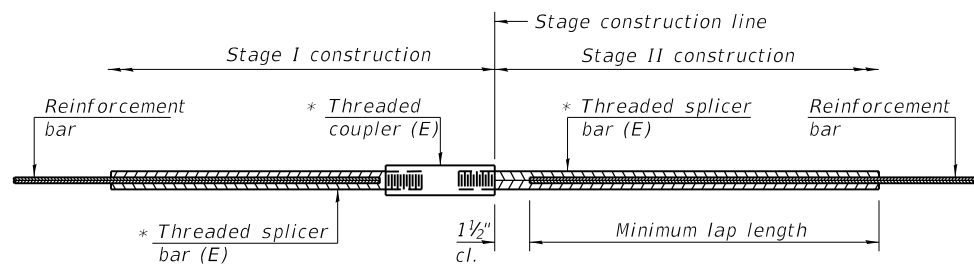


STRUCTURAL REPAIR

Cost included in STRUCTURAL REPAIR
OF CONCRETE (DEPTH ≤ 5")

PATCH NUMBER	STATION	AREA SQ FT
1	LT STA 523+43 TO 523+52	21
2	LT STA 523+55 TO 523+60	12
3	LT STA 523+63 TO 523+81	43
4	LT STA 523+84 TO 523+89	12
5	LT STA 524+16 TO 524+19	7
6	LT STA 524+22 TO 524+27	12
7	LT STA 524+30 TO 524+33	7
8	RT STA 523+35 TO 523+40	12
9	RT STA 523+43 TO 523+52	21
10	RT STA 524+02 TO 524+07	12
	TOTAL	159



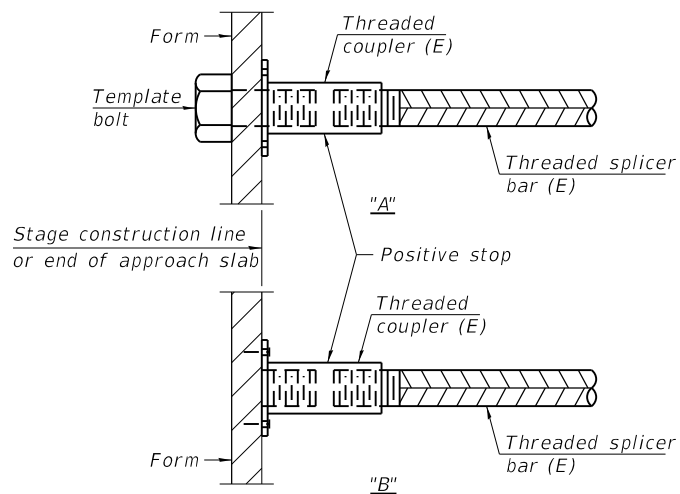


STANDARD BAR SPLICER ASSEMBLY

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

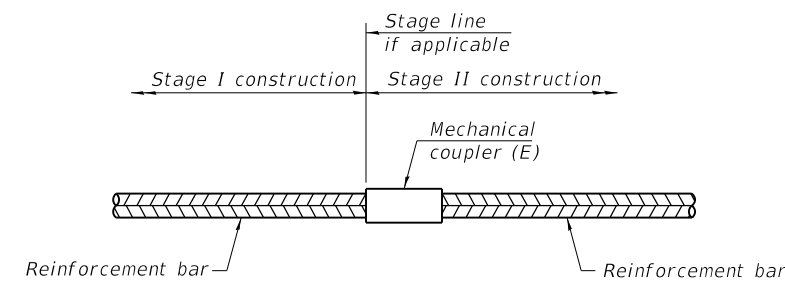
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
W. Abut.	#5	4	3'-4"
E. Abut.	#5	4	3'-4"



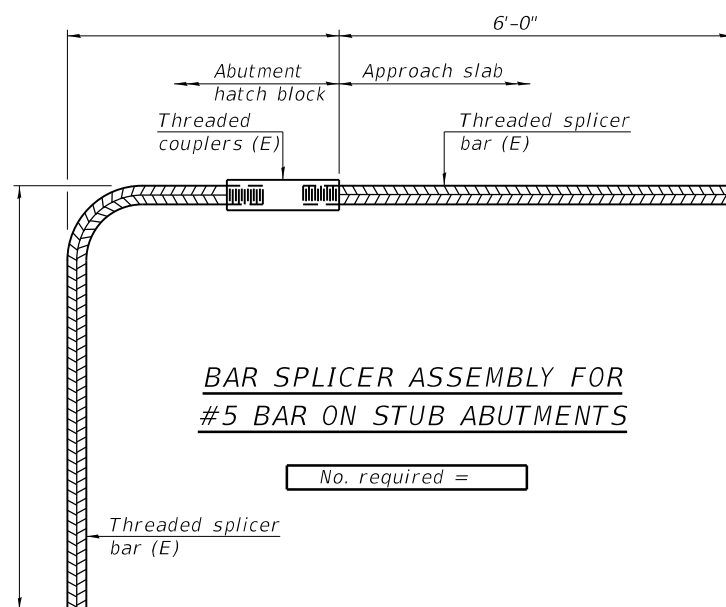
INSTALLATION AND SETTING METHODS

"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
Abutments	#5	56



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

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 2-17-2017

FILE NAME =	USER NAME = steffenmk	DESIGNED - KLB	REVISED - SAK 9/20/2017	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 015-0021	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\11\084EBIDINTEG.illinois.gov\PI\DOT\Documents\DOT Offices\District 7\Projects\74261\DRAWING\CAD\sheet\74261-shr-structure-revised.dwg	PLOT SCALE = 40.0000' / in.	CHECKED - MEA	REVISED -			91	(4)RS-4	Coles	57	57
PLOT DATE = 10/19/2018	DATE - 04/16/12	REVISED -	SCALE:			SHEET 21	OF 21 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT