

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**PROPOSED  
HIGHWAY PLANS**  
F.A.P. 821 (IL. 15) OVER BIG MUDDY RIVER OVERFLOW  
SECTION 13B-3  
PROJECT HBFP-TRSF(037)  
JEFFERSON COUNTY  
C-99-005-22



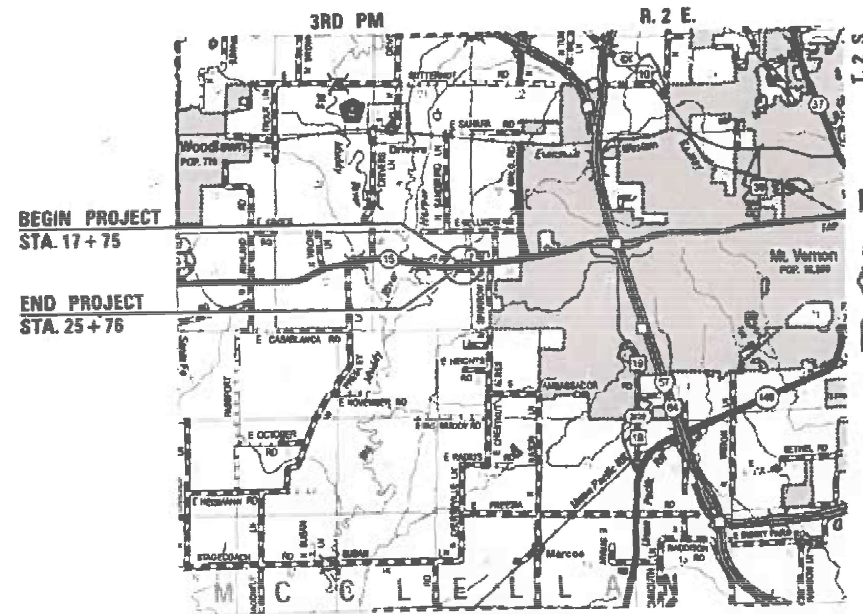
FOR INDEX OF SHEETS SEE SHEET NO. 3  
FOR SUMMARY OF QUANTITIES SEE SHEET NOS. 4-8  
DESIGN DESIGNATION: N/A  
COORDINATE SYSTEM: ILLINOIS COORDINATE SYSTEM,  
EAST ZONE

**TRAFFIC DATA**

F.A.P. 821 (IL. 15)  
EXISTING ADT = 5670 (2024)  
%SU = 230 (4.06%)  
%MU = 155 (2.73%)  
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR  
POSTED SPEED: 55 MPH

PROPOSED SN 041-7100  
C STRUCTURE STA. 1219+00  
PRECAST BOX CULVERT WITH  
PRECAST END SECTIONS  
12'-0" W X 4'-0" H X 60'-0" L  
NO SKEW

EXISTING SN 041-0024  
C STRUCTURE STA. 1223+24  
PROPOSED SN 041-2024  
C STRUCTURE STA. 1223+24  
CAST IN PLACE BOX CULVERT  
WITH CAST IN PLACE WINGWALLS  
12'-0" W X 5'-0" H X 43'-0" L  
NO SKEW



LOCATION MAP  
(NOT TO SCALE)

GROSS LENGTH = 801.00 FT. = 0.151 MILE



*Christopher P. Kohlman* 4/25/24  
EXPIRATION: 11/30/2025

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED May 6 2024  
Kirk H. Brown  
REGION FIVE ENGINEER

June 28, 2024 [Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT

June 28, 2024 [Signature]  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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

PROJECT ENGINEER: EHREN KIRBY

CONTRACT NO. 78911



Veenstra & Kimm, Inc.  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

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OF THE STATE OF ILLINOIS**

PREPARED BY: Susan Poe  
DISTRICT STUDIES AND PLANS ENGINEER

EXAMINED BY: Nancy Lee  
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: C. Nelson  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: R. [Signature]  
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: Dagoberto [Signature]  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: Dagoberto [Signature]  
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: Alan Wang  
DISTRICT MATERIALS ENGINEER

USER NAME *	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE *	DRAWN -	REVISED -
PLOT DATE *	CHECKED -	REVISED -

**SIGNATURE SHEET**

SCALE:	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	138-3	JEFFERSON	78	2
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

## INDEX OF SHEETS

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2	SIGNATURE SHEET
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14	PAVED SHOULDER DETAIL
15-17	SCHEDULE OF QUANTITIES
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19-20	STAGE CONSTRUCTION PLAN
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28	BUTT JOINT DETAILS
29	PAVEMENT MARKING PLAN
30	EROSION CONTROL PLAN
31-41	STRUCTURE PLANS (SN 041-2024)
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53-59	DISTRICT 9 STANDARDS, SEEDING AND MULCH, ROUGH GROOVED SURFACE, TEMPORARY DITCH CHECKS, UNEVEN LANE SIGN, STEP CONSTRUCTION ON EXISTING FILL, 24' PCC PAVEMENT, ENTRANCE SIGN FOR USE WITH TEMPORARY SIGNALS
60-78	CROSS SECTIONS

### GENERAL NOTES

- 1.) THE CENTERLINE PAVEMENT MARKING SHALL BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHALL BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHALL BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
- 2.) THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE HMA SURFACE REMOVAL AND SURFACE COURSE.
- 3.) AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.
- 4.) TO RETAIN THE TEMPORARY CONCRETE BARRIER FOR STAGE II TRAFIC, THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER 2-#5 BAR SPLICERS OR TWO CAST IN PLACE INSERTS AT 6" CENTERS AT THE MID-DEPTH OF THE PCC PAVEMENT. THE BAR SPLICERS OR INSERTS SHALL HAVE A MINIMUM PROOF LOAD OF 5,000 POUNDS. ALONG WITH THE ANCHORING DEVICES THE CONTRACTOR SHALL PROVIDE ONE STEEL RETAINER PLATE, AND 2½" DIAMETER BOLT AND WASHERS EVERY 6 FEET AS SHOWN ON DETAIL II ON STANDARD R-27 FROM STA. 1218+79 TO STA. 1219+21 AND STA. 1222+87 TO STA. 1223+61 FOR STAGE II TRAFFIC. COST TO BE INCLUDED WITH TEMPORARY CONCRETE BARRIER.

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL AGGREGATE MATERIAL	2.05 TON/CU. YD.
ALL HOT-MIX ASPHALT	2.016 TON/CU. YD.
RIPRAP	1.5 TON/CU. YD.

### COMMITMENTS

- 1.) TREES EQUAL TO OR GREATER THAN 3 INCHES IN DIAMETER SHALL NOT BE REMOVED BETWEEN APRIL 1 AND SEPTEMBER 30 OF ANY GIVEN YEAR.

### MIXTURE REQUIREMENTS

LOCATIONS	HMA SURFACE COURSE	HMA SHOULDERS 8" & 10" (LOWER LIFT)	HMA SHOULDERS 8" & 10" (TOP LIFT)	BASE COURSE WIDENING 10"
MIXTURE USES:	HMA SURFACE COURSE, MIX D, N70	HMA BASE COURSE, N70, IL-19.0	HMA SURFACE COURSE, MIX C, N30	HMA BASE COURSE, N70, IL-19.0
AB/PG	PG64-22	PG64-22	PG64-22	PG64-22
ABR % (MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION
DESIGN AIR VOIDS	4.0%, 70 GYRATION DESIGN	4.0%, 70 GYRATION DESIGN	4.0%, 30 GYRATION DESIGN	4.0%, 70 GYRATION DESIGN
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL-9.5MM	IL-19.0MM	IL-9.5MM	IL-19.0MM
FRICTION AGGREGATE	MIX D	NONE	MIX C	NONE
MIXTURE WEIGHT	112 LBS./SQ. YD./INCH	112 LBS./SQ. YD./INCH	112 LBS./SQ. YD./INCH	112 LBS./SQ. YD./INCH
QUALITY MANAGEMENT PROGRAM	QCQA	QCQA	QCQA	QCQA
SUBLOT SIZE	3000 TONS	3000 TONS	3000 TONS	3000 TONS
MATERIAL TRANSFER DEVICE	NO	NO	NO	NO

### LIFT THICKNESS REQUIREMENTS

SHOULDERS 8":  
 $\frac{1\frac{1}{2}}{4}$ " SURFACE COURSE  
 $\frac{2\frac{1}{2}}{4}$ " BINDER COURSE  
 $\frac{4}{4}$ " BINDER COURSE

SHOULDERS 10":  
 $\frac{1\frac{1}{2}}{4}$ " SURFACE COURSE  
 $\frac{2\frac{1}{2}}{4}$ " BINDER COURSE  
 $\frac{2\frac{1}{2}}{4}$ " BINDER COURSE  
 $\frac{4}{4}$ " BINDER COURSE

BASE COURSE WIDENING 10":  
 $\frac{2\frac{1}{2}}{4}$ " BINDER COURSE  
 $\frac{3\frac{3}{4}}{4}$ " BINDER COURSE  
 $\frac{4}{4}$ " BINDER COURSE

### STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-10	PAVEMENT JOINTS
420101-07	24' (7.2M) JOINTED PCC PAVEMENT
420701-03	PAVEMENT WELDED WIRE FABRIC
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482006-03	HMA SHOULDER ADJACENT TO RIGID PAVEMENT
515001-04	NAME PLATE FOR BRIDGES
630001-13	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631066	TRAFFIC BARRIER TERMINAL TYPE 14
666001-01	RIGHT-OF-WAY MARKERS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24' (600mm) FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
701901-09	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
001006	DECIMAL OF AN INCH AND OF A FOOT
704001-08	TEMPORARY PAVEMENT BARRIER
862001-01	UNINTERRUPTABLE POWER SUPPLY

REV. - MS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	JEFFERSON	JEFFERSON	JEFFERSON
				FAP 821 (IL 15)	FAP 821 (IL 15)	FAP 821 (IL 15)
				80% FED/20% STATE	80% FED/20% STATE	80% FED/20% STATE
				RURAL	RURAL	RURAL
					041-2024	041-7100
				CONST CODE	CONST CODE	CONST CODE
				0004	0010	0004
20100500	TREE REMOVAL, ACRES	ACRE	0.05	0.05		
20200100	EARTH EXCAVATION	CU YD	1814	1258		556
20200500	EARTH EXCAVATION (WIDENING)	CU YD	81	81		
20700220	POROUS GRANULAR EMBANKMENT	CU YD	323		200	123
25000210	SEEDING, CLASS 2A	ACRE	1.33	1.33		
25000350	SEEDING, CLASS 7	ACRE	1.33	1.33		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	120	120		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	120	120		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	120	120		
25000700	AGRICULTURAL GROUND LIMESTONE	TON	2.66	2.66		
25100115	MULCH, METHOD 2	ACRE	1.33	1.33		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	133	133		
28000305	TEMPORARY DITCH CHECKS	FOOT	27	27		
28000400	PERIMETER EROSION BARRIER	FOOT	570	570		

MODEL: \$MODELNAME\$  
FILE NAME: \$FILE\$



USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
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PLOT DATE = \$DATES	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: NONE SHEET 1 OF 5 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	4
			CONTRACT NO. 78911	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	JEFFERSON	JEFFERSON	JEFFERSON
				FAP 821 (IL 15)	FAP 821 (IL 15)	FAP 821 (IL 15)
				80% FED/20% STATE	80% FED/20% STATE	80% FED/20% STATE
				RURAL	RURAL	RURAL
					041-2024	041-7100
				CONST CODE	CONST CODE	CONST CODE
				0004	0010	0004
28100107	STONE RIPRAP, CLASS A4	SQ YD	601	12	419	170
28200200	FILTER FABRIC	SQ YD	601	12	419	170
35100100	AGGREGATE BASE COURSE, TYPE A	TON	393	393		
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	446	446		
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	2500	2500		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1908	1908		
40600990	TEMPORARY RAMP	SQ YD	42	42		
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	113	113		
42000060	WELDED WIRE REINFORCEMENT	SQ YD	284	284		
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	284	284		
44000100	PAVEMENT REMOVAL	SQ YD	246	246		
44004250	PAVED SHOULDER REMOVAL	SQ YD	394	394		
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	228	228		
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	663	663		

REV. - MS

MODEL: \$MODELNAME\$  
FILE NAME: \$FILES\$



USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
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PLOT DATE = \$DATES	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: NONE SHEET 2 OF 5 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	5
			CONTRACT NO. 78911	
			ILLINOIS FED. AID PROJECT	

JEFFERSON	JEFFERSON	JEFFERSON
FAP 821 (IL 15)	FAP 821 (IL 15)	FAP 821 (IL 15)
80% FED/20% STATE	80% FED/20% STATE	80% FED/20% STATE
RURAL	RURAL	RURAL
	041-2024	041-7100
CONST CODE	CONST CODE	CONST CODE
0004	0010	0004

CODE NO.	ITEM	UNIT	TOTAL QUANTITY			
48300500	PORTLAND CEMENT CONCRETE SHOULDERS 10"	SQ YD	172	172		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1	
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	244		142	102
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	27790		27790	
50800515	BAR SPLICERS	EACH	198		198	
50900207	STEEL RAILING, TYPE CO-10	FOOT	78		78	
51500100	NAME PLATES	EACH	1		1	
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	589		323	266
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2			2
54003000	CONCRETE BOX CULVERTS	CU YD	193.4		193.4	
54011204	PRECAST CONCRETE BOX CULVERTS 12' X 4'	FOOT	54			54
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	294		190	104
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	175	175		
* 63100119	TRAFFIC BARRIER TERMINAL, TYPE 14	EACH	4	4		

\* SPECIALTY ITEM

REV. - MS

MODEL NUMBER  
FILE NAME: SHEETS



USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
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PLOT SCALE = \$SCALE\$	CHECKED - _____	REVISED - _____
PLOT DATE = \$DATES\$	DATE - _____	REVISED - _____

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE SHEET 3 OF 5 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	6
			CONTRACT NO. 78911	
			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	JEFFERSON	JEFFERSON	JEFFERSON
				FAP 821 (IL 15)	FAP 821 (IL 15)	FAP 821 (IL 15)
				80% FED/20% STATE	80% FED/20% STATE	80% FED/20% STATE
				RURAL	RURAL	RURAL
				041-2024	041-7100	
				CONST CODE	CONST CODE	CONST CODE
				0004	0010	0004
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	689	689		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	10		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	42	42		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	108	108		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	36	36		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	687.5	687.5		

\* SPECIALTY ITEM

MODEL: 44002ELNAMES  
FILE NAME: 8213



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PLOT DATE = \$DATES	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: NONE SHEET 4 OF 5 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	7
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	JEFFERSON	JEFFERSON	JEFFERSON
				FAP 821 (IL 15)	FAP 821 (IL 15)	FAP 821 (IL 15)
				80% FED/20% STATE	80% FED/20% STATE	80% FED/20% STATE
				RURAL	RURAL	RURAL
				041-2024	041-7100	
				CONST CODE	CONST CODE	CONST CODE
				0004	0010	0004
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	74	74		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	687.5	687.5		
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3431	3431		
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	16	16		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10	10		
78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	750	750		
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1	1		
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	2239	2239		
X5810103	WATERPROOFING MEMBRANE SYSTEM FOR BURIED STRUCTURES	SQ YD	294		190	104
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0023500	FILLING EXISTING CULVERTS	CU YD	6.3	6.3		
* Z0054517	ROCK FILL - FOUNDATION	TON	420		214	206

\* SPECIALTY ITEM

MODEL: 44002ELNAMES  
FILE NAME: 8213B



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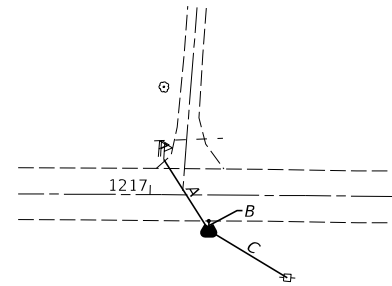
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE SHEET 5 OF 5 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

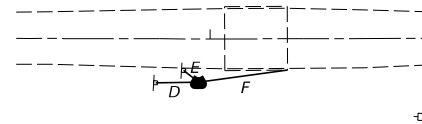
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	8
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				





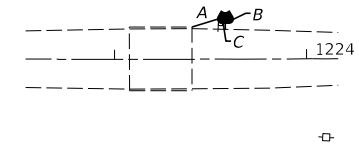
A = 44.9' (EAST MAILBOX)  
 B = 4.9' (EDGE OF SHOULDER)  
 C = 48.1' (POWER POLE)

**WP 4100241**  
 IRON PIN W/  
 YELLOW IDOT CAP  
 18.52' RT STA. 1217+30.68  
 N 598812.8  
 E 797890.1  
 EL. 437.472'



D = 21.7' (NO PASSING ZONE SIGN)  
 E = 8.6' (STRUCTURE SIGN)  
 F = 15.1' (SE CORNER OF BRIDGE DECK)

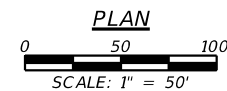
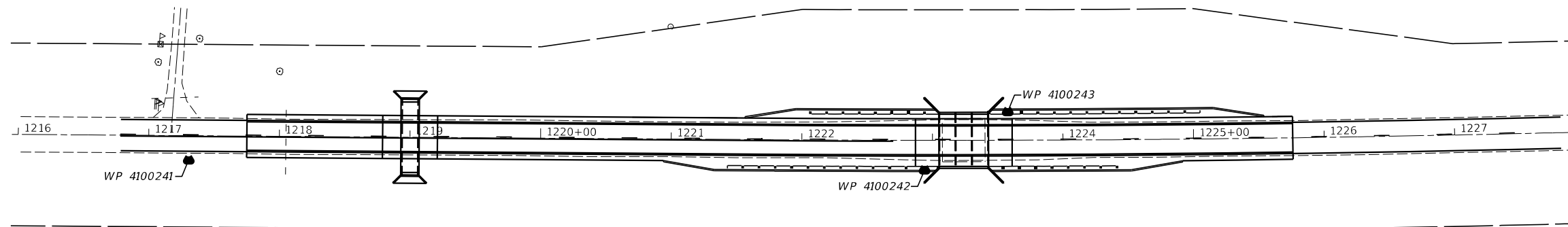
**WP 4100242**  
 IRON PIN W/  
 YELLOW IDOT CAP  
 22.54' RT STA. 1223+94.03  
 N 598840.8  
 E 798452.9  
 EL. 436.055'



A = 18.0' (NE CORNER OF BRIDGE DECK)  
 B = 6.4' (EDGE OF SHOULDER)  
 C = 4.4' (STRUCTURE SIGN)

**WP 4100243**  
 IRON PIN W/  
 YELLOW IDOT CAP  
 22.05' LT STA. 1223+57.72  
 N 598889.3  
 E 798513.6  
 EL. 436.72'

BENCHMARKS: BM1504 - CUT "C" ON TOP CENTER OF S. END OF A 2'X3' CONC. BOX CULVERT UNDER IL 15 STA. 1232+10, 33' RT.



MODEL: 34026LMM16  
 FILE NAME: 34026L

**VK VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL. Design Firm No. 184-001939

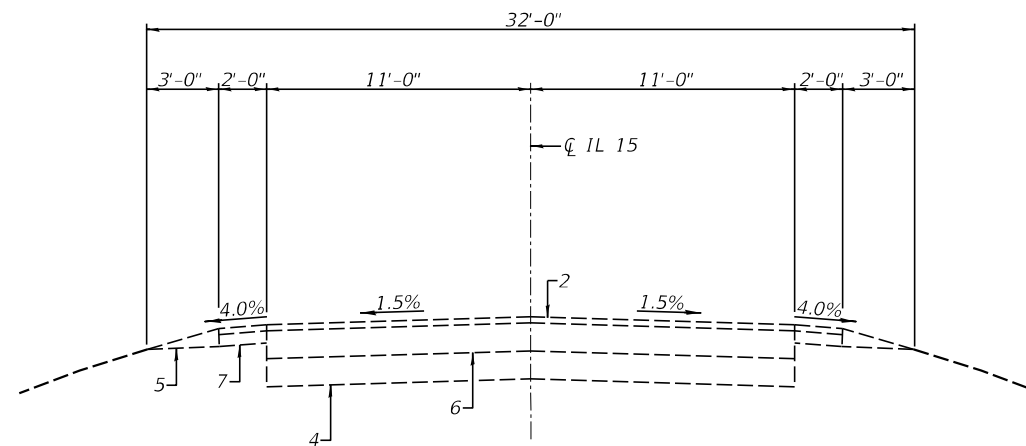
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	DATE - _____	REVISED - _____

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

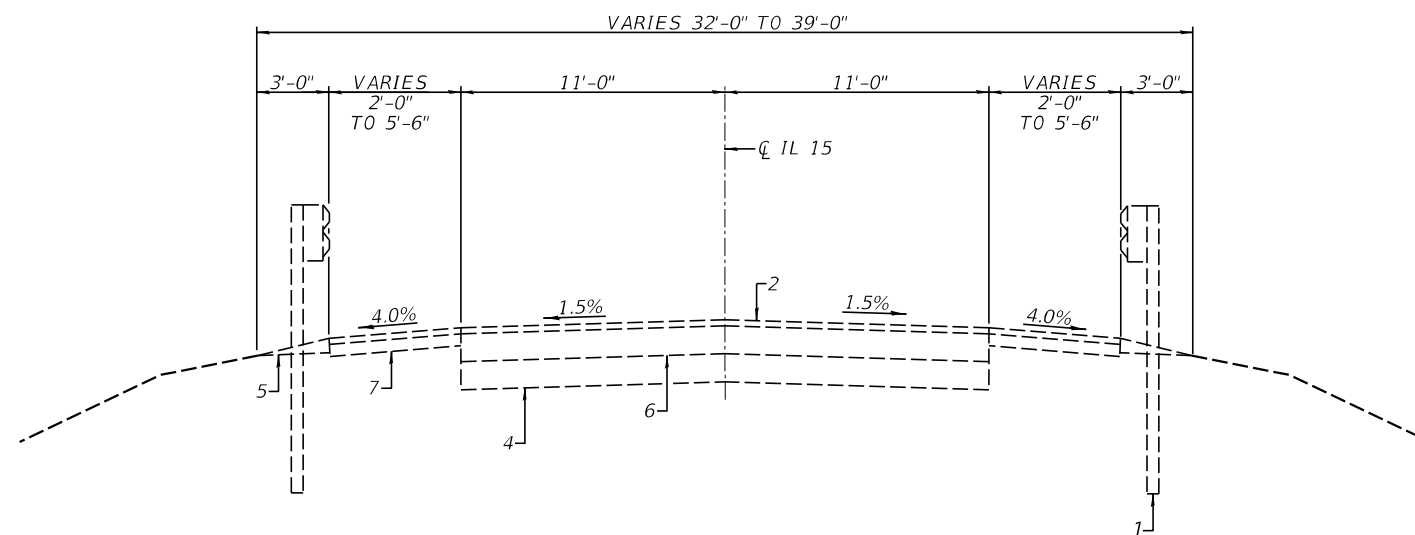
ALIGNMENT TIES & BENCHMARKS SN 041-2024

SCALE: VARIES SHEET 1 OF 1 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	9
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



**EXISTING TYPICAL CROSS SECTION**  
 (STA. 1217+75 TO STA. 1221+56.4 & STA. 1225+54.2 TO STA. 1225+76 LT.)  
 (STA. 1217+75 TO STA. 1220+94.2 & STA. 1224+91.5 TO STA. 1225+76 RT.)



**EXISTING TYPICAL CROSS SECTION**  
 (STA. 1221+56.4 TO STA. 1222+87.6 & STA. 1223+60.4 TO STA. 1222+87.6 & STA. 1223+60.4 TO STA. 1225+54.2 LT. &  
 STA. 1220+94.2 TO STA. 1222+87.6 & STA. 1223+60.4 TO STA. 1222+87.6 & STA. 1223+60.4 TO STA. 1224+91.5 RT.)

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"

MODEL: 8/06/2015 11:45 AM  
FILE: 8/06/2015 11:45 AM



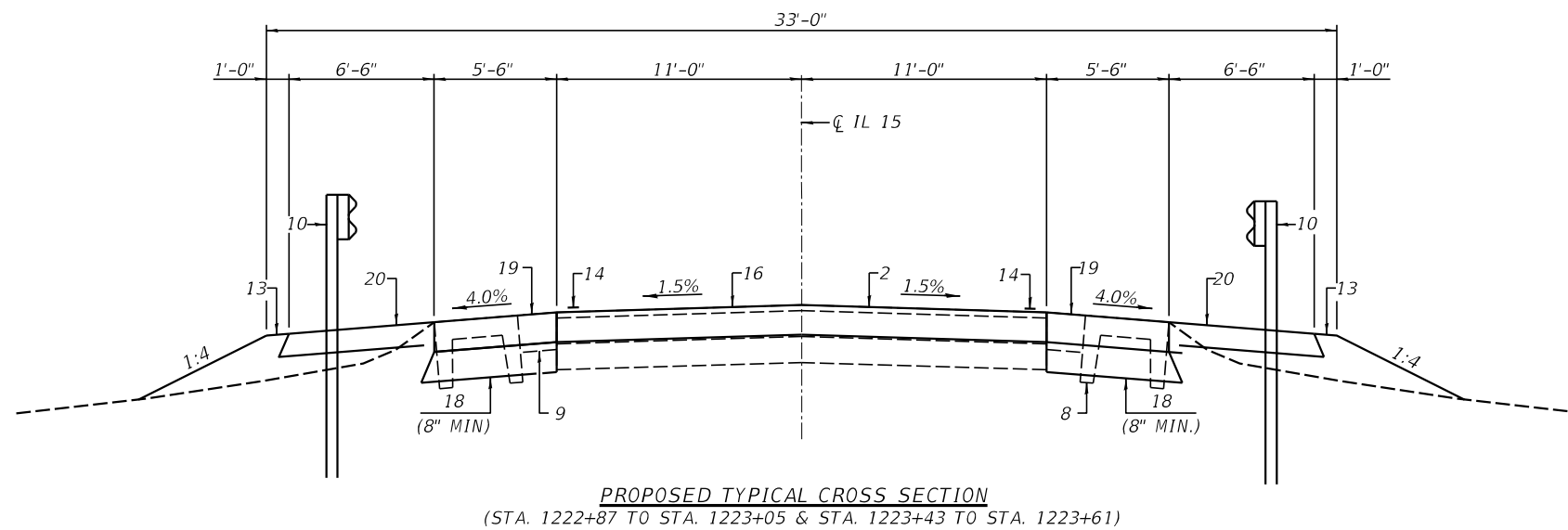
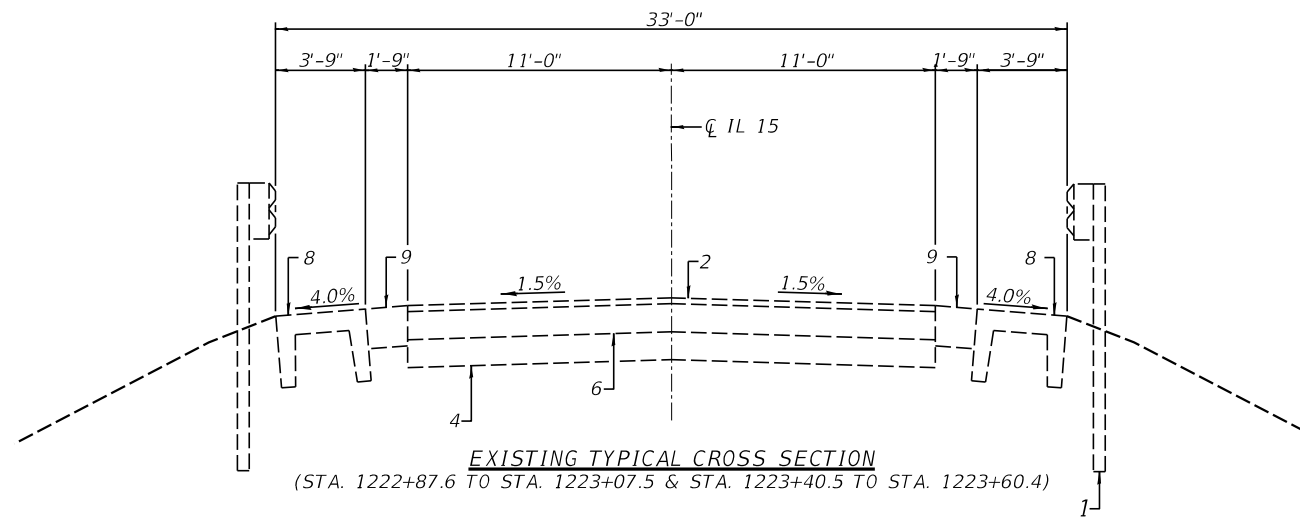
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PLOT DATE = \$DATE\$	CHECKED - _____	REVISED - _____
	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXISTING TYPICAL SECTIONS**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_ OF \_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	10
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"

MODEL NUMBER: MK1115  
FILE NAME: 81115

**VK VEENSTRA & KIMM INC.**  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

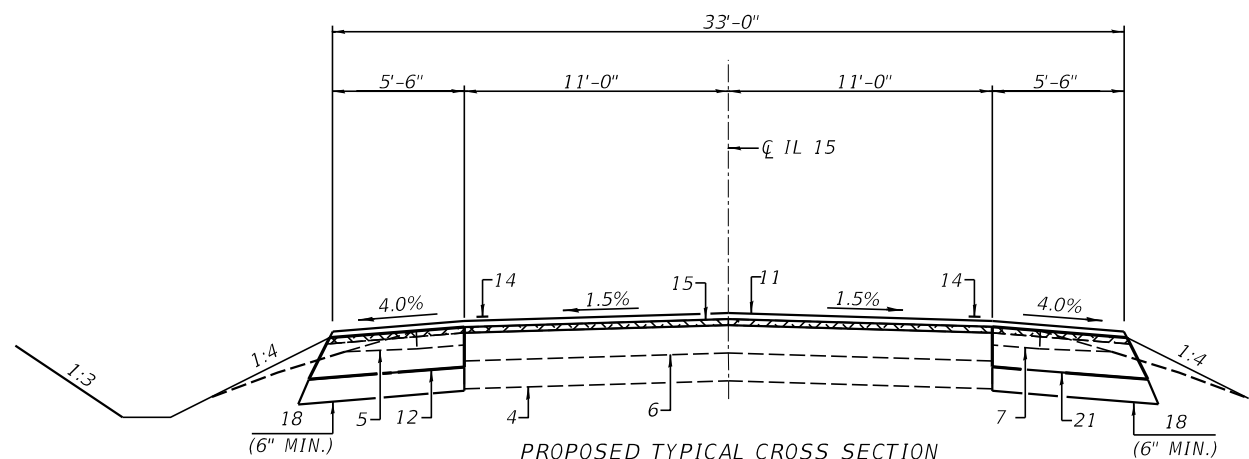
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

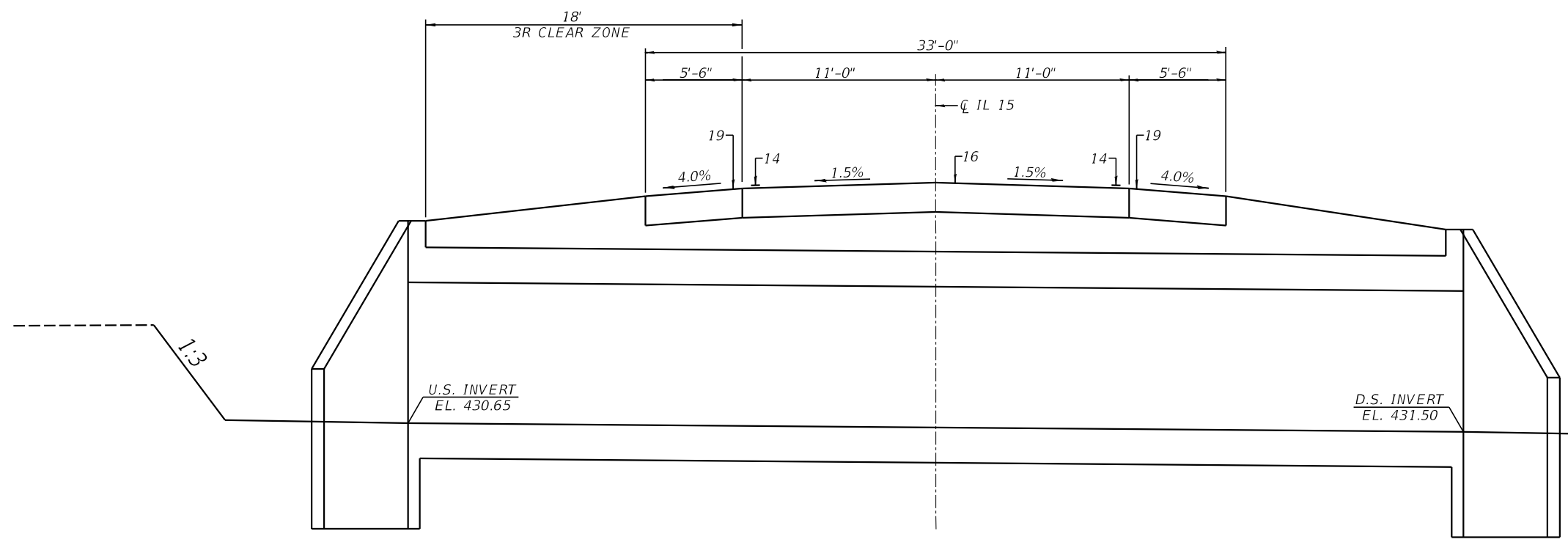
**TYPICAL SECTIONS**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_ OF \_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	11
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



**PROPOSED TYPICAL CROSS SECTION**  
 (STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1221+56.4 & STA. 1225+54.2 TO STA. 1225+76 LT.)  
 (STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1220+94.2 & STA. 1224+91.5 TO STA. 1225+76 RT.)



**PROPOSED TYPICAL CROSS SECTION**  
 (STA. 1218+79 TO STA. 1219+21)

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"

MODEL: 140816MAMES  
FILE: 140816MAMES.DWG

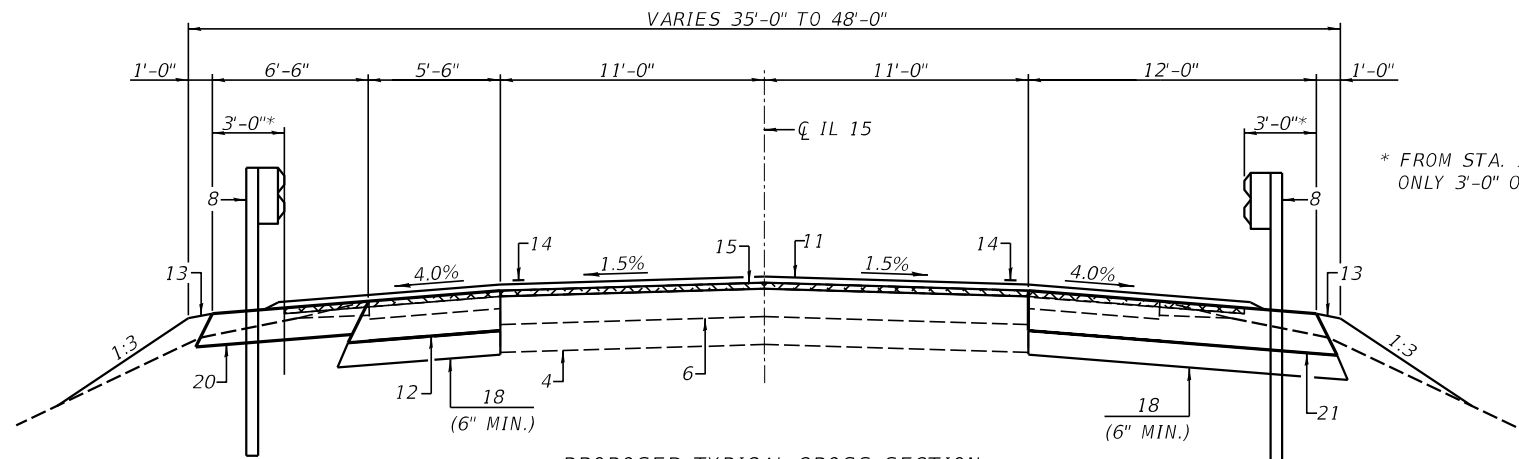
**VK VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL. Design Firm No. 184-001939

USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
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	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

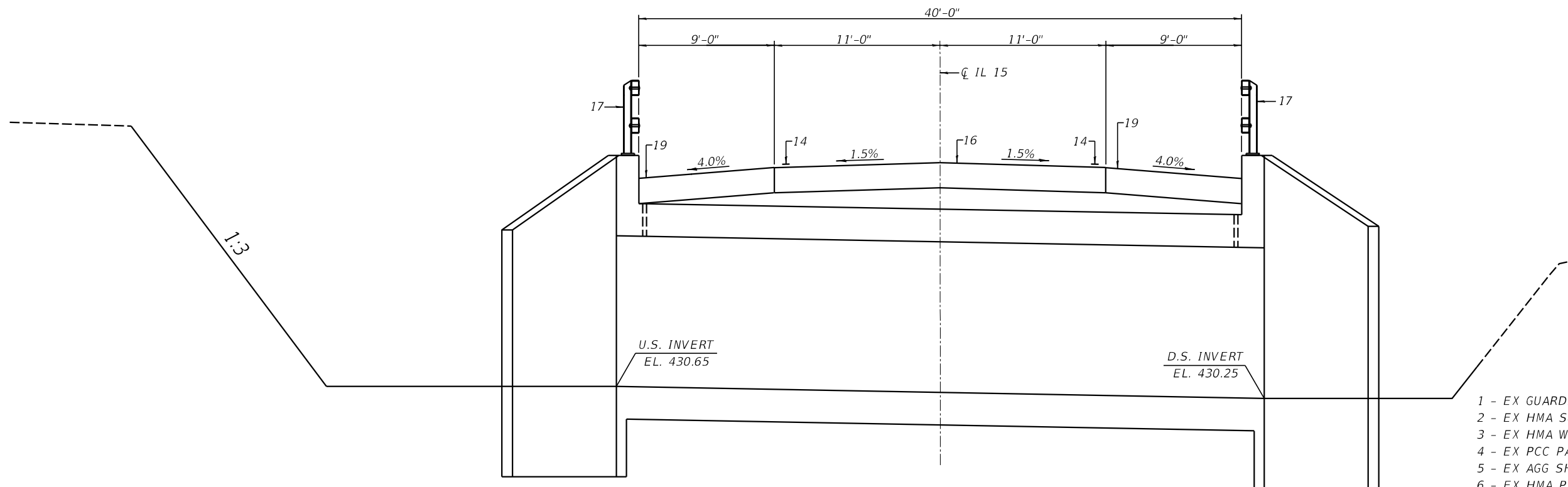
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SCALE: _____	SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	12
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



\* FROM STA. 1222+87 TO STA. 1223+05 & STA. 1223+43 TO STA. 1223+61 LT. & RT. ONLY 3'-0" OF HMA SHOULDER 10" WILL BE PLACED BEHIND PCC SHOULDER 10".

**PROPOSED TYPICAL CROSS SECTION**  
(STA. 1221+56.4 TO STA. 1222+87 & STA. 1223+61 TO STA. 1225+54.2 LT. & STA. 1220+94.2 TO STA. 1222+87 & STA. 1223+61 TO STA. 1224+91.5 RT.)



**PROPOSED TYPICAL CROSS SECTION**  
(STA. 1223+05 TO STA. 1223+43)

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1 1/2" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1 1/2" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"

MODEL: 440021.MXD  
FILE NAME: 813.DWG

**VK VEENSTRA & KIMM INC.**  
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IL. Design Firm No. 184-001939

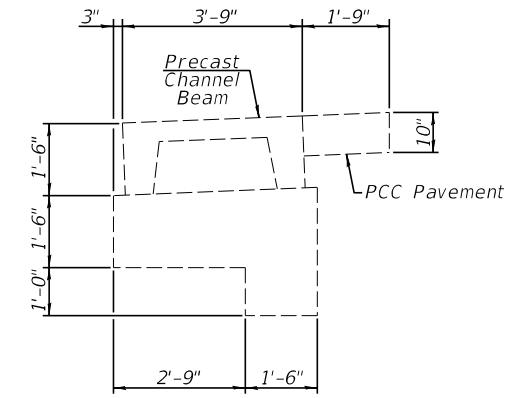
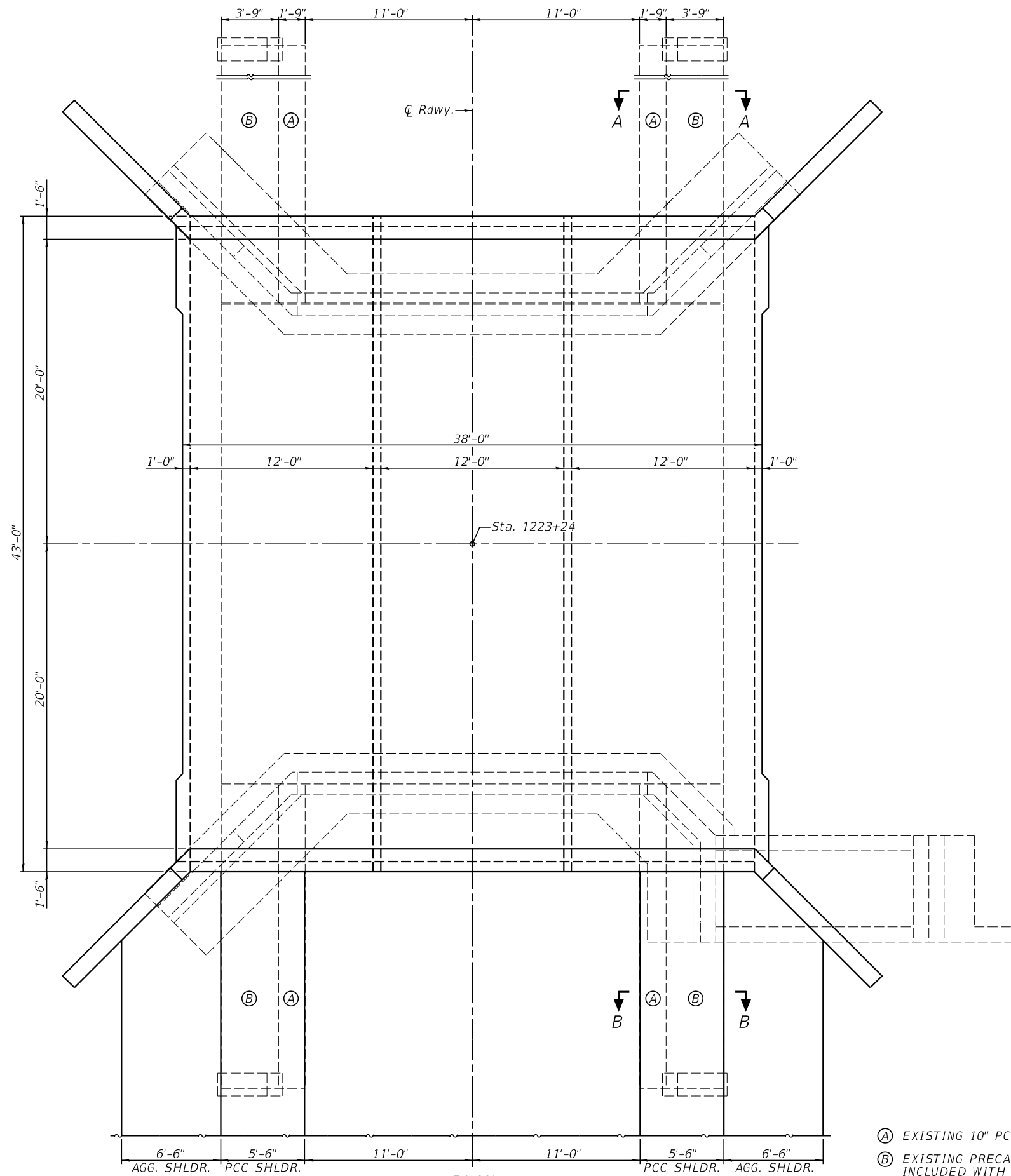
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

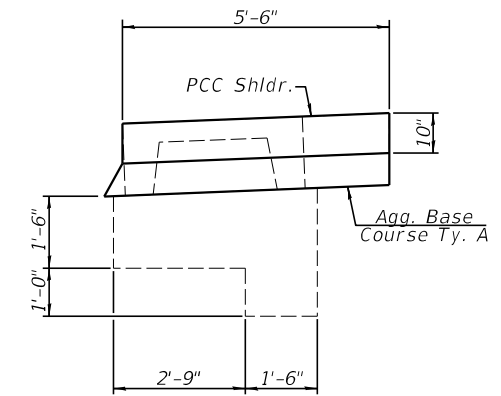
**TYPICAL SECTIONS**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_ OF \_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE. 821	SECTION 13B-3	COUNTY JEFFERSON	TOTAL SHEETS 78	SHEET NO. 13
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



EXISTING SECTION A-A



PROPOSED SECTION B-B

- Ⓐ EXISTING 10" PCC PAVEMENT REMOVAL INCLUDED IN PAVEMENT REMOVAL.
- Ⓑ EXISTING PRECAST CONCRETE CHANNEL BEAM REMOVAL INCLUDED WITH REMOVAL OF EXISTING STRUCTURES.

PLAN

USER NAME =	DESIGNED -	REVISED -
CHECKED -	REVISOR -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	14
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

EARTHWORK								
LOCATION	EARTH EXCAVATION	ADJUSTED SHRINKAGE FACTOR	EARTH EXCAVATION (ADJUSTED)	EMBANKMENT	EARTHWORK BALANCE		FURNISHED EXCAVATION	REMARKS
					EXCAVATION REQUIRED TO COMPLETE	EXCESS EXCAVATION*		
					CU. YD.	CU. YD.		
STA. 1211+75 TO STA. 1225+76	1058	25	794	216	0	578	0	
STA. 1222+90 TO STA. 1223+02.5 (FOR PGE PLACEMENT)	100					100		
STA. 1223+45.5 TO STA. 1223+58 (FOR PGE PLACEMENT)	100					100		
FOR PLACEMENT OF SN 041-7100	556					556		
TOTAL	1,814					1,334	0	

\*EXCESS EARTH EXCAVATION TO BE REMOVED FROM SITE. COST INCLUDED IN EARTH EXCAVATION.

HMA SHOULDERS AND BASE COURSE WIDENING			
LOCATION	HOT-MIX ASPHALT SHOULDERS 8"	HOT-MIX ASPHALT SHOULDERS 10"	HOT-MIX ASPHALT BASE COURSE WIDENING 10"
	SQ. YD.	SQ. YD.	SQ. YD.
STA. 1217+75 TO STA. 1222+87.6 LT.			314
STA. 1223+60.4 TO STA. 1225+76 LT.			132
STA. 1221+56.4 TO STA. 1223+05 LT.	92		
STA. 1223+65 TO STA. 1225+54.2 LT.	136		
STA. 1217+75 TO STA. 1220+94.2 RT.		195	
STA. 1220+94.2 TO STA. 1223+05 RT.		249	
STA. 1223+43 TO STA. 1224+91.5 RT.		167	
STA. 1224+91.5 TO STA. 1225+76 LT.		52	
TOTAL	228	663	446

HMA RESURFACING SCHEDULE					
LOCATION	HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH)	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (TACK COAT)	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX"D", N70	TEMPORARY RAMP
	SQ. YD.	POUND	POUND	TON	SQ. YD.
STA. 1217+75 TO STA. 1218+06	114				
STA. 1219+67 TO STA. 1220+94.2	467				
STA. 1220+94.2 TO STA. 1221+56.4	238				
STA. 1221+56.4 TO STA. 1222+87	567				
STA. 1223+61 TO STA.1224+14	236				
STA. 1224+34 TO STA. 1225+76	617				
STA. 1217+75 TO STA. 1222+87.6 LT. PRE-STAGE I WIDENING		705			
STA. 1223+60.4 TO STA. 1225+76 LT. PRE-STAGE I WIDENING		297			
STA. 1217+75 TO STA. 1218+79 RT.		143			
STA. 1219+21 TO STA. 1222+87 RT.		795			
STA. 1223+61 TO STA. 1225+76 RT.		486			
STA. 1222+87 TO STA. 1223+05 SHOULDERS LT. & RT. (PRECAST BEAM AREA)		37			
STA. 1223+43 TO STA. 1223+61 SHOULDERS LT. & RT. (PRECAST BEAM AREA)		37			
STA. 1217+75 TO STA. 1218+79 (SURFACE)			115		
STA. 1219+21 TO STA. 1222+87 (SURFACE)			403		
STA. 1223+61 TO STA. 1225+76 (SURFACE)			237		
STA. 1217+75 TO STA. 1222+87.6 LT. (BASE COURSE WIDENING)			283		
STA. 1223+60.4 TO STA. 1225+76 LT. (BASE COURSE WIDENING)			119		
STA. 1221+56.4 TO STA. 1222+87 LT. (HMA SHOULDERS 8")			62		
STA. 1223+61 TO STA. 1225+54.2 LT. (HMA SHOULDERS 8")			92		
STA. 1217+75 TO STA. 1223+05 RT. (HMA SHOULDERS 10")			400		
STA. 1223+43 TO STA. 1225+76 RT. (HMA SHOULDERS 10")			197		
STA. 1217+75 TO STA. 1218+79 INCLUDES SHOULDERS				32	
STA. 1219+21 TO STA. 1222+87 RT. INCLUDES SHOULDERS				26	
STA. 1219+21 TO STA. 1222+87 LT. INCLUDES SHOULDERS				23	
STA. 1223+61 TO STA. 1225+75 RT. INCLUDES SHOULDERS				16	
STA. 1223+61 TO STA. 1225+75 LT. INCLUDES SHOULDERS				16	
STA. 1217+75 TO STA. 1217+80 RT. (STAGE II TRAFFIC)					7
STA. 1218+74 TO STA. 1218+79 RT. (STAGE II TRAFFIC)					7
STA. 1219+21 TO STA. 1219+26 RT. (STAGE II TRAFFIC)					7
STA. 1222+82 TO STA. 1222+87 RT. (STAGE II TRAFFIC)					7
STA. 1223+61 TO STA. 1223+66 RT. (STAGE II TRAFFIC)					7
STA. 1225+71 TO STA. 1225+76 RT. (STAGE II TRAFFIC)					7
TOTAL	2239	2500	1908	113	42

PAVEMENT REMOVAL	
LOCATION	PAVEMENT REMOVAL
	SQ. YD.
STA. 1218+79 TO STA. 1219+21	103
STA. 1222+87 TO STA. 1223+07.5	87
STA. 1223+40.5 TO STA. 1223+61	56
TOTAL	246

TREE REMOVAL, ACRES	
LOCATION	TREE REMOVAL, ACRES
	ACRE
STA. 1222+78 TO STA. 1223+41 45' LT. TO 75' LT.	0.04
STA. 1222+87 TO STA. 1223+54 68' RT. TO 70' RT.	0.01
TOTAL	0.05

AGGREGATE BASE COURSE, TYPE A	
LOCATION	AGGREGATE BASE COURSE, TYPE A
	TON
STA. 1222+87 TO STA. 1223+05 SHOULDERS LT. & RT.	8
STA. 1223+43 TO STA. 1223+61 SHOULDERS LT. & RT.	8
STA. 1217+75 TO STA. 1222+87.6 LT. PRE-STAGE I WIDENING	112
STA. 1223+60.4 TO STA. 1225+76 LT. PRE-STAGE I WIDENING	47
STA. 1217+75 TO STA. 1218+79 RT.	23
STA. 1219+21 TO STA. 1222+87 RT.	121
STA. 1223+61 TO STA. 1225+76 RT.	74
TOTAL	393

TEMPORARY EROSION CONTROL ITEMS			
LOCATION	TEMPORARY EROSION CONTROL SEEDING	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER
	POUND	FOOT	FOOT
	STA. 1217+75 TO STA. 1225+76 LT.	85	
STA. 1217+75 TO STA. 1225+76 RT.	48		
STA. 1218+50 36' RT.		9	
STA. 1220+00 35' RT.		9	
STA. 1222+00 45' LT.		9	
STA. 1217+75 64' LT. TO STA. 1219+25 64' LT.			150
STA. 1219+25 64' LT. TO STA. 1220+50 40' LT.			127
STA. 1220+50 40' LT. TO STA. 1221+25 40' LT.			100
STA. 1221+25 40' LT. TO STA. 1222+90 72' LT.			168
STA. 1222+90 72' LT. TO STA. 1223+15 72' LT.			25
TOTAL	133	27	570

PORTLAND CEMENT CONCRETE			
LOCATION	PORTLAND CEMENT CONCRETE PAVEMENT 10"	WELDED WIRE FABRIC	PORTLAND CEMENT CONCRETE SHOULDERS 10"
	SQ. YD.	SQ. YD.	SQ. YD.
STA. 1218+79 TO STA. 1219+21	103	103	52
STA. 1222+87 TO STA. 1223+61	181	181	120
TOTAL	284	284	172

MODEL - 3/00/01/01/01/01  
FILE NAME: 3/00/01/01/01/01



USER NAME = \$USERS  
DESIGNED - \_\_\_\_\_  
DRAWN - \_\_\_\_\_  
PLOT SCALE = \$SCALES  
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PLOT DATE = \$DATES  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

QUANTITY SCHEDULES

SCALE: NONE SHEET \_ OF \_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE. 821 SECTION 13B-3 COUNTY JEFFERSON TOTAL SHEETS 78 SHEET NO. 15 CONTRACT NO. 78911 ILLINOIS FED. AID PROJECT

TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS				
LOCATION	IMPACT ATTENUATORS, TEMPORARY (FULLY-REDIRECTIVE, NARROW), TEST LEVEL 3	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, RELOCATE (FULLY-REDIRECTIVE, NARROW) TEST LEVEL 3
	EACH	FOOT	FOOT	EACH
STA. 1217+68.4 TO STA. 1218+01.0 RT.	1			
STA. 1218+01.0 TO STA. 1224+88.5 LT. (STAGE I)		687.5		
STA. 1224+88.5 TO STA. 1225+21.1 RT.	1			
STA. 1218+68.4 TO STA. 1218+01.0 LT.				1
STA. 1218+01.0 TO STA. 1224+88.5 LT. (STAGE II)			687.5	
STA. 1224+88.5 TO STA. 1225+21.1 LT.				1
TOTAL	2	687.5	687.5	2

PINNING TEMPORARY CONCRETE BARRIER	
LOCATION	PINNING TEMPORARY CONCRETE BARRIER
	EACH
STAGE I	
STA. 1218+01 TO STA. 1218+51	6*
STA. 1218+51.0 TO STA. 1219+38.5	21
STA. 1219+38.5 TO STA. 1219+51.0	2
STA. 1219+51 TO STA. 1219+63.5	1
STA. 1222+51.0 TO STA. 1222+63.5	1
STA. 1222+63.5 TO STA. 1222+76.0	2
STA. 1222+76.0 TO STA. 1223+63.5	21
STA. 1223+63.5 TO STA. 1223+76	2
STA. 1223+76 TO STA. 1223+88.5	1
STA. 1223+88.5 TO STA. 1224+88.5	6*
STAGE II	
STA. 1218+01 TO STA. 1218+51	6*
STA. 1218+51.0 TO STA. 1218+76.0	6
STA. 1218+76.0 TO STA. 1219+26.0	0
STA. 1219+26.0 TO STA. 1219+38.5	3
STA. 1219+38.5 TO STA. 1219+51.0	2
STA. 1219+51.0 TO STA. 1219+63.5	1
STA. 1222+38.5 TO STA. 1222+51.0	1
STA. 1222+51.0 TO STA. 1222+63.5	2
STA. 1222+63.5 TO STA. 1222+76.0	3
STA. 1222+76.0 TO STA. 1223+63.5	0
STA. 1223+63.5 TO STA. 1223+76.0	3
STA. 1223+76.0 TO STA. 1223+88.5	2
STA. 1223+88.5 TO STA. 1224+88.5	6*
TOTAL	74

\*INCLUDED WITH COST OF TEMPORARY CONCRETE BARRIER

GUARDRAIL SCHEDULE						
LOCATION	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	STEEL PLATE BEAM GUARDRAIL 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 14	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL REFLECTORS, TYPE A	GUARDRAIL REMOVAL
	EACH	FOOT	EACH	EACH	EACH	FOOT
STA. 1221+42.2 TO STA. 1221+92.2 RT.	1			1		
STA. 1221+92.2 TO STA. 1222+67.2 RT.		75			4	
STA. 1222+67.2 TO STA. 1223+05 RT.			1			
STA. 1223+43 TO STA. 1223+80.8 RT.			1			
STA. 1223+80.8 TO STA. 1223+93.3 RT.		12.5			4	
STA. 1223+93.3 TO STA. 1224+43.3 RT.	1			1		
STA. 1222+04.7 TO STA. 1222+54.7 LT.	1			1		
STA. 1222+54.7 TO STA. 1222+67.2 LT.		12.5			4	
STA. 1222+67.2 TO STA. 1223+05 LT.			1			
STA. 1223+43 TO STA. 1223+80.8 LT.			1			
STA. 1223+80.8 TO STA. 1224+55.8 LT.		75			4	
STA. 1224+55.8 TO STA. 1225+05.8 LT.	1			1		
STA. 1221+15.9 TO STA. 1224+58.0 RT.						343
STA. 1221+86.7 TO STA. 1225+32.4 LT.						346
TOTAL	4	175	4	4	16	689

STONE RIPRAP AND FILTER FABRIC SCHEDULE		
LOCATION	STONE RIPRAP CLASS A4	FILTER FABRIC
	SQ. YD.	SQ. YD.
STA. 1218+75 TO STA. 1218+87.5 LT. DITCH	12	12
SN 041-2024 UPSTREAM	83	83
SN 041-2024 DOWNSTREAM	336	336
SN 041-7100 UPSTREAM	57	57
SN 041-7100 DOWNSTREAM	113	113
TOTAL	601	601

PERMANENT SEEDING						
LOCATION	SEEDING CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH METHOD 2
	ACRE	POUND	POUND	POUND	TON	ACRE
STA. 1217+75 TO STA. 1225+76 LT.	0.85	77	77	77	1.70	0.85
STA. 1217+75 TO STA. 1225+76 RT.	0.48	43	43	43	0.96	0.48
TOTAL	1.33	120	120	120	2.66	1.33

SHORT TERM PAVEMENT MARKING		
LOCATION	SHORT TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL
	FOOT	SQ. FT.
STA. 1215+01 TO STA. 1226+82 CENTERLINE ASSUME 4' STRIPES @ 40' CENTERS	108	36
TOTAL	108	36

PAINT PAVEMENT MARKING SCHEDULE			
LOCATION	PAINT PAVEMENT MARKING - LINE 4"		
	30' SKIP 10' DASH (YELLOW)	CENTERLINE NO PASSING (YELLOW)	EDGE LINE (WHITE)
	FOOT	FOOT	FOOT
STA. 1215+01 TO STA. 1226+82 LT.			1181
STA. 1215+01 TO STA. 1226+82 CENTERLINE	300		
STA. 1215+01 TO STA. 1226+82 RT.			1181
STA. 1215+01 TO STA. 1222+70 CENTERLINE RT.		769	
SUBTOTAL	300	769	2362
TOTAL		3431	

MODEL - 3/20/2015  
FILE NAME - 3/20/15



USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISOR - _____	
PLOT SCALE = \$SCALES	CHECKED - _____	REVISED - _____
PLOT DATE = \$DATES	DATE - _____	REVISED - _____

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

QUANTITY SCHEDULES			
SCALE: NONE	SHEET	OF	SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	16
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



70107025 CHANGEABLE MESSAGE SIGN	
LOCATION	CHANGEABLE MESSAGE SIGN
	CAL. DAY
MESSAGE BOARD EAST OF PROJECT LOCATION TO BE DETERMINED BY ENGINEER	21
MESSAGE BOARD WEST OF PROJECT LOCATION TO BE DETERMINED BY ENGINEER	21
TOTAL	42

FILLING EXISTING CULVERTS	
LOCATION	FILLING EXISTING CULVERTS
	CU. YD.
STA. 1218+05 24"Ø X 54'	6.3
TOTAL	6.3

EARTH EXCAVATION (WIDENING)	
LOCATION	EARTH EXCAVATION (WIDENING)
	CU. YD.
STA. 1217+75 TO STA. 1222+87.6 LT. PRE-STAGE 1 WIDENING	57
STA. 1223+60.4 TO STA. 1225+76 LT. PRE-STAGE 1 WIDENING	24
TOTAL	81

UNINTERRUPTED POWER SUPPLY (EXTENDED)	
LOCATION	UNINTERRUPTED POWER SUPPLY (EXTENDED)
	EACH
LOCATION TO BE DETERMINED BY ENGINEER	1
TOTAL	1

TEMPORARY BRIDGE TRAFFIC SIGNALS	
LOCATION	TEMPORARY BRIDGE TRAFFIC SIGNALS
	EACH
STA. 1215+51 RT.	0.25
STA. 1215+76 LT.	0.25
STA. 1226+07 RT.	0.25
STA. 1226+32 LT.	0.25
TOTAL	1

PAVEMENT MARKING REMOVAL-GRINDING	
LOCATION	PAVEMENT MARKING REMOVAL-GRINDING
	SQ. FT.
STA. 1215+01 TO STA. 1226+82 - EDGE LINE	394
STA. 1215+01 TO STA. 1226+79 - CENTERLINE	100
STA. 1215+01 TO STA. 1222+70 - CENTERLINE SOLID YELLOW	256
TOTAL	750

PAVED SHOULDER REMOVAL	
LOCATION	PAVED SHOULDER REMOVAL
	SQ. YD.
STA. 1217+75 TO STA. 1221+56.4 LT.	85
STA. 1217+75 TO STA. 1220+94.2 RT.	71
STA. 1220+94.2 TO STA.1222+87.6 RT.	66
STA. 1221+56.4 TO STA.1222+87.6 LT.	45
STA. 1223+60.4 TO STA. 1225+54.2 LT.	57
STA. 1223+60.4 TO STA. 1224+91.5 RT.	46
STA. 1224+91.5 TO STA. 1225+76 RT.	19
STA. 1225+54.2 TO STA. 1225+76 LT.	5
TOTAL	394

RAISED REFLECTIVE PAVEMENT MARKER	
LOCATION	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
	EACH
STA. 1217+75 TO STA. 1225+76	10
TOTAL	10

TEMPORARY RUMBLE STRIPS	
LOCATION	TEMPORARY RUMBLE STRIPS
	EACH
STA. 1198+01 RT.	1
STA. 1203+01 RT.	1
STA. 1208+01 RT.	1
STA. 1233+82 LT.	1
STA. 1238+82 LT.	1
STA. 1243+82 LT.	1
TOTAL	6

MODEL - 84002ELNAMES  
FILE NAME: SHELUS



USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
PLOT SCALE = \$SCALES	DRAWN - _____	REVISED - _____
PLOT DATE = \$DATES	CHECKED - _____	REVISED - _____
	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**QUANTITY SCHEDULES**

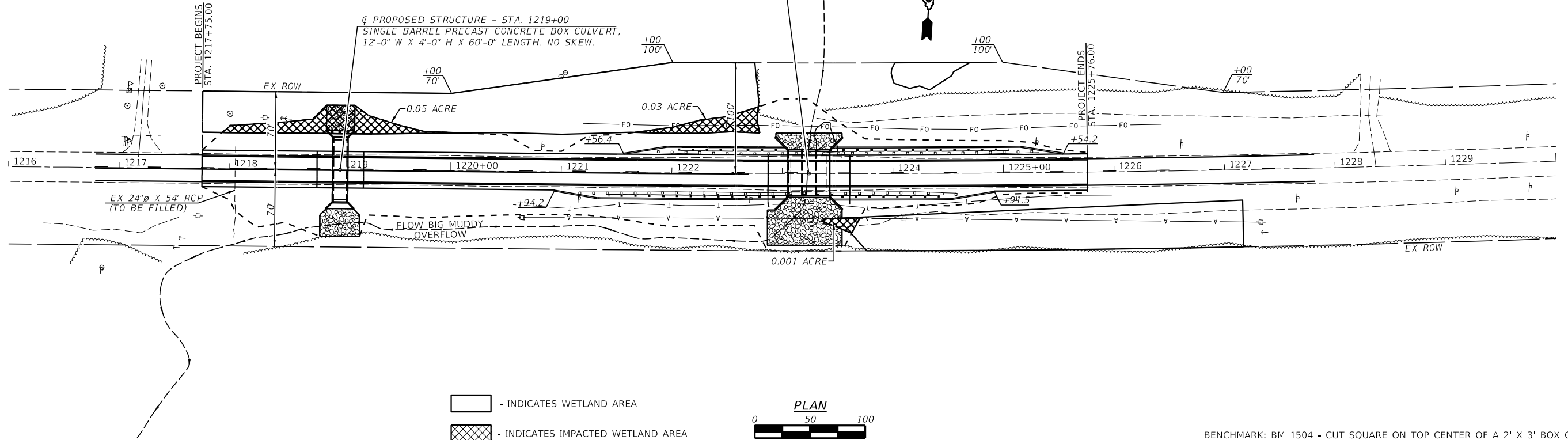
SCALE: NONE SHEET \_ OF \_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	17
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

SECTION 33, T. 2S, R. 2E 3RD P.M.

PROPOSED STRUCTURE - STA. 1223+24  
TRIPLE BARREL CAST IN PLACE REINFORCED  
CONCRETE BOX CULVERT, 12'-0" W X 5'-0" H X  
43'-0" LENGTH, NO SKEW.

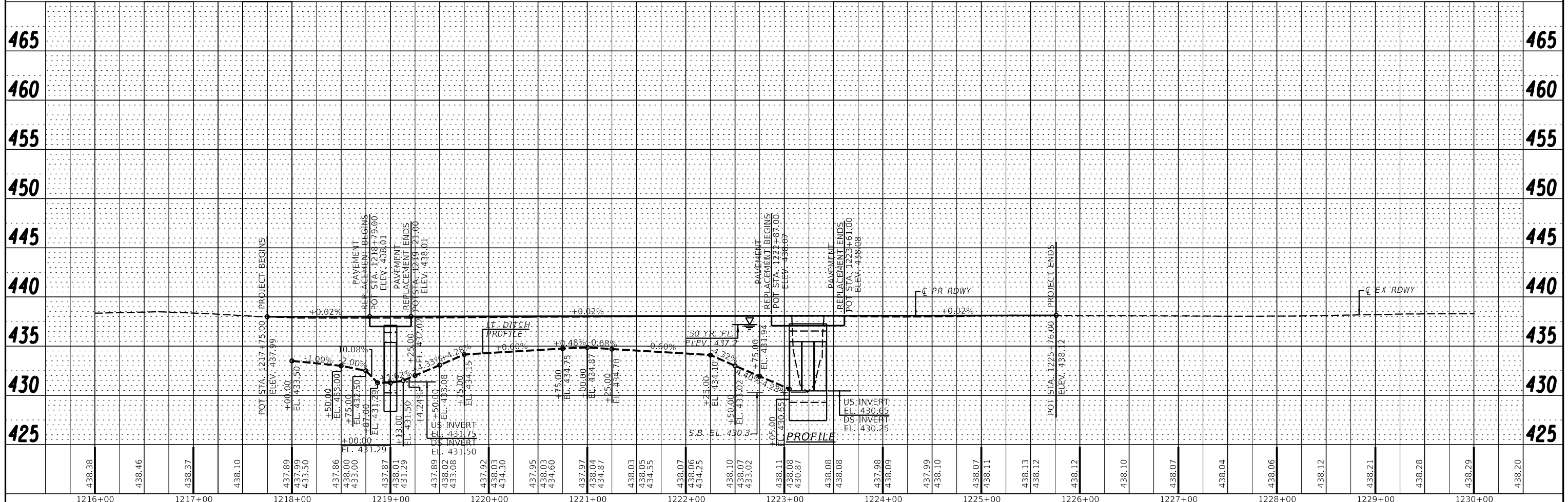
PROPOSED STRUCTURE - STA. 1219+00  
SINGLE BARREL PRECAST CONCRETE BOX CULVERT,  
12'-0" W X 4'-0" H X 60'-0" LENGTH, NO SKEW.



BENCHMARK: BM 1504 - CUT SQUARE ON TOP CENTER OF A 2' X 3' BOX CULVERT  
UNDER IL ROUTE 15, STA. 1232+10 32' RT. EL. 436.502

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	ALIGNED		
	CAD FILE NAME		
	NO.		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NO.		



1216+00	1217+00	1218+00	1219+00	1220+00	1221+00	1222+00	1223+00	1224+00	1225+00	1226+00	1227+00	1228+00	1229+00	1230+00																																											
438.38	438.46	438.37	438.10	437.89	437.99	433.50	437.86	438.00	433.00	437.87	438.01	431.29	437.89	438.02	433.08	437.92	438.03	438.03	434.30	437.95	438.03	434.00	437.97	438.04	434.87	438.03	438.05	434.55	438.07	438.06	434.25	438.07	438.02	433.02	438.11	438.08	430.87	438.08	438.08	437.98	438.09	437.99	438.10	438.07	438.11	438.13	438.12	438.12	438.10	438.07	438.04	438.06	438.12	438.21	438.28	438.29	438.20

**VK**  
VEENSTRA & KIMM INC.  
Springfield, IL Phone: (217)544-8033

USER NAME = *USER*	DESIGNED -	REVISD -
PLOT SCALE = *SCALE*	CHECKED -	REVISD -
PLOT DATE = *DATE*	DRAWN -	REVISD -
	CHECKED -	REVISD -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCALE: 1" = 50'	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	18
CONTRACT NO. 78911				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

**GENERAL NOTES**

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN ACCORDING TO "TRAFFIC CONTROL & PROTECTION, STANDARD 701321.
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. LOCATION OF TEMPORARY BRIDGE SIGNALS SHALL BE COORDINATED AND PLACED AS DIRECTED BY THE ENGINEER.
4. ADDITIONAL SIGNAGE FOR ENTRANCES AND ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
5. SEE STD 701321 FOR COMPLETION OF STAGE CONSTRUCTION SIGNING AND ADVANCE DETECTOR LOOP PLACEMENT NOT SHOWN.
6. THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHALL APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
7. THE CENTERLINE PAVEMENT MARKING SHALL BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHALL BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHALL BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
8. VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE 2 NEW CO-10 RAIL. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
9. ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC AND THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.
10. ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
11. THE COST OF THE TEMPORARY PAVEMENT MARKING AND ITS REMOVAL WILL BE INCLUDED IN THE COST OF STANDARD 701321.

**SUGGESTED SEQUENCE OF CONSTRUCTION**

1. PERFORM EARTH EXCAVATION (WIDENING) FROM STA. 1217+75 TO STA. 1225+76 LT.
2. INSTALL HOT-MIX ASPHALT BASE COURSE WIDENING FROM STA. 1217+75 TO STA. 1225+76 LT.
3. INSTALL TEMPORARY BRIDGE TRAFFIC SIGNALS AND ALL OTHER SIGNS PER STANDARD 701321 INCLUDING WIDTH RESTRICTION SIGNS.
4. PLACE TEMPORARY CONCRETE BARRIER FROM STA. 1218+01 TO STA. 1224+88.5 AS SHOWN BELOW.
5. PERFORM WORK FOR STAGE I CONSTRUCTION INCLUDING INSTALLATION OF NEW TRIPLE BARREL BOX CULVERT, HMA SHOULDERS, GUARDRAIL, RELIEF STRUCTURE AND EARTHWORK.
6. RELOCATE TEMPORARY CONCRETE BARRIER FROM STA. 1218+01 TO STA. 1224+88.5 AS SHOWN ON STAGE II CONSTRUCTION SHEET.
7. PERFORM WORK FOR STAGE II CONSTRUCTION INCLUDING INSTALLING THE REMAINDER OF BOTH CULVERTS, HMA SHOULDERS, GUARDRAIL, RELIEF STRUCTURE AND EARTHWORK.
8. REMOVE TEMPORARY CONCRETE BARRIER AND PERFORM HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH) ON SURFACE AND SHOULDERS.
9. INSTALL HOT-MIX ASPHALT SURFACE COURSE TO PROPOSED GRADE AS SHOWN ON THE PLANS.
10. INSTALL STRIPING PER PAVEMENT MARKING PLAN.



**WIDTH RESTRICTION SIGN**

W12-1103 48" X 48" WITH XX' XX" LETTERS BLACK ON ORANGE MAX WIDTH & 3 MILES AHEAD BLACK ON WHITE WITH M3-1 30X15 AND M1-1100 30X24

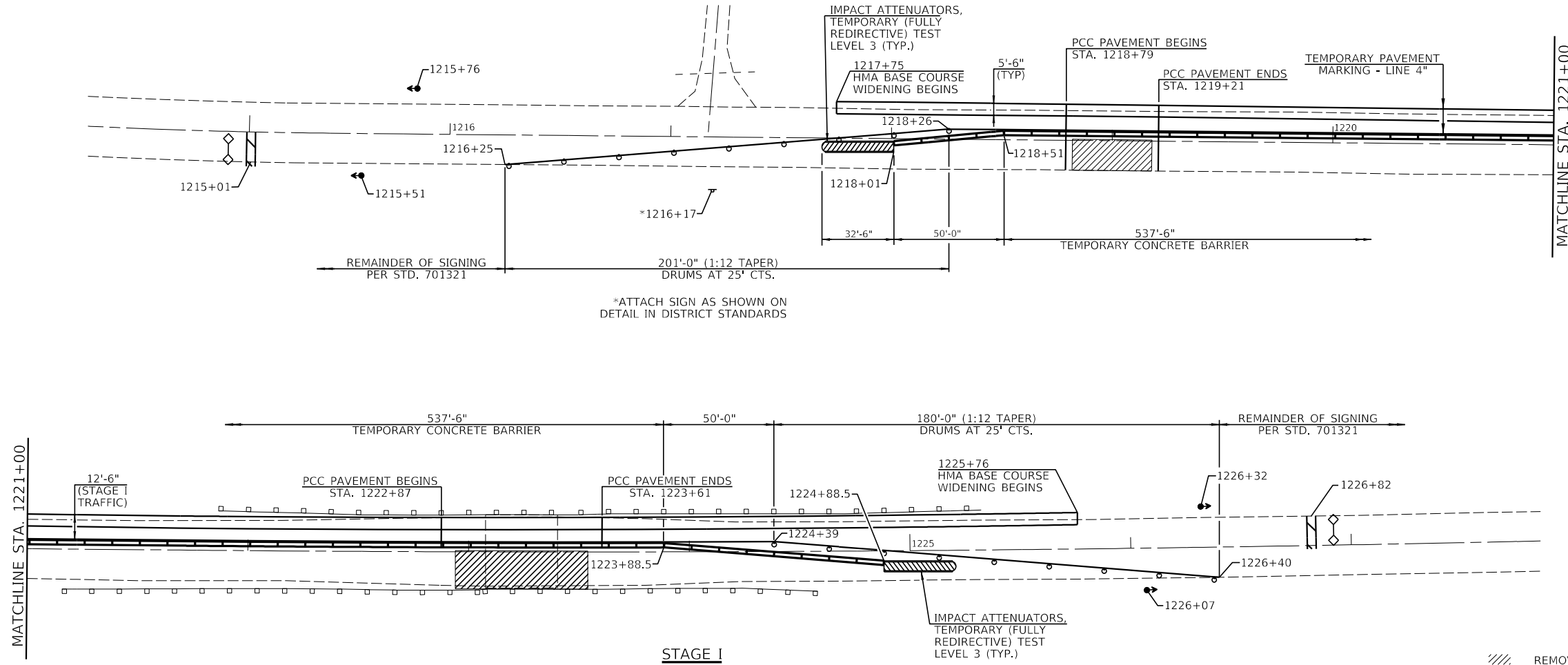
LOCATED WEST OF THE INTERSECTION OF IL 15 AND US ROUTE 51 EAST OF ASHLEY



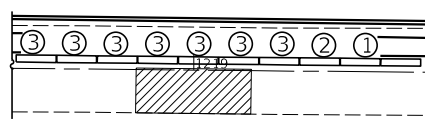
**WIDTH RESTRICTION SIGN**

W12-1103 48" X 48" WITH XX' XX" LETTERS BLACK ON ORANGE MAX WIDTH & 2 MILES AHEAD BLACK ON WHITE WITH M3-1 30X15 AND M1-1100 30X24

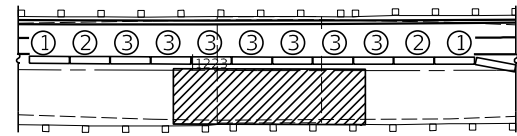
LOCATED EAST OF THE INTERSECTION OF I-64 AND IL ROUTE 15



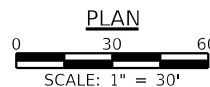
**STAGE I**



**TCB PINNING DETAILS**



**TCB PINNING DETAILS**



**LEGEND**

	REMOVAL ITEMS
	SIGN
	TYPE III BARRICADE
	DRUM WITH STEADY BURNING LIGHT
	BARRICADE WITH STEADY BURNING LIGHT
	TRAFFIC SIGNAL
	INDUCTION LOOP DETECTOR
	DOUBLE VERTICAL PANEL
	TYPE C BIDIRECTIONAL REFLECTOR
	TEMPORARY CONCRETE BARRIER
	IMPACT ATTENUATOR
	STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

MODEL: SMOBELNAMES  
FILE NAME: STG1S

USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = \$SCALE\$	CHECKED - _____	REVISIONS - _____
PLOT DATE = \$DATE\$	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE I CONSTRUCTION PLAN**

SCALE: 1"=30' SHEET 1 OF 2 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	19
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

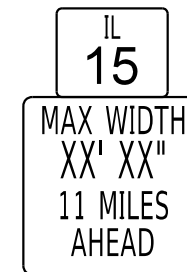
**GENERAL NOTES**

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN ACCORDING TO "TRAFFIC CONTROL & PROTECTION, STANDARD 701321.
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. LOCATION OF TEMPORARY BRIDGE SIGNALS SHALL BE COORDINATED AND PLACE AS DIRECTED BY THE ENGINEER.
4. ADDITIONAL SIGNAGE FOR ENTRANCES AND ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
5. SEE STD 701321 FOR COMPLETION OF STAGE CONSTRUCTION SIGNING AND ADVANCE DETECTOR LOOP PLACEMENT NOT SHOWN.
6. THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHALL APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

7. THE CENTERLINE PAVEMENT MARKING SHALL BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS, EDGE LINE PAVEMENT MARKING SHALL BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHALL BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
8. VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE 2 NEW CO-10 RAIL. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
9. ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC AND THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.
10. ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
11. THE COST OF THE TEMPORARY PAVEMENT MARKING AND ITS REMOVAL WILL BE INCLUDED IN THE COST OF STANDARD 701321.

**SUGGESTED SEQUENCE OF CONSTRUCTION**

1. PERFORM EARTH EXCAVATION (WIDENING) FROM STA. 1217+75 TO STA. 1225+76 LT.
2. INSTALL HOT-MIX ASPHALT BASE COURSE WIDENING FROM STA. 1217+75 TO STA. 1225+76 LT.
3. INSTALL TEMPORARY BRIDGE TRAFFIC SIGNALS AND ALL OTHER SIGNS PER STANDARD 701321 INCLUDING WIDTH RESTRICTION SIGNS.
4. PLACE TEMPORARY CONCRETE BARRIER FROM STA. 1218+01 TO STA. 1224+88.5 AS SHOWN BELOW.
5. PERFORM WORK FOR STAGE I CONSTRUCTION INCLUDING INSTALLATION OF NEW TRIPLE BARREL BOX CULVERT, HMA SHOULDERS, GUARDRAIL, RELIEF STRUCTURE AND EARTHWORK.
6. RELOCATE TEMPORARY CONCRETE BARRIER FROM STA. 1218+01 TO STA. 1224+88.5 AS SHOWN ON STAGE II CONSTRUCTION SHEET.
7. PERFORM WORK FOR STAGE II CONSTRUCTION INCLUDING INSTALLING THE REMAINDER OF BOTH CULVERTS, HMA SHOULDERS, GUARDRAIL, RELIEF STRUCTURE AND EARTHWORK.
8. REMOVE TEMPORARY CONCRETE BARRIER AND PERFORM HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH) ON SURFACE AND SHOULDERS.
9. INSTALL HOT-MIX ASPHALT SURFACE COURSE TO PROPOSED GRADE AS SHOWN ON THE PLANS.
10. INSTALL STRIPING PER PAVEMENT MARKING PLAN.



**WIDTH RESTRICTION SIGN**

W12-1103 48" X 48" WITH XX' XX" LETTERS BLACK ON ORANGE MAX WIDTH & 3 MILES AHEAD BLACK ON WHITE WITH M3-1 30X15 AND M1-1100 30X24

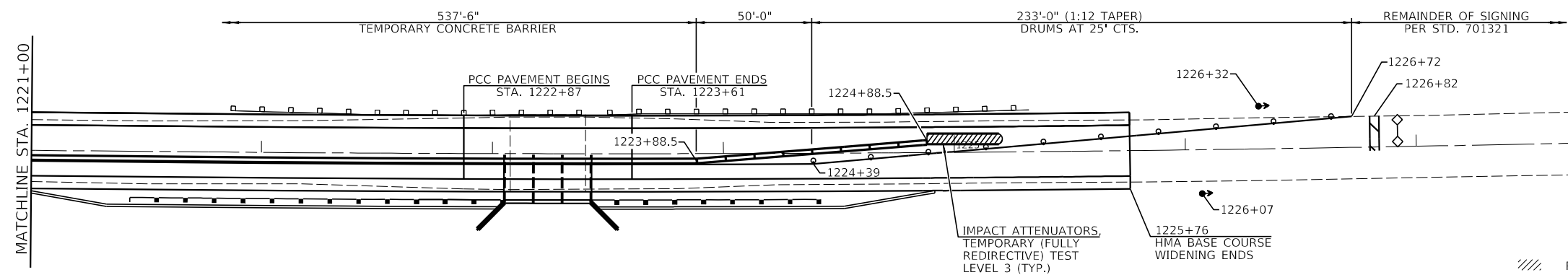
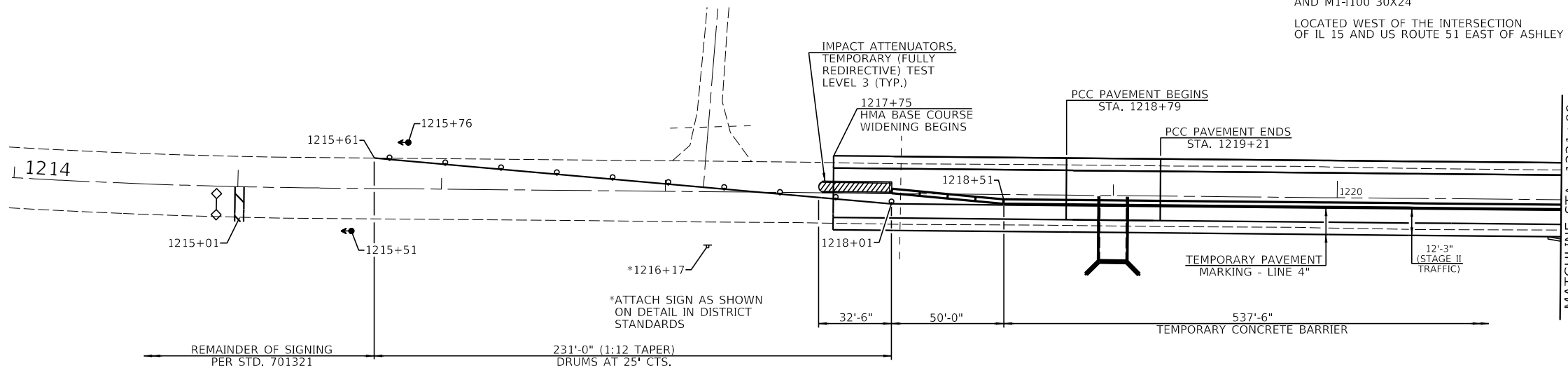
LOCATED WEST OF THE INTERSECTION OF IL 15 AND US ROUTE 51 EAST OF ASHLEY



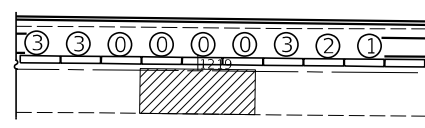
**WIDTH RESTRICTION SIGN**

W12-1103 48" X 48" WITH XX' XX" LETTERS BLACK ON ORANGE MAX WIDTH & 2 MILES AHEAD BLACK ON WHITE WITH M3-1 30X15 AND M1-1100 30X24

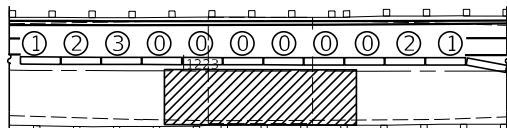
LOCATED EAST OF THE INTERSECTION OF I-64 AND IL ROUTE 15



**STAGE II**

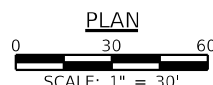


**TCB PINNING DETAILS**



**TCB PINNING DETAILS**

\*\* FOR STAGE II PINNING SEE GENERAL NOTES & R-27 BASE SHEETS



**LEGEND**

	REMOVAL ITEMS
	SIGN
	TYPE III BARRICADE
	DRUM WITH STEADY BURNING LIGHT
	BARRICADE WITH STEADY BURNING LIGHT
	TRAFFIC SIGNAL
	INDUCTION LOOP DETECTOR
	DOUBLE VERTICAL PANEL
	TYPE C BIDIRECTIONAL REFLECTOR
	TEMPORARY CONCRETE BARRIER
	IMPACT ATTENUATOR
	STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

MODEL: 8408ELNAMES  
FILE NAME: ST1503

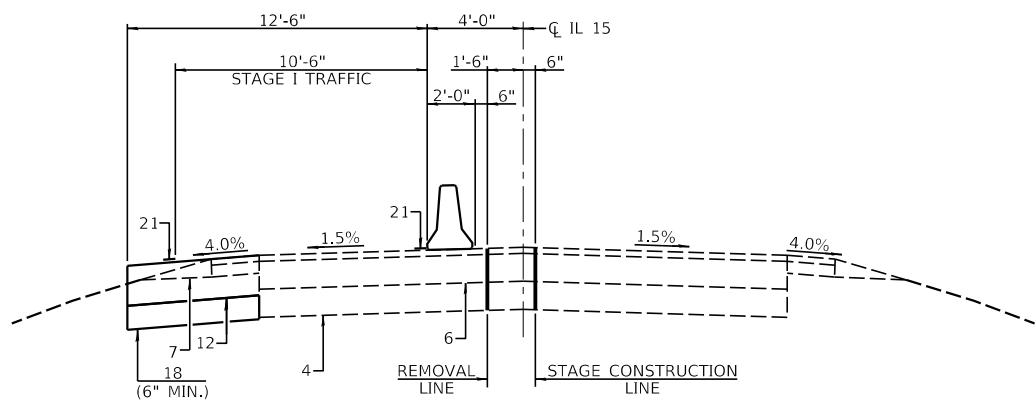
USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISED - _____	
PLOT SCALE = \$SCALE\$	CHECKED - _____	REVISED - _____
PLOT DATE = \$DATE\$	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE II CONSTRUCTION PLAN**

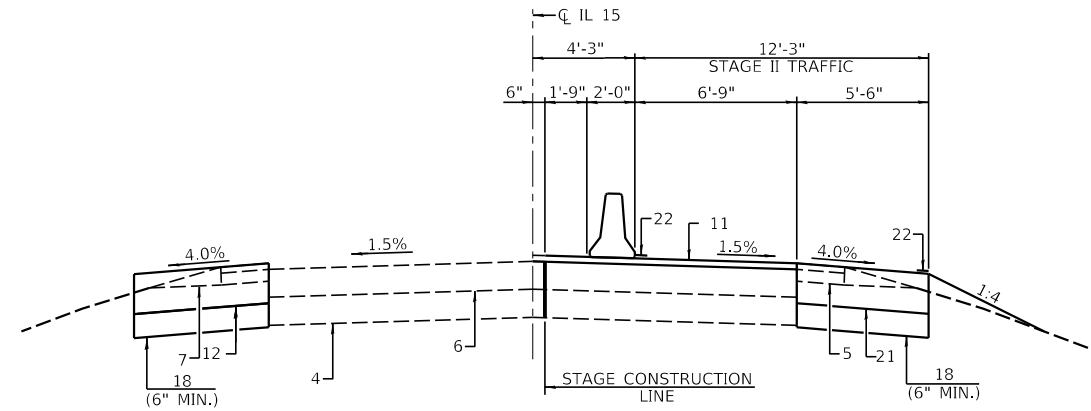
SCALE: 1"=30' SHEET 2 OF 2 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	20
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



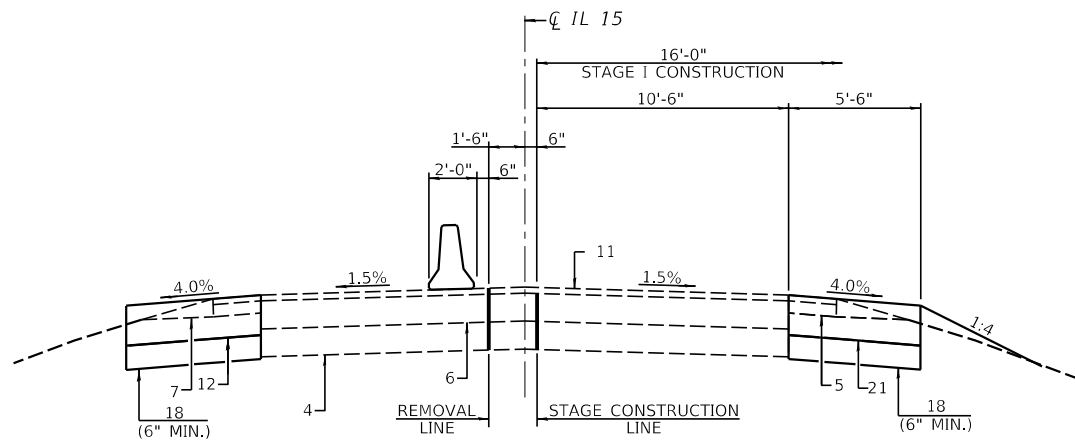
**STAGE I TRAFFIC**

(STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1221+56.4 & STA. 1225+54.2 TO STA. 1225+76 LT.  
 STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1220+94.2 & STA. 1224+91.5 TO STA. 1225+76 RT.)



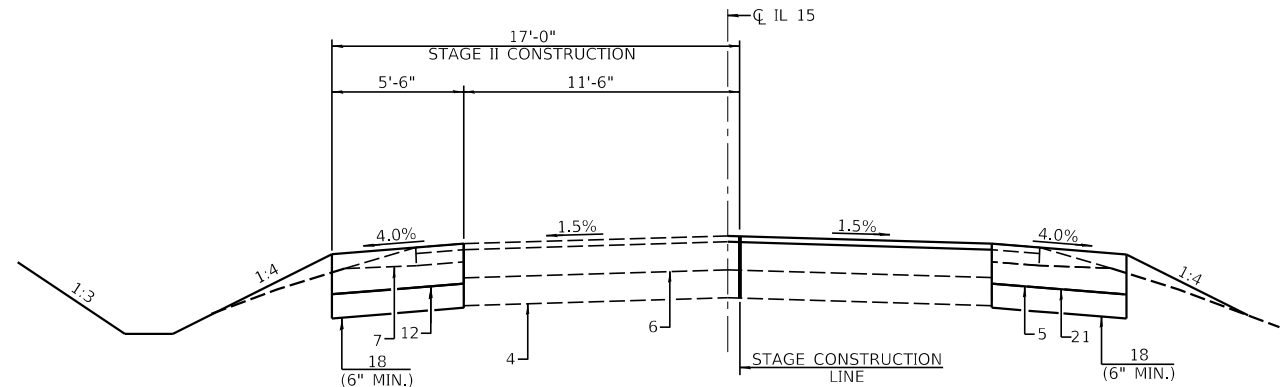
**STAGE II TRAFFIC**

(STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1221+56.4 & STA. 1225+54.2 TO STA. 1225+76 LT.  
 STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1220+94.2 & STA. 1224+91.5 TO STA. 1225+76 RT.)



**STAGE I CONSTRUCTION**

(STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1221+56.4 & STA. 1225+54.2 TO STA. 1225+76 LT.  
 STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1220+94.2 & STA. 1224+91.5 TO STA. 1225+76 RT.)



**STAGE II CONSTRUCTION**

(STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1221+56.4 & STA. 1225+54.2 TO STA. 1225+76 LT.  
 STA. 1217+75 TO STA. 1218+79, STA. 1219+21 TO STA. 1220+94.2 & STA. 1224+91.5 TO STA. 1225+76 RT.)

NOTE: #12 TO BE PLACED PRE-STAGE I CONSTRUCTION.

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1 1/2" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1 1/2" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"
- 22 - PR TEMP. PAVEMENT MARKING LINE - 4"

MODEL: SMOORELHAMMES  
FILE: IADAMS: SHELLES

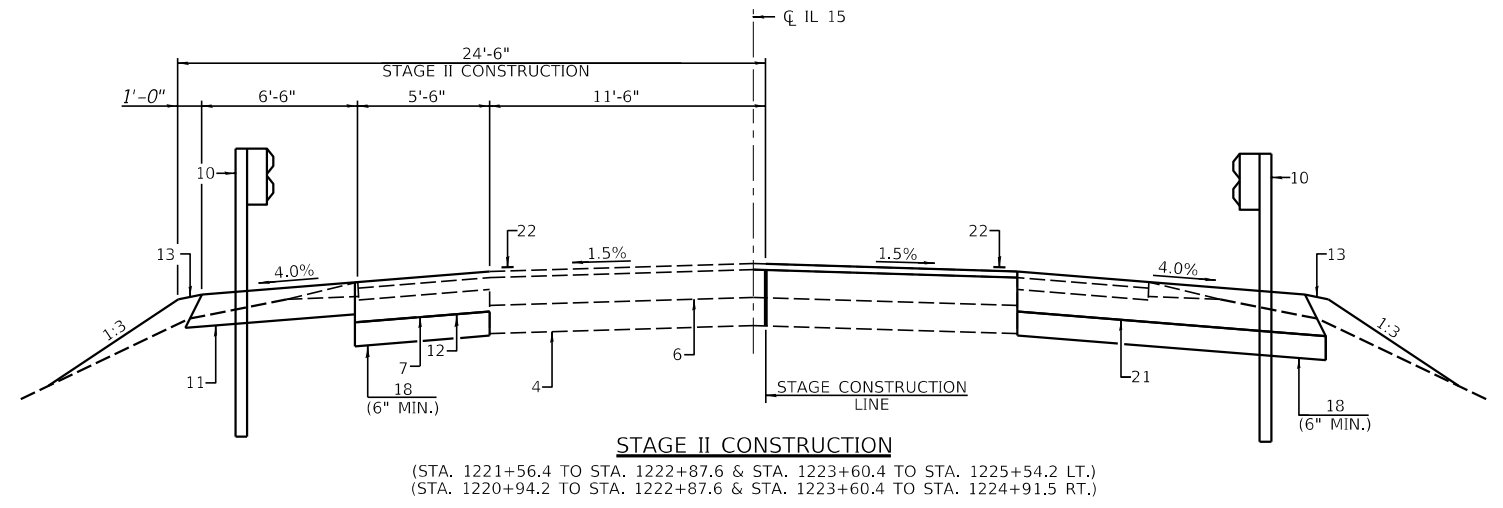
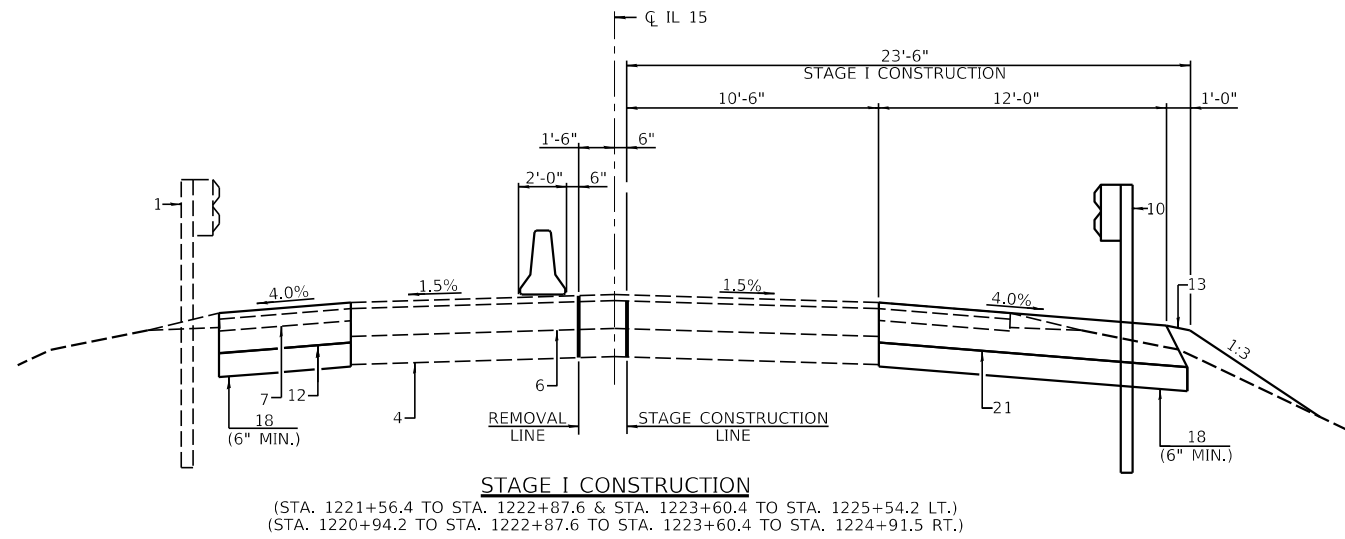
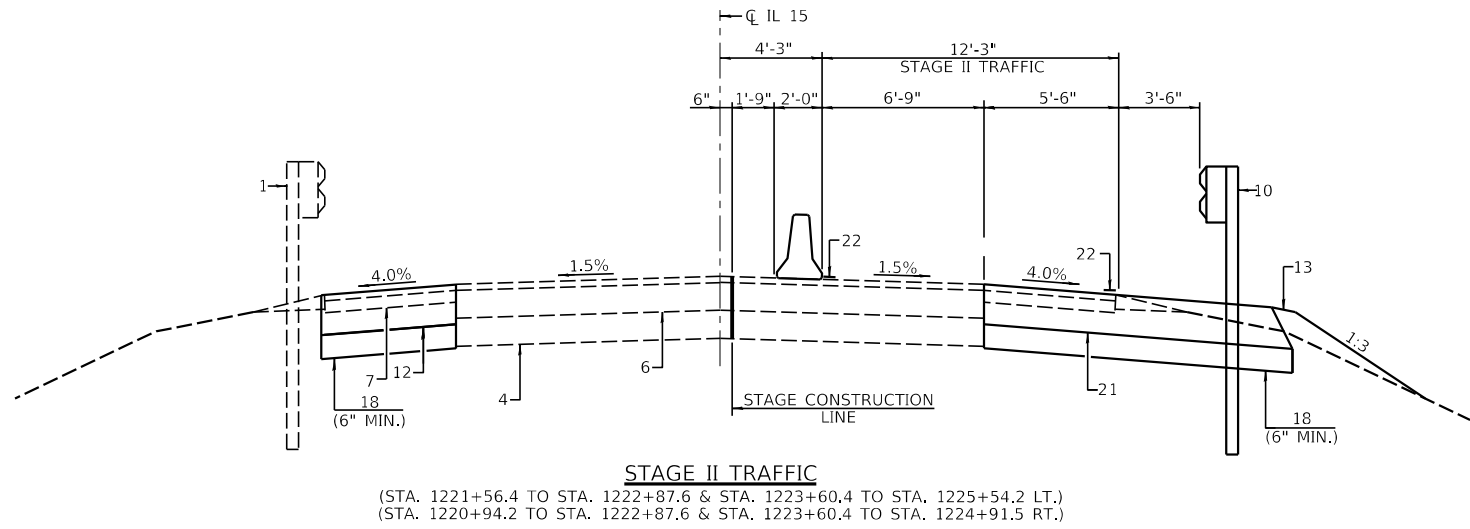
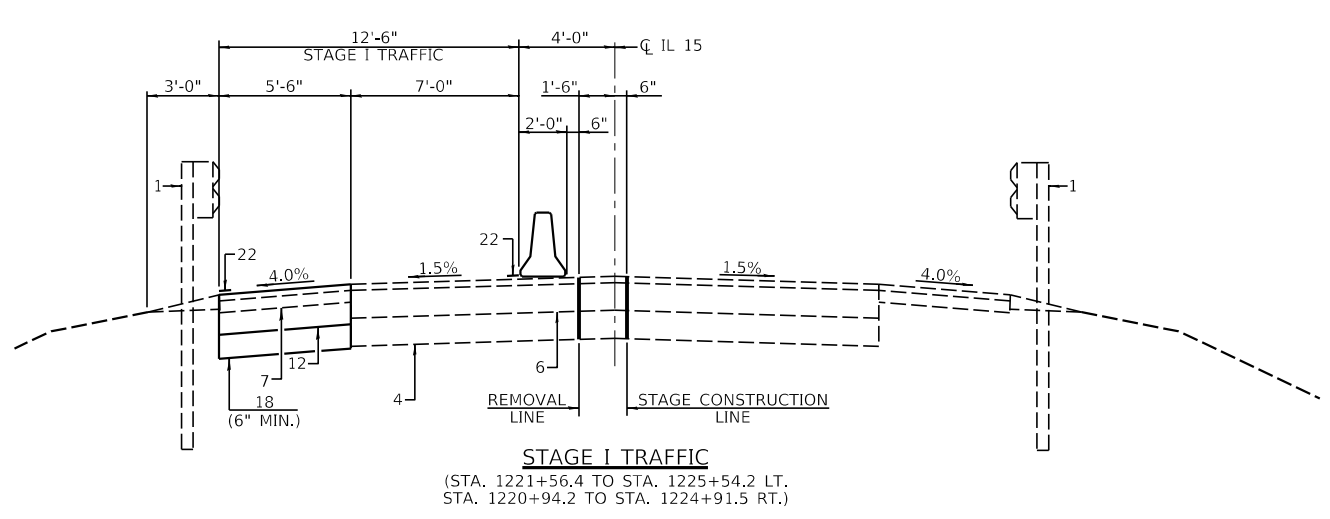
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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY STAGING TYPICAL SECTIONS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	21
			CONTRACT NO. 78911	
ILLINOIS FED. AID PROJECT				



NOTE: #12 TO BE PLACED PRE-STAGE I CONSTRUCTION.

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"
- 22 - PR TEMP. PAVEMENT MARKING LINE - 4"

MODEL: SMOBELMAMES  
FILE: ILLAMS: SHELFS

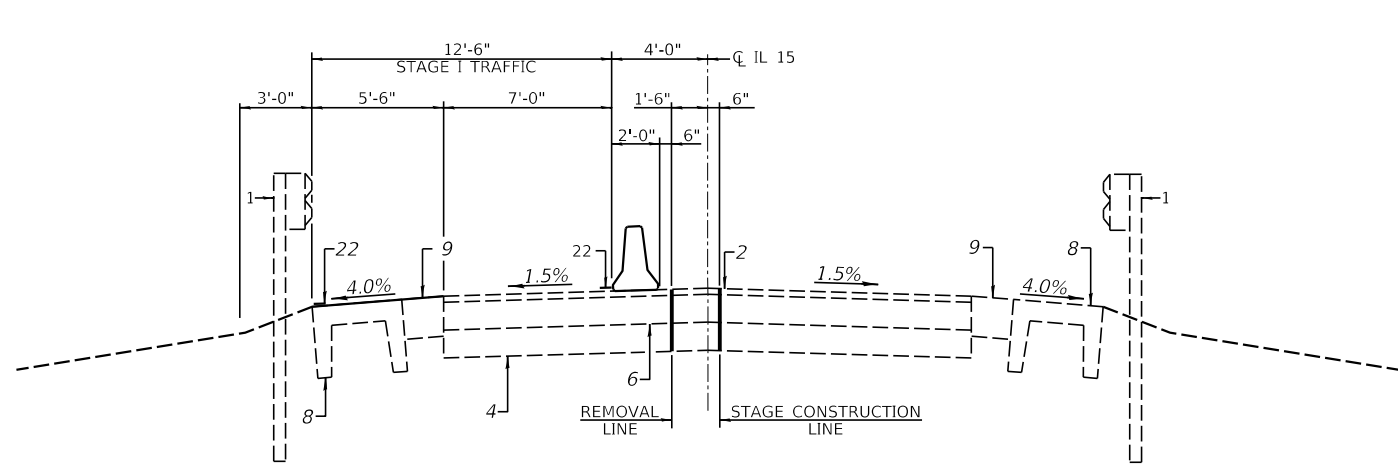
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

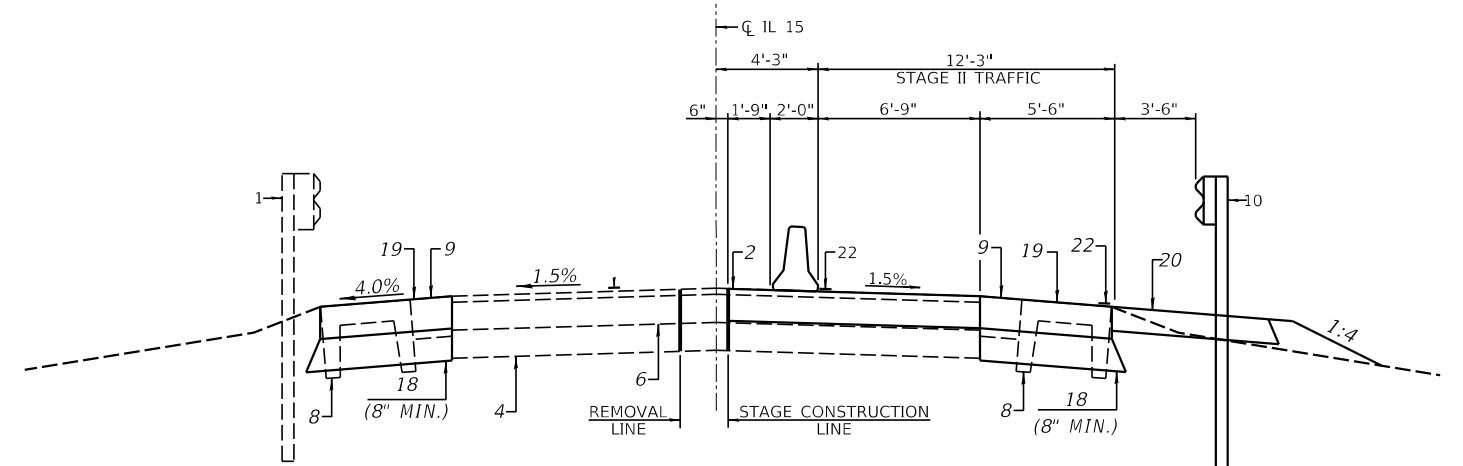
**ROADWAY STAGING TYPICAL SECTIONS**

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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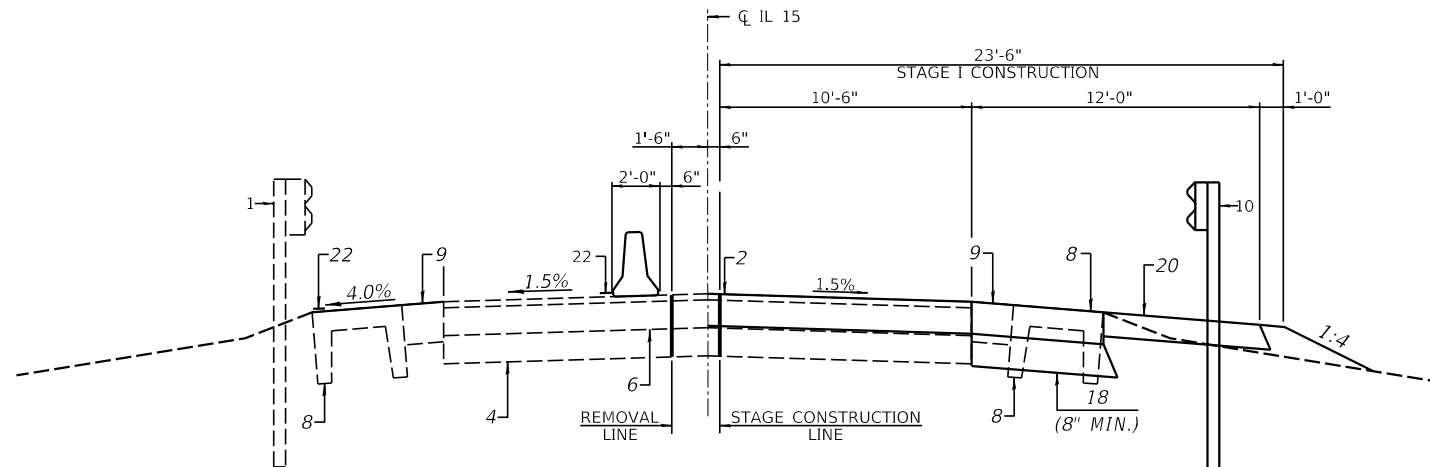
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821	13B-3	JEFFERSON	78	22
			CONTRACT NO. 78911	
ILLINOIS FED. AID PROJECT				



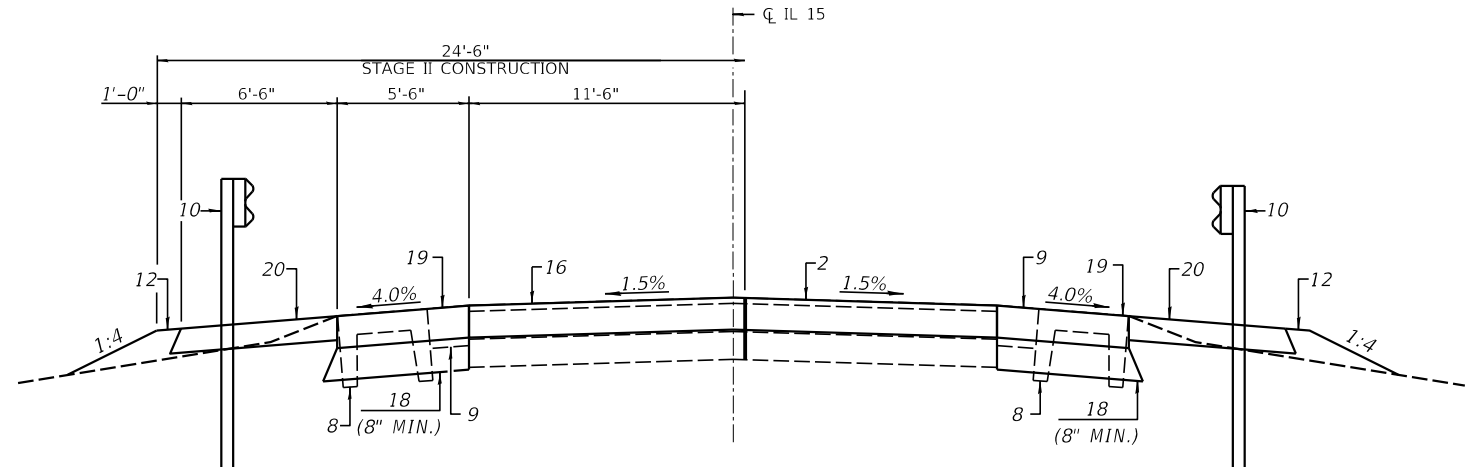
**STAGE I TRAFFIC**  
(STA. 1222+87.6 TO STA. 1223+05 & STA. 1223+43 TO STA. 1223+61)



**STAGE II TRAFFIC**  
(STA. 1222+87.6 TO STA. 1223+05 & STA. 1223+43 TO STA. 1223+61)



**STAGE I CONSTRUCTION**  
(STA. 1222+87.6 TO STA. 1223+05 & STA. 1223+43 TO STA. 1223+61)



**STAGE II CONSTRUCTION**  
(STA. 1222+87 TO STA. 1223+05 & STA. 1223+43 TO STA. 1223+61)

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"
- 22 - PR TEMP. PAVEMENT MARKING LINE - 4"

MODEL: SMOBELMAMES  
FILE: 13B-3\_P11E15

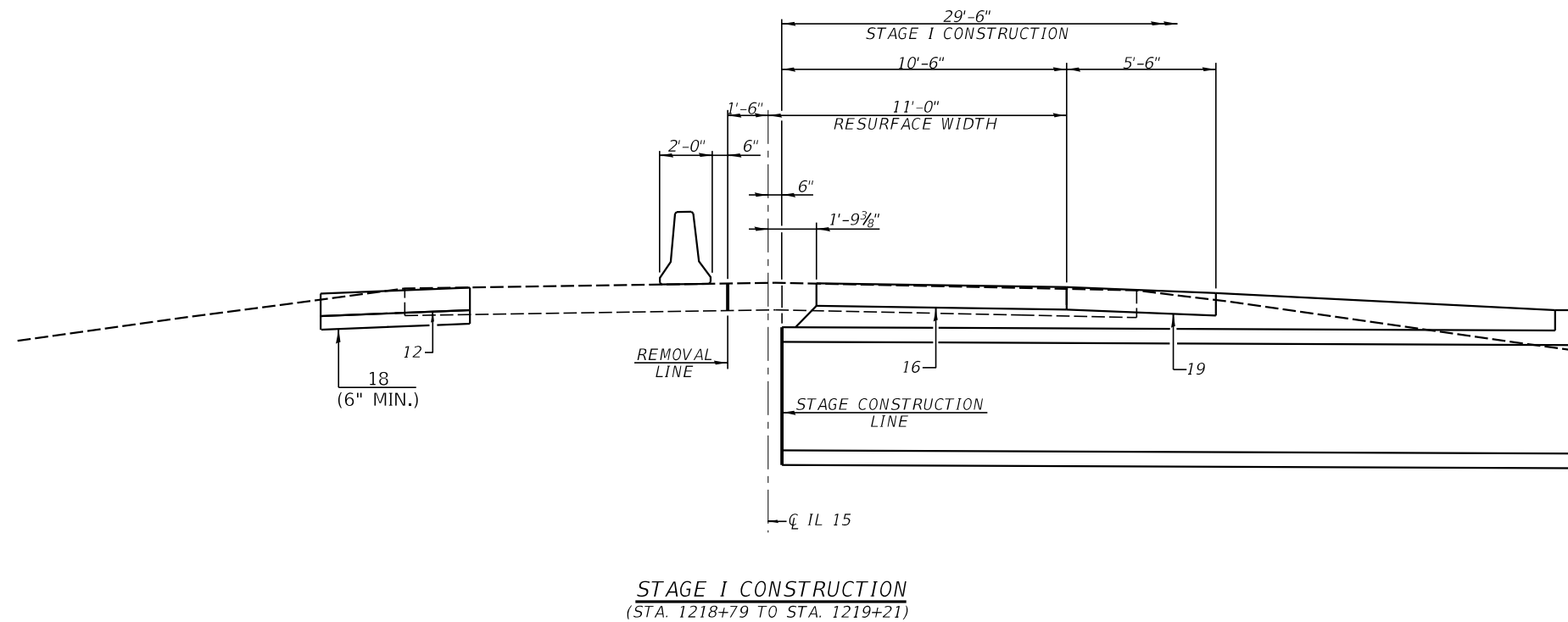
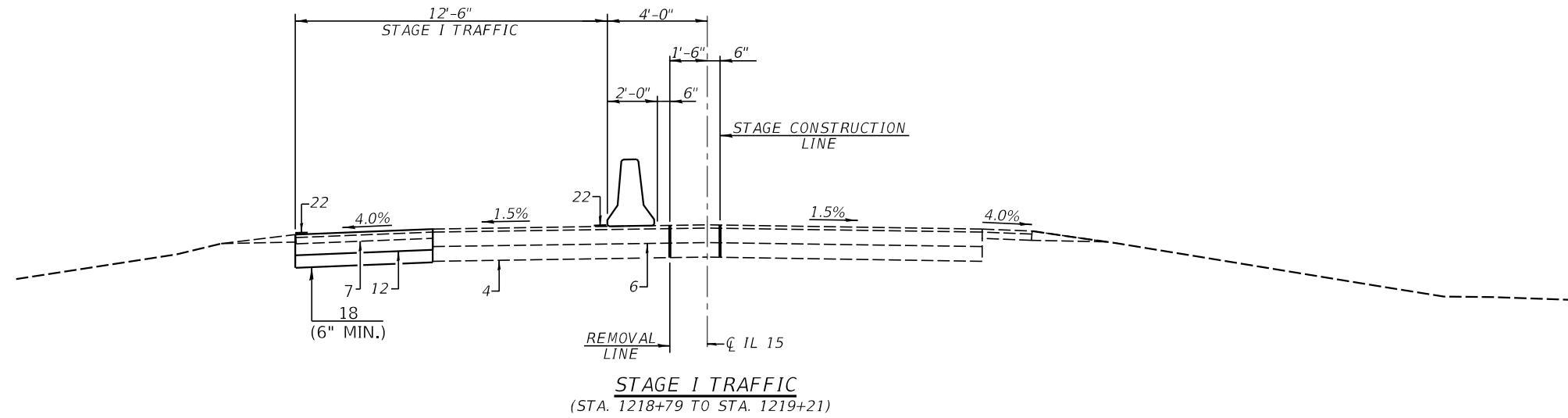
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY STAGING TYPICAL SECTIONS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	23
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



NOTE: #12 TO BE PLACED PRE-STAGE I CONSTRUCTION.

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"
- 22 - PR TEMP. PAVEMENT MARKING LINE - 4"

MODEL: CH06ELM101  
FILE NAME: CH06EL

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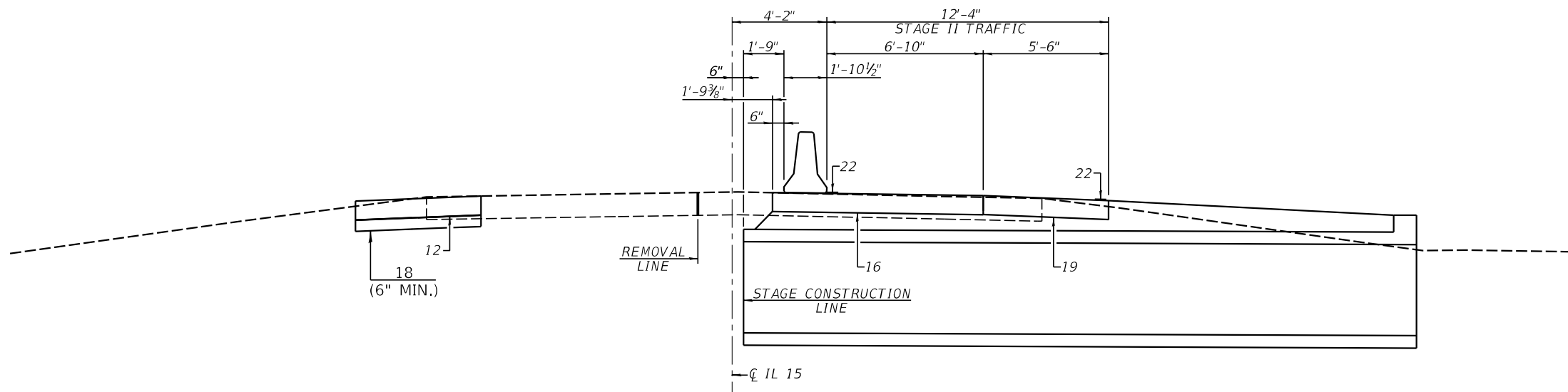
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY STAGING TYPICAL SECTIONS**

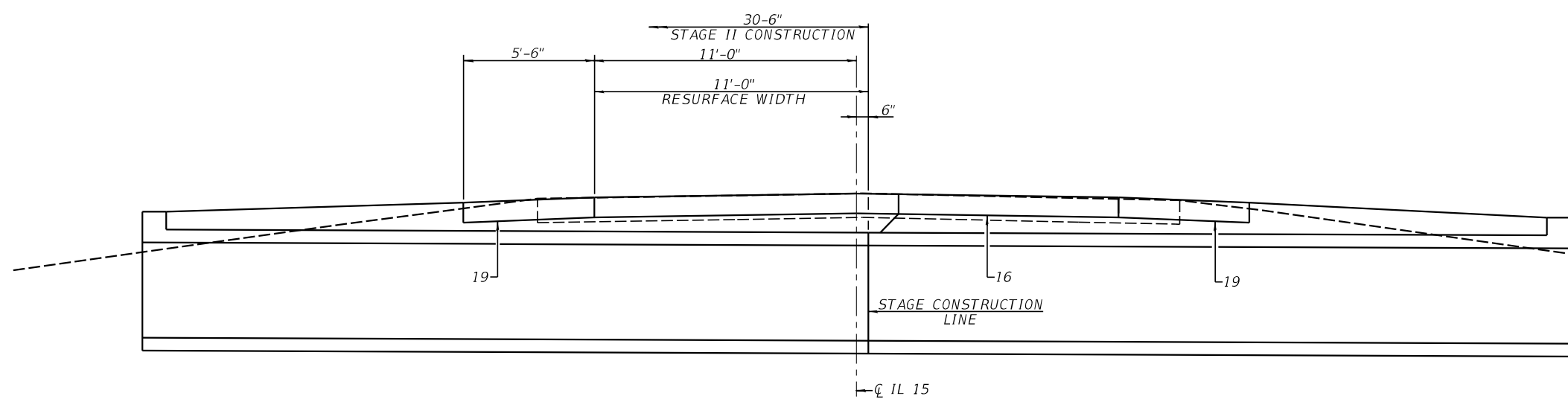
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 821	SECTION 13B-3	COUNTY JEFFERSON	TOTAL SHEETS 78	SHEET NO. 24
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				





**STAGE II TRAFFIC**  
(STA. 1218+79 TO STA. 1219+21)



**STAGE II CONSTRUCTION**  
(STA. 1218+79 TO STA. 1219+21)

NOTE: #12 TO BE PLACED PRE-STAGE I CONSTRUCTION.

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1 1/2" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1 1/2" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"
- 22 - PR TEMP. PAVEMENT MARKING LINE - 4"

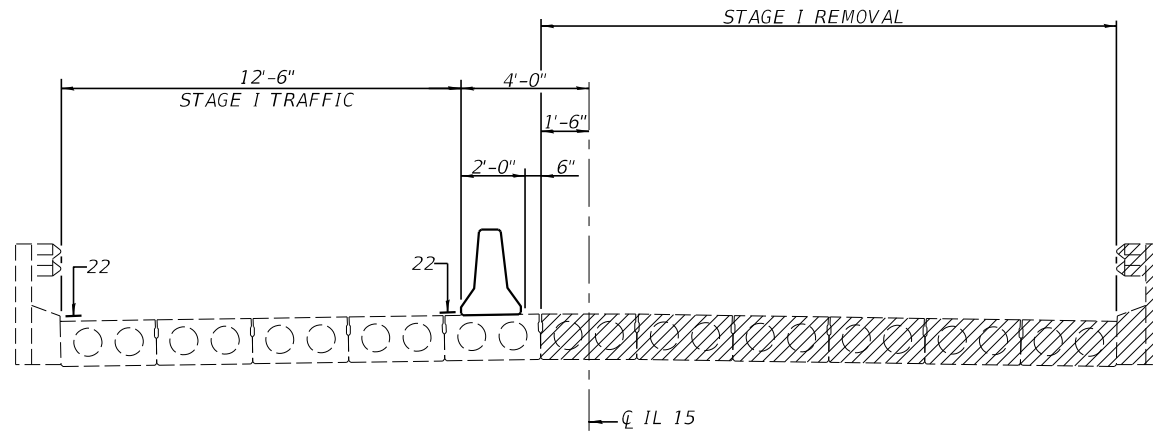
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FILE NAME: STILES

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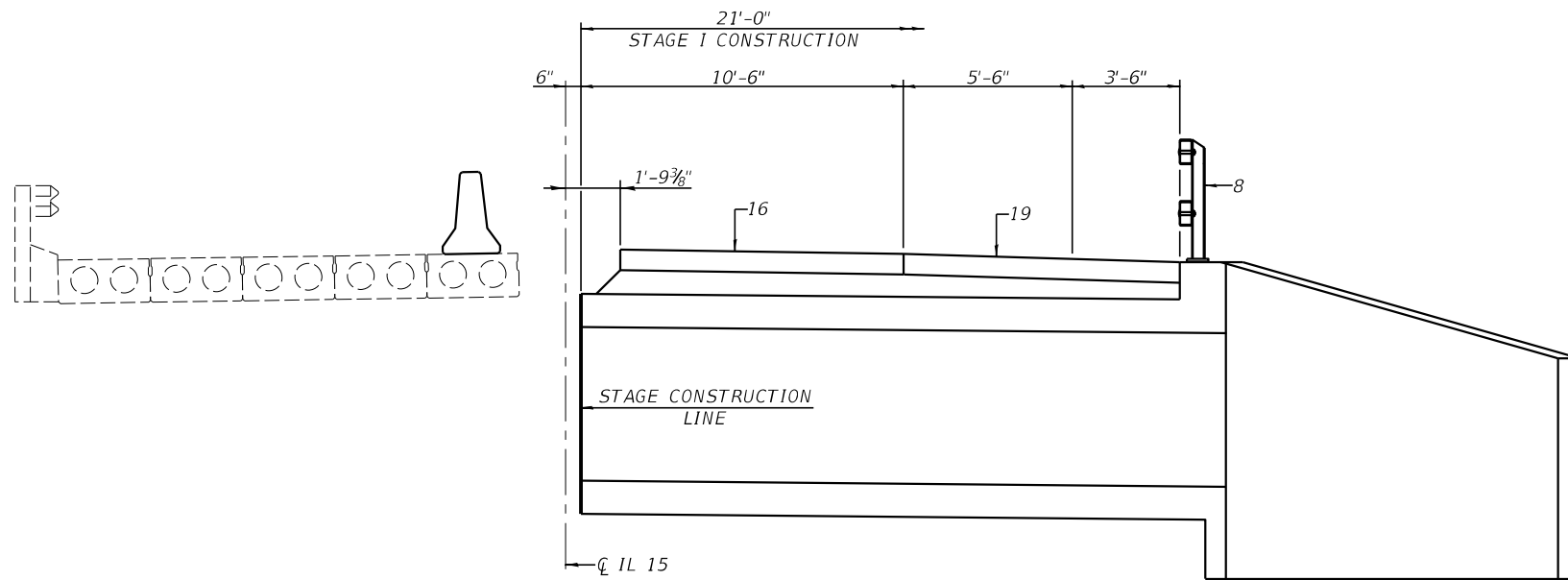
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>ROADWAY STAGING TYPICAL SECTIONS</b>				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	25
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



**STAGE I TRAFFIC**  
(STA. 1223+05 TO STA. 1223+43 - BRIDGE)



**STAGE I CONSTRUCTION**  
(STA. 1223+05 TO STA. 1223+43 - BRIDGE & CULVERT)

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"
- 22 - PR TEMP. PAVEMENT MARKING LINE - 4"

MODEL: \$MODELNAME\$  
FILE: \$NAME\$.SHEET\$

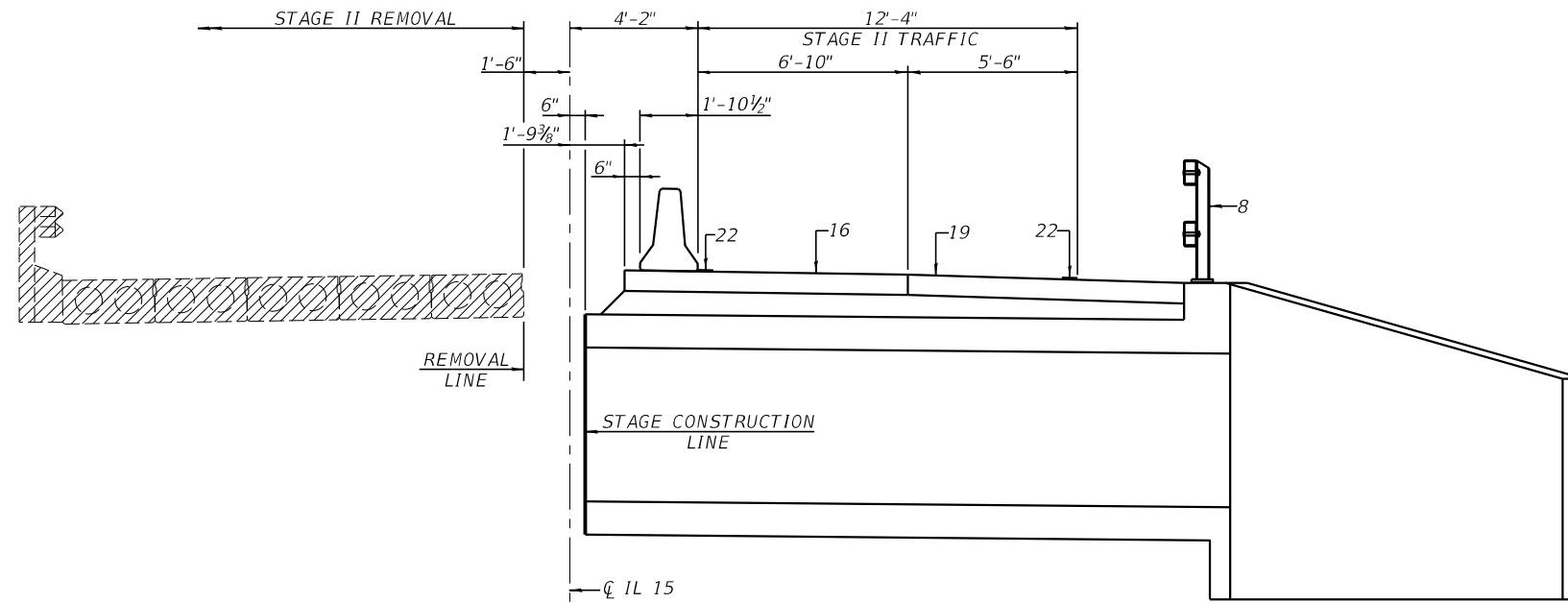
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

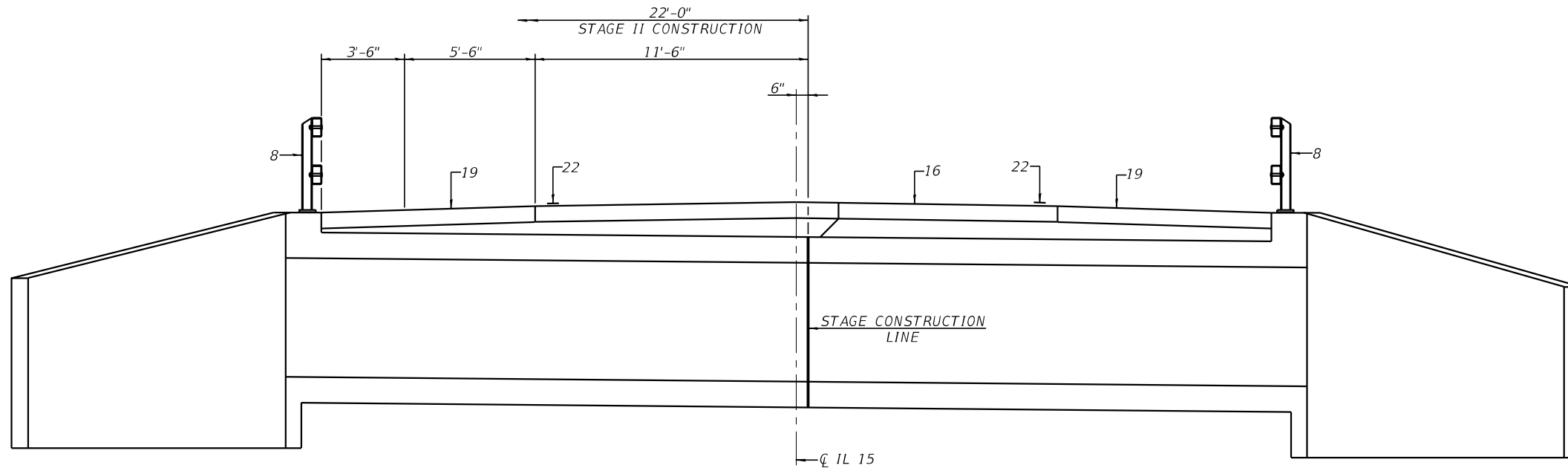
**ROADWAY STAGING TYPICAL SECTIONS**

SCALE: SHEET OF SHEETS STA. TO STA.

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821	13B-3	JEFFERSON	78	26
CONTRACT NO. 78911			ILLINOIS FED. AID PROJECT	



**STAGE II TRAFFIC**  
(STA. 1223+05 TO STA. 1223+43 - BRIDGE & CULVERT)



**STAGE II CONSTRUCTION**  
(STA. 1223+05 TO STA. 1223+43)

**LEGEND**

- 1 - EX GUARDRAIL
- 2 - EX HMA SURFACE
- 3 - EX HMA WIDENING
- 4 - EX PCC PAVEMENT 7"
- 5 - EX AGG SHOULDER
- 6 - EX HMA PAVEMENT 7"
- 7 - EX HMA SHOULDER
- 8 - EX PRECAST CHANNEL BEAM
- 9 - EX PCC PAVEMENT 10"
- 10 - PR GUARDRAIL
- 11 - PR HMA SURFACE COURSE (1½" MIN.) & VARIABLE
- 12 - PR HMA BASE COURSE WIDENING 10"
- 13 - PR EARTH SHOULDER
- 14 - PR PAVEMENT MARKING LINE - 4" PAINT
- 15 - PR HMA SURFACE REMOVAL-(VARIABLE DEPTH) (1½" MAX.)
- 16 - PR PCC PAVEMENT 10"
- 17 - PR CO-10 RAILING
- 18 - PR AGGREGATE BASE COURSE, TYPE A (8" MIN.)
- 19 - PR PCC SHOULDER 10"
- 20 - PR HMA SHOULDER 8"
- 21 - PR HMA SHOULDER 10"
- 22 - PR TEMP. PAVEMENT MARKING LINE - 4"

MODEL: 4100ELM1M1ES  
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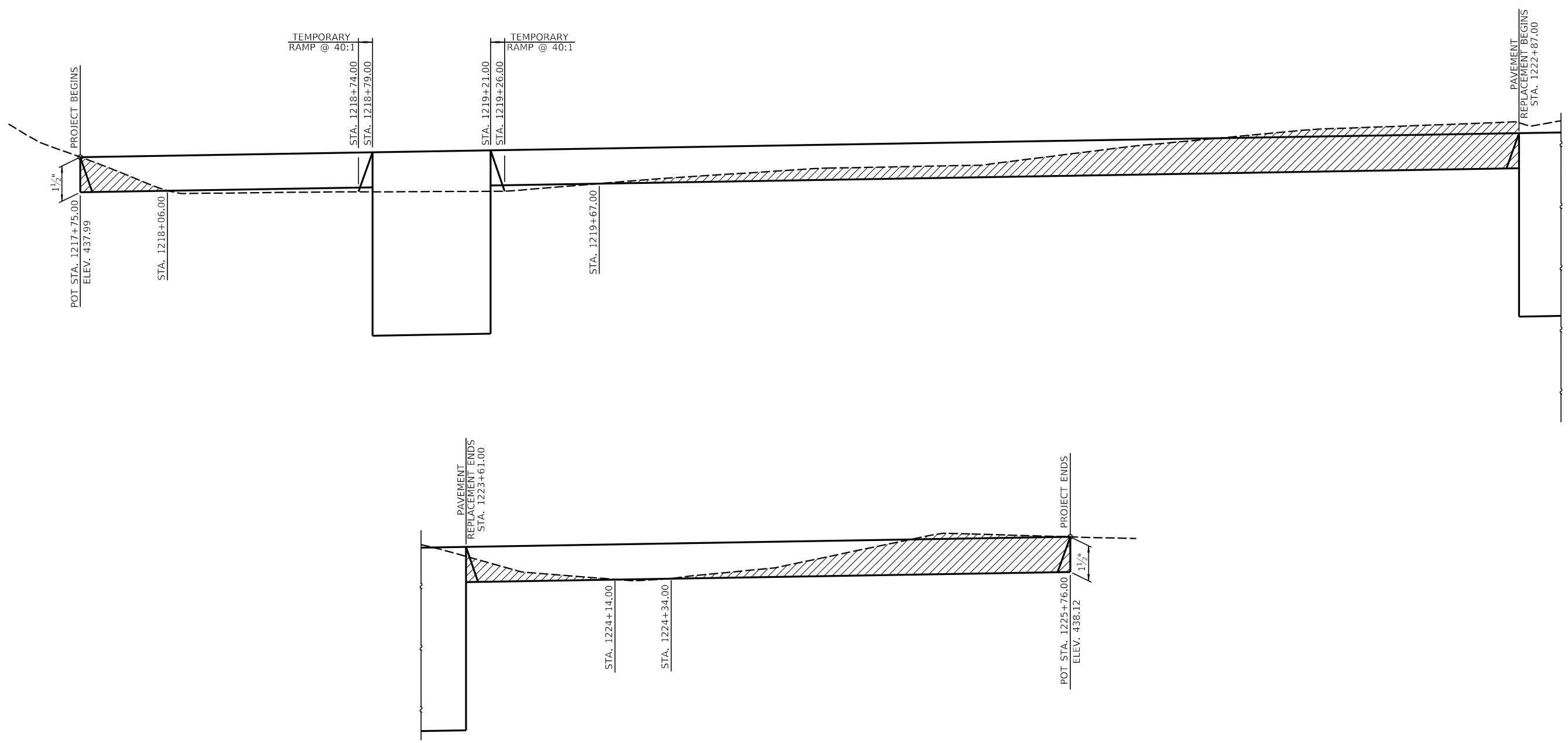
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY STAGING TYPICAL SECTIONS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	27
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



- INDICATES HOT-MIX ASPHALT REMOVAL (VARIABLE DEPTH)

MODEL: 84008ELNAMES  
FILE NAME: ST8EUS

**VK VEENSTRA & KIMM INC.**  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

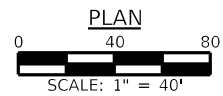
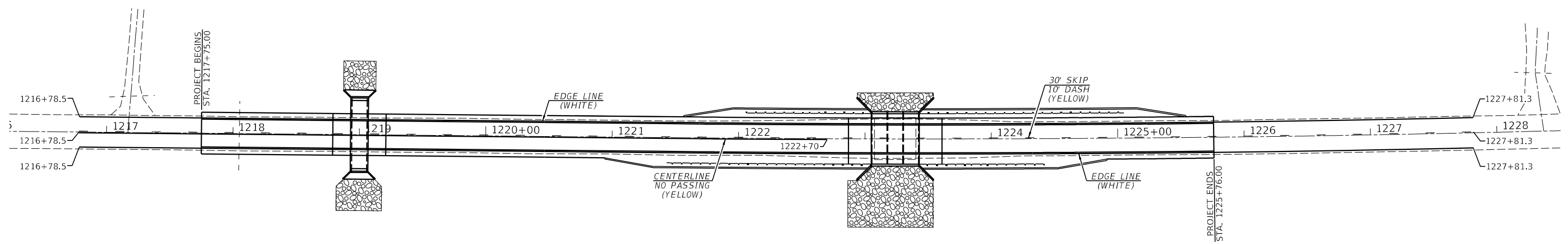
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	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT DETAILS**

SCALE: NONE    SHEET 2    OF 5    SHEETS    STA. \_\_\_\_\_    TO STA. \_\_\_\_\_

F.A.P. RTE. 821	SECTION 13B-3	COUNTY JEFFERSON	TOTAL SHEETS 78	SHEET NO. 28
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



MODEL: 34002ELNAMES  
FILE NAME: ST1E15

**VK VEENSTRA & KIMM INC.**  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

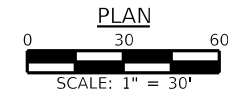
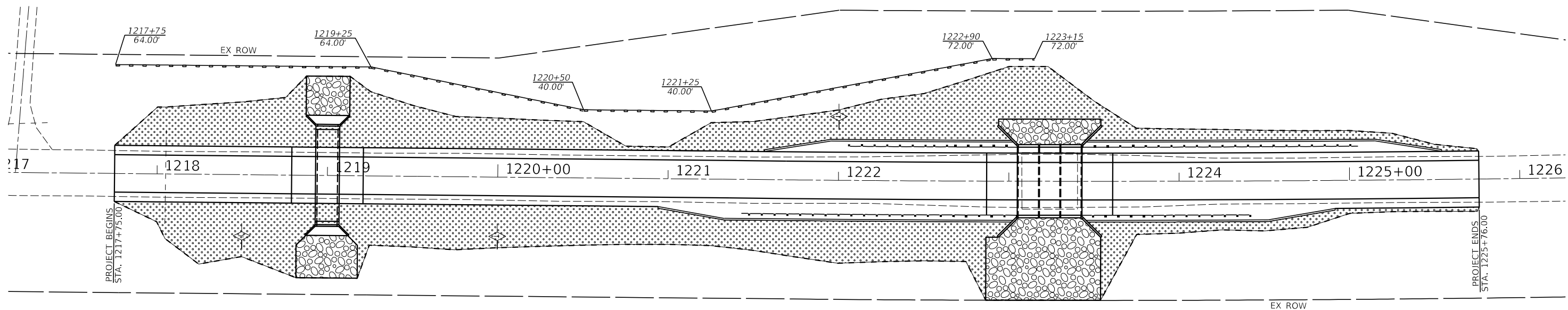
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PLOT DATE = \$DATE\$		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN**

SCALE: 1" = 40' SHEET 1 OF 1 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	29
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



MODEL: 840821NAMES  
FILE NAME: 8213

**VK VEENSTRA & KIMM INC.**  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

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PLOT SCALE = \$SCALE\$	CHECKED - _____	REVISIONS - _____
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL PLAN**

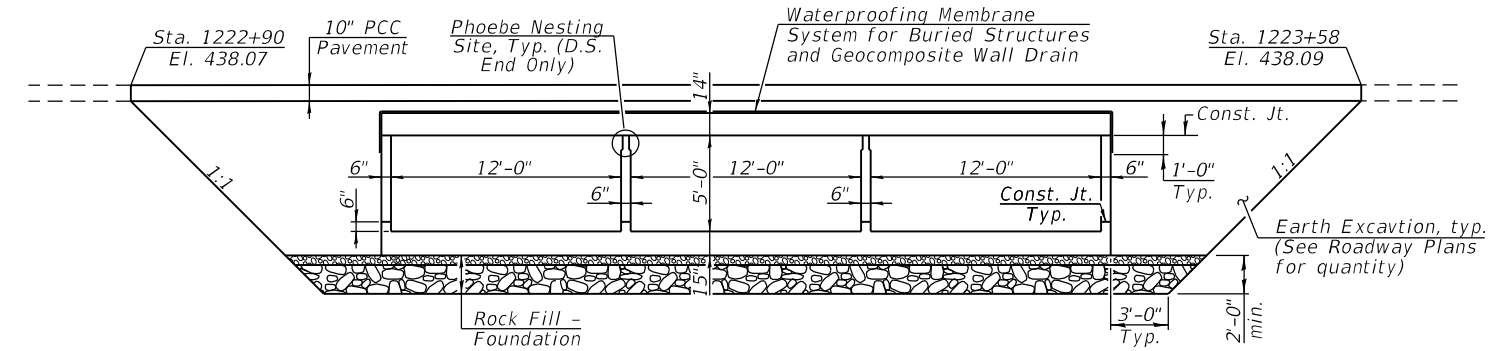
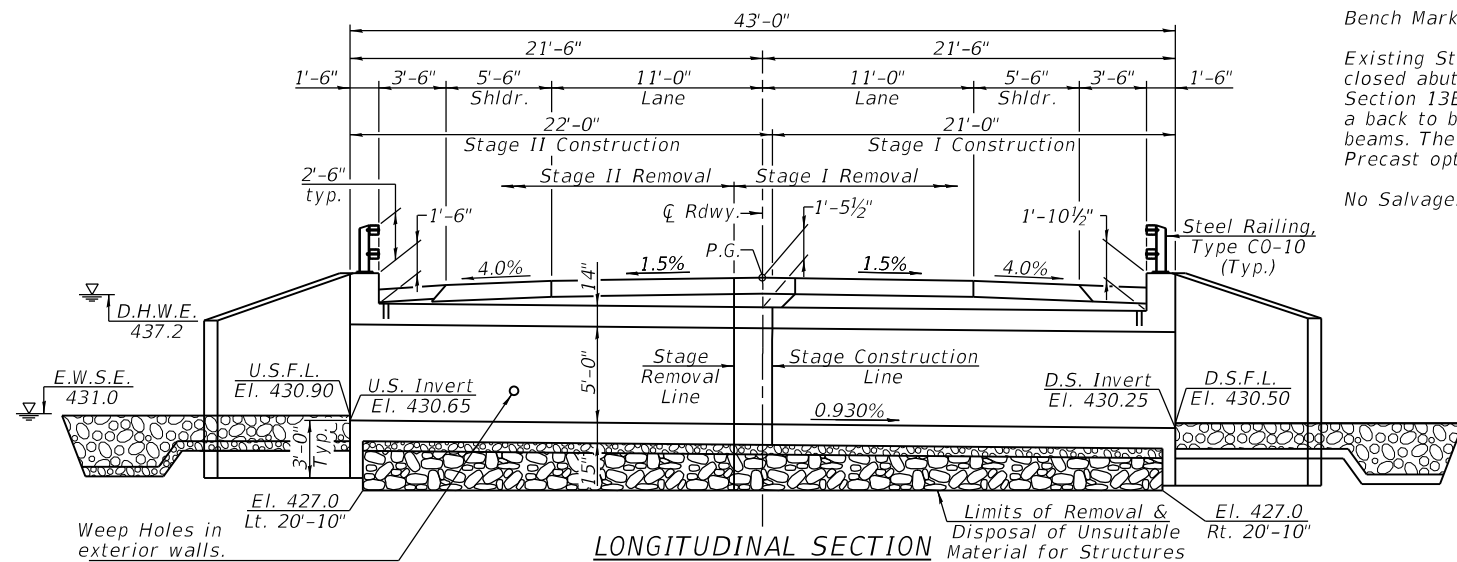
SCALE: 1" = 30'    SHEET 1    OF 1    SHEETS    STA. \_\_\_\_\_    TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	30
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

Bench Mark: BM1504 - Cut "□" on top center of south end of a 2'x3' concrete box culvert under IL Route 15. Station 1232+10, 32' Rt. Elev. 436.502

Existing Structure: Structure number 041-0024, built in 1922 under S.B.I Route 15, Section 13 at Station 1223+24 as a single span RC Thru Girder bridge on closed abutments founded on spread footings. The superstructure measured 33'-0" back to back abutment length and out to out width of 23'-0". In 1970, under Section 13BR-1, the superstructure was replaced with PPC deck beams, and the abutments were widened. The existing structure is a single span bridge having a back to back abutment length of 33'-0" and an out to out of deck width of 33'-0". The superstructure consists of 11-17"x36" precast prestressed concrete deck beams. The substructure consists of closed abutments founded on spread footings. The structure will be replaced utilizing stage construction. Precast option is not allowed.

No Salvage.



**SECTION THRU BARREL**  
 (Existing bridge foundation within the limits of the proposed construction to be removed.)

- \* Removal of the precast concrete bridge slabs at all four corners shall be included in the cost of Removal of Existing Structures
- \*\* 1:2 Sideslopes at the structure will transition to 1:4 sideslopes going away from the structure. See Roadway Plans.

**INDEX OF SHEETS**

- 1 - General Plan & Elevation
- 2 - General Data
- 3 - Stage Construction Details
- 4 - Temporary Concrete Barrier
- 5 - Culvert Plan
- 6-7 - Culvert Details
- 8 - Steel Railing, Type C0-10
- 9 - Bar Splicer Assembly and Mechanical Splicer Details
- 10-11 - Boring Logs

**LOADING HL-93**

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

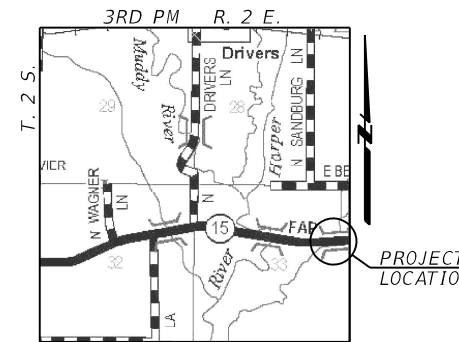
**DESIGN SPECIFICATIONS**

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

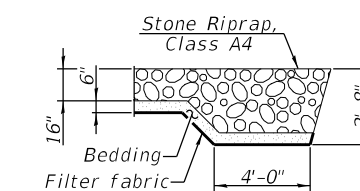
**DESIGN STRESSES**

**FIELD UNITS**

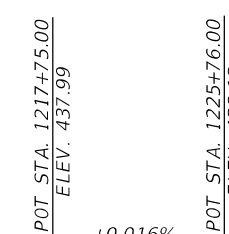
$f'_c = 3,500$  psi  
 $f'_c = 4,500$  psi (Top Slab & Headwalls)  
 $f_y = 60,000$  psi (Reinforcement)



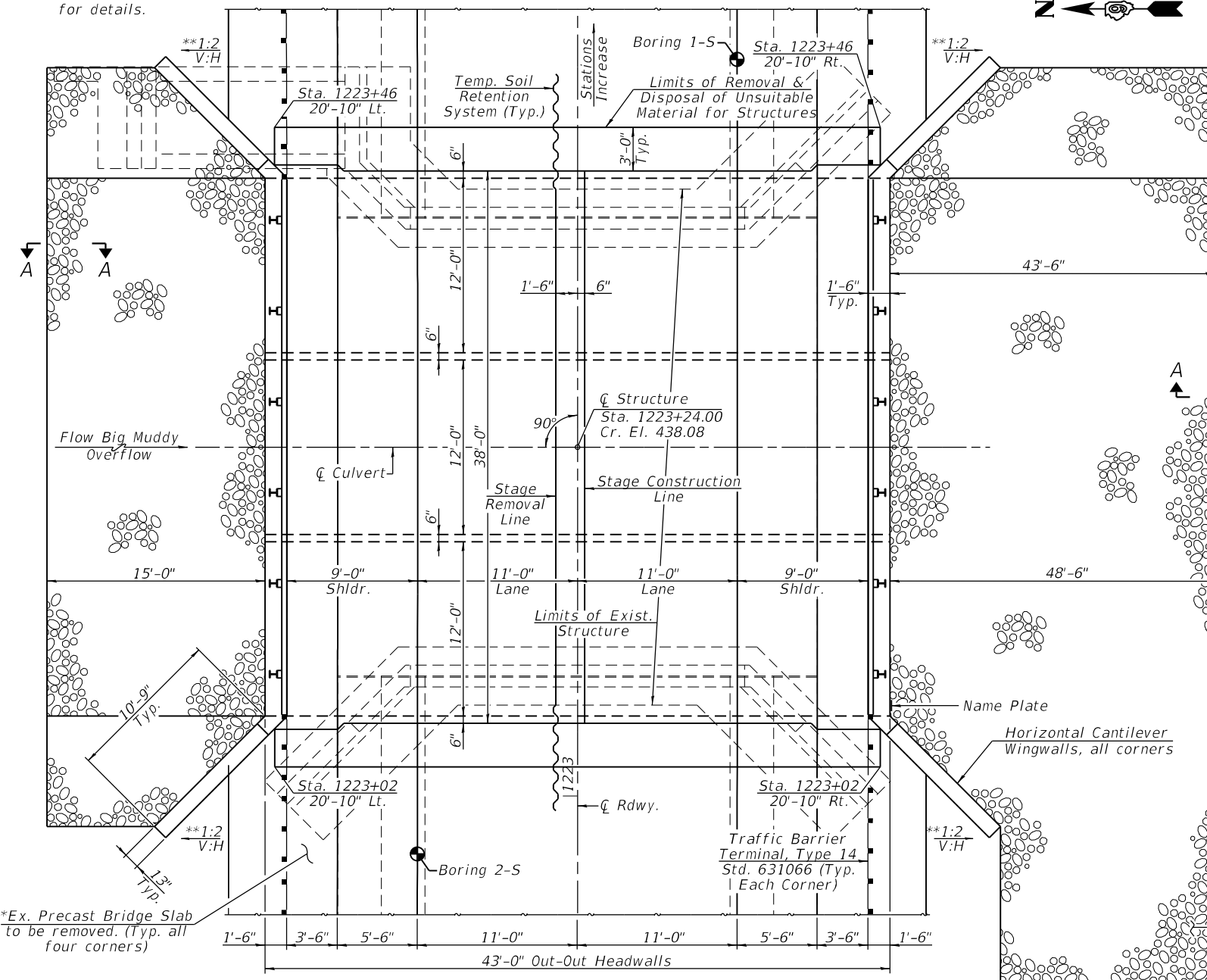
**LOCATION MAP**



**SECTION A-A**



**PROFILE GRADE**  
 (Along  $\bar{C}$  IL Route 15)



**PLAN**



*Dewey H. Coultas*  
 Expires: 11/30/2024  
 Date: 4/17/2024

**APPROVED**  
 For Structural Adequacy Only  
*Jan F. Schell*  
 Engineer of Bridges & Structures

**GENERAL PLAN & ELEVATION**  
**IL. ROUTE 15 OVER**  
**BIG MUDDY OVERFLOW**  
**F.A.P. RTE 821 - SECTION 13B-3**  
**JEFFERSON COUNTY**  
**STATION 1223+24**  
**STRUCTURE NO. 041-2024**

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION**  
**STRUCTURE NO. 041-2024**

SHEET 1 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	31
CONTRACT NO. 78911				

ILLINOIS FED. AID PROJECT

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**VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL. Design Firm No. 184-001939

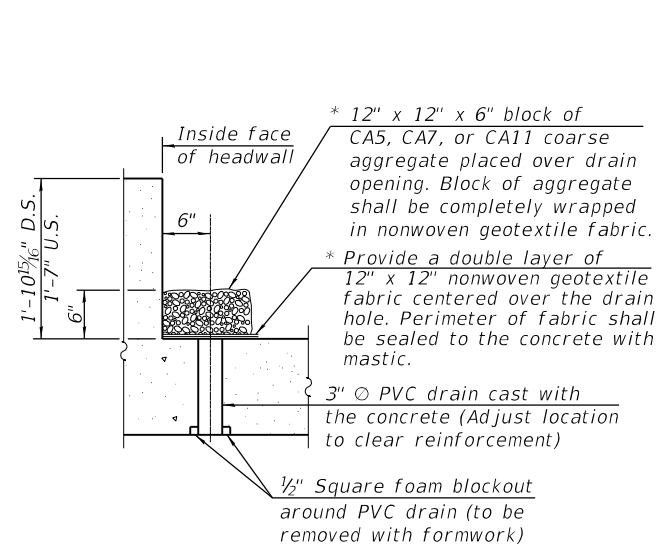
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---	KES	---
---	DHC	---
---	JRP	---
---	KES	---

**TOTAL BILL OF MATERIAL**

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	200
Stone Riprap, Class A4	Sq. Yd.	419
Filter Fabric	Sq. Yd.	419
Removal of Existing Structures	Each	1
Removal & Disposal of Unsuitable Material for Structures	Cu. Yd.	142
Reinforcement Bars, Epoxy Coated	Pound	27,790
Bar Splicers	Each	198
Steel Railing, Type C0-10	Foot	78
Name Plates	Each	1
Temporary Soil Retention System	Sq. Ft.	323
Concrete Box Culverts	Cu. Yd.	193.4
Geocomposite Wall Drain	Sq. Yd.	190
Waterproofing Membrane System for Buried Structures	Sq. Yd.	190
Rock Fill - Foundation	Ton	214

**GENERAL NOTES**

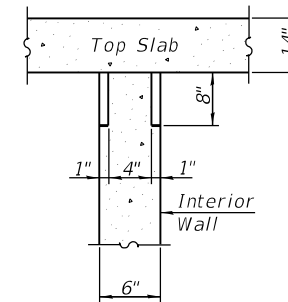
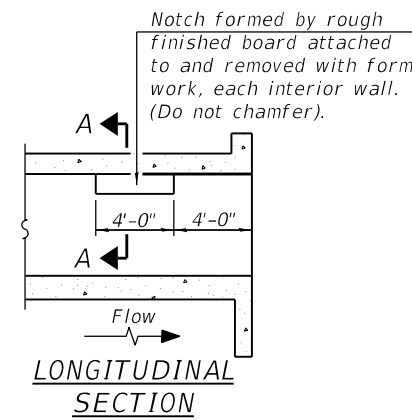
Reinforcement bars designated (E) shall be epoxy coated.  
 Weep holes shall be provided on exterior culvert walls with a clear rise greater than 3 feet and one in each of the wingwalls. The weep holes shall be located within 1/2 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.  
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
 At least 6'-0" of the barrel shall be poured monolithically with the wingwalls.  
 Precast alternate is not allowed.  
 Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing existing superstructure. The contractor shall saw out the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.  
 The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field. The minimum Unconfined Compressive Strength of the layer below the removal limit shall be 1.0 tsf.



**DRAIN DETAIL**

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

\* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



**SECTION A-A**

**PHOEBE NESTING**

**SITE DETAILS**  
 (Downstream End Only)

**WATERWAY INFORMATION**

Flood Event		Discharge C.F.S.		Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	Main Channel	1097	822	135	180	436.9	2.1	0.5	439.0	437.4
	Relief Structure		275		48	436.9		0.5		437.4
	TOTAL	1097	1097		228					
50	Main Channel	1526	1161	135	180	437.2	1.2	1.1	438.4	438.3
	Relief Structure		365		48	437.2		1.1		438.3
	TOTAL	1526	1526		228					
100	Main Channel	1727	1331	135	180	437.3	1.1	1.0	438.4	438.3
	Relief Structure		396		48	437.3		1.0		438.3
	TOTAL	1727	1727		228					
200	Main Channel	1900	1452	135	180	437.4	1.1	1.0	438.5	438.4
	Relief Structure		448		48	437.4		1.0		438.4
	TOTAL	1900	1900		228					
Existing Overtopping	Main Channel	750	649	135	180	436.7	1.9	0.7	438.6	437.4
	Relief Structure		101		48	436.7		0.7		437.4
	TOTAL	750	750		228					
Proposed Overtopping	Main Channel	1140	854	135	180	437.0	2.2	1.1	439.2	438.1
	Relief Structure		286		48	437.0		1.1		438.1
	TOTAL	1140	1140		228					
500	Main Channel	2135	1644	135	180	437.5	1.0	1.0	438.5	438.5
	Relief Structure		491		48	437.5		1.0		438.5
	TOTAL	2135	2135		228					

10 Yr. Outlet Velocity through Exist. Main Structure = 0.7 ft/s  
 10 Yr. Outlet Velocity through Prop. Main Structure = 6.0 ft/s  
 10 Yr. Outlet Velocity through Prop. Relief Structure = 3.0 ft/s

STA. 1223+24.00  
 BUILT 20 BY  
 STATE OF ILLINOIS  
 F.A.P. ROUTE 821  
 SECTION 13B-3  
 LOADING HL 93  
 STR. NO. 041-2024

**NAME PLATE**  
 (Standard 515001)

MODEL: 78911-033  
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 IL. Design Firm No. 184-001939

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PLOT DATE =	CHECKED - KES	REVISED -

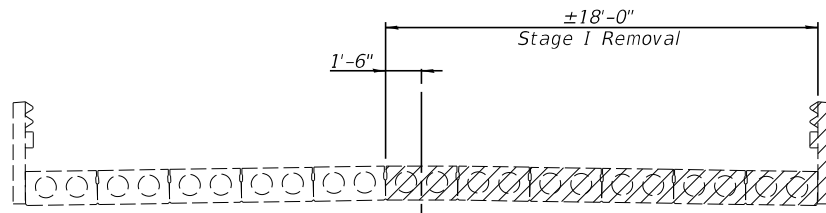
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA**  
**STRUCTURE NO. 041-2024**

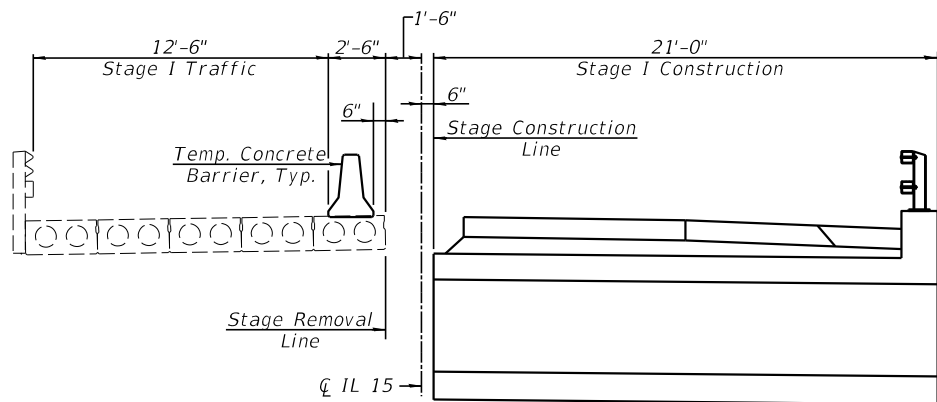
SHEET 2 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	32
			CONTRACT NO. 78911	
		ILLINOIS	FED. AID PROJECT	

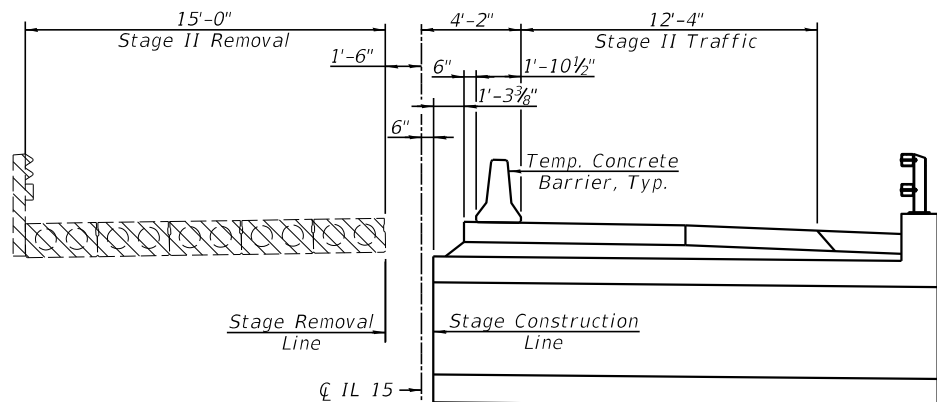




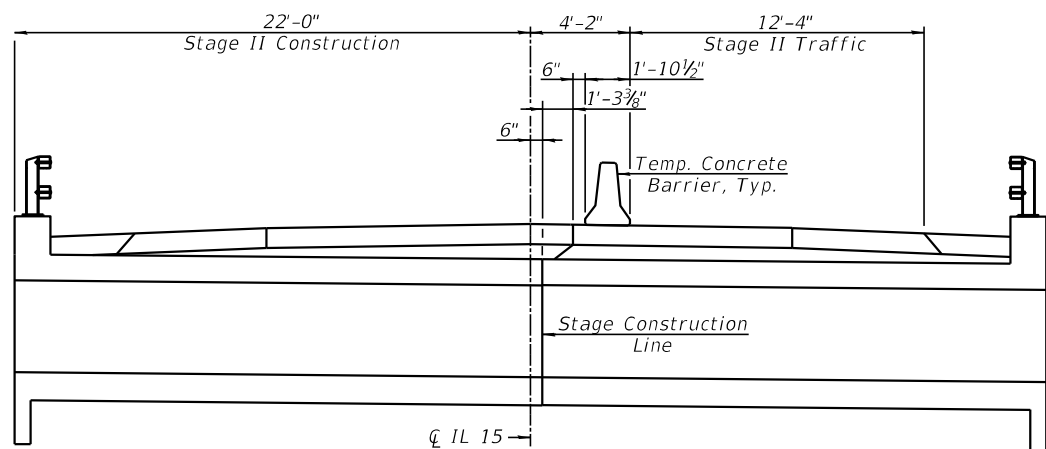
**STAGE I REMOVAL**



**STAGE I CONSTRUCTION**



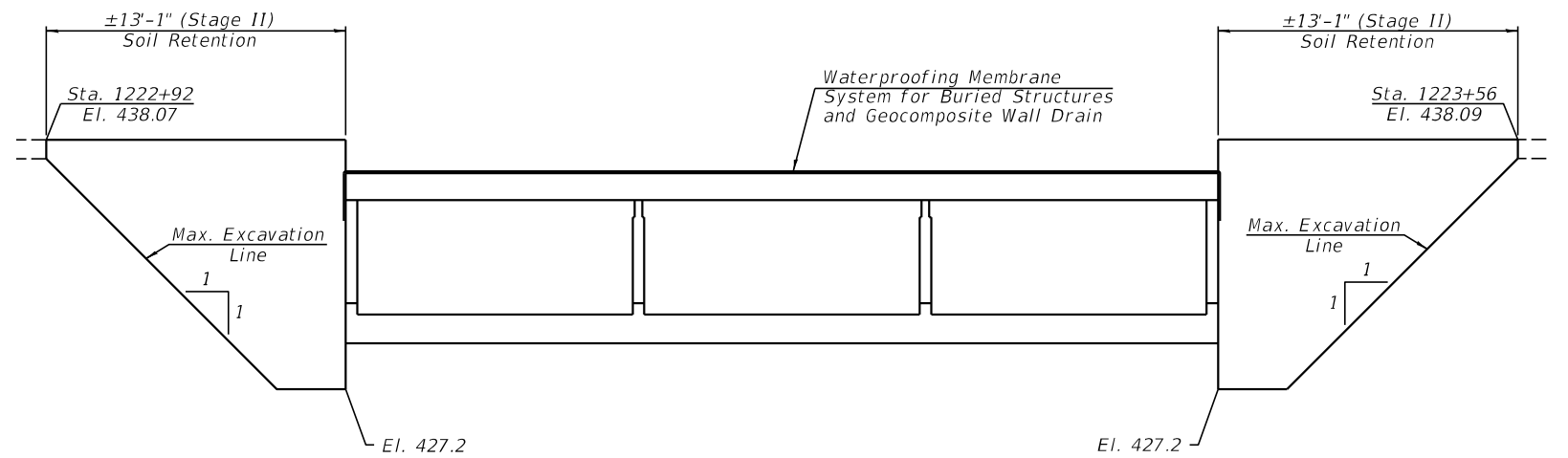
**STAGE II REMOVAL**



**STAGE II CONSTRUCTION**



**TEMPORARY SOIL RETENTION SYSTEM**  
(Looking Upstream)



**TEMPORARY SOIL RETENTION SYSTEM**  
(Looking Upstream)

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Note: Hatched areas indicate removal of existing structure.  
See roadway plans for quantity of Temporary Concrete Barrier.

MODEL: SMODELNAMES  
FILE NAME: SFILES

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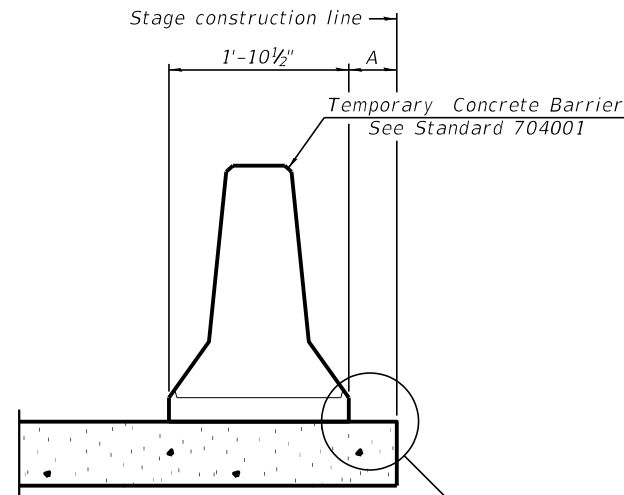
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS**  
**STRUCTURE NO. 041-2024**

SHEET 3 OF 11 SHEETS

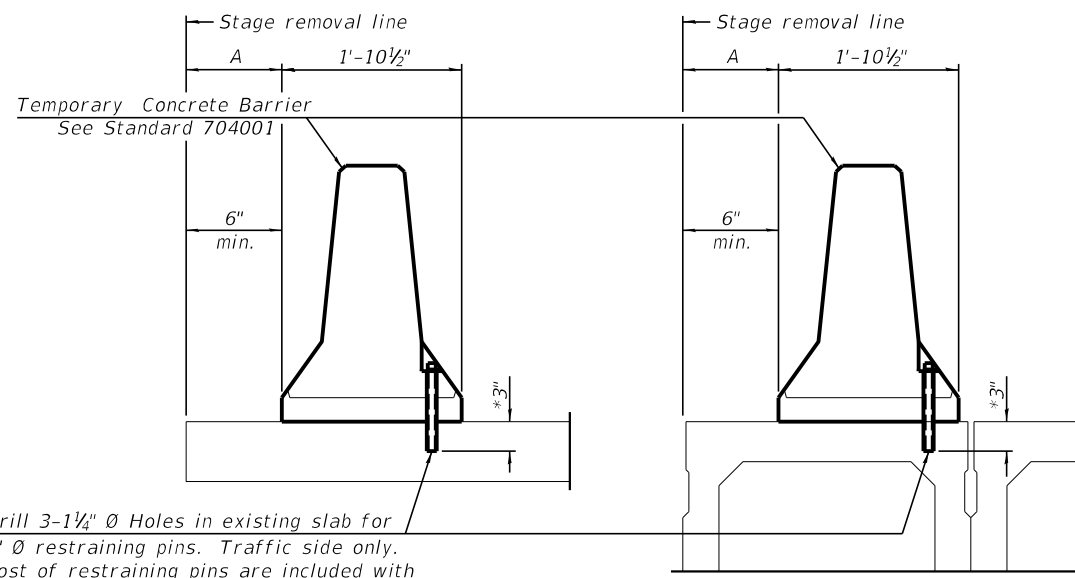
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	33
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

SDATES STIMES



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

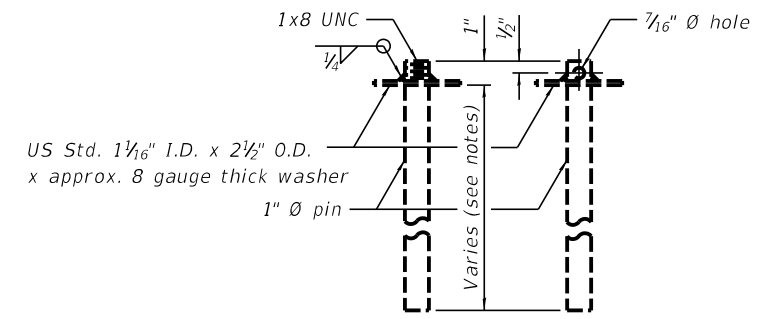


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

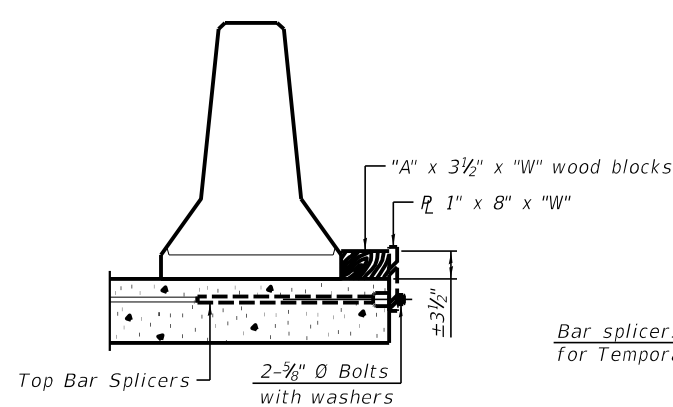
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

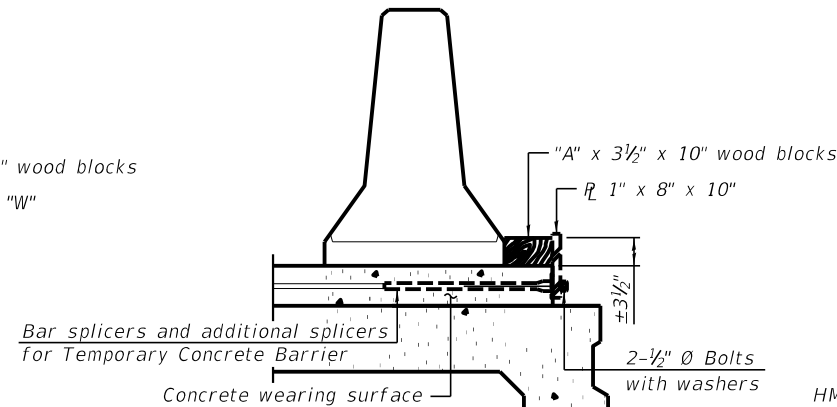


RESTRAINING PIN

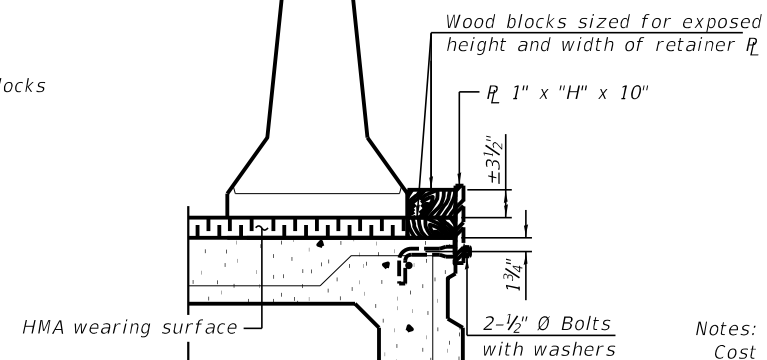
SECTIONS THRU SLAB OR DECK BEAM



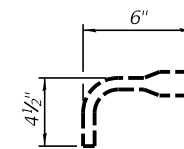
DETAIL I



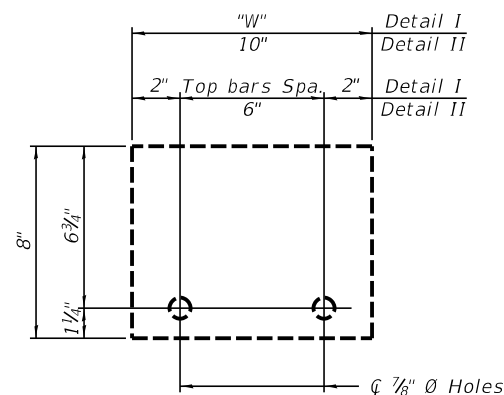
DETAIL II



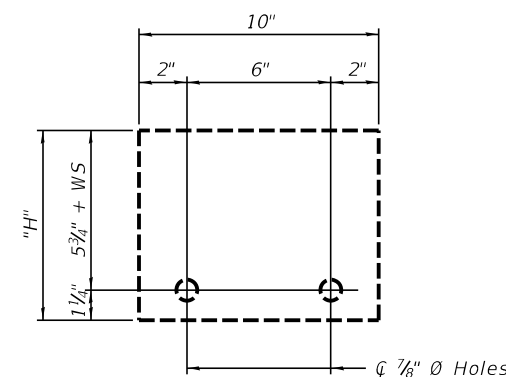
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W" (Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)

Notes:  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate C of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.  
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	1	3
Railing Weight (plf)	440	

R-27 5-15-2023

MODEL: SMODELNAMES  
 FILE NAME: SFILES

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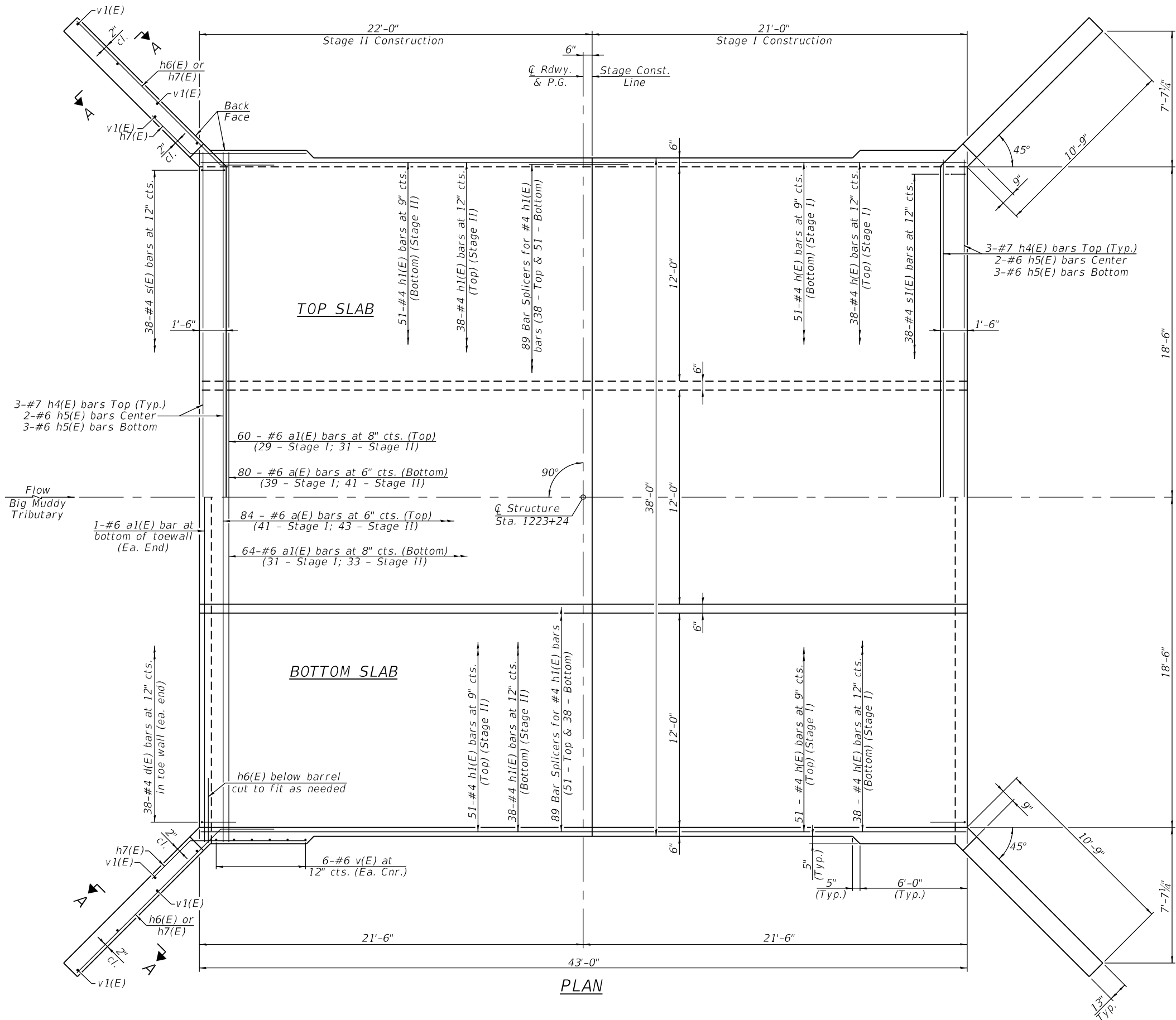
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER  
 STRUCTURE NO. 041-2024

SHEET 4 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	34
CONTRACT NO. 78911				

ILLINOIS FED. AID PROJECT



**MIN. BAR LAPS**

#4 bars = 1'-10"  
#6 bars = 3'-10"

At least 6'-0" of the barrel shall be poured monolithically with the wingwalls. See Sheet 6 of 11 for Section A-A.

**PLAN**

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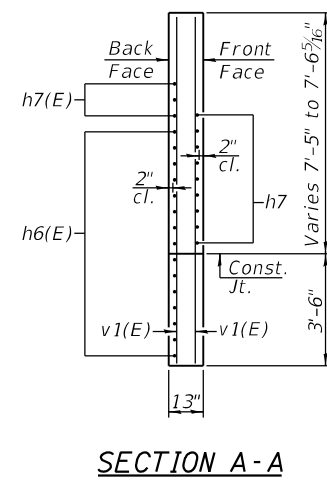
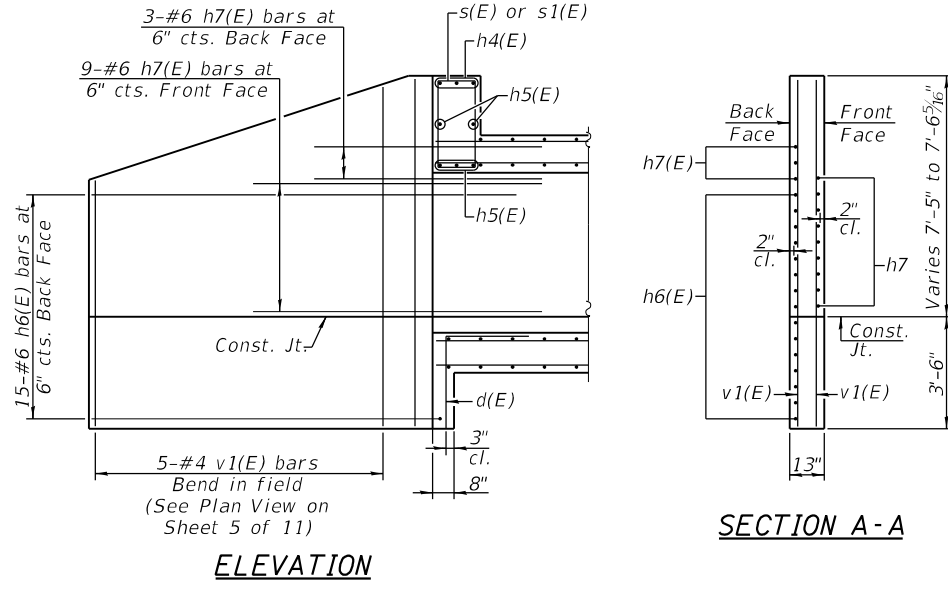
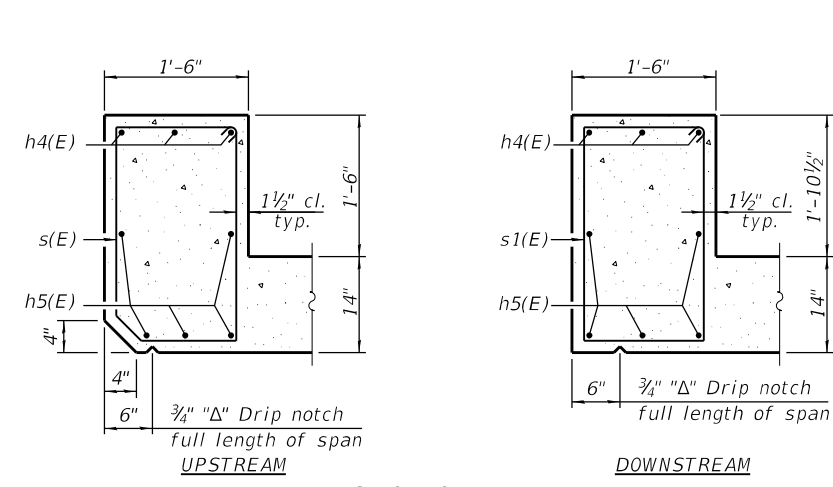
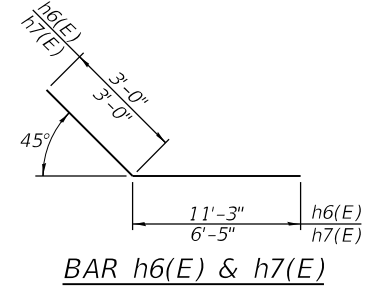
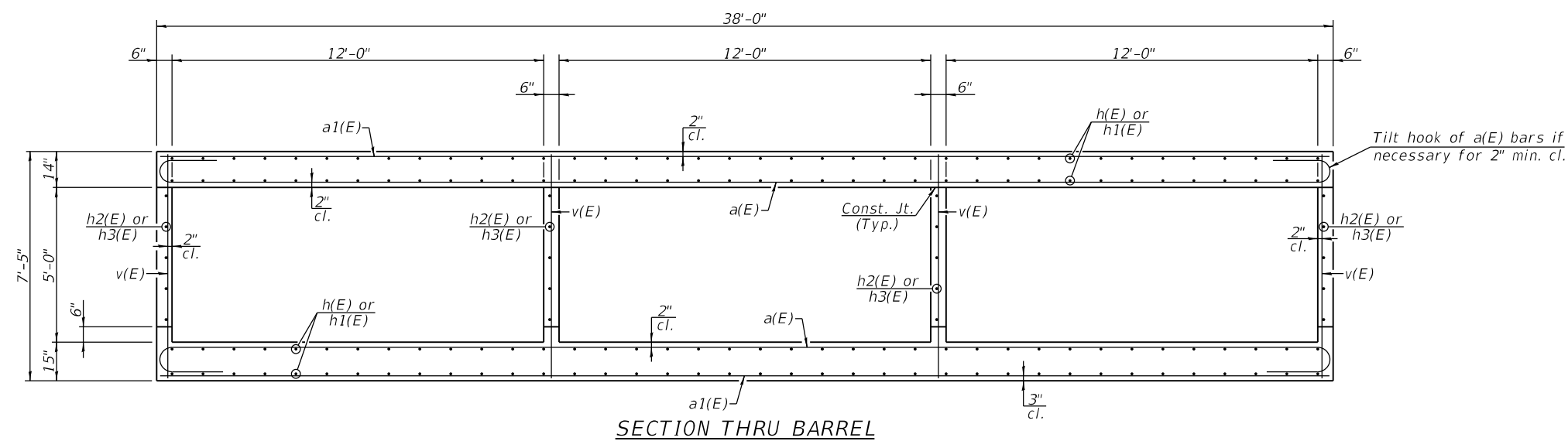
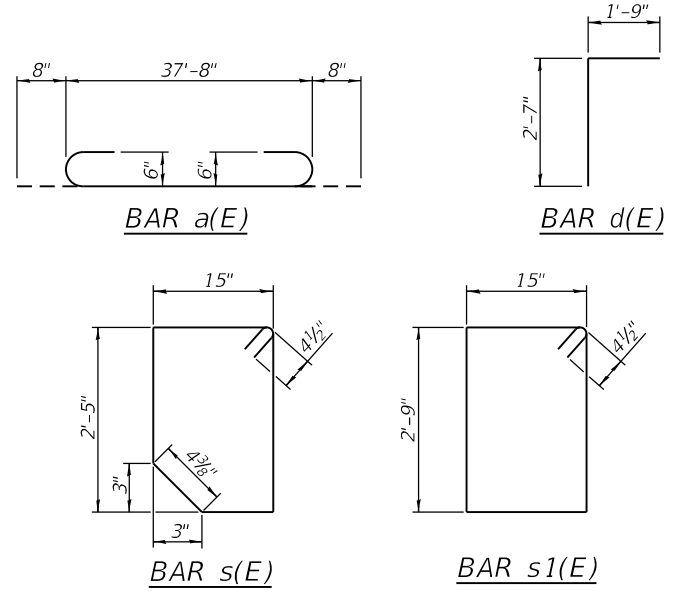
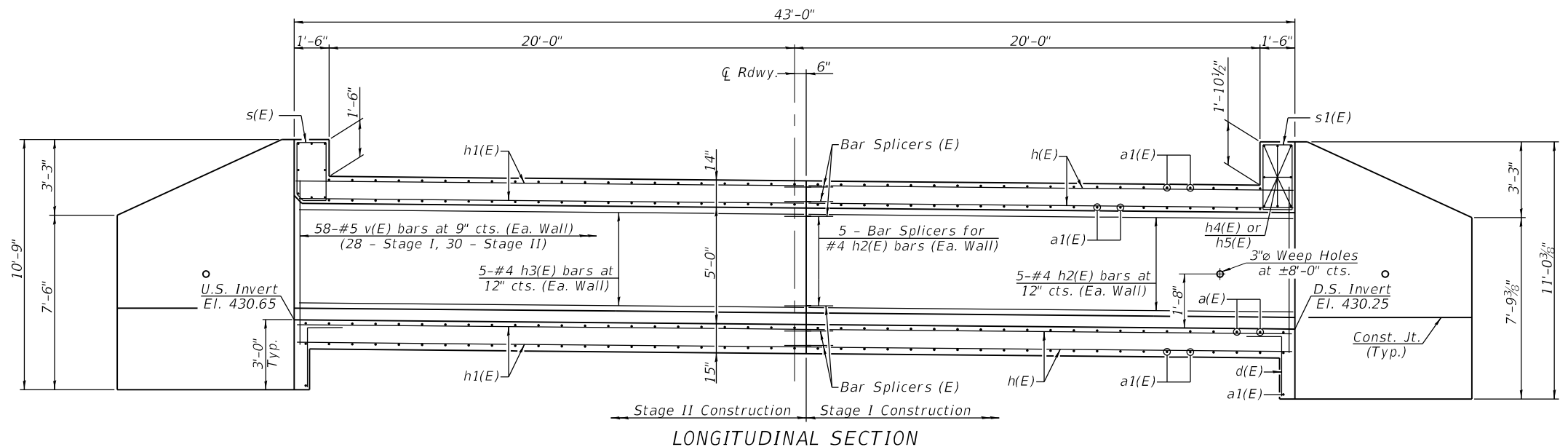
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CULVERT PLAN  
STRUCTURE NO. 041-2024**

SHEET 5 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	35
CONTRACT NO. 78911				

ILLINOIS FED. AID PROJECT



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	164	#6	39'-0"	
a1(E)	126	#6	37'-8"	
d(E)	76	#4	4'-4"	
h(E)	178	#4	20'-8"	
h1(E)	178	#4	21'-8"	
h2(E)	20	#4	20'-8"	
h3(E)	20	#4	21'-8"	
h4(E)	6	#7	36'-11"	
h5(E)	10	#6	36'-11"	
h6(E)	60	#6	14'-3"	
h7(E)	48	#6	9'-5"	
s(E)	38	#4	8'-0"	
s1(E)	38	#4	8'-9"	
v(E)	232	#5	7'-0"	
v1(E)	20	#4	10'-6"	
Concrete Box Culverts			Cu. Yd.	193.4
Reinforcement Bars, Epoxy Coated			Pound	27,790

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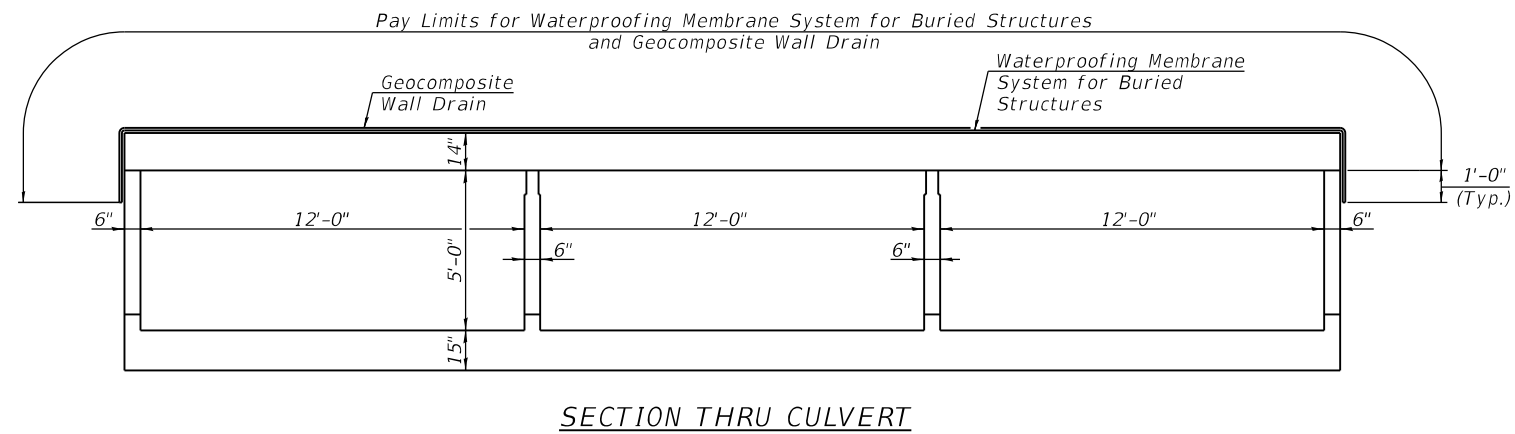
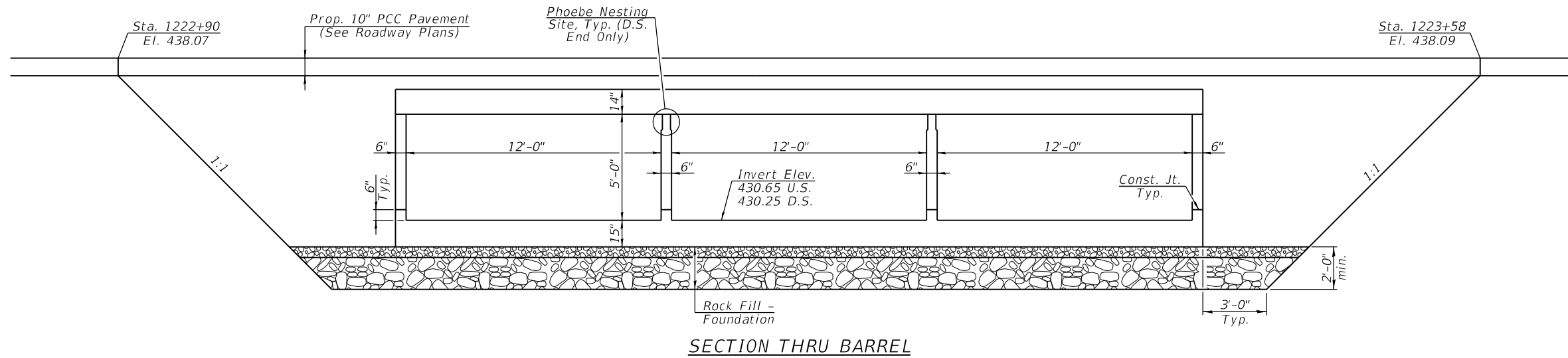
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS  
STRUCTURE NO. 041-2024**

SHEET 6 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	36
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



**NOTES**

The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.

The Rock Fill shall be capped with 6 inches of CA-6 and satisfy the Standard Specifications unless otherwise indicated in the Special Provisions. The cost of capping material shall be included in the pay item for Rock Fill - Foundation.

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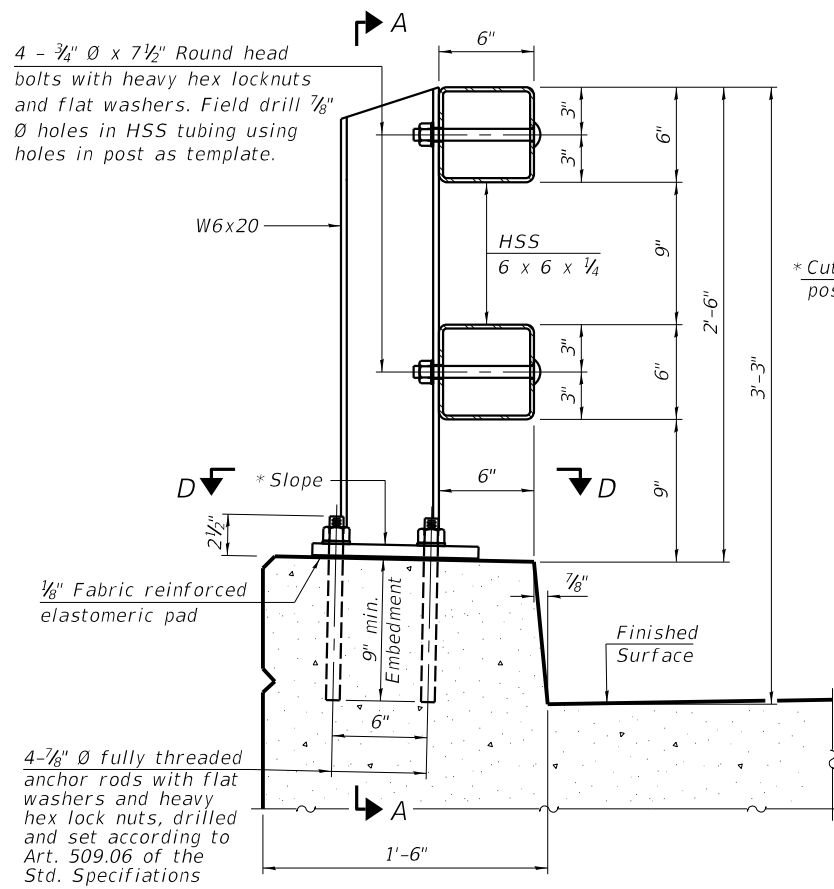
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**STATE OF ILLINOIS  
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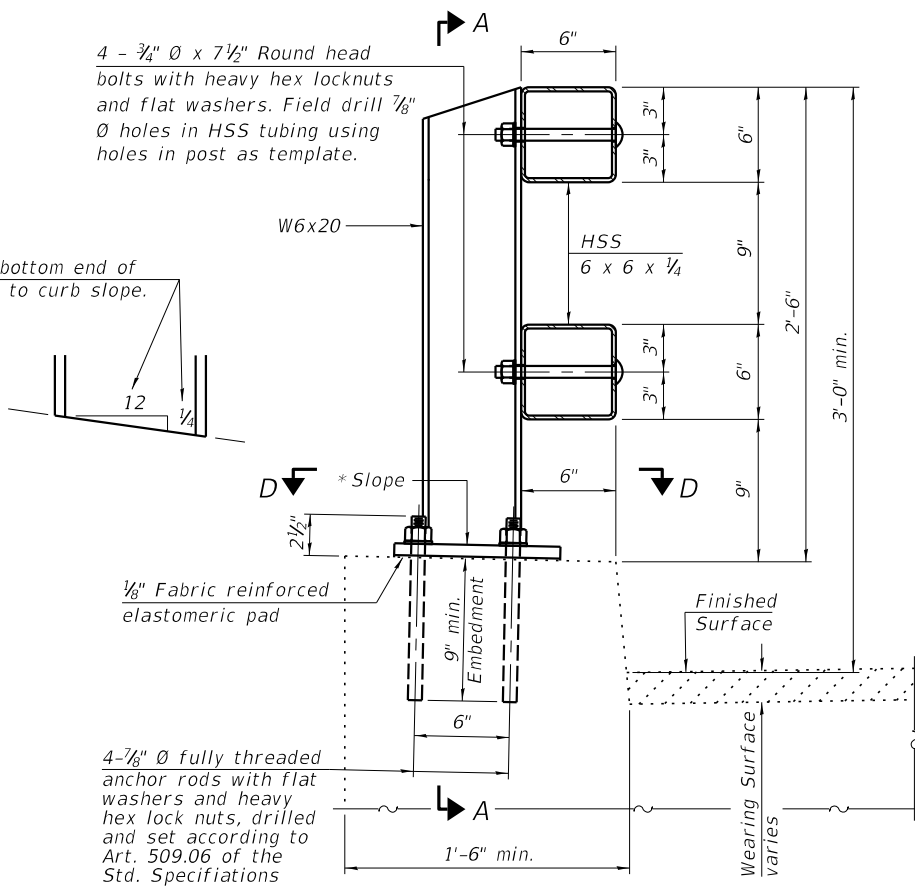
**CULVERT DETAILS  
 STRUCTURE NO. 041-2024**

SHEET 7 OF 11 SHEETS

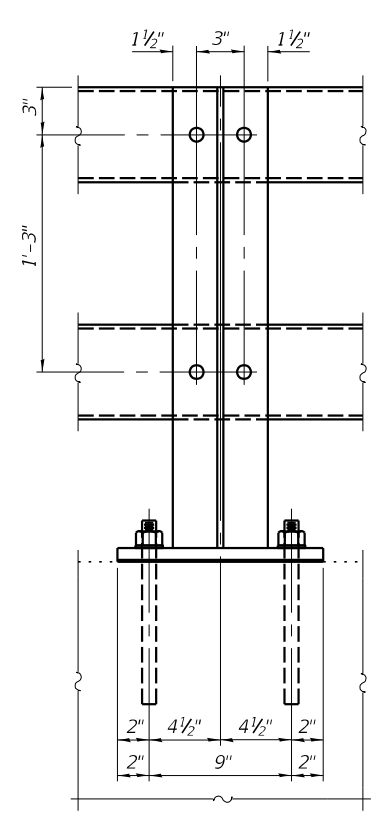
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	37
			CONTRACT NO. 78911	
		ILLINOIS FED. AID PROJECT		



**SECTION AT RAIL POST**  
(New construction)

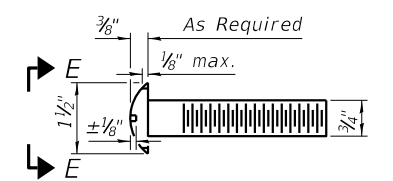


**SECTION AT RAIL POST**  
(Retrofit construction)

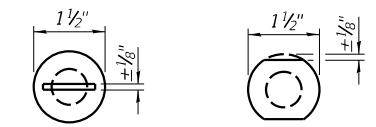


**SECTION A-A**

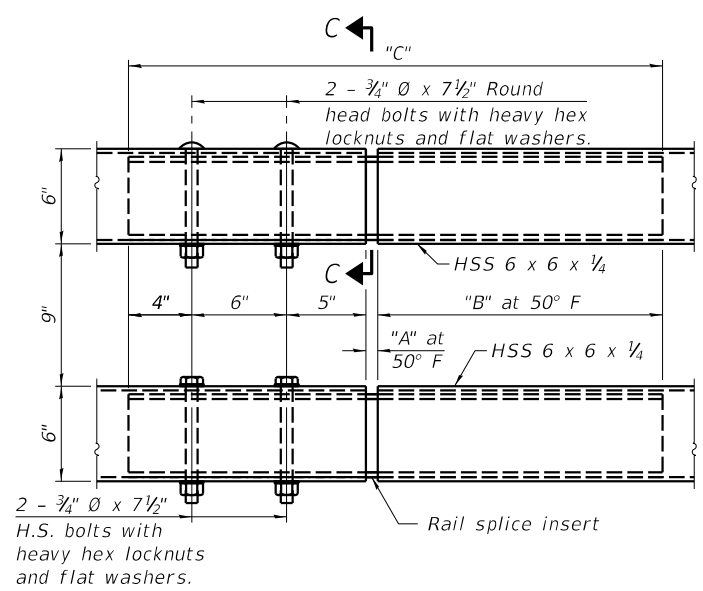
**Notes:**  
 All HSS tubing shall be ASTM A500 grade C.  
 All plates shall be AASHTO M270 grade 50.  
 All heavy hex nuts shall be according to ASTM A563 grade DH.  
 All fully threaded anchor rods shall be ASTM F1554 grade 105.  
 The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.  
 Posts shall not be located closer than 2'-6" to a bridge expansion joint.  
 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.  
 All HSS tubing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.  
 Rail splice inserts may be built out of 2 - 3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.  
 All round head bolts shall be ASTM A449.  
 The centerline of rail splices shall be placed between 1'-8" to 2'-6" from the centerline of the posts. The free end of the splice tube shall be oriented away from the closest post.



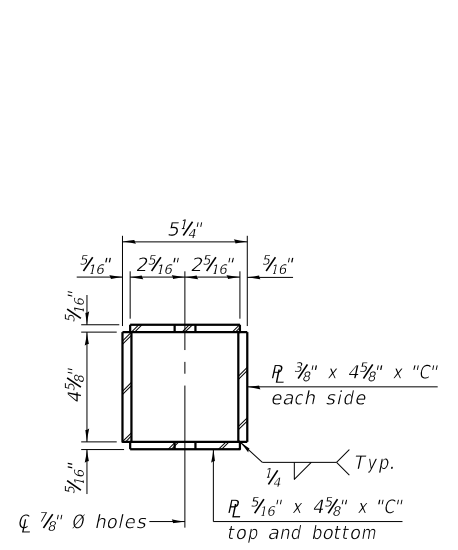
**ROUND HEAD BOLT DETAIL**



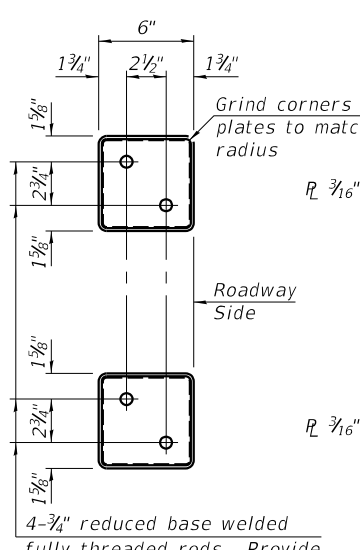
**VIEW E-E**  
With Slot (shown) or Without Slot or Recess



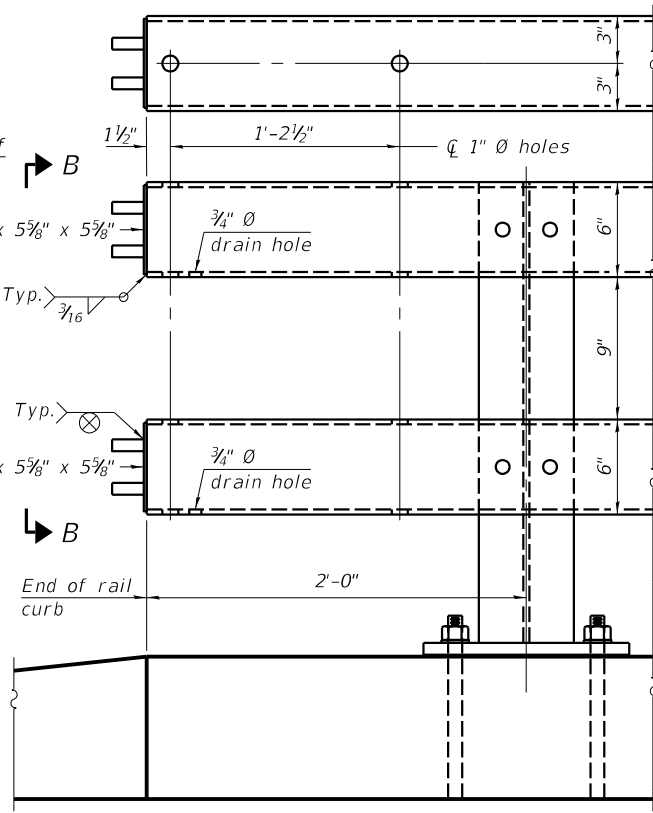
**TOP AND BOTTOM RAIL SPLICE ELEVATION**



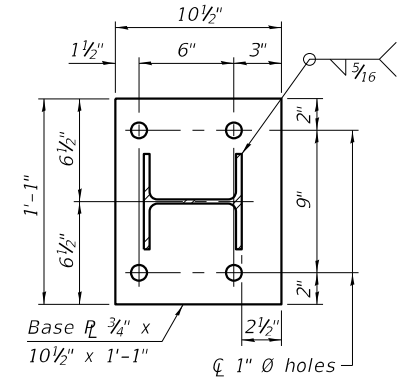
**SECTION C-C**



**VIEW B-B**



**END OF RAIL DETAILS**



**SECTION D-D**

**SPLICE DIMENSIONS**

Location	T	A	B	C
All locs. not over exp. jts.	0	1/2"	1'-6"	2'-9 1/2"
Over Strip Seal Jt.	≤4"	2 1/2"	1'-8"	3'-1 1/2"
Over Finger or Modular Jt.	≤9 1/2"	5 1/2"	1'-10 3/4"	3'-7 1/4"
Over Finger or Modular Jt.	≤15"	8 1/4"	2'-1 1/2"	4'-0 3/4"

T = ; total movement along centerline of roadway at expansion joint.

**RAILING CRITERIA**

MASH 2016 Test Level	4
Railing Weight (plf)	75
Min f'c (psi)	4,500
Post Spacing Range	6'-8" - 10'-0"

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type CO-10	Foot	78

MODEL: SMODELNAMES  
FILE NAME: SFILES

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 IL. Design Firm No. 184-001939

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PLOT SCALE =	CHECKED - DHC	REVISD -
PLOT DATE =	DRAWN - JRP	REVISD -
	CHECKED - KES	REVISD -

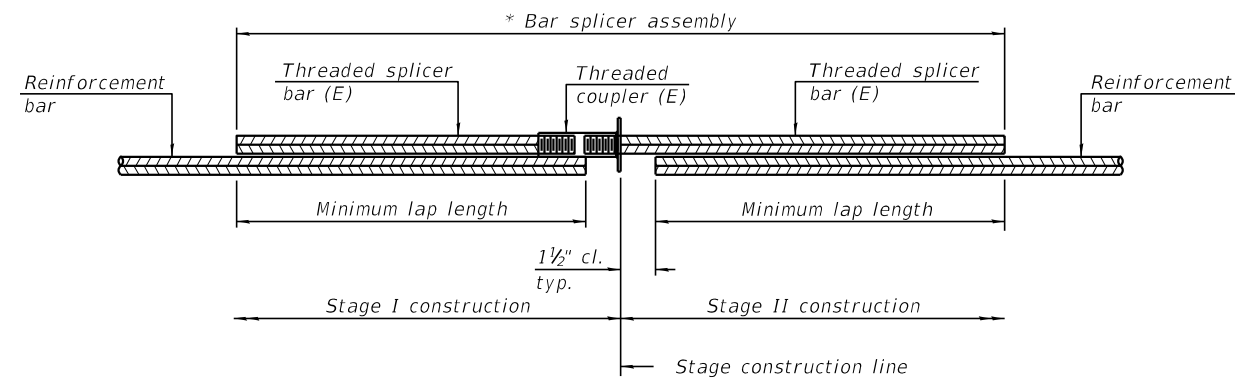
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE CO-10**  
**STRUCTURE NO. 041-2024**

SHEET 8 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	38
CONTRACT NO. 78911				

ILLINOIS FED. AID PROJECT



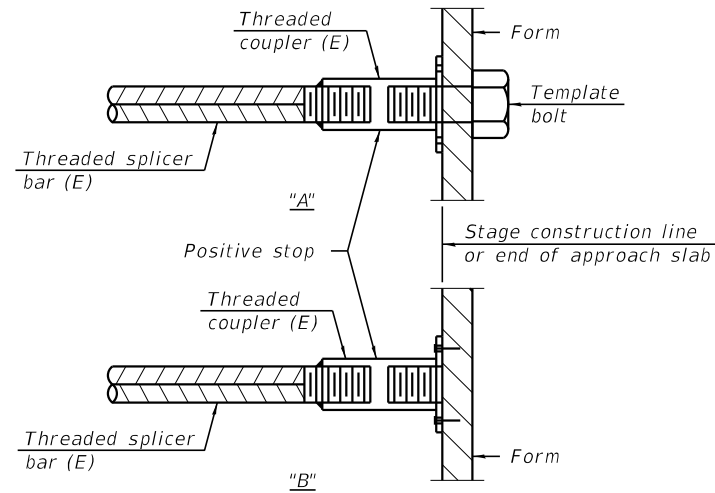
**STANDARD BAR SPLICER ASSEMBLY PLAN**

Only bar splicer assemblies as presented on the approved QPL list may be used.

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
Top Slab	#4	89	2'-7"
Bottom Slab	#4	89	2'-7"
Interior Wall	#4	10	2'-7"
Exterior Wall	#4	10	2'-7"

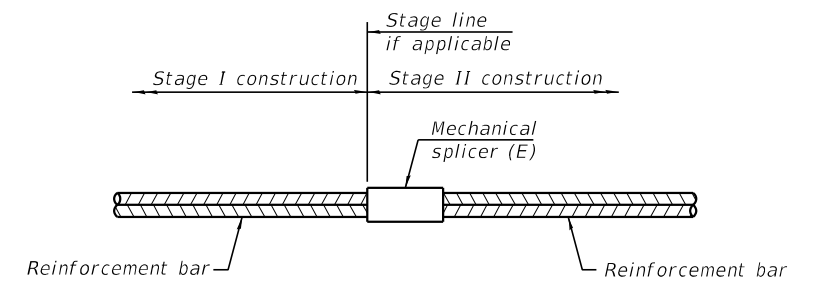


**INSTALLATION AND SETTING METHODS**

"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

**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.

MODEL: SMODELNAMES  
FILE NAME: SFILES

BSD-1

2-1-2023

**VEENSTRA & KIMM INC.**  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 041-2024**

SHEET 9 OF 11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	39
CONTRACT NO. 78911				

ILLINOIS FED. AID PROJECT

SDATES STIMES



SOIL BORING LOG

Date 5/10/22

ROUTE IL 15 DESCRIPTION IL 15 over Big Muddy Overflow LOGGED BY L Estel
SECTION 13B-3 LOCATION 9 miles E of Washington Co. Line (Near E. Abut.), SEC. 33, TWP. 2S, RNG. 2E, PM
COUNTY Jefferson DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto SPT 140 lb (HE=86.5%)

Table with columns for Depth (ft), Blows (B), Penetration (P), and Soil Description. Includes data for Surface Water Elev., Stream Bed Elev., and various soil layers like Stiff Grey, Moist SILT and V. Soft Grey, V. Moist SILT.

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) BES, from 137 (Rev. 8-99)



SOIL BORING LOG

Date 5/10/22

ROUTE IL 15 DESCRIPTION IL 15 over Big Muddy Overflow LOGGED BY L Estel
SECTION 13B-3 LOCATION 9 miles E of Washington Co. Line (Near E. Abut.), SEC. 33, TWP. 2S, RNG. 2E, PM
COUNTY Jefferson DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto SPT 140 lb (HE=86.5%)

Table with columns for Depth (ft), Blows (B), Penetration (P), and Soil Description. Includes data for Surface Water Elev., Stream Bed Elev., and various soil layers like M. Stiff Grey, Moist SILTY CLAY and Hard Grey, Dry CLAY SHALE.

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, from 117 (Rev. 8-99)



ROCK CORE LOG

Date 5/10/22

ROUTE IL 15 DESCRIPTION IL 15 over Big Muddy Overflow LOGGED BY L Estel
SECTION 13B-3 LOCATION 9 miles E of Washington Co. Line (Near E. Abut.), SEC. 33, TWP. 2S, RNG. 2E, PM
COUNTY Jefferson CORING METHOD Conventional rotary with polymer modified water

Table with columns for Depth (ft), Core Diameter (in), and Rock Core Description. Includes data for Hard Grey, Dry CLAY SHALE and Bottom of hole @ 54.75 ft.

Color pictures of the cores Yes, attached
Cores will be stored for examination until 5 Years after Construction
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)

MODEL: SMODELNAMES
FILE NAME: SFILES



Table with columns for USER NAME, DESIGNED, REVISIONS, PLOT SCALE, and PLOT DATE.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 041-2024
SHEET 10 OF 11 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., and CONTRACT NO.



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 File Name: S:\MATERIALS\GEO\15\15024\15024-11 OVER BIG MUDDY OVERFLOW\041-0024 IL 15 OVER BIG MUDDY OVERFLOW.DWG Date Printed: 5/11/22

**SOIL BORING LOG**

ROUTE IL 15 DESCRIPTION IL 15 over Big Muddy Overflow LOGGED BY L. Estel  
 SECTION 13B-3 LOCATION 9 miles E. of Washington Co. Line (Near W. Abut.), SEC. 33, TWP. 2S, RNG. 2E, PM  
 COUNTY Jefferson DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE up to SPT 140 lb (HE=86.5%)

STRUCT. NO. Station	BORING NO. Station	Ground Surface Elev.	D (ft)	B (tsf)	U (%)	M (%)	Surface Water Elev.		D (ft)		B (tsf)	U (%)	M (%)
							ft	ft	ft	ft			
041-0024 223+24	2-S 1222+96	437.9					430.6	418.4					
Cored Pavement													
Soft Brown and Tan, Moist SILTY CLAY													
V. Soft Brown and Tan, V. Moist SILTY CLAY													
M. Stiff Grey, Moist SILT 80% Fines <#200, LL 26, PI 7 (Estimated based on visual ID and historical database)													
Stiff Grey with specks of Brown, Moist SILTY CLAY													
Soft Grey and Brown, Moist SILTY CLAY													
M. Stiff Brown and Grey, Moist SILTY CLAY (continued)													
Stiff Brown and Grey, Moist SILTY CLAY													
Soft Brown and Grey, Moist SILTY CLAY													
Stiff Grey, Moist CLAY - CLAY TILL with GRAVEL													
V. Stiff Grey, Moist CLAY - CLAY TILL													

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, from 137 (Rev. 8-99)

File Name: S:\MATERIALS\GEO\15\15024\15024-11 OVER BIG MUDDY OVERFLOW\041-0024 IL 15 OVER BIG MUDDY OVERFLOW.DWG Date Printed: 5/11/22  
 File Name: S:\MATERIALS\GEO\15\15024\15024-11 OVER BIG MUDDY OVERFLOW\041-0024 IL 15 OVER BIG MUDDY OVERFLOW.DWG Date Printed: 5/11/22

**SOIL BORING LOG**

ROUTE IL 15 DESCRIPTION IL 15 over Big Muddy Overflow LOGGED BY L. Estel  
 SECTION 13B-3 LOCATION 9 miles E. of Washington Co. Line (Near W. Abut.), SEC. 33, TWP. 2S, RNG. 2E, PM  
 COUNTY Jefferson DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE up to SPT 140 lb (HE=86.5%)

STRUCT. NO. Station	BORING NO. Station	Ground Surface Elev.	D (ft)	B (tsf)	U (%)	M (%)	Surface Water Elev.		D (ft)		B (tsf)	U (%)	M (%)
							ft	ft	ft	ft			
041-0024 1223+24	2-S 1222+96	437.9					430.6	418.4					
Hard Grey, Dry weathered CLAY SHALE													
Bottom of hole @ 41.0 ft													
To convert "N" values to "N60", multiply by 1.44; Hammer Efficiency = 86.5%													
Ground surface elevation referenced to IP&C 4100243 at Sta 1223+45, 22 ft Lt; EL. 436.72													

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, from 137 (Rev. 8-99)

MODEL: S:\MODEL\NAMES FILE NAME: S:\FILES


**VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL. Design Firm No. 184-001939

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PLOT SCALE =	CHECKED - DHC	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - KES	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BORING LOGS**  
**STRUCTURE NO. 041-2024**

SHEET 11 OF 11 SHEETS

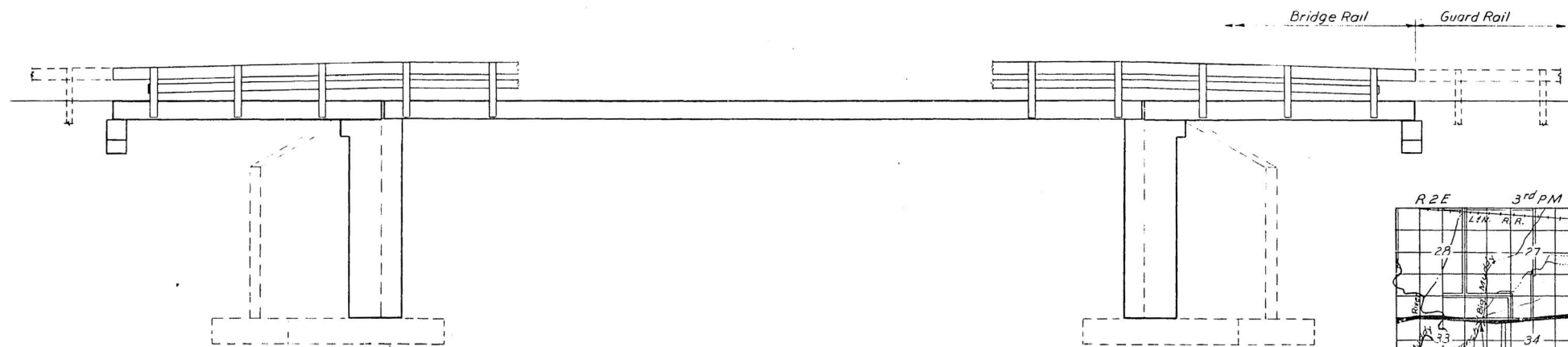
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	41
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

Build on S.B.I. RT.15, Section 13, Sta 1223+24, Year 1922  
 Existing structure: R.C. Three Girder on Open Abutments  
 Superstructure: 33'-0" x 23'-0" wide  
 Existing Superstructure shall be removed after temporary  
 Bridge is completed. 3 6" Pipe Culverts will be used.

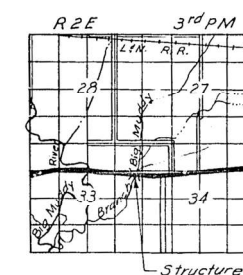
STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
 DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 15	13BR-1	JEFFERSON	11	7
F.A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

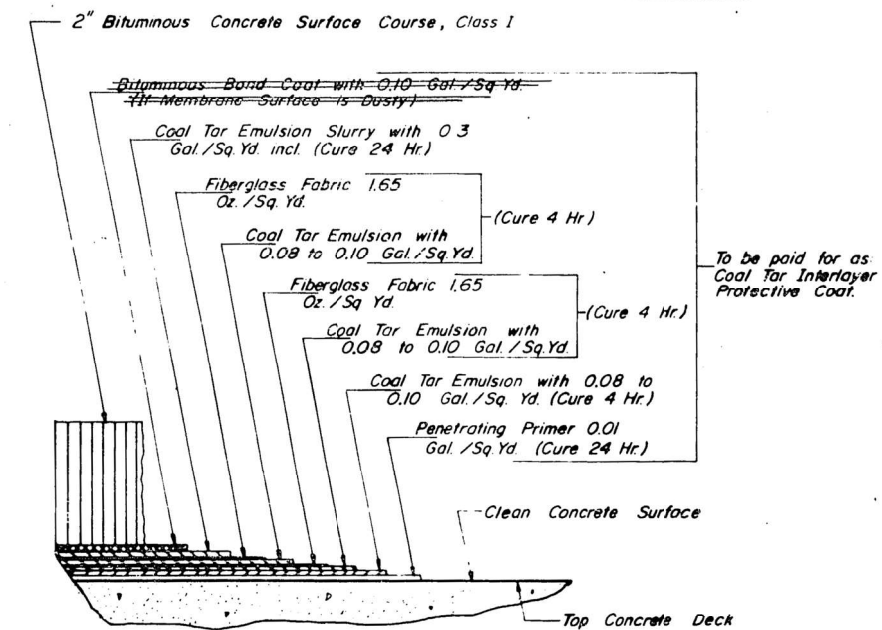
SHEET NO. 1  
5 SHEETS



ELEVATION

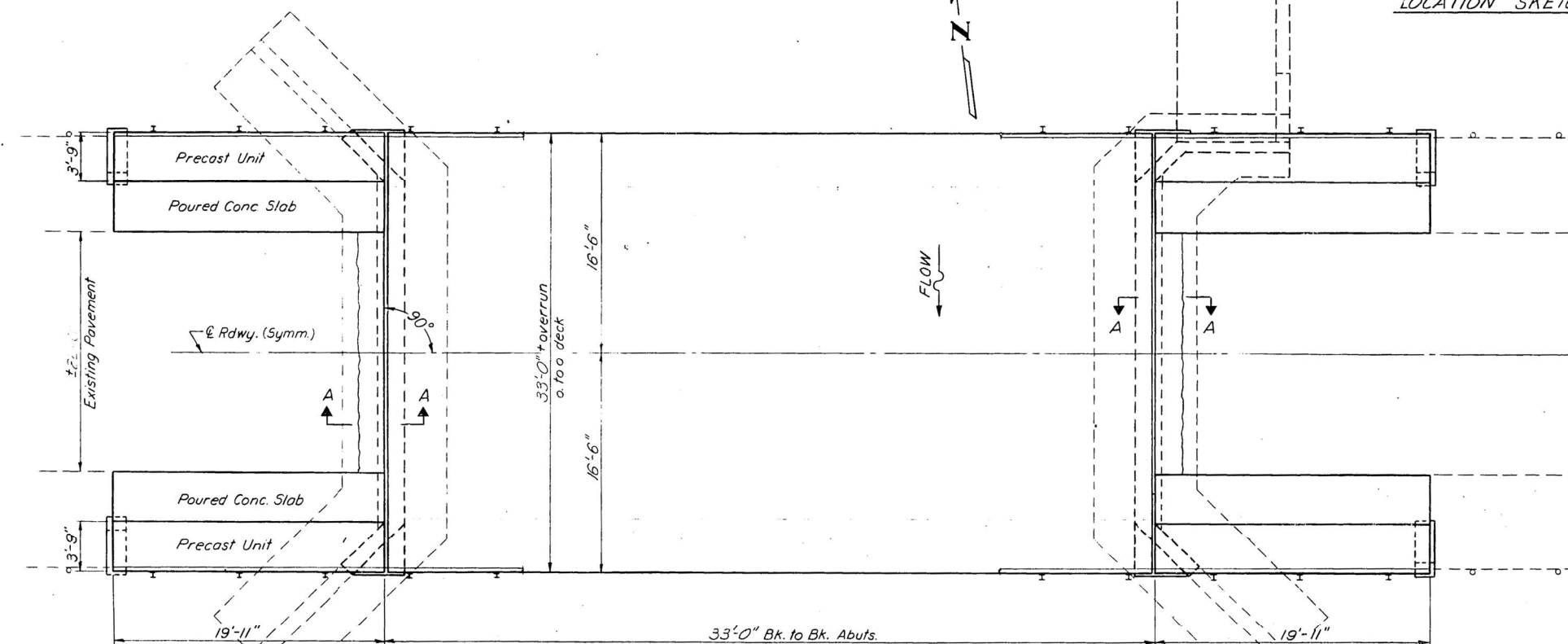


LOCATION SKETCH



DETAIL OF DECK SURFACING

To be paid for as  
 Coal Tar Interlayer  
 Protective Coat.



PLAN

FOR  
 INFORMATION  
 ONLY

**GENERAL NOTES**

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

An alternate strand pattern using Extra High Strength Prestressing strand (270 ksi.) is permitted.

Expansion bolts shall consist of self drilling expansion shields and 3/4 inch hooked bolts. Hooked bolts shall extend a minimum of 12 inches into new concrete.

Any excavation shall be incidental to Bridge Contract.

Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

Limits of Coal Tar Interlayer Protective Coat shall be back to back of abutments.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Portland Cement Concrete Pavement (10")	Sq. Yds.	16		16
Pavement Fabric	Sq. Yds.	16		16
Concrete Removal	Cu. Yds.		5	6
Expansion Bolts (3/4")	Each	52	100	152
Class X Concrete	Cu. Yds.		28.0	28.0
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Precast Prestressed Concrete Deck Beams (17)	Sq. Ft.	1,084		1,084
Steel Railing, Type W	Lin. Ft.	125		125
Reinforcement Bars	Lbs.		1,000	1,000
Pavement Removal & P.C.C. Replacement, Type 2 (10")	Sq. Yds.			10
Removal of Existing Superstructures	Each	1		1
Coal Tar Interlayer Protective Coat	Sq. Yds.	21		21

DESIGNED: Raymond Sumner  
 CHECKED: James Hamilton  
 R. P. Sumner  
 DRAWN: J. L. Armstrong  
 CHECKED: JH

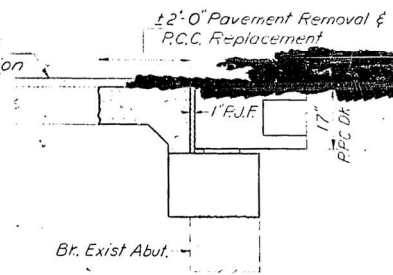
EXAMINED: [Signature]  
 PASSED: [Signature]  
 APPROVED: Richard H. Gollerman  
 CHIEF HIGHWAY ENGINEER

SEPTEMBER 23 1969

**DESIGN STRESSES**

FIELD UNITS      PRECAST PRESTR. UNITS

$f_c = 1400$  psi. (super)       $f_c = 5000$  psi.  
 $f_c = 1000$  psi. (sub)       $f_{ci} = 4000$  psi.  
 $f_s = 20,000$  psi. (reinf.)       $f_s = 248,000$  psi.  
 $v_c = 75$  psi. (footing)       $f_{si} = 173,600$  psi.  
 $n = 10$



SECTION A-A

GENERAL PLAN & ELEVATION  
 S.B.I. RT.15 OVER BRANCH  
 OF BIG MUDDY RIVER  
 S.B.I. RT.15 SEC.13BR-1  
 JEFFERSON COUNTY  
 STA. 1223+24

LOADING HS 20-44

MODEL: SMODELNAMES  
 FILE NAME: SFILES

**VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL. Design Firm No. 184-001939

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PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - KES	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

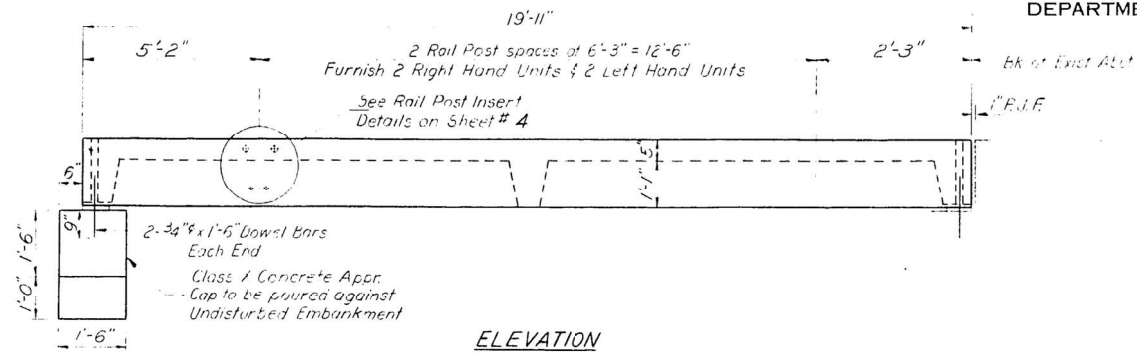
EXISTING STRUCTURE PLANS  
 STRUCTURE NO. 041-2024

SHEET 1 OF 4 SHEETS

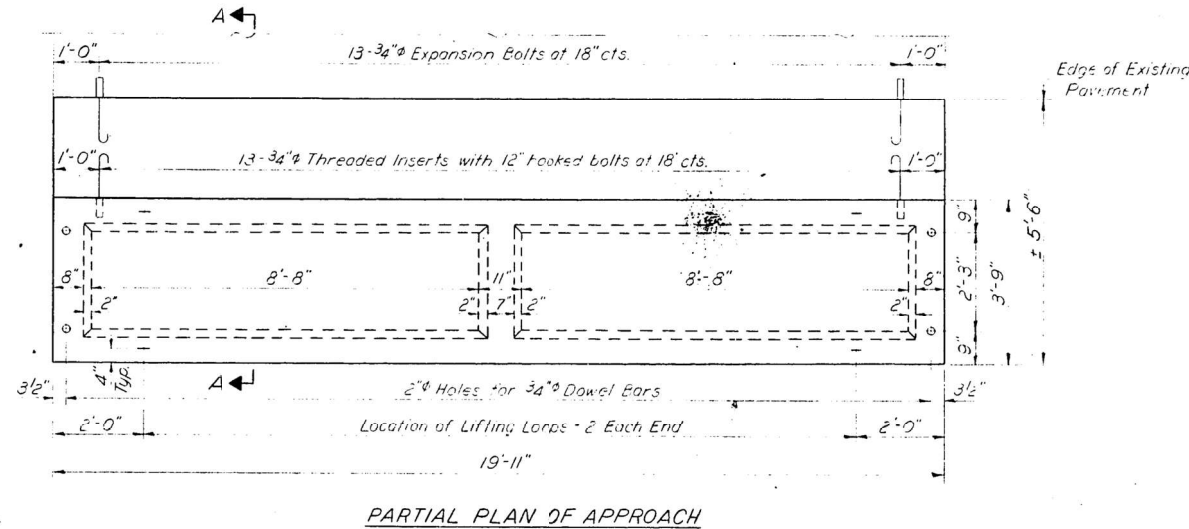
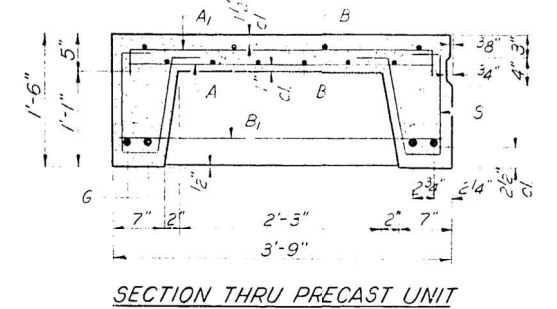
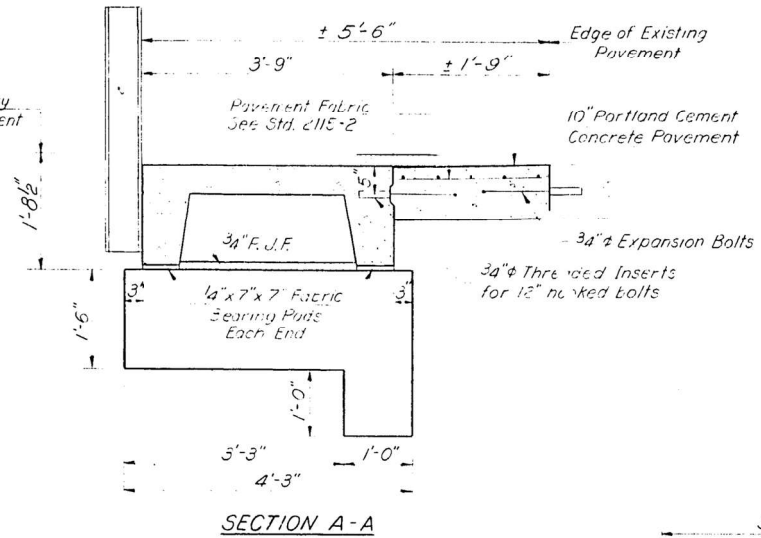
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	42
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEETS
Rt. 15	13BR-1	JEFFERSON	11	8	5
F.A. 15		ILLINOIS		FED. AID PROJECT	



Grade Line Elev. at Rdwy. Top of exist. conc. pavement

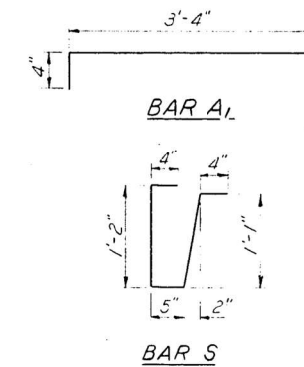


Edge of Existing Pavement

BAR LIST - ONE UNIT

Reinforcement to be cast into slab

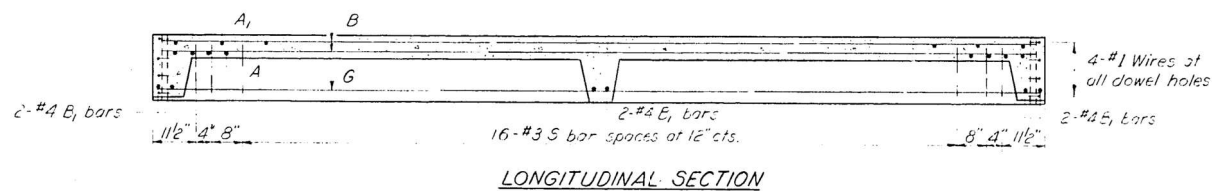
Bar	No	Size	Length	Shape
A	52	#4	3'-3"	
A1	27	#4	4'-0"	
B	10	#4	19'-6"	
B1	6	#4	3'-6"	
6	4	#10	19'-6"	
5	42	#3	3'-4"	



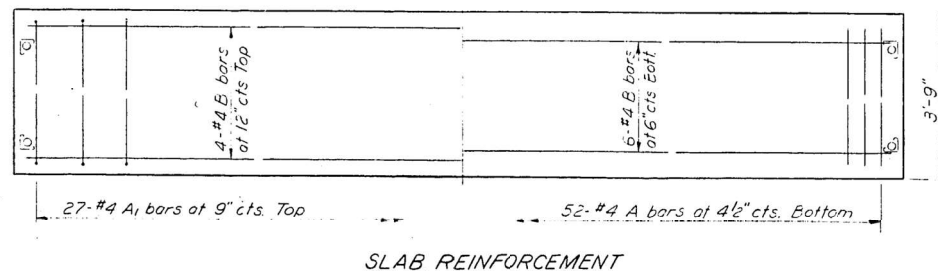
FOR INFORMATION ONLY

NOTES

Unless otherwise approved by the Engineer, lifting loops shall be 1/2" 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 15,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab." The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.



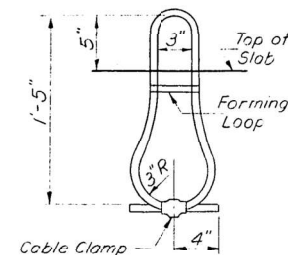
LONGITUDINAL SECTION



SLAB REINFORCEMENT

DESIGNED	SEPT. 23 1969
CHECKED	EXAMINED
R. P. Sumner	W. E. Baumann
DRAWN	APPROVED
J. L. Armstrong	Richard H. Hollerman
CHECKED	

DESIGNED - KES  
CHECKED - DHC  
DRAWN - JRP  
CHECKED - KES



LIFTING LOOP DETAIL

STRESSES  
fc = 4,500 psi.  
fc = 1,800 psi.  
fs = 20,000 psi.  
n = 8  
LOADING HS-20

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299
Portland Cement Concrete Pavement (10')	Sq. Yds.	16
Pavement Fabric	Sq. Yds.	10
Expansion Bolts 3/4"	Each	52
Class X Concrete	Cu. Yds.	1.6

APPROACH DETAILS  
S.B.I. RT.15 SEC.13BR-1  
JEFFERSON COUNTY  
STA. 1223+24

MODEL: SMODELNAME  
FILE NAME: SFILES

VEENSTRA & KIMM INC.  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

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	CHECKED - KES	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS  
STRUCTURE NO. 041-2024

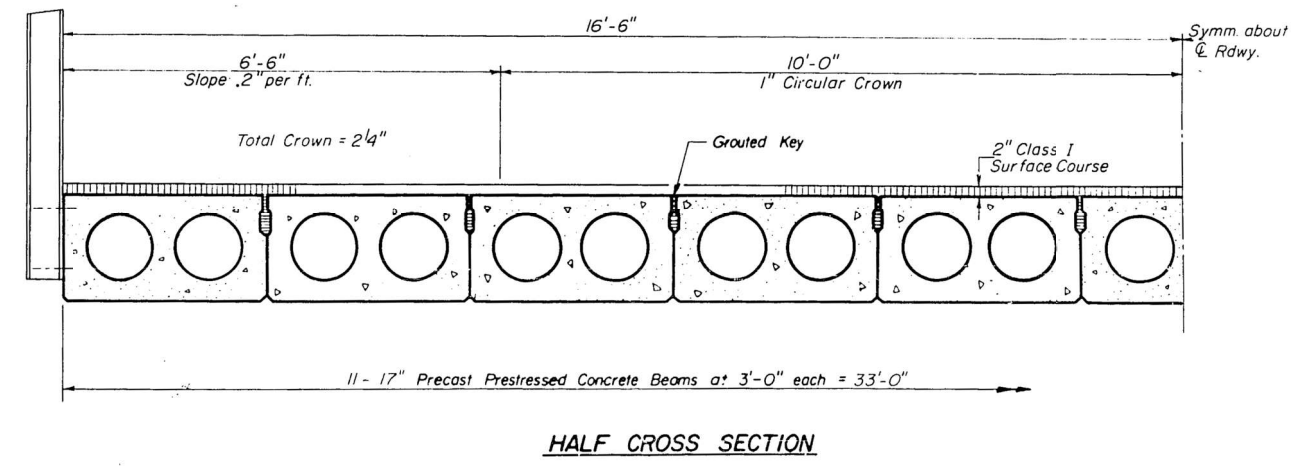
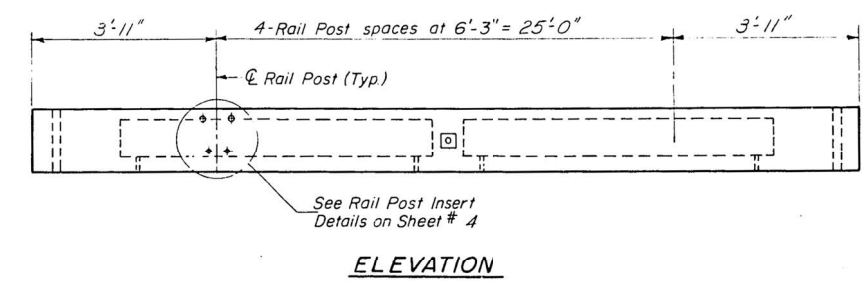
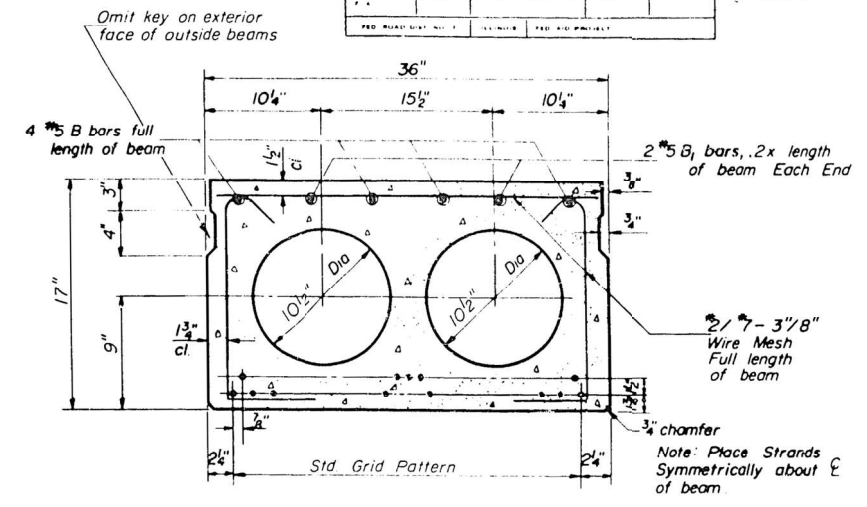
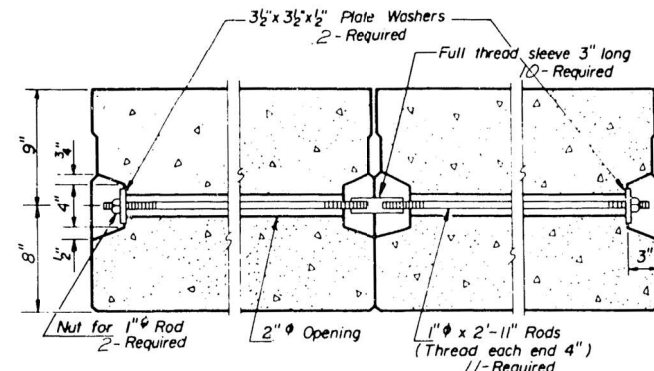
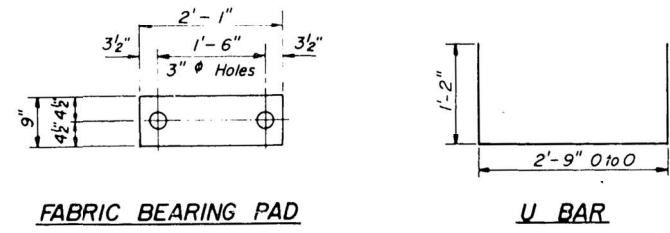
SHEET 2 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	43
ILLINOIS			FED. AID PROJECT	
			CONTRACT NO. 78911	

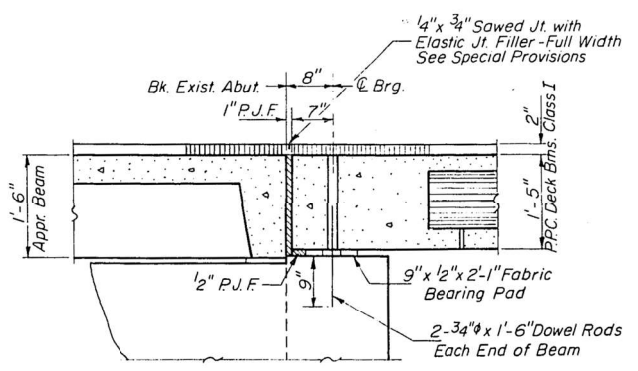
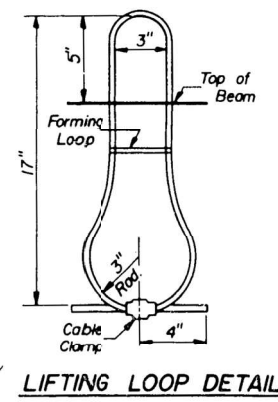
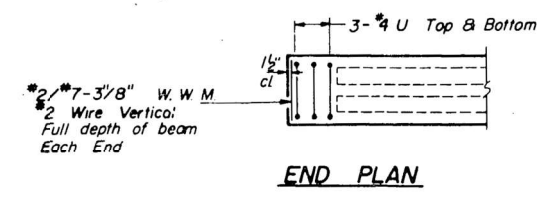
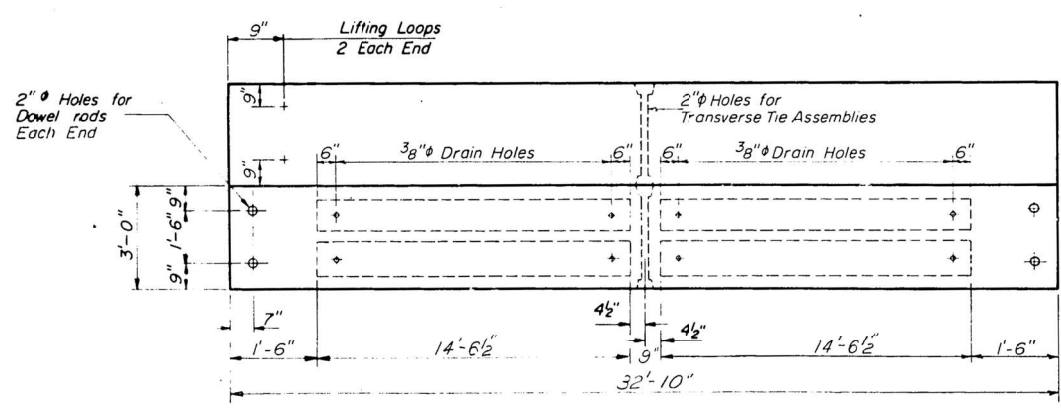
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
15	13BR-1	JEFFERSON	11	9

SHEET NO. 3  
5 SHEETS



FOR INFORMATION ONLY



GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the nominal cross-sectional area shall be 0.109 sq in.. Lifting loops shall be 1/2" diameter, 6x19 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 18,700 lbs. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place. Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand and P.C. mortar. After beams have been erected, holes for the dowel anchors shall be drilled into the sub-structure and the anchor dowels shall be grouted in place. Steel for dowel rods, transverse tie rods, and armor angles shall be S.A.E. 1020, structural steel A.S.T.M. Designation: A36, or intermediate grade A.S.T.M. Designation: A15. After fabrication the transverse tie assemblies (the rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. Designation: A153. Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams."

BILL OF MATERIAL

Description	Unit	Quantity
Precast Prestressed Concrete Deck Beams	Sq Ft	1,084
Removal of Existing Superstructure	Each	1

SUPERSTRUCTURE  
S.B.I. RT.15 SEC.13BR-1  
JEFFERSON COUNTY  
STA.1223+24

DESIGNED: Raymond P. Summer  
CHECKED: James Hamilton  
DRAWN: J.L. Armstrong  
APPROVED: Richard H. Gollerman, CHIEF HIGHWAY ENGINEER

SEPT 23 1965

PD-1-S 11-19-65 Rev 5-20-68

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS  
STRUCTURE NO. 041-2024

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	44

CONTRACT NO. 78911

MODEL: SMODELNAMES  
FILE NAME: SFILES

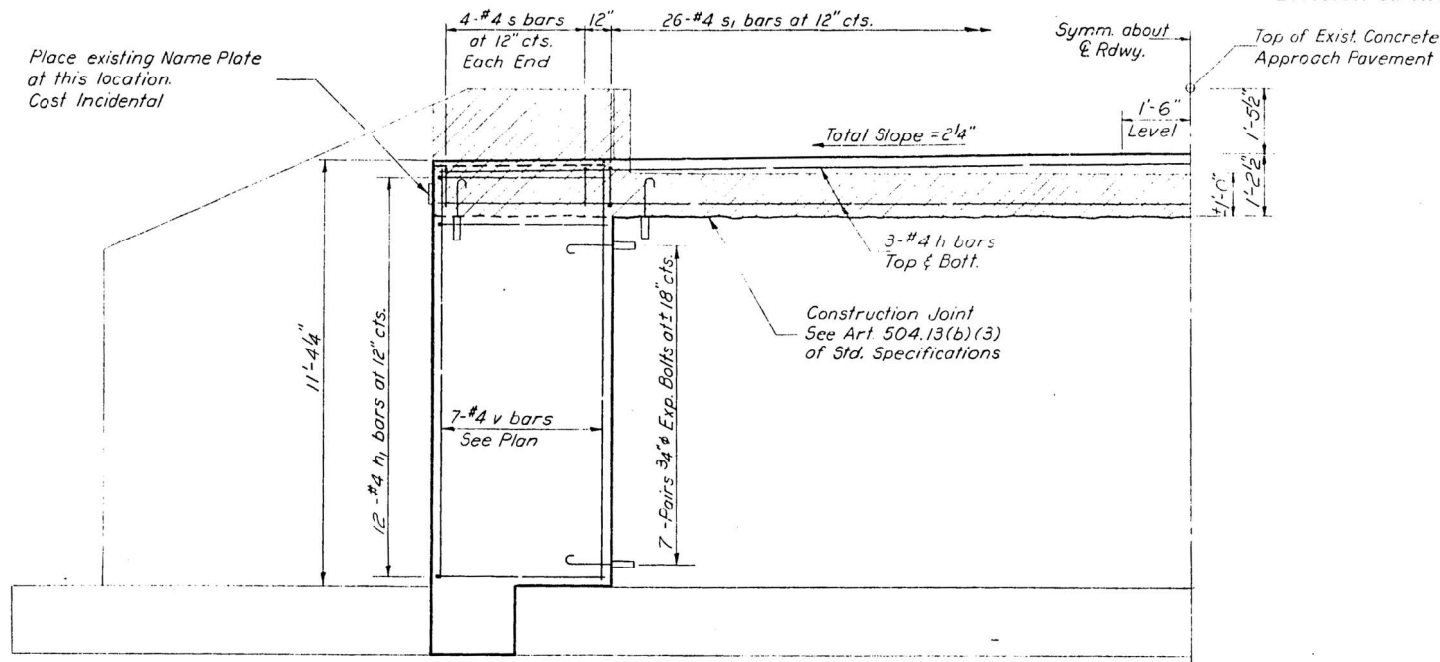
VEENSTRA & KIMM INC.  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

USER NAME =	DESIGNED - KES	REVISED -
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PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED - KES	REVISED -

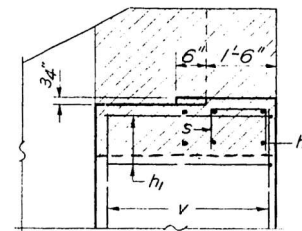
SHEET 3 OF 4 SHEETS

ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

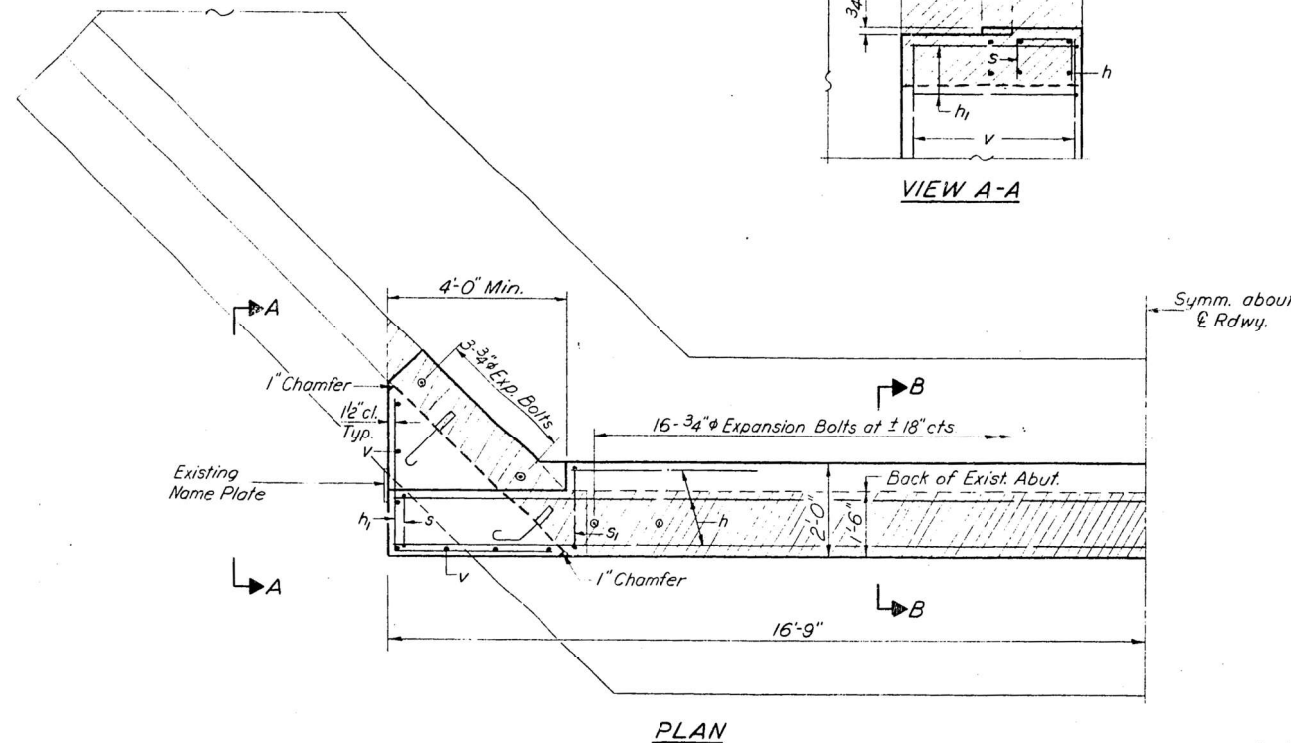


ELEVATION

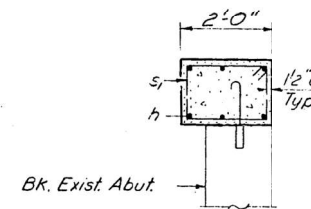


VIEW A-A

FOR  
INFORMATION  
ONLY



PLAN



SECTION B-B

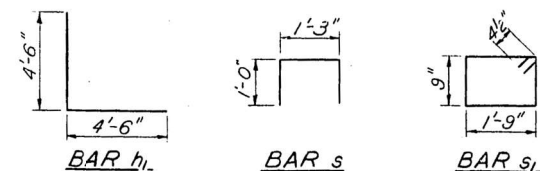
NOTES:  
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.  
Expansion bolts shall be anchored in sound concrete.  
All edges shall have standard 3/4 inch chamfers except as noted.

TWO ABUTMENTS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	12	#4	33'-3"	—
h <sub>1</sub>	43	#4	9'-0"	L
s	16	#4	3'-1"	□
s <sub>1</sub>	52	#4	5'-9"	□
v	28	#4	11'-0"	—
Class X Concrete			Cu. Yds.	26.4
Reinforcement Bars			Lbs.	1,000
Expansion Bolts 3/4"			Each	100
Concrete Removal			Cu. Yds.	6

ABUTMENTS  
S.B.I. RT. 15 SEC. 13BR-1  
JEFFERSON COUNTY  
STA. 1223+24

DESIGNED: Raymond P. Sumner  
CHECKED: James Hamilton  
DRAWN: J.L. Armstrong  
APPROVED: Richard H. Hottelmaier  
SEPT. 23 1969



MODEL: SMODELNAMES  
FILE NAME: SFILES

VEENSTRA & KIMM INC.  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

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	CHECKED - KES	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS  
STRUCTURE NO. 041-2024

SHEET 4 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	45
CONTRACT NO. 78911				

ILLINOIS FED. AID PROJECT

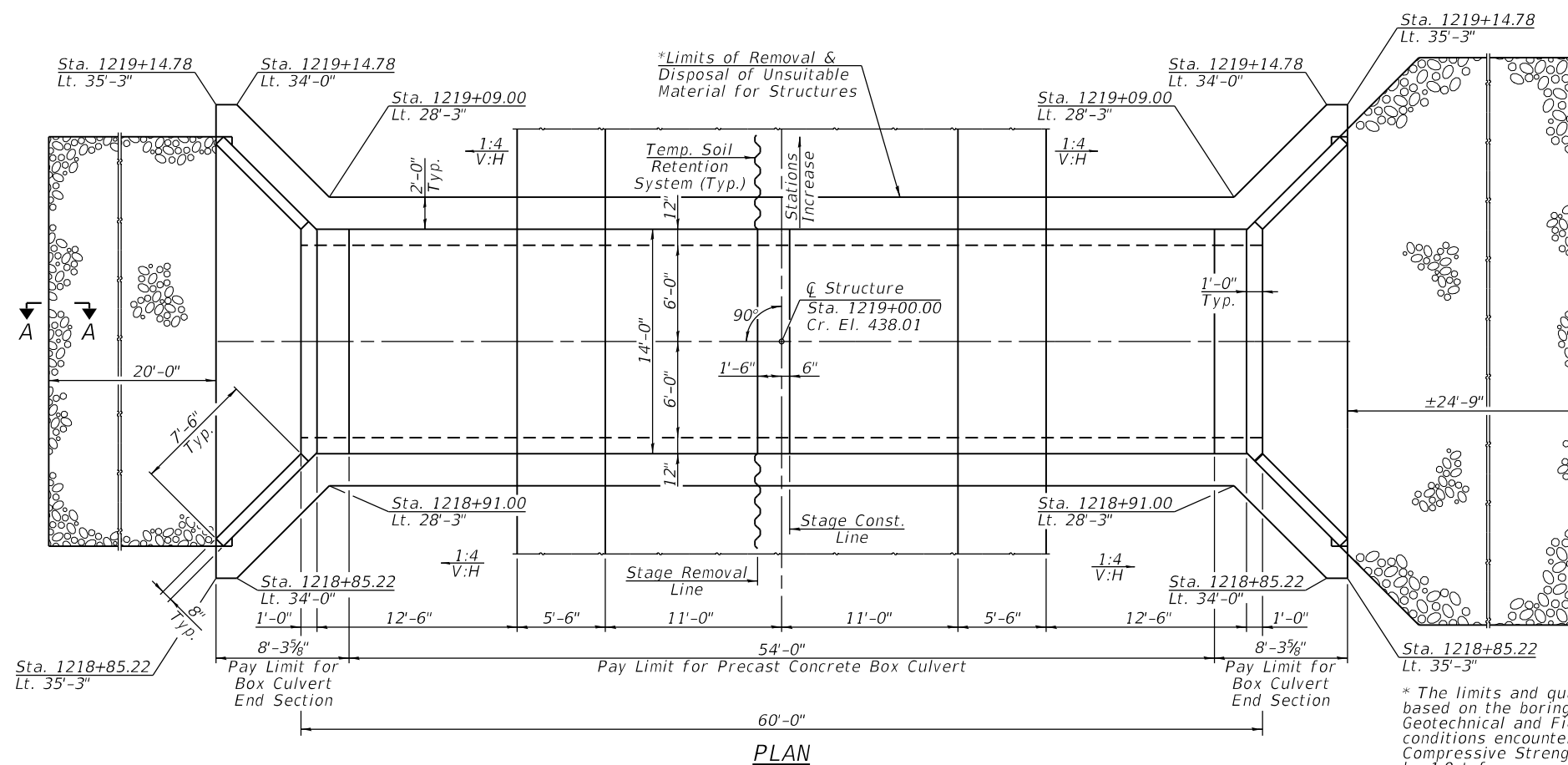
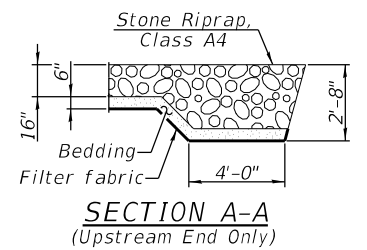
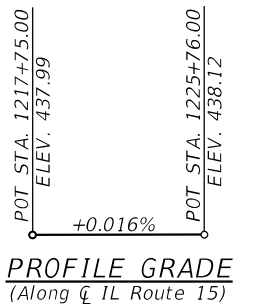
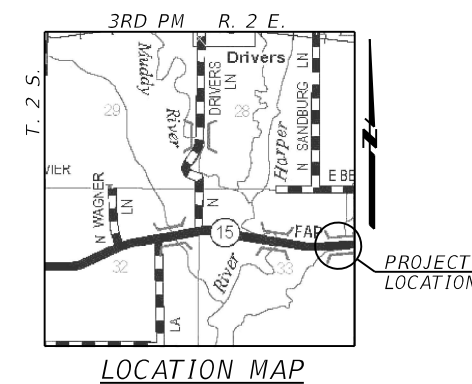
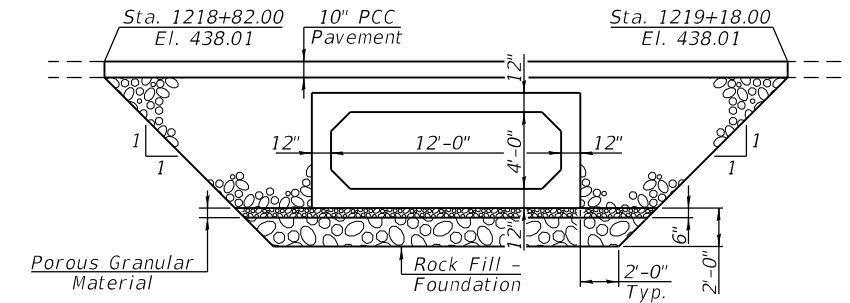
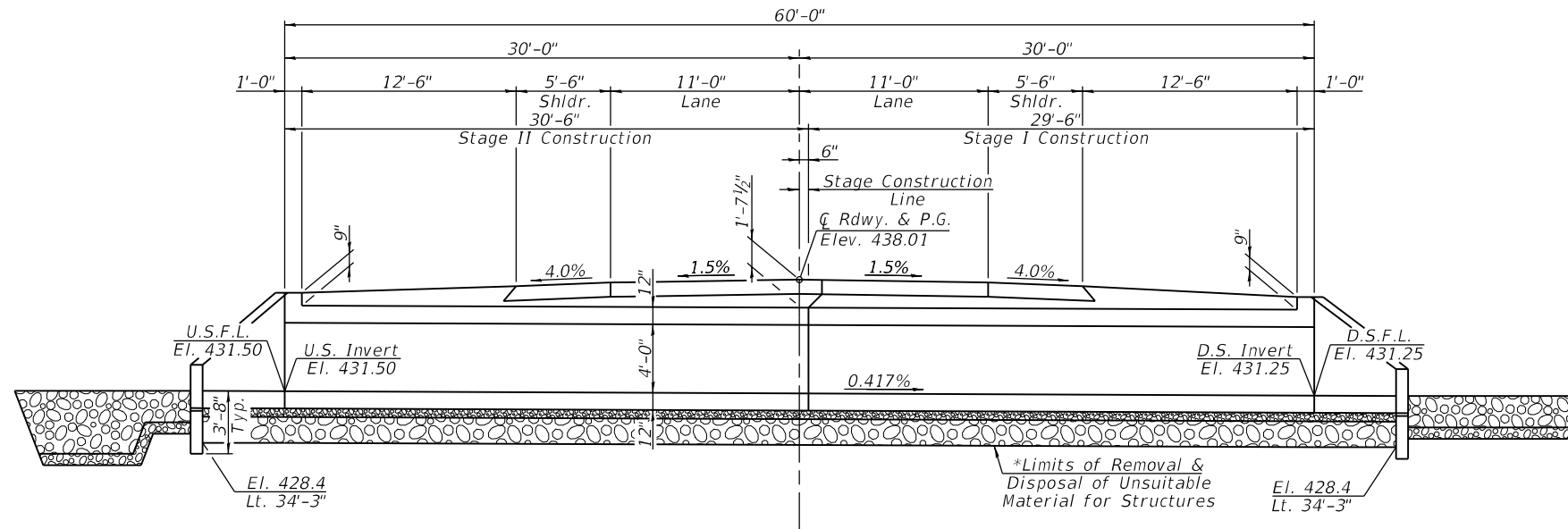
Bench Mark: BM207 - RR spike in north side of power pole, 42.0' south of IL Route 15, 250' west of SN 041-0025.  
Sta. 1219+65, 42.0' Rt. Elev. 436.542

Existing Structure: No existing structure is present.

No Salvage.

**INDEX OF SHEETS**

- 1 - General Plan & Elevation
- 2 - General Data
- 3 - Stage Construction Details
- 4 - Temporary Concrete Barrier
- 5 - Precast Concrete Box Culvert Section
- 6-7 - Precast Concrete Box Culvert Apron End Section Details



\* The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field. The minimum Unconfined Compressive Strength of the layer below the removal limit shall be 1.0 tsf.

**GENERAL PLAN & ELEVATION**  
**IL. ROUTE 15**  
**BIG MUDDY RELIEF STRUCTURE**  
**F.A.P. RTE 821 - SECTION 13B-3**  
**JEFFERSON COUNTY**  
**STATION 1219+00**  
**STRUCTURE NO. 041-7100**

**VEENSTRA & KIMM INC.**  
Springfield, IL. Phone: (217)544-8033  
IL. Design Firm No. 184-001939

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION**  
**STRUCTURE NO. 041-7100**

SHEET NO. 1 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	46
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

**GENERAL NOTES**

Reinforcement bars designated (E) shall be epoxy coated.  
 Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Precast Concrete Box Culvert shall be determined by the Contractor.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of the box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise less than or equal to 3 ft. and a span greater than or equal to 10 ft.

1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 3/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

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

Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.

The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Article 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

Geocomposite wall drain shall be according to Section 591 of the Standard Specifications, except that concrete nails shall not be used in areas where it overlaps Waterproofing Membrane System for Buried Structures.

**TOTAL BILL OF MATERIAL**

Item	Unit	Total
Earth Excavation	Cu. Yd.	556
Porous Granular Embankment	Cu. Yd.	123
Stone Riprap, Class A4	Sq. Yd.	170
Filter Fabric	Sq. Yd.	170
Removal & Disposal of Unsuitable Material for Structures	Cu. Yd.	102
Temporary Soil Retention System	Sq. Ft.	266
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts 12'x4'	Foot	54
Geocomposite Wall Drain	Sq. Yd.	104
Waterproofing Membrane System for Buried Structures	Sq. Yd.	104
Rock Fill - Foundation	Ton	206

**WATERWAY INFORMATION**

Flood Event		Discharge C.F.S.		Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	Main Channel	1097	822	135	180	436.9	2.1	0.5	439.0	437.4
	Relief Structure		275		48	436.9		0.5		437.4
	TOTAL	1097	1097		228					
50	Main Channel	1526	1161	135	180	437.2	1.2	1.1	438.4	438.3
	Relief Structure		365		48	437.2		1.1		438.3
	TOTAL	1526	1526		228					
100	Main Channel	1727	1331	135	180	437.3	1.1	1.0	438.4	438.3
	Relief Structure		396		48	437.3		1.0		438.3
	TOTAL	1727	1727		228					
200	Main Channel	1900	1452	135	180	437.4	1.1	1.0	438.5	438.4
	Relief Structure		448		48	437.4		1.0		438.4
	TOTAL	1900	1900		228					
Existing Overtopping	Main Channel	750	649	135	180	436.7	1.9	0.7	438.6	437.4
	Relief Structure		101		48	436.7		0.7		437.4
	TOTAL	750	750		228					
Proposed Overtopping	Main Channel	1140	854	135	180	437.0	2.2	1.1	439.2	438.1
	Relief Structure		286		48	437.0		1.1		438.1
	TOTAL	1140	1140		228					
500	Main Channel	2135	1644	135	180	437.5	1.0	1.0	438.5	438.5
	Relief Structure		491		48	437.5		1.0		438.5
	TOTAL	2135	2135		228					

10 Yr. Outlet Velocity through Exist. Main Structure = 0.7 ft/s  
 10 Yr. Outlet Velocity through Prop. Main Structure = 6.0 ft/s  
 10 Yr. Outlet Velocity through Prop. Relief Structure = 3.0 ft/s

**LOADING HL-93**

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

**DESIGN SPECIFICATIONS**

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

**DESIGN STRESSES**

**PRECAST UNITS**

f'c = 5,000 psi  
 fy = 65,000 psi (Welded Wire Fabric)  
 fy = 60,000 psi (Reinforcement)



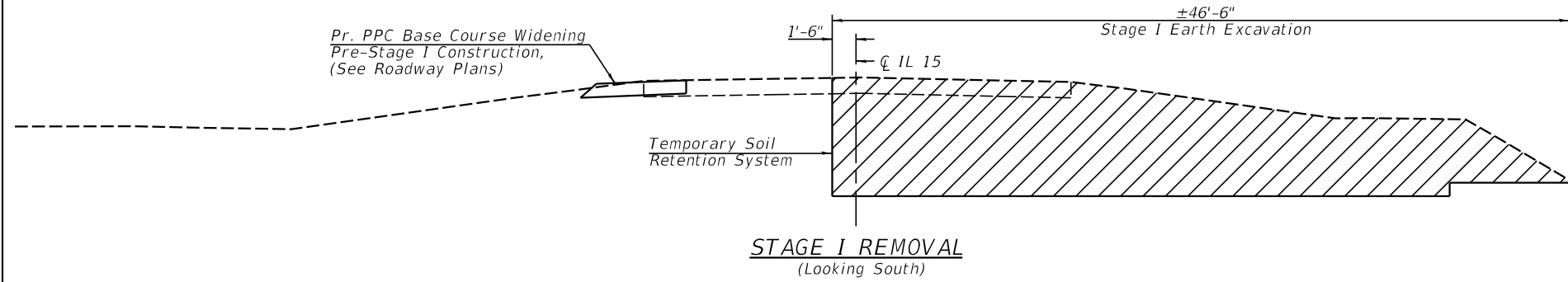
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PLOT DATE =	CHECKED -	REVISED -

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 DEPARTMENT OF TRANSPORTATION**

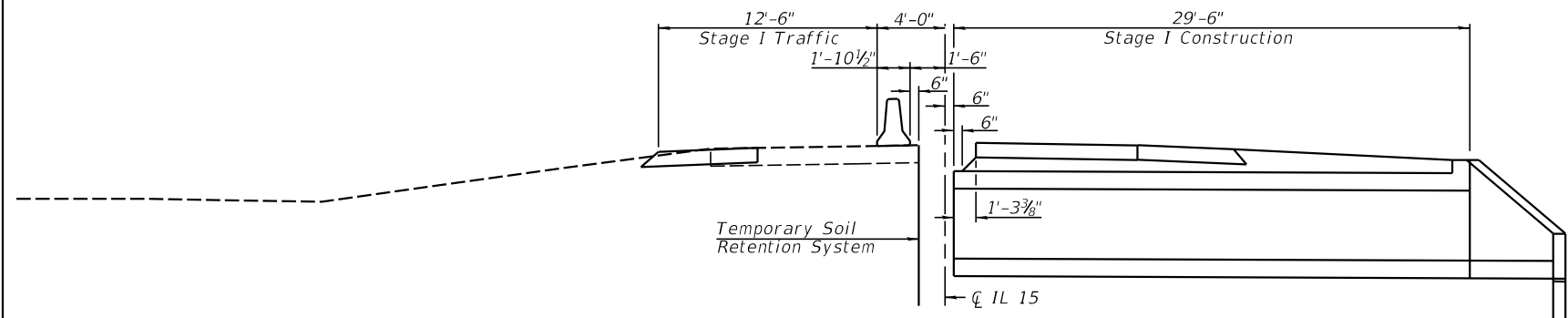
**GENERAL DATA  
 STRUCTURE NO. 041-7100**

SHEET NO. 2 OF 7 SHEETS

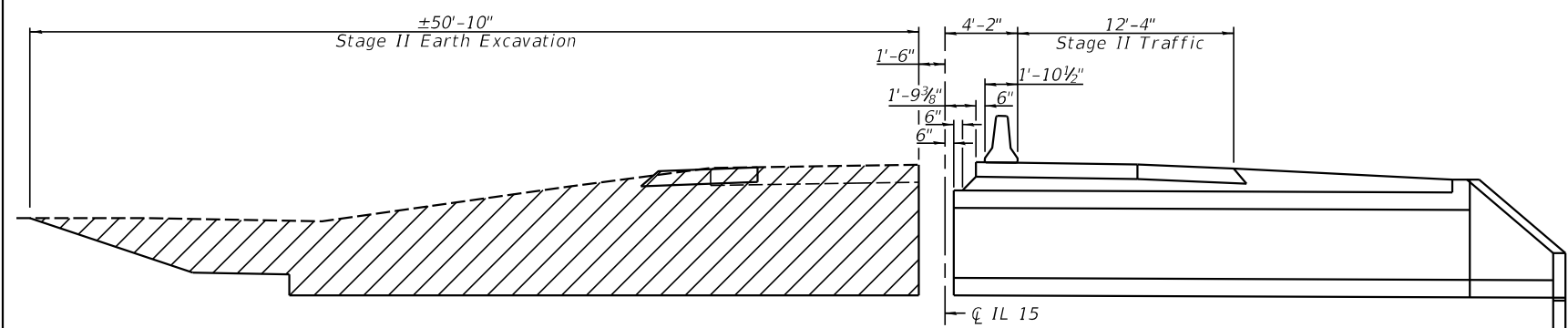
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	47
			CONTRACT NO. 78911	
ILLINOIS FED. AID PROJECT				



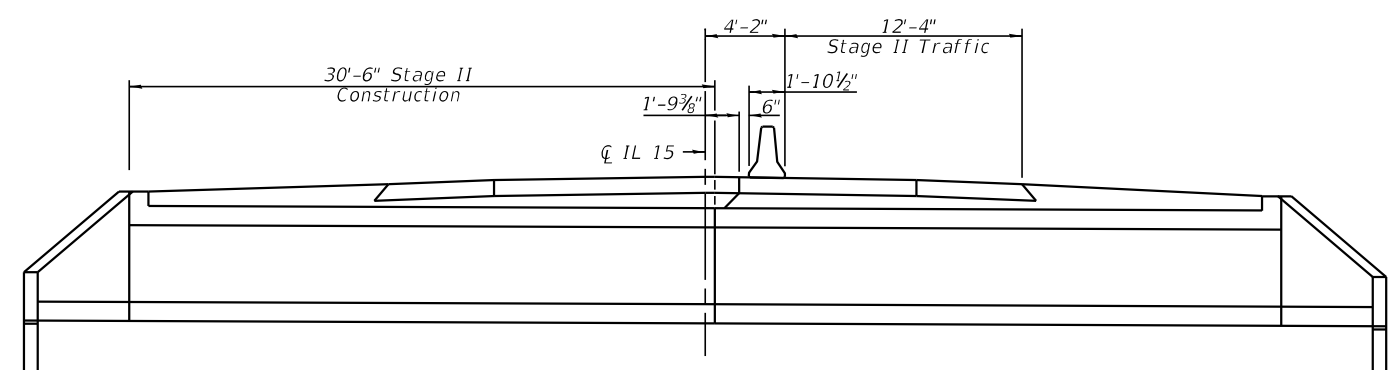
**STAGE I REMOVAL**  
(Looking South)



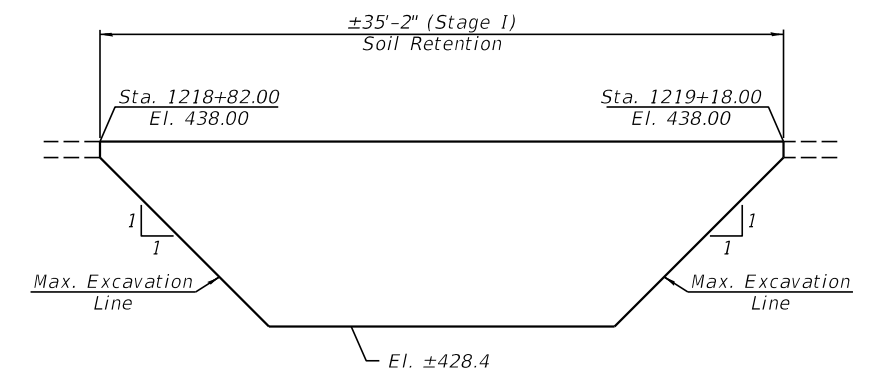
**STAGE I CONSTRUCTION**  
(Looking South)



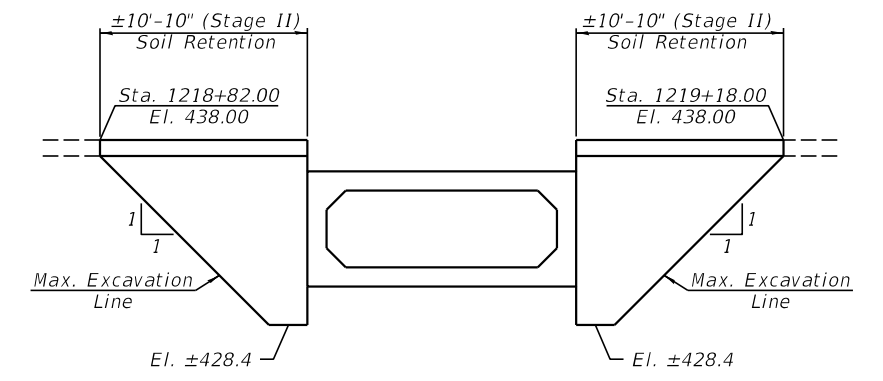
**STAGE II REMOVAL**  
(Looking South)



**STAGE II CONSTRUCTION**  
(Looking South)



**TEMPORARY SOIL RETENTION SYSTEM**  
(Looking Upstream)



**TEMPORARY SOIL RETENTION SYSTEM**  
(Looking Upstream)

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Note: Hatched area indicates Earth Excavation.  
See roadway plans for Temporary Concrete Barrier.



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PLOT DATE =	CHECKED -	REVISED -

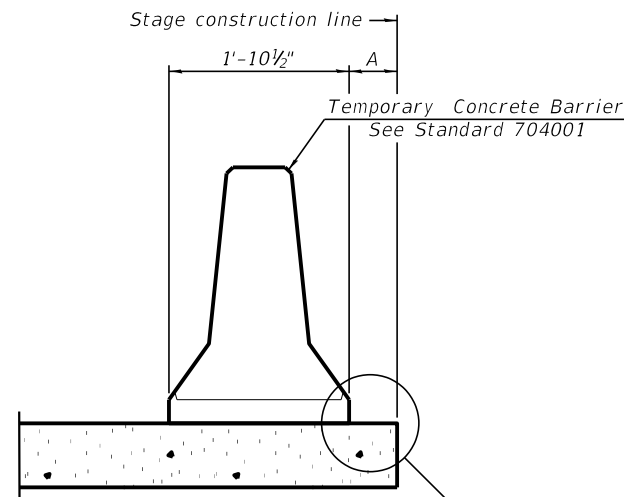
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS**  
**STRUCTURE NO. 041-7100**

SHEET NO. 3 OF 7 SHEETS

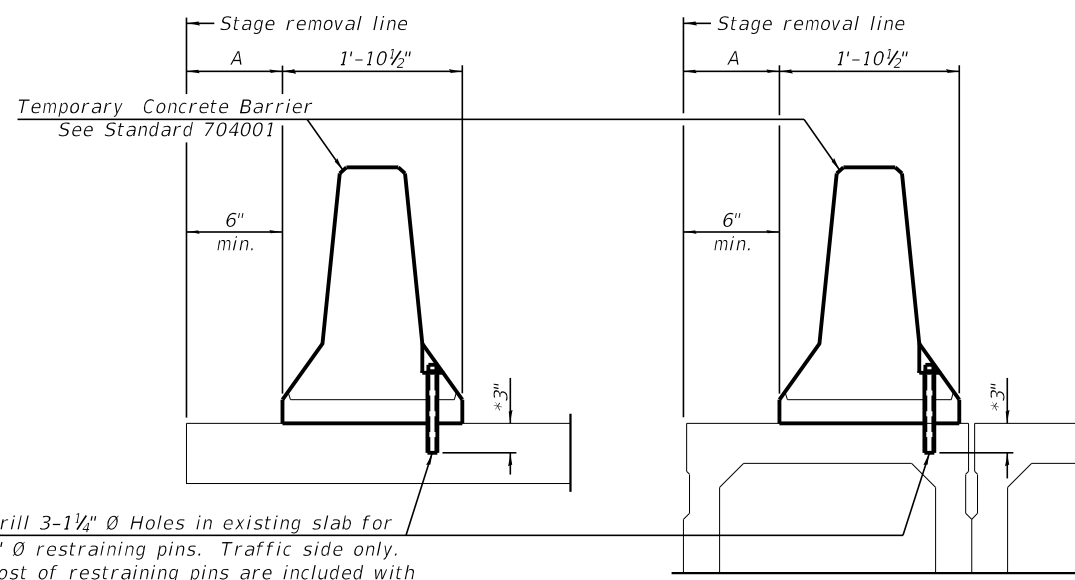
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821	13B-3	JEFFERSON	78	48
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				





When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



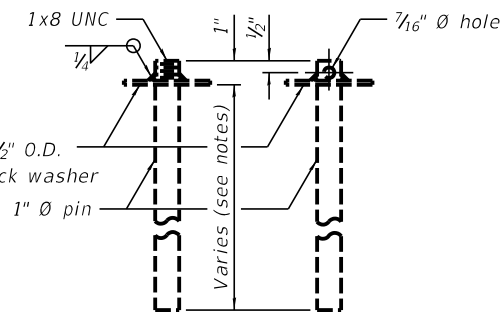
Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

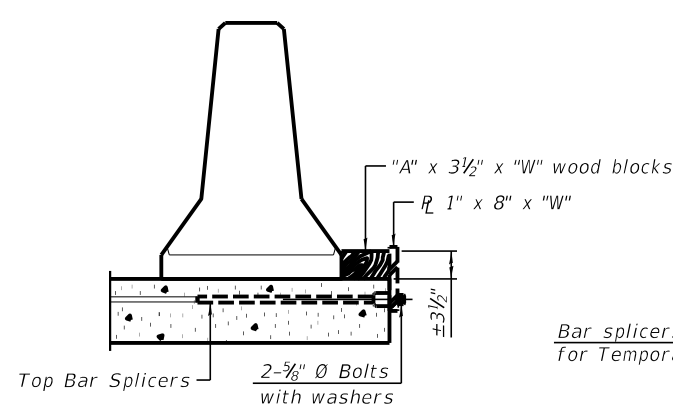
EXISTING SLAB

EXISTING DECK BEAM

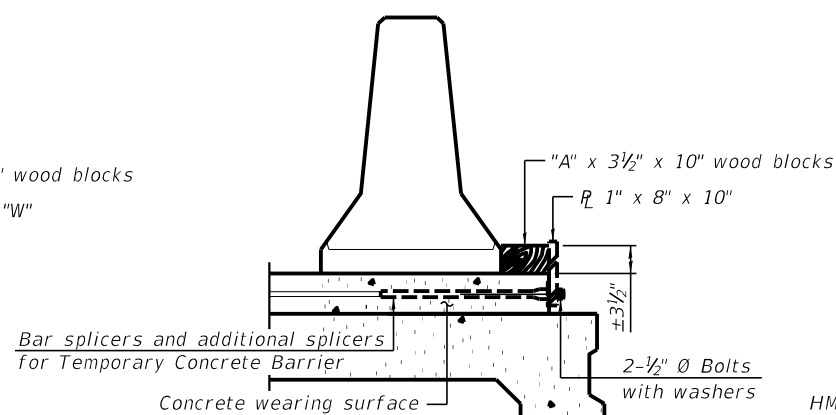
SECTIONS THRU SLAB OR DECK BEAM



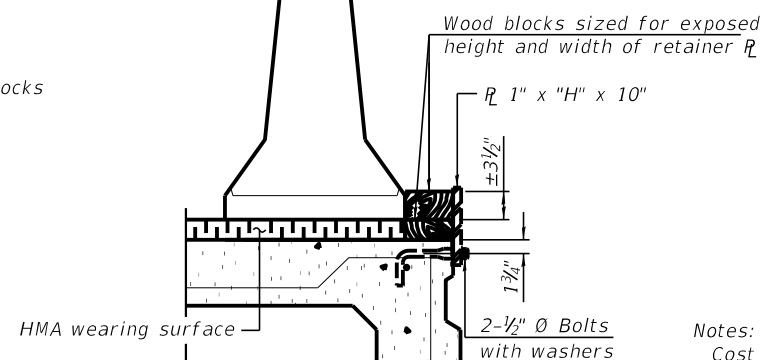
RESTRAINING PIN



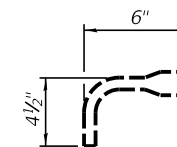
DETAIL I



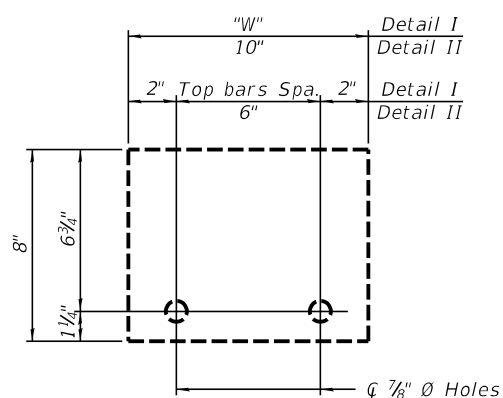
DETAIL II



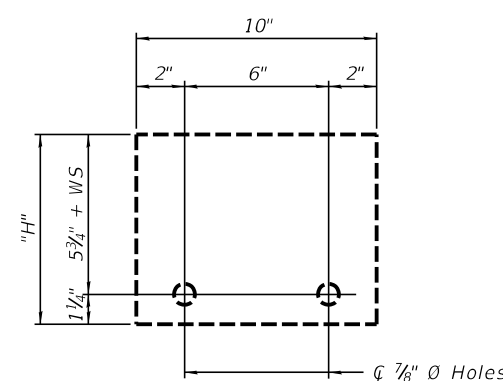
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 8" x "W"  
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"  
(Detail III)

Notes:  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate center of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.  
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	1	3
Railing Weight (plf)	440	

R-27 5-15-2023



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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER  
STRUCTURE NO. 041-7100

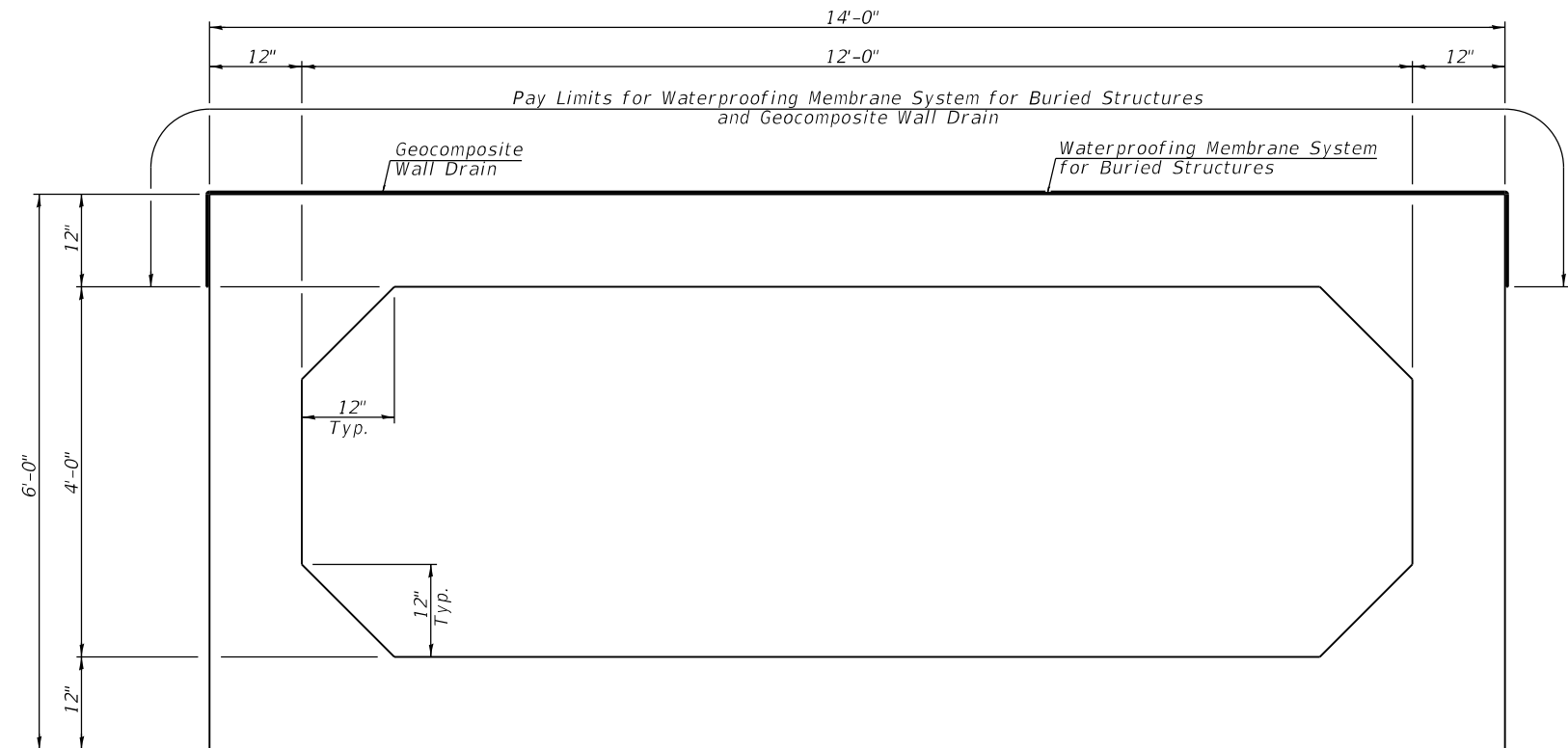
SHEET NO. 4 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	49
CONTRACT NO. 78911				

ILLINOIS FED. AID PROJECT

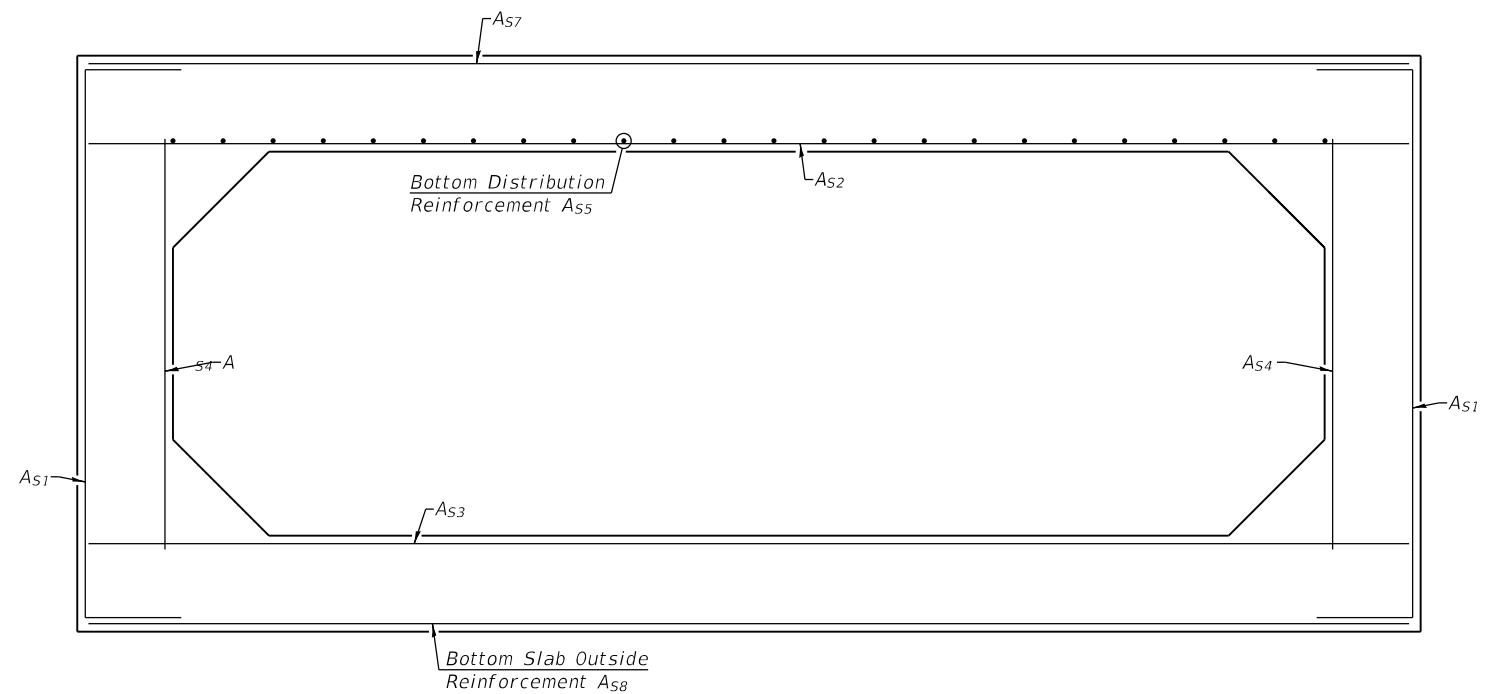
**PRECAST CONCRETE BOX CULVERT 12'x4'**

1. Precast Concrete Box Culverts 12'x4' shall conform to the requirements of Article 540.06 of the Standard Specifications, the applicable requirements of AASHTO M 259 and ASTM C1577 except as modified herein.  
The minimum precast concrete strength shall be 5,000 psi.  
Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.  
Fill varies from 0.75' to 1.64' within limits of roadway.
2. Cover from face of precast concrete reinforcement bars shall be 2" for the top of the top slab, and 1" for all other surfaces.
3. The reinforcement areas shown on this plan sheet were based on welded wire reinforcement (WWR). The contractor may use reinforcement bars in lieu of welded WWR. Reinforcement bars shall be limited to the sizes of #3 through #5 bars, and have a maximum spacing of the lesser of 8" or the member thickness. The reinforcement areas shown on this sheet shall be increased to account for the difference in steel yield strength in accordance with ASTM C1577, Section 12.6.



**SECTION THRU PRECAST BARREL**

Transverse Reinforcement	As1 0.380 in <sup>2</sup> /ft.
	As2 0.310 in <sup>2</sup> /ft.
	As3 0.290 in <sup>2</sup> /ft.
	As4 0.290 in <sup>2</sup> /ft.
	As7 0.290 in <sup>2</sup> /ft.
	As8 0.290 in <sup>2</sup> /ft.
Longitudinal Reinforcement	As5 0.290 in <sup>2</sup> /ft.



**PRECAST BARREL REINFORCEMENT**



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PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

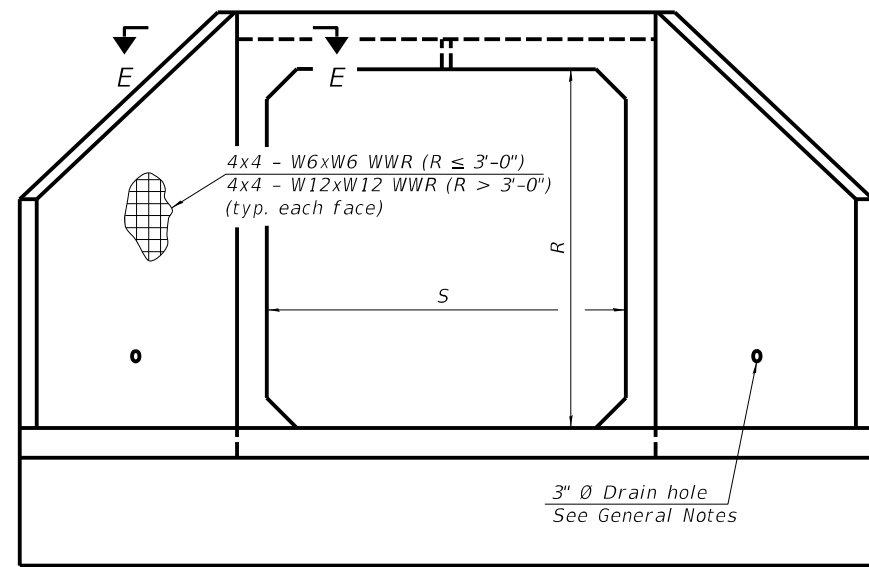
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE BOX CULVERT SECTION  
STRUCTURE NO. 041-7100**

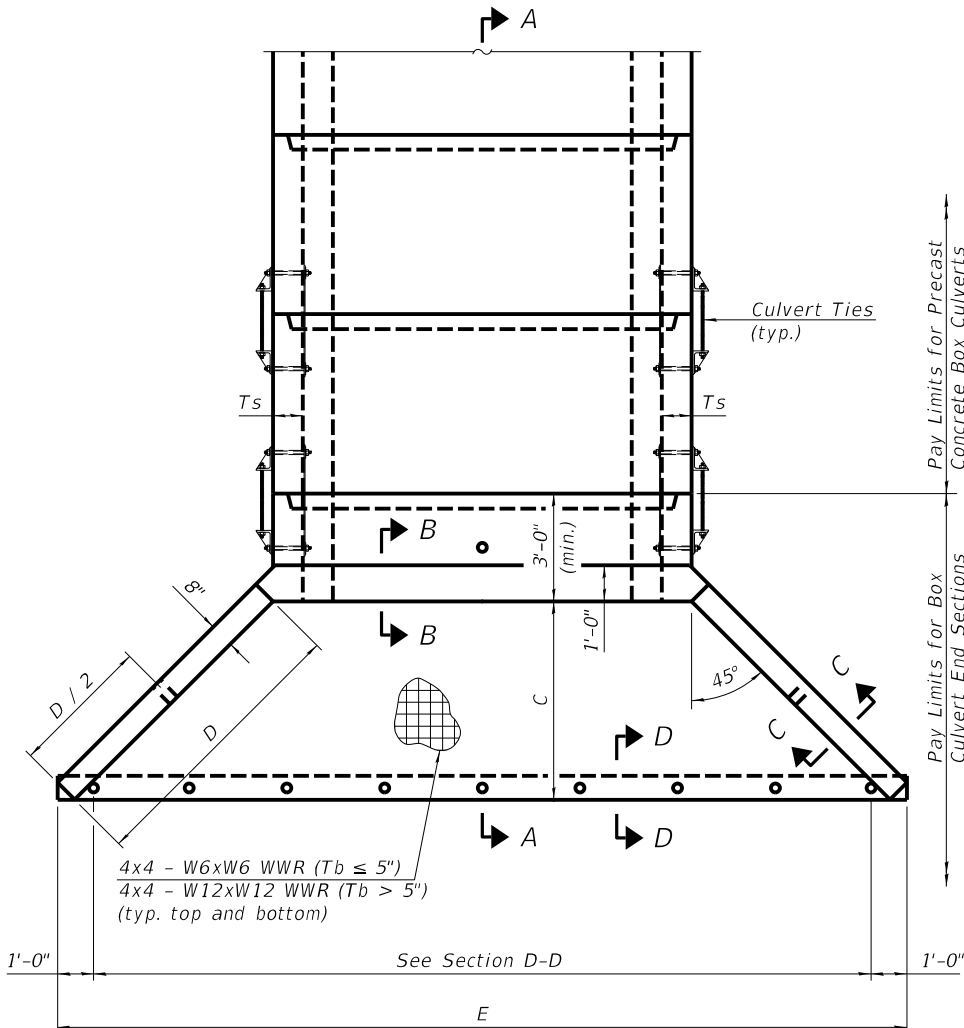
SHEET NO. 5 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	50
CONTRACT NO. 78911				

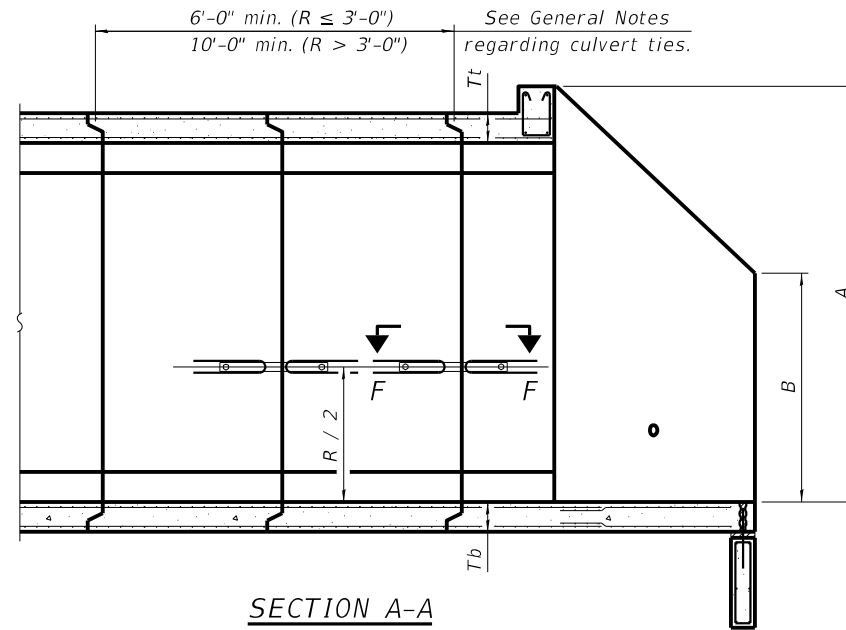
ILLINOIS FED. AID PROJECT



END VIEW



PLAN



SECTION A-A

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

The Contractor may furnish the end section as a single precast concrete piece or construct the end section in the field using cast-in-place (CIP) construction. For CIP construction, the bottom slab thickness shall be increased by 2" and the clear cover to the bottom mat of reinforcement shall be increased to 3".

Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the unit price for Box Culvert End Sections of the culvert number specified.

Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than 1/2" nor more than 2". For the precast option, it shall be the Contractor's responsibility for determining a method of handling and a construction procedure shall be included in the shop drawings. The Contractor shall determine and detail in the shop drawings any necessary strengthening or stiffening provisions necessary to handle the precast segment. Any required modifications shall be at no extra charge.

The Contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.

Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within the lower 1/3 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.

APRON END SECTION DIMENSIONS

Span (S)	Rise (R)	Tt	Tb	Ts	A	B	C	D	E	Concrete Cu. Yd.	Culvert Ties Required
3'-0"	2'-0"	7"	6"	4"	3'-4"	2'-2"	2'-10 3/8"	4'-1"	10'-4 5/8"	2.8	Yes
3'-0"	2'-0"	4"	4"	4"	3'-1"	2'-1"	2'-7 1/8"	3'-9"	9'-11"	2.3	Yes
3'-0"	3'-0"	7"	6"	4"	4'-4"	2'-8"	3'-10 3/8"	5'-6"	12'-4 5/8"	3.7	Yes
3'-0"	3'-0"	4"	4"	4"	4'-1"	2'-7"	3'-7 1/8"	5'-2"	11'-11"	3.1	Yes
4'-0"	2'-0"	7.5"	6"	5"	3'-4 1/2"	2'-2 1/2"	2'-11 3/8"	4'-2"	11'-8"	3.3	Yes
4'-0"	2'-0"	5"	5"	5"	3'-2"	2'-1"	2'-8 1/2"	3'-10"	11'-2 3/8"	2.8	Yes
4'-0"	3'-0"	7.5"	6"	5"	4'-4 1/2"	2'-8 1/2"	3'-11 3/8"	5'-7"	13'-8 1/8"	4.2	Yes
4'-0"	3'-0"	5"	5"	5"	4'-2"	2'-7"	3'-8 1/2"	5'-3"	13'-2 3/8"	3.7	Yes
4'-0"	4'-0"	7.5"	6"	5"	5'-4 1/2"	3'-2 1/2"	4'-11 3/8"	7'-0"	15'-8 1/8"	5.3	Yes
4'-0"	4'-0"	5"	5"	5"	5'-2"	3'-1"	4'-8 1/2"	6'-8"	15'-2 1/2"	4.7	Yes
5'-0"	2'-0"	8"	7"	6"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	12'-10"	3.9	Yes
5'-0"	2'-0"	6"	6"	6"	3'-3"	2'-2"	2'-10"	4'-0"	12'-7 1/4"	3.5	Yes
5'-0"	3'-0"	8"	7"	6"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	14'-10 1/8"	4.9	Yes
5'-0"	3'-0"	6"	6"	6"	4'-3"	2'-8"	3'-10"	5'-5"	14'-7 1/4"	4.5	Yes
5'-0"	4'-0"	8"	7"	6"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	16'-10 1/8"	6.1	Yes
5'-0"	4'-0"	6"	6"	6"	5'-3"	3'-2"	4'-9 1/4"	6'-9"	16'-5 1/8"	5.5	Yes
5'-0"	5'-0"	8"	7"	6"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	18'-10 1/8"	7.4	Yes
5'-0"	5'-0"	6"	6"	6"	6'-3"	3'-8"	5'-9 1/4"	8'-2"	18'-5 1/8"	6.8	Yes
6'-0"	2'-0"	8"	7"	7"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	14'-0"	4.3	Yes
6'-0"	2'-0"	7"	7"	7"	3'-4"	2'-2"	2'-10 3/8"	4'-1"	13'-10 3/8"	4.2	Yes
6'-0"	3'-0"	8"	7"	7"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	16'-0 1/8"	5.4	Yes
6'-0"	3'-0"	7"	7"	7"	4'-4"	2'-8"	3'-10 3/8"	5'-6"	15'-10 3/8"	5.2	Yes
6'-0"	4'-0"	8"	7"	7"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	18'-0 1/8"	6.5	Yes
6'-0"	4'-0"	7"	7"	7"	5'-4"	3'-2"	4'-10 3/4"	6'-11"	17'-10 3/4"	6.5	Yes
6'-0"	5'-0"	8"	7"	7"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	20'-0 1/8"	8.0	Yes
6'-0"	5'-0"	7"	7"	7"	6'-4"	3'-8"	5'-10 3/4"	8'-4"	19'-10 3/4"	7.8	Yes
6'-0"	6'-0"	8"	7"	7"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	22'-0 1/4"	9.5	Yes
6'-0"	6'-0"	7"	7"	7"	7'-4"	4'-2"	6'-10 3/4"	9'-9"	21'-10 3/4"	9.3	Yes
7'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	15'-2"	4.9	Yes
7'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	17'-2 1/8"	6.1	Yes
7'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	19'-2 1/8"	7.4	Yes
7'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	21'-2 1/8"	8.9	Yes
7'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	23'-2 1/4"	10.6	Yes
8'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	16'-2"	5.3	Yes
8'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	18'-2 1/8"	6.5	Yes
8'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	20'-2 1/8"	7.8	Yes
8'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	22'-2 1/8"	9.3	Yes
8'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	24'-2 1/4"	11.0	Yes
9'-0"	2'-0"	9"	9"	9"	3'-6"	2'-3"	3'-0 3/4"	4'-4"	17'-6 1/8"	6.2	Yes
9'-0"	3'-0"	9"	9"	9"	4'-6"	2'-9"	4'-0 3/4"	5'-9"	19'-6 1/8"	7.5	Yes
9'-0"	4'-0"	9"	9"	9"	5'-6"	3'-3"	5'-0 3/4"	7'-2"	21'-6 7/8"	9.0	Yes
9'-0"	5'-0"	9"	9"	9"	6'-6"	3'-9"	6'-0 7/8"	8'-7"	23'-7"	10.6	Yes
9'-0"	6'-0"	9"	9"	9"	7'-6"	4'-3"	7'-0 1/8"	9'-11"	25'-5 5/8"	12.4	Yes
10'-0"	2'-0"	10"	10"	10"	3'-7"	2'-4"	3'-1 1/2"	4'-5"	18'-10 1/4"	7.1	No
10'-0"	3'-0"	10"	10"	10"	4'-7"	2'-10"	4'-1 1/2"	5'-10"	20'-10 1/4"	8.6	No
10'-0"	4'-0"	10"	10"	10"	5'-7"	3'-4"	5'-1 1/2"	7'-3"	22'-10 3/8"	10.2	Yes
10'-0"	5'-0"	10"	10"	10"	6'-7"	3'-10"	6'-1 1/2"	8'-8"	24'-10 3/8"	12.0	Yes
10'-0"	6'-0"	10"	10"	10"	7'-7"	4'-4"	7'-1 1/2"	10'-1"	26'-10 3/8"	13.9	Yes
11'-0"	2'-0"	11"	11"	11"	3'-8"	2'-4"	3'-2 7/8"	4'-7"	20'-3 1/8"	8.2	No
11'-0"	3'-0"	11"	11"	11"	4'-8"	2'-10"	4'-2 7/8"	6'-0"	22'-3 1/8"	9.8	No
11'-0"	4'-0"	11"	11"	11"	5'-8"	3'-4"	5'-2 1/4"	7'-4"	24'-1 3/4"	11.5	Yes
11'-0"	5'-0"	11"	11"	11"	6'-8"	3'-10"	6'-2 1/4"	8'-9"	26'-1 3/4"	13.3	Yes
11'-0"	6'-0"	11"	11"	11"	7'-8"	4'-4"	7'-2 1/4"	10'-2"	28'-1 1/8"	15.5	Yes
12'-0"	2'-0"	12"	12"	12"	3'-9"	2'-5"	3'-3 3/8"	4'-8"	21'-6 1/2"	9.3	No
12'-0"	3'-0"	12"	12"	12"	4'-9"	2'-11"	4'-3 3/8"	6'-1"	23'-6 1/2"	11.1	No
12'-0"	4'-0"	12"	12"	12"	5'-9"	3'-5"	5'-3 3/8"	7'-6"	25'-6 3/8"	13.0	Yes
12'-0"	5'-0"	12"	12"	12"	6'-9"	3'-11"	6'-3 3/8"	8'-11"	27'-6 3/8"	14.1	Yes
12'-0"	6'-0"	12"	12"	12"	7'-9"	4'-5"	7'-3 3/8"	10'-4"	29'-6 5/8"	17.4	Yes

Note:

Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft.

(Sheet 1 of 2)

SCB-AES

5-15-2023



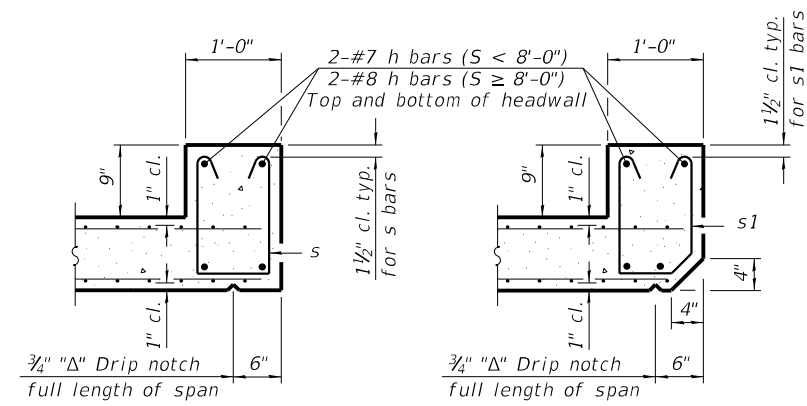
USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT APRON END  
SECTION DETAILS - STRUCTURE NO. 041-7100

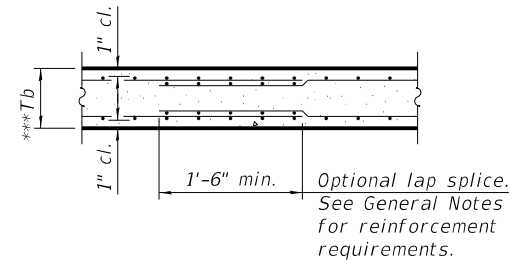
SHEET NO. 6 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	51
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				



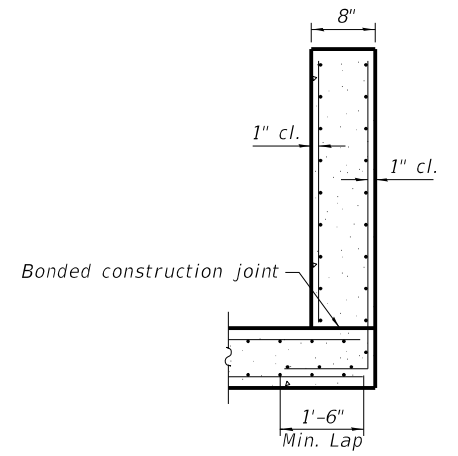
**SECTION B-B**  
(Top slab at downstream end)

**SECTION B-B**  
(Top slab at upstream end)

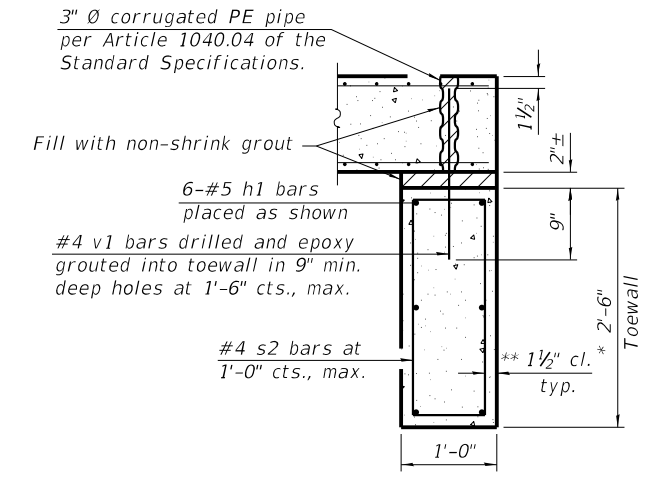


**SECTION B-B**  
(Bottom Slab)

\*\*\* This dimension shall be increased by 2" for CIP construction.



**SECTION C-C**



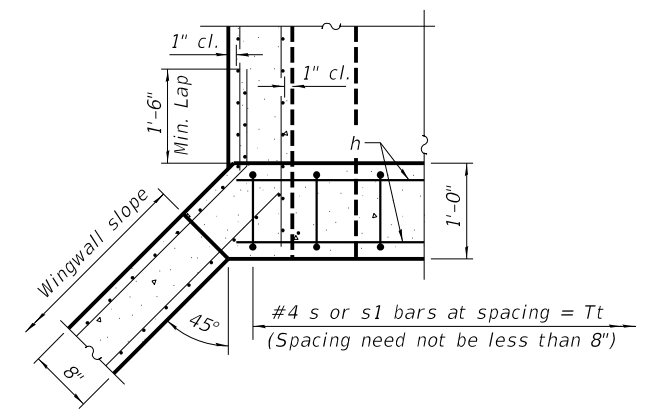
**SECTION D-D**

**TOEWALL CONSTRUCTION SEQUENCE**

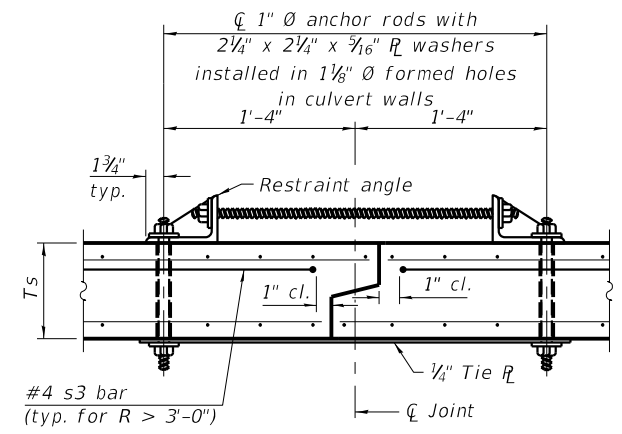
1. Perform excavation and construct toewall.
2. Backfill accordingly and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

\* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling method.

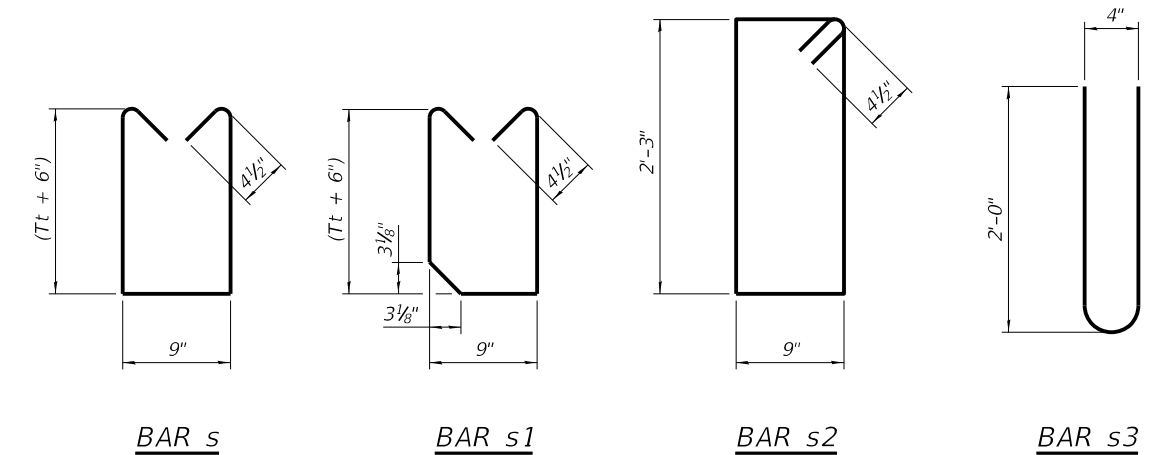
\*\* If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



**SECTION E-E**



**SECTION F-F**  
(Showing culvert tie details)

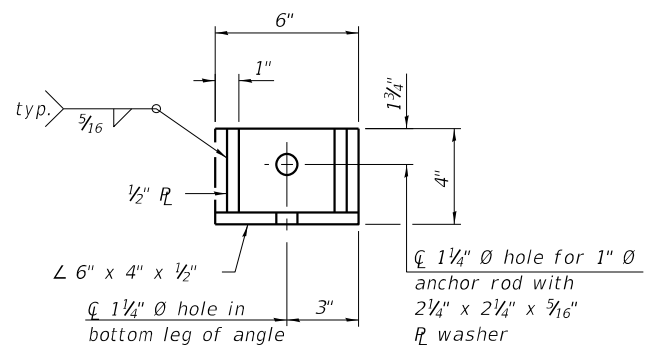


**BAR s**

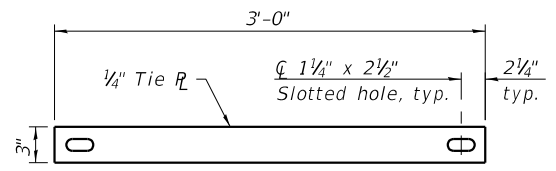
**BAR s1**

**BAR s2**

**BAR s3**



**RESTRAINT ANGLE DETAIL**



**TIE PLATE DETAIL**

Notes:  
1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 3/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

SCB-AES 5-15-2023

(Sheet 2 of 2)



USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

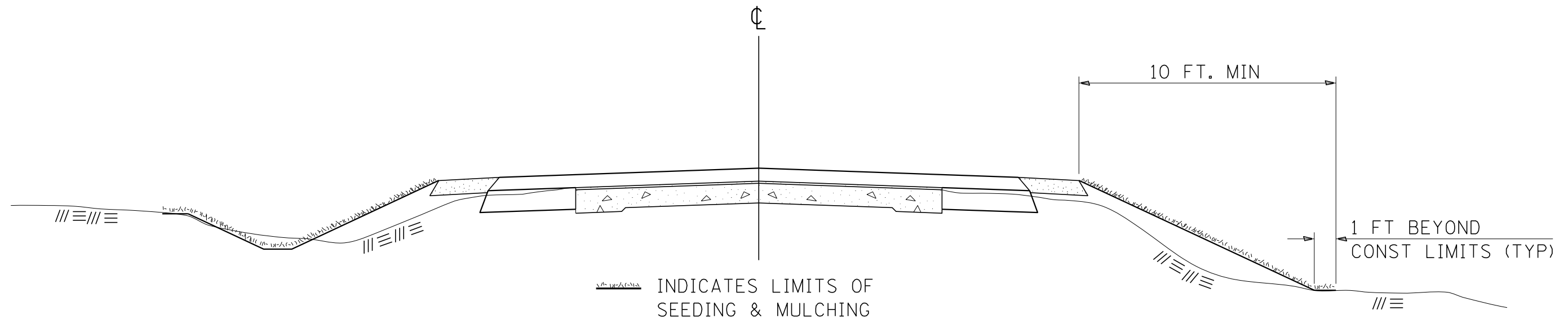
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT APRON END  
SECTION DETAILS - STRUCTURE NO. 041-7100

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	52
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				

SHEET NO. 7 OF 7 SHEETS

# SEEDING & MULCHING



## GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

ON DETOUR ROADS, SLOPES SHALL BE SEEDED IMMEDIATELY UPON COMPLETION OF ANY GIVEN STAGE GRADING. TEMPORARY SEEDING SHALL BE CLASS 7.

FERTILIZER NUTRIENTS SHALL BE APPLIED TO ALL SEEDED AREAS. LIMESTONE SHALL BE APPLIED TO ALL AREAS OF FINAL SEEDING.

THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR ROAD AND BRIDGE CONSTRUCTION.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

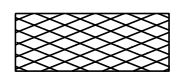
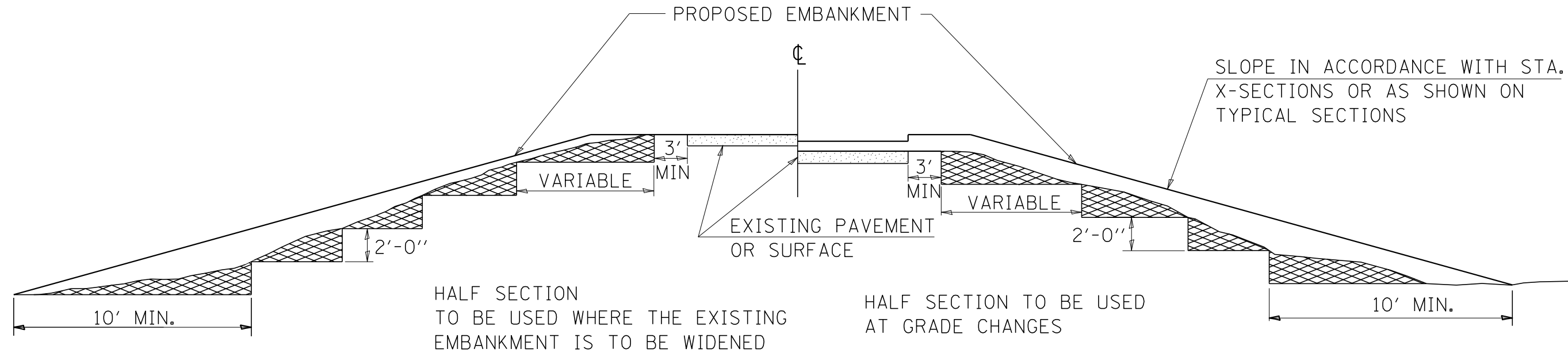
### REVISIONS

REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08
REVISED	5-16-13

STD. 9-12

 Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033	USER NAME = _____	DESIGNED - _____	REVISED - _____	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT STANDARDS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = _____	DRAWN - _____	REVISED - _____		SCALE:	SHEET NO. ___ OF ___ SHEETS	STA. _____	TO STA. _____	821	13B-3	JEFFERSON	78
PLOT DATE = _____	CHECKED - _____	REVISED - _____								CONTRACT NO. 78911		
											ILLINOIS FED. AID PROJECT	

# TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



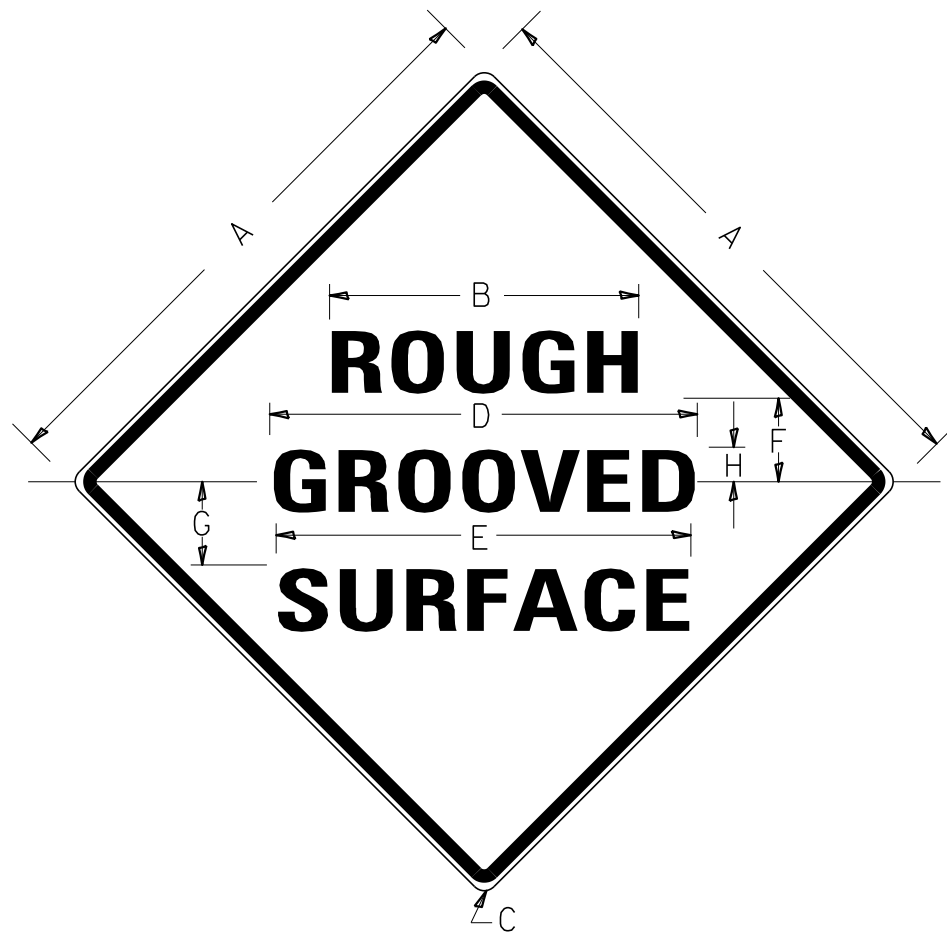
MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08
REVIEWED	5-17-13

STD. 9-16

<small>Veenstra &amp; Kimm, Inc. Springfield, IL. Phone: (217)544-8033</small>	USER NAME = _____	DESIGNED - _____	REVISED - _____	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT STANDARDS</b>	SCALE:	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	<table border="1" style="font-size: 8px;"> <tr> <th>F.A.P. RTE.</th> <th>SECTION</th> <th>COUNTY</th> <th>TOTAL SHEETS</th> <th>SHEET NO.</th> </tr> <tr> <td>821</td> <td>13B-3</td> <td>JEFFERSON</td> <td>78</td> <td>54</td> </tr> <tr> <td colspan="5" style="text-align: center;">CONTRACT NO. 78911</td> </tr> </table>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	821	13B-3	JEFFERSON	78	54	CONTRACT NO. 78911				
	F.A.P. RTE.	SECTION	COUNTY			TOTAL SHEETS	SHEET NO.																	
821	13B-3	JEFFERSON	78	54																				
CONTRACT NO. 78911																								
PLOT SCALE = _____	DRAWN - _____	REVISED - _____	REVISED - _____	ILLINOIS FED. AID PROJECT																				
PLOT DATE = _____	CHECKED - _____	REVISED - _____	REVISED - _____																					

# ILLINOIS STANDARD



## COLORS:

LEGEND AND BORDER- BLACK NON-REFLECTORIZED  
 BACKGROUND- ORANGE REFLECTORIZED

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
48X48	48.0	24.1	3.0	34.0	33.0	6.0	13.0	3.5

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
48X48	7C	7C	7C	0.8	1.2	B4-48D

ALL DIMENSIONS IN INCHES

## NOTES:

PRIOR TO ALLOWING TRAFFIC ON ANY PORTION OF THE ROADWAY THAT HAS BEEN COLDMILLED, THE CONTRACTOR SHALL HAVE ERECTED "ROUGH GROOVED SURFACE" SIGNS THAT CONFORM TO THE ABOVE DETAILS. A MINIMUM OF ONE SIGN AT EACH END OF THE IMPROVEMENT WILL BE REQUIRED. THE CONTRACTOR SHALL MAINTAIN THE "ROUGH GROOVED SURFACE" SIGNS UNTIL THE COLDMILLED SURFACE IS COVERED WITH LEVELING BINDER OR SURFACE COURSE.

IF AT ANY TIME THE SIGNS ARE IN PLACE BUT NOT APPLICABLE, THEY SHALL BE TURNED FROM THE VIEW OF MOTORISTS OR COVERED AS DIRECTED BY THE ENGINEER.

THE COST OF FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE REQUIRED SIGNS SHALL BE INCLUDED IN THE CONTRACT.

### REVISIONS

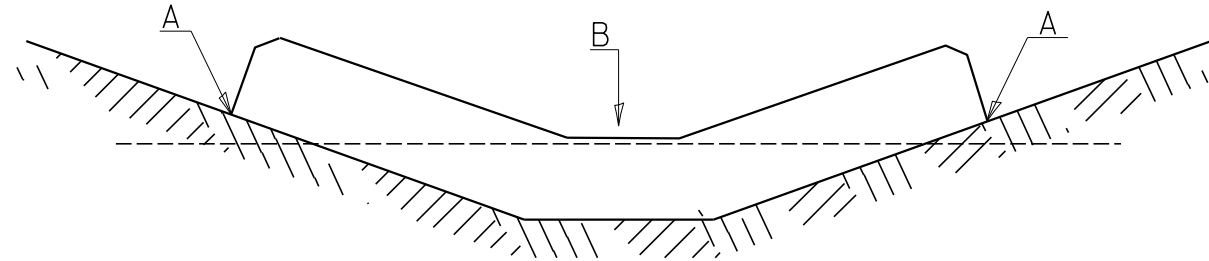
REDRAWN	2-15-89
REVISED	4-6-93
REVISED	3-27-08
REVIEWED	5-17-13

STD. 9-39

 Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033	USER NAME = ___	DESIGNED - ___	REVISED - ___	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT STANDARDS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = ___	DRAWN - ___	REVISED - ___		SCALE:	SHEET NO. ___ OF ___ SHEETS	STA. TO STA.	821	13B-3	JEFFERSON	78	55
PLOT DATE = ___	CHECKED - ___	REVISED - ___					CONTRACT NO. 78911					
ILLINOIS FED. AID PROJECT												

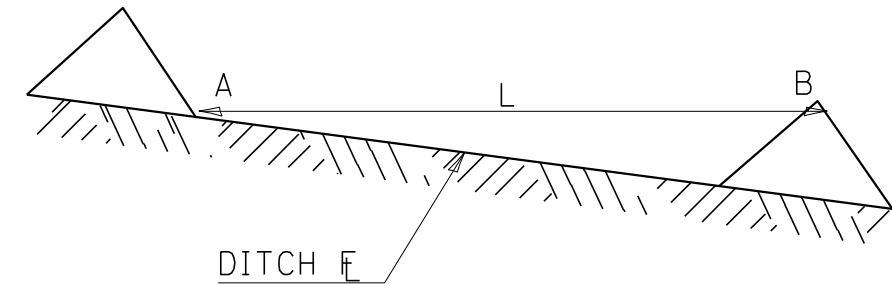
# TEMPORARY DITCH CHECKS

## PLACEMENT OF TEMPORARY DITCH CHECK IN DRAINAGE WAY



POINTS A SHOULD BE HIGHER THAN POINT B

## SPACING BETWEEN TEMPORARY DITCH CHECKS



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

B = THE LOW POINT IN CENTER OF CHECK

### REVISIONS

DRAWN	9-01-99
REVISED	10-3-01
RESIZED	5-8-08
REVISED	05-04-10
REVIEWED	5-17-13

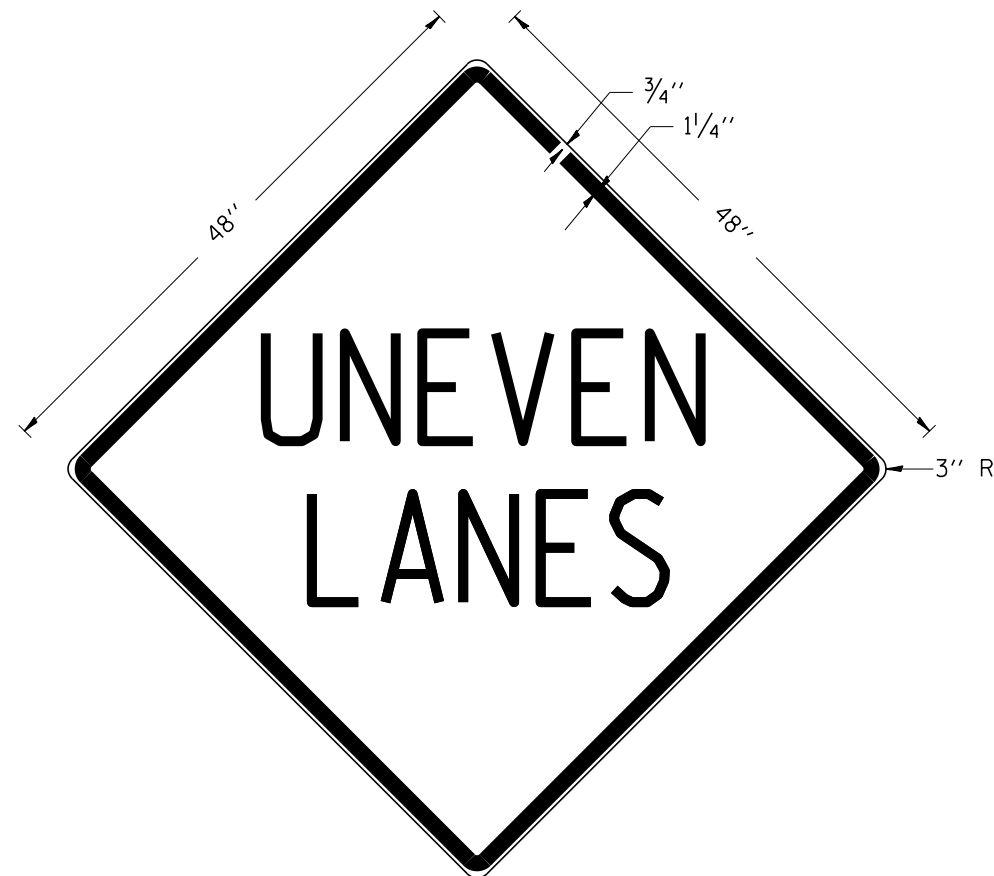
STD. 9-108

 Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033	USER NAME = ___	DESIGNED - ___	REVISED - ___	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT STANDARDS</b>	SCALE:	SHEET NO. ___ OF ___ SHEETS	STA. TO STA.	F.A.P. RTE. 821 SECTION 13B-3 COUNTY JEFFERSON TOTAL SHEETS 78 SHEET NO. 56 CONTRACT NO. 78911 ILLINOIS FED. AID PROJECT
	PLOT SCALE = ___	DRAWN - ___	REVISED - ___			CHECKED - ___ CHECKED - ___ CHECKED - ___	CHECKED - ___ CHECKED - ___ CHECKED - ___		



# UNEVEN LANES SIGN

W8-11 (48'' x 48'')



**COLORS:**

LEGEND AND BORDER - BLACK NON-REFLECTORIZED  
 BACKGROUND - ORANGE REFLECTORIZED

**NOTE:** PRIOR TO ALLOWING TRAFFIC ON ANY PORTION OF THE ROADWAY THAT HAS BEEN COLDMILLED OR BEFORE RESURFACING OPERATIONS BEGIN, THE CONTRACTOR SHALL HAVE ERECTED "UNEVEN PAVEMENT" SIGNS THAT CONFORM TO THE ABOVE DETAILS. A MINIMUM OF ONE SIGN AT EACH END OF THE IMPROVEMENT WILL BE REQUIRED. THE CONTRACTOR SHALL MAINTAIN THE "UNEVEN PAVEMENT" SIGNS UNTIL THE RESURFACING OPERATIONS ARE COMPLETED.

IF AT ANY TIME THE SIGNS ARE IN PLACE BUT NOT APPLICABLE, THEY SHALL BE TURNED FROM THE VIEW OF MOTORISTS OR COVERED AS DIRECTED BY THE ENGINEER.

THE COST OF FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE REQUIRED SIGNS SHALL BE INCLUDED IN THE CONTRACT.

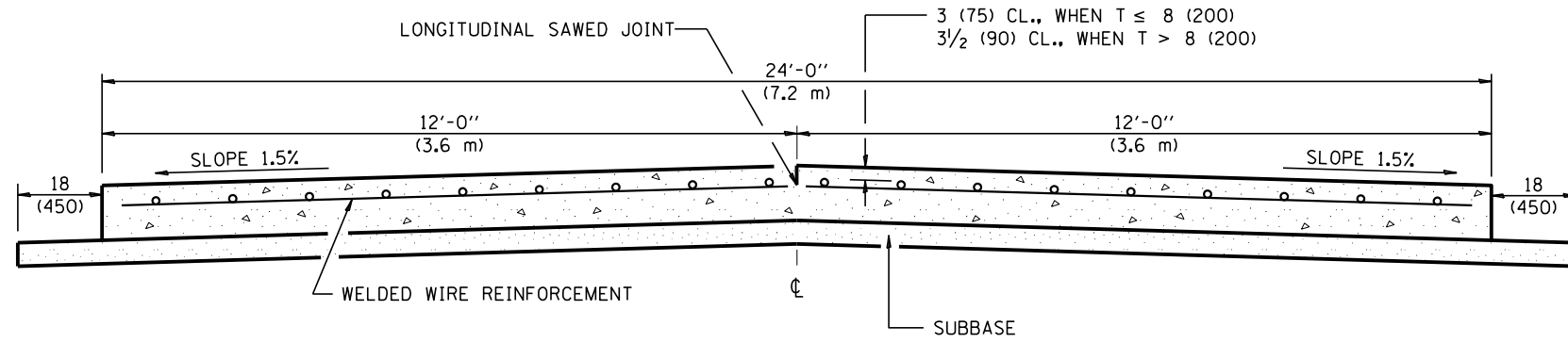
**REVISIONS**

DRAWN	2-15-89
REVISED	4-06-93
REDSIGNED	7-23-04
RESIZED	5-08-08
REVIEWED	5-17-13

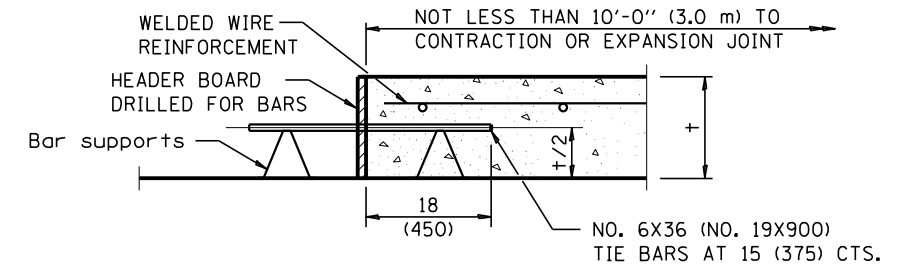
STD. 9-41

 Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033	USER NAME = ___	DESIGNED - ___	REVISED - ___	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT STANDARDS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = ___	DRAWN - ___	REVISED - ___		SCALE:	SHEET NO. ___ OF ___ SHEETS	STA. TO STA.	821	13B-3	JEFFERSON	78	57
PLOT DATE = ___	CHECKED - ___	REVISED - ___					CONTRACT NO. 78911			ILLINOIS FED. AID PROJECT		

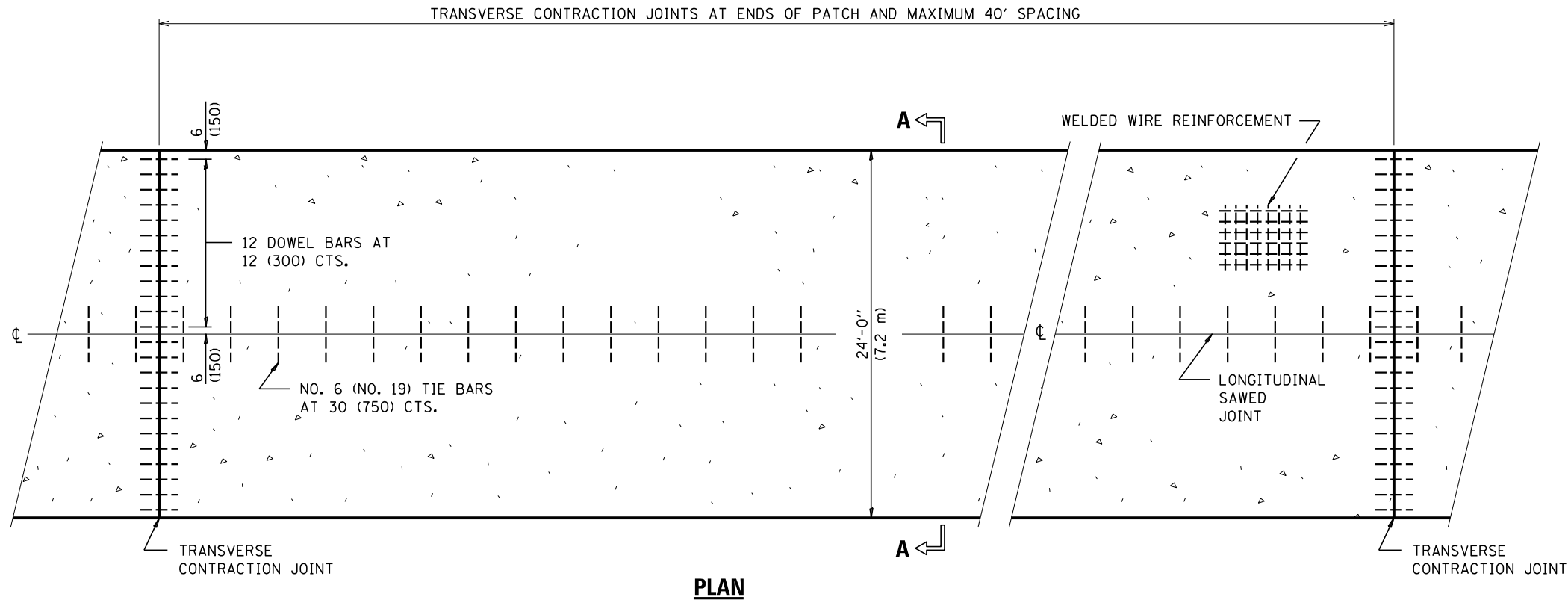
# 24' (7.2 m) PCC PAVEMENT OVER BOX CULVERT



**SECTION A-A**  
(TYPICAL 2-LANE WITH SHOULDERS)



**TRANSVERSE CONSTRUCTION JOINT**  
(IF NEEDED PER STANDARD SPECIFICATIONS)



**PLAN**

**GENERAL NOTES**

- SEE STANDARD 420001 FOR DETAILS NOT SHOWN.
- SEE STANDARD 420701 FOR WELDED WIRE REINFORCEMENT DETAILS.
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- ACTUAL DIMENSIONS TO MATCH FIELD CONDITIONS AND CONSTRUCTION METHODS.

REVISIONS

DRAWN	11-9-17
REVISED	7-23-18

STD. 9-25



USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT STANDARDS**

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

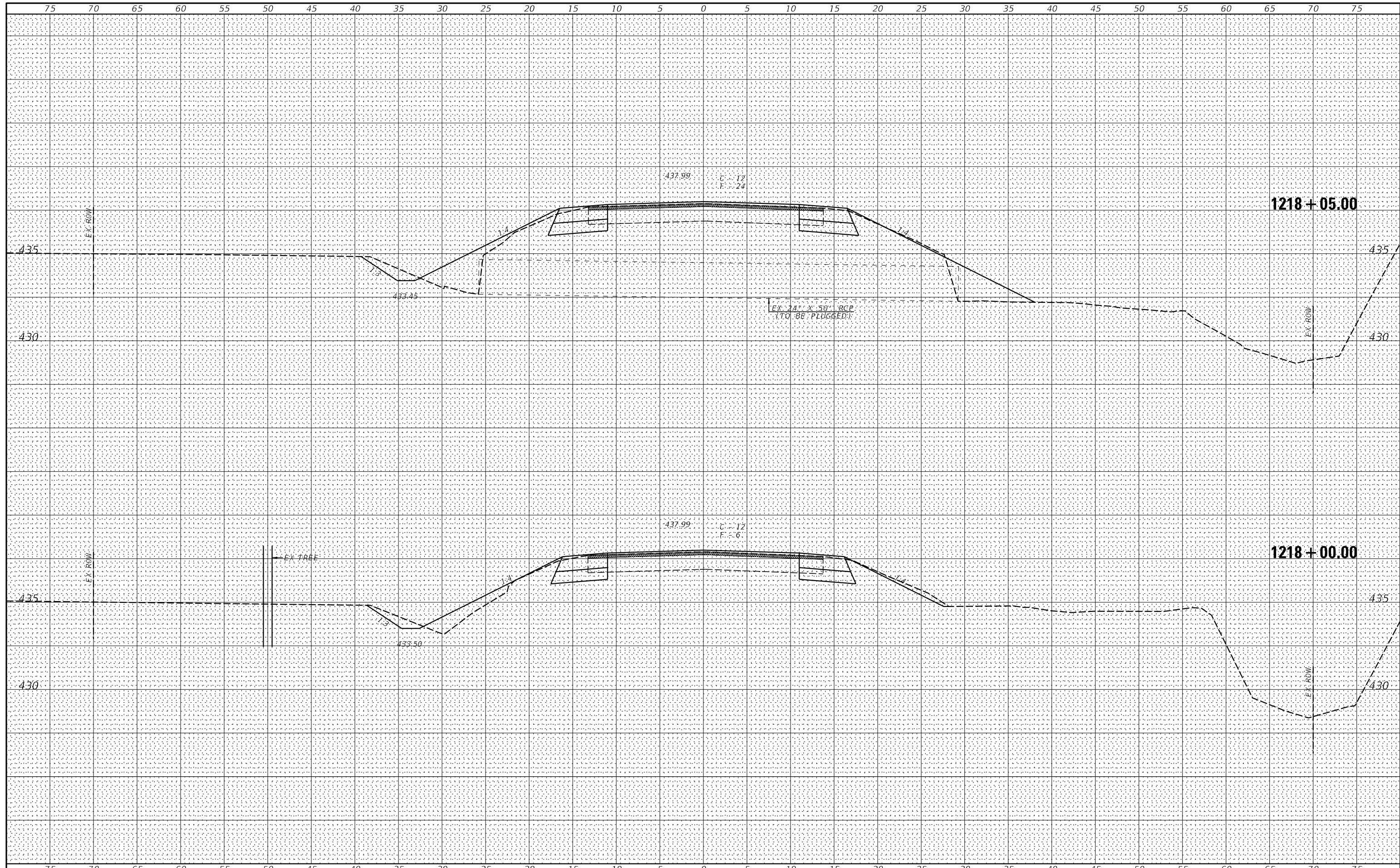
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	58
CONTRACT NO. 78911				
ILLINOIS FED. AID PROJECT				





BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_



**VK VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL Design Firm No. 184-001939

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

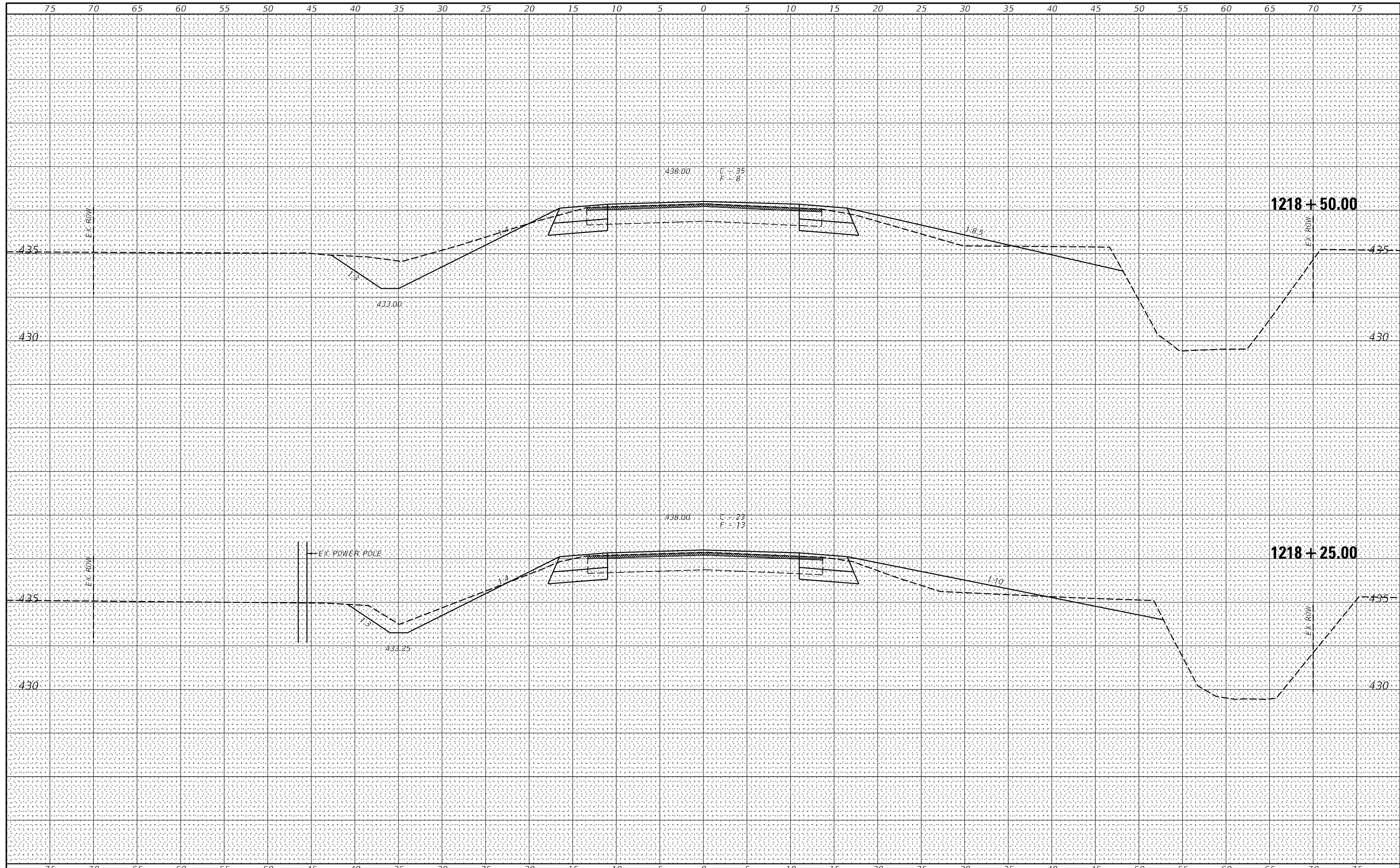
**CROSS SECTIONS**

SCALE: \_\_\_\_\_ SHEET NO. 2 OF 19 SHEETS STA. 1218+00.00 TO STA. 1218+05.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	61
CONTRACT NO. 78911				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_



**VK VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL. Design Firm No. 184-001939

USER NAME = \*USER\*  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

SCALE: \_\_\_\_\_ SHEET NO. 3 OF 19 SHEETS STA. 1218+25.00 TO STA. 1218+50.00

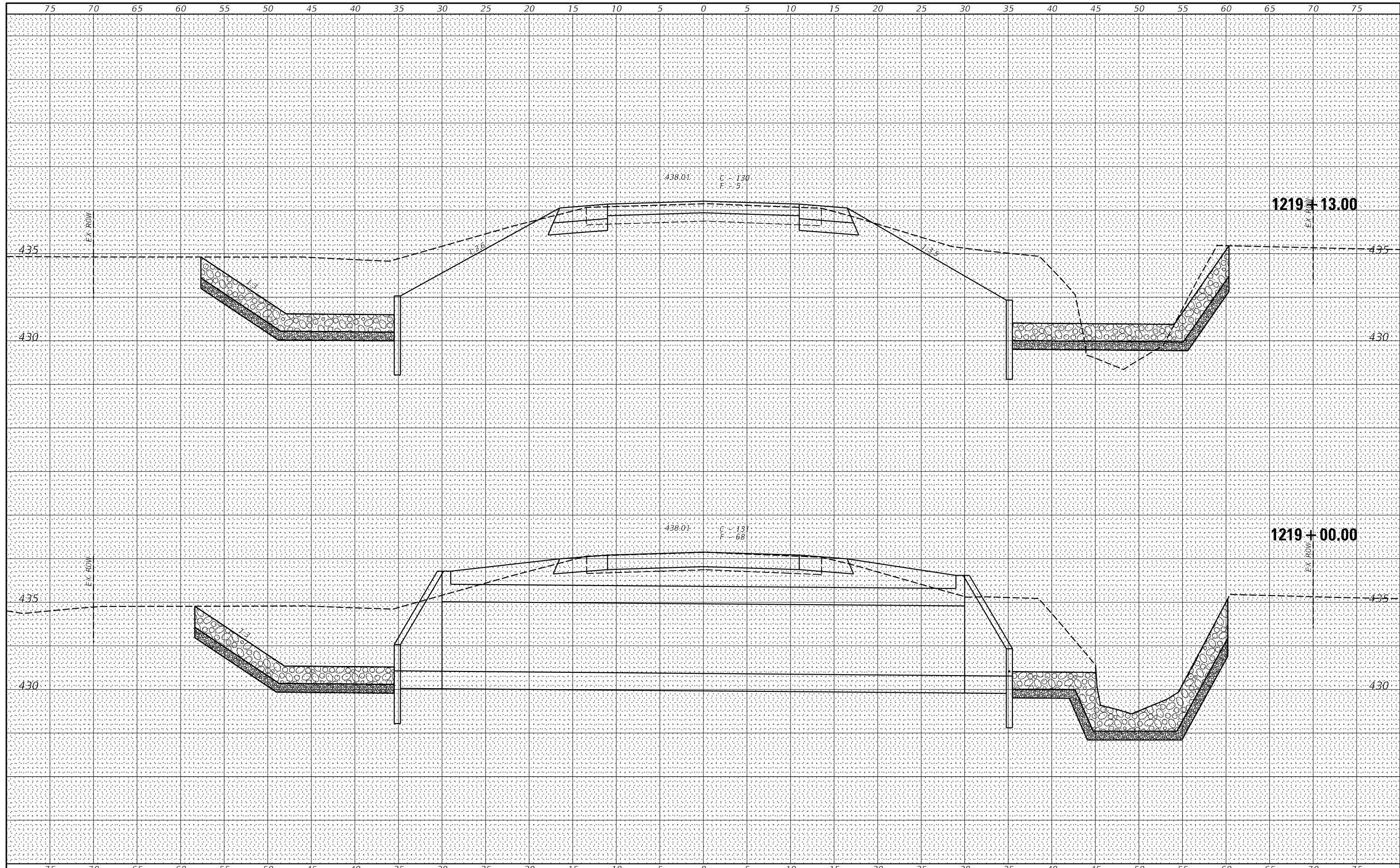
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	62
CONTRACT NO. 78911				

FED. ROAD DIST. NO. [ ] ILLINOIS FED. AID PROJECT



BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_



**VK VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL Design Firm No. 184-001939

USER NAME = \*USER\*  
 PLOT SCALE = \*SCALE\*  
 PLOT DATE = \*DATE\*

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

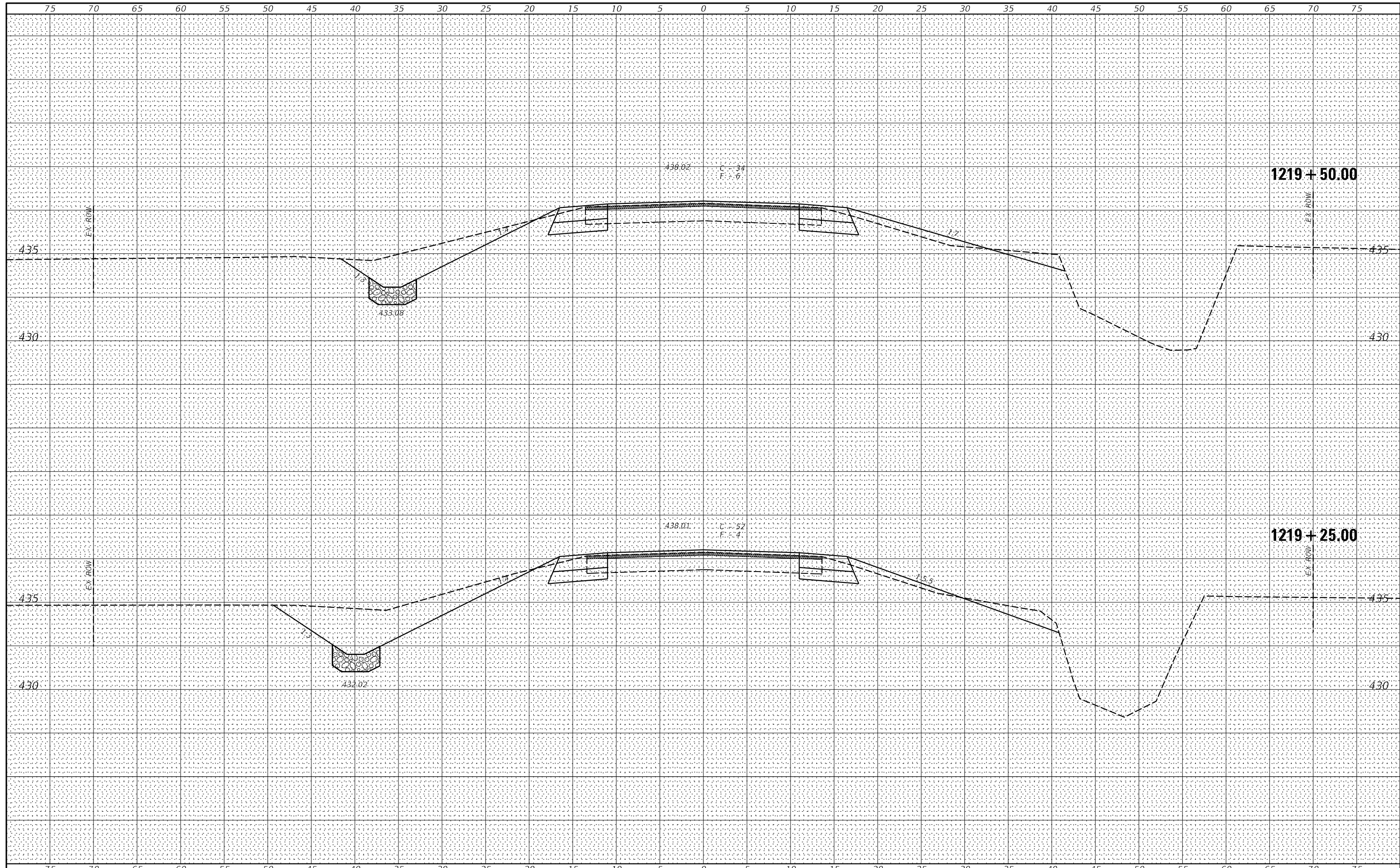
SCALE: \_\_\_\_\_ SHEET NO. 5 OF 19 SHEETS STA. 1219+00.00 TO STA. 1219+13.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	64
CONTRACT NO. 78911				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_



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 Springfield, IL. Phone: (217)544-8033  
 IL Design Firm No. 184-001939

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

SCALE: \_\_\_\_\_ SHEET NO. 6 OF 19 SHEETS STA. 1219+25.00 TO STA. 1219+50.00

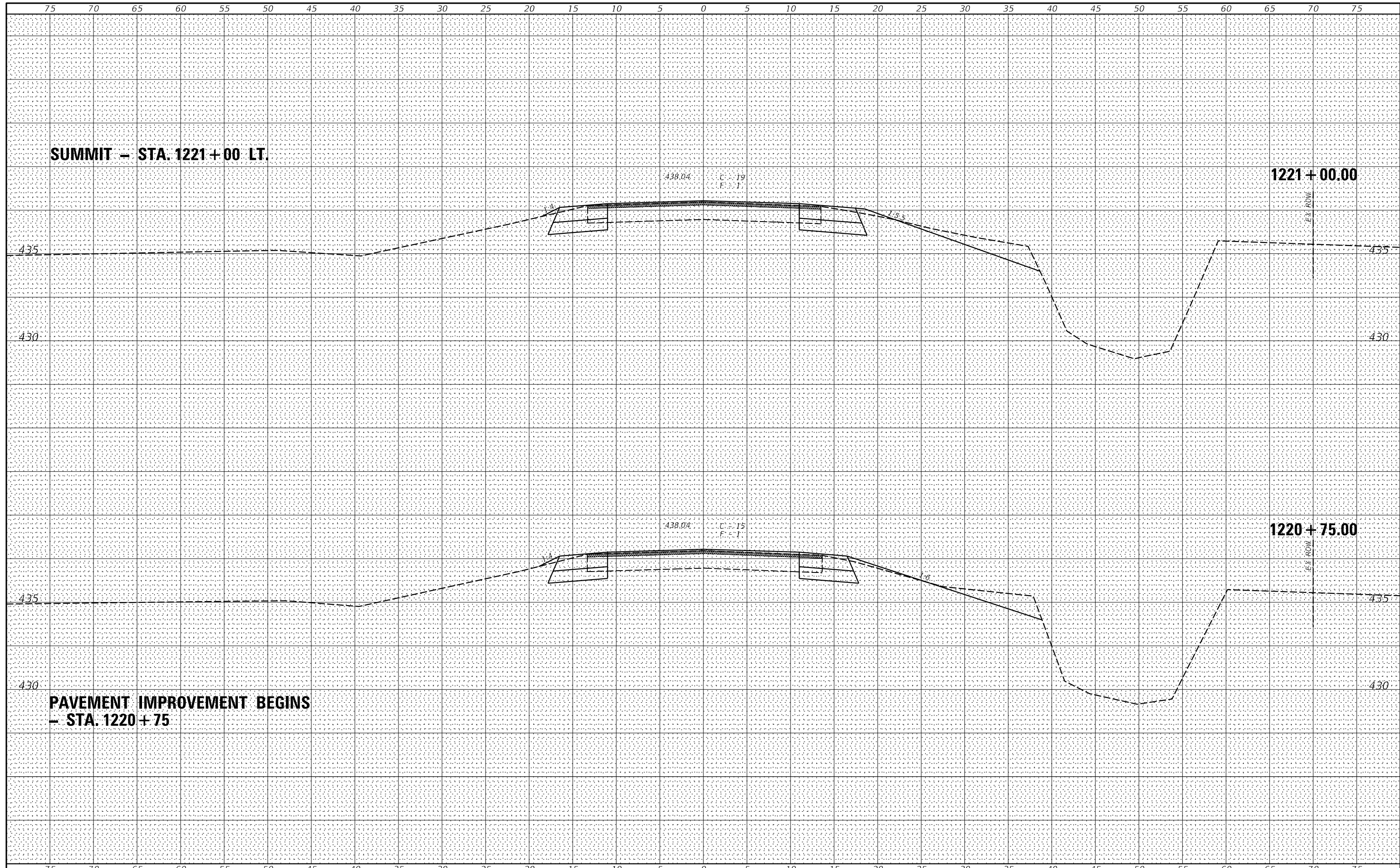
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	65
CONTRACT NO. 78911				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_

DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_



**VK VEENSTRA & KIMM INC.**  
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 IL Design Firm No. 184-001939

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

SCALE: \_\_\_\_\_ SHEET NO. 9 OF 19 SHEETS STA. 1220+75.00 TO STA. 1221+00.00

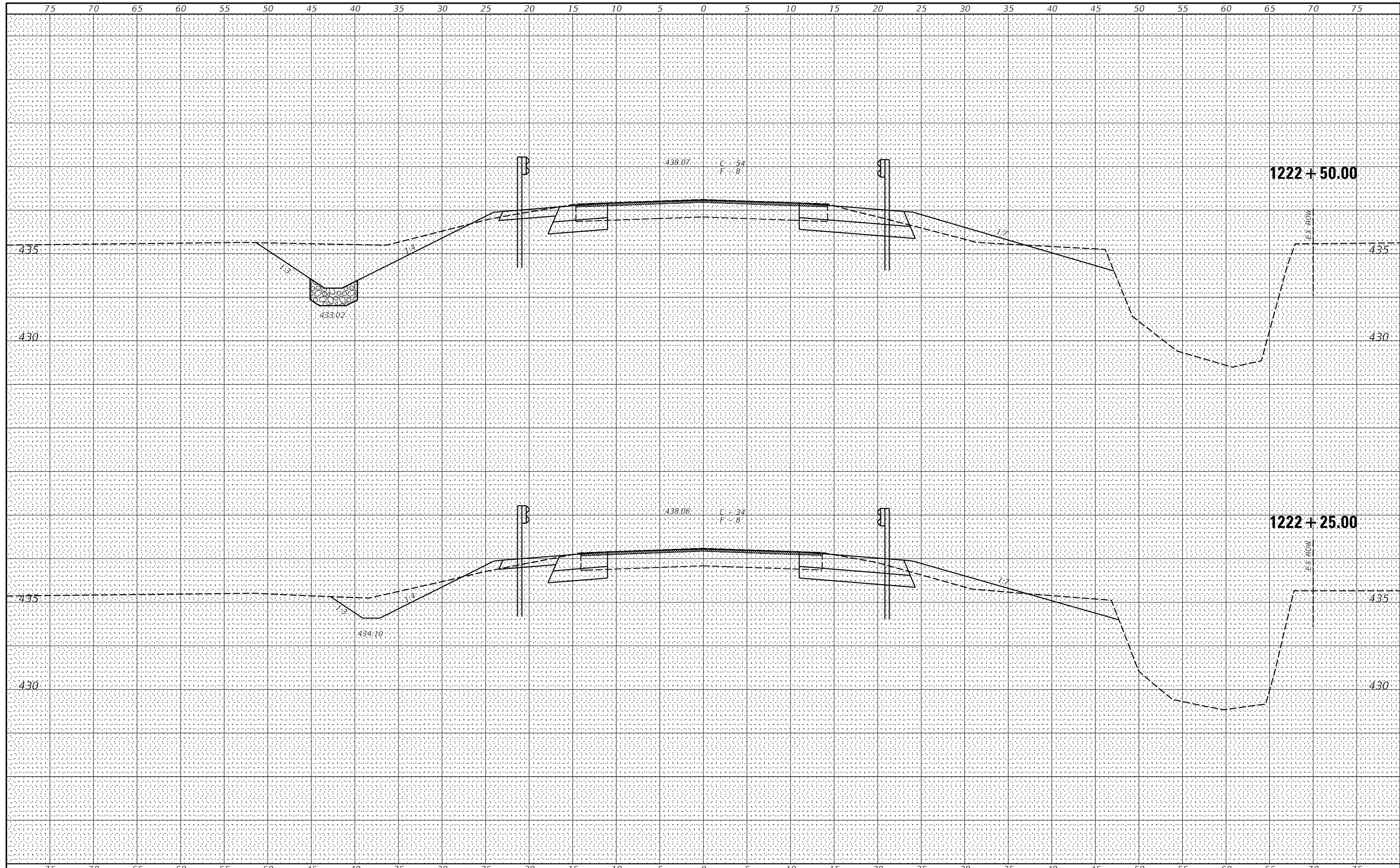
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	68
CONTRACT NO. 78911				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS \_\_\_\_\_  
 CHECKED \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS \_\_\_\_\_  
 CHECKED \_\_\_\_\_



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USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

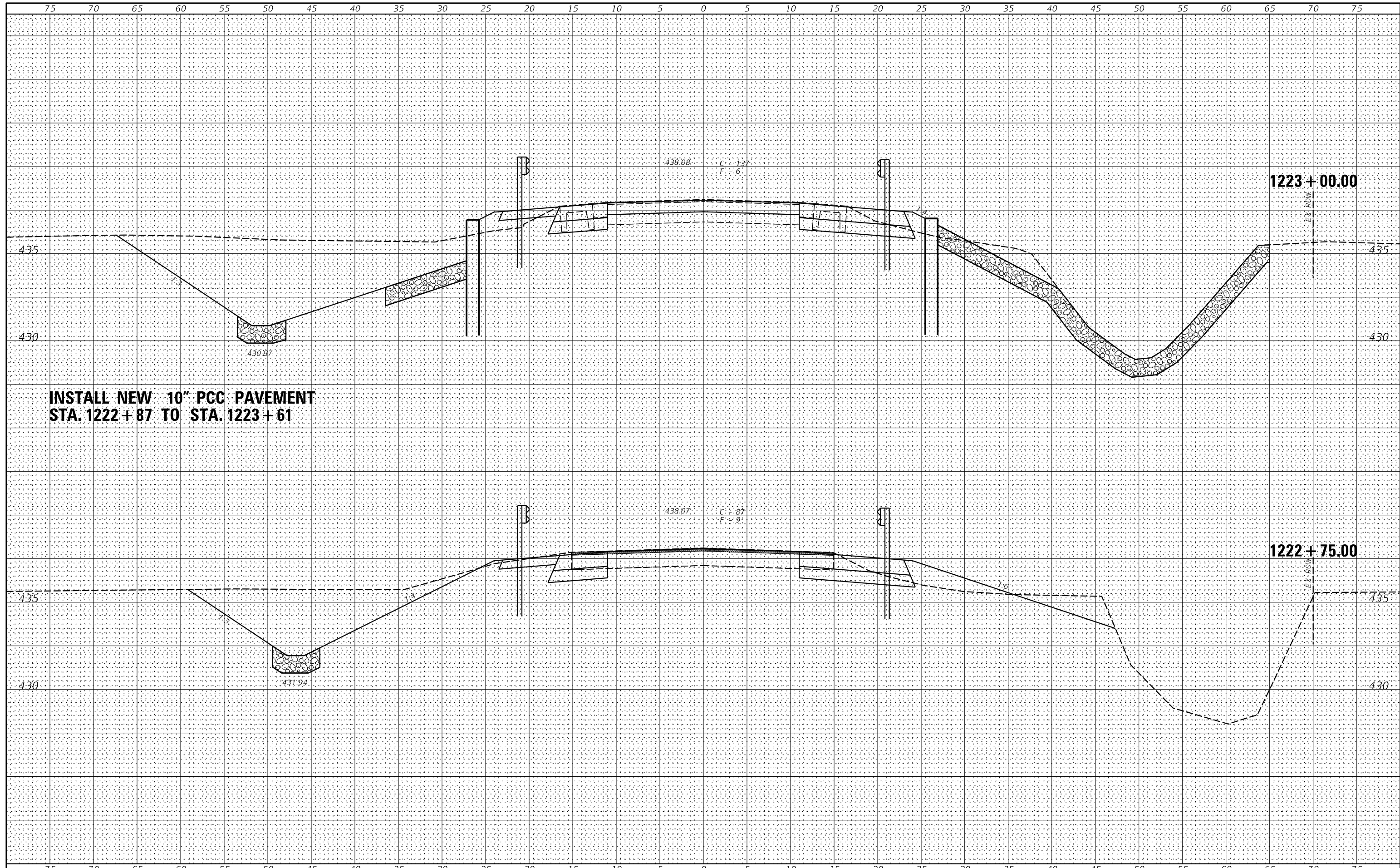
**CROSS SECTIONS**

SCALE: \_\_\_\_\_ SHEET NO. 12 OF 19 SHEETS STA. 1222+25.00 TO STA. 1222+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	71
CONTRACT NO. 78911				
FED. ROAD DIST. NO. [ ] ILLINOIS FED. AID PROJECT				

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_



**INSTALL NEW 10" PCC PAVEMENT  
 STA. 1222+87 TO STA. 1223+61**

**VK VEENSTRA & KIMM INC.**  
 Springfield, IL. Phone: (217)544-8033  
 IL Design Firm No. 184-001939

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

SCALE: \_\_\_\_\_ SHEET NO. 13 OF 19 SHEETS STA. 1222+75.00 TO STA. 1223+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	72
CONTRACT NO. 78911				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





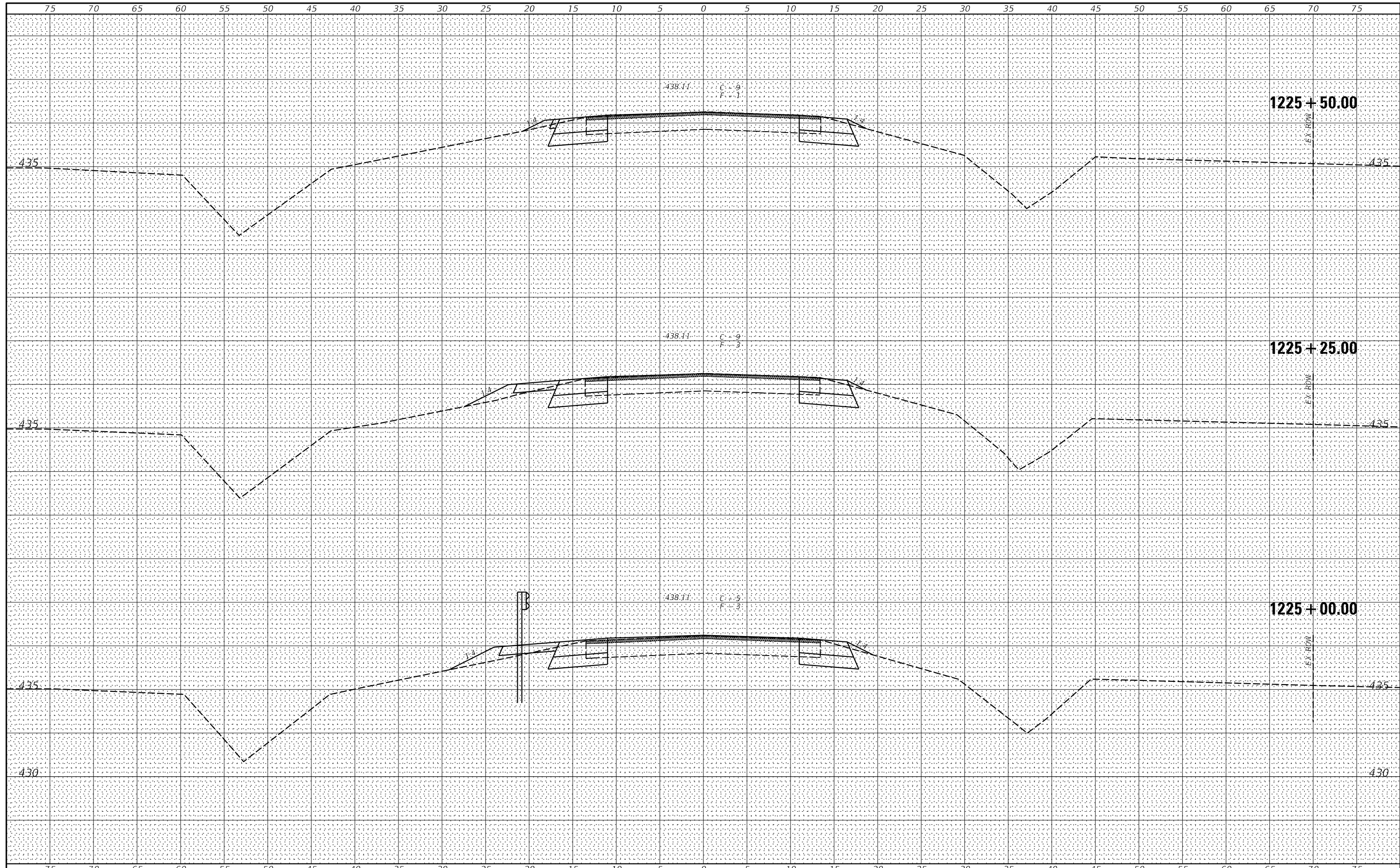






BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 ORIGINAL SURVEY NO. \_\_\_\_\_



**VK VEENSTRA & KIMM INC.**  
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 IL Design Firm No. 184-001939

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

SCALE: \_\_\_\_\_ SHEET NO. 18 OF 19 SHEETS STA. 1225+00.00 TO STA. 1225+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	13B-3	JEFFERSON	78	77
CONTRACT NO. 78911				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

