

04-26-2024 LETTING ITEM 099

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

INDEX OF SHEETS

- 1 COVER SHEET
- 2 HIGHWAY STANDARDS, GENERAL NOTES, & COMMITMENTS
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- 48-54 CROSS SECTIONS

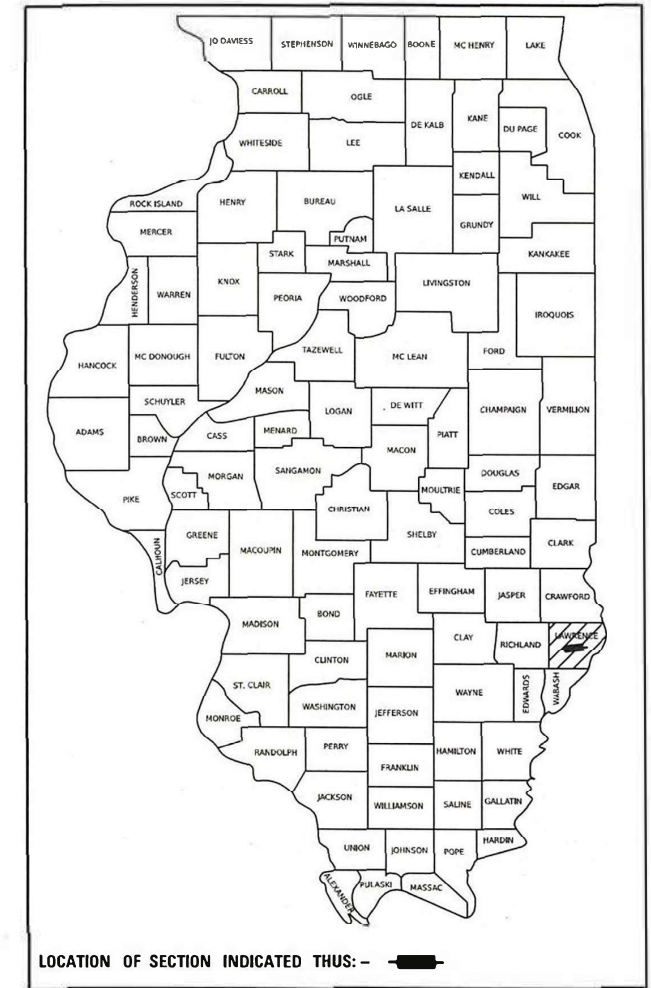
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 327 (US 50)
SECTION (3,2B) B-1
PROJECT NHPP-OBPJ(861)
BRIDGE REPLACEMENT
LAWRENCE COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B) B-1	LAWRENCE	54	1
		ILLINOIS	CONTRACT NO. 74443	

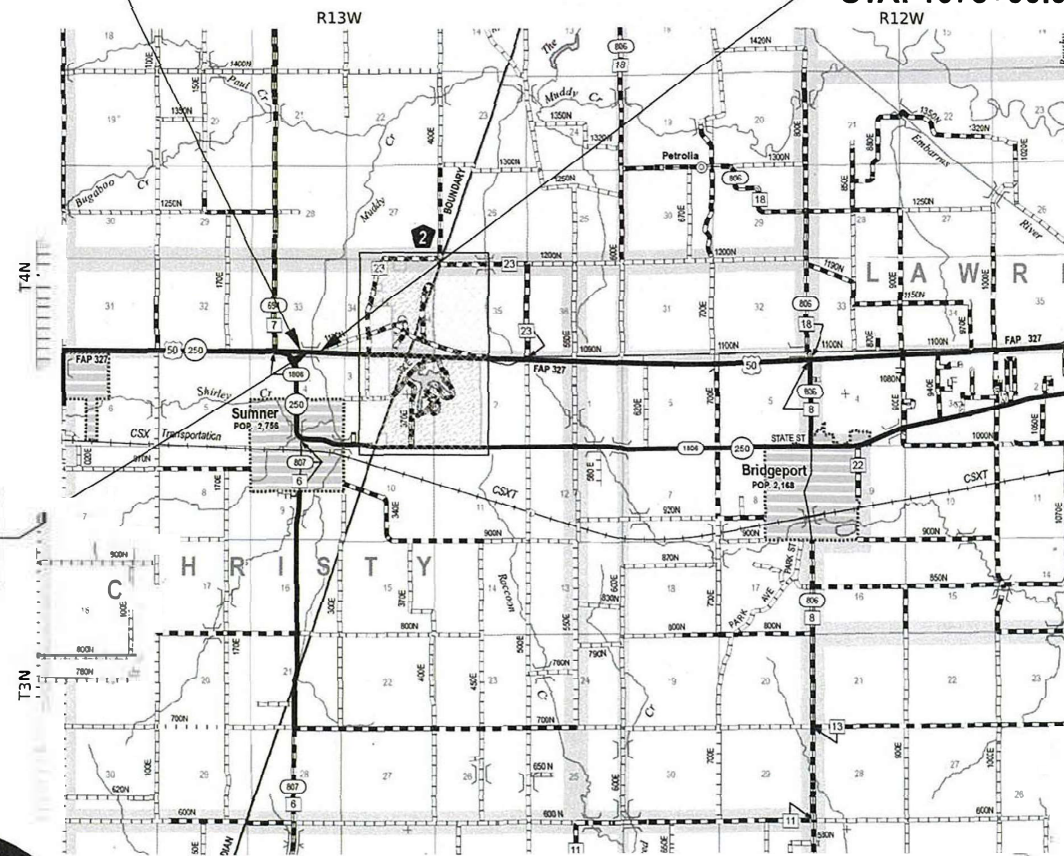
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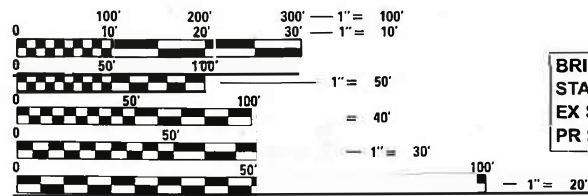
BEGIN IMPROVEMENT
STA: 1066+25.00

C-97-051-10

END IMPROVEMENT
STA: 1075+00.00



LOCATION MAP
NOT TO SCALE



BRIDGE REPLACEMENT
STA. 1071+75
EX SN 051-0009
PR SN 051-0077

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

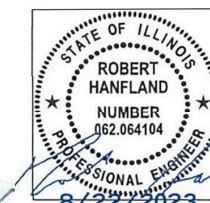
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: MATTHEW BOWER
PROJECT MANAGER: ROBERT HANFLAND
217-342-8359
CONTRACT NO. 74443



CIVIL DESIGN, INC.
WBE / DBE
LICENSE #184.003222

GROSS LENGTH = 875 FT. = 0.166 MILE
NET LENGTH = 875 FT. = 0.166 MILE



ROBERT HANFLAND, PE
STATE OF ILLINOIS NO. 062-064104
EXPIRES 11-30-2023

FUNCTIONAL CLASSIFICATION
OTHER PRINCIPAL ARTERIAL
2024 ADT = 4500
P.V.=83.7% TRUCKS=16.3%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED JANUARY 25 20 24
Jerry P. Myrals
REGIONAL ENGINEER

March 22, 2024
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

March 22, 2024
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				80% FED 20% STATE BRIDGE 0010	051-0077
20200100	EARTH EXCAVATION	CU YD	80	80	
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	421	421	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	125	125	
28000400	PERIMETER EROSION BARRIER	FOOT	1,796	1,796	
28100109	STONE RIPRAP, CLASS A5	SQ YD	781	781	
28200200	FILTER FABRIC	SQ YD	682	682	
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	499	499	
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	1,505	1,505	
40600990	TEMPORARY RAMP	SQ YD	312	312	
40603240	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	231	231	
40604164	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90	TON	182	182	
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	120	120	
44000100	PAVEMENT REMOVAL	SQ YD	336	336	
44004250	PAVED SHOULDER REMOVAL	SQ YD	384	384	

* SPECIALTY ITEM
^ SPECIAL PROVISION

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				80% FED 20% STATE BRIDGE 0010	051-0077
44201811	CLASS D PATCHES, TYPE I, 14 INCH	SQ YD	24	24	
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	263	263	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	19	19	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	256	256	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	159	159	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1	
50200100	STRUCTURE EXCAVATION	CU YD	414	414	
50300225	CONCRETE STRUCTURES	CU YD	178.4	178.4	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	262.0	262.0	
50300260	BRIDGE DECK GROOVING	SQ YD	898	898	
50300300	PROTECTIVE COAT	SQ YD	1,146	1,146	
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	105.9	105.9	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1	
50500505	STUD SHEAR CONNECTORS	EACH	4,518	4,518	

* SPECIALTY ITEM
^ SPECIAL PROVISION

MODEL: S00 (Sheet)
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PLOT SCALE = 0.16666633 1/ in.	DRAWN -	REVISED -
PLOT DATE = 10/18/2023	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: N/A SHEET 1 OF 3 SHEETS STA. ___+___ TO STA. ___+___

F.A.P. RTE. 327	SECTION (3,2B) B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 3
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FED
				20% STATE
				BRIDGE
				0010
				051-0077
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	121,430	121,430
50800515	BAR SPLICERS	EACH	936	936
51202100	FURNISHING STEEL PILES HP14X117	FOOT	485	485
51202115	FURNISHING STEEL PILES HP16X162	FOOT	822	822
51202305	DRIVING PILES	FOOT	485	485
51204100	TEST PILE STEEL HP14X117	EACH	2	2
51204650	PILE SHOES	EACH	12	12
51265001	DRILLING AND SETTING PILES (IN SOIL)	CU FT	1,867	1,867
51265002	DRILLING AND SETTING PILES (IN ROCK)	CU FT	1,178	1,178
51500100	NAME PLATES	EACH	1	1
52100510	ANCHOR BOLTS, 3/4"	EACH	24	24
52100520	ANCHOR BOLTS, 1"	EACH	24	24
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	538	538
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	111	111

* SPECIALTY ITEM
^ SPECIAL PROVISION

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FED
				20% STATE
				BRIDGE
				0010
				051-0077
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	135	135
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	200	200
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4
63200310	GUARDRAIL REMOVAL	FOOT	582	582
64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	1,215	1,215
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8
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
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	100	100

* SPECIALTY ITEM
^ SPECIAL PROVISION

REV. - MS

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 CIVIL DESIGN, INC. WBE / DBE EFFINGHAM, IL LICENSE #184.003222	USER NAME = rhanfland	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.16666833' / in.	DRAWN -	REVISED -					327	(3,2B) B-1	LAWRENCE	54	4
	PLOT DATE = 8/22/2023	CHECKED -	REVISED -					CONTRACT NO. 74443				
	DATE -	REVISED -		SCALE: N/A	SHEET 2	OF 3	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

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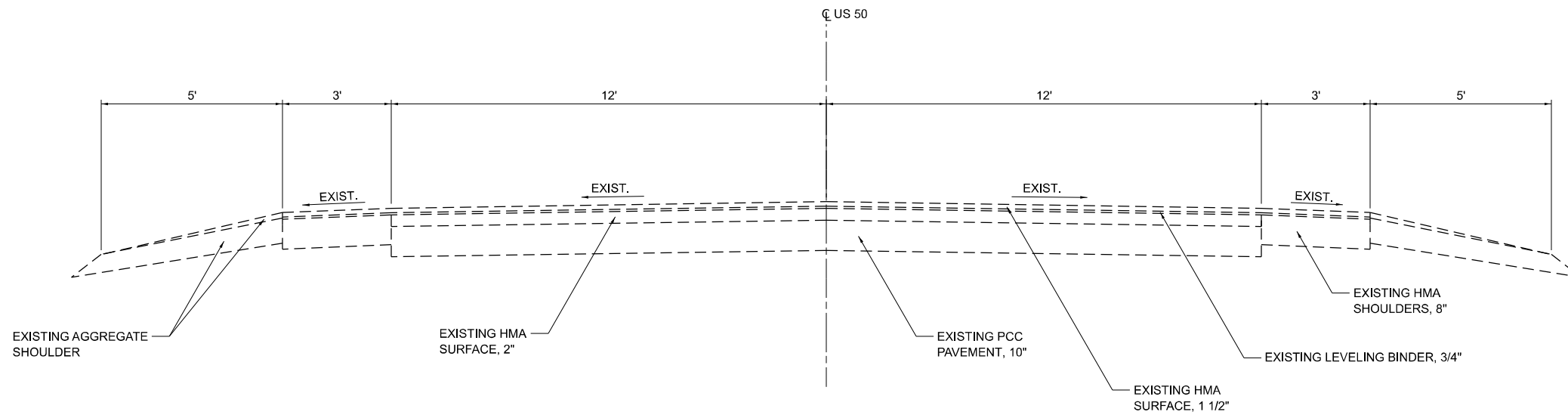
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				80% FED 20% STATE BRIDGE 0010 051-0077	
^ 70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	224	224	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	117	117	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	550	550	
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	94	94	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	475	475	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,970	1,970	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	11	11	
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	16	16	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	11	11	
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.50	0.50	

* SPECIALTY ITEM
^ SPECIAL PROVISION

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				80% FED 20% STATE BRIDGE 0010 051-0077	
^ X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	2,230	2,230	
^ X5503101	PLUG EXISTING PIPE	CU YD	5	5	
^ X6050310	FILLING INLETS, SPECIAL	EACH	4	4	

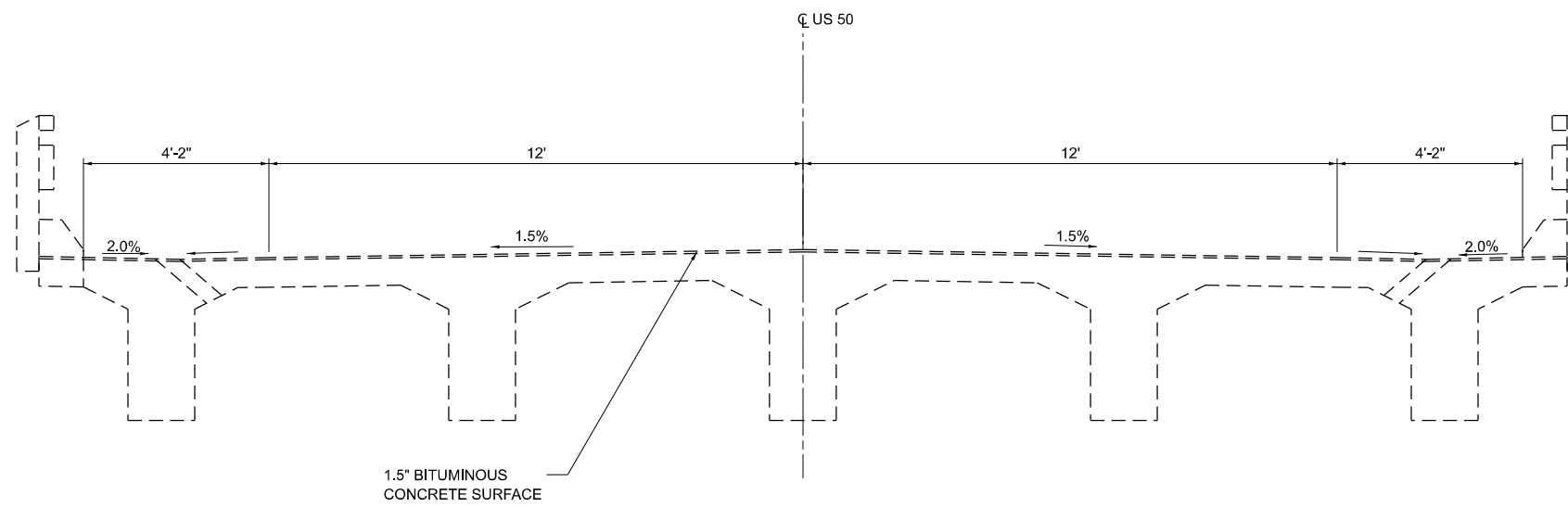
* SPECIALTY ITEM
^ SPECIAL PROVISION

REV. - MS



EXISTING TYPICAL SECTION (A)

STA. 1066+25.00 TO STA. 1071+05.95
 STA. 1072+44.22 TO STA. 1075+45.93



EXISTING STRUCTURE CROSS SECTION (B)

STA. 1071+05.95 TO STA. 1072+44.22

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PLOT DATE	= 8/22/2023

DESIGNED	-
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DATE	-

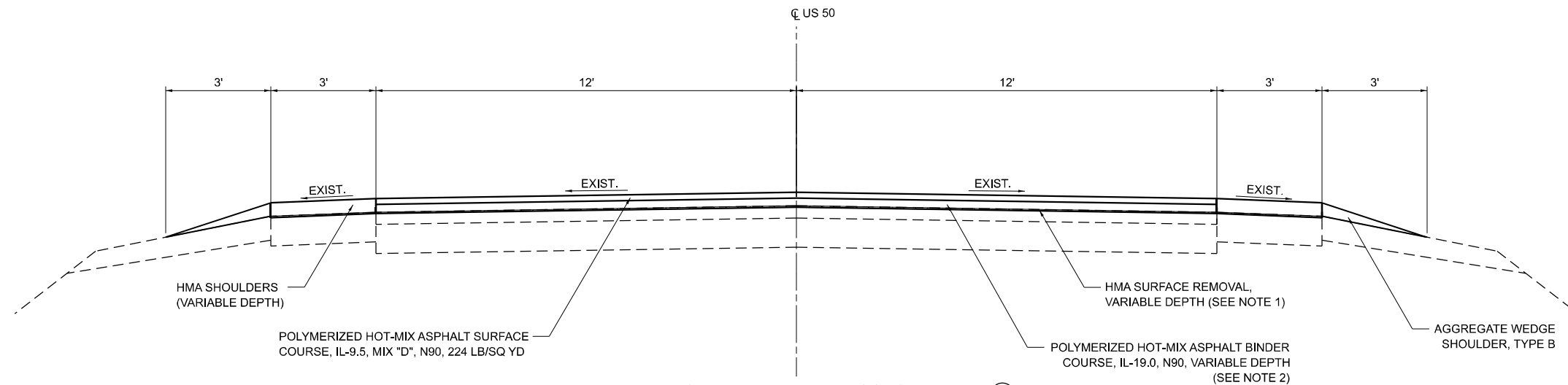
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REVISED	-

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: 1/2"=1'-0" SHEET 1 OF 3 SHEETS STA. ___+___ TO STA. ___+___

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	6
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



PROPOSED TYPICAL CROSS SECTION ①

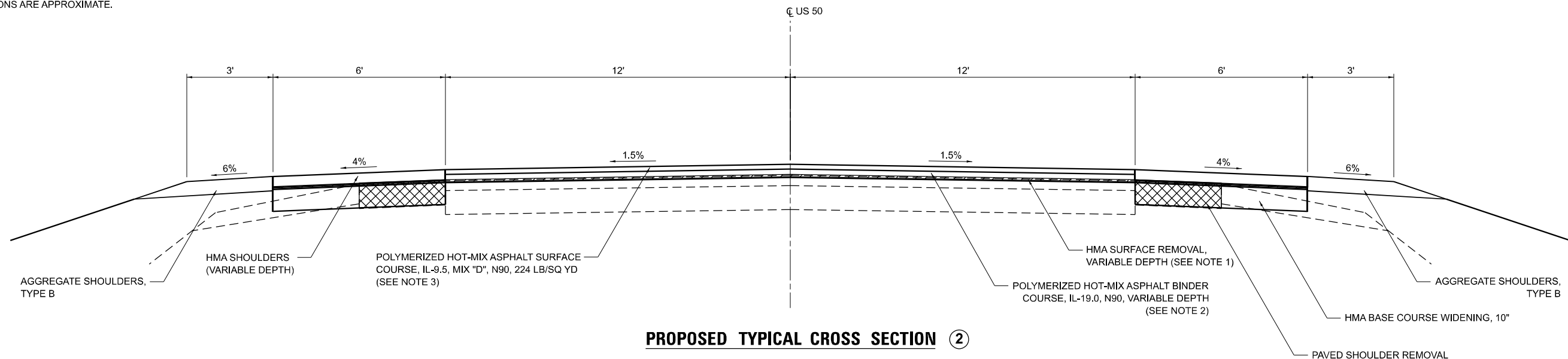
STA. 1066+25.00 TO STA. 1069+24.00 LT.
 STA. 1066+25.00 TO STA. 1068+86.00 RT.
 STA. 1074+64.00 TO STA. 1075+00.00 LT.
 STA. 1074+48.00 TO STA. 1075+00.00 RT.

[Hatched Box] PAVED SHOULDER REMOVAL

NOTES:

1. DEPTH VARIES FROM 4.25" TO 2.25" FROM STA. 1066+25 TO STA. 1067+11
 DEPTH VARIES FROM 2.25" TO 1.5" FROM STA. 1067+11 TO STA. 1069+06
 DEPTH OF 1.5" FROM STA. 1069+06 TO STA. 1070+41
 DEPTH VARIES FROM 2.25" TO 3.75" FROM STA. 1073+09 TO STA. 1073+93
 DEPTH VARIES FROM 3.75" TO 4.25" FROM STA. 1073+93 TO STA. 1075+00
2. DEPTH OF 2.25" FROM STA. 1066+25 TO STA. 1069+06
 MINIMUM DEPTH OF 2.25" AND VARIES FROM STA. 1069+06 TO STA. 1070+41
 DEPTH OF 2.25" FROM STA. 1073+09 TO STA. 1075+00

ALL ABOVE STATIONS ARE APPROXIMATE.



PROPOSED TYPICAL CROSS SECTION ②

STA. 1069+24.00 TO STA. 1069+71.00 LT.
 STA. 1068+86.00 TO STA. 1068+96.00 RT.
 STA. 1074+54.00 TO STA. 1074+64.00 LT.
 STA. 1073+79.00 TO STA. 1074+48.00 RT.

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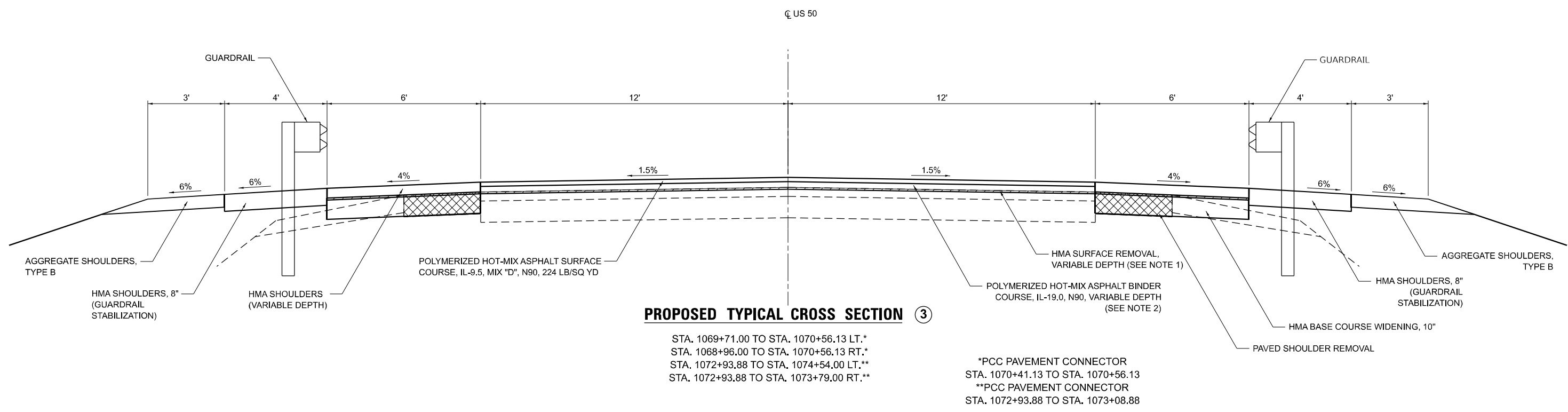
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PLOT SCALE = 0.16666633 1/ in.	CHECKED -	REVISED -
PLOT DATE = 8/22/2023	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: 1/2"=1'-0" SHEET 2 OF 3 SHEETS STA. ____+____ TO STA. ____+____

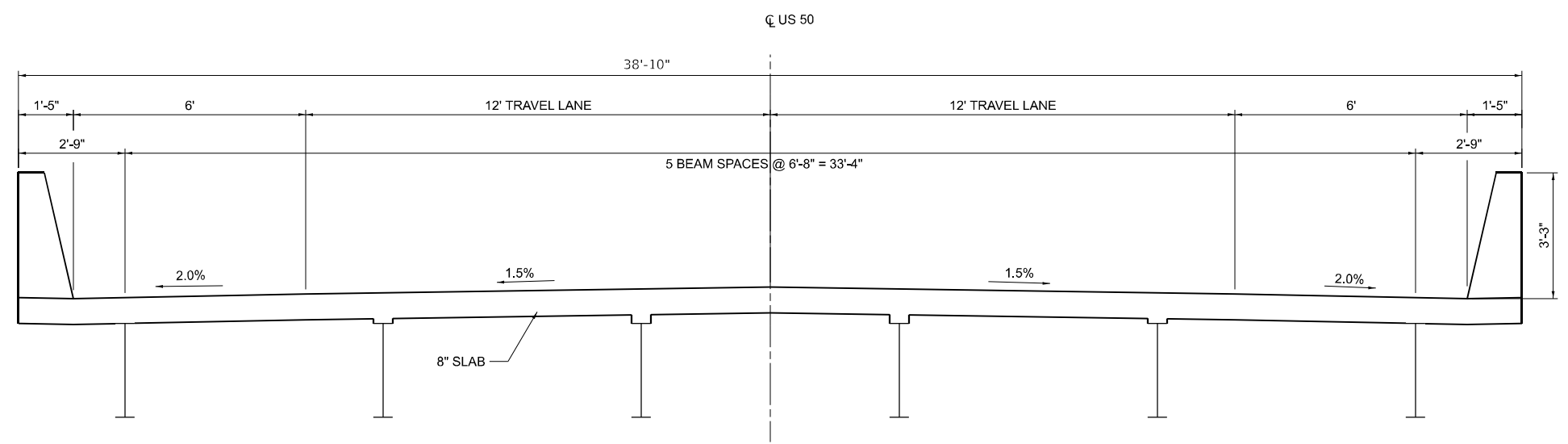
F.A.P. RTE. 327	SECTION (3,2B) B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 7
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



PROPOSED TYPICAL CROSS SECTION ③

STA. 1069+71.00 TO STA. 1070+56.13 LT.*
 STA. 1068+96.00 TO STA. 1070+56.13 RT.*
 STA. 1072+93.88 TO STA. 1074+54.00 LT.**
 STA. 1072+93.88 TO STA. 1073+79.00 RT.**

*PCC PAVEMENT CONNECTOR
 STA. 1070+41.13 TO STA. 1070+56.13
 **PCC PAVEMENT CONNECTOR
 STA. 1072+93.88 TO STA. 1073+08.88



PROPOSED STRUCTURE CROSS SECTION ④

STA. 1070+56.13 TO STA. 1072+93.88***

***APPROACH PAVEMENT
 STA. 1070+56.13 TO STA. 1070+86.13
 STA. 1072+63.88 TO STA. 1072+93.88

NOTES:

- DEPTH VARIES FROM 4.25" TO 2.25" FROM STA. 1066+25 TO STA. 1067+11
 DEPTH VARIES FROM 2.25" TO 1.5" FROM STA. 1067+11 TO STA. 1069+06
 DEPTH OF 1.5" FROM STA. 1069+06 TO STA. 1070+41
 DEPTH VARIES FROM 2.25" TO 3.75" FROM STA. 1073+09 TO STA. 1073+93
 DEPTH VARIES FROM 3.75" TO 4.25" FROM STA. 1073+93 TO STA. 1075+00
- DEPTH OF 2.25" FROM STA. 1066+25 TO STA. 1069+06
 MINIMUM DEPTH OF 2.25" AND VARIES FROM STA. 1069+06 TO STA. 1070+41
 DEPTH OF 2.25" FROM STA. 1073+09 TO STA. 1075+00

ALL ABOVE STATIONS ARE APPROXIMATE.

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PLOT DATE = 8/22/2023	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: 1/2"=1'-0" SHEET 3 OF 3 SHEETS STA. ___+___ TO STA. ___+___

F.A.P. RTE. 327	SECTION (3,2B) B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 8
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

TEMPORARY CONCRETE BARRIER SCHEDULE

STAGE	STATION	TO	STATION	TEMPORARY CONCRETE BARRIER 70400100 FOOT	PINNING TEMPORARY CONCRETE BARRIER 70400125 EACH	RELOCATE TEMPORARY CONCRETE BARRIER 70400200 FOOT	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 70600250	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 70600350
1	1069+37.8		1074+12.2	475.0	70		2	
2	1069+00.4		1074+49.6	75.0	24	475.0		2
	TOTAL			550.0	94	475.0	2	2
	USE			550	94	475	2	2

PAVING SCHEDULE

LT/RT	STATION	TO	STATION	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90 40603240 TONS	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX D, N90 40604164 TONS	HOT-MIX ASPHALT SHOULDERS 48203100 TONS	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) 40600295 POUND
MAINLINE	1066+25.0		1069+06.0	94.4	84.0		505.8
MAINLINE	1069+06.0		1070+41.1	72.1	40.4		243.2
MAINLINE	1073+08.9		1073+93.0	28.3	25.2		151.4
MAINLINE	1073+93.0		1075+00.0	36.0	32.0		192.6
RT	1066+25.0		1070+41.0			53.0	131.4
LT	1066+25.0		1070+41.0			49.6	122.8
RT	1073+08.9		1075+00.0			27.1	77.1
LT	1073+08.9		1075+00.0			28.5	80.7
	TOTAL			230.8	181.6	158.2	1,505.0
	USE			231	182	159	1,505

EARTHWORK

STATION	TO	STATION	EARTH EXCAVATION 20200100	STRUCTURE EXCAVATION 50200100	EMBANKMENT	EXCAVATION ADJUSTED FOR SHRINKAGE 25%	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	TOPSOIL EXCAVATION AND PLACEMENT
1066+25.0		1070+86.0	38.1		97.5	28.6	-68.9	256.2
BRIDGE				414.0		310.5	310.5	
1072+64.0		1075+00.0	37.5		37.6	28.1	-9.5	163.9
TOTAL			75.6	414.0	135.1	367.2	232.1	420.1
USE			80	414	135	367	232	421

NOTE: TOPSOIL EXCAVATION QUANTITY BASED OFF 4" DEPTH

AGGREGATE SHOULDERS, TYPE B, 6"
48101500

STATION	TO	STATION	SIDE	WIDTH (FT)	SQ YD
1068+61.0		1070+71.1	RT	3	70.0
1068+99.0		1070+71.1	LT	3	57.4
1072+78.9		1074+89.0	LT	3	70.0
1072+78.9		1074+73.0	RT	3	64.7
TOTAL					262.1
USE					263

HOT-MIX ASPHALT SHOULDERS, 8"
48203029

STATION	TO	STATION	SIDE	AVG WIDTH (FT)	SQ YD
1068+86.0		1068+96.0	RT	2.5	2.8
1068+96.0		1070+71.1	RT	4	77.8
1069+61.0		1069+71.0	LT	2.5	2.8
1069+71.0		1070+71.1	LT	4	44.5
1072+78.9		1074+54.0	LT	4	77.8
1074+54.0		1074+64.0	LT	2.5	2.8
1072+78.9		1073+79.0	RT	4	44.5
1073+79.0		1073+89.0	RT	2.5	2.8
TOTAL					255.8
USE					256

AGGREGATE WEDGE SHOULDER, TYPE B
48102100

STATION	TO	STATION	SIDE	WIDTH (FT)	TON
1066+25.0		1068+61.0	RT	3	8.1
1066+25.0		1068+99.0	LT	3	9.7
1074+89.0		1075+00.0	LT	3	0.2
1074+73.0		1075+00.0	RT	3	0.5
TOTAL					18.5
USE					19

HOT-MIX ASPHALT BASE COURSE WIDENING, 10"
35600716

STATION	TO	STATION	SIDE	AVG WIDTH (FT)	SQ YD
1068+61.0		1068+86.0	RT	4.5	12.5
1068+86.0		1070+41.1	RT	6	103.4
1068+99.0		1069+24.0	LT	4.5	12.5
1069+24.0		1070+94.2	LT	6	113.5
1073+08.9		1074+48.0	RT	6	92.7
1074+48.0		1074+73.0	RT	4.5	12.5
1072+55.9		1074+64.0	LT	6	138.7
1074+64.0		1074+89.0	LT	4.5	12.5
TOTAL					498.3
USE					499

REV. - MS

MODEL - Schedule (Rev. 1)
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USER NAME = rhanfland
DESIGNED -
DRAWN -
PLOT SCALE = 0.16666633' / in.
CHECKED -
PLOT DATE = 8/22/2023
DATE -
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: N/A SHEET 1 OF 2 SHEETS STA. ___+___ TO STA. ___+___

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	9
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

PAVEMENT MARKING SCHEDULE

LOCATION	STATION	TO	STATION	70107005	70300100	70300150	78001110		78100100	78300200
				PAVEMENT MARKING BLACKOUT TAPE, 5" FOOT	SHORT TERM PAVEMENT MARKING FOOT	SHORT TERM PAVEMENT MARKING REMOVAL SQ FT	PAINT PAVEMENT MARKING - LINE 4" SOLID, WHITE FOOT	SKIP DASH, YELLOW FOOT	RAISED REFLECTIVE PAVEMENT MARKER EACH	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL EACH
STAGE 1/STAGE2										
	1067+52.5		1069+24.5	50.0		20.9				
	1074+25.5		1076+13.5	50.0		20.9				
POST STAGE										
RT EDGELINE	1066+25.0		1075+00.0		24.0	8.0	875.0			
LT EDGELINE	1066+25.0		1075+00.0		24.0	8.0	875.0			
CENTER SKIPS	1066+25.0		1075+00.0		176.0	58.7		220.0	11	11
TOTAL				100.0	224.0	116.5	1750.0	220.0	11	11
USE				100	224	117	1750	220	11	11

GUARDRAIL SCHEDULE

LOCATION	STATION	TO	STATION	63000001	63100085	63100167	78200005	72501000
				STEEL PLATE BEAM GUARDRAIL TYPE A, 6 FOOT POSTS FOOT	TRAFFIC BARRIER TERMINAL TYPE 6 EACH	TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT EACH	GUARDRAIL REFLECTORS TYPE A EACH	TERMINAL MARKER - DIRECT APPLIED EACH
NW QUAD								
LT	1069+71.7		1070+21.7			1.0		1.0
LT	1070+21.7		1070+34.2	12.5			4.0	
LT	1070+34.2		1070+71.7		1.0			
SW QUAD								
RT	1068+96.7		1069+46.7			1.0		1.0
RT	1069+46.7		1070+34.2	87.5			4.0	
RT	1070+34.2		1070+71.7		1.0			
NE QUAD								
LT	1072+78.3		1073+15.8		1.0			
LT	1073+15.8		1074+03.3	87.5			4.0	
LT	1074+03.3		1074+53.3			1.0		1.0
SE QUAD								
RT	1072+78.3		1073+15.8		1.0			1.0
RT	1073+15.8		1073+28.3	12.5			4.0	
RT	1073+28.3		1073+78.3			1.0		1.0
TOTAL				200.0	4.0	4.0	16.0	4.0
USE				200	4	4	16	4

PAVED SHOULDER REMOVAL
44004250

STATION	TO	STATION	SIDE	SQ YD
1068+99.0		1070+94.2	LT	65.1
1072+55.9		1074+89.0	LT	77.7
1070+41.1		1071+04.0	RT	21.0
1072+46.0		1073+08.9	RT	21.0
1068+61.0		1070+41.1	RT	60.1
1073+08.9		1074+73.0	RT	54.8
1070+41.1		1071+04.0	LT	42.0
1072+46.0		1073+08.9	LT	42.0
TOTAL				383.7
USE				384

PAVEMENT REMOVAL
44000100

STATION	TO	STATION	SQ YD
1070+41.1		1071+04.0	167.7
1072+46.0		1073+08.9	167.7
TOTAL			335.4
USE			336

GUARDRAIL REMOVAL
63200310

STATION	TO	STATION	SIDE	FOOT
1069+92		1071+06	LT	114
1069+30		1071+06	RT	177
1072+44		1074+20	LT	177
1072+44		1073+58	RT	114
TOTAL				582
USE				582

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
X4401198

STATION	TO	STATION	SIDE	SQ YD
1066+25.0		1070+41.1	MAINLINE	1109.6
1073+08.9		1075+00.0	MAINLINE	509.6
1066+25.0		1068+61.0	RT	78.7
1068+61.0		1068+86.0	RT	12.5
1068+86.0		1070+41.1	RT	103.4
1066+25.0		1068+99.0	LT	91.3
1068+99.0		1069+24.0	LT	12.5
1069+24.0		1070+41.1	LT	78.1
1073+08.9		1074+48.0	RT	92.7
1074+48.0		1074+73.0	RT	12.5
1074+73.0		1075+00.0	RT	9.0
1073+08.9		1074+64.0	LT	103.4
1074+64.0		1074+89.0	LT	12.5
1074+89.0		1075+00.0	LT	3.7
TOTAL				2229.5
USE				2230

CLASS D PATCHES, TYPE I, 14 INCH
44201811

STATION	TO	STATION	SIDE	SQ YD
1070+38.1		1070+41.1	LT	6.0
1070+38.1		1070+41.1	RT	6.0
1073+08.9		1073+11.9	LT	6.0
1073+08.9		1073+11.9	RT	6.0
TOTAL				24.0
USE				24

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USER NAME = rhanfland
 PLOT SCALE = 0.16666633 1/16"
 PLOT DATE = 8/22/2023

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

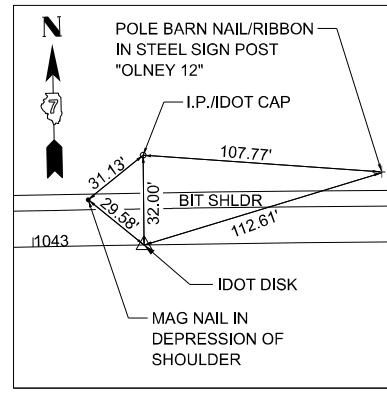
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 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

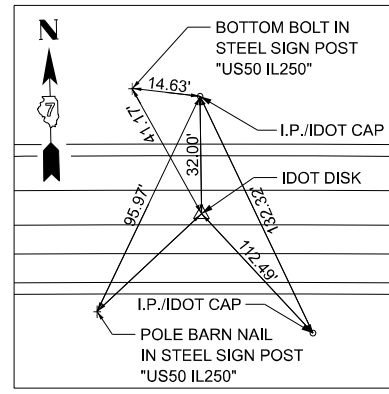
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	10
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



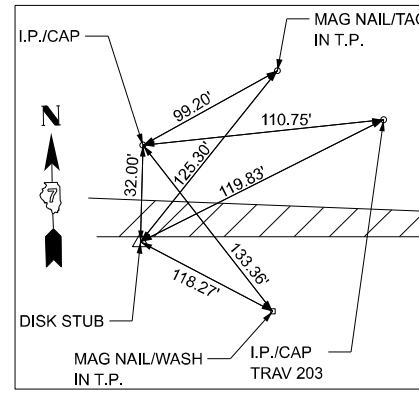
POINT OF CURVATURE

IDOT DISK
STA. 1043+16.30, 00.00' RT.
N 752445.218
E 1116653.892



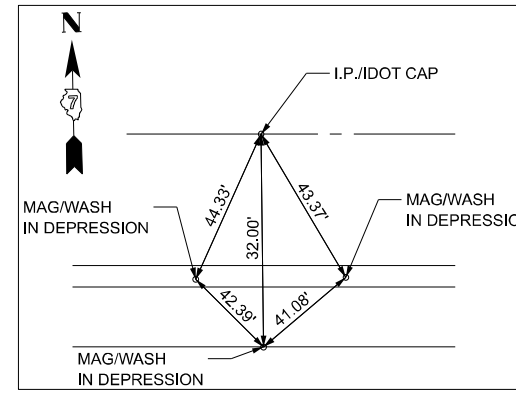
POINT OF INTERSECTION

IDOT DISK
STA. 1049+88.18, 6.56' LT.
N 752444.998
E 1117325.858



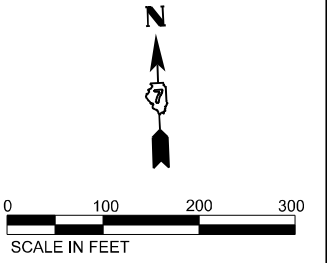
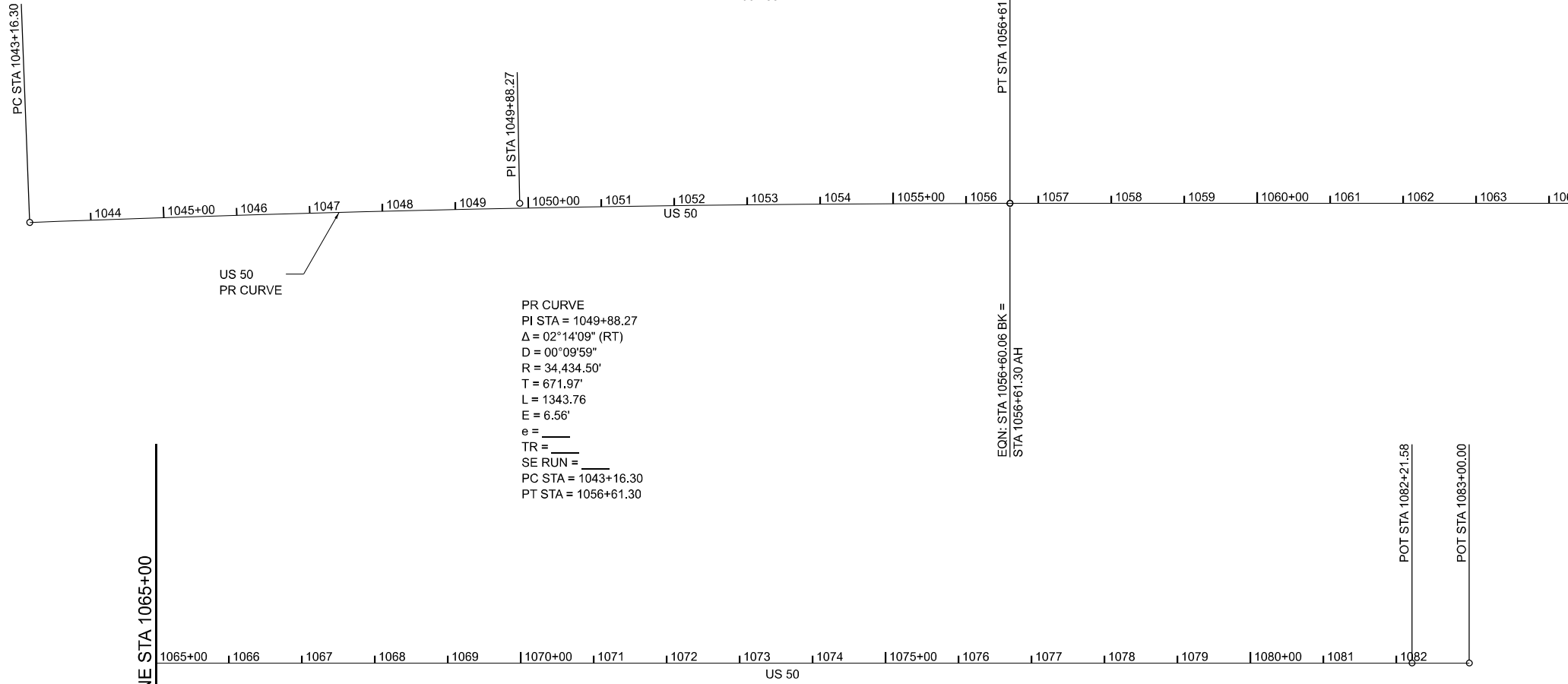
POINT OF TANGENCY

IDOT DISK STUB
STA. 1056+60.06 BK =
1056+61.30 AH
N 752418.563
E 1117997.304



POINT OF INTERSECTION

IRON PIN/IDOT CAP
STA. 1082+21.58
N 752317.840
E 1120555.597



STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
1043+16.30	0.00	752445.218	1116653.892	PC
1049+88.27	6.56	752444.998	1117325.858	PI
1056+60.06 BK = 1056+61.30 AH	0.00	752418.563	1117997.304	PT
1082+21.58	0.00	752317.840	1120555.597	POT
1083+00.00	0.00	752314.755	1120633.956	POT

BENCHMARK BM 391
ELEV. 453.87

CHISELED "I" ON SW WINGWALL OF SN 051-0009
STA. 1070+90 OFFSET 18.0' RT.

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 DATE: 8/22/2023



CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

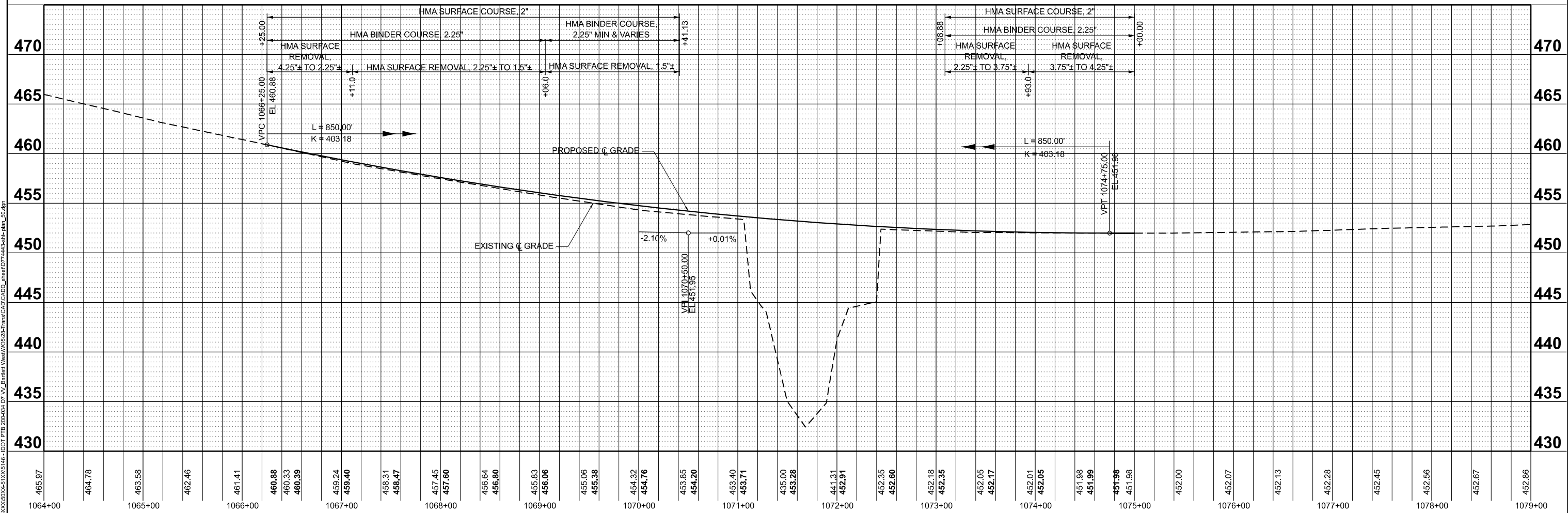
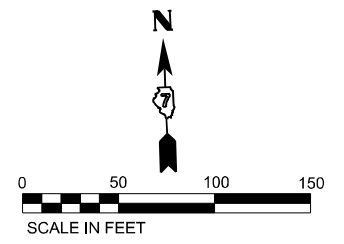
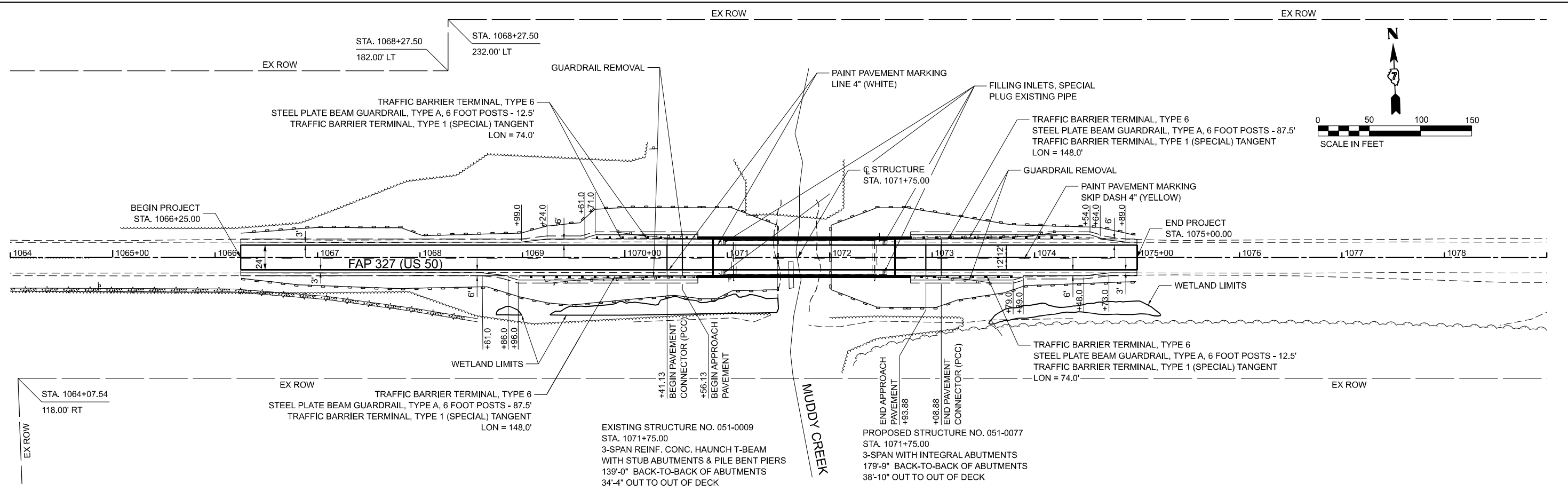
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DRAWN	-	REVISION	-	REVISION	-
CHECKED	-	REVISION	-	REVISION	-
DATE	-	REVISION	-	REVISION	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ALIGNMENT, TIES
AND BENCHMARKS**

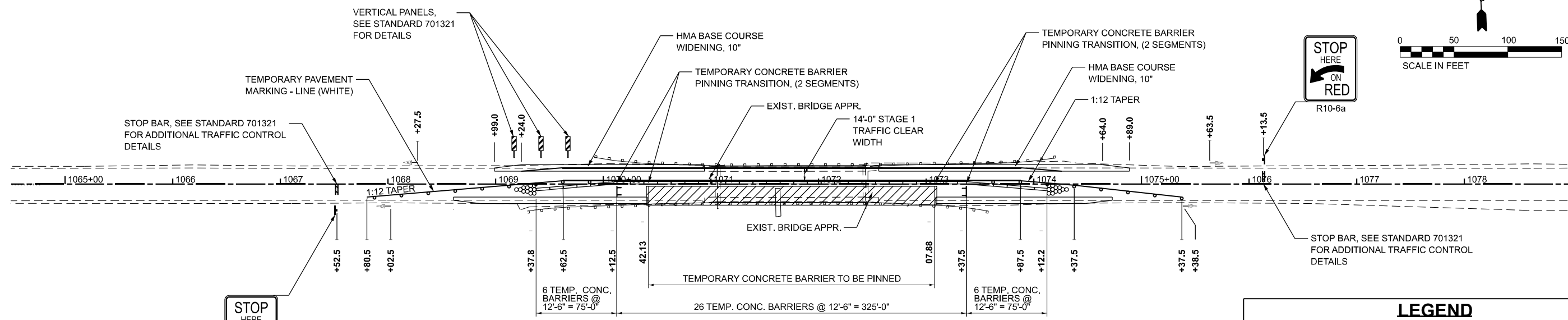
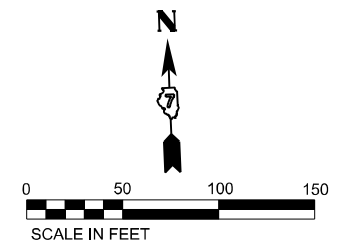
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	11
		CONTRACT NO. 74443		
		ILLINOIS FED. AID PROJECT		



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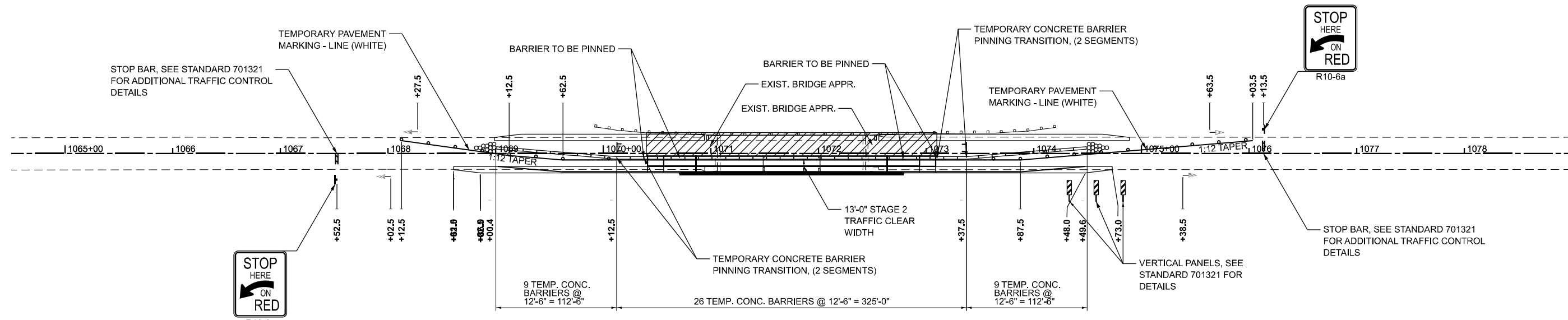
CIVIL DESIGN, INC. WBE DBE EFFINGHAM, IL LICENSE #184.003222	USER NAME = kullrich PLOT SCALE = 0.16666633" / ft. PLOT DATE = 10/18/2023	DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. TO STA.	F.A.P. RTE. 327 SECTION (3.2B) B-1 COUNTY LAWRENCE TOTAL SHEETS 54 SHEET NO. 12 CONTRACT NO. 74443 ILLINOIS FED. AID PROJECT
--	--	--	--	---	---	--



STAGE 1

LEGEND

- STAGE CONSTRUCTION
- SIGN
- TRAFFIC SIGNAL
- IMPACT ATTENUATOR
- BARRICADES, TYPE III WITH WARNING LIGHT
- DRUM
- DOUBLE VERTICAL PANEL



STAGE 2

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PLOT DATE = 8/22/2023	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

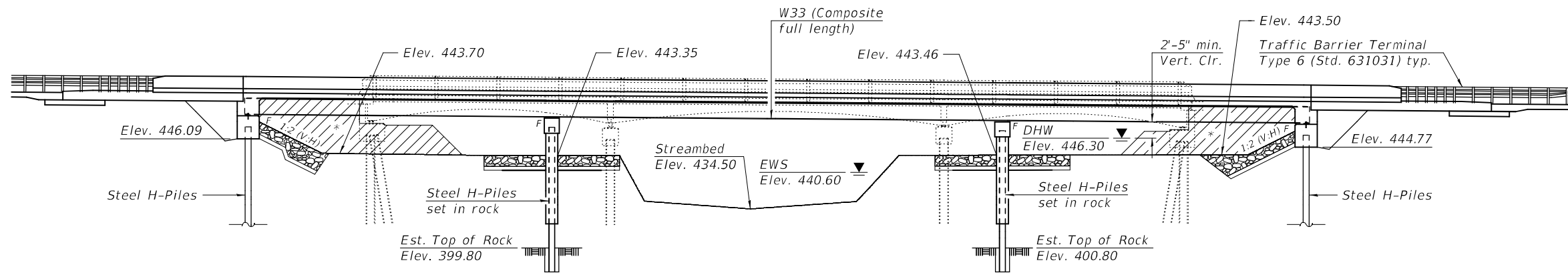
STAGING PLAN
SCALE: 1"=50' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 327	SECTION (3,2B) B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 13
			CONTRACT NO. 74443	
ILLINOIS FED. AID PROJECT				

Benchmarks: BM 391: Chiseled square on wingwall at southwest corner of S.N. 051-0009
Station 1071+05, 18.0' Right of \bar{C} F.A.P. 327, Elevation = 453.87

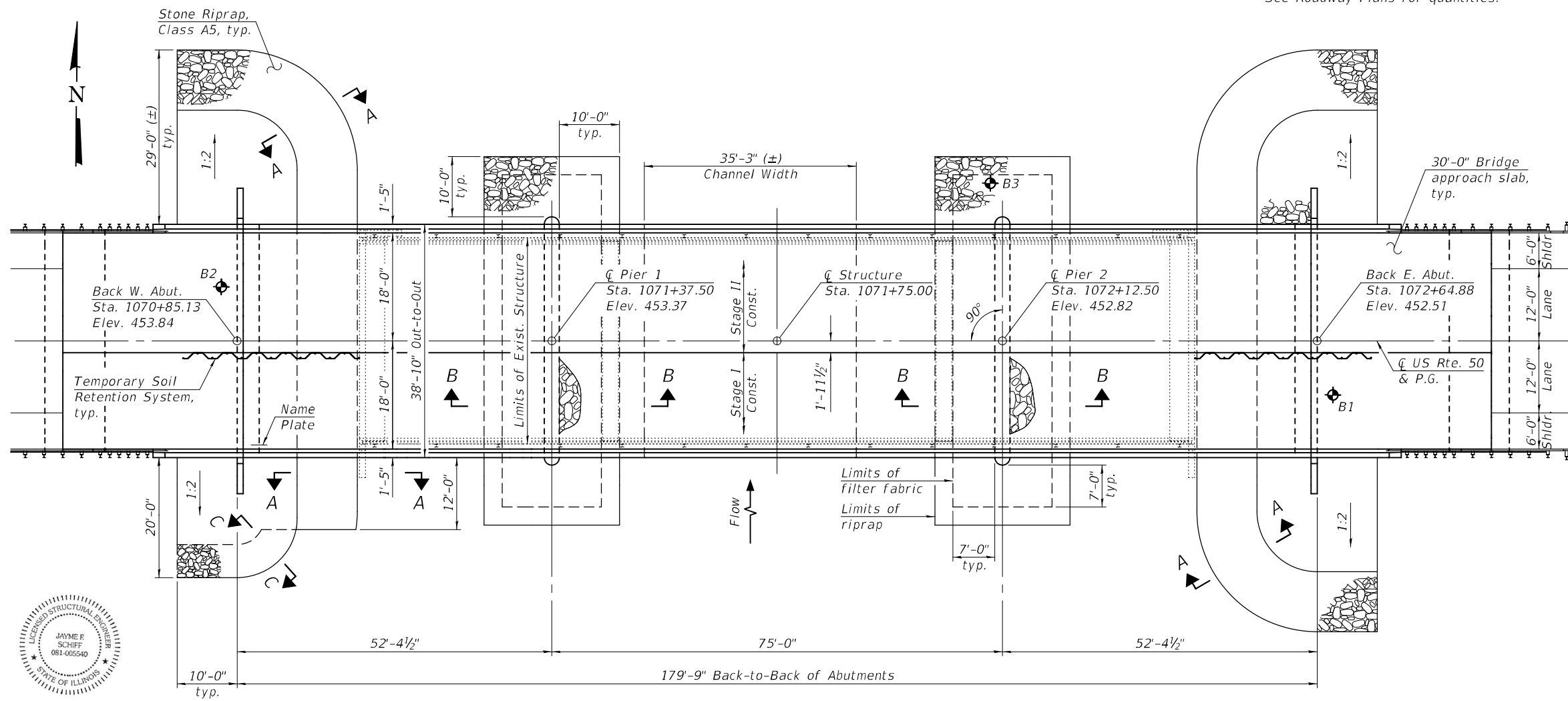
Existing Structure: S.N. 051-0009 was originally constructed in 1946 under F.A. Route 13, Section 3-2-B. In 1986, structural repairs were made under F.A. 99 (US 50), Section 3-2B-1. The structure is a continuous three-span reinforced concrete haunch T-beam bridge with reinforced concrete stub abutments and reinforced concrete pile bent piers, both supported on precast concrete piles. The structure has no skew. Existing structure will be removed and replaced. Traffic is to be maintained utilizing stage construction.

No salvage.

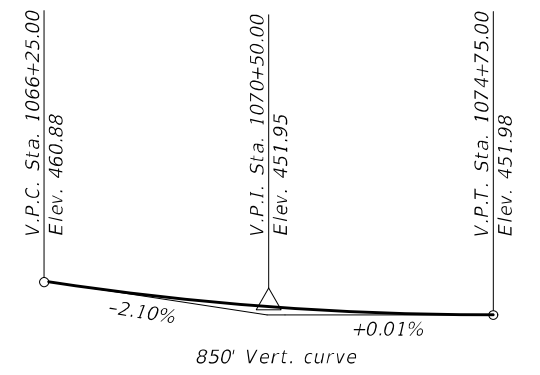


ELEVATION

* Hatched area indicates channel excavation. See Roadway Plans for quantities.



PLAN



PROFILE GRADE
(along \bar{C} of FAP 327 (US 50))

DESIGN SPECIFICATIONS
2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

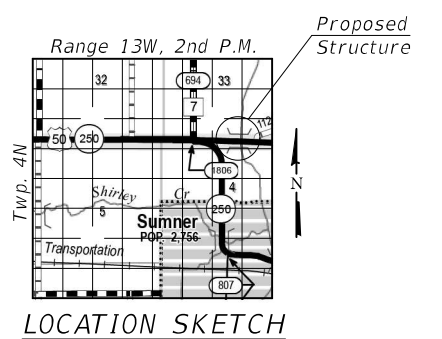
All structural steel shall be galvanized.

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.235g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.544g
Soil Site Class = D



LOCATION SKETCH

GENERAL PLAN & ELEVATION
U.S. 50 OVER MUDDY CREEK
F.A.P. ROUTE 327 - SEC. (3,2B)B-1
LAWRENCE COUNTY
STA. 1071+75.00
STRUCTURE NO. 051-0077

MODEL: 051007774443-001
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EXPIRES 11-30-2024

DESIGNED - DAVID H. RICHTER	EXAMINED - Mark Schiff	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	ENGINEER OF BRIDGE DESIGN	
DRAWN - ANTHONY J. NOVELLO		
CHECKED - D.H.R./R.P.N.	ENGINEER OF BRIDGES AND STRUCTURES	

PASSED		REVIS
		REVIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 30 SHEETS

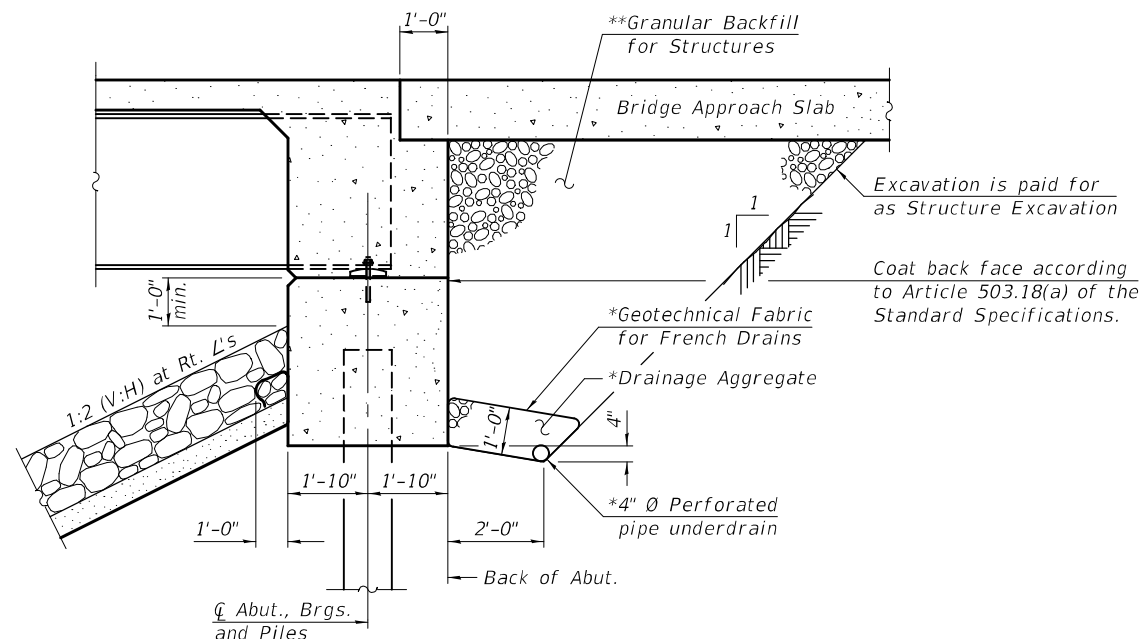
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE		
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 General Data
- 3 Stage Construction Details
- 4 Temporary Soil Retention System
- 5 Temporary Concrete Barrier
- 6-8 Top of Slab Elevations
- 9 Top of West Approach Slab Elevations
- 10 Top of East Approach Slab Elevations
- 11 Superstructure
- 12 Superstructure Details
- 13 Diaphragm Details
- 14 Bridge Approach Slab
- 15 Bridge Approach Slab Details
- 16 Structural Steel
- 17 Structural Steel Details
- 18 Bearing Details
- 19 West Abutment
- 20 East Abutment
- 21 Abutment Details
- 22 Pier 1
- 23 Pier 2
- 24 Pier Details
- 25 HP Pile Details
- 26 Concrete Parapet Slipforming Option
- 27 Bar Splicer Assembly & Mechanical Splicer Details
- 28-30 Soil Boring Logs

GENERAL NOTES

Fasteners shall be ASTM F 3125 Grade A325 Type 1. Fasteners shall be hot dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel." Bolts 7/8 in. diameter, holes 1 1/16 in. diameter, unless otherwise noted. Calculated weight of Structural Steel = 137,520 lbs. (M270 Grade 50) Calculated weight of Structural Steel = 20,830 lbs. (M270 Grade 36) All structural steel shall be galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel". No field welding is permitted except as specified in the contract documents. Reinforcement bars designated (E) shall be epoxy coated. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments. The Contractor is advised that the existing concrete superstructure is a continuous structure and removal must be done in a proper sequence, possibly with falsework support. The sequence of removal and use of any required falsework is the responsibility of the Contractor. The existing bearings contain lead plates. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. at Rt. L's)

Notes:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).
* Included in the cost of Pipe Underdrains for Structures.
** Granular Backfill for Structures shall follow Std. Spec. 586 except the Coarse Aggregate shall be Grade CA 7, CA 11, or CA 14. Granular Backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.

STATION 1071+75.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 327 SEC. (3,2B)B-1
LOADING HL-93
STRUCTURE NO. 051-0077

NAME PLATE
See Std. 515001

WATERWAY INFORMATION TABLE

		Existing Overtopping Elev. = 451.28 @ Sta. 75+08.75		Proposed Overtopping Elev. = 451.30 @ Sta. 75+50.00		
Drainage Area = 19.97 sq. mi.						
Flood Event	Freq. Yr.	Q C.F.S.	Opening Ft ² Exist. Prop.	Nat. H.W.E.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
	10	3550	533 657	445.4	1.9 0.8	447.3 446.2
Design	50	5750	619 792	446.3	2.5 1.4	448.8 447.7
Base	100	6740	662 855	446.7	2.8 1.6	449.5 448.3
Scour Design Check	200	7400	676 874	446.8	3.0 1.8	449.8 448.6
Max. Calc.	500	9190	741 964	447.3	3.6 2.3	450.9 449.6

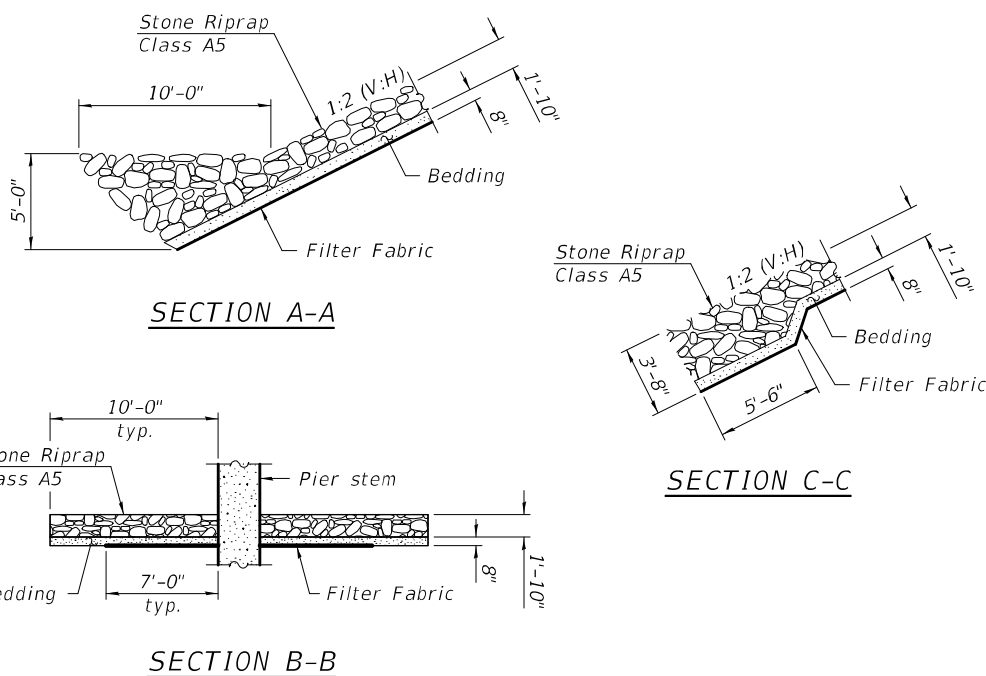
10 Year Velocity through Existing Bridge = 5.50 fps
10 Year Velocity through Proposed Bridge = 4.14 fps

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		781	781
Filter Fabric	Sq. Yd.		682	682
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		414	414
Concrete Structures	Cu. Yd.		178.4	178.4
Concrete Superstructure	Cu. Yd.	262.0		262.0
Bridge Deck Grooving	Sq. Yd.	898		898
Protective Coat	Sq. Yd.	1146		1146
Concrete Superstructure (Approach Slab)	Cu. Yd.	105.9		105.9
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4518		4518
Reinforcement Bars, Epoxy Coated	Pound	104970	16460	121430
Bar Splicers	Each	756	180	936
Furnishing Steel Piles HP14x117	Foot		485	485
Furnishing Steel Piles HP16x162	Foot		822	822
Driving Piles	Foot		485	485
Test Pile Steel HP14x117	Each		2	2
Pile Shoes	Each		12	12
Drilling and Setting Piles (In Soil)	Cu. Ft.		1867	1867
Drilling and Setting Piles (In Rock)	Cu. Ft.		1178	1178
Name Plates	Each	1		1
Anchor Bolts, 3/4"	Each	24		24
Anchor Bolts, 1"	Each	24		24
Temporary Soil Retention System	Sq. Ft.		538	538
Granular Backfill for Structures	Cu. Yd.		111	111
Pipe Underdrains for Structures 4"	Foot		135	135

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)				Item 113
	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q100	446.09	409.9	410.0	444.77	5
Q200	446.09	408.3	408.4	444.77	
Design	446.09	409.9	410.0	444.77	
Check	446.09	408.3	408.4	444.77	



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DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - ANTHONY J. NOVELLO
CHECKED - D.H.R. / R.P.N.

EXAMINED
PASSED

Mark Shuffler
ENGINEER OF BRIDGE DESIGN
Jayne F. Hoff
ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3-27-2024

REVISED -
REVISED -

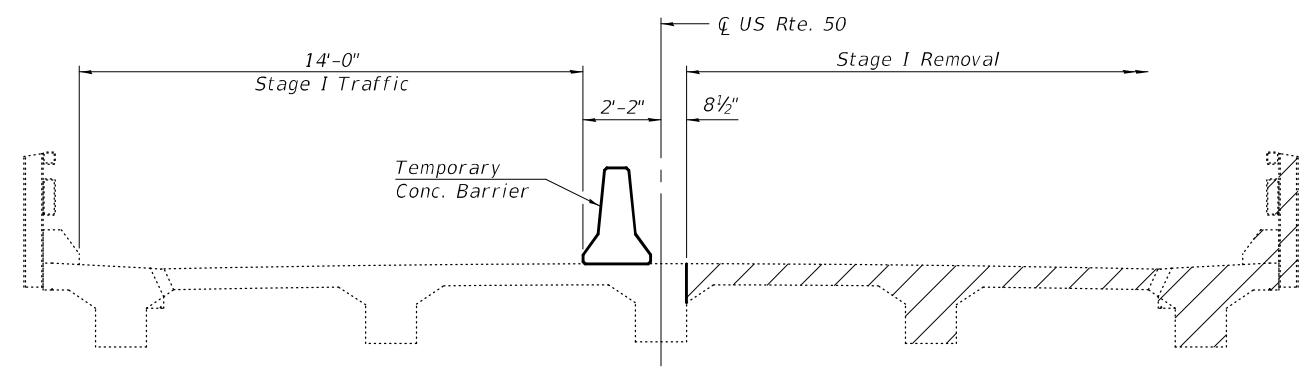
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 051-0077

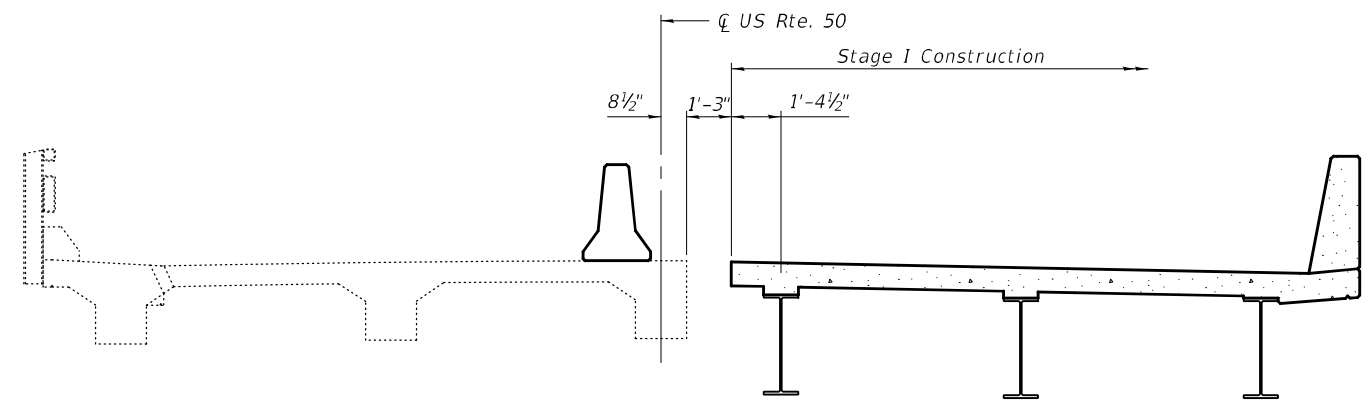
SHEET 2 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	15
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

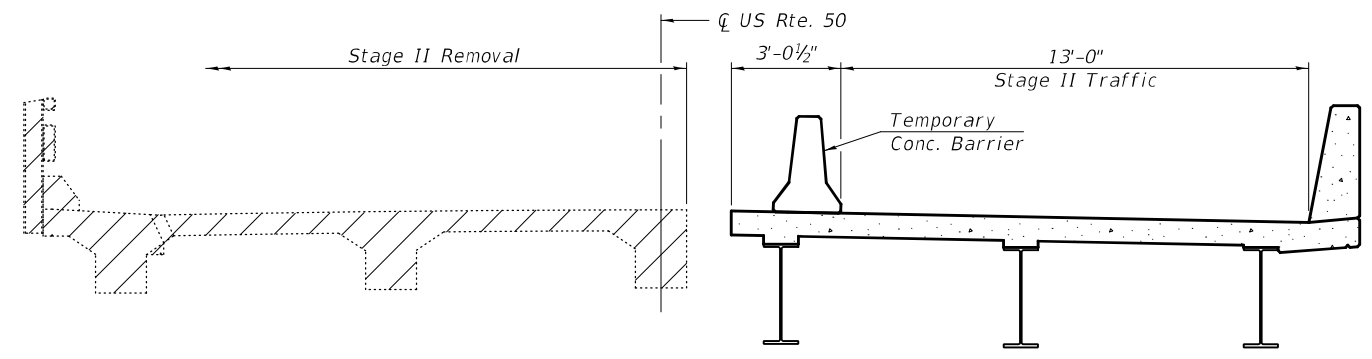
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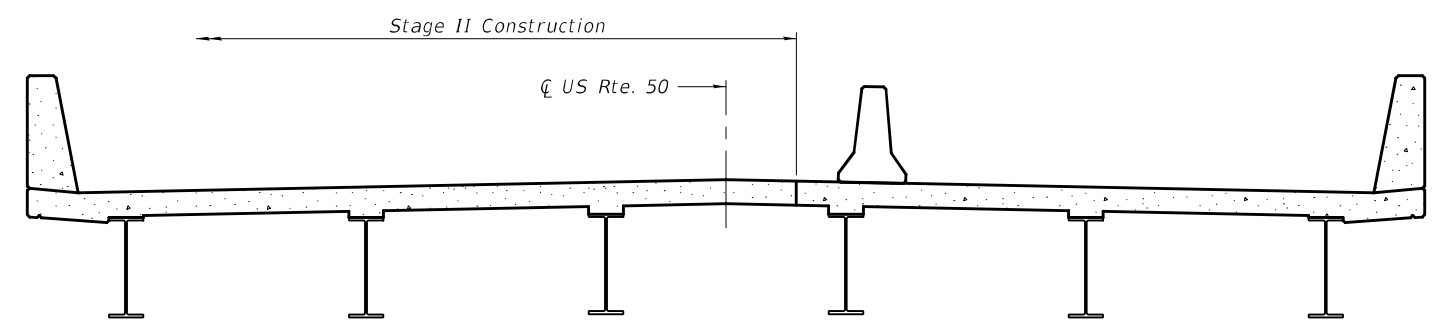
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

Notes:
 Hatched area indicates Removal of Existing Structures.
 For quantity of Temporary Concrete Barrier, see Roadway Plans. See sheet 5 of 30 for details.
 All staging cross sections are looking East.

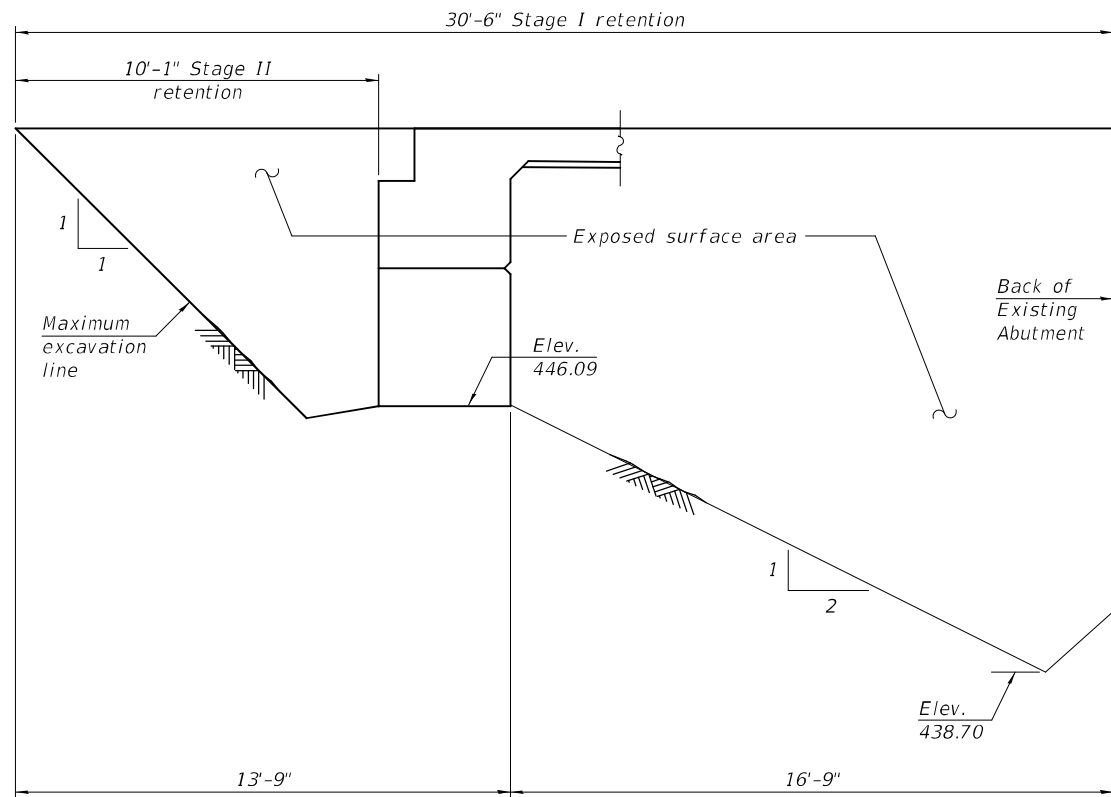
DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	<i>Mark Shuffler</i> ENGINEER OF BRIDGE DESIGN	
DRAWN - ANTHONY J. NOVELLO	PASSED	REVISED -
CHECKED - D.H.R. / R.P.N.	<i>Jayne F. Hoff</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

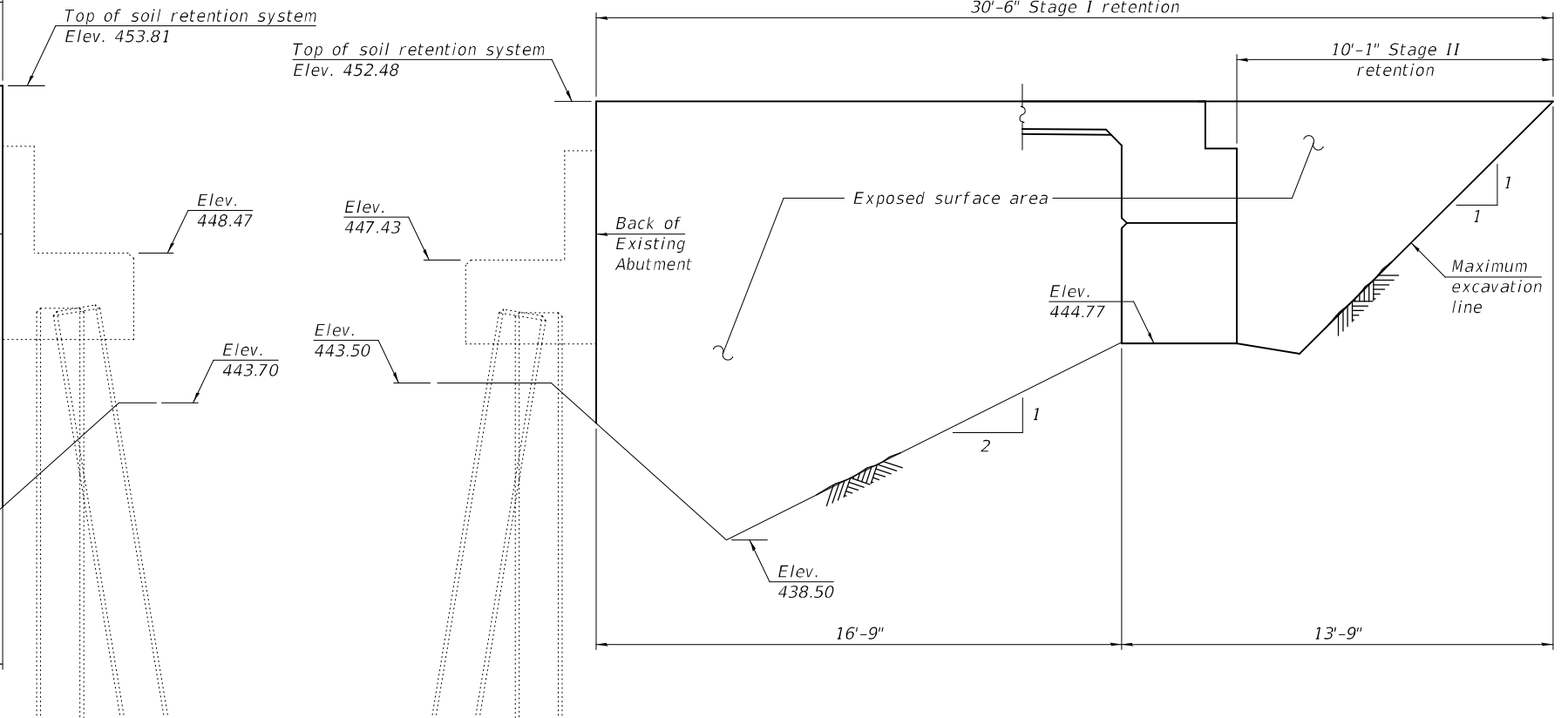
**STAGE CONSTRUCTION DETAILS
 STRUCTURE NO. 051-0077**

SHEET 3 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	16
			CONTRACT NO. 74443	
		ILLINOIS FED. AID PROJECT		



TEMPORARY SOIL RETENTION SYSTEM
(West Abutment Looking North)





TEMPORARY SOIL RETENTION SYSTEM
(East Abutment Looking North)

Note:
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.

MODEL: 0510077-74443-017
FILE NAME: p:\w\p\w\benley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510077\CADD Plans\0510077-74443.dgn

DESIGNED -	DAVID H. RICHTER
CHECKED -	RYAN P. NEGANGARD
DRAWN -	ANTHONY J. NOVELLO
CHECKED -	D.H.R. / R.P.N.

EXAMINED	 ENGINEER OF BRIDGE DESIGN	DATE -	3-27-2024
PASSED	 ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	
		REVISED -	

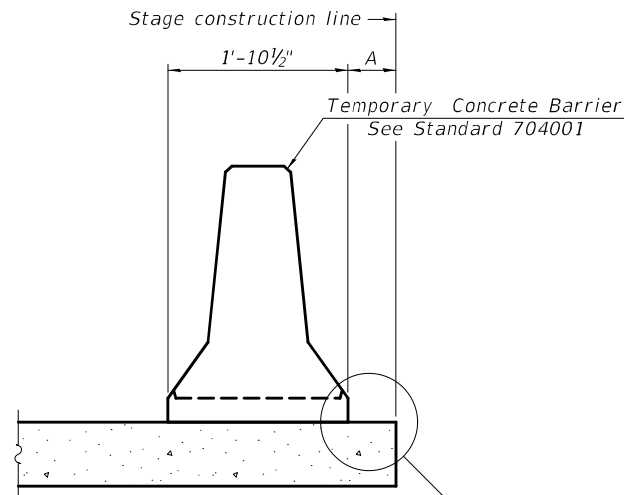
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SOIL RETENTION SYSTEM
STRUCTURE NO. 051-0077

SHEET 4 OF 30 SHEETS

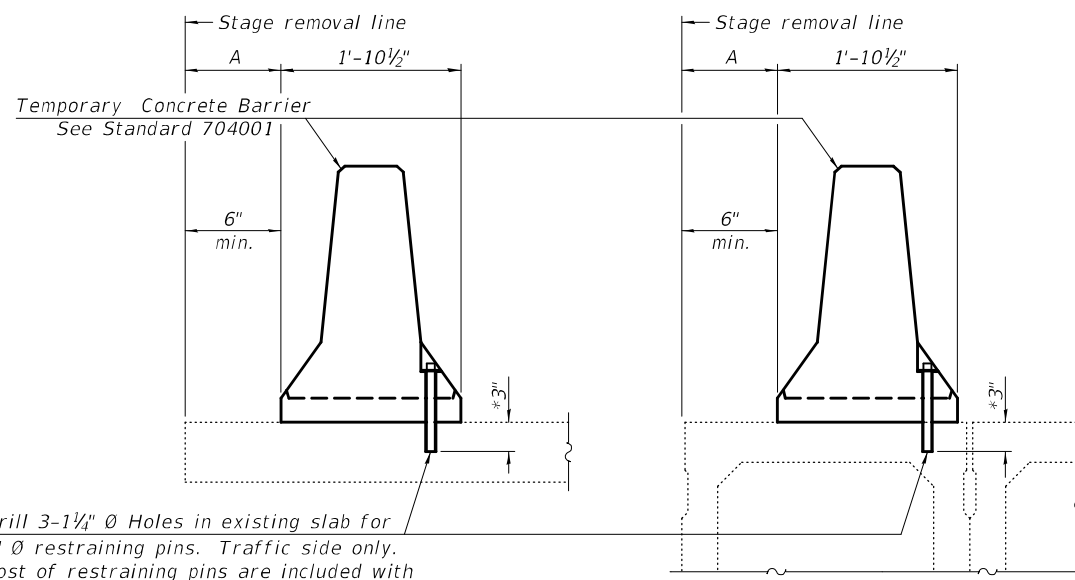
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327	(3.2B)-1	LAWRENCE	54	17
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

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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



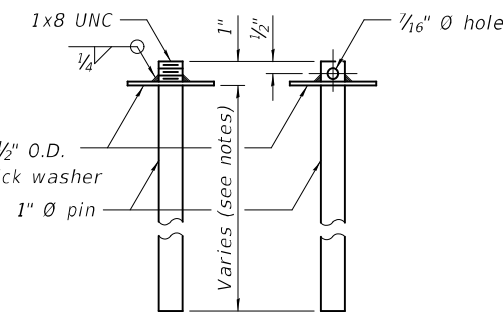
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

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

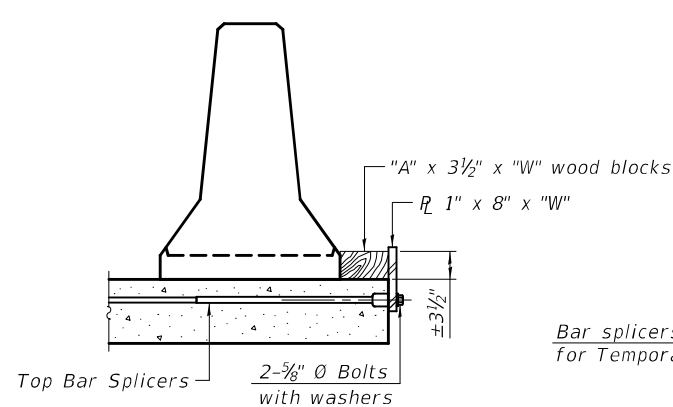
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

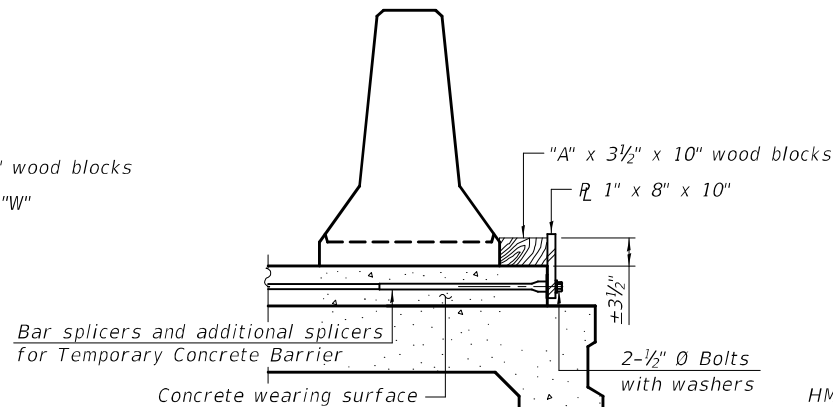


US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer

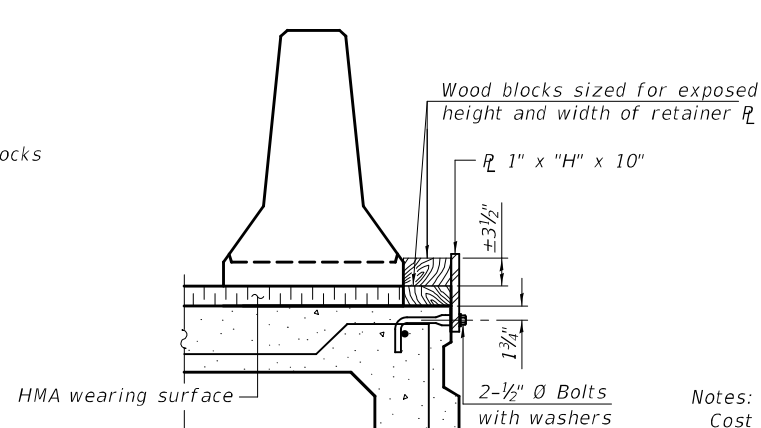
RESTRAINING PIN



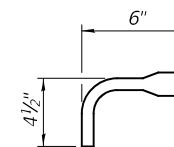
DETAIL I



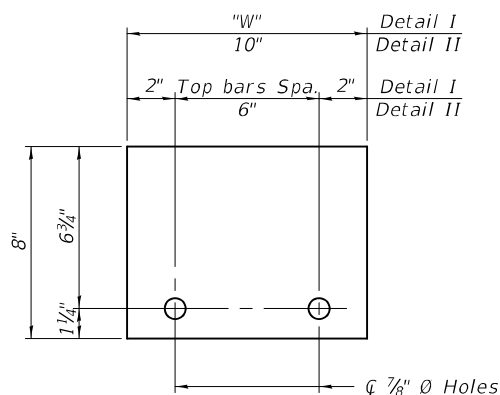
DETAIL II



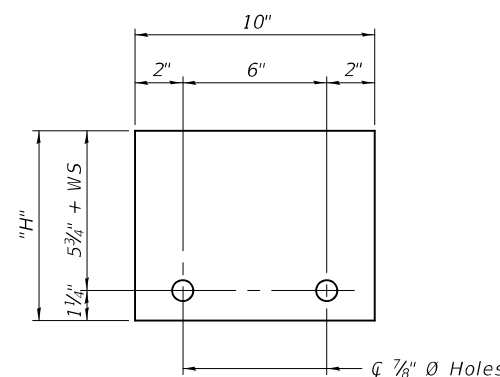
DETAIL III



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 $\frac{1}{2}$ 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	3
Railing Weight (plf)	440

R-27 10-12-2021

DESIGNED -	DAVID H. RICHTER	EXAMINED	
CHECKED -	RYAN P. NEGANGARD	PASSED	
DRAWN -	ANTHONY J. NOVELLO		
CHECKED -	D.H.R. / R.P.N.		

10-12-2021

Mark Shuffler
 ENGINEER OF BRIDGE DESIGN
Jayne F. Hoff
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3-27-2024

REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

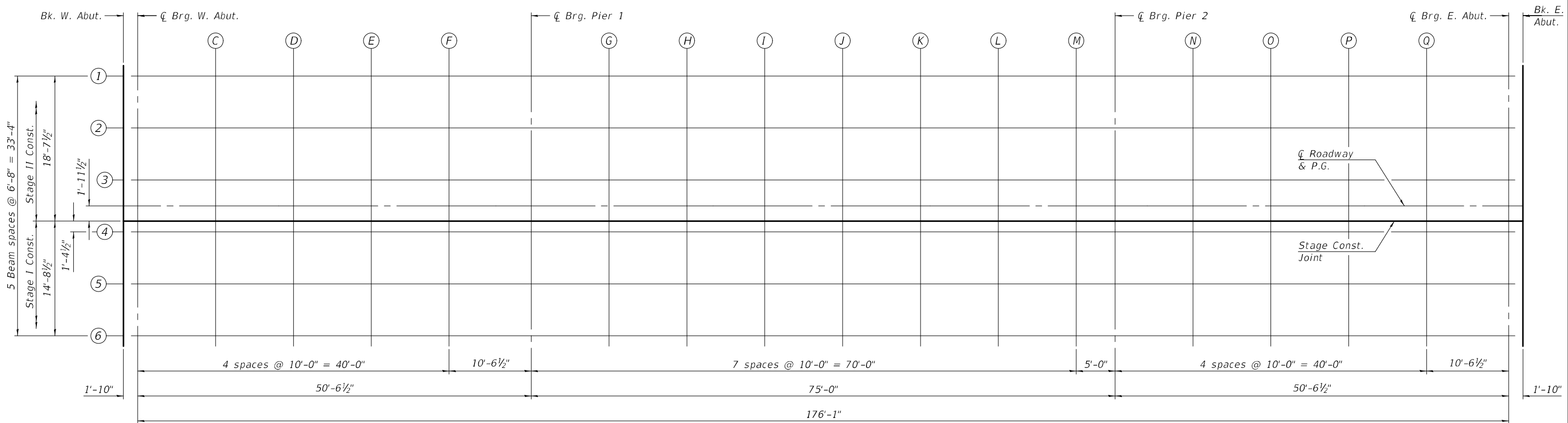
TEMPORARY CONCRETE BARRIER
 STRUCTURE NO. 051-0077

SHEET 5 OF 30 SHEETS

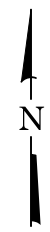
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	18
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

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PLAN



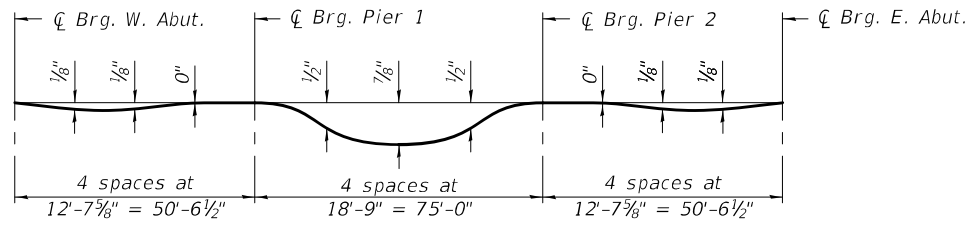
DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	<i>Mark Shuffin</i> ENGINEER OF BRIDGE DESIGN	
DRAWN - ANTHONY J. NOVELLO	PASSED	REVISED -
CHECKED - D.H.R. / R.P.N.	<i>Joey F. [Signature]</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 051-0077

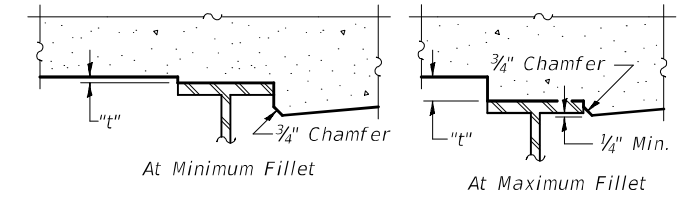
SHEET 6 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	19
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 8 of 30.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 6 of 30. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet 8 of 30, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	-16.67	453.56	453.56
C Brg. W. Abut.	1070+86.96	-16.67	453.55	453.55
C	1070+96.96	-16.67	453.45	453.46
D	1071+06.96	-16.67	453.36	453.37
E	1071+16.96	-16.67	453.27	453.28
F	1071+26.96	-16.67	453.18	453.19
C Brg. Pier 1	1071+37.50	-16.67	453.10	453.10
G	1071+47.50	-16.67	453.01	453.04
H	1071+57.50	-16.67	452.93	452.98
I	1071+67.50	-16.67	452.86	452.92
J	1071+77.50	-16.67	452.78	452.85
K	1071+87.50	-16.67	452.71	452.77
L	1071+97.50	-16.67	452.64	452.68
M	1072+07.50	-16.67	452.58	452.59
C Brg. Pier 2	1072+12.50	-16.67	452.54	452.54
N	1072+22.50	-16.67	452.48	452.48
O	1072+32.50	-16.67	452.42	452.43
P	1072+42.50	-16.67	452.36	452.37
Q	1072+52.50	-16.67	452.31	452.31
C Brg. E. Abut.	1072+63.04	-16.67	452.25	452.25
Bk. E. Abut.	1072+64.88	-16.67	452.24	452.24

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	-10.00	453.69	453.69
C Brg. W. Abut.	1070+86.96	-10.00	453.67	453.67
C	1070+96.96	-10.00	453.58	453.58
D	1071+06.96	-10.00	453.48	453.50
E	1071+16.96	-10.00	453.39	453.40
F	1071+26.96	-10.00	453.31	453.31
C Brg. Pier 1	1071+37.50	-10.00	453.22	453.22
G	1071+47.50	-10.00	453.14	453.16
H	1071+57.50	-10.00	453.06	453.10
I	1071+67.50	-10.00	452.98	453.04
J	1071+77.50	-10.00	452.91	452.98
K	1071+87.50	-10.00	452.83	452.89
L	1071+97.50	-10.00	452.77	452.80
M	1072+07.50	-10.00	452.70	452.71
C Brg. Pier 2	1072+12.50	-10.00	452.67	452.67
N	1072+22.50	-10.00	452.60	452.60
O	1072+32.50	-10.00	452.54	452.55
P	1072+42.50	-10.00	452.48	452.50
Q	1072+52.50	-10.00	452.43	452.44
C Brg. E. Abut.	1072+63.04	-10.00	452.37	452.37
Bk. E. Abut.	1072+64.88	-10.00	452.36	452.36

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	-3.33	453.79	453.79
C Brg. W. Abut.	1070+86.96	-3.33	453.77	453.77
C	1070+96.96	-3.33	453.68	453.68
D	1071+06.96	-3.33	453.58	453.60
E	1071+16.96	-3.33	453.49	453.50
F	1071+26.96	-3.33	453.41	453.41
C Brg. Pier 1	1071+37.50	-3.33	453.32	453.32
G	1071+47.50	-3.33	453.24	453.26
H	1071+57.50	-3.33	453.16	453.20
I	1071+67.50	-3.33	453.08	453.14
J	1071+77.50	-3.33	453.01	453.08
K	1071+87.50	-3.33	452.93	452.99
L	1071+97.50	-3.33	452.87	452.90
M	1072+07.50	-3.33	452.80	452.81
C Brg. Pier 2	1072+12.50	-3.33	452.77	452.77
N	1072+22.50	-3.33	452.70	452.70
O	1072+32.50	-3.33	452.64	452.65
P	1072+42.50	-3.33	452.58	452.60
Q	1072+52.50	-3.33	452.53	452.54
C Brg. E. Abut.	1072+63.04	-3.33	452.47	452.47
Bk. E. Abut.	1072+64.88	-3.33	452.46	452.46

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DESIGNED -	DAVID H. RICHTER
CHECKED -	RYAN P. NEGANGARD
DRAWN -	ANTHONY J. NOVELLO
CHECKED -	D.H.R. / R.P.N.

EXAMINED		DATE -	3-27-2024
PASSED		REVISED -	
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0077

SHEET 7 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	20
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

☉ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	0.00	453.84	453.84
☉ Brg. W. Abut.	1070+86.96	0.00	453.82	453.82
C	1070+96.96	0.00	453.73	453.73
D	1071+06.96	0.00	453.63	453.65
E	1071+16.96	0.00	453.54	453.55
F	1071+26.96	0.00	453.46	453.46
☉ Brg. Pier 1	1071+37.50	0.00	453.37	453.37
G	1071+47.50	0.00	453.29	453.31
H	1071+57.50	0.00	453.21	453.25
I	1071+67.50	0.00	453.13	453.19
J	1071+77.50	0.00	453.06	453.13
K	1071+87.50	0.00	452.98	453.04
L	1071+97.50	0.00	452.92	452.95
M	1072+07.50	0.00	452.85	452.86
☉ Brg. Pier 2	1072+12.50	0.00	452.82	452.82
N	1072+22.50	0.00	452.75	452.75
O	1072+32.50	0.00	452.69	452.70
P	1072+42.50	0.00	452.63	452.65
Q	1072+52.50	0.00	452.58	452.59
☉ Brg. E. Abut.	1072+63.04	0.00	452.52	452.52
Bk. E. Abut.	1072+64.88	0.00	452.51	452.51

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	1.96	453.81	453.81
☉ Brg. W. Abut.	1070+86.96	1.96	453.79	453.79
C	1070+96.96	1.96	453.70	453.71
D	1071+06.96	1.96	453.60	453.62
E	1071+16.96	1.96	453.52	453.52
F	1071+26.96	1.96	453.43	453.43
☉ Brg. Pier 1	1071+37.50	1.96	453.34	453.34
G	1071+47.50	1.96	453.26	453.28
H	1071+57.50	1.96	453.18	453.22
I	1071+67.50	1.96	453.10	453.16
J	1071+77.50	1.96	453.03	453.10
K	1071+87.50	1.96	452.96	453.01
L	1071+97.50	1.96	452.89	452.92
M	1072+07.50	1.96	452.82	452.83
☉ Brg. Pier 2	1072+12.50	1.96	452.79	452.79
N	1072+22.50	1.96	452.72	452.72
O	1072+32.50	1.96	452.66	452.67
P	1072+42.50	1.96	452.60	452.62
Q	1072+52.50	1.96	452.55	452.56
☉ Brg. E. Abut.	1072+63.04	1.96	452.49	452.49
Bk. E. Abut.	1072+64.88	1.96	452.48	452.48

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	3.33	453.79	453.79
☉ Brg. W. Abut.	1070+86.96	3.33	453.77	453.77
C	1070+96.96	3.33	453.68	453.68
D	1071+06.96	3.33	453.58	453.60
E	1071+16.96	3.33	453.49	453.50
F	1071+26.96	3.33	453.41	453.41
☉ Brg. Pier 1	1071+37.50	3.33	453.32	453.32
G	1071+47.50	3.33	453.24	453.26
H	1071+57.50	3.33	453.16	453.20
I	1071+67.50	3.33	453.08	453.14
J	1071+77.50	3.33	453.01	453.08
K	1071+87.50	3.33	452.93	452.99
L	1071+97.50	3.33	452.87	452.90
M	1072+07.50	3.33	452.80	452.81
☉ Brg. Pier 2	1072+12.50	3.33	452.77	452.77
N	1072+22.50	3.33	452.70	452.70
O	1072+32.50	3.33	452.64	452.65
P	1072+42.50	3.33	452.58	452.60
Q	1072+52.50	3.33	452.53	452.54
☉ Brg. E. Abut.	1072+63.04	3.33	452.47	452.47
Bk. E. Abut.	1072+64.88	3.33	452.46	452.46

BEAM 5



Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	10.00	453.69	453.69
☉ Brg. W. Abut.	1070+86.96	10.00	453.67	453.67
C	1070+96.96	10.00	453.58	453.58
D	1071+06.96	10.00	453.48	453.50
E	1071+16.96	10.00	453.39	453.40
F	1071+26.96	10.00	453.31	453.31
☉ Brg. Pier 1	1071+37.50	10.00	453.22	453.22
G	1071+47.50	10.00	453.14	453.16
H	1071+57.50	10.00	453.06	453.10
I	1071+67.50	10.00	452.98	453.04
J	1071+77.50	10.00	452.91	452.98
K	1071+87.50	10.00	452.83	452.89
L	1071+97.50	10.00	452.77	452.80
M	1072+07.50	10.00	452.70	452.71
☉ Brg. Pier 2	1072+12.50	10.00	452.67	452.67
N	1072+22.50	10.00	452.60	452.60
O	1072+32.50	10.00	452.54	452.55
P	1072+42.50	10.00	452.48	452.50
Q	1072+52.50	10.00	452.43	452.44
☉ Brg. E. Abut.	1072+63.04	10.00	452.37	452.37
Bk. E. Abut.	1072+64.88	10.00	452.36	452.36

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1070+85.13	16.67	453.56	453.56
☉ Brg. W. Abut.	1070+86.96	16.67	453.55	453.55
C	1070+96.96	16.67	453.45	453.46
D	1071+06.96	16.67	453.36	453.37
E	1071+16.96	16.67	453.27	453.28
F	1071+26.96	16.67	453.18	453.19
☉ Brg. Pier 1	1071+37.50	16.67	453.10	453.10
G	1071+47.50	16.67	453.01	453.04
H	1071+57.50	16.67	452.93	452.98
I	1071+67.50	16.67	452.86	452.92
J	1071+77.50	16.67	452.78	452.85
K	1071+87.50	16.67	452.71	452.77
L	1071+97.50	16.67	452.64	452.68
M	1072+07.50	16.67	452.58	452.59
☉ Brg. Pier 2	1072+12.50	16.67	452.54	452.54
N	1072+22.50	16.67	452.48	452.48
O	1072+32.50	16.67	452.42	452.43
P	1072+42.50	16.67	452.36	452.37
Q	1072+52.50	16.67	452.31	452.31
☉ Brg. E. Abut.	1072+63.04	16.67	452.25	452.25
Bk. E. Abut.	1072+64.88	16.67	452.24	452.24

MODEL: 05100774443-021
FILE NAME: p:\w\pwbentley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\05100774443.dgn

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - ANTHONY J. NOVELLO
CHECKED - D.H.R. / R.P.N.

EXAMINED
PASSED


 ENGINEER OF BRIDGE DESIGN
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3-27-2024
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0077

SHEET 8 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	21
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1070+56.13	-18.00	453.83
A	1070+66.13	-18.00	453.72
B	1070+76.13	-18.00	453.62
E. End of W. Appr. Slab	1070+86.13	-18.00	453.53

NORTH EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1070+56.13	-12.00	453.95
A	1070+66.13	-12.00	453.84
B	1070+76.13	-12.00	453.74
E. End of W. Appr. Slab	1070+86.13	-12.00	453.65

☐ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1070+56.13	0.00	454.13
A	1070+66.13	0.00	454.02
B	1070+76.13	0.00	453.92
E. End of W. Appr. Slab	1070+86.13	0.00	453.83

STAGE CONSTRUCTION JOINT

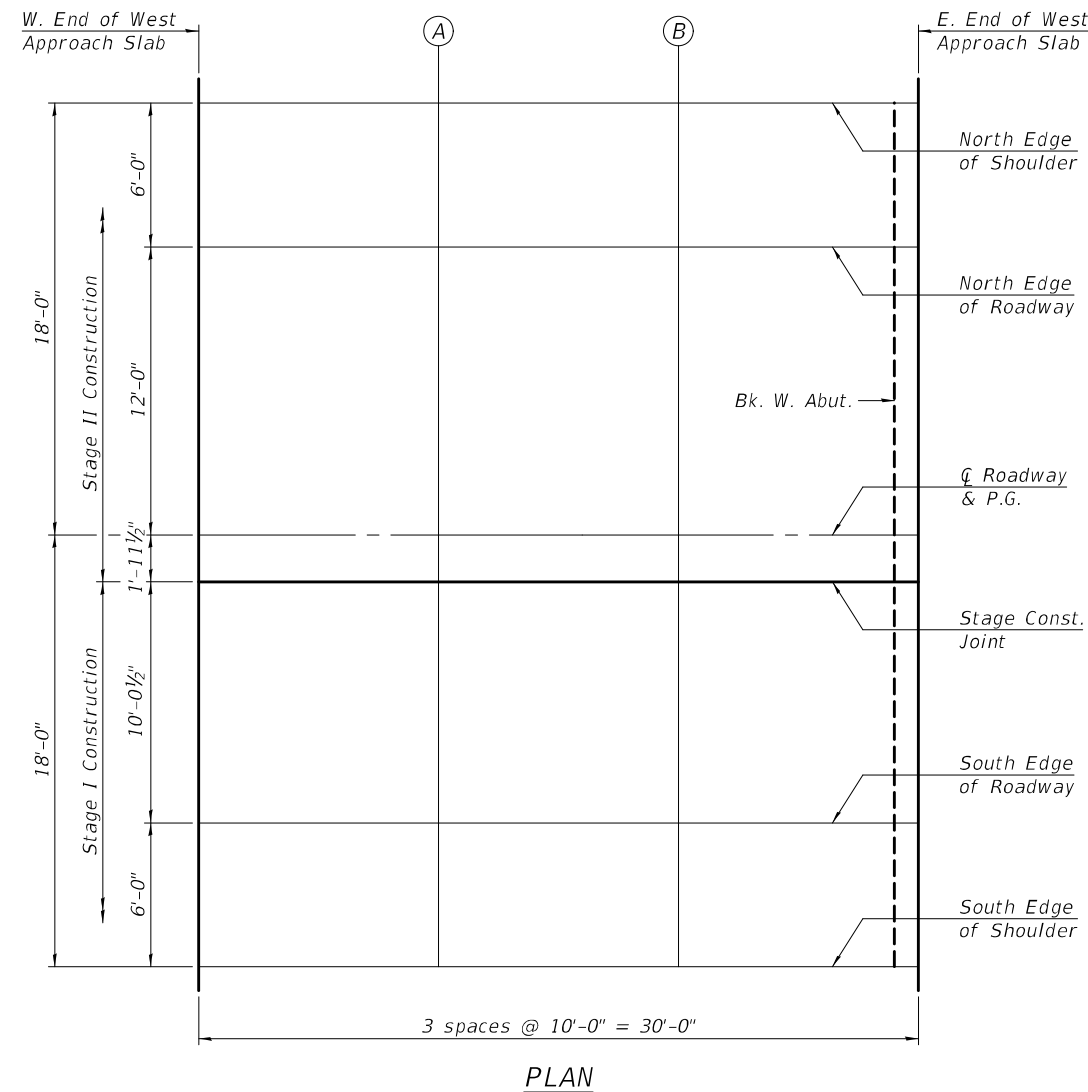
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1070+56.13	1.96	454.10
A	1070+66.13	1.96	454.00
B	1070+76.13	1.96	453.90
E. End of W. Appr. Slab	1070+86.13	1.96	453.80

SOUTH EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1070+56.13	12.00	453.95
A	1070+66.13	12.00	453.84
B	1070+76.13	12.00	453.74
E. End of W. Appr. Slab	1070+86.13	12.00	453.65

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	1070+56.13	18.00	453.83
A	1070+66.13	18.00	453.72
B	1070+76.13	18.00	453.62
E. End of W. Appr. Slab	1070+86.13	18.00	453.53



MODEL: 0510077-74443-022
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DESIGNED -	DAVID H. RICHTER
CHECKED -	RYAN P. NEGANGARD
DRAWN -	ANTHONY J. NOVELLO
CHECKED -	D.H.R. / R.P.N.

EXAMINED	<i>Mark Shuffler</i> ENGINEER OF BRIDGE DESIGN	DATE -	3-27-2024
PASSED	<i>Joanne F. ...</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0077

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	22
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

SHEET 9 OF 30 SHEETS

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NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1072+63.88	-18.00	452.22
R	1072+73.88	-18.00	452.17
S	1072+83.88	-18.00	452.12
E. End of E. Appr. Slab	1072+93.88	-18.00	452.07

NORTH EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1072+63.88	-12.00	452.34
R	1072+73.88	-12.00	452.29
S	1072+83.88	-12.00	452.24
E. End of E. Appr. Slab	1072+93.88	-12.00	452.19

☉ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1072+63.88	0.00	452.52
R	1072+73.88	0.00	452.47
S	1072+83.88	0.00	452.42
E. End of E. Appr. Slab	1072+93.88	0.00	452.37

STAGE CONSTRUCTION JOINT

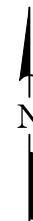
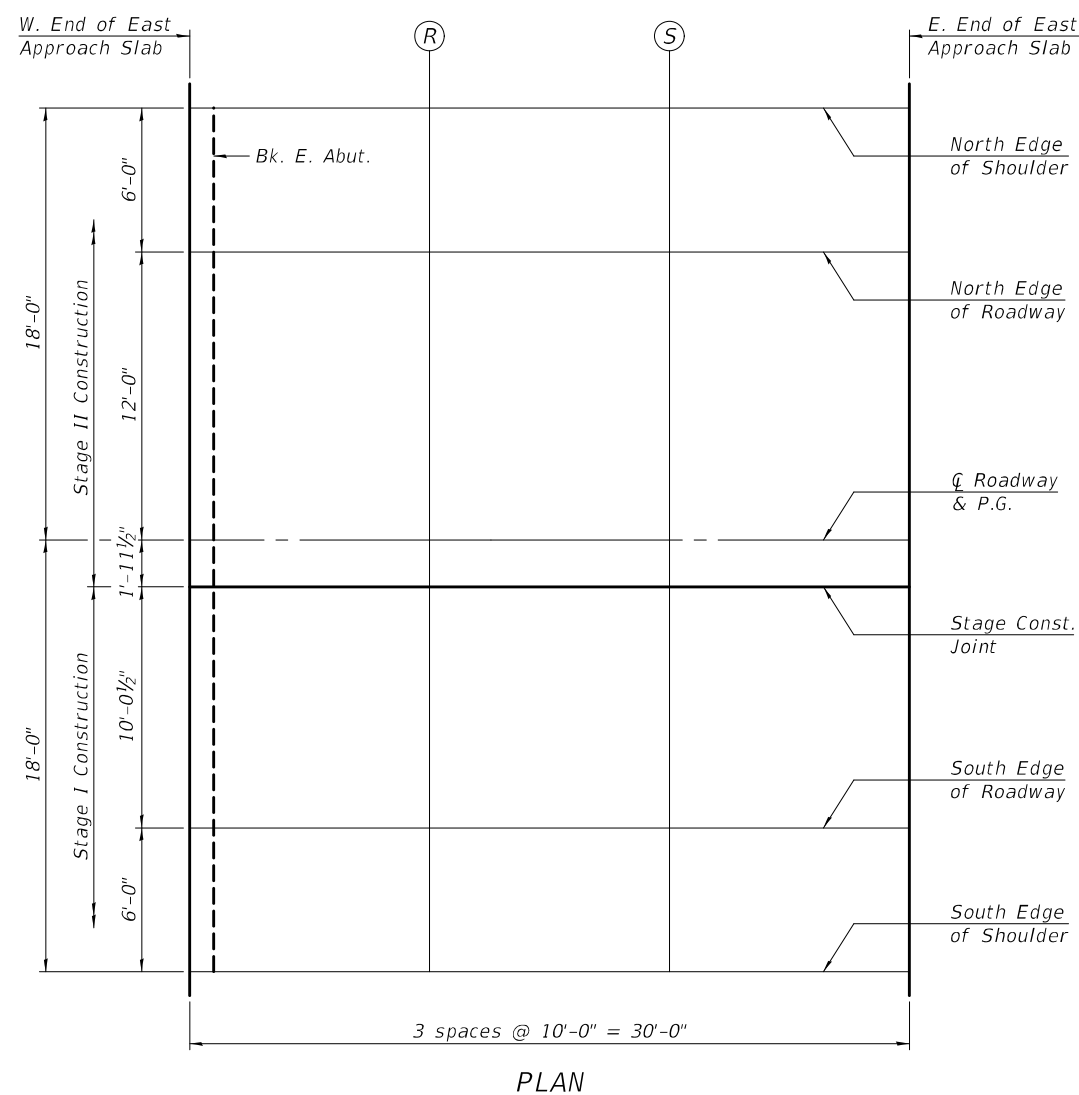
Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1072+63.88	1.96	452.49
R	1072+73.88	1.96	452.44
S	1072+83.88	1.96	452.39
E. End of E. Appr. Slab	1072+93.88	1.96	452.34

SOUTH EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1072+63.88	12.00	452.34
R	1072+73.88	12.00	452.29
S	1072+83.88	12.00	452.24
E. End of E. Appr. Slab	1072+93.88	12.00	452.19

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	1072+63.88	18.00	452.22
R	1072+73.88	18.00	452.17
S	1072+83.88	18.00	452.12
E. End of E. Appr. Slab	1072+93.88	18.00	452.07



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DESIGNED - DAVID H. RICHTER	EXAMINED
CHECKED - RYAN P. NEGANGARD	PASSED
DRAWN - ANTHONY J. NOVELLO	
CHECKED - D.H.R. / R.P.N.	

DATE - 3-27-2024

 ENGINEER OF BRIDGE DESIGN

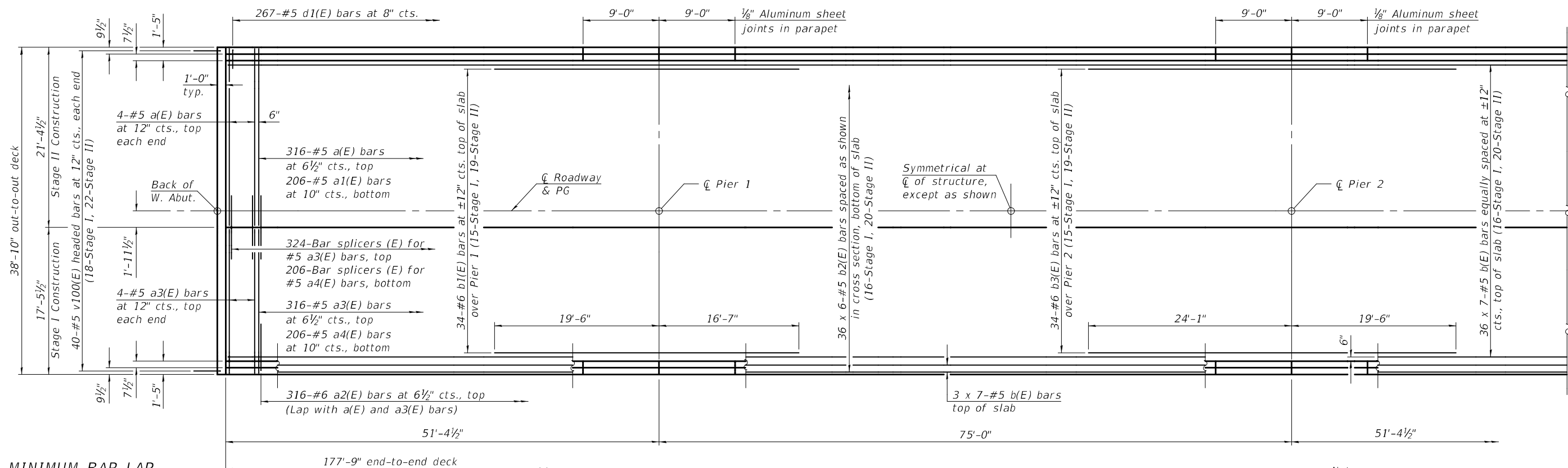
 ENGINEER OF BRIDGES AND STRUCTURES

REVISD -
REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0077

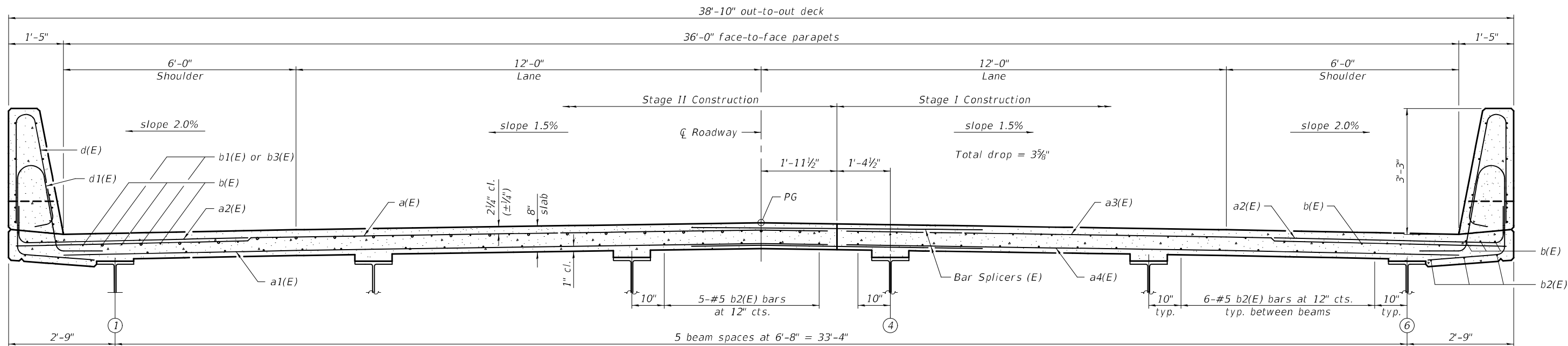
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CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



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

PARTIAL PLAN

Notes:
 See sheet 12 of 30 for superstructure details and Bill of Material.
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



NEAR PIER

NEAR MIDSPAN

CROSS SECTION
 (Looking East)

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DESIGNED -	DAVID H. RICHTER
CHECKED -	RYAN P. NEGANGARD
DRAWN -	ANTHONY J. NOVELLO
CHECKED -	D.H.R. / R.P.N.

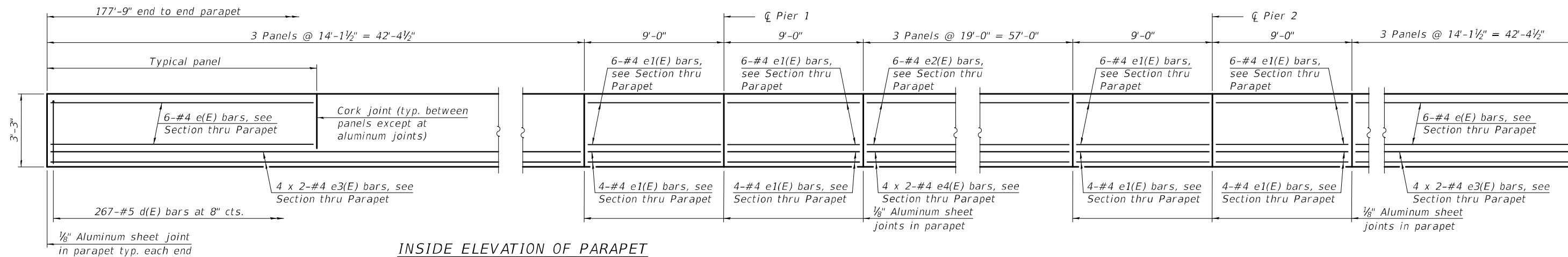
EXAMINED	<i>Mark Shuffler</i> ENGINEER OF BRIDGE DESIGN	DATE -	3-27-2024
PASSED	<i>James F. Hoff</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

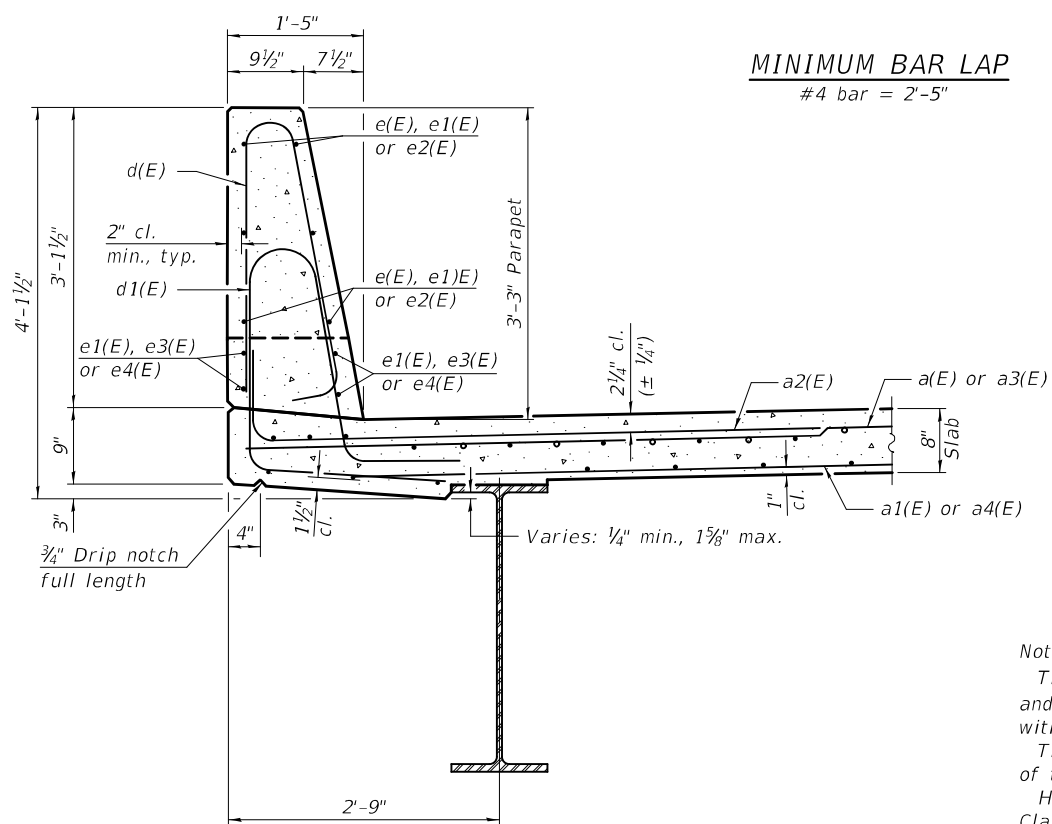
SUPERSTRUCTURE
STRUCTURE NO. 051-0077

SHEET 11 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	24
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

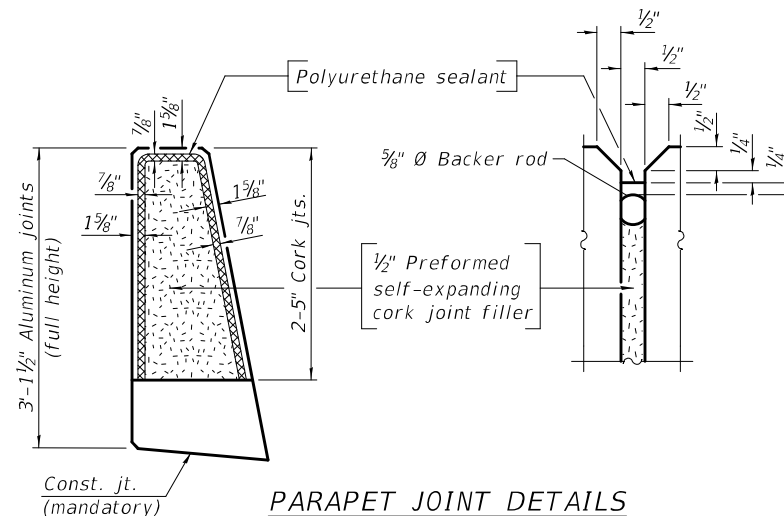


INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET

MINIMUM BAR LAP
#4 bar = 2'-5"



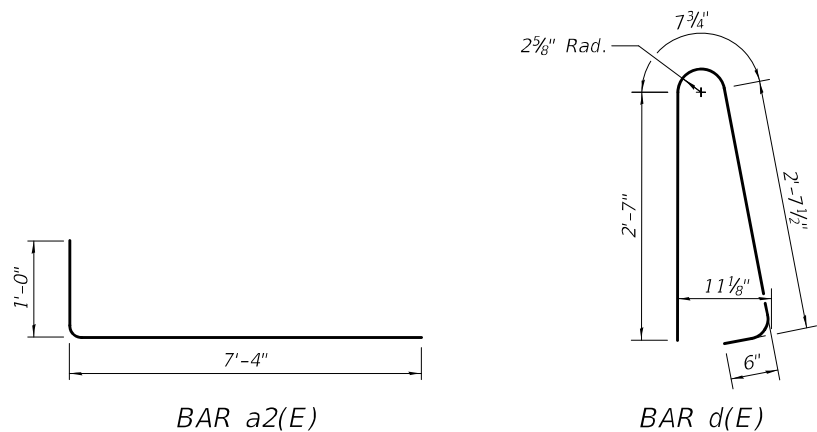
PARAPET JOINT DETAILS

Notes:
The 1/8" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

SUPERSTRUCTURE
BILL OF MATERIAL

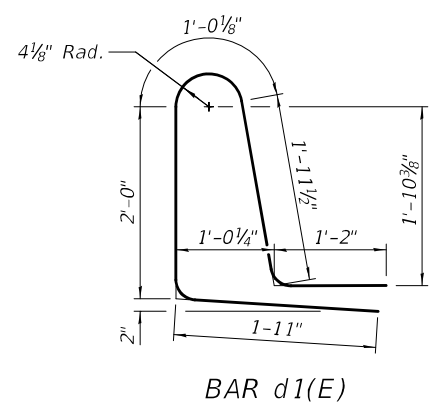
Bar	No.	Size	Length	Shape
a(E)	324	#5	21'-1"	—
a1(E)	206	#5	20'-3"	—
a2(E)	632	#6	8'-4"	└
a3(E)	324	#5	17'-2"	—
a4(E)	206	#5	16'-4"	—
b(E)	294	#5	28'-5"	—
b1(E)	34	#6	36'-1"	—
b2(E)	216	#5	32'-6"	—
b3(E)	34	#6	43'-7"	—
d(E)	534	#5	6'-5"	└
d1(E)	534	#5	8'-1"	└
e(E)	72	#4	13'-10"	—
e1(E)	80	#4	8'-9"	—
e2(E)	36	#4	18'-9"	—
e3(E)	32	#4	22'-4"	—
e4(E)	16	#4	29'-7"	—
m10(E)	8	#6	17'-2"	—
m11(E)	24	#6	6'-4"	—
m12(E)	12	#6	2'-5"	—
m13(E)	8	#6	21'-1"	—
s100(E)	72	#5	6'-10"	└
s101(E)	72	#5	9'-10"	└
v100(E)	80	#5	3'-1"	└
Reinforcement Bars, Epoxy Coated		Pound		61490
Concrete Superstructure		Cu. Yd.		254.2

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

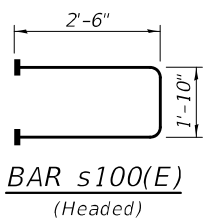


BAR a2(E)

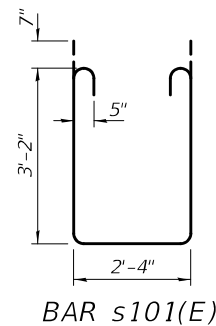
BAR d(E)



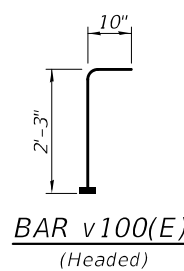
BAR d1(E)



BAR s100(E)
(Headed)



BAR s101(E)



BAR v100(E)
(Headed)

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DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - ANTHONY J. NOVELLO
CHECKED - D.H.R./R.P.N.

EXAMINED
PASSED
Mark Shuffler
ENGINEER OF BRIDGE DESIGN
Jayne F. Schuff
ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3-27-2024
REVISED -
REVISED -

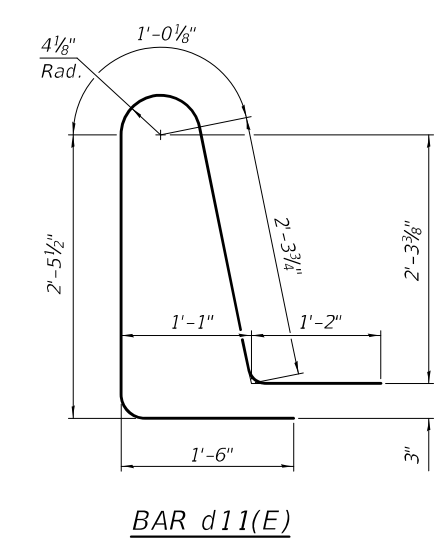
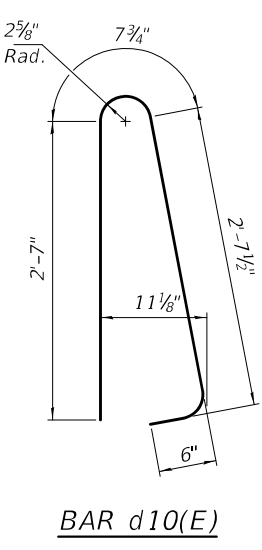
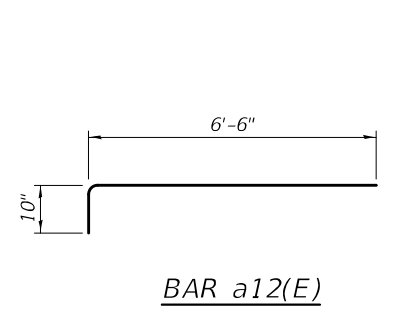
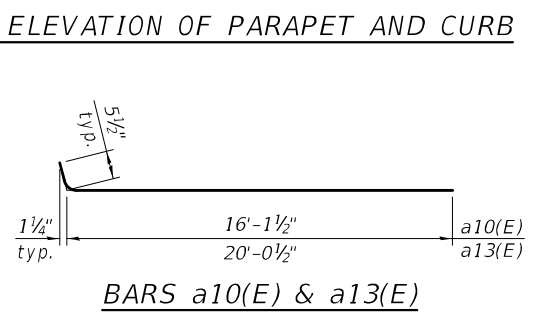
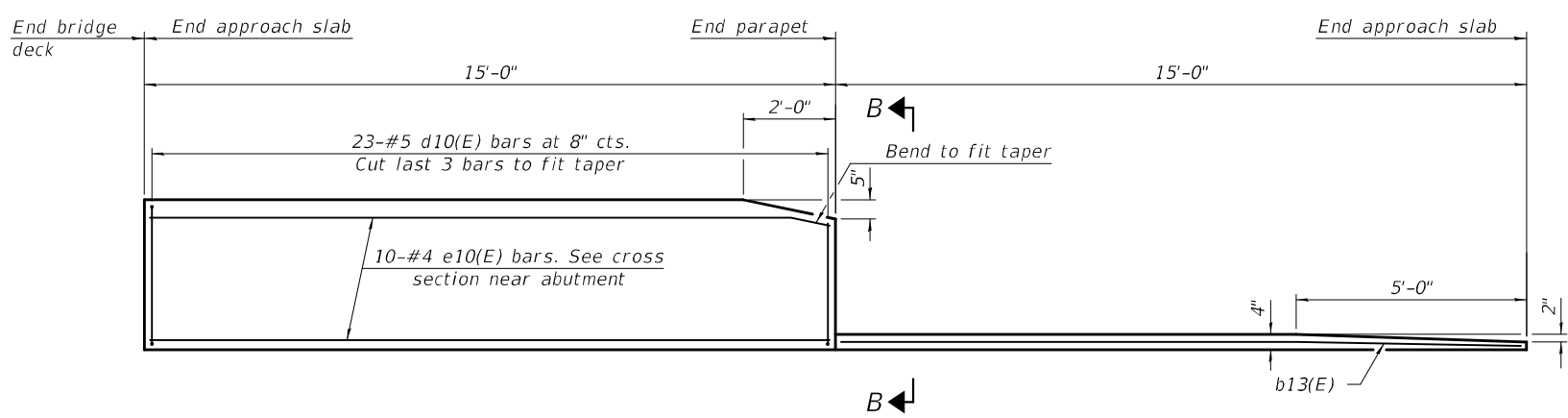
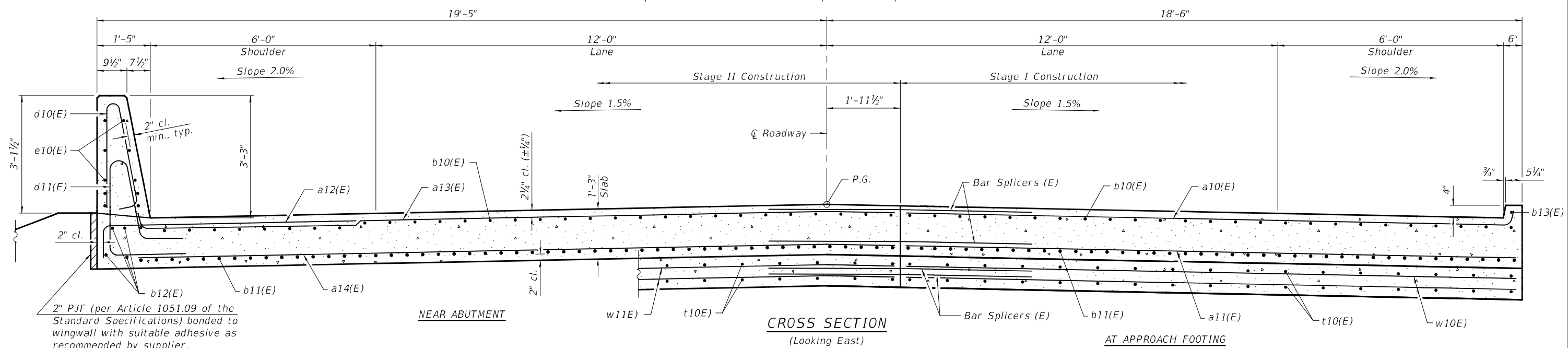
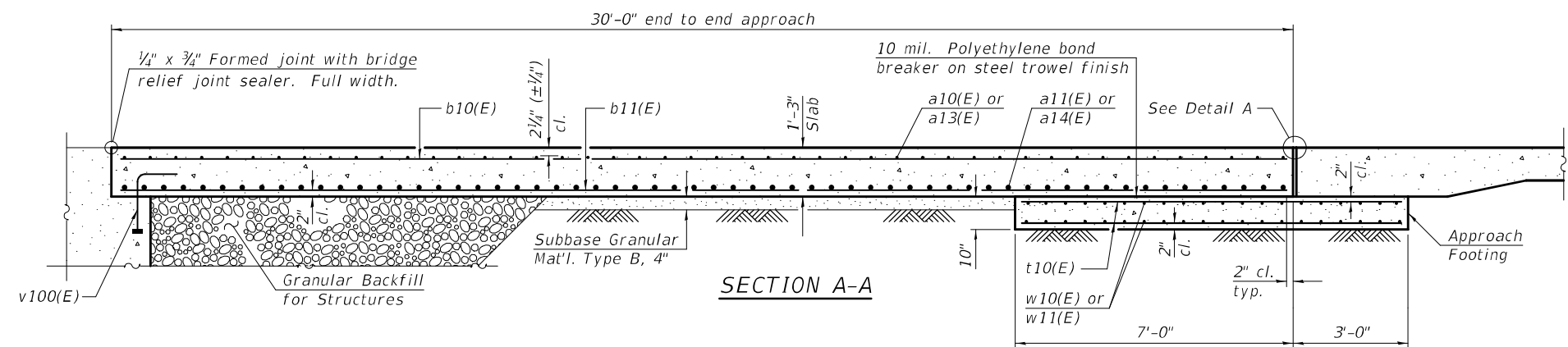
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 051-0077

SHEET 12 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	25
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

Notes:
 Parapet concrete shall be paid for as Concrete Superstructure.
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 30.
 The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.



**TWO APPROACHES
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a10(E)	92	#5	16'-7"	┌───┐
a11(E)	120	#8	16'-3"	┌───┐
a12(E)	92	#5	7'-4"	┌───┐
a13(E)	92	#5	20'-6"	┌───┐
a14(E)	120	#8	20'-2"	┌───┐
b10(E)	112	#5	29'-8"	┌───┐
b11(E)	178	#9	29'-8"	┌───┐
b12(E)	16	#5	14'-8"	┌───┐
b13(E)	4	#4	14'-8"	┌───┐
d10(E)	92	#5	6'-5"	┌───┐
d11(E)	92	#5	8'-6"	┌───┐
e10(E)	40	#4	14'-8"	┌───┐
t10(E)	152	#4	9'-8"	┌───┐
w10(E)	80	#5	16'-3"	┌───┐
w11(E)	80	#5	20'-2"	┌───┐
Concrete Superstructure		Cu. Yd.	7.8	
Concrete Superstructure (Approach Slab)		Cu. Yd.	105.9	
Concrete Structures		Cu. Yd.	22.8	
Reinforcement Bars, Epoxy Coated		Pound	43480	

(Sheet 2 of 2)

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DESIGNED - DAVID H. RICHTER
 CHECKED - RYAN P. NEGANGARD
 DRAWN - ANTHONY J. NOVELLO
 CHECKED - D.H.R. / R.P.N.

EXAMINED
 PASSED
 Mark Shuffler
 ENGINEER OF BRIDGE DESIGN
 Joanne F. [Signature]
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3-27-2024
 REVISED -
 REVISED -

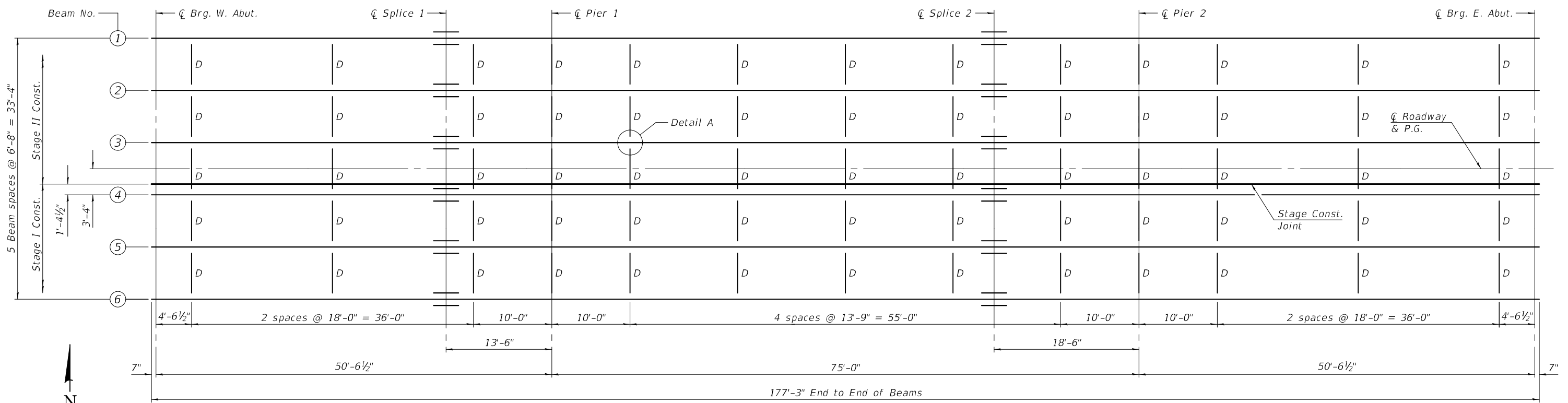
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 051-0077**

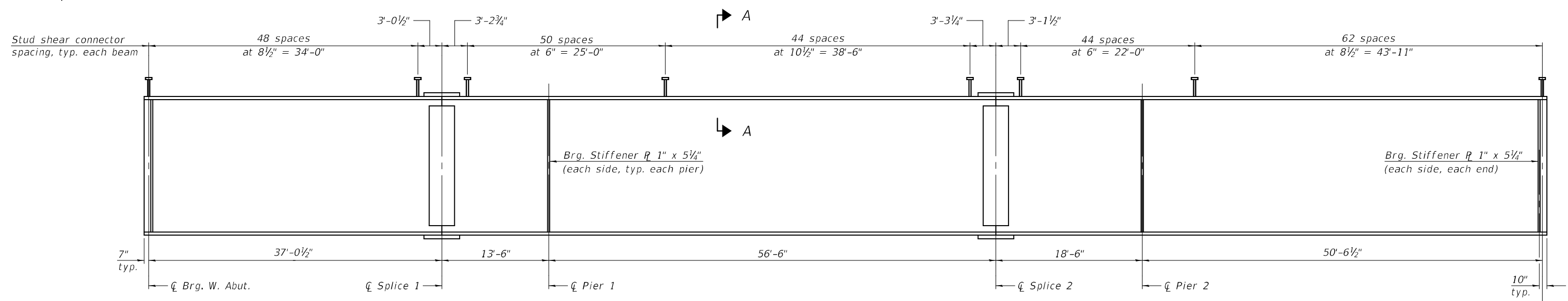
SHEET 15 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	28
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

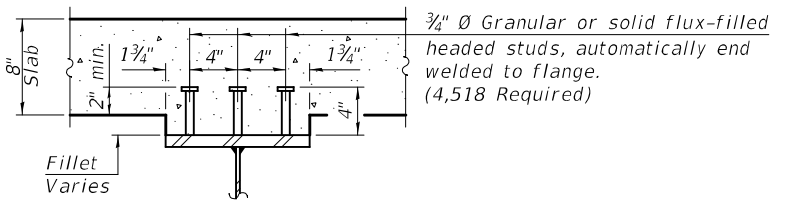
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PLAN
(All beams are W33x118, AASHTO M270, Grade 50, CVN)



BEAM ELEVATION



Note: See sheet 17 of 30 for additional notes and details

***TOP OF BEAM ELEVATIONS**

Location	☐ Brg. W. Abut.	☐ Splice 1	☐ Pier 1	☐ Splice 2	☐ Pier 2	☐ Brg. E. Abut.
Beam 1	452.84	452.43	452.33	451.93	451.82	451.52
Beam 2	452.96	452.55	452.46	452.06	451.94	451.64
Beam 3	453.06	452.65	452.56	452.16	452.04	451.74
Beam 4	453.06	452.65	452.56	452.16	452.04	451.74
Beam 5	452.96	452.55	452.46	452.06	451.94	451.64
Beam 6	452.84	452.43	452.33	451.93	451.82	451.52

* For Fabrication use only

DESIGNED - DAVID H. RICHTER	EXAMINED - <i>Mark Shuffler</i>	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	ENGINEER OF BRIDGE DESIGN	
DRAWN - ANTHONY J. NOVELLO	PASSED - <i>Jayne F. Hoff</i>	REVISOR -
CHECKED - D.H.R./R.P.N.	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -

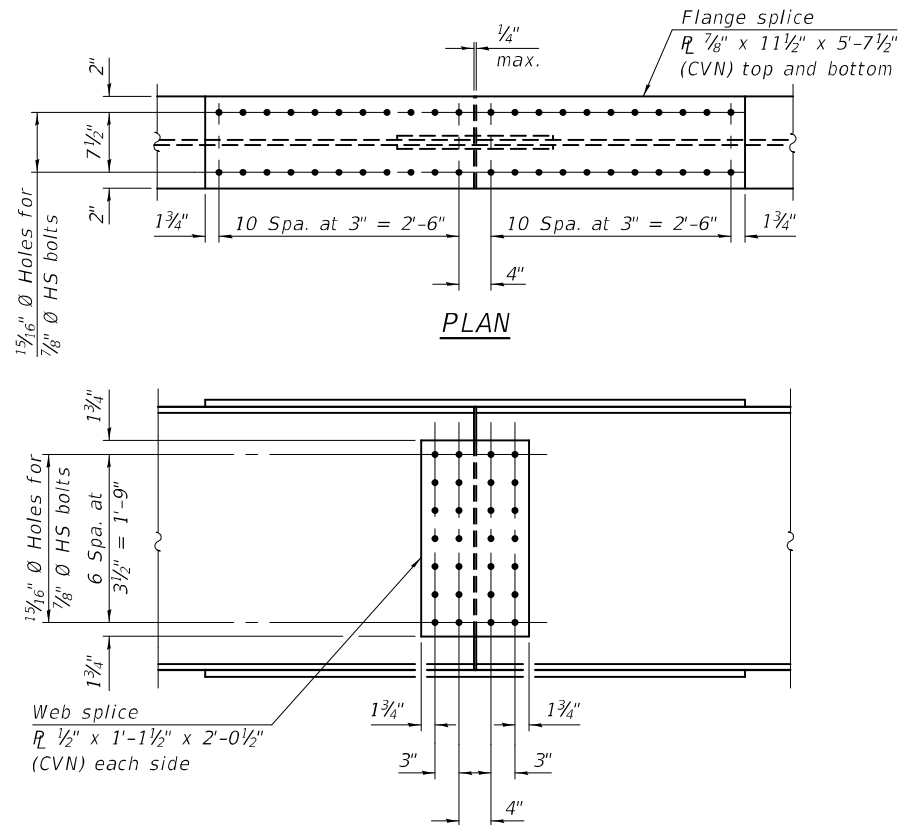
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL
STRUCTURE NO. 051-0077**

F.A.P. RTE. 327	SECTION (3.2B)B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 29
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

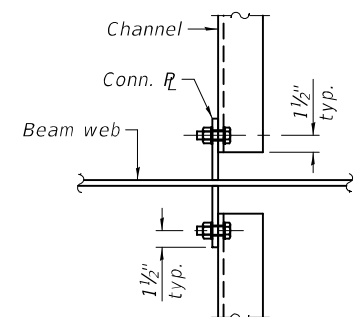
SHEET 16 OF 30 SHEETS

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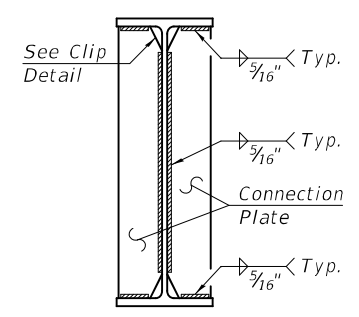


ELEVATION

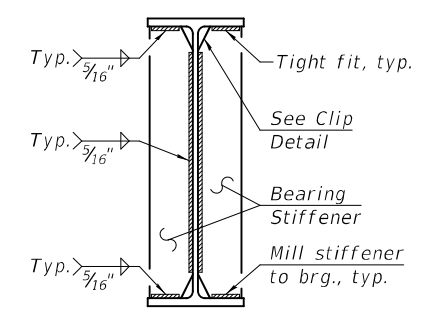
SPLICE DETAIL
(12 Required)



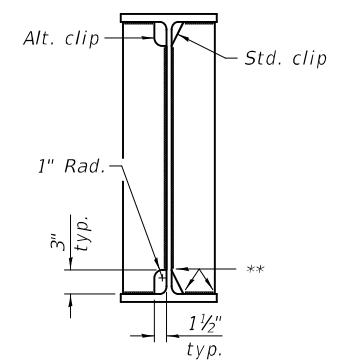
DETAIL A



CONNECTION PLATE
DETAIL

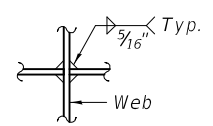


BEARING STIFFENER
DETAIL

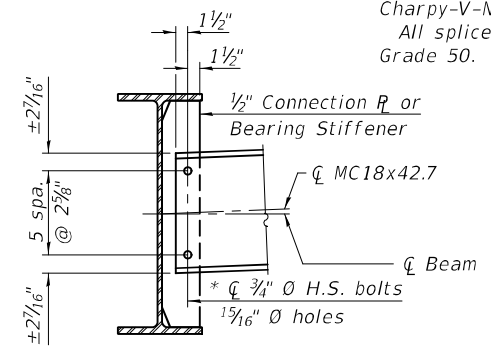


WELD LIMITS AND CLIP DETAILS

** Stop welds 1/4" (±1/8") from edges as shown, typ.



WEB WELD DETAIL



DIAPHRAGM D
(65 Required)

INTERIOR BEAM MOMENT TABLE				
		0.4 Span 1 and 0.6 Span 3	Piers 1 and 2	0.5 Span 2
I_s	(in ⁴)	5823	5823	5823
$I_c(n)$	(in ⁴)	17124	17124	17124
$I_c(3n)$	(in ⁴)	12919	12919	12919
$I_c(cr)$	(in ⁴)	—	8338	—
S_s	(in ³)	354	354	354
$S_c(n)$	(in ³)	543	543	543
$S_c(3n)$	(in ³)	495	495	495
$S_c(cr)$	(in ³)	—	418	—
S_x	(in ³)	523	399	501
DC1	(k/ft)	0.831	0.831	0.831
M_{DC1}	(k)	114.3	351	233.3
DC2	(k/ft)	0.175	0.175	0.175
M_{DC2}	(k)	24.1	73.9	49.1
DW	(k/ft)	0.333	0.333	0.333
M_{DW}	(k)	45.8	140.7	93.5
LLDF		0.578	0.549	0.521
M_{L+IM}	(k)	500.1	540.8	570.3
f_t (Strength I)	(ksi)	0	0	0
$M_u + 1/3 f_t S_x$	(k)	1117.0	1688.6	1491.2
$\phi_f M_n$	(k)	2830.6	2127.7	2714.2
f_s DC1	(ksi)	3.87	11.90	7.91
f_s DC2	(ksi)	0.58	1.79	1.19
f_s DW	(ksi)	1.11	3.39	2.27
f_s (L+IM)	(ksi)	11.05	11.95	12.60
f_t (Service II)	(ksi)	0	0	0
$f_s + f_t/2$ (Service II)	(ksi)	19.94	32.62	27.75
Service II Resistance	(ksi)	47.5	47.5	47.5
$f_s + f_t/3$ (Strength I)	(ksi)	—	—	—
$\phi_f F_n$	(ksi)	—	—	—
V_f	(k)	24.2	27.9	20.9

BEAM REACTION TABLE		
	Abuts.	Piers 1 & 2
LLDF	0.719	0.719
OCF	—	—
R_{DC1}	(k) 14.1	59.1
R_{DC2}	(k) 3.0	12.4
R_{DW}	(k) 5.6	23.7
R_L	(k) 51.1	84.4
R_{IM}	(k) 13.4	16.6
R_{Total} (Strength I)(Impact)	(k) 142.7	301.7
R_{Total} (Strength I)(No Impact)	(k) 119.2	272.6

Note:
 M_L and R_L include the effects of centrifugal force and superelevation.

Notes:
Two hardened washers required for each set of oversized holes.
Alternate channels of equal depth and larger weight are permitted to facilitate material acquisition. Alternate channels, if utilized, shall be provided at no additional cost to the Department.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.
Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.
All splice plates and bearing stiffeners shall be AASHTO M270, Grade 50.

* Install only one 7/8" Ø H.S. bolt in center-most hole above C of beam at each end of the stage line diaphragm. The bolts shall be finger-tightened prior to deck pour to permit rotation. Install 3/4" Ø H.S. bolts and fully tighten immediately after Stage II deck pour is complete.

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).

DC1: Un-factored non-composite dead load (kips/ft.).
 M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
 M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
 M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
 M_{L+IM} : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
 M_u : Strength I load combination of factored design moments (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{L+IM}$
 f_t : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).
 $\phi_f M_n$: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).
 f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_s
 f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.
 f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.
 f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.
 $f_s + f_t/2$ (Service II): Sum of stresses as computed below (ksi).
 f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L+IM) + $f_t/2$
Service II Resistance: Composite (0.95 $R_n F_y$) or noncomposite (0.80 $R_n F_y$) stress capacity according to Article 6.10.4.2 (ksi).
 $f_s + f_t/3$ (Strength I): Sum of stresses as computed below on non-compact sections (ksi).
 $1.25 (f_s$ DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (L+IM) + $f_t/3$
 $\phi_f F_n$: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).
 V_f : Maximum factored shear range in span computed according to Article 6.10.10.
OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
 R_{DC1} : Un-factored reaction due to non-composite dead load (kip).
 R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
 R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
 R_L : Un-factored live load reaction (kip).
 R_{IM} : Un-factored dynamic load allowance (impact) (kip).
 R_{Total} (Strength I)(Impact): Strength I load combination of factored design reactions (kip).
 $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_L + R_{IM})$
 R_{Total} (Strength I)(No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
 $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_L)$

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DESIGNED -	DAVID H. RICHTER
CHECKED -	RYAN P. NEANGANGARD
DRAWN -	ANTHONY J. NOVELLO
CHECKED -	D.H.R. / R.P.N.

EXAMINED		DATE -	3-27-2024
PASSED		REVISED -	
		REVISED -	

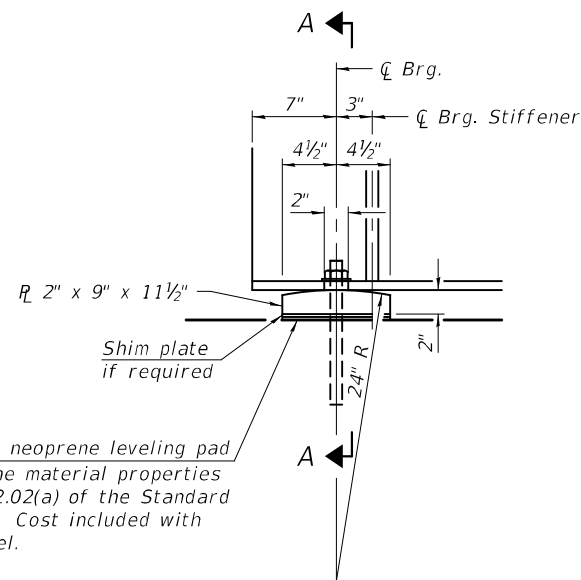
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 051-0077

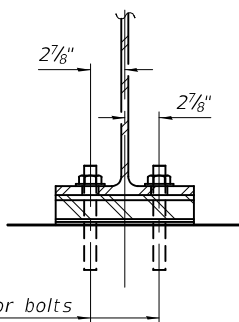
SHEET 17 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	30
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

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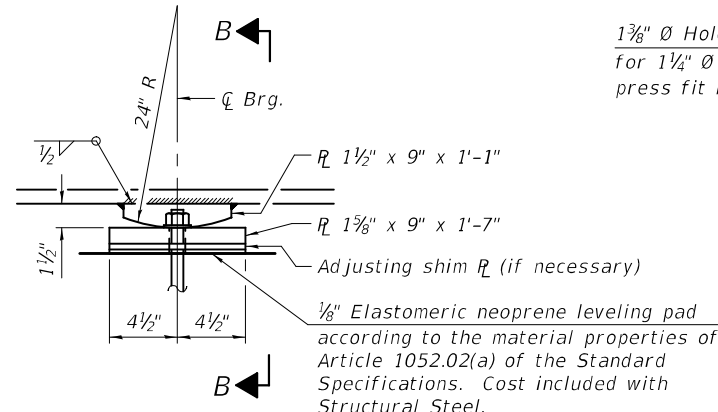
ELEVATION AT ABUTMENT



SECTION A-A

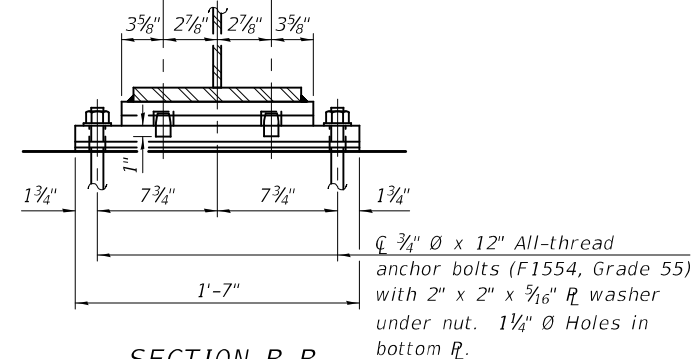
\varnothing 1" \varnothing x 12" All-thread anchor bolts (Grade 55) with 2 1/4" x 2 1/4" x 5/16" \varnothing washers under nuts. 1 3/8" x 2" slotted holes in flange. 1 1/2" \varnothing Holes in bearing plate.

FIXED BEARING
(12 Required)



ELEVATION AT PIER

1 3/8" \varnothing Holes, 1" deep in top \varnothing for 1 1/4" \varnothing pintles. Thread or press fit in bottom \varnothing .

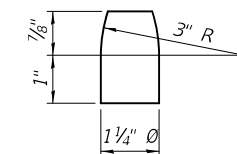


SECTION B-B

FIXED BEARING
(12 Required)

Notes:

- Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
- The structural steel plates and pintles of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.
- All bearing plates, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.



PINTLE

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 3/4"	Each	24
Anchor Bolts, 1"	Each	24

DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	PASSED	REVISED -
DRAWN - ANTHONY J. NOVELLO		REVISED -
CHECKED - D.H.R. / R.P.N.		

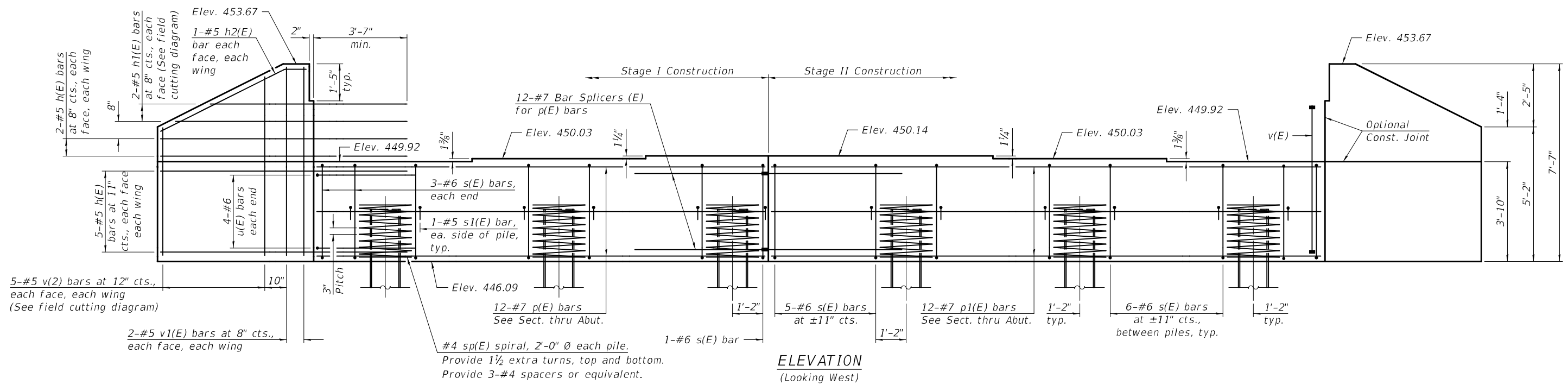
Mark Shuffler
 ENGINEER OF BRIDGE DESIGN
 Jayne F. [Signature]
 ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

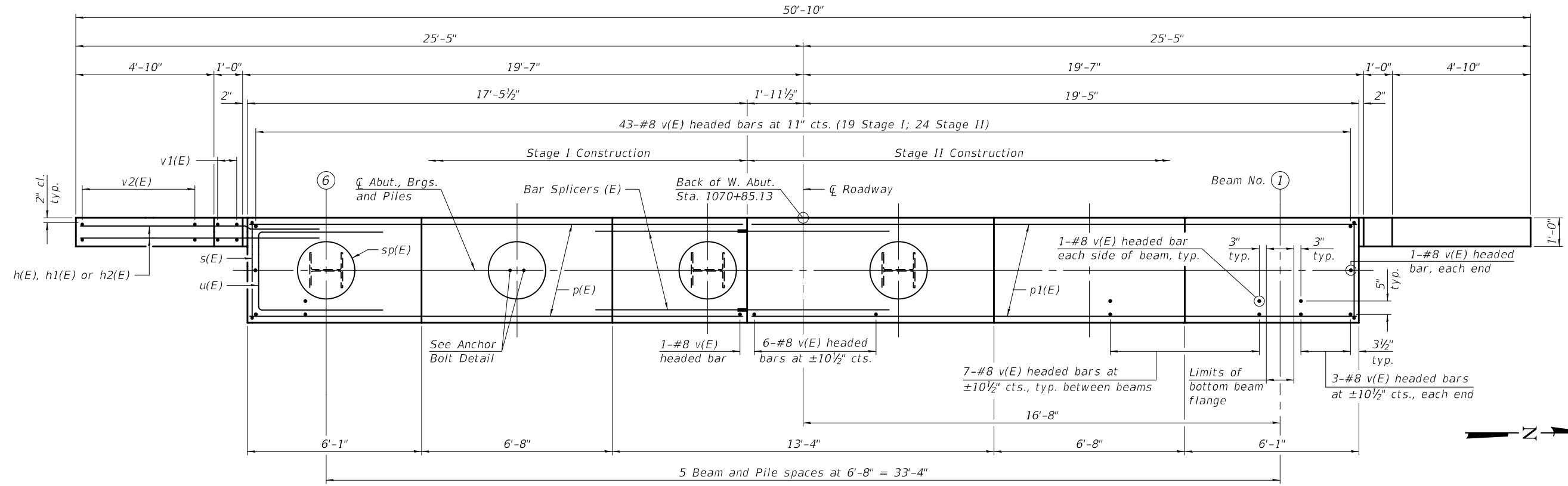
BEARING DETAILS
STRUCTURE NO. 051-0077

SHEET 18 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	31
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



ELEVATION
(Looking West)



PLAN

PILE DATA

Type: HP14x117 with pile shoes
 Nominal Required Bearing: 929 kips
 Factored Resistance Available: 511 kips
 Est. Length: 59'
 No. Production Piles: 5
 No. Test Piles: 1

Notes:
 Pour steps monolithically with cap.
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
 See sheet 21 of 30 for addition details and Bill of Materials.
 See sheet 25 of 30 for details of piles.

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DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	<i>Mark Shuffler</i> ENGINEER OF BRIDGE DESIGN	
DRAWN - ANTHONY J. NOVELLO	PASSED	REVISED -
CHECKED - D.H.R. / R.P.N.	<i>James F. ...</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

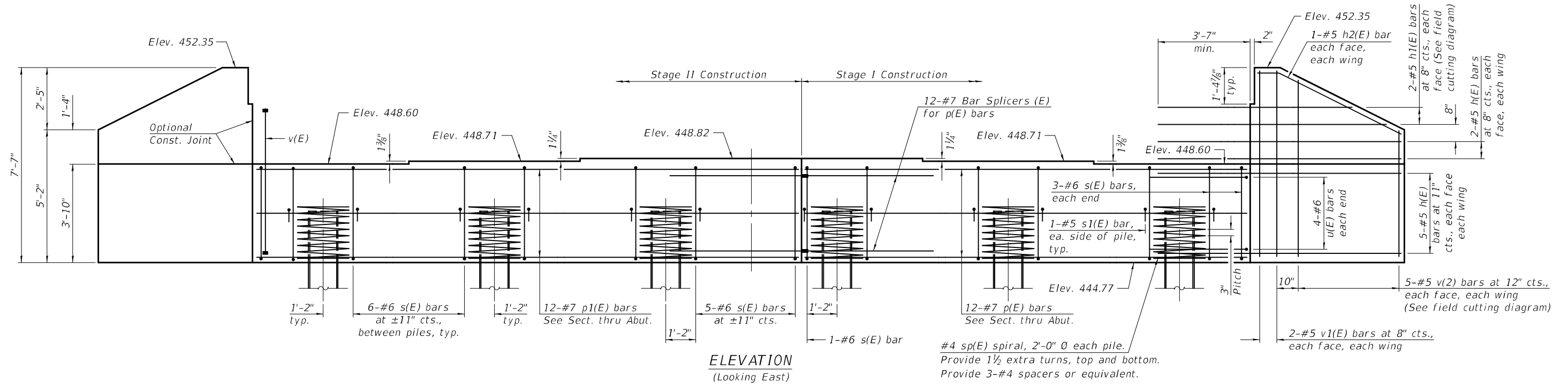
WEST ABUTMENT
STRUCTURE NO. 051-0077

SHEET 19 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	32
CONTRACT NO. 74443				

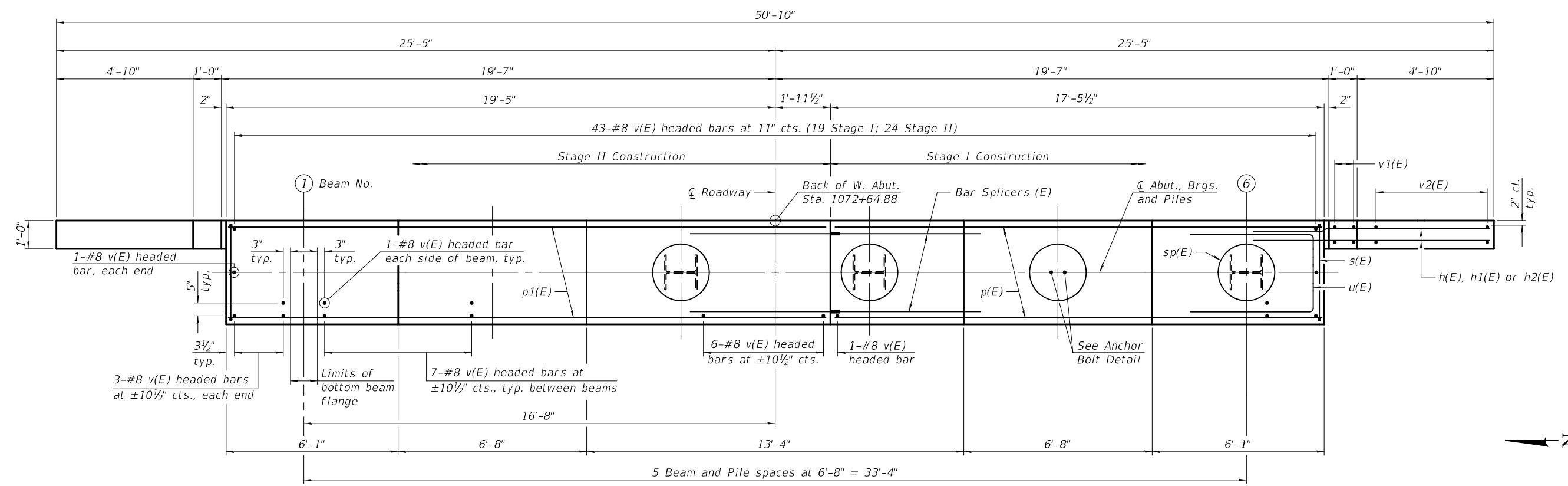
ILLINOIS FED. AID PROJECT

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ELEVATION
(Looking East)

#4 sp(E) spiral, 2'-0" O each pile.
Provide 1 1/2 extra turns, top and bottom.
Provide 3-#4 spacers or equivalent.



PLAN

PILE DATA

Type: HP14x117 with pile shoes
 Nominal Required Bearing: 929 kips
 Factored Resistance Available: 511 kips
 Est. Length: 38'
 No. Production Piles: 5
 No. Test Piles: 1

Notes:
 Pour steps monolithically with cap.
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
 See sheet 21 of 30 for additional details and Bill of Materials.
 See sheet 25 of 30 for details of piles.

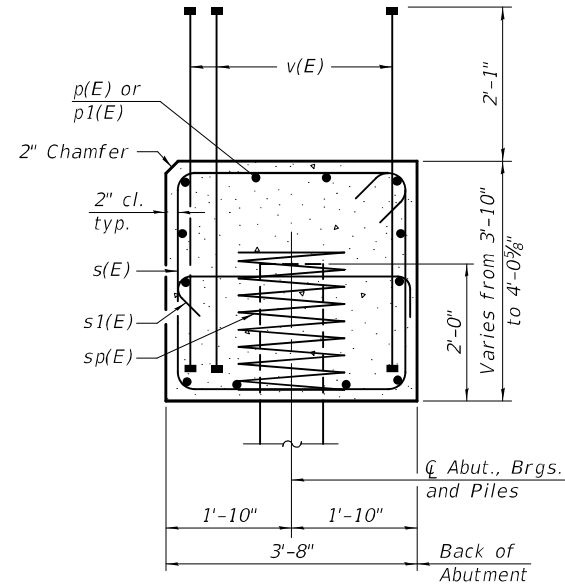
DESIGNED - DAVID H. RICHTER	EXAMINED	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	<i>Mark Shuffler</i> ENGINEER OF BRIDGE DESIGN	
DRAWN - ANTHONY J. NOVELLO	PASSED	REVISED -
CHECKED - D.H.R./R.P.N.	<i>James F. ...</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

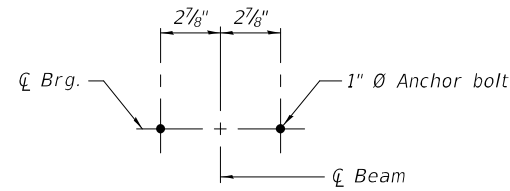
EAST ABUTMENT
STRUCTURE NO. 051-0077

SHEET 20 OF 30 SHEETS

F.A.P. RTE. 327	SECTION (3.2B)B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 33
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



SEC. THRU ABUT.



ANCHOR BOLT DETAIL

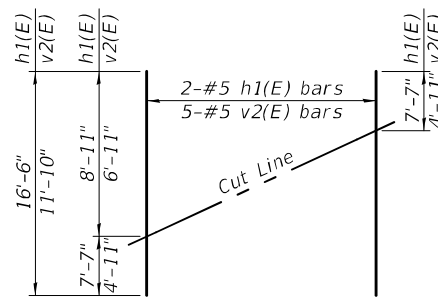
**WEST ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	28	#5	9'-5"	—
h1(E)	4	#5	16'-6"	—
h2(E)	4	#5	6'-1"	—
p(E)	12	#7	17'-2"	—
p1(E)	12	#7	21'-1"	—
s(E)	36	#6	15'-0"	□
s1(E)	12	#5	4'-4"	└
* sp(E)	6	#4	2'-0"	≡
u(E)	8	#6	11'-10"	└
v(E)	98	#8	5'-7"	—
v1(E)	8	#5	7'-3"	—
v2(E)	10	#5	11'-10"	—
Structure Excavation			Cu. Yd.	96
Concrete Structures			Cu. Yd.	23.7
Reinforcement Bars, Epoxy Coated			Pound	4260
Furnishing Steel Piles HP14x117			Foot	295
Driving Piles			Foot	295
Test Pile Steel HP14x117			Each	1
Pile Shoes			Each	6

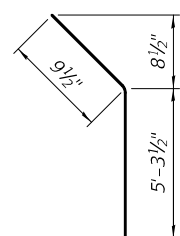
* Length is height of spiral

**EAST ABUTMENT
BILL OF MATERIAL**

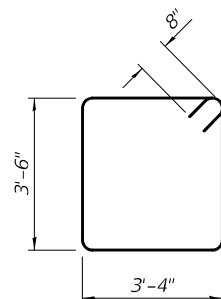
Bar	No.	Size	Length	Shape
h(E)	28	#5	9'-5"	—
h1(E)	4	#5	16'-6"	—
h2(E)	4	#5	6'-1"	—
p(E)	12	#7	17'-2"	—
p1(E)	12	#7	21'-1"	—
s(E)	36	#6	15'-0"	□
s1(E)	12	#5	4'-4"	└
* sp(E)	6	#4	2'-0"	≡
u(E)	8	#6	11'-10"	└
v(E)	98	#8	5'-7"	—
v1(E)	8	#5	7'-3"	—
v2(E)	10	#5	11'-10"	—
Structure Excavation			Cu. Yd.	101
Concrete Structures			Cu. Yd.	23.7
Reinforcement Bars, Epoxy Coated			Pound	4260
Furnishing Steel Piles HP14x117			Foot	190
Driving Piles			Foot	190
Test Pile Steel HP14x117			Each	1
Pile Shoes			Each	6



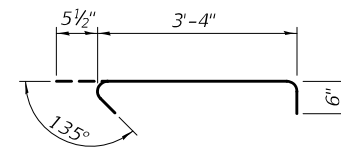
FIELD CUTTING DIAGRAM
Order h1(E) and v2(E) full length. Cut as shown and use remainder of bars in opposite wing.



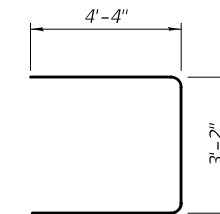
BAR h2(E)



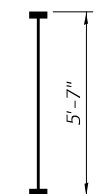
BAR s(E)



BAR s1(E)



BAR u(E)



**BAR v(E)
(Headed)**

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DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANGARD
DRAWN - ANTHONY J. NOVELLO
CHECKED - D.H.R. / R.P.N.

EXAMINED
PASSED
Mark Shuffler
ENGINEER OF BRIDGE DESIGN
Jayne F. [Signature]
ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3-27-2024
REVISED -
REVISED -

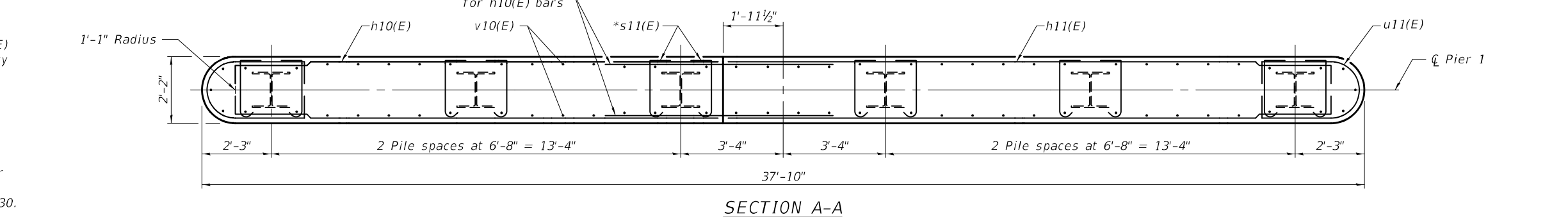
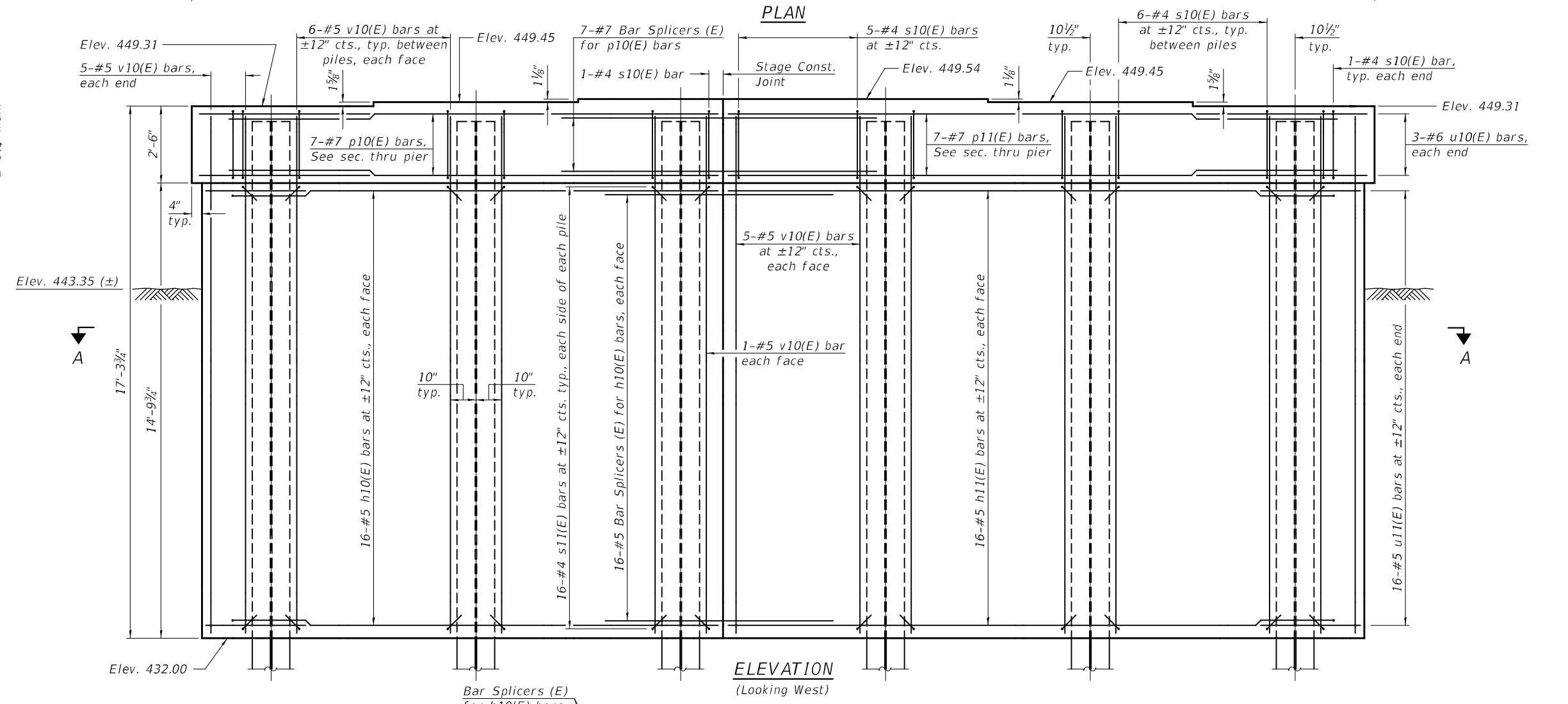
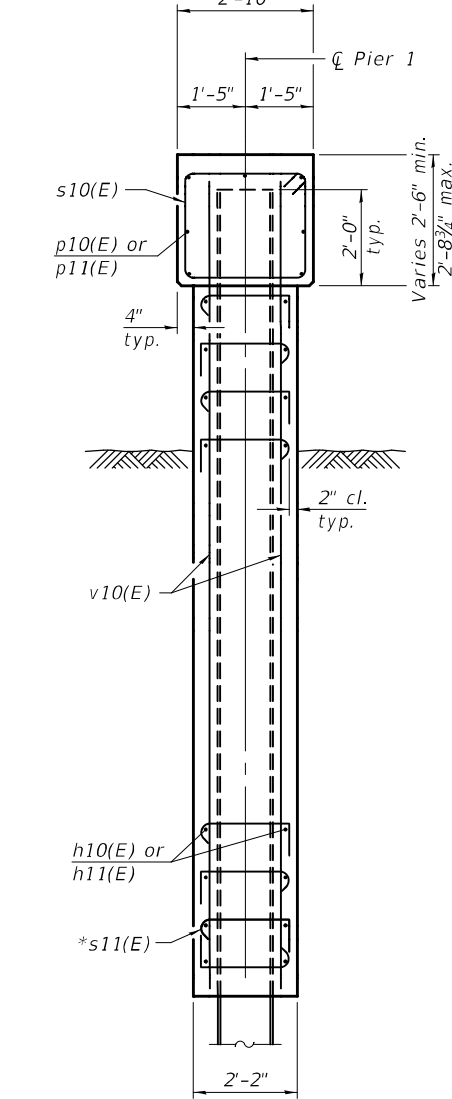
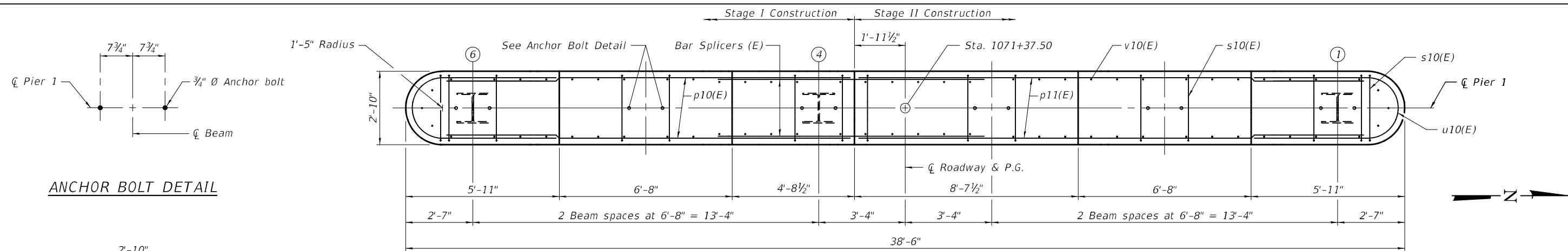
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENT DETAILS
STRUCTURE NO. 051-0077**

SHEET 21 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3.2B)B-1	LAWRENCE	54	34
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

3/28/2024 1:21:16 PM

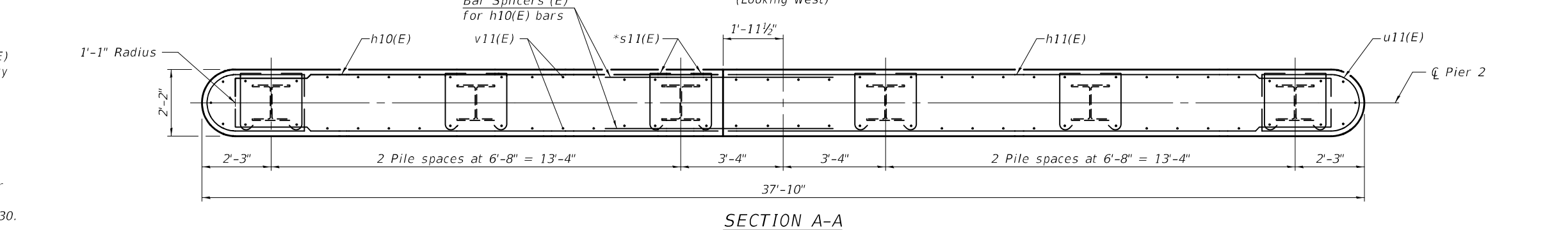
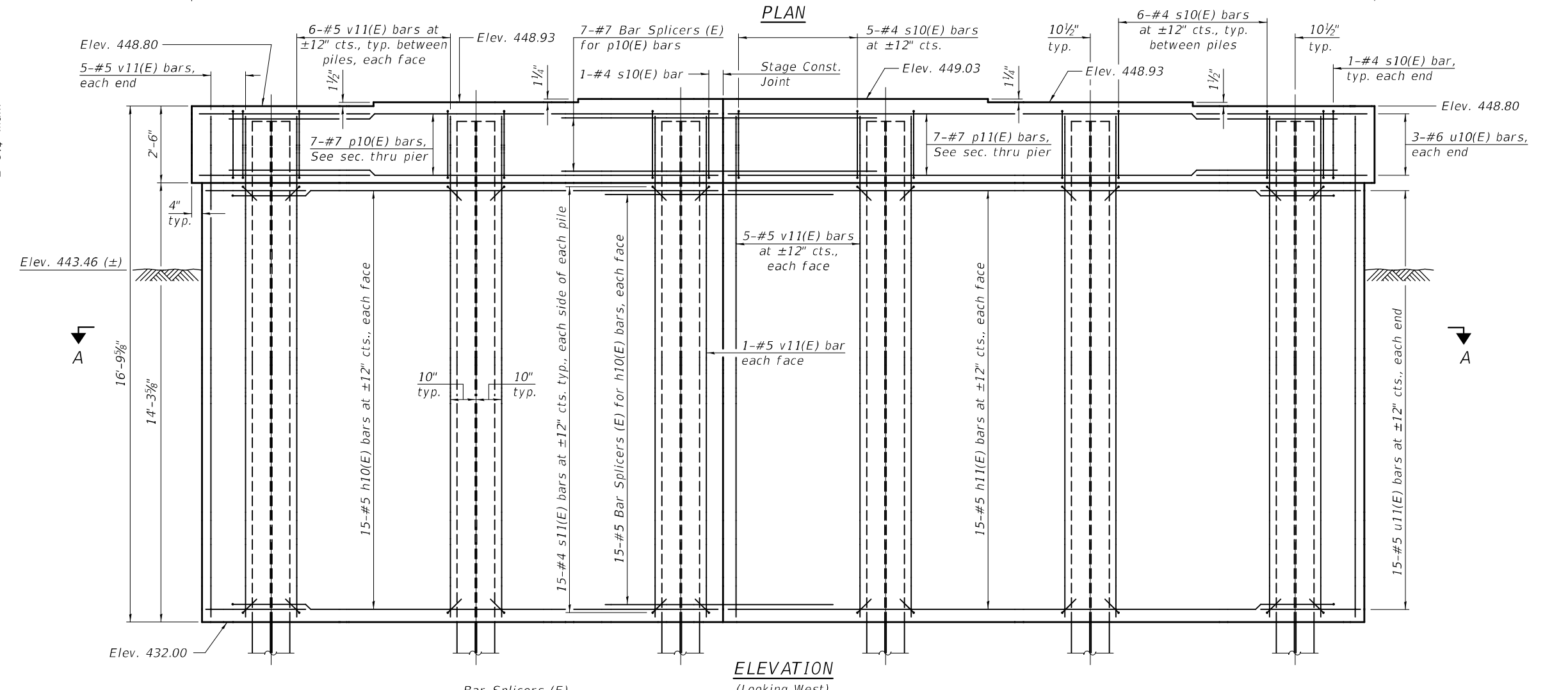
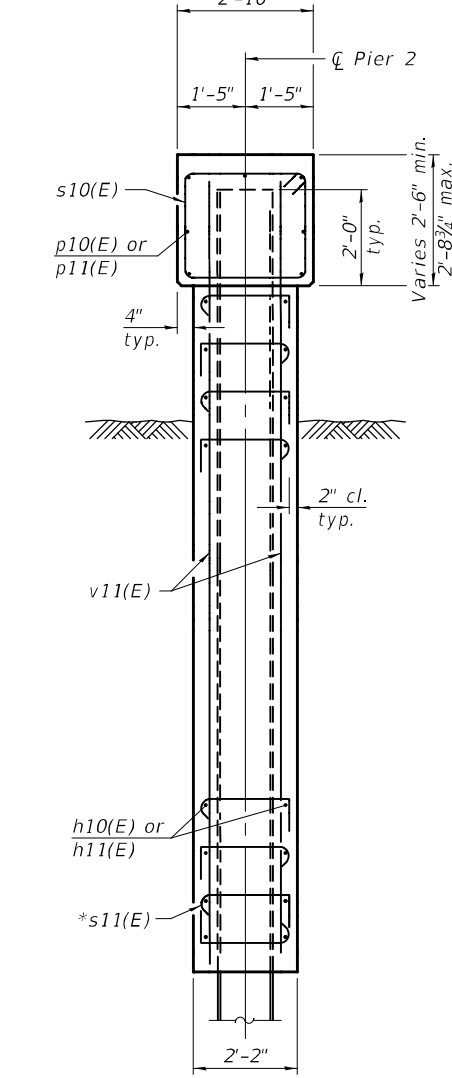
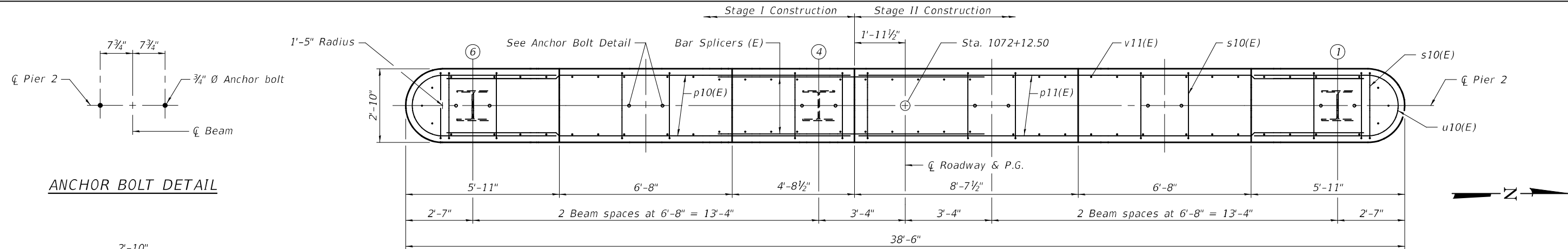


SECTION THRU PIER
 * Hook s11(E) bar around h10(E) or h11(E) and v10(E) bars. Alternate 135° end every other row, typ.
 Notes:
 Pour steps monolithically with cap.
 Space reinforcement in cap to miss anchor bolts.
 See sheet 24 of 30 for additional pier details and Bill of Material.
 For details of piles, see sheet 25 of 30.

MODEL: 05100774443-035
 FILE NAME: p:\w\p-w\benley.com\FWIDOT\Documents\Bureau of Bridges and Structures\Projects\05100774443.dgn
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DESIGNED - DAVID H. RICHTER	EXAMINED - <i>Mark Shuffler</i> ENGINEER OF BRIDGE DESIGN	DATE - 3-27-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 1 STRUCTURE NO. 051-0077	F.A.P. RTE. 327	SECTION (3,2B)-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 35	
CHECKED - RYAN P. NEANGARD	PASSED - <i>Jayne F. Hoff</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			CONTRACT NO. 74443					
DRAWN - ANTHONY J. NOVELLO		REVISED -			SHEET 22 OF 30 SHEETS					
CHECKED - D.H.R./R.P.N.					ILLINOIS FED. AID PROJECT					

MODEL: 05100774443-036
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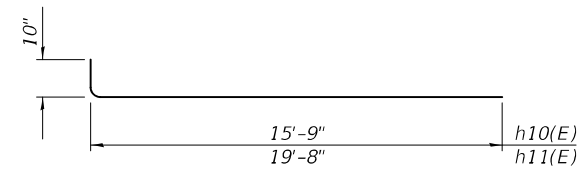


SECTION THRU PIER

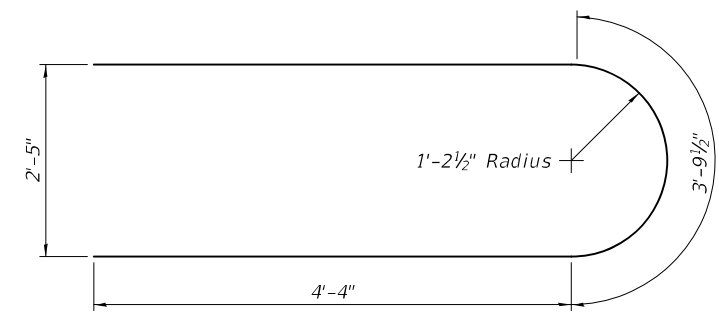
* Hook s11(E) bar around h10(E) or h11(E) and v11(E) bars. Alternate 135° end every other row, typ.

Notes:
 Pour steps monolithically with cap.
 Space reinforcement in cap to miss anchor bolts.
 See sheet 24 of 30 for additional pier details and Bill of Material.
 For details of piles, see sheet 25 of 30.

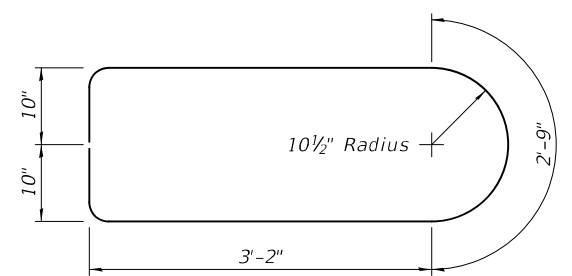
DESIGNED - DAVID H. RICHTER	EXAMINED - <i>Mark Shuffler</i>	DATE - 3-27-2024	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 2 STRUCTURE NO. 051-0077		F.A.P. RTE. 327	SECTION (3,2B)-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 36	
CHECKED - RYAN P. NEGANGARD	PASSED - <i>Joanne F. Hoff</i>	REVISED -		SHEET 23 OF 30 SHEETS		CONTRACT NO. 74443					
DRAWN - ANTHONY J. NOVELLO		REVISED -				ILLINOIS FED. AID PROJECT					
CHECKED - D.H.R./R.P.N.											



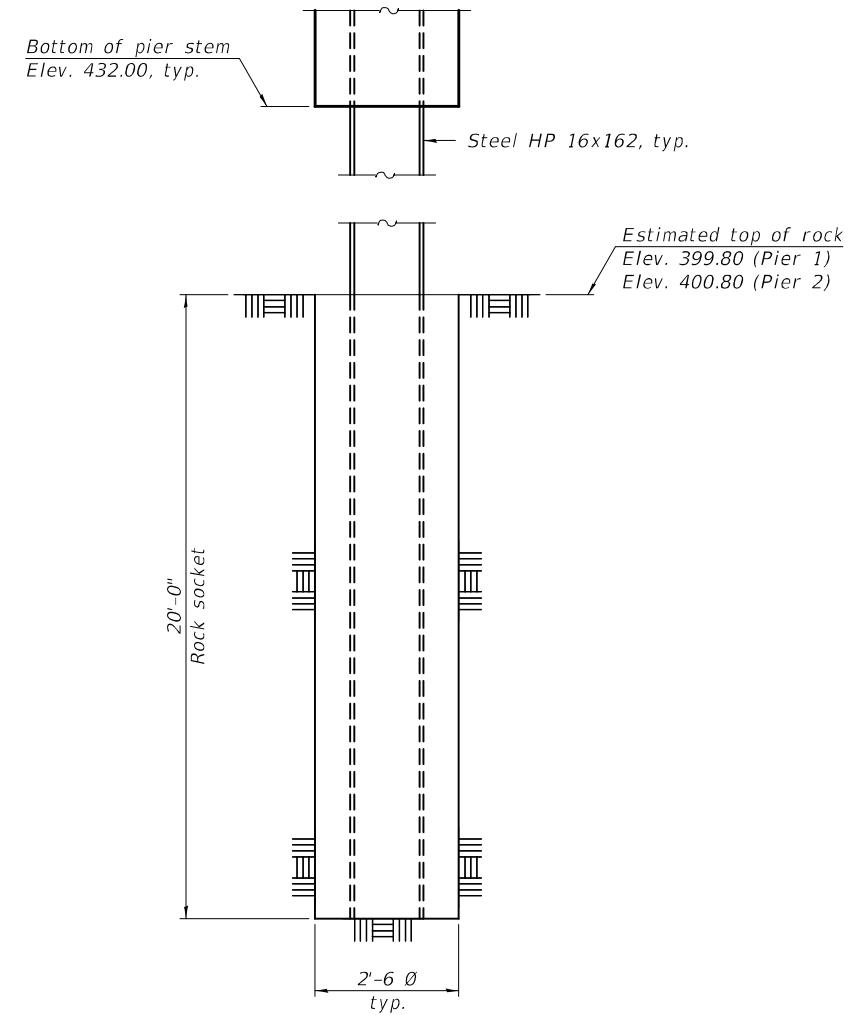
BAR h10(E) and h11(E)



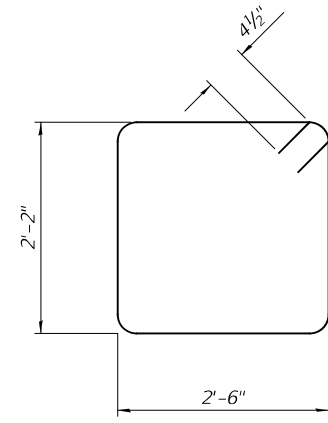
BAR u10(E)



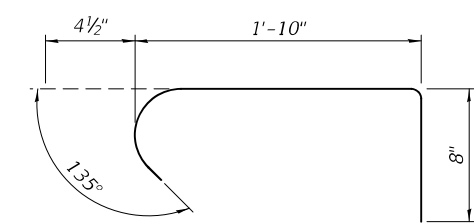
BAR u11(E)



ROCK SOCKET DETAIL



BAR s10(E)



BAR s11(E)

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	32	#5	16'-7"	└─
h11(E)	32	#5	20'-6"	└─
p10(E)	7	#7	15'-9"	—
p11(E)	7	#7	19'-8"	—
s10(E)	32	#4	10'-1"	□
s11(E)	192	#4	2'-11"	└─
u10(E)	6	#6	12'-6"	U
u11(E)	32	#5	10'-9"	U
v10(E)	70	#5	17'-0"	—
Structure Excavation		Cu. Yd.	108	
Concrete Structures		Cu. Yd.	54.9	
Reinforcement Bars, Epoxy Coated		Pound	4050	
Furnishing Steel Piles HP16x162		Foot	414	
Drilling and Setting Piles (In Soil)		Cu. Ft.	948	
Drilling and Setting Piles (In Rock)		Cu. Ft.	589	

PIER 1
PILE DATA

Type: HP16x162
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 798 kips
Est. Length: 69'
No. Production Piles: 6
No. Test Piles: 0

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	30	#5	16'-7"	└─
h11(E)	30	#5	20'-6"	└─
p10(E)	7	#7	15'-9"	—
p11(E)	7	#7	19'-8"	—
s10(E)	32	#4	10'-1"	□
s11(E)	180	#4	2'-11"	└─
u10(E)	6	#6	12'-6"	U
u11(E)	30	#5	10'-9"	U
v11(E)	70	#5	16'-6"	—
Structure Excavation		Cu. Yd.	109	
Concrete Structures		Cu. Yd.	53.3	
Reinforcement Bars, Epoxy Coated		Pound	3890	
Furnishing Steel Piles HP16x162		Foot	408	
Drilling and Setting Piles (In Soil)		Cu. Ft.	919	
Drilling and Setting Piles (In Rock)		Cu. Ft.	589	

PIER 2
PILE DATA

Type: HP16x162
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 798 kips
Est. Length: 68'
No. Production Piles: 6
No. Test Piles: 0

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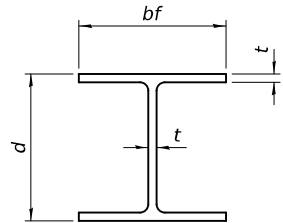
DESIGNED - DAVID H. RICHTER	EXAMINED - <i>Mark Shuffler</i> ENGINEER OF BRIDGE DESIGN	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	PASSED - <i>James F. Hoff</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - ANTHONY J. NOVELLO		REVISED -
CHECKED - D.H.R. / R.P.N.		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
STRUCTURE NO. 051-0077

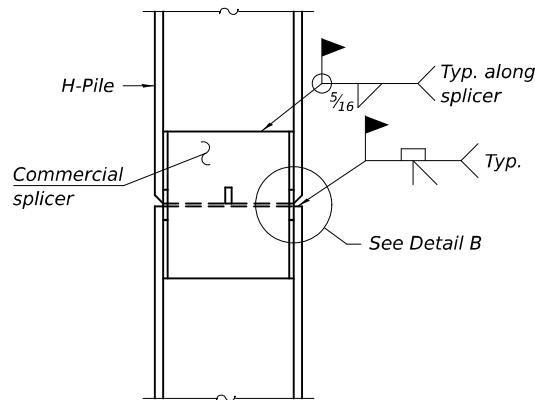
SHEET 24 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	37
			CONTRACT NO. 74443	
		ILLINOIS	FED. AID PROJECT	

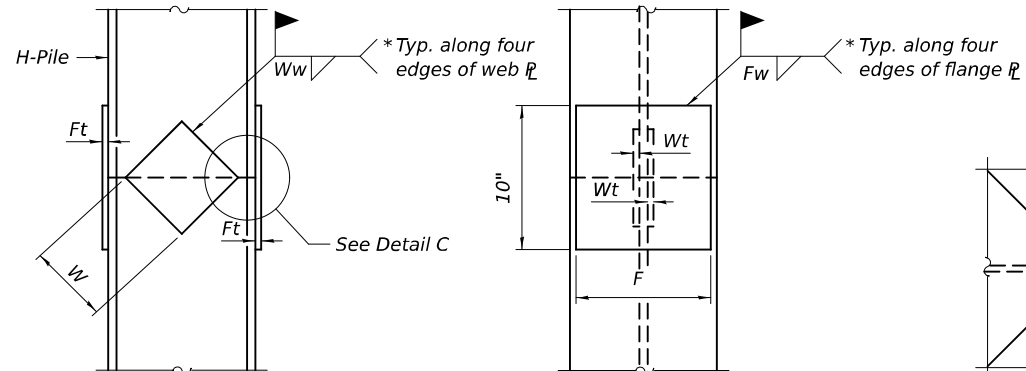


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 18x181	18	18	1	36"
x157	17 3/4"	17 7/8"	7/8"	36"
x135	17 1/2"	17 3/4"	3/4"	36"
HP 16x183	16 1/2"	16 1/2"	1 1/8"	36"
x162	16 1/4"	16 1/8"	1"	36"
x141	16	16	7/8"	36"
x121	15 3/4"	15 7/8"	3/4"	36"
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 3/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 7/8"	7/16"	18"

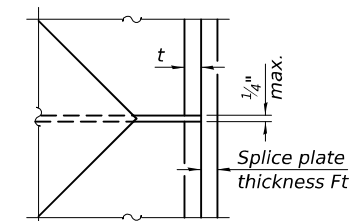


ELEVATION

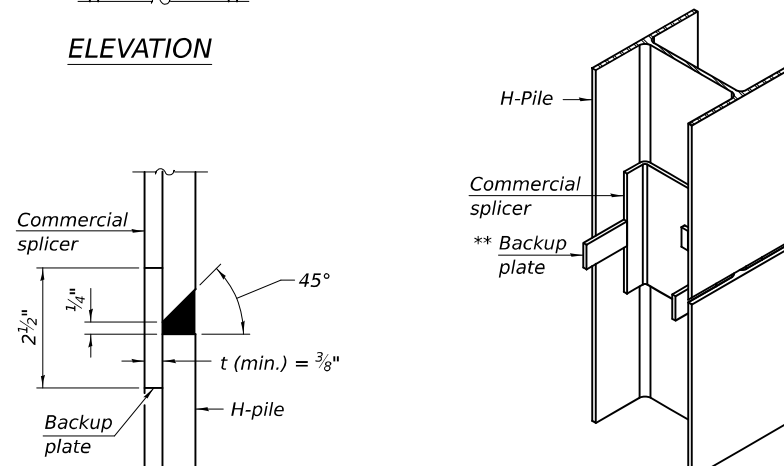


ELEVATION

END VIEW



DETAIL C



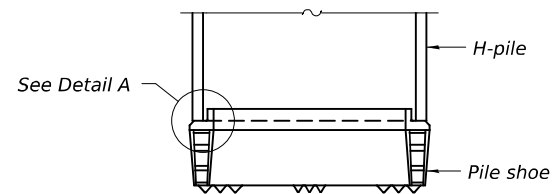
ISOMETRIC VIEW

DETAIL B

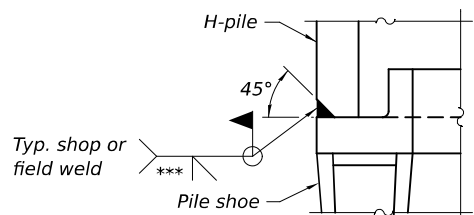
Designation	F	Ft	Fw	W	Wt	Ww
HP 18x181	15 1/2"	1 1/2"	1"	9 1/2"	7/8"	3/4"
x157	15 1/4"	1 1/4"	1"	9 1/2"	7/8"	3/4"
x135	15 1/4"	1 1/4"	1"	9 1/2"	7/8"	3/4"
HP 16x183	13 3/4"	1 1/2"	1"	8 1/4"	7/8"	3/4"
x162	13 1/2"	1 1/2"	1"	8 1/4"	3/4"	5/8"
x141	13 1/2"	1 1/4"	7/8"	8 1/4"	3/4"	5/8"
x121	13 1/2"	1 1/4"	7/8"	8 1/4"	3/4"	5/8"
HP 14x117	12 1/2"	1 1/4"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	1"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	7/8"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	3/4"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	1"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	3/4"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	3/4"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	7/8"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	6 3/4"	5/8"	7/16"	4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE

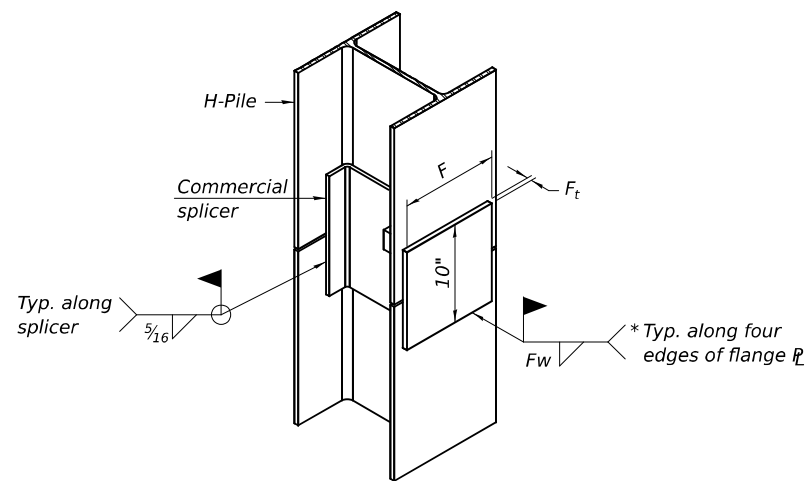


ELEVATION



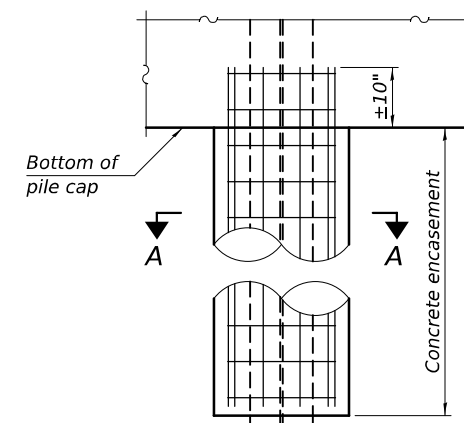
DETAIL A

SHOE ATTACHMENT



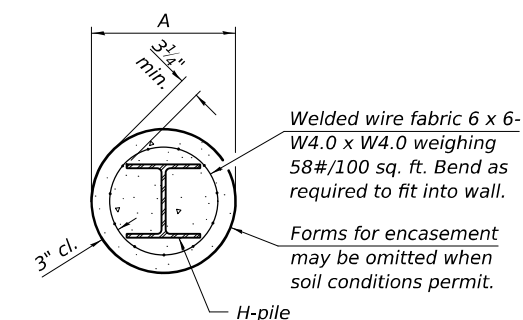
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE



ELEVATION

INDIVIDUAL PILE CONCRETE ENCASUREMENT (when specified)



SECTION A-A

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

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (7/16" min.).

MODEL: 0510077-74443-038
FILE NAME: p:\p\110101-pw-bentley.com\FWIDOT\Documents\OBM Projects\0510077-74443.dgn

DESIGNED -	DAVID H. RICHTER
CHECKED -	RYAN P. NEGANGARD
DRAWN -	ANTHONY J. NOVELLO
CHECKED -	D.H.R. / R.P.N.

EXAMINED		DATE -	3-27-2024
PASSED		REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

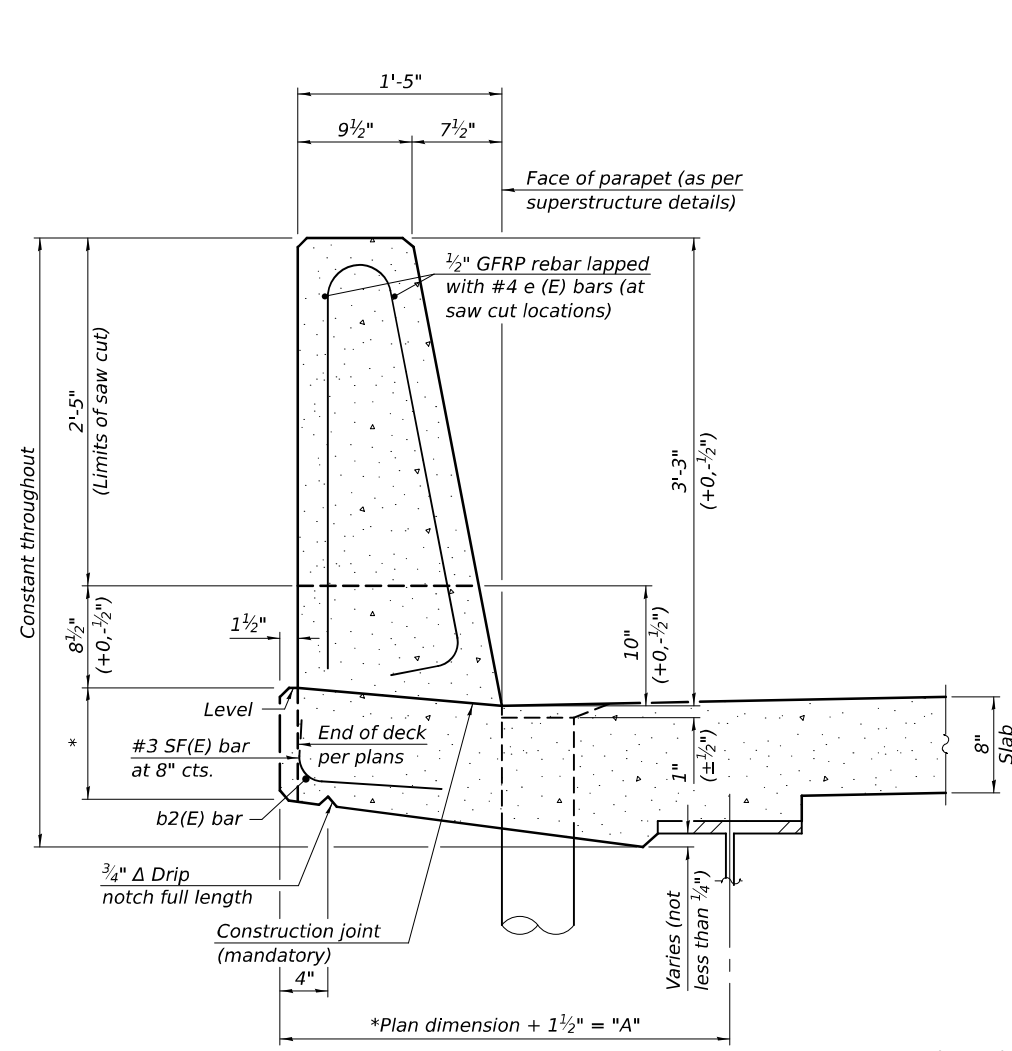
HP PILE DETAILS
STRUCTURE NO. 051-0077

SHEET 25 OF 30 SHEETS

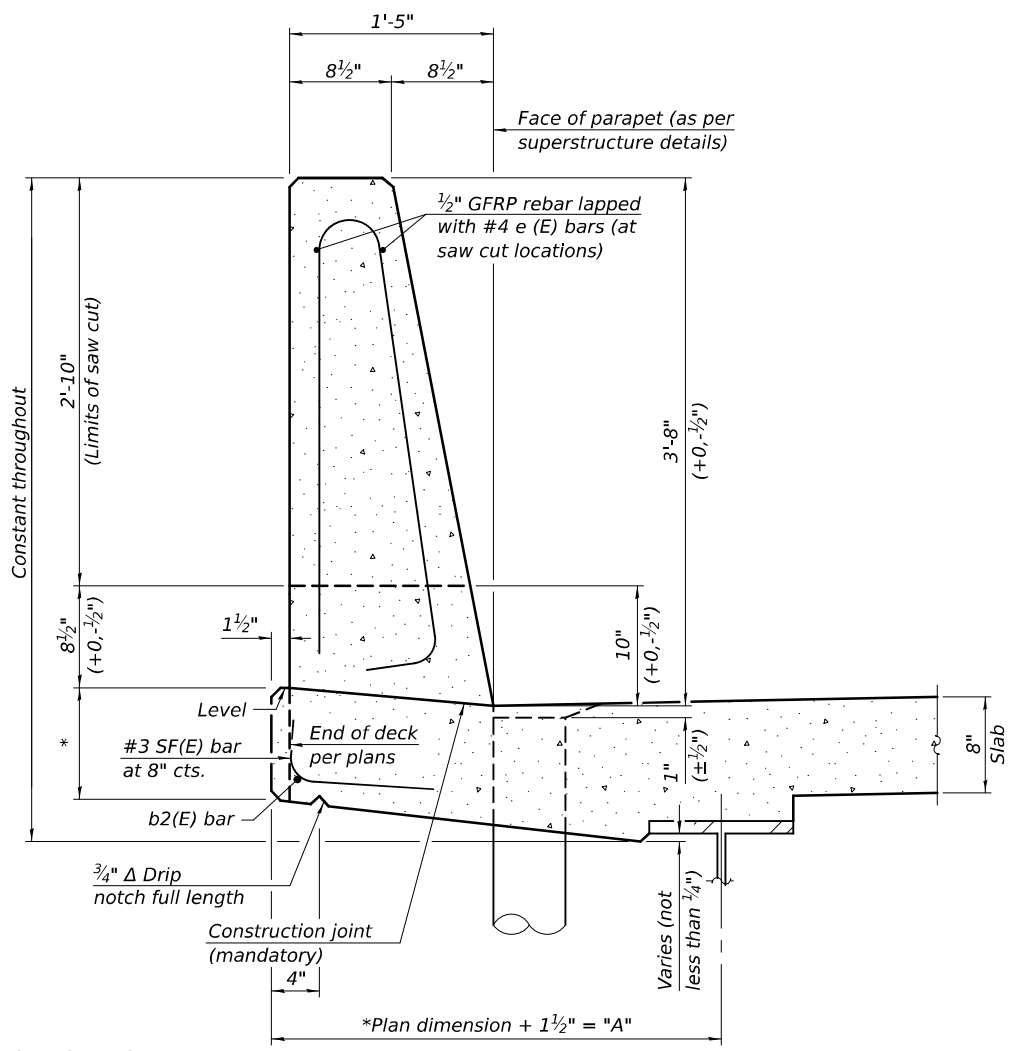
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	38
				CONTRACT NO. 74443

ILLINOIS FED. AID PROJECT

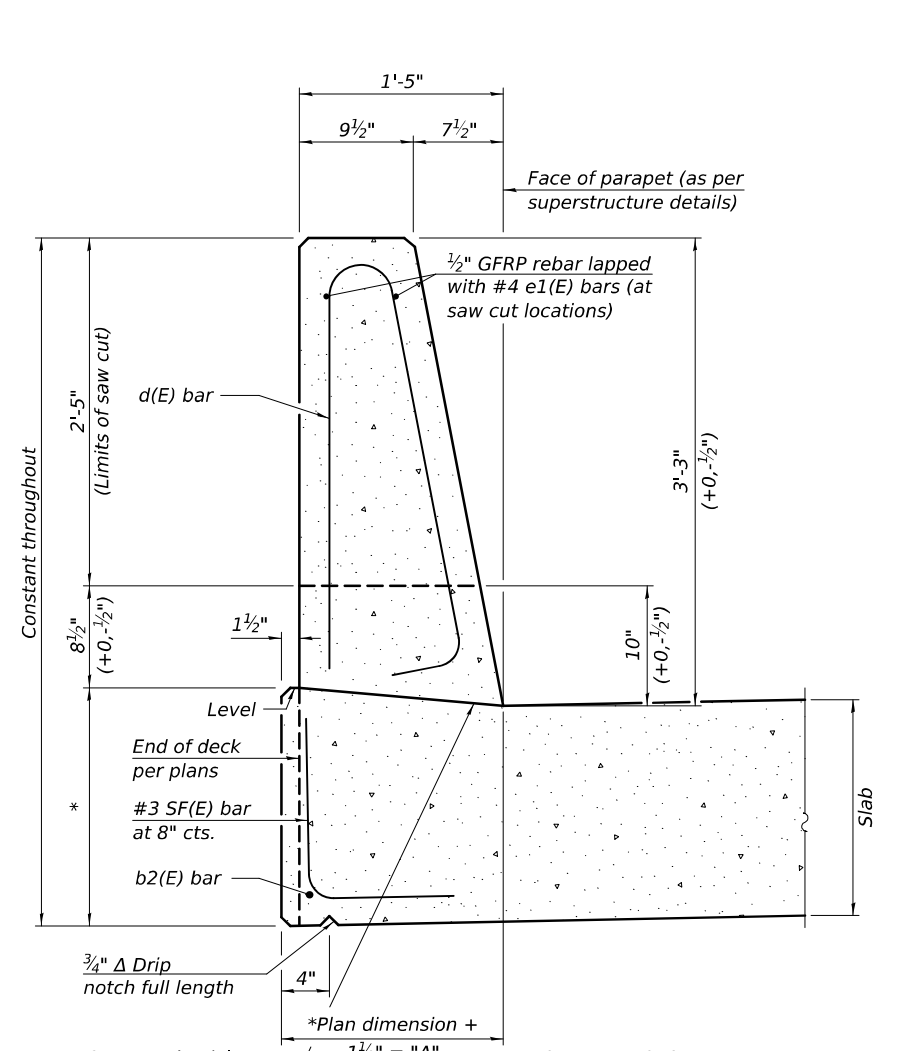
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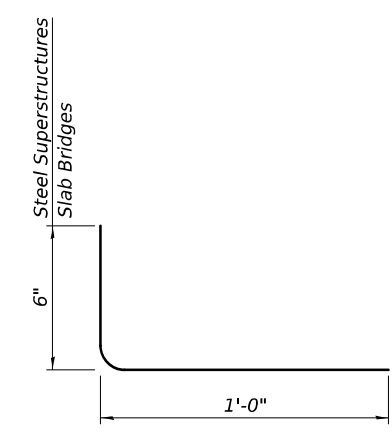
**39" CONSTANT-SLOPE
 PARAPET SECTION**
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)



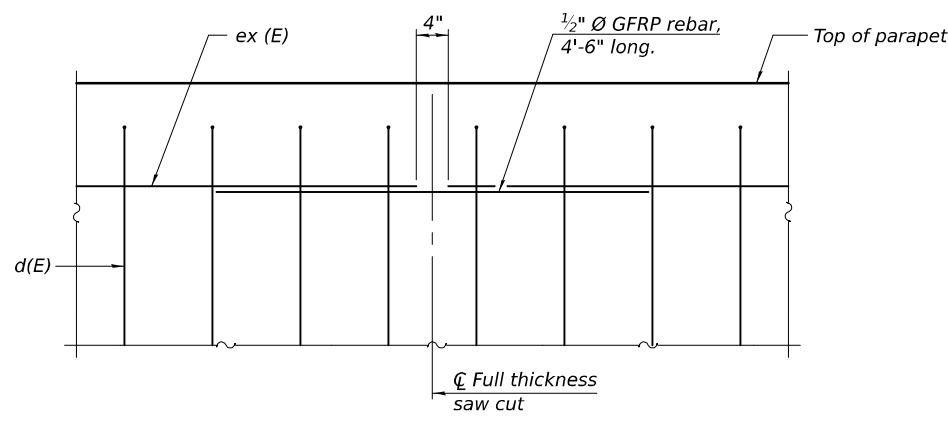
**44" CONSTANT-SLOPE
 PARAPET SECTION**
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)
 *See Superstructure Details.



**39" CONSTANT-SLOPE
 PARAPET SECTION**
 (Showing dimensions, d(E), and 1/2" Ø GFRP rebar)



SF(E) BAR



DETAIL - GFRP REBAR STIFFENING ELEVATION
 (Place as shown in parapet section at each parapet joint location.)

Notes:
 All dimensions shall remain the same as shown on superstructure details, except dimension "A" which is to be revised as shown.
 Additional concrete needed to revise dimension "A" (39" and 44" parapets):
 Steel Superstructures: 0.00348 cu. yds./ft.
 Slab Bridge Superstructures: cu. yds./ft.
 Place full depth aluminum sheets as shown on superstructure details.
 Replace all cork joint filler locations with a full thickness saw cut.
 Steel and slab superstructures shown. Other superstructure types similar.

SFP 39-44

10/27/2023

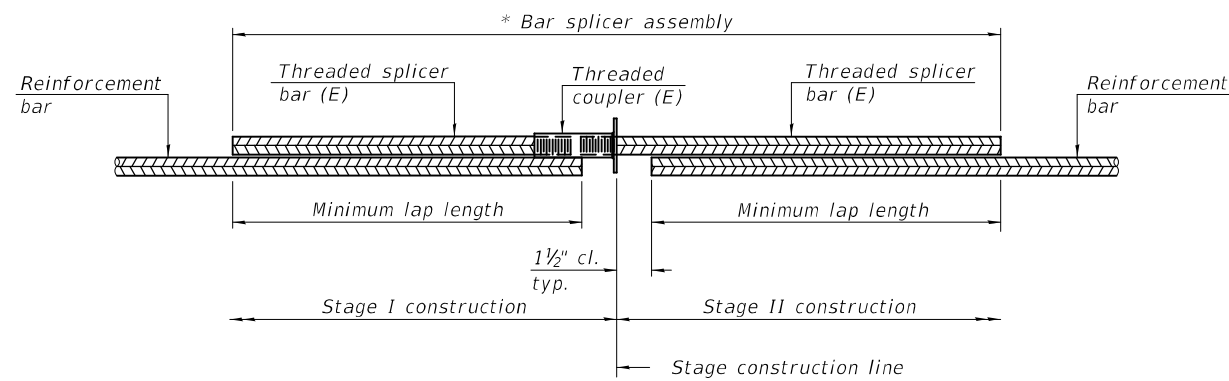
DESIGNED - DAVID H. RICHTER	EXAMINED - <i>Mark Shellen</i>	DATE - 3-27-2024
CHECKED - RYAN P. NEGANGARD	PASSED - <i>Joey F. Kelly</i>	REVISER -
DRAWN - ANTHONY J. NOVELLO	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -
CHECKED - D.H.R. / R.P.N.		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CONCRETE PARAPET SLIPFORMING OPTION
 STRUCTURE NO. 051-0077**

SHEET 26 OF 30 SHEETS

F.A.P. RTE. 327	SECTION (3,2B)B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 39
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



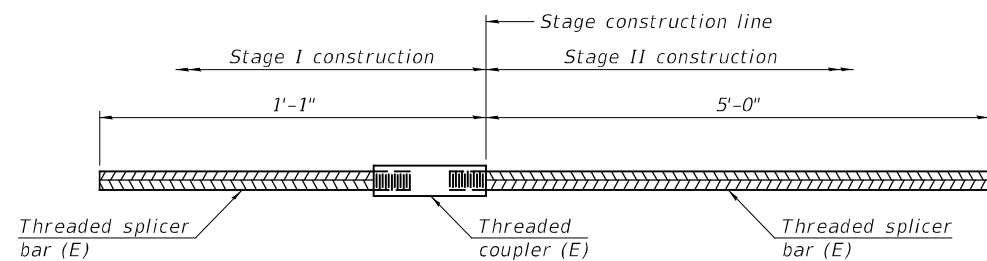
STANDARD BAR SPLICER ASSEMBLY PLAN

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

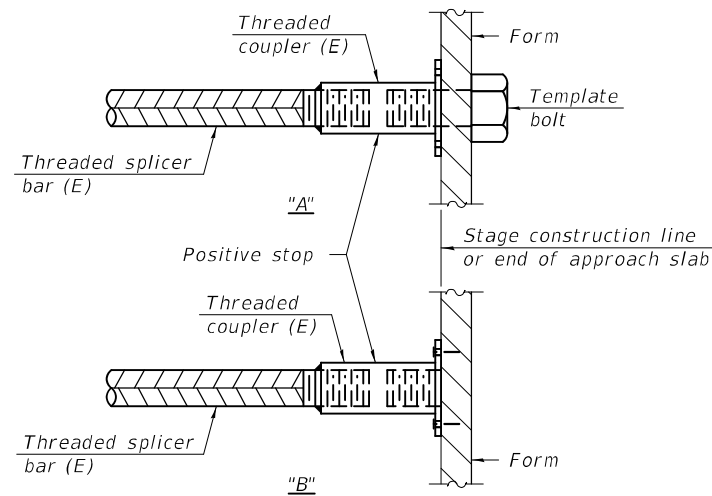
Threaded splicer bar length = min. lap length + 1 1/2" + thread length

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

Location	Bar size	No. assemblies required	Minimum lap length
Slab Top	#5	324	3'-0"
Slab Bottom	#5	206	3'-6"
Abutment Diaphragm, Back Face	#6	8	4'-0"
Abutment Diaphragm, Front Face	#6	6	See Diaphragm Bar Splicer Detail
Approach Slab Top	#5	92	3'-4"
Approach Slab Bottom	#8	120	4'-9"
Approach Slab Footing	#5	80	3'-2"
Abutment Caps	#7	24	5'-0"
Pier Caps	#7	14	5'-0"
Pier Walls	#5	62	3'-7"



DIAPHRAGM BAR SPLICER DETAIL

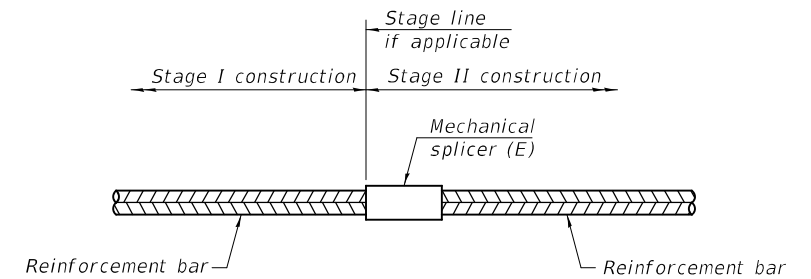


INSTALLATION AND SETTING METHODS

"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: 0510077-74443-040
 FILE NAME: p:\w\idol-pw\benley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510077\CADD Plans\0510077-74443.dgn

DESIGNED - DAVID H. RICHTER
 CHECKED - RYAN P. NEGANGARD
 DRAWN - ANTHONY J. NOVELLO
 CHECKED - D.H.R. / R.P.N.

EXAMINED
 PASSED
 Mark Shuffler
 ENGINEER OF BRIDGE DESIGN
 Jayne F. DePoff
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - 3-27-2024
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 051-0077

SHEET 27 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	40
CONTRACT NO. 74443				

ILLINOIS FED. AID PROJECT

3/28/2024 1:21:18 PM



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 3

Date 11/10/22

ROUTE FAP 327 (US 50) DESCRIPTION US 50 over Muddy Creek LOGGED BY, Sandschafer

SECTION (3,2B)B-1 LOCATION SW 1/4 of SE1/4, SEC. 33, TWP. 4N, RNG. 13W, 2nd PM, Latitude N 38.731941, Longitude W 87.859084

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER Auto ETR = 91.8% @ 57.4 bpm

STRUCT. NO. 051-0009 (Existing) SURFACE WATER Elev. 436.46 ft
Station 71+75 Stream Bed Elev. 433.81 ft

BORING NO. 3 East Pier GROUNDWATER Elev.:
Station 72+11.5 First Encounter 435.8 ft
Offset 27.0 ft LT Upon Completion Washed ft
Ground Surface Elev. 445.27 ft After 96 Hrs. 436.3 ft

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOISTURE (%)
0				Brown, SANDY LOAM	0	1	0.6	27
1				Very soft, moist	1	2	0.2	13
2			2		3	0.2	13	
3								
4				Very soft, moist, brown, SILTY LOAM	4	3	0.2	18
5					5	2	0.2	18
6				Wet, grey	6	1	0.3	27
7					7	1	0.3	27
8				With sand	8	1	0.2	24
9					9	1	0.2	24
10				Very soft, wet	10	1	0.3	33
11					11	1	0.3	33
12				Very soft, wet	12	1	0.3	26
13					13	1	0.3	26
14				Very soft, wet	14	1	0.2	25
15					15	1	0.2	25
16				Very soft, wet	16	1	0.2	25
17					17	1	0.2	25
18				Very soft, wet	18	1	0.2	25
19					19	1	0.2	25
20				Very soft, wet	20	1	0.2	25
21					21	1	0.2	25

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206). WH-Weight of Hammer, NT-Not Tested.

BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 3

Date 11/10/22

ROUTE FAP 327 (US 50) DESCRIPTION US 50 over Muddy Creek LOGGED BY, Sandschafer

SECTION (3,2B)B-1 LOCATION SW 1/4 of SE1/4, SEC. 33, TWP. 4N, RNG. 13W, 2nd PM, Latitude N 38.731941, Longitude W 87.859084

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER Auto ETR = 91.8% @ 57.4 bpm

STRUCT. NO. 051-0009 (Existing) SURFACE WATER Elev. 436.46 ft
Station 71+75 Stream Bed Elev. 433.81 ft

BORING NO. 3 East Pier GROUNDWATER Elev.:
Station 72+11.5 First Encounter 435.8 ft
Offset 27.0 ft LT Upon Completion Washed ft
Ground Surface Elev. 445.27 ft After 96 Hrs. 436.3 ft

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOISTURE (%)
0				Loose, wet, grey, fine grain, SAND	0	1	0.2	23
1				Very dense, moist, grey, SHALE	1	2	0.7	25
2					2	3	0.8	16
3					3	3	0.8	16
4				Borehole continued with rock coring.	4	1	0.7	25
5					5	2	0.7	25
6				Borehole continued with rock coring.	6	1	0.7	25
7					7	2	0.7	25
8				Borehole continued with rock coring.	8	1	0.7	25
9					9	2	0.7	25
10				Borehole continued with rock coring.	10	1	0.7	25
11					11	2	0.7	25
12				Borehole continued with rock coring.	12	1	0.7	25
13					13	2	0.7	25
14				Borehole continued with rock coring.	14	1	0.7	25
15					15	2	0.7	25
16				Borehole continued with rock coring.	16	1	0.7	25
17					17	2	0.7	25
18				Borehole continued with rock coring.	18	1	0.7	25
19					19	2	0.7	25
20				Borehole continued with rock coring.	20	1	0.7	25
21					21	2	0.7	25

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206). WH-Weight of Hammer, NT-Not Tested.

BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Page 3 of 3

Date 11/10/22

ROUTE FAP 327 (US 50) DESCRIPTION US 50 over Muddy Creek LOGGED BY, Sandschafer

SECTION (3,2B)B-1 LOCATION SW 1/4 of SE1/4, SEC. 33, TWP. 4N, RNG. 13W, 2nd PM, Latitude N 38.731941, Longitude W 87.859084

COUNTY Lawrence CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 051-0009 (Existing) CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Station 71+75

BORING NO. 3 East Pier Core Diameter 2.1 in
Station 72+11.5 Top of Rock Elev. 399.27 ft
Offset 27.0 ft LT Begin Core Elev. 399.27 ft
Ground Surface Elev. 445.27 ft

DEPTH (ft)	BLOWS (#)	UCS (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOWS (#)	UCS (tsf)	MOISTURE (%)
0				Grey, Sandy Clay SHALE	0	1	64	53
1				Grey, Sandy Clay SHALE	1	2	97	72
2					2	3	97	72
3					3	3	97	72
4				Grey, Sandy Clay SHALE	4	3	92	75
5					5	3	92	75
6				Grey, Sandy Clay SHALE	6	3	92	75
7					7	3	92	75
8				Grey, Sandy Clay SHALE	8	3	92	75
9					9	3	92	75
10				Grey, Sandy Clay SHALE	10	3	92	75
11					11	3	92	75
12				Grey, Sandy Clay SHALE	12	3	92	75
13					13	3	92	75
14				Grey, Sandy Clay SHALE	14	3	92	75
15					15	3	92	75
16				Grey, Sandy Clay SHALE	16	3	92	75
17					17	3	92	75
18				Grey, Sandy Clay SHALE	18	3	92	75
19					19	3	92	75
20				Grey, Sandy Clay SHALE	20	3	92	75
21					21	3	92	75

Benchmark: BM 391 Chiseled square on the Southwest wingwall of SN 051-0009, Sta. 70+90, 18' RT, Elevation 453.873 ft.
End of Boring

Color pictures of the cores Available on request
Cores will be stored for examination until Construction Complete
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

MODEL: 0510077-74443-043
FILE NAME: pw:\wido-pw-bentley.com\FWIDOT\Documents\DOT Offices\Bureau of Bridges and Structures\Projects\0510077-74443.dgn

DESIGNED - DAVID H. RICHTER
CHECKED - RYAN P. NEGANARD
DRAWN - ANTHONY J. NOVELLO
CHECKED - D.H.R. / R.P.N.

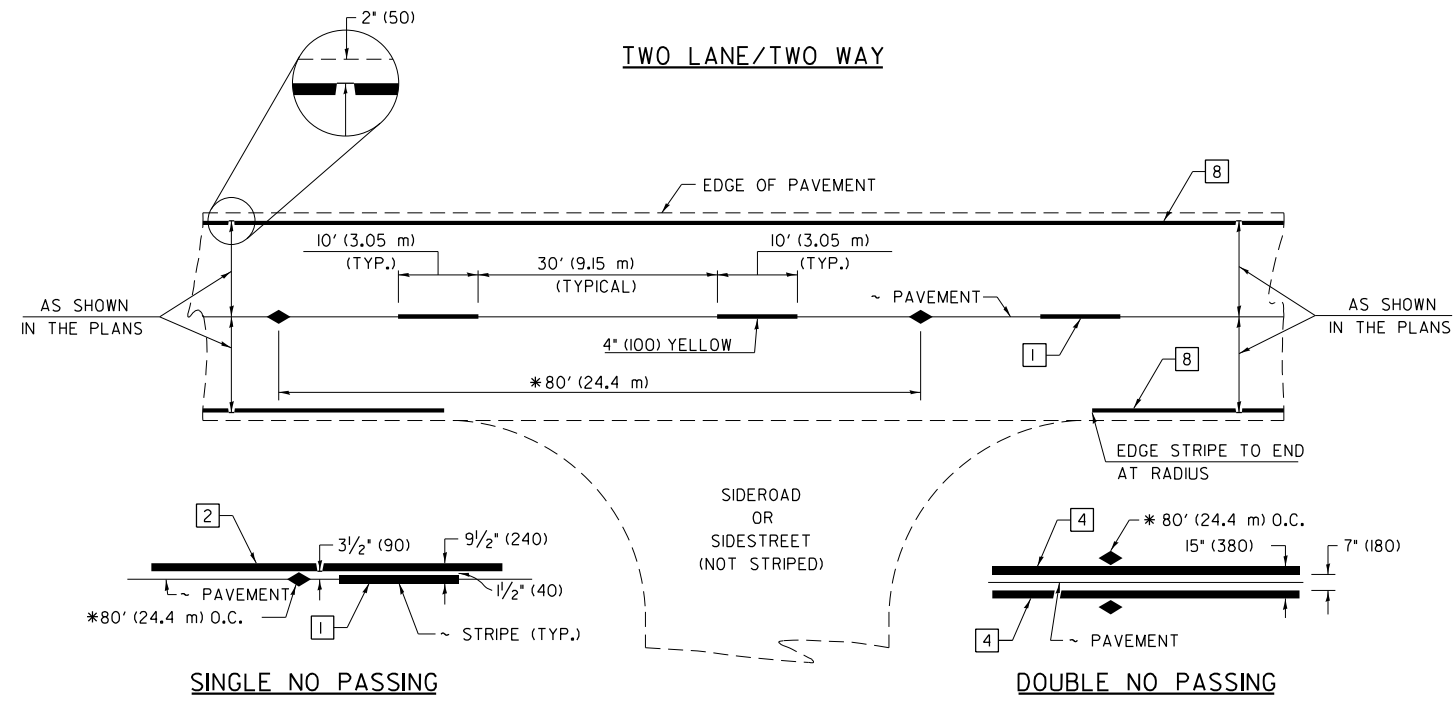
EXAMINED
PASSED
DATE - 3-27-2024
REVISOR -
REVISION -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS
STRUCTURE NO. 051-0077

SHEET 30 OF 30 SHEETS

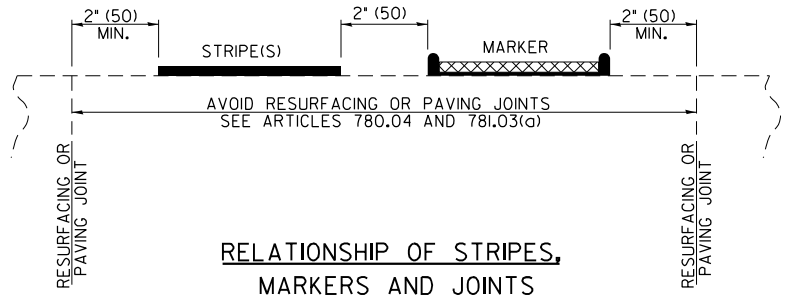
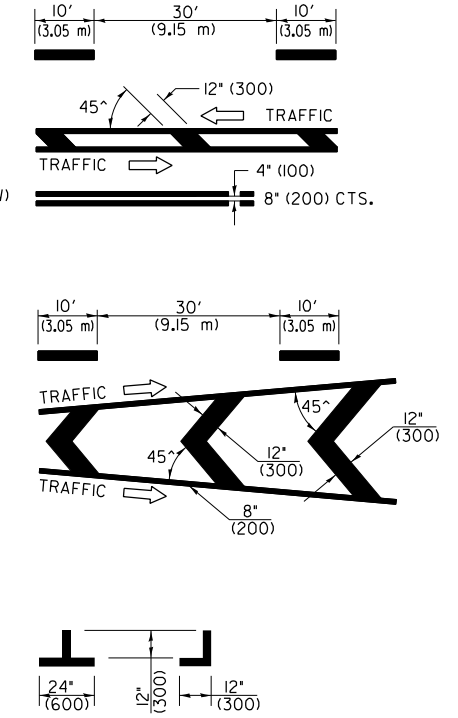
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B)B-1	LAWRENCE	54	43
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				



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

PAVEMENT MARKING LEGEND

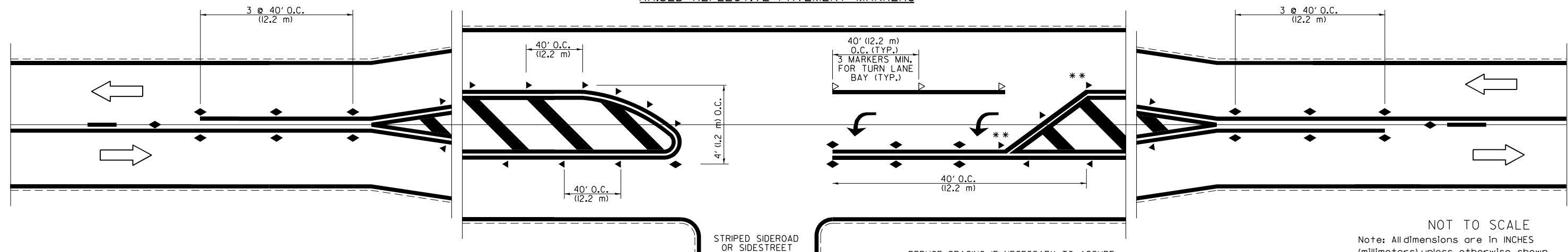
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP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



TYPICAL PAVEMENT MARKERS LEGEND

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

RAISED REFLECTIVE PAVEMENT MARKERS



** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

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

DISTRICT 7 DETAIL NO. 78000001

FILE NAME = P:\5XXX\50XX-51XX\5146 - IDOT PTB 200-034 D7 VV_Bartlett West\W05\28-Trans\CAD\CADDRAWN 78000001.dgn	USER NAME = kulrich	DESIGNED -	REVISED -
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PLOT DATE = 8/22/2023	DATE -	REVISED -	REVISED -

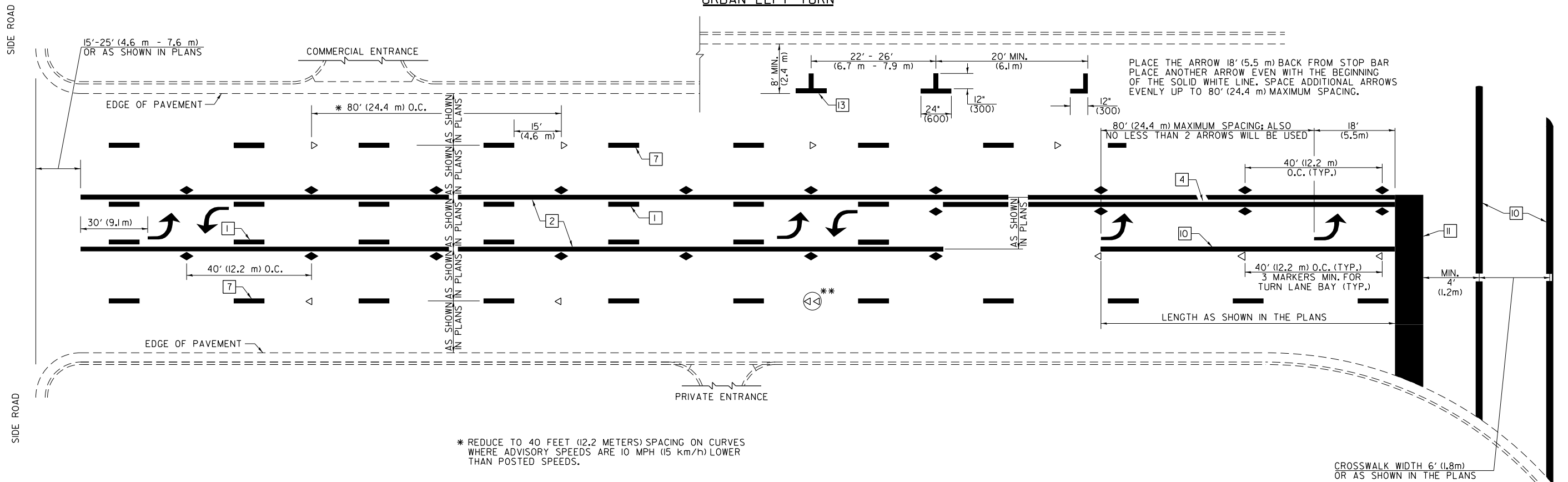
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	44
CONTRACT NO. 74443			ILLINOIS FED. AID PROJECT	

URBAN LEFT TURN

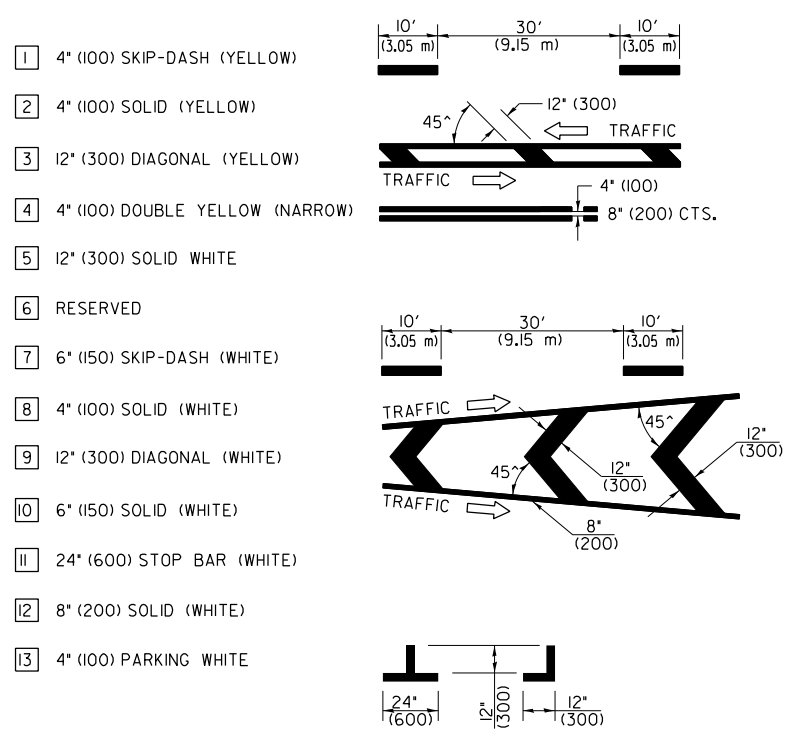


PLACE THE ARROW 18' (5.5 m) BACK FROM STOP BAR
PLACE ANOTHER ARROW EVEN WITH THE BEGINNING
OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS
EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING.

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

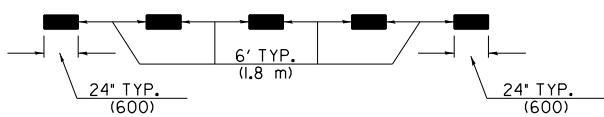
** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED
AND SPACED AS SHOWN IN HIGHWAY STANDARD
781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED
HIGHWAYS.

PAVEMENT MARKING LEGEND

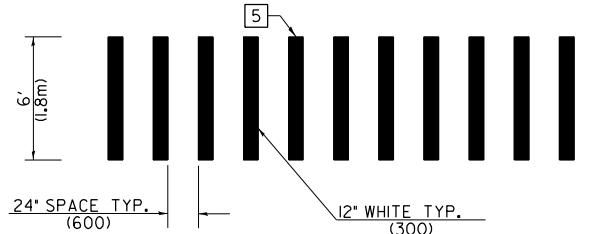


GENERAL NOTES

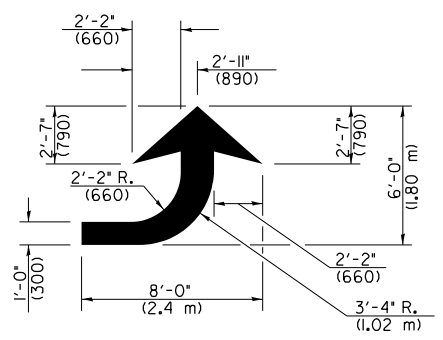
- TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
- THE SOLID YELLOW PAVEMENT MARKINGS 2 SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE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



LANE LINE EXTENSIONS

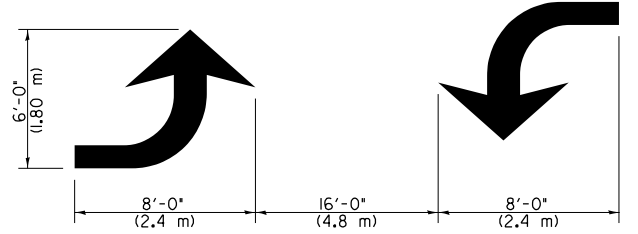


**CROSSWALK DETAIL
(DECATUR CITY LIMITS ONLY)**



LEFT ARROW

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



**TYPICAL DOUBLE
TURN ARROWS (WHITE)**

NOT TO SCALE

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

DISTRICT 7 DETAIL NO. 78000001

FILE NAME =	USER NAME = kulrich	DESIGNED -	REVISED -
P:\5XXX\50XX-51XX\5146 - IDOT PTB 200-034 D7 VV_Bartlett West\W05\28-Trans\CAD\CADDRAWN 78000001.dgn		CHECKED -	REVISED -
		DATE -	REVISED -

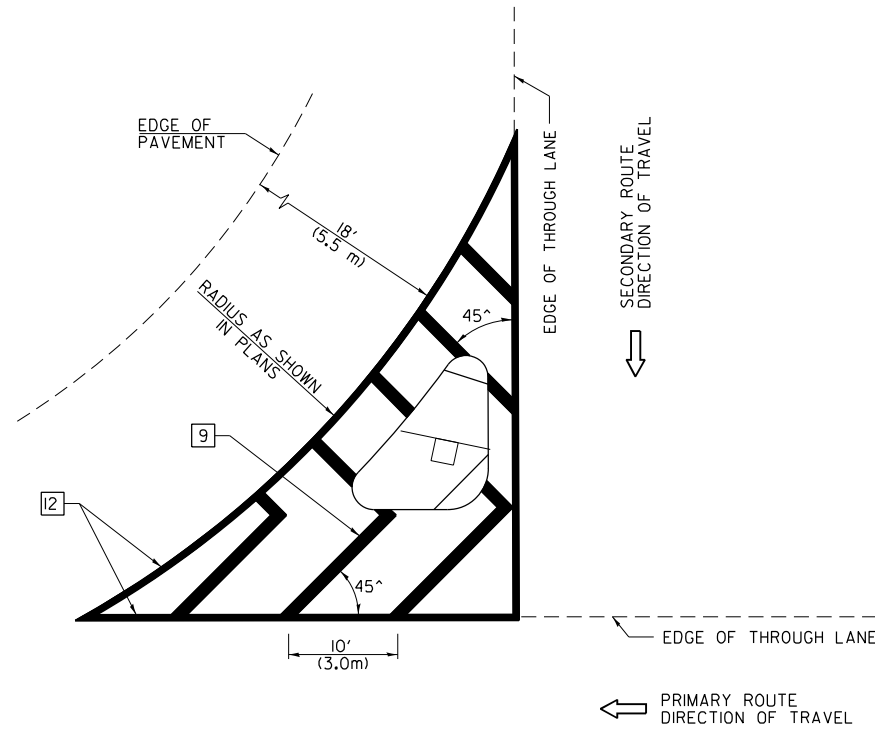
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-I	LAWRENCE	54	45
CONTRACT NO. 74443			ILLINOIS FED. AID PROJECT	

ISLAND



GENERAL NOTES

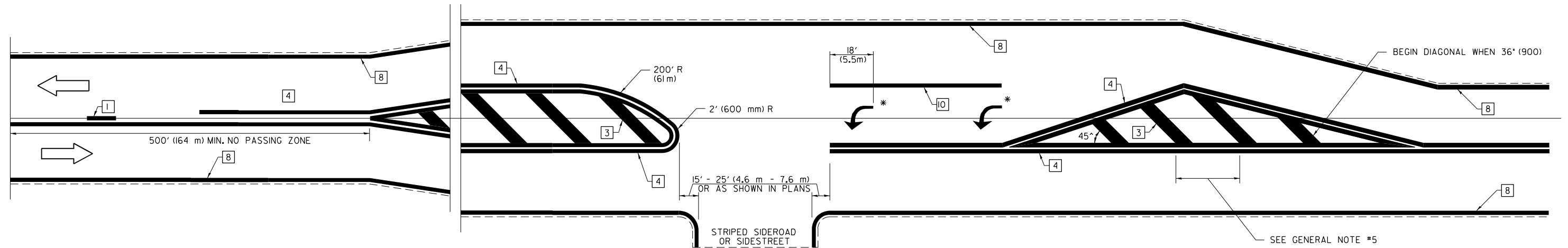
1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING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

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

PAVEMENT MARKING LEGEND

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

RURAL LEFT TURN STRIPING



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

NOT TO SCALE

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

DISTRICT 7 DETAIL NO. 78000001

FILE NAME =	USER NAME = kulrich	DESIGNED -	REVISED -
P:\5XXX\50XX-51XX\5146 - IDOT PTB 200-034 D7 VV_Bartlett West\W05\28-Trans\CAD\CADDRAWN 78000001.dgn		CHECKED -	REVISED -
		DATE -	REVISED -

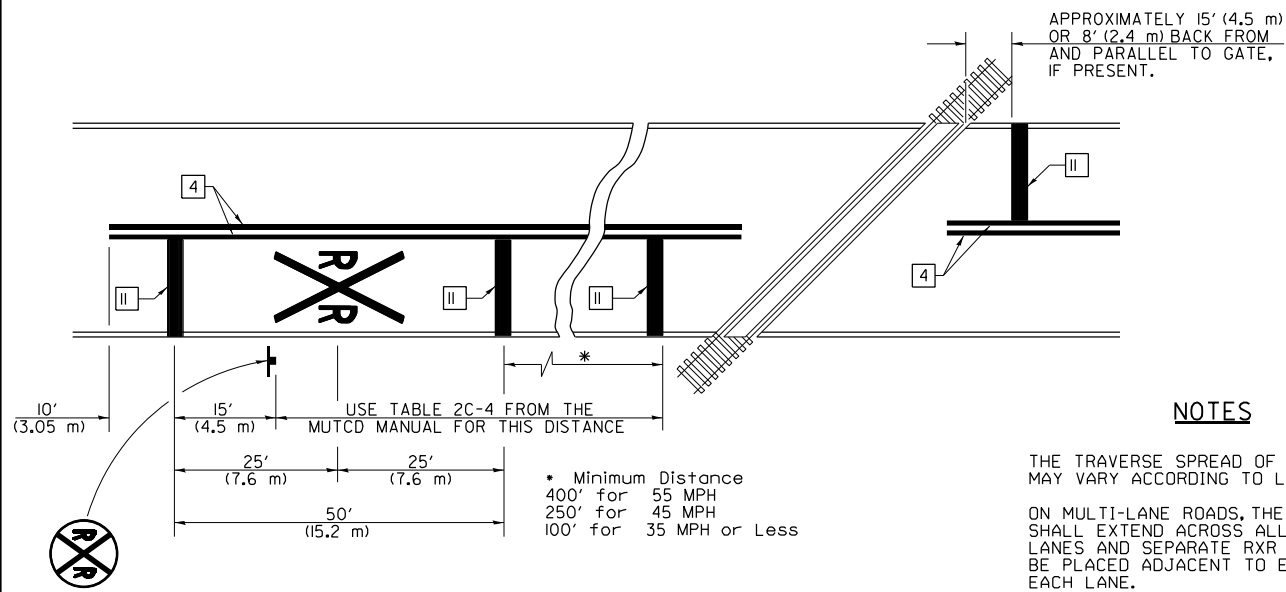
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-I	LAWRENCE	54	46
CONTRACT NO. 74443			ILLINOIS FED. AID PROJECT	

PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

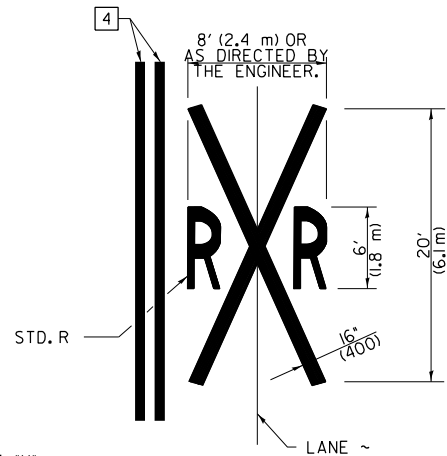


NOTES

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

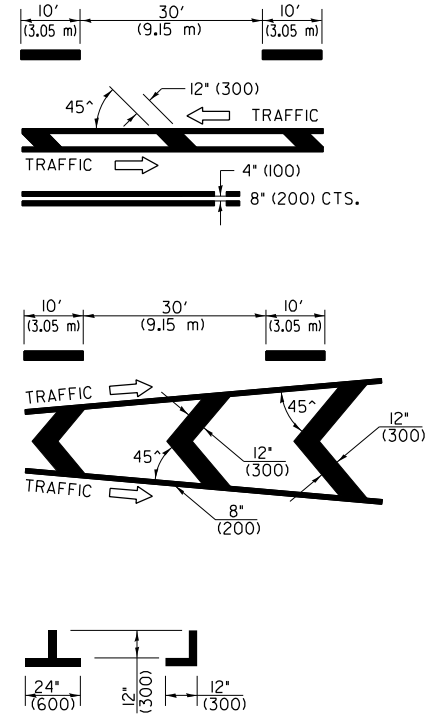
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

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

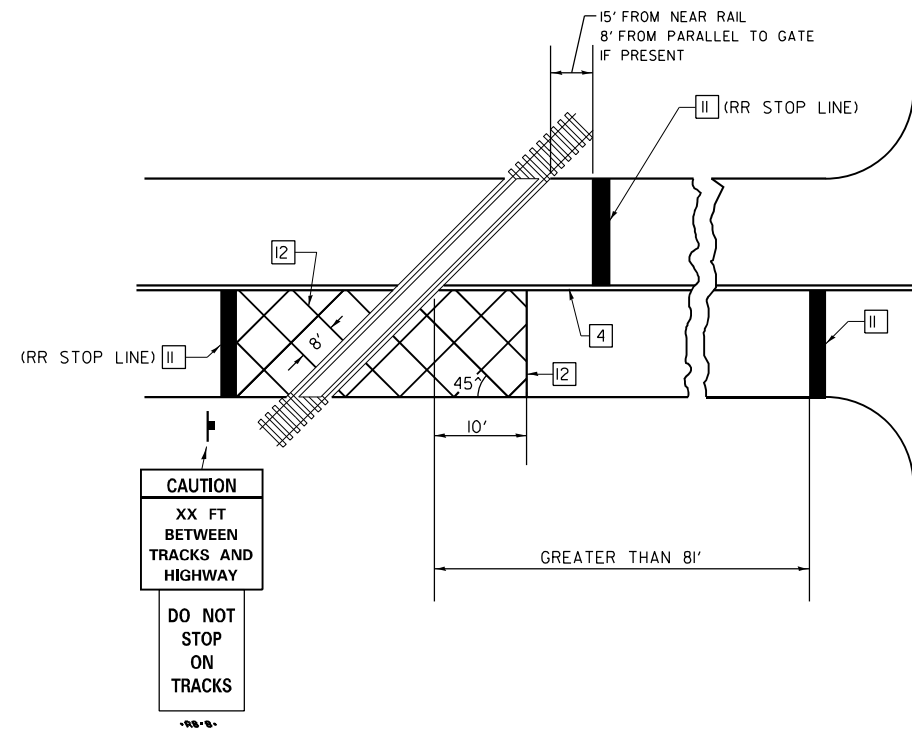


PAVEMENT MARKING LEGEND

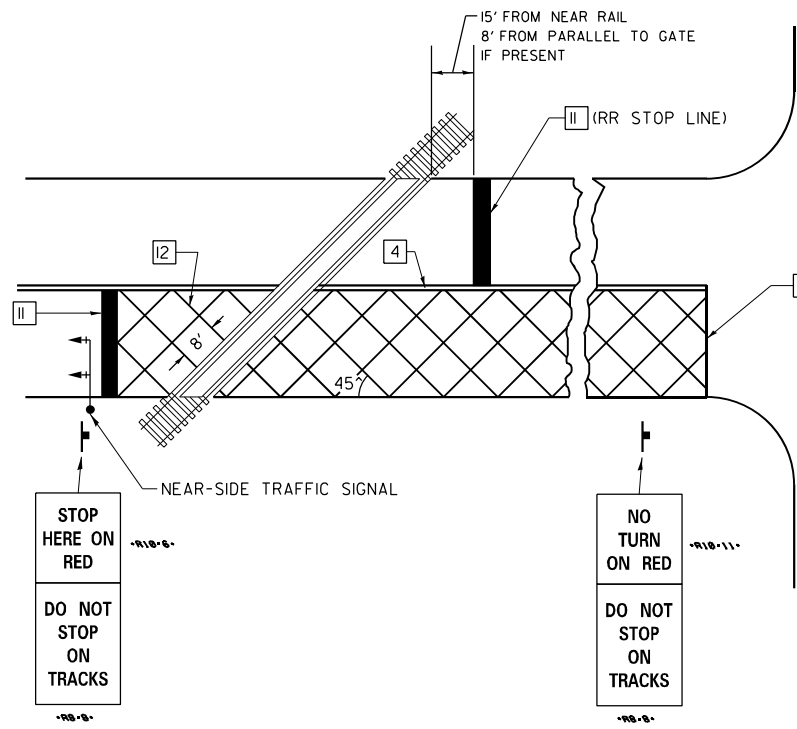
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP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



RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



GENERAL NOTES

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

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

NOT TO SCALE

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

DISTRICT 7 DETAIL NO. 7800001

FILE NAME =	USER NAME = kulrich	DESIGNED -	REVISED -
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	PLOT SCALE = 2.0000' / in.	DATE -	REVISED -
	PLOT DATE = 8/22/2023		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

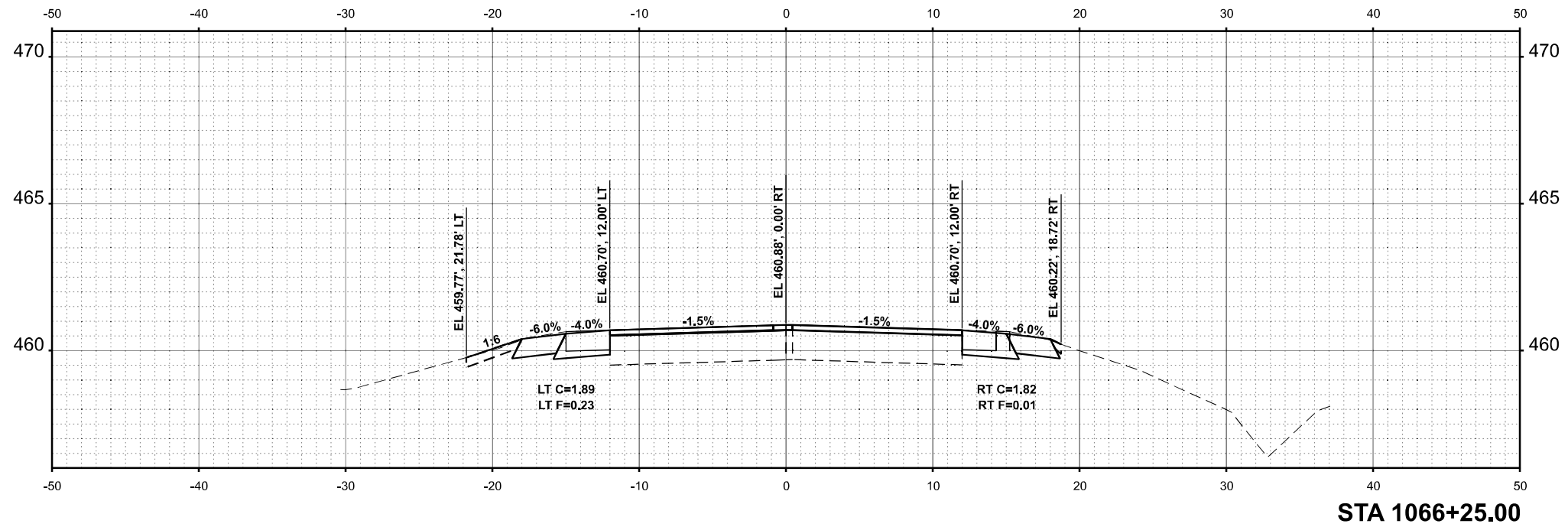
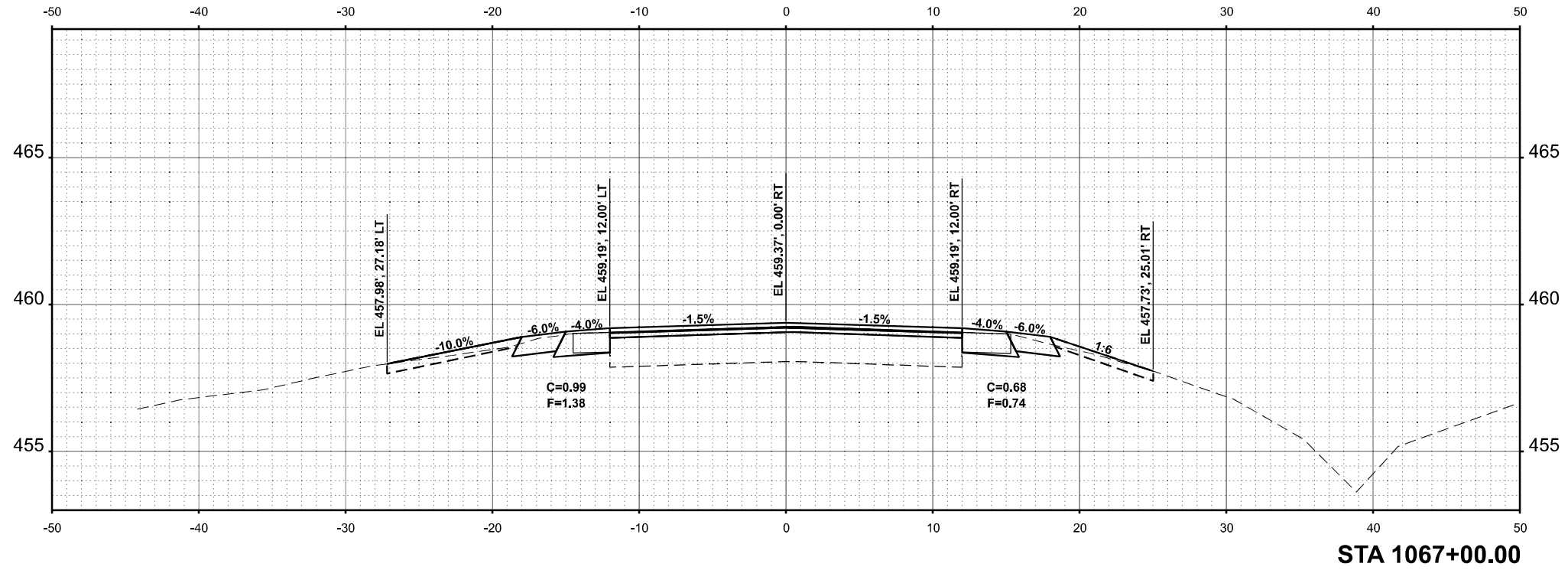
SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	47
CONTRACT NO. 74443			ILLINOIS FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS	
	CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS	
	CHECKED	

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	DRAWN -	REVISED -
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PLOT DATE = 8/22/2023	DATE -	REVISED -

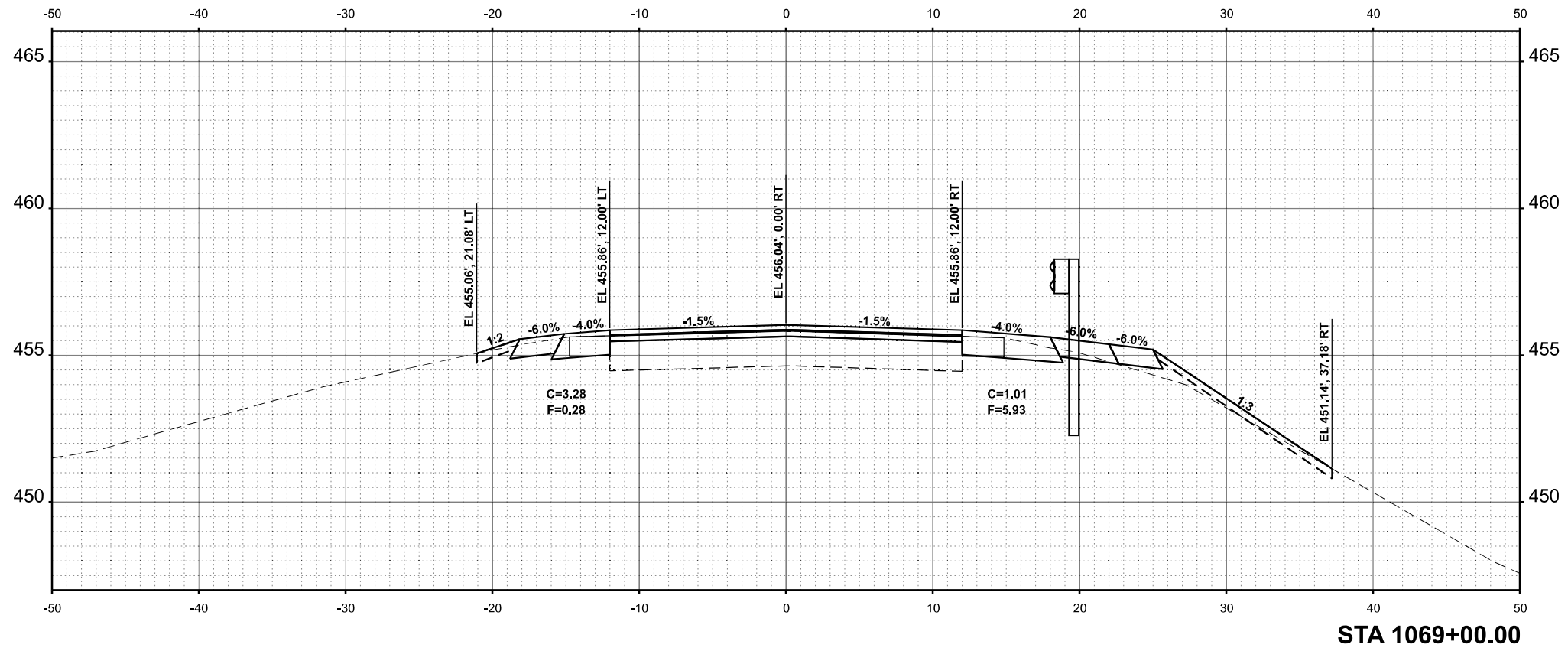
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US 50 CROSS SECTIONS

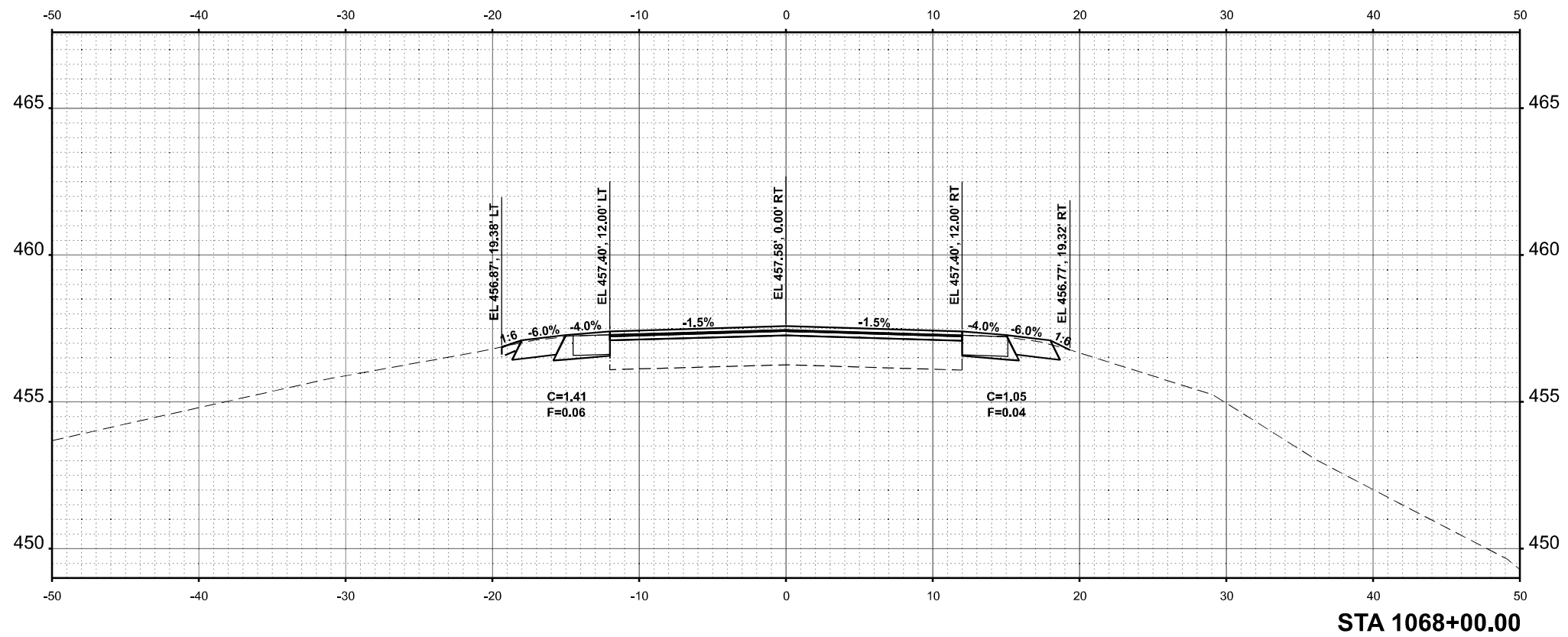
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F.A.P. RTE. 327	SECTION (3,2B) B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 48
			CONTRACT NO. 74443	
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	



ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	



MODEL: US50 XS Sht 2
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DRAWN	-
CHECKED	-
DATE	-
PLOT SCALE	= 0.16666633' / in.
PLOT DATE	= 8/22/2023

DESIGNED	-
DRAWN	-
CHECKED	-
DATE	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US 50 CROSS SECTIONS

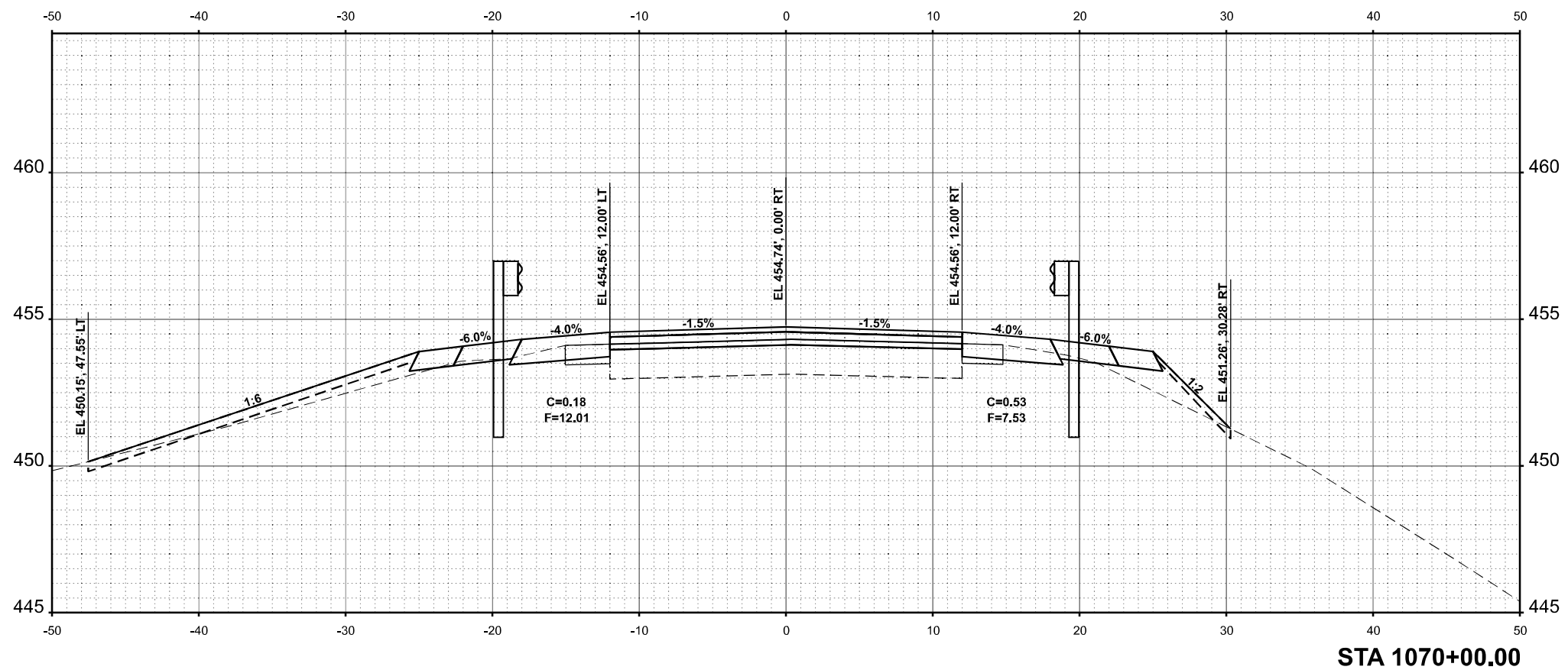
SCALE: 1"=5' SHEET 2 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	49
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

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USER NAME = manland	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666833' / in.	CHECKED -	REVISED -
PLOT DATE = 8/22/2023	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

US 50 CROSS SECTIONS

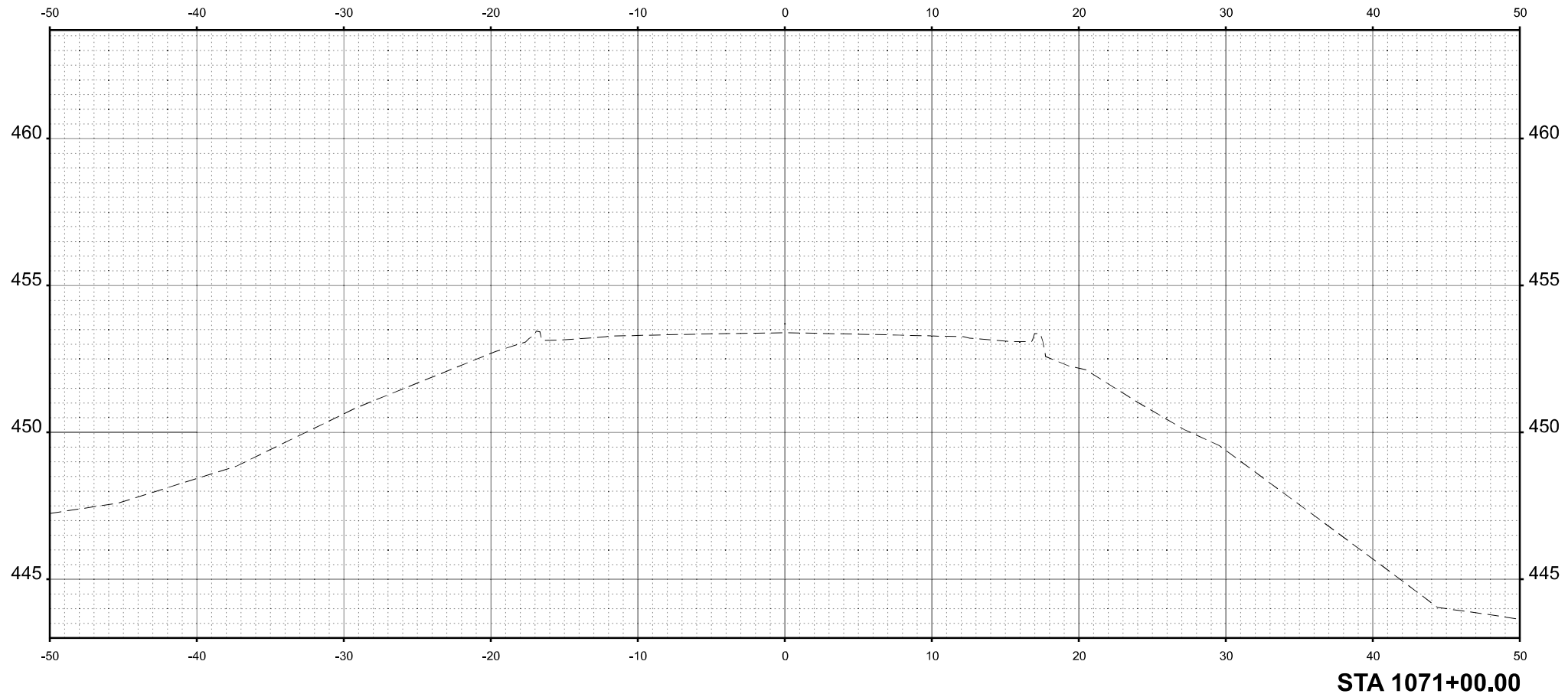
SCALE: 1"=5' SHEET 3 OF 7 SHEETS STA. TO STA.

F.A.P. RTE. 327	SECTION (3,2B) B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 50
CONTRACT NO. 74443				ILLINOIS FED. AID PROJECT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

MODEL: US50 XS Sht 4
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STA 1071+00.00



USER NAME = manland	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666833' / in.	CHECKED -	REVISED -
PLOT DATE = 8/22/2023	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US 50 CROSS SECTIONS

SCALE: 1"=5' SHEET 4 OF 7 SHEETS STA. TO STA.

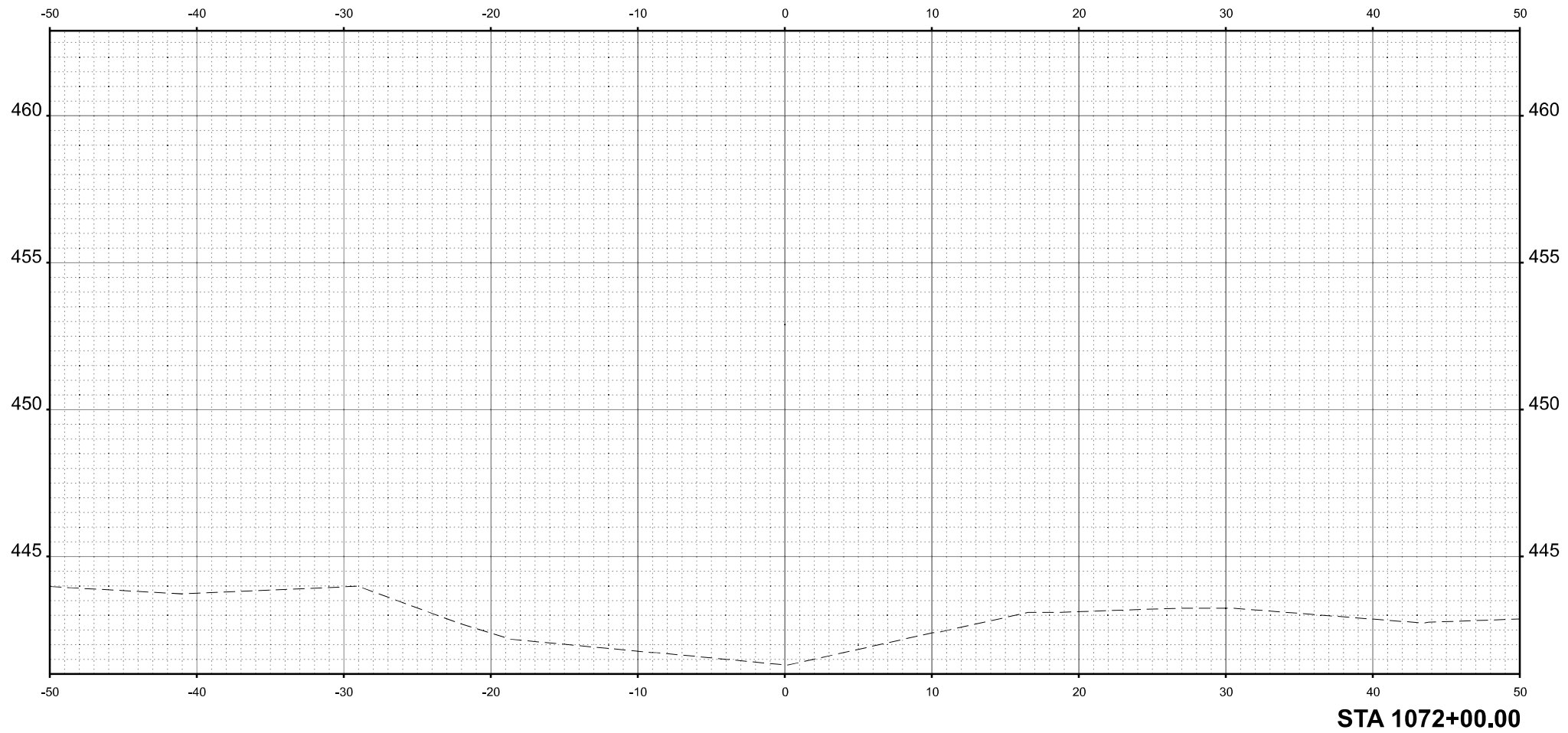
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	51
CONTRACT NO. 74443				

ILLINOIS FED. AID PROJECT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

MODEL: US50 XS Sht 5
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STA 1072+00.00



USER NAME = manland	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633' / in.	CHECKED -	REVISED -
PLOT DATE = 8/22/2023	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US 50 CROSS SECTIONS

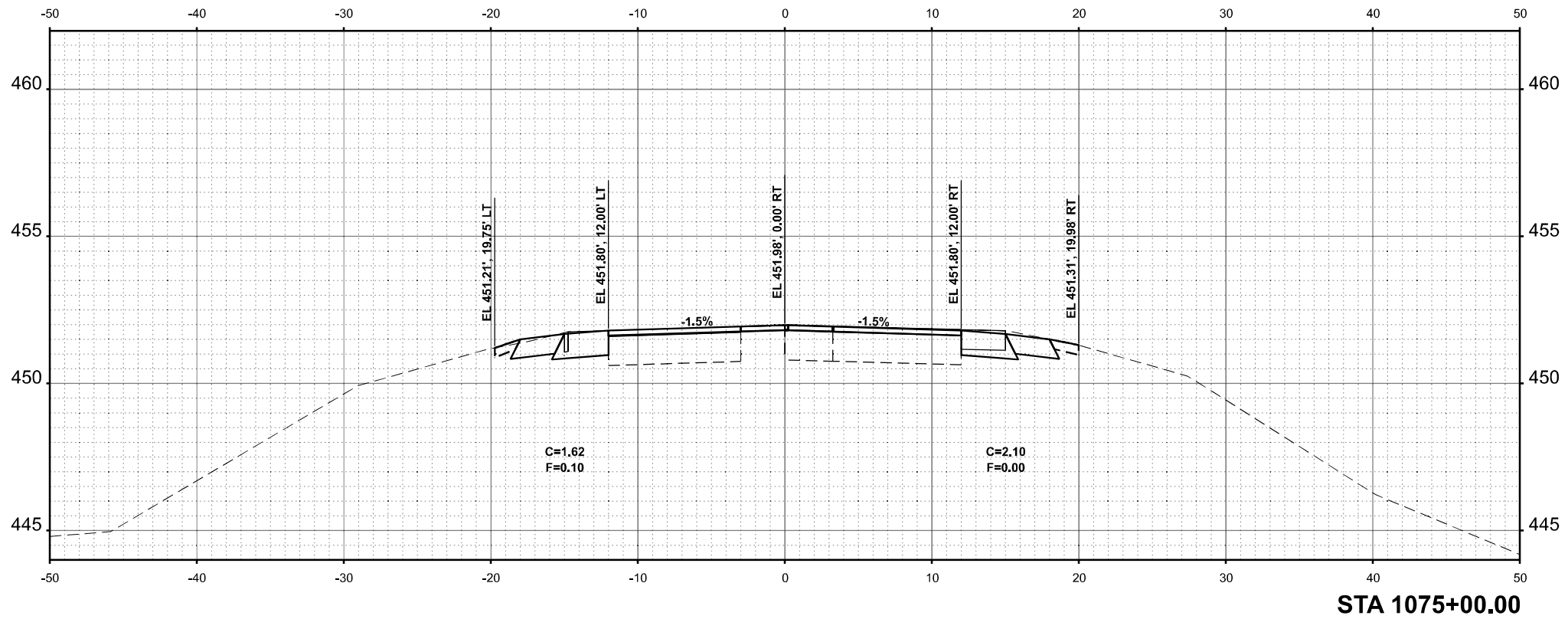
SCALE: 1"=5' SHEET 5 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(3,2B) B-1	LAWRENCE	54	52
CONTRACT NO. 74443				
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

MODEL: US50 XS Sht 7
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USER NAME = manland	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666833' / in.	CHECKED -	REVISED -
PLOT DATE = 8/22/2023	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US 50 CROSS SECTIONS

SCALE: 1"=5' SHEET 7 OF 7 SHEETS STA. TO STA.

F.A.P. RTE. 327	SECTION (3,2B) B-1	COUNTY LAWRENCE	TOTAL SHEETS 54	SHEET NO. 54
CONTRACT NO. 74443				
ILLINOIS FED. AID PROJECT				