# STATE OF ILLINOIS

# **DEPARTMENT OF TRANSPORTATION**

 
 F.A.5 RTE.
 SECTION
 COUNTY
 TOTAL SHEET NO.

 2701
 D7 BRIDGE REPAIRS 2024-8
 EFFINGHAM
 23
 1

 ILLINOIS
 CONTRACT NO. 74B34

FOR INDEX OF SHEETS, SEE SHEET NO. 2

 $\mathsf{ADT} = 2050$ 

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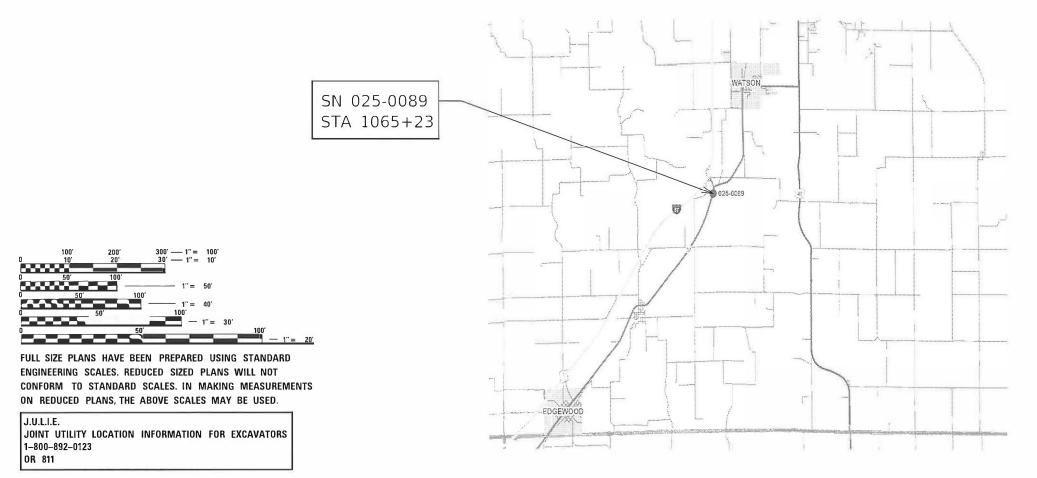
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# PROPOSED HIGHWAY PLANS

FAS ROUTE 2701 (IL 37)
SECTION D7 BRIDGE REPAIRS 2024-8
PROJECT HBFP-1PLT(920)
BRIDGE REPAIR
EFFINGHAM COUNTY

C-97-102-22

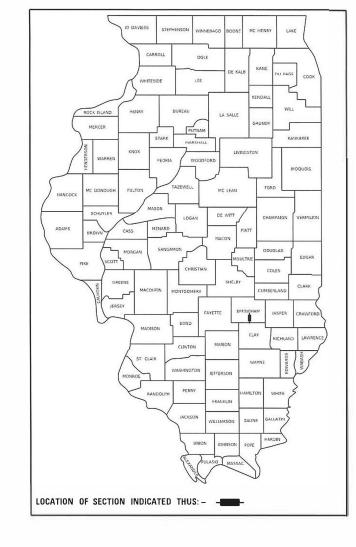


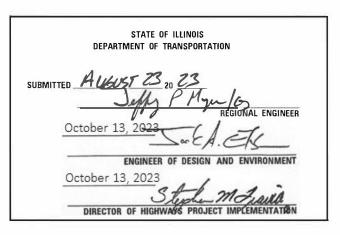
GROSS LENGTH = 376 FT. = 0.071 MILE NET LENGTH = 376 FT. = 0.071 MILE

CONTRACT NO. 74B34

PROJECT ENGINEER BRIAN LEWIS

PROJECT MANAGER ANDREW NIEMERG





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REV. - MS

# GENERAL NOTES

THE WORK IN THIS SECTION CONSISTS OF BRIDGE DECK OVERLAY, BRIDGE JOINT REPLACE/REPAIR,
BRIDGE APPROACH ROADWAY, BRIDGE DECK REPAIRS, PCC BASED COURSE WIDENING, PAVEMENT MARKING,
AND ALL OTHER WORK NEEDED TO COMPLETE THIS SECTION.

THE PROPOSED PROJECT ON STRUCTURE #025-0089 IS LOCATED 0.5 MILES SOUTH OF I-57 OVER THE LITTLE WABASH RIVER ON FAS 2701 (IL-37)

	THE	FOLLOWIN	G MIXTURE R	REQUIREMENTS	ARE APPLICAE	BLE TO TH	IS PROJECT:		
LOCATION	MIXTURE USE	PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION		MIXTURE WEIGHT	QUALITY MANAGEMENT PROGRAM	SUBLOT SIZE	MATERIAL TRANSFER DEVICE (REQUIRED?)
MAINLINE	HMA SURFACE COURSE, IL-9.5, MIX "C", N70	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	N70	QC/QA	3000	N/A

# INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS, HIGHWAY STANDARDS
3 - 4	SUMMARY OF QUANTITIES
5	TYPICAL CROSS SECTIONS
6	SCHEDULE OF QUANTITIES
7 - 9	STAGE CONSTRUCTION DETAILS
10 - 18	BRIDGE REPAIR PLANS
19	TRANSITION DETAILS
20 - 23	PAVEMENT MARKING DETAILS

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

STANDARD NO.	DESCRIPTION
000001-08	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001-10	PAVEMENT JOINTS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-05	LANE CLOSEURE, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS, DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSEURE, 2L, 2W, PAVEMENT WIDENING
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

REV. - MS

	USER NAME = jessica.hille	DESIGNED	REVISED =		INDEX OF SHEETS &						SECTION	COUNTY	TOTAL SHEET
- 1		DRAWN -	REVISED =	STATE OF ILLINOIS	GENERAL NOTES					2701 D7	BRIDGE REPAIRS 2024-8	EFFINGHAM	23 2
- 1	PLOT SCALE = 100.0000 / in.	CHECKED	REVISED -	DEPARTMENT OF TRANSPORTATION		GENERAL NOTES						CONTRACT	Г NO. 74B34
	PLOT DATE = 8/25/2023	DATE	REVISED +		SCALE: SHEET O		OF	SHEETS STA.	TO STA.		ILLINOIS FED. AI	D PROJECT	

	SUMMARY OF QUANTITIES				TRUCTION TYPE CODE	<del> </del>	SUMMARY OF QUANTITIES		ļ		UCTION TYPE CODE
CODE NO		LINITT	TOTAL QUANTITIES	0047		CODE NO.	T		TOTAL	0047	
JODE NO	ITEM	UNIT	QUANTITIES			CODE NO	ITEM	UNIT	OUANTITIES		
35300500	PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ YD	207	207		67100100	MOBILIZATION	L SUM	1	1	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	291	291		70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	1	1	
							701321				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	213	213		70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1	
40600990	TEMPORARY RAMP	SQ YD	41	41		70100450	701201	L SUM	1	1	
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX	TON	37	37		70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1	
	"C", N70						701326				
50102400	CONCRETE REMOVAL	CU YD	5.6	5.6		70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
50300100	FLOOR DRAINS	EACH	56	56		70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	1168	1168	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	6.2	6.2		70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28	
50300300	PROTECTIVE COAT	SO YD	1288	1288		70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	486	486	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	960	960		70400100	TEMPORARY CONCRETE BARRIER	FOOT	687.5	687.5	
50800515	BAR SPLICERS	EACH	12	12		70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	625	625	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	68	68		70600250	IMPACT ATTENUATORS, TEMPORARY (NON-	EACH	2	2	
							REDIRECTIVE), TEST LEVEL 3				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5	5							
						70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	

USER NAME = jessica.nille	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/25/2023	DATE -	REVISED -	

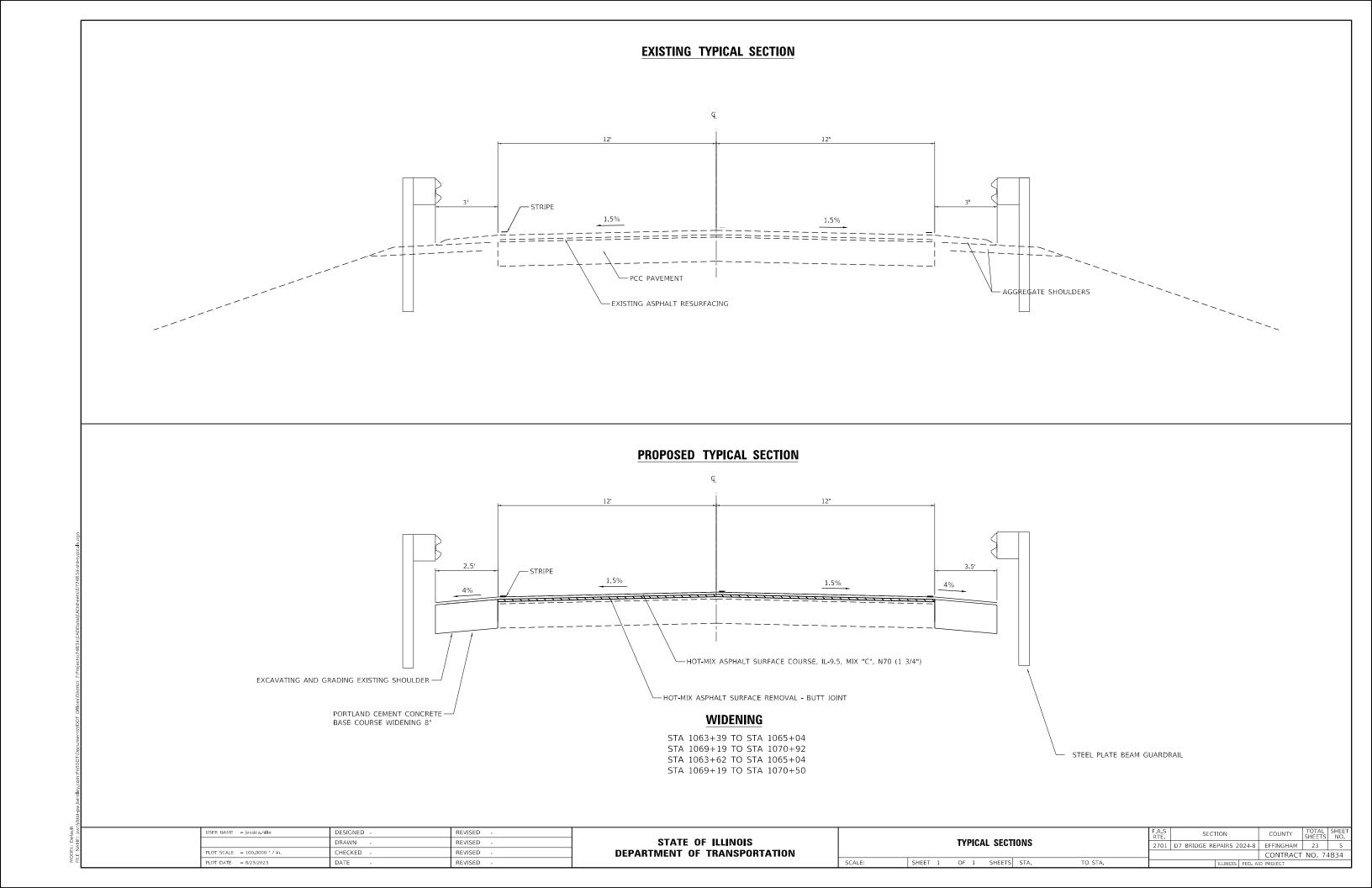
# 80% FED 20% STATE

	CUMMANY OF CHANTITIES			CON	STRUCTION TYPE CODE		CLIVALADY		OLIANITITIC			COI	NSTRUCTION TYPE	CODE
	SUMMARY OF QUANTITIES	_	TOTAL	0047			SUMMARY	UF	QUANTITIES		TOTAL			
CODE NO	ITEM	UNIT	OUANTITIES			CODE NO		ITEM	-	UNIT	QUANTITIES			
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2302	2302										
X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	992	992										
Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SO YD	1	1										
Z0012111	BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE	SQ YD	1271	1271										
	OVERLAY, 2 1/2"													
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SO YD	1271	1271										
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	26	26										
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO YD	8	8										
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SO YD	1112	1112										
<b>*</b> SPFCI	ALTY ITEM													REV M

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USER NAME = jessica-hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLÖT DÄTE = 8/25/2023	DATE -	REVISED -

							F.A.S. RTE.	SEC	TION		COUNTY	TOTAL SHEETS	SHEE NO.
SUMMARY OF QUANTITIES							2701	D7 BRIDGE R	EPAIRS 2	024-8	EFFINGHAM	23	4
											CONTRACT	NO. 7	4B34
SHEET	2	OF	2	SHEETS	STA.	TO STA.			ILLINOIS	FED. AI	D PROJECT		



		HOT-N	1IX ASPHAL	T SURFACE R	EMOVAL - BU	TT JOINT			HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT												
				WIDTH	TOTAL EOP	AREA	AREA	AREA													
STATIO	ONING	LENGTH	WIDTH	SHOULDER	WIDTH	MAINLINE	SHOULDER	COMBINED	AREA												
FROM	TO	(FEET)	(FEET)	(FEET)	(FEET)	(SQ FT)	(SQ FT)	(SQ FT)	(SQ YD)												
1064+64	1065+04	40	24.0		24.0	960		960	106.7												
1069+20	1069+60	40	24.0		24.0	960		960	106.7												
TOTALS 21																					

	TEM	1PORARY	RAMP								
			DROP-								
LOCATION	V	RAMP	OFF	RAMP	RAMP						
		WIDTH	DEPTH	LENGTH	AREA						
STATION	SIDE	(FOOT)	(INCH)	(FOOT)	(SQ YD)						
1065+23.50	CL	30.8	1.75	6.0	20.5						
1068+99.50	CL	30.8	1.75	6.0	20.5						
	TOTAL										

	BITUMINOUS MATERIALS (TACK COAT)												
STATIO	ONING	LENGTH	WIDTH	WIDTH SHOULDER	AREA MAINLINE	AREA SHOULDER	AREA COMBINED	40600290 BITUMINOUS MATERIALS (TACK COAT) MAINLINE					
FROM	TO	(FEET)	(FEET)	(FEET)	(SQ FT)	(SQ FT)	(SQ FT)	(POUND)					
1064+63.50	1065+23.50	60	30.0	18.5	1,800	1,110	2,910	145.5					
1068+99.50	1069+59.50	60	30.0	18.5	1,800	1,110	2,910	145.5					
TOTAL													

		TRAFFIC CON	ITROL SCHEDULE		
				70600250	70600350
				IMPACT	IMPACT
			70400200	ATTENUATORS	ATTENUATORS,
		70400100	RELOCATE	TEMPORARY	RELOCATE
		TEMPORARY	TEMPORARY	(NON-	(NON
		CONCRETE	CONCRETE	REDIRECTIVE),	REDIRECTIVE),
STATIO	ONING	BARRIER	BARRIER	TEST LEVEL 3	TEST LEVEL 3
FROM	TO	(FEET)	(FEET)	(EACH)	(EACH)
		ST	AGE 1		
1063+68	1070+55	687.5		2	
	•	ST	AGE 2		
1063+99	1070+24		625		2

	HOT-MIX	ASPHALT S	SURFACE CO	DURSE, IL-9.5	, MIX "C", N7	70	_
							HMA
							SURFACE
				WIDTH	AVG LIFT	AREA	COURSE
STATIO	ONING	LENGTH	WIDTH	SHOULDER	THICKNESS	MAINLINE	IL-9.5 N70
FROM	ТО	(FEET)	(FEET)	(FEET)	(INCH)	(SQ FT)	(TON)
1064+63.50	1065+23.50	60	30.0		1.63	1,800	18.3
1068+99.50	1069+59.50	60	30.0		1.63	1,800	18.3
TOTALS							37

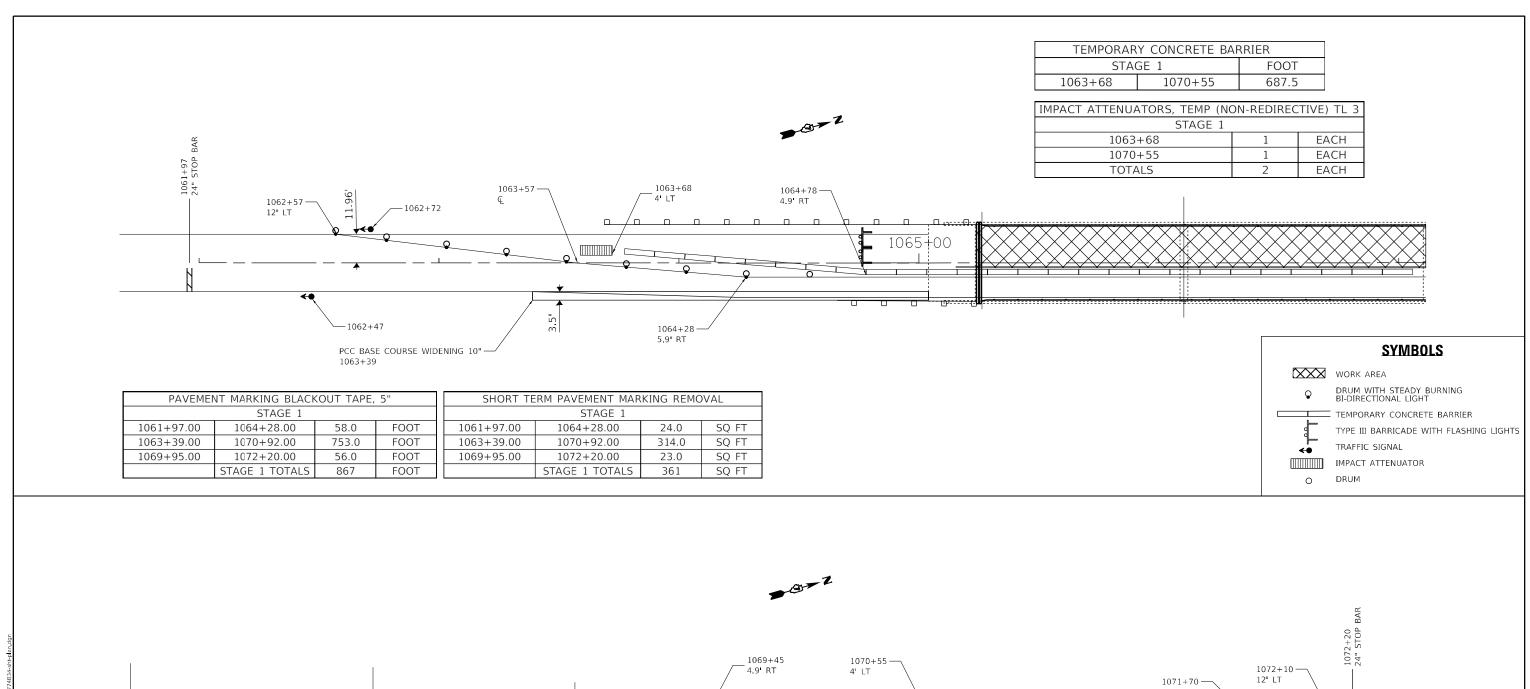
	PCC BASE COURSE WIDENING 10"  WIDENING   WIDENING   WIDENING										
	WIDENING	WIDENING									
S	TATIC	NING		WIDTH	LENGTH	AREA					
FROM		TO		(FOOT)	(FOOT)	(SQ YD)					
1063+39	RT	1065+04	RT	3.5	165.0	64.2					
1069+19	RT	1070+92	RT	3.5	173.0	67.3					
1063+62	LT	1065+04	LT	2.5	142.0	39.4					
1069 + 19	LT	1070+50	LT	2.5	131.0	36.4					
		TOTA	٦L			207					

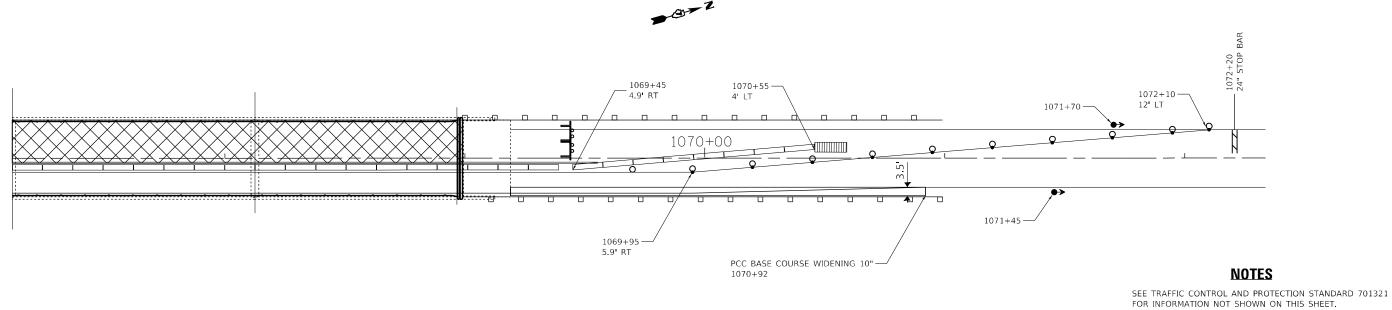
		PAV	EMENT M	ARKING SCHE	DULE		
				PAVEMENT MARKING	SHORT TERM PAVEMENT	PAINT PAVEM LINI	ENT MARKING E 4"
				BLACKOUT	MARKING	SOLID EDGE	SKIP DASH
STA	ΓΙΟΝ		LENGTH	TAPE, 5"	REMOVAL	WHITE	YELLOW
FROM	ТО	SIDE	FOOT	FOOT	SQ FT	FOOT	FOOT
			S	TAGE 1			
1061+97	1064+28	CL	231	58	24		
1063+39	1070+92	RT	753	753	314		
1069+95	1072+20	CL	225	56	23		
			S	TAGE 2			
1063+62	1065 + 18	L	156	156	65		
1069+05	1070+50	L	145	145	60		
1061+97	1072+20	CL	1023				256
1061+97	1072+20	LT/RT	1023			2046	
	TOTAL			1168	486	2046	256

USER NAME = jessica hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 8/25/2023	DATE -	REVISED -

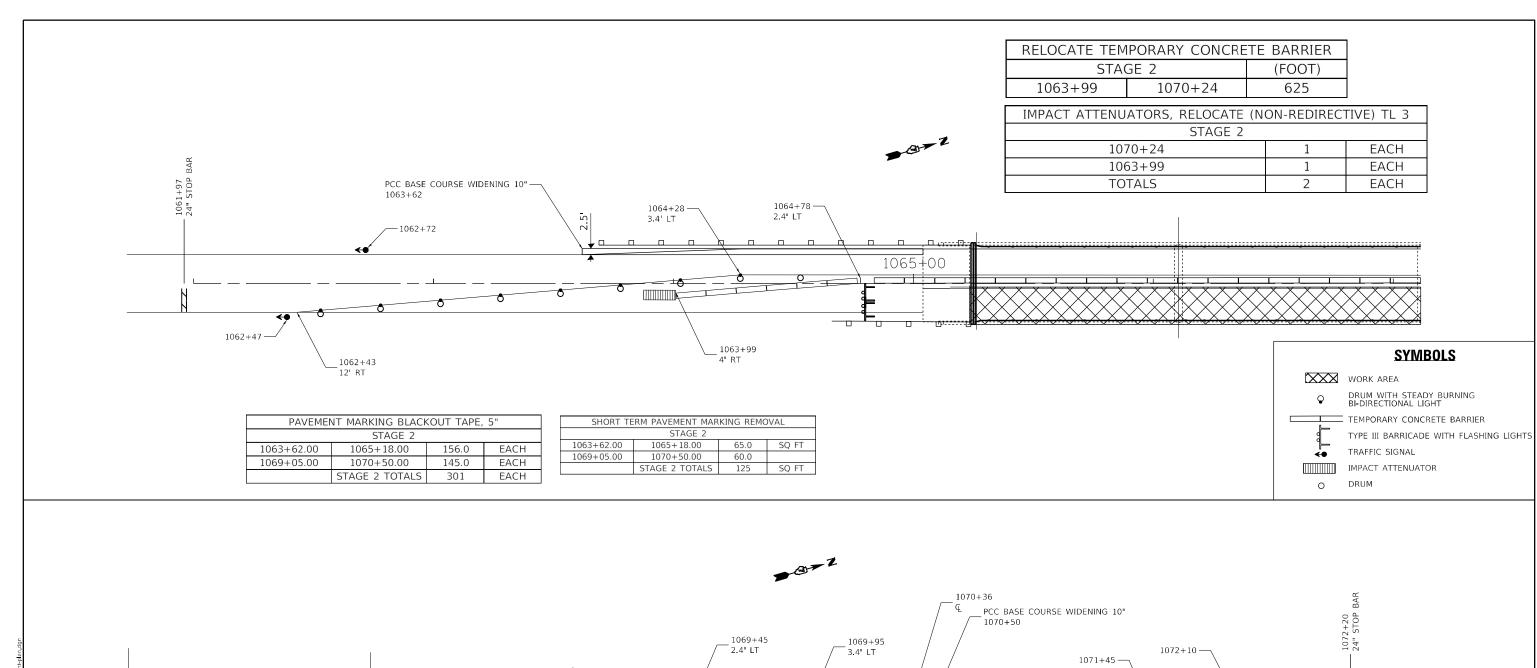
STATE	OF ILLINOIS	
DEPARTMENT O	OF TRANSPORTATION	NC

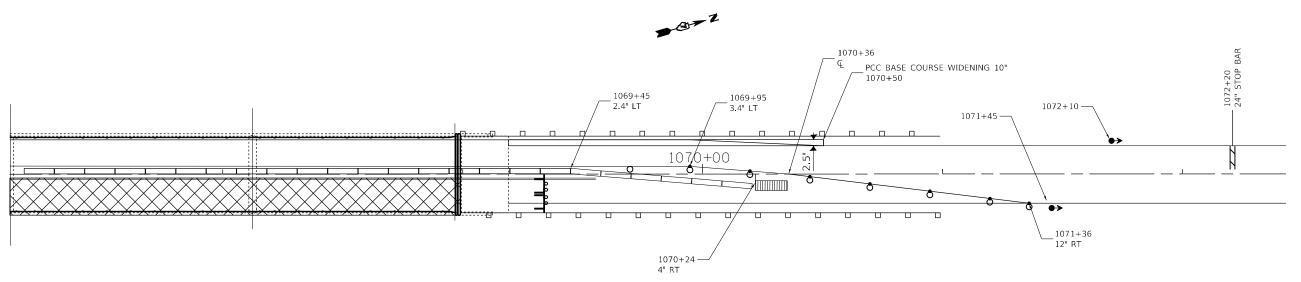
	SCHEDULE OF QUANTITIES								SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
									D7 BRIDGE REPAIRS 2024-8	EFFINGHAM	23	6
										CONTRACT	NO. 74	1B34
SCALE:	SHEET	1	OF	1	SHEETS	STA.	TO STA.		ILLINOIS FED. AI	D PROJECT		





USER NAME = jessica hille	DESIGNED -	REVISED -							F.A.S.	SECTION	COUNTY	TOTAL SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS			STAGE	1 DETAILS	-	2701	D7 BRIDGE REPAIRS 2024-8	EFFINGHAM	23 7
PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION					-			CONTRACT	NO. 74B34
PLOT DATE = 8/25/2023	DATE -	REVISED -		SCALE:	SHEET 1	OF 1	SHEETS STA.	TO STA.		TILINOIS FED AID	PROJECT	

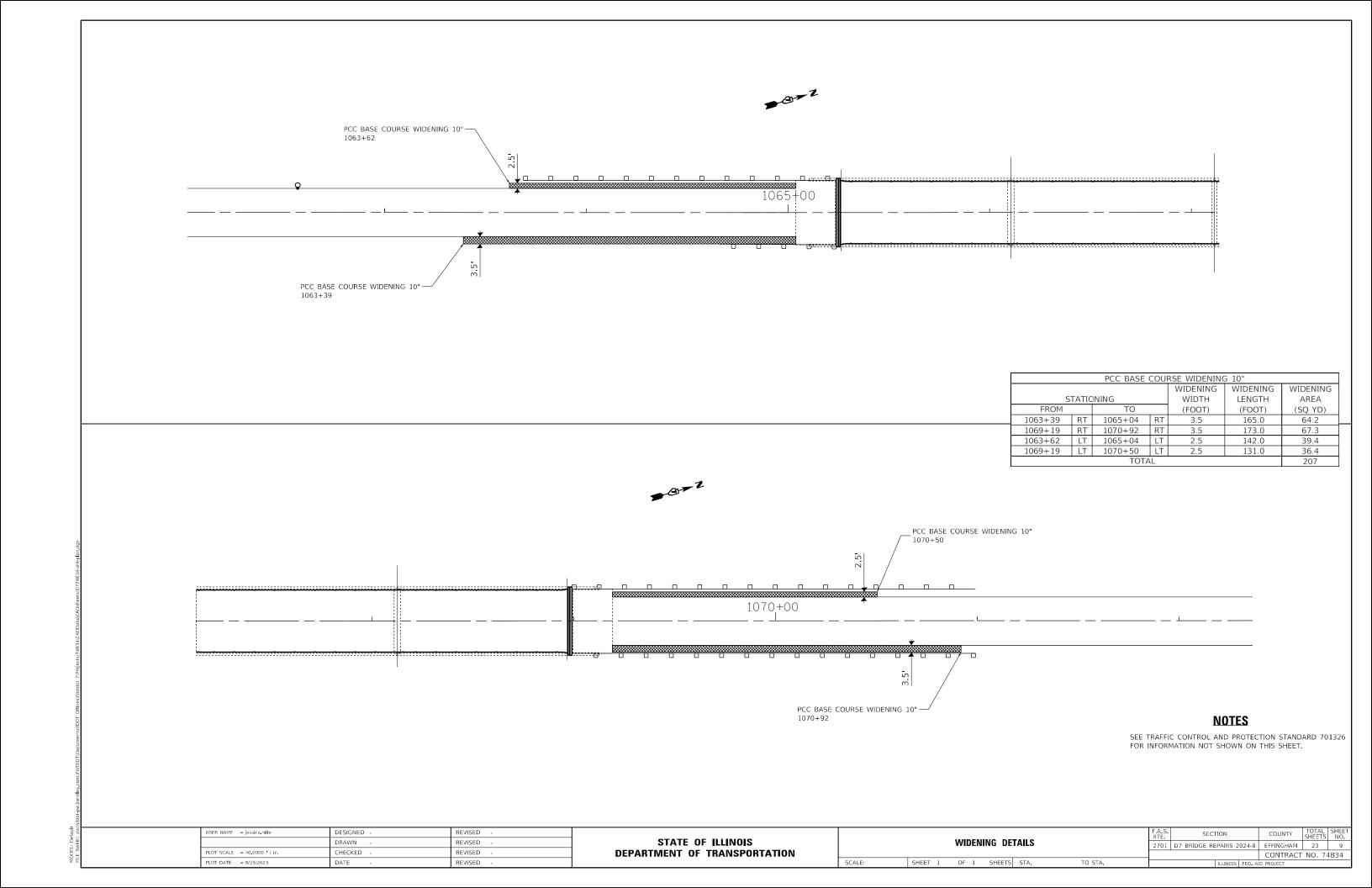




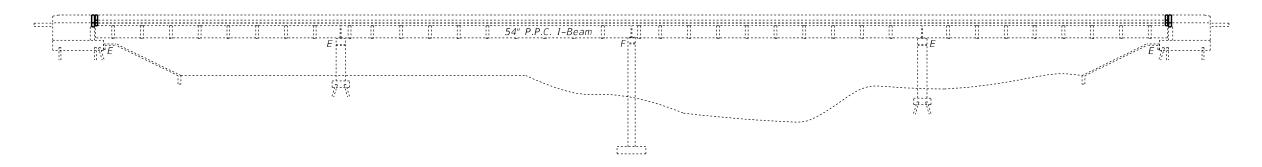
# **NOTES**

SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR INFORMATION NOT SHOWN ON THIS SHEET.

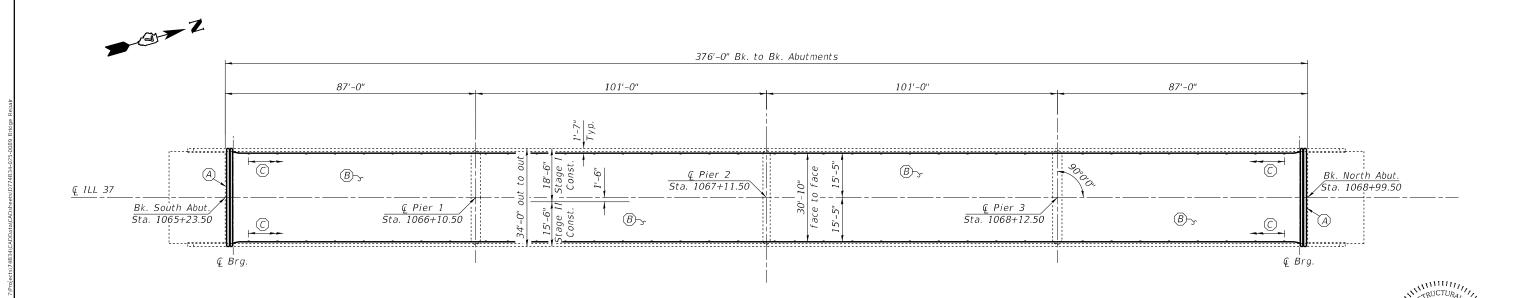
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	DRAWN -	REVISED -	STATE OF ILLINOIS			STAGE	2 DETAILS		2701	D7 BRIDGE REPAIRS 2024-8	EFFINGHAM	23 8
PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION								CONTRACT	T NO. 74B34
PLOT DATE = 8/25/2023	DATE -	REVISED -		SCALE:	SHEET 1	OF 1	SHEETS STA.	TO STA.		ILLINOIS FED. AI	D PROJECT	



EXISTING STRUCTURE: SN 025-0089 carries ILL 37 over Little Wabash River. The four span, P.C.C. I-beam structure was built in 1981. The proposed project consists of replacement of the expansion joints with new strip seals, replacement of deck drains, full depth deck patching, scarification & concrete overlay.



# ELEVATION



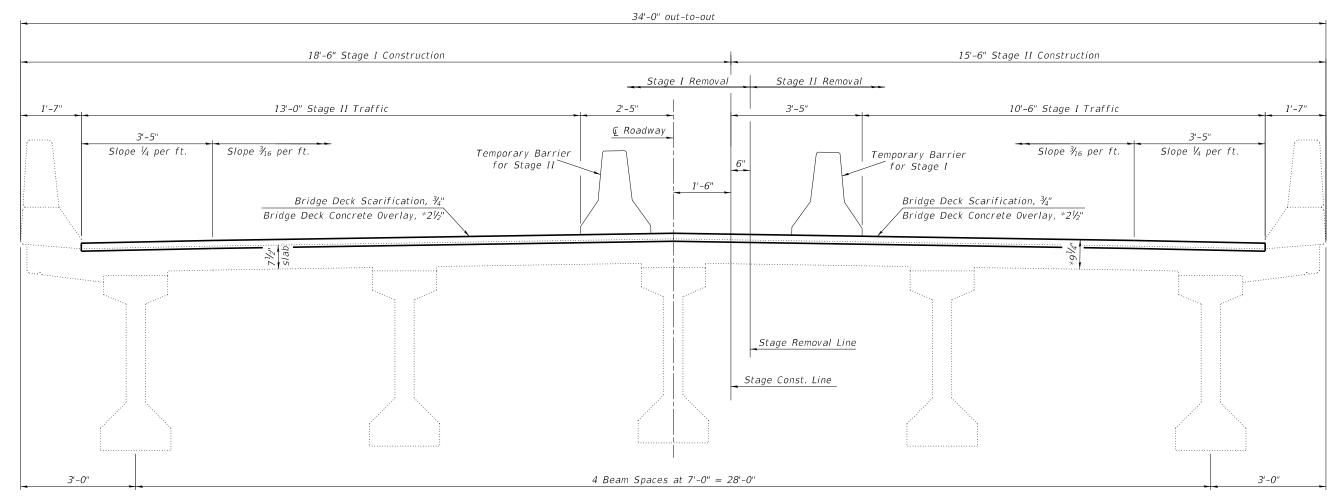
# PLAN

- (A) Remove Existing Joints and Construct Strip Seal Expansion Joint
- B Bridge Deck Scarification  $rac{3}{4}$ ", Deck Patching, Bridge Deck Fly Ash or GGBF Slag Concrete Overlay  $2\frac{1}{2}$ ", Diamond Grinding (Bridge Section)
- © Remove and Replace Existing Floor Drains

THE OF ILLINOS
Expires 11-30-2024

USER NAME = jessica hille	DESIGNED	-	T. Walk	REVISED -	Ī
	DRAWN	-	T. Walk	REVISED -	
PLOT SCALE = 100.0000 / in.	CHECKED	-	D. Mack <b>l</b> in	REVISED -	
PLOT DATE = 8/25/2023	DATE	-	September 2022	REVISED -	ı

GENERAL PLAN & ELEVATION								SECT	TION		COUNTY	TOTAL SHEETS	
S.N. 025-0089							2701	D7 BRIDGE RE	EPAIRS 2	024-8	EFFINGHAM	23	10
3.IV. UZ3-UU03										CONTRACT	NO. 74	1B34	
SHEET 1 OF 9 SHEETS STA.				TO STA.			ILLINOIS	FED. AI	D PROJECT				



\* Overlay thickness prior to grinding

# STAGE CONSTRUCTION DETAIL Looking North

### GENERAL NOTES

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

Reinforcement Bars designated (E) shall be epoxy coated.

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

It is anticipated that a full depth deck slab repair will be necessary at each existing floor drain location. Removal and disposal of the existing floor drains shall be included in the contract unit price for Deck Slab Repair (Full Depth, Type I).

Protective Coat to be applied to areas of new concrete only, including bridge deck concrete overlay.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50 °F.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.

Full depth deck slab repairs performed in the exterior bays of the bridge deck (between the parapet walls and the first interior beams) shall be limited to individual lengths no greater than 10'. In these portions of the deck, repair areas longer than 10' shall be divided into segments not greater than 10' in length, and the segments shall be poured in alternating sequence. Subsequent segments repaired in sequence shall not be removed until 72 hours shall have elapsed from the end of the previous, adjacent pour, and the adjacent pour shall have attained a minimum modulus of rupture of 650psi.

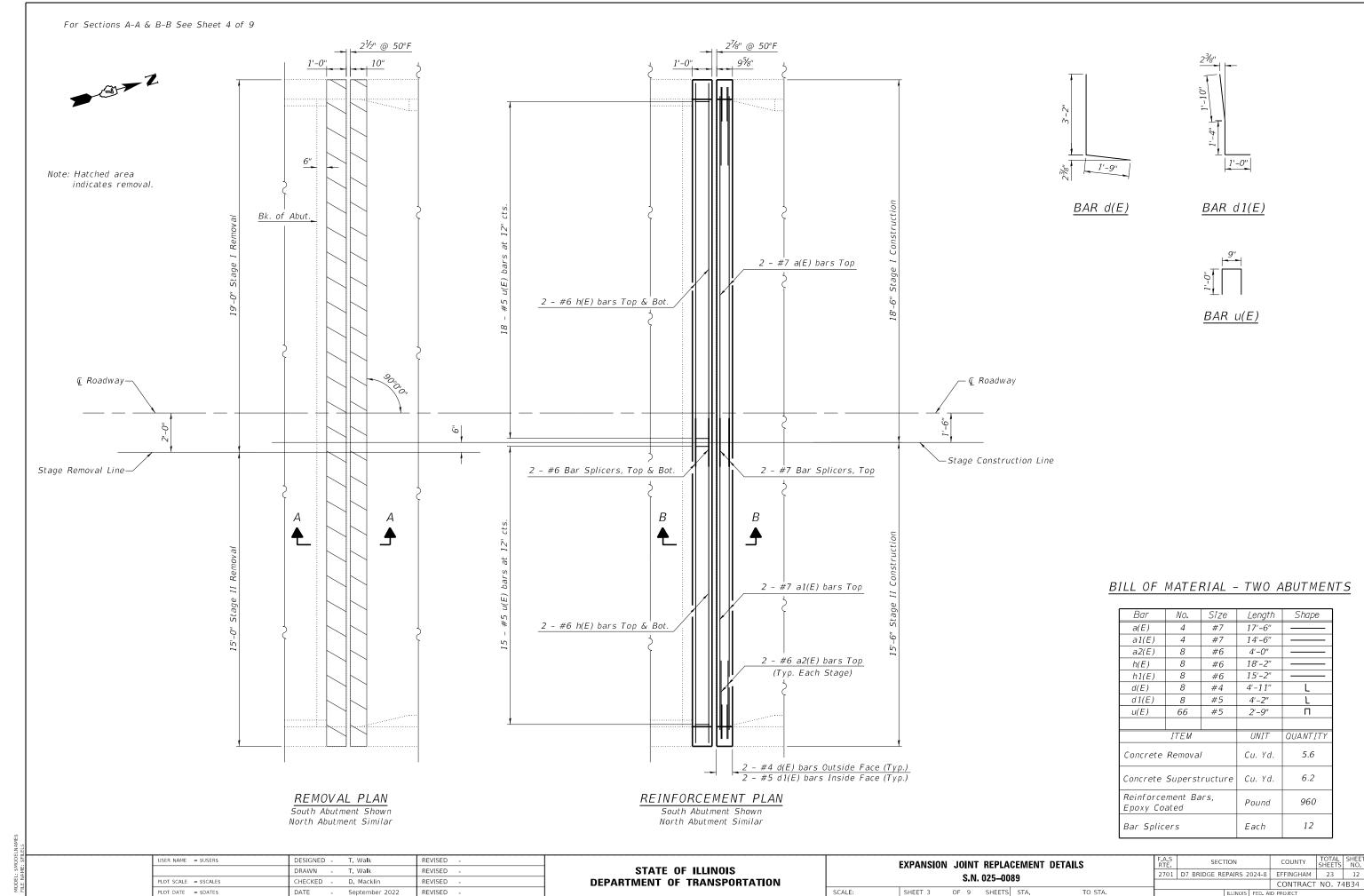
# TOTAL BILL OF MATERIAL

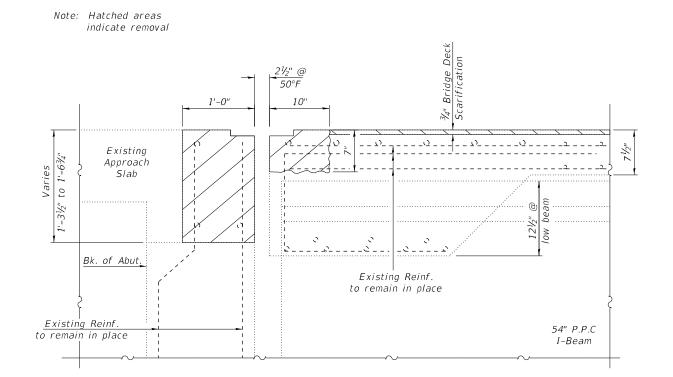
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	5.6
Concrete Superstructure	Cu. Yd.	6.2
Reinforcement Bars, Epoxy Coated	Pound	960
Bar Splicers	Each	12
Bridge Deck Scarification, ¾"	Sq. Yd.	1,271
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2½"	Sq. Yd.	1,271
Diamond Grinding (Bridge Section)	Sq. Yd.	1,112
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	992
Preformed Joint Strip Seal	Foot	68
Protective Coat	Sq. Yd.	1,288
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	26.0
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	8.0
Approach Slab Repair (Partial Depth)	Sq. Yd.	1.0
Floor Drains	Each	56

USER NAME = \$USER\$	DESIGNED	-	T. Wa <b>l</b> k	REVISED	-
	DRAWN	-	T. Wa <b>l</b> k	REVISED	-
PLOT SCALE = \$SCALE\$	CHECKED	-	D. Macklin	REVISED	-
PLOT DATE = \$DATE\$	DATE	-	September 2022	REVISED	-

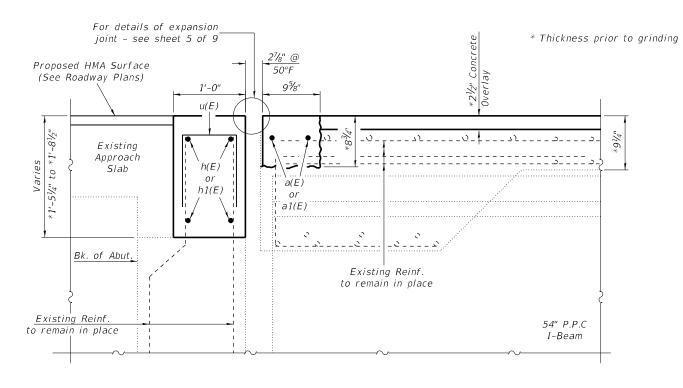
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CO	NSTRUC	TION, GE	NERAL N	IOTES, &	F.A.S RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
BILL OF MATERIALS S.N. 025-0089						D7 BRIDGE REPAIR	RS 2024-8	EFFINGHAM	23	11
DILL	DILL OF WATERIALS S.W. 020-0009							CONTRACT	NO. 74	1B34
SHEET 2	OF 9	SHEETS	STA.	TO STA.		ILLIN	IOIS FED. A	ID PROJECT		

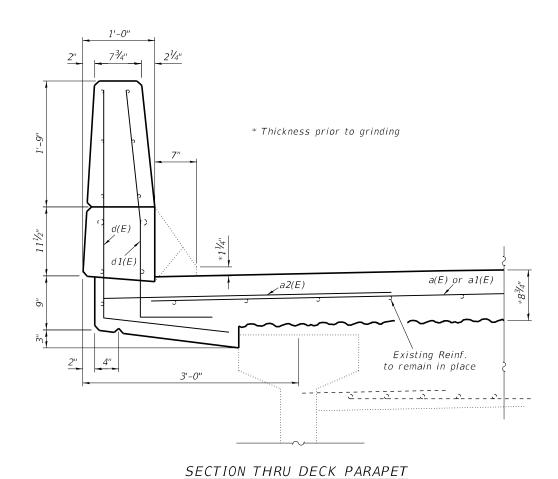


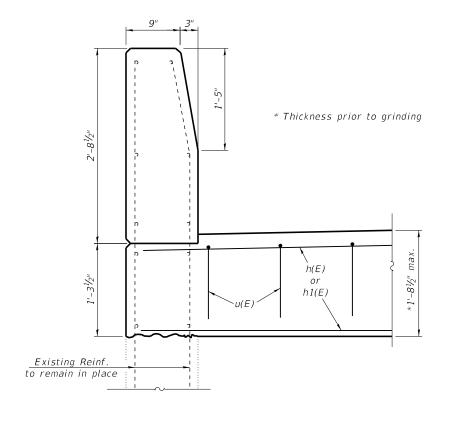


SECTION A-A



SECTION B-B



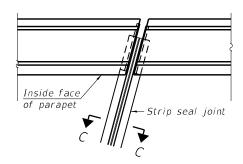


SECTION THRU APPROACH PARAPET

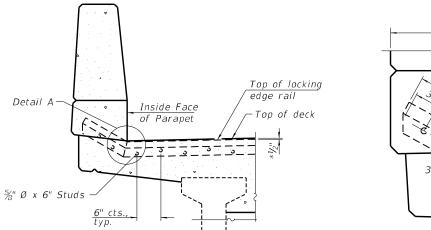
USER NAME = \$USER\$	DESIGNED	-	T. Wa <b>l</b> k	REVISED -	
	DRAWN	-	T. Wa <b>l</b> k	REVISED -	
PLOT SCALE = \$SCALE\$	CHECKED	-	D. Macklin	REVISED -	
PLOT DATE = \$DATE\$	DATE	-	September 2022	REVISED -	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

	EXPANSION JOINT REPLACEMENT DETAILS						F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
							2701	D7 BRIDGE REPAIRS 2024-8	EFFINGHAM	23	13
									CONTRACT	NO. 74	1B34
	SHEET 4	OF	9	SHEETS	STA.	TO STA.		ILLINOIS FED. AI	D PROJECT		

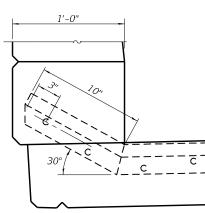


# PLAN AT PARAPET

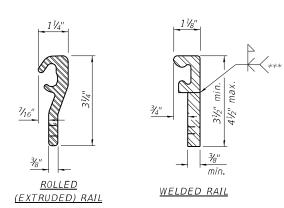


# ELEVATION AT PARAPET

(Skews >  $30^{\circ}$  shown. Skews  $\leq 30^{\circ}$  similar except as shown in plan view.)

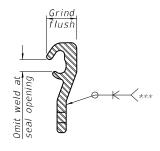


# DETAIL A



#### LOCKING EDGE RAILS

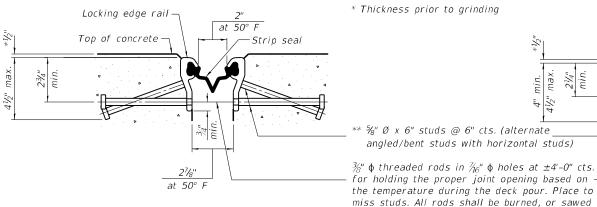
\*\*\*\* Back gouge not required if complete joint penetration is verified by mock-up.



### LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

SCALE:



SHOWING ROLLED RAIL JOINT

# \* Thickness prior to grinding Locking edge rail Top of concrete Top of concrete \*\* $\frac{1}{3}$ \*\* $\frac{1}$ \*\* $\frac{1}{3}$ \*\* $\frac{1}{3}$ \*\* $\frac{1}{3}$ \*\* $\frac{1}{3}$ \*\*

#### SECTION C-C

off flush with the plates after concrete is set.

\*\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

# Notes:

The strip seal shall be made continuous and shall have a minimum thickness of  $\frac{1}{4}$ ". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be  $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

#### BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	68

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

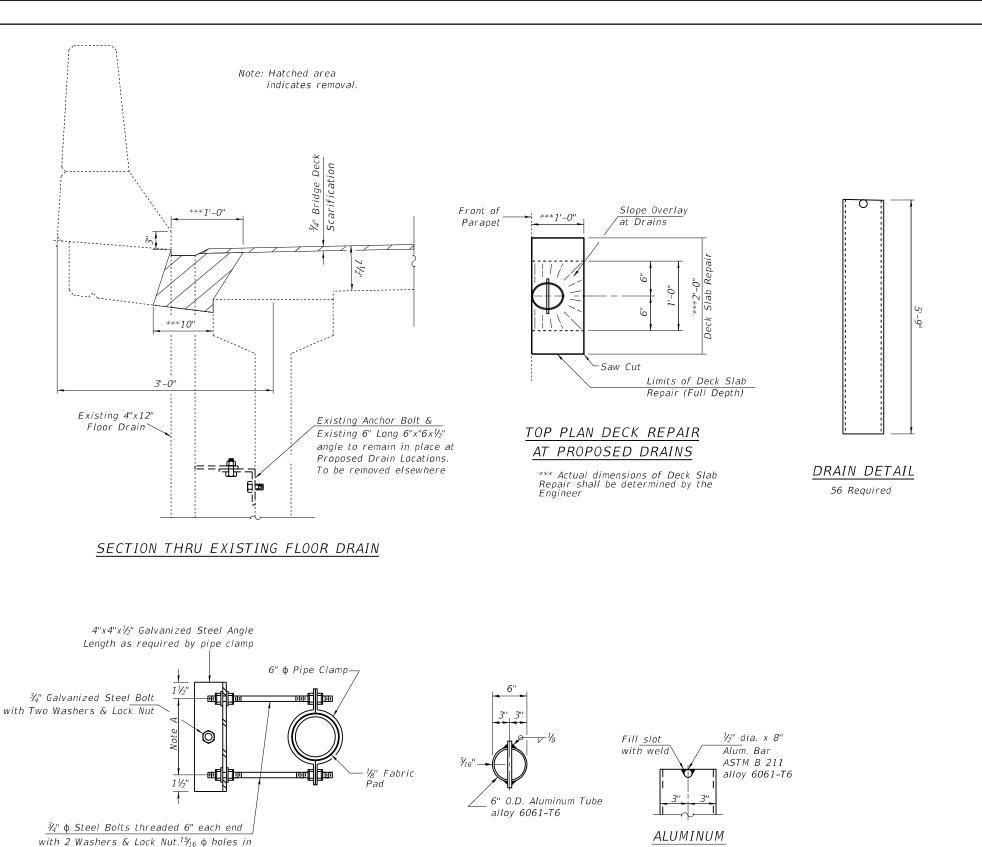
SHOWING WELDED RAIL JOINT

PREFORMED JOINT STRIP SEAL DETAIL
S.N. 025–0089

SHEET 5 OF 9 SHEETS STA. TO STA.

F.A.S RTE. SECTION COUNTY SHEETS NO. 2701 D7 BRIDGE REPAIRS 2024-8 EFFINGHAM 23 14

CONTRACT NO. 74B34



TOP PLAN

st Overlay thickness prior to grinding \*\* Minimum thickness of overlay at edge of drain = 1" \*\*\* Actual dimensions of Deck Slab Repair shall be determined by the Engineer \*\*\*1'-0" Deck Slab Repair (Full Depth, Type I) D 6" ♦ Pipe Existing Anchor Bolt & Clamp Existing 6" Long 6"x"6x1/2" angle to remain in place at Proposed Drain Locations. To be removed elsewhere 4"x4"x½" Galvanized Steel Angle

# DRAIN REPLACEMENT DETAIL

### NOTES

Fiberglass pipe drain option not allowed.

Gallvanize clamping device according to AASHTO M232. Cost of clamping device, bolts and galvanizing is included with Floor Drains.

Concrete removal and replacement quantites and locations for drains are included in Deck Slab Repair (Full Depth, Type I) as shown on "Bridge Deck Patching" see sheets 7 & 8 of 9.

Extreme care must be used when removing concrete near the top flange of the Precast Concrete I-Beams. The contractor is responsible for any damage to the beams.

USER NAME = jessica hille	DESIGNED	-	T. Walk	REVISED -	ı
	DRAWN	-	T. Walk	REVISED -	1
PLOT SCALE = 100.0000 / in.	CHECKED	-	D. Macklin	REVISED -	1
PLOT DATE = 8/25/2023	DATE	-	September 2022	REVISED -	Ĺ

SECTION D-D

Note A: Dimension as required by Pipe Clamp

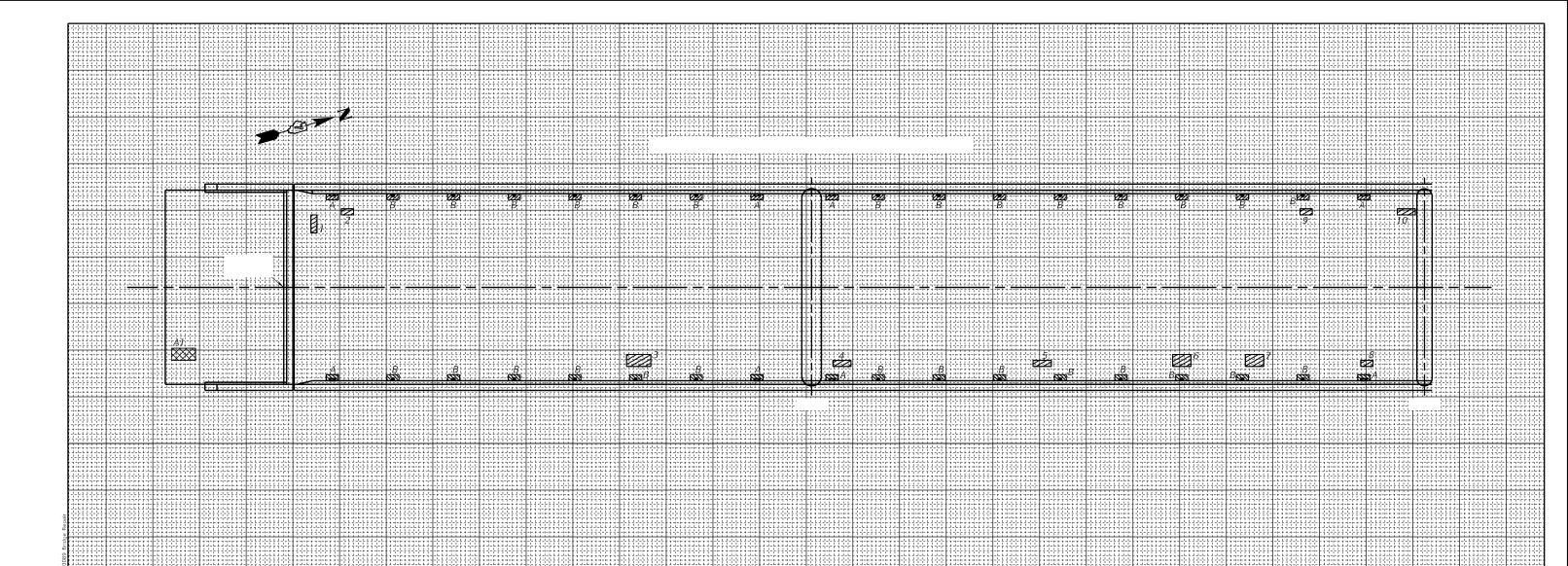
galvanized plate (shop drilled prior to galvanizing)

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DEPARTMENT OF TRANSPORTATION

SCALE:

TUBE

	DECK DRAIN REPLACEMENT DETAILS S.N. 025-0089							F.A.S RTE SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
								2701	D7 BRIDGE REPAIRS 2	2024-8	EFFINGHAM	23	15
		`	).IV.	023-00	0.0						CONTRACT	NO. 74	1B34
	SHEET 6	OF	9	SHEETS	STA.		TO STA.		ILLINOIS	FED. AI	D PROJECT		



PATCH	SI	ZE	DECK SLAB REPAIR (FD TY I)	DECK SLAB REPAIR (FD TY II)
NO.	LENGTH	WIDTH	SQ YD	SQ YD
1	1.0	3.0	0.3	
2	2.0 1.0		0.2	
3	4.0	2.0		0.9
4	3.0	1.0	0.3	
5	3.0 1.0		0.3	
6	3.0	2.0		0.7
7	3.0	2.0		0.7
8	2.0	1.0	0.2	
9	2.0	1.0	0.2	
10	3.0	1.0	0.3	
A - Re	move Drai	n, 8 ea	1.8	
B- Rep	lace Drain	, 28 ea	6.2	
TOT	AL ROUNDS	TO:	10.0	3.0

PATCH	SI	APPROACH SLAB REPAIR (PARTIAL DEPTH)	
NO.	LENGTH	WIDTH	SQ YD
A1	4.0	0.9	
TOT	1.0		

Note: Extreme care must be used when removing concrete near the top flange of the Precast Concrete I-Beams. The contractor is responsible for any damage to the beams.

# ESTIMATED PAY QUANTITIES

DECK SLAB REPAIR (FULL DEPTH, TYPE I) = 10.0 SQ YD DECK SLAB REPAIR (FULL DEPTH, TYPE II) = 3.0 SQ YD APPROACH SLAB REPAIR (PARTIAL DEPTH) = 1.0 SQ YD FLOOR DRAINS = 28 EACH

ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.



THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE



DATE OF SURVEY: 7-12-2022 SURVEY BY: DPM & TMW METHOD OF SURVEY: VISUAL



A & B = Deck Slab Repair

REMOVE DECK

(Full Depth, Type I)

2ft²=.22yd² Each



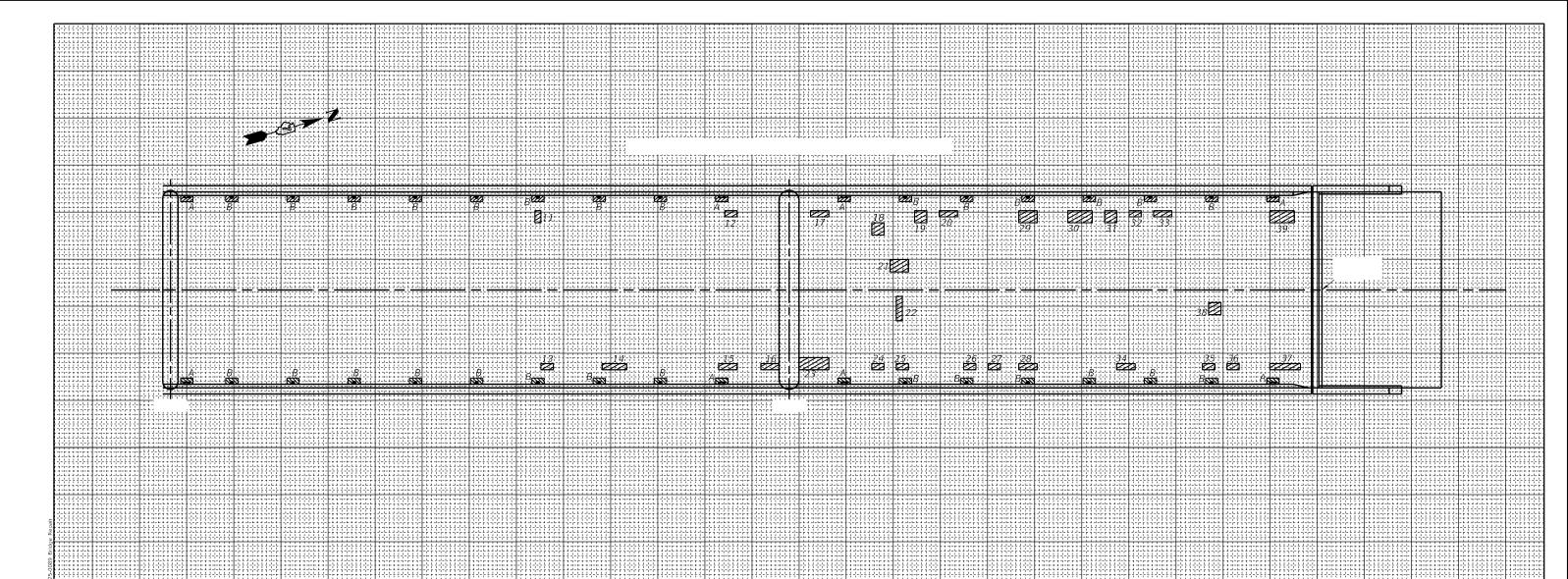
REMOVE & REPLACE DECK DRAIN

USER NAME = Jessica. Hille	DESIGNED	-	I. Walk	KENIZED	-
	DRAWN	-	T. Walk	REVISED	-
PLOT SCALE = 100.0000 / in.	CHECKED	-	D. Mack <b>l</b> in	REVISED	-
PLOT DATE = 8/25/2023	DATE	-	September 2022	REVISED	-

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

BRIDGE DECK PATCHING, SPANS 1 & 2 SN. 025-0089 SHEET 7 OF 9 SHEETS STA. TO STA.

F.A.S RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
2701	D7 BRIDGE REPAIRS 2	2024-8	EFFINGHAM	23	16
			CONTRACT	NO. 74	1B34
	TI LINIOTE	55D A	D DDG IECT		



PATCH	SI	ZE	DECK SLAB REPAIR (FD TY I)	DECK SLAB REPAIR (FD TY II)
NO.	LENGTH	WIDTH	SQ YD	SQ YD
11	1.0	2.0	0.2	
12	2.0	1.0	0.2	
13	2.0	1.0	0.2	
14	4.0	1.0	0.4	
15	3.0	1.0	0.3	
16	3.0	1.0	0.3	
17	3.0	1.0	0.3	
18	2.0	2.0	0.4	
19	2.0	2.0	0.4	
20	3.0	1.0	0.3	
21	3.0	2.0		0.7
22	1.0	4.0	0.4	
23	5.0	2.0		1.1
24	2.0	1.0	0.2	
25	2.0	1.0	0.2	
26	2.0	1.0	0.2	

PATCH	SI.	ZE	DECK SLAB REPAIR (FD TY I)	DECK SLAB REPAIR (FD TY II)
NO.	LENGTH	WIDTH	SQ YD	SQ YD
27	2.0	1.0	0.2	
28	3.0	1.0	0.3	
29	3.0	2.0		0.7
30	4.0	2.0		0.9
31	2.0	2.0	0.4	
32	2.0	1.0	0.2	
33	3.0	1.0	0.3	
34	3.0	1.0	0.3	
35	2.0	1.0	0.2	
36	2.0	1.0	0.2	
37	5.0	1.0	0.6	
38	2.0	2.0	0.4	
39	4.0	2.0		0.9
A - Re	move Drai	n, 8 ea	1.8	
B- Rep	lace Drain	, 28 ea	6.2	
ТОТ	AL ROUNDS	TO:	16.0	5.0

Note: Extreme care must be used when removing concrete near the top flange of the Precast Concrete I-Beams. The contractor is responsible for any damage to the beams.

# ESTIMATED PAY QUANTITIES

DECK SLAB REPAIR (FULL DEPTH, TYPE I) = 16.0 SQ YD DECK SLAB REPAIR (FULL DEPTH, TYPE II) = 5.0 SQ YD FLOOR DRAINS = 28 EACH

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





DATE OF SURVEY: 7-12-2022 SURVEY BY: DPM & TMW METHOD OF SURVEY: VISUAL



A & B = Deck Slab Repair

REMOVE DECK

(Full Depth, Type I)

2ft²=.22yd² Each



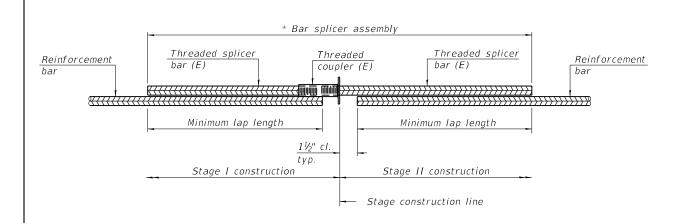
REMOVE & REPLACE DECK DRAIN

USER NAME = jessica hille	DESIGNED	-	T. Walk	REVISED	-
	DRAWN	-	T. Walk	REVISED	-
PLOT SCALE = 100.0000 / in.	CHECKED	-	D. Macklin	REVISED	-
PLOT DATE = 8/25/2023	DATE	-	September 2022	REVISED	-

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

BRIDGE DECK PATCHING, SPANS 3 & 4 SN. 025-0089 SHEET 8 OF 9 SHEETS STA TO STA.

	F.A.S RTE	SECTION		COUNTY	TOTAL SHEETS	SHE
	2701	D7 BRIDGE REPAIRS 2	2024-8	EFFINGHAM	23	1
				CONTRACT	NO. 74	₽B34
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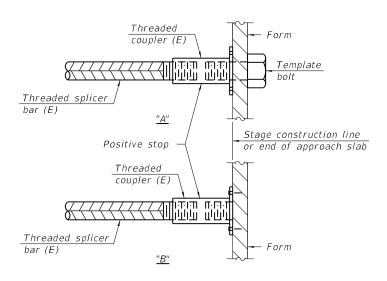
# STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length +  $1\frac{1}{2}$ " + thread length

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

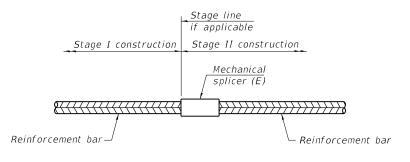
Location	Bar size	No. assemblies required	Minimum Iap length
Deck	#7	4	6'-3"
Approach	#6	8	4'-0''



# 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.

BSD-1

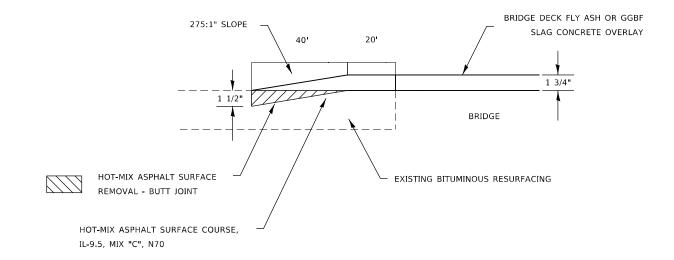
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USER NAME = \$USER\$	DESIGNED	-	T. Walk	REVISED -
	DRAWN	-	T. Walk	REVISED -
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PLOT DATE = \$DATE\$	DATE	-	September 2022	REVISED -

BAR SPLI	CER ASSEI	ИBLY	A۱	ID MEC	HANICAL	SPLICER	DETAILS	F.A.S RTE.	SECT	TON		COUNTY	TOTAL SHEETS	SHEET NO.	
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	3.14. 023-0003											CONTRACT	NO. 74	1B34	
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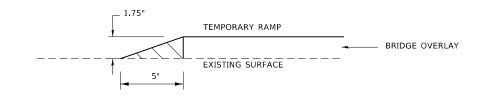
# BUTT JOINT DETAIL

STA 1069+00 TO STA 1069+60



# BUTT JOINT DETAIL

STA 1064+64 TO STA 1065+24



# TEMPORARY RAMP

STA 1064+64 TO STA 1065+24 STA 1069+00 TO STA 1069+60

NOT TO SCALE

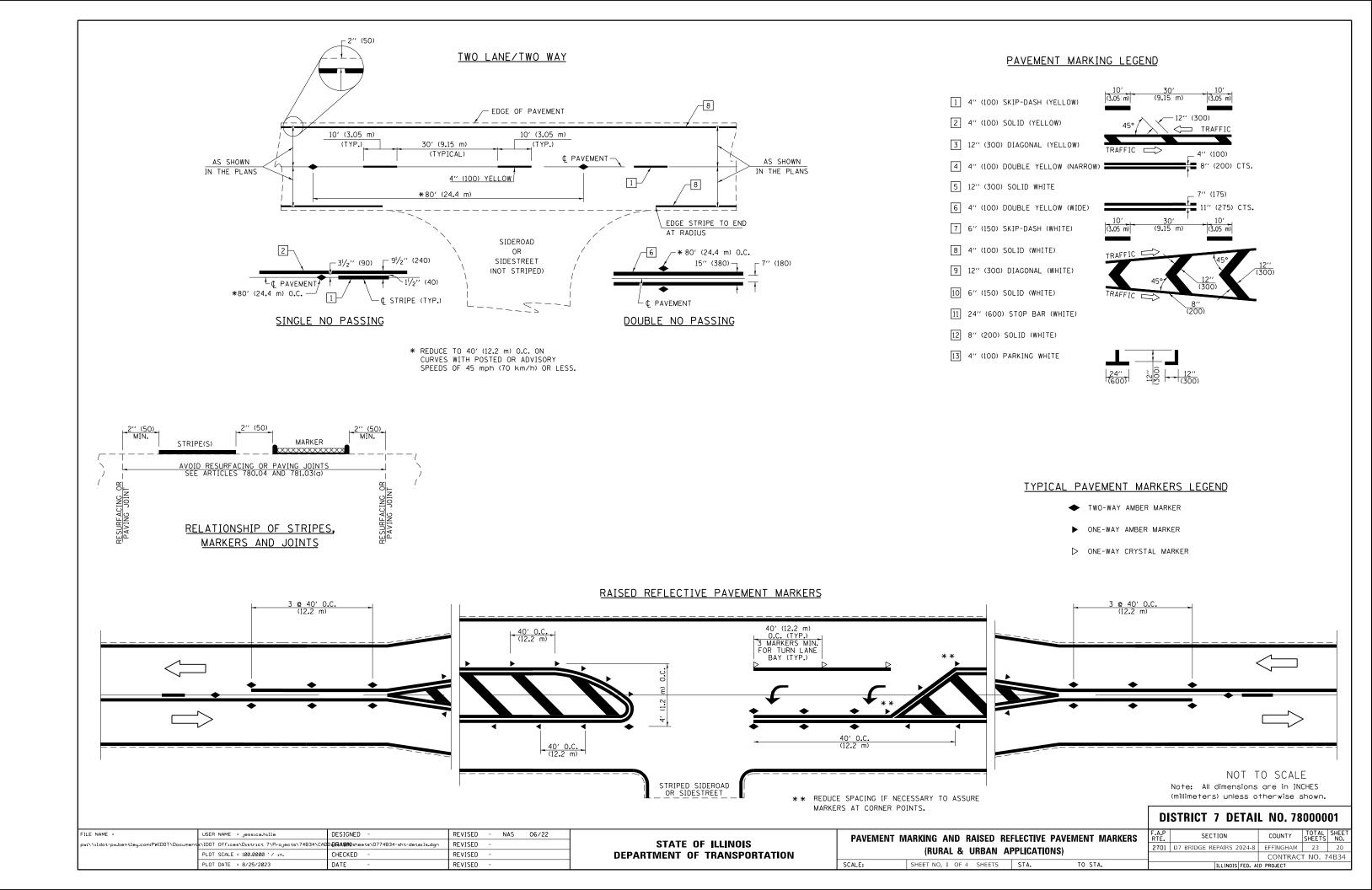
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

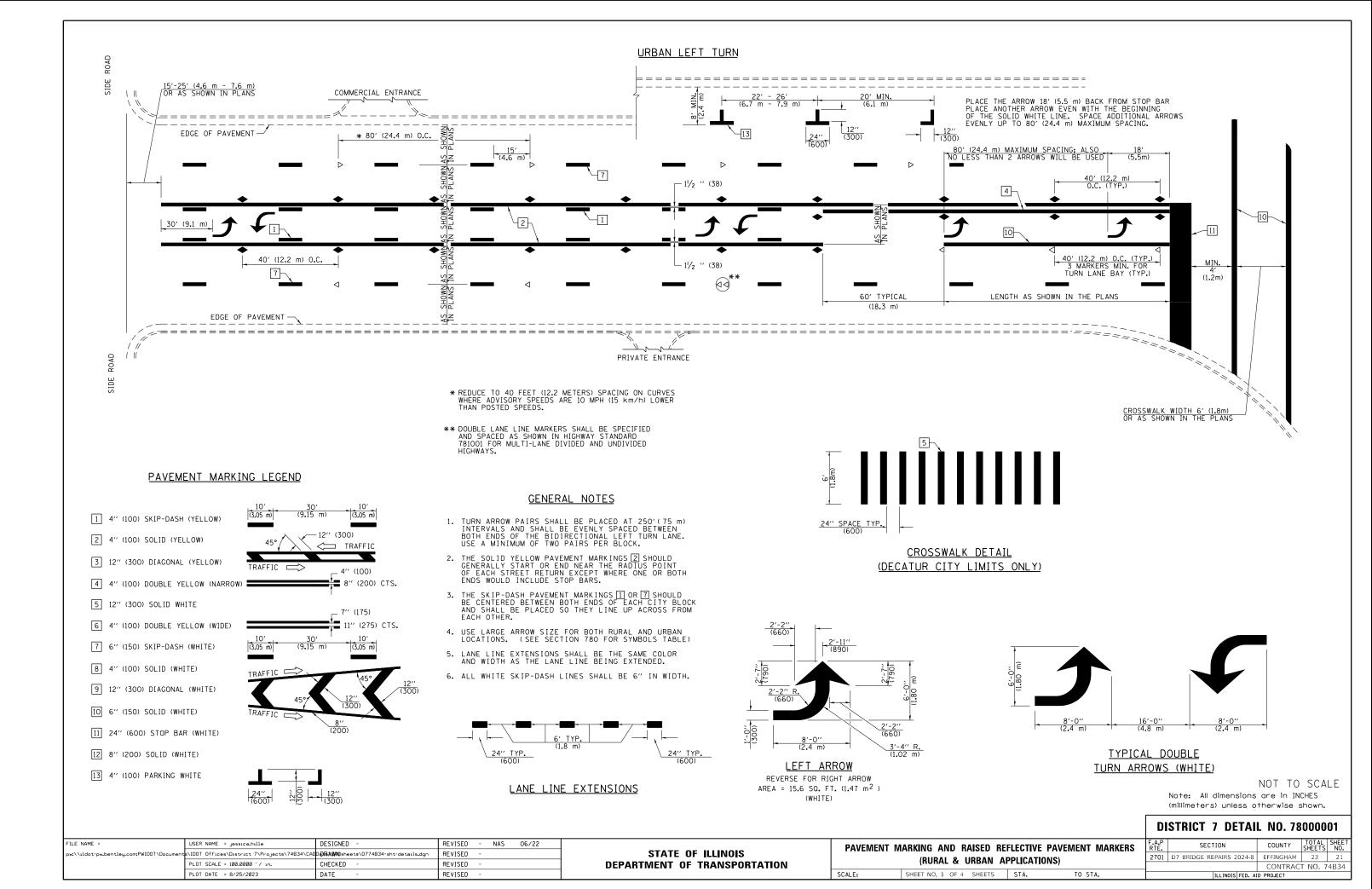
\* D7 BRIDGE REPAIRS 2024-8

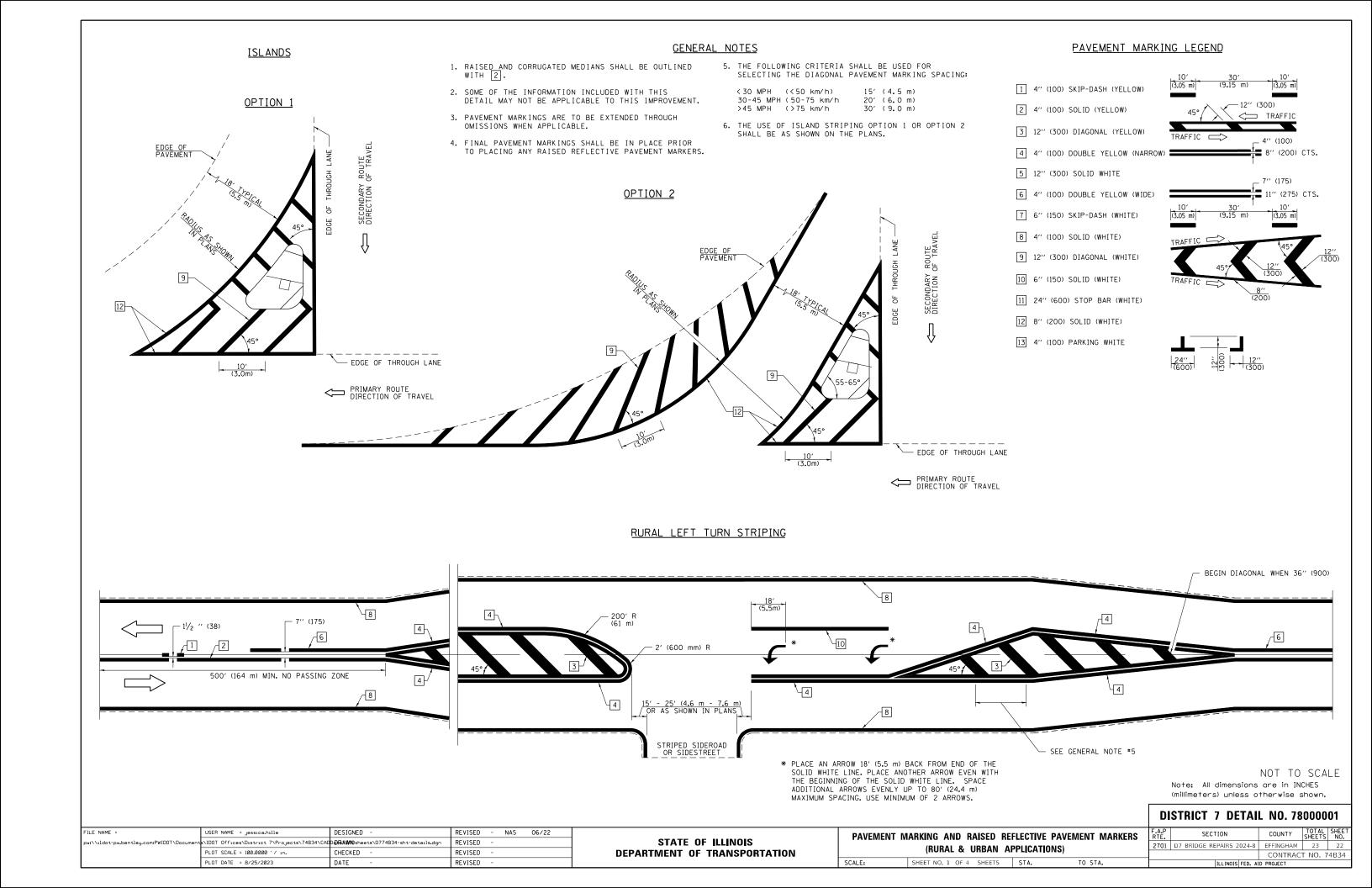
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

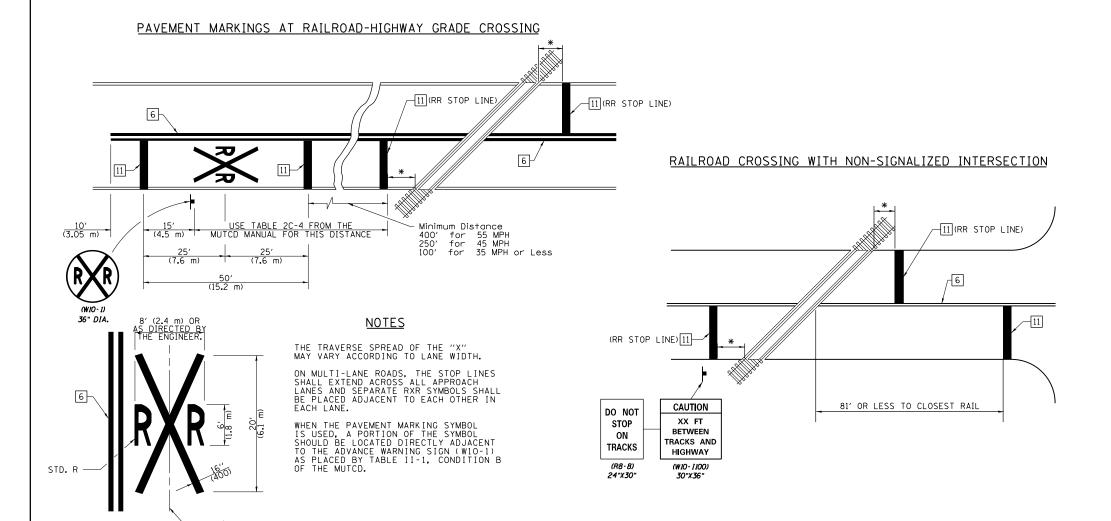
TDANCITION DETAILS							F.A.S RTE	SECTION	TOTAL SHEETS	SHEET NO.	
TRANSITION DETAILS						2701	D7 BRIDGE REPAIRS 2024-	-8 EFFINGHAM	23	19	
									CONTRACT	NO. 7	1B34
SCALE:	SHEET 1	OF	1	SHEETS	STA.	TO STA.		ILLINOIS FED	. AID PROJECT		







# SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING



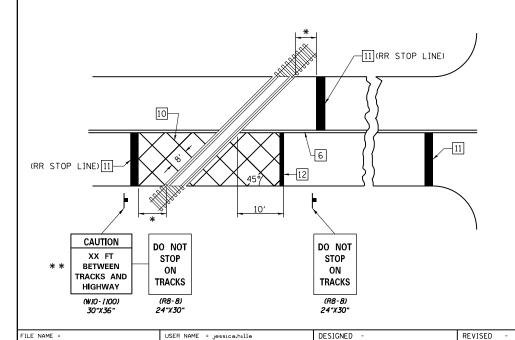
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#### RAILROAD CROSSING WITH INTERCONNECT ONLY



PLOT SCALE = 100.0000 '/ 10.

PLOT DATE = 8/25/2023

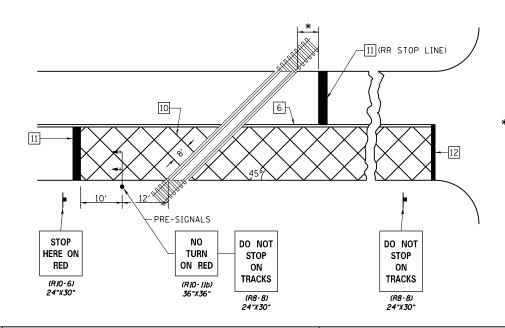
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DATE

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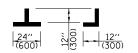




#### PAVEMENT MARKING LEGEND

- 10' 30' 10' (3.05 m) (3.05 m)
- 6 4" (100) DOUBLE YELLOW (WIDE)
- 7 6" (150) SKIP-DASH (WHITE)

  8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE



#### GENERAL NOTES

- 1. 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 PRE-SIGNALS ARE USED.
- 3. WHEN PEDESTRIAN SIGNALS ARE PRESENT WITH INTERCONNECTED SIGNALS, WARNING SIGN WIO-IIOI (18"X24") SHALL BE PLACED NEAR EACH PEDESTRIAN SIGNAL HEAD. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL NOT BE UTILIZED ALONG WITH INTERCONNECTED SIGNALS.

CAUTION

WALK TIME
SHORTENED
WHEN TRAIN
APPROACHES

(W10- [101) 18"X24"

- PLEASE REFER TO THE IDOT BUREAU OF OPERATION MEMO OPS T-06 DATED DECEMBER 1, 2020 FOR ADDITIONAL INFORMATION
- \* 15' FROM NEAR RAIL OR 8' FROM AND PARALLEL TO GATE IF PRESENT
- \*\* WARNING SIGN W10-I100 SHALL BE USED AS AN INTERIM MEASURE AT INTERCONNECTED SIGNAL LOCATIONS WHERE PRE-SIGNALS ARE TO BE INSTALLED IN THE FUTURE. THIS SIGN SHALL BE REMOVED WHEN THE PRE-SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS ARE EXTENDED TO THE INTERSECTION.

NOT TO SCALE

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

DISTRICT	7	DETAIL	NO.	78000001
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STATE OF ILLINOIS	
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PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS
(RURAL & URBAN APPLICATIONS)

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