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STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

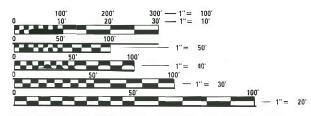
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

FAS ROUTE 1707 (US 40)
SECTION D7 BRIDGE REPAIRS 2020–7
PROJECT STP-C1E9(751)
BRIDGE REPAIRS
CUMBERLAND COUNTY

C-97-055-20

ADT = 1400 (2019)

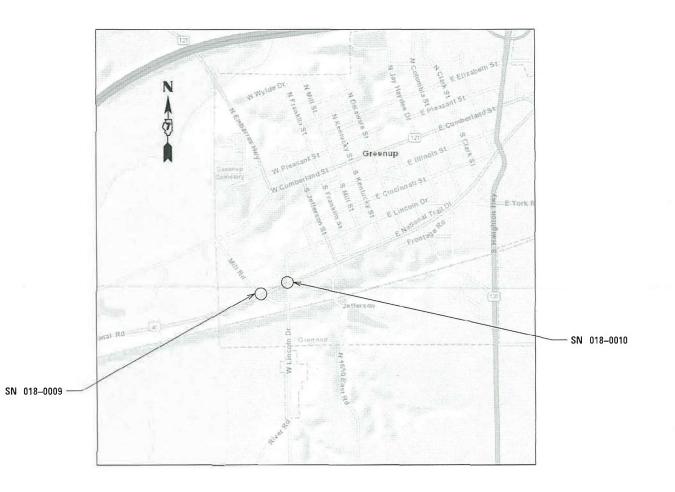


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER TOM RONAN
PROJECT MANAGER JACQUELINE ASHBAUGH
PHONE NUMBER: (217) 342-8320

CONTRACT NO. 74973

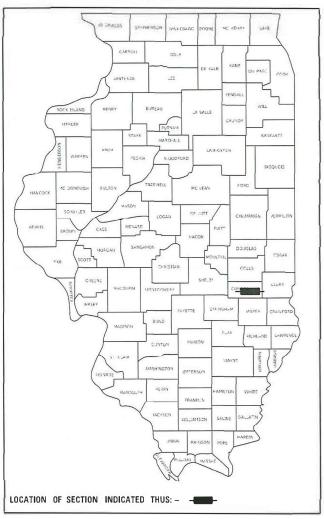


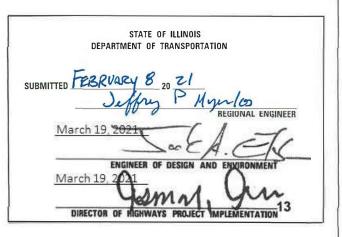
GROSS LENGTH = 902.0 FT. = 0.17 MILE NET LENGTH = 734.0 FT. = 0.14 MILE F.A.S. SECTION COUNTY TOTAL SHEET NO.

1707 D-7 BRIDGE REPAIRS 2020-7 CUMBERLAND 36 1

TILINOIS CONTRACT NO. 74973

D-97-050-20





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REV. - MS

INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	INDEX OF SHEETS & GENERAL NOTES
3-4	SUMMARY OF QUANTITIES
5-6	TYPICAL SECTIONS
7	SCHEDULES OF QUANTITIES
8	DETAILS
9-10	PLAN SHEETS
11-35	BRIDGE PLANS
36	DETOUR SIGN PLAN MAP

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING SHEET NUMBER 36.

STD NO.	DESCRIPTION
000001-08 420401-13 542401-04 606001-07 610001-09 630001-12 631031-17 701001-02 701006-05 701201-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB METAL FLARED END SECTION FOR PIPE CULVERTS CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURBAND GUTTER SHOULDER INLET WITH CURB STEEL PLATE BEAM GUARDRAIL TRAFFIC BARRIER TERMINAL, TYPE 6 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY OFF-ROAD OPERATIONS, 2L, 2W, LESS THAN 15' TO EDGE OF PAVEMENT LANE CLOSURE, 2L, 2W, DAY ONLY
701311-03 701901-08	LANE CLOSURE, 2L, 2W, DAY ONLY TRAFFIC CONTROL DEVICES
701001-02 701006-05	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY OFF-ROAD OPERATIONS, 2L, 2W, LESS THAN 15' TO EDGE OF PAVEMENT
	ON RURAL LOCAL HIGHWAYS

GENERAL NOTES

THIS PROJECT IS LOCATED AT EXISTING STRUCTURE NUMBERS 018-0009 AND 018-0010 ON US ROUTE 40 IN CUMBERLAND COUNTY NEAR GREENUP. THE WORK ON THIS PROJECT CONSISTS OF REMOVING AND REPLACING EXISTING EXPANSION JOINTS, WEARING SURFACE, HMA RESURFACING, GUARDRAIL, REMOVING AND REPLACING APPROACH PAVEMENTS, TRAFFIC CONTROL, PAVEMENT MARKING, AND ANY OTHER WORK NECESSARY TO COMPLETE THIS SECTION. THE WORK WILL BE COMPLETED UTILIZING A ROAD CLOSURE.

MIX DESIG	JN NOTE				
	AC/PG	DESIGN AIR	MIXTURE	FRICTION	QUALITY
APPLICATION		VOIDS	COMPOSITION	AGGREGATE	MANAGEMENT
HMA SURFACE COURSE, MIX "C", N70 2"	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	QC/QA

USER NAME = steffenmk	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -	
PLOT DATE = 2/9/2021	DATE -	REVISED -	

80% FED 20% STATE

80% FED 20% STATE

	CUMMANDY OF QUANTITIES			CON	STRUCTION TYPE	CODE		CUMMANDY OF CHANTITIES			CONS	TRUCTION TYPE (CODE
	SUMMARY OF QUANTITIES		TOTAL	0047 SN 018-0009	0047 SN	Col. 3		SUMMARY OF QUANTITIES		TOTAL	0047 SN	0047 SN	Col. 3
CODE NO	ITEM	UNIT	QUANTITIES	018-0009	SN 018-0010		CODE NO	ITEM	UNIT	QUANTITIES	018-0009	SN 018-0010	
							50300260	BRIDGE DECK GROOVING	SQ YD	1461	728	733	
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	8	8									
							50300300	PROTECTIVE COAT	SQ YD	1646	821	825	
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	18	18									
							50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	179.4	89.7	89.7	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	234	126	108								
							50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	81420	41780	39640	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	520	280	240								
							52000110	PREFORMED JOINT STRIP SEAL	FOOT	143	74	69	
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX	TON	58	31	27								
	"C", N70						52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	14	14		
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH	SQ YD	292	153	139		52100520	ANCHOR BOLTS, 1"	EACH	28	28		
	SLAB												
							54213447	END SECTIONS 12"	EACH	2	2		
44000100	PAVEMENT REMOVAL	SQ YD	219	115	104								
							59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	6	6		
44000300	CURB REMOVAL	FOOT	43	43									
							60100945	PIPE DRAINS 12"	F00T	168	168		
44004250	PAVED SHOULDER REMOVAL	SQ YD	19	19									
							61000050	CONCRETE THRUST BLOCKS	EACH	4	4		
50102400	CONCRETE REMOVAL	CU YD	11.4	5.7	5.7								
							61000335	TYPE G INLET BOX, STANDARD 610001	EACH	2	2		
50157300	PROTECTIVE SHIELD	SO YD	330	170	160								
							4 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT	FOOT	980	429	551	
50300225	CONCRETE STRUCTURES	CU YD	53.2	30.8	22.4			POSTS					
				23.7				TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	4	4	

USER NAME = steffenmk	DESIGNED -	REVISED -
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PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 2/9/2021	DATE -	REVISED -

SCALE:

							F.A.S. RTE	S	ECTION		COUNTY	TOTAL SHEETS	SHEET NO.
	SUM	MA	KY	OF QU	ANTITIES		1707	D-7 BRIDGE	REPAIRS	2020-7	CUMBERLAND	36	3
											CONTRACT	NO. 74	1973
SHEET 1	. (OF :	2	SHEETS	STA.	TO STA.			ILLINOI	S FED. A	ID PROJECT		

 80% FED

 20% STATE
 20% STATE

	CHAMADY OF CHANTITIES			CON	STRUCTION TYPE	CODE					CONS	TRUCTION TYPE	CODE
	SUMMARY OF QUANTITIES	1	TOTAL	0047 SN	0047 SN	Col. 3		SUMMARY OF QUANTITIES		TOTAL	0047 SN	0047 SN 018-0010	Col. 3
CODE NO	ITEM	UNIT	QUANTITIES	018-0009	018-0010		CODE NO	ITEM	UNIT	OUANTITIES	018-0009	018-0010	
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL)	EACH	6	2	4								
	TANGENT						X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR	L SUM	1	0.5	0.5	
								21					
63200310	GUARDRAIL REMOVAL	FOOT	980	429	551								
							Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	14	14		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	3	3								
							Z0004552	APPROACH SLAB REMOVAL	SQ YD	427	214	213	
67100100	MOBILIZATION	L SUM	1	0.5	0.5								
							Z0012110	BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE	SO YD	1117	552	565	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	0.5	0.5			OVERLAY, 2 1/4"					
	701201												
							Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SO YD	1117	552	565	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	14	14								
							Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO	SQ FT	48	48		
72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	6	2	4			OR LESS THAN 5 INCHES)					
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2911	1455	1456		Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SO YD	27	13	14	
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8	4	4		Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO YD	62	34	28	
78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	32	16	16		Z0016702	DETOUR SIGNING	L SUM	1	0.5	0.5	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	8	4	4								
X5041800	CONCRETE ANCHORS	EACH	16	9	7								
x6060505	CONCRETE CURB (SPECIAL)	FOOT	43	43									
x6330900	VERTICAL ADJUSTMENT OF GUARDRAIL	FOOT	50	50									
* SPE	CIALTY ITEM												

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PLOT DATE = 2/9/2021	DATE -	REVISED -

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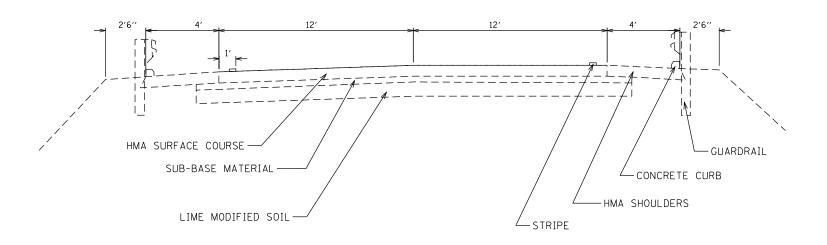
STATE	OF ILLINOIS
DEPARTMENT O	F TRANSPORTATION

SCALE:

						F.A.S. SECTION				COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES					1707	D-7 BRIDGE REPA	AIRS 2	020-7	CUMBERLAND	36	4	
										CONTRACT	NO. 74	1973
SHEET 2	OF	2	SHEETS	STA.	TO STA.		ILI	LINOIS	FED. AI	D PROJECT		

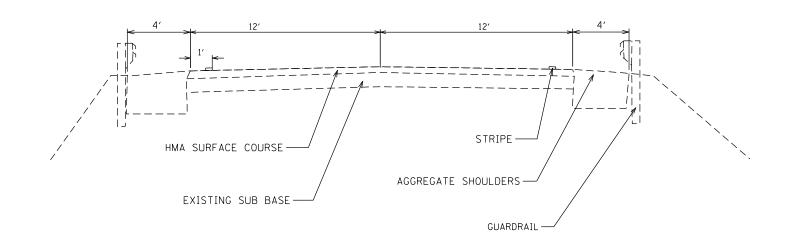
EXISTING TYPICAL CROSS SECTION

STA. 771+73.74 TO STA. 772+18.74



EXISTING TYPICAL CROSS SECTION

TA. 774+95.49 TO 775+40.49 TA. 777+04.85 TO 777+49.85 TA. 780+24.35 TO 780+69.35



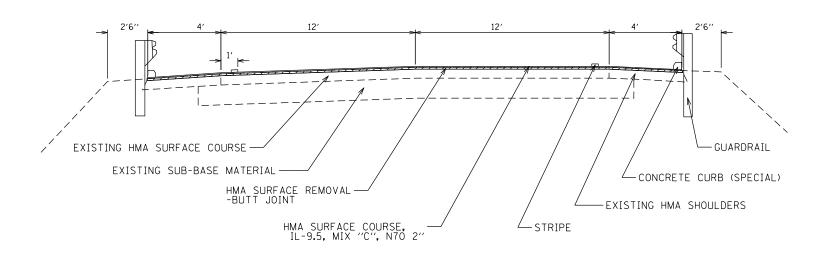
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PLOT DATE = 2/9/2021	DATE -	REVISED -

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

F.A.S. SECTION COUNTY TOT RTE. SECTION COUNTY SHE	
TYPICAL CROSS SECTIONS 1707 D-7 BRIDGE REPAIRS 2020-7 CUMBERLAND 3	5
CONTRACT NO	74973
HEET 1 OF 2 SHEETS STA. TO STA. ILLINOIS FED. AID PROJECT	

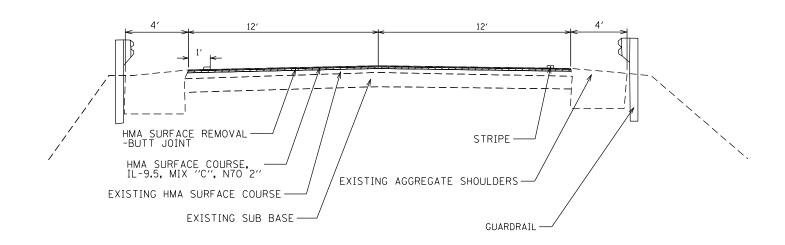
PROPOSED TYPICAL CROSS SECTION

STA. 771+73.74 TO STA. 772+18.74



PROPOSED TYPICAL CROSS SECTION

STA. 774+95.49 TO 775+40.49 STA. 777+04.85 TO 777+49.85 STA. 780+24.35 TO 780+69.35



USER NAME = steffenmk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 2/9/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

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TYPICAL CROSS SECTIONS				1707	D-7 BRIDGE REPAIRS	2020-7	CUMBERLAND	36	6			
										CONTRACT	NO. 74	1973
SHEET	2	OF	2	SHEETS	STA.	TO STA.		ILLINO	S FED. A	ID PROJECT		

USER NAME = steffenmk	DESIGNED -	REVISED -
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PLOT DATE = 2/9/2021	DATE -	REVISED -

CURB OUTLET SCHEDULE										
LOCATION	TYPE G INLET BOX	PIPE DRAINS 12"	CONCRETE ANCHORS	CONCRETE THRUST BLOCKS	METAL END SECTIONS					
SN 018-0009	EACH	FOOT	EACH	EACH	EACH					
LEFT										
772+26.24	1.0	84	9.0	4.0	1.0					
RIGHT										
772+32.74	1.0	68	7.0	4.0	1.0					
T. S. T. L. S.										
TOTALS	2.0	152.0	16.0	8.0	2.0					

GUARDRAIL	ADJU	STMENT	AND	REMOVAL	SCHEDULE
				VERTICAL ADJUSTMENT OF GUARDRAIL	GUARDRAIL REMOVAL
LOC	CATIC	N			
				FOOT	FOOT
	18-0	009	_		
	LEFT	771.72	7.4	25.0	
771+48.74 771+73.74	TO	771+73. 772+79.		25.0	106.0
774+21.49	TO	775+36.			115.0
	IGHT	//5±30.	49		115.0
771+48.74	TO	771+73.	7/1	25.0	
771+73.74	TO	772+92.		25.0	119.0
774+34.49	TO	775+23.			89.0
771131113		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			03.0
SN C	18-0	010			
1	LEFT				
777+32.85	TO	778+19.	85		87.0
779+63.35	TO	781+62.	35		199.0
R	IGHT				
776+81.85	TO	778+10.	85		129.0
779+54.35	TO	780+90.	35		136.0
TO	OTALS	<u> </u>	-	50.0	980.0
				00.0	000.0

STATE OF ILLINOIS

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		RE	SURFACING	SCHEDU	ILE			
LOCATI	ON.	LENGTH	HOT-MIX ASPHALT SURFACE COURSE. MIX "C" N70	BRIDGE APPROACH PAVEMENT CONNECTOR PCC	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	CONCRETE CURB (SPECIAL)	BITUMINOUS MATERIALS (TACK COAT)	CONTROLLED LOW-STRENGTH MATERIAL
200,111	LOCATION		TON	SQ YD	SQ YD	FOOT	POUND	CU YD
SN 018-0	009	FOOT						
771+73.74 TO	772+18.74	45.0	17.9		160.0		72	
772+18.74 TO	772+40.24	21.5		76.4				
772+40.24 TO	774+73.99	233.75	BRIDGE					
774+73.99 TO	774+95.49	21.5		76.4				
774+95.49 TO	775+40.49	45.00	13.4		120.0		54	
CURB								
772+18.74 TO	772+33.74					15.0		
772+18.74 TO	772+46.74					28.0		
UNDER D	RAIN							
//2+5/.50 10	//2+58.50							3.1
772+74.00 TO	772+75.00							2.5
SN 018-0	010							
777+04.85 TO	777+49.85	45.0	13.4		120.0		54	
777+49.85 TO	777+69.35	19.5		69.3				
777+69.35 TO	780+04.85	235.5	BRIDGE					
780+04.85 TO	780+24.35	19.5		69.3				
780+24.35 TO	780+69.35	45.0	13.4		120.0		54	
TOTAL YELLO		1120.0						
TOTAL YELLO TOTAL WHIT TOTAL	E PAINT	1120.0 1791.0	58.0	292.0	520.0	43.0	234.0	6.0

REMOVAL SCHEDULE								
LOCATION		APPROACH SLAB REMOVAL	PAVED SHOULDER REMOVAL	CURB REMOVAL	PAVEMENT REMOVAL	TREE REMOVEAL6 TO 15 UNIT	TREE REMOVAL OVER 15 UNITS	
			SQ YD	SQ YD	FOOT	SQ YD	UNIT	UNIT
SN 0	18-	0009						
772+18.74	TO	772+40.24				57.3		
772+40.24	TO	772+70.24	106.70					
772+70.24	ТО	774+43.99	BRIDGE					
774+43.99	TO	774+73.99	106.70					
774+73.99	TO	774+95.49				57.3		
	EFT							
772 + 18.74	ТО			6.7	15.0			
	IGH							
772 + 18.74	TO	772+46.74		12.4	28.0			
TREE								
	+59						8.0	
772	+42	2.50						18.0
SN 0	10	0010						
777+56.00								
	TO	777+76.00	106.7			52	-	_
777+76.00	TO TO	778+00.50 779+79.50	106.7					
778+00.50 779+79.50	TO	779+79.50	BRIDGE 106.7					
779+79.50	TO	780+28.00	100.7			52		
//3T/4.30	10	700+20.00				JZ		_
TO	TAI	LS	427.0	19.0	43.0	219.0	8.0	18.0
			-	-	-			

		GU	JARDRAI	L SCHED	ULE		
			TRAFFIC BARRIER TERMINAL, TYPE 6	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGET	TERMINAL MARKER - DIRECT APPLY	GUARDRAIL REFLECTORS, TYPE A
	CATI		EACH	FOOT	EACH	EACH	EACH
	LEFT	0009	EACH	FUUT	EACH	EACH	EACH
771+66.30	TO	772+16.30		50			4
772+16.30	TO	772+53.20		- 50			
774+56.20	ТО	774+93.00	1				
774+93.00	TO	775+18.00		25			4
775+18.00	ТО	775+68.00			1	1	
R	IGH						
771+70.50	TO	772+33.00		62.5			4
772+33.00	TO	772+69.80					
774+72.80	TO	775+09.60	1				
775+09.60	TO	775+34.60		25			4
774+34.60	TO	775+84.60			1	1	
		0010					
	LEFT						
776+71.80	TO	777+21.80			1	1	
777+21.80	TO	777+46.80		25			4
777+46.80	ТО	777+83.60	1				
779+88.60	ТО	780+25.50	1				
780+25.50	TO	781+00.50		75			4
781+00.50	TO	781+50.50			1	1	
	IGH						
776+83.50	TO	777+33.50			1	1	
777+33.50 777+58.50	TO	777+58.50		25			4
777+58.50	TO	777+95.40	1				
780+00.40	TO	780+37.20	1				
780+37.20	TO	781+12.20		75			4
781+12.20	ТО	781+62.20			1	1	
т,	T / I	c	6.0	362.5	6.0	6.0	32.0
10	IATC	LO	6.0	362.5	0.0	0.0	32.0

SCHEDULE OF QUANTITIES

TO STA.

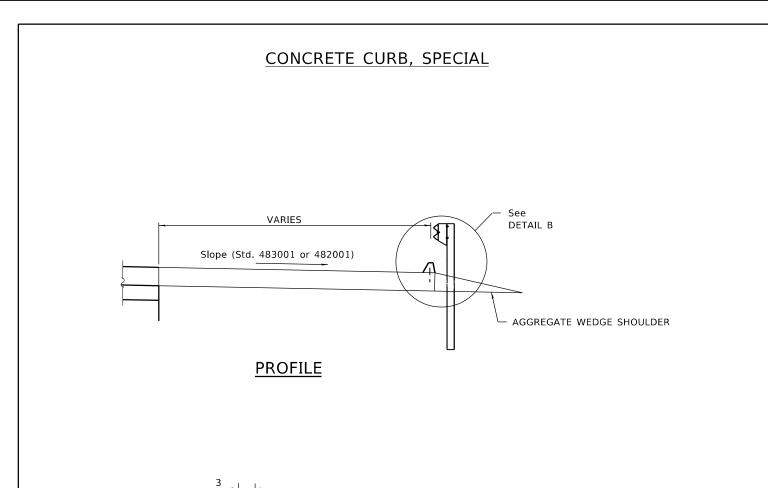
SHEET OF SHEETS STA.

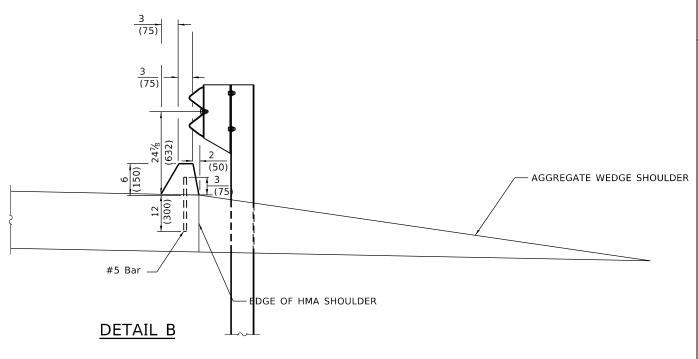
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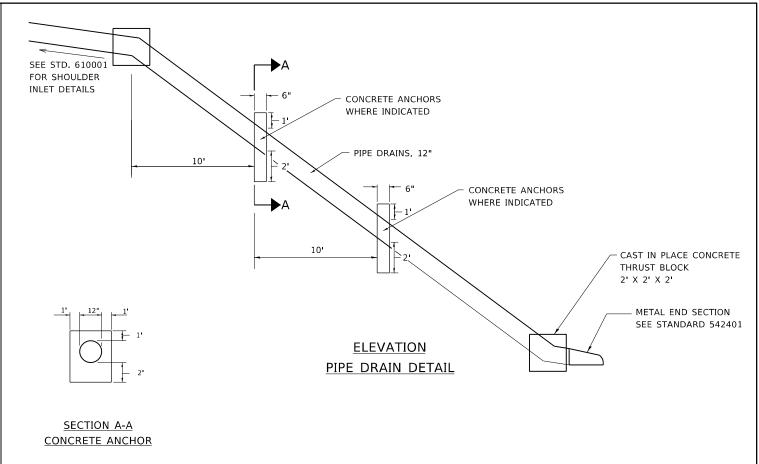
F.A.S. RTE. SECTION COUNTY TOTAL SHEETS NO.

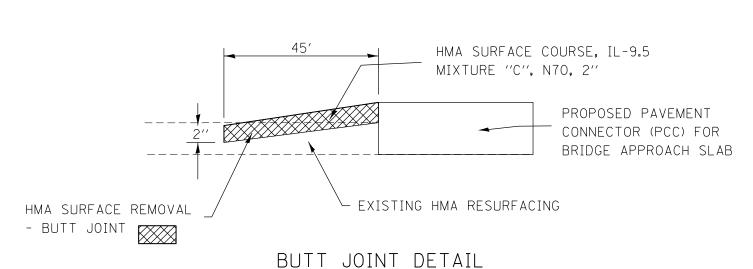
1707 D-7 BRIDGE REPAIRS 2020-7 CUMBERLAND 36 7

CONTRACT NO. 74973



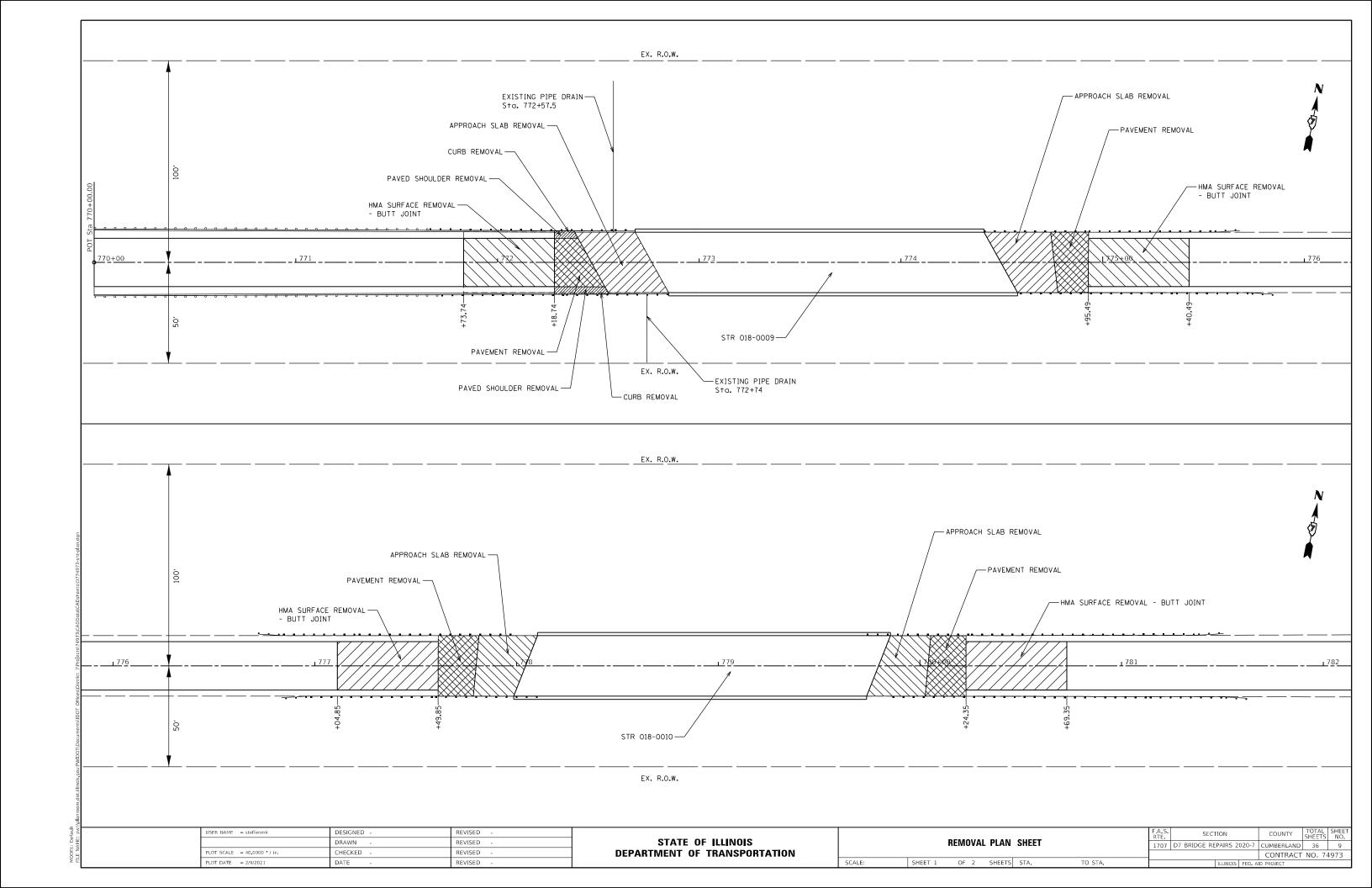


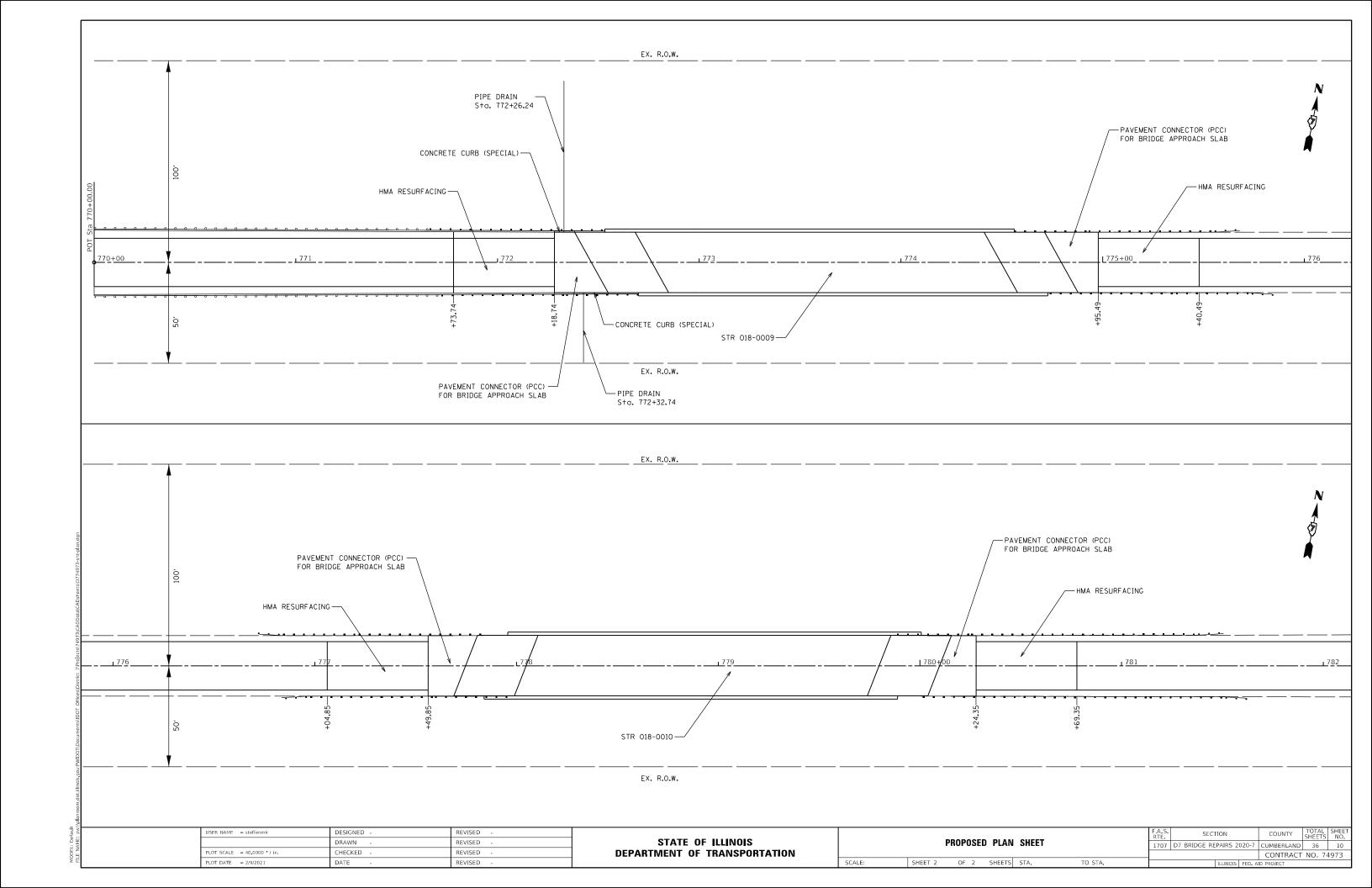




STA 771+73.74 TO STA 772+18.74 STA 774+95.49 TO STA 775+40.49 STA 777+04.85 TO STA 777+49.85 STA 780+24.35 TO STA 780+69.35

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





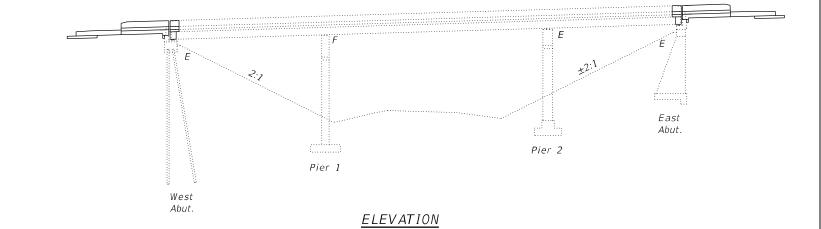
Existing Structure: SN 018-0009 was originally built as FA Route 12, Section FX-VBR in 1950. In 1990, the bridge was shortened, the superstructure replaced with 3-span concrete deck on steel I-beams, and the substructure modified. The structure carries US-40 over Mill Road. The bridge length is 173'-9" back to back abutments and the width is 33'-2" out to out. The proposed project consists of bridge deck repair, new concrete overlay, new deck expansion devices, new elastomeric bearings, new concrete approach slabs, and substructure structural repair of concrete.

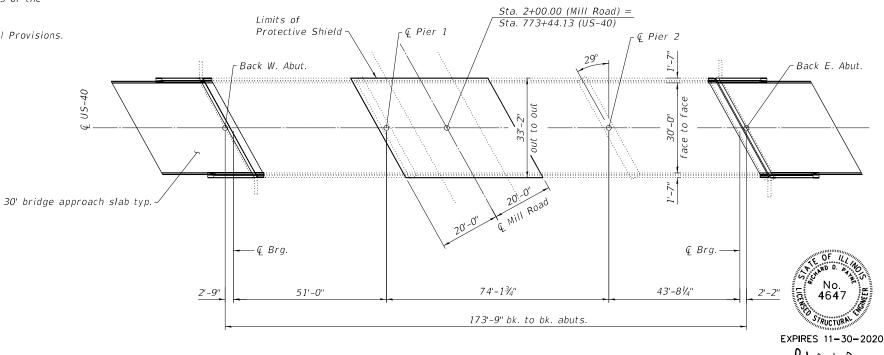
Traffic to be detoured.

No salvage.

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. 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.
- 3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- 4. Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.
- 5. 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.
- 6. Prior to pouring the new concrete deck and end diaphragms, all heavy and loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- 7. All structural steel shall conform to AASHTO Classification M-270 Gr. 36 unless otherwise noted.
- 8. Protective coat shall be applied to areas of Concrete Superstructure consisting of the front face and top of the parapet and wingwall and the top surface of the expansion joint reconstruction. Protective coat shall also be applied to the new overlay area, and areas of Concrete Superstructure (Approach Slab) including the front faces and tops of the curbs.
- 9. Synthetic fibers should be added to the Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 21/4". See Special Provisions.





ESCA
CONSULTANTS, INC.
THE ESTRECTIVAL EMPRESS

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 ESCA PROJECT NO. 1343.02
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 - PR
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 PLOT SCALE
 = 0.1667 ¹ / in.
 DRAWN
 - NHC
 07/20
 REVISED

 PLOT DATE
 = 7/23/2020
 CHECKED
 - ELH
 07/20
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION AND GENERAL NOTES
SN 018-0009

SHEET 1 OF 14 SHEETS

PLAN

F.A.S. SECTION COUNTY TOTAL SHEETS NO. 1707 D7 BRIDGE REPAIRS 2020-7 CUMBERLAND 36 11 CONTRACT NO. 74973

`SIGNATURE 07-23-2020 DATE

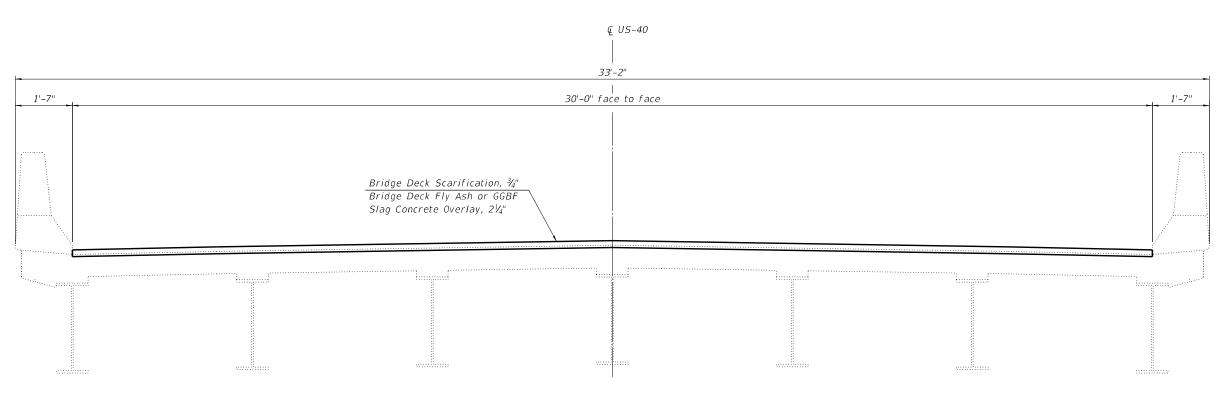
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TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	5.7
Concrete Superstructure	Cu. Yd.	23.7
Reinforcement Bars, Epoxy Coated	Pound	41780
Preformed Joint Strip Seal	Foot	74
Bridge Deck Scarification, ¾"	Sq. Yd.	<i>552</i>
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 21/4"	Sq. Yd.	<i>552</i>
Bridge Deck Grooving	Sq. Yd.	728
Protective Coat	Sq. Yd.	821
Structural Repair of Concrete (Depth ≤5")	Sq. Ft.	48
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	13
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	34
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Anchor Bolts, 1"	Each	28
Concrete Superstructure (Approach Slab)	Cu. Yd.	89.7
Concrete Structures	Cu. Yd.	30.8
Protective Shield	Sq. Yd.	170

STRUCTURE INDEX OF SHEETS

STATE THE EXTENSION OF STREET	
General Plan & Elevation and General Notes	Sheet No. 1 of 14
Bill of Material & List of Drawings	Sheet No. 2 of 14
Bridge Deck Patching	Sheet No. 3 of 14
Expansion Joint and Diaphragm Replacement Details	Sheet No. 4-6 of 14
Preformed Joint Strip Seal	Sheet No. 7 of 14
Bridge Approach Slab Details	Sheet No. 8-9 of 14
West Abutment Bearing Replacement Details	Sheet No. 10 of 14
East Abutment Bearing Replacement Details	Sheet No. 11 of 14
Concrete Repairs-West Abutment	Sheet No. 12 of 14
Concrete Repairs-East Abutment	Sheet No. 13 of 14
Concrete Repairs-Pier 2	Sheet No. 14 of 14

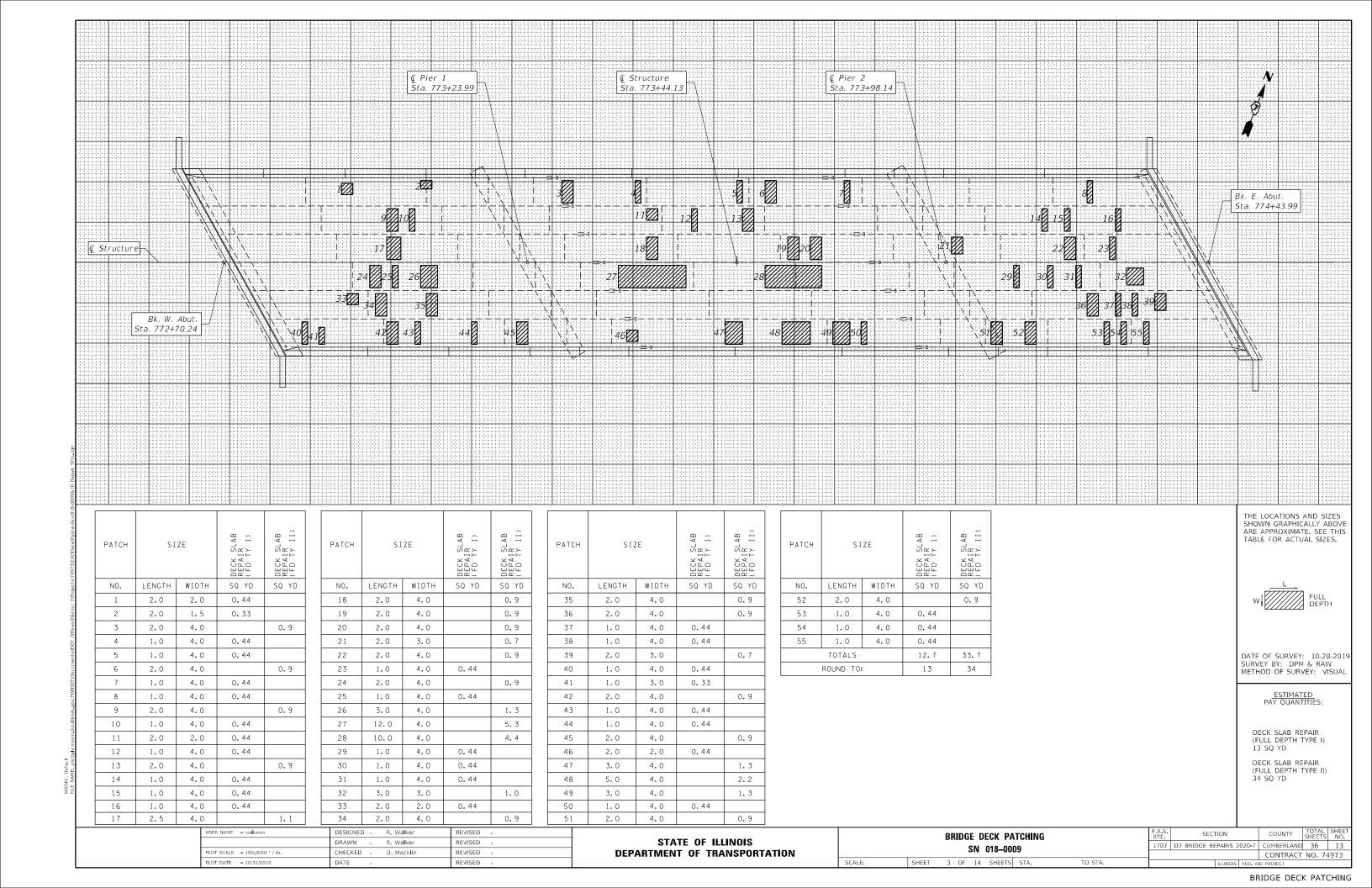


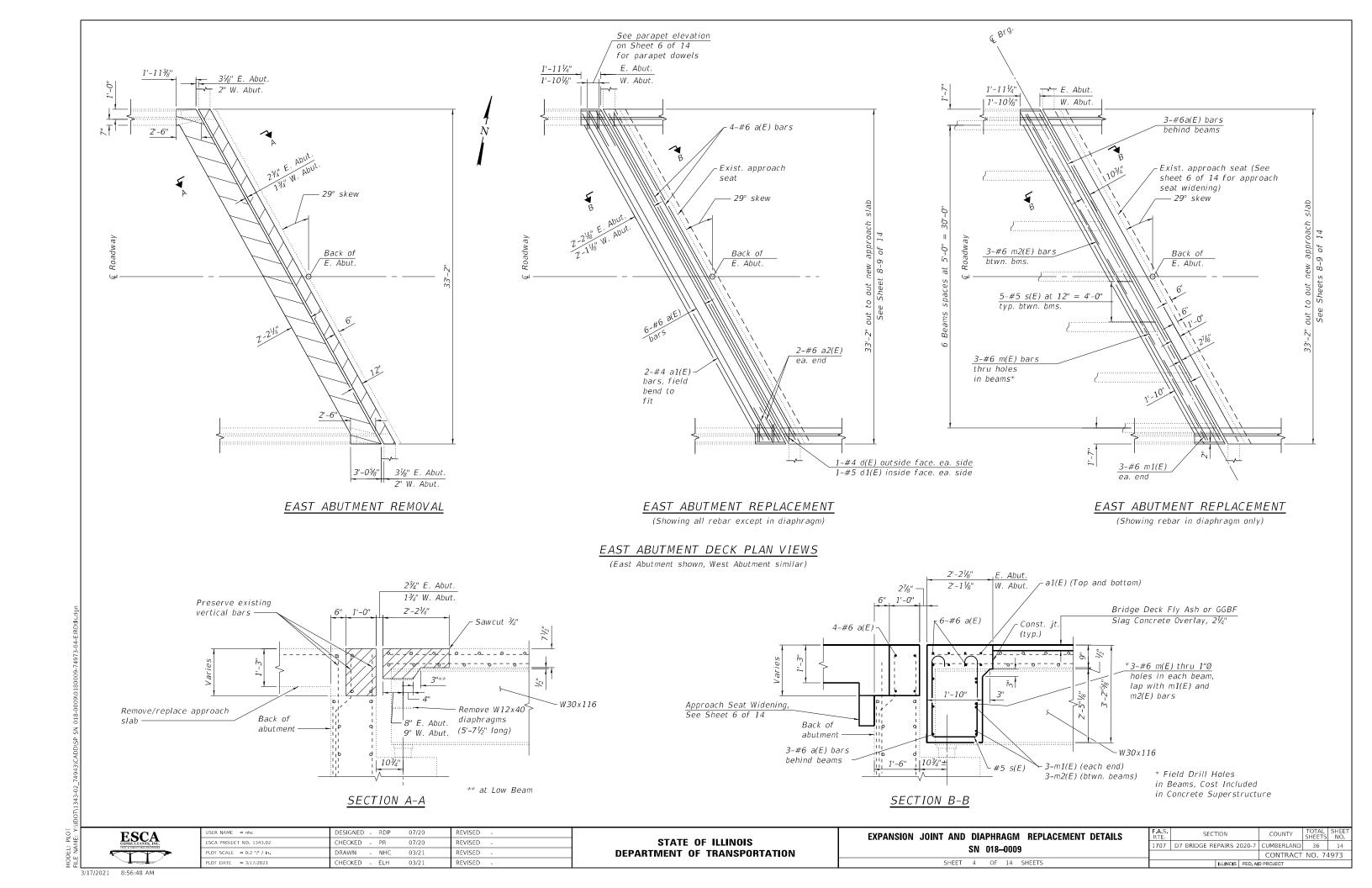
TYPICAL SECTION (Showing Deck Scarification and Overlay)

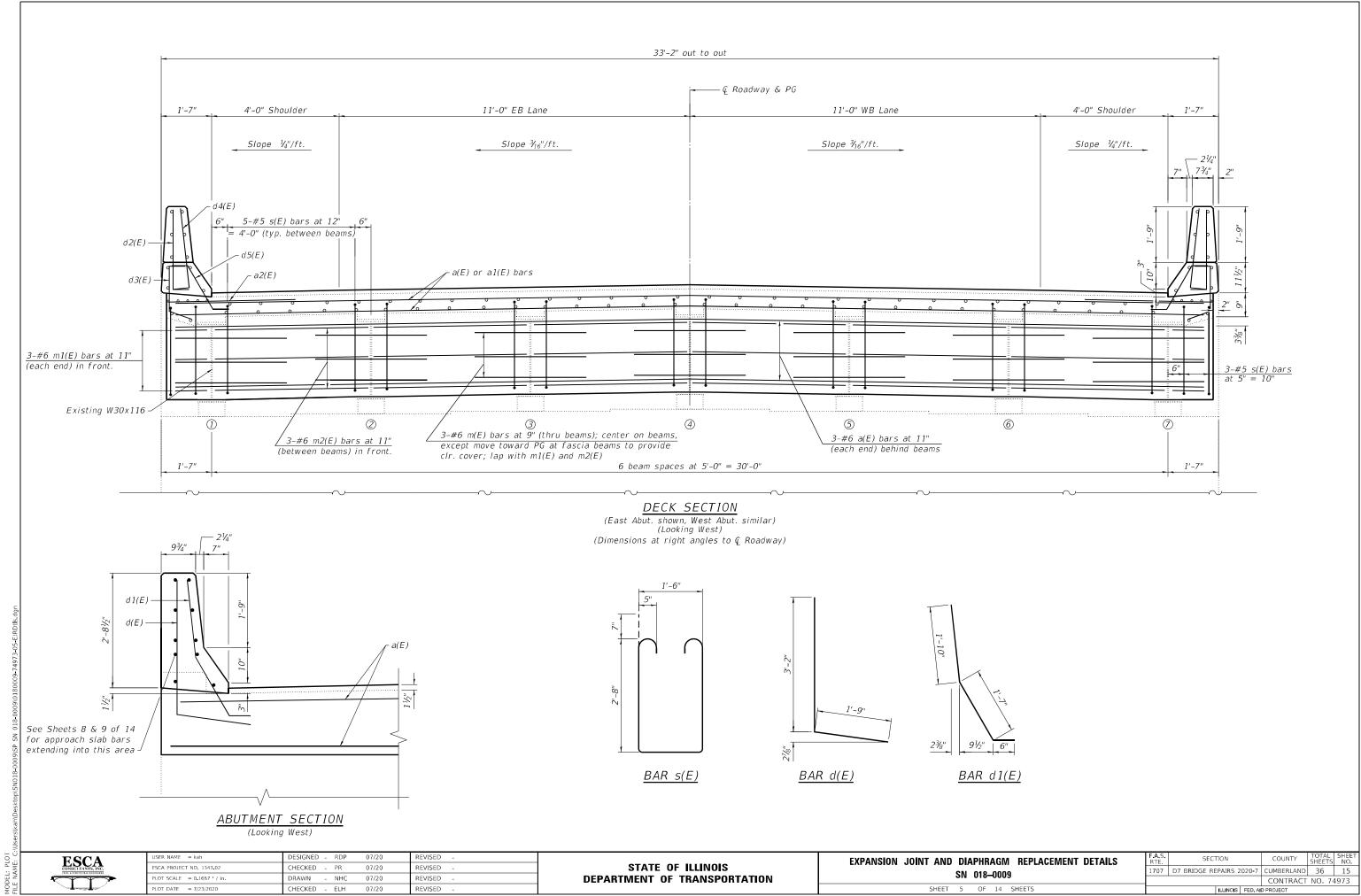
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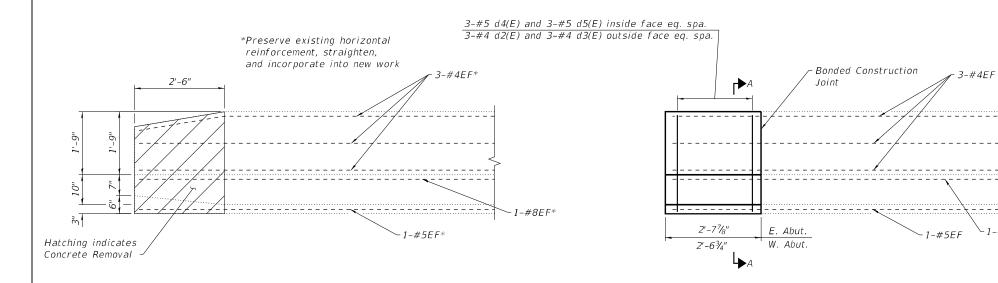
BILL OF MATERIAL & LIST OF DRAWINGS	F.A.S. RTE	SECTION	(
SN 018-0009		D7 BRIDGE REPAIRS 2020-7	CUI
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CHEET 2 OF 14 CHEETS			



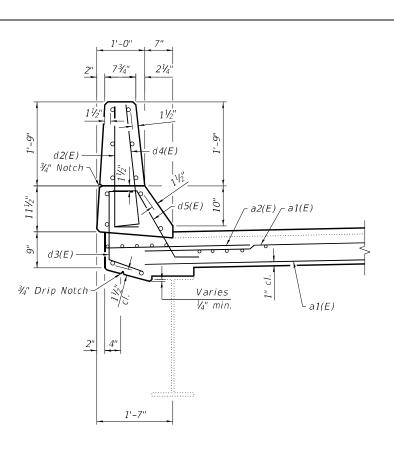




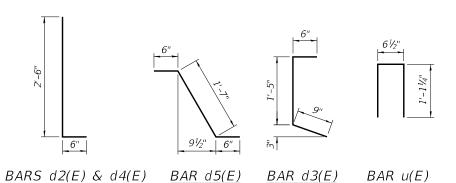
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INSIDE ELEVATION OF PARAPET (Showing New Work)

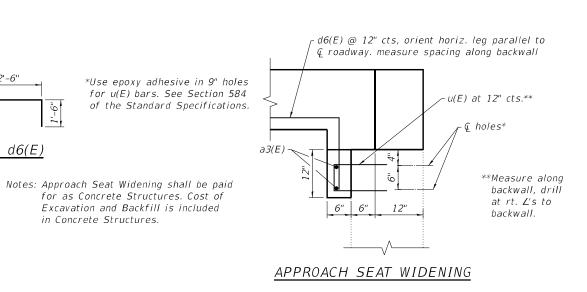


SECTION A-A



INSIDE ELEVATION OF EXISTING PARAPET

(Showing Removal)



-1-#8EF

BILL OF MATERIAL (2 Abutments)

(Z / todelire res)					
Bar	No.	Size	Length	Shape	
a(E)	26	#6	37'-0"		
a1(E)	4	#4	37'-0"		
a2(E)	8	#6	4'-0"		
a3(E)	4	#5	37'-6"		
d(E)	4	#4	4'-11"	L	
d1(E)	4	#5	3'-11"		
d2(E)	12	#4	3'-0"		
d3(E)	12	#4	2'-8"		
d4(E)	12	#5	3'-0"		
d5(E)	12	#5	2'-7"	_	
d6(E)	76	#4	4'-0"		
m(E)	42	#6	4'-0"		
m1(E)	12	#6	1'-1"		
m2(E) 36 #6		#6	5'-6"		
s(E)	72	#5	8'-0"	u	
u(E)	76	#4	2'-9"	Ш	
	e Remova		Cu. Yd.	5.7	
	e Structi		Cu. Yd.	1.4	
	e Supers		Cu. Yd.	18.1	
	cement B	ars,	Pound	3420	
Ероху С	oated				

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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

Excavation and Backfill is included

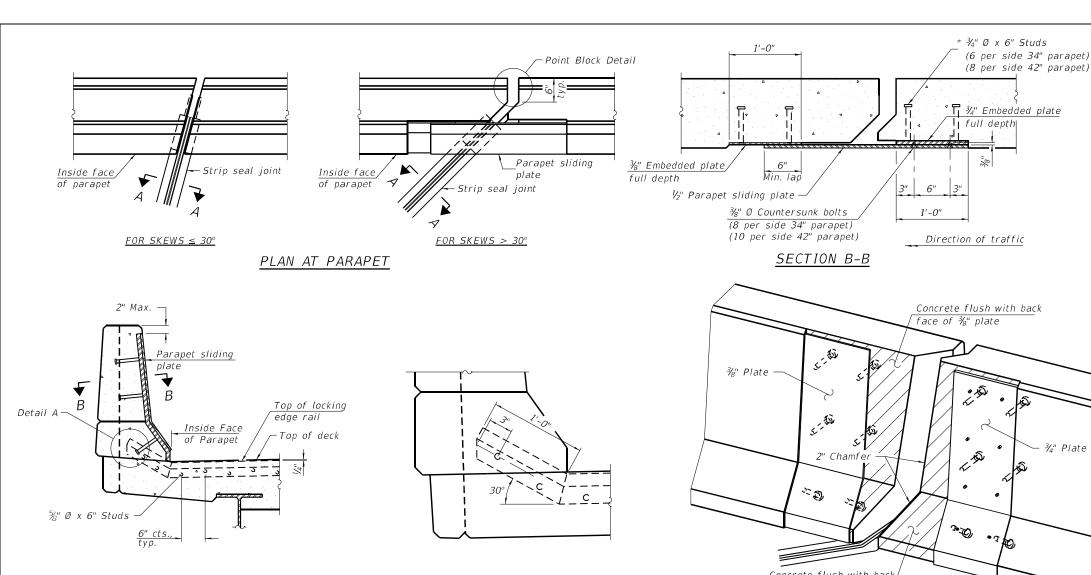
in Concrete Structures.

2'-6"

 $BAR \ d6(E)$

SECTION COUNTY **EXPANSION JOINT AND DIAPHRAGM REPLACEMENT DETAILS** 1707 D7 BRIDGE REPAIRS 2020-7 CUMBERLAND 36 16 SN 018-0009 CONTRACT NO. 74973 SHEET 6 OF 14 SHEETS

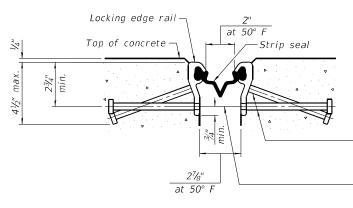
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TRIMETRIC VIEW

Concrete flush with back face of 3/4" plate

(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

ELEVATION AT PARAPET (Skews > 30° shown. Skews ≤ 30° similar

except as shown in plan view.)

off flush with the plates after concrete is set.

Locking edge railat 50° F Top of concrete —Strip seal * $\frac{1}{8}$ " Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

 $\frac{3}{6}$ " ϕ threaded rods in $\frac{1}{6}$ " ϕ holes at ± 4 '-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed

DETAIL A

SHOWING WELDED RAIL JOINT

ROLLED WELDED RAIL (EXTRUDED) RAIL

LOCKING EDGE RAILS

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

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip

are not permitted. The gland shall be sized for a maximum

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

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 $\frac{3}{6}$ and sealed with a suitable sealant; however, any

Cost of parapet sliding plates, embedded plates, and

anchorage studs included with Preformed Joint Strip Seal. 34" F-shape barrier shown, 42" F-shape similar as noted. 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

on the rolled locking edge rail. If the Contractor elects to use

to the concrete opening, not the joint opening, and are based

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.

rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge

The manufacturer's recommended installation methods

according to the manufacturer's recommendation.

seal shall match the configuration of the locking edge

rated movement of 4 inches.

shall be followed.

rail splice detail.

rails. Open or "webbed" strip seal gland configurations

LOCKING EDGE RAIL SPLICE

1707

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	74

SECTION A-A

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

EJ-SS 8-11-17



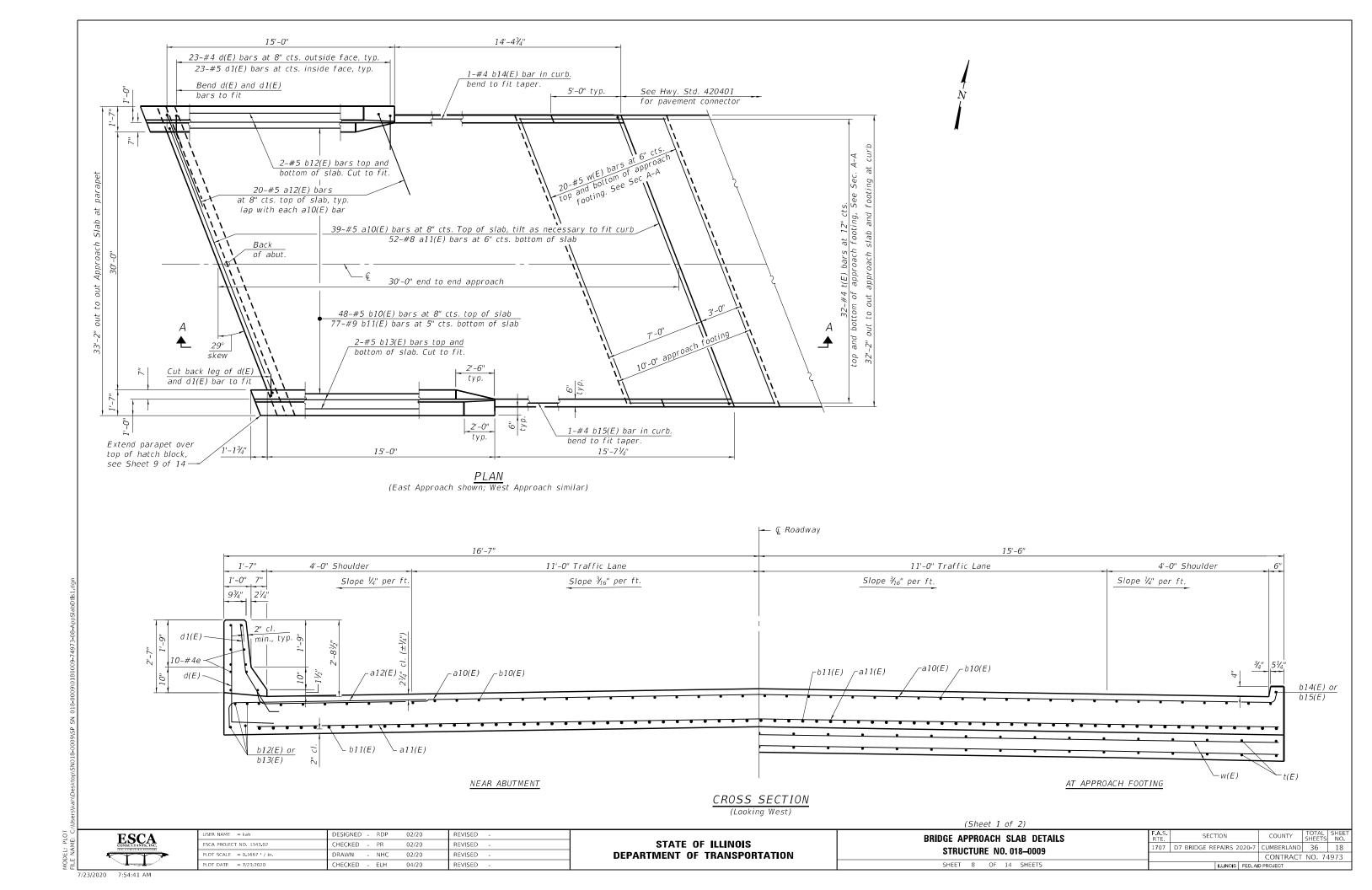
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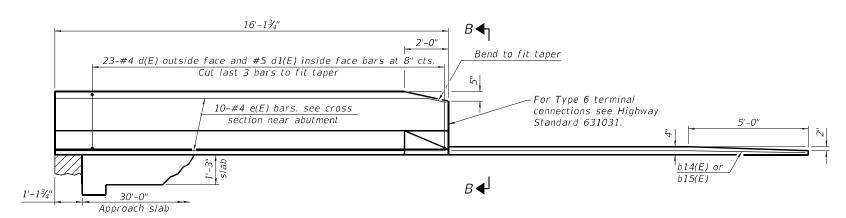
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

PR					TRIP SEAL 18–0009	
	SHEET	7	OF	14	SHEETS	

SECT	TION		COUNTY	TOTAL SHEETS	SHEET NO.
D7 BRIDGE RE	PAIRS 2	020-7	CUMBERLAND	36	17
			CONTRACT	NO. 74	1973

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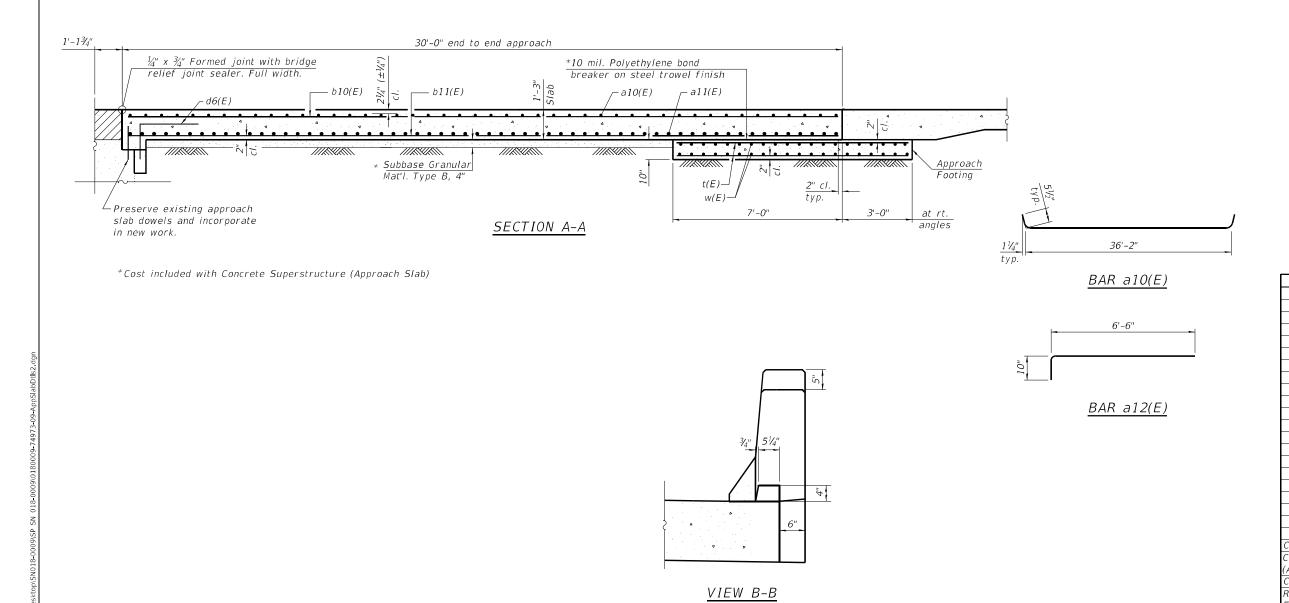




Notes:

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 (Qmax) = 2.0 ksf. Cost of excavation for approach footing included with Concrete Structures. See Sheet No. 5 of 14 for bars d(E) and d1(E) bending details.

INSIDE ELEVATION OF PARAPET AND CURB



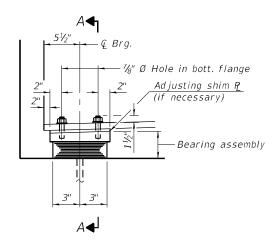
TWO APPROACHES BILL OF MATERIAL

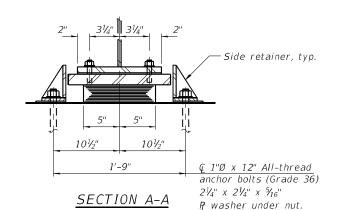
Bar	No.	Size	Length	Shape
a10(E)	78	#5	37'-1"	
a11(E)	104	#8	36'-5"	
a12(E)	60	#5	7'-4"	
b10(E)	96	#5	29'-8"	
b11(E)	154	#9	29'-8"	
b12(E)	8	#5	15'-6"	
b13(E)	8	#5	14'-8"	
b14(E)	8 2 2	#4	14'-1"	
b15(E)	2	#4	15'-3"	
d(E)	92 92	#4	4'-11" 3'-11"	L
d1(E)	92	#5	3'-11"	
e(E)	40	#4	15'-9"	
t(E)	128	#4	11'-1"	
w(E)	80	#5	35'-0"	
Concrete			Cu. Yd.	5.6
`oncrete	Superstr	ucture	Cu. Yd.	89.7
Approach				
Concrete			Cu. Yd.	21.9
Reinforcement Bars, Fpoxy Coated			Pound	37350
. ,				

(Sheet 2 of 2)



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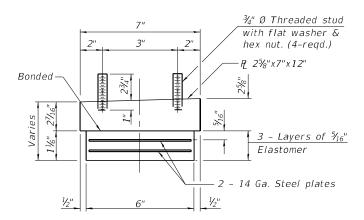




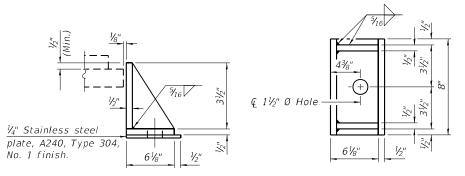
ELEVATION AT WEST ABUT.

(Looking North)

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY WEST ABUT. (Looking North)



SIDE RETAINER

(14 Required see Beam Layout) Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BEAM REACTIONS

R₽	(K)	19.0
RŁ	(K)	26.0
Imp.	(K)	7.3
R (Tot	al) (K)	52.3

Diaphragm removal should be performed prior to drilling holes. Cost included with Concrete Superstructure. New shim plates and connection bolts are included with

Elastomeric Bearing Assembly, Type I.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Min. jack capacity = 30 tons. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer- approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi).

The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

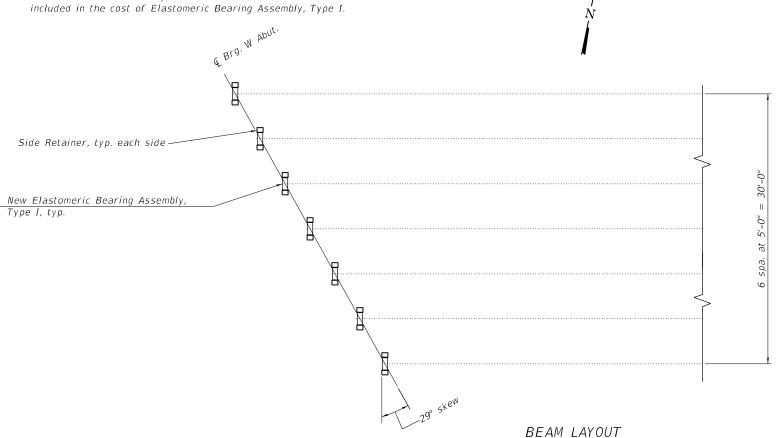
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of stainless steel plates and side retainers shall be

Exist. Bearing Assembly At 2 locations, burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost Included with Jack and Remove Existing Bearings.



BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Anchor Bolts, 1"	Each	14

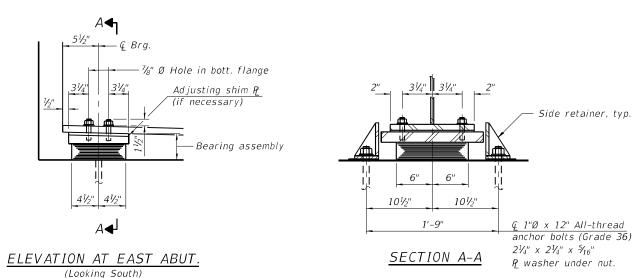


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PLOT DATE = 7/23/2020	CHECKED - ELH	07/20	REVISED -	

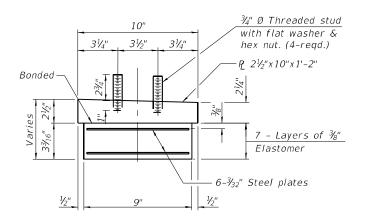
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

WEST ABUTMENT BEARING REPLACEMENT DETAILS	F.A.S. RTE	S
SN 018-0009	1707	D7 BRIDGE
3N 010-0003		
SHEET 10 OF 14 SHEETS		

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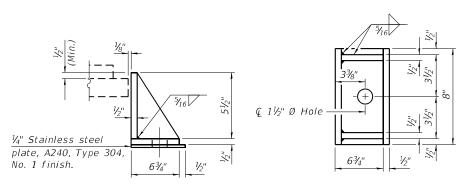


TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY EAST ABUT.

(Looking South)



SIDE RETAINER

(14 Required see Beam Layout) Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BEAM REACTIONS

R₽	(K)	15.4
R_{ℓ}	(K)	24.9
Imp.	(K)	7.3
R (Total)	(K)	47.6

Notes:

Diaphragm removal should be performed prior to drilling holes. Cost included with Concrete Superstructure. New shim plates and connection bolts are included with Elastomeric Bearing Assembly, Type I.

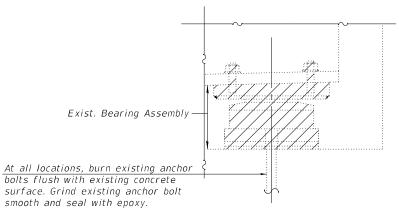
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 30 tons.

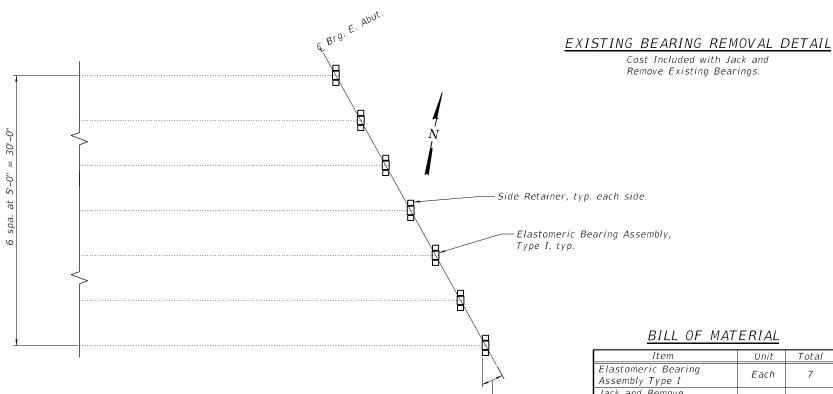
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer- approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi).

The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of stainless steel plates and side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.





BEAM LAYOUT

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Anchor Bolts, 1"	Each	14

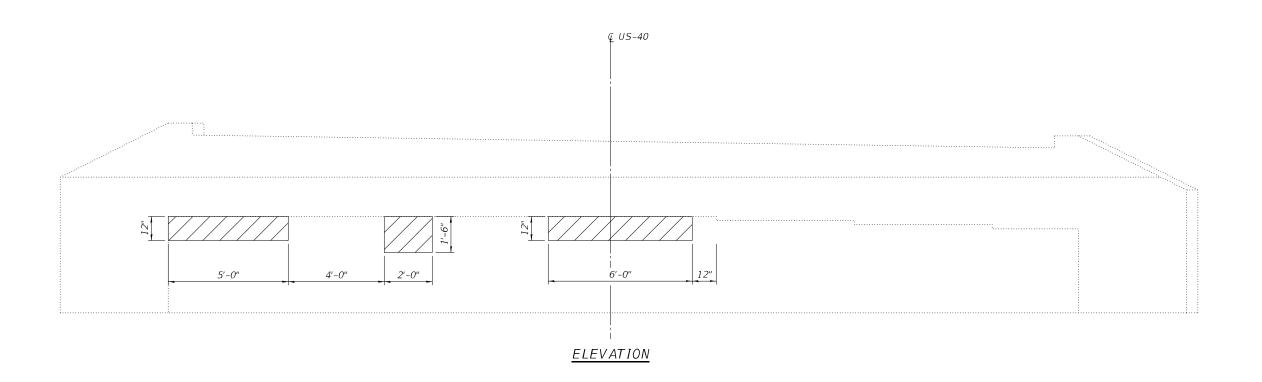
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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** EAST ABUTMENT BEARING REPLACEMENT DETAILS SN 018-0009 SHEET 11 OF 14 SHEETS

–29° skew

SECTION COUNTY 1707 D7 BRIDGE REPAIRS 2020-7 CUMBERLAND 36 21 CONTRACT NO. 74973

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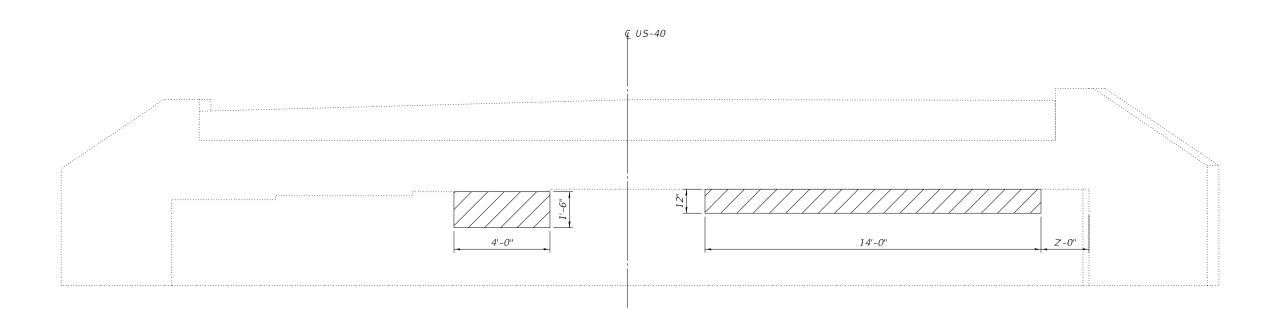
BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete ≤ 5"	Sq. Ft.	14



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CONCRETE REPAIRS—WEST ABUTMENT	F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SN 018-0009		D7 BRIDGE REPAIRS 2020-7	CUMBERLAND	36	22
			CONTRACT	NO. 74	973
CHEET 13 OF 14 CHEETC					



ELEVATION

BILL OF MATERIAL

	Ur	iit	Quantity				
Structural	Repair o	f Con	crete	≤ 5"	Sq.	Ft.	20

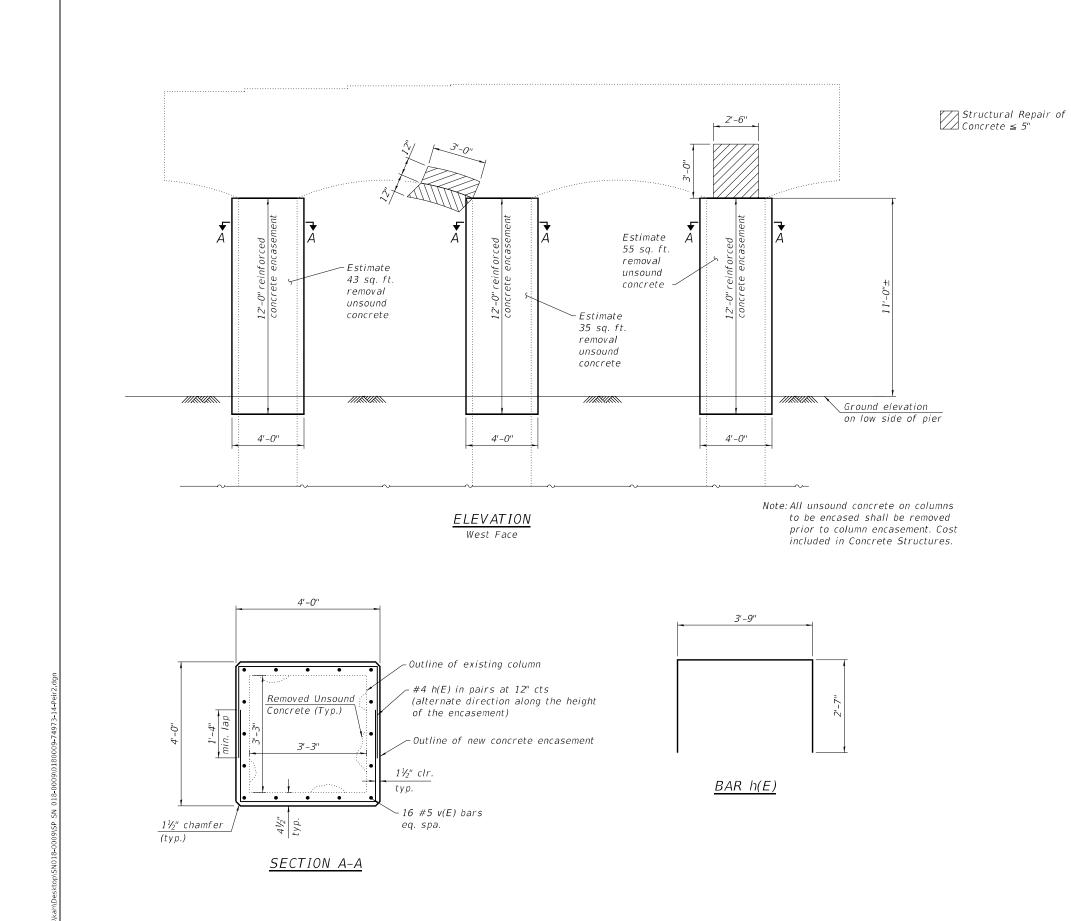
Structural Repair of Concrete ≤ 5"

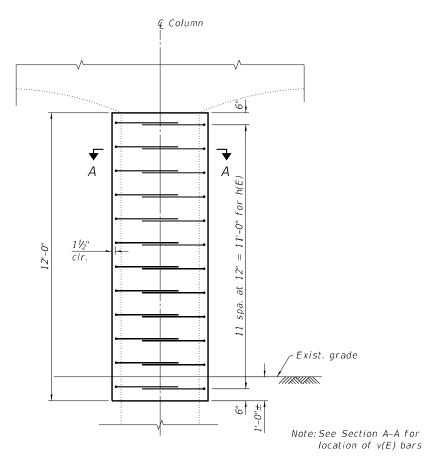


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	SHEET	13	OF	14	SHEETS	

F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE REPAIRS 2020-7	CUMBERLAND	36	23
		CONTRACT	NO. 74	1973
	ILLINOIS FED. AI	D PROJECT		





COLUMN ENCASEMENT DETAIL

(Typ. at 3 columns)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
	7,00.	3120	Lengen	Silape	
h(E)	72 #4		8'-11"		
v(E)	48	#5	11'-6"		
Structu	ral Repai	ir	Sg. Ft.	14	
of Conc	rete ≤ 5'	ı	39.70		
Concret	e Structi	Cu. Yd.	7.5		
Reinfor	cement B	Pound	1010		
Ероху С	Coated	1 Odila	1010		



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PLOT DATE = 7/23/2020	CHECKED	-	ELH	04/20	REVISED	-

CONCRETE REPAIRS-PIER 2						F.A.S. RTE		
SN 018-0009					1707	D7	BRID	
SHEET	14	OF	14	SHEETS				

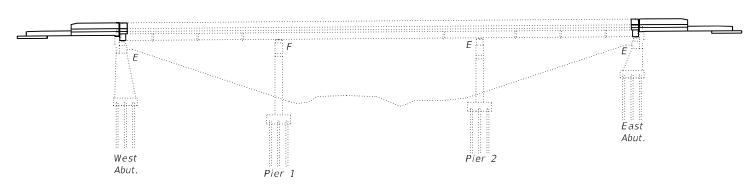
Existing Structure: SN 018-0010 was originally built as FA Route 12, Section FX-VBF in 1950. In 1990, the superstructure was replaced with a 3-span concrete deck on steel I-beams, and the substructure was modified. The structure carries US-40 over Lincoln Drive. The bridge length is 175'-6" back to back abutments and the width is 33'-2" out to out. The proposed project consists of bridge deck repair, new concrete overlay, new deck expansion devices, new concrete approach slabs, and substructure concrete repairs.

Traffic to be detoured.

No salvage.

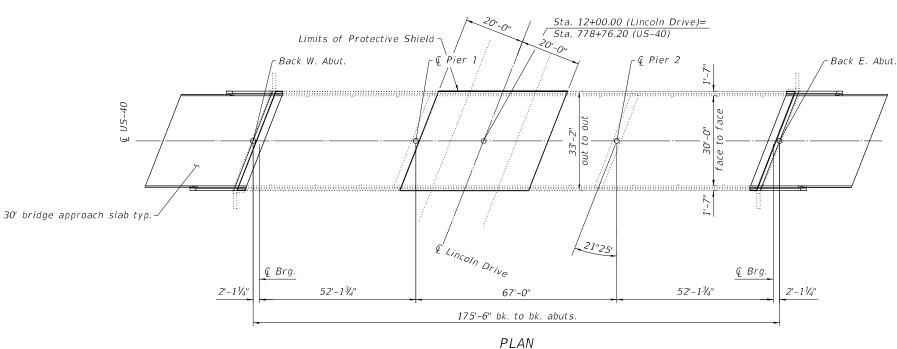
GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. 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.
- 3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- 4. Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.
- 5. 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.
- 6. Prior to pouring the new concrete deck and end diaphragms, all heavy and loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- 7. Protective coat shall be applied to areas of Concrete Superstructures consisting of the front face and top of the parapet and wingwall and the top surface of the expansion joint reconstruction. Protective coat shall also be applied to the new overlay area, and areas of Concrete Superstructure (Approach Slab) including the front faces and tops of
- 8. Synthetic fibers should be added to the Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 21/4". See Special Provisions.



ELEVATION







ESCA
CONSULTANTS, INC.
TIVE A PERIOD PLANE.

TO SERVICE A

USER NAME = kah	DESIGNED - RDP 07/20	REVISED -
ESCA PROJECT NO. 1343.02	CHECKED - PR 07/20	REVISED -
PLOT SCALE = 0.1667 ' / in.	DRAWN - NHC 07/20	REVISED -
PLOT DATE = 7/23/2020	CHECKED - ELH 07/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION AND GENERAL NOTES

SN 018-0010

SHEET 1 OF 11 SHEETS

 FA.S. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL SHEETS
 SHEETS NO.

 1707
 D7 BRIDGE REPAIRS 2020-7
 CUMBERLAND
 36
 25

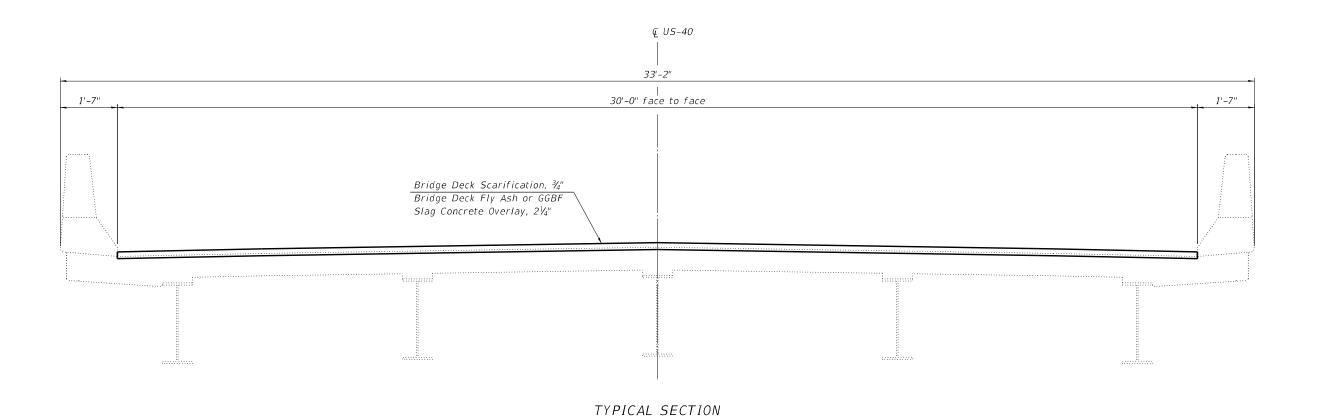
 CONTRACT
 NO.
 74973

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	5.7
Concrete Superstructure	Cu. Yd.	22.0
Reinforcement Bars, Epoxy Coated	Pound	39640
Preformed Joint Strip Seal	Foot	69
Bridge Deck Scarification, ¾"	Sq. Yd.	565
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 21/4"	Sq. Yd.	565
Bridge Deck Grooving	Sq. Yd.	733
Protective Coat	Sq. Yd.	825
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	14
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	28
Conrete Superstructure (Approach Slab)	Cu. Yd.	89.7
Concrete Structures	Cu. Yd.	22.4
Protective Shield	Sq. Yd.	160

STRUCTURE INDEX OF SHEETS

General Plan & Elevation and General Notes Sheet No. 1 of 11 Bill of Material & List of Drawings Sheet No. 2 of 11 Bridge Deck Patching Sheet No. 3 of 11 Expansion Joint and Diaphragm Replacement Details Sheet No. 4-6 of 11 Preformed Joint Strip Seal Sheet No. 7 of 11 Bridge Approach Slab Details Sheet No. 8-9 of 11 Concrete Repairs-West Abutment Sheet No. 10 of 11 Sheet No. 11 of 11 Concrete Repairs-East Abutment



ESCA CONSULTANTS, INC. STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

(Showing Deck Scarification and Overlay)

BILL OF MATERIAL & LIST OF DRAWINGS
SN 018-0010

SHEET 2 OF 11 SHEETS

 F.A.S. RTE.
 SECTION
 COUNTY COUNTY
 TOTAL SHEETS NO.
 SHEETS NO.

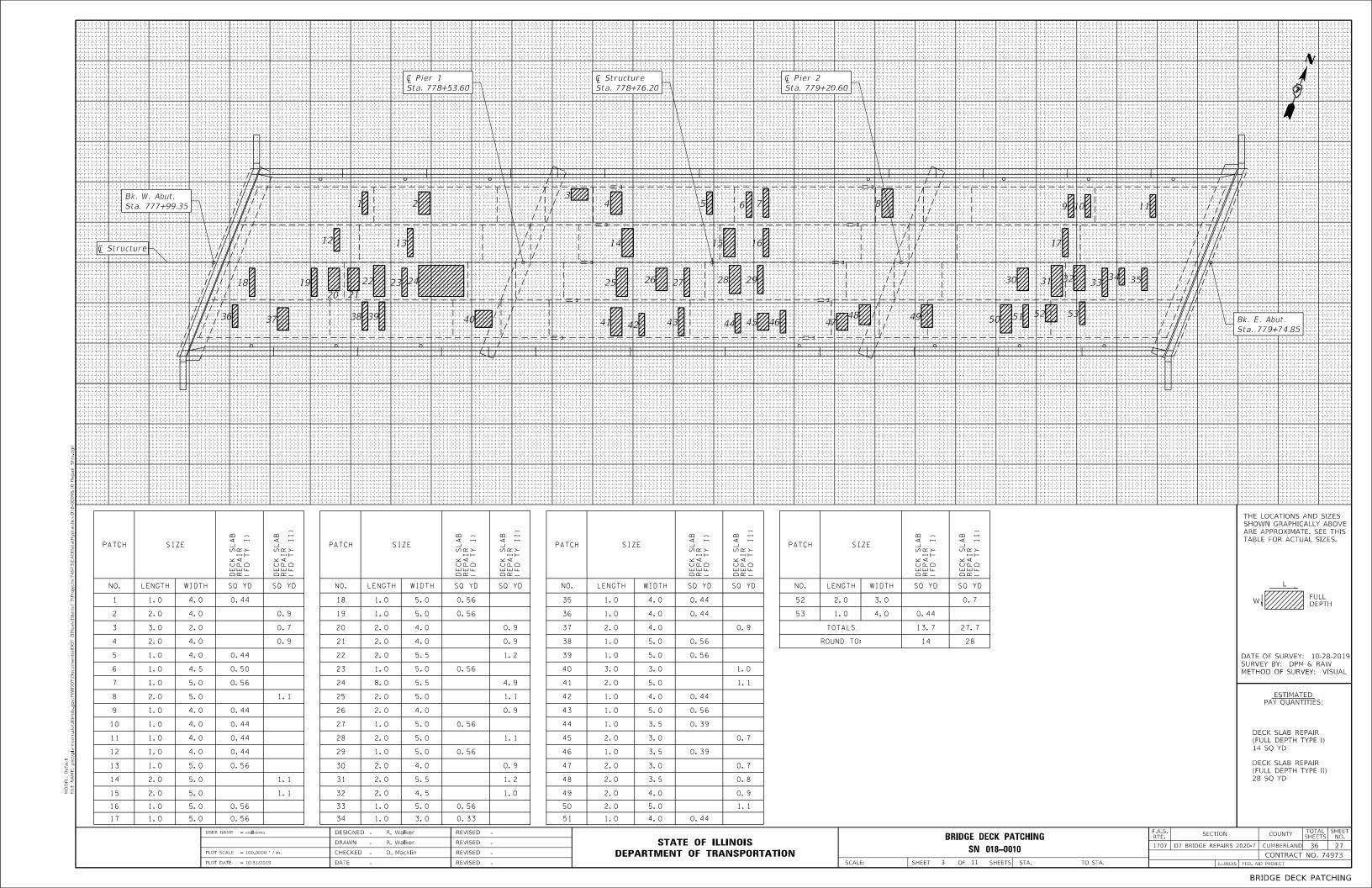
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 CUMBERLAND
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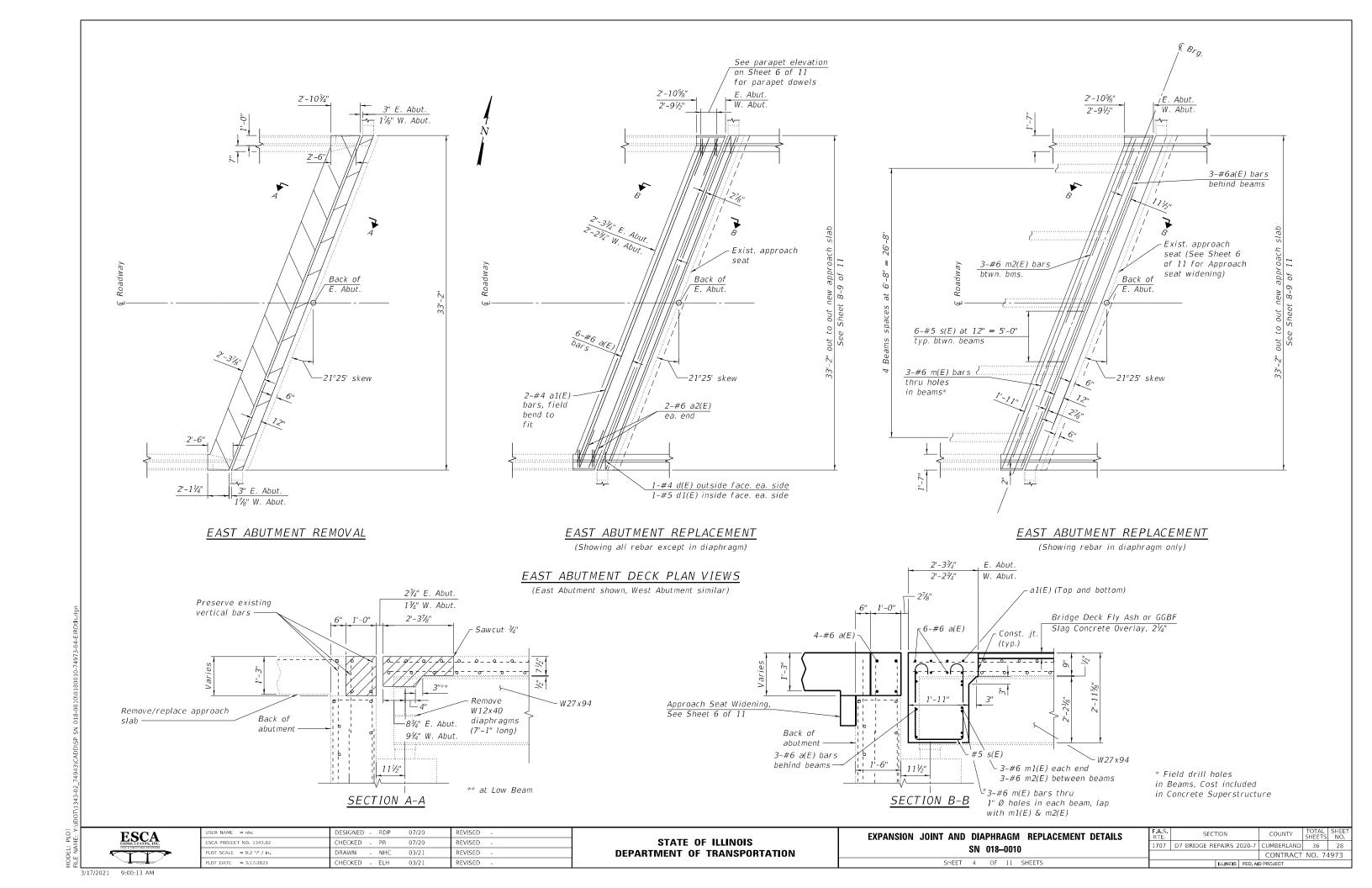
 CONTRACT NO. 74973

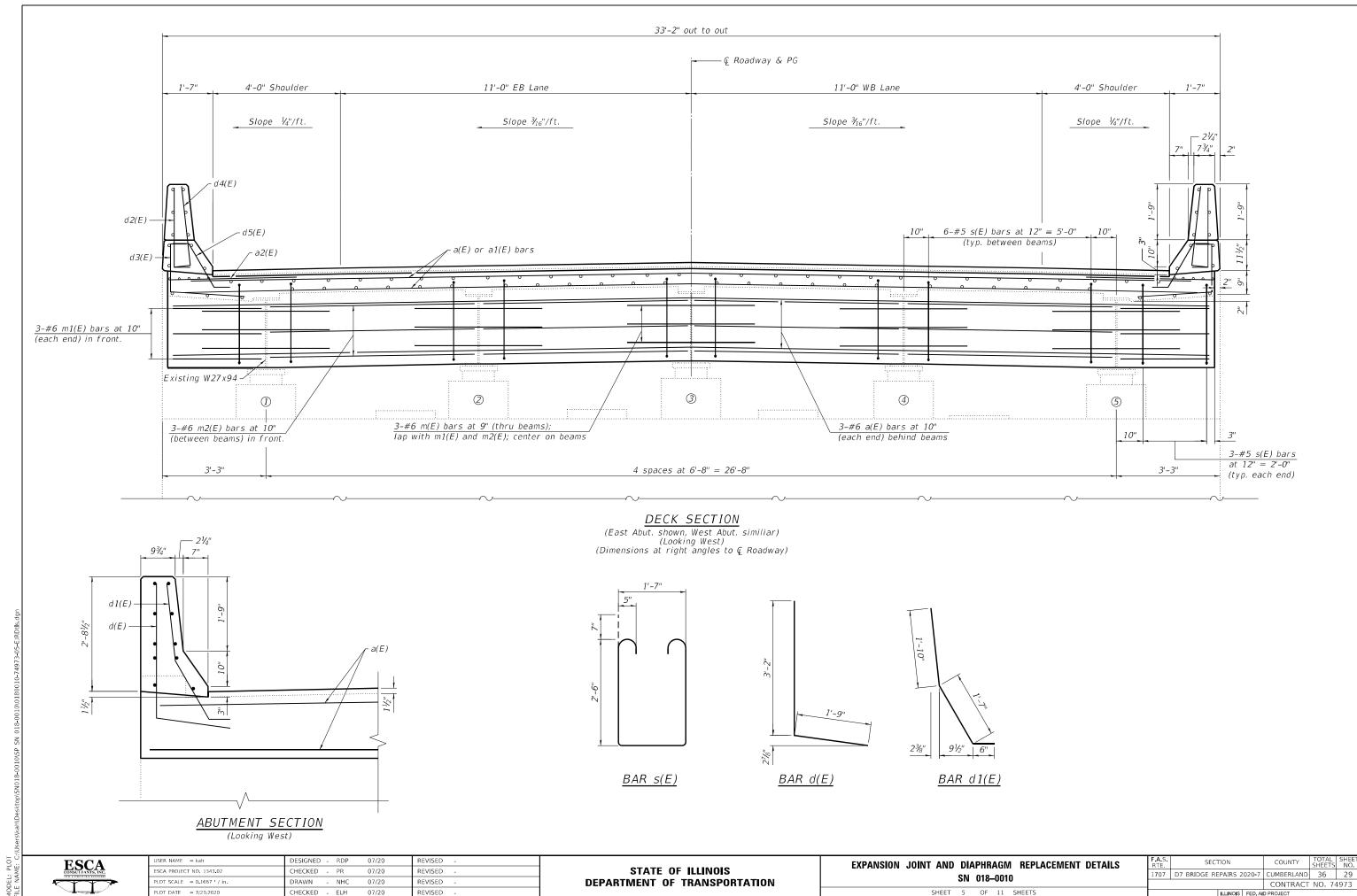
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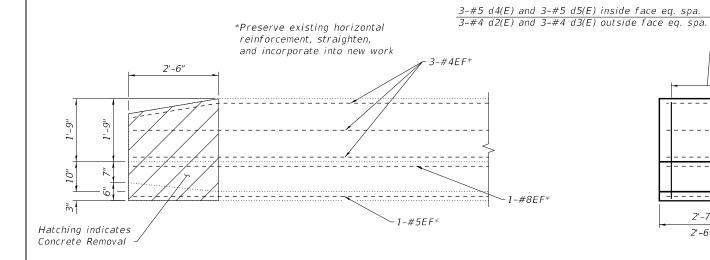
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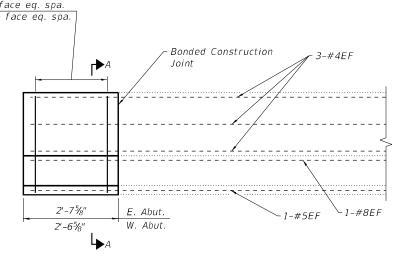




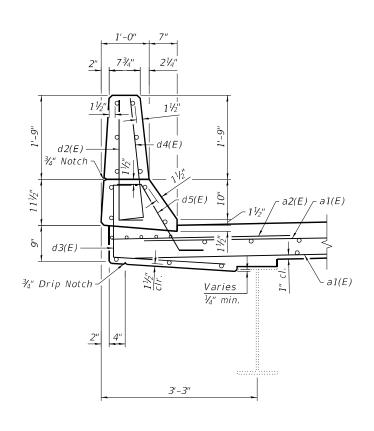
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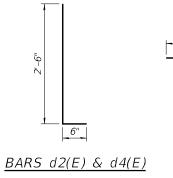
INSIDE ELEVATION OF EXISTING PARAPET (Showing Removal)

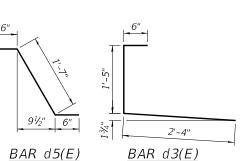


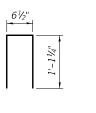
INSIDE ELEVATION OF PARAPET (Showing New Work)



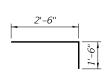
SECTION A-A







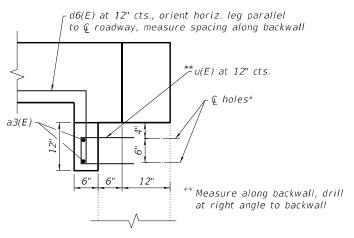
BAR u(E)



*Use epoxy adhesive in 9" holes for u(E) bars. See Section 584 of the Standard Specifications.

BAR d6(E)

Notes: Approach Seat Widening shall be paid for as Concrete Structures. Cost of Excavation and Backfill is included in Concrete Structures.



APPROACH SEAT WIDENING

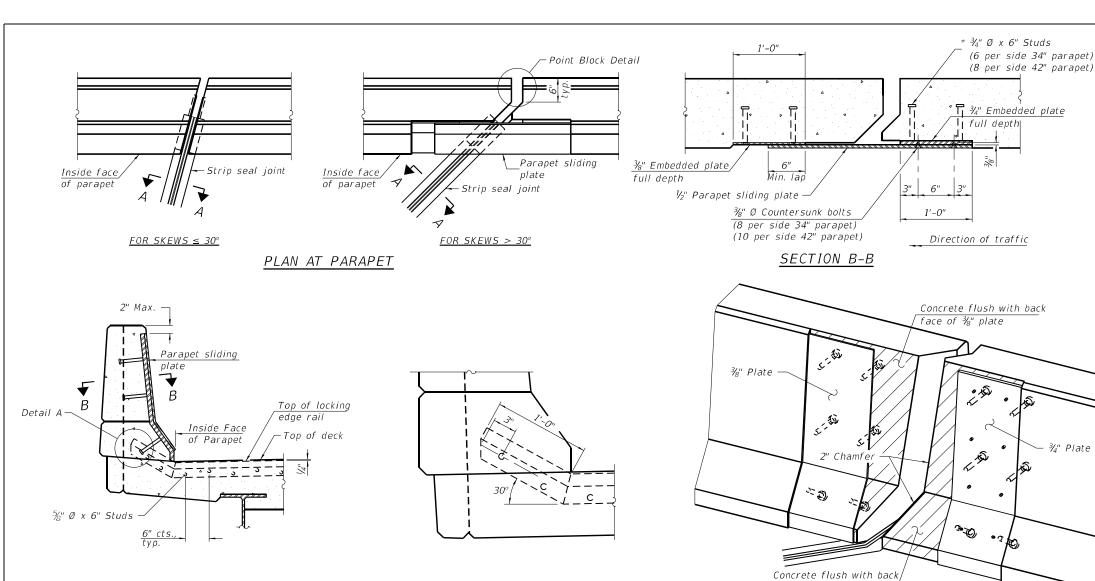
BILL OF MATERIAL

(2 Abutments)

Bar	No.	Size	Length	Shape
a(E)	26	#6	34'-9"	
a1(E)	4	#4	34'-9"	
a2(E)	8	#6	4'-0"	
a3(E)	4	#5	35'-3"	
d(E)	4	#4	4'-11"	Ļ
d1(E)	4	#5	3'-11"	_
d2(E)	12	#4	3'-0"	
d3(E)	12	#4	4'-3"	
d4(E)	12	#5	3'-0"	
d5(E)	12	#5	2'-7"	~
d6(E)	72	#4	4'-0"	
m(E)	30	#6	4'-0"	
m1(E)	12	#6	2'-11"	
m2(E)	24	#6	6'-9"	
s(E)	60	#5	7'-9"	U
u(E)	72	#4	2'-9"	Ш
	e Remova	Cu. Yd.	5.7	
	e Structu	Cu. Yd.	1.3	
	e Supers	Cu. Yd.	16.4	
Reinfor Epoxy (cement B Coated	Pound 3090		

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PLOT DATE = 7/23/2020	CHECKED	-	ELH	07/20	REVISED	-	ı
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TRIMETRIC VIEW (Showing embedded plates only)

face of 3/4" plate

The strip seal shall be made continuous and shall have a minimum thickness of 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 $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

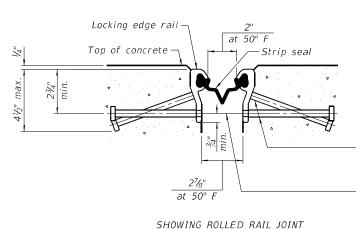
The manufacturer's recommended installation methods shall be followed.

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.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal. 34" F-shape barrier shown, 42" F-shape similar as noted.

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.



8-11-17

ELEVATION AT PARAPET (Skews > 30° shown. Skews ≤ 30° similar

except as shown in plan view.)

Locking edge railat 50° F Top of concrete -Strip seal * $\frac{1}{8}$ " Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

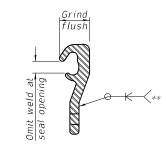
 $\frac{3}{6}$ " ϕ threaded rods in $\frac{1}{16}$ " ϕ holes at ± 4 '-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

DETAIL A

ROLLED WELDED RAIL (EXTRUDED) RAIL

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.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	69

SECTION A-A

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

EJ-SS

ESCA
CIVIL A STRUCTURAL ENGINEERS

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ESCA PROJECT NO. 1343.02	CHECKED -	PR	03/20	REVISED -
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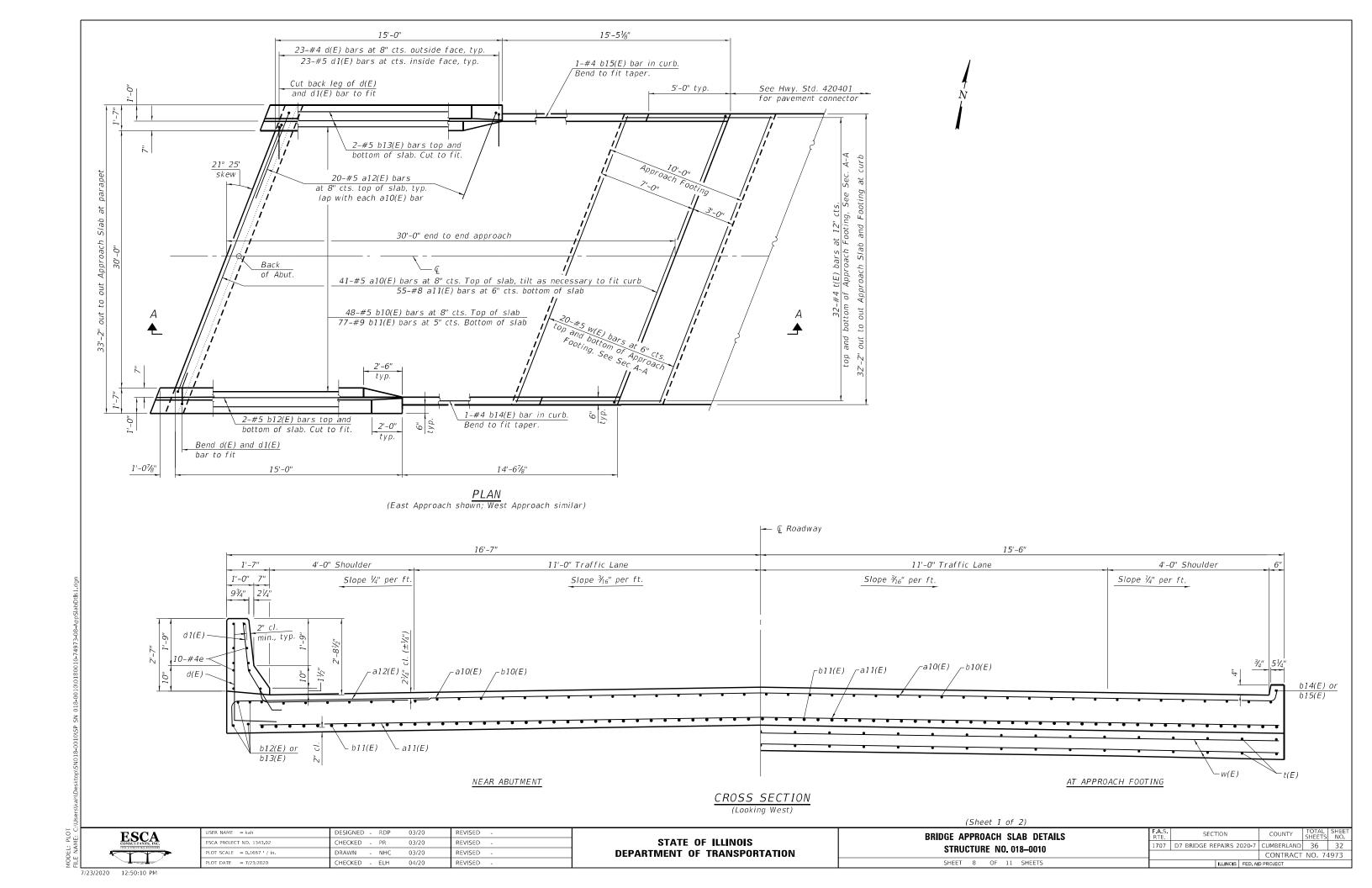
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

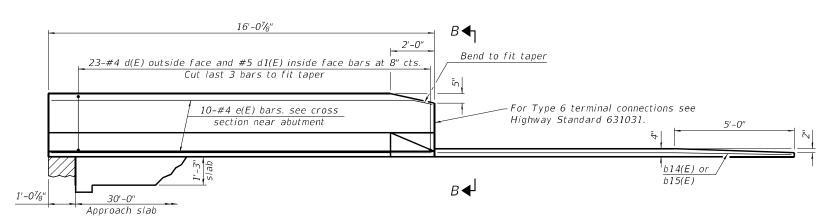
SHOWING WELDED RAIL JOINT

PREFORMED JOINT STRIP SEAL **STRUCTURE NO. 018-0010** SHEET 7 OF 11 SHEETS

SECTION COUNTY 1707 D7 BRIDGE REPAIRS 2020-7 CUMBERLAND 36 31 CONTRACT NO. 74973

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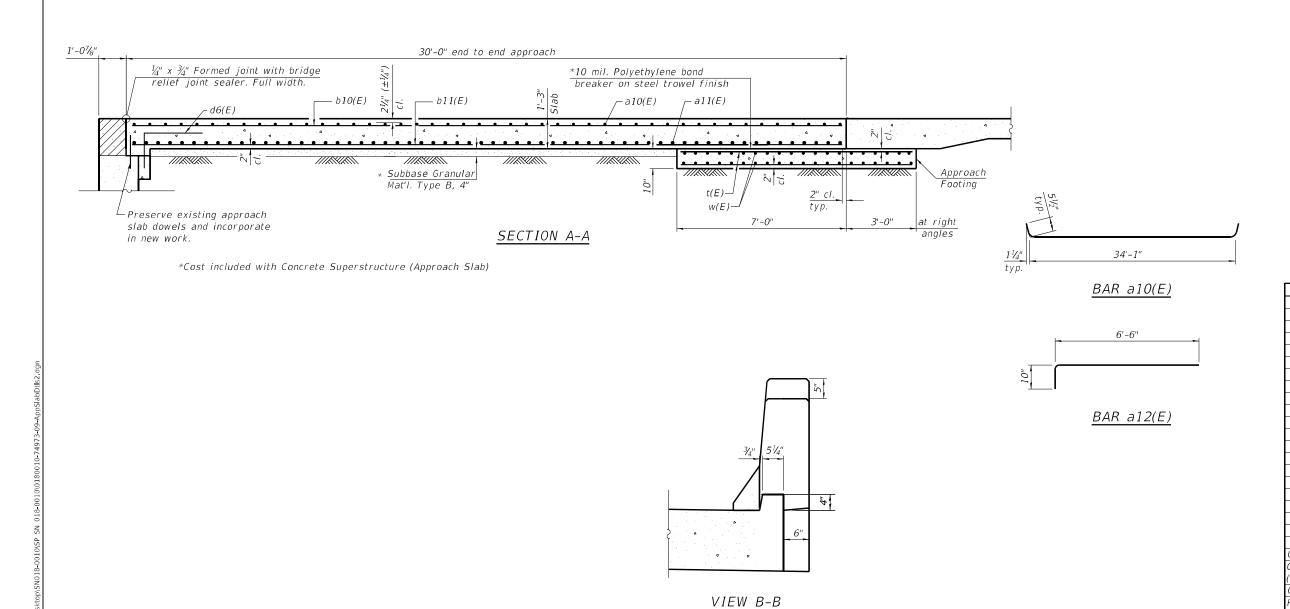




Notes:

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 (Qmax) = $2.0~\rm ksf$. Cost of excavation for approach footing included with Concrete Structures. See Sheet No. 5 of 14 for bars d(E) and d1(E) bending details.

INSIDE ELEVATION OF PARAPET AND CURB



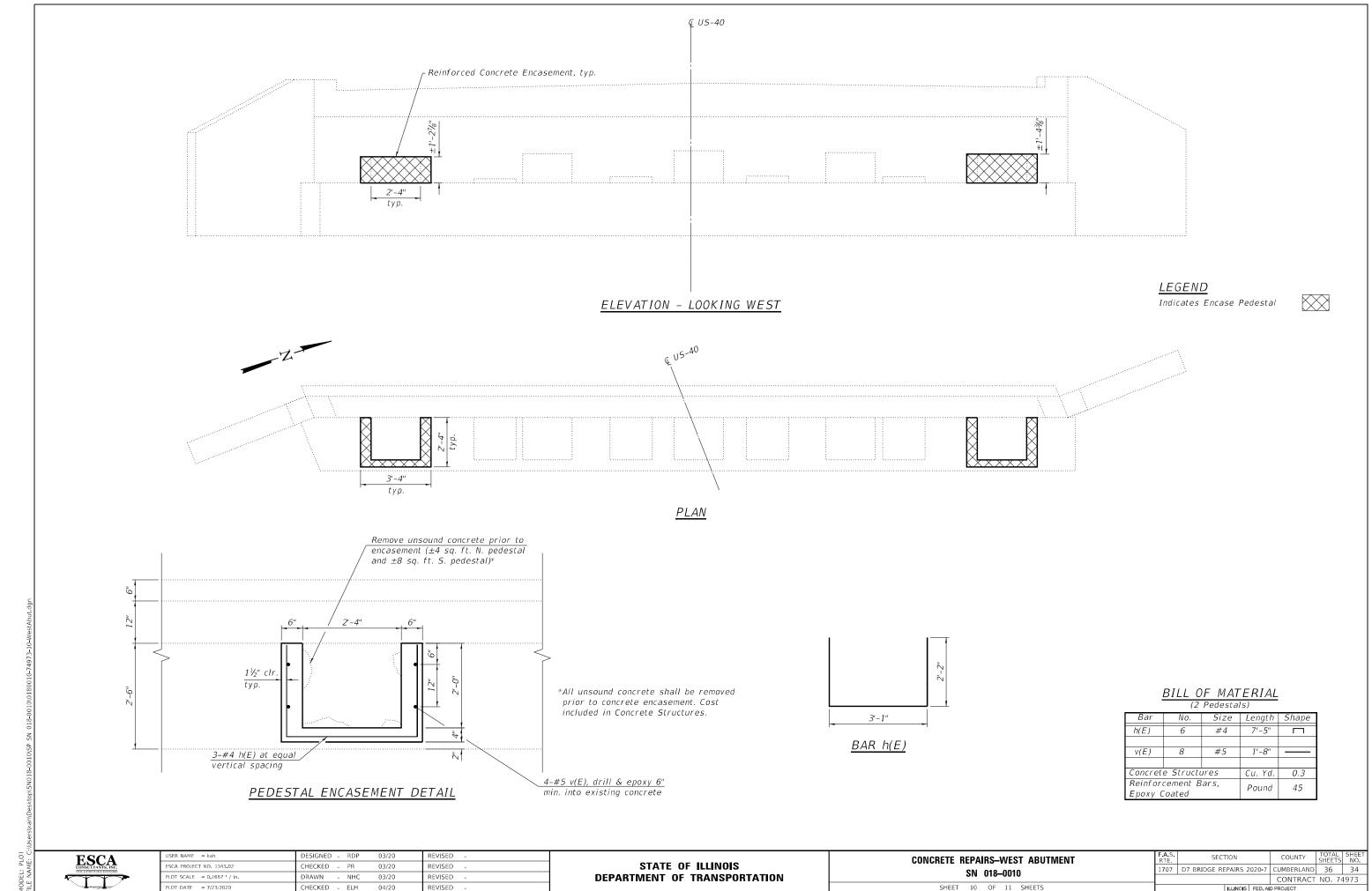
TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape			
a10(E)	82	#5	35'-0"				
a11(E)	110	#8	34'-3"				
a12(E)	60	#5	7'-4"				
b10(E)	96	#5	29'-8"				
b11(E)	154	#9	29'-8"				
b12(E)	8	#5	15'-3"				
b13(E)	8	#5	14'-8"				
b14(E)	2 2	#4	14'-2"				
b15(E)	2	#4	15'-1"				
d(E)	92	#4	4'-11"	L			
d1(E)	92	#5	3'-11"				
e(E)	40	#4	15'-8"				
t(E)	128	#4	10'-6"				
w(E)	80	#5	34'-2"				
	Superstr		Cu. Yd.	5.6			
	Superstr	ucture	Cu. Yd.	89.7			
(Approac							
	Structur	Cu. Yd.	20.6				
	ement Bar	Pound	36480				
Ероху Со	pated		7 00110	20700			

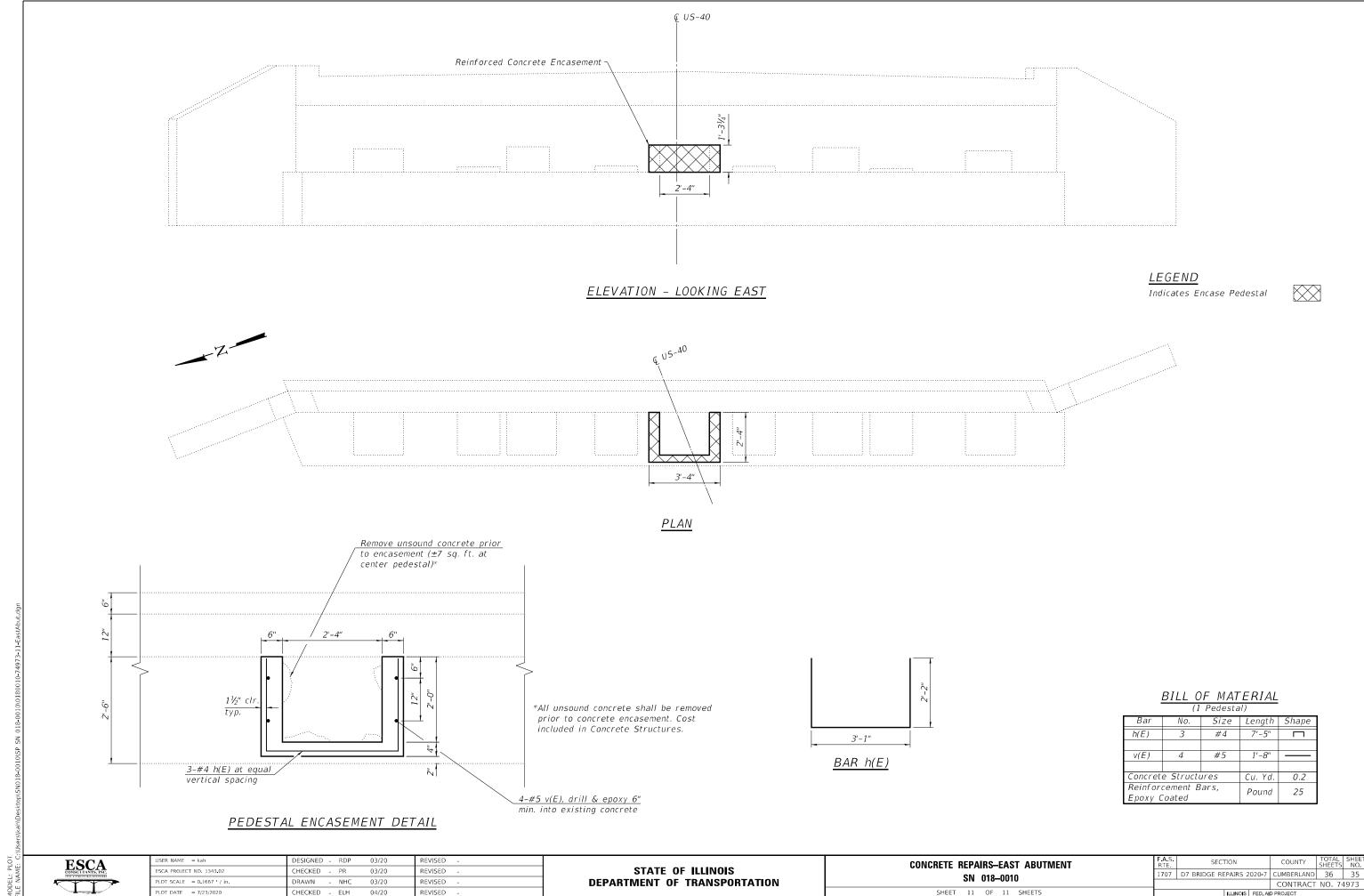
(Sheet 2 of 2)



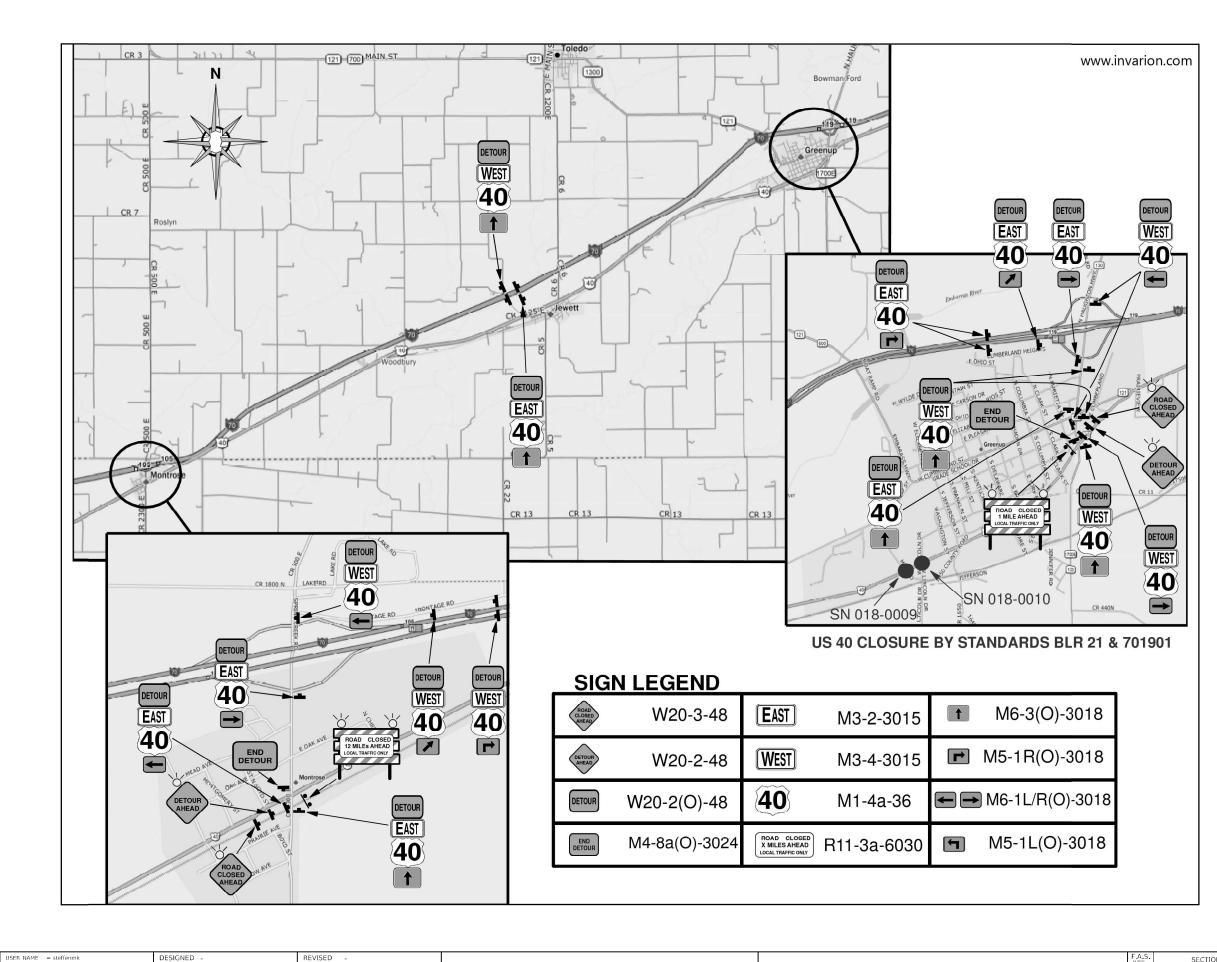
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STATE OF ILLINOIS DRAWN REVISED **DEPARTMENT OF TRANSPORTATION** LOT SCALE = 100.0000 / in. CHECKED REVISED

DETOUR SIGN MAP PLAN SHEET OF SHEETS STA.

SECTION

TO STA.

1707 D-7 BRIDGE REPAIRS 2020-7 CUMBERLAND 36 36 CONTRACT NO. 74973