01-17-2025 LETTING ITEM 075

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.S. SECTION COUNTY TOTAL SHEET NO. 659 07 BRIDGE REPAIRS 2025. MOULTER 87 1

D-97-102-23

FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT = 2000

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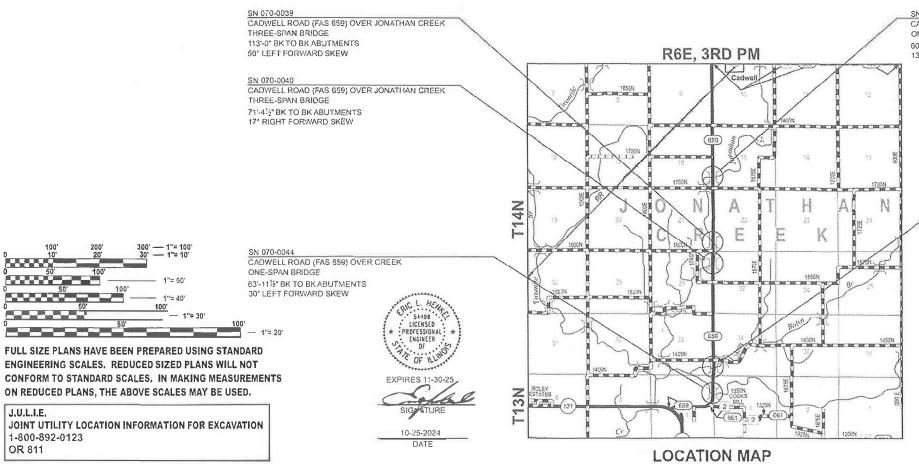
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PROPOSED HIGHWAY PLANS

FAS ROUTE 659 (CADWELL ROAD)
SECTION D7 BRIDGE REPAIRS 2025-7
PROJECT STP-5NBJ(490)
BRIDGE REPAIR
MOULTRIE COUNTY

C-97-133-23



GROSS LENGTH = 18632.30 FT. = 3.529 MILE NET LENGTH = 1201.10 FT. = 0.227 MILE SN 07C-0041

CADWELL ROAD (FAS \$59) OVER JONATHAN CREEK ONE-SPAN BRIDGE
60'-6%" BK TO BK ABUTMENTS
13' LEFT FORWARD SKEW

IL LICENSE NO. 184000883-0006

JOB NO. 1363.08

N ♠ ⊕

CADWELL ROAD POSTED SPEED: 55 MPH

LOCATION OF SECTION INDICATED THUS: - -

SN 070-0045
CADWELL ROAD (FAS 659) OVER BOLIN BRANCH
ONE-SPAN BRIDGE
63'-5" BK TO BK ABUTMENTS
15" RIGHT FORWARD SKEW

SUBMITTED OCTOSER 23 20 24

Selfy P Myling
REGIONAL ENGINEER

December 6, 2024

ENGINEER OF DESIGN AND ENVIRONMENT

December 9, 2024

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV - MS

PROJECT ENGINEER: BRIAN LEWIS

PROJECT MANAGER: ERIC HENKEL - ESCA CONSULTANTS

TOWNSHIP: JONATHAN CREEK, EAST NELSON

CONTRACT NO. 74C56

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

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
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
120001-10	PAVEMENT JOINTS
120406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
642401-04	METAL FLARED END SECTION FOR PIPE CULVERTS
606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
10001-09	SHOULDER INLET WITH CURB
30001-13	STEEL PLATE BEAM GUARDRAIL
30301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
31031-18	TRAFFIC BARRIER TERMINAL, TYPE 6
67101-02	PERMANENT SURVEY MARKERS
01001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
01006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
01011-04	OFF-RD MOVING OPERATIONS 2L, 2W, DAY ONLY
01201-05	LANE CLOSURE, 2L 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
01301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
01311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
01321-19	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
01326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING FOR SPEEDS ≥ 45 MPH
01901-10	TRAFFIC CONTROL DEVICES
04001-08	TEMPORARY CONCRETE BARRIER
25001-01	OBJECT AND TERMINAL MARKERS
30001-05	TYPICAL PAVEMENT MARKINGS
82006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
01316-14	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS ≥ 45 MPH

GENERAL NOTES

- 1. THIS PROJECT HAS LOCATIONS AT FIVE STRUCTURES, SN 070-0039; SN 070-0040; SN 070-0041; SN 070-0044; SN 070-0045, ALONG CADWELL ROAD (FAS 659) IN MOULTRIE COUNTY. THIS WORK INCLUDES THE FOLLOWING REPAIRS TO ALL STRUCTURES: DECK PATCHING, CONCRETE WEARING SURFACE, AND NEW BRIDGE APPROACH SLABS. THIS WORK WILL ALSO INCLUDE NEW STRIP SEAL JOINTS AT THE ABUTMENTS FOR SN 070-0039 AND ELIMINATION OF JOINTS AT THE ABUTMENTS FOR SN 070-0040.
- 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 WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- 3. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- 4. EDGE LINE PAVEMENT MARKING SHALL BE COVERED WITH BLACKOUT TAPE IF A 10 FT LANE WIDTH CANNOT BE MAINTAINED.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
1.	COVER SHEET		STRUCTURE PLANS - SN 070-0040
2.	INDEX OF SHEETS, HIGHWAY STANDARDS, AND GENERAL NOTES	54.	GENERAL PLAN & ELEVATION
39.	SUMMARY OF QUANTITIES	55.	GENERAL DATA
1012.	ROADWAY SECTIONS	56.	STAGE CONSTRUCTION DETAILS
1315.	SCHEDULES OF QUANTITIES	57.	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
1620.	PAVING PLAN	58.	DECK OVERLAY PLAN
21.	PRE-STAGE I & STAGE I TRAFFIC CONTROL SN 070-0044	59.	JOINT ELIMINATION DIAPHRAGM
22.	STAGE II TRAFFIC CONTROL SN 070-0044	6062.	BRIDGE APPROACH SLAB DETAILS
23.	PRE-STAGE I & STAGE I TRAFFIC CONTROL SN 070-0045	63.	FRAMING PLAN
24.	STAGE II TRAFFIC CONTROL SN 070-0045	64.	BEARING DETAILS
25.	PRE-STAGE I & STAGE I TRAFFIC CONTROL SN 070-0040	65.	BAR SPLICER DETAILS
26.	STAGE II TRAFFIC CONTROL SN 070-0040		STRUCTURE PLANS - SN 070-0039
27.	PRE-STAGE I & STAGE I TRAFFIC CONTROL SN 070-0039	66.	GENERAL PLAN & ELEVATION
28.	STAGE II TRAFFIC CONTROL SN 070-0039	67.	GENERAL DATA
29.	PRE-STAGE I & STAGE I TRAFFIC CONTROL SN 070-0041	68.	STAGE CONSTRUCTION DETAILS
30.	STAGE II TRAFFIC CONTROL SN 070-0041	69.	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
3135.	REMOVAL PLAN	70.	DECK OVERLAY PLAN
	STRUCTURE PLANS - SN 070-0044	7173.	EXPANSION JOINT DETAILS
36.	GENERAL PLAN & ELEVATION	74.	PREFORMED JOINT STRIP SEAL
37.	GENERAL NOTES AND TOTAL BILL OF MATERIAL	7576.	BRIDGE APPROACH SLAB DETAILS
38.	STAGE CONSTRUCTION	77.	ABUTMENT MODIFICATIONS
39.	TEMPORARY CONCRETE BARRIER	78.	BAR SPLICER DETAILS
40.	BRIDGE DECK PATCHING		STRUCTURE PLANS - SN 070-0041
41.	SUPERSTRUCTURE DETAILS	79.	GENERAL PLAN & ELEVATION
4243.	BRIDGE APPROACH SLAB DETAILS	80.	GENERAL NOTES AND TOTAL BILL OF MATERIAL
44.	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS	81.	STAGE CONSTRUCTION
	STRUCTURE PLANS - SN 070-0045	82.	TEMPORARY CONCRETE BARRIER
45.	GENERAL PLAN & ELEVATION	83.	BRIDGE DECK PATCHING
46.	GENERAL NOTES AND TOTAL BILL OF MATERIAL	84.	SUPERSTRUCTURE DETAILS
47.	STAGE CONSTRUCTION	8586.	BRIDGE APPROACH SLAB DETAILS
48.	TEMPORARY CONCRETE BARRIER	87.	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
49.	BRIDGE DECK PATCHING		
50.	SUPERSTRUCTURE DETAILS		
5152.	BRIDGE APPROACH SLAB DETAILS		
53.	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS		

HMA MIXTURES REQUIREMENTS TABLE								
LOCATIONS	HOT-MIX ASPHALT INCIDENTAL HOT-MIX PAVEMENT CONNECTOR SURFACE COURSE ASPHALT SURFACING FOR BRIDGE APPROACH							
MIXTURE USES	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5 MIX "C", N70		SURFACE	ALL LOWER LIFTS				
PG:	PG 64-22	PG 64-22	PG 64-22	PG 64-22				
DESIGN AIR VOIDS:	4.0% @ N70	4.0% @ N70	4.0% @ N70	4.0% @ N70				
MIX COMPOSITION:	IL-9.5 mm	IL-9.5 mm	IL-9.5 mm	IL-9.5 mm OR IL-19.0 mm				
FRICTION AGGREGATE:	MIXTURE C	MIXTURE C	MIXTURE C	N/A				
MIXTURE WEIGHT:	112 LB/SQ YD/ IN	112 LB/SQ YD/ IN	112 LB/SQ YD/ IN	112 LB/SQ YD/ IN				
QUALITY MANAGEMENT PROGRAM:	QC/QA	QC/QA	QC/QA	QC/QA				
SUBLOT SIZE:	3,000	3,000	3,000	3,000				
MATERIAL TRANSFER DEVICE REQUIRED:	NO	NO	NO	NO				

SCALE: N/A

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ESCA PROJECT NO. = 1363.08	DRAWN -	IRC	REVISED -
	CHECKED -	ELH	REVISED -
PLOT DATE = 10/24/2024	DATE -	10/24	REVISED -

INDEX OF SHEETS, HIGHWAY STANDARDS,	F.A.S. RTE. SECTION COUNT		COUNTY	TOTAL SHEETS	SHEET NO.
AND GENERAL NOTES	659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	2
AND CENTERAL HOLES			CONTRACT	NO. 740	C56
SHEET 1 OF 1 SHEETS STA TO STA		LILLINGID LEED AU	PRO IECT		



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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: N/A

SECTION COUNTY SUMMARY OF QUANTITIES 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 3 CONTRACT NO. 74C56 SHEET 1 OF 7 SHEETS STA. TO STA.



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 PLOT DATE
 = 10/24/2024
 DATE
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: N/A

SUMMARY OF QUANTITIES								SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	SU	WINA	KY	OF QUA	NTITIE	S	659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	4
									CONTRACT	NO. 740	C56
SHEET	2	OF	7	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

	SUMMARY OF QUANTITIES		80% FEDERAL 20% STATE						
		, ,		ROADWAY	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE
CODE			TOTAL				TION CODE		
NO.	ITEM	UNIT	QUANTITY	0047	0047	0047	0047	0047	0047
1,101			Q0/11/11/1	ROADWAY	S.N. 070-0039	S.N. 070-0040	S.N. 070-0041	S.N. 097-0044	S.N. 070-0045
50300300	PROTECTIVE COAT	SQ YD	2415		617	488	442	416	452
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	367.2		95.3		96.0	79.9	96.0
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	6220			6220			
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	192390		42020	45640	36670	31210	36850
50800515	BAR SPLICERS	EACH	1394		246	332	292	232	292
52000110	PREFORMED JOINT STRIP SEAL	FOOT	104		104				-
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10			10			
52100510	ANCHOR BOLTS, 3/4"	EACH	20			20			
5421D018	PIPE CULVERTS, CLASS D, TYPE 1 18" (TEMPORARY)	FOOT	170	170					
5421D036	PIPE CULVERTS, CLASS D, TYPE 1 36" (TEMPORARY)	FOOT	270	270					
54262712	METAL FLARED END SECTIONS 12"	EACH	4	4					
54262718	METAL FLARED END SECTIONS 18"	EACH	1	1					
54262736	METAL FLARED END SECTIONS 36"	EACH	2	2					
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	27		13	14			
	· · · 								

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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

								F.A.S. RTE.	SECTION
	SUMMARY OF QUANTITIES							659	D7 BRIDGE REPAIRS
SCALE: N/A	SHEET	3	OF	7	SHEETS	STA.	TO STA.		ILLINOIS

REV - MS

* SPECIALTY ITEM



DESIGNED - IRC REVISED -DRAWN - IRC ESCA PROJECT NO. = 1363.08 REVISED -CHECKED - ELH REVISED -PLOT DATE = 10/24/2024 REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: N/A

					F.A.S. RTE.	SEC ⁻	TION		COUNTY			
SUMMARY OF QUANTITIES								659	D7 BRIDGE RE	EPAIRS 2	025-7	MOULTRIE
												CONTRAC
	SHEET	4	OF	7	SHEETS	STA.	TO STA.			ILLINOIS	FED, AII	D PROJECT

87 6

	SUMMARY OF QUANTITIES				80% FEDERAL 20% STATE				
				ROADWAY	STRUCTURE	STRUCTURE	STRUCTURE CTION CODE	STRUCTURE	STRUCTURE
CODE	ITEM	UNIT	TOTAL	0047	0047	0047	0047	0047	0047
NO.	I I CIVI	UNIT	QUANTITY	ROADWAY	S.N. 070-0039	S.N. 070-0040	S.N. 070-0041	S.N. 097-0044	S.N. 070-0045
				ROADWAT	S.N. 070-0039	5.N. 070-0040	5.N. 070-0041	5.N. 097-0044	S.N. 070-0045
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	5	5					
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1	1					
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1					
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	18	18					
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	5	5					
70106700	TEMPORARY RUMBLE STRIPS	EACH	30	30					
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	3817	3817					
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	84	84					
70300100	SHORT TERM PAVEMENT MARKING	FOOT	208	208					
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1670	1670					
70300221	TEMPORARY PAVEMENT MARKING - LINE 4"- PAINT	FOOT	2728	2728					
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2087.5	2087.5					
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	352	352					
. 0 100 120	THE STATE OF THE S	LAOIT		002					
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2062.5	2062.5					

ESC CONSULTANTS, CIVIL A STRUCTURAL ENGINEER

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ESCA PROJECT NO. = 1363.08	DRAWN - IRC	REVISED -
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PLOT DATE = 10/24/2024	DATE - 10/24	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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L					ROADWAT	STRUCTURE				
	0005			TOTAL			CONSTRUC	TION CODE		
	CODE	ITEM	UNIT	TOTAL	0047	0047	0047	0047	0047	0047
	NO.	112.00	01111	QUANTITY						
-					ROADWAY	S.N. 070-0039	S.N. 070-0040	S.N. 070-0041	S.N. 097-0044	S.N. 070-0045
	70600260	IMPACT ATTENUATORS TEMPORARY (FILL V REDIDECTIVE NARROWN) TEST LEVEL 2	EACH	10	10					
	70000200	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	10	10					
t										
H										
	70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	10	10					
. [70504000	TERMINA MARKET DIFFER ADDITION								
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	20	20					
H										
-										
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2728	2728					
. †	70005555									
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	47	47					
+							<u> </u>		1	
-										
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4					
	. 5555255			•						
ı										
	78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	915	915					
+							<u> </u>			
	X4400102	SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL)	SQ YD	251	251					
	X4400102	CONTROL NEW OWNER, WHITH DEEP THE GOVERN	00,15	201	201					
	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	1755		458	342	322	304	329
-										
L										
	X5427600	REMOVE AND RELOCATE END SECTIONS	EACH	3	3					
	7.5 72. 500									
Γ										
-										
	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	10			10			
H						1			+	
	Z0001903	STRUCTURAL STEEL REMOVAL	POUND	1950			1950			
							.500			
ŀ									1	
	Z0004552	APPROACH SLAB REMOVAL	SQ YD	971	971					
-						1			1	
	Z0012111	BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE OVERLAY, 2 1/2"	SQ YD	1238		359	209	216	228	226
	20012111	BABGE BEGATE AND ON GODE GEAG GORGALTE GVERLAT, 2 1/2	العال	1200			203			
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L							L	.		<u> </u>

80% FEDERAL 20% STATE

ROADWAY

80% FEDERAL

20% STATE

STRUCTURE

* SPECIALTY ITEM

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SUMMARY OF QUANTITIES

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

0.11111.4.70%		F.A.S. RTE.	SEC
SUMMARY	OF QUANTITIES	659	D7 BRIDGE R
SCALE: N/A SHEET 6 OF 7	SHEETS STA. TO STA.		

80% FEDERAL 20% STATE

STRUCTURE

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	SUMMARY OF QUANTITIES			80% FEDERAL 20% STATE					
				ROADWAY	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE
CODE	177.4		TOTAL				CTION CODE		
NO.	ITEM	UNIT	QUANTITY	0047	0047	0047	0047	0047	0047
				ROADWAY	S.N. 070-0039	S.N. 070-0040	S.N. 070-0041	S.N. 097-0044	S.N. 070-0045
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1238		359	209	216	228	226
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	19		3	1	5	6	4
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	20		2	1	2	1	14
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	2070		535	399	383	361	392
Z0053700	RESETTING SURVEY MONUMENTS	EACH	1	1					

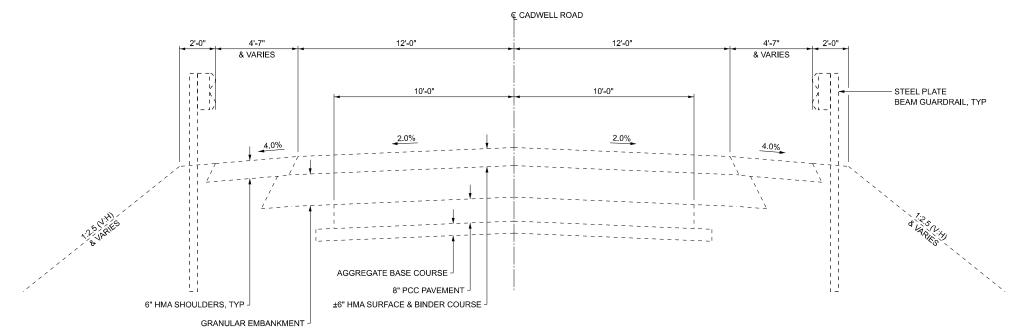


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: N/A

F.A.S. SECTION COUNTY TOTAL SHEETS NO.
659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 9 SUMMARY OF QUANTITIES CONTRACT NO. 74C56 SHEET 7 OF 7 SHEETS STA. TO STA.



EXISTING TYPICAL SECTION

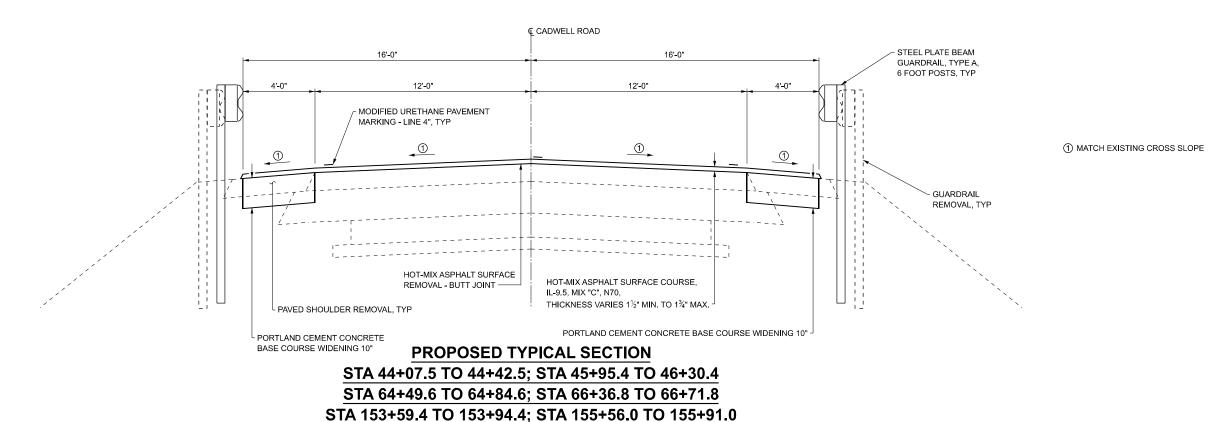
STA 42+90.00 TO 44+60.14; STA 45+77.78 TO 47+47.50

STA 63+52.00 TO 64+98.04; STA 66+23.36 TO 67+85.00

STA 152+40.00 TO 154+13.80; STA 155+33.12 TO 157+10.00

STA 171+02.00 TO 172+69.00; STA 174+51.02 TO 176+35.00

STA 225+65.00 TO 227+32.03; STA 228+37.97 TO 230+10.00



SCALE: N/A

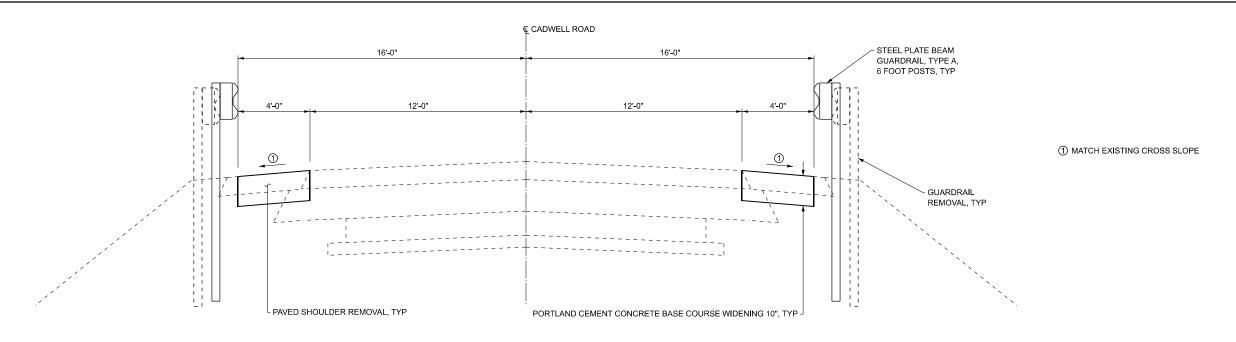


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PLOT DATE = 10/24/2024	DATE	-	10/24	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STA 172+09.5 TO 172+44.5; STA 174+82.0 TO 175+17.0 STA 226+76.0 TO 227+11.0; STA 228+59.0 TO 228+94.0

POARWAY SECTIONS						F.A.S. RTE				COUNTY	TOTAL SHEETS	SHEET NO.	
	ROADWAY SECTIONS				659	D7 BRIDGE REPAIRS 2025-7			MOULTRIE	87	10		
											CONTRACT	NO. 740	C56
ET	1	OF	3	SHEETS	STA.	TO STA.			ILLINOIS	FED. AII	D PROJECT		



PROPOSED TYPICAL SECTION

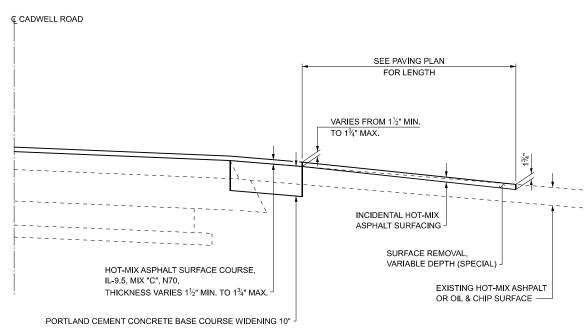
STA 42+90.0 TO 44+07.5; STA 46+30.4 TO 47+47.5

STA 63+52.0 TO 64+49.6; STA 66+71.8 TO 67+85.0

STA 152+40.0 TO 153+59.4; STA 155+91.0 TO 157+10.0

STA 171+02.0 TO 172+09.5; STA 175+17.0 TO 176+35.0

STA 225+65.0 TO 226+76.0; STA 228+94.0 TO 230+10.0



PROPOSED PRIVATE ENTRANCE TYPICAL SECTION

STA 44+28.0

STA 46+41.0

STA 175+02.0

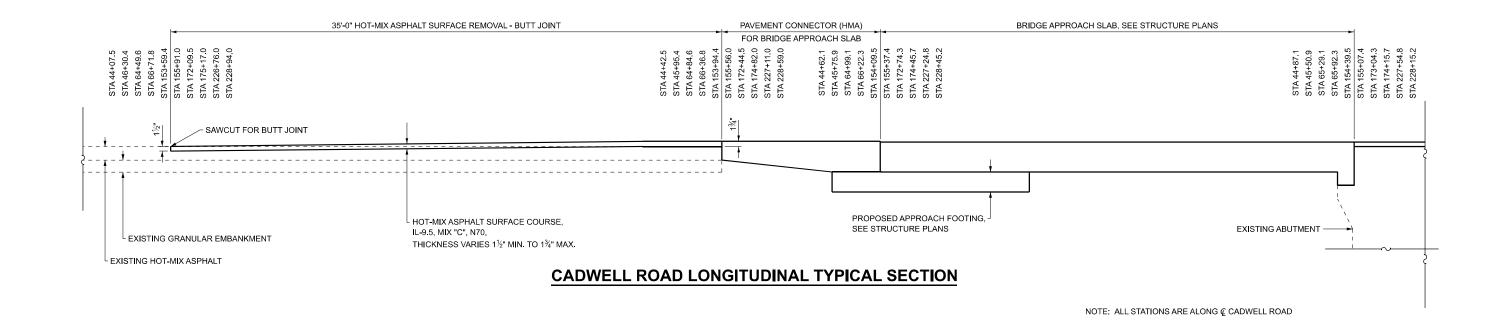
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: N/A

							F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ROADWAY SECTIONS					IONS	659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	11	
							,		CONTRACT	NO. 740	256
SHEET	2	OF	3	SHEETS	STA.	TO STA.		ILLINOIS FED. AIL	PROJECT		



SCALE: N/A

ESCA CONSULTANTS, INC.

 USER NAME
 = Inhc
 DESIGNED
 IRC
 REVISED

 ESCA PROJECT NO.
 = 1383.08
 DRAWN
 IRC
 REVISED

 CHECKED
 ELH
 REVISED

 PLOT DATE
 = 10/24/2024
 DATE
 10/24
 REVISED

\1363-U8 /4C56\CADD\Highway\CADD Sheets\D / /4C56-sht-typical03.

 AWN
 IRC
 REVISED
 STATE OF ILLINOIS

 ECKED
 ELH
 REVISED
 DEPARTMENT OF TRANSPORTATION

EARTHWORK SCHEDULE										
		AVERAGE SHRINKAGE FACTOR	EARTH EXCAVATION (ADJUSTED)		EARTHWOR	K BALANCE		REMARKS		
LOCATION	EARTH EXCAVATION			EMBANKMENT	EXCAVATION REQUIRED TO COMPLETE	EXCESS EXCAVATION	FURNISHED EXCAVATION			
	CU YD	%	CU YD	CU YD	CU YD	CU YD	CU YD			
STA 44+28.00 LT				310	310		310	PRE-STAGE I TEMPORARY ENTRANCES		
STA 46+41.00 RT				285	285		285	PRE-STAGE I TEMPORARY ENTRANCES		
STA 175+02.00 RT				605	605		605	PRE-STAGE I TEMPORARY ENTRANCES		
STA 44+28.00 LT	310	25	233			233		STAGE II TEMPORARY ENTRANCES		
STA 46+41.00 RT	285	25	214			214		STAGE II TEMPORARY ENTRANCES		
STA 175+02.00 RT	605	25	454			454		STAGE II TEMPORARY ENTRANCES		
TOTALS	1200			<u> </u>			1200			

EROSION CONTROL SCHEDULE											
LOCATION	EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING	INLET AND PIPE PROTECTION								
	SQ YD	POUND	EACH								
STA 42+45.00 TO 44+11.60 LT	472	28									
STA 44+02.40 LT			1								
STA 46+89.47 RT			1								
STA 46+53.40 TO 47+88.00 RT	424	26									
STA 175+02.00 TO 177+00.00 RT	741	46									
STA 175+36.00 RT			1								
TOTALS	1637	100	3								

		PAV	/EMEN	IT MAI	RKING	SCHEDU	LE				
LOCATION	DESCRIPTION	PAVE MAR - LIN	INT MENT KING IE 4"	PAVE MAF	T TERM EMENT RKING	SHORT TERM PAVEMENT MARKING REMOVAL	PAVE MARKING - PA	ORARY MENT G - LINE 4" AINT	PAVEMENT MARKING REMOVAL - WATER BLASTING	PAVEMENT MARKING BLACKOUT TAPE, 5"	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
			ОТ		DOT	SQ FT		ОТ	SQ FT	FOOT	EACH
		WHITE	YELLOW	WHITE	YELLOW		WHITE	YELLOW			
STAGE I											
STA 41+30.00 TO 43+12.80	CENTERLINE									50	
STA 43+14.00 TO 47+23.50 RT	EDGELINE									410	
STA 47+24.90 TO 49+07.50	CENTERLINE									50	
STA 62+40.00 TO 63+87.80	CENTERLINE									40	
STA 63+76.00 TO 67+61.00 RT	EDGELINE									385	
STA 67+62.40 TO 69+45.00	CENTERLINE									50	
STA 150+80.00 TO 152+62.60	CENTERLINE									50	
STA 152+64.00 TO 156+86.00 LT	EDGELINE									422	
STA 156+87.40 TO 158+70.00	CENTERLINE									50	
STA 169+90.00 TO 171+37.80	CENTERLINE									40	
STA 171+26.00 TO 176+11.00 LT	EDGELINE									485	
STA 176+12.30 TO 177+95.00	CENTERLINE									50	
STA 224+05.00 TO 225+87.60	CENTERLINE									50	
STA 225+89.00 TO 229+74.00 RT	EDGELINE									385	
STA 229+62.30 TO 231+60.00	CENTERLINE									50	
STAGE II											
STA 43+14.00 TO 44+42.50 LT	EDGELINE									129	
STA 45+95.40 TO 47+23.50 LT	EDGELINE									129	
STA 63+76.00 TO 64+84.60 LT	EDGELINE									109	
STA 66+36.80 TO 67+61.00 LT	EDGELINE									125	
STA 152+64.00 TO 153+94.40 RT	EDGELINE									131	
STA 155+56.00 TO 156+86.00 RT	EDGELINE									130	
STA 171+26.00 TO 172+44.50 RT	EDGELINE									119	
STA 174+82.00 TO 176+11.00 RT	EDGELINE									129	
STA 225+89.00 TO 227+11.00 LT	EDGELINE									122	
STA 228+59.00 TO 229+86.00 LT	EDGELINE									127	
STA 44+07.50 TO 46+30.40	CENTERLINE		60		24	8		60	20		2
STA 44+07.50 TO 46+30.40 RT	EDGELINE	223		8		3	223		75		
STA 44+07.50 TO 46+30.40 LT	EDGELINE	223		8		3	223		75		
STA 64+49.60 TO 66+71.80	CENTERLINE		60		24	8		60	20		1
STA 64+49.60 TO 66+71.80 RT	EDGELINE	223		8		3	223		75		
STA 64+49.60 TO 66+71.80 LT	EDGELINE	223		8		3	223		75		
STA 153+59.40 TO 155+91.00	CENTERLINE		60		24	8		60	20		
STA 153+59.40 TO 155+91.00 RT	EDGELINE	232	- "	8	 -:	3	232		78		
STA 153+59.40 TO 155+91.00 LT	EDGELINE	232		8	<u> </u>	3	232		78		
STA 172+09.50 TO 175+17.00	CENTERLINE		80	l	32	11		80	27		1
STA 172+09.50 TO 175+17.00 RT	EDGELINE	308	- 55	8	1 02	3	308	- 55	103		'
STA 172+09.50 TO 175+17.00 LT	EDGELINE	308		8	†	3	308	†	103		
STA 226+76.00 TO 228+94.00	CENTERLINE	000	60		24	8	000	60	20		
STA 226+76.00 TO 228+94.00 RT	EDGELINE	218	"	8	 	3	218	"	73		
STA 226+76.00 TO 228+94.00 LT	EDGELINE	218		8	1	3	218		73		
5.7.120.70.00 TO 220.04.00 ET		210		 	 		-10		,,,		
	SUBTOTALS	2408	320	80	128		2408	320			
	TOTALS		728		208	73		728	915	3817	4
	TOTALS									1 0017	

DRAINAGE SCHEDULE								
LOCATION	REMOVING INLETS	TYPE G INLET BOX STANDARD 610001	PIPE DRAINS 12"	CONCRETE THRUST BLOCKS	METAL FLARED END SECTIONS 12"			
	EACH	EACH	FOOT	EACH	EACH			
STAGE I								
STA 155+25.00 RT	1							
STA 155+50.74 RT		1	10	1	1			
STA 174+10.00 RT	1							
STA 174+42.60 RT		1	10	1	1			
STAGE II								
STA 155+25.00 LT	1							
STA 155+48.77 LT		1	10	1	1			
STA 174+47.00 LT	1							
STA 174+69.00 LT		1	10	1	1			
TOTALS	4	4	40	4	4			

T:\D	
EL: Namec NAME: Y:\	ESCA CONSULTANTS, INC. COVIL A STEUCTURAL SCIENCES
MB	

USER NAME = nhc	DESIGNED	-	IRC	REVISED -
ESCA PROJECT NO. = 1363.08	DRAWN	-	IRC	REVISED -
	CHECKED	-	ELH	REVISED -
PLOT DATE = 10/24/2024	DATE	_	10/24	REVISED -

SCALE: N/A

SHEET

COLLEGE OF OLIVITATION				F.A.S. RTE.	SEC ⁻	TION		COUNTY	TOTAL SHEETS	SHEET NO.		
SCHEDULES OF QUANTITIES			659	D7 BRIDGE REPAIRS 2025-7			MOULTRIE	87	13			
										CONTRACT	NO. 740	256
1	OF	3	SHEETS	STA.	TO STA.			ILLINOIS	FED. AII	O PROJECT		

SHOULDER SCHEDULE								
LOCATION	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	PORTLAND CEMENT CONCRETE SHOULDERS 10"	PROTECTIVE COAT	CONCRETE CURB, TYPE B				
	SQ YD	SQ YD	SQ YD	FOOT				
PRE-STAGE I								
STA 152+40.00 TO 153+59.40 LT			53					
STA 152+40.00 TO 153+59.40 RT			53					
STA 152+40.00 TO 153+94.40 RT	69							
STA 152+40.00 TO 154+13.80 LT	77							
STA 155+33.10 TO 157+10.00 LT	79							
STA 155+56,00 TO 157+10,00 RT	69							
STA 155+91.00 TO 157+10.00 LT			53					
STA 155+91.00 TO 157+10.00 RT			53					
STA 171+02.00 TO 172+09.50 LT			48					
STA 171+02.00 TO 172+09.50 RT			48					
STA 171+02,00 TO 172+44,50 RT	63							
STA 171+02.00 TO 173+01.60 LT	89							
STA 174+51.00 TO 176+35.00 LT	82							
STA 174+82.00 TO 176+35.00 RT	68							
STA 175+17.00 TO 176+35.00 LT			53					
STA 175+17,00 TO 176+35,00 RT			53					
STA 225+65.00 TO 226+76.00 LT			49					
STA 225+65.00 TO 226+76.00 RT			49					
STA 225+65.00 TO 227+11.00 LT	65							
STA 225+65.00 TO 227+39.00 RT	77							
STA 228+24.40 TO 229+98.00 RT	77							
STA 228+59.00 TO 230+10.00 LT	67							
STA 228+94.00 TO 229+98.00 RT			46					
STA 228+94.00 TO 230+10.00 LT			52					
STA 42+90.00 TO 44+07.50 LT			52					
STA 42+90.00 TO 44+07.50 RT			52					
STA 42+90.00 TO 44+42.50 LT	68							
STA 42+90.00 TO 44+65.10 RT	78							
STA 45+55.90 TO 47+47.50 RT	85							
STA 45+95.40 TO 47+47.50 LT	68							
STA 46+30,40 TO 47+47,50 LT			52					
STA 46+30.40 TO 47+47.50 RT			52					
STA 63+52.00 TO 64+49.60 LT			44	·				
STA 63+52.00 TO 64+49.60 RT			44					
STA 63+52.00 TO 64+84.60 LT	59							
STA 63+52.00 TO 65+03.50 RT	67							
STA 66+26.80 TO 67+85.00 RT	70							
STA 66+36.80 TO 67+85.00 LT	66							
STA 66+71.80 TO 67+85.00 LT			50					
STA 66+71.80 TO 67+85.00 RT			50					
STAGE I								
STA 44+53.90 TO 44+96.60 LT	14		14					
STA 155+42.60 TO 155+56.00 RT		8	8	13				
STA 174+26.00 TO 174+50.00 RT		12	12	24				
STAGE II								
STA 155+32.20 TO 155+56.00 LT		13	14	24				
STA 174+65.50 TO 174+82.00 LT		10	11	17				
TOTALS	1457	43	1065	78				

SCALE: N/A

SHEET

ESCA CONSULTANTS, INC. CIVIL A TRUCTURAL SYGIMETR

USER NAME = IRC	DESIGNED	-	IRC	REVISED -
ESCA PROJECT NO. = 1363.08	DRAWN	-	IRC	REVISED -
	CHECKED	-	ELH	REVISED -
PLOT DATE = 10/24/2024	DATE	-	10/24	REVISED -



	COLEDIN ES OF QUANTITIES					F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCHEDULES OF QUANTITIES			659	659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 83						
								CONTRACT	NO. 740	C56
2	OF	3	SHEETS	STA.	TO STA.		ILLINOIS FED. A	D PROJECT		

		ROAI	OSIDE	BARRIER SC	HEDULE			
LOCATION	GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL REFLECTORS, TYPE A	IMPACT ATTENUATORS (FULLY REDIRECTIVE NARROW), TEST LEVEL 3
	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH	EACH
STAGEI								
STA 44+41.58 TO 44+96.60 LT	62							
STA 45+60.40 TO 47+69.40 LT	209							
STA 64+42.86 TO 65+24.60 LT	84							
STA 65+87.90 TO 67+92.17 LT	207							
STA 151+59.75 TO 154+43.90 RT	300							
STA 155+13,30 TO 155+96,41 RT	84							
STA 170+69.52 TO 172+76.80 RT	211							
STA 174+05.10 TO 174+90.40 RT	98							
STA 226+77.10 TO 227+58.60 LT	84							
STA 228+19.00 TO 230+24.21 LT	209	1						
STA 44+96,60 LT	200					1	1	1
STA 45+97.30 TO 46+97.30 LT		100	1	1		1	3	<u>'</u>
STA 64+37.70 TO 64+87.70 LT		50	1	1		1	2	
STA 66+24.80 TO 67+24.80 LT		100	1	1		1	3	
STA 152+05.0 TO 153+92.50 RT		187.5	1	1	1	1	4	
		50	1	4	l l			
STA 155+64,20 TO 156+14,20 RT		100	1	1		1	3	
STA 171+39.90 TO 172+39.90 RT		100				<u>'</u>	3	
STA 174+05.10 RT			1		4		4	
STA 174+42.00 RT		=0		4	1	1	1	
STA 226+71.70 TO 227+21.70 LT		50	1	1		1	2	
STA 228+55.90 TO 229+55.90 LT		100	1	1		1	3	
STAGE II								
STA 43+31.03 TO 44+77.50 RT	160							
STA 45+41.30 TO 46+29.10 RT	98							
STA 63+28.66 TO 65+33.45 RT	208							
STA 65+96.80 TO 66+78.33 RT	84							
STA 153+50.62 TO 154+33.70 LT	84							
STA 155+02.90 TO 157+11.36 LT	209							
STA 172+33.67 TO 173+14.90 LT	84							
STA 174+43.20 TO 176+51.16 LT	211							
STA 225+43,04 TO 227+51,00 RT	211							
STA 228+11.40 TO 228+93.92 RT	85							
STA 43+65.60 TO 44+40.60 RT		75	1		1	1	2	
STA 45+41.30 RT			1					
STA 45+78.20 RT					1	1	1	
STA 63+96.60 TO 64+96.60 RT		100	1	1		1	3	
STA 66+33.70 TO 66+83.70 RT		50	1	1		1	2	
STA 153+32.70 TO 153+82.70 LT		50	1	1		1	2	
STA 155+54.40 TO 156+54.40 LT		100	1	1		1	3	
STA 172+28.00 TO 172+78.00 LT		50	1	1		1	2	
STA 174+80.10 TO 175+80.10 LT		100	1	1		1	3	
STA 226+14.10 TO 227+14.10 RT		100	1	1		1	3	
STA 228+48.30 TO 228+98.30 RT		50	1	1		1	2	
TOTALS	3 2982	1412.5	19	15	4	20	47	1

SEEDING SCHEDULE								
LOCATION	SEEDING, CLASS 2	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2	
	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE	
STA 42+45.00 TO 44+11.60 LT	0.14	0.14	12.6	12.6	12.6	0.28	0.28	
STA 46+53.40 TO 47+88.00 RT	0.13	0.13	11.7	11.7	11.7	0.26	0.26	
STA 175+02.00 TO 177+00.00 RT	0.23	0.23	20.7	20.7	20.7	0.46	0.46	
TOTALS	0.50	0.50	45	45	45	1.0	1.00	

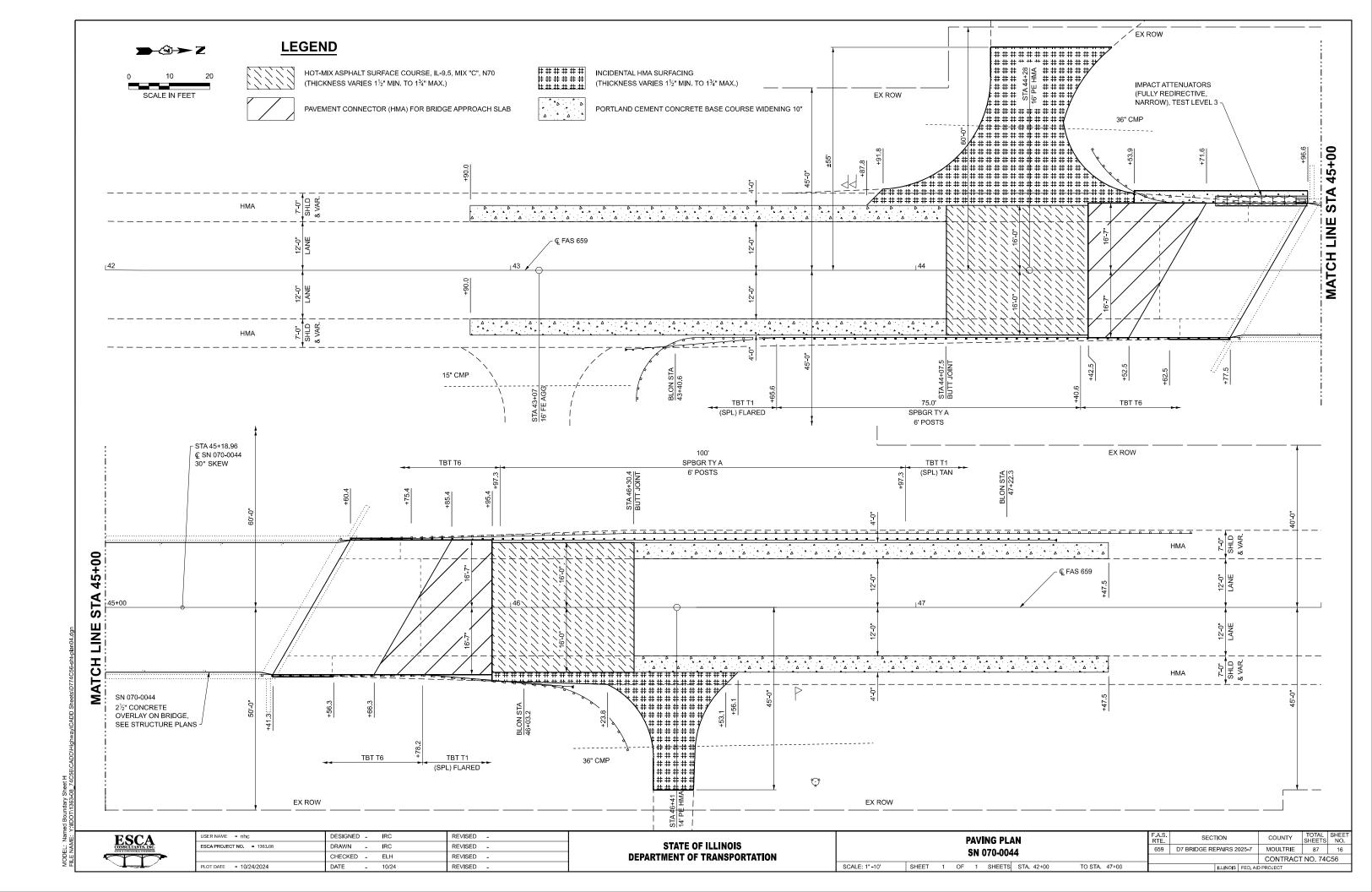
REMOVAL SCHEDULE								
LOCATION	PAVEMENT REMOVAL	APPROACH SLAB REMOVAL	PAVED SHOULDER REMOVAL					
	SQ YD	SQ YD	SQ YD					
PRE-STAGE I								
STA 42+90.00 TO 44+42.50 LT STA 42+90.00 TO 44+65.10 RT			68 78					
STA 45+95.40 TO 47+47.50 LT			68					
STA 45+55.90 TO 47+47.50 RT			85					
STA 63+52.00 TO 64+84.60 LT			59					
STA 63+52,00 TO 65+03,50 RT			67					
STA 66+36.80 TO 67+85.00 LT			66					
STA 66+26.80 TO 67+85.00 RT STA 152+40.00 TO 154+13.80 LT			70 77					
STA 152+40.00 TO 153+94.40 RT			69					
STA 155+33.10 TO 157+10.00 LT			79					
STA 155+56.00 TO 157+10.00 RT			68					
STA 171+02.00 TO 173+01.60 LT			89					
STA 171+02.00 TO 172+44.50 RT			63					
STA 174+51.00 TO 176+35.00 LT STA 174+82.00 TO 176+35.00 RT			82 68					
STA 225+65.00 TO 227+11.00 LT			65					
STA 225+65.00 TO 227+39.00 RT			77					
STA 228+59.00 TO 230+10.00 LT			67					
STA 228+24.40 TO 229+98.00 RT			77					
STAGE I STA 44+42.50 TO 44+60.14 LT	48							
STA 44+60 14 TO 44+87 10 LT	40	48						
STA 45+50.90 TO 45+77.78 LT		39						
STA 45+77.78 TO 45+95.40 LT	37							
STA 64+84.60 TO 64+98.04 LT	22							
STA 64+98.04 TO 65+29.10 LT		59						
STA 65+92.30 TO 66+23.36 LT STA 66+23.36 TO 66+36.80 LT	30	57						
STA 153+94.40 TO 154+13.80 RT	35							
STA 154+13.80 TO 154+39.50 RT		49						
STA 155+07.40 TO 155+33.10 RT		40						
STA 155+33.10 TO 155+56.00 RT	41							
STA 172+44.50 TO 172+69.00 RT STA 172+69.00 TO 173+04.30 RT	44	43						
STA 174+15.70 TO 174+51.00 RT		62						
STA 174+51.00 TO 174+82.00 RT	75							
STA 227+11.00 TO 227+32.03 LT	50							
STA 227+32.03 TO 227+54.80 LT		39						
STA 228+15.20 TO 228+37.97 LT	4.4	36						
STA 228+37.97 TO 228+59.00 LT STAGE II	44	<u> </u>						
STA 44+42.50 TO 44+60.14 RT	37							
STA 44+60.14 TO 44+87.10 RT		39						
STA 45+50.90 TO 45+77.78 RT		48						
STA 45+77 78 TO 45+95 40 RT	48							
STA 64+84.60 TO 64+98.04 RT	31	50						
STA 64+98.04 TO 65+29.10 RT STA 65+92.30 TO 66+23.36 RT		59 57						
STA 66+23.36 TO 66+36.80 RT	22	j , ,						
STA 153+94.40 TO 154+13.80 LT	39							
STA 154+13.80 TO 154+39.50 LT		45						
STA 155+07.40 TO 155+33.10 LT		55						
STA 155+33.10 TO 155+56.00 LT STA 172+44.50 TO 172+69.00 LT	47 72							
STA 172+44.50 TO 172+69.00 LT	12	71						
STA 174+15.70 TO 174+51.00 LT		50						
STA 174+51.00 TO 174+82.00 LT	62							
STA 227+11.00 TO 227+32.03 RT	44							
STA 227+32.03 TO 227+54.80 RT		36						
STA 228+15.20 TO 228+37.97 RT STA 228+37.97 TO 228+59.00 RT	48	39						
	+ 0							

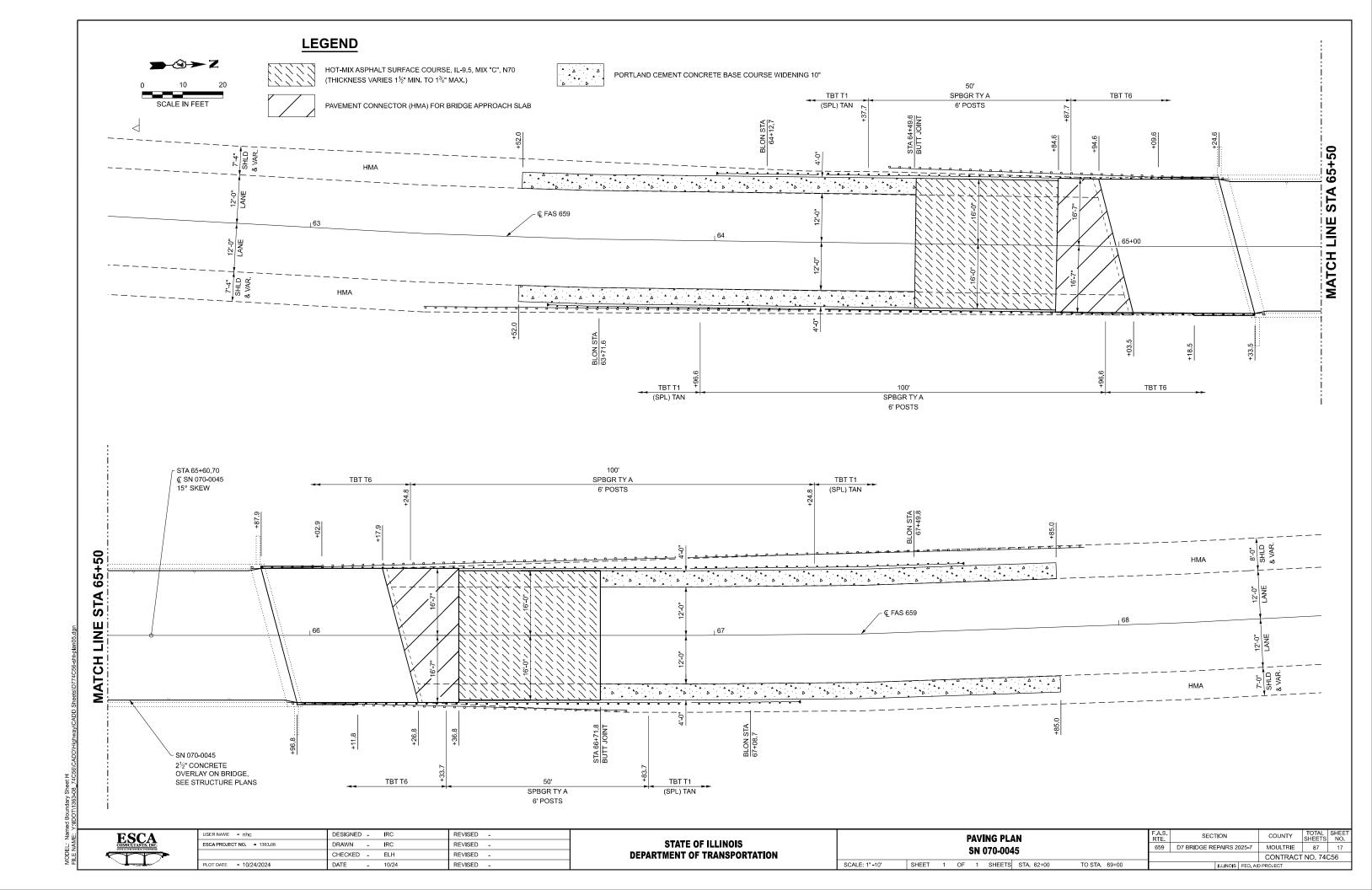
ESCA CONSULTANTS, INC. CYVILA D TRUCTURAL ENGINEERS

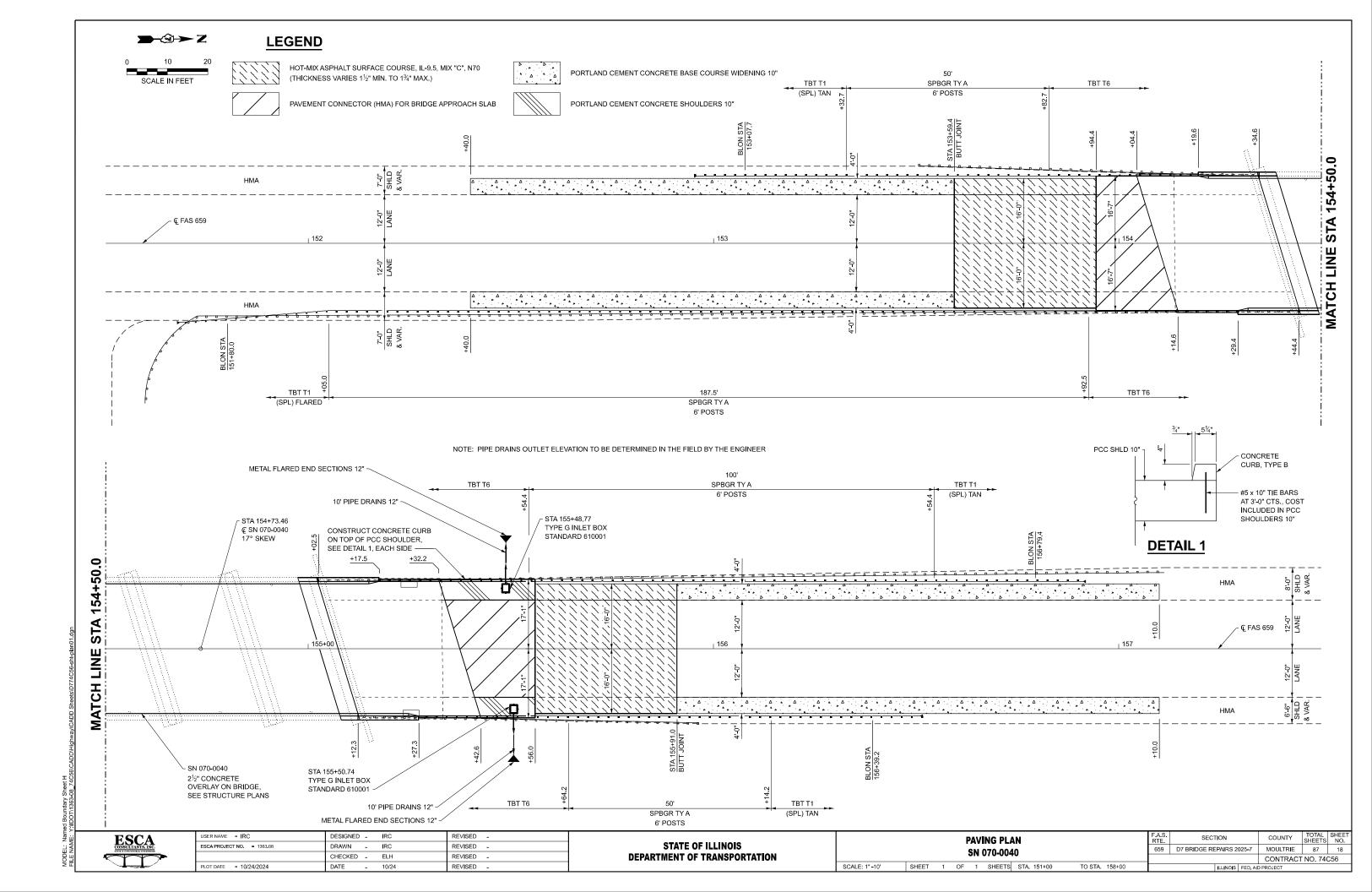
USER NAME = nhc	DESIGNED	-	IRC	REVISED	-
ESCA PROJECT NO. = 1363.08	DRAWN	-	IRC	REVISED	-
	CHECKED	-	ELH	REVISED	-
PLOT DATE = 10/24/2024	DATE	-	10/24	REVISED	_

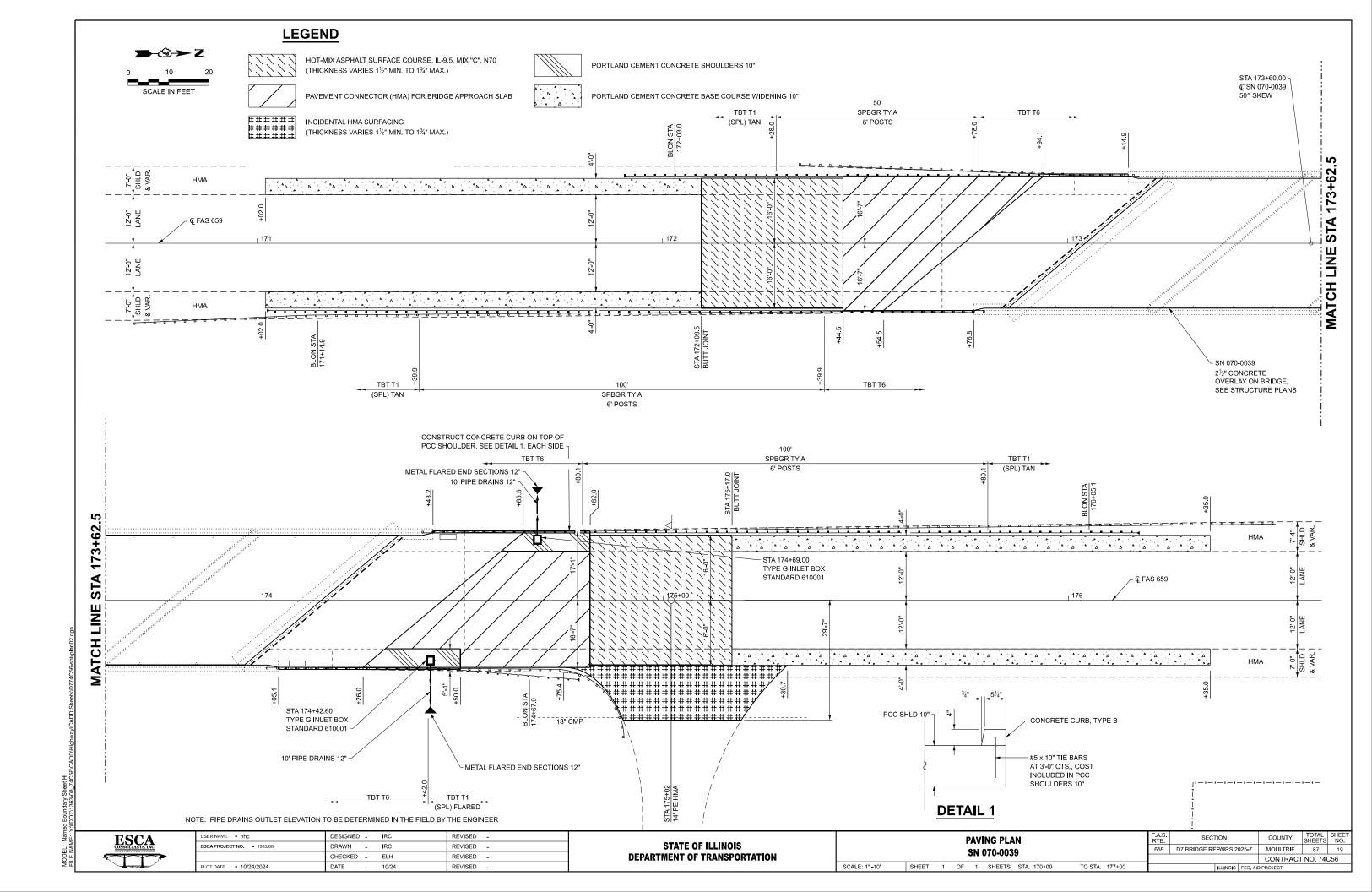
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

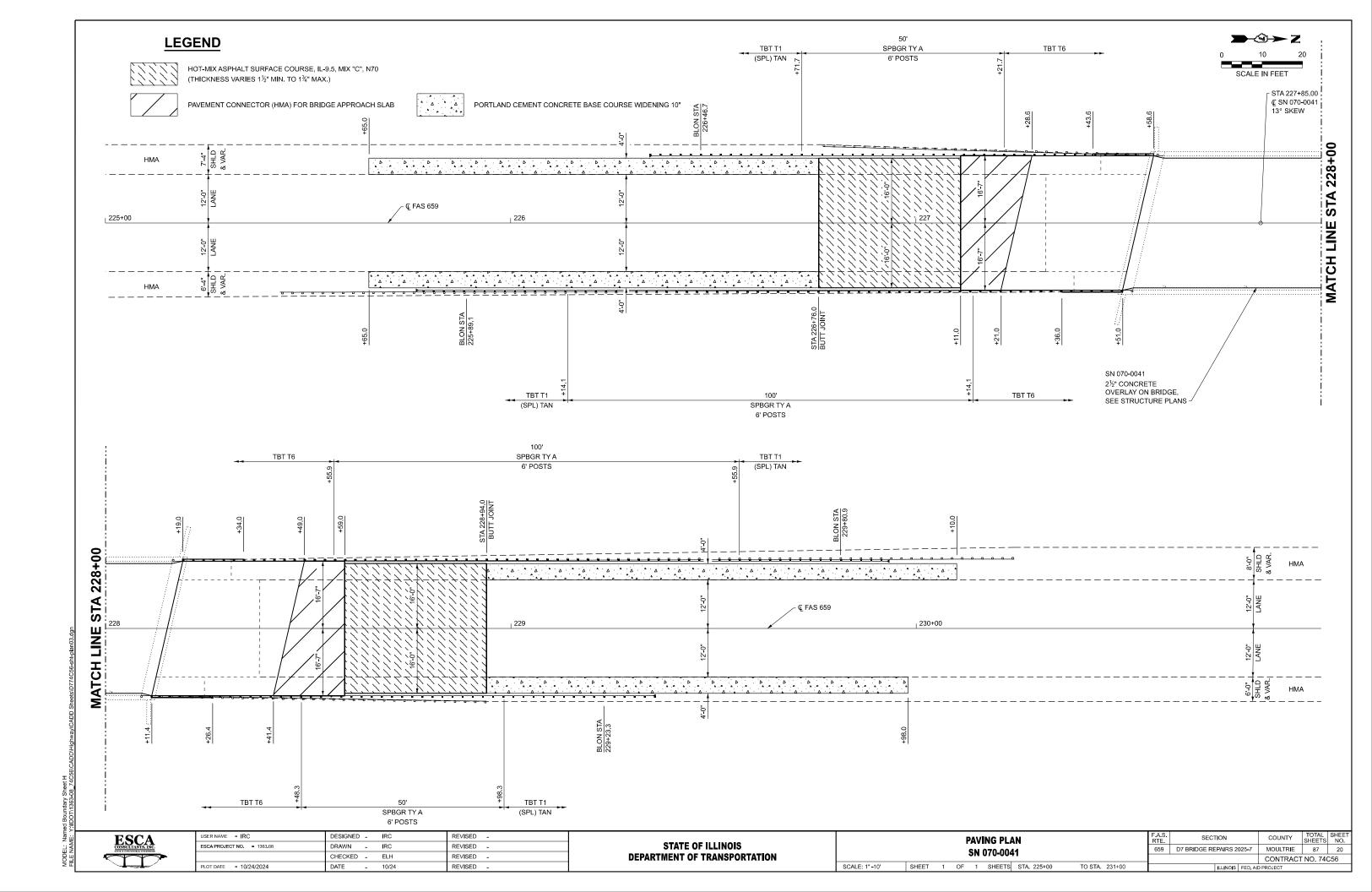
	SCHEDINES OF CHANTITIES						F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
							659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	15
								CONTRACT	ΓNO. 740	C56	
	SCALE: N/A SHEET 3 OF 3 SHEETS STA. TO STA. ILLINOIS FED, AID PROJECT										

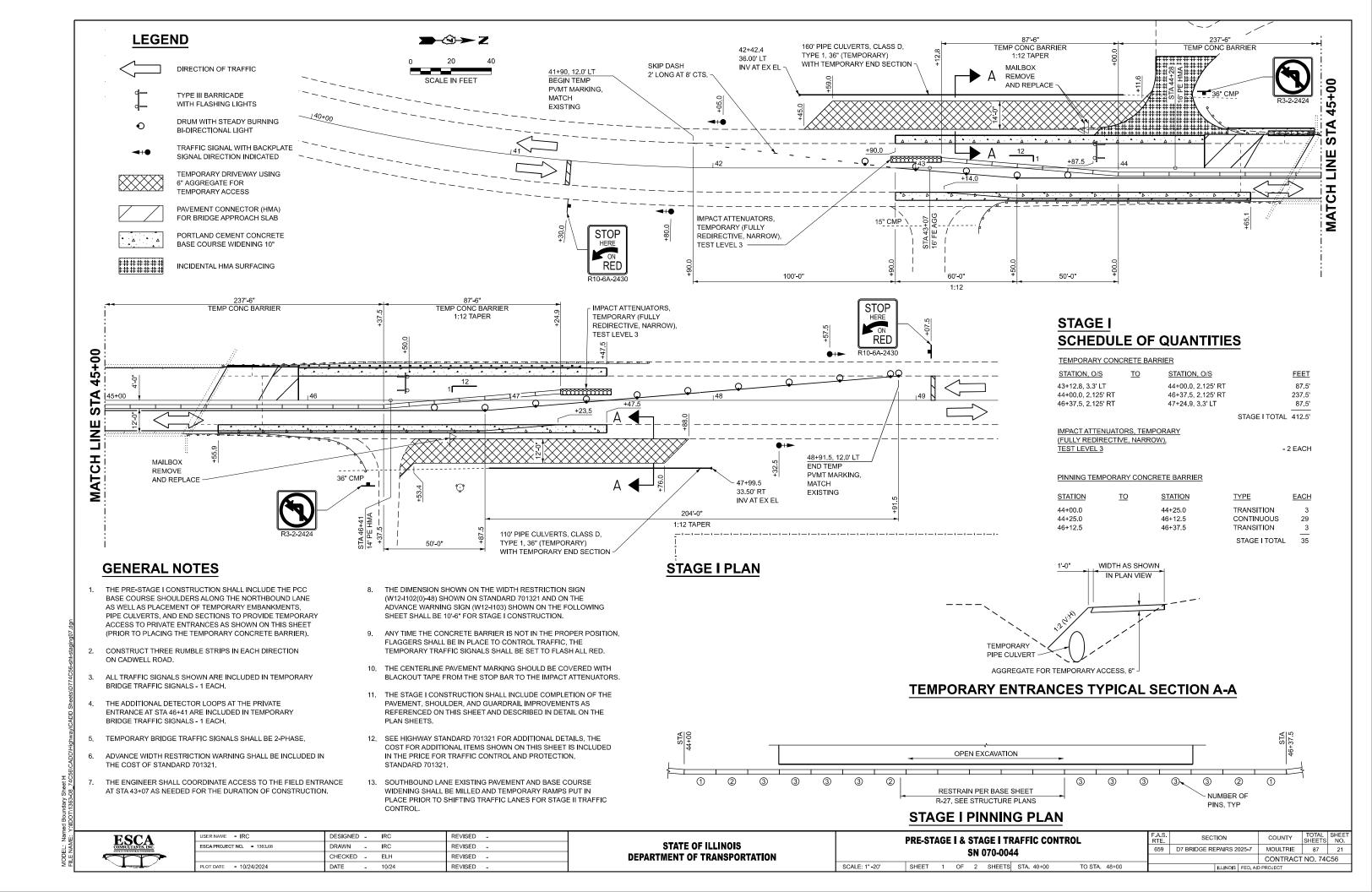


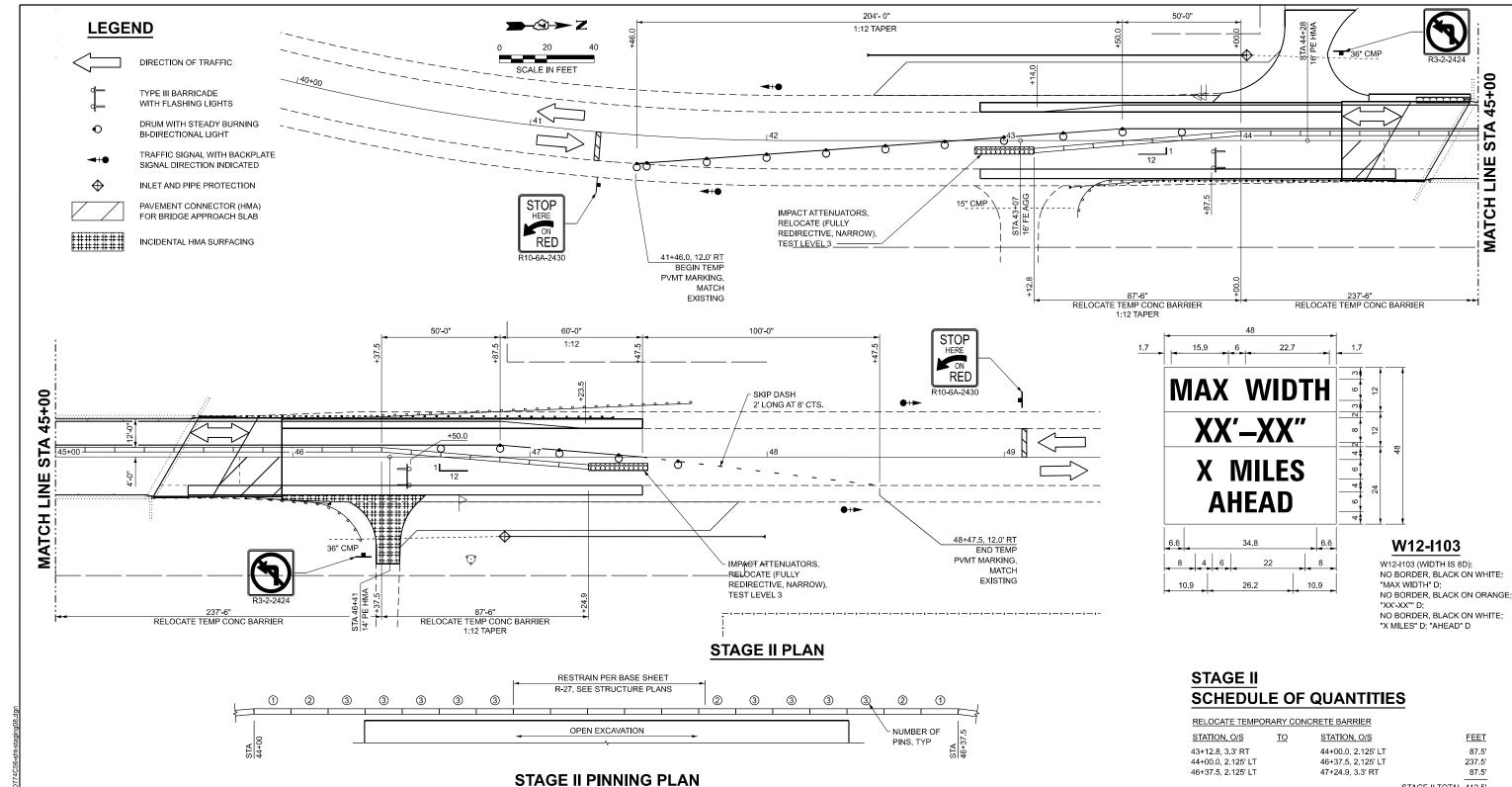












GENERAL NOTES

- ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD
- THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(0)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN SHALL BE 10'-6" FOR STAGE II CONSTRUCTION.
- ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC, THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.
- 4. THE STAGE II CONSTRUCTION SHALL INCLUDE COMPLETION OF THE PAVEMENT AND GUARDRAIL IMPROVEMENTS AS REFERENCED ON THIS SHEET AND DESCRIBED IN DETAIL
- AFTER TEMPORARY DRIVEWAYS ARE REMOVED, THE TEMPORARY PORTION OF THE PIPE CULVERTS SHALL BE REMOVED. THE METAL FLARED END SECTION SHALL BE REMOVED FROM THE TEMPORARY END AND RESET ON THE END OF THE PIPE TO REMAIN, PAID FOR AS REMOVE AND RELOCATE END SECTIONS.
- AREAS DISTURBED BY TEMPORARY ENTRANCES SHALL BE SEEDED AND MULCHED. INLET AND PIPE PROTECTION SHALL BE USED AT THE FINAL ENDS OF PIPES.
- 7. SEE HIGHWAY STANDARD 701321 FOR ADDITIONAL DETAILS. THE COST FOR ADDITIONAL ITEMS SHOWN ON THIS SHEET IS INCLUDED IN THE PRICE FOR TRAFFIC CONTROL AND PROTECTION, STANDARD 701321.
- NORTHBOUND LANE EXISTING PAVEMENT AND BASE COURSE WIDENING SHALL BE MILLED AND TEMPORARY RAMPS PUT IN PLACE PRIOR TO OPENING TO TRAFFIC.

STAGE II TOTAL 412.5'

IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3

- 2 EACH

PINNING TEMPORARY CONCRETE BARRIER

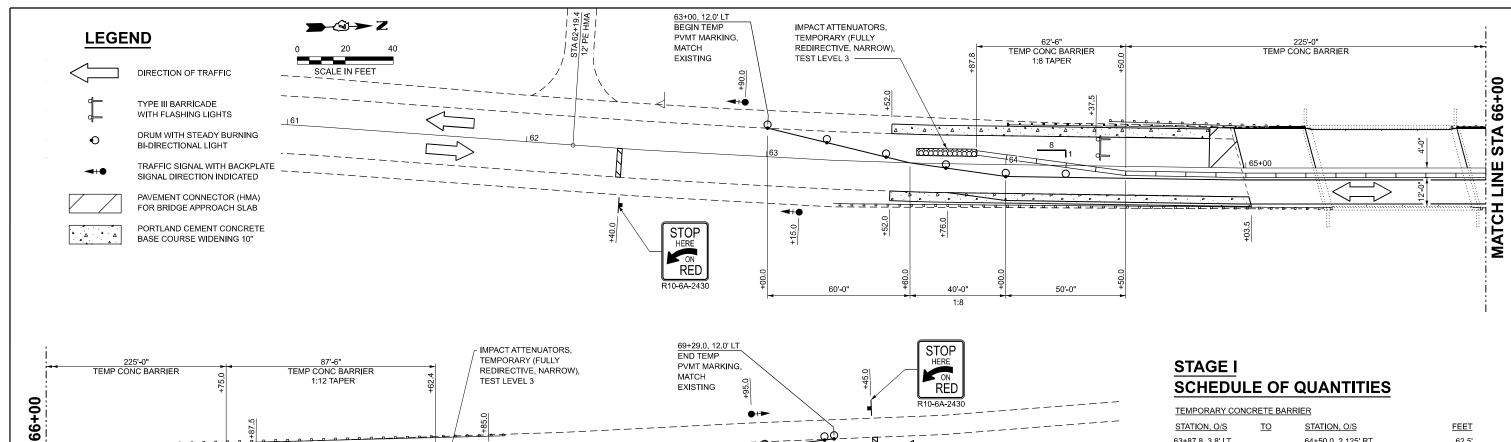
STATION	<u>TO</u>	<u>STATION</u>	TYPE	<u>EACH</u>
44+00.0		44+25.0	TRANSITION	3
44+25.0		46+12.5	CONTINUOUS	29
46+12.5		46+37.5	TRANSITION	3
			STAGE II TOTAL	35

USER NAME = IRC	DESIGNED -	IRC	REVISED -
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	CHECKED -	ELH	REVISED -
PLOT DATE = 10/24/2024	DATE -	10/24	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

	STA			AFFIC (070-004	CONTROL 4	
SHEET	2	OF	2	SHEETS	STA. 40+00	TO STA. 48+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	22
		CONTRACT	NO. 740	C56
	ILLINOIS FED AL	D PRO JECT		



GENERAL NOTES

ST

ΣÌ

. THE PRE-STAGE I CONSTRUCTION SHALL INCLUDE THE PCC BASE COURSE SHOULDERS ALONG THE NORTHBOUND LANE (PRIOR TO PLACING THE TEMPORARY CONCRETE BARRIER).

50'-0"

- 2. CONSTRUCT THREE RUMBLE STRIPS IN EACH DIRECTION ON CADWELL ROAD.
- ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
- 4. TEMPORARY BRIDGE TRAFFIC SIGNALS SHALL BE 2-PHASE.
- 5. ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
- 6. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(0)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN ON THE FOLLOWING SHEET SHALL BE 10'-6" FOR STAGE I CONSTRUCTION.
- 7. ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC, THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

 THE CENTERLINE PAVEMENT MARKING SHOULD BE COVERED WITH BLACKOUT TAPE FROM THE STOP BAR TO THE IMPACT ATTENUATORS.

204'-0" 1:12 TAPER

- THE STAGE I CONSTRUCTION SHALL INCLUDE COMPLETION OF THE PAVEMENT AND GUARDRAIL IMPROVEMENTS AS REFERENCED ON THIS SHEET AND DESCRIBED IN DETAIL ON THE PLAN SHEETS.
- 10. SEE HIGHWAY STANDARD 701321 FOR ADDITIONAL DETAILS. THE COST FOR ADDITIONAL ITEMS SHOWN ON THIS SHEET IS INCLUDED IN THE PRICE FOR TRAFFIC CONTROL AND PROTECTION, STANDARD 701321.
- 11. SOUTHBOUND LANE EXISTING PAVEMENT AND BASE COURSE WIDENING SHALL BE MILLED AND TEMPORARY RAMPS PUT IN PLACE PRIOR TO SHIFTING TRAFFIC LANES FOR STAGE II TRAFFIC

STATION, O/S	<u>TO</u>	STATION, O/S	<u>FEET</u>
63+87.8, 3.8' LT		64+50.0, 2.125' RT	62.5'
64+50.0, 2.125' RT		66+75.0, 2.125' RT	225.0'
66+75.0, 2.125' RT		67+62.4, 3.3' LT	87.5'
			STAGE I TOTAL 375.0'

IMPACT ATTENUATORS, TEMPORARY

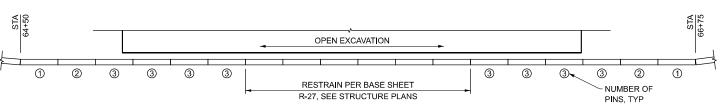
(FULLY REDIRECTIVE, NARROW),

PINNING TEMPORARY CONCRETE BARRIER

STATION	<u>TO</u>	<u>STATION</u>	TYPE	<u>EACH</u>
64+50.0		64+75.0	TRANSITION	3
64+75.0		66+50.0	CONTINUOUS	24
66+50.0		66+75.0	TRANSITION	3
				_
			STAGE I TOTAL	30

- 2 EACH

STAGE I PLAN



STAGE I PINNING PLAN

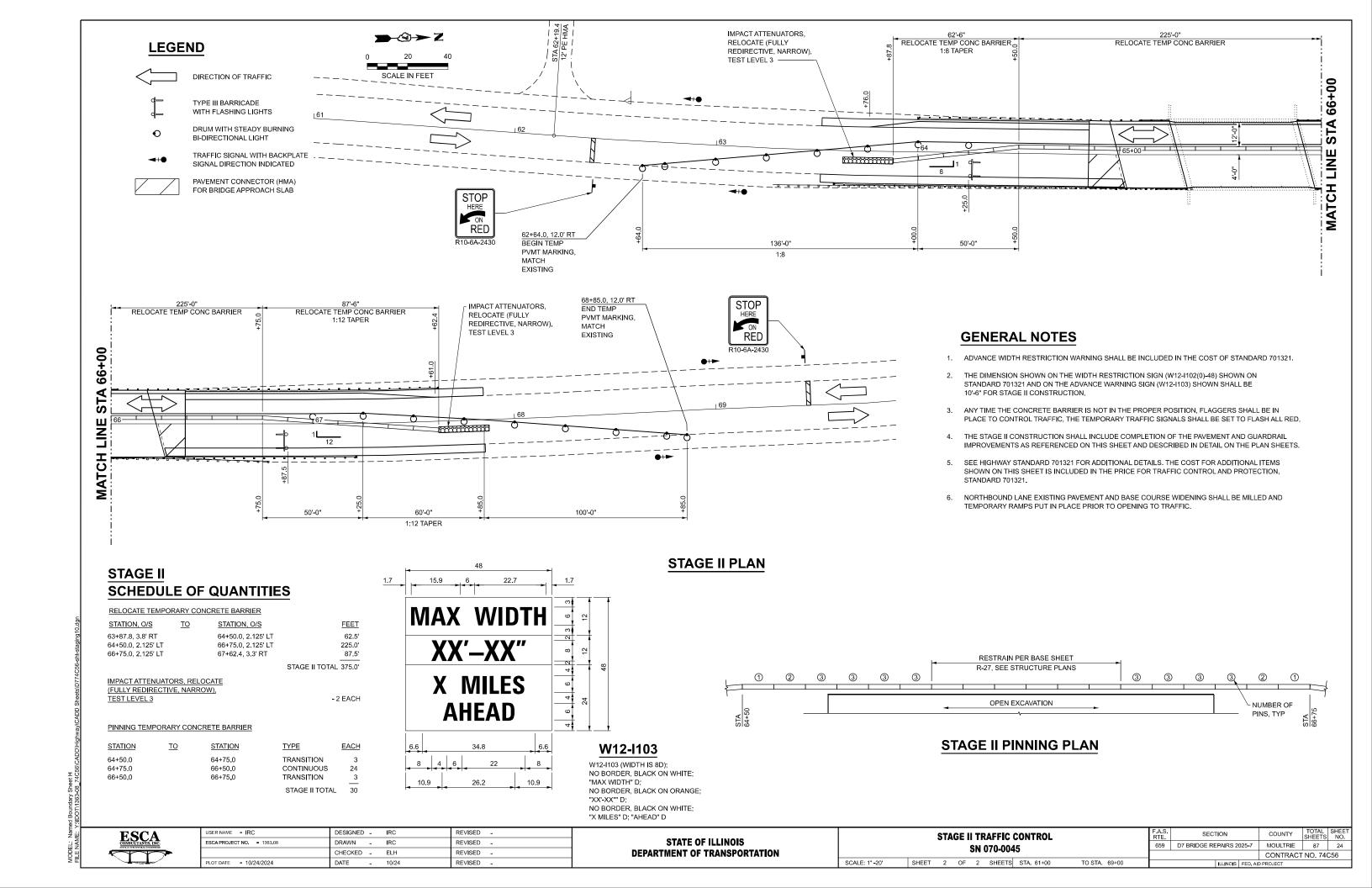
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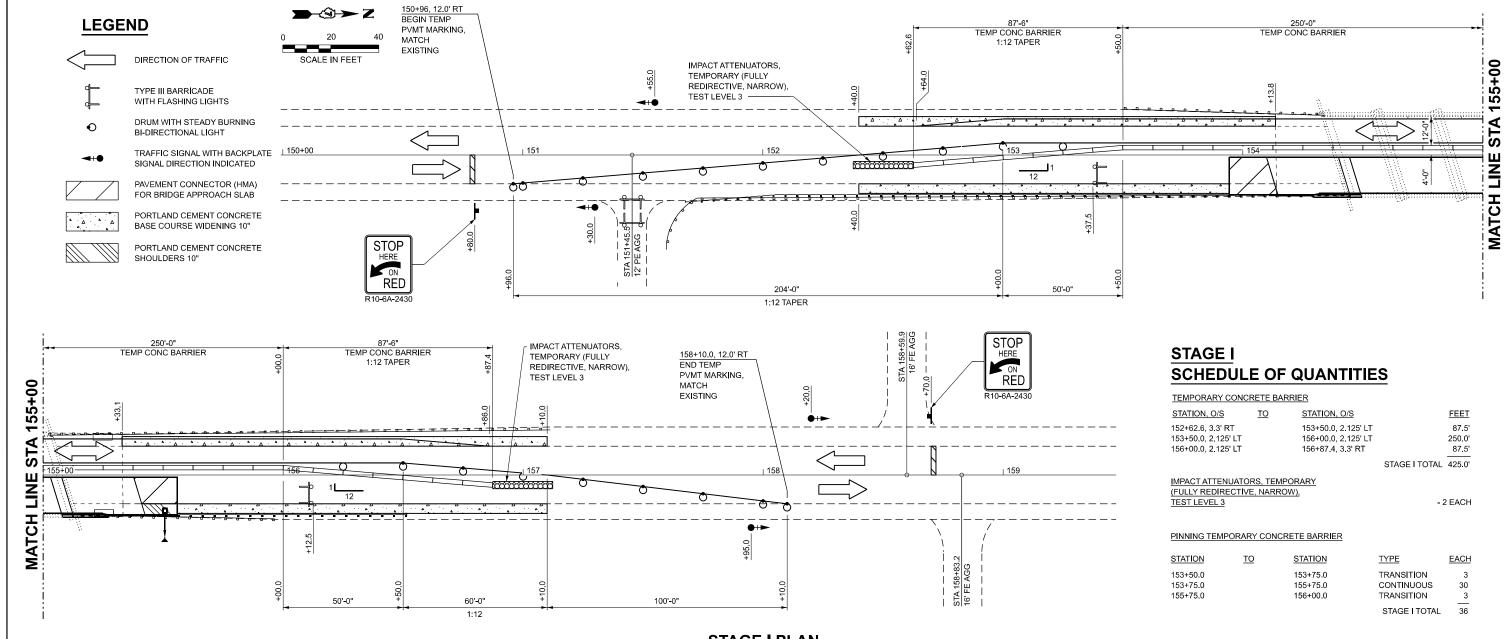
ESCA CONSULTANTS, INC. STYLL A J TRUCTURAL ENGINEERS

USER NAME = IRC	DESIGNED -	IRC	REVISED -
ESCA PROJECT NO. = 1363.08	DRAWN -	IRC	REVISED -
	CHECKED -	ELH	REVISED -
PLOT DATE = 10/24/2024	DATE -	10/24	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRE-STAGE I & STAGE I TRAFFIC CONTROL						F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
SN 070-0045							659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	23
311 070-00-53									CONTRACT	NO. 740	C56
SHEET	1	OF	2	SHEETS	STA, 61+00	TO STA, 70+00		ILLINOIS FED AII	D PROJECT		



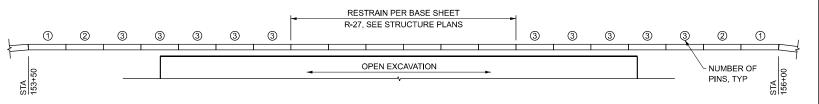


GENERAL NOTES

- THE PRE-STAGE I CONSTRUCTION SHALL INCLUDE THE PCC BASE COURSE SHOULDERS (PRIOR TO PLACING THE TEMPORARY CONCRETE BARRIER).
- 2. CONSTRUCT THREE RUMBLE STRIPS IN EACH DIRECTION ON CADWELL ROAD.
- ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
- 4. TEMPORARY BRIDGE TRAFFIC SIGNALS SHALL BE 2-PHASE.
- ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
- PRIVATE ENTRANCE AT STA 151+45.5 SHALL BE CLOSED FOR THE DURATION OF CONSTRUCTION. PROPERTY IS ACCESSIBLE VIA ALTERNATE ENTRANCE AT STA 149+45.
- THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(0)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN ON THE FOLLOWING SHEET SHALL BE 10'-6" FOR STAGE I CONSTRUCTION.

- ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC, THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.
- THE CENTERLINE PAVEMENT MARKING SHOULD BE COVERED WITH BLACKOUT TAPE FROM THE STOP BAR TO THE IMPACT ATTENUATORS.
- THE STAGE I CONSTRUCTION SHALL INCLUDE COMPLETION OF THE PAVEMENT, SHOULDER, AND GUARDRAIL IMPROVEMENTS AS REFERENCED ON THIS SHEET AND DESCRIBED IN DETAIL ON THE PLAN SHEETS.
- SEE HIGHWAY STANDARD 701321 FOR ADDITIONAL DETAILS. THE COST FOR ADDITIONAL ITEMS SHOWN ON THIS SHEET IS INCLUDED IN THE PRICE FOR TRAFFIC CONTROL AND PROTECTION, STANDARD 701321
- 12. NORTHBOUND LANE EXISTING PAVEMENT AND BASE COURSE WIDENING SHALL BE MILLED AND TEMPORARY RAMPS PUT IN PLACE PRIOR TO SHIFTING TRAFFIC LANES FOR STAGE II TRAFFIC CONTROL

STAGE I PLAN



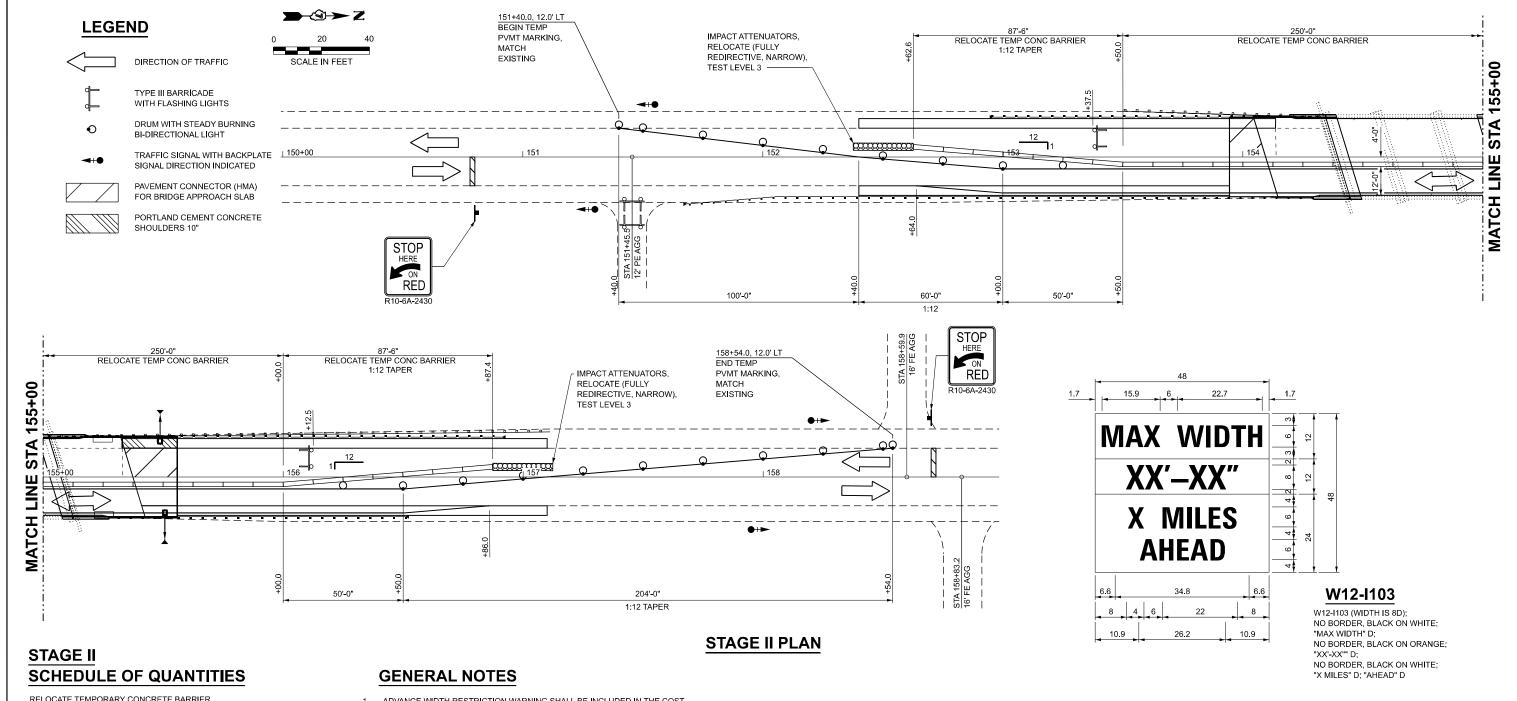
STAGE I PINNING PLAN

ESCA CONSULTANTS, INC. CIVIL A STEUCTURAL DIGENEERS

USER NAME = IRC	DESIGNED	-	IRC	REVISED	-
ESCA PROJECT NO. = 1363.08	DRAWN	-	IRC	REVISED	-
	CHECKED	-	ELH	REVISED	-
PLOT DATE = 10/24/2024	DATE	-	10/24	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	PRE-STAGE I & STAGE I TRAFFIC CONTROL						F.A.S. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.				
SN 070-0040							659	D7 BRIDGE REPAIRS 2	025-7	MOULTRIE	87	25				
	314 070=00=0											CONTRAC	Γ NO. 74	C56		
	SHEET	- 1	OF	2	SHEETS	AT2	150+00	TO ST	ΓΔ	150+00		11.11010	EED A	D DDO JEGT		



RELOCATE TEMPORARY CONCRETE BARRIER

STATION, O/S STATION, O/S <u>FEET</u> 152+62.6, 3.3' LT 153+50.0, 2.125' RT 87.5' 153+50.0, 2.125' RT 156+00.0, 2.125' RT 250.0' 156+00.0, 2.125' RT 156+87.4, 3.3' LT 87.5'

STAGE II TOTAL 425.0'

IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW),

- 2 EACH

PINNING TEMPORARY CONCRETE BARRIER

STATION	<u>TO</u>	STATION	TYPE	<u>EACH</u>
153+50.0		153+75.0	TRANSITION	3
153+75.0		155+75.0	CONTINUOUS	30
155+75.0		156+00,0	TRANSITION	3
				_
			STAGE II TOTAL	36

- 1. ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
- 2. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(0)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN SHALL BE 10'-6" FOR STAGE II CONSTRUCTION.
- ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.
- THE STAGE II CONSTRUCTION SHALL INCLUDE COMPLETION OF THE PAVEMENT AND GUARDRAIL IMPROVEMENTS AS REFERENCED ON THIS SHEET AND DESCRIBED IN DETAIL ON THE PLAN SHEETS
- SEE HIGHWAY STANDARD 701321 FOR ADDITIONAL DETAILS. THE COST FOR ADDITIONAL ITEMS SHOWN ON THIS SHEET IS INCLUDED IN THE PRICE FOR TRAFFIC CONTROL AND PROTECTION, STANDARD 701321.
- SOUTHBOUND LANE EXISTING PAVEMENT AND BASE COURSE WIDENING SHALL BE MILLED AND TEMPORARY RAMPS PUT IN PLACE PRIOR TO OPENING TO TRAFFIC.

OPEN EXCAVATION 3 3 3 3 3 (3) (3) - NUMBER OF RESTRAIN PER BASE SHEET PINS, TYP R-27. SEE STRUCTURE PLANS

STAGE II PINNING PLAN

ESCA CONSULTANTS, INC.

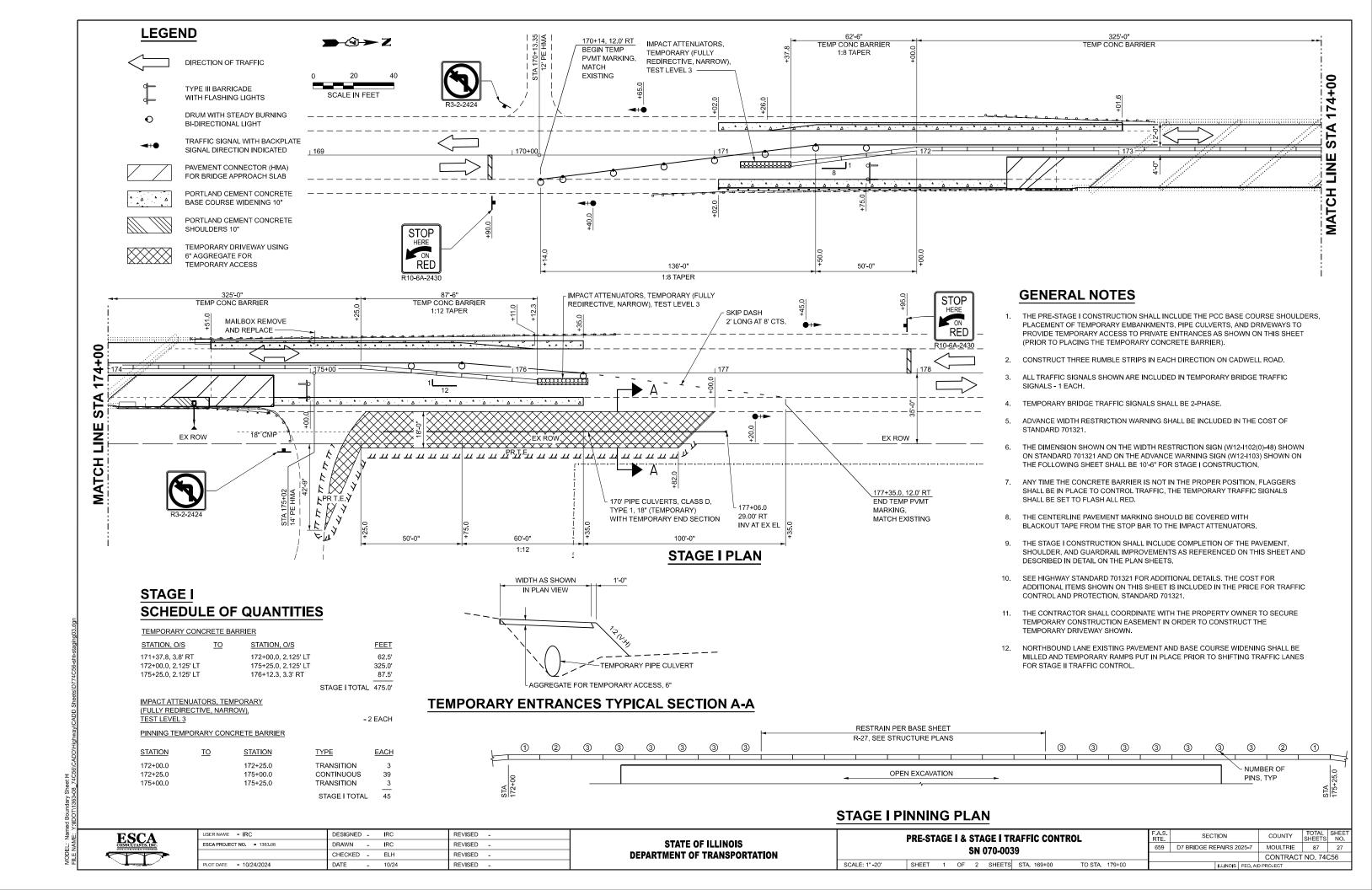
USER NAME = nhc	DESIGNED	-	IRC	REVISED	-
ESCA PROJECT NO. = 1363.08	DRAWN	-	IRC	REVISED	-
	CHECKED	-	ELH	REVISED	-
PLOT DATE = 10/24/2024	DATE	-	10/24	REVISED	-

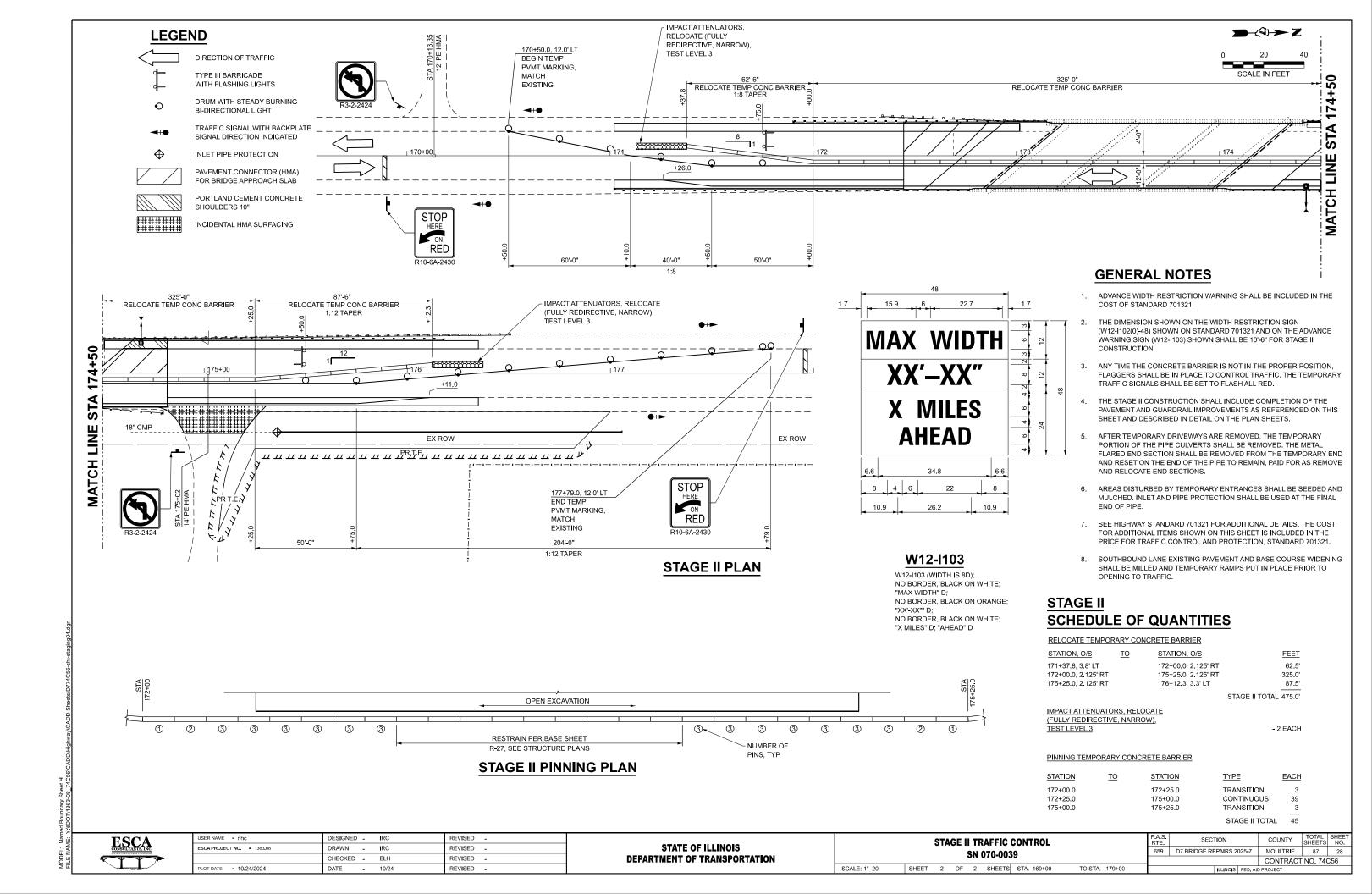
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

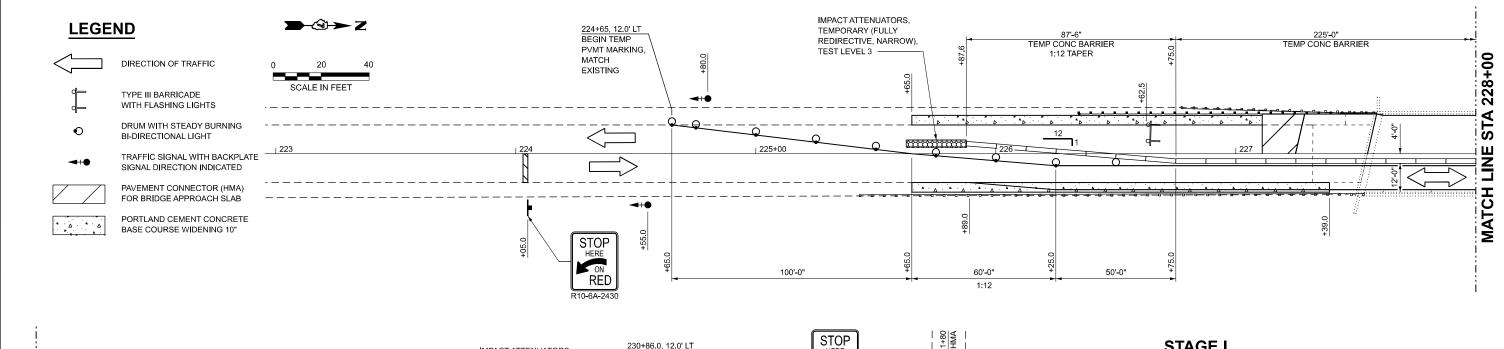
SCALE: 1" -20'

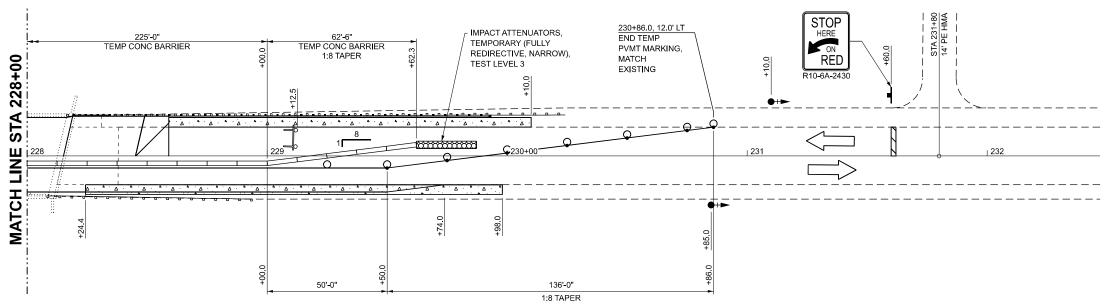
SHEET

STAGE II TRAFFIC CONTROL					F.A.S. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.		
SN 070-0040						659	659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 26				26	
									CONTRACT	NO. 740	C56	
2	OF	2	SHEETS	STA. 150+00	TO STA, 159	9+00		ILLINOIS	FED AL	D PRO JECT		









STAGE I SCHEDULE OF QUANTITIES

TEMPORARY CONCRETE BARRIER

STATION, O/S	<u>TO</u>	STATION, O/S		<u>FEET</u>
225+87.6, 3.3' LT		226+75.0, 2.125' RT		87.5'
226+75.0, 2.125' RT		229+00.0, 2.125' RT		225.0'
229+00.0, 2.125' RT		229+62.3, 3.8' LT		62.5'
			STAGE I TOTAL	375.0'

IMPACT ATTENUATORS, TEMPORARY

(FULLY REDIRECTIVE, NARROW),

ST LEVEL 3 - 2 EACH

PINNING TEMPORARY CONCRETE BARRIER

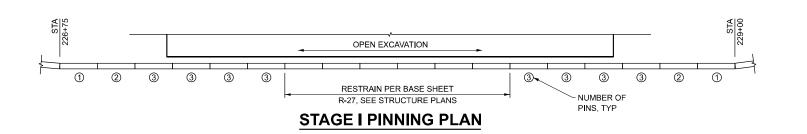
STATION	<u>TO</u>	STATION	TYPE	<u>EACH</u>
226+75.0		227+00.0	TRANSITION	3
227+00.0		228+75.0	CONTINUOUS	24
228+75.0		229+00.0	TRANSITION	3
			STAGE I TOTAL	30
			SIAGETIOIAL	30

STAGE I PLAN

GENERAL NOTES

- . THE PRE-STAGE I CONSTRUCTION SHALL INCLUDE THE PCC BASE COURSE SHOULDERS ALONG THE NORTHBOUND LANE (PRIOR TO PLACING THE TEMPORARY CONCRETE BARRIER).
- 2. CONSTRUCT THREE RUMBLE STRIPS IN EACH DIRECTION ON CADWELL ROAD.
- ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
- 4. TEMPORARY BRIDGE TRAFFIC SIGNALS SHALL BE 2-PHASE.
- ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.
- 6. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-1102(0)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-1103) SHOWN ON THE FOLLOWING SHEET SHALL BE 10'-6" FOR STAGE I CONSTRUCTION.
- 7. ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC, THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

- THE CENTERLINE PAVEMENT MARKING SHOULD BE COVERED WITH BLACKOUT TAPE FROM THE STOP BAR TO THE IMPACT ATTENUATORS.
- THE STAGE I CONSTRUCTION SHALL INCLUDE COMPLETION OF THE PAVEMENT, SHOULDER, AND GUARDRAIL IMPROVEMENTS AS REFERENCED ON THIS SHEET AND DESCRIBED IN DETAIL ON THE PLAN SHEETS.
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- 11. SOUTHBOUND LANE EXISTING PAVEMENT AND BASE COURSE WIDENING SHALL BE MILLED AND TEMPORARY RAMPS PUT IN PLACE PRIOR TO SHIFTING TRAFFIC LANES FOR STAGE II TRAFFIC CONTROL



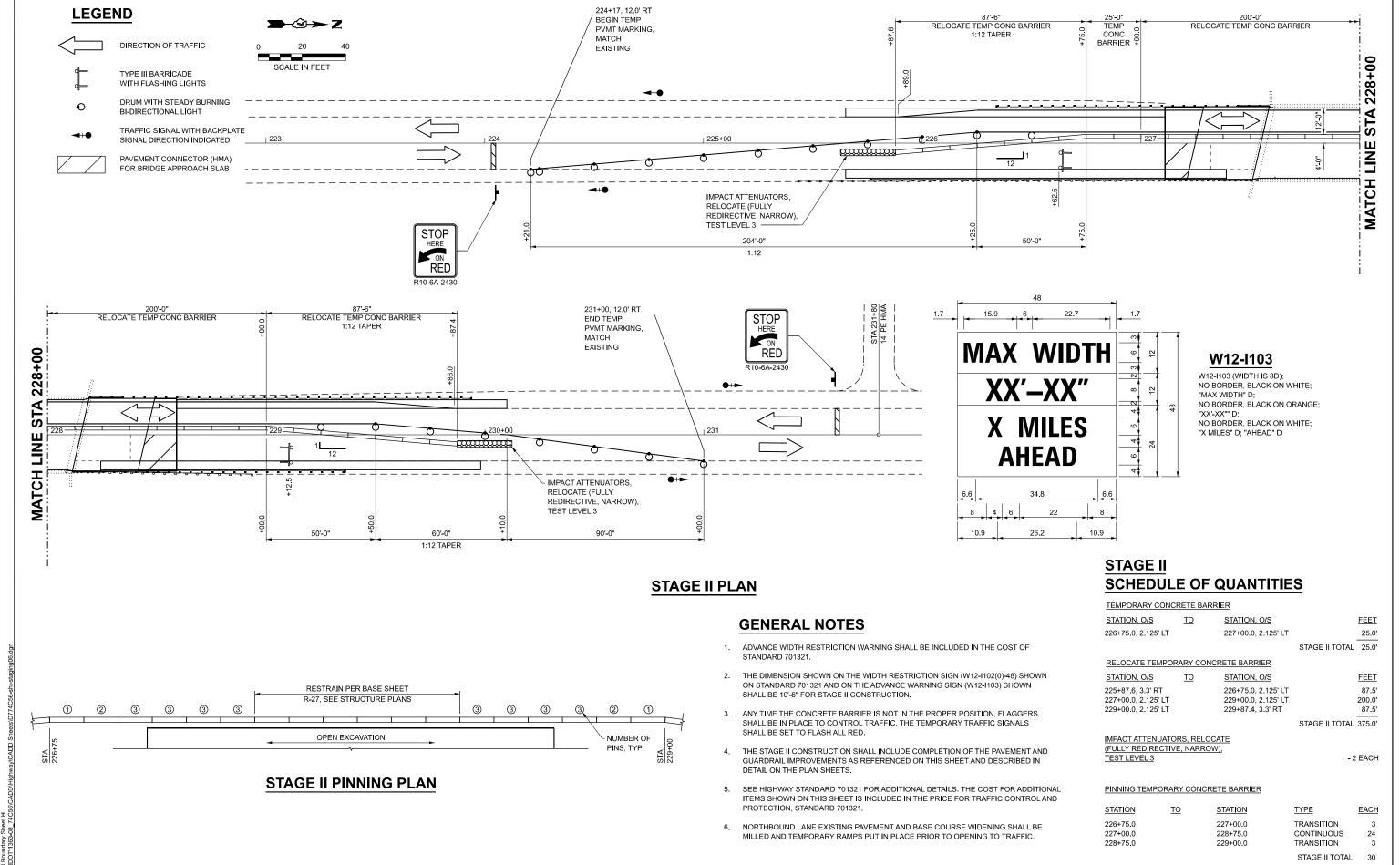
ESCA CONSULTANTS, INC.

USER NAME = IRC	DESIGNED	-	IRC	REVISED	-
ESCA PROJECT NO. = 1363.08	DRAWN	-	IRC	REVISED	-
	CHECKED	-	ELH	REVISED	-
PLOT DATE = 10/24/2024	DATE	_	10/24	REVISED	-

STATE OF ILLINOIS							
DEPARTMENT OF TRANSPORTATION							

SCALE: 1" -20'

PRE-STAGE I & STAGE I TRAFFIC CONTROL					F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
SN 070-0041						659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	29			
								CONTRACT	ΓNO. 740	C56			
	SHEET	1	OF	2	SHEETS	STA 223+00	TO STA	232+00		HUNDE EED AD PROJECT			



STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

SECTION

659 D7 BRIDGE REPAIRS 2025-7

TO STA. 232+00

STAGE II TRAFFIC CONTROL

SN 070-0041

SHEET 2 OF 2 SHEETS STA. 223+00

SCALE: 1" -20'

COUNTY

MOULTRIE

87

CONTRACT NO. 74C56

MODEL: Named Boundary Sheet H

DESIGNED - IRC

DRAWN - IRC

DATE

ELH

REVISED

REVISED

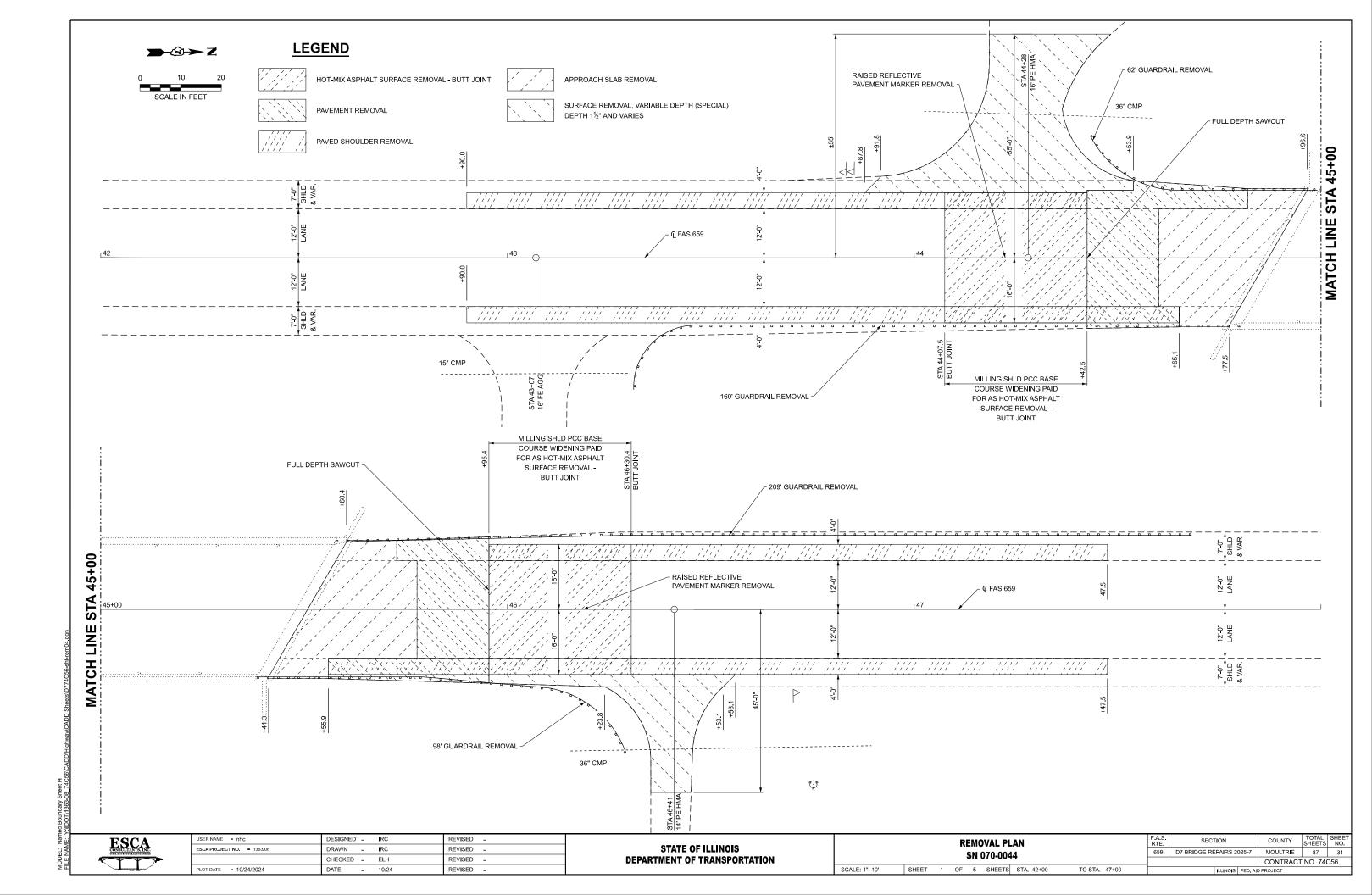
REVISED

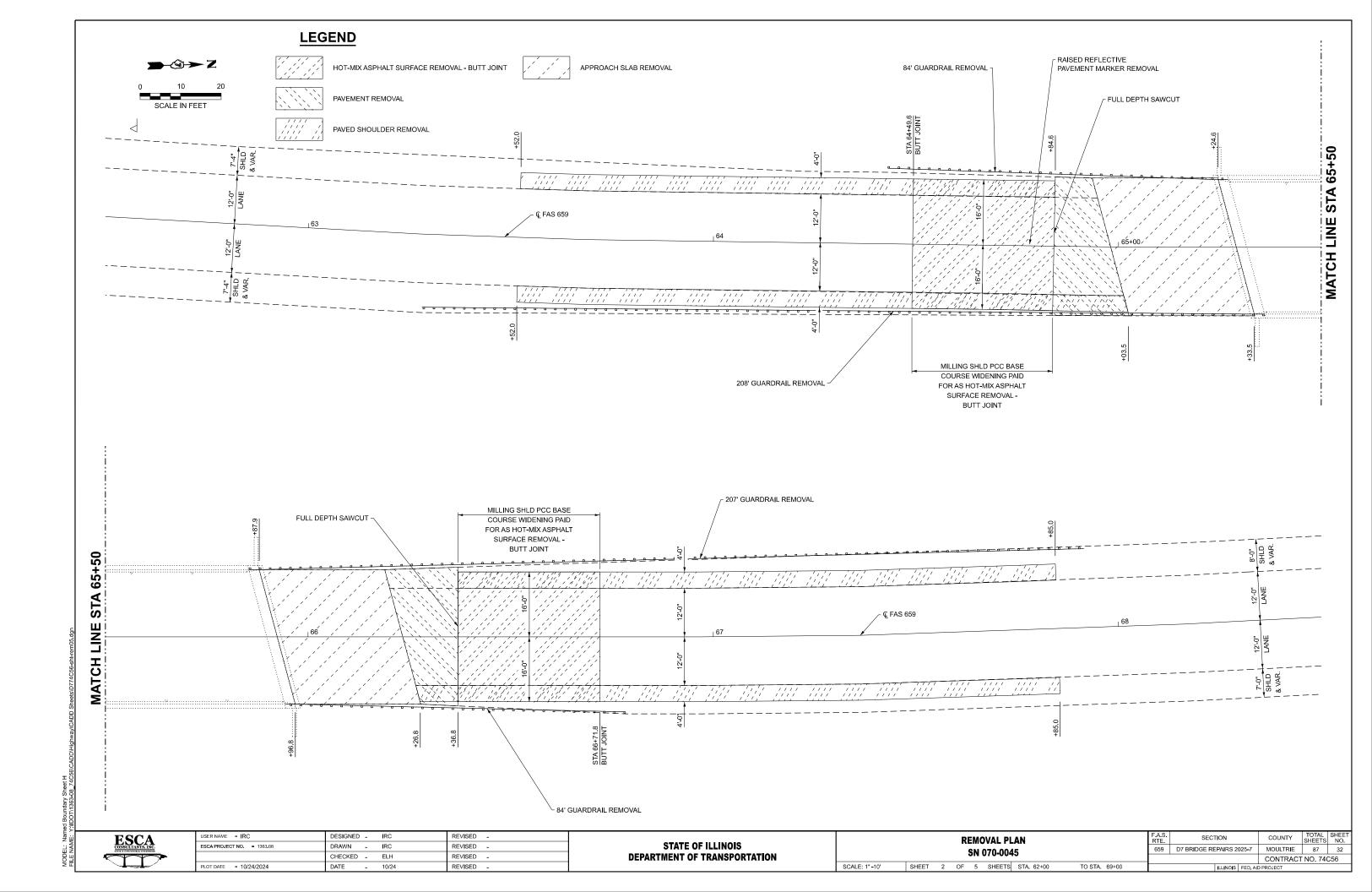
REVISED

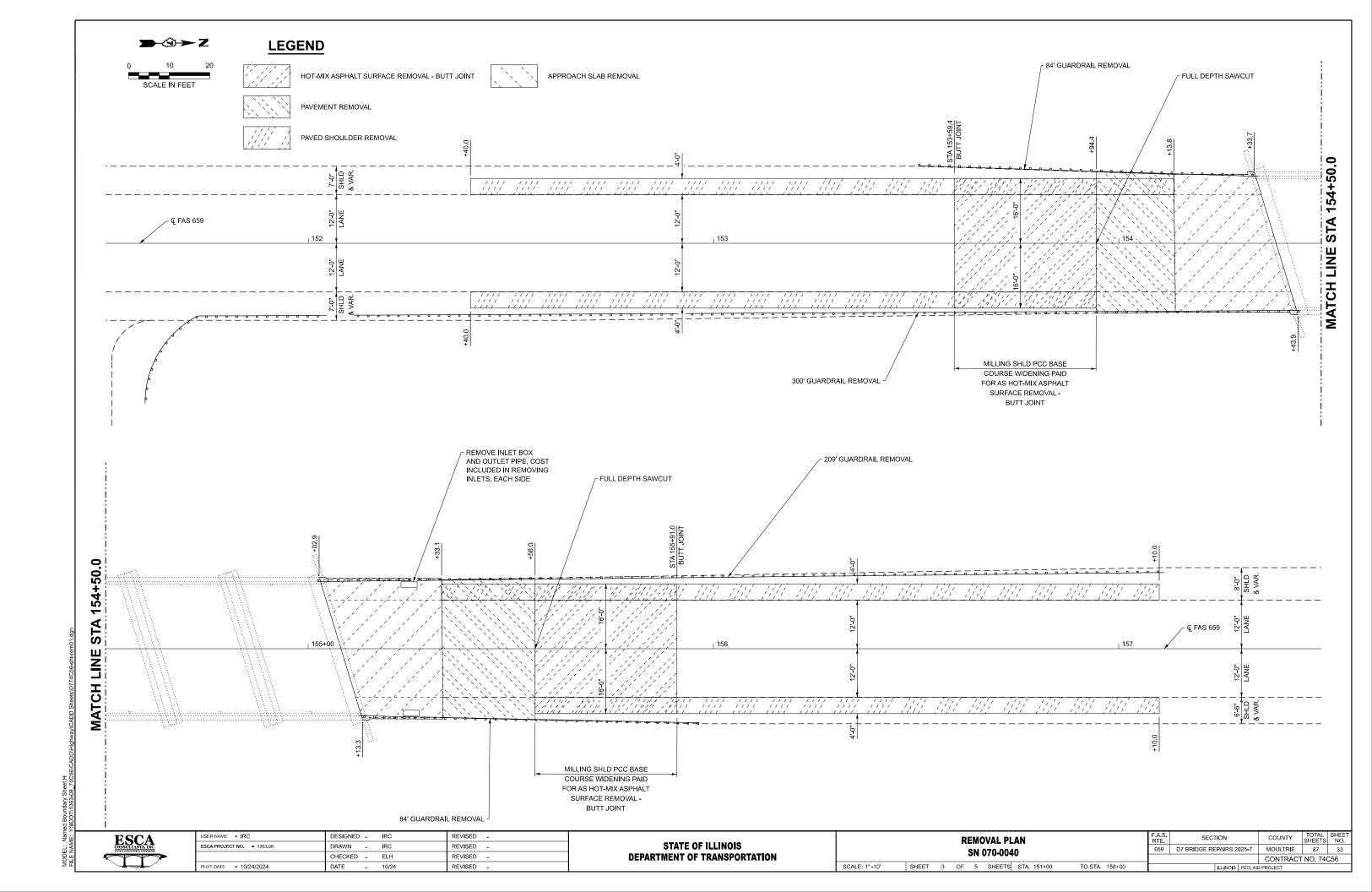
SER NAME = IRC

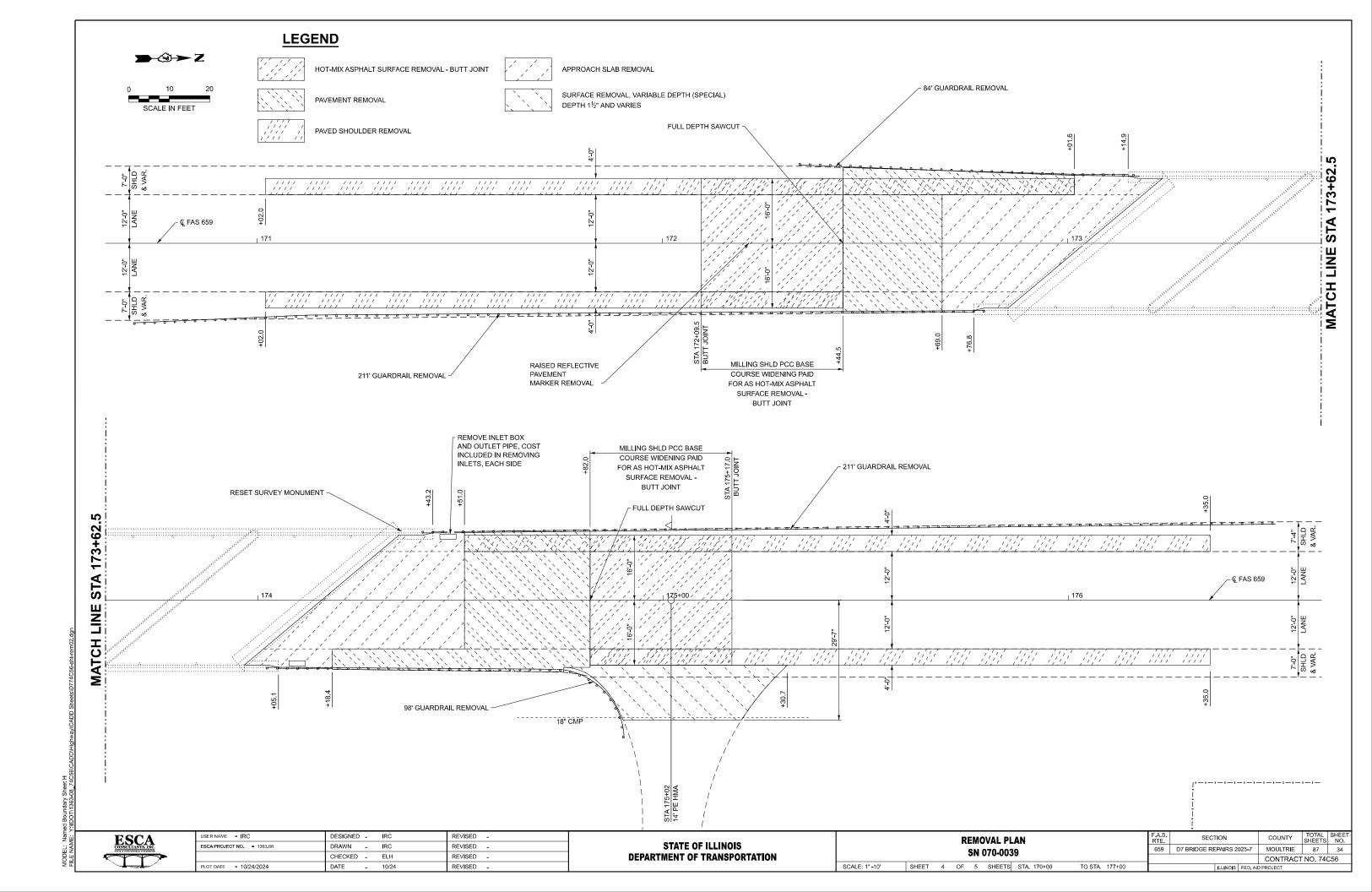
SCA PROJECT NO. = 1363.08

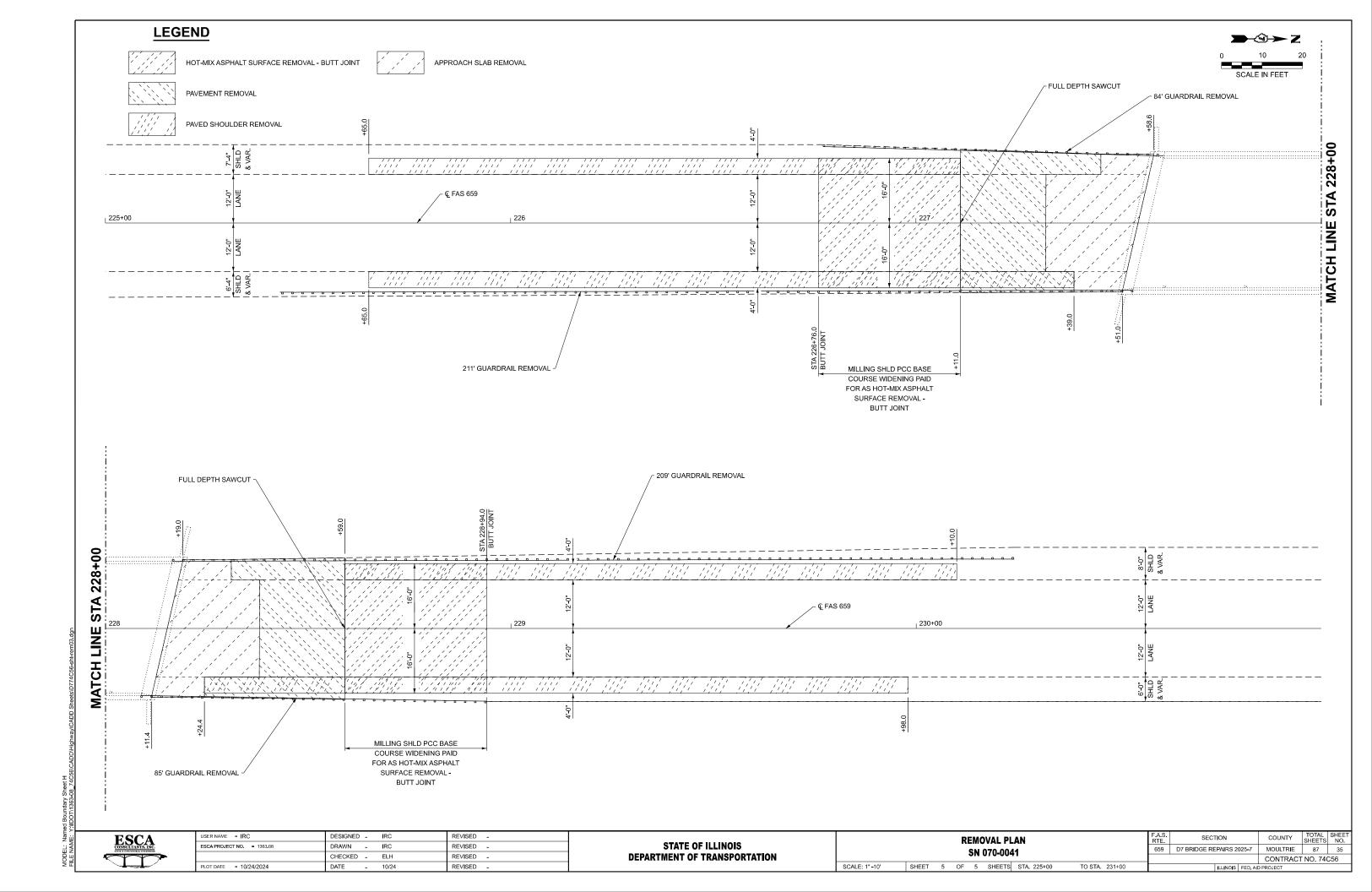
LOT DATE = 10/24/2024











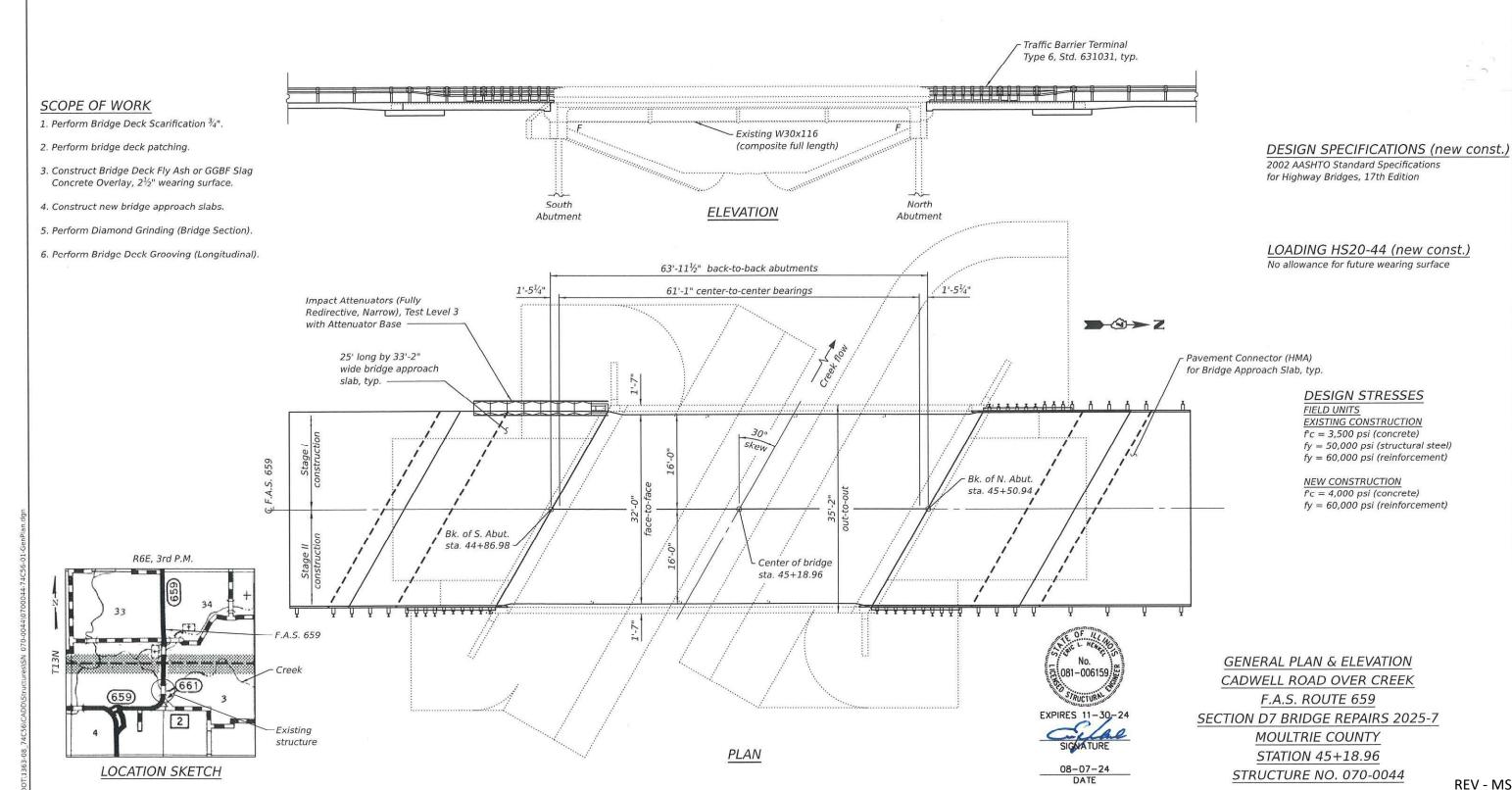
EXISTING STRUCTURE:

The existing single-span steel beam structure was constructed in 1986 as F.A.S. Route 659 Section 1BR-2 at Station 45+18.96. SN 070-0044 carries Cadwell Road over a creek. The concrete integral abutments are supported on metal shell piles. The bridge is $63'-11^{1}\!\!\!/_{2}$ " long back-to-back of abutments. The superstructure is 35'-2" out-to-out and is skewed $30^{\circ}-00'-00$ " left-forward.

The proposed project consists of bridge deck repairs, new overlay, and new bridge approach slabs. Traffic is to be maintained utilizing stage construction.

STRUCTURE INDEX OF SHEETS

General Plan & Elevation Sheet No. 1 of 9 General Notes and Total Bill of Material Sheet No. 2 of 9 Stage Construction Sheet No. 3 of 9 Temporary Concrete Barrier Sheet No. 4 of 9 Bridge Deck Patching Sheet No. 5 of 9 Superstructure Details Sheet No. 6 of 9 Bridge Approach Slab Details Sheet No. 7-8 of 9 Bar Splicer Assembly Details Sheet No. 9 of 9



MODEL: Sheet

10/22/2024 10:42:54 AM

ESCA PROJECT NO. = 1363.08

PLOT SCALE = 0:2 "." / in.

PLOT DATE = 10/22/2024

CTJ

ELH

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DRAWN

07/24

07/24

08/24

REVISED

REVISED

REVISED

REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION

SHEET 1 OF 9 SHEETS

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

 659
 D7 BRIDGE REPAIRS 2025-7
 MOULTRIE
 87
 36

 CONTRACT NO. 74C56

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Plan dimensions and details relative to the existing structure have been taken from existing plans and 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 shall be replaced with an approved bar splicer or anchorage system at the Contractor's expense.
- Areas of deck repairs shown are estimated. The Engineer shall show actual locations and size of deck repairs on As-built plans.
- 5. Bridge Deck Grooving (Longitudinal) shall be completed only after Diamond Grinding (Bridge Section) is complete.
- 6. Protective Coat shall be applied to the top of the new concrete overlay, bridge approach slabs, and tops and inside faces of bridge approach slab curbs.
- 7. Up to $\frac{1}{4}$ " to be ground off the concrete overlay and bridge approach slabs.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Structures	Cu. Yd.		23.7	23.7
Protective Coat	Sq. Yd.	416		416
Concrete Superstructure (Approach Slab)	Cu. Yd.	79.9		79.9
Reinforcement Bars, Epoxy Coated	Pound	27,070	4,140	31,210
Bar Splicers	Each	152	80	232
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	304		304
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, $2\frac{1}{2}$ "	Sq. Yd.	228		228
Bridge Deck Scarification 3/4"	Sq. Yd.	228		228
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	6		6
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	1		1
Diamond Grinding (Bridge Section)	Sa. Yd.	361		361

ESCA CONSULTANIS, INC.
 USER NAME = nhc
 DESIGNED - CTJ
 07/24
 REVISED

 ESCA PROJECT NO. = 1363.08
 CHECKED - ELH 07/24
 REVISED

 PLOT SCALE = 0:2 ':" / in.
 DRAWN - NHC 08/24
 REVISED

 PLOT DATE = 10/22/2024
 CHECKED - ELH 08/24
 REVISED

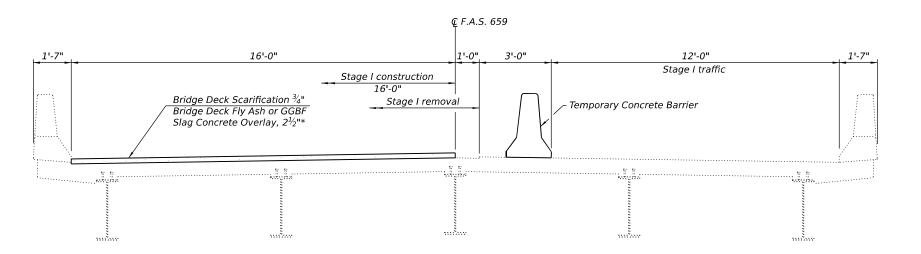
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND TOTAL BILL OF MATERIAL
SN 070-0044

SHEET 2 OF 9 SHEETS

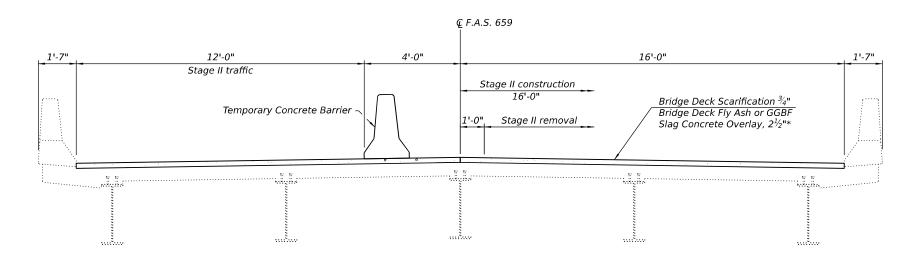
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tures\SN 070-0044\0700044-74C56-02-GenNotes.



STAGE I - LOOKING NORTH

* Prior to grinding

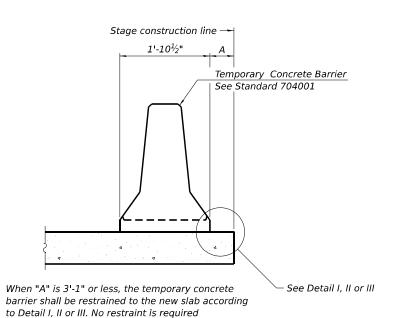


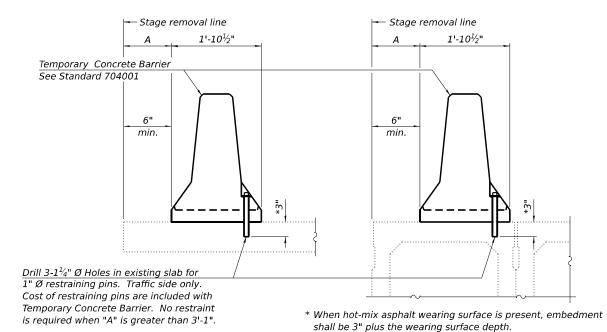
STAGE II - LOOKING NORTH

USER NAME = nhc	DESIGNED	-	CTJ	07/24	REVISED	-
ESCA PROJECT NO.= 1363.08	CHECKED	-	ELH	07/24	REVISED	-
PLOT SCALE = 0:2 ':" / in.	DRAWN	-	NHC	07/24	REVISED	-
PLOT DATE = 10/22/2024	CHECKED	-	ELH	07/24	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION		SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
SN 070-0044		D7 BRIDGE REPAIRS 202	25-7	MOULTRIE	87	38
311 070-0044				CONTRACT	NO. 740	256
SHEET 3 OF 9 SHEETS		ILLINOIS	FED.	AID PROJECT		





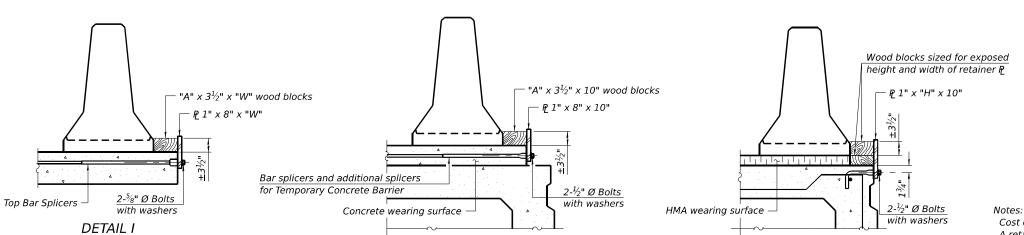
1x8 UNC $\frac{7}{16}$ " Ø hole US Std. $1\frac{1}{16}$ " I.D. $\times 2\frac{1}{2}$ " O.D. x approx. 8 gauge thick washer 1" Ø pin RESTRAINING PIN

NEW SLAB OR NEW DECK BEAM

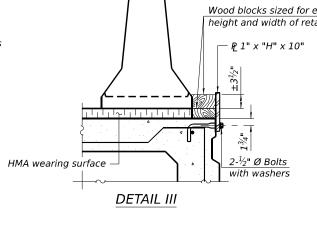
when "A" is greater than 3'-1".

SECTIONS THRU SLAB OR DECK BEAM

EXISTING SLAB



DETAIL II



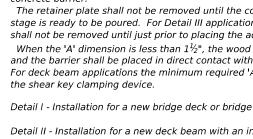
10"

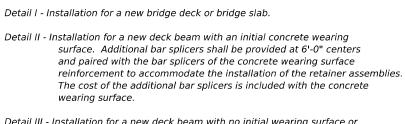
STEEL RETAINER P 1" x "H" x 10"

(Detail III)

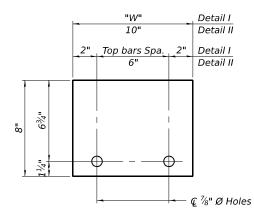
EXISTING DECK BEAM

− **¢** %" Ø Holes





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 3	50 Test Level	3
Railing W	/eight (plf)	440

R-27 5-15-2023

ISER NAME = nhc

SCA PROJECT NO. = 1363.08

PLOT SCALE = 0:2 ':" / in.

PLOT DATE = 10/22/2024

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

DESIGNED - CTJ 07/24 REVISED CHECKED - ELH 07/24 REVISED NHC 07/24 REVISED CHECKED - ELH 07/24 REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION TEMPORARY CONCRETE BARRIER 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 39 SN 070-0044 CONTRACT NO. 74C56 SHEET 4 OF 9 SHEETS



Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate ${\mathfrak C}$ of each temporary concrete barrier.

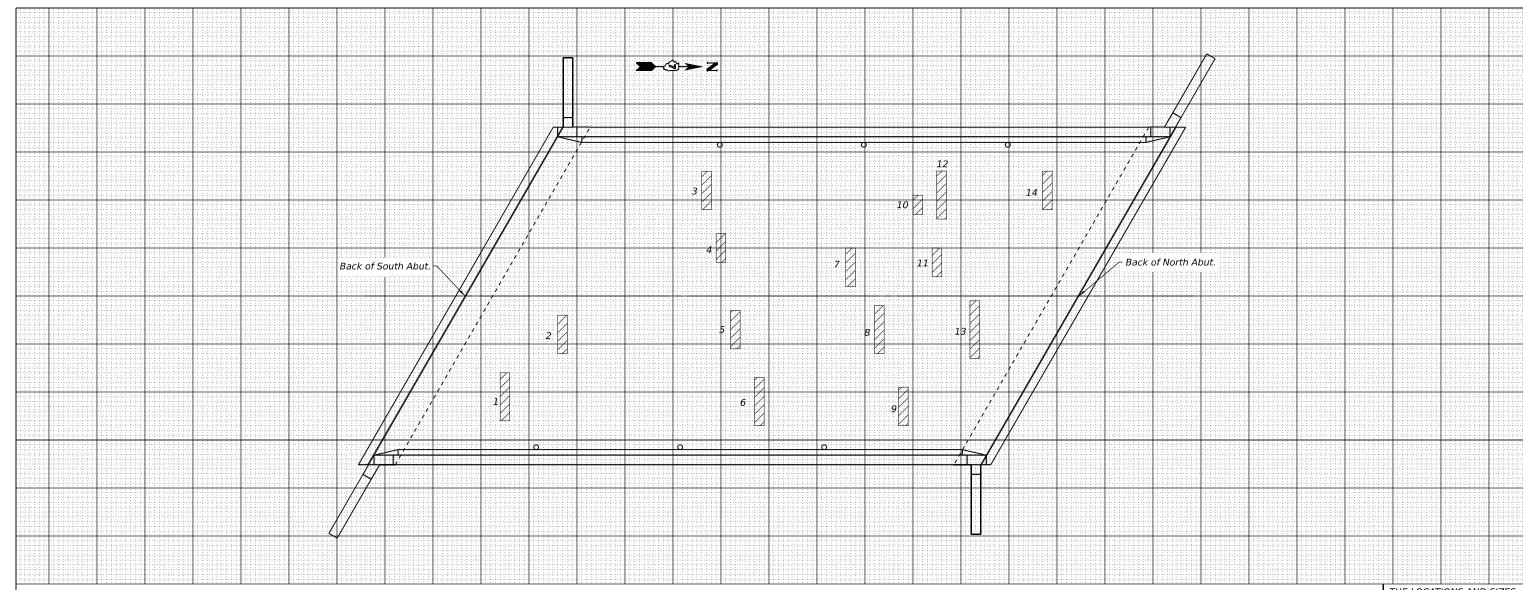
BAR SPLICER FOR #4 BAR - DETAIL III

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 $1\frac{1}{2}$ ", 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



10/22/2024 11:30:19 AM



PATCH	SIZ (FE		DECK SLAB REPAIR (FD, TY I)	DECK SLAB REPAIR (FD, TY II)
NO.	LENGTH	WIDTH	SQ YD	SQ YD
1	1.0	5.0	0.6	
2	1.0	4.0	0.4	
3	1.0	4.0	0.4	
4	1.0	3.0	0.3	
5	1.0	4.0	0.4	
6	1.0	5.0	0.6	
7	1.0	4.0	0.4	
8	1.0	5.0	0.6	
9	1.0	4.0	0.4	
10	1.0	2.0	0.2	
11	1.0	3.0	0.3	
12	1.0	5.0	0.6	
13	1.0	6.0	·	0.7
14	1.0	4.0	0.4	
TOTA	AL ROUNDS	5 TO:	6.0	1.0

SN 070-0044 BRIDGE DECK PATCHING

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



DATE OF SURVEY: 11-2-23 SURVEY BY: DM METHOD OF SURVEY: VISUAL

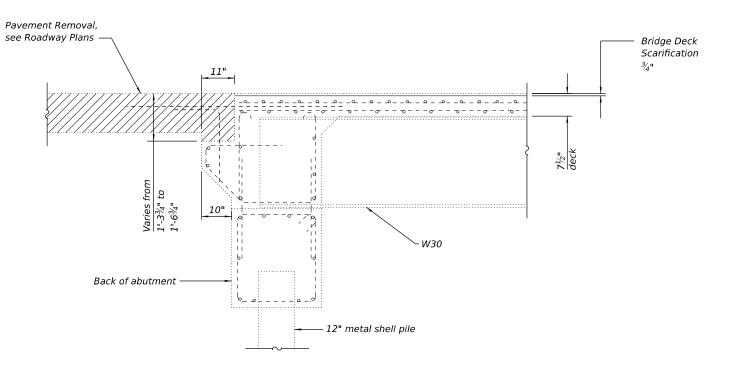
<u>ESTIMATED</u> PAY QUANTITIES:

DECK SLAB REPAIR (FULL DEPTH, TYPE I) 6.0 SQ YD

DECK SLAB REPAIR (FULL DEPTH, TYPE II) 1.0 SQ YD

ESCA CONSULTANTS, INC. CIVIL ESTRUCTURAL REGISTRES

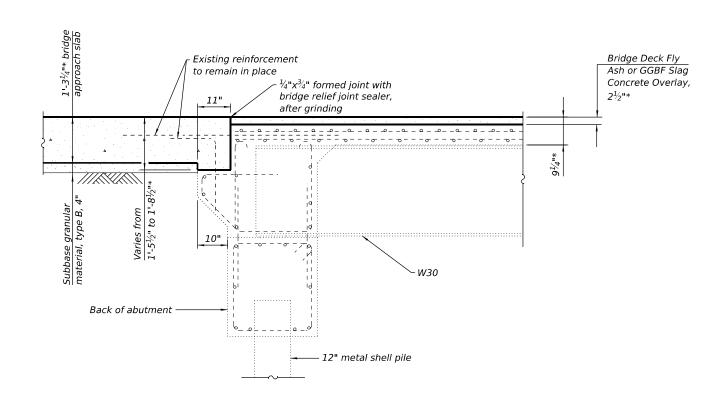
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ESCA PROJECT NO.= 1363.08	CHECKED -	ELH	07/24	REVISED	-
PLOT SCALE = 0:2 ':" / in.	DRAWN -	NHC	07/24	REVISED	-
PLOT DATE = 10/22/2024	CHECKED -	ELH	07/24	REVISED	-



APPROACH SLAB REMOVAL SECTION

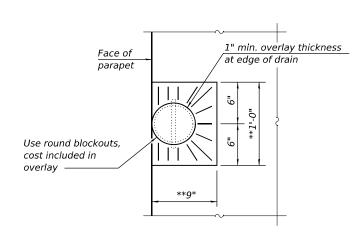
(Horizontal dimensions at right angles)

*Prior to grinding **Slope to drain

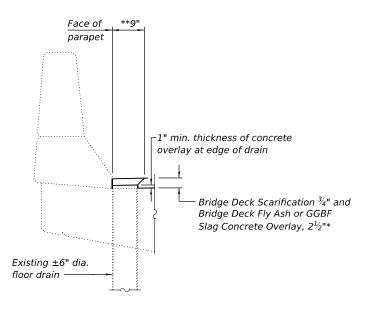


APPROACH SLAB CONSTRUCTION SECTION

(Horizontal dimensions at right angles)



OVERLAY TREATMENT AT FLOOR DRAINS



SECTION AT FLOOR DRAINS



 USER NAME = nhc
 DESIGNED CTJ
 07/24
 REVISED

 ESCA PROJECT NO. = 1363.08
 CHECKED ELH
 07/24
 REVISED

 PLOT SCALE = 0:2 '." / in.
 DRAWN NHC
 10/24
 REVISED

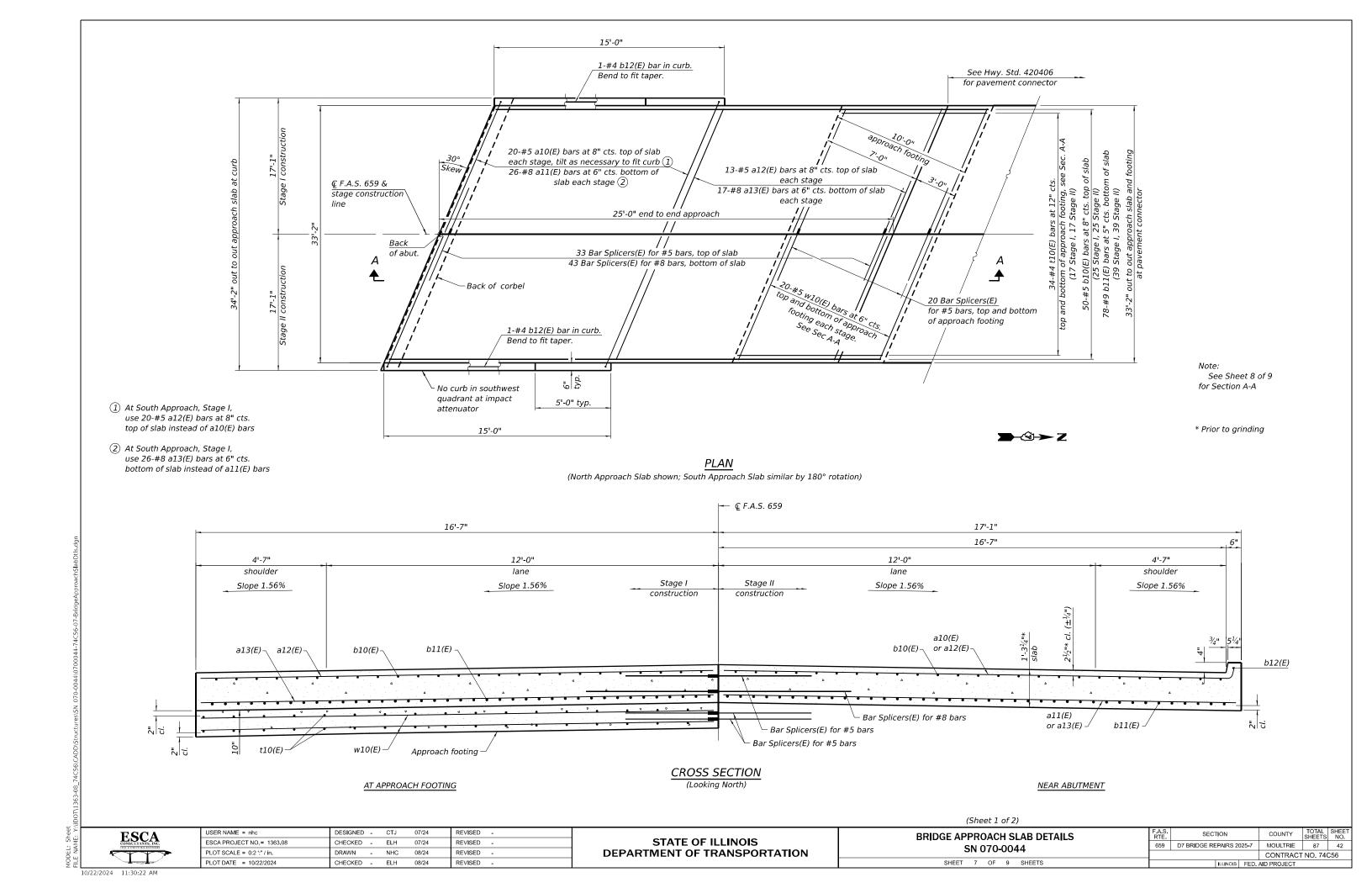
 PLOT DATE = 10/22/2024
 CHECKED ELH
 10/24
 REVISED

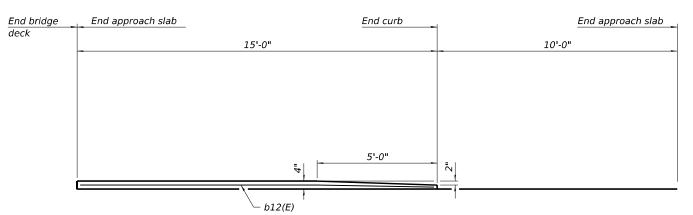
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

 SUPERSTRUCTURE DETAILS
 F.A.S. RTE.
 SECTION
 COUNTY SHEETS
 SHEETS NO.

 SN 070-0044
 659
 D7 BRIDGE REPAIRS 2025-7
 MOULTRIE
 87
 41

 SHEET
 6
 OF
 9
 SHEETS
 LILINOIS
 FED. AID PROJECT

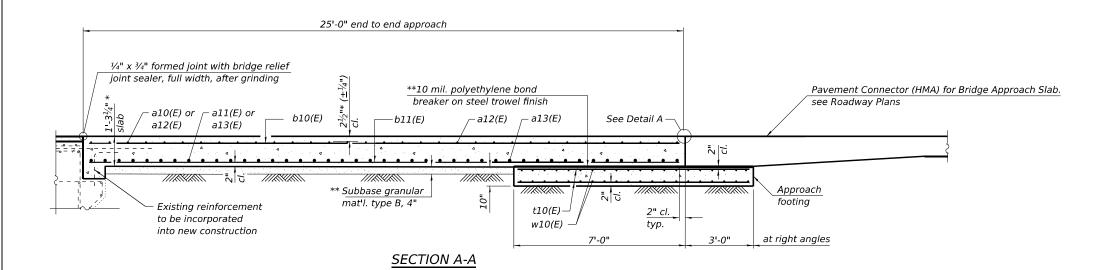




Notes:

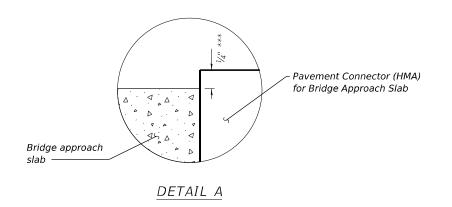
Approach slab shall be paid for as Concrete Superstructure (Approach Slab). Approach footing concrete shall be paid for as Concrete Structures. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.Cost of excavation for approach footing included with Concrete Structures.

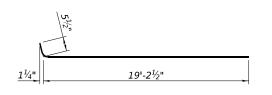
INSIDE ELEVATION OF CURB



TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	60	#5	19'-8"	
a11(E)	78	#8	19'-4"	
a12(E)	72	#5	18'-9"	
a13(E)	94	#8	18'-9"	
b10(E)	100	#5	24'-8"	
b11(E)	156	#9	24'-8"	
b12(E)	3	#4	14'-8"	
t10(E)	136	#4	11'-2"	
w10(E)	160	#5	18'-9"	
Concrete S	Superstru	cture	Cu. Yd.	79.9
(Approach	Slab)		Cu. ru.	79.9
Concrete S	Structures	5	Cu. Yd.	23.7
Reinforcer	Reinforcement Bars,		Pound	31,210
Epoxy Coa	ited		Found	31,210





BAR a10(E)

- * Prior to grinding

 ** Cost included with Concrete Superstructure (Approach Slab)
- *** After grinding

(Sheet 2 of 2)

BRIDGE APPROACH SLAB DETAILS SN 070-0044 SHEET 8 OF 9 SHEETS

SECTION COUNTY 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 43 CONTRACT NO. 74C56

ESCA CONSULTANTS, INC. UNLE STRUCTURAL EMOINMENS	

JSER NAME = nhc DESIGNED - CTJ 07/24 REVISED ESCA PROJECT NO. = 1363.08 CHECKED - ELH 07/24 REVISED -PLOT SCALE = 0:2 ':" / in. NHC 10/24 REVISED PLOT DATE = 10/22/2024 CHECKED - ELH 10/24 REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

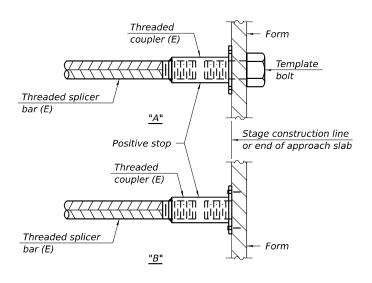
STANDARD BAR SPLICER ASSEMBLY PLAN

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

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

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

Location	Bar size	No. assemblies required	Minimum lap length
070-0044 Approach Slabs	#5	66	3'-4"
070-0044 Approach Slabs	#8	86	4'-9"
070-0044 Approach Footings	#5	80	3'-4"

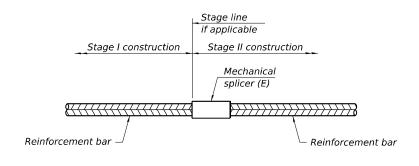


INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.

"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
NA		

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

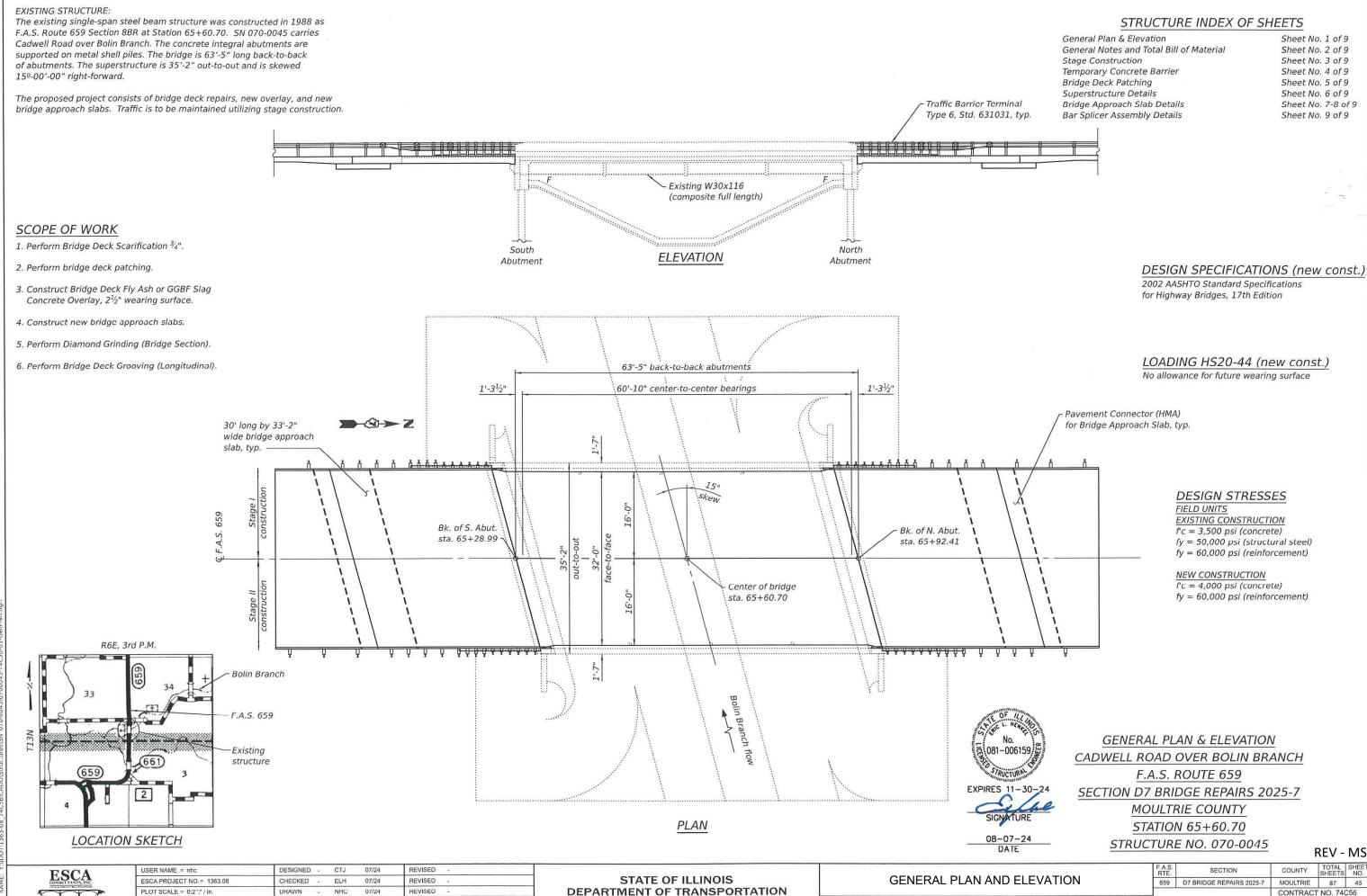
5-15-2023



USER NAME = nhc	DESIGNED	-	CTJ	07/24	REVISED	-
ESCA PROJECT NO.= 1363.08	CHECKED	-	ELH	07/24	REVISED	-
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10/22/2024 11:30:23 AM



PLOT DATE = 10/22/2024

CHECKED -

ELH

07/24

REVISED

DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 9 SHEETS

MOULTRIE 87 45 CONTRACT NO. 74C56 ILLINOIS FED. AID PROJECT

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Plan dimensions and details relative to the existing structure have been taken from existing plans and 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 shall be replaced with an approved bar splicer or anchorage system at the Contractor's expense.
- Areas of deck repairs shown are estimated. The Engineer shall show actual locations and size of deck repairs on As-built plans.
- 5. Bridge Deck Grooving (Longitudinal) shall be completed only after Diamond Grinding (Bridge Section) is complete.
- 6. Protective Coat shall be applied to the top of the new concrete overlay, bridge approach slabs, and tops and inside faces of bridge approach slab curbs.
- 7. Up to $\frac{1}{4}$ " to be ground off the concrete overlay and bridge approach slabs.

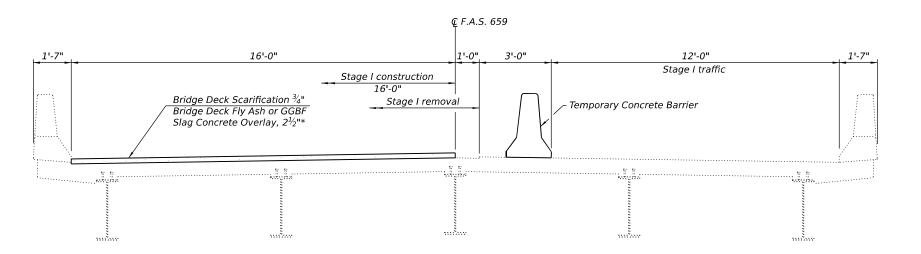
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Structures	Cu. Yd.		21.2	21.2
Protective Coat	Sq. Yd.	452		452
Concrete Superstructure (Approach Slab)	Cu. Yd.	96.0		96.0
Reinforcement Bars, Epoxy Coated	Pound	33,130	3,720	36,850
Bar Splicers	Each	212	80	292
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	329		329
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, $2\frac{1}{2}$ "	Sq. Yd.	226		226
Bridge Deck Scarification 3/4"	Sq. Yd.	226		226
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	4		4
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	14		14
Diamond Grinding (Bridge Section)	Sa. Yd.	392		392

ESCA CONSULTANTS, INC.

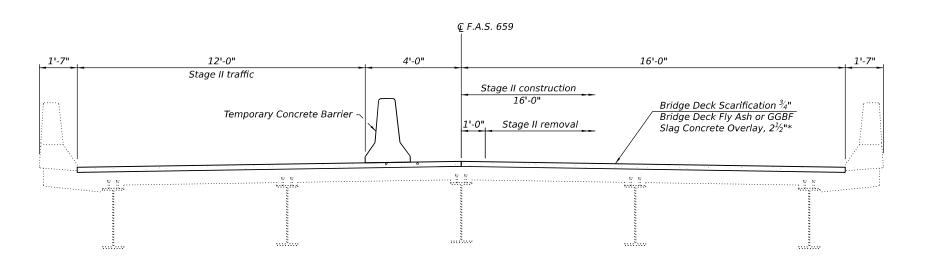
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ESCA PROJECT NO.= 1363.08	CHECKED -	ELH	07/24	REVISED	-	
PLOT SCALE = 0:2 ':" / in.	DRAWN -	NHC	07/24	REVISED	-	
DLOT DATE = 10/22/2024	CHECKED		07/24	DEVICED		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STAGE I - LOOKING NORTH

* Prior to grinding

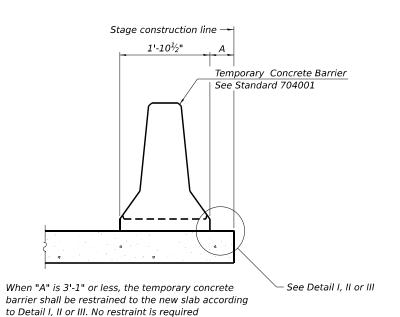


STAGE II - LOOKING NORTH

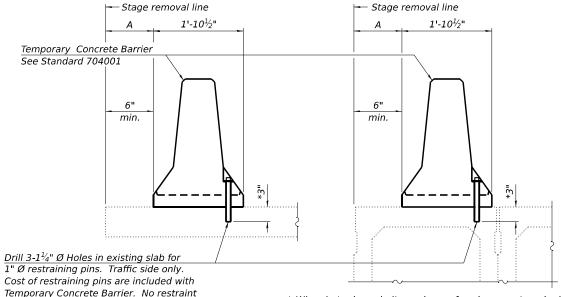
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ESCA PROJECT NO.= 1363.08	CHECKED	-	ELH	07/24	REVISED -
PLOT SCALE = 0:2 ':" / in.	DRAWN	-	NHC	07/24	REVISED -
PLOT DATE = 10/22/2024	CHECKED	-	ELH	07/24	REVISED -

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

STAGE CONSTRUCTION	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHE
SN 070-0045	659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	47
311 010-0043			CONTRACT	NO. 740	256
SHEET 3 OF 9 SHEETS		ILLINOIS FED.	AID PROJECT		



NEW SLAB OR NEW DECK BEAM



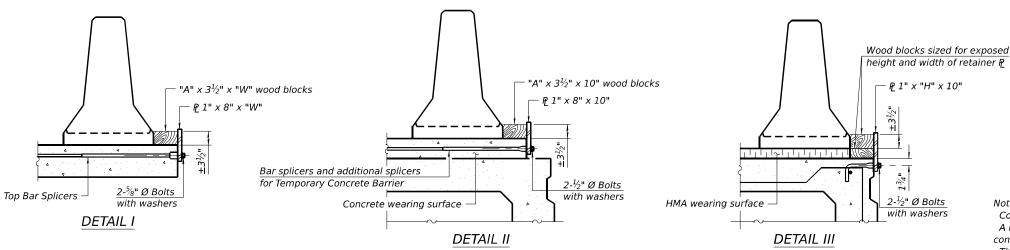
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

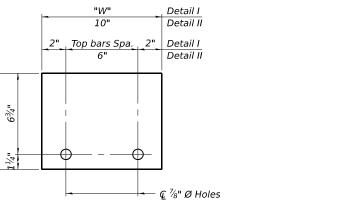
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

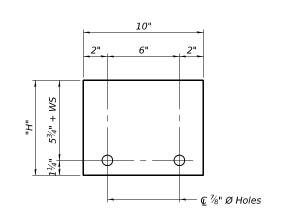
is required when "A" is greater than 3'-1".

EXISTING SLAB

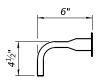




STEEL RETAINER P 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER P 1" x "H" x 10"



RESTRAINING PIN

 $\frac{7}{16}$ " Ø hole

BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate ${\mathfrak C}$ of each temporary concrete barrier.

1x8 UNC

1" Ø pin

US Std. $1\frac{1}{16}$ " I.D. $\times 2\frac{1}{2}$ " O.D. x approx. 8 gauge thick washer

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 $1\frac{1}{2}$ ", 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.

11-27	
ESCA CONSULTANTS, INC. GIVE A STRUCTURAL EMOISTERS	

NCHRP 350 Test Level

Railing Weight (plf)

RAILING CRITERIA

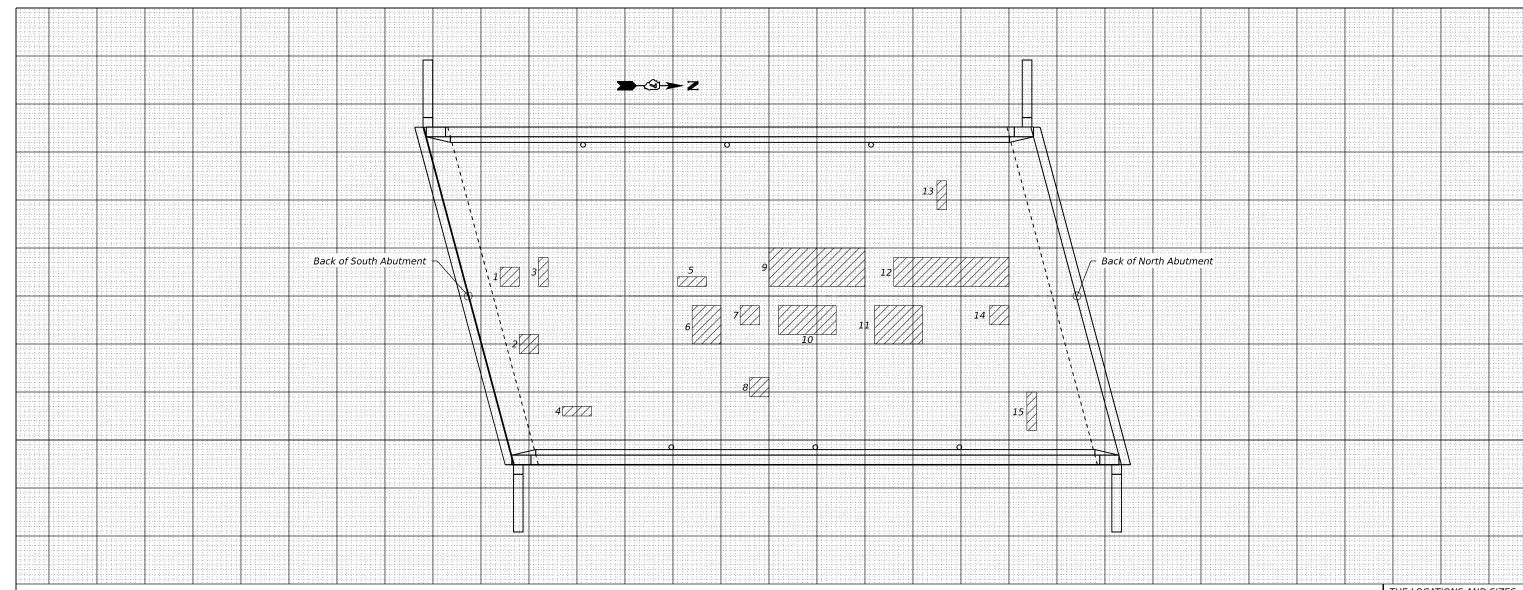
440

when "A" is greater than 3'-1".

5-15-2023						
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ESCA PROJECT NO.= 1363.08	CHECKED	-	ELH	07/24	REVISED	-
PLOT SCALE = 0:2 ':" / in.	DRAWN	-	NHC	07/24	REVISED	-
PLOT DATE = 10/22/2024	CHECKED	-	ELH	07/24	REVISED	-
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION TEMPORARY CONCRETE BARRIER 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 48 SN 070-0045 CONTRACT NO. 74C56 SHEET 4 OF 9 SHEETS



	PATCH	SIZ (FE	ZE ET)	DECK SLAB REPAIR (FD, TY I)	DECK SLAB REPAIR (FD, TY II)
,	NO.	LENGTH	WIDTH	SQ YD	SQ YD
	1	2.0	2.0	0.4	
	2	2.0	2.0	0.4	
	3	1.0	3.0	0.3	
	4	3.0	3.0 1.0		
	5	3.0	1.0	0.3	
	6	3.0	4.0		1.3
	7	2.0	2.0	0.4	
	8	2.0	2.0	0.4	
	9	10.0	4.0		4.4
	10	6.0	3.0		2.0
	11	5.0	4.0		2.2
	12	12.0	3.0		4.0
	13	1.0	3.0	0.3	
ı	14	2.0	2.0	0.4	
l	15	1.0	4.0	0.4	
	TOTA	AL ROUNDS	5 TO:	4.0	14.0

SN 070-0045 BRIDGE DECK PATCHING

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



DATE OF SURVEY: 11-2-23 SURVEY BY: DM METHOD OF SURVEY: VISUAL

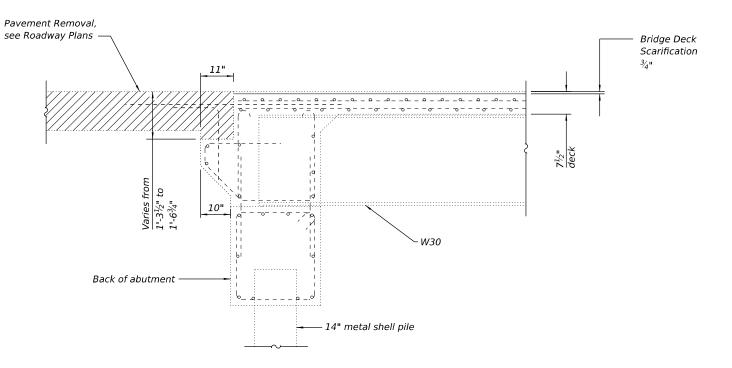
<u>ESTIMATED</u> PAY QUANTITIES:

DECK SLAB REPAIR (FULL DEPTH, TYPE I) 4.0 SQ YD

DECK SLAB REPAIR (FULL DEPTH, TYPE II) 14.0 SQ YD

ESCA CONSULTANTS, INC. CIVIL A STRUCTURAL EMOISSIERS

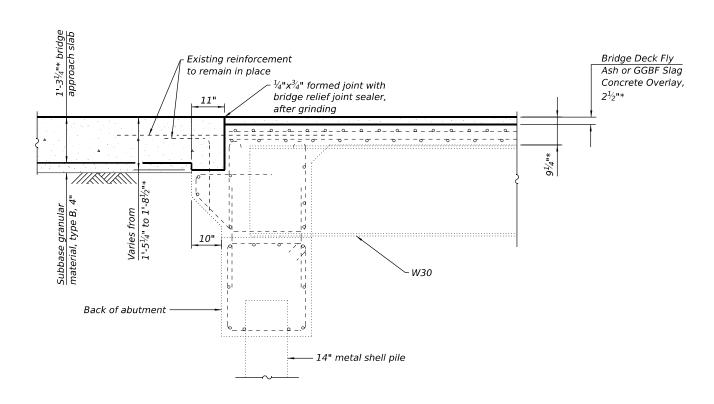
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ESCA PROJECT NO.= 1363.08	CHECKED	-	ELH	07/24	REVISED	-
PLOT SCALE = 0:2 ':" / in.	DRAWN	-	NHC	07/24	REVISED	-
PLOT DATE = 10/22/2024	CHECKED	-	ELH	07/24	REVISED	_



APPROACH SLAB REMOVAL SECTION

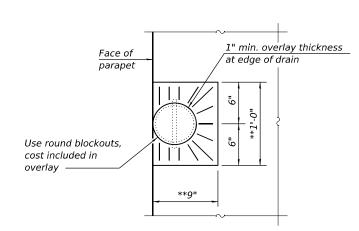
(Horizontal dimensions at right angles)

*Prior to grinding **Slope to drain

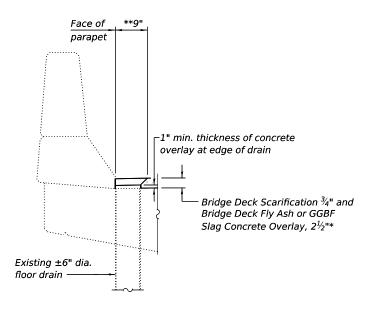


APPROACH SLAB CONSTRUCTION SECTION

(Horizontal dimensions at right angles)



OVERLAY TREATMENT AT FLOOR DRAINS

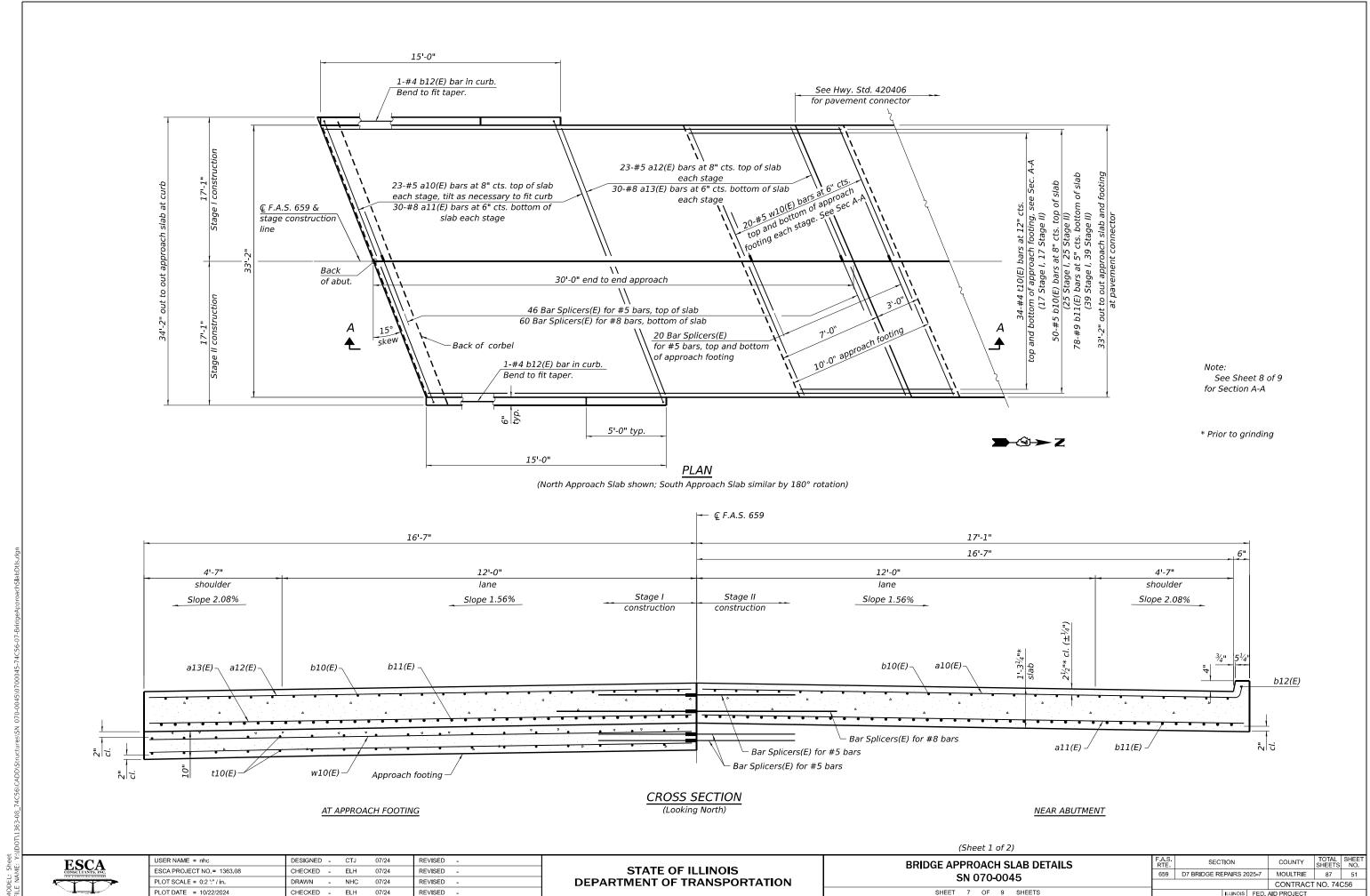


SECTION AT FLOOR DRAINS

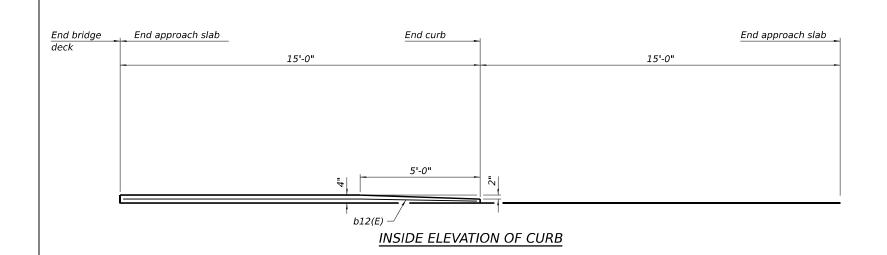
JSER NAME = nhc DESIGNED - CTJ 07/24 REVISED CHECKED - ELH ESCA PROJECT NO. = 1363.08 07/24 REVISED PLOT SCALE = 0:2 ':" / in. NHC 10/24 REVISED PLOT DATE = 10/22/2024 CHECKED - ELH 10/24 REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** SUPERSTRUCTURE DETAILS SN 070-0045

SECTION COUNTY 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 50 CONTRACT NO. 74C56 SHEET 6 OF 9 SHEETS



10/22/2024 10:54:38 AM



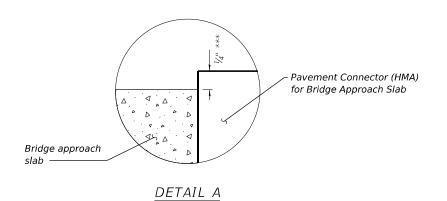
Notes:

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.

30'-0" end to end approach 1/4" x 3/4" formed joint with bridge relief **10 mil. polyethylene bond Pavement Connector (HMA) for Bridge Approach Slab. joint sealer, full width, after grinding breaker on steel trowel finish see Roadway Plans _ a11(E) – b10(E) a12(E) _ a13(E) See Detail A — -a10(E) −b11(E) ** Subbase granular Approach mat'l. type B, 4" footing Existing reinforcement t10(E)-2" cl. _ to be incorporated w10(E) typ. into new construction at right angles SECTION A-A

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	92	#5	17'-8"	
a11(E)	120	#8	17'-4"	
a12(E)	92	#5	16'-10"	
a13(E)	120	#8	16'-10"	
b10(E)	100	#5	29'-8"	
b11(E)	156	#9	29'-8"	
b12(E)	4	#4	14'-8"	
t10(E)	136	#4	10'-0"	
w10(E)	160	#5	16'-10"	
Concrete S	Superstru	cture	Cu. Yd.	96.0
(Approach	Slab)		Cu. ru.	
Concrete S	Structures	5	Cu. Yd.	21.2
Reinforcer	nent Bars	,	Pound	36.850
Epoxy Coa	ited		Touriu	30,030
-			-	-



17'-2½"

BAR a10(E)

- * Prior to grinding ** Cost included with Concrete Superstructure (Approach Slab) *** After grinding

(Sheet 2 of 2)

ESCA CONSULTANTS, INC.	

USER NAME = nhc	DESIGNED	-	CTJ	07/24	REVISED	-
ESCA PROJECT NO.= 1363.08	CHECKED	-	ELH	07/24	REVISED	-
PLOT SCALE = 0:2 ':" / in.	DRAWN	-	NHC	10/24	REVISED	-
PLOT DATE = 10/22/2024	CHECKED	-	ELH	10/24	REVISED	-

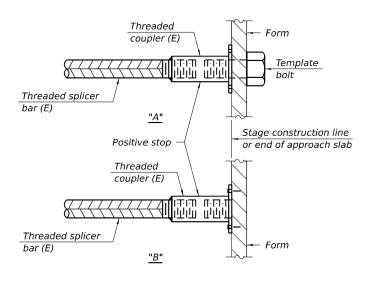
STANDARD BAR SPLICER ASSEMBLY PLAN

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

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

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

Location	Bar size	No. assemblies required	Minimum lap length
070-0045 Approach Slabs	#5	92	3'-4"
070-0045 Approach Slabs	#8	120	4'-9"
070-0045 Approach Footings	#5	80	3'-4"

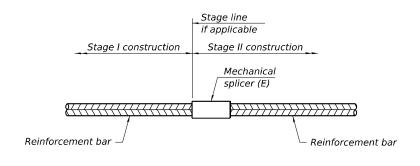


INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.

"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies
	size	required
NA		

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

5-15-2023



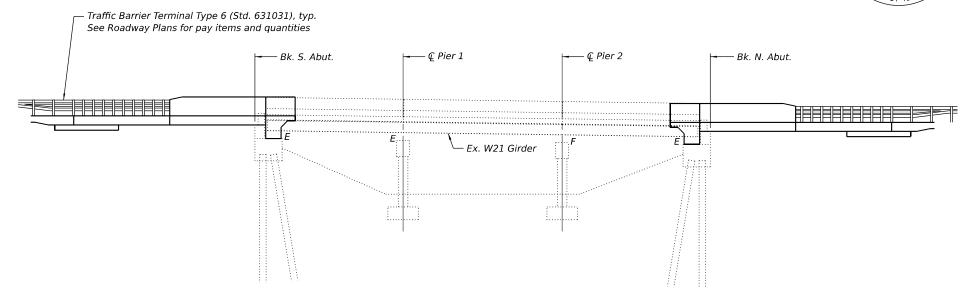
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PLOT SCALE = 0:2 ':" / in.	DRAWN	-	NHC	07/24	REVISED	-
PLOT DATE = 10/22/2024	CHECKED	-	ELH	07/24	REVISED	-

Existing Structure: SN 070-0040, originally built in 1982 as a three-span continuous steel wide flange beam superstructure with stub abutments and solid wall piers. The back to back length = 71'- $4\frac{1}{2}$ " and the out to out width = 35'-2". Structure is to be repaired as detailed in these plans. Traffic is to be maintained using stage construction.

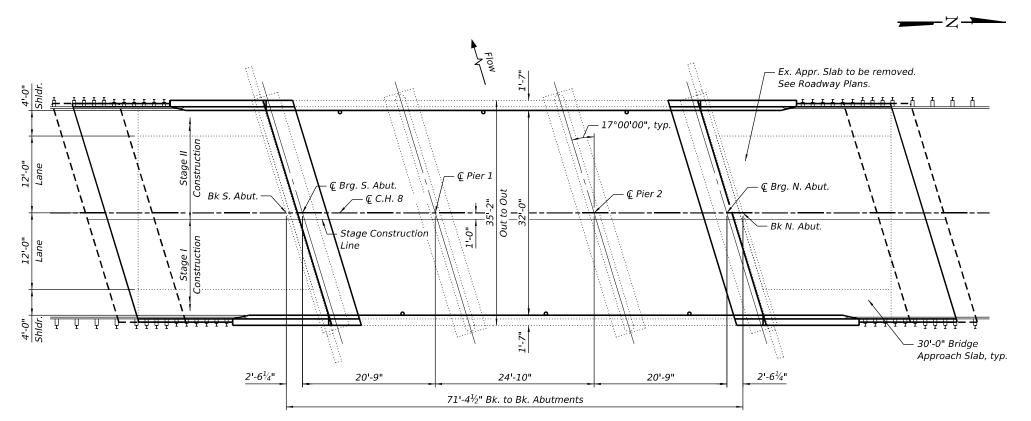
No salvage

Robert Whiteside, Illinois S.E. 081-008015 Date Expires 11/30/2026

ROBERT WHITESIDE 081-008015



ELEVATION



PLAN

SCOPE OF WORK

- 1. Remove existing diaphragms at the abutments and place new diaphragms near the piers.
- 2. Eliminate the expansion joints at the ends of the bridge.
- 3. Remove and replace the bearings with new elastomeric bearings at the abutments.
- 4. Scarify the bridge deck.
- 5. Complete full depth deck repairs.
- 6. Place a fly ash or GGBF slag overlay with diamond grinding and bridge deck grooving.
- 7. Remove the existing approach slab and place a 30'-0" long full width approach slab.

INDEX OF SHEETS

- 1. General Plan and Elevation
- 2. General Data
- 3. Stage Construction Details
- 4. Temporary Concrete Barrier for Stage Construction
- 5. Deck Overlay Plan
- 6. Joint Elimination Diaphragm
- 7-9. Bridge Approach Slab Details
- 10. Framing Plan
- 11. Bearing Details
- 12. Bar Splicer Details

LOADING HS20-44

No Allowance for Additional Future Wearing Surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges - LFD

DESIGN STRESSES

FIELD UNITS (EXIST. CONST.)

 $f'c = 3,500 \, psi$

fy = 60,000 psi (Reinforcement)

fy = 50,000 psi (M-222 Grade 50, Structural Steel)

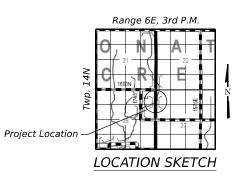
FIELD UNITS (NEW CONST.)

f'c = 4,000 psi (Superstructure)f'c = 3,500 psi (Substructure)

fy = 60,000 psi (Reinforcement)

fy = 50,000 psi (M270 Grade 50W)

fy = 36,000 psi (M270 Grade 36)



GENERAL PLAN & ELEVATION
C.H. 8 OVER JONATHAN CREEK
F.A.S. ROUTE 659
SECTION D7 BRIDGE REPAIRS 2025-7
MOULTRIE COUNTY
STATION 154+73.46
STRUCTURE NO. 070-0040

SHEET 1 OF 12 SHEETS



USER NAME = zdavidson	DESIGNED - RPW	REVISED -
0700040-74C56-001-GPE.dgn	CHECKED - ZLD	REVISED -
PLOT SCALE = 15.000 ' / in.	DRAWN - JDC	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

 659
 D7 BRIDGE REPAIRS 2025-7
 MOULTRIE
 87
 54

 CONTRACT NO. 74C56

 ILLINOIS
 FED. AID PROJECT
 Calculated weight of Structural Steel = 4,310 lbs. (M270 Grade 50W) 1,910 lbs. (M270 Grade 36)

All structural steel shall be AASHTO M270 Grade 50W (except expansion bearings which shall be AASHTO M270 Grade 36).

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to the existing structure have been taken from existing plans and 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.

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 shall be replaced with an approved bar splicer or anchorage system at the Contractor's expense. Cost included with Concrete Removal.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC-SP3 standards). 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 paid for according to Article 109.04 of the Standard Specifications.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

The protective coat shall be applied to the new concrete overlay, new bridge deck concrete, new approach slab concrete, and top and inside faces of the new portions of the parapets.

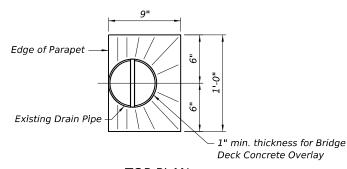
New diaphragms shall be installed prior to scarification and overlay.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

All new structural steel and bearing assemblies shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	16.2	-	16.2
Structure Excavation	Cu. Yd.	-	16	16
Concrete Structures	Cu. Yd.	-	22.1	22.1
Concrete Superstructure	Cu. Yd.	129.5	i	129.5
Protective Coat	Sq. Yd.	488	-	488
Furnishing and Erecting Structural Steel	Pound	6,220	-	6,220
Reinforcement Bars, Epoxy Coated	Pound	41,760	3,880	45,640
Bar Splicers	Each	252	80	332
Elastomeric Bearing Assembly, Type I	Each	10	-	10
Anchor Bolts, ¾"	Each	20	-	20
Granular Backfill for Structures	Cu. Yd.	-	14	14
Jack and Remove Existing Bearings	Each	10	-	10
Structural Steel Removal	Pound	1,950	-	1,950
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2 ¹ / ₂ "	Sq. Yd.	209	,	209
Bridge Deck Scarification 3/4"	Sq. Yd.	209	-	209
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1	-	1
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	1	-	1
Diamond Grinding (Bridge Section)	Sq. Yd.	399	-	399
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	342	-	342

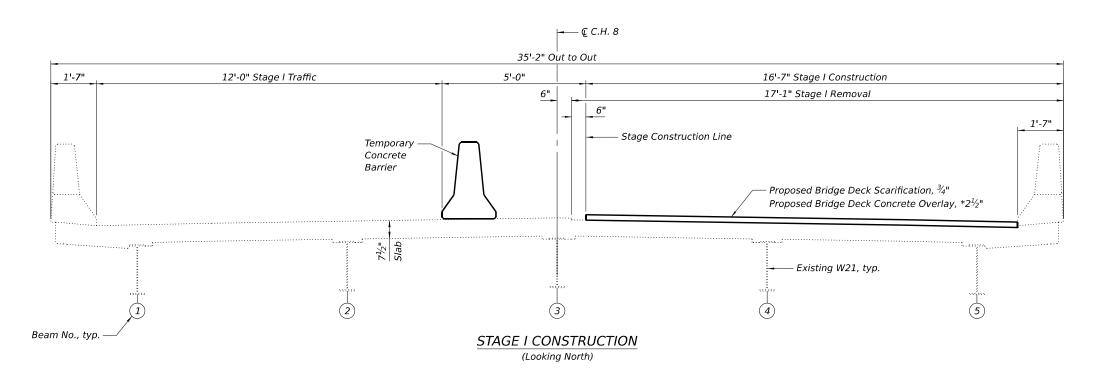


TOP PLAN

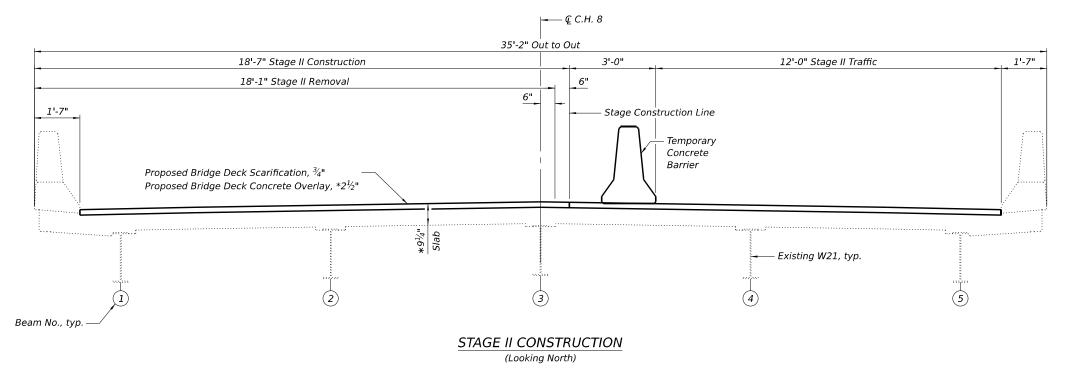
Overlay Transition at 6" Ø Floor Drains

QUIGG ENGINEERING INC

USER NAME = zdavidson	DESIGNED - RPW	REVISED -	
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PLOT SCALE = 0.167 ' / in.	DRAWN - JDC	REVISED -	
PLOT DATE =	CHECKED - MDC	REVISED -	



* Prior to grinding



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 USER NAME = zdavidson
 DESIGNED - RPW
 REVISED

 0700040-74C56-003-Stage_Constuction_Details. tg6HECKED - ZLD
 REVISED

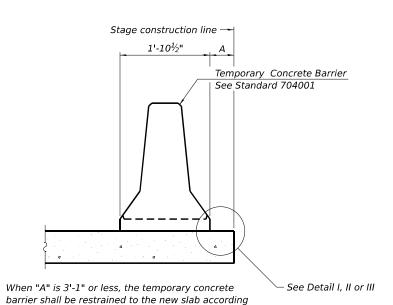
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 DRAWN - JDC
 REVISED

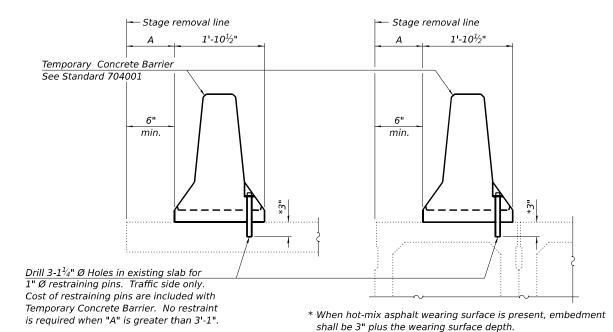
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 REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

 STAGE CONSTRUCTION DETAILS
 FA.S. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL SHEETS NO.
 SHEET NO.
 NO.
 AULTRIE
 87
 56

 SHEET
 3
 OF 12
 SHEETS
 SHEETS
 ILLINOIS FED. AID PROJECT
 FED. AID PROJECT





1x8 UNC 7/16" Ø hole US Std. $1\frac{1}{16}$ " I.D. $\times 2\frac{1}{2}$ " O.D. x approx. 8 gauge thick washer 1" Ø pin RESTRAINING PIN

BAR SPLICER FOR #4 BAR - DETAIL III

NEW SLAB OR NEW DECK BEAM

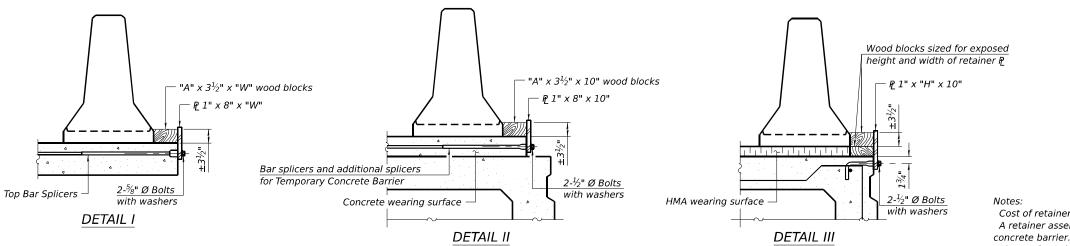
to Detail I, II or III. No restraint is required

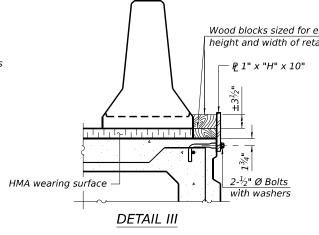
when "A" is greater than 3'-1".

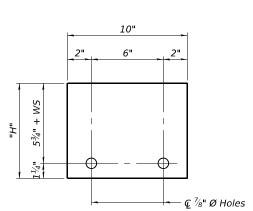
EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM







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

"W" Detail I 10" Detail II 2" Top bars Spa. 2" Detail I Detail II € 1/8" Ø Holes

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 5-15-2023

STEEL	RETAINER	P_1'	" x 8"	x "W'
	(Detail I	224 11	11	

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.

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate $\mathcal C$ of each temporary

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 $1\frac{1}{2}$ ", 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

Detail II - Installation for a new deck beam with an initial concrete wearing

Detail III - Installation for a new deck beam with no initial wearing surface or

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

Detail I - Installation for a new bridge deck or bridge slab.

QUIGG ENGINEERING INC

USER NAME = zdavidson	DESIGNED	-	RPW	REVISED -
0700040-74C56-004-Temporary_Concrete_Barrie	r.o@HECKED	-	ZLD	REVISED -
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PLOT DATE =	CHECKED	-	MDC	REVISED -

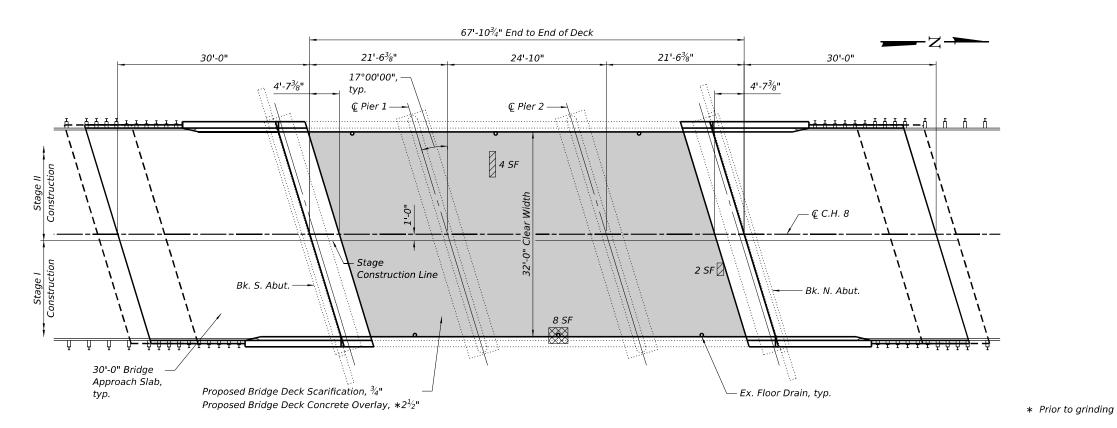
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION	F.A.S. RTE	SECTION
STRUCTURE NO. 070-0040	659	D7 BRIDGE REP
311001011E NO. 070-0040		
CHEET 4 OF 40 CHEETO		1

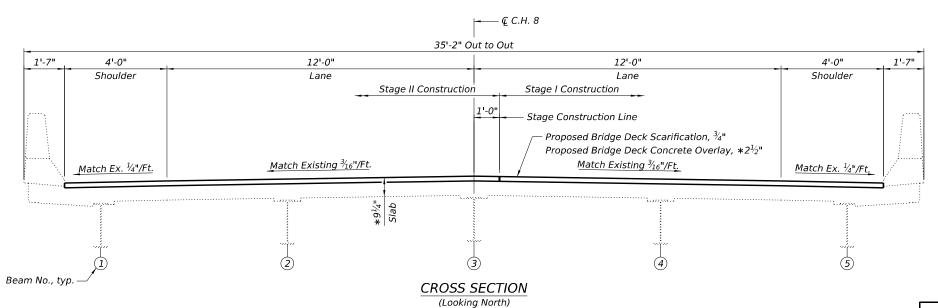
the shear key clamping device.

wearing surface.

PAIRS 2025-7 MOULTRIE 87 57 CONTRACT NO. 74C56



PLAN



LEGEND

Deck Slab Repair (Full Depth, Type I)

Deck Slab Repair (Full Depth, Type II)

Scarification and Concrete Overlay Limits

Notes:

See sheet 2 of 12 for overlay details at floor drains. See sheet 6 of 12 for joint elimination diaphragm. Deck Slab Repair (Full Depth, Type I) and Deck Slab Repair (Full Depth, Type II) areas are estimated and will be field verified by the Engineer prior to patching. The Engineer shall show actual locations of deck repairs on as-built plans.

BILL OF MATERIAL

Item	Unit	Total
Protective Coat	Sq. Yd.	209
Bridge Deck Fly Ash or GGBF Slag	Ca Vd	209
Concrete Overlay, $2\frac{1}{2}$ "	Sq. Yd.	209
Bridge Deck Scarification, ¾"	Sq. Yd.	209
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	1
Diamond Grinding (Bridge Section)	Sq. Yd.	183
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	157

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 USER NAME = zdavidson
 DESIGNED - RPW
 REVISED

 0700040-74C56-005-Deck_Overlay_Plan.dgn
 CHECKED - ZLD REVISED

 PLOT SCALE = 15.0001/in.
 DRAWN - JDC REVISED

 PLOT DATE = CHECKED - MDC REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

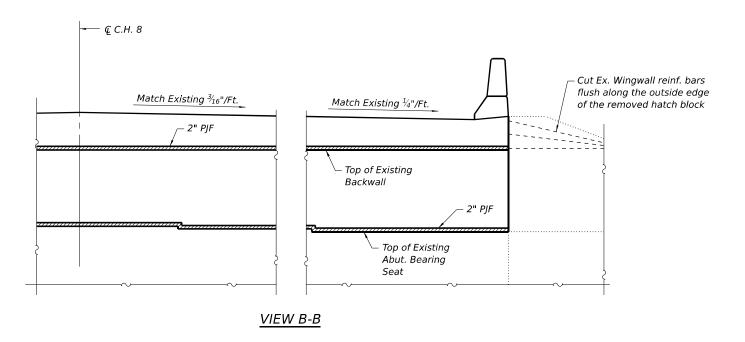
 DECK OVERLAY PLAN
 F.A.S. RTE.
 SECTION
 COUNTY SHEETS NO.

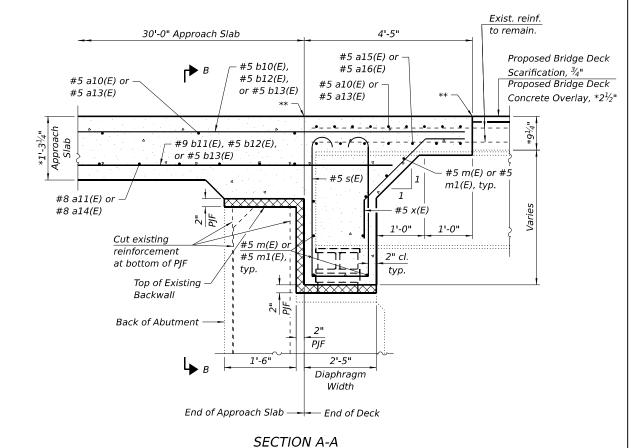
 STRUCTURE NO. 070-0040
 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 58
 CONTRACT NO. 74C56

 SHEET 5 OF 12 SHEETS
 SHEET SHEET SHEETS NO.

DIAPHRAGM AT ABUTMENT

(Diaphragm at North Abutment Shown, Diaphragm at South Abutment Similar)





(at Rt. ∠'s)

(Diaphragm not shown for clarity)

- * Prior to grinding
- ** ½" x ¾" Formed Joint with bridge relief joint sealer. After grinding.

Notes:

See sheet 5 of 12 for overlay details.

See sheet 7 thru 9 of 12 for details and Bill of Material.

The s(E) and x(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

Existing end diaphragms to be removed to facilitate placement of new reinforcement and concrete.

The m(E) and m1(E) bars are to be placed through holes drilled in the beam web where appropriate.

Existing transverse, longitudinal, and vertical reinforcements remaining and extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.

Existing reinforcement that does not fit into the new parapet configuration shall be trimmed to allow for min. concrete cover in new layout or cut, ground flush with the concrete and coated with epoxy paint.

U.N.O. = Unless Noted Otherwise

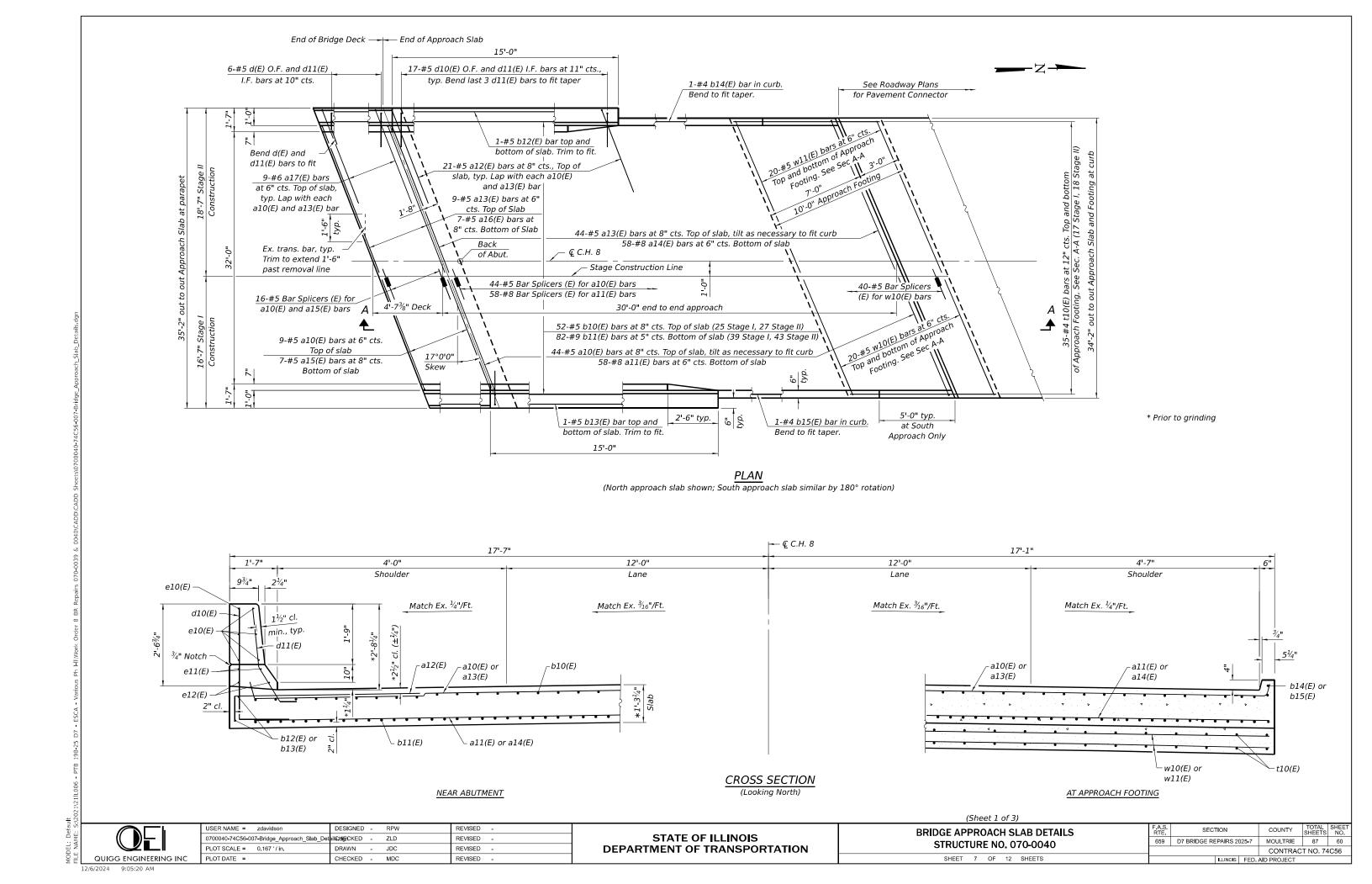


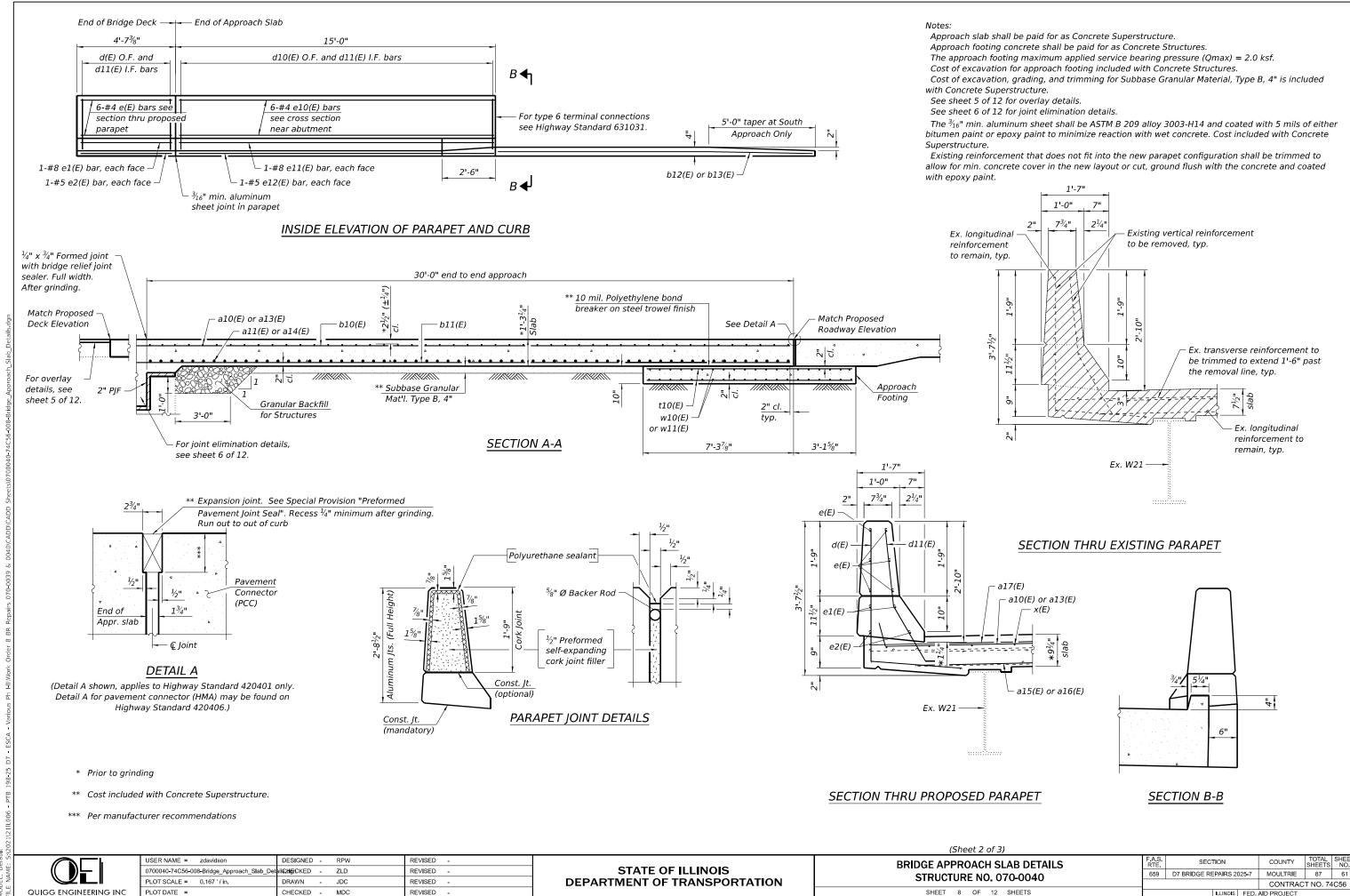
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

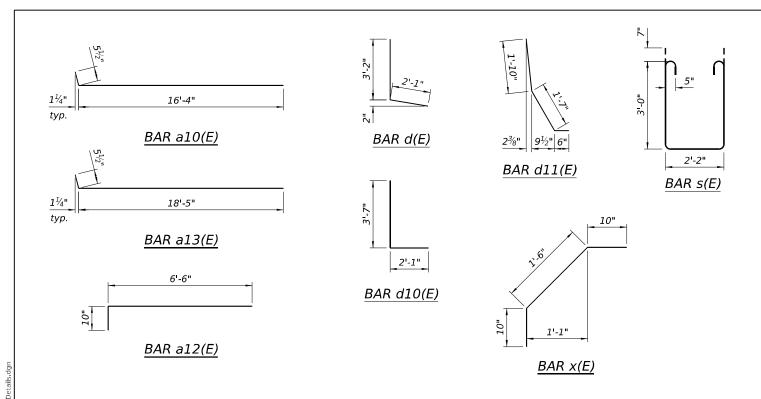
JOINT ELIMINATION DIAPHRAGM STRUCTURE NO. 070-0040

12/6/2024 9:05:19 AM





12/6/2024 9:05:21 A



TWO APPROACHES AND DECK BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	106	106 #5		
a11(E)	116	#8	16'-6"	
a12(E)	84	#5	7'-4"	
a13(E)	106	#5	18'-11"	
a14(E)	116	#8	18'-7"	
a15(E)	14	#5	16'-0"	
a16(E)	14	#5	18'-1"	
a17(E)	36	#6	7'-8"	
` ′				
b10(E)	104	#5	34'-2"	
b11(E)	164	#9	32'-8"	
b12(E)	4	#5	19'-8"	
b13(E)	4	#5	18'-10"	
b14(E)	2	#4	14'-5"	
b15(E)	2	#4	14'-10"	
213(2)			1, 10	
d(E)	24	#5	5'-3"	
d10(E)	68	#5	5'-8"	ì
d10(E)	92	#5	3'-11"	-
GII(L)	32	#3	3-11	
e(E)	24	#4	4'-3"	
e1(E)	8	#8	4'-3"	
e2(E)	8	#5	4'-3"	
e10(E)	24	#4	14'-8"	
e11(E)	8	#4	14'-8"	
e12(E)	8	#5	14'-8"	
E1Z(L)	-	#5	14 -6	
m(E)	16	#5	17'-0"	
m1(E)	16	#5	19'-1"	
1111(L)	10	#3	19-1	
s(E)	68	#5	9'-4"	<u> </u>
3(L)	- 00	1 7	7 7	
t10(E)	140	#4	10'-1"	
(IU(L)	170	777	10-1	
w10(E)	80	#5	16'-6"	
w10(L) w11(E)	80	#5	18'-7"	
****(L)	- 00	#3	10-7	
x(E)	68	#5	3'-2"	_
A(L)	- 00	#3	J -2	
Concrete	Removal		Cu. Yd.	16.2
Concrete		ıc	Cu. Yd.	22.1
			Cu. Yd.	129.5
	Concrete Superstructure Protective Coat			279
Reinforce			Sq. Yd.	2/3
		٥,	Pound	45,640
Epoxy Co				
Diamond			Sq. Yd.	216
(Bridge Se			<u> </u>	
Bridge De		ing	Sq. Yd.	185
(Longitud	ırıaı)			

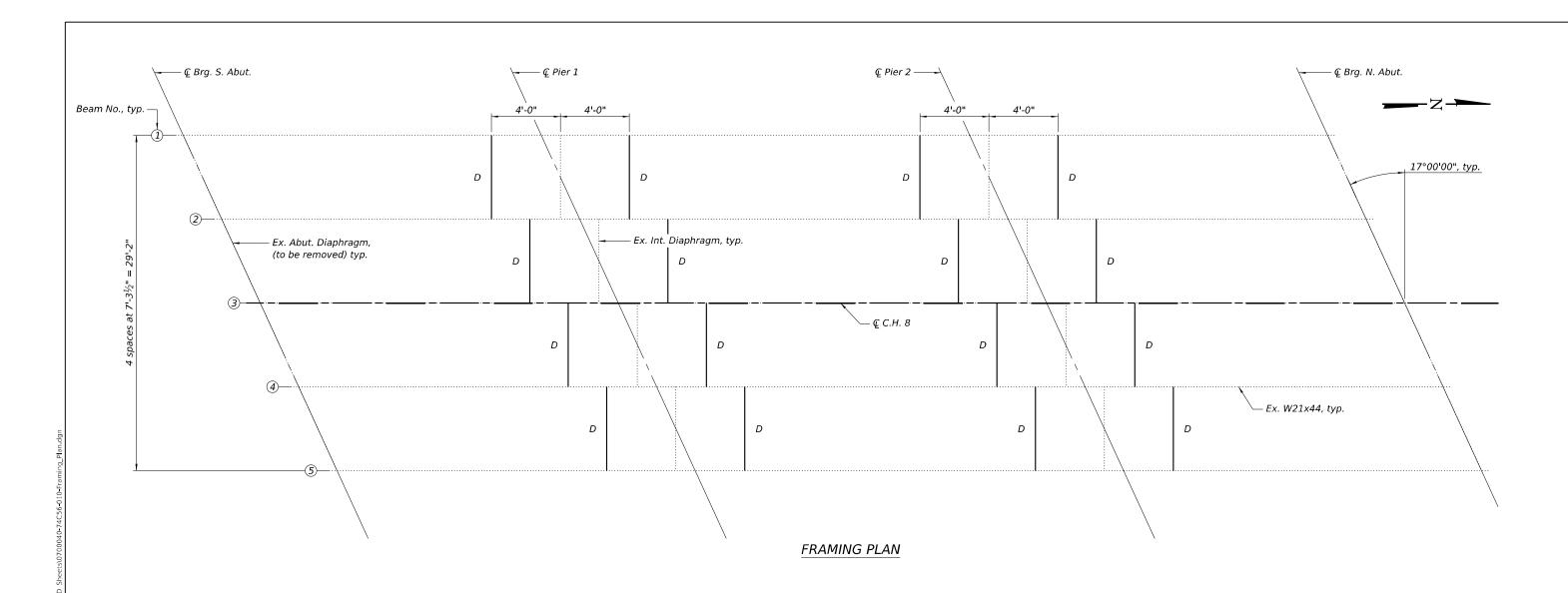
(Sheet 3 of 3)

QUIGG ENGINEERING INC

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 070-0040

SHEET 9 OF 12 SHEETS



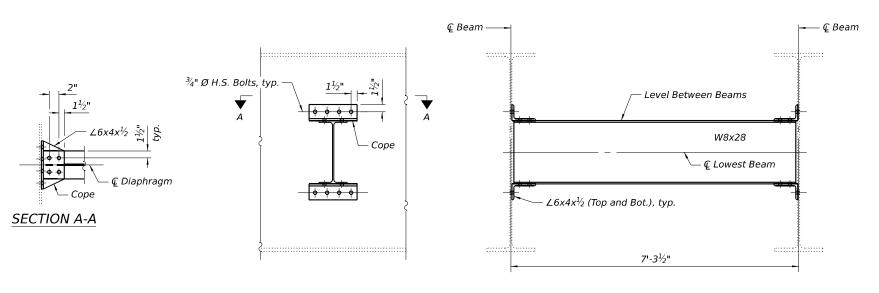
Notes

Field drill $^{15}\!\!_{16}$ " Ø holes for $^{3}\!\!_{4}$ " Ø bolts into existing girder. Use holes in new steel as template to field drill holes in existing steel.

All structural steel shall be AASHTO M270 Grade 50W. Fasteners shall be ASTM F3125 Grade A325 Type 3 weathering steel bolts. Bolts $^3\!4$ " Ø, holes $^{15}\!\!_{16}$ " Ø, unless otherwise noted.

Two hardened washers required for each set of oversized holes.

Alternate w-sections of equal depth and larger weight are permitted to facilitate material acquisition. Alternate w-sections, if utilized, shall be provided at no additional cost to the Department.



DIAPHRAGM D

(16 Diaphragms Required)

BILL	OF	MAT	ERIAL

ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	Pound	4,310
Structural Steel Removal	Pound	1,950
•		

QUIGG ENGINEERING INC

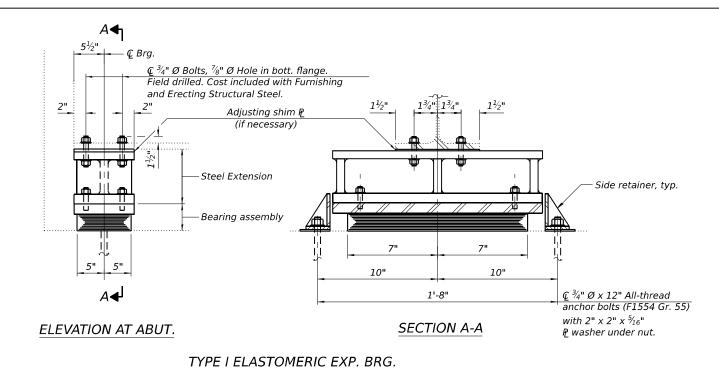
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 DESIGNED - RPW
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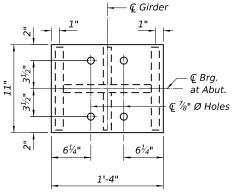
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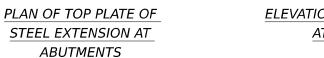
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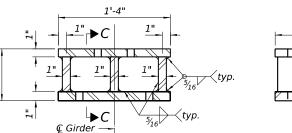
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION











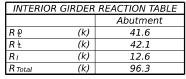
- 🕻 Brg. at Abut.

ELEVATION STEEL EXTENSION AT ABUTMENTS

at Abut. 3½" 31/2" 1'-4"

€ Girder

PLAN OF BOTTOM PLATE OF STEEL EXTENSION AT **ABUTMENTS**



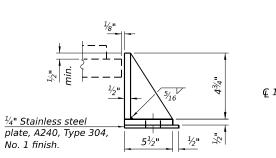
BEARING ASSEMBLY

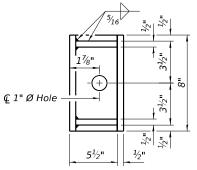
10"

Note:

Bonded

Shim plates shall not be placed under bearing assembly.





SIDE RETAINER

 $\frac{3}{4}$ " Ø Threaded stud

with flat washer &

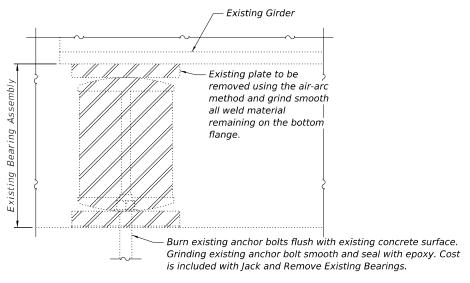
hex nut. (4-read.)

 $P_2 2^{1/4}$ " x 11" x 1'-4"

5 - Layers of ½6" elastomer

4 - $\frac{1}{8}$ " Steel plates

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



EXISTING BEARING REMOVAL DETAIL (BOTH ABUTMENTS)

(Cost of bearing removal is included with Jack and Remove Existing Bearings)

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Anchor bolts and side retainers at all supports shall be installed as each existing bearing assembly is replaced unless an equivalent temporary means of lateral

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim plate thickness dimensions.

Two $\frac{1}{8}$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown. Adjusting shim plates shall be paid for with Furnishing and Erecting Structural Steel.

Plates and fasteners required for the steel extensions shall be paid for with Furnishing and Erecting Structural Steel.

The structural steel plates of the Bearing Assembly and steel extensions shall conform to the requirements of AASHTO M270 Grade 36.

All bearing plates, steel extensions, side retainers, anchor bolts, nuts, and washers shall be galvanized according to AASHTO M111 or M232 as applicable. Cost shall be included with Elastomeric Bearing Assembly, Type I.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	1,910
Elastomeric Bearing Assembly, Type I	Each	10
Anchor Bolts, 3/4"	Each	20



USER NAME = zdavidson	DESIGNED - RPW	REVISED -
0700040-74C56-011-Bearing_Details.dgn	CHECKED - ZLD	REVISED -
PLOT SCALE = 0.167 ' / in.	DRAWN - JDC	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS STRUCTURE NO. 070-0040						
SHEET	11	OF	12	SHEETS		

F.A.S. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
659	D7 BRIDGE REPAIRS	2025-7	MOULTRIE	87	64
			CONTRAC	T NO. 74	1C56

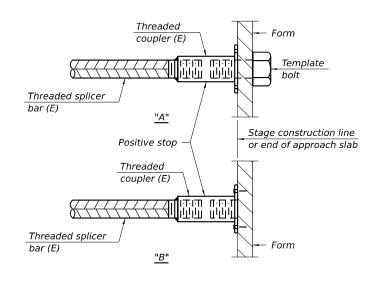
STANDARD BAR SPLICER ASSEMBLY PLAN

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

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

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

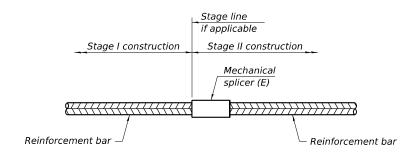
	Bar	No. assemblies	Minimum
Location	size	required	lap length
Bridge Deck	#5	32	3'-4"
Joint Elimination Diaphragm	#5	16	3'-4"
Approach Slab	#5	88	3'-4"
Approach Slab	#8	116	4'-9"
Approach Slab Footing	#5	80	3'-2"



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

5-15-2023



USER NAME = zdavidson	DESIGNED	-	RPW	REVISED	-
0700040-74C56-012-Bar_Splicer_Details.dgn	CHECKED	-	ZLD	REVISED	-
PLOT SCALE = 0.167 ' / in.	DRAWN	-	JDC	REVISED	-
PLOT DATE =	CHECKED	-	MDC	REVISED	-

Existing Structure: SN 070-0039, originally built in 1982 as a three-span continuous wide flange steel beam superstructure with stub abutments and solid wall piers. The back to back length = 113'-0" and the out to out width = 35'-2". Structure is to be repaired as detailed in these plans. Traffic is to be maintained using stage

Traffic Barrier Terminal Type 6 (Std. 631031), typ.

⊢ Bk. S. Abut.

See Roadway Plans for pay items and quantities

No Salvage



├--- **©** Pier 1

€ C.H. 8

€ Brg. S. Abut.

Stage Construction Line

32'-10%"

- Ex. W24 Girder

ELEVATION

39'-8" 113'-0" Bk. to Bk. Abutments

PLAN

Robert Whiteside, Illinois S.E. 081-008015 Expires 11/30/2026

€ Brg. N. Abut.

32'-10%"

12/5/2024

30'-0" Bridge Approach Slab, typ.

SHEET 1 OF 13 SHEETS

3'-91/8"

⊢ Bk. N. Abut.

INDEX OF SHEETS

SCOPE OF WORK

1. Replace the transverse expansion joints.

4. Place a fly ash or GGBF slag overlay with

diamond grinding and bridge deck grooving. 5. Remove the existing approach slab and place

a 30'-0" long full clear width approach slab. 6. Widen abutment seats for new approach slab.

3. Complete full depth deck repairs.

2. Scarify the bridge deck.

- 1. General Plan and Elevation
- 2. General Data
- 3. Stage Construction Details
- 4. Temporary Concrete Barrier for Stage Construction
- 5. Deck Overlay Plan
- 6-8. Expansion Joint Details
- 9. Preformed Joint Strip Seal
- 10-11. Bridge Approach Slab Details
- 12. Abutment Modifications
- 13. Bar Splicer Details

LOADING HS20-44

No Allowance for Additional Future Wearing Surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges - LFD

DESIGN STRESSES FIELD UNITS (EXIST. CONST.)

f'c = 3,500 psi

Project Location

fy = 60,000 psi (Reinforcement)

FIELD UNITS (NEW CONST.)

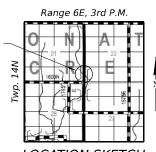
fy = 50,000 psi (M-222 Grade 50, Structural Steel)

f'c = 4,000 psi (Superstructure)

f'c = 3,500 psi (Substructure)

fy = 60,000 psi (Reinforcement)

fy = 36,000 psi (M270 Grade 36)



LOCATION SKETCH

GENERAL PLAN & ELEVATION

C.H. 8 OVER JONATHAN CREEK F.A.S. ROUTE 659

SECTION D7 BRIDGE REPAIRS 2025-7 **MOULTRIE COUNTY**

> STATION 173+60.00 STRUCTURE NO. 070-0039



JSER NAME = zdavidson DESIGNED - RPW REVISED 700039-74C56-001-GPE.dgn CHECKED - ZLD REVISED PLOT SCALE = 18.333 ' / in. DRAWN REVISED PLOT DATE = CHECKED - MDC REVISED

3'-91/8"

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 66 CONTRACT NO. 74C56

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to the existing structure have been taken from existing plans and 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.

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 shall be replaced with an approved bar splicer or anchorage system at the Contractor's expense. Cost included with Concrete Removal.

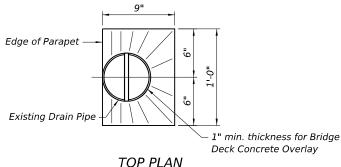
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC-SP3 standards). Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be paid for according to Article 109.04 of the Standard Specifications.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding $^{1}\!\!\!/_4$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

The protective coat shall be applied to the new concrete overlay, new bridge deck concrete, new approach slab concrete, and top and inside faces of the new portions of the parapets and wingwalls.

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.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.



Overlay Transition at 6" Ø Drain Pipes

QUIGG ENGINEERING INC

USER NAME = zdavidson	DESIGNED - RPW	REVISED -
0700039-74C56-002-General_Data.dgn	CHECKED - ZLD	REVISED -
PLOT SCALE = 0.167 ' / in.	DRAWN - JDC	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

GENERAL DATA STRUCTURE NO. 070-0039		SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
		D7 BRIDGE REPAIRS 2025-7		MOULTRIE	87	67
				CONTRAC	T NO. 74	1C56
SHEET 2 OF 13 SHEETS		ILLIN	IOIS FEE	. AID PROJECT		

TOTAL BILL OF MATERIAL

Cu. Yd.

Cu. Yd.

Cu. Yd.

Sq. Yd.

Each

Foot

Cu. Yd.

Sq. Yd.

Sq. Yd.

Sq. Yd.

Cu. Yd. 18.6

Cu. Yd. | 95.3

Sq. Yd. 359

Sq. Yd. 535

Sq. Yd. 458

Concrete Removal

Structure Excavation

Concrete Superstructure

Preformed Joint Strip Seal

Concrete Overlay, $2\frac{1}{2}$ "

Granular Backfill for Structures

Bridge Deck Scarification 3/4"

Bridge Deck Fly Ash or GGBF Slag

Deck Slab Repair (Full Depth, Type I)

Deck Slab Repair (Full Depth, Type II)

Diamond Grinding (Bridge Section)

Bridge Deck Grooving (Longitudinal)

Concrete Superstructure (Approach Slab)

Reinforcement Bars, Epoxy Coated

Concrete Structures

Protective Coat

Bar Splicers

SUPER

17.1

617

162

104.0

359

3

2

Pound 35,450 6,570 42,020

SUB TOTAL

16

34.8

84

13

17.1

16

34.8

18.6

617

95.3

246

104.0

13

359

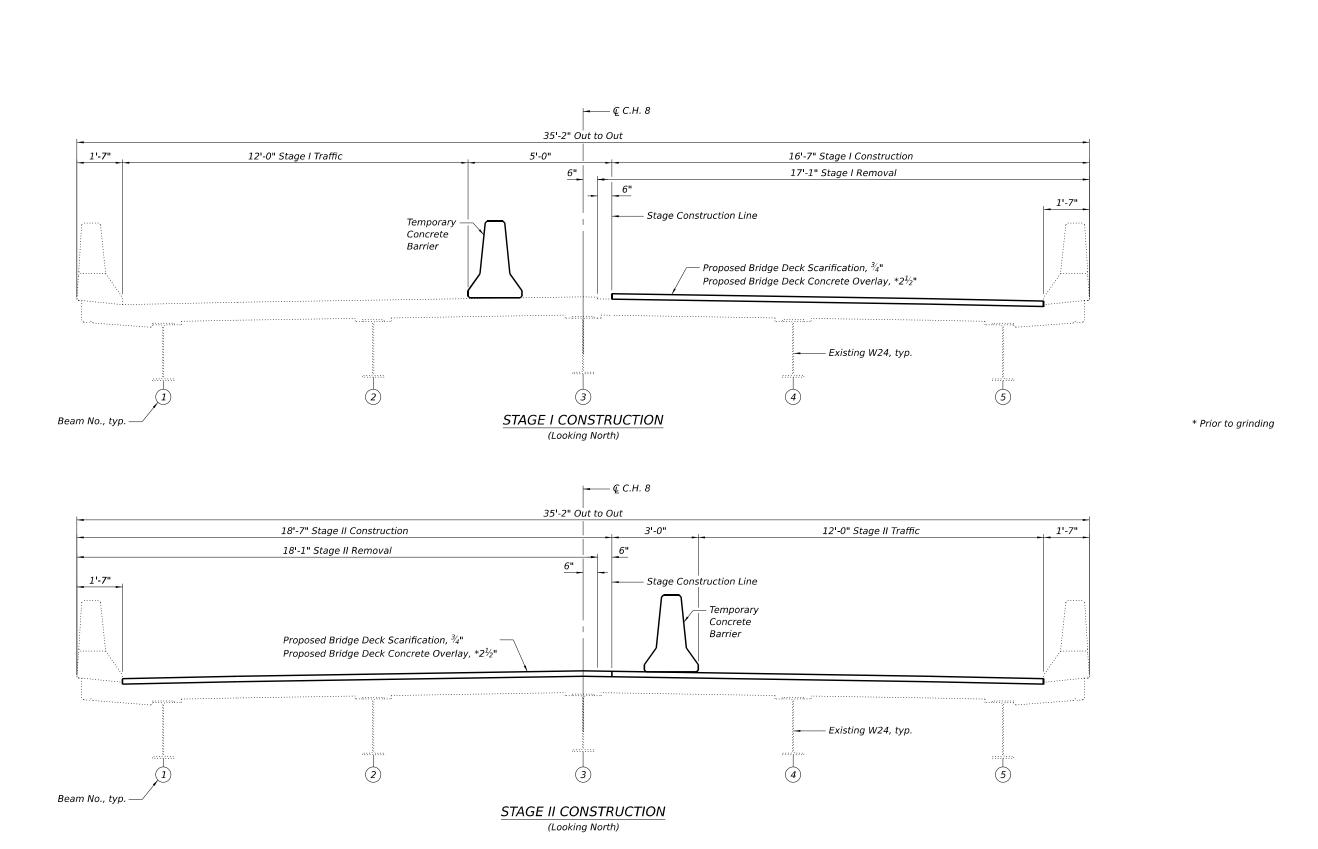
359

3

2

535

458

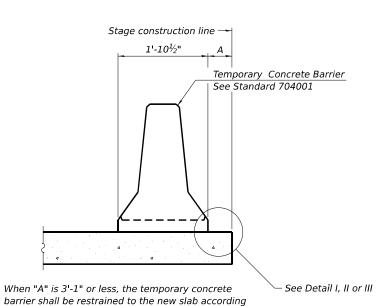


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PLOT DATE =	CHECKED	-	MDC	REVISED -	
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS STRUCTURE NO. 070-0039		SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
		D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	68
			CONTRAC	T NO. 74	1C56
		ILLINOIS EED	AID DRO IECT		



– Stage removal line — Stage removal line 1'-10½" Temporary Concrete Barrier See Standard 704001 6" 6" min. min. Drill 3-1 $\frac{1}{4}$ " 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 * When hot-mix asphalt wearing surface is present, embedment

1x8 UNC 7/16" Ø hole US Std. $1\frac{1}{16}$ " I.D. $\times 2\frac{1}{2}$ " O.D. x approx. 8 gauge thick washer 1" Ø pin RESTRAINING PIN

NEW SLAB OR NEW DECK BEAM

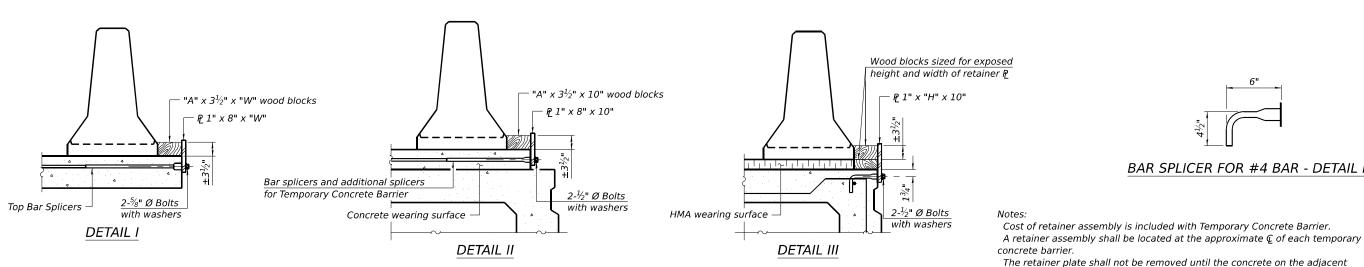
to Detail I, II or III. No restraint is required

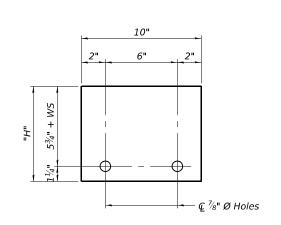
when "A" is greater than 3'-1".

SECTIONS THRU SLAB OR DECK BEAM

is required when "A" is greater than 3'-1".

EXISTING SLAB





shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

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

2" Top bars Spa. 2" Detail I Detail II

"W"

10"

Detail I

Detail II

€ 7/8" Ø Holes

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

STEEL RETAINER P 1" x 8" x "W" (Detail I and II) 5-15-2023

the shear key clamping device. Detail I - Installation for a new bridge deck or bridge slab.

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 $1\frac{1}{2}$ ", 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

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.

BAR SPLICER FOR #4 BAR - DETAIL III

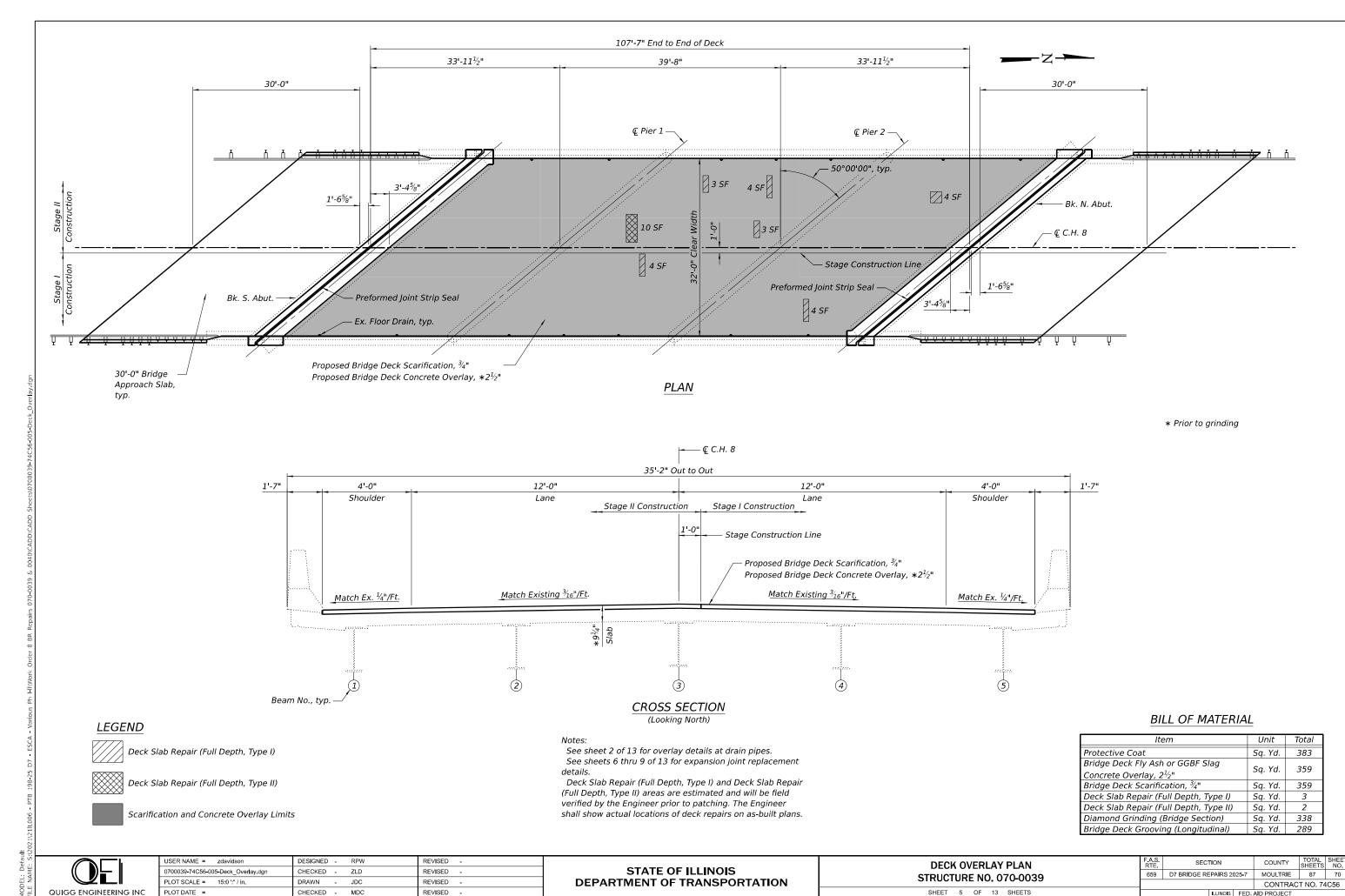
Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate 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.

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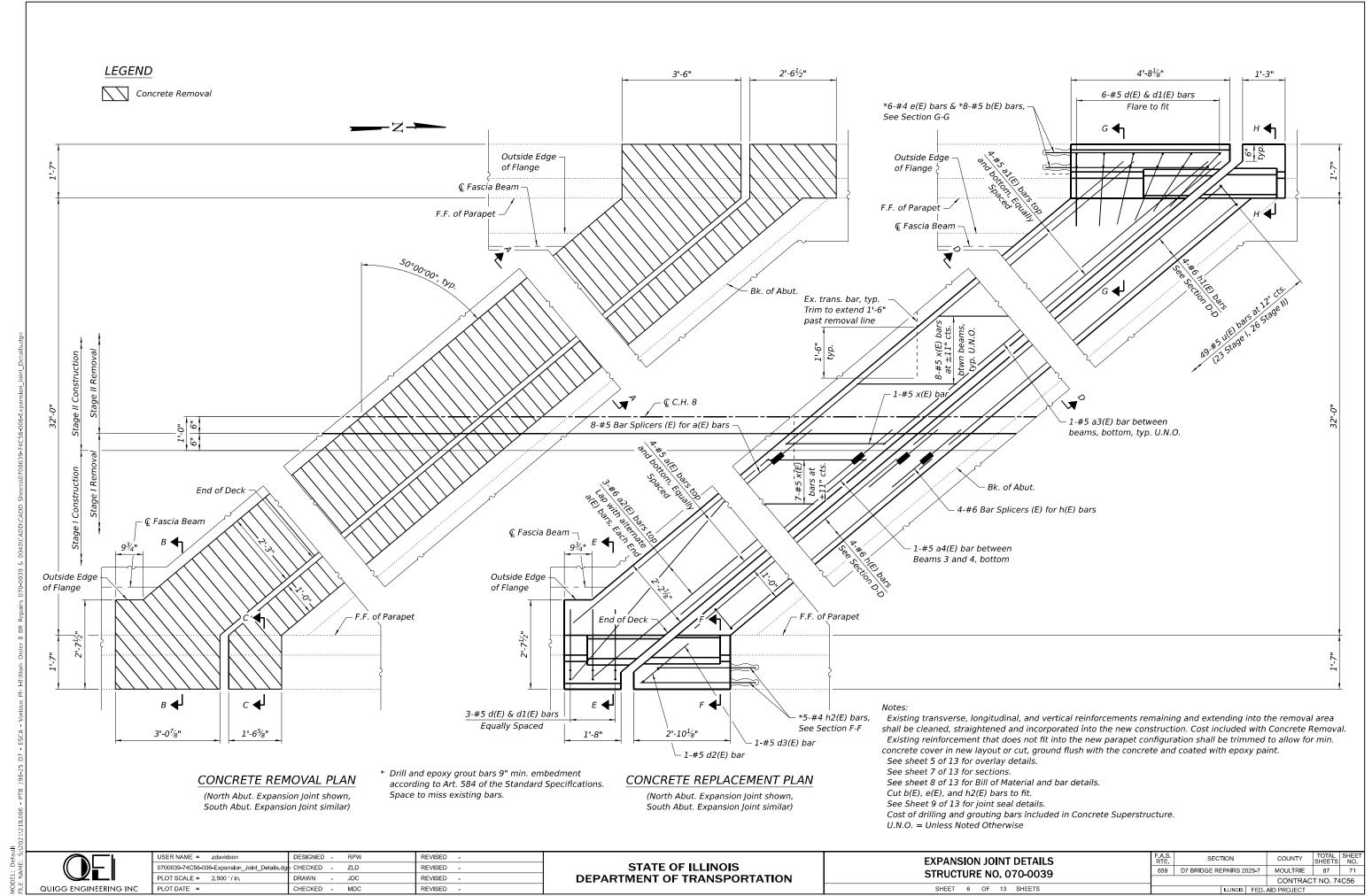
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PLOT SCALE = 0.167 ' / in.	DRAWN	-	JDC	REVISED	-
PLOT DATE =	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 69 **STRUCTURE NO. 070-0039** CONTRACT NO. 74C56 SHEET 4 OF 13 SHEETS

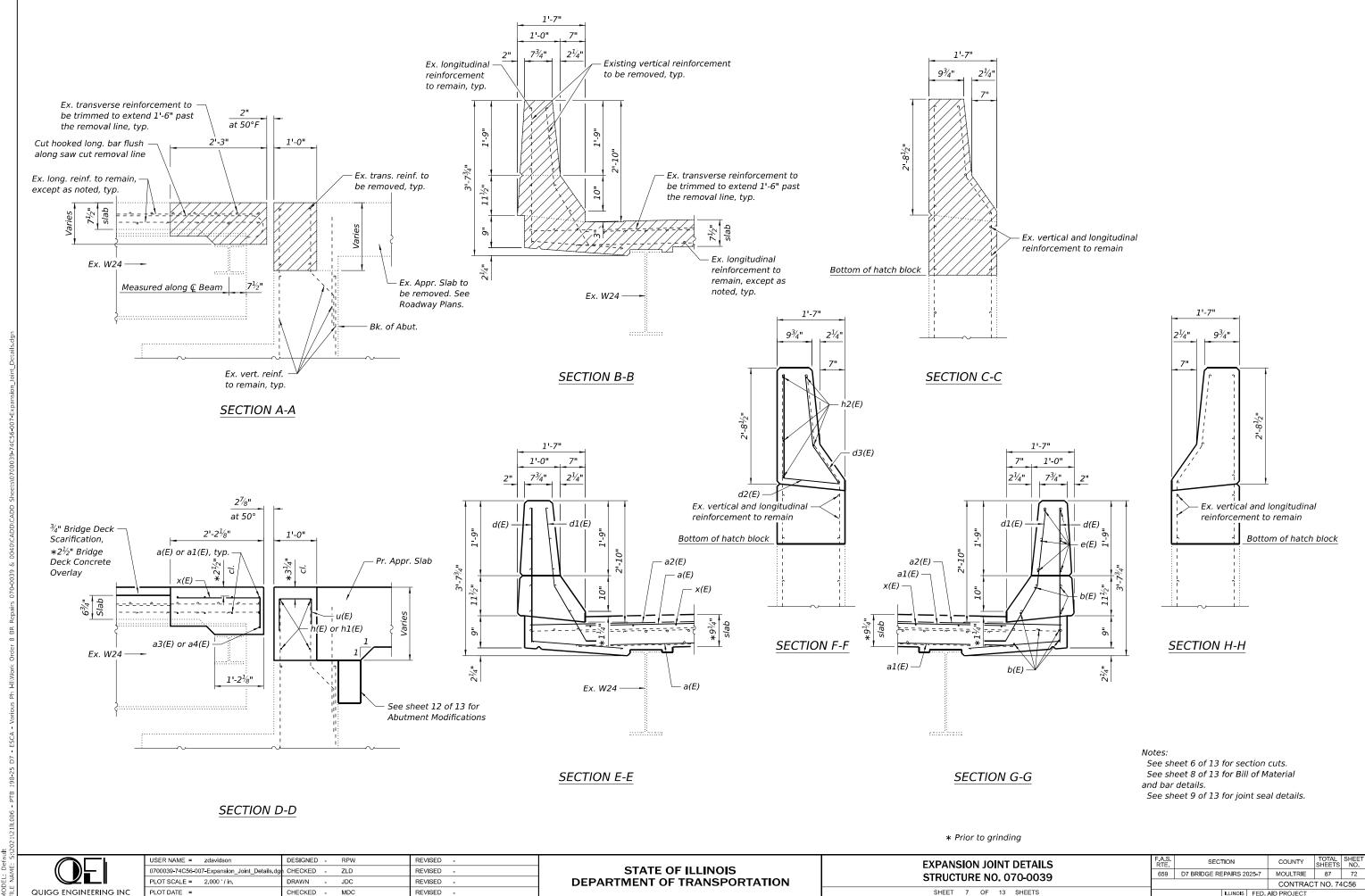
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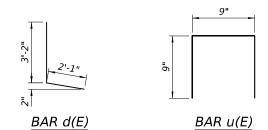
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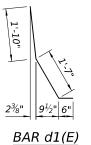


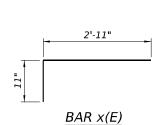
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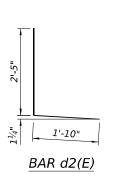


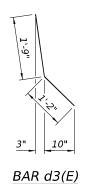
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BILL OF MATERIAL

Bar	No.	Size	Leng	th		Shape
a(E)	16	#5	22'-7	7"	_	
a1(E)	16	#5	28'-0)"	-	
a2(E)	12	#6	7'-0	"	-	
a3(E)	6	#5	10'-1	0"	-	
a4(E)	2	#5	9'-3	"	_	
b(E)	16	#5	5'-3	"	-	
d(E)	d(E) 18 #5 5'-3					L
d1(E)	18	18 #5 3'-11"				\
d2(E)	2	#5	4'-3"		L	
d3(E)	2	#5	2'-11"			
e(E)	12	#4	5'-3	"	_	
h(E)	8	#6	24'-1		_	
h1(E)	8	#6	27'-7			
h2(E)	10	#4	3'-7	"	-	
u(E)	98	#5	2'-3	"		
x(E)	64	#5	3'-10	ייר		
X(L)	04	#3	3-10	,		1
	Itei	 m		Unit		Total
Concrete R				Cu. Yo		17.1
Concrete S		turo		Cu. Yo	-	18.6
Reinforcem			ated			2,520
Kennorcen	CIR Dals,	aceu	rouni	u	2,320	

QUIGG ENGINEERING INC

 USER NAME = zdavidson
 DESIGNED - RPW
 REVISED

 0700039-74C56-008-Expansion_Joint_Details.dgh
 CHECKED - ZLD
 REVISED

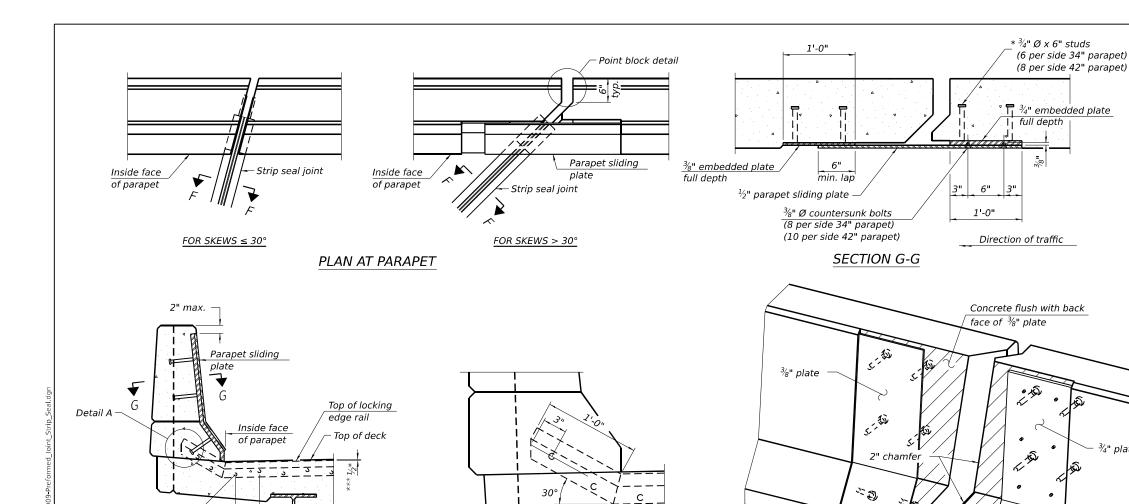
 PLOT SCALE = 0.167 '/ in.
 DRAWN - JDC
 REVISED

 PLOT DATE = CHECKED - MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT DETAILS
STRUCTURE NO. 070-0039

SHEET 8 OF 13 SHEETS



DETAIL A

TRIMETRIC VIEW
(Showing embedded plates only)

Concrete flush with back

face of 3/4" plate

D. D.

ELEVATION AT PARAPET

at 50° F

SHOWING ROLLED RAIL JOINT

at 50° F

-Strip seal

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

Locking edge rail

Top of concrete

 $\frac{6"\ cts.,}{typ.}$

5/8" Ø x 6" studs

*** Prior to grinding

Locking edge rail Top of concrete * $\frac{5}{6}$ " Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs) 3%" ϕ threaded rods in $\frac{7}{16}$ " ϕ holes at $\pm 4^{1}$ -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.

SECTION F-F

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

7/6" ROLLED (EXTRUDED) RAIL WELDED RAIL

LOCKING EDGE RAILS

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

**** Omit weld at seal opening.

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 height and thickness of the locking edge rails shown are minimum dimensions. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the locking edge rail groove shall be free of weld residue.

Locking edge rails may be spliced at slope discontinuities and stage construction joints.

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 $^3\!\!_{16}$ " 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.

Grind flush

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	104.0



 USER NAME
 zdavidson
 DESIGNED
 RPW
 REVISED

 0700039-74C56-009-Preformed_Joint_Strip_Seal d@HECKED
 ZLD
 REVISED

 PLOT SCALE
 0.167 '/ in.
 DRAWN
 JDC
 REVISED

 PLOT DATE
 CHECKED
 MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

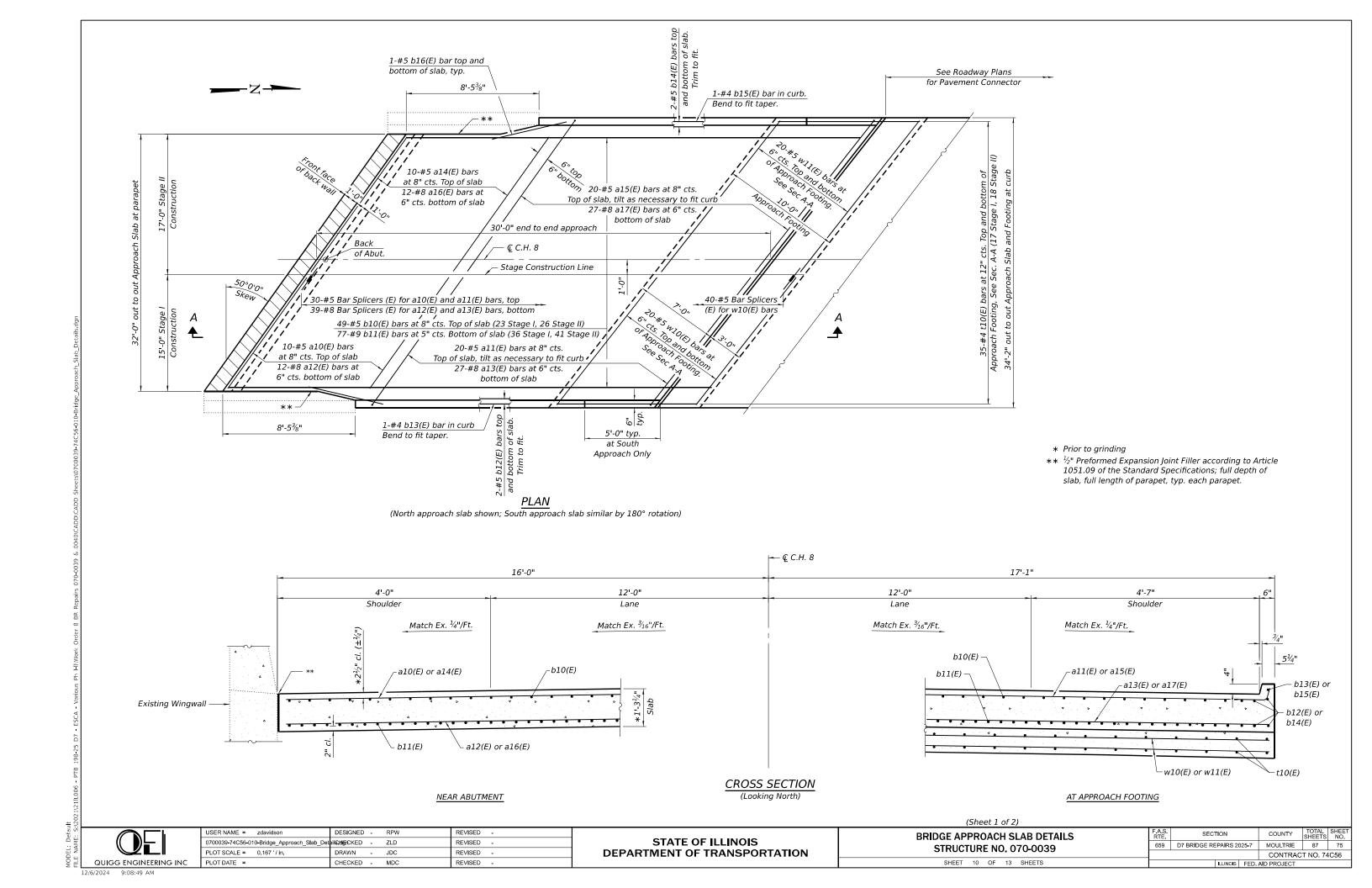
SHOWING WELDED RAIL JOINT

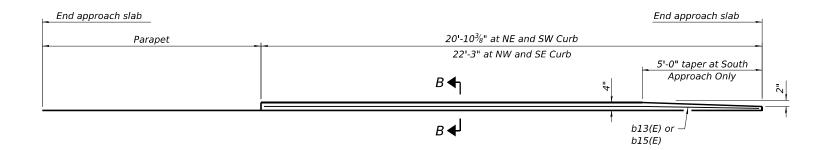
PREFORMED JOINT STRIP SEAL STRUCTURE NO. 070-0039

SHEET 9 OF 13 SHEETS

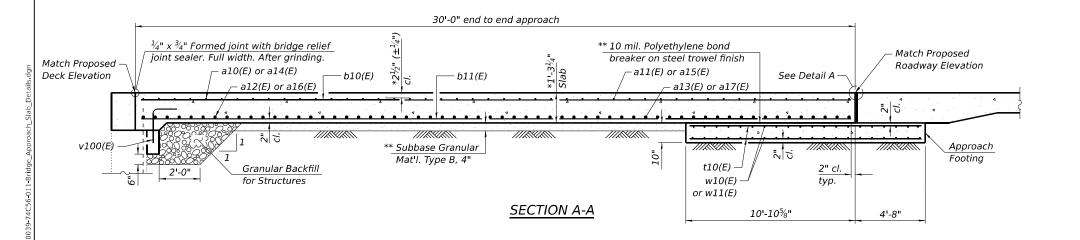
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
659	D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	74
		CONTRAC	T NO. 74	IC56
	ILLINOIS EED	AID DRO IECT		

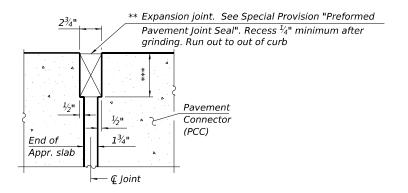
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INSIDE ELEVATION OF PARAPET AND CURB

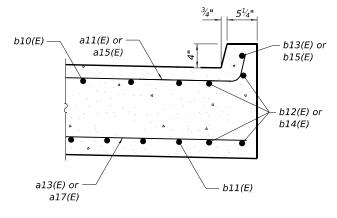




DETAIL A

(Detail A shown, applies to Highway Standard 420401 only. Detail A for pavement connector (HMA) may be found on Highway Standard 420406.)

- * Prior to grinding
- ** Cost included with Concrete Superstructure (Approach Slab).
- *** Per manufacturer recommendations



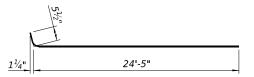
SECTION B-B

Notes:

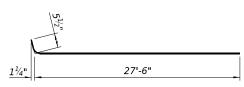
Approach slab shall be paid for as Concrete Superstructure (Approach Slab). Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf. Cost of excavation for approach footing included with Concrete Structures. See sheet 6 thru 8 of 13 for hatched block details.

Cost of excavation, grading, and trimming for Subbase Granular Material, Type B, 4" is included with Concrete Superstructure (Approach Slab).



BAR a11(E)



BAR a15(E)

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a10(E)	20	#5	22'-9"		
a11(E)	40	#5	24'-11"		
a12(E)	24	#8	22'-9"		
a13(E)	54	#8	24'-7"		
a14(E)	20	#5	25'-11"		
a15(E)	40	#5	28'-0"		
a16(E)	24	#8	25'-11"		
a17(E)	54	#8	27'-8"		
b10(E)	98	#5	29'-8"		
b11(E)	154	#9	29'-8"		
b12(E)	8	#5	20'-8"		
b13(E)	2	#4	20'-0"		
b14(E)	8	#5	22'-2"		
b15(E)	2	#4	22'-2"		
b16(E)	8	#5	8'-6"		
t10(E)	140	#4	15'-0"		
w10(E)	80	#5	24'-7"		
w11(E)	80	#5	27'-8"		
Concrete	Structure.	S	Cu. Yd.	32.9	
Protective			Sq. Yd.	234	
Concrete:	Superstru	cture	Cu. Yd.	95.3	
(Approach			ca. ra.	33.3	
Reinforce		5,	Pound	38,700	
Epoxy Coa	ated	round	30,700		
Diamond Grinding (Bridge			Sq. Yd.	197	
Section)			34, 14.	137	
Bridge De		ng	Sg. Yd.	169	
(Longitudi	inal)		39, 14.	100	

(Sheet 2 of 2)



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 070-0039

BILL OF MATERIAL Size Length Shape d4(E) 1'-7" 98 #5 d5(E) h3(E) 4 #5 22'-10" h4(E) #5 25'-11" v100(E) 66 3'-8" Concrete Structures Cu. Yd. 1.9 Reinforcement Bars, 800 Pound Epoxy Coated 1-#5 h4(E) bar, top and bottom Back of 1'-11" abutment 50°00'00" – Vertical — Vertical 1'-1" – Front of Abut. 2-#5 Bar Splicers -(E) for h3(E) bars BAR d4(E) *BAR d5(E)* BAR v100(E) Stage Construction 1'-0" 1-#5 h3(E) bar, – top and bottom v100(E), orient horizontal leg parallel to **€** Lanes Proposed hatch block 2" cl. h3(E) or h4(E) -- d5(E)* * Drill and epoxy grout bars. 9" min. embedment according to Art. 584 of the Standard Specifications. 1'-6" Back of Abut. — Front of Abut. Space to miss existing bars. Abutment corbel concrete shall be paid for as Concrete Structures. PROPOSED PARTIAL PLAN SECTION A-A (South Abutment Shown, North Abutment Similar)

QUIGG ENGINEERING INC 12/6/2024 9:08:51 AM DESIGNED -

DRAWN

CHECKED - ZLD

CHECKED - MDC

0700039-74C56-012-Abutment_Modifications.dgr

PLOT DATE =

REVISED

REVISED

REVISED -

REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ABUTMENT MODIFICATIONS
STRUCTURE NO. 070-0039

SHEET 12 OF 13 SHEETS

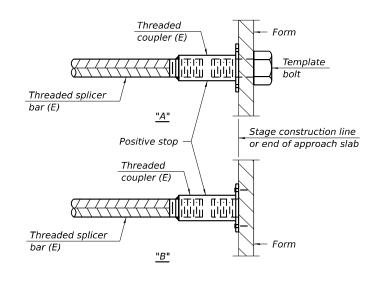
STANDARD BAR SPLICER ASSEMBLY PLAN

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

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

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

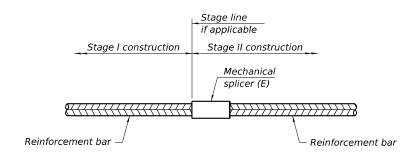
Landina	Bar	No. assemblies	Minimum
Location	size	required	lap length
Bridge Deck Side of Exp. Jt.	#5	16	3'-4"
Appr. Side of Exp. Jt.	#6	8	4'-0"
Approach Slab	#5	60	3'-4"
Approach Slab	#8	78	4'-9"
Approach Slab Footing	#5	80	3'-2"
Abutment Modification	#5	4	3'-2"



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

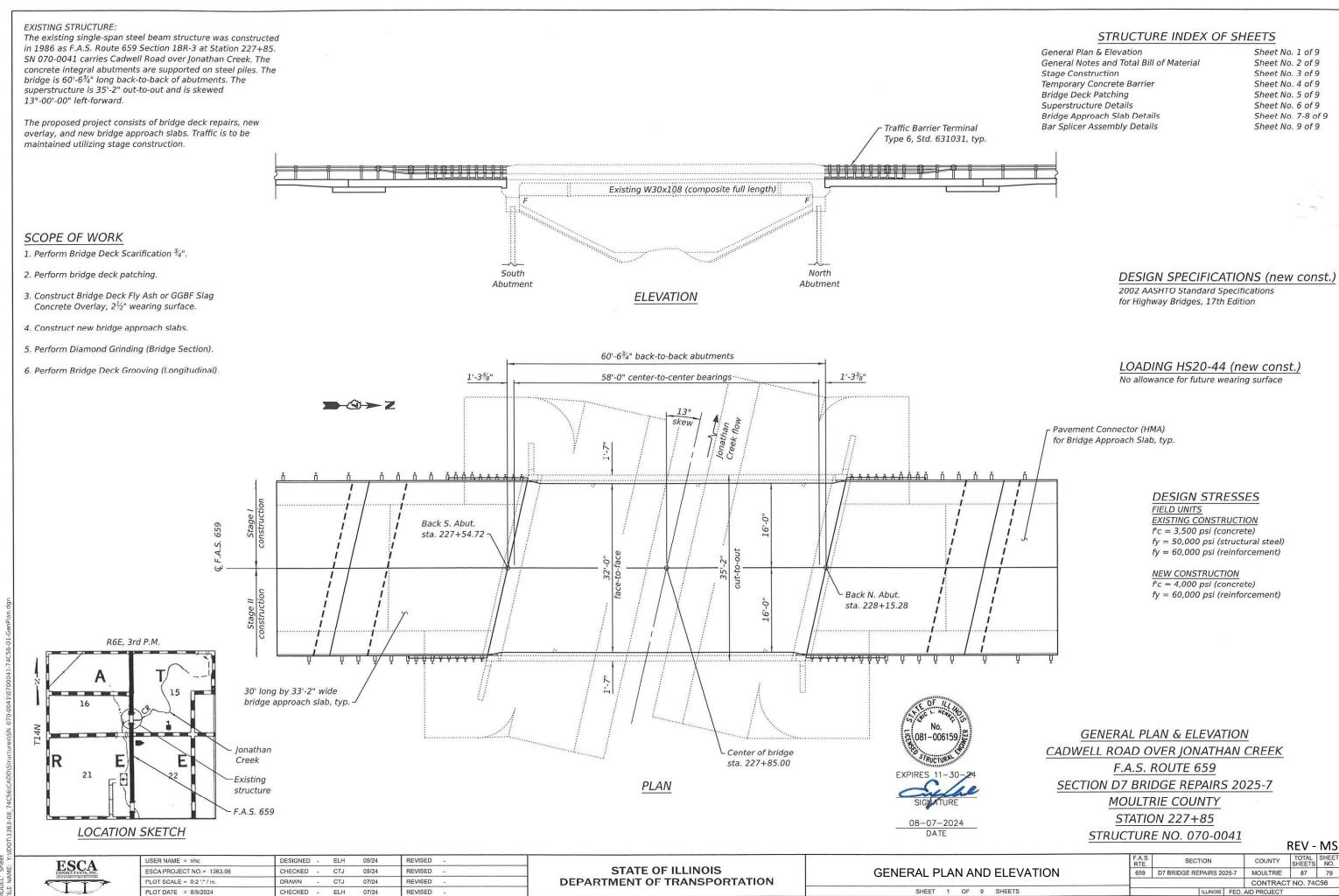
for reinforcement bars. See Section 508 of the Standard Specifications. See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

5-15-2023



USER NAME = zdavidson	DESIGNED - RPW	REVISED -
0700039-74C56-013-Bar_Splicer_Details.dgn	CHECKED - ZLD	REVISED -
PLOT SCALE = 0.167 ' / in.	DRAWN - JDC	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -



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GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Plan dimensions and details relative to the existing structure have been taken from existing plans and 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 shall be replaced with an approved bar splicer or anchorage system at the Contractor's expense.
- 4. Areas of deck repairs shown are estimated. The Engineer shall show actual locations and size of deck repairs on As-built plans.
- 5. Bridge Deck Grooving (Longitudinal) shall be completed only after Diamond Grinding (Bridge Section) is complete.
- Protective Coat shall be applied to the top of the new concrete overlay, bridge approach slabs, and tops and inside faces of bridge approach slab curbs.
- 7. Up to $\frac{1}{4}$ " to be ground off the concrete overlay and bridge approach slabs.

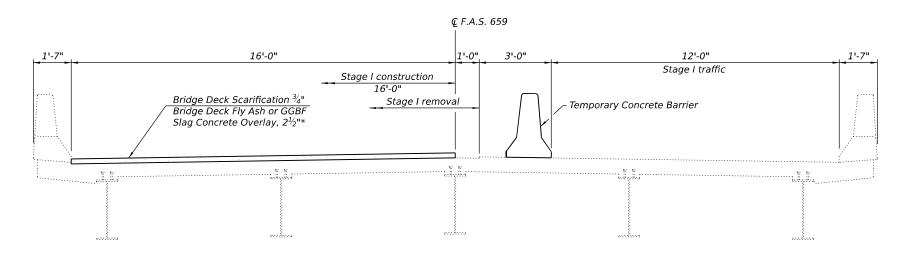
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Structures	Cu. Yd.		21.1	21.1
Protective Coat	Sq. Yd.	442		442
Concrete Superstructure (Approach Slab)	Cu. Yd.	96.0		96.0
Reinforcement Bars, Epoxy Coated	Pound	32,990	3,680	36,670
Bar Splicers	Each	212	80	292
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	322		322
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2½"	Sq. Yd.	216		216
Bridge Deck Scarification 3/4"	Sq. Yd.	216		216
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	5		5
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	2		2
Diamond Grinding (Bridge Section)	Sq. Yd.	383		383

NAME: Y:\IDOT\1363-08_74C56\CA

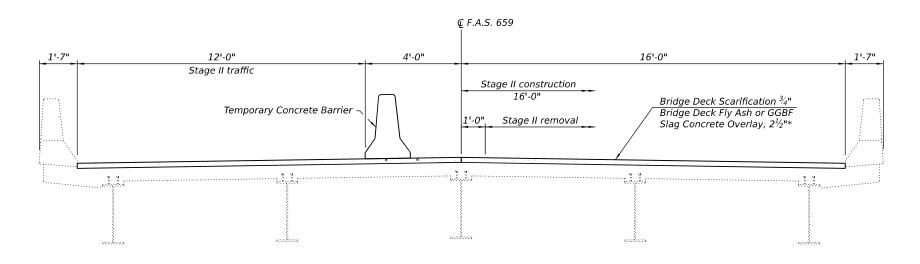


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STAGE I - LOOKING NORTH

* Prior to grinding

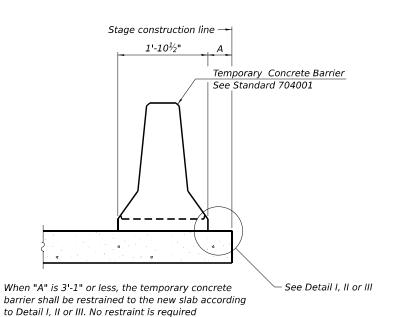


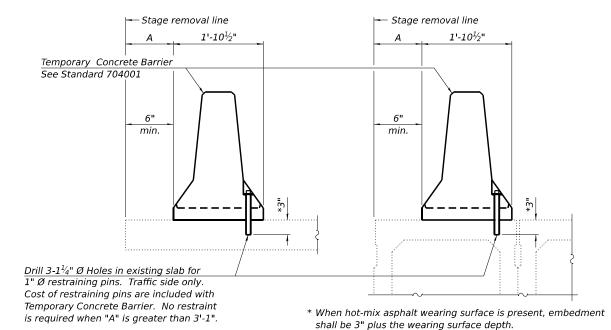
STAGE II - LOOKING NORTH

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ESCA PROJECT NO.= 1363.08	CHECKED	-	CTJ	05/24	REVISED -
PLOT SCALE =	DRAWN	-	CTJ	05/24	REVISED -
PLOT DATE = 5/14/2024	CHECKED	-	ELH	05/24	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION STRUCTURE NO. 070-0041		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		D7 BRIDGE REPAIRS 2025-7	MOULTRIE	87	81
			CONTRACT	NO. 740	256
SHEET 3 OF 9 SHEETS		ILLINOIS FED	AID PROJECT		-





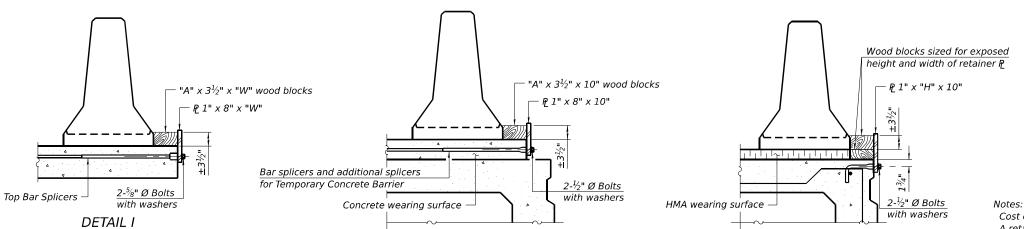
 $\frac{7}{16}$ " Ø hole 1x8 UNC US Std. $1\frac{1}{16}$ " I.D. $\times 2\frac{1}{2}$ " O.D. x approx. 8 gauge thick washer 1" Ø pin RESTRAINING PIN

NEW SLAB OR NEW DECK BEAM

when "A" is greater than 3'-1".

SECTIONS THRU SLAB OR DECK BEAM

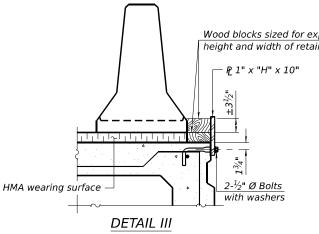
EXISTING SLAB



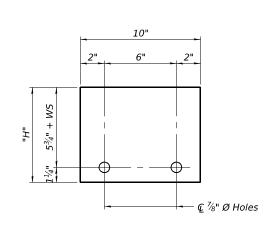
DETAIL II

Detail I

€ %" Ø Holes



EXISTING DECK BEAM



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

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate ${\mathfrak C}$ of each temporary concrete barrier.

BAR SPLICER FOR #4 BAR - DETAIL III

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 $1\frac{1}{2}$ ", 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.

Detail II 2" Top bars Spa. 2" Detail I Detail II

STEEL RETAINER P 1" x 8" x "W"

(Detail I and II)

"W"

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

5-15-2023

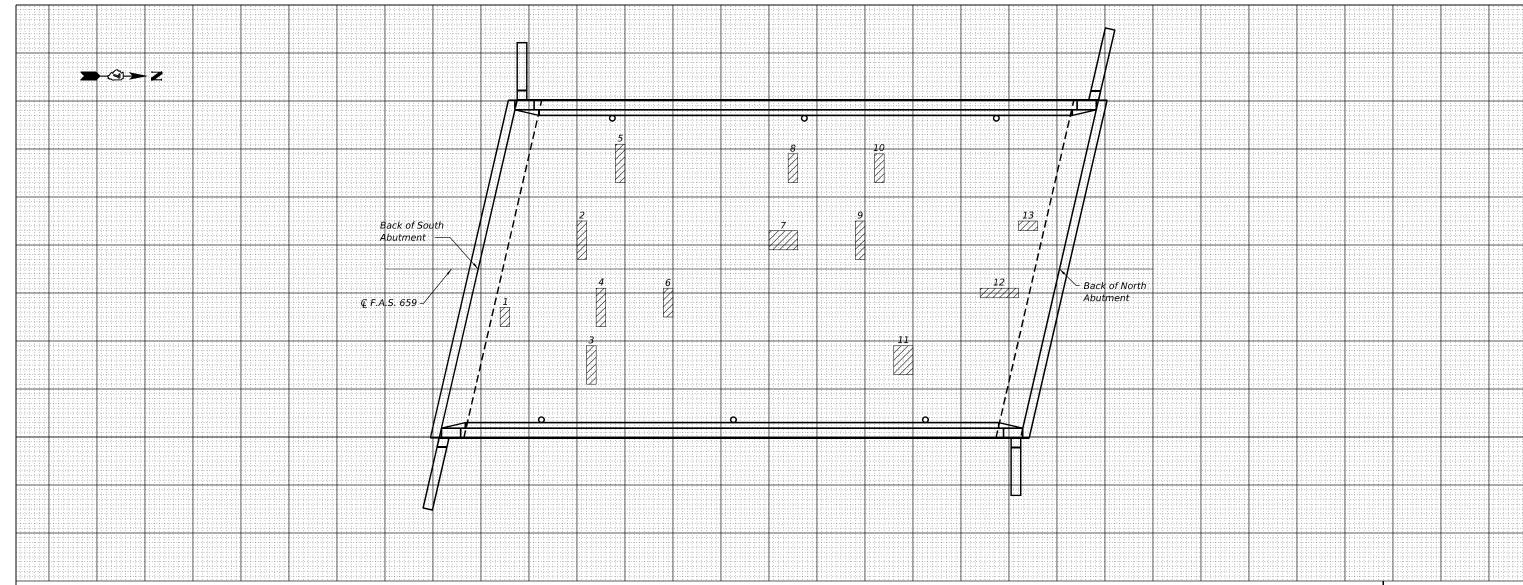
R-27

ESCA CONSULTANTS, INC. UNIL A STRUCTURAL ENGINEERS	

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PLOT SCALE = 0:2 ':" / in.	DRAWN	-	CTJ	05/24	REVISED	-
PLOT DATE = 8/9/2024	CHECKED	-	ELH	05/24	REVISED	-

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TEMPORARY CONCRETE BARRIER SECTION 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 82 **STRUCTURE NO. 070-0041** CONTRACT NO. 74C56 SHEET 4 OF 9 SHEETS

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PATCH	SI. (FE	ZE EET)	DECK SLAB REPAIR (FD, TY I)	DECK SLAB REPAIR (FD, TY II)			
NO.	LENGTH	WIDTH	SQ YD	SQ YD			
1	1.0	2.0	0.2				
2	1.0	4.0	0.4				
3	1.0	4.0	0.4				
4	1.0	4.0	0.4				
5	1.0	4.0	0.4				
6	1.0	3.0	0.3				
7	3.0	2.0		0.7			
8	1.0	3.0	0.3				
9	1.0	4.0	0.4				
10	1.0	3.0	0.3				
11	2.0	3.0		0.7			
12	4.0	1.0	0.4				
13	2.0	1.0	0.2				
ТОТА	AL ROUNDS	5.0	2.0				

SN 070-0041 BRIDGE DECK PATCHING

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



DATE OF SURVEY: 11-2-23 SURVEY BY: DM METHOD OF SURVEY: VISUAL

<u>ESTIMATED</u> PAY QUANTITIES:

DECK SLAB REPAIR (FULL DEPTH, TYPE I) 5.0 SQ YD

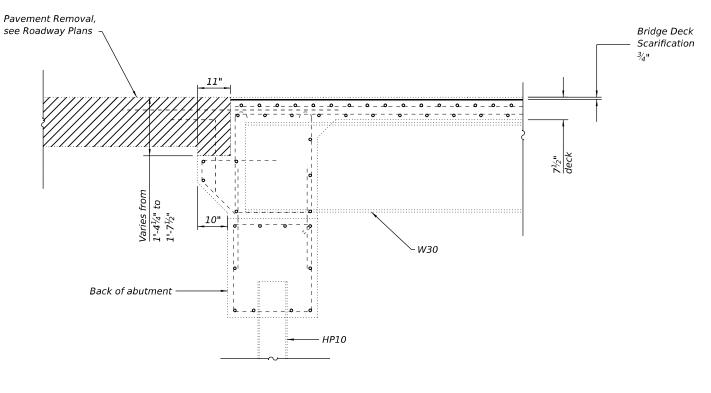
DECK SLAB REPAIR (FULL DEPTH, TYPE II) 2.0 SQ YD

ESCA CONSULTANTS, INC. CINIL A STRUCTURAL REGISSIONS

USER NAME = nhc	DESIGNED	-	ELH	05/24	REVISED -	
ESCA PROJECT NO.= 1363.08	CHECKED	-	CTJ	05/24	REVISED -	
PLOT SCALE = 0:2 ':" / in.	DRAWN	-	CTJ	05/24	REVISED -	
PLOT DATE = 8/9/2024	CHECKED	-	ELH	05/24	REVISED -	

F.A.S. RTE.	SECTION			COUNTY	TOTAL SHEETS	SHEE NO.
659	D7 BRIDGE REPAIRS 2025-7			MOULTRIE	87	83
			CONTRACT	NO. 740	256	
ILLINOIS FED				AID PROJECT		

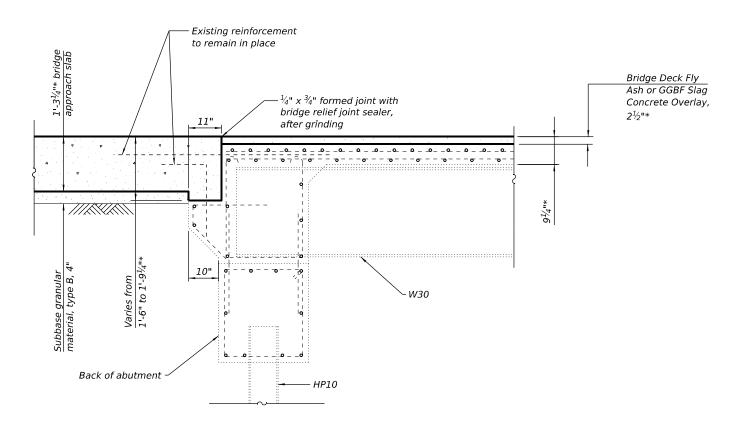
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APPROACH SLAB REMOVAL SECTION

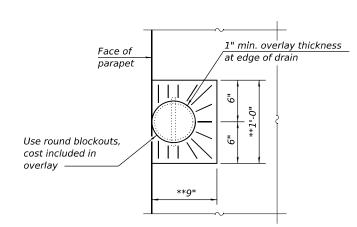
(Horizontal dimensions at right angles)

*Prior to grinding **Slope to drain

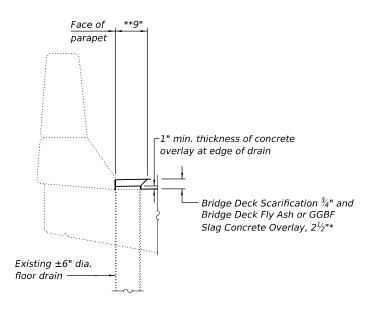


APPROACH SLAB CONSTRUCTION SECTION

(Horizontal dimensions at right angles)



OVERLAY TREATMENT AT FLOOR DRAINS



SECTION AT FLOOR DRAINS

ESCA CONSULTANTS, INC. TOTAL STRECTIFAL REGISTERS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 070-0041

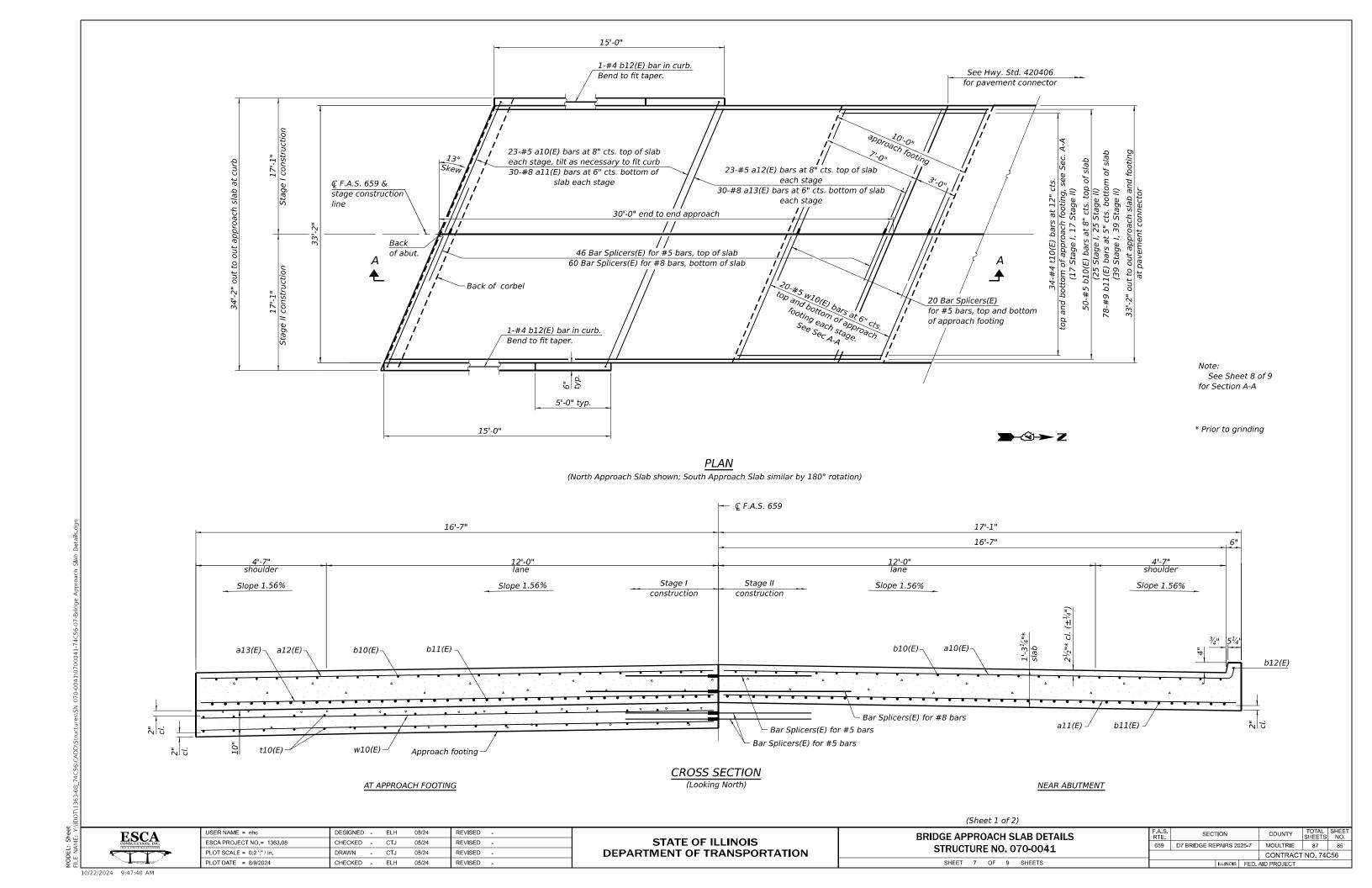
SHEET 6 OF 9 SHEETS

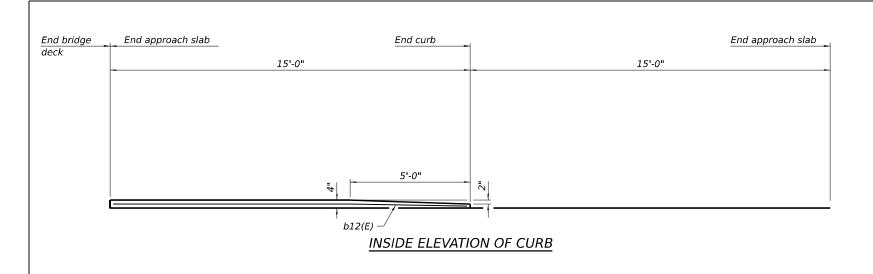
 F.A.S. RTE.
 SECTION
 COUNTY
 TOTAL, SHEETS
 SHEETS NO.

 659
 D7 BRIDGE REPAIRS 2025-7
 MOULTRIE
 87
 84

 CONTRACT NO. 74C56

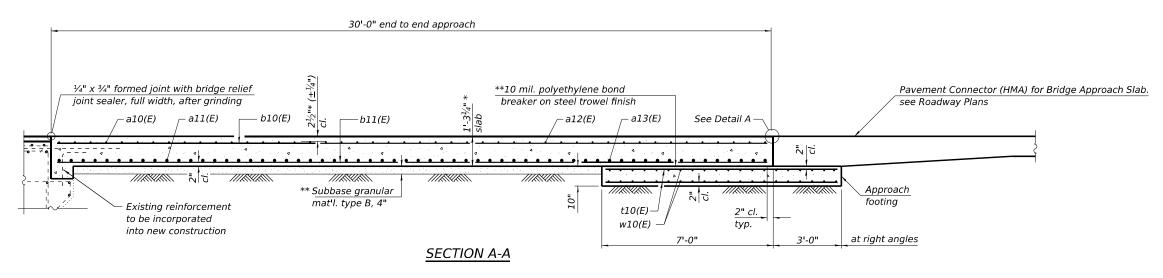
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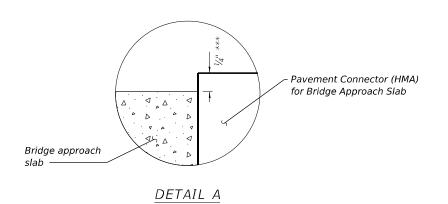
Notes:

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.



TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	92	#5	17'-6"	
a11(E)	120	#8	17'-2"	
a12(E)	92	#5	16'-8"	
a13(E)	120	#8	16'-8"	
b10(E)	100	#5	29'-8"	
b11(E)	156	#9	29'-8"	
b12(E)	4	#4	14'-8"	
t10(E)	136	#4	9'-11"	
w10(E)	160	#5	16'-8"	
Concrete S	Superstru	Cu. Yd.	96.0	
(Approach	Slab)	Cu. ru.	90.0	
Concrete S	Structures	Cu. Yd.	21.1	
Reinforcer		Pound	36,670	
Epoxy Coa	ted		Tourid	30,070



17'-0½"

BAR a10(E)

- * Prior to grinding ** Cost included with Concrete Superstructure (Approach Slab) *** After grinding

(Sheet 2 of 2)

JSER NAME = nhc DESIGNED - ELH 05/24 REVISED ESCA PROJECT NO. = 1363.08 CHECKED - CTJ 05/24 REVISED -PLOT SCALE = 0:2 ':" / in. CTJ 10/24 REVISED PLOT DATE = 10/22/2024 CHECKED - ELH 10/24 REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** **BRIDGE APPROACH SLAB DETAILS** SECTION COUNTY 659 D7 BRIDGE REPAIRS 2025-7 MOULTRIE 87 86 **STRUCTURE NO. 070-0041** CONTRACT NO. 74C56 SHEET 8 OF 9 SHEETS

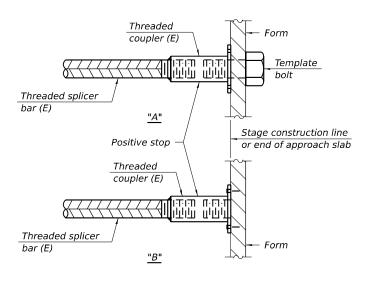
STANDARD BAR SPLICER ASSEMBLY PLAN

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

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

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

Location	Bar	No. assemblies	Minimum
Location	size	required	lap length
070-0041 Approach Slabs	#5	92	3'-4"
070-0041 Approach Slabs	#8	120	4'-9"
070-0041 Approach Footings	#5	80	3'-4"

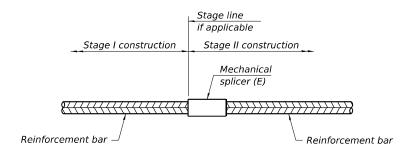


INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.

"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

L	ocation	Bar size	No. assemblies required
	NA		

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

5-15-2023



USER NAME = nhc	DESIGNED	-	ELH	05/24	REVISED	-
ESCA PROJECT NO.= 1363.08	CHECKED	-	CTJ	05/24	REVISED	-
PLOT SCALE = 0:2 ':" / in.	DRAWN	-	CTJ	05/24	REVISED	-
PLOT DATE = 9/12/2024	CHECKED	-	ELH	05/24	REVISED	-

SHEET 9 OF 9 SHEETS

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