

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1)BRR-1	ALEXANDER	31	1
		ILLINOIS	CONTRACT NO. 78959	

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
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PROPOSED
HIGHWAY PLANS

FAI ROUTE 57 (I-57)
SECTION (02-1B-1)BRR-1
PROJECT NO. NHPP-KVIK(595)
PAVEMENT APPROACH & JOINT REPAIR
ALEXANDER COUNTY, IL & MISSISSIPPI COUNTY, MO

C-99-073-22

BRIDGE DATA

INVENTORY RATING 0.87 (31)
OPERATING RATING 1.450 (52)
NO LOADING POSTING

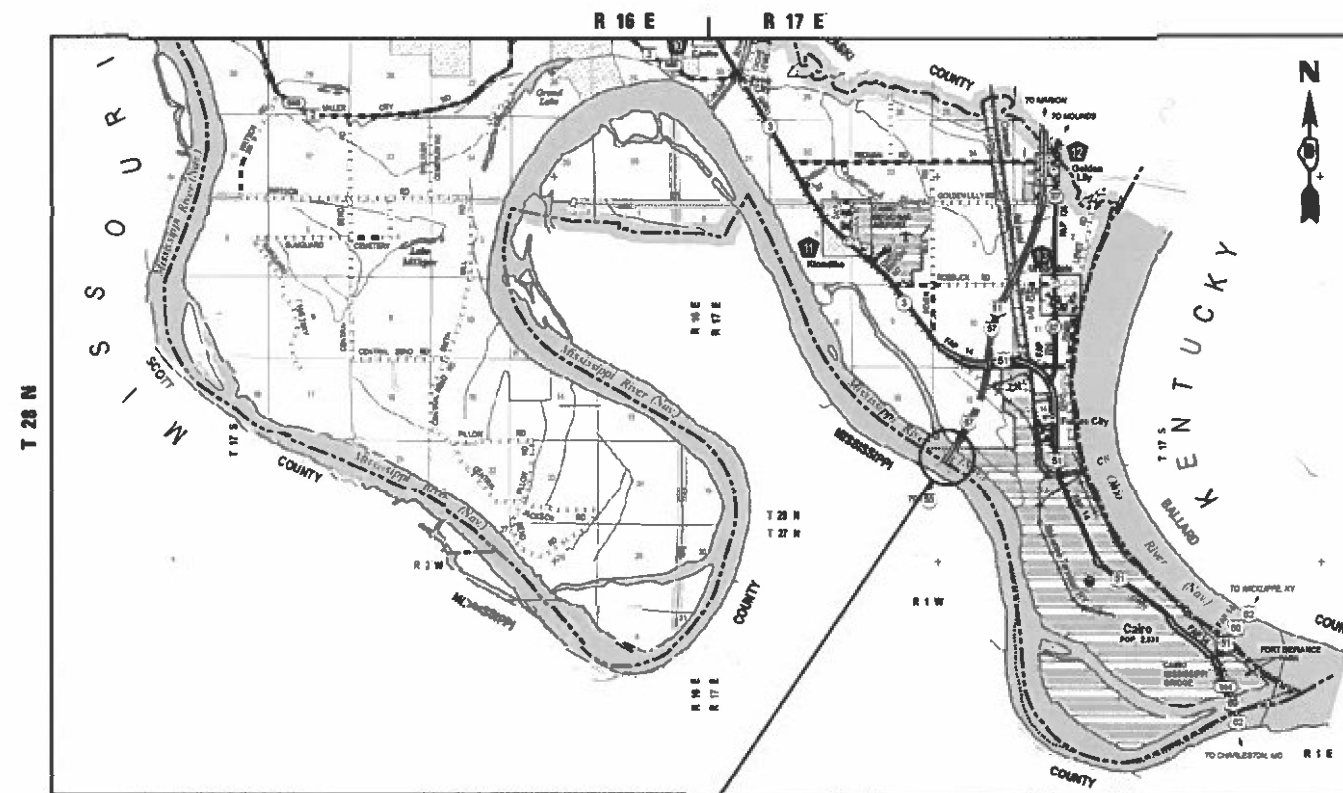
I-57 TRAFFIC DATA

2021 ADT 13,500
49% TRUCKS
POSTED SPEED: 70 MPH

D-99-054-22



LOCATION OF SECTION INDICATED THUS: - [black box] -



EXISTING STRUCTURE NO. 002-0022
F.A.I. 57 OVER THE MISSISSIPPI RIVER

BRIDGE LENGTH = 4090.50 FT.



Sean D. Maxwell
SEAN D. MAXWELL ILLINOIS P.E. 062.071986 DATE 1/04/2023
EXPIRES 11/30/2023

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

PROJECT ENGINEER: GRANT DETERDING (618) 351-5226



CONTRACT NO. 78959

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Feb 17 20 23

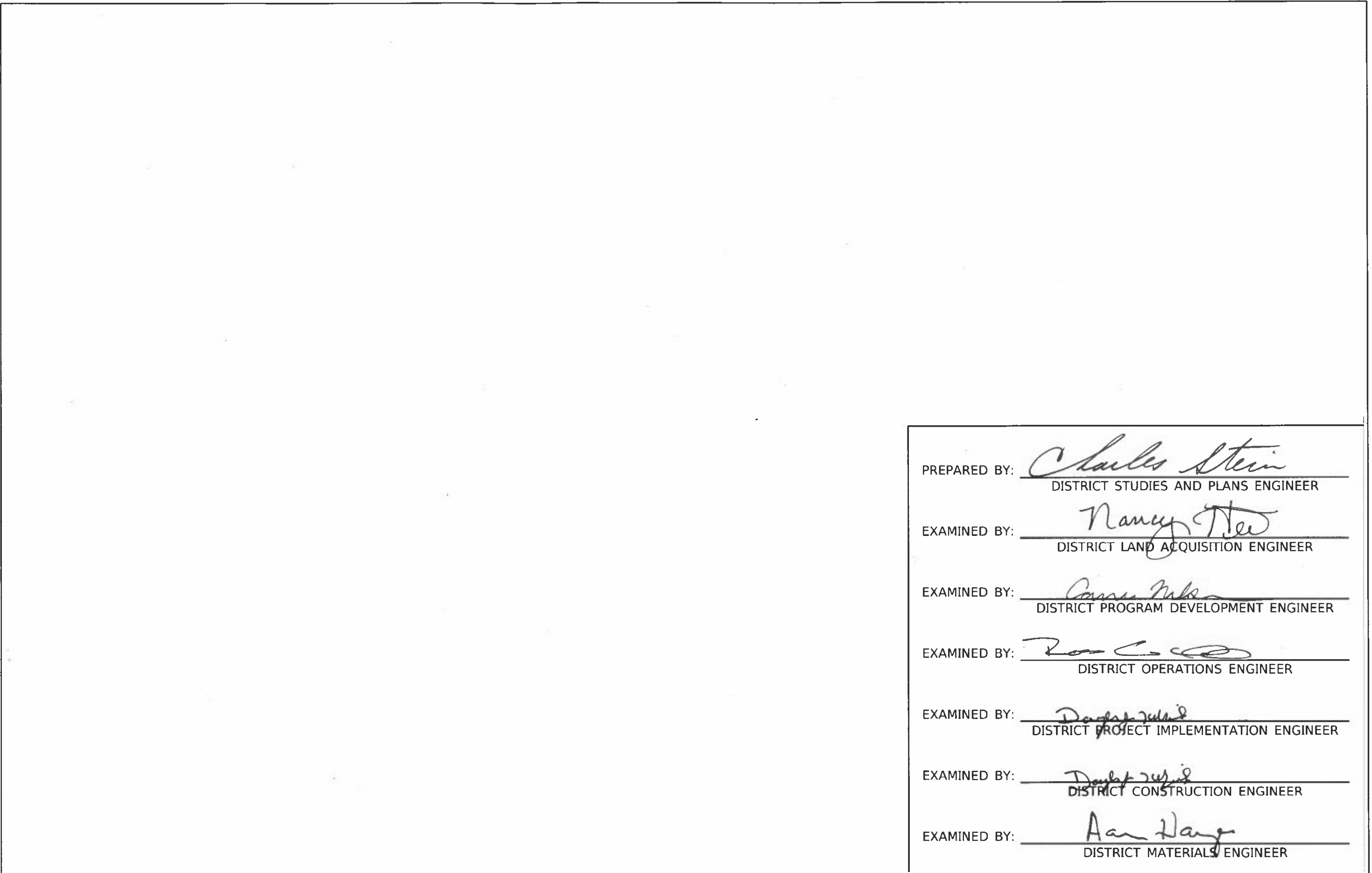
Kirk H. Brown
REGION FIVE ENGINEER

May 12, 2023 *Scott A. Etk*
ENGINEER OF DESIGN AND ENVIRONMENT

May 12, 2023 *Stephen M. Smith*
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

MODEL: Default
FILE NAME: S:\2021\11\1033 - RTB 199-38 DR - 001 - Various LRWD-7 - 157 BR over Mississippi Regal - P170\CADD\CADD Sheets\078959-AH-Corridor.dgn



PREPARED BY: Charles Stein
DISTRICT STUDIES AND PLANS ENGINEER

EXAMINED BY: Nancy New
DISTRICT LAND ACQUISITION ENGINEER


EXAMINED BY: Carrie Nicks
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: Tom C. [Signature]
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: Douglas [Signature]
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: Douglas [Signature]
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: Aan Hays
DISTRICT MATERIALS ENGINEER

 QUIGG ENGINEERING INC	USER NAME = smaxwell	DESIGNED - TS	REVISED -
	PLOT SCALE = 100.0000' / in.	DRAWN - TS	REVISED -
	PLOT DATE = 12/5/2022	CHECKED - SM	REVISED -
		DATE - 08/18/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT SIGNATURE BLOCK

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.J RTE. 57	SECTION (02-18-1)BRR-1	COUNTY ALEXANDER	TOTAL SHEETS 31	SHEET NO. 2
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. WHERE STAGE I TRAFFIC DRIVES OVER THE EXISTING SOUTHBOUND AND NORTHBOUND OUTSIDE SHOULDERS, EACH EXISTING ±22" X ±25" DRAINAGE SCUPPER SHALL BE COVERED WITH A METAL PLATE TO ADEQUATELY PROTECT IT FROM CARRYING THE FULL WEIGHT OF TRAFFIC IMPACTS. THE METAL PLATE SHALL BE OFFSET 6" FROM THE TOE OF THE PARAPET TO ALLOW FOR DRAINAGE OF THE ROADWAY. THE METAL PLATE SHALL BE FASTENED TO THE DECK SURROUNDING THE SCUPPER AS APPROVED BY THE ENGINEER. THE COST OF FURNISHING, INSTALLING, MAINTAINING, AND REMOVING THE METAL PLATES IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).
2. THE CONTRACTOR SHALL NOT REDUCE TRAFFIC TO ONE LANE IN EITHER DIRECTION UNTIL A DELIVERY DATE OF STAGE I MATERIALS AND A WORK SCHEDULE HAS BEEN APPROVED BY THE ENGINEER.
3. ALL TEMPORARY CONCRETE BARRIER SHOWN ON THE PLANS SHALL BE ANCHORED TO THE PAVEMENT. COST OF ANCHORING THE TEMPORARY CONCRETE BARRIER SHALL BE INCLUDED IN THE CONTRACT UNIT COST FOR "TEMPORARY CONCRETE BARRIER" AND "RELOCATE TEMPORARY CONCRETE BARRIER".

HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420701-03	PAVEMENT WELDED WIRE REINFORCEMENT
630001-12	STEEL PLATE BEAM GUARDRAIL
631033-09	TRAFFIC BARRIER TERMINAL, TYPE 6B
701400-11	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-13	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45 MPH
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
420001-10	PAVEMENT JOINTS
420401-13	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLABS
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5

COMMITMENTS

NONE AT THIS TIME

SUGGESTED SEQUENCE OF CONSTRUCTION

1. PRE-STAGE IS USING TRAFFIC CONTROL & PROTECTION STANDARD 701401, REMOVE THE EXISTING SOLID WHITE PAVEMENT MARKING EDGE LINES. THE COST OF TRAFFIC CONTROL & PROTECTION STANDARD 701401 IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).
2. STAGE I REMOVAL/CONSTRUCTION SET UP TRAFFIC CONTROL & PROTECTION, (SPECIAL) AS SHOWN IN THE PLANS FOR THE ENTIRE STRUCTURE IN BOTH DIRECTIONS. PERFORM ALL STAGE I WORK OF TYPE 6B TERMINAL, TYPE D GUARDRAIL, PAVEMENT CONNECTOR (PCC), JOINT REPAIR, & BRIDGE APPROACH SLAB. REMOVE THE EXISTING SOLID YELLOW PAVEMENT MARKING EDGE LINES.
3. STAGE II REMOVAL/CONSTRUCTION SET UP TRAFFIC CONTROL & PROTECTION, (SPECIAL) AS SHOWN IN THE PLANS FOR THE ENTIRE STRUCTURE IN BOTH DIRECTIONS. PERFORM THE REMAINDER OF PAVEMENT CONNECTOR (PCC), JOINT REPAIR & BRIDGE APPROACH SLAB.
4. USING TRAFFIC CONTROL & PROTECTION STANDARD 701401. INSTALL REPLACEMENT PAVEMENT MARKING. THE COST OF TRAFFIC CONTROL & PROTECTION STANDARD 701401 IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).

REV. - MS

MODEL: Default
FILE NAME: S:\2021\12\11\033 - PTB 199-38 D9 - OEL - Various I-170-7 - I-57 BR over Mississippi Repair PH2\CADD\CADD Sheets\0978959-rt-CemHaze2.dgn



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	DRAWN - TS	REVISED -
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PLOT DATE = 1/6/2023	DATE - 01/03/2023	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, HIGHWAY STANDARDS & SEQUENCE OF CONSTRUCTION
SN 002-0022

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	3
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE			
				100% ILLINOIS (90% FED / 10% STATE)	100% FEDERAL PLANNING FUNDS	50% ILLINOIS (90% FED / 10% STATE)	100% MISSOURI
				0021 RURAL	0044 RURAL	0013 RURAL	0013 RURAL
20200100	EARTH EXCAVATION	CU YD	114			57	57
31100910	SUBBASE GRANULAR MATERIAL, TYPE A 12"	SQ YD	238			119	119
42000060	WELDED WIRE REINFORCEMENT	SQ YD	280			140	140
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	280			140	140
42001300	PROTECTIVE COAT	SQ YD	280			140	140
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4"	SQ FT	200		200		
44001980	CONCRETE BARRIER REMOVAL	FOOT	30			15	15
44213200	SAW CUTS	FOOT	126			63	63
44213208	TIE BARS 1 1/4"	EACH	124			62	62
50102400	CONCRETE REMOVAL	CU YD	20.2			10.1	10.1
50200100	STRUCTURE EXCAVATION	CU YD	240			120	120
50300225	CONCRETE STRUCTURES	CU YD	43.2			21.6	21.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	30.9			15.45	15.45
50300260	BRIDGE DECK GROOVING	SQ YD	377			188.5	188.5

* SPECIALTY ITEM

REV. - MS

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PLOT DATE = 1/6/2023	CHECKED - SM	REVISED -
	DATE - 01/03/2023	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
SN 002-0022**

SCALE: NONE SHEET 1 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	4
			CONTRACT NO. 78959	
			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE			
				100% ILLINOIS (90% FED / 10% STATE)	100% FEDERAL PLANNING FUNDS	50% ILLINOIS (90% FED / 10% STATE)	100% MISSOURI
				0021 RURAL	0044 RURAL	0013 RURAL	0013 RURAL
50300300	PROTECTIVE COAT	SQ YD	511			255.5	255.5
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	176.8			88.4	88.4
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	76,250			38,125	38,125
50800515	BAR SPLICERS	EACH	644			322	322
52000025	PREFORMED JOINT SEAL 2"	FOOT	126			63	63
52000110	PREFORMED JOINT STRIP SEAL	FOOT	127			63.5	63.5
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	202			101	101
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	240			120	120
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	117			58.5	58.5
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	232			116	116
* 63000017	STEEL PLATE BEAM GUARDRAIL, TYPE D, 6 FOOT POSTS	FOOT	1,525	1,525			
* 63100089	TRAFFIC BARRIER TERMINAL, TYPE 6B	EACH	4	2		1	1
63200310	GUARDRAIL REMOVAL	FOOT	1,715.5	1,715.5			
* 63302400	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 5	EACH	1			0.5	0.5

* SPECIALTY ITEM

REV. - MS

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	DATE - 01/03/2023	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
SN 002-0022**

SCALE: NONE SHEET 2 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	5
			CONTRACT NO. 78959	
		ILLINOIS FED. AID PROJECT		

CONSTRUCTION TYPE CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	100% ILLINOIS (90% FED / 10% STATE)	100% FEDERAL PLANNING FUNDS	50% ILLINOIS (90% FED / 10% STATE)	100% MISSOURI
				0021	0044	0013	0013
				RURAL	RURAL	RURAL	RURAL
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4			2	2
67100100	MOBILIZATION	L SUM	1			0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	124			62	62
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28			14	14
70303130	TEMPORARY PAVEMENT MARKING - LINE 6" - MODIFIED URETHANE	FOOT	47,875			23,937.5	23,937.5
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,393			696.5	696.5
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,112			556	556
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4			2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4			2	2
* 72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	520		520		
73400100	CONCRETE FOUNDATIONS	CU YD	1.4		1.4		
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	47,675			23,837.5	23,837.5
78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8	8			
78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	15,891			7,945.5	7,945.5

* SPECIALTY ITEM

REV. - MS

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
SN 002-0022**

SCALE: NONE SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	6
			CONTRACT NO. 78959	
			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE			
				100% ILLINOIS (90% FED / 10% STATE)	100% FEDERAL PLANNING FUNDS	50% ILLINOIS (90% FED / 10% STATE)	100% MISSOURI
				0021 RURAL	0044 RURAL	0013 RURAL	0013 RURAL
X0320089	TRAFFIC COUNTER - TIRTL SYSTEM	EACH	1		1		
X0325868	REMOVE EXISTING TRAFFIC CONTROL DEVICES	L SUM	1			0.5	0.5
X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1			0.5	0.5
Z0004552	APPROACH SLAB REMOVAL	SQ YD	700			350	350
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	51			25.5	25.5

* SPECIALTY ITEM

REV. - MS

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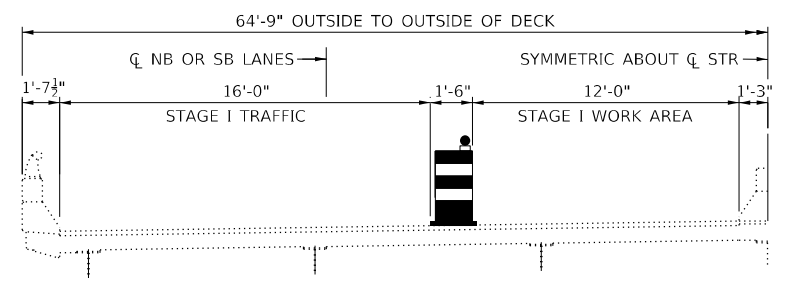
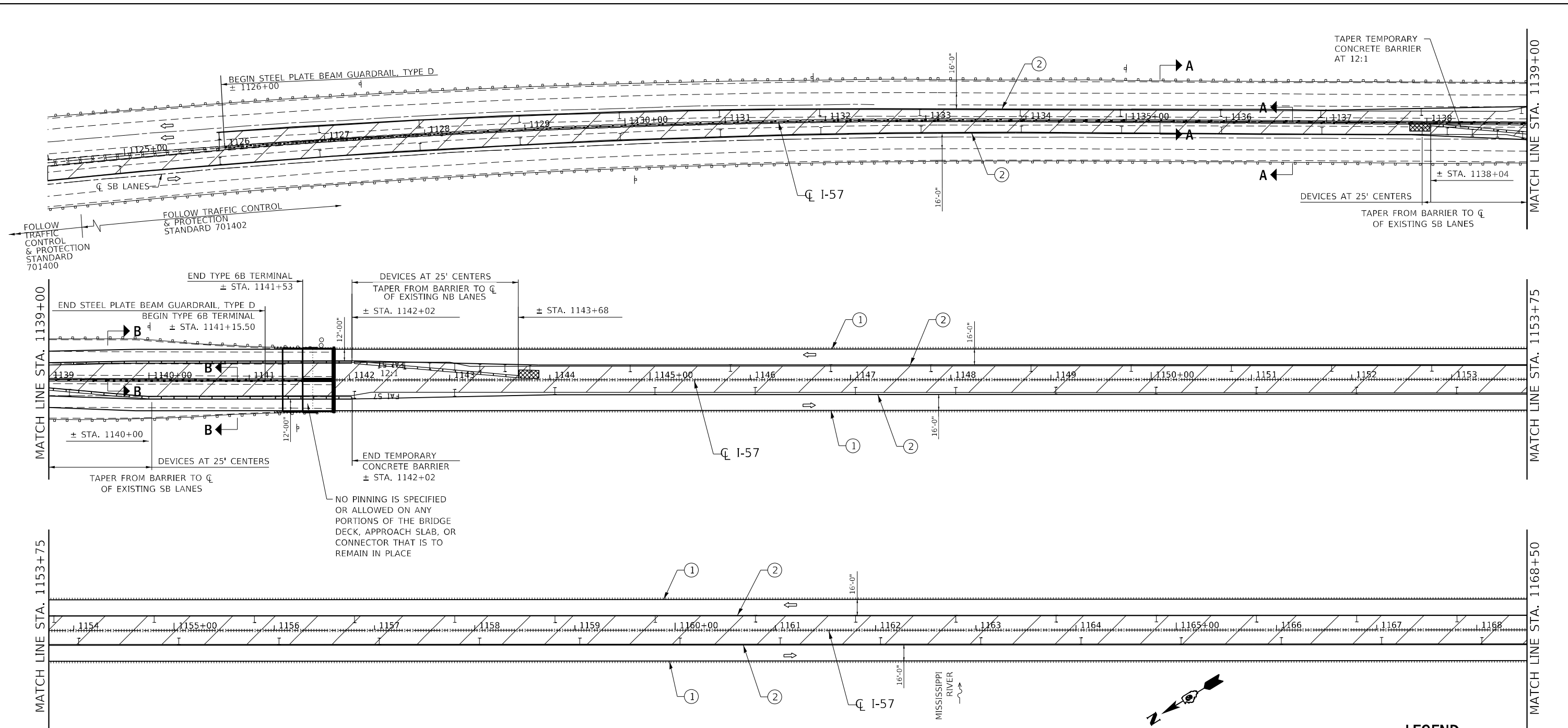
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
SN 002-0022**

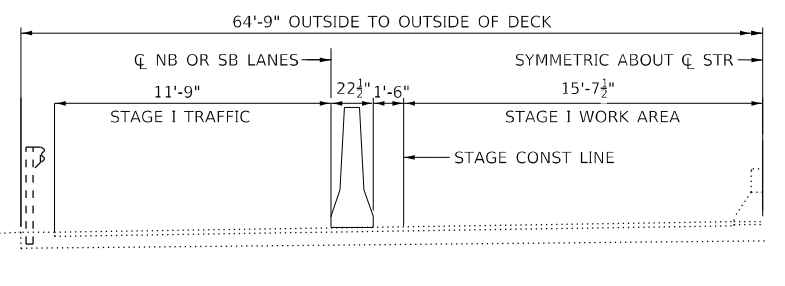
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F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 78959	
		ILLINOIS FED. AID PROJECT		

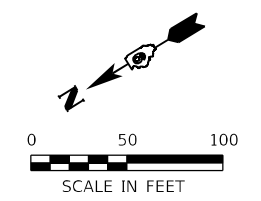
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SECTION A-A



SECTION B-B



NOTES

1. TEMPORARY PAVEMENT MARKING SHALL BE PLACED ALONGSIDE THE WORK AREA. THE EDGE LINES SHALL BE THE COLOR SPECIFIED IN THE LEGEND.
2. VERTICAL BARRICADES SHALL NOT BE USED IN LANE SHIFT TAPER.
3. SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701400 AND 701402 FOR TRAFFIC CONTROL DETAILS NOT SHOWN.
4. ALL TERMINAL ENDS WILL BE REMOVED. STORE THE DEPARTURE LANE TERMINAL ENDS ON SITE DURING CONSTRUCTION OF BRIDGE APPROACH SLAB AND PCC CONNECTOR. ANY DAMAGE TO THE TERMINAL ENDS DURING STORAGE WILL BE AT THE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND

- WORK AREA
- TYPE II BARRICADE OR DRUM WITH STEADY BURN LIGHT AT 100' CENTERS ALONG CL OF EXISTING LANES EXCEPT AS NOTED
- TYPE II DIRECTIONAL BARRICADE WITH STEADY BURN LIGHT
- TEMPORARY CONCRETE BARRIER, SEE STANDARD 704001
- DIRECTION OF TRAFFIC (FOR INFORMATION ONLY)
- TYPE 6 TERMINAL
- IMPACT ATTENUATOR, TEST LEVEL 3, NON-REDIRECTIONAL
- TEMPORARY PAVEMENT MARKING, LINE 6" (SOLID WHITE)
- TEMPORARY PAVEMENT MARKING, LINE 6" (SOLID YELLOW)



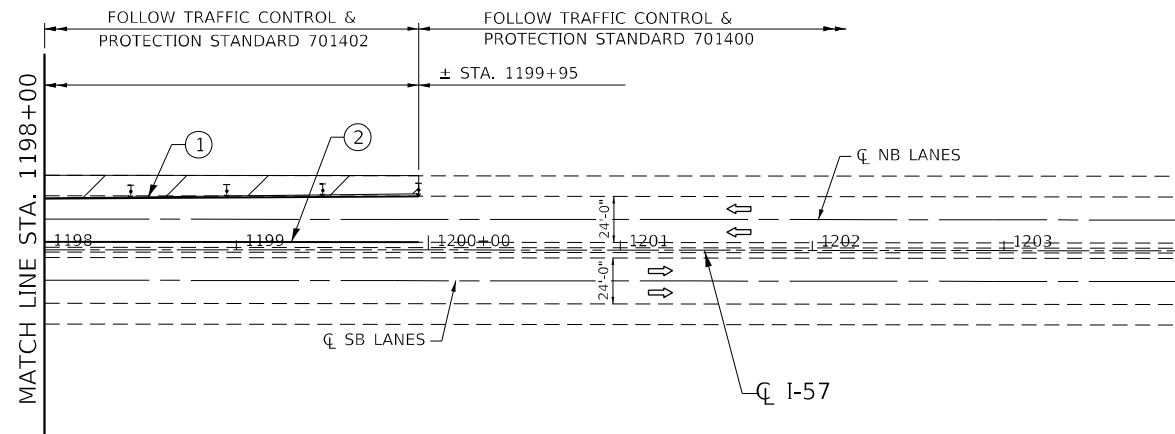
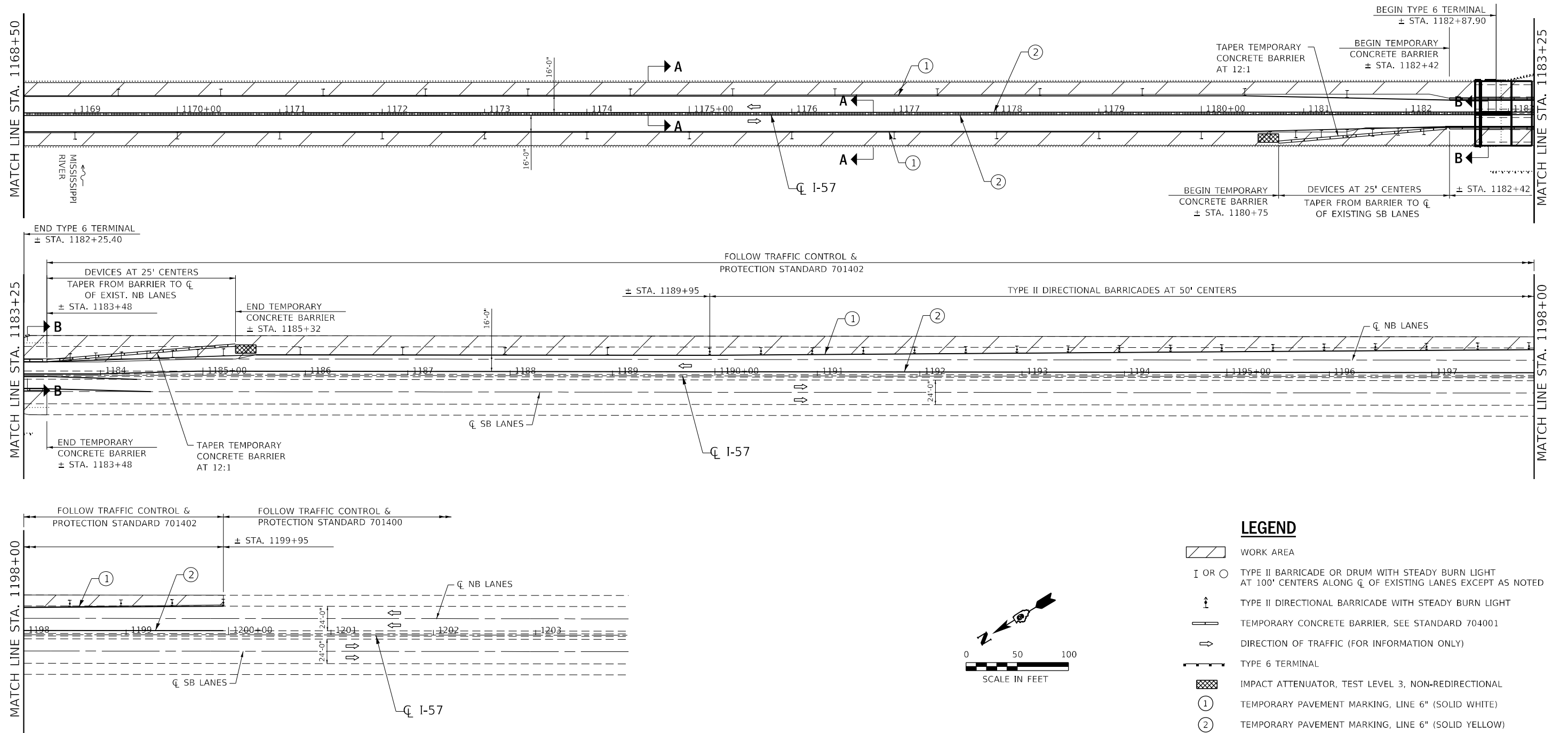
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	DATE - 01/03/2023	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STAGE I TRAFFIC CONTROL LAYOUT
 SN 002-0022**

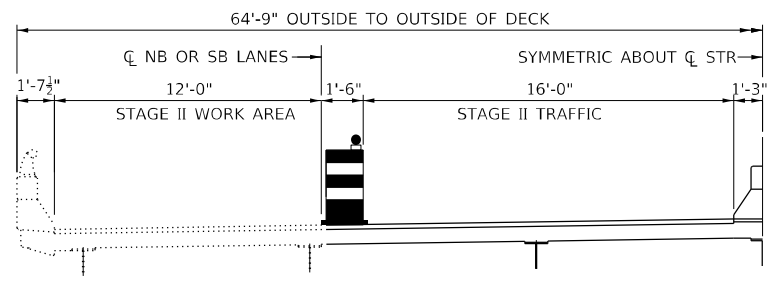
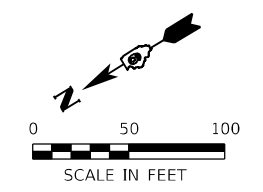
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F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

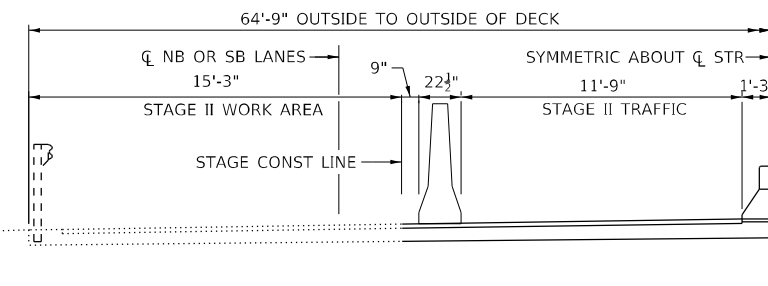


LEGEND

- WORK AREA
- TYPE II BARRICADE OR DRUM WITH STEADY BURN LIGHT AT 100' CENTERS ALONG CL OF EXISTING LANES EXCEPT AS NOTED
- TYPE II DIRECTIONAL BARRICADE WITH STEADY BURN LIGHT
- TEMPORARY CONCRETE BARRIER, SEE STANDARD 704001
- DIRECTION OF TRAFFIC (FOR INFORMATION ONLY)
- TYPE 6 TERMINAL
- IMPACT ATTENUATOR, TEST LEVEL 3, NON-REDIRECTIONAL
- TEMPORARY PAVEMENT MARKING, LINE 6" (SOLID WHITE)
- TEMPORARY PAVEMENT MARKING, LINE 6" (SOLID YELLOW)



SECTION A-A



SECTION B-B

- ### NOTES
- TEMPORARY PAVEMENT MARKING SHALL BE PLACED ALONGSIDE THE WORK AREA. THE EDGE LINES SHALL BE THE COLOR SPECIFIED IN THE LEGEND.
 - VERTICAL BARRICADES SHALL NOT BE USED IN LANE SHIFT TAPER.
 - SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701400 AND 701402 FOR TRAFFIC CONTROL DETAILS NOT SHOWN.
 - ALL TERMINAL ENDS WILL BE REMOVED. STORE THE DEPARTURE LANE TERMINAL ENDS ON SITE DURING CONSTRUCTION OF BRIDGE APPROACH SLAB AND PCC CONNECTOR. ANY DAMAGE TO THE TERMINAL ENDS DURING STORAGE WILL BE AT THE RESPONSIBILITY OF THE CONTRACTOR.

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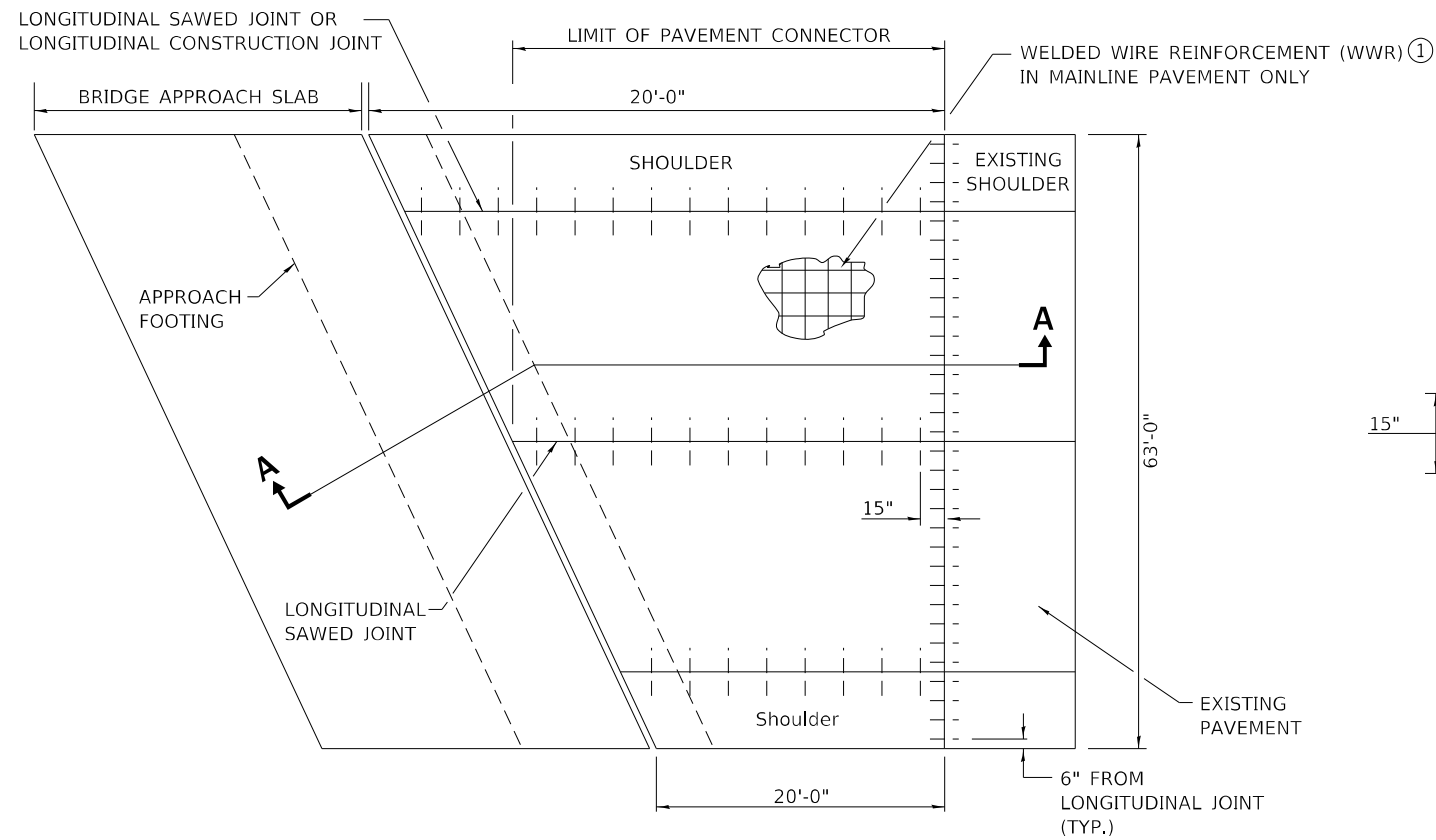
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL LAYOUT SN 002-0022		
SCALE: 1"=50'	SHEET 2 OF 2 SHEETS	STA. 1168+50 TO STA. 1204+00

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	11
			CONTRACT NO. 78959	
ILLINOIS FED. AID PROJECT				

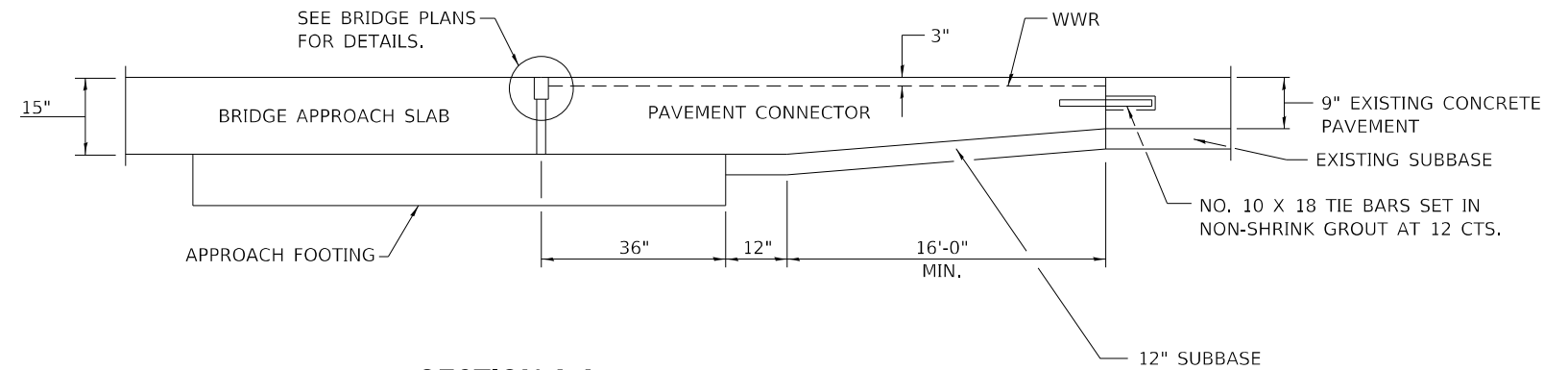
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PLAN

EARTHWORK SCHEDULE

LOCATION	CU YD
NORTH PAVEMENT CONNECTOR	56.9
SOUTH PAVEMENT CONNECTOR	56.9
TOTAL	113.8
USE	114



SECTION A-A

① WWR SHALL BE 0.11 SQ. IN./FT. IN BOTH DIRECTIONS. MAXIMUM WIRE SPACING SHALL BE 6". MINIMUM LAP DISTANCE SHALL BE TWO CROSS WIRES.

NOTES

SEE STANDARD 420001 FOR PAVEMENT JOINT DETAILS NOT SHOWN.

SEE PLANS FOR DETAILS OF BRIDGE APPROACH SLAB, APPROACH FOOTING AND JOINT TREATMENT.



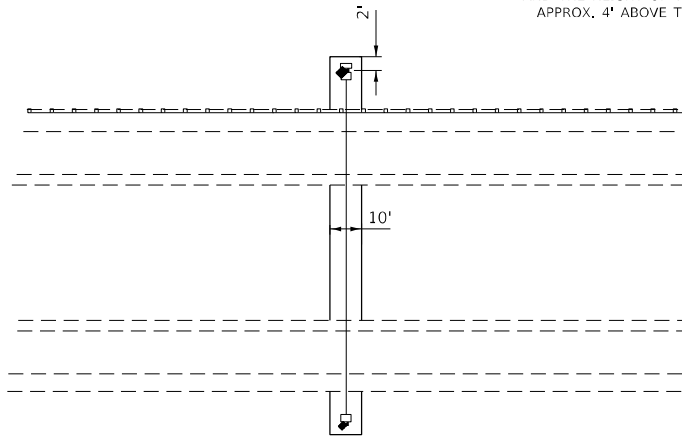
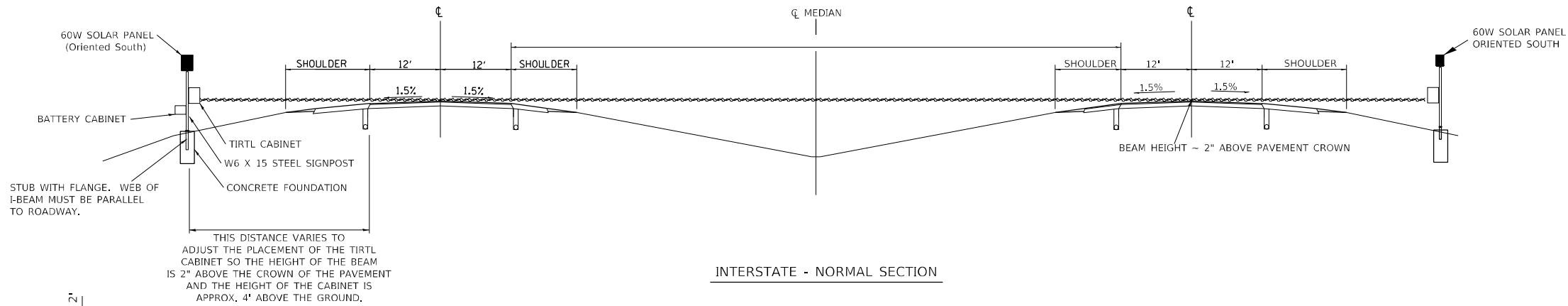
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PCC PAVEMENT CONNECTOR DETAILS
 SN 002-0022

SCALE: NONE SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	13
			CONTRACT NO. 78959	
			ILLINOIS FED. AID PROJECT	



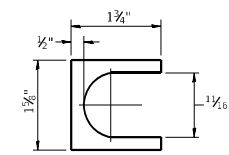
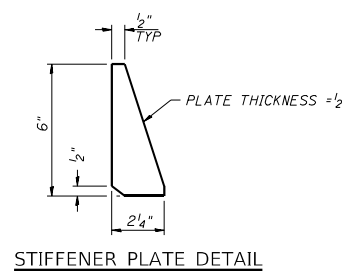
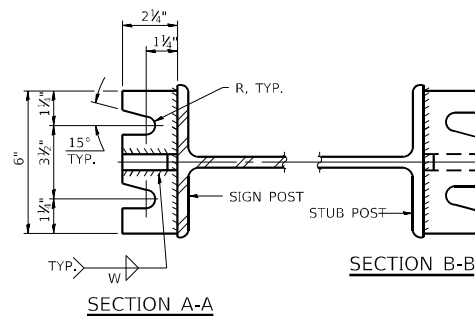
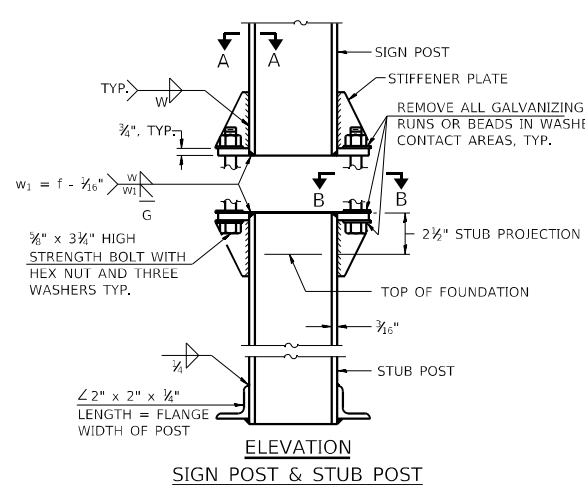
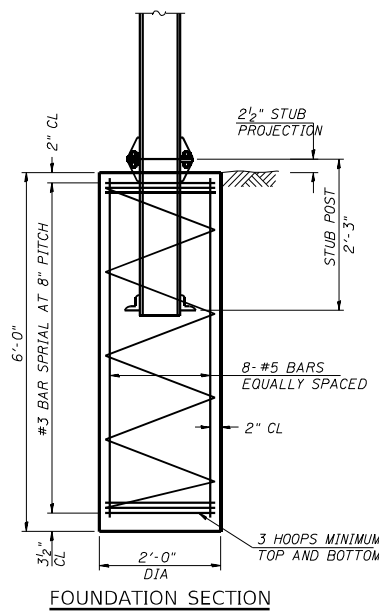
WEED BARRIER - PC CONC SIDEWALK SHALL BE PLACED AS SHOWN 8' TO 10' WIDE AND 4\"/>

NOTES:

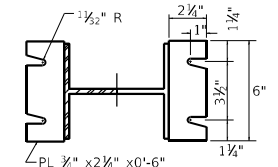
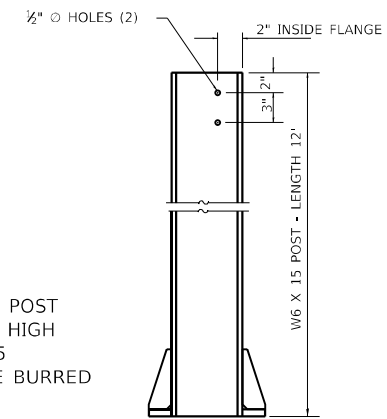
1. SYSTEM CONSISTS OF TWO W6 X 15 I-BEAM SIGNPOSTS WITH CONCRETE FOUNDATION AND A FLANGE WITH BREAKAWAY BOLTS
2. THE I-BEAMS ARE 12' LONG AND DRILLED AS PER THE I-BEAM DETAIL TO ACCOMMODATE A PIPE TO ALLOW THE MOUNTING OF THE SOLAR PANEL.
3. THE WEB OF THE I-BEAM IS TO BE PLACED PARALLEL TO THE LANES.
4. THE TWO POSTS MUST BE PLACED DIRECTLY ACROSS FROM EACH OTHER AND PERPENDICULAR TO THE LANES.
5. TWO POSTS ARE REQUIRED LOCATED AS PER THE ENGINEER AND DRAWING.
6. THE CABINETS ARE ATTACHED TO THE I-BEAM USING 8\"/>
- 7. THE BOTTOM OF THE CABINET HEIGHT MUST BE NO LOWER THAN 4' ABOVE THE GROUND AND BE ABLE TO VIEW ACROSS ALL LANES AT THE CROWN OF THE PAVEMENT.
- 8. THE IDOT OFFICE OF PLANNING AND PROGRAMMING DATA MANAGEMENT LAB RICH MARX (217-782-2065) SHALL BE NOTIFIED TWO WEEKS PRIOR TO THE LAYOUT AND SHALL BE PRESENT DURING THE PLACEMENT OF THE POST FOUNDATIONS.

TIRTL TRAFFIC COUNTER SCHEDULE OF QUANTITIES (FOR INFORMATION ONLY)

CODE NUMBER	ITEM	UNIT	QUANTITY
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4"	SQ FT	200
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	520
73400100	CONCRETE FOUNDATIONS	CU YD	1.4
X0320089	TRAFFIC COUNTER - TIRTL SYSTEM (INCLUDES BELOW)	EACH	1
TIRTL TRAFFIC DATA COLLECTION SYSTEM INCLUDES:			
	Sierra Wireless Modem RV-50	EACH	1
	Panorama Low Profile LTE MiMo LGAM-BC3G-26-35P Antenna	EACH	1
	TIRTL CABINET 15" X 27" X 16"	EACH	2
	BATTERY CABINET 16.5" X 16" X 11.5" BBA1M w/ #2 Police Lock	EACH	1
	SOLAR PANEL 60 W 12 VDC with Bracket and junction box	EACH	2
	TIRTL TRAFFIC COUNTER	EACH	1
	SUNSAVER SOLAR CHARGE REGULATOR 10 AMP 12 VDC	EACH	2
	BATTERY - 33 AH ABSORBED ELECTROLYTE 8" X 5.5" X 7" (DEEP CYCLE)	EACH	1
	BATTERY -104AH ABSORBED ELECTROLYTE 10" X 6" X 8" (DEEP CYCLE)	EACH	1



SHIM DETAIL
FURNISH TWO 0.01" THICK AND TWO 0.03" THICK STAINLESS STEEL OR BRASS (ASTM B36) SHIMS PER POST.



GENERAL NOTES

POSTS SHALL BE PLUMBED BY USING SHIMS WITH POST-TO-STUB POST CONNECTION BOLTS SNUG TIGHT ONLY. FINAL TIGHTENING OF ALL HIGH STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH ARTICLE 727.05 AND THREADS AT THE JUNCTION OF THE BOLT AND NUT SHALL BE BURRED OR CENTER PUNCHED TO PREVENT THE NUT FROM LOOSENING.

LOADING: 80 MPH WIND WITH 30% GUST FACTOR, NORMAL TO SIGN.

DESIGN STRESSES:
STRUCTURAL STEEL - 20,000 PSI
REINFORCING STEEL - 20,000 PSI
CONCRETE - 1,400 PSI
FOOTING SOIL PRESSURE - 2,000 PSF

AFTER FABRICATION, THE POST AND UPPER 6", MIN. OF THE STUB POST SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232.

BREAK-AWAY WIDE FLANGE STEEL POST DETAILS

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	DATE - 01/03/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC COUNTER - TIRTL SYSTEM
SN 002-0022

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

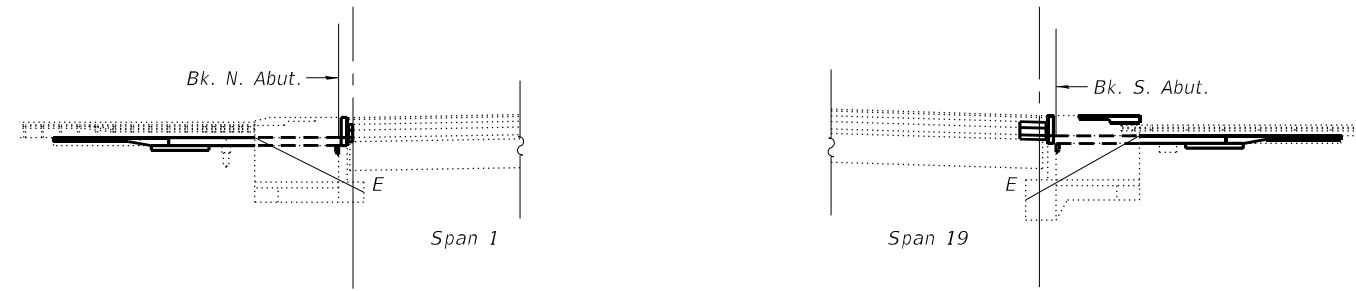
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	15
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

Existing Structure: S.N. 002-0022 was originally built in 1978. The 3 main spans are a steel through truss with 9 plate girder approach spans on the north end and 5 plate girder approach spans on the south end. The back to back abutment length = 4090'-6" and the out to out width = 64'-9". Structure is to be repaired as detailed in these plans. Stage construction will be used to maintain one lane of traffic in each direction at all times.

No Salvage

INDEX OF SHEETS

1. General Plan and Elevation
2. General Notes
3. Stage Construction Details
4. Temporary Concrete Barrier
5. Approach Removal
- 6-8. Bridge Approach Slab Details
9. Expansion Joint Details - North Abutment
10. Expansion Joint Details - South Abutment
- 11-12. Expansion Joint Details
13. Prefomed Joint Strip Seal
14. Abutment Modification
15. Abutment Repair Details
16. Bar Splicer Assembly and Mechanical Splicer Detail



PARTIAL ELEVATION

LOADING HL-93

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

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

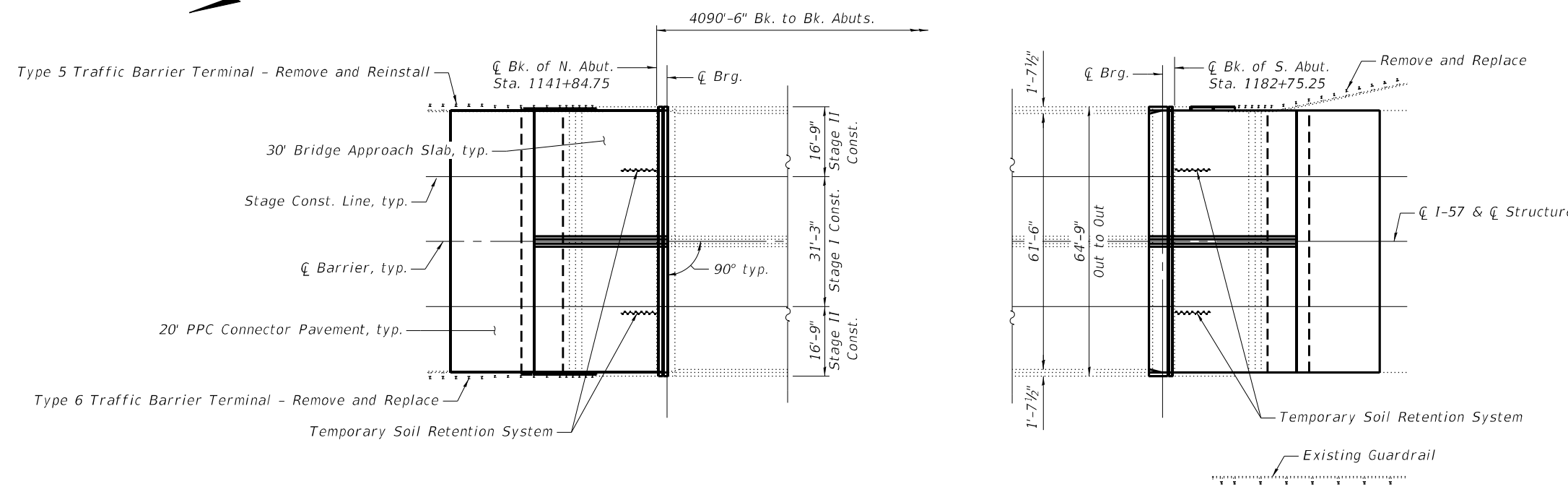
DESIGN STRESSES

FIELD UNITS (EXIST. CONST.)

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

FIELD UNITS (NEW CONST.)

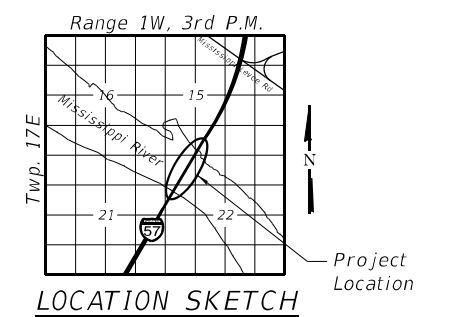
$f'_c = 4,000$ psi (Superstructure)
 $f'_c = 3,500$ psi (Substructure)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (AASHTO M270 Grade 36)



PARTIAL PLAN

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Concrete Removal	Cu. Yd.	20.2		20.2
Structure Excavation	Cu. Yd.		240	240
Concrete Structures	Cu. Yd.		43.2	43.2
Concrete Superstructure	Cu. Yd.	28.3		28.3
Bridge Deck Grooving	Sq. Yd.	377		377
Protective Coat	Sq. Yd.	511		511
Concrete Superstructure (Approach Slab)	Cu. Yd.	176.8		176.8
Reinforcement Bars, Epoxy Coated	Pound	67,610	8,260	75,930
Bar Splicers	Each	476	168	644
Prefomed Joint Strip Seal	Foot	127		127
Temporary Soil Retention System	Sq. Ft.		202	202
Granular Backfill for Structures	Cu. Yd.		240	240
Geocomposite Wall Drain	Sq. Yd.		117	117
Pipe Underdrain for Structures 4"	Foot		232	232
Approach Slab Removal	Sq. Yd.	280		280
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq. Ft.		51	51



GENERAL PLAN AND ELEVATION

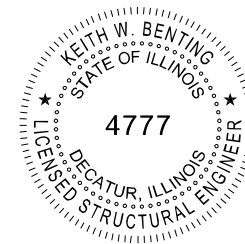
I-57 OVER MISSISSIPPI RIVER

F.A.I. 57 - SEC. (02-1B-1)BRR-1

ALEXANDER COUNTY

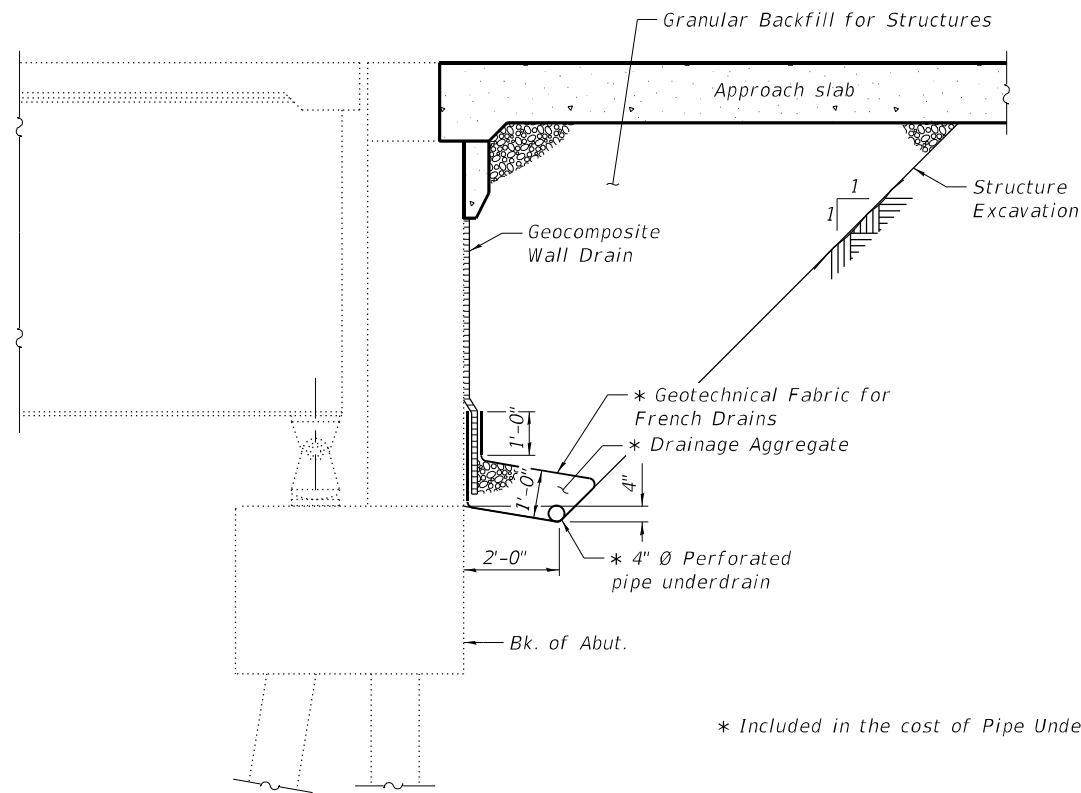
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STRUCTURE NO. 002-0022

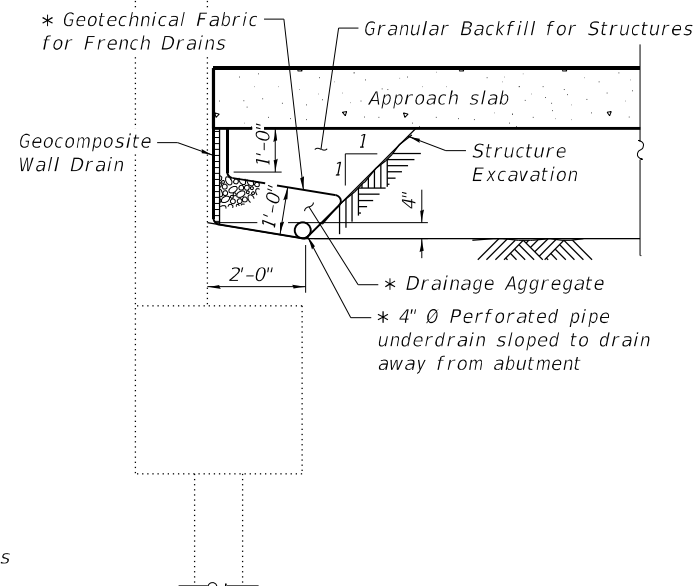


Keith W. Benting 1/05/2023
 Keith W. Benting, Illinois S.E. 081-004777 Date
 Expires 11/30/2024

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ABUTMENT DRAIN DETAIL
(Horiz. dim. @ Rt. L's)



SECTION THRU ABUTMENT WINGWALL
(Horiz. dim. @ Rt. L's)

Note:
All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall wrap around and extend until intersecting with the side slope beyond the end of the existing wingwalls. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

GENERAL NOTES

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

Reinforcement bars designated (E) shall be epoxy coated.

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

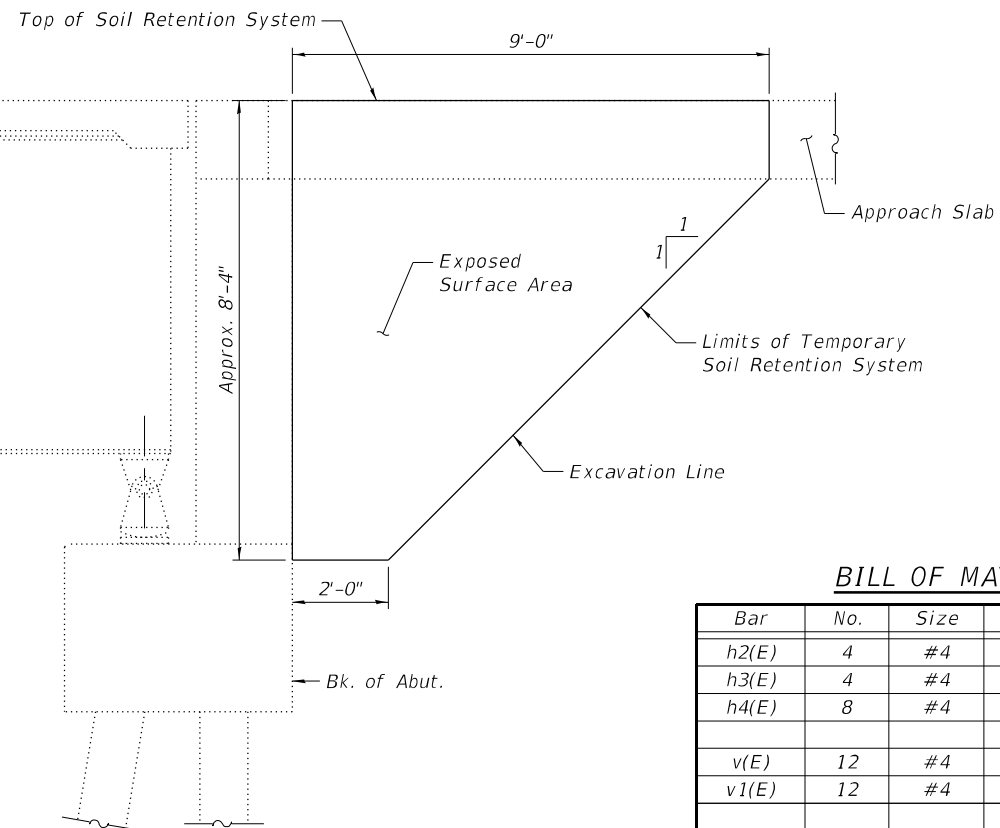
Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

Existing northeast guardrail shall be removed, stored and reinstalled during each stage of construction. Cost included with Concrete Removal.

Existing northwest and southeast guardrail shall be removed and replaced. See roadway plans.

Protective coat shall be applied to the top and front face of the new approach parapets and new approach slabs.

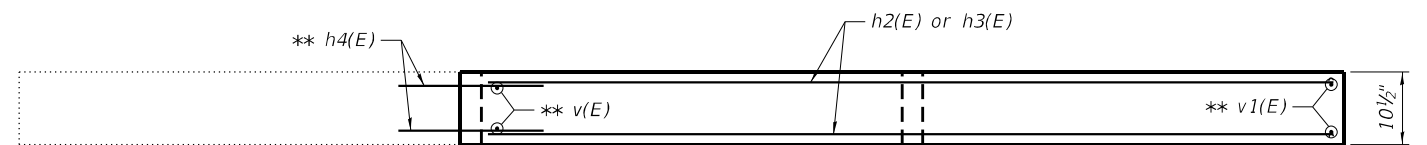
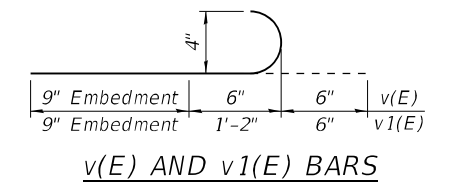
The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.



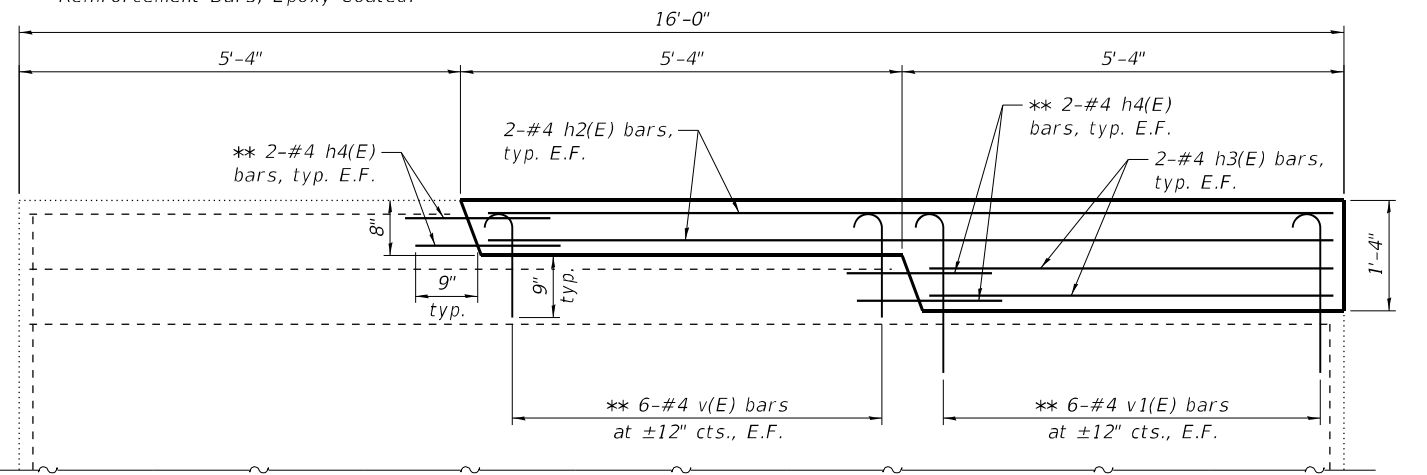
TEMPORARY SOIL RETENTION SYSTEM
(Horiz. dim. @ Rt. L's)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2(E)	4	#4	10'-4"	—
h3(E)	4	#4	5'-0"	—
h4(E)	8	#4	1'-9"	—
v(E)	12	#4	1'-9"	⌋
v1(E)	12	#4	2'-5"	⌋
Item		Unit	Total	
Reinforcement Bars, Epoxy Coated		Pound	90	
Concrete Structures		Cu. Yd.	0.4	

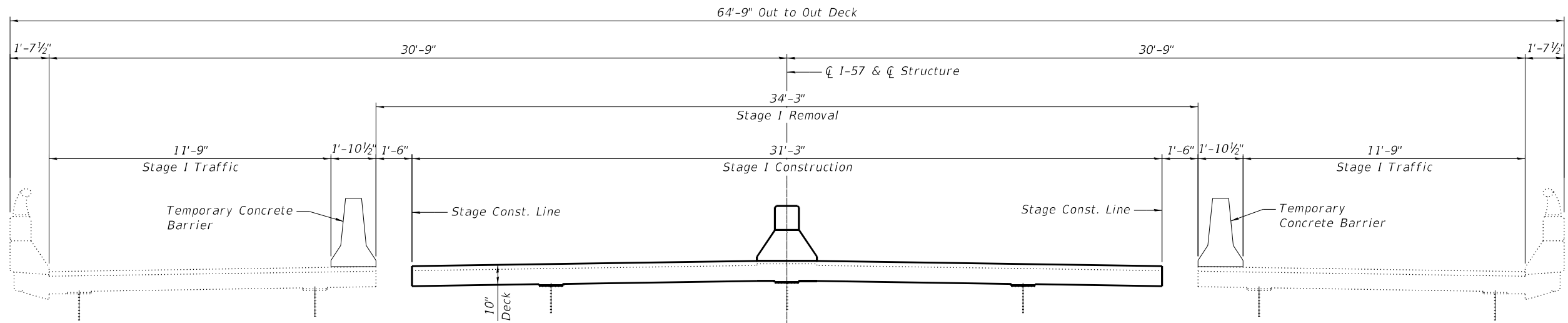


** Epoxy grout h4(E), v(E), and v1(E) bars in 9" min. holes according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.

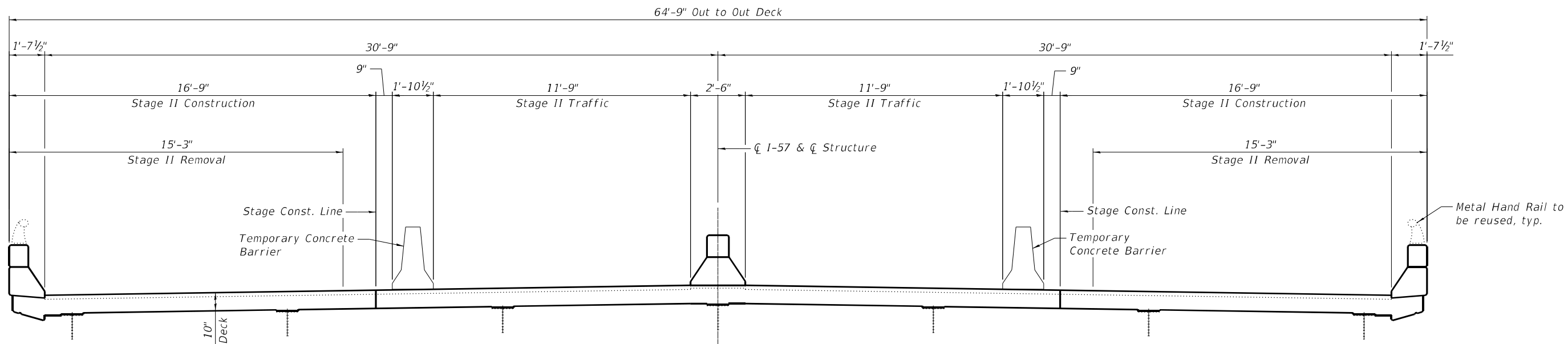


PROPOSED SOUTHEAST WINGWALL ELEVATION

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STAGE I TRAFFIC AND CONSTRUCTION
(Looking South near Abutment)



STAGE II TRAFFIC AND CONSTRUCTION
(Looking South near Abutment)

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QUIGG ENGINEERING INC

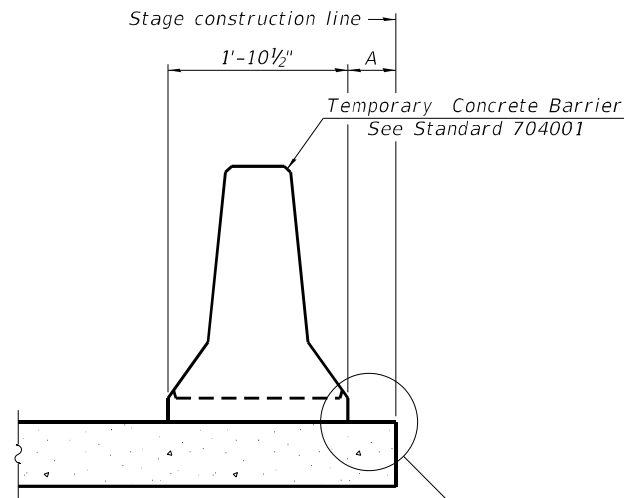
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 002-0022

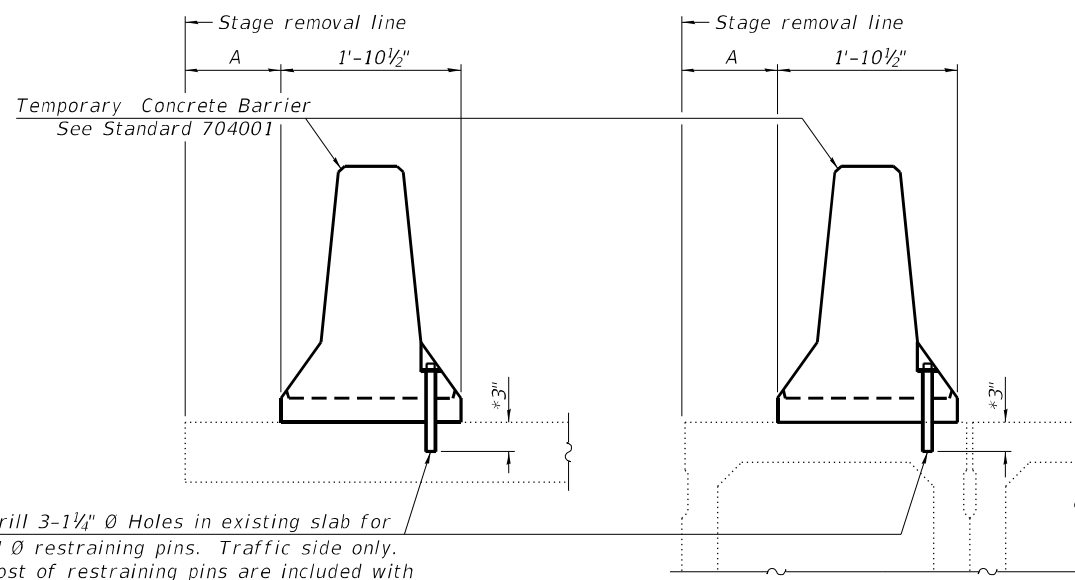
SHEET 3 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	18
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				



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

NEW SLAB OR NEW DECK BEAM

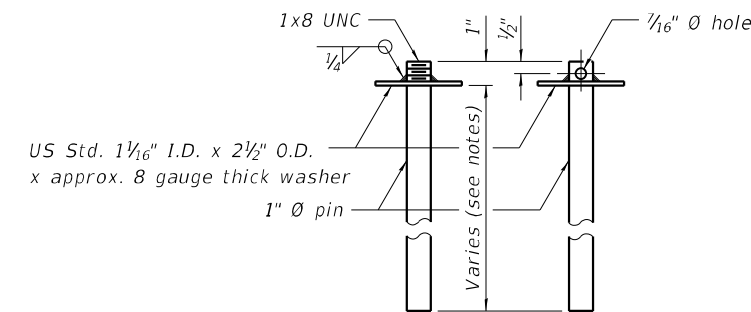


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

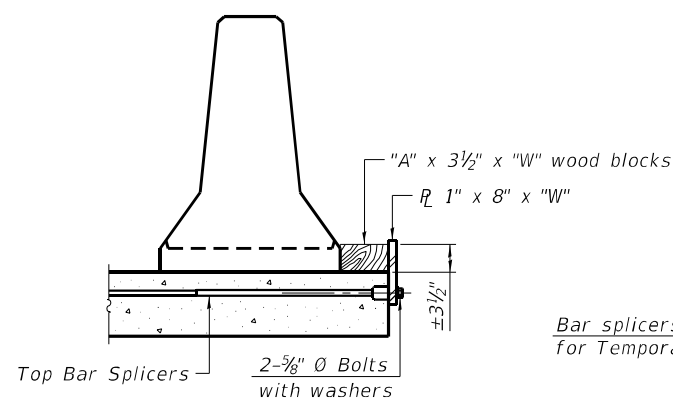
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

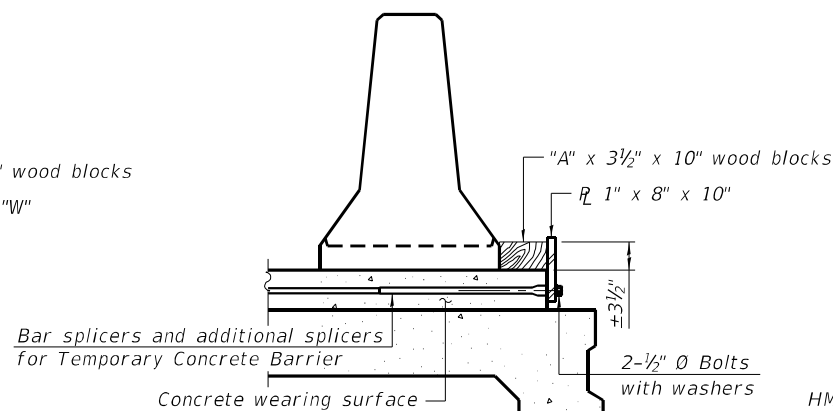


RESTRAINING PIN

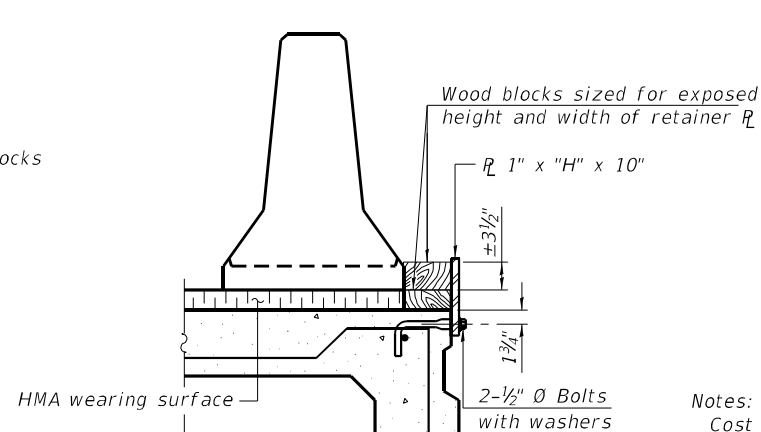
SECTIONS THRU SLAB OR DECK BEAM



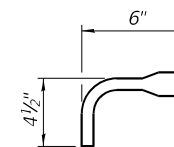
DETAIL I



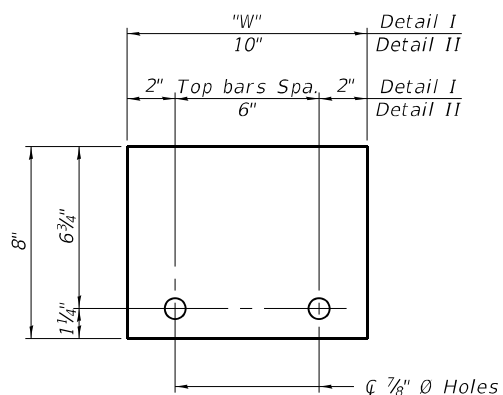
DETAIL II



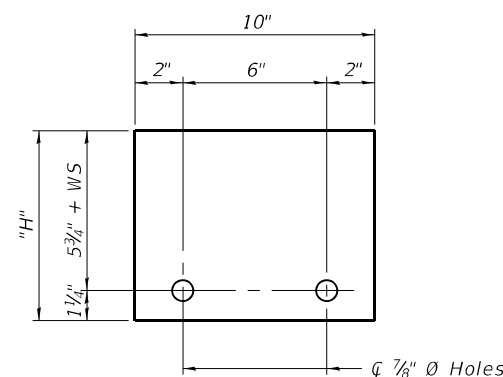
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



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

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

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

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

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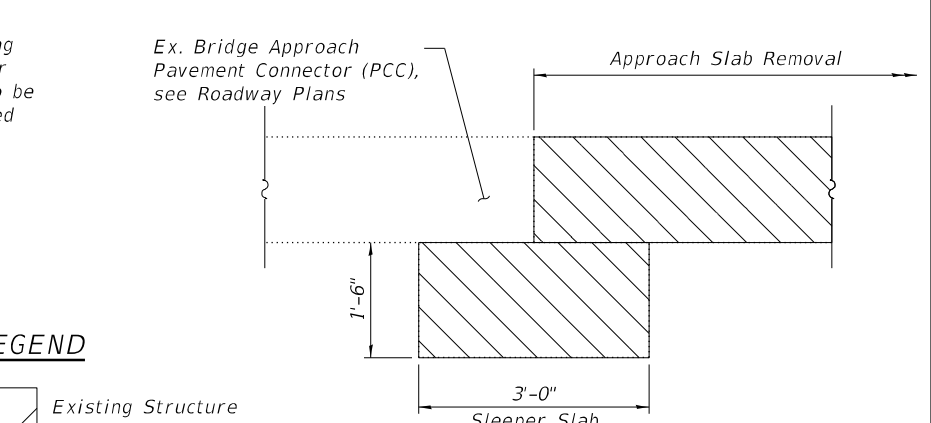
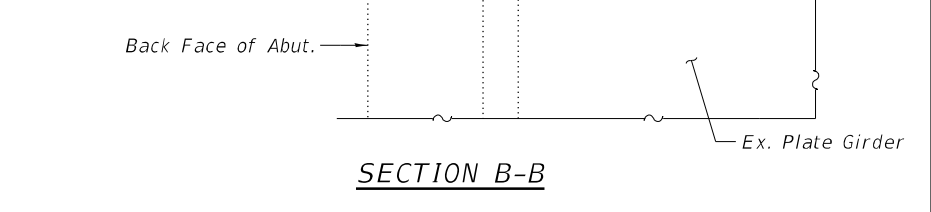
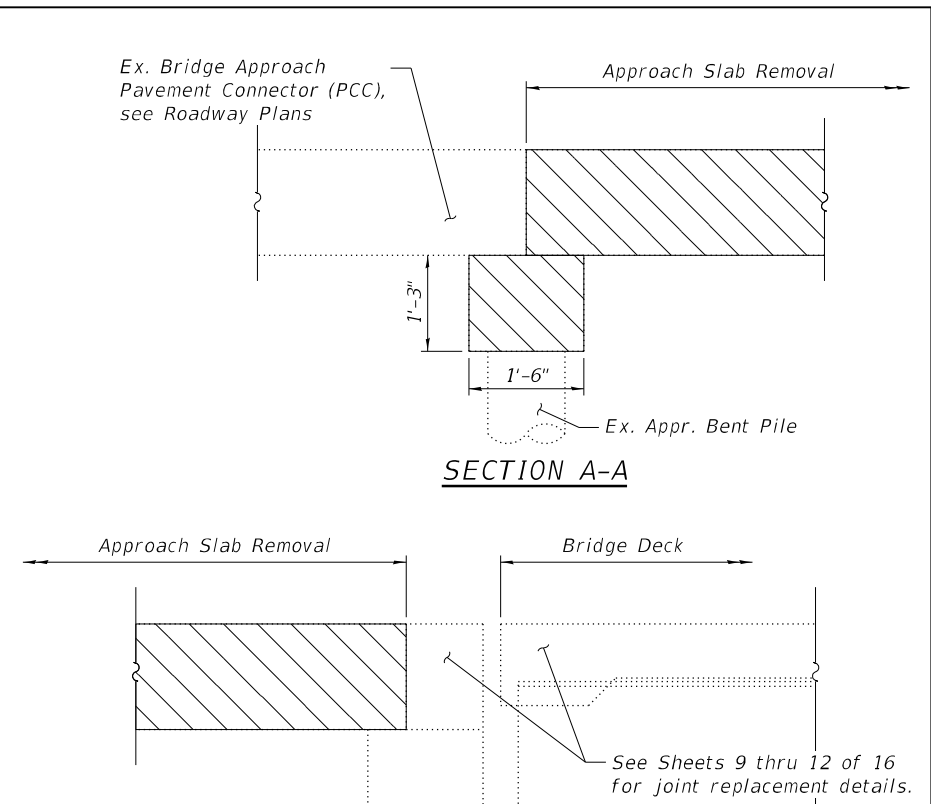
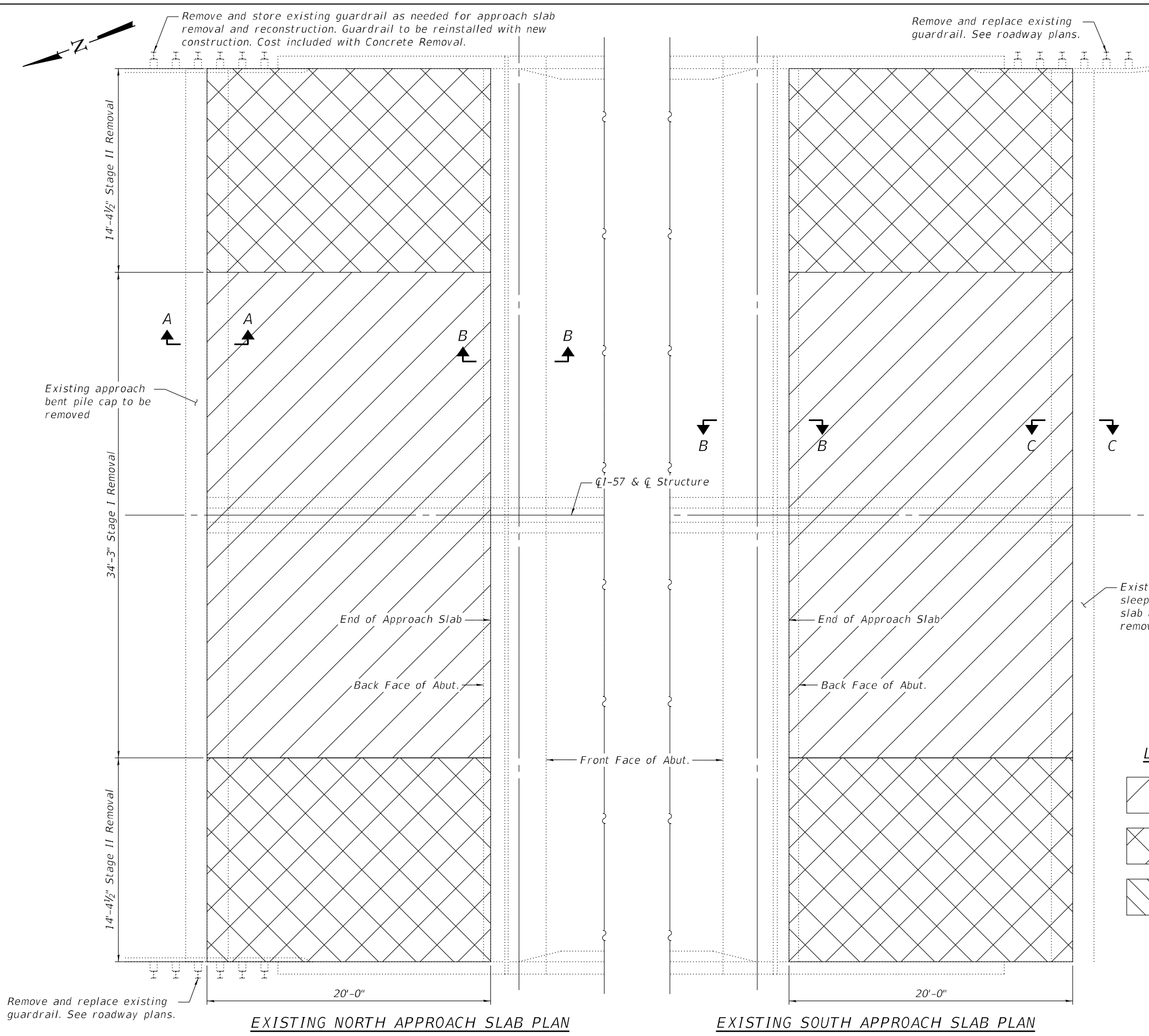
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
 STRUCTURE NO. 002-0022

SHEET 4 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	19
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

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LEGEND

- Existing Structure Removal Stage I
- Existing Structure Removal Stage II
- Approach Slab Removal

Notes:
 Existing Bridge Approach Pavement Connector (PCC) removal is detailed and paid for in the Roadway Plans.
 Removal of Sleeper Slab and Appr. Bent Pile Cap included with Approach Slab Removal.

BILL OF MATERIAL

Item	Unit	Total
Approach Slab Removal	Sq. Yd.	280



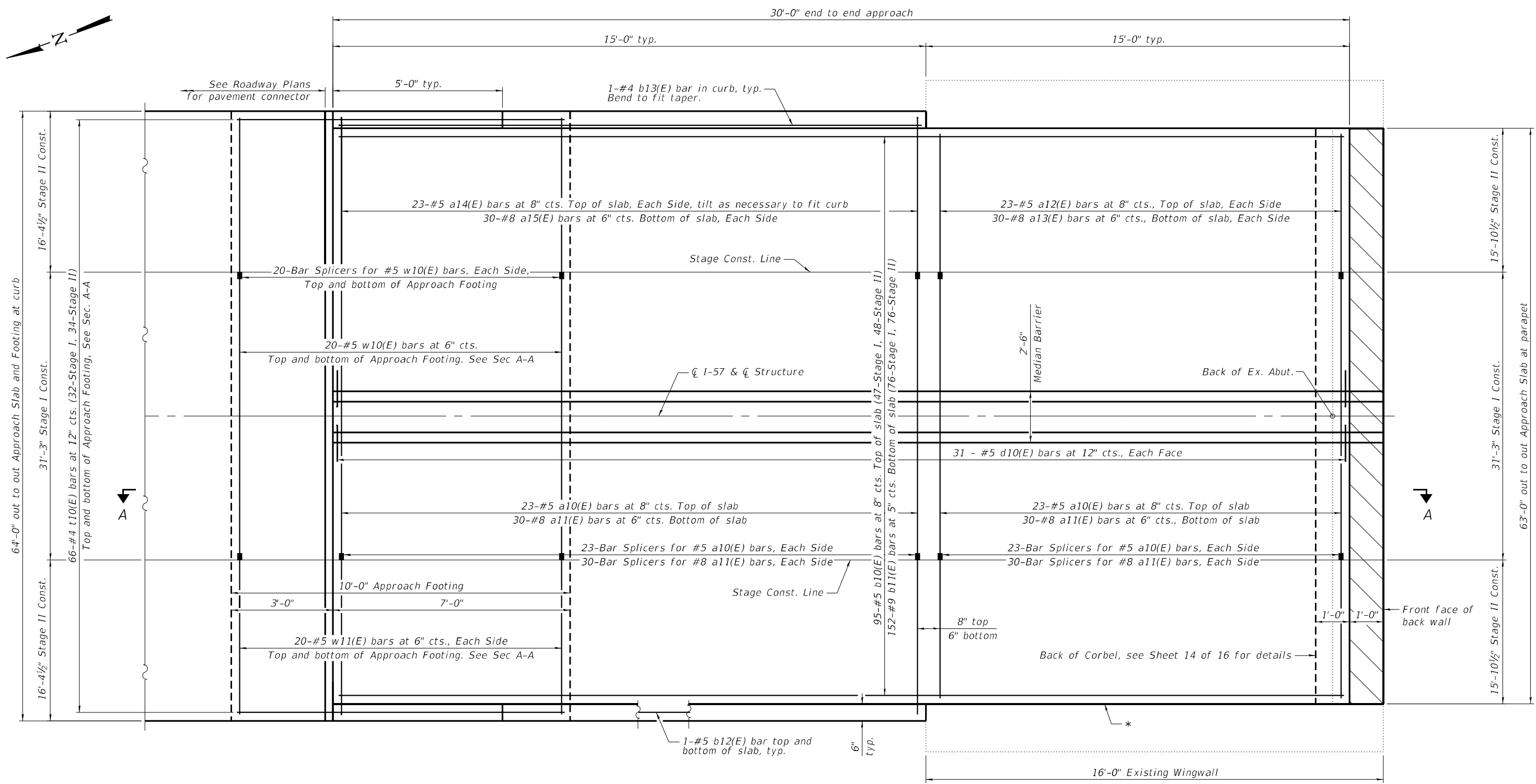
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**APPROACH REMOVAL
 STRUCTURE NO. 002-0022**

SHEET 5 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1)BRR-1	ALEXANDER	31	20
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				



PLAN

(North approach slab shown; South approach slab similar by 180° rotation)

* 1/2" Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.

Note:
For median barrier reinforcement details see elevation of median barrier on Sheet 8 of 16.
For section A-A see sheet 7 of 16.

MODEL: Default
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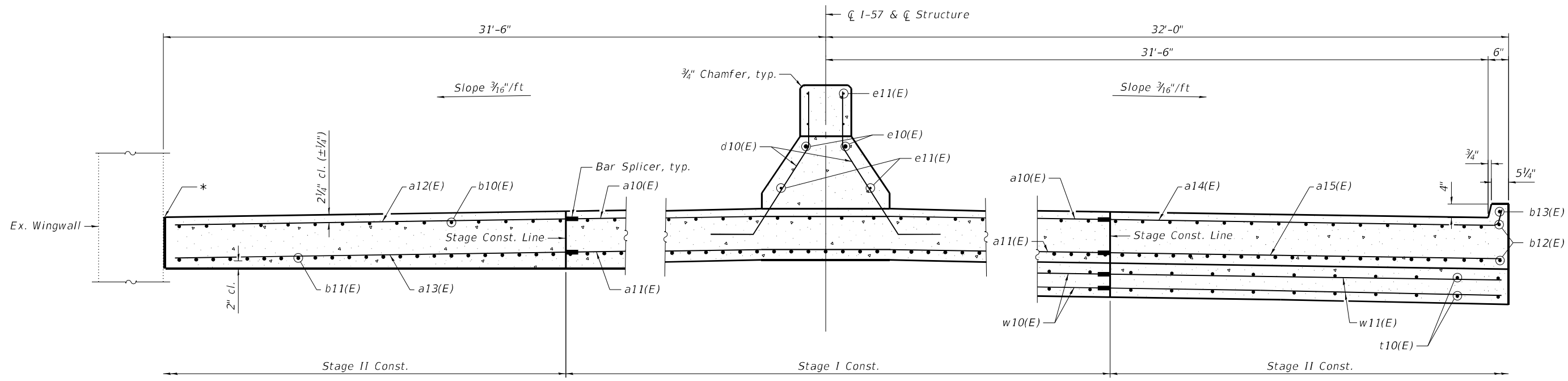
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PLOT DATE	1/5/2023	CHECKED	- MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 002-0022

SHEET 6 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	21
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

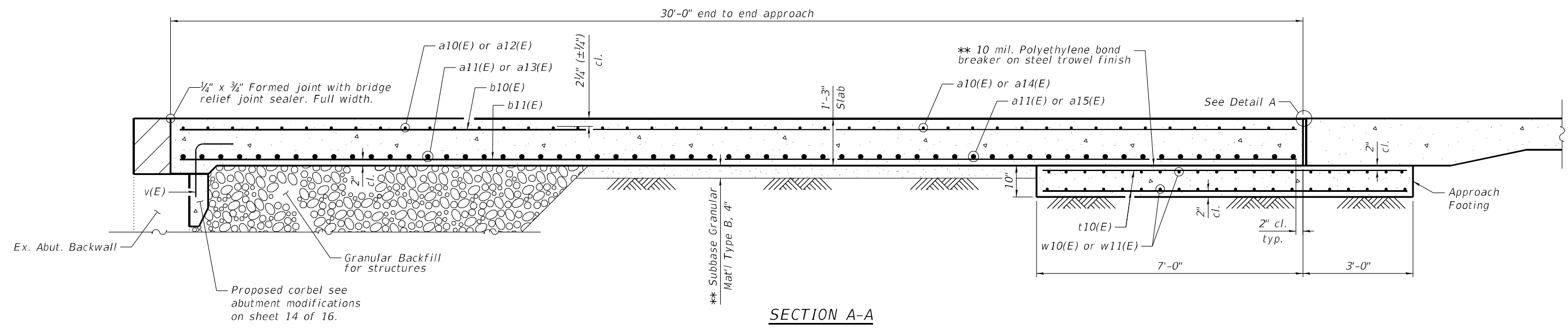


* 1/2" Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.

NEAR ABUTMENT

CROSS SECTION
(Looking South)

AT APPROACH FOOTING



SECTION A-A

** Cost included with Concrete Superstructure (Approach Slab).

Notes:
See sheet 8 of 16 for Detail A.
See sheets 11 and 12 of 16 for concrete median barrier sections.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 16.

MODEL: Default
FILE NAME: S:\2022\12\11\033 - PTB. 199-38 D9 - QEI - Various HIWO-7 - I-57 BR over Mississippi Repair PH2\CADD\CADD Sheets\0020022-78959-007-ApprSec.dgn
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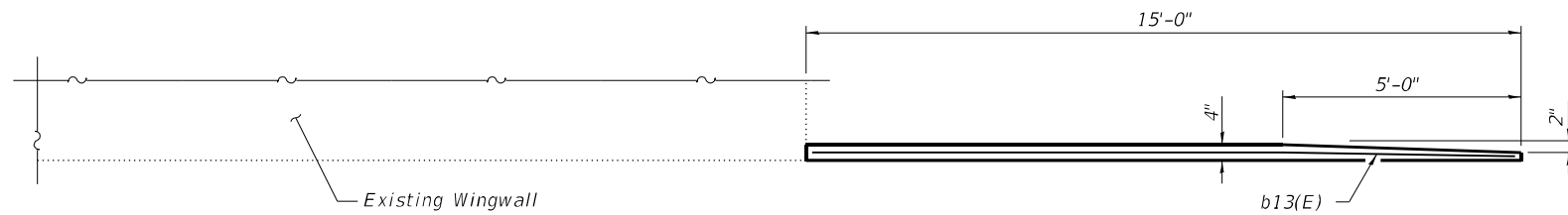
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PLOT DATE	1/5/2023	CHECKED	- MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 002-0022

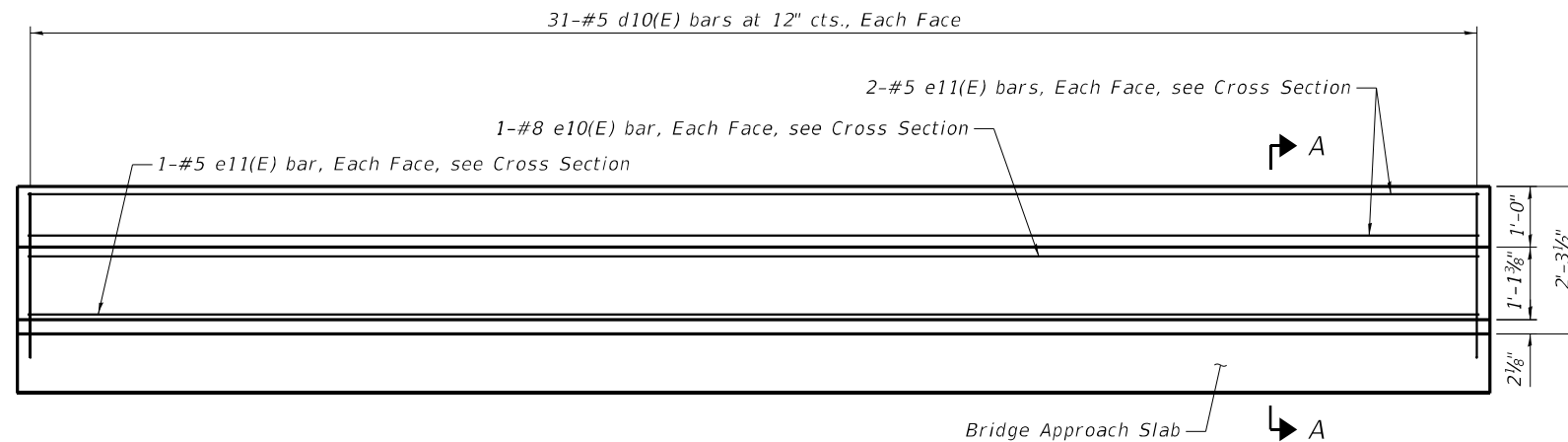
SHEET 7 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-1B-1)BRR-1	ALEXANDER	31	22
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

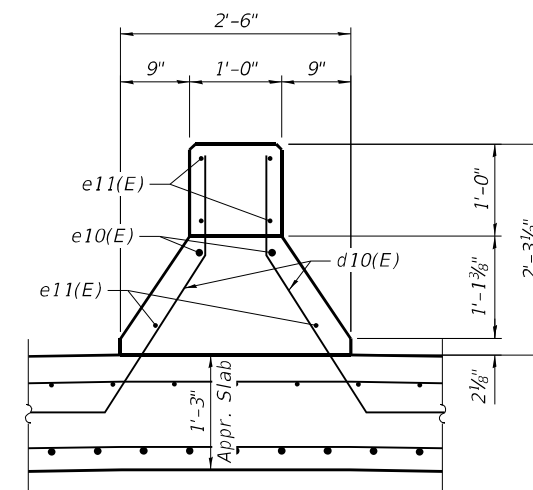


INSIDE ELEVATION OF EXISTING PARAPET AND PROPOSED CURB

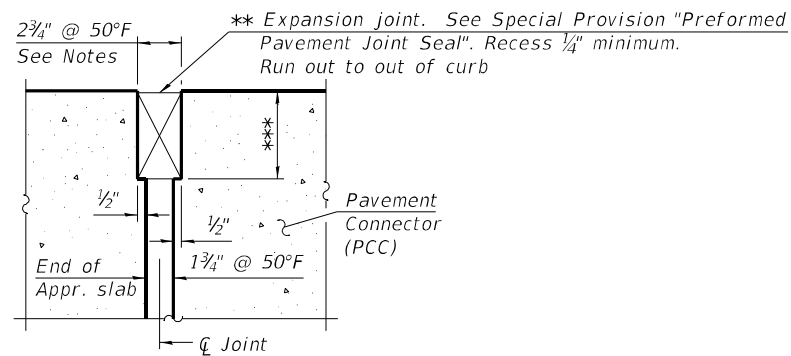
Notes:
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Median barrier shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Cross Section, see sheet 7 of 16.
 The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications.



ELEVATION OF MEDIAN BARRIER



SECTION A-A

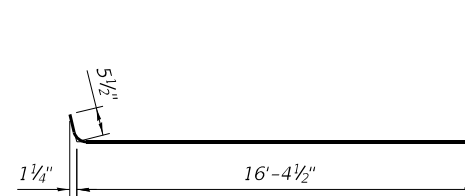


DETAIL A

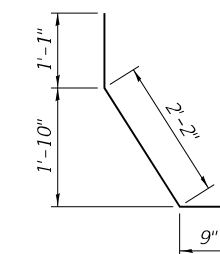
(Detail A shown, applies to Highway Standard 420401 only.)

** Cost included with Concrete Superstructure (Approach Slab).

*** Per manufacturer recommendations



BAR a14(E)



BAR d10(E)

**TWO APPROACHES
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
a10(E)	92	#5	30'-2"	—	
a11(E)	120	#8	30'-2"	—	
a12(E)	92	#5	16'-0"	—	
a13(E)	120	#8	16'-0"	—	
a14(E)	92	#5	16'-10"	—	
a15(E)	120	#8	16'-6"	—	
b10(E)	190	#5	29'-8"	—	
b11(E)	304	#9	29'-8"	—	
b12(E)	8	#5	14'-8"	—	
b13(E)	4	#4	14'-8"	—	
d10(E)	124	#5	4'-0"	U	
e10(E)	4	#8	29'-8"	—	
e11(E)	12	#5	29'-8"	—	
t10(E)	264	#4	9'-8"	—	
w10(E)	80	#5	30'-2"	—	
w11(E)	160	#5	16'-6"	—	
Item				Unit	Total
Concrete Superstructure (Approach Slab)				Cu. Yd.	176.8
Concrete Superstructure				Cu. Yd.	7.6
Concrete Structures				Cu. Yd.	39.6
Bar Splicers				Each	584
Reinforcement Bars, Epoxy Coated				Pound	71,010

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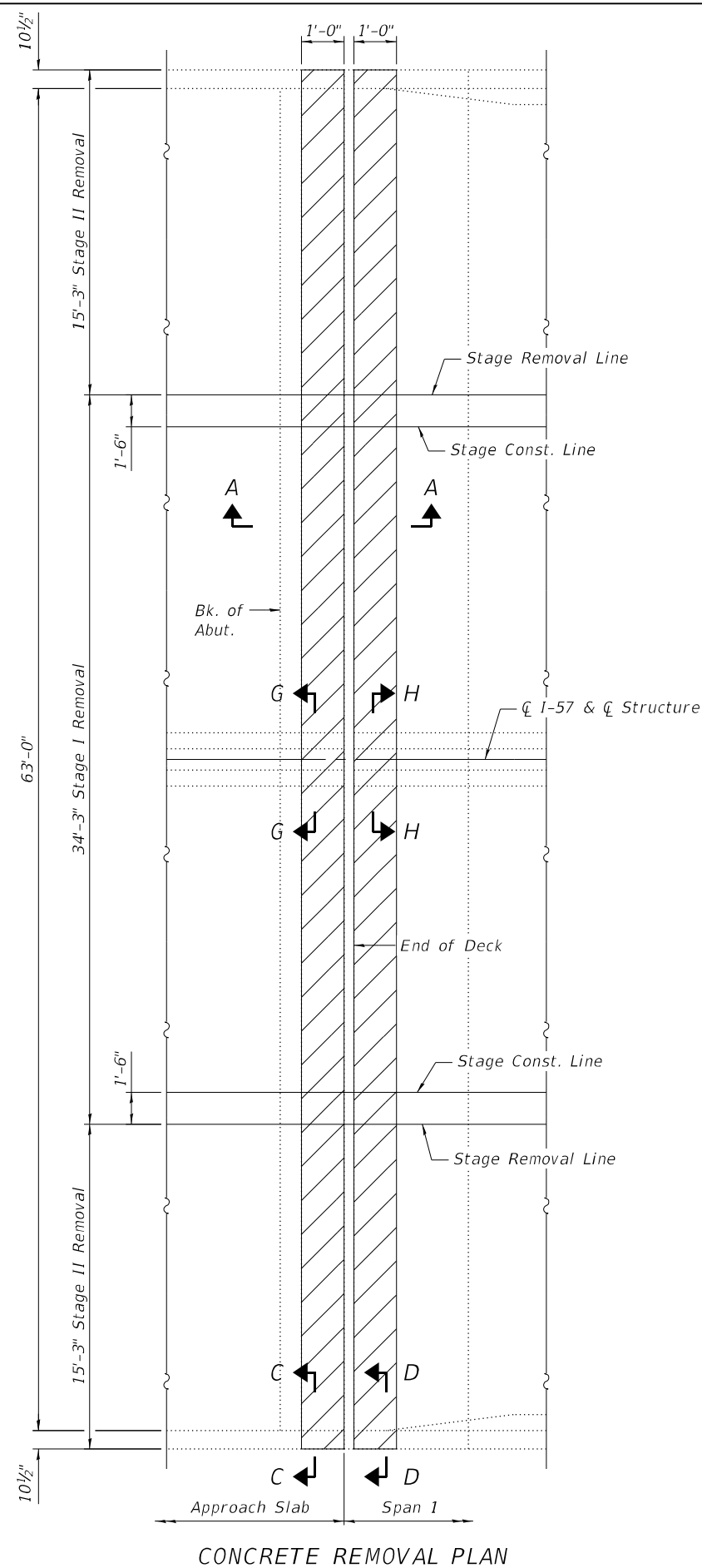
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 002-0022

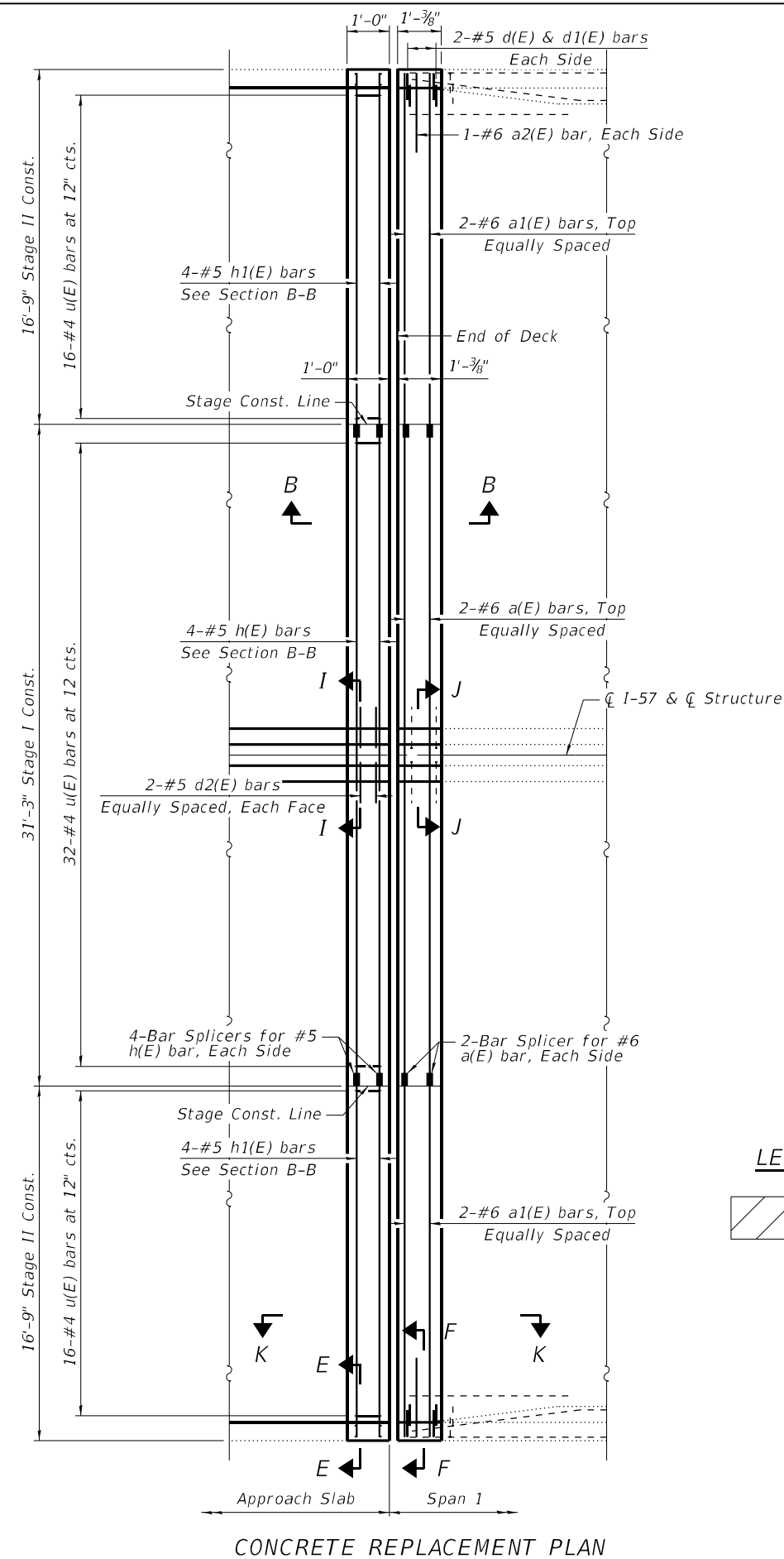
SHEET 8 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

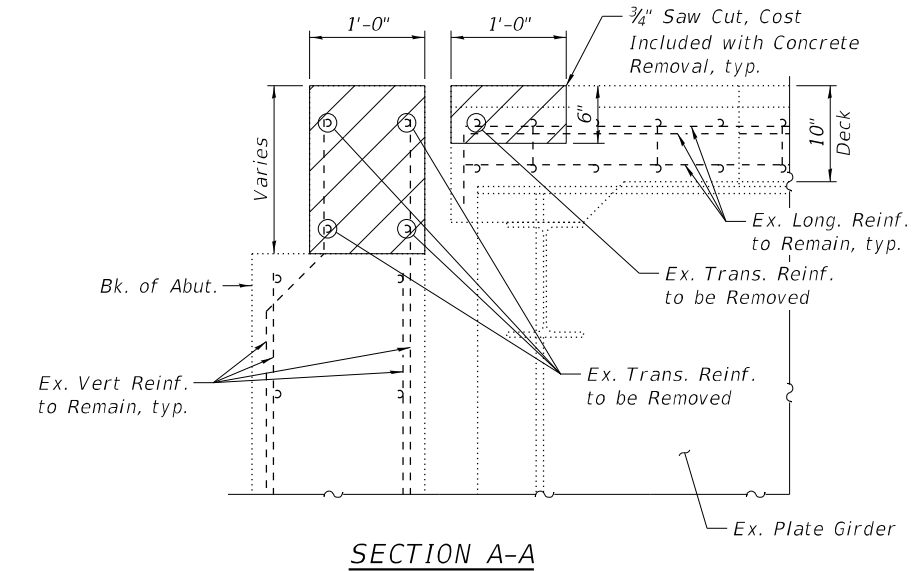
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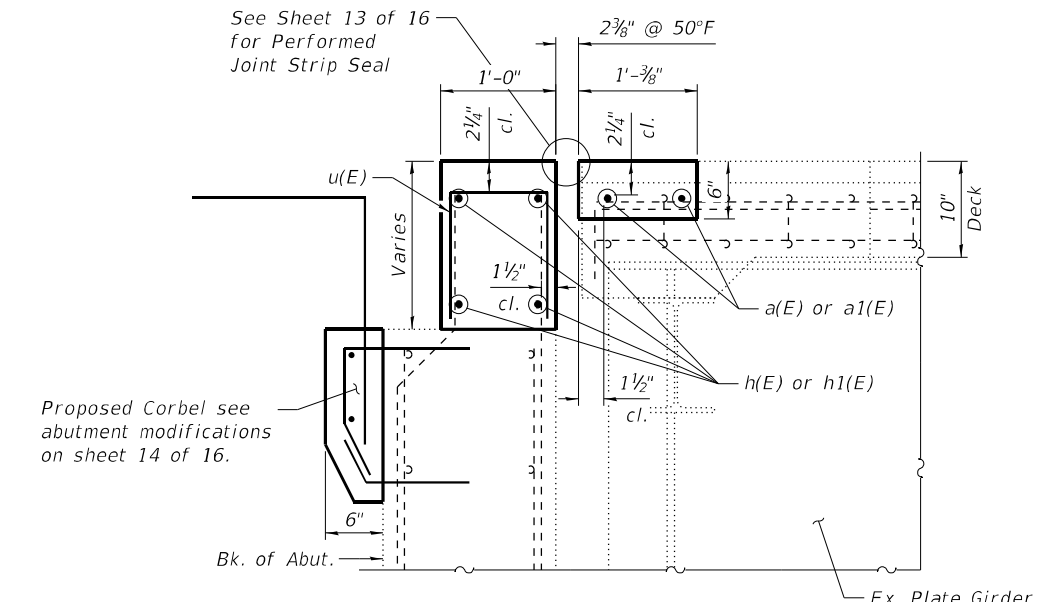
CONCRETE REMOVAL PLAN



CONCRETE REPLACEMENT PLAN



SECTION A-A



SECTION B-B

LEGEND



BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	5.5

Notes:
 Existing reinforcement to remain shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
 See Sheet 11 of 16 for View K-K, and Sections D-D, F-F, H-H, and J-J.
 See Sheet 12 of 16 for Bar Details, Bill of Material, and Sections C-C, E-E, G-G, and I-I.



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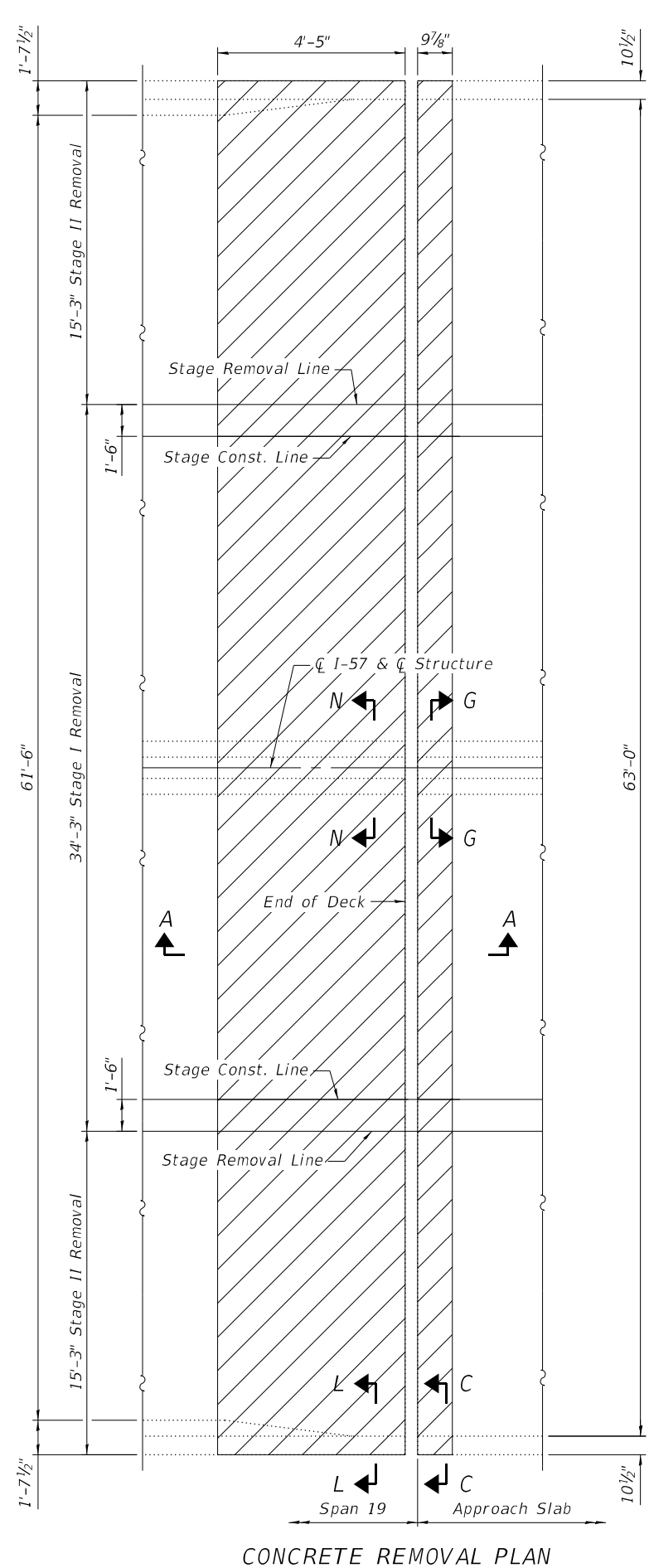
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT DETAILS - NORTH ABUTMENT
 STRUCTURE NO. 002-0022

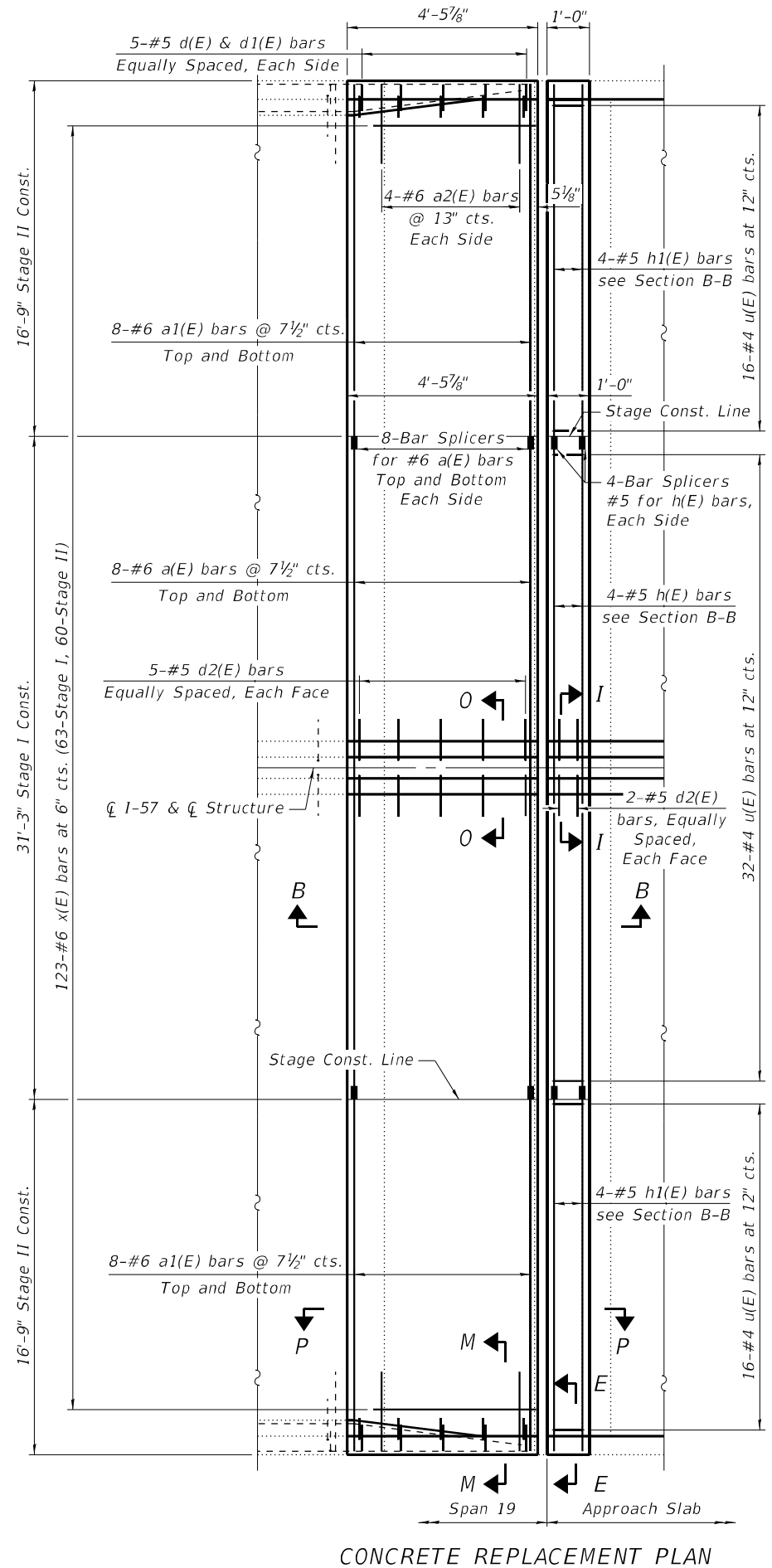
SHEET 9 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

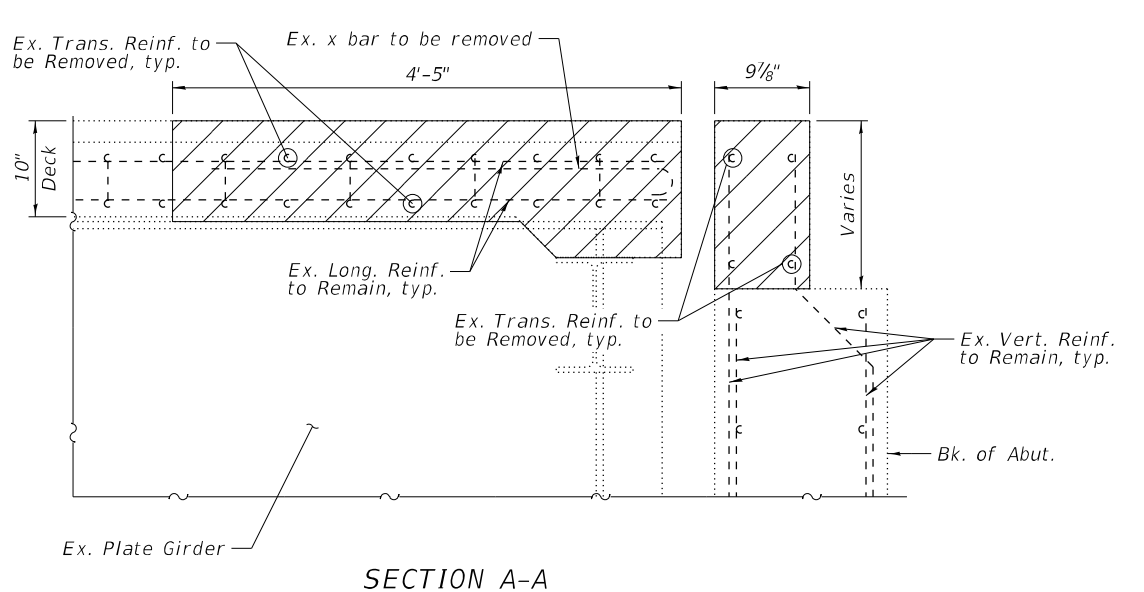
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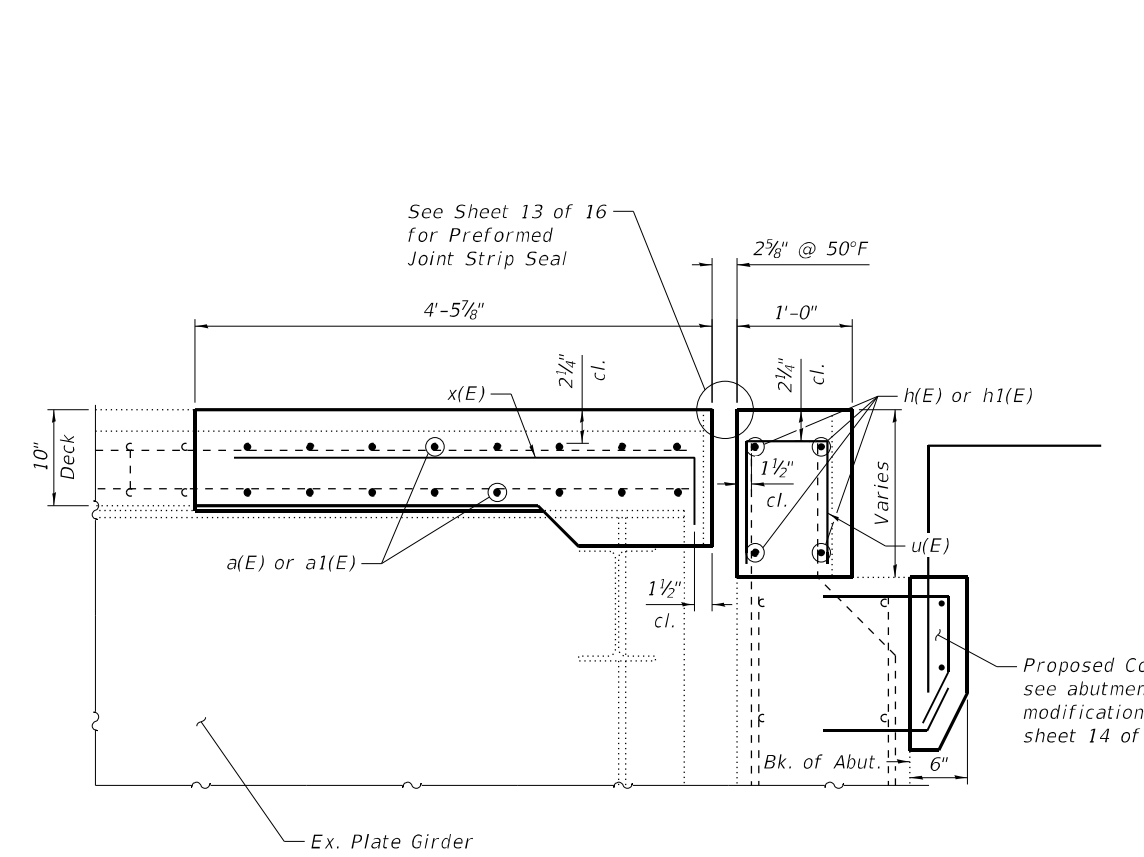
CONCRETE REMOVAL PLAN



CONCRETE REPLACEMENT PLAN



SECTION A-A



SECTION B-B

LEGEND
 Concrete Removal

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	14.7

Notes:
 Existing reinforcement to remain shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
 See Sheet 11 of 16 for View P-P and Sections L-L, M-M, N-N, and O-O.
 See Sheet 12 of 16 for Bar Details, Bill of Material, and Sections C-C, E-E, G-G, and I-I.



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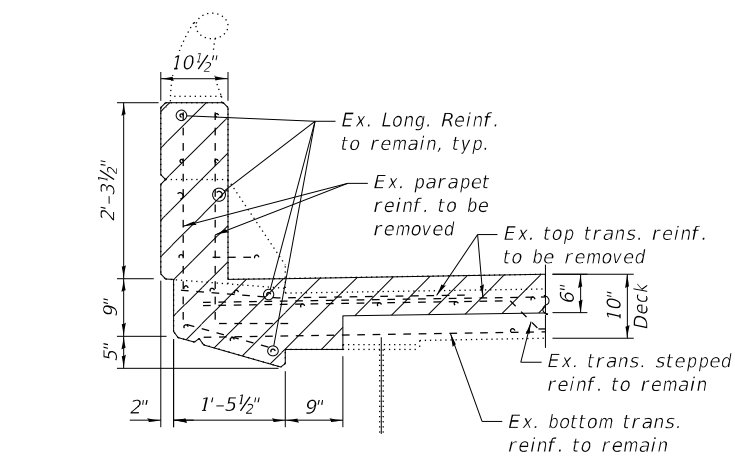
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT DETAILS - SOUTH ABUTMENT
 STRUCTURE NO. 002-0022

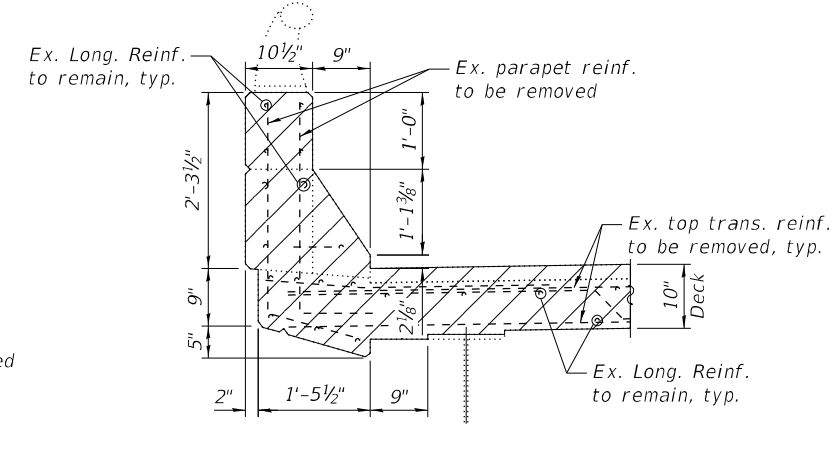
SHEET 10 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

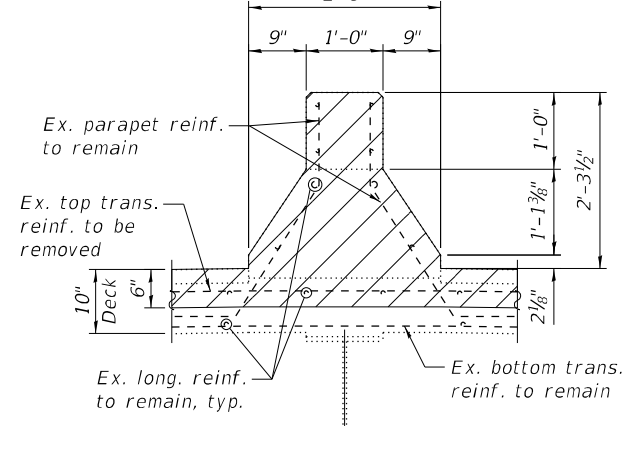
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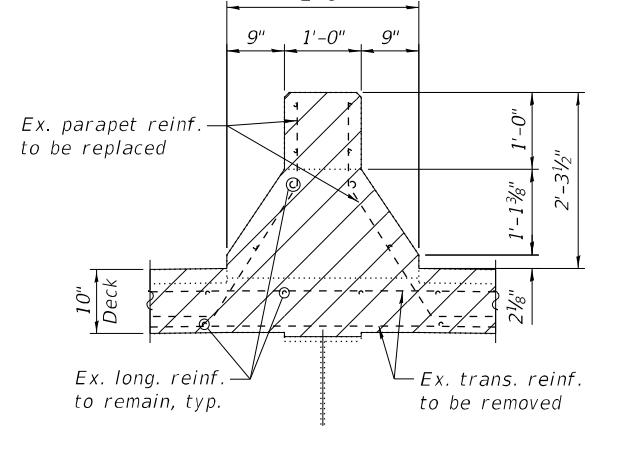
SECTION D-D



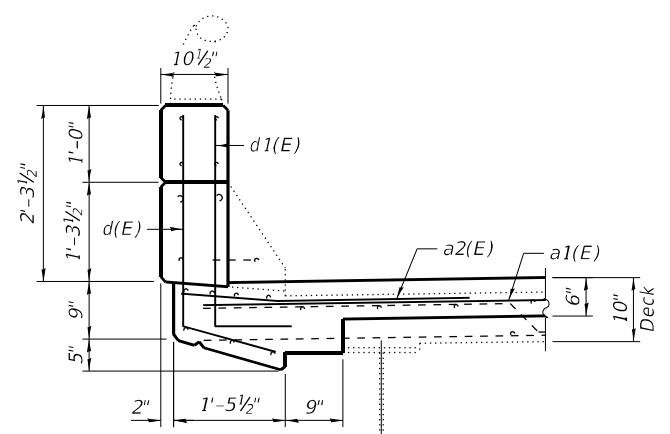
SECTION L-L



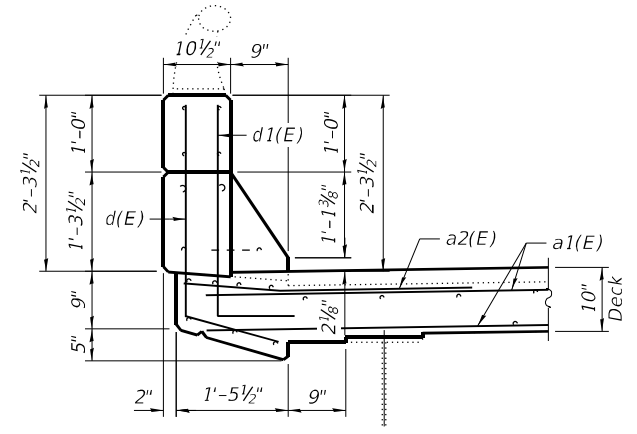
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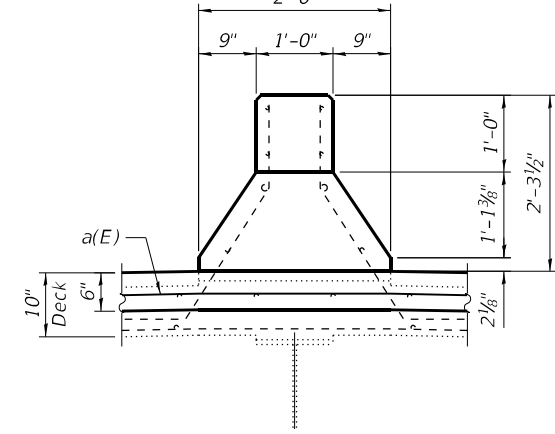
SECTION N-N



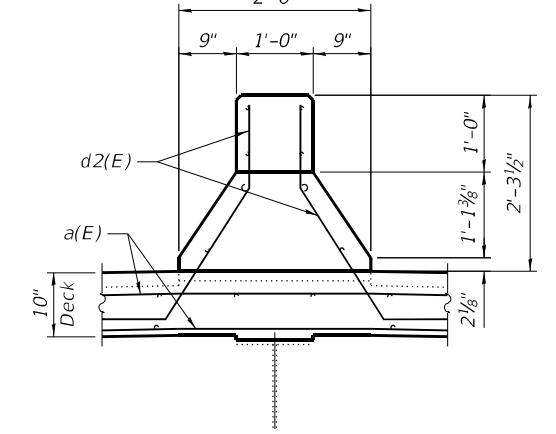
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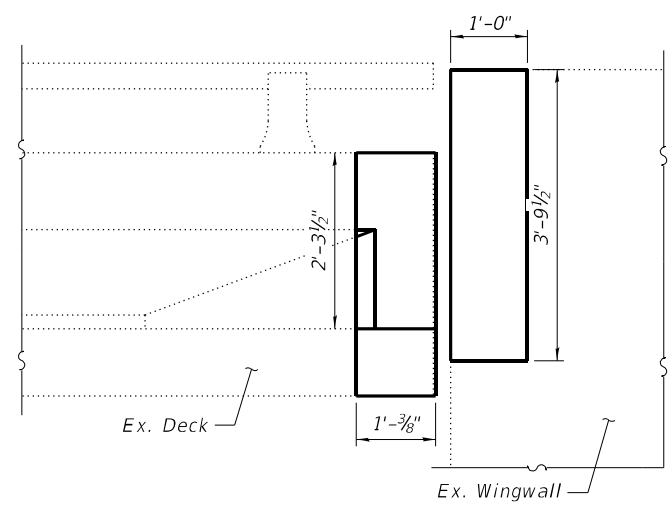
SECTION M-M



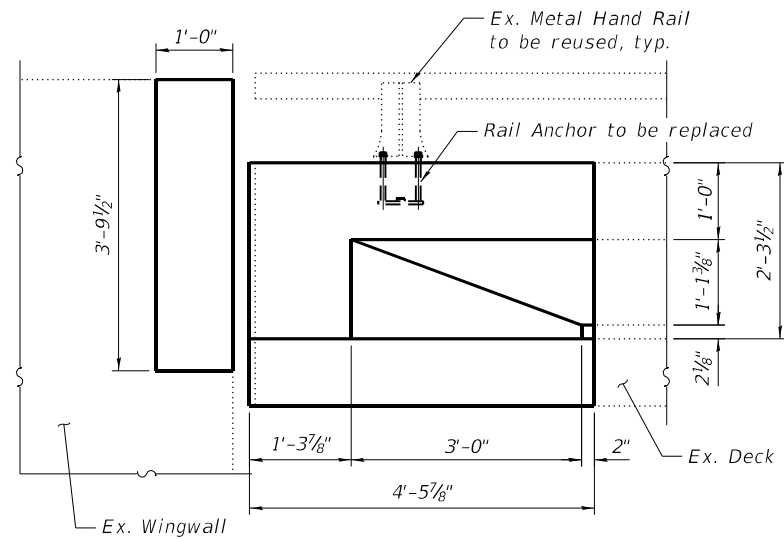
SECTION J-J



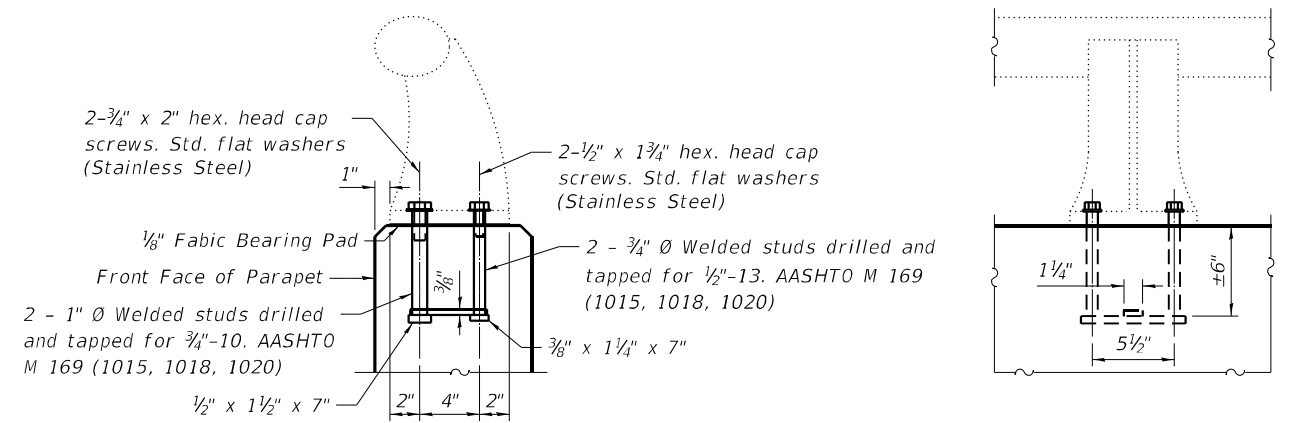
SECTION O-O



VIEW K-K



VIEW P-P



RAIL POST DETAILS

Notes:
 See Sheet 9 of 16 for the location of View K-K and Sections D-D, F-F, H-H, and J-J.
 See Sheet 10 of 16 for the location of View P-P and Sections L-L, M-M, N-N, and O-O.
 Parapet metal hand rail shall be removed and reused. Cost included with Concrete Removal.
 Railing anchor shall be replaced. Cost included with Concrete Superstructures.



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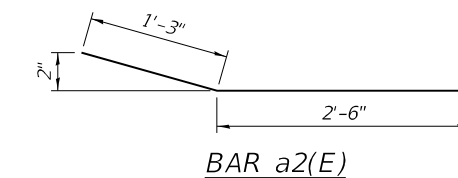
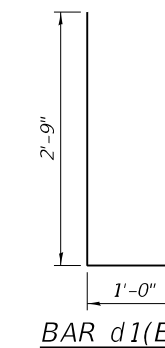
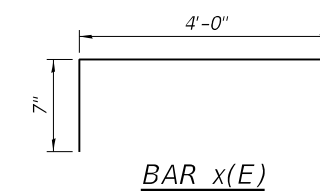
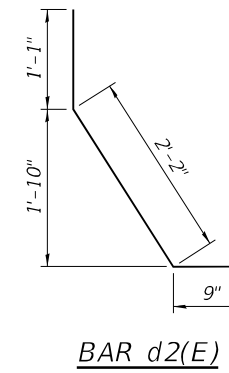
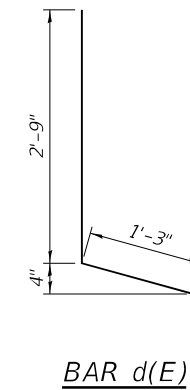
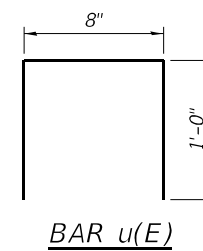
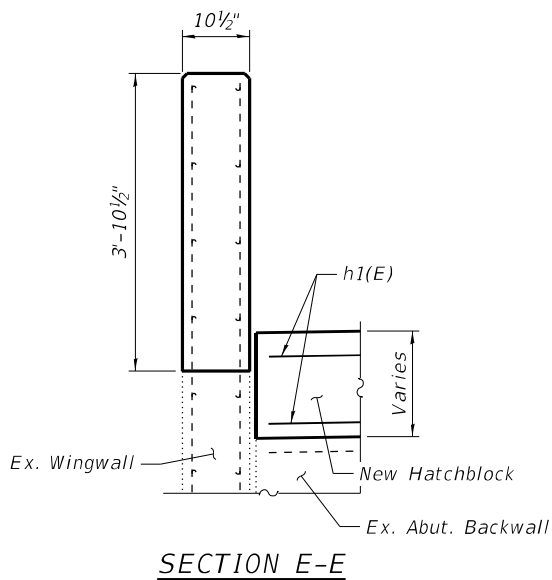
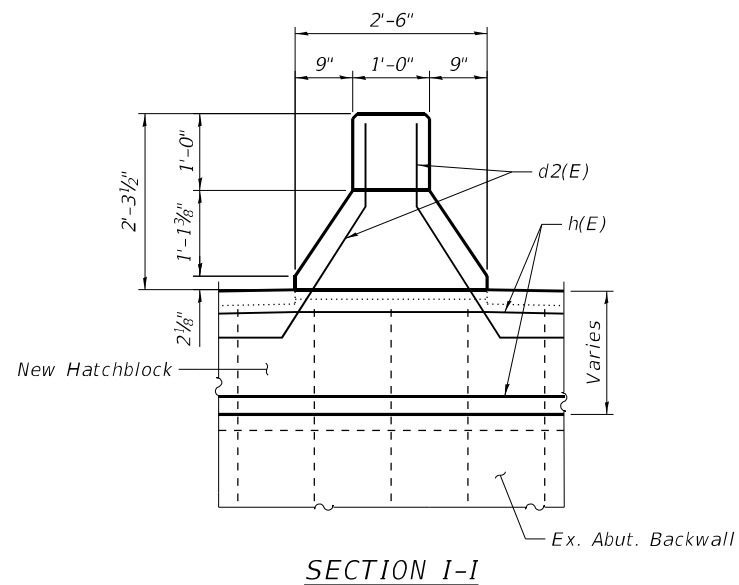
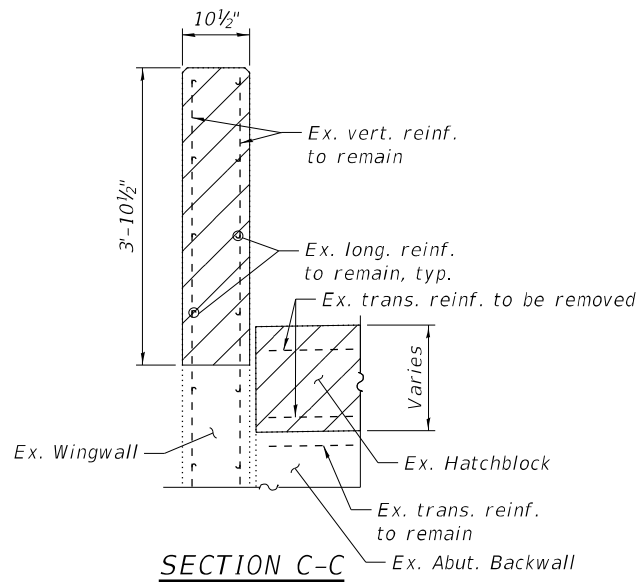
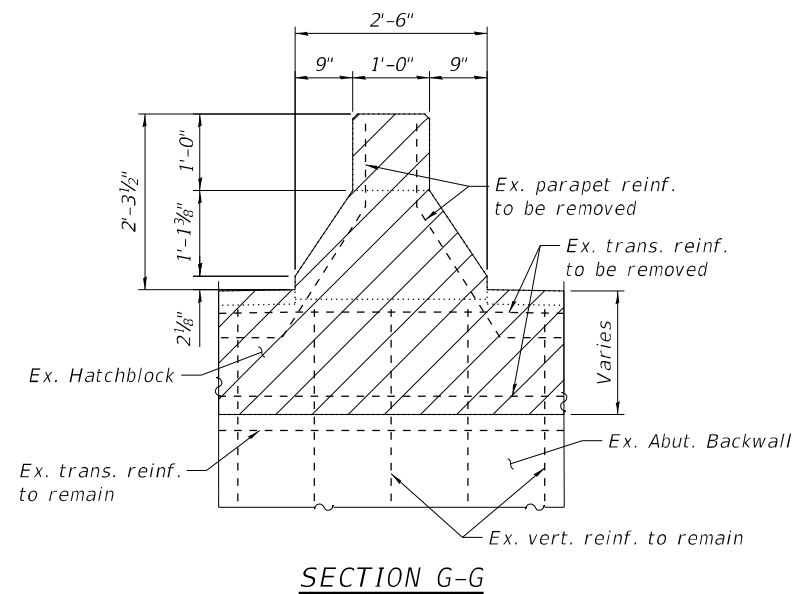
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT DETAILS
 STRUCTURE NO. 002-0022**

SHEET 11 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(02-18-1)BRR-1	ALEXANDER	31	26
CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				

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BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	18	#6	30'-2"	—	
a1(E)	36	#6	16'-5"	—	
a2(E)	10	#6	3'-9"	—	
d(E)	14	#5	4'-0"	L	
d1(E)	14	#5	3'-9"	L	
d2(E)	18	#5	4'-0"	L	
h(E)	8	#5	30'-2"	—	
h1(E)	16	#5	16'-0"	—	
u(E)	128	#4	2'-8"	□	
x(E)	123	#6	4'-7"	┌	
Item				Unit	Total
Concrete Superstructure				Cu. Yd.	20.7
Bar Splicers				Each	52
Reinforcement Bars, Epoxy Coated				Pound	3,550

Notes:
 See Sheets 9 and 10 of 16 for the location of Sections C-C, E-E, G-G, and I-I.



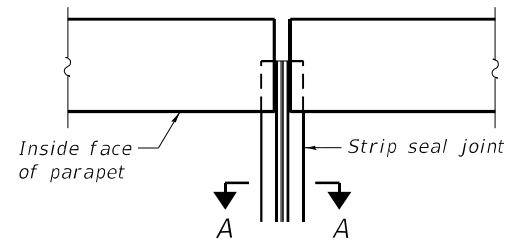
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

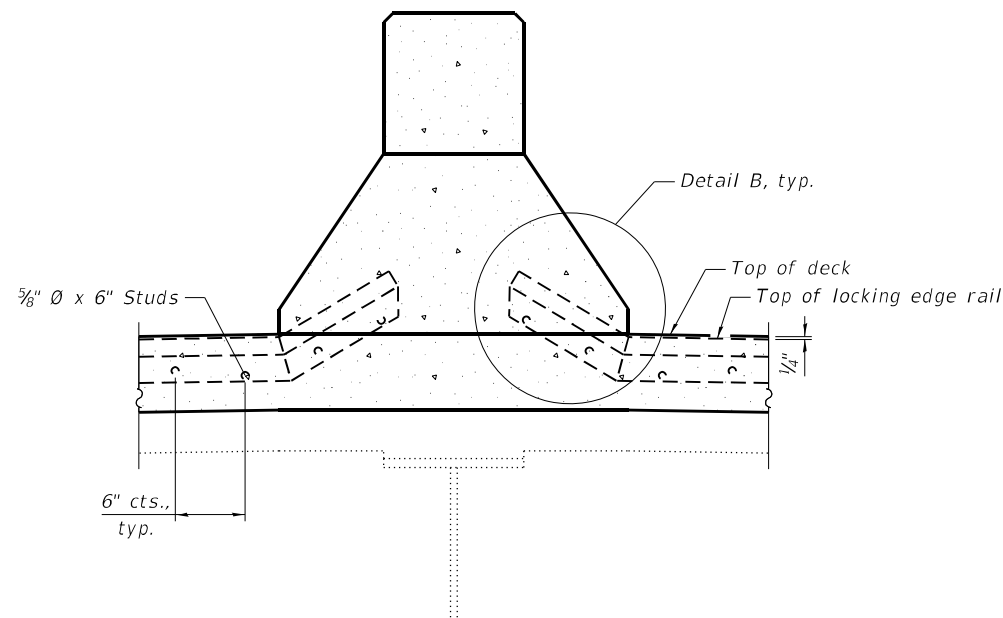
EXPANSION JOINT DETAILS
 STRUCTURE NO. 002-0022

SHEET 12 OF 16 SHEETS

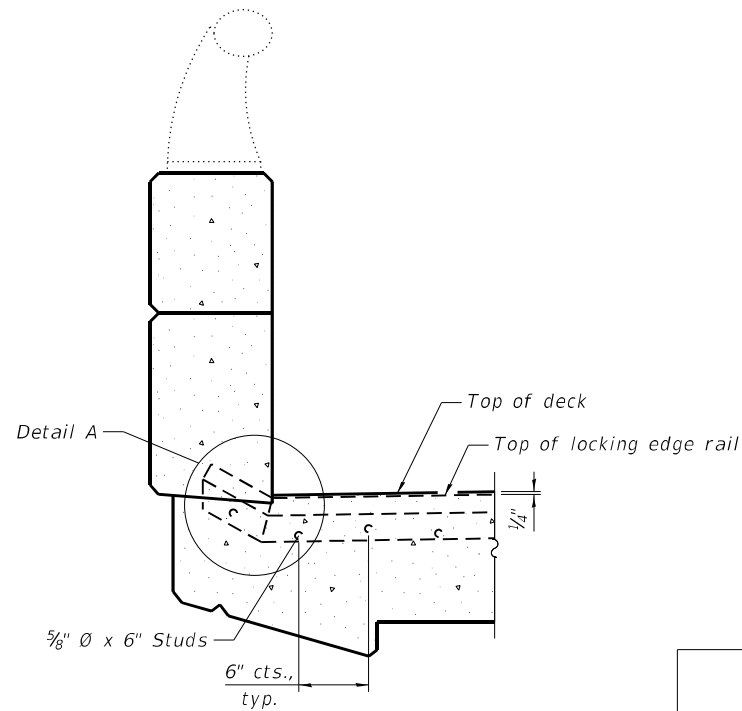
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				



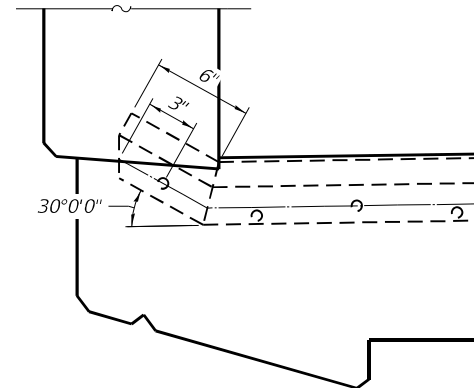
PLAN AT PARAPET



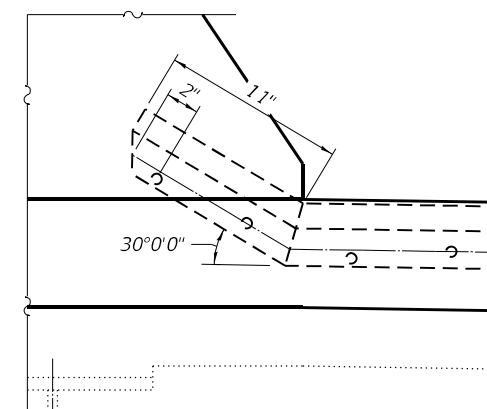
ELEVATION AT MEDIAN BARRIER



ELEVATION AT PARAPET

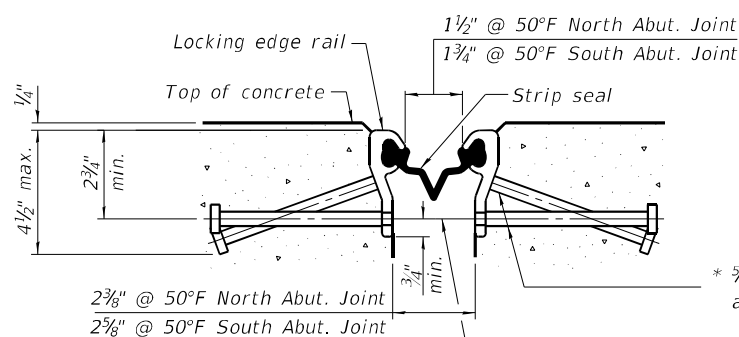


DETAIL A



DETAIL B

Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
 The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.
 The manufacturer's recommended installation methods shall be followed.
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
 The Maximum space between locking edge rail segments shall be 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 embedded plates and anchorage studs included with Preformed Joint Strip Seal.
 The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required.

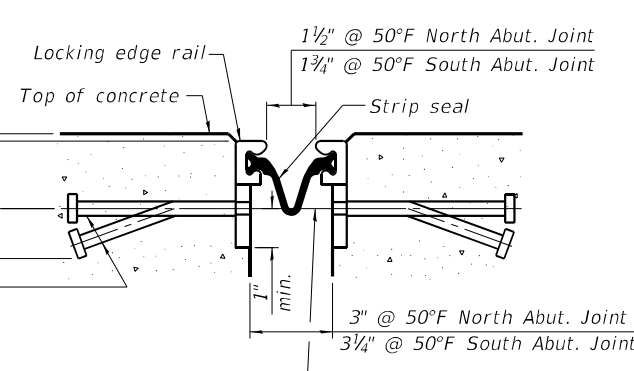


SHOWING ROLLED RAIL JOINT

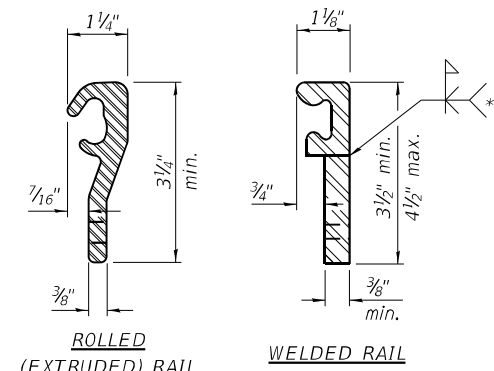
* 5/8" ϕ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
 3/8" ϕ threaded rods in 1/16" ϕ holes at ± 4 -0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

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

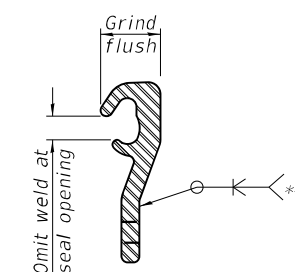


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	127

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 PLOT DATE 1/5/2023

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 CHECKED - MDC

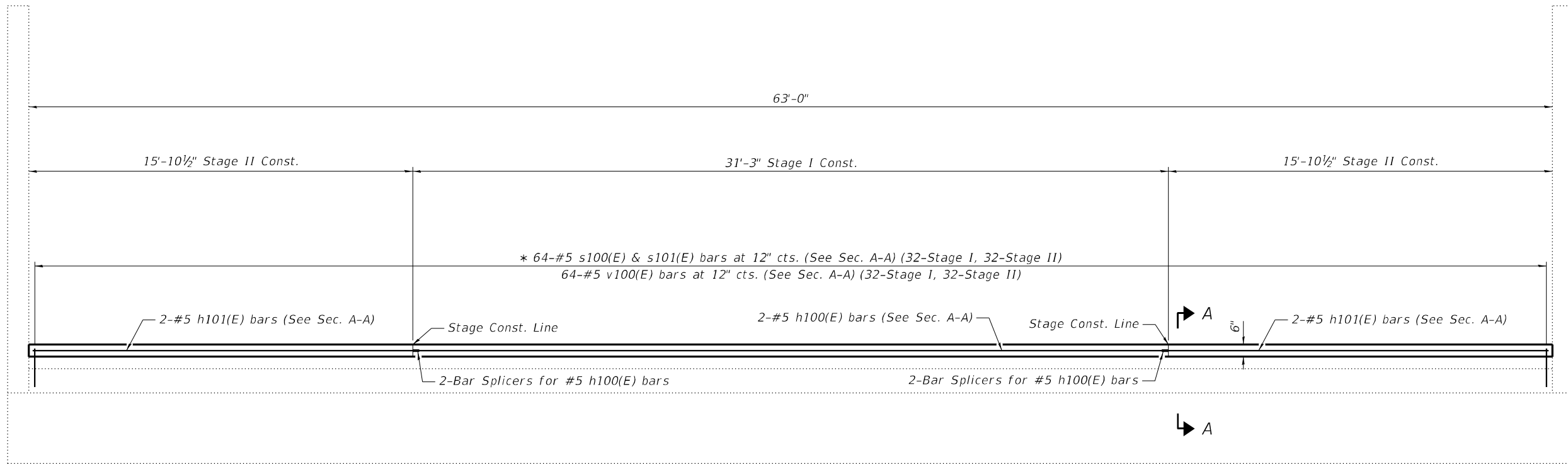
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 002-0022

SHEET 13 OF 16 SHEETS

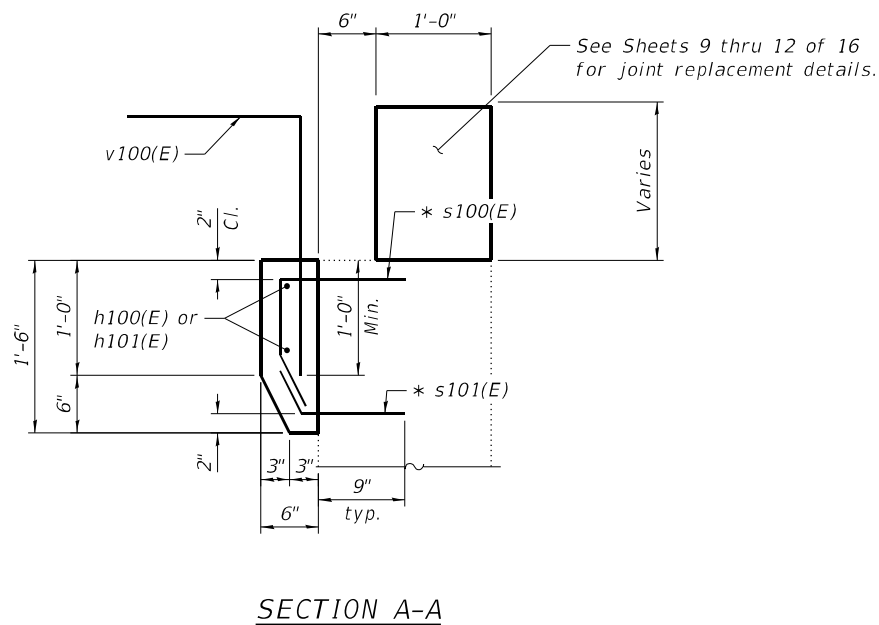
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				



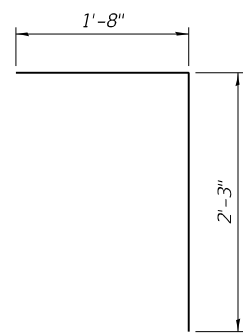
PARTIAL PLAN

(North Abutment Shown, South Abutment Similar)

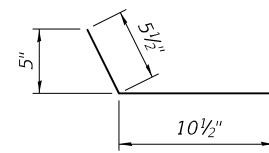
* Epoxy grout s100(E) and s101(E) bars according to Article 584 of the Standard Specifications. Cost included with Concrete Structures.



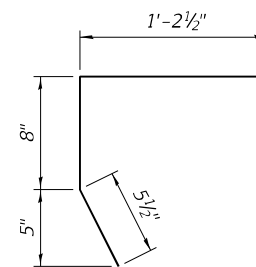
SECTION A-A



BAR v100(E)



BAR s101(E)



BAR s100(E)

Note:
Any loose or deteriorated concrete shall be removed prior to pouring new concrete. Cost included with Concrete Structures.

**TWO ABUTMENTS
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
h100(E)	4	#5	30'-2"	—	
h101(E)	8	#5	16'-0"	—	
s100(E)	128	#5	2'-4"	┌	
s101(E)	128	#5	1'-4"	└	
v100(E)	128	#5	3'-11"	└	
Item				Unit	Total
Concrete Structures				Cu. Yd.	3.2
Bar Splicers				Each	8
Reinforcement Bars, Epoxy Coated				Pound	1,280

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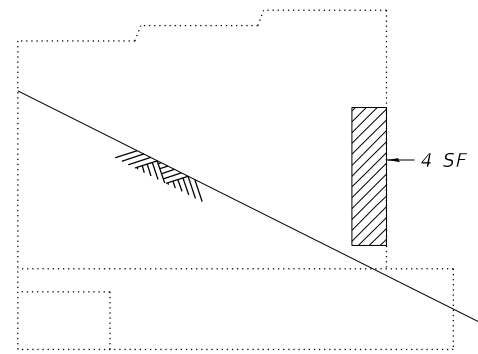
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT MODIFICATIONS
STRUCTURE NO. 002-0022

SHEET 14 OF 16 SHEETS

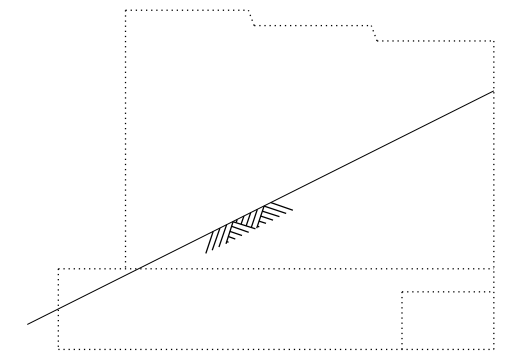
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				



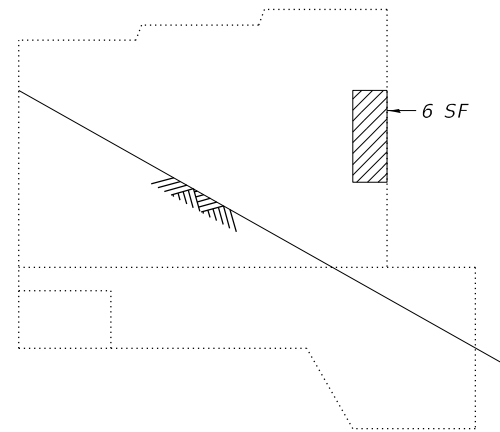
ELEVATION
(Northwest Wingwall, Looking East)



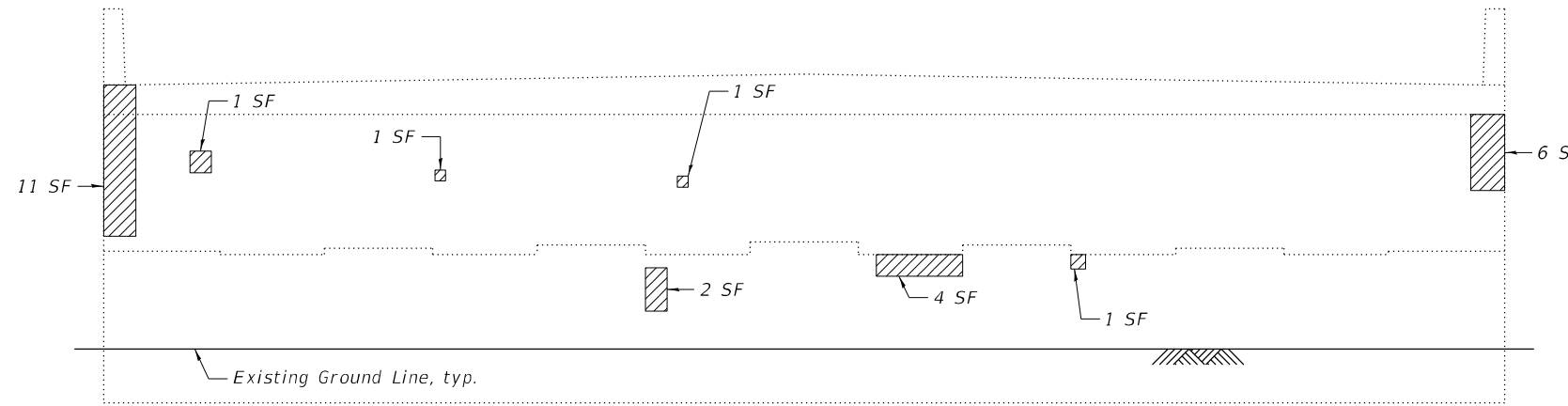
ELEVATION
(North Abutment, Looking North)



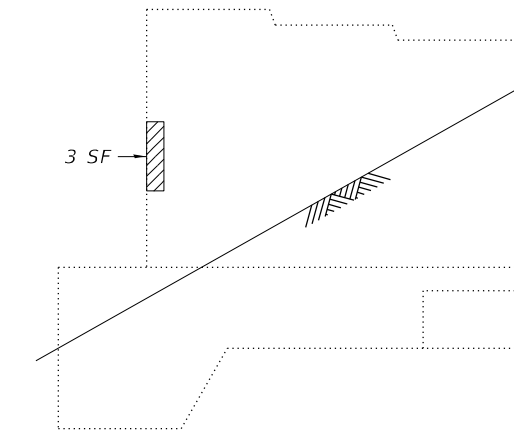
ELEVATION
(Northeast Wingwall, Looking West)



ELEVATION
(Southeast Wingwall, Looking West)



ELEVATION
(South Abutment, Looking South)



ELEVATION
(Southwest Wingwall, Looking East)

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less than 5")
- Crack

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.	51

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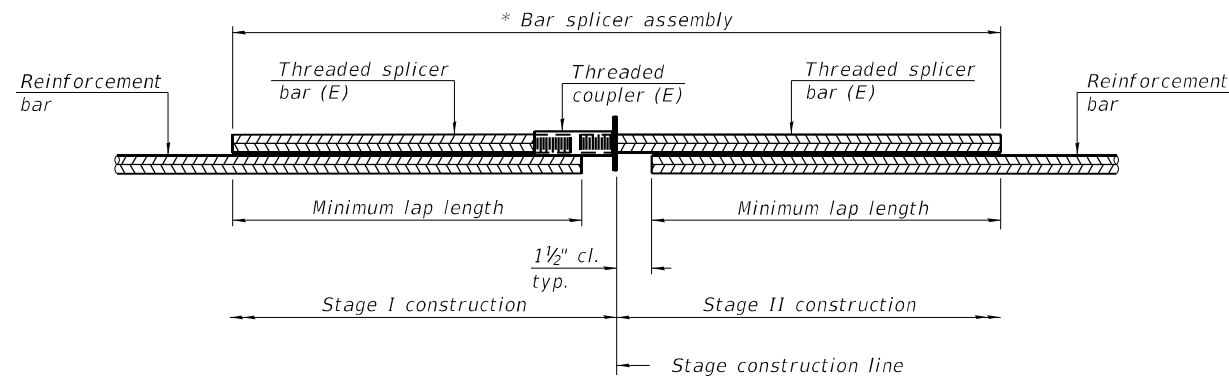
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PLOT DATE	1/5/2023	CHECKED	- MDC	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENT REPAIR DETAILS
STRUCTURE NO. 002-0022**

SHEET 15 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78959				
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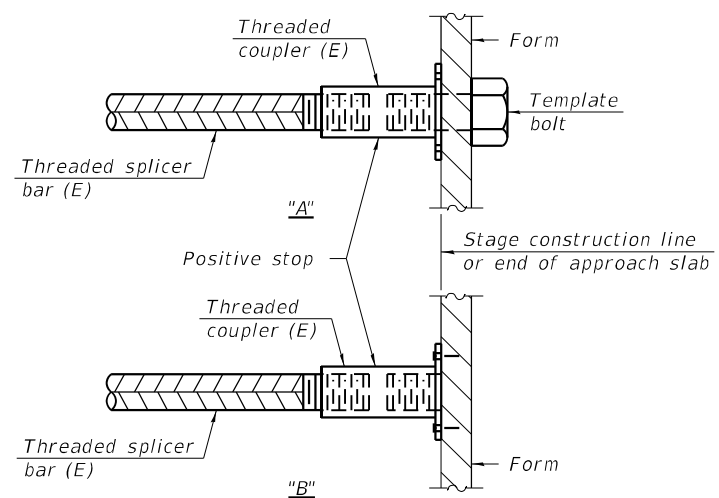


STANDARD BAR SPLICER ASSEMBLY PLAN
 (All components shall be provided from one supplier)

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

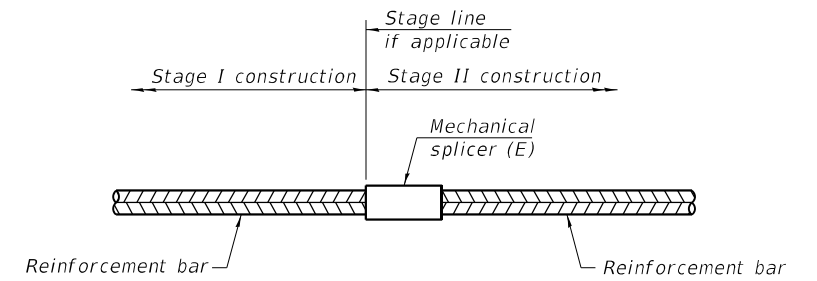
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Approach Slab	#5	184	3'-0"
Approach Slab	#8	240	4'-9"
Approach Footing	#5	160	3'-2"
North Joint	#5	8	3'-6"
South Joint	#5	8	3'-6"
Abutment Corbel	#5	8	3'-2"
North Joint	#6	4	4'-0"
South Joint	#6	32	4'-0"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
 Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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1-1-2020



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 002-0022

SHEET 16 OF 16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78959				
ILLINOIS FED. AID PROJECT				