

106

06-14-2019 LETTING ITEM 106

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-2) BJR	LOGAN	10	1
		REPORT	CONTRACT NO. 72L15	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED CONTRACT MAINTENANCE

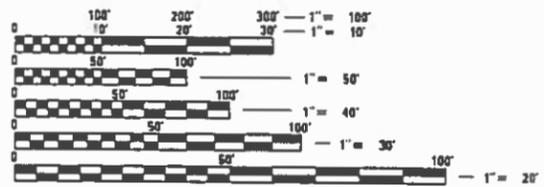
FAI ROUTE 55 (I-55)
SECTION (54-2) BJR

BRIDGE JOINT REPAIR
LOGAN COUNTY

D-96-037-19



PROJECT LOCATION
SN 054-0039
CH 513 OVER I-55
BROADWELL INTERCHANGE

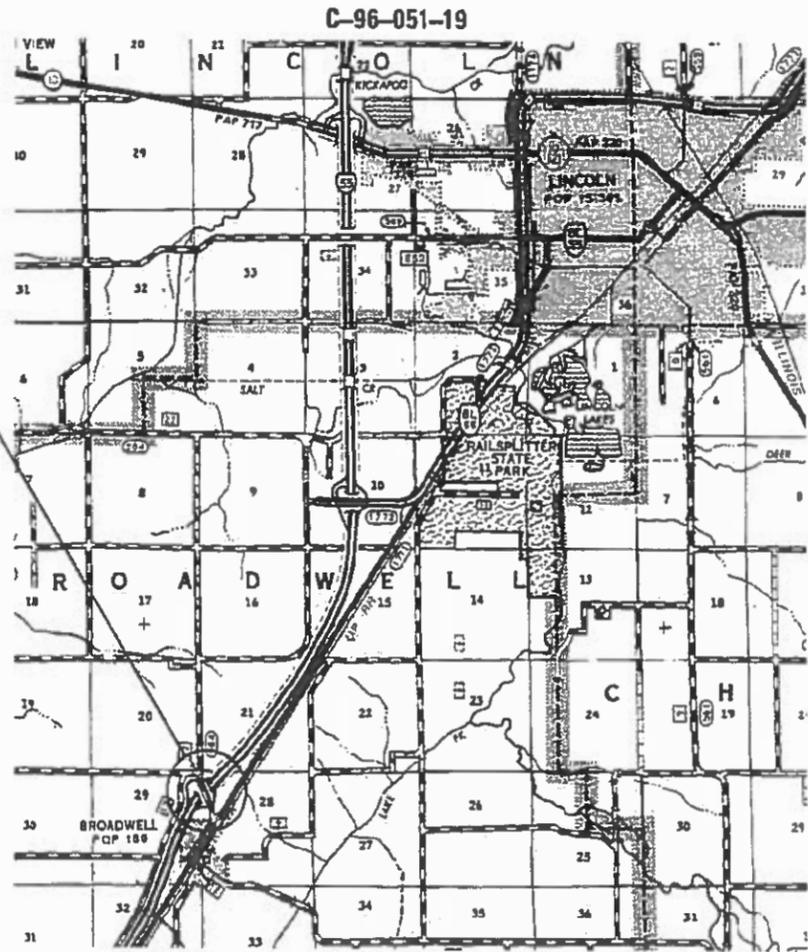


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY, 217-785-9290

CONTRACT NO. 72L15



GROSS LENGTH = x.xx FT. = x.xxx MILE
NET LENGTH = x.xx FT. = x.xxx MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 22 March 2019
Staff on Duty
MAY 10 2019 REGIONAL ENGINEER
E.A. ERK
MAY 10 2019 ENGINEER OF DESIGN AND ENVIRONMENT
DIRECTOR OF HIGHWAY PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, SIGNATURES, GENERAL NOTES, & SUMMARY OF QUANTITIES
- 3-4 TRAFFIC CONTROL PLAN
- 5-10 SN 054-0039 BRIDGE PLANS

STANDARDS

- 000001-07
- 001001-02
- 001006
- 701001-02
- 701006-05
- 701101-05
- 701106-02
- 701301-04
- 701316-12
- 701901-08
- 704001-08

GENERAL NOTES:

0-02174-6002
 SN 054-0039
 100% STATE
 BRIDGE
 0047
 LOGAN

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 DISTRICT 6**

EXAMINED 15 March 20 19

 ENGINEER OF OPERATIONS

EXAMINED 15 March 20 19

 ENGINEER OF PROJECT IMPLEMENTATION

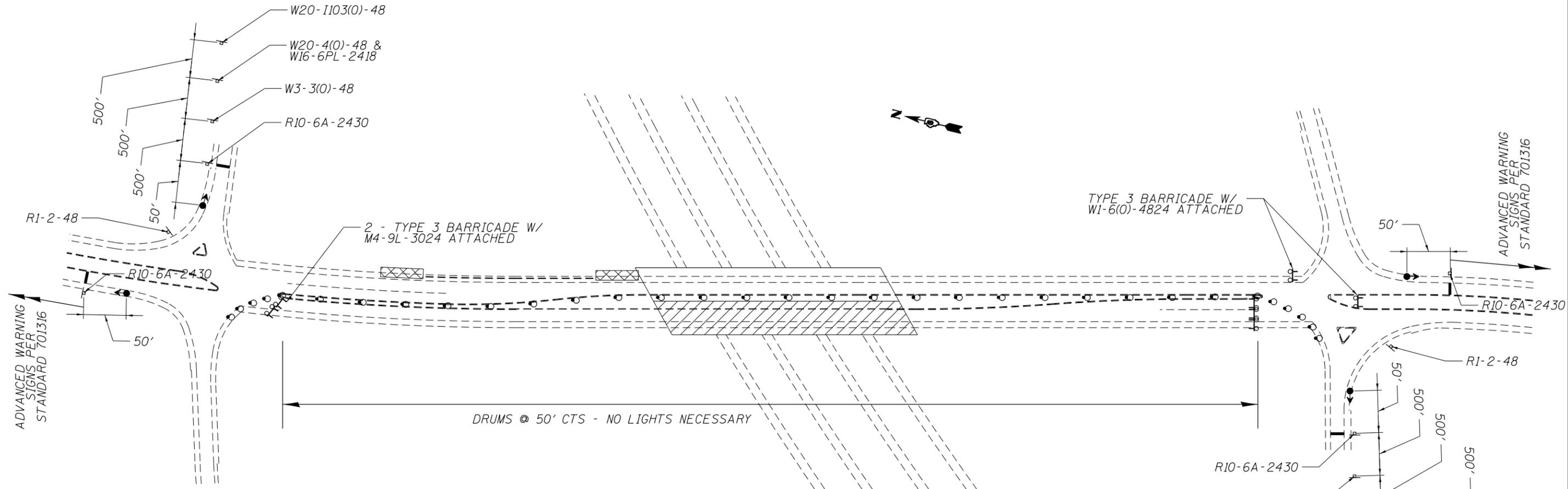
EXAMINED March 5 20 19

 ENGINEER OF PROGRAM DEVELOPMENT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
50102400	CONCRETE REMOVAL	CU YD	7	7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	7	7
50300300	PROTECTIVE COAT	SQ YD	31	31
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	730	730
50800515	BAR SPLICERS	EACH	8	8
52000110	PREFORMED JOINT STRIP SEAL	FOOT	144	144
67100100	MOBILIZATION	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70400100	TEMPORARY CONCRETE BARRIER WALL	FOOT	100	100
70400200	RELOCATE TEMPORARY CONCRETE BARRIER WALL	FOOT	100	100
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1
X7010200	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 (SPECIAL)	EACH	1	1

MODEL: 02/10/18
 FILE: 02/10/18
 DESIGNED: J. P. M...
 DRAWN: J. P. M...
 CHECKED: J. P. M...
 DATE: 3/19/2019

REV. - MS



SYMBOLS

- WORK AREA
- SIGN
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER WALL
- TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- TYPE III BARRICADE WITH FLASHING LIGHTS

SIGN INDEX

- R10-6A-2430
- W3-3(O)-48
- W20-4(O)-48
- W16-6PL-2418
- W20-1103(O)-48
- R1-2-48
- W1-6(O)-4824
- M4-9L-3024

TRAFFIC CONTROL NOTES:

1. TRAFFIC CONTROL DEVICES NOT SHOWN IN THIS DETAIL SHALL BE PER STANDARD 701316. DEVICES AND TEMPORARY PAVEMENT MARKINGS SHOWN IN THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 (SPECIAL). IMPACT ATTENUATORS, TEMPORARY TRAFFIC SIGNALS, AND TEMPORARY CONCRETE BARRIER SHALL BE PAID SEPARATELY.
2. ALL EXISTING STOP SIGNS INSIDE THE WORK ZONE SHALL BE COVERED WHILE TRAFFIC SIGNALS ARE ACTIVE.
3. RUMBLE STRIPS SHOWN IN STANDARD 701316 WILL NOT BE REQUIRED.
4. STOP BARS SHOWN SHALL BE 24" WIDE.
5. IMPACT ATTENUATORS AND TEMPORARY CONCRETE BARRIER SHALL BE PLACED SUCH THAT ALL REQUIRED PINNING/SECURING SHALL OCCUR ON THE HMA SHOULDERS AND NOT THE CONCRETE BRIDGE DECK.

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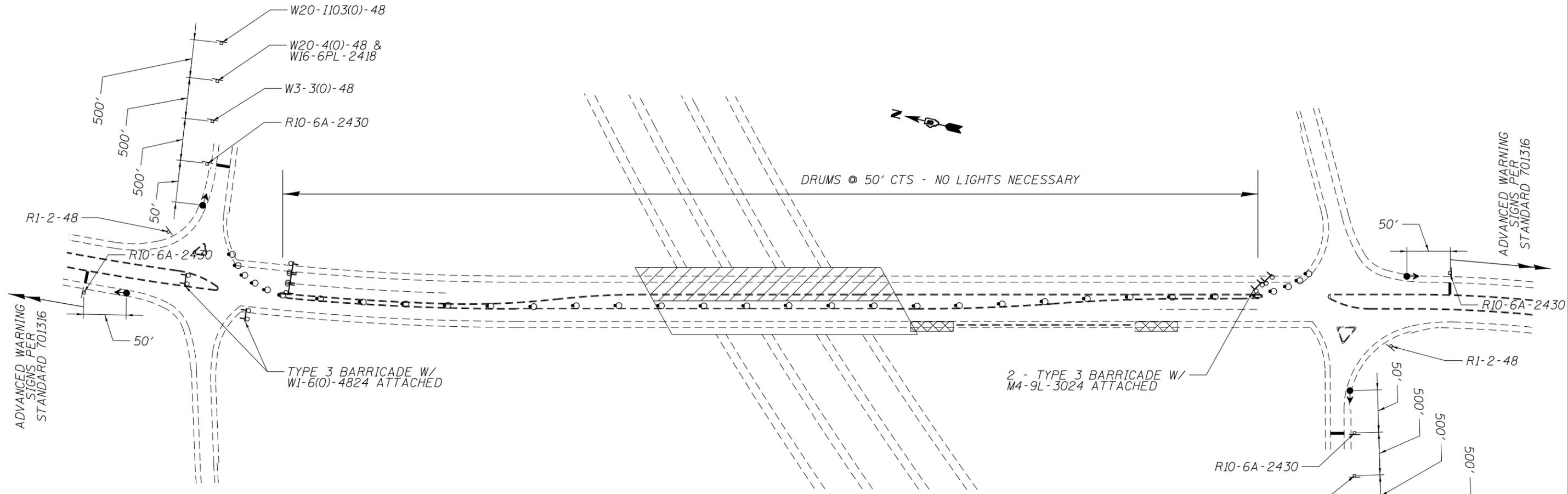
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	DATE -	REVISOR -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE I TRAFFIC CONTROL PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-2) BJR	LOGAN	10	3
CONTRACT NO. 72L15				
ILLINOIS FED. AID PROJECT				



SYMBOLS

- WORK AREA
- SIGN
- IMPACT ATTENUATOR
- TEMPORARY CONCRETE BARRIER WALL
- TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- TYPE III BARRICADE WITH FLASHING LIGHTS

SIGN INDEX

- R10-6A-2430
- W3-3(O)-48
- W20-4(O)-48
- W16-6PL-2418
- W20-1103(O)-48
- R1-2-48
- W1-6(O)-4824
- M4-9L-3024

TRAFFIC CONTROL NOTES:

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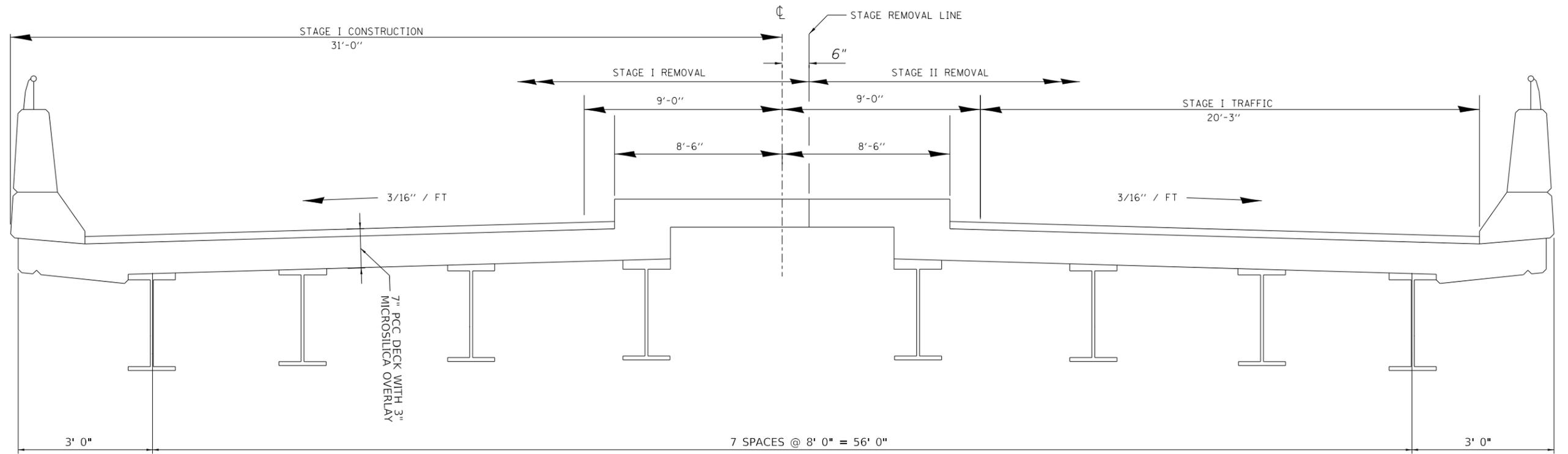
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

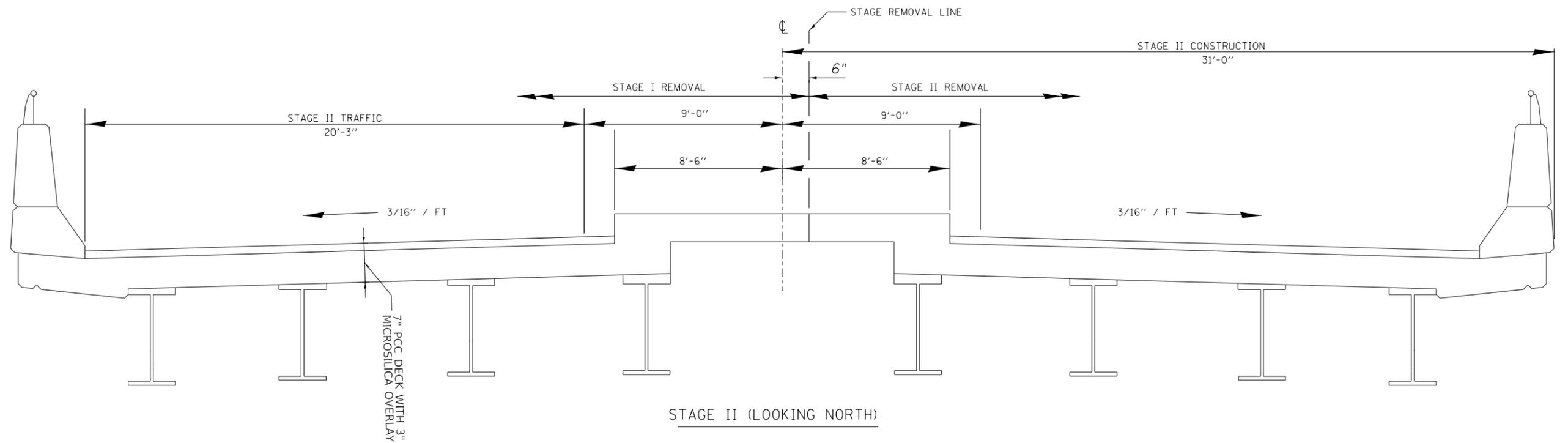
STAGE II TRAFFIC CONTROL PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-2) BJR	LOGAN	10	4
CONTRACT NO. 72L15				
ILLINOIS FED. AID PROJECT				



STAGE I (LOOKING NORTH)



STAGE II (LOOKING NORTH)

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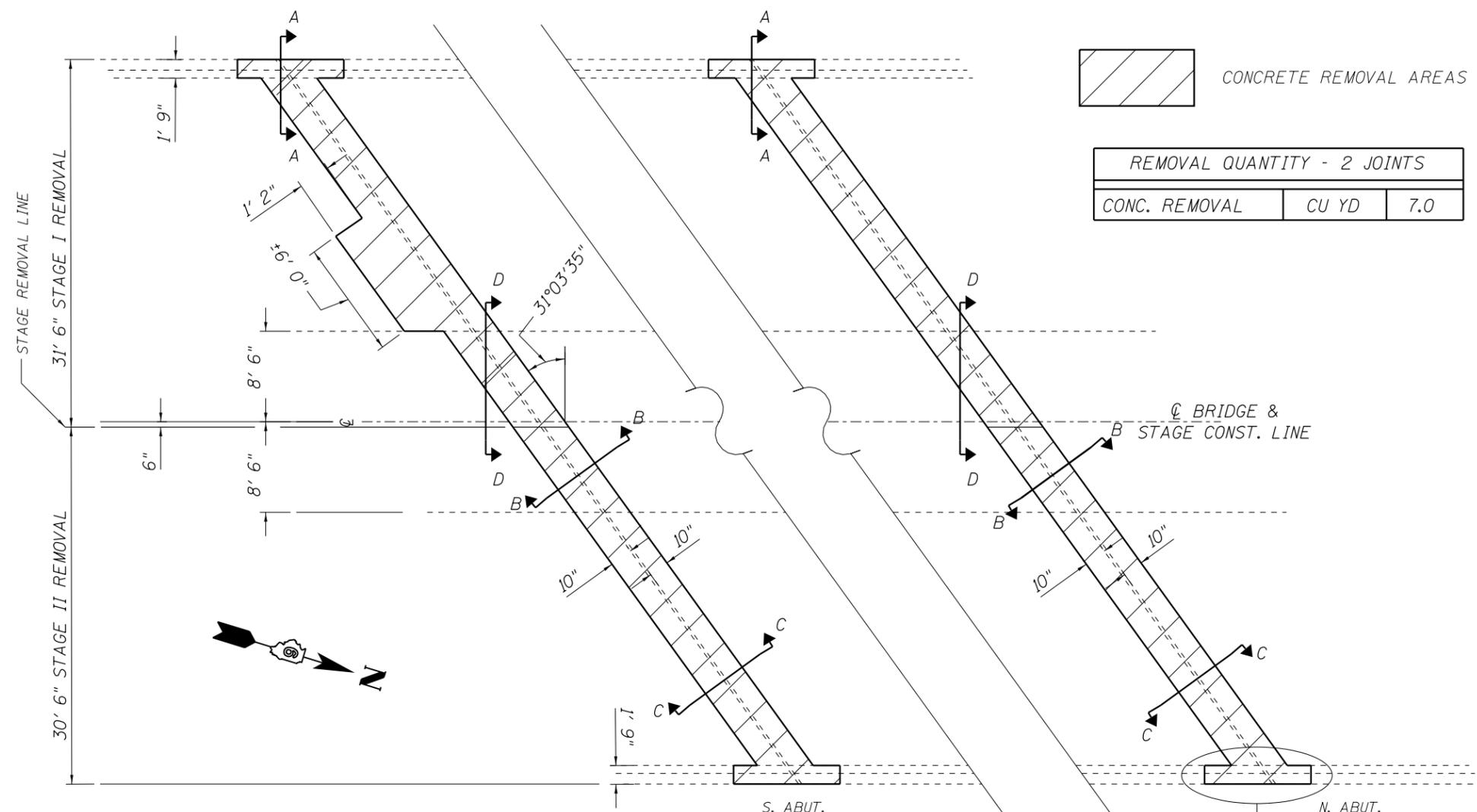
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAIL
SN 054-0039

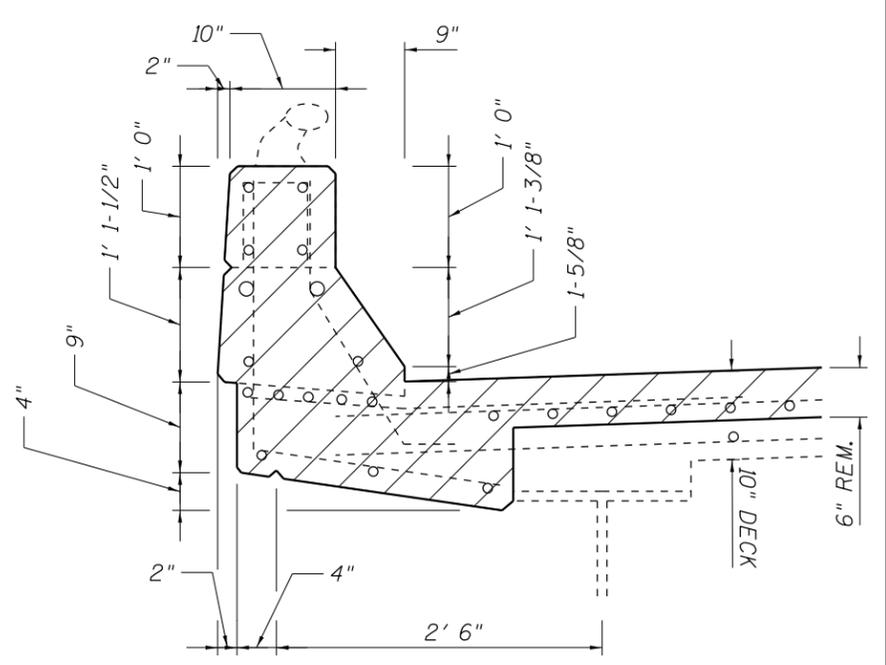
SCALE: SHEET 2 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72L15				
ILLINOIS FED. AID PROJECT				

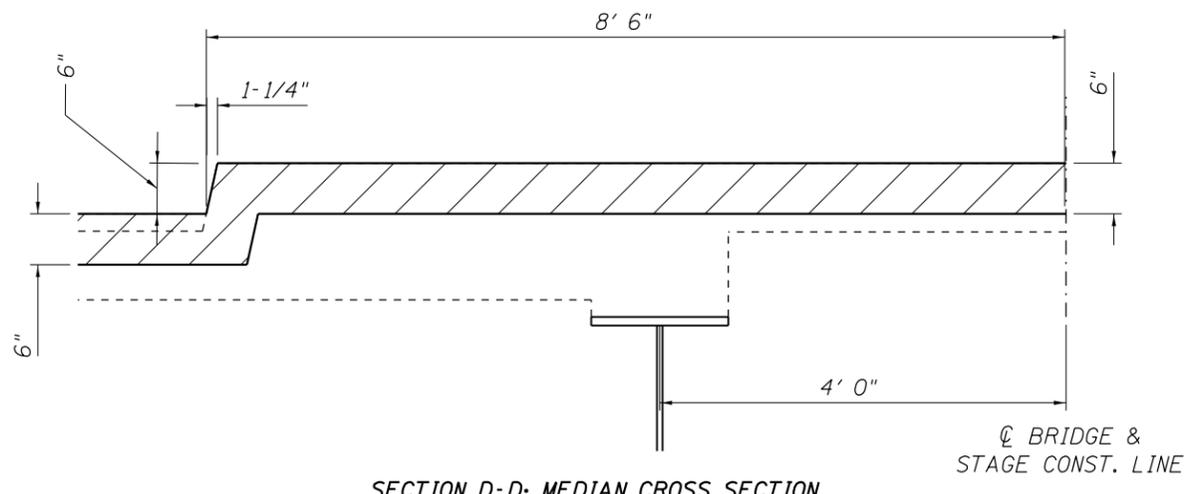


CONCRETE REMOVAL AREAS

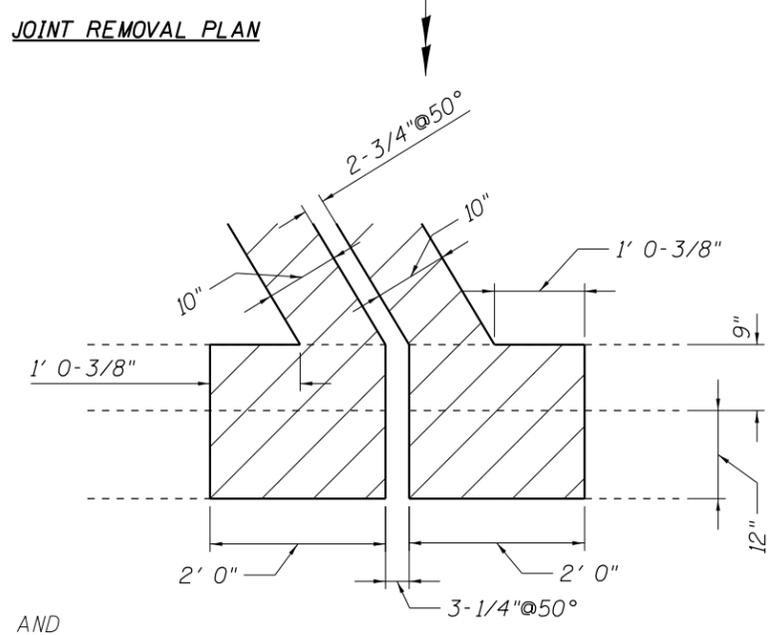
REMOVAL QUANTITY - 2 JOINTS		
CONC. REMOVAL	CU YD	7.0



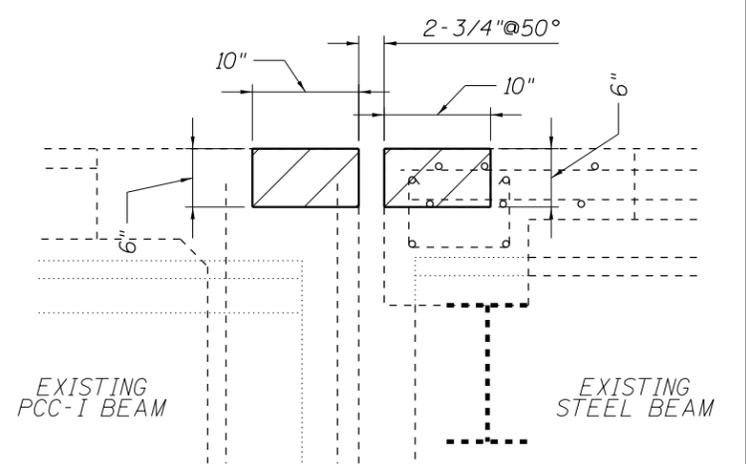
SECTION A-A: PARAPET CROSS SECTION



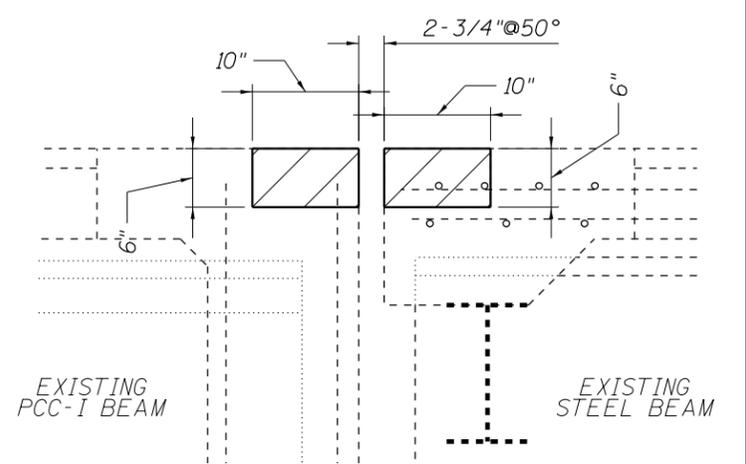
SECTION D-D: MEDIAN CROSS SECTION



PARAPET REMOVAL PLAN (TYPICAL)



SECTION B-B: JOINT CROSS SECTION (MEDIAN)



SECTION C-C: JOINT CROSS SECTION (DECK)

- NOTES:
- EXISTING JOINTS CONSIST OF EMBEDDED STEEL PLATES AND PREFORMED RUBBER SEALS. REMOVAL AND DISPOSAL OF THE EXISTING JOINTS SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
 - THE CONTRACTOR SHALL USE EXTEREME CARE DURING CONCRETE REMOVAL SO AS NOT TO DAMAGE PPC-I BEAMS.

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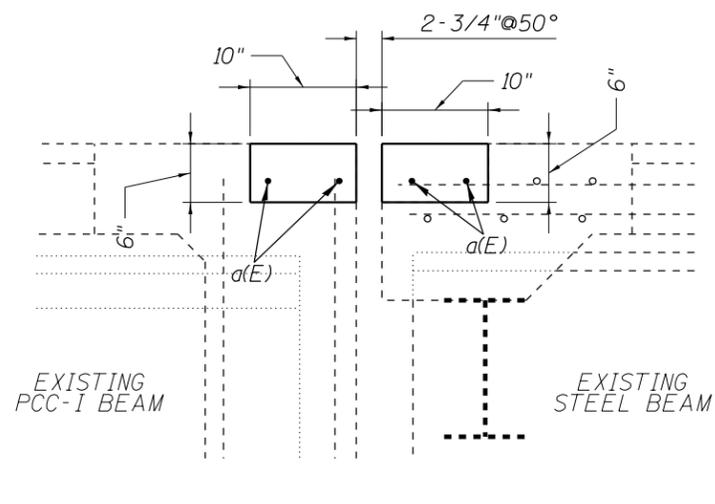
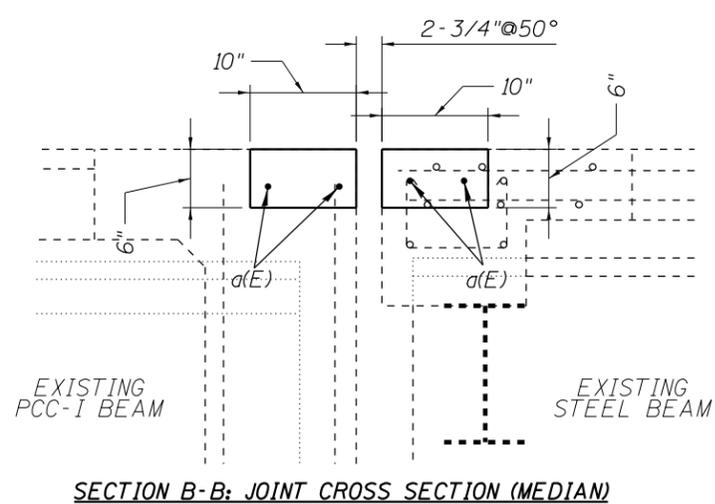
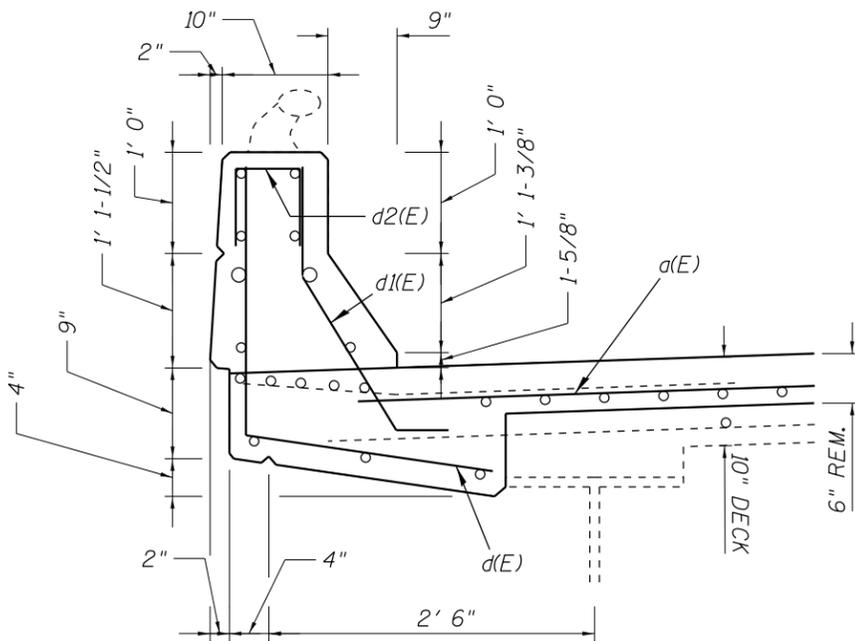
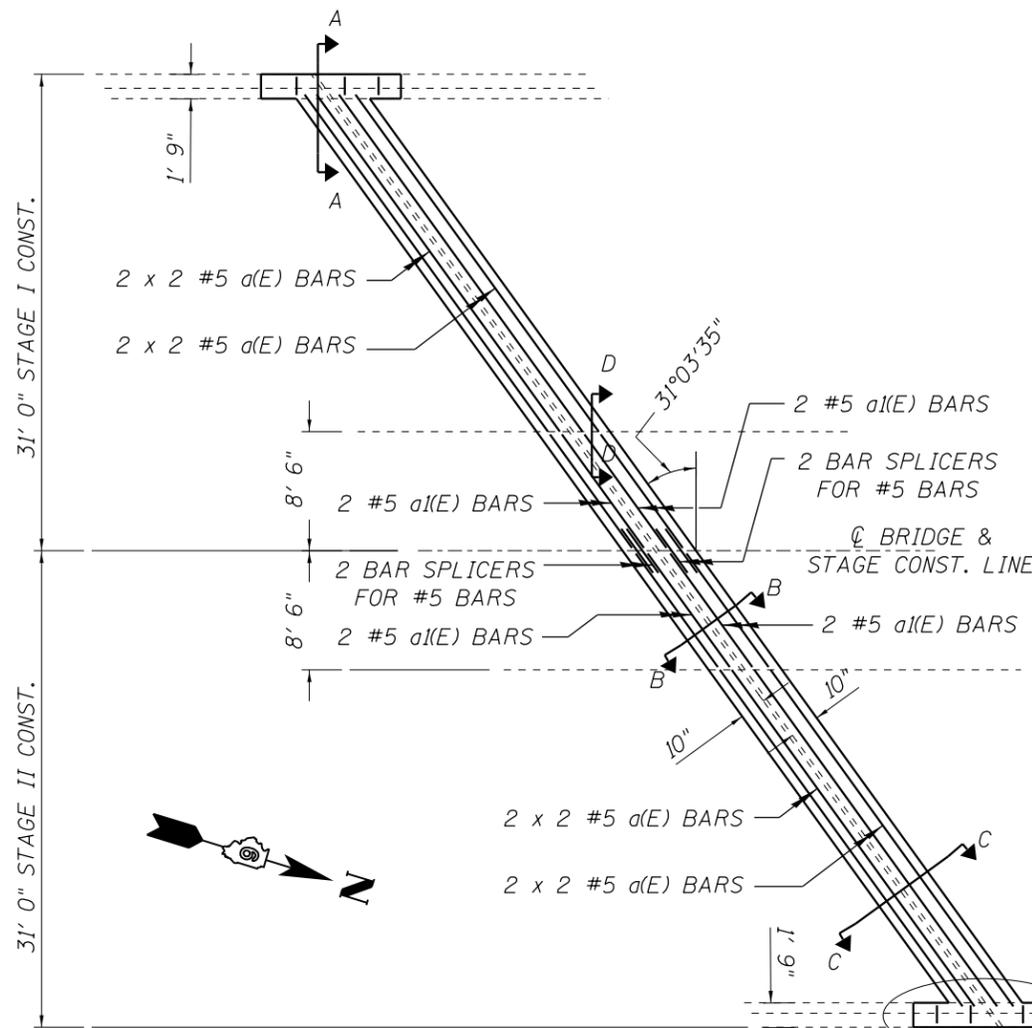
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PLOT DATE = 3/19/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL DETAILS
SN 054-0039

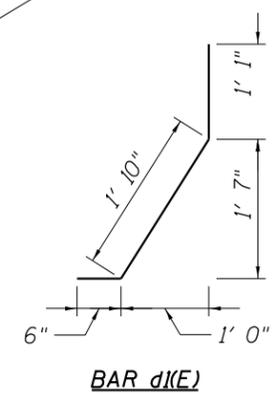
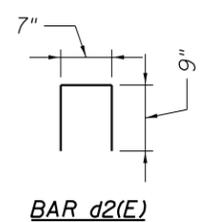
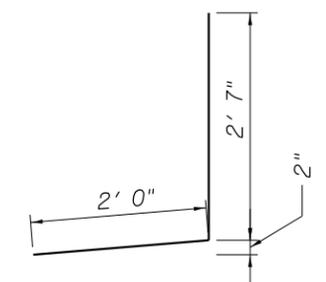
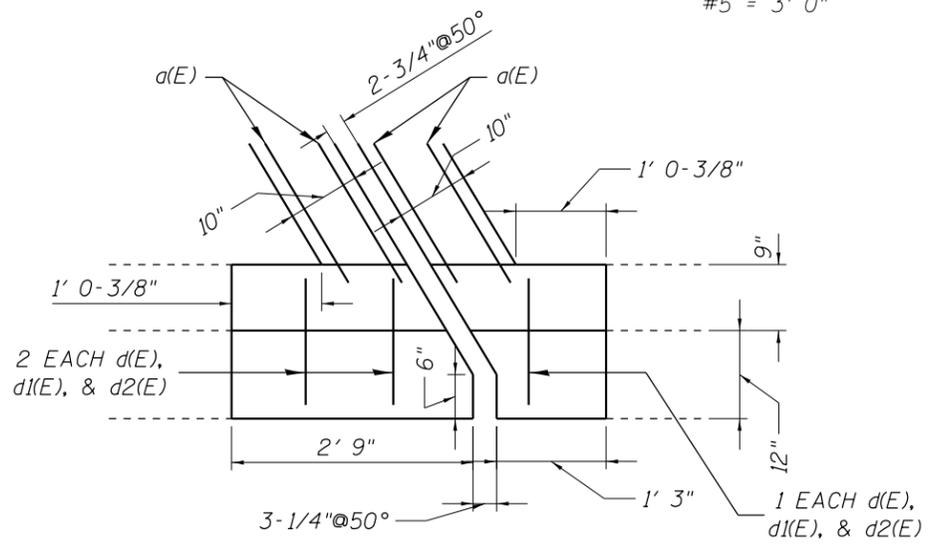
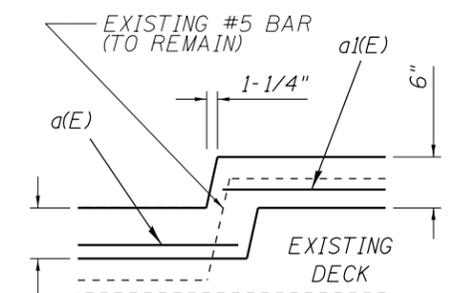
SCALE: SHEET 3 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-2) BIR	LOGAN	10	7
CONTRACT NO. 72L15				
ILLINOIS FED. AID PROJECT				



JOINT PLAN (NORTH JT. SHOWN, SOUTH JT. SIMILAR)

MIN. BAR LAP
#5 = 3' 0"



SECTION C-C: JOINT CROSS SECTION (DECK)

BILL OF MATERIAL - 2 JOINTS				
BAR	#	SIZE	LENGTH	SHAPE
a(E)	32	#5	14' 1"	—
a1(E)	16	#5	9' 4"	—
d(E)	12	#4	4' 7"	J
d1(E)	12	#5	3' 5"	J
d2(E)	12	#4	2' 1"	□
REINFORCEMENT BARS (EPOXY COATED)			POUND	730
CONC. SUPERSTRUCTURE			CU YD	7.0

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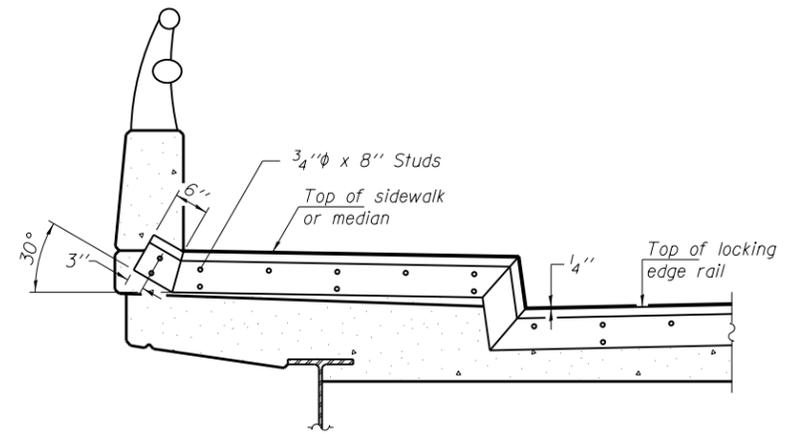
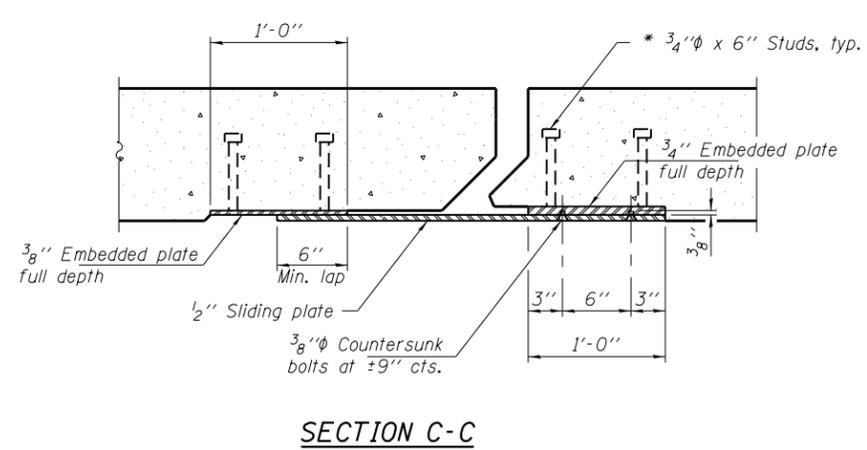
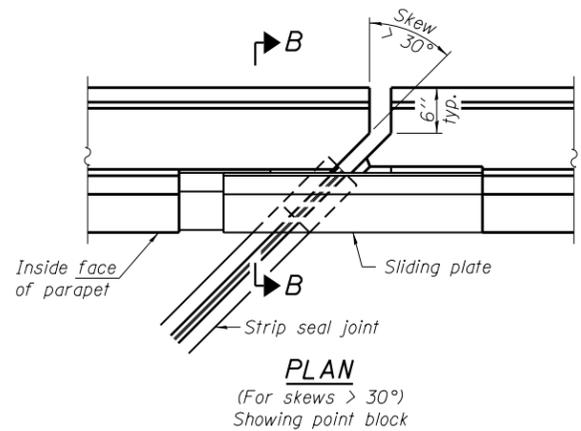
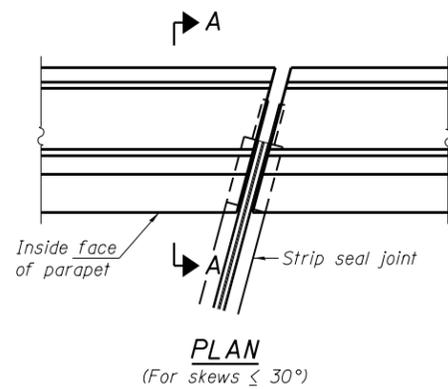
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL DETAILS
SN 054-0039

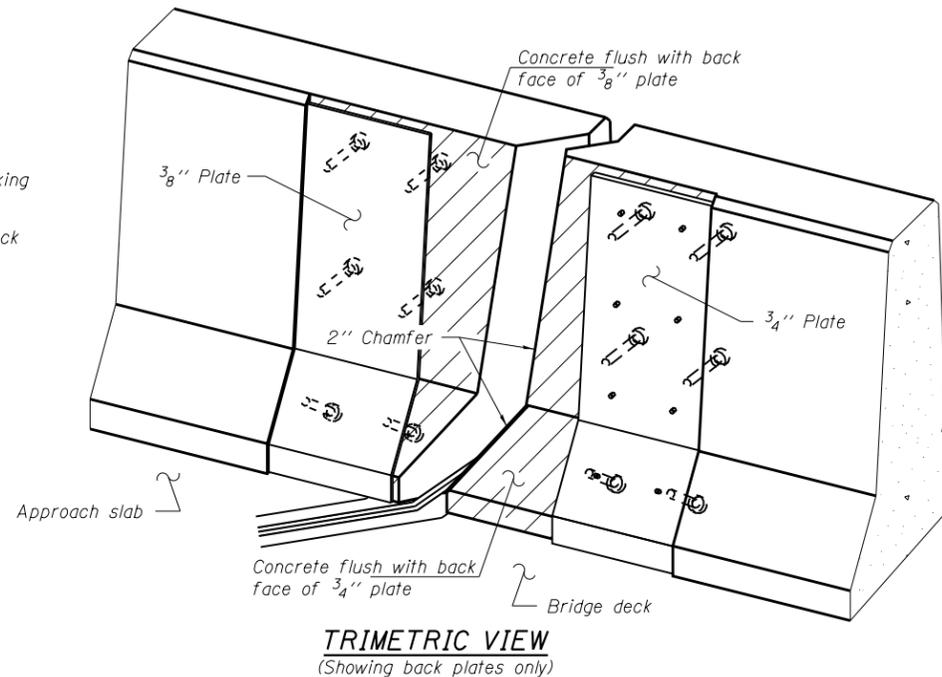
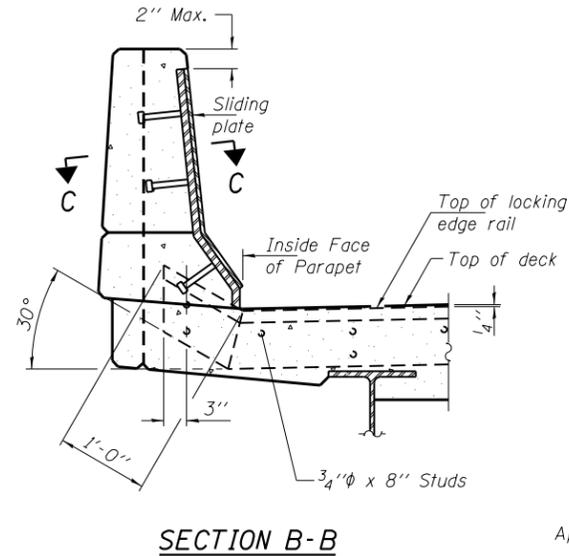
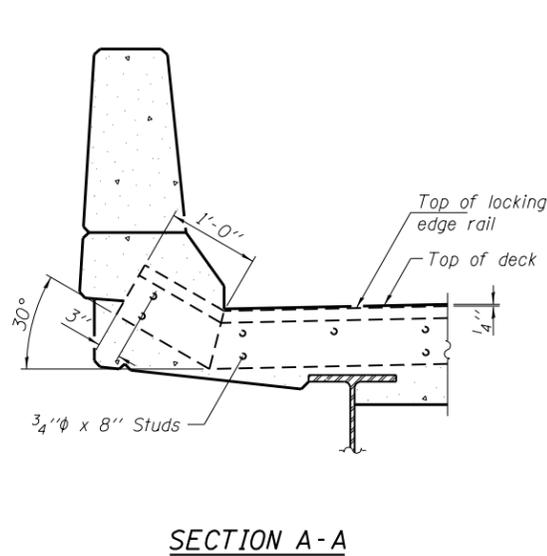
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-2) BIR	LOGAN	10	8
CONTRACT NO. 72L15				
ILLINOIS FED. AID PROJECT				



TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12 inch cts. may be necessary on medians which are shallower than 9 inch. See manufacturer's recommendation.



Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4 inch. 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 inch maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

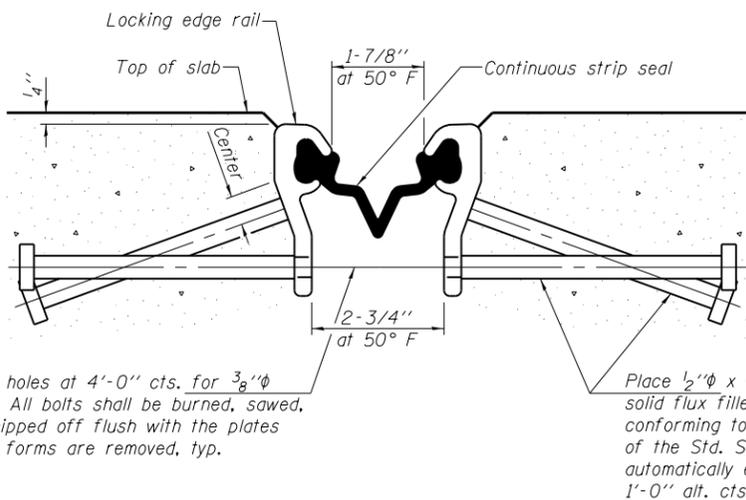
The manufacturer's recommended installation methods shall be followed.

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

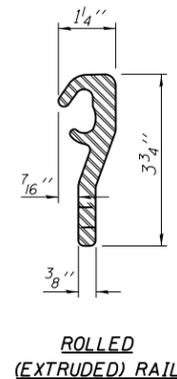
The Maximum space between locking edge rail segments shall be 3/16 inch and sealed with a suitable sealant; however, any rail joint within 10 feet measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

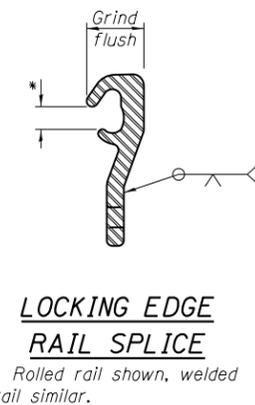
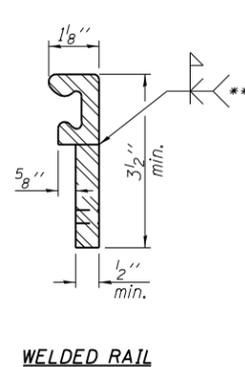
34 inch F-shape barrier shown, 42 inch F-shape similar as noted. The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



SECTION THRU STRIP SEAL JOINT



LOCKING EDGE RAIL



* Omit weld at seal opening.

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	144

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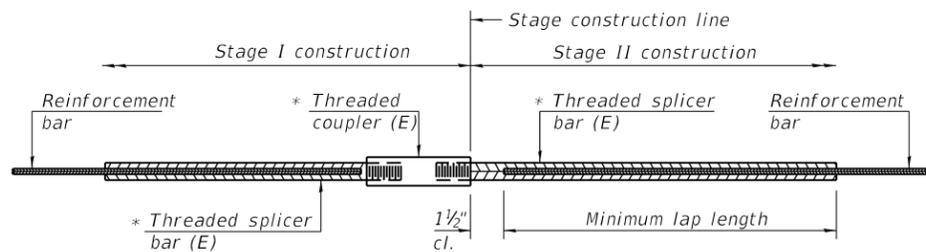
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL DETAILS
SN 054-0039**

SCALE: SHEET 5 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-2) BIR	LOGAN	10	9
			CONTRACT NO. 72115	
		ILLINOIS	FED. AID PROJECT	

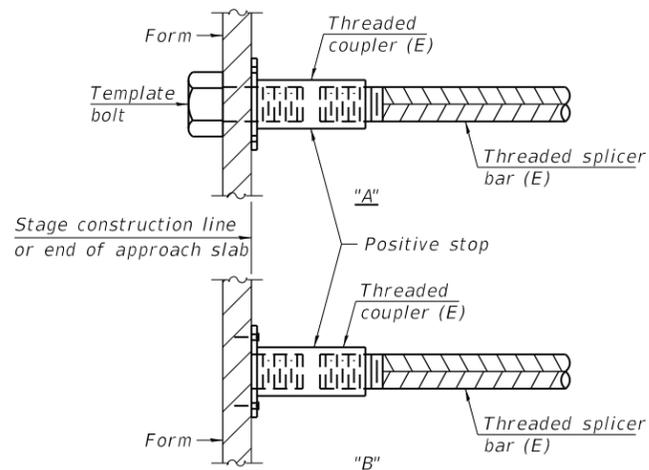


STANDARD BAR SPLICER ASSEMBLY

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

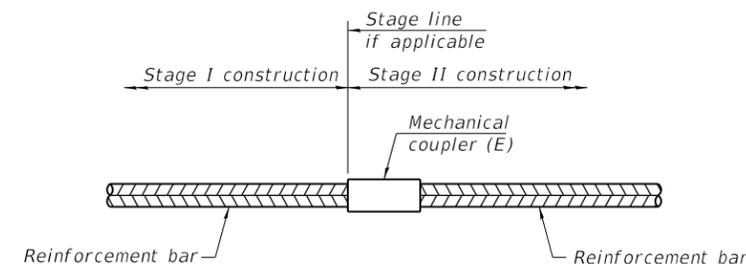
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
stage line (2 jts.)	#5	8	3' 0"



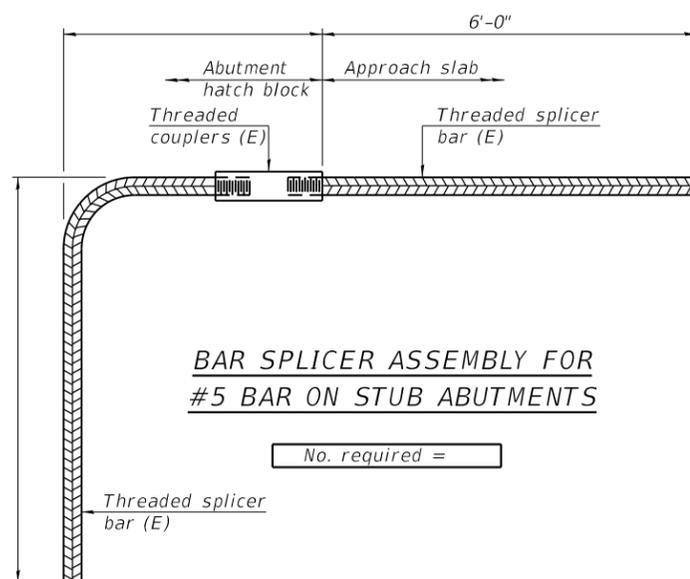
INSTALLATION AND SETTING METHODS

"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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. 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

2-17-2017

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USER NAME = dudleybm	DESIGNED -	REVISED -
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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 054-0039

SCALE: SHEET 6 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(54-2) BJR	LOGAN	10	10
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