06-14-2019 LETTING ITEM 107

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
172	(1-6) BJR	ADAMS	10	1
	ILLINOIS	CONTRACT NO 72L16		

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

FOR INDEX OF SHEETS, SEE SHEET NO.

PROPOSED
CONTRACT MAINTENANCE

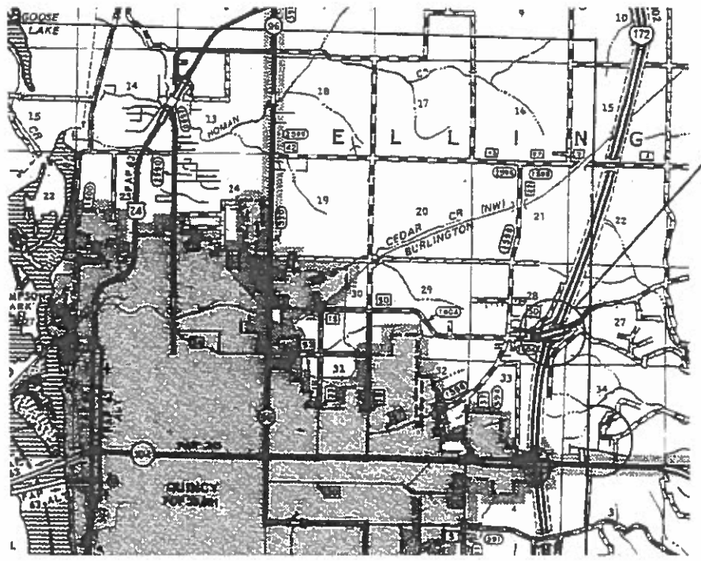
FAI ROUTE 172 (I–172)
SECTION (1–6) BJR

BRIDGE JOINT REPAIR
ADAMS COUNTY

C–96–052–19

D-96-038-19

LOCATION OF SECTION INDICATED THUS:–



PROJECT LOCATION
SN 001-0048
COLUMBUS RD OVER I-172
JUST EAST OF QUINCY

N

100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 22 March 2019

REGIONAL ENGINEER

May 10 2019

ENGINEER OF DESIGN AND ENVIRONMENT

May 10 2019

DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY – (217) 785–9290

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

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CONTRACT NO. 72L16

INDEX OF SHEETS

1 COVER SHEET
2 INDEX, STANDARDS, SIGNATURES, GENERAL NOTES, & SUMMARY OF QUANTITIES
3-4 TRAFFIC CONTROL PLAN
5-10 SN 001-0048 BRIDGE PLANS

STANDARDS

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

GENERAL NOTES:

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	0-02174-6003 SN 001-0048 100% STATE BRIDGE 0013 ADAMS
50102400	CONCRETE REMOVAL	CU YD	7.4	7.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	7.4	7.4
50300300	PROTECTIVE COAT	SQ FT	38	38
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	890	890
50800515	BAR SPLICERS	EACH	8	8
52000110	PREFORMED JOINT STRIP SEAL	FOOT	171	171
67100100	MOBILIZATION	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
X7010200	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 (SPECIAL)	EACH	1	1

REV. - MS

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	DRAWN -	REVISED -	
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PLOT DATE = 3/21/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

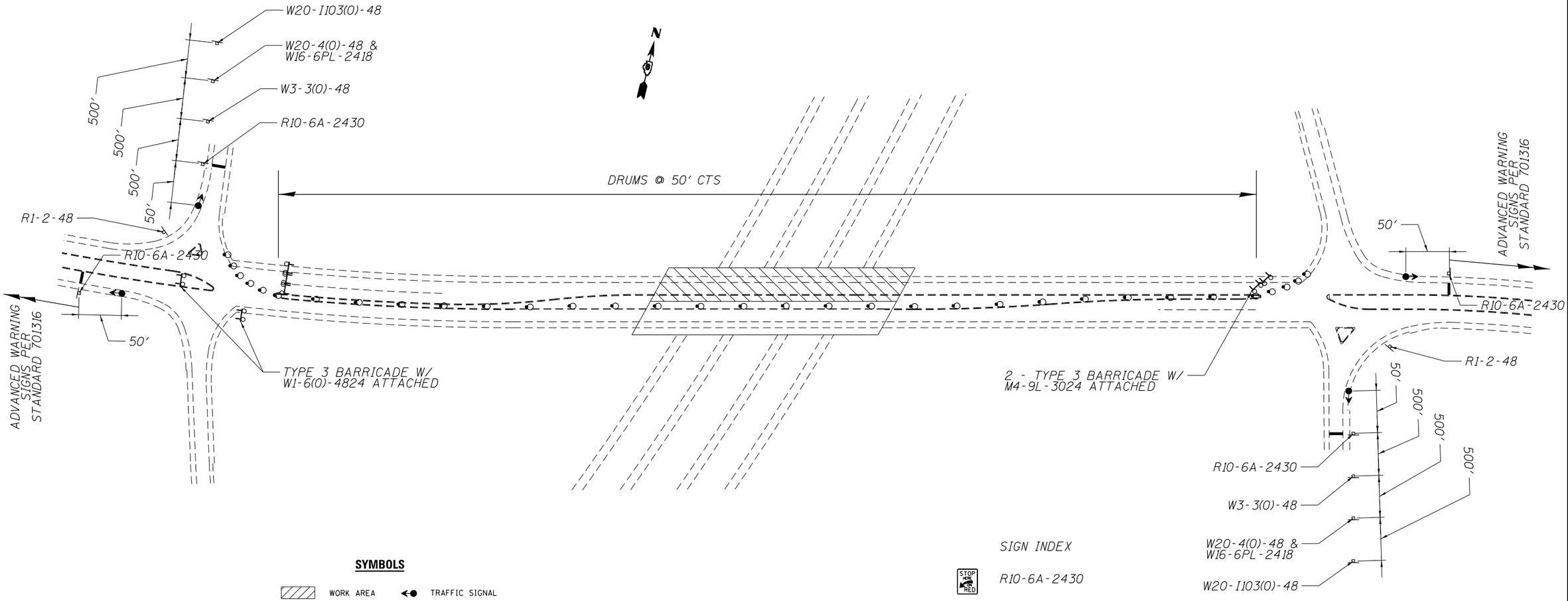
INDEX, STANDARDS, GENERAL NOTES, SIGNATURES, & SUMMARY OF QUANTITIES

SCALE ____ SHEET __ OF __ SHEETS STA ____ TO STA ____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
172	(1-6) BJR	ADAMS	10	2

CONTRACT NO. 72L16

ILLINOIS | FED. AID PROJECT



SYMBOLS

WORK AREA — TRAFFIC SIGNAL

SIGN — DRUM WITH STEADY BURNING LIGHT

TYPE III BARRICADE WITH FLASHING LIGHTS

SIGN INDEX

R10-6A-2430

W3-3(0)-48

W20-4(0)-48

W16-6PL-2418

W20-I103(0)-48

R1-2-48

W1-6(0)-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 AND TEMPORARY TRAFFIC SIGNALS 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.

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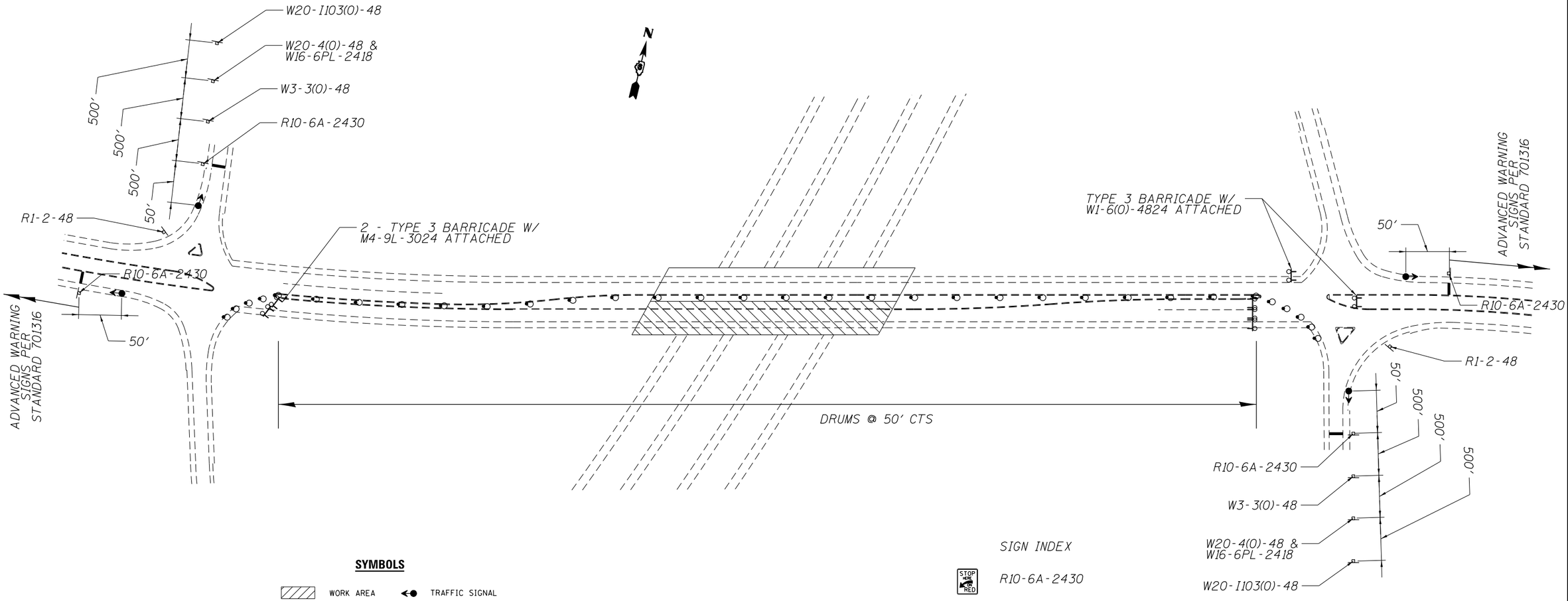
PLOT DATE = 3/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
172	(1-6) BJR	ADAMS	10	3
		CONTRACT NO. 72L16		
	ILLINOIS	FED. AID PROJECT		



SYMBOLS

WORK AREA	TRAFFIC SIGNAL
SIGN	DRUM WITH STEADY BURNING LIGHT
	TYPE III BARRICADE WITH FLASHING LIGHTS

SIGN INDEX

STOP HERE ON RED	R10-6A-2430
	W3-3(0)-48
ONE LANE ROAD AHEAD	W20-4(0)-48
	W16-6PL-2418
ROAD CONSTRUCTION AHEAD	W20-I103(0)-48
YIELD	R1-2-48
	W1-6(0)-4824
DETOUR	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 AND TEMPORARY TRAFFIC SIGNALS 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.*

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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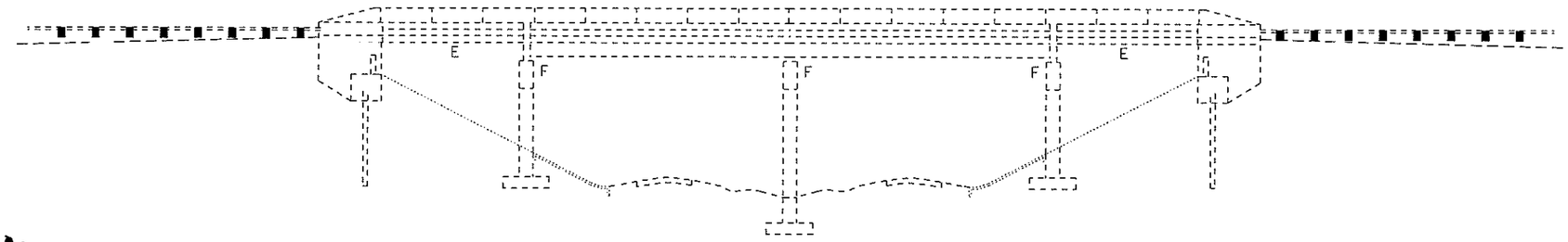
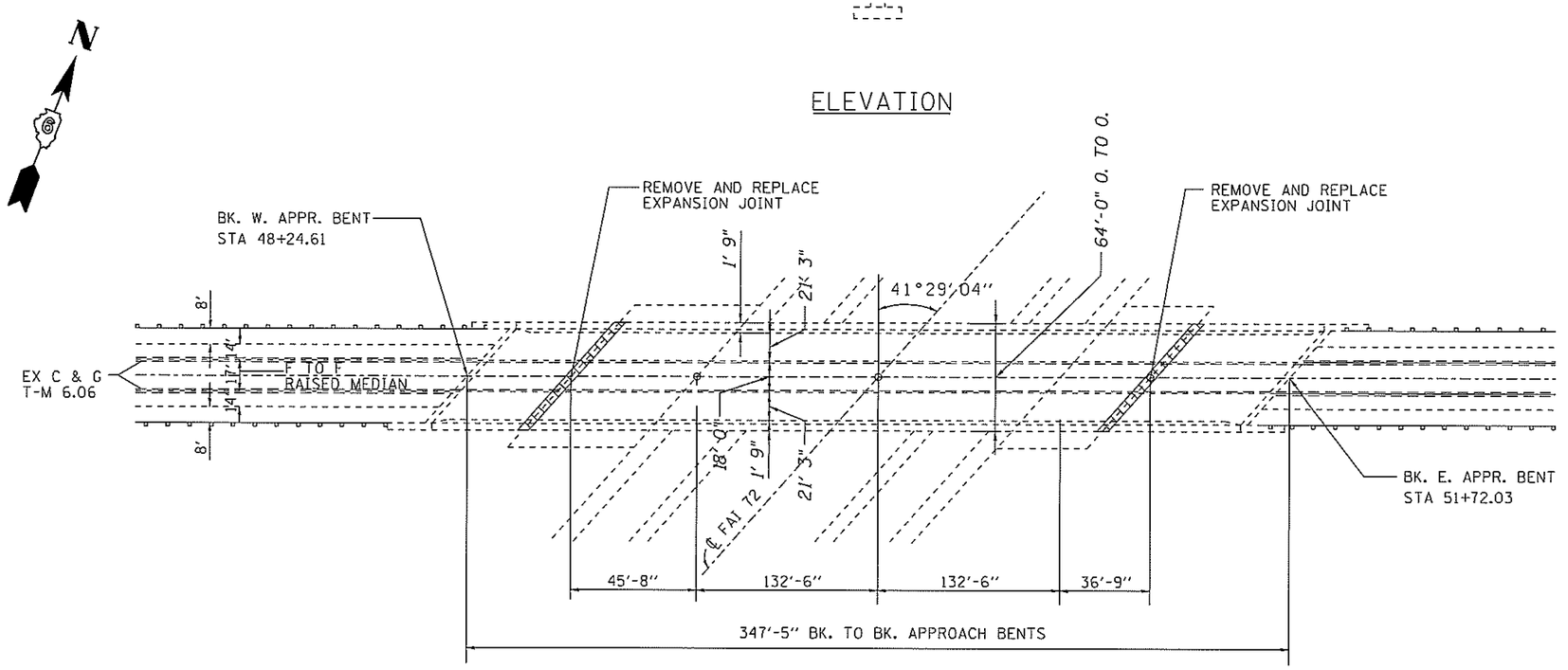
		CONTRACT NO. 72L16		
	ILLINOIS	FED. AID PROJECT		





DAVID CARL PUZEY
081.005470
LICENSED
STRUCTURAL
ENGINEER
OF
STATE OF ILLINOIS
5/9/19
Expires 11/30/20

STRUCTURE GENERAL NOTES:

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

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 THE SCOPE OF 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. 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.

THE ABUTMENT AND DECK SURFACES IN THE AREAS OF EXPANSION JOINT REPLACEMENT SHALL HAVE A TINED FINISH AS PER ARTICLE 420.09(e)(1) OF THE STANDARD SPECIFICATIONS. COST INCLUDED WITH CONCRETE SUPERSTRUCTURE.

PROTECTIVE COAT SHALL BE APPLIED TO THE NEW CONCRETE ON THE DECK AND PARAPETS ADJACENT TO THE PROPOSED EXPANSION JOINTS.

TOTAL BILL OF MATERIAL (001-0048)

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	7.4
Concrete Superstructure	Cu. Yd.	7.4
Reinforcement Bars, Epoxy Coated	Pound	890
Bar Splicers	Each	8
Preformed Joint Strip Seal	Foot	171
Protective Coat	Sq. Yd.	38

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
SN 001-0048

SCALE: | SHEET 1 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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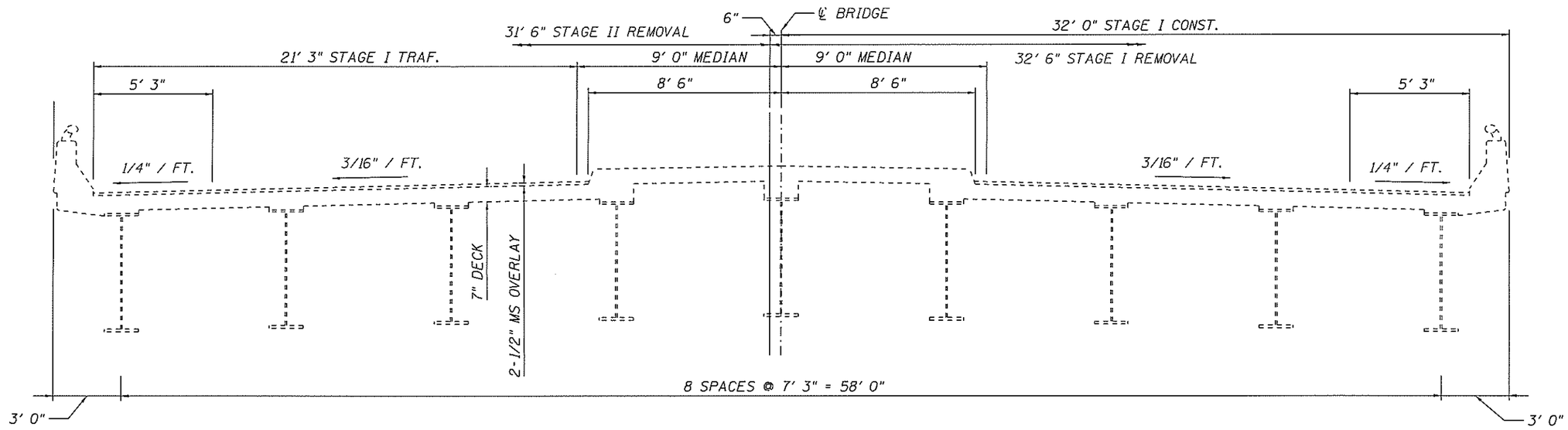
		CONTRACT NO. 72L16		
	ILLINOIS	FED. AID PROJECT		



STAGE I CROSS SECTION (LOOKING WEST)

STAGE II CROSS SECTION (LOOKING WEST)

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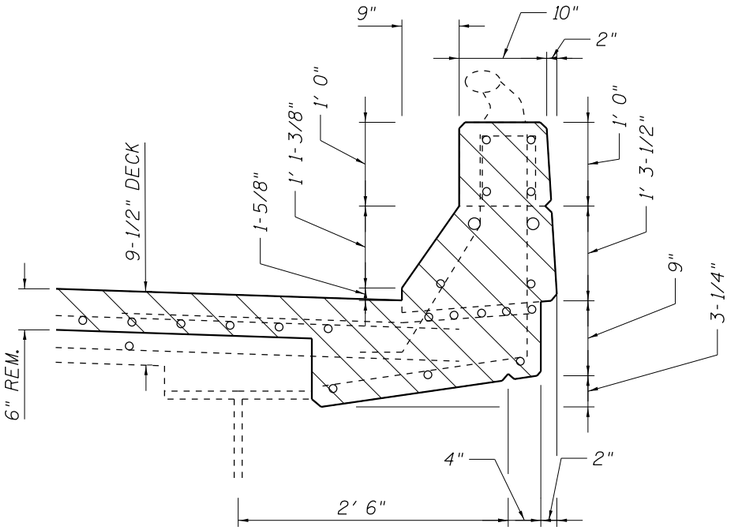
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

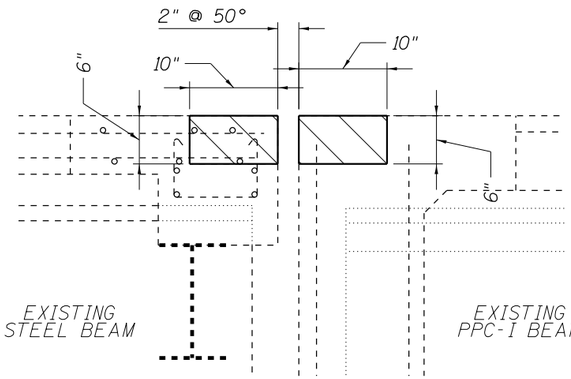
STAGING PLAN
SN 001-0048

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

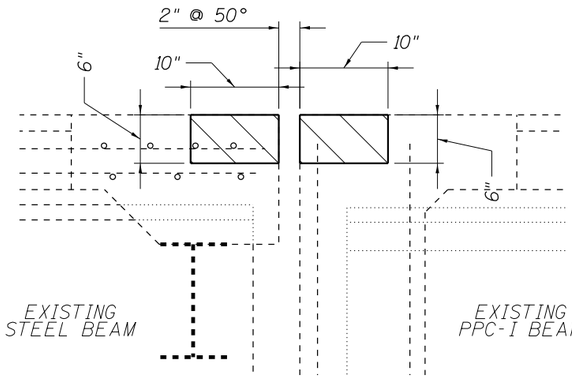
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
172	(1-6) BJR	ADAMS	10	6
		CONTRACT NO. 72L16		
	ILLINOIS	FED. AID PROJECT		



SECTION A-A: PARAPET CROSS SECTION



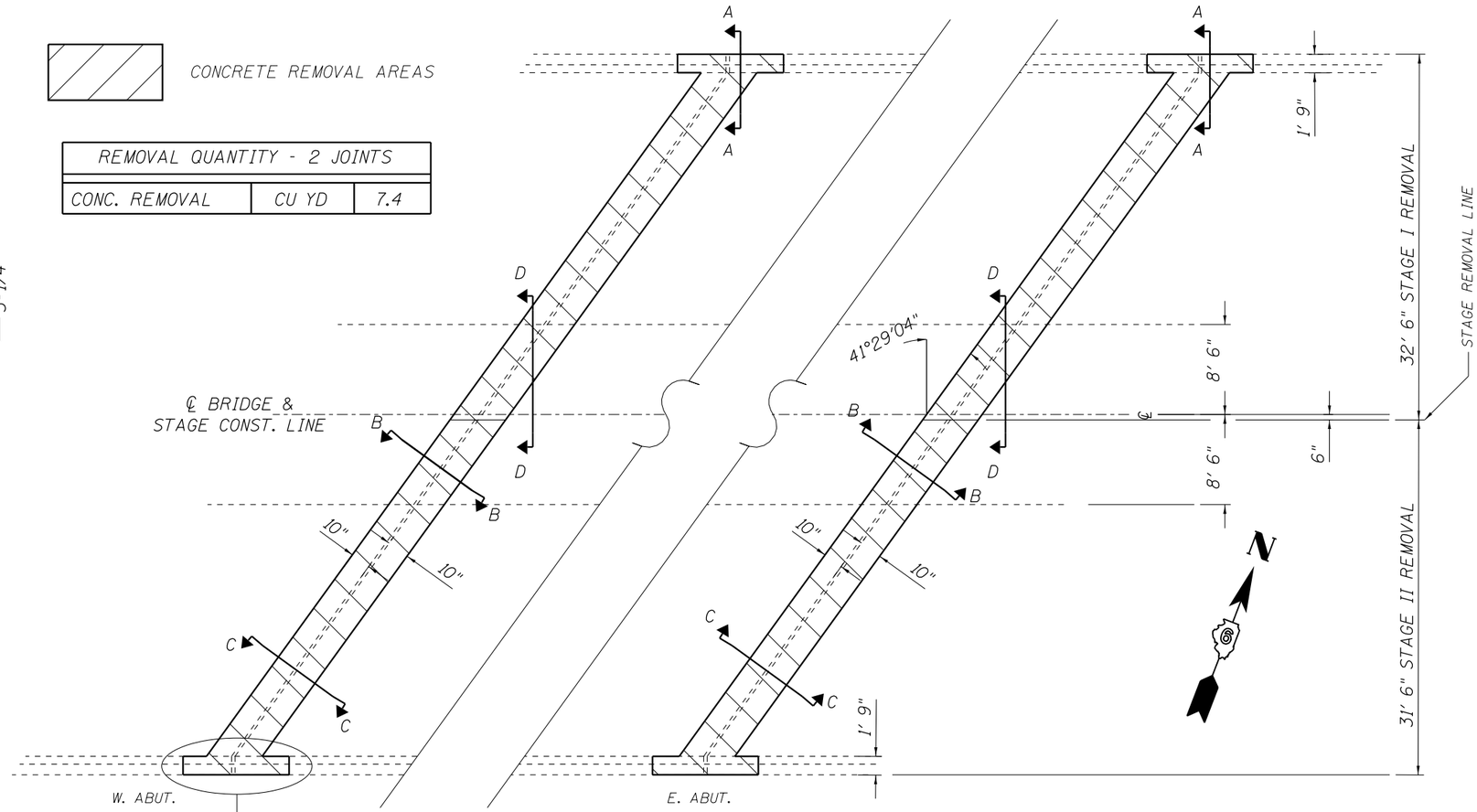
SECTION B-B: JOINT CROSS SECTION (MEDIAN)



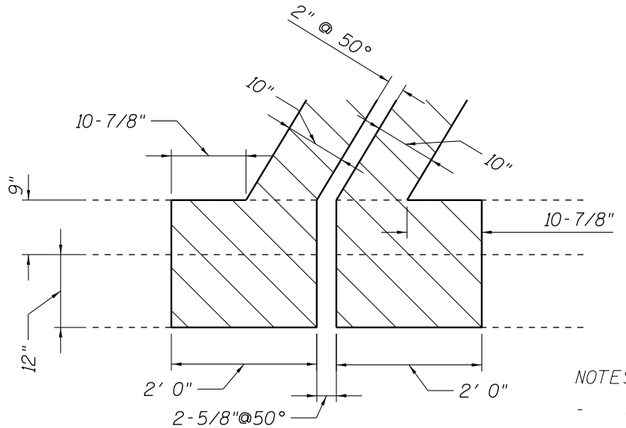
SECTION C-C: JOINT CROSS SECTION (DECK)

CONCRETE REMOVAL AREAS

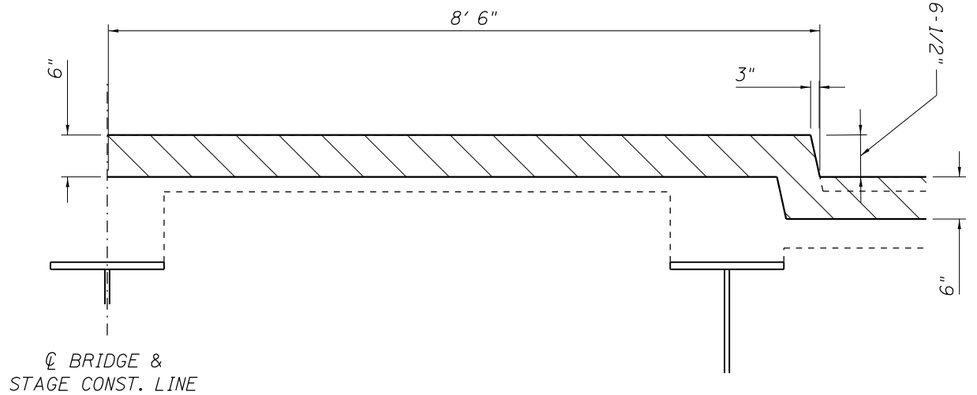
REMOVAL QUANTITY - 2 JOINTS		
CONC. REMOVAL	CU YD	7.4



JOINT REMOVAL PLAN



PARAPET REMOVAL PLAN (TYPICAL)



SECTION D-D: MEDIAN CROSS SECTION

NOTES:

- EXISTING JOINTS CONSIST OF POLYMER CONCRETE AND SILICONE 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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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
SN 001-0048

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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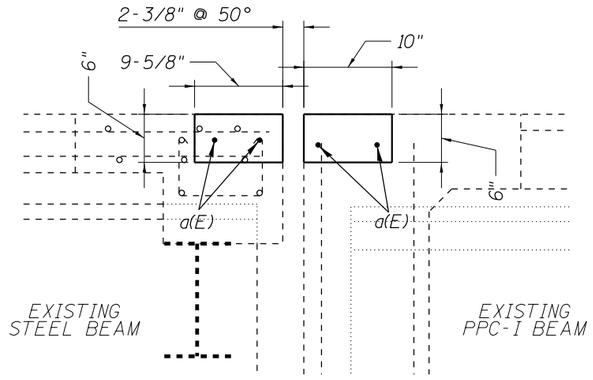
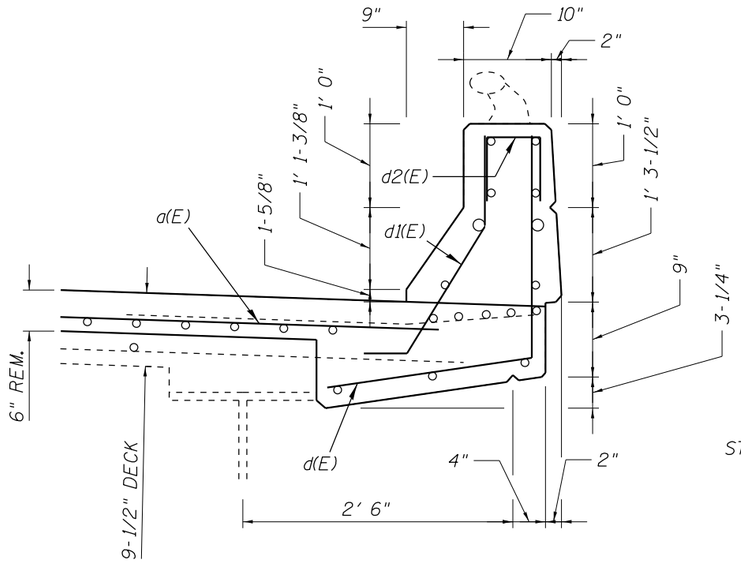
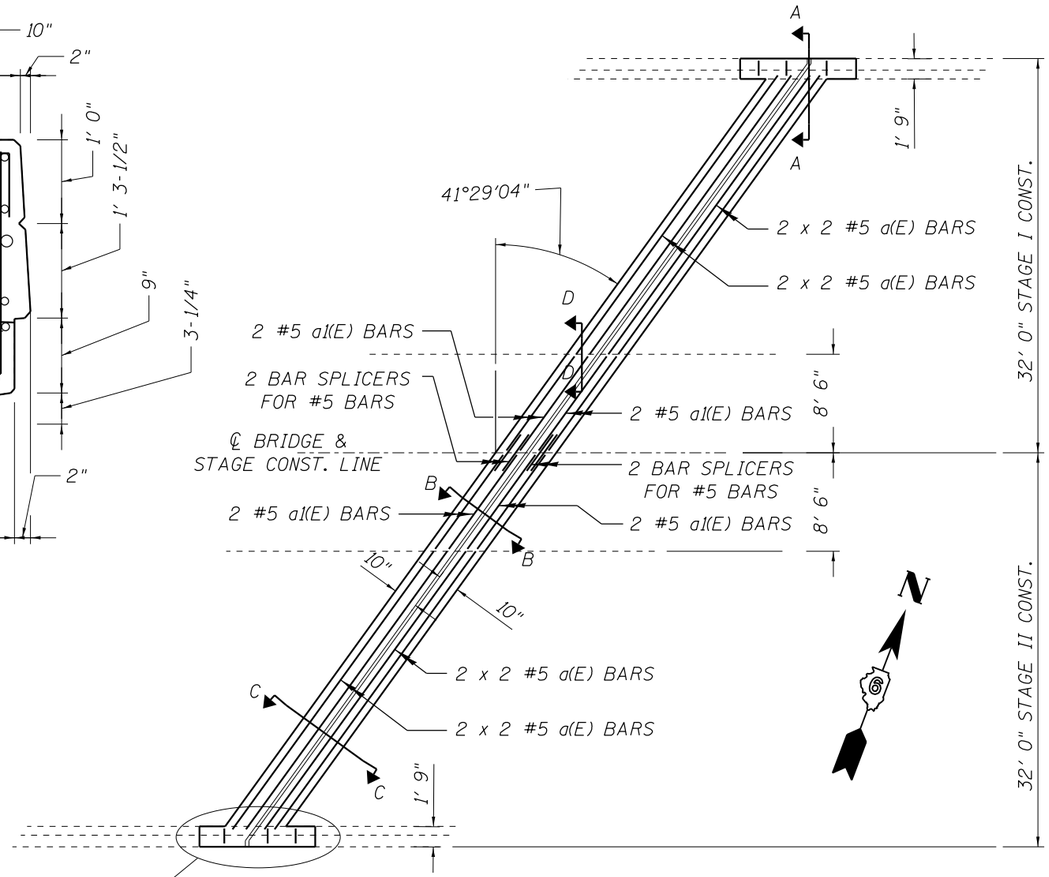
		CONTRACT NO. 72L16		
		ILLINOIS	FED. AID PROJECT	



SECTION B-B: JOINT CROSS SECTION (MEDIAN)

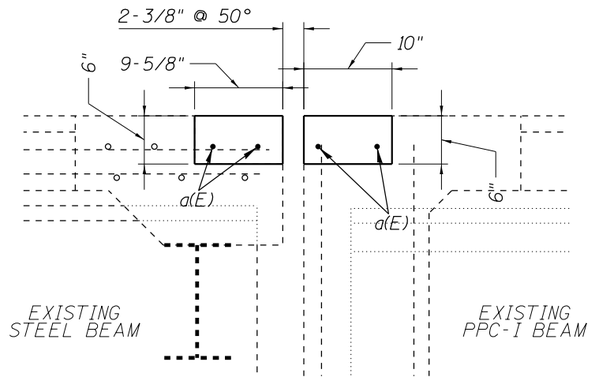


SECTION A-A: PARAPET CROSS SECTION

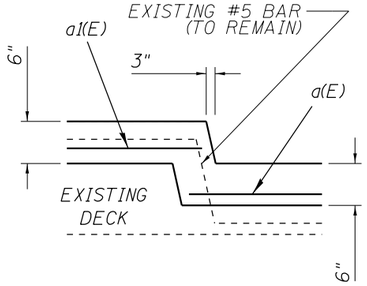


JOINT PLAN (EAST JT. SHOWN, WEST JT. SIMILAR)

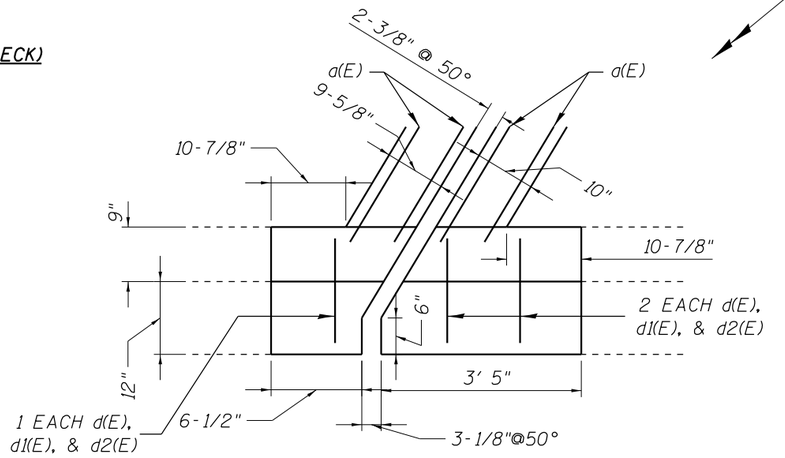
MIN. BAR LAP
#5 = 3' 0"



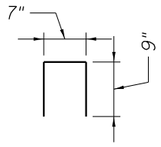
SECTION C-C: JOINT CROSS SECTION (DECK)



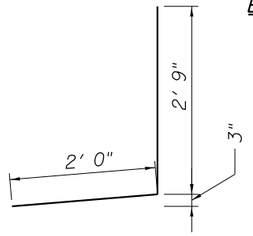
SECTION D-D: MEDIAN CURB CROSS SECTION (TYPICAL)



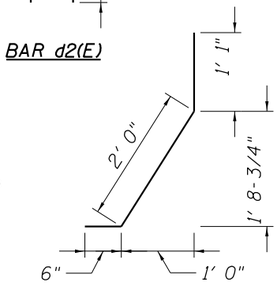
PARAPET PLAN (TYPICAL)



BAR d2(E)



BAR d(E)



BAR d1(E)

BILL OF MATERIAL - 2 JOINTS				
BAR	#	SIZE	LENGTH	SHAPE
d(E)	32	#5	18' 0"	——
a1(E)	16	#5	11' 2"	——
d(E)	12	#4	4' 9"	⌊
d1(E)	12	#5	3' 7"	⌋
d2(E)	12	#4	2' 1"	⊓
REINFORCEMENT BARS (EPOXY COATED)		POUND	890	
CONC. SUPERSTRUCTURE		CU YD	7.4	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT PLAN
SN 001-0048

SCALE: | SHEET 4 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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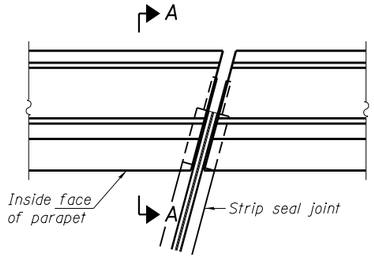
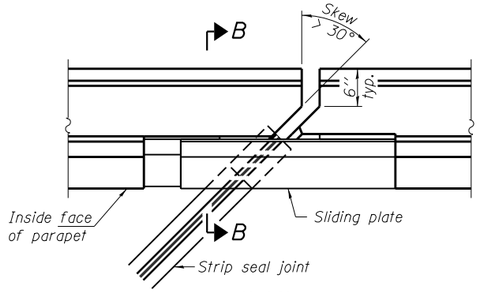
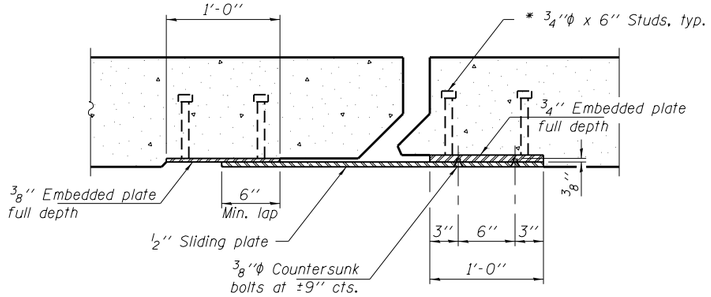
		CONTRACT NO. 72L16		
	ILLINOIS	FED. AID PROJECT		



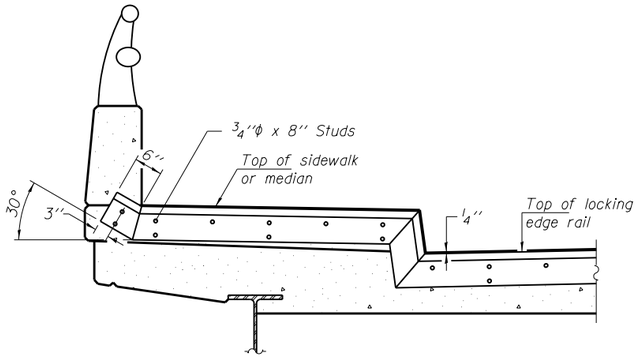
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

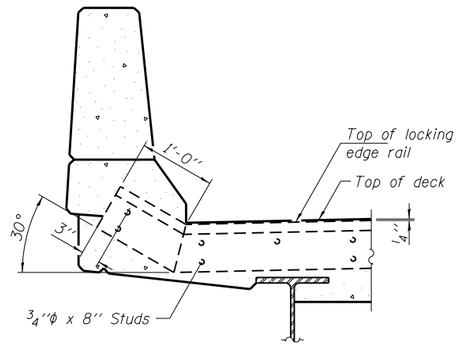


SECTION C-C

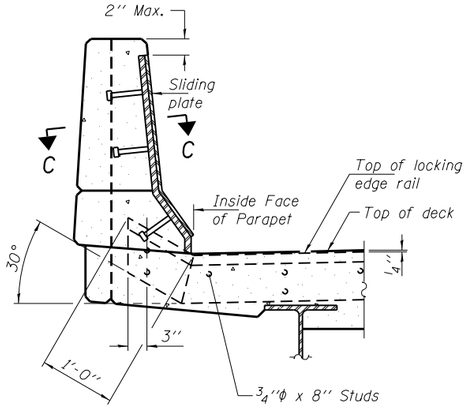


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

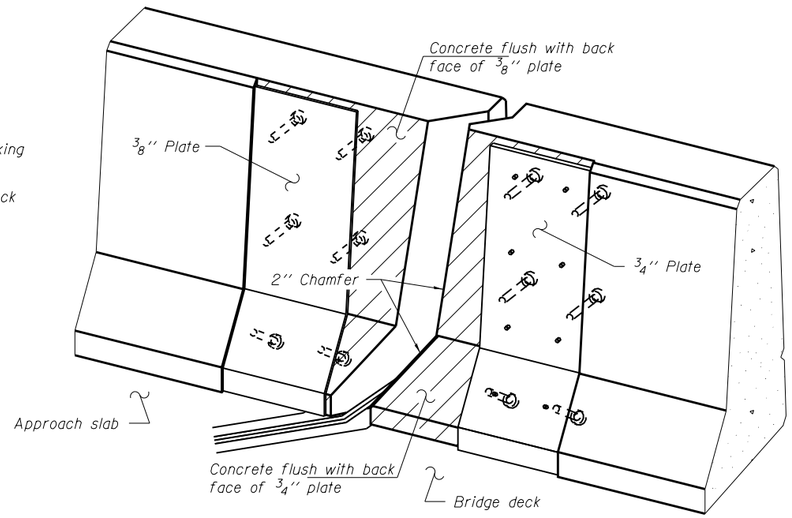
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

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

The manufacturer's recommended installation methods shall be followed.

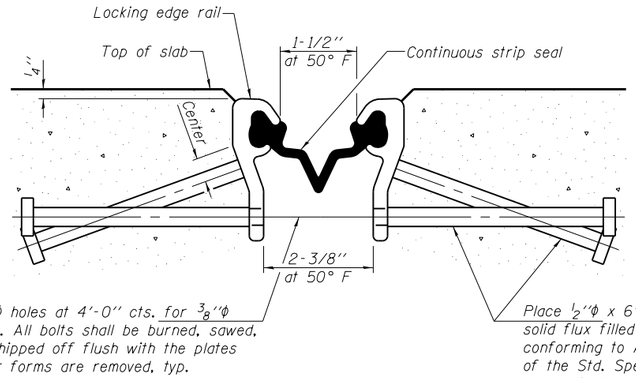
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

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

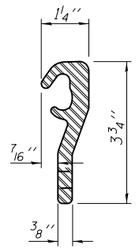
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

34" F-shape barrier shown, 42" F-shape similar as noted.

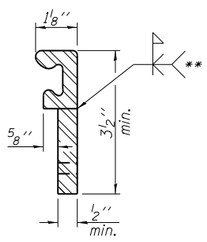
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to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



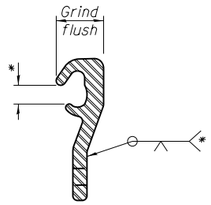
SECTION THRU STRIP SEAL JOINT



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

Rolled rail shown, welded rail similar.

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	171

MODEL: Default
FILE NAME: c:\OPERATIONS\Bridges\Bridgeplans_CAD\72L16 - 0010048 joints\plansheet.dgn

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	DRAWN -	REVISED -	
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PLOT DATE = 3/21/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
SN 001-0048

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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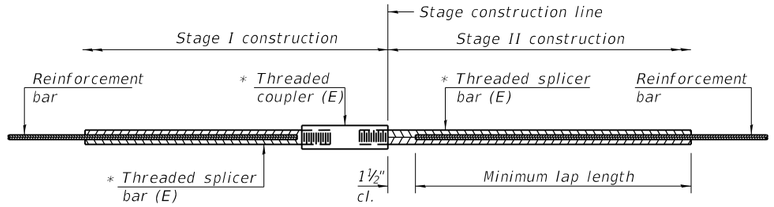
		CONTRACT NO. 72L16		
	ILLINOIS	FED. AID PROJECT		

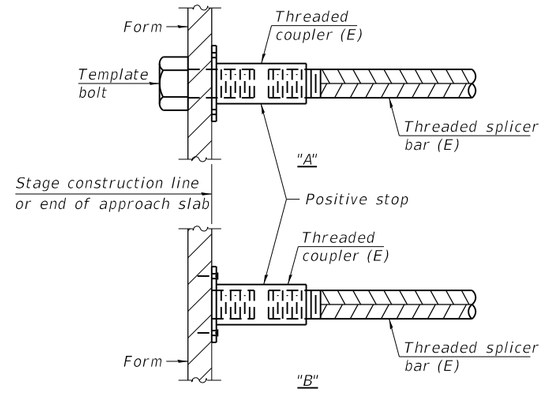


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1½" + thread length

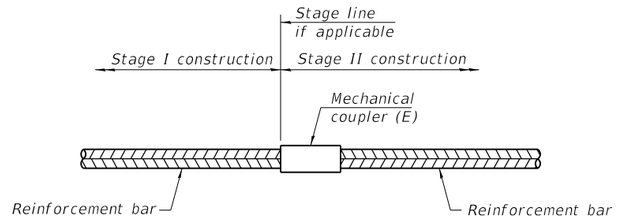
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

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



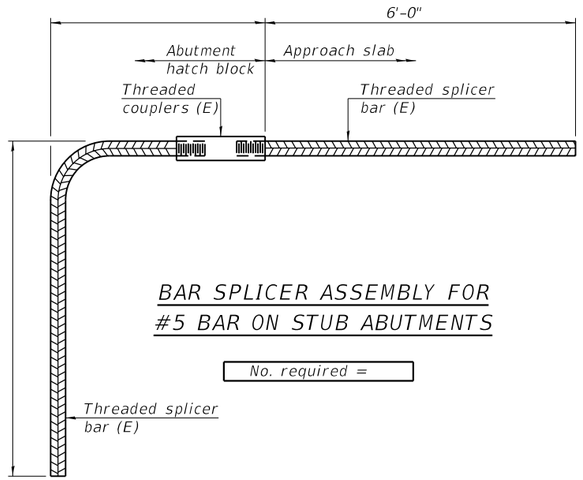
INSTALLATION AND SETTING METHODS

"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



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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	DRAWN -	REVISED -	
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PLOT DATE = 3/21/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 001-0048

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 72L16		
	ILLINOIS	FED. AID PROJECT		

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