

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR,BRR)	CASS	17	1
		ILLINOIS	CONTRACT NO. 72187	

* 17 + 1 = 18 TOTAL SHEETS

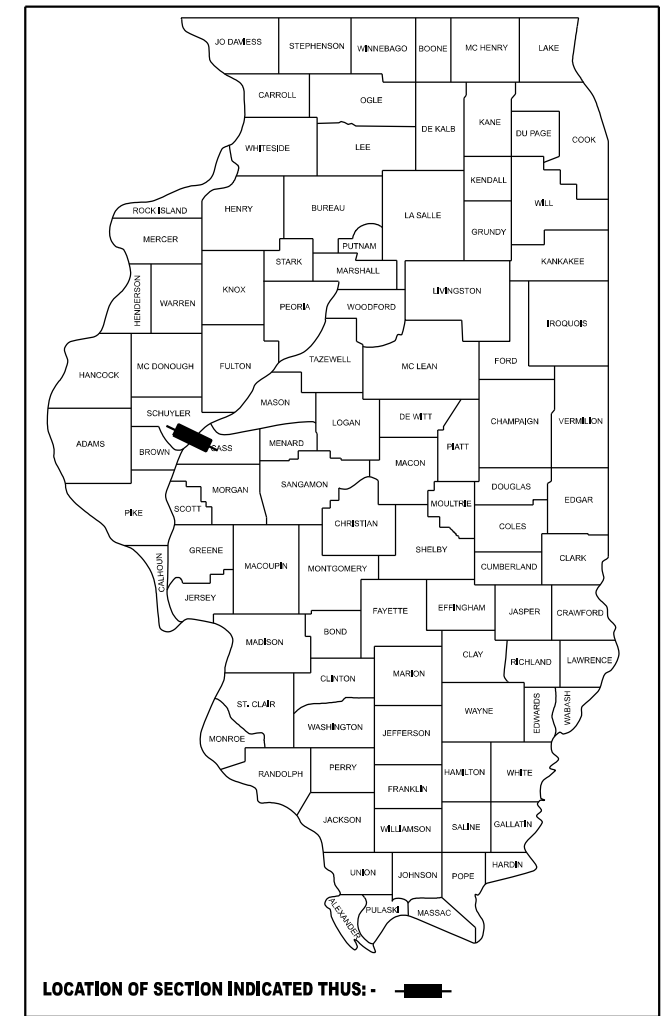
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

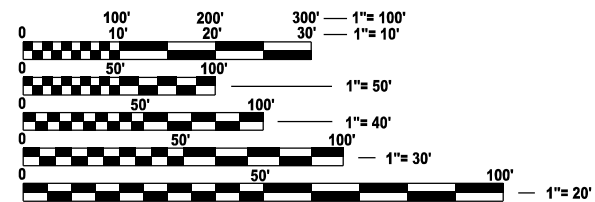
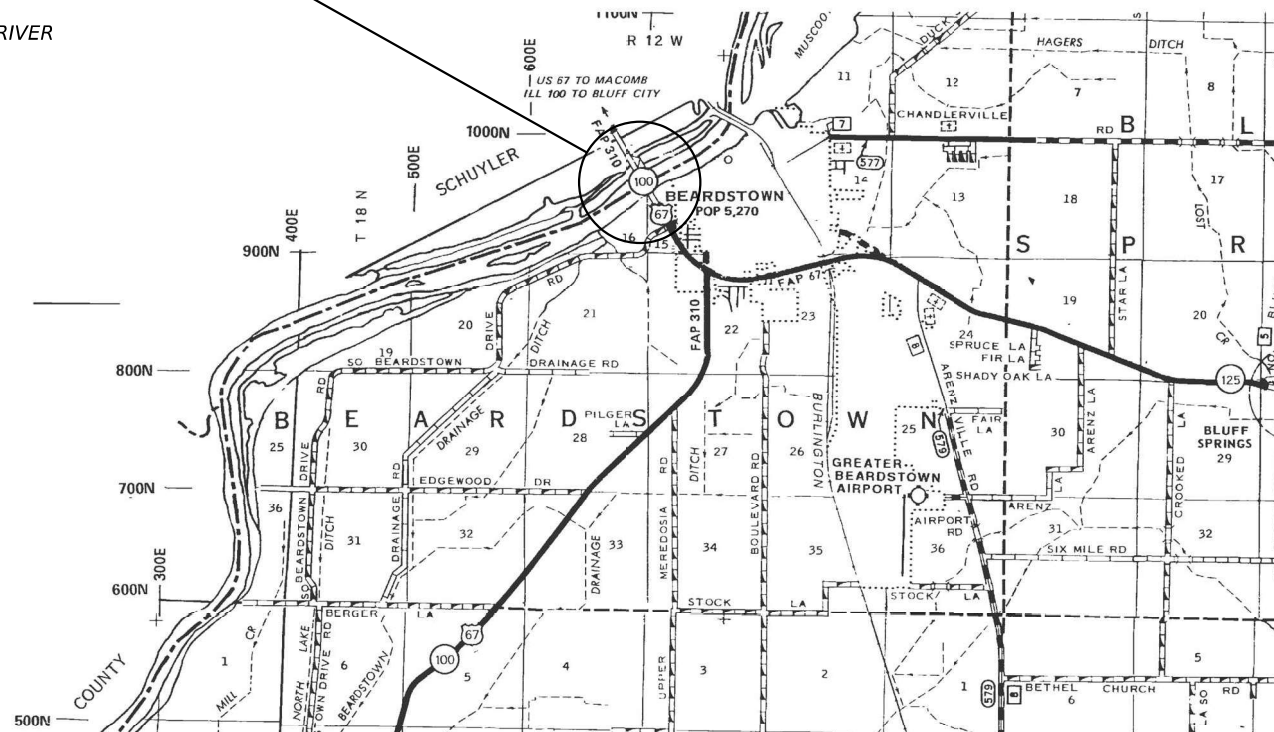
FAP ROUTE 310 (US 67, IL 100) SECTION 86B(BDR,BJR,BRR) PROJECT (STATE ONLY) BRIDGE DECK REPAIRS CASS COUNTY

C-96-031-25

D-96-009-25



PROJECT LOCATION:
SN 009-0001
US 67 OVER ILLINOIS RIVER
AT BEARDSTOWN



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 EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: BRANDON DUDLEY (217-785-9290)
PROJECT MANAGER

GROSS LENGTH = 3655 FT. = 0.69 MILE
NET LENGTH = 3655 FT. = 0.69 MILE

CONTRACT NO. 72187

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 17, 2024

Jeff P. Meyer
REGIONAL ENGINEER

December 6, 2024
Scott A. Etkin
ENGINEER OF DESIGN AND ENVIRONMENT

December 6, 2024
James M. Jones
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 13

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
- 3-4 SUMMARY OF QUANTITIES
- 5-9 TRAFFIC CONTROL DETAILS
- 10-17 BRIDGE PLANS, SN 009-0001


HIGHWAY STANDARDS


- 000001-08
- 001001-02
- 001006
- 701001-02
- 701006-05
- 701201-05
- 701301-04
- 701321-19
- 701901-10
- 704001-08
- 782006-01

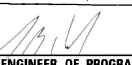
GENERAL NOTES:

IMPACT ATTENUATORS TO BE PLACED ON THE BRIDGE DECK SHALL BE OF A TYPE WHICH DOES NOT REQUIRE FASTENING TO THE DECK SLAB.
 IF SAND BARRELS ARE USED FOR IMPACT ATTENUATORS, THE CONTRACTOR SHALL KEEP SPARE BARRELS AND SAND ON THE JOB SITE FOR REPLACING ANY BARRELS THAT ARE DAMAGED DURING THE JOB.

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

EXAMINED October 15, 20 24

 ENGINEER OF OPERATIONS

EXAMINED October 15, 20 24

 ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED October 16, 20 24

 ENGINEER OF PROGRAM DEVELOPMENT

REV - MS

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	USER NAME = brandon.dudley	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS GENERAL NOTES, & SIGNATURES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -			310	86B(BDR,BJR)	CASS	17	2	
		CHECKED -	REVISED -			CONTRACT NO. 72187					
	PLOT DATE = 8/8/2024	DATE -	REVISED -			SCALE:	SHEET	OF 1	SHEETS	STA.	TO STA.

6-00236-0400
 SN 009-0001
 100% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE
				0013 URBAN
50102400	CONCRETE REMOVAL	CU YD	33.7	33.7
50157300	PROTECTIVE SHIELD	SQ YD	212	212
50300255	CONCRETE SUPERSTRUCTURE	CU YD	32.8	32.8
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	6080	6080
50800515	BAR SPLICERS	EACH	164	164
52000110	PREFORMED JOINT STRIP SEAL	FOOT	270	270
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12
67100100	MOBILIZATION	L SUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	2
70107025	CHANGEABLE MESSAGE SIGN	CAL DAY	300	300
70400100	TEMPORARY CONCRETE BARRIER	FOOT	300	300
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	900	900
70600240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	2	2

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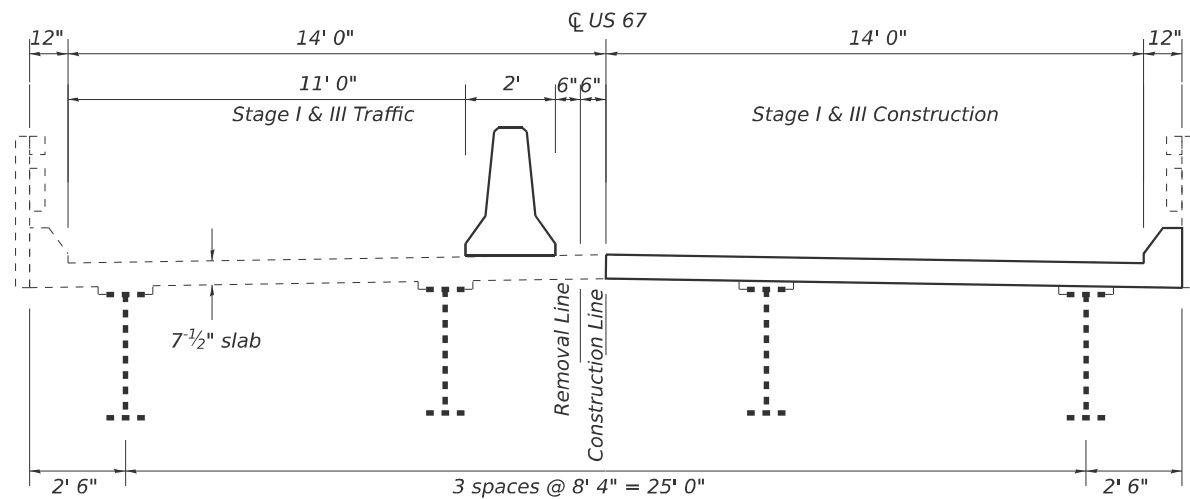
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PLOT DATE = 8/8/2024	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

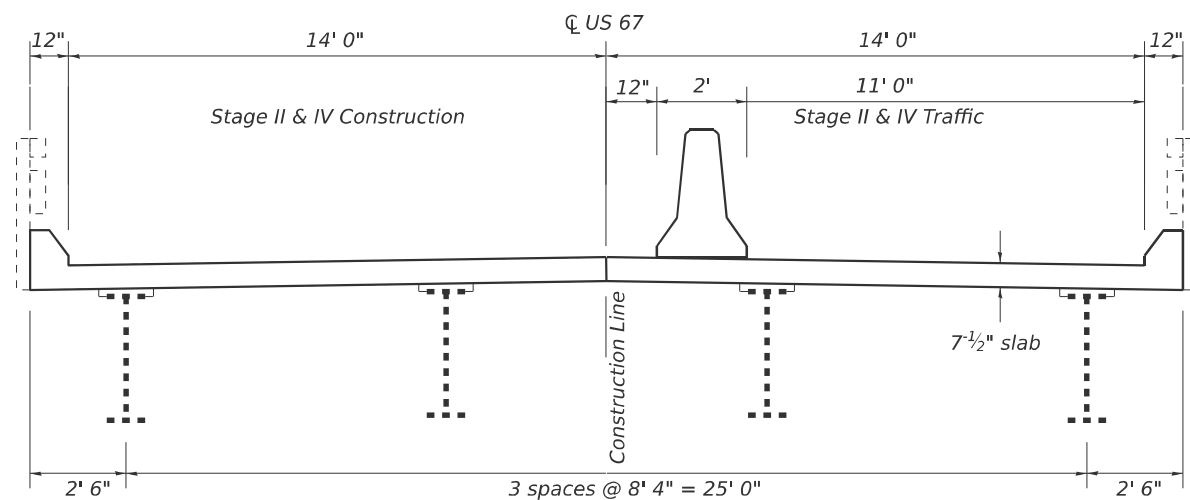
SUMMARY OF QUANTITIES

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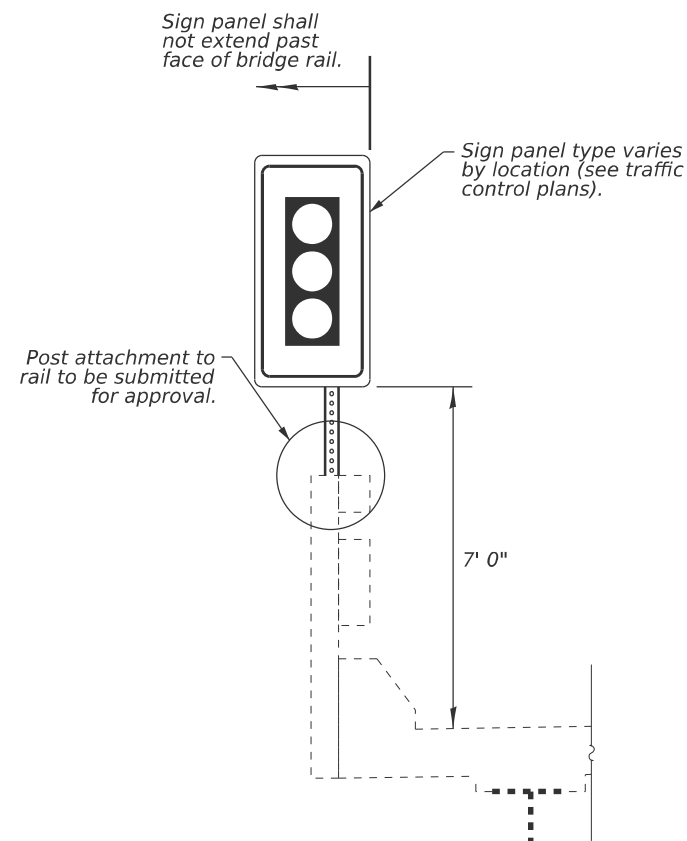
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR)	CASS	17	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72187	



STAGE I & III TRAFFIC STAGING CROSS SECTION (LOOKING SOUTH)



STAGE II & IV TRAFFIC STAGING CROSS SECTION (LOOKING SOUTH)



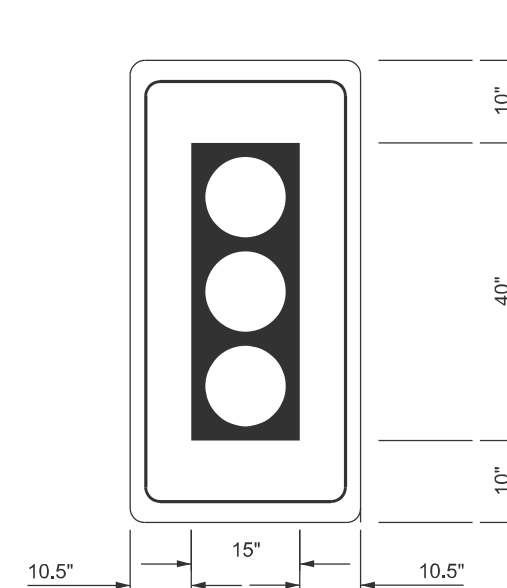
BRIDGE MOUNTED SIGN PANEL ELEVATION

NOTES:

This detail shall be applied in all locations where sign panels are called to be placed on the bridge. Locations shall be as shown in the traffic control plans.

The contractor shall submit a plan for attaching the sign posts to the existing bridge rail to the engineer for approval prior to sign placement. No drilling into the bridge rail or rail posts will be allowed.

All attachments shall be made to the existing bridge rail. No attachments to the bridge members will be allowed.



W3-3 SPECIAL DETAIL

36" x 60" Sign panel, 2.25" radius, 1.0" border, 0.75" indent, black on fluorescent orange, SIGNAL AHEAD

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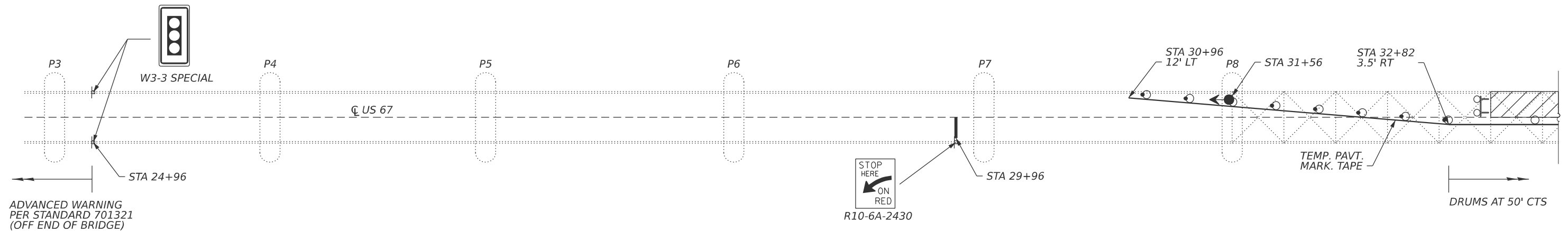
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PLOT DATE = 8/8/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

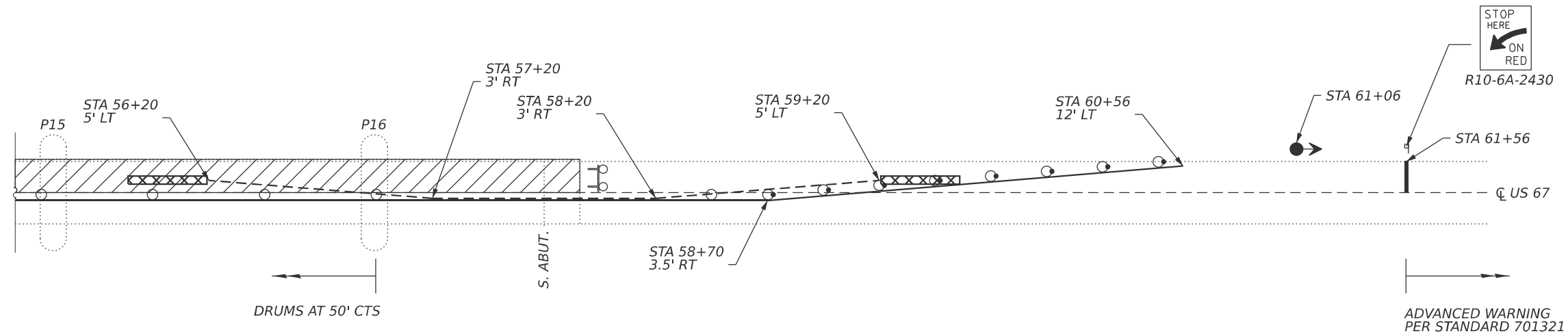
TRAFFIC STAGING DETAILS

SCALE: SHEET OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72187				
ILLINOIS FED. AID PROJECT				

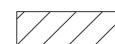








STAGE II - PARTIAL PLAN



STAGE II - PARTIAL PLAN

SYMBOLS

-  WORK AREA
-  DRUM WITH STEADY BURN BI-DIRECTIONAL LIGHT
-  DRUM
-  TRAFFIC SIGNAL
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  TEMPORARY CONCRETE BARRIER
-  IMPACT ATTENUATOR

TRAFFIC CONTROL NOTES:

1. Traffic control devices not shown in this detail shall be per standard 701321. Devices and temporary pavement markings shown in this detail shall be included in the cost of TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL). Impact attenuators temporary rumble strips, temporary concrete barrier, and temporary traffic signals shall be paid separately.
2. Temporary concrete barrier offsets given in this detail refer to the edge of the barrier nearest to live traffic.
3. The upper signal head on traffic signal cart(s) inside the truss shall be mounted horizontally to improve visibility. Signal heads shall be reversed as necessary when signal cart placement dictates.

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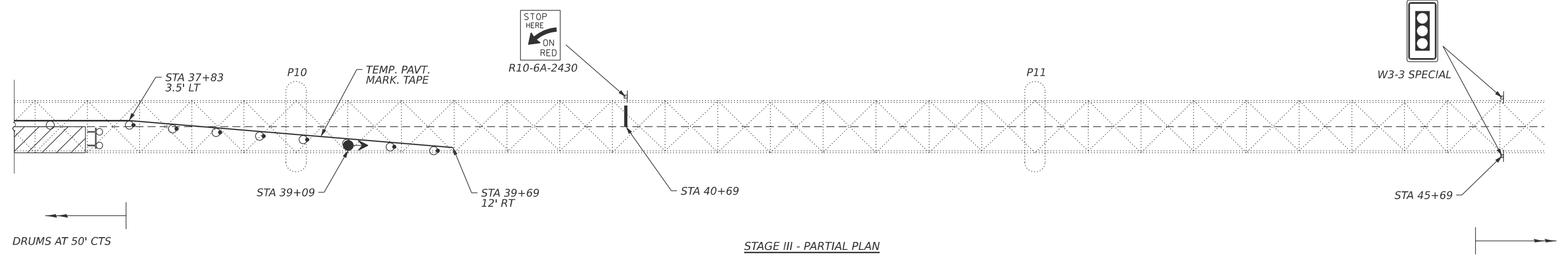
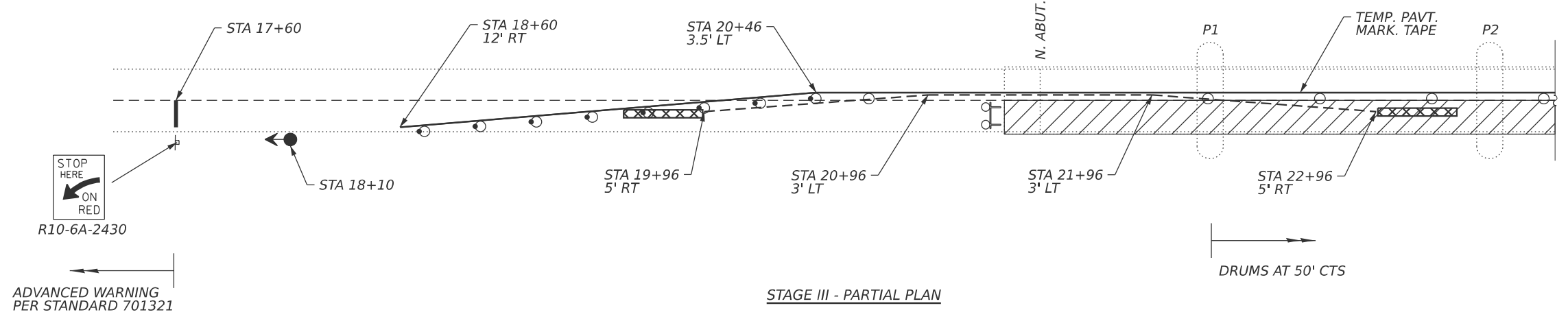
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	CHECKED -	REVISED -
PLOT DATE = 8/8/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**








STAGE II TRAFFIC CONTROL PLAN

SCALE: SHEET OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR)	CASS	17	7
CONTRACT NO. 72187				
ILLINOIS FED. AID PROJECT				



SYMBOLS

-  WORK AREA
-  DRUM WITH STEADY BURN BI-DIRECTIONAL LIGHT
-  DRUM
-  TRAFFIC SIGNAL
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  TEMPORARY CONCRETE BARRIER
-  IMPACT ATTENUATOR

TRAFFIC CONTROL NOTES:

1. Traffic control devices not shown in this detail shall be per standard 701321. Devices and temporary pavement markings shown in this detail shall be included in the cost of TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL). Impact attenuators temporary rumble strips, temporary concrete barrier, and temporary traffic signals shall be paid separately.
2. Temporary concrete barrier offsets given in this detail refer to the edge of the barrier nearest to live traffic.
3. The upper signal head on traffic signal cart(s) inside the truss shall be mounted horizontally to improve visibility. Signal heads shall be reversed as necessary when signal cart placement dictates.

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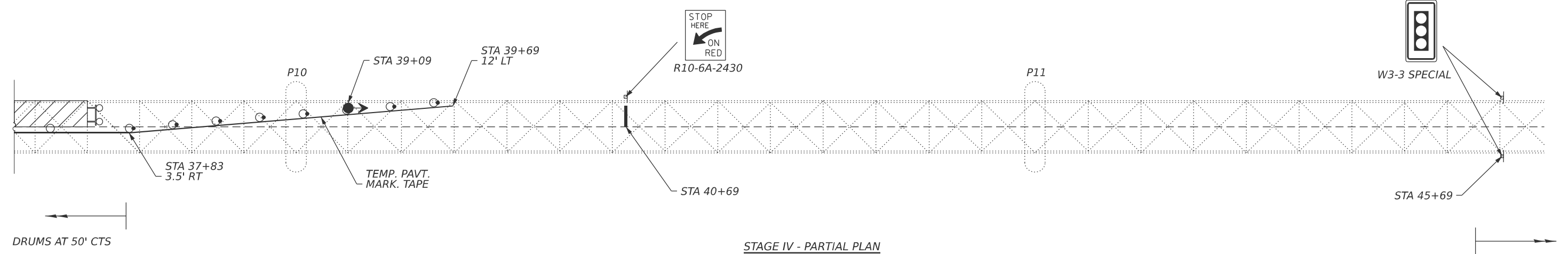
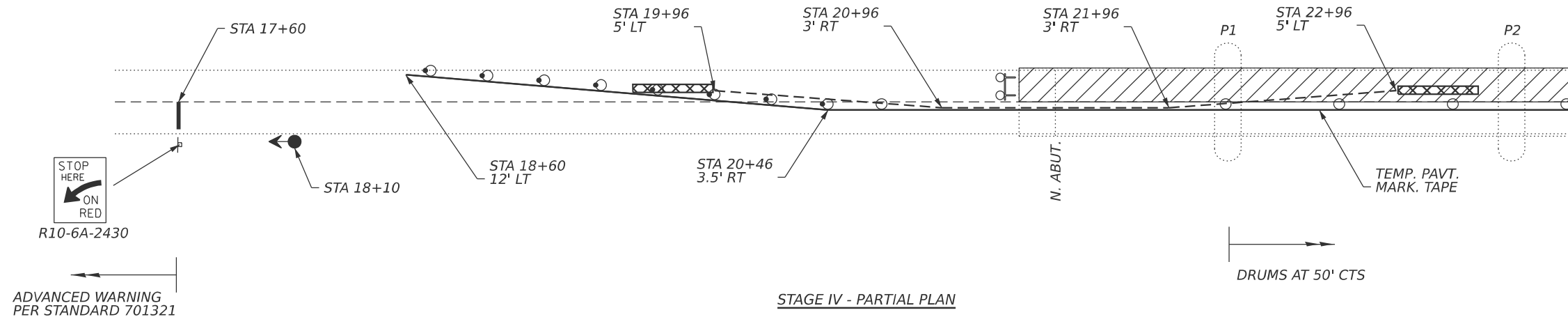
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PLOT DATE = 8/8/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

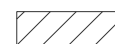






STAGE III TRAFFIC CONTROL PLAN

SCALE: SHEET OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR)	CASS	17	8
CONTRACT NO. 72187			ILLINOIS FED. AID PROJECT	



SYMBOLS

-  WORK AREA
-  DRUM WITH STEADY BURN BI-DIRECTIONAL LIGHT
-  DRUM
-  TRAFFIC SIGNAL
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  TEMPORARY CONCRETE BARRIER
-  IMPACT ATTENUATOR

TRAFFIC CONTROL NOTES:

1. Traffic control devices not shown in this detail shall be per standard 701321. Devices and temporary pavement markings shown in this detail shall be included in the cost of TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL). Impact attenuators temporary rumble strips, temporary concrete barrier, and temporary traffic signals shall be paid separately.
2. Temporary concrete barrier offsets given in this detail refer to the edge of the barrier nearest to live traffic.
3. The upper signal head on traffic signal cart(s) inside the truss shall be mounted horizontally to improve visibility. Signal heads shall be reversed as necessary when signal cart placement dictates.

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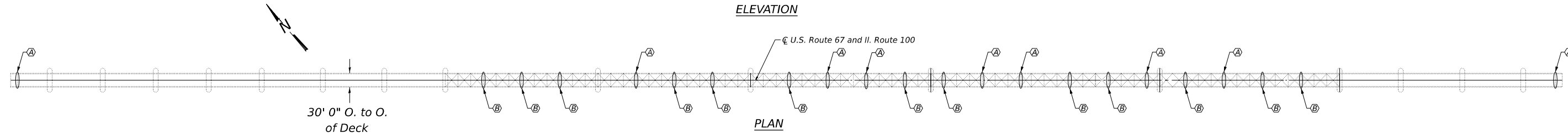
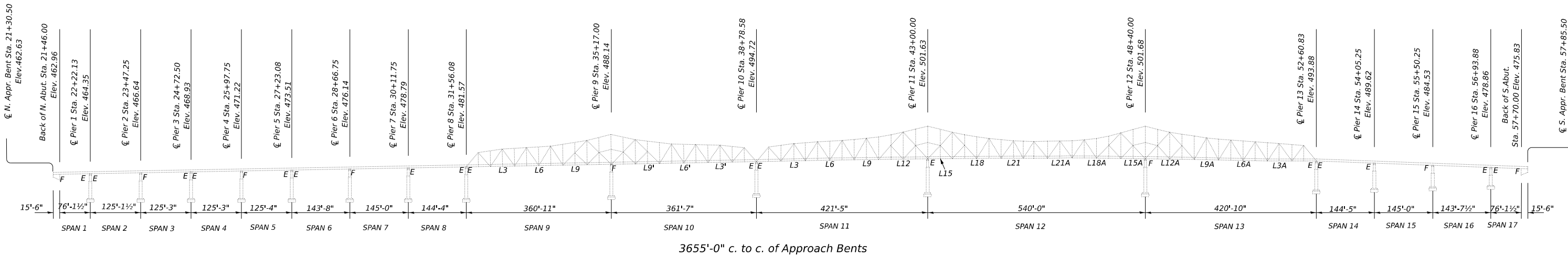
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PLOT DATE = 8/8/2024	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE IV TRAFFIC CONTROL PLAN

SCALE: SHEET OF 5 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR)	CASS	17	9
CONTRACT NO. 72187				
ILLINOIS FED. AID PROJECT				



- (A) REPLACE DECK JOINT WITH STRIP SEAL JOINT & INSTALL REPAIR PLATE ON TOP OF FLOOR BEAM
- (B) RESEAL EXISTING DECK JOINT WITH SILICONE JOINT SEALER

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

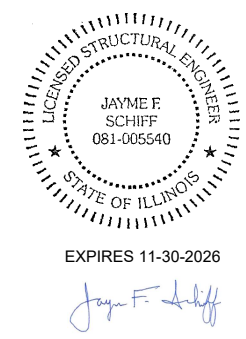
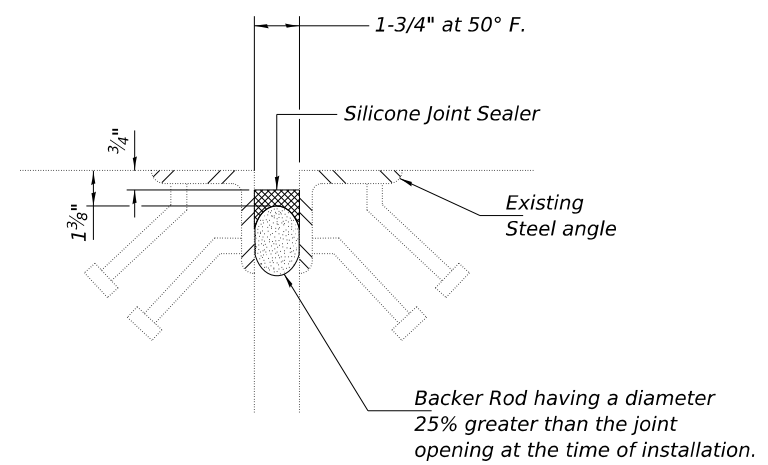
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall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

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

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.

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

Typical protective shield application shall consist of a 4' x 34' area under each side of truss deflection joints to be replaced. Abutment joints do not need protective shield.



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	33.7
Concrete Superstructure	Cu. Yd.	32.8
Bar Splicers	Each	164
Reinforcement Bars, Epoxy Coated	Pound	6080
Preformed Joint Strip Seal	Foot	270
* Deck Slab Repair (Partial)	Sq. Yd.	2700
* Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	150
* Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	150
Silicone Joint Sealer, 1.75"	Foot	390
Protective Shield	Sq. Yd.	212
Structural Steel Repair	Pound	6400

* Quantity is estimated. Location and size of patches to be determined in the field by the Engineer.

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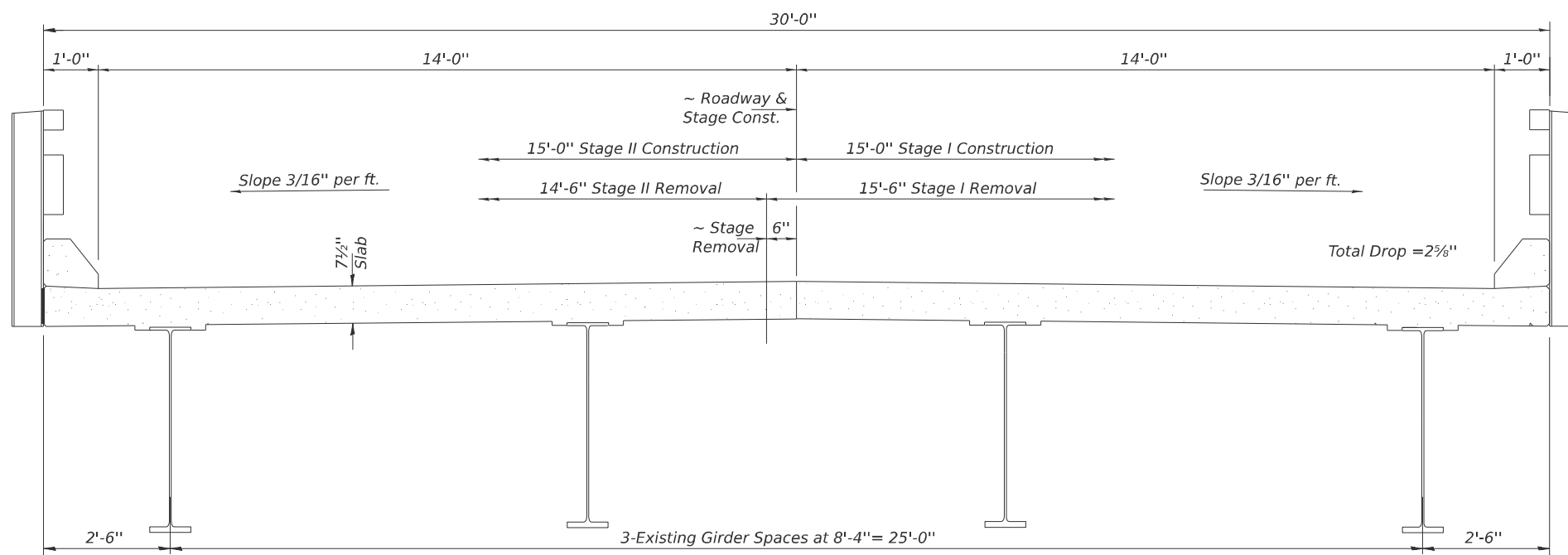
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

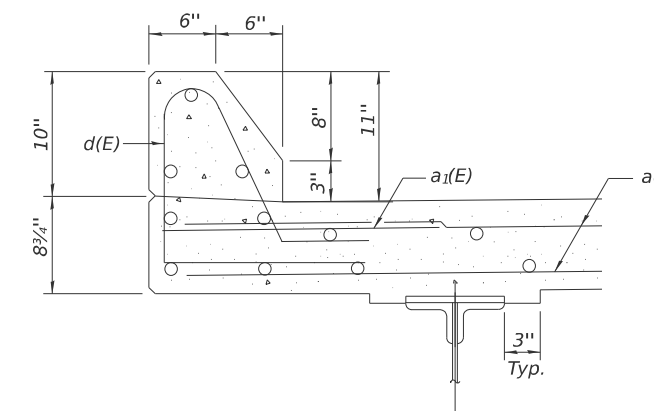
**BRIDGE PLAN & ELEVATION
SN 009-0001**

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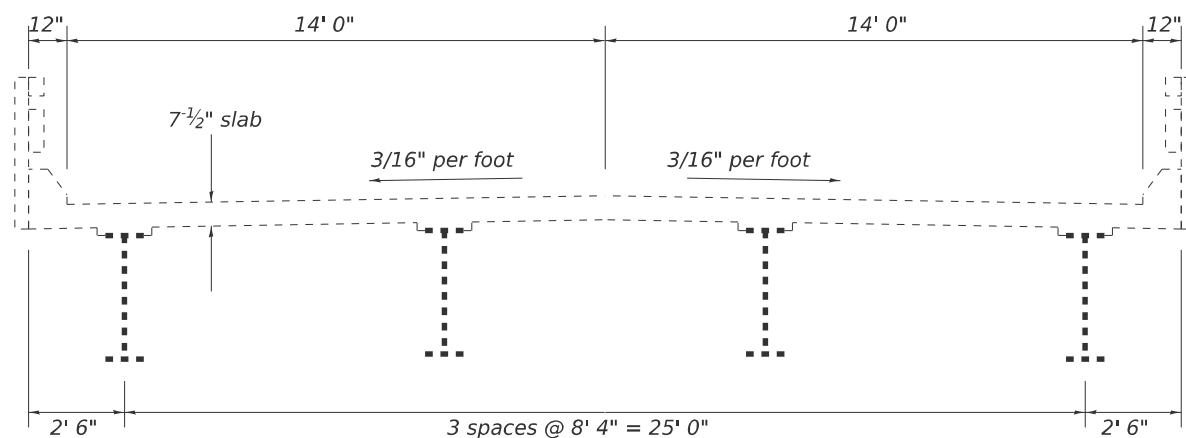
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR)	CASS	17	10
CONTRACT NO. 72187				
ILLINOIS FED. AID PROJECT				



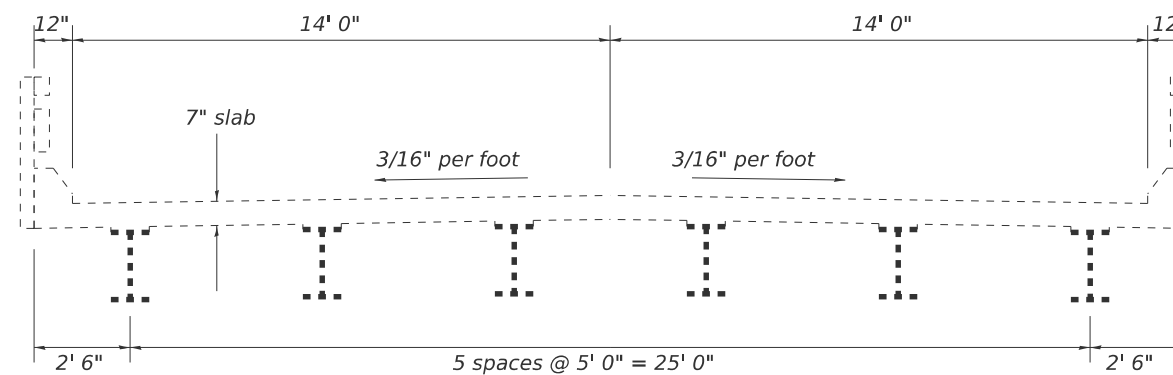
JOINT REPLACEMENT CROSS SECTION
(Looking South)



JOINT TEPLACEMENT SECTION THRU CURB



TYPICAL CROSS SECTION - SPANS 1-8 & 14-17



TYPICAL CROSS SECTION - SPANS 9-13

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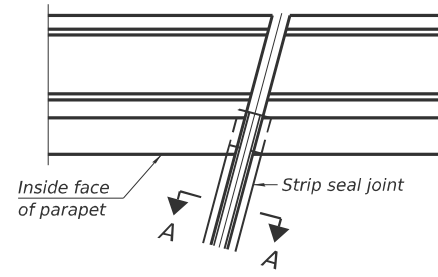
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PLOT DATE = 8/8/2024	DATE -	REVISED -

STATE OF ILLINOIS
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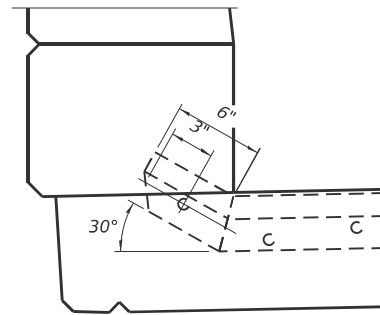
BRIDGE CROSS SECTIONS
SN 009-0001

SCALE: SHEET 2 OF 8 SHEETS STA. TO STA.

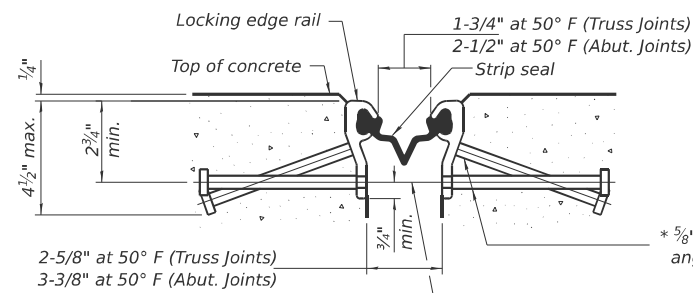
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR)	CASS	17	11
CONTRACT NO. 72187				
ILLINOIS FED. AID PROJECT				



FOR SKEWS $\leq 30^\circ$
PLAN AT PARAPET



ELEVATION AT PARAPET
 (Skews $\leq 30^\circ$)



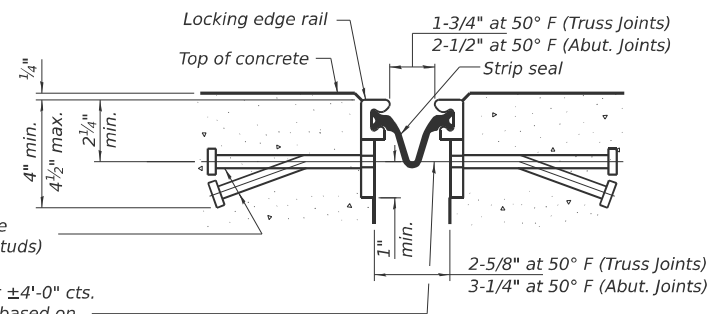
SHOWING ROLLED RAIL JOINT

* $5/8"$ \varnothing x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

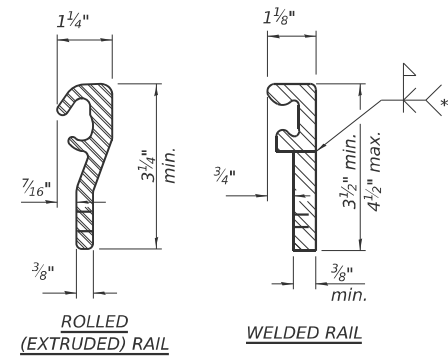
$3/8"$ \varnothing threaded rods in $7/16"$ \varnothing holes at $\pm 4'-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

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

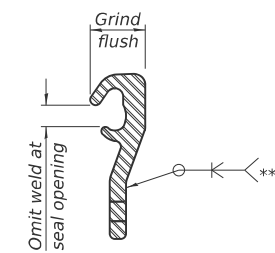


SHOWING WELDED RAIL JOINT



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	270

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.

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.

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	CHECKED -	REVISED -
PLOT DATE = 8/8/2024	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL
 SN 009-0001**

SCALE: SHEET 7 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	86B(BDR,BJR)	CASS	17	16
CONTRACT NO. 72187				
ILLINOIS FED. AID PROJECT				

