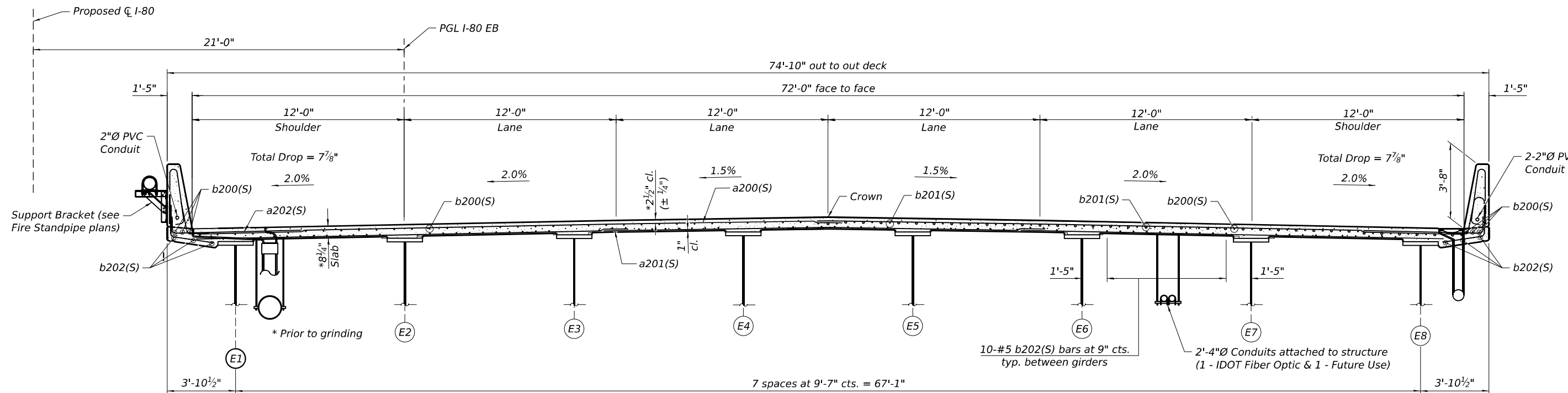
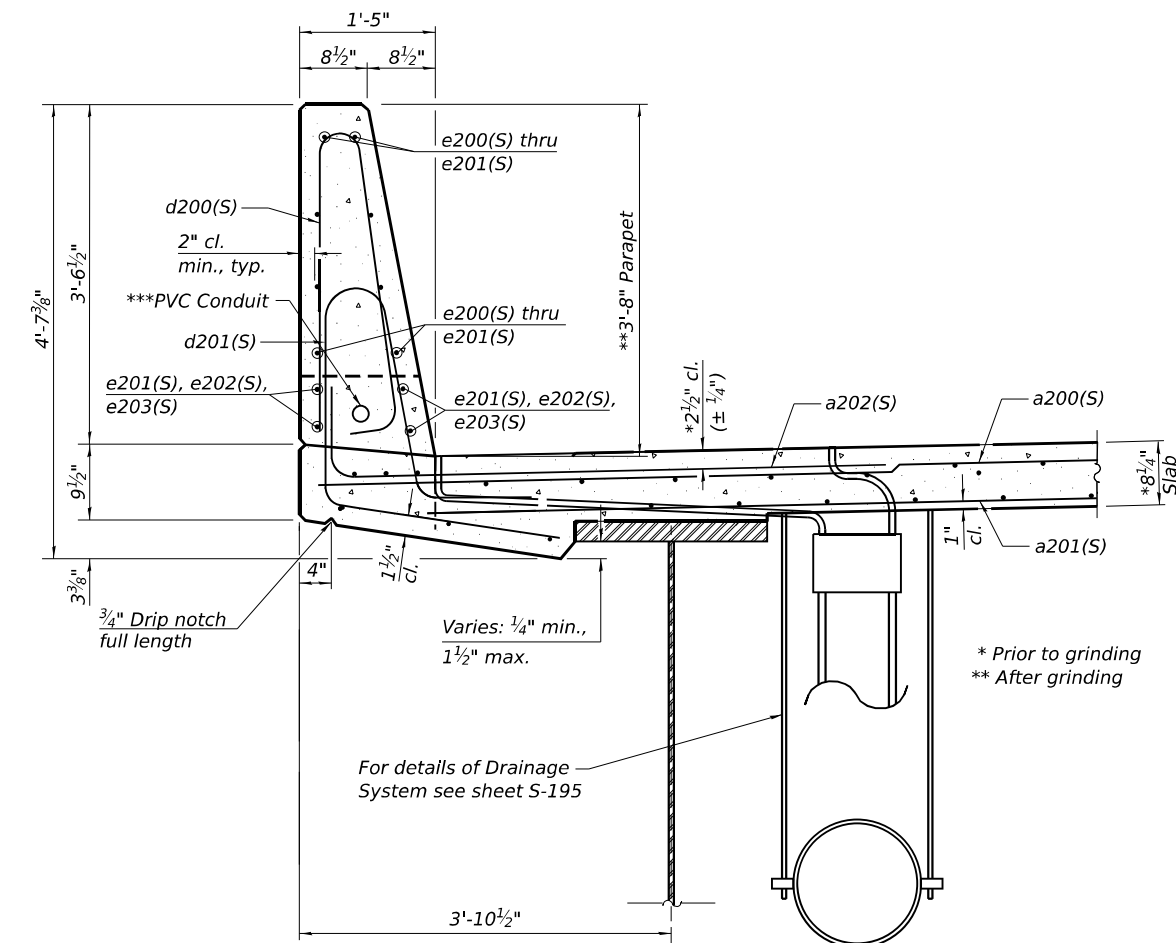




NEAR MIDSPAN

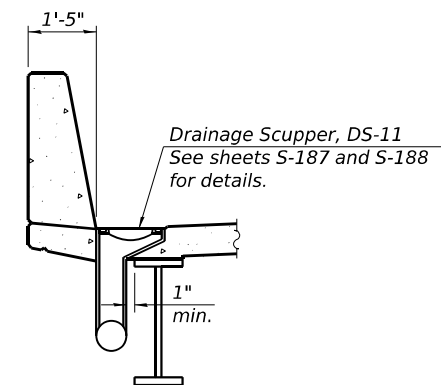
CROSS SECTION - UNIT 2 EB
(Looking East)

NEAR PIER

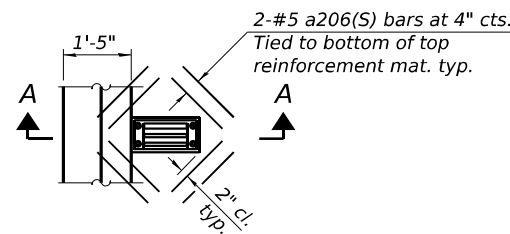


SECTION THRU PARAPET

Drainage Scuppers (Special) shown, Drainage Scupper, DS-11 similar
 ***2-2" Dia. PVC Conduits Outside Parapet,
 1-2" Dia. PVC Conduit Inside Parapet



SECTION A-A



PLAN

Drainage Scupper, DS-11 shown,
 Drainage Scuppers (Special), see sheet S-126

Note:
 Cut longitudinal reinforcement to
 clear drainage scuppers.

REINFORCEMENT AT
DRAINAGE SCUPPERS

MINIMUM BAR LAP
 #5 bar = 3'-6"
 #6 bar = 4'-10"

MODEL Default: FILE NAME: p:\projects\trans\scuppers\unit2\unit2.dgn 2018/04/01/11:00:22/03-WSP/CAD/62R23-RB-1/Sheet/Structure/0998309-42R23-5370-DX211.dgn

wsp
 WSP USA INC.
 30 N. LA SALLE STREET
 SUITE 400
 CHICAGO, IL 60602
 TEL: (312) 782-8150
 FAX: (312) 782-1684

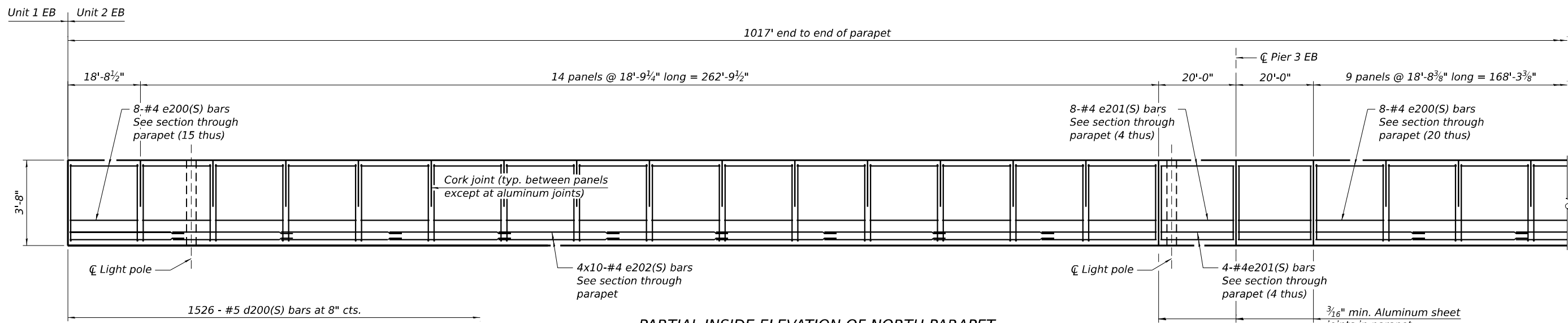
USER NAME = USSJ696614	DESIGNED - PK	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 6,000' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

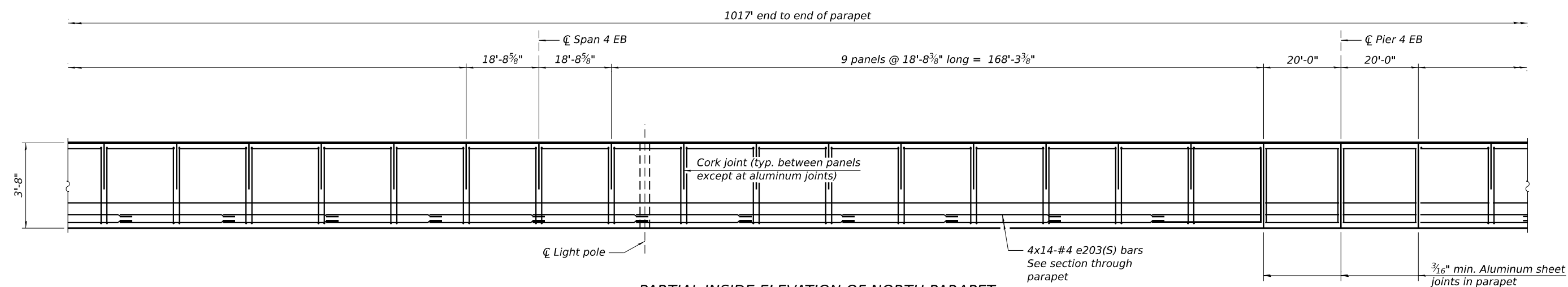
DECK CROSS SECTION AND PARAPET - UNIT 2 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	701
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

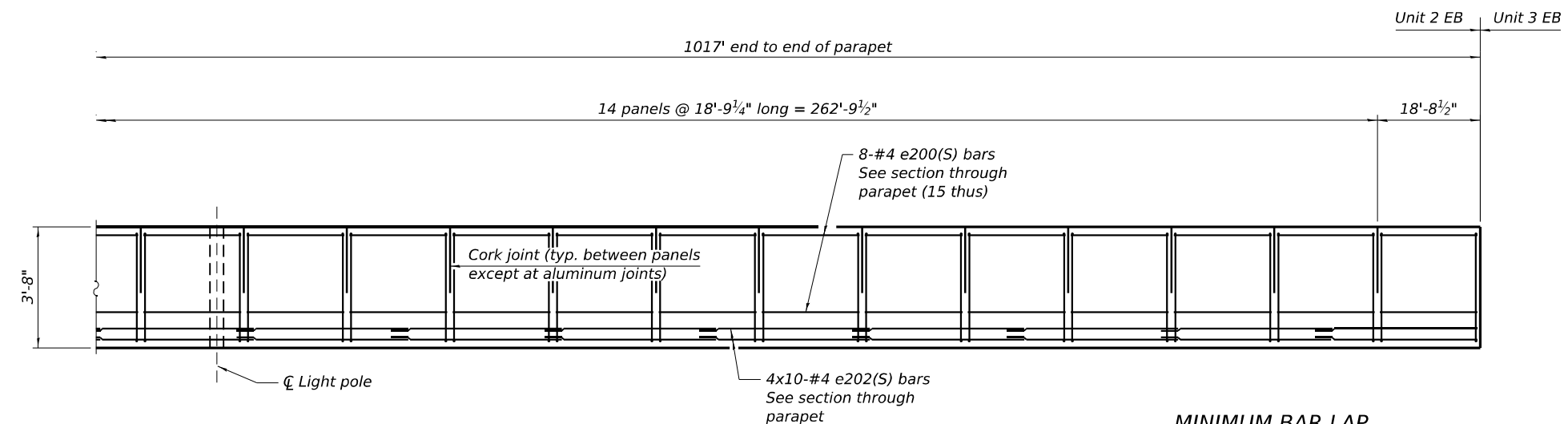
SHEET S-120 OF 5-333 SHEETS



PARTIAL INSIDE ELEVATION OF NORTH PARAPET



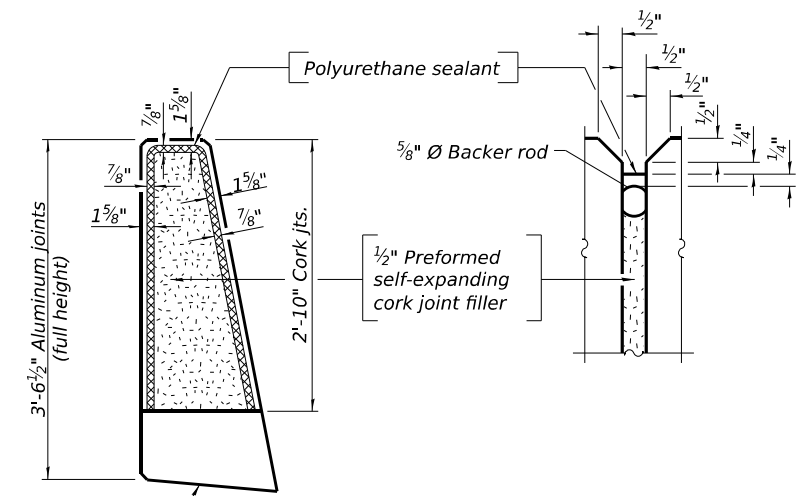
PARTIAL INSIDE ELEVATION OF NORTH PARAPET



PARTIAL INSIDE ELEVATION OF NORTH PARAPET

MINIMUM BAR LAP
#4 bar = 2'-5"

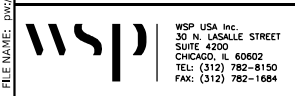
Note:
For details of attachment of navigation lights
see details on sheet S-221



PARAPET JOINT DETAILS

Notes:
The 3/16" minimum aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated with 5 mills of either bitumen paint or spray paint to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

MODEL Default:
FILE NAME: p:\proj\transystems-pw\bartley.com\transystems-pw\p1-located\Documents\Projects_2018\CH4001401180022\03-WSP\CAD\62023-RB-1-Sheets\Structure\0998309-42R23-5321-DX212.dgn



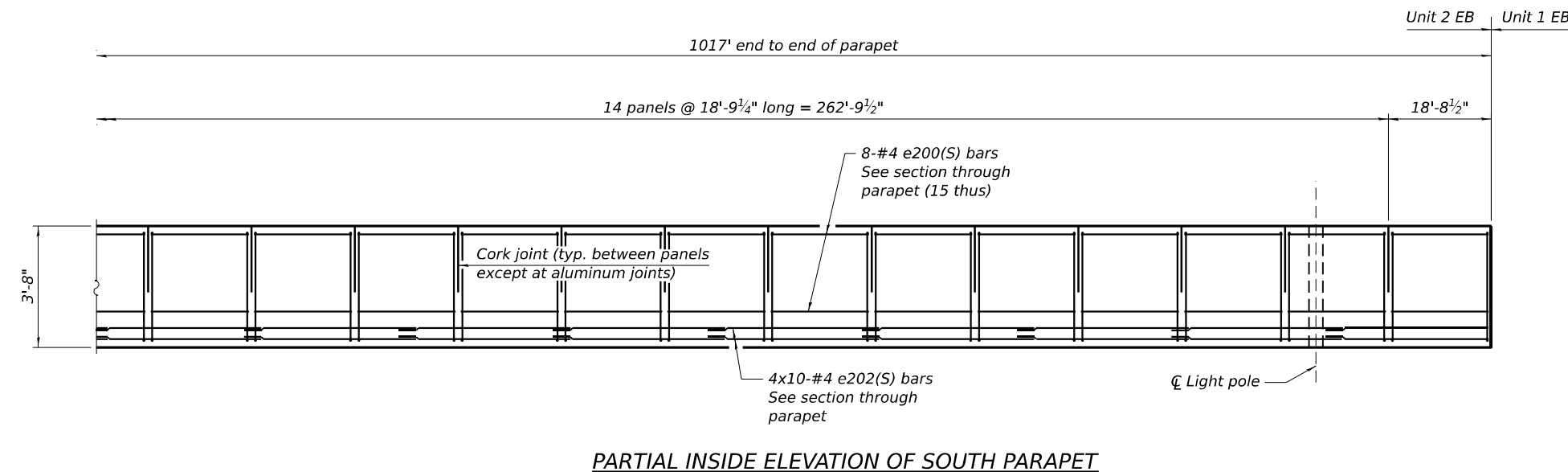
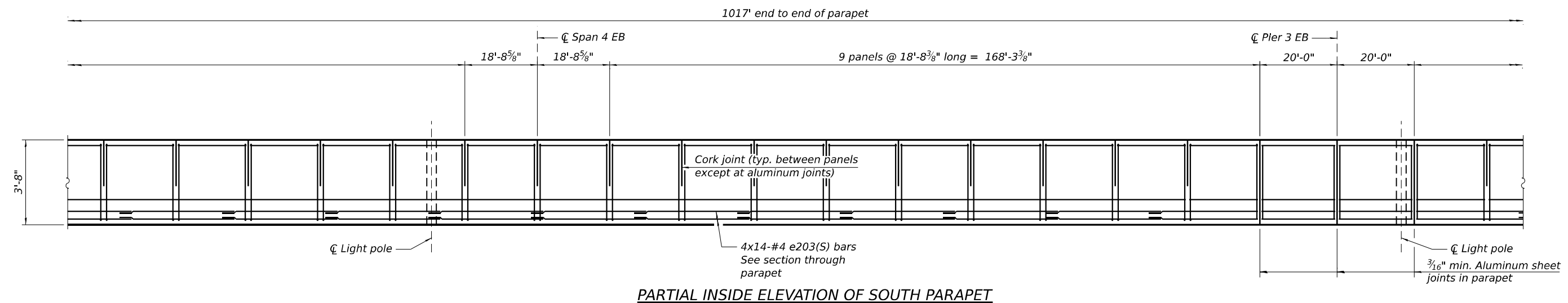
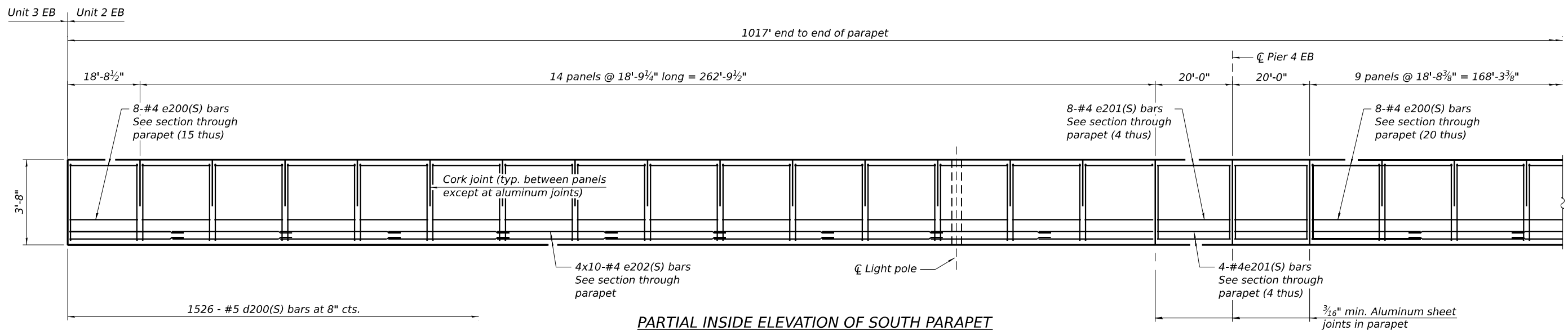
USER NAME = USSJ696614	DESIGNED - PK	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 28,000 ' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET ELEVATION 1 - UNIT 2 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	702
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

SHEET S-121 OF 5-333 SHEETS



MINIMUM BAR LAP
#4 bar = 2'-5"

Note:
For details of attachment of navigation lights
see details on sheet S-221

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET ELEVATION 2 - UNIT 2 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-122 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	703
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

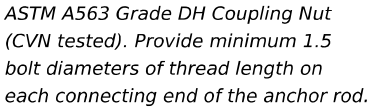
USER NAME = USSJ696614	DESIGNED - PK	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 28,000' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -



LIGHT POLE DETAILS



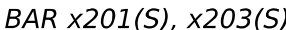
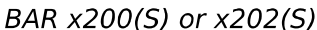
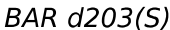
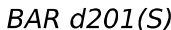
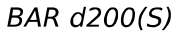
ALTERNATE
ANCHOR ROD



(Headed. 28-#6 Bar terminators)

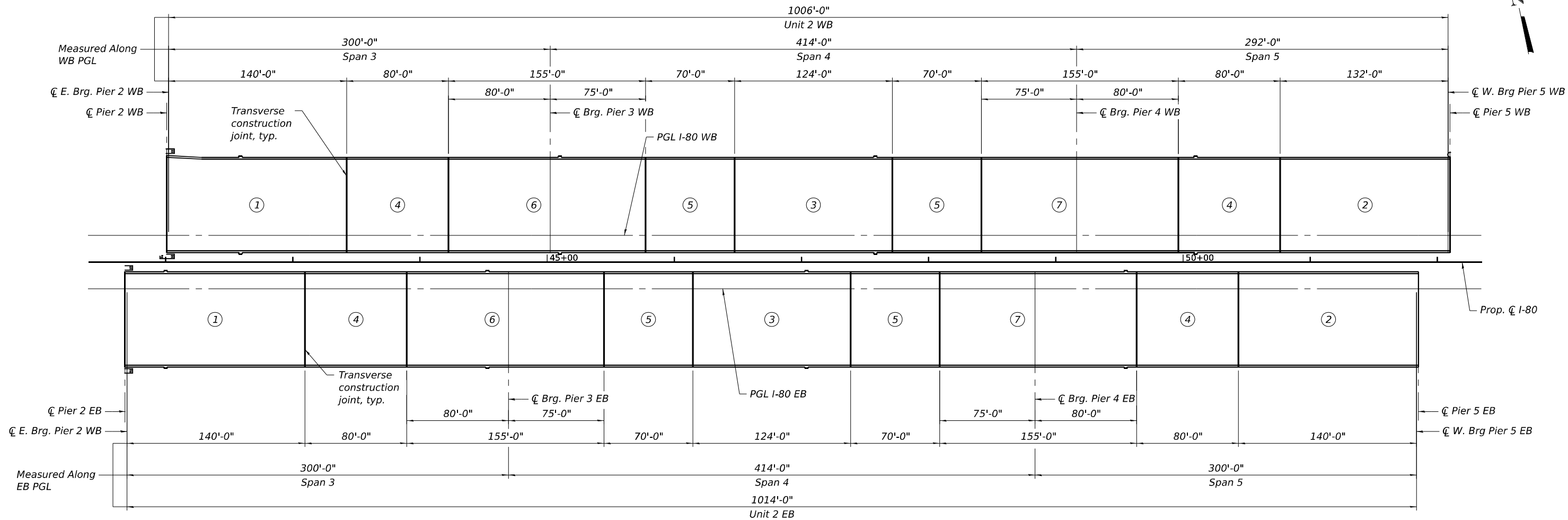


(Headed. 8-#6 Bar terminators)



*Note: Bar terminators paid for separately.
See Total Bill of Materials.*

MODEL Default:
FILE NAME: p:\projects\trans\systems-pw\hntb\comtrans\corp-pw\hntb\hntb\Documents\Projects_2018\CH401\401180022\03-WSP\Structure\0998309-8B-1-Sheet\Structure\0998309-8B-1-Sheet.dgn



DECK POURING SEQUENCE - UNIT 2

NOTES ON DECK POURING SEQUENCE:

- When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
 - At least 72 hours shall have elapsed from the end of the previous pour.
 - The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compressive strength of 4000 psi.
- See sheet S-77 for additional notes regarding the camber and the elevations being developed from the pour sequence.

 WSP USA Inc. 30 N. LA SALLE STREET SUITE 4000 CHICAGO, IL 60602 TEL: (312) 782-8150 FAX: (312) 782-1684	USER NAME = USSJ696614			DESIGNED - KB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK POURING SEQUENCE - UNIT 2 WB & EB STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - PSK			DRAWN - GM	REVISED -		SHEET S-124 OF S-333 SHEETS			I-80	FAI 80 21 STRUCTURE 2	WILL	1230	705
	PLOT SCALE = 0:2,0000 '"/in.			CHECKED - PSK	REVISED -					CONTRACT NO. 62R23				
	PLOT DATE = 11/5/2025									ILLINOIS FED. AID PROJECT				

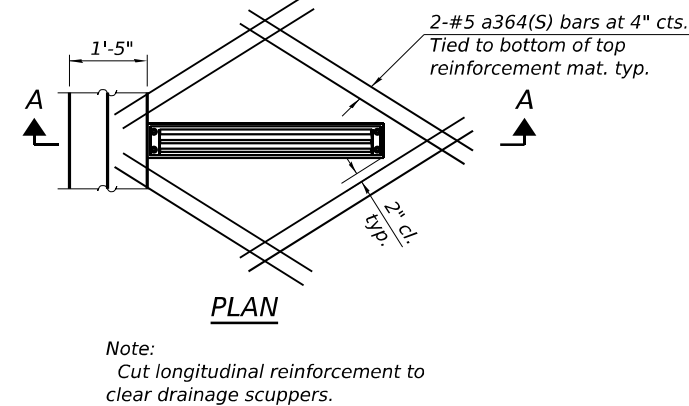
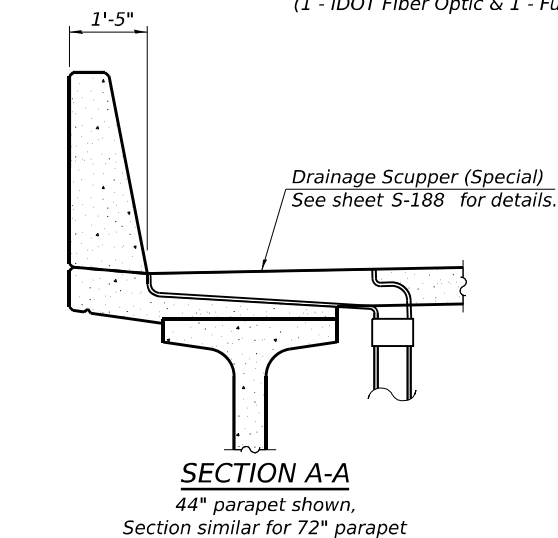
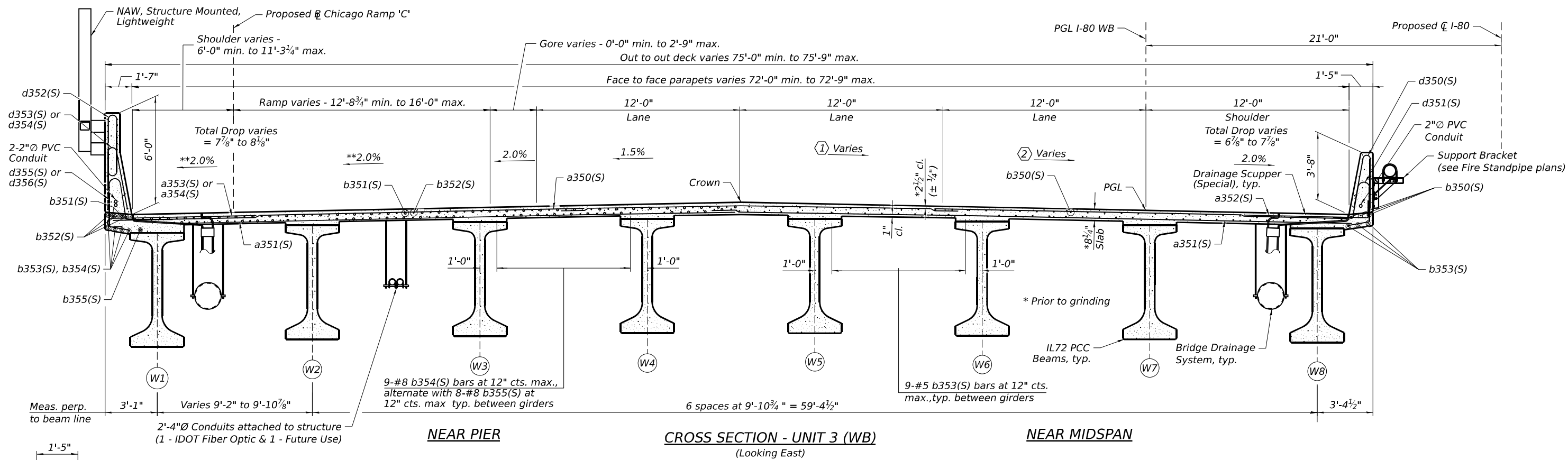


* Dimension showing concrete opening. For joint opening and bars near joint see sheet S-157 and S-161

#5 bar = 3'-6"
#6 bar = 4'-10"
#8 bar = 7'-10"
#9 bar = 8'-7"

1. See sheet S-130 for superstructure details and Bill of Material.
2. Offsets for scupper and light pole locations are measured off of WB PGL.
3. Bars indicated thus, 32 x 2 - #5 etc. indicates 32 lines of bars with 2 lengths per line.
4. For Cross Section see sheet S-126.

MODEL Default:
FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CD\62023-RB-1\Sheet\Structure\0998309-42R23-5376-DC302.dgn



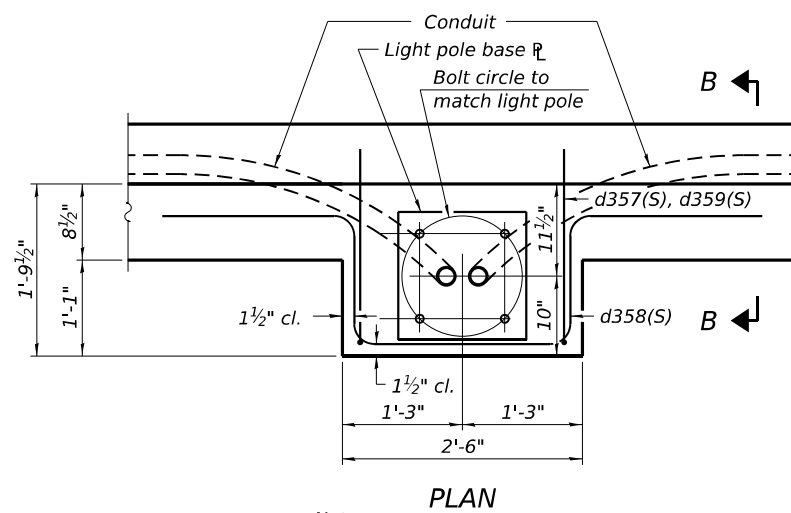
REINFORCEMENT AT DRAINAGE SCUPPERS

CROSS SLOPE TRANSITION DATA

Note: Positive (+) slopes upward from Lt.-to-Rt., Negative (-) slopes downward from Lt.-to-Rt.

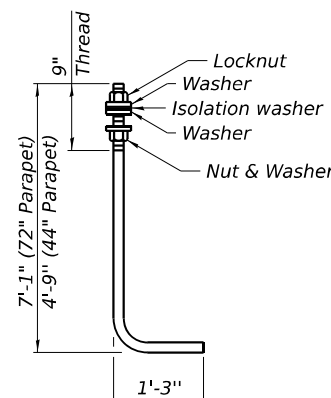
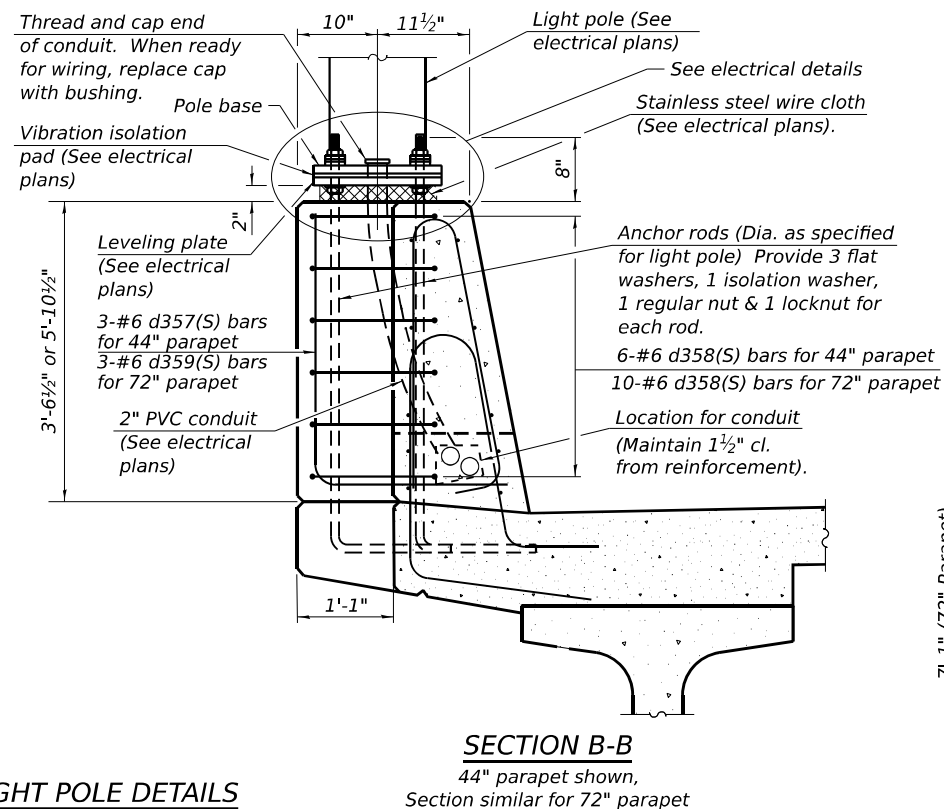
- ① Varies from -1.50% at Sta. 55+09 to +5.20% at Sta. 59+33.
- ② Varies from -2.00% at Sta. 54+64 to +5.20% at Sta. 59+33.

** Cross slopes shown are measured relative to the PGL I-80 WB up to Sta. 55+73.61, beyond this point they are measured relative to Proposed Chicago Ramp C.

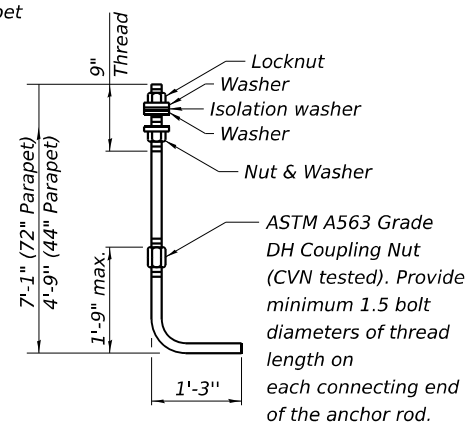


Note: Cost of anchor rods is included with Concrete Superstructure.

LIGHT POLE DETAILS



ANCHOR ROD



ALTERNATE ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105) Full length hot dipped galvanized.

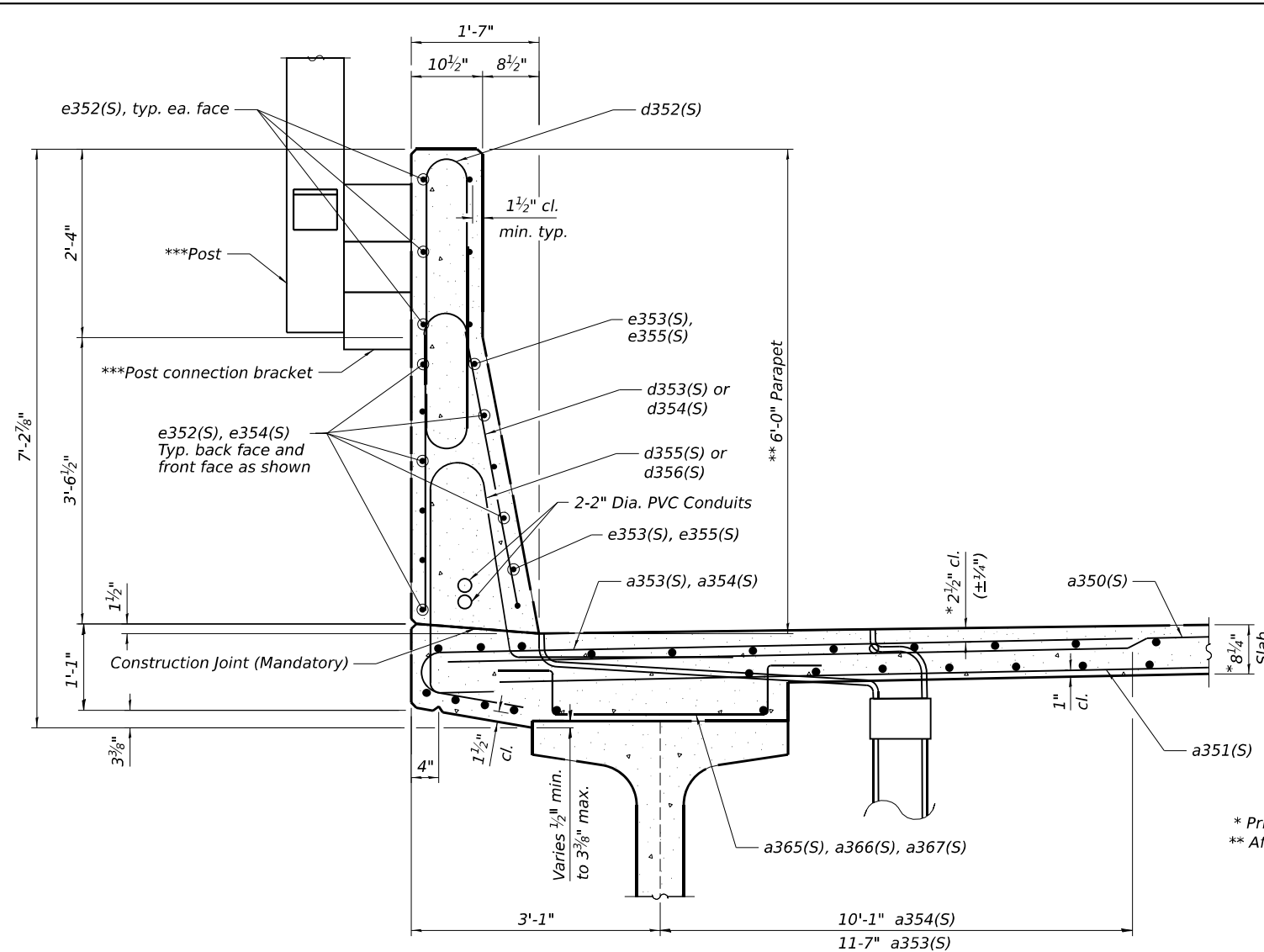
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK CROSS SECTION AND PARAPET - UNIT 3 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

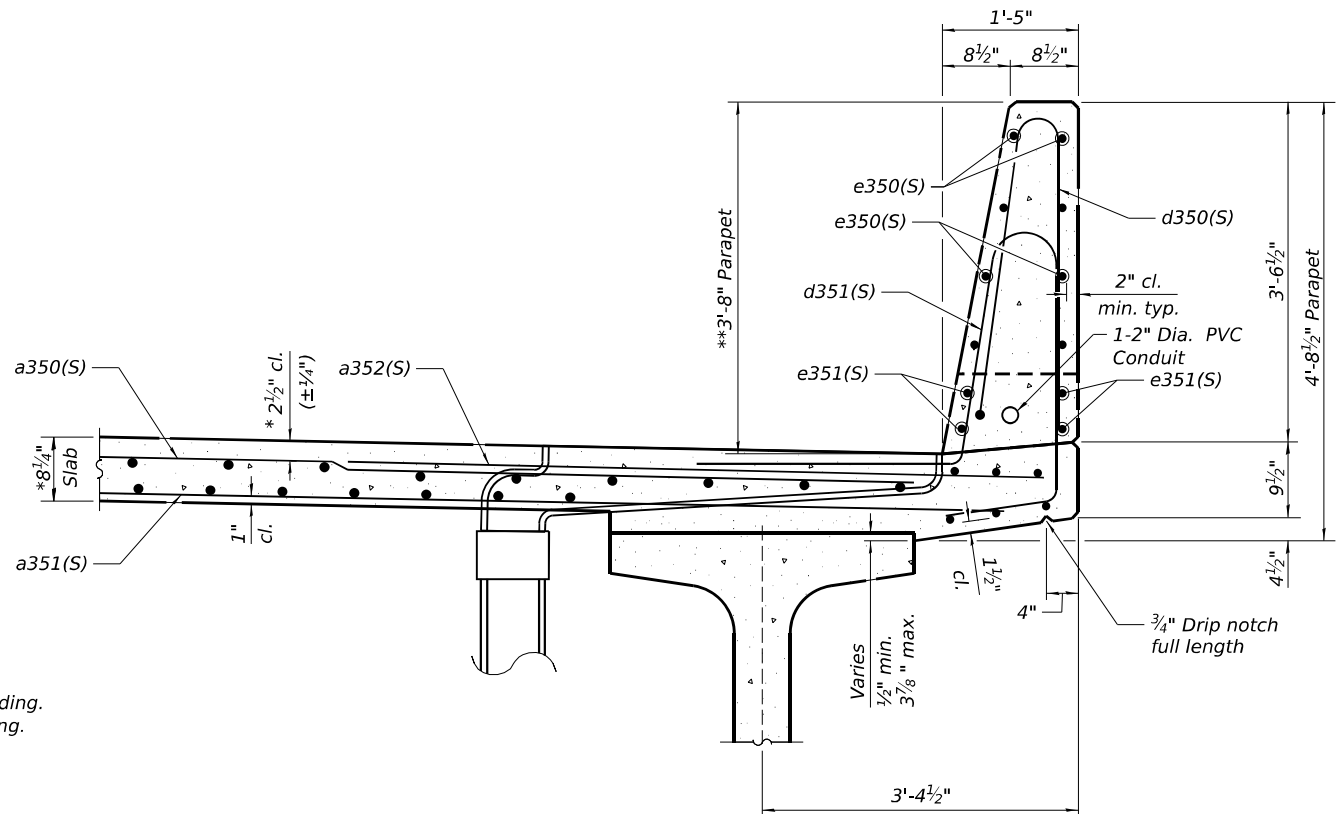
SHEET 5-126 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	707
CONTRACT NO. 62R23				

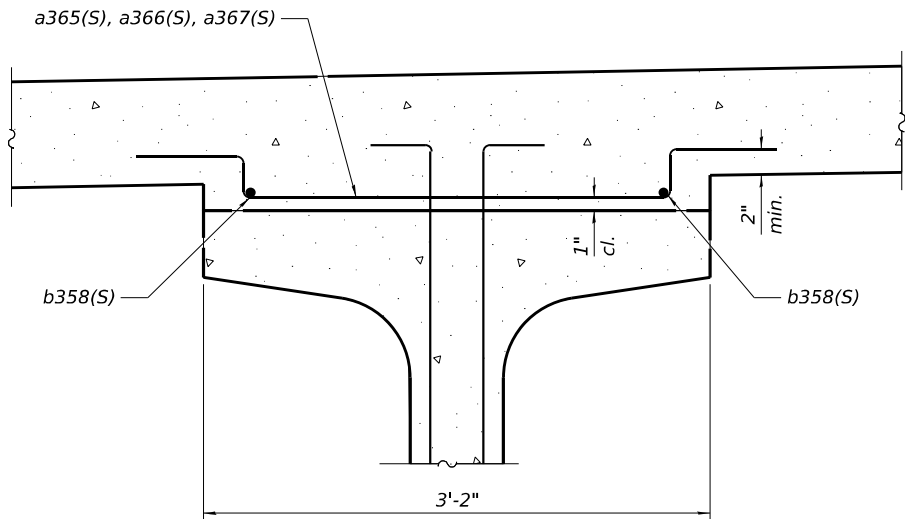
ILLINOIS FED. AID PROJECT



SECTION THRU NORTH PARAPET



SECTION THRU SOUTH PARAPET



FILLET DETAIL

NUMBER OF REINFORCEMENT BARS IN FILLET

	W1	W2	W3	W4	W5	W6	W7	W8
Number of Bars in Span 6 near Pier 5	32-a367(S)	30-a365(S) 2-b358(S)	31-a365(S) 2-b358(S)	25-a365(S) 2-b358(S)	30-a365(S) 2-b358(S)	16-a366(S) 2-b358(S)	28-a365(S) 2-b358(S)	16-a366(S) 2-b358(S)
No Bars	0'-0"	91'-0"	86'-6"	101'-4"	92'-5"	83'-8"	88'-3"	85'-5"
	87-a366(S) 2x5-b358(S)							
Number of Bars in Span 6 near Pier 6	32-a367(S)	15-a365(S) 16-a366(S) 2-b358(S)	18-a365(S) 16-a366(S) 2-b358(S)	26-a365(S) 2-b358(S)	14-a365(S) 16-a366(S) 2-b358(S)	17-a365(S) 16-a366(S) 2-b358(S)	20-a365(S) 16-a366(S) 2-b358(S)	20-a365(S) 16-a366(S) 2-b358(S)
Number of Bars in Span 7 near Pier 6	32-a367(S)	16-a366(S) 2-b358(S) 15-a365(S)	27-a365(S) 2-b358(S) 20-a365(S)	27-a365(S) 2-b358(S)	16-a366(S) 2-b358(S) 16-a365(S)	16-a366(S) 2-b358(S) 17-a365(S)	16-a366(S) 2-b358(S) 20-a365(S)	16-a366(S) 2-b358(S) 20-a365(S)
No Bars	0'-0"	94'-2"	92'-5"	109'-10"	98'-11"	89'-11"	88'-4"	86'-9"
Number of Bars in Span 7 near Pier 7	32-a367(S)	27-a365(S) 2-b358(S)	24-a365(S) 2-b358(S)	15-a365(S) 2-b358(S)	22-a365(S) 2-b358(S)	29-a365(S) 2-b358(S)	28-a365(S) 2-b358(S)	29-a365(S) 2-b358(S)

Note:
#4- a365(S), a366(S) and a367(S) bars are spaced at 12" centers above the beam as shown in the Fillet Detail. #4 b358(S) shall be placed as shown in the Fillet Detail. Bars can be cut to fit.

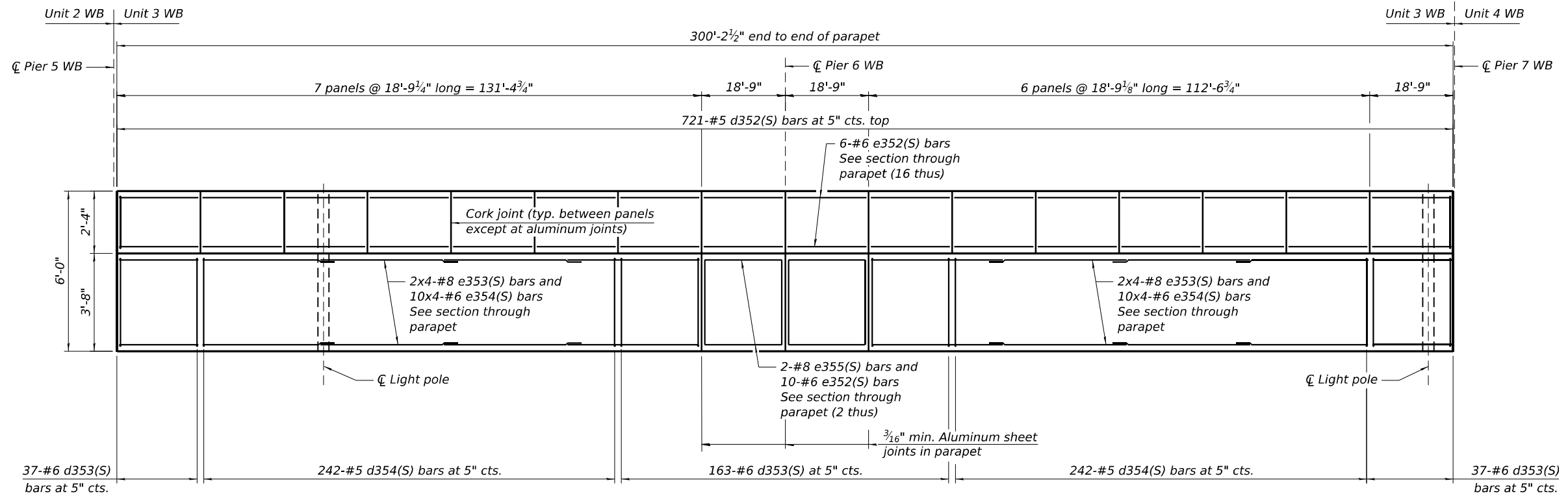
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET SECTION - UNIT 3 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-127 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	708
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

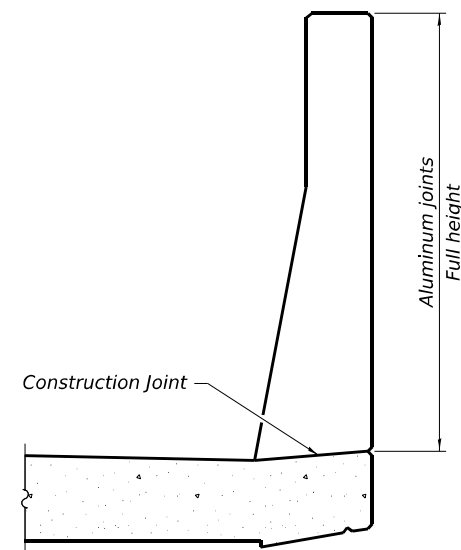
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVIS	
PLOT SCALE = 6,000' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -



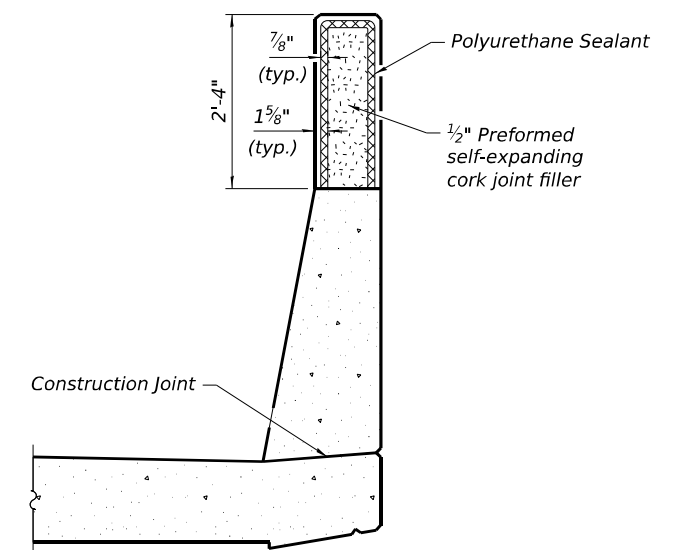
INSIDE ELEVATION OF NORTH PARAPET

MINIMUM BAR LAP

#4 bar = 2'-5"
#6 bar = 3'-7"
#8 bar = 4'-9"



ALUMINUM PARAPET JOINT DETAILS



CORK PARAPET JOINT DETAILS

See S-129 for parapet joint notes.

MODEL Default: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CAD\62023-RB-1-Sheets\Structural\0998309-42R23-5328-DK304.dgn



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

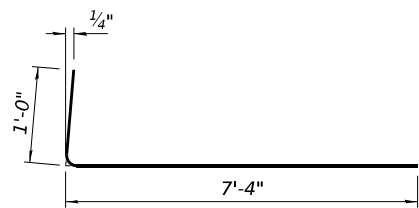
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVIS	REVISED -
PLOT SCALE = 28,000 ' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

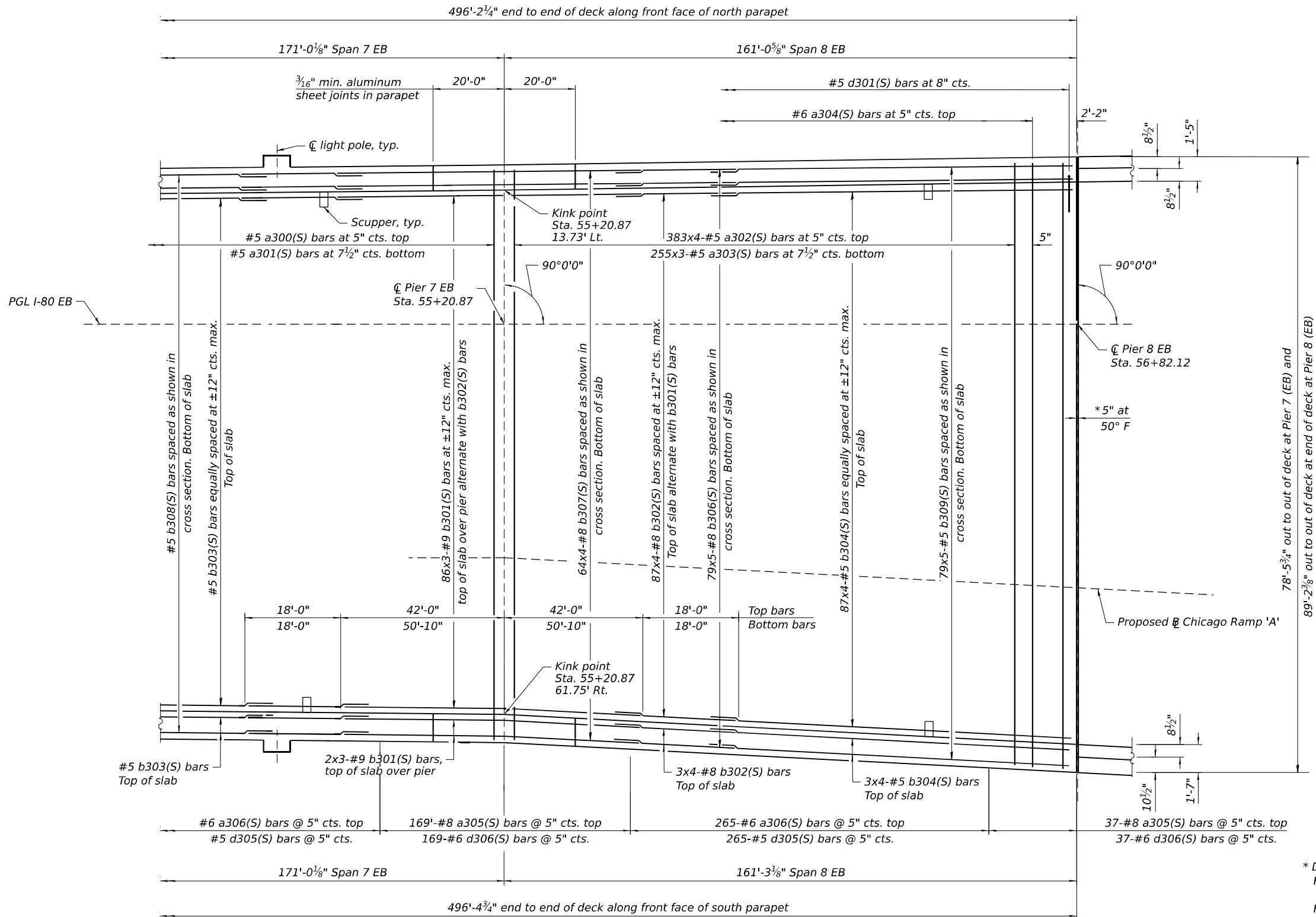
PARAPET ELEVATION 1 - UNIT 3 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-128 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	709
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



BAR a352(S)



PARTIAL PLAN - UNIT 3 EB

MINIMUM BAR LAP

#5 bar = 3'-6"
#6 bar = 4'-10"
#8 bar = 7'-10"
#9 bar = 8'-7"

NOTES:

- See sheet S-137 for superstructure details and Bill of Material.
- Offsets for scupper and light pole locations are measured off of EB PGL.
- Bars indicated thus, 32 x 2 - #5 etc. indicates 32 lines of bars with 2 lengths per line.
- For Cross Section see sheet S-133
- Longitudinal bars in deck to be kinked as necessary at pier.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN 2 - UNIT 3 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-132 OF S-333 SHEETS

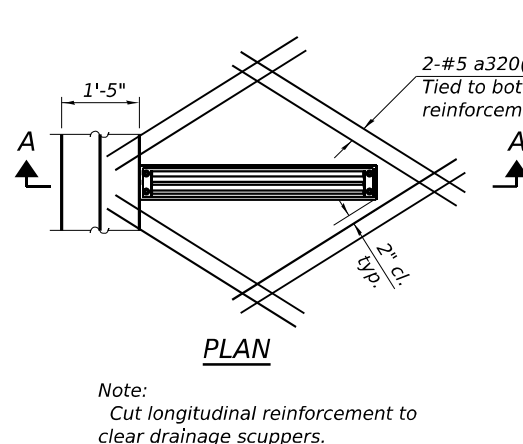
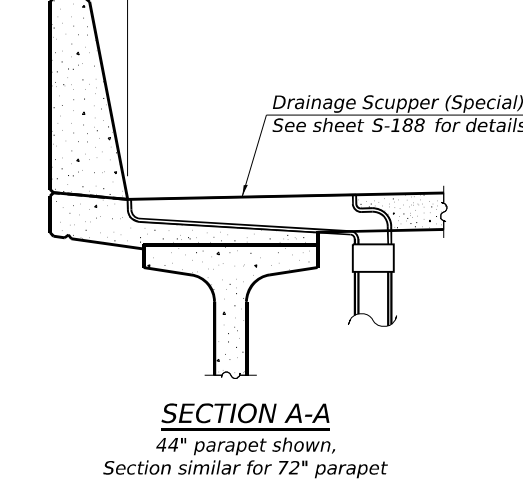
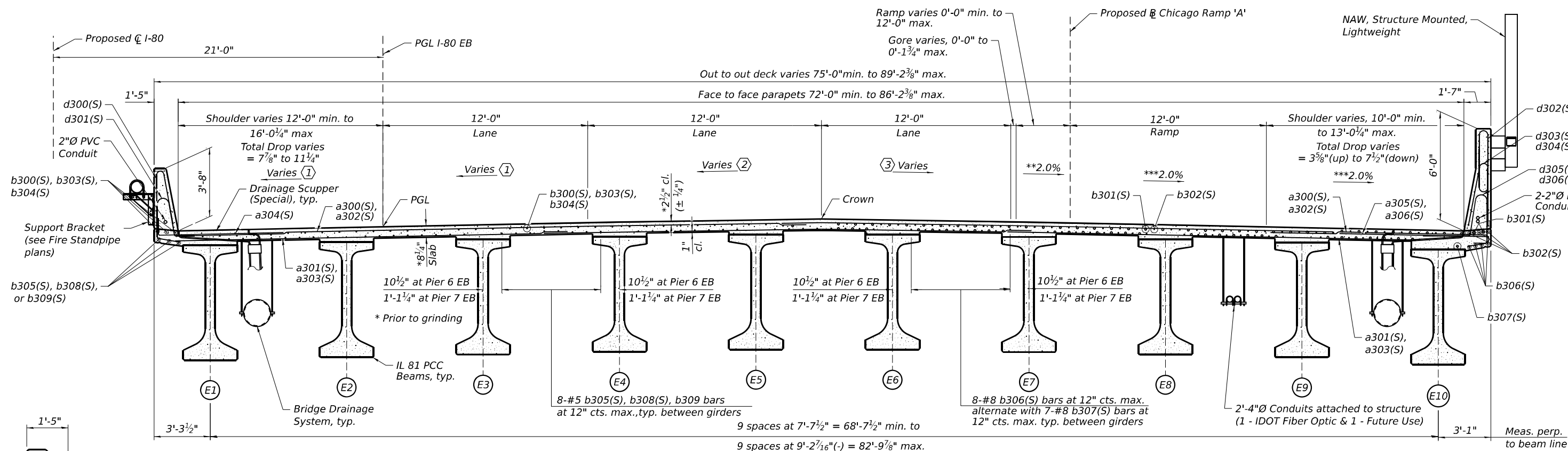
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	713
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



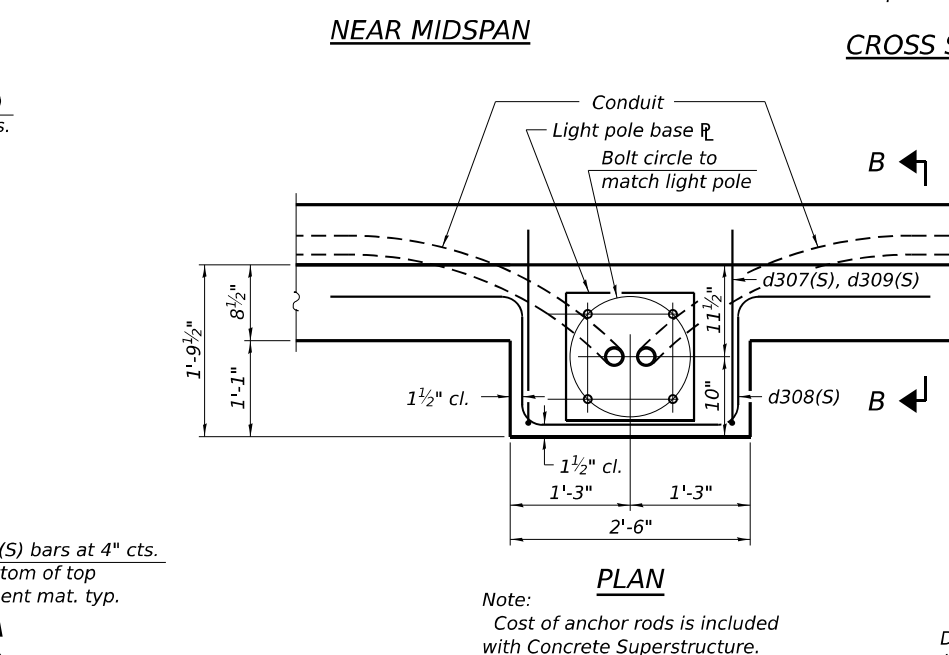
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME	= USSJ696614
DESIGNED	- LAS
CHECKED	- PJL
PLOT SCALE	= 32,000 ' / in.
DRAWN	- BK
CHECKED	- LAS
PLOT DATE	= 11/5/2025
REVISED	-
REVISED	-
REVISED	-
REVISED	-

MODEL Default:
FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH4001\401180022\03-WSP\CD\62023-RB-1\Sheet\Structure\0998309-42R23-5333-20308.dgn



REINFORCEMENT AT DRAINAGE SCUPPERS

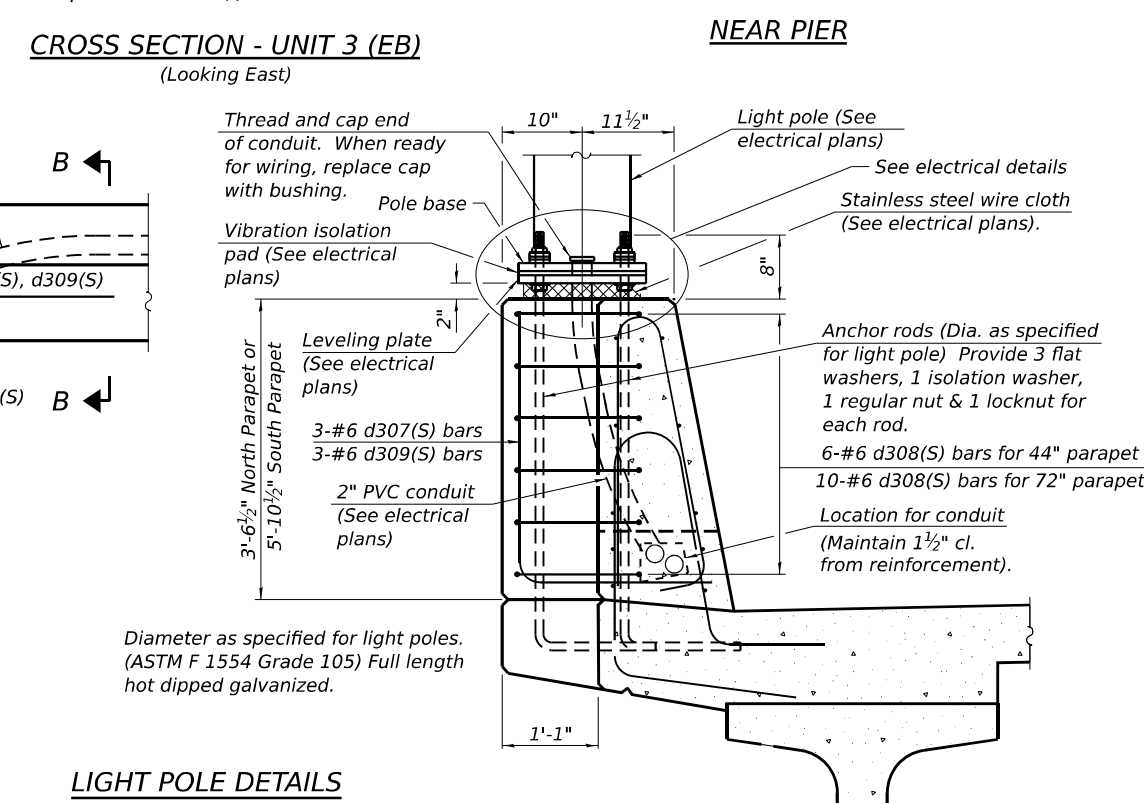


CROSS SLOPE TRANSITION DATA
Note: Positive (+) slopes upward from Lt.-to-Rt., Negative (-) slopes downward from Lt.-to-Rt.

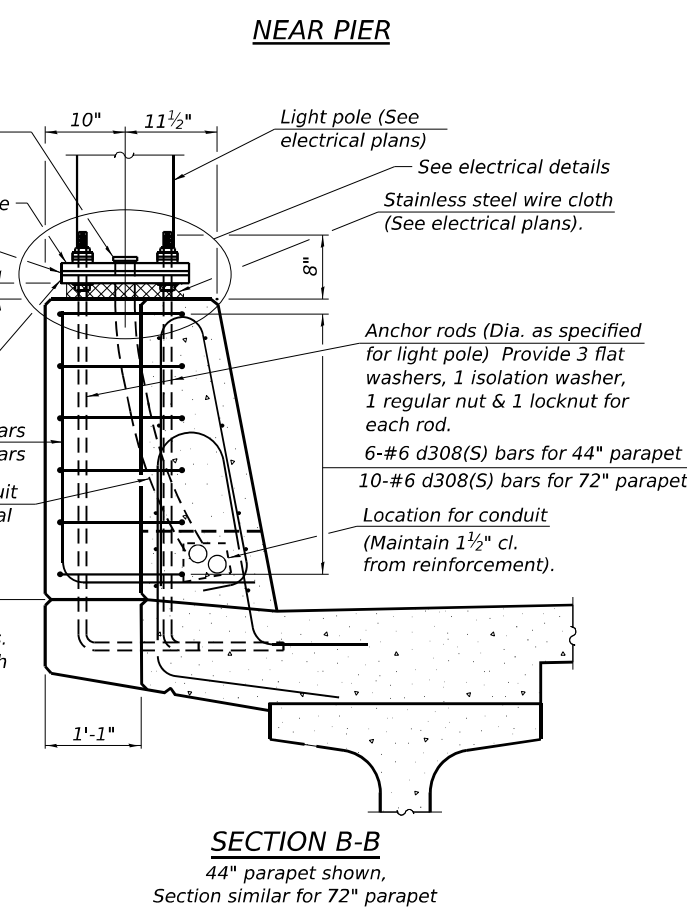
①	Varies from +2.00% at Sta. 56+61 to +5.20% at Sta. 59+08.
②	Varies from +1.50% at Sta. 55+96 to +5.20% at Sta. 59+08.
③	Varies from -1.50% at Sta. 55+57 to +5.20% at Sta. 59+08.

*** Cross slopes shown are measured relative to the PGL I-80 EB up to Sta. 56+79, beyond this point they are measured relative to Proposed Chicago Ramp A.

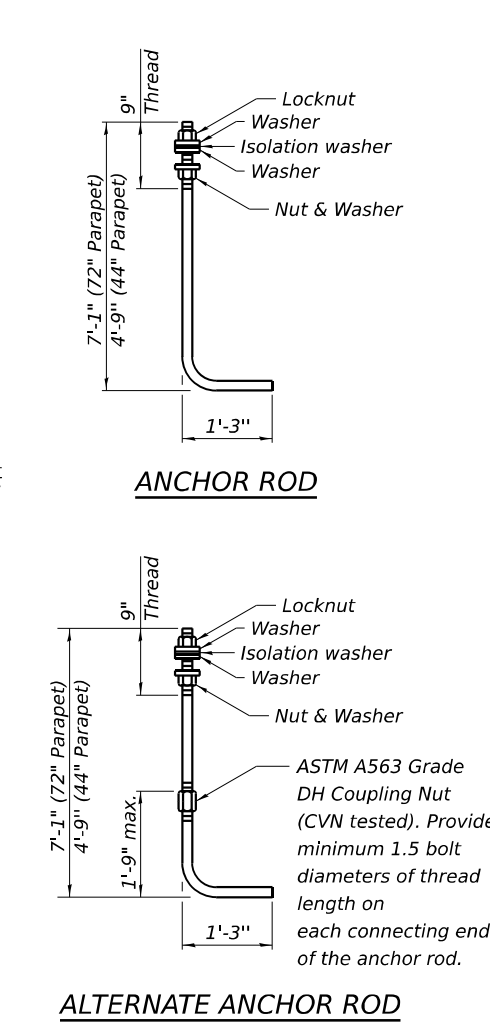
*** Cross slopes shown are measured relative to the PGL I-80 EB up to Sta. 54+50, beyond this point they are measured relative to Proposed Chicago Ramp A.



LIGHT POLE DETAILS



DECK CROSS SECTION AND PARAPET- UNIT 3 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

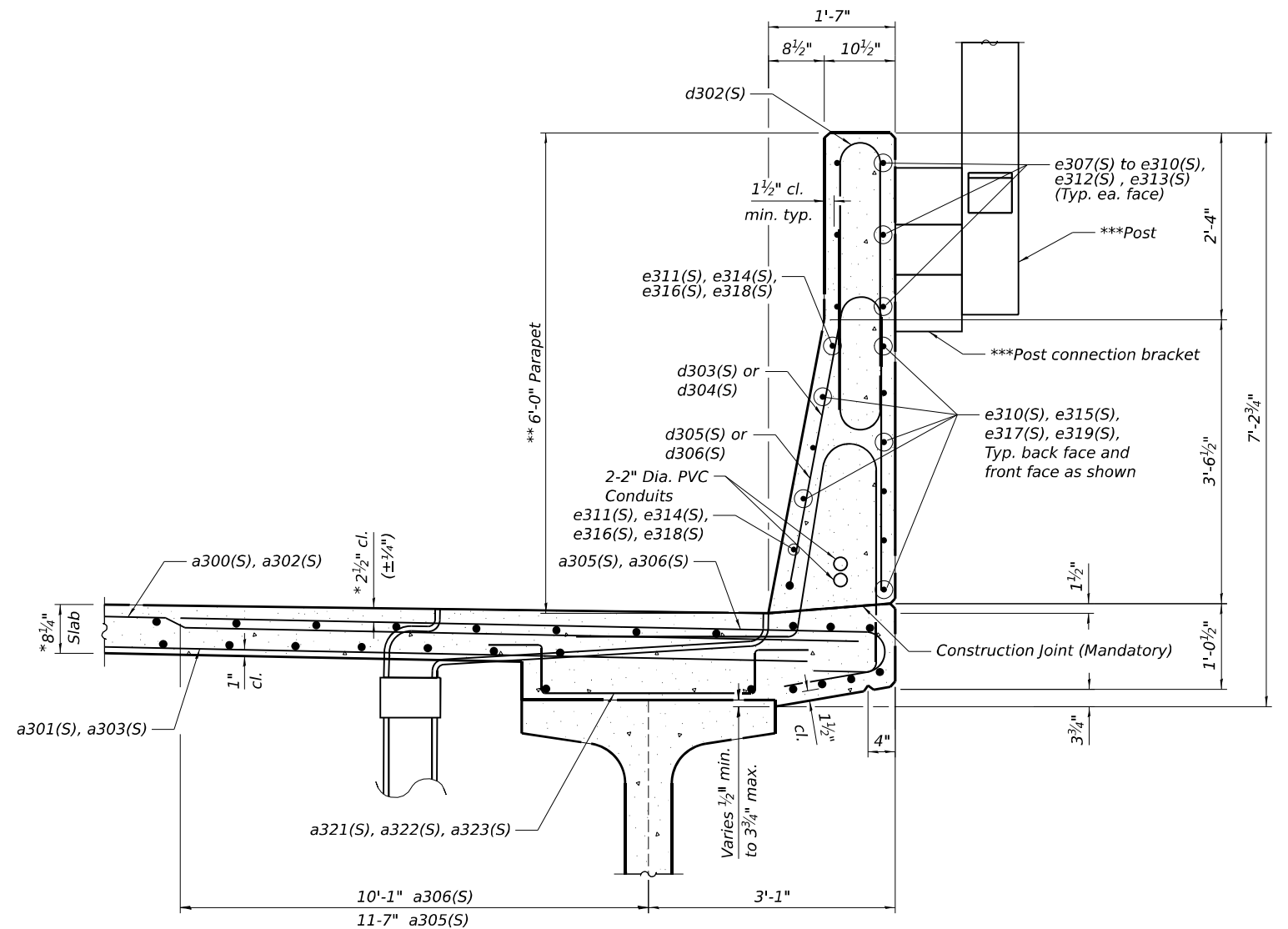


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	714
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WSP	USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
	PLOT SCALE = 6,000' / in.	CHECKED - PJL	REVISED -
	PLOT DATE = 11/5/2025	DRAWN - BK	REVISED -
		CHECKED - LAS	REVISED -

WSP USA INC.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684



SECTION THRU SOUTH PARAPET

*** *Post and connection to parapet to be designed by the Contractor, See Noise Abatement Wall Plans and Special Provisions.*

Note:
#4- a321(S), a322(S) and a323(S) bars are spaced at 12" centers above the beam as shown in the Fillet Detail. #4 b312(S) shall be placed as shown in the Fillet Detail. Bars can be cut to fit.

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
Number of Bars in Span 6 near Pier 5	32-a321(S)	31-a321(S)	27-a321(S)	26-a321(S)	26-a321(S)	25-a321(S)	24-a321(S)	24-a321(S)	29-a321(S)	17-a323(S)
	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	
	No bars	102'-10"	105'-8"	104'-9"	108'-5"	116'-7"	120'-1"	111'-11"	109'-6"	107'-4"
										131-a322(S) 2x5-b312(S)
Number of Bars in Span 6 near Pier 6	31-a321(S)	30-a321(S)	34-a321(S)	32-a321(S)	23-a321(S)	22-a321(S)	30-a321(S)	32-a321(S)	30-a321(S)	17-a323(S)
	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	
Number of Bars in Span 7 near Pier 6	36-a321(S)	35-a321(S)	45-a321(S)	43-a321(S)	33-a321(S)	31-a321(S)	49-a321(S)	57-a321(S)	54-a321(S)	51-a323(S)
	2-b312(S)	2-b312(S)	2x2-b312(S)	2x2-b312(S)	2-b312(S)	2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	
	No bars	100'-11"	100'-1"	84'-3"	80'-9"	84'-8"	90'-2"	55'-1"	48'-7"	55'-0"
				31-a321(S)	37-a321(S)	34-a321(S)	51-a321(S)	49-a321(S)	46-a321(S)	70-a322(S) 2x6-b312(S)
Number of Bars in Span 7 near Pier 7	36-a321(S)	37-a321(S)	44-a321(S)	18-a322(S)	18-a322(S)	18-a322(S)	18-a322(S)	18-a322(S)	18-a322(S)	51-a323(S)
	2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	
Number of Bars in Span 8 near Pier 7	29-a321(S)	29-a321(S)	31-a321(S)	17-a322(S)	17-a322(S)	17-a322(S)	17-a322(S)	17-a322(S)	17-a322(S)	17-a323(S)
	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2x2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	
				18-a321(S)	23-a321(S)	10-a321(S)	11-a321(S)	11-a321(S)	11-a321(S)	111-a322(S) 2x5-b312(S)
No bars	98'-3"	101'-4"	99'-10"	96'-3"	91'-11"	103'-1"	86'-1"	84'-9"	86'-11"	0'-0"
			15-a321(S)	15-a321(S)	15-a321(S)	16-a321(S)	18-a321(S)	19-a321(S)	16-a321(S)	
Number of Bars in Span 8 near Pier 8	36-a321(S)	33-a321(S)	17-a322(S)	17-a322(S)	17-a322(S)	17-a322(S)	32-a322(S)	32-a322(S)	32-a322(S)	34-a323(S)
	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2-b312(S)	2x2-b312(S)	2x2-b312(S)	2x2-b312(S)	

Note:
#4- a321(S), a322(S) and a323(S) bars are spaced at 12" centers above the beam as shown in the Fillet Detail. #4 b312(S) shall be placed as shown in the Fillet Detail. Bars can be cut to fit.



3'-6 1/2" Aluminum joints (full height)

2'-10" Cork jts.

Const. jt. (mandatory)

Polyurethane sealant

5/8" Ø Backer rod

1/2" Preformed self-expanding cork joint filler

7/8"

1 5/8"

1/2"

1/4"

1 1/4"

PARAPET JOINT DETAILS

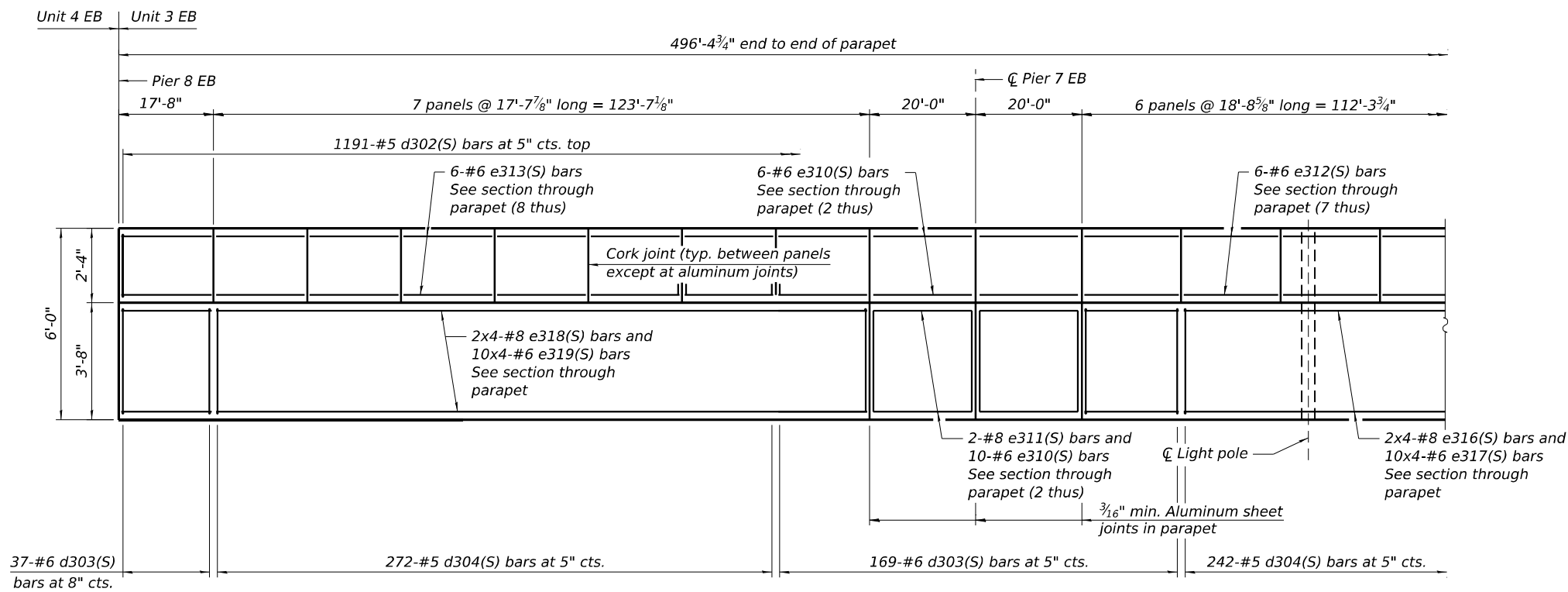
PARAPET JOINT DETAILS

Notes:

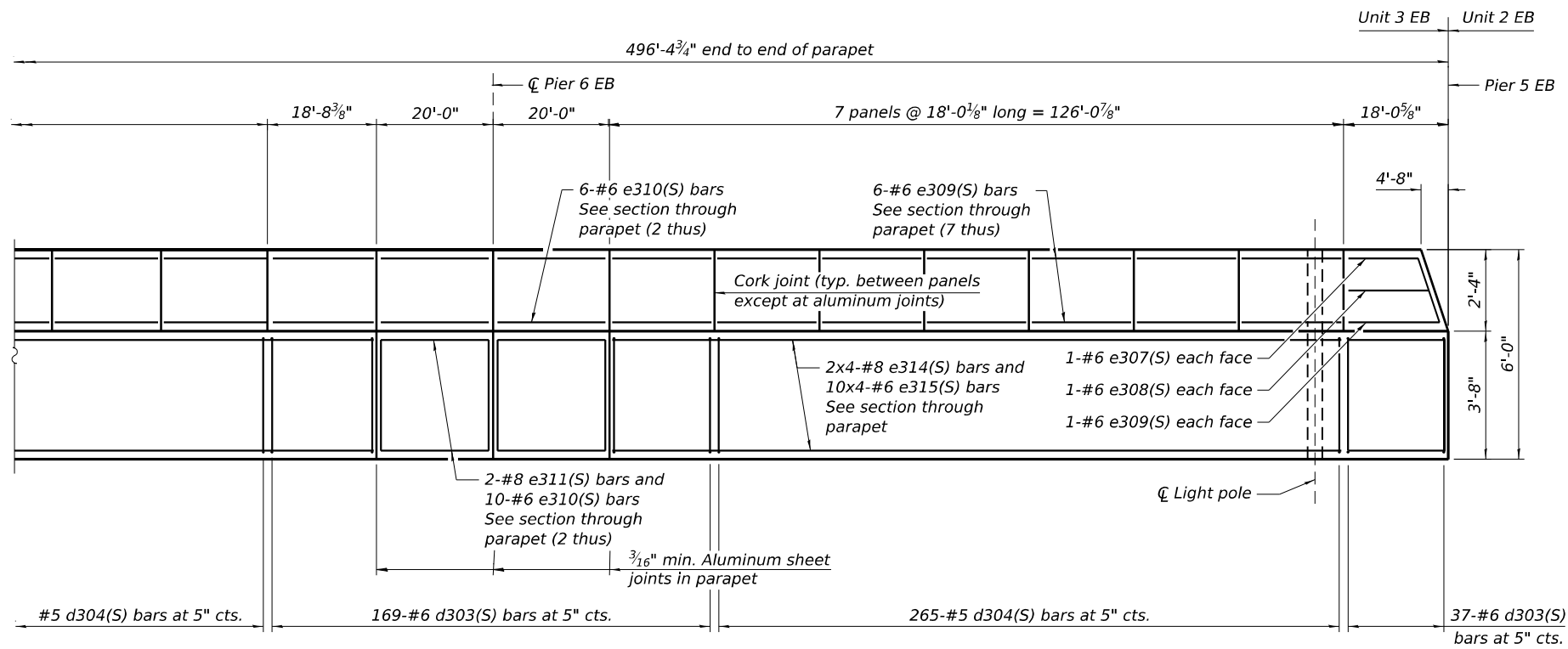
The $\frac{3}{16}$ " minimum aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated with 5 mils of either bitumen paint or epoxy paint to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

MODEL Default:
FILE NAME: p:\proj\transystems-pw\bartley.com\transystems-pw\labeled\Documents\Projects_2018\CH4001\401180022\03-WSP\CD\62R23-RB-1-Sheets\Structural\0998309-42R23-5376-DK112.dgn



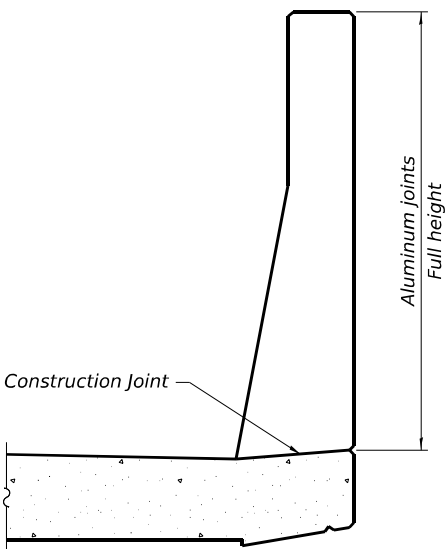
PARTIAL INSIDE ELEVATION OF SOUTH PARAPET



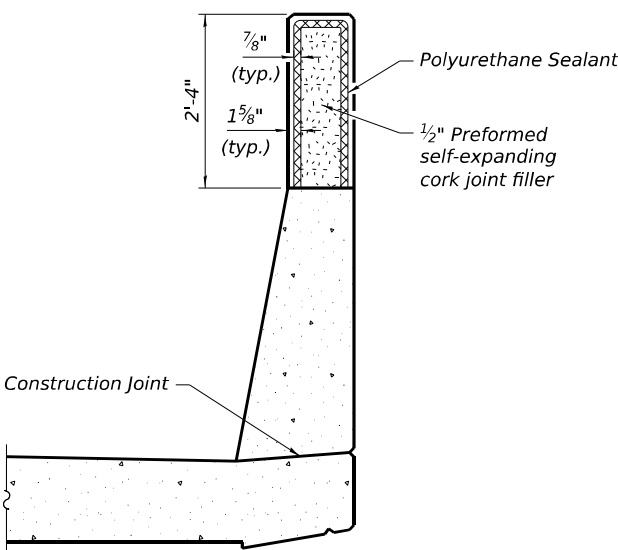
PARTIAL INSIDE ELEVATION OF SOUTH PARAPET

MINIMUM BAR LAP

#4 bar = 2'-5"
#6 bar = 3'-7"
#8 bar = 4'-9"



ALUMINUM PARAPET JOINT DETAILS



CORK PARAPET JOINT DETAILS

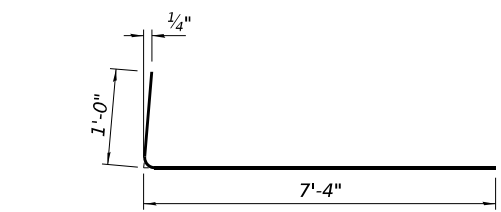
See sheet S-135 for parapet joint notes.

UNIT 3 EB
SUPERSTRUCTURE
BILL OF MATERIAL

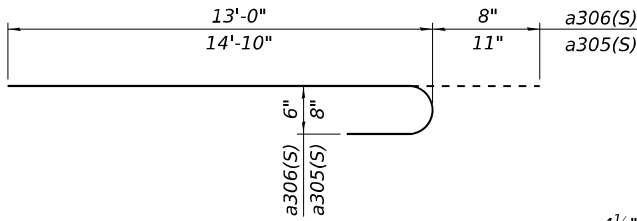
Bar	No.	Size	Length	Shape
a300(S)	2,433	#5	28'-5"	————
a301(S)	1,068	#5	39'-6"	————
a302(S)	1,532	#5	24'-11"	————
a303(S)	765	#5	31'-1"	————
a304(S)	1,182	#6	8'-4"	└┐
a305(S)	412	#8	15'-9"	└┐
a306(S)	779	#6	13'-8"	└┐
a307(S)	9	#5	4'-2"	└┐
a308(S)	9	#5	6'-9"	└┐
a309(S)	1	#5	1'-5"	└┐
a310(S)	1	#5	2'-8"	└┐
a311(S)	1	#5	1'-2"	└┐
a312(S)	1	#5	2'-5"	└┐
a313(S)	36	#6	32'-11"	————
a314(S)	9	#6	5'-8"	└┐
a315(S)	9	#6	8'-3"	└┐
a316(S)	1	#6	1'-5"	└┐
a317(S)	1	#6	2'-8"	└┐
a318(S)	1	#6	1'-2"	└┐
a319(S)	1	#6	2'-5"	└┐
a320(S)	48	#5	5'-0"	————
a321(S)	1,612	#4	4'-10"	└┐
a322(S)	686	#4	5'-2"	└┐
a323(S)	187	#4	5'-6"	└┐
b300(S)	372	#5	29'-6"	————
b301(S)	540	#9	33'-9"	————
b302(S)	744	#8	35'-11"	————
b303(S)	186	#5	30'-10"	————
b304(S)	372	#5	28'-10"	————
b305(S)	395	#5	22'-7"	————
b306(S)	790	#8	33'-10"	————
b307(S)	512	#8	31'-4"	————
b308(S)	79	#5	40'-4"	————
b309(S)	395	#5	22'-0"	————
b312(S)	174	#4	36'-0"	————
d300(S)	745	#5	7'-0"	└┐
d301(S)	745	#5	7'-6"	└┐
d302(S)	1,191	#5	10'-0"	└┐
d303(S)	412	#6	8'-8"	└┐
d304(S)	779	#5	8'-2"	└┐
d305(S)	779	#5	9'-1"	└┐
d306(S)	412	#6	9'-7"	└┐
d307(S)	6	#6	5'-3"	└┐
d308(S)	32	#6	8'-11"	└┐
d309(S)	6	#6	7'-7"	└┐

Bar	No.	Size	Length	Shape
e300(S)	64	#4	17'-8"	————
e301(S)	48	#4	19'-8"	————
e302(S)	56	#4	18'-5"	————
e303(S)	64	#4	17'-4"	————
e304(S)	20	#4	30'-9"	————
e305(S)	20	#4	28'-2"	————
e306(S)	20	#4	30'-2"	————
e307(S)	2	#6	17'-11"	└┐
e308(S)	2	#6	15'-4"	└┐
e309(S)	44	#6	17'-8"	└┐
e310(S)	64	#6	19'-8"	└┐
e311(S)	8	#8	19'-8"	└┐
e312(S)	42	#6	18'-5"	└┐
e313(S)	48	#6	17'-4"	└┐
e314(S)	8	#8	39'-6"	└┐
e315(S)	40	#6	38'-8"	└┐
e316(S)	8	#8	36'-3"	└┐
e317(S)	40	#6	35'-5"	└┐
e318(S)	8	#8	38'-10"	└┐
e319(S)	40	#6	37'-11"	└┐
m300(S)	18	#6	4'-2"	└┐
m301(S)	108	#6	6'-3"	└┐
m302(S)	40	#5	4'-0"	└┐
m303(S)	18	#6	4'-5"	└┐
m304(S)	108	#6	6'-8"	└┐
m305(S)	48	#5	3'-0"	└┐
s300(S)	99	#5	19'-6"	└┐
s301(S)	72	#5	10'-2"	└┐
x300(S)	120	#5	6'-11"	└┐
x301(S)	116	#5	5'-5"	└┐
Concrete Superstructure			Cu Yd.	1,462.0
Reinforcement Bars, Stainless Steel			Pound	617,100
Bar Splicers			Each	344
Protective Coat			Sq. Yd.	4,789
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	2,649
Diamond Grinding (Bridge Section)			Sq. Yd.	3,940

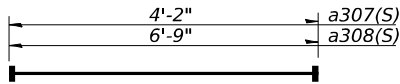
Note: Bar terminators paid for separately.
See Total Bill of Materials.



BAR a304(S)

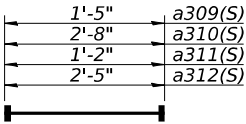


BAR a305(S), a306(S)



HEADED BAR a307(S), a308(S)

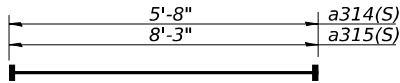
(Headed 18-#5 a307(S) Bar terminators)
(Headed 18-#5 a308(S) Bar terminators)



HEADED BAR a309(S), a310(S),

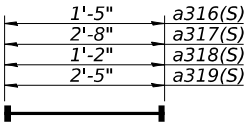
a311(S), a312(S)

(Headed 2-#5 a309(S) Bar terminators)
(Headed 2-#5 a310(S) Bar terminators)
(Headed 2-#5 a311(S) Bar terminators)
(Headed 2-#5 a312(S) Bar terminators)



HEADED BAR a314(S), a315(S)

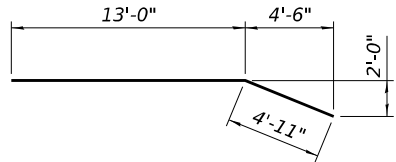
(Headed 18-#6 a314(S) Bar terminators)
(Headed 18-#6 a315(S) Bar terminators)



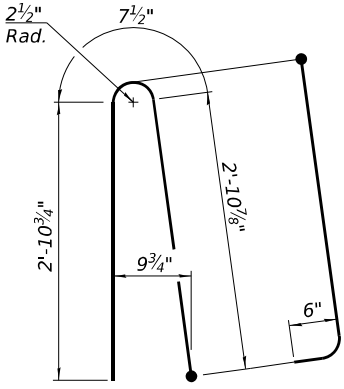
HEADED BAR a316(S), a317(S),

a318(S), a319(S)

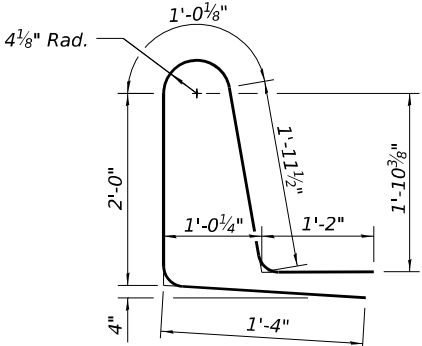
(Headed 2-#6 a316(S) Bar terminators)
(Headed 2-#6 a317(S) Bar terminators)
(Headed 2-#6 a318(S) Bar terminators)
(Headed 2-#6 a319(S) Bar terminators)



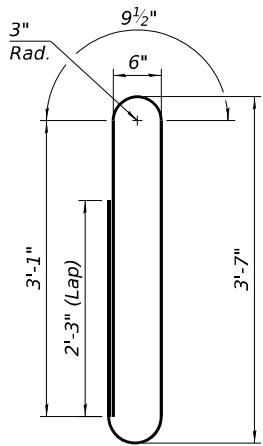
BAR e307(S)



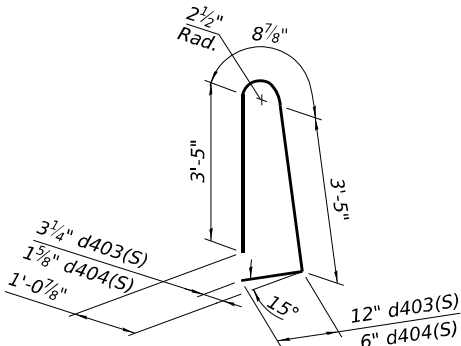
BAR d300(S)



BAR d301(S)

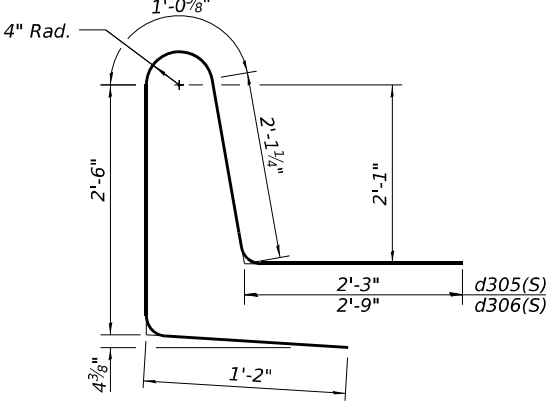


BAR d302(S)

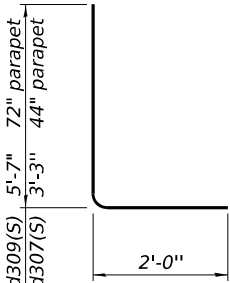


BAR d303(S) or d304(S)

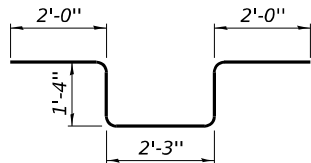
(Trimetric View)



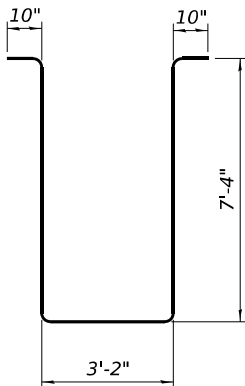
BAR d305(S), d306(S)



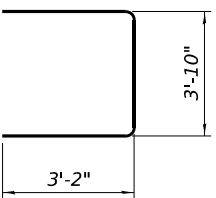
BAR d307(S) & d309(S)



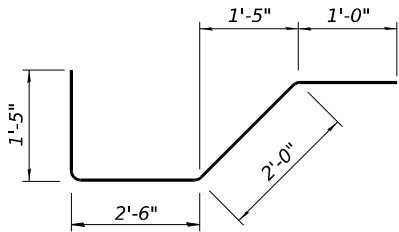
BAR d308(S)



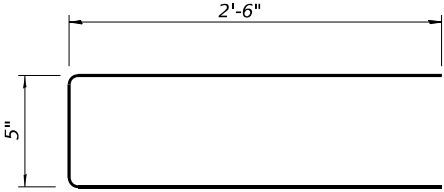
BAR s300(S)



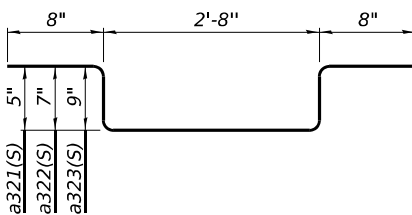
BAR s301(S)



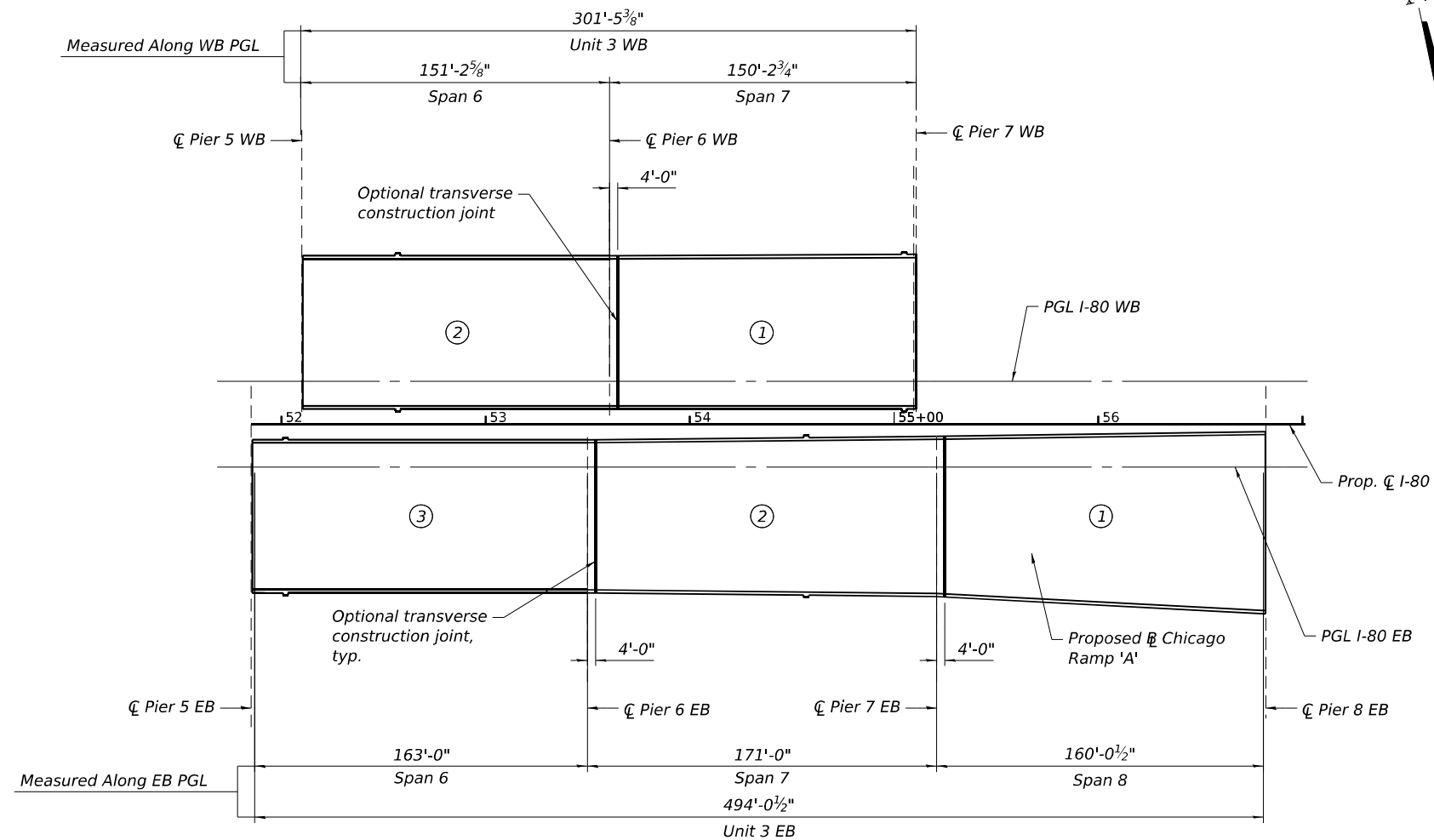
BAR x300(S)



BAR x301(S)



BAR a321(S), a322(S), a323(S)



DECK POURING SEQUENCE - UNIT 3

NOTES ON DECK POURING SEQUENCE:

- When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
 - At least 72 hours shall have elapsed from the end of the previous pour.
 - The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compressive strength of 4000 psi.

MODEL Default:
FILE NAME: p:\projects\transys\corp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\Structure\0998309-42R23-5338-DC314.dgn

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

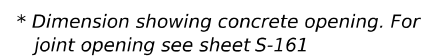
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVIS	REVISED -
PLOT SCALE = 0:0 3/16 : 1 in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

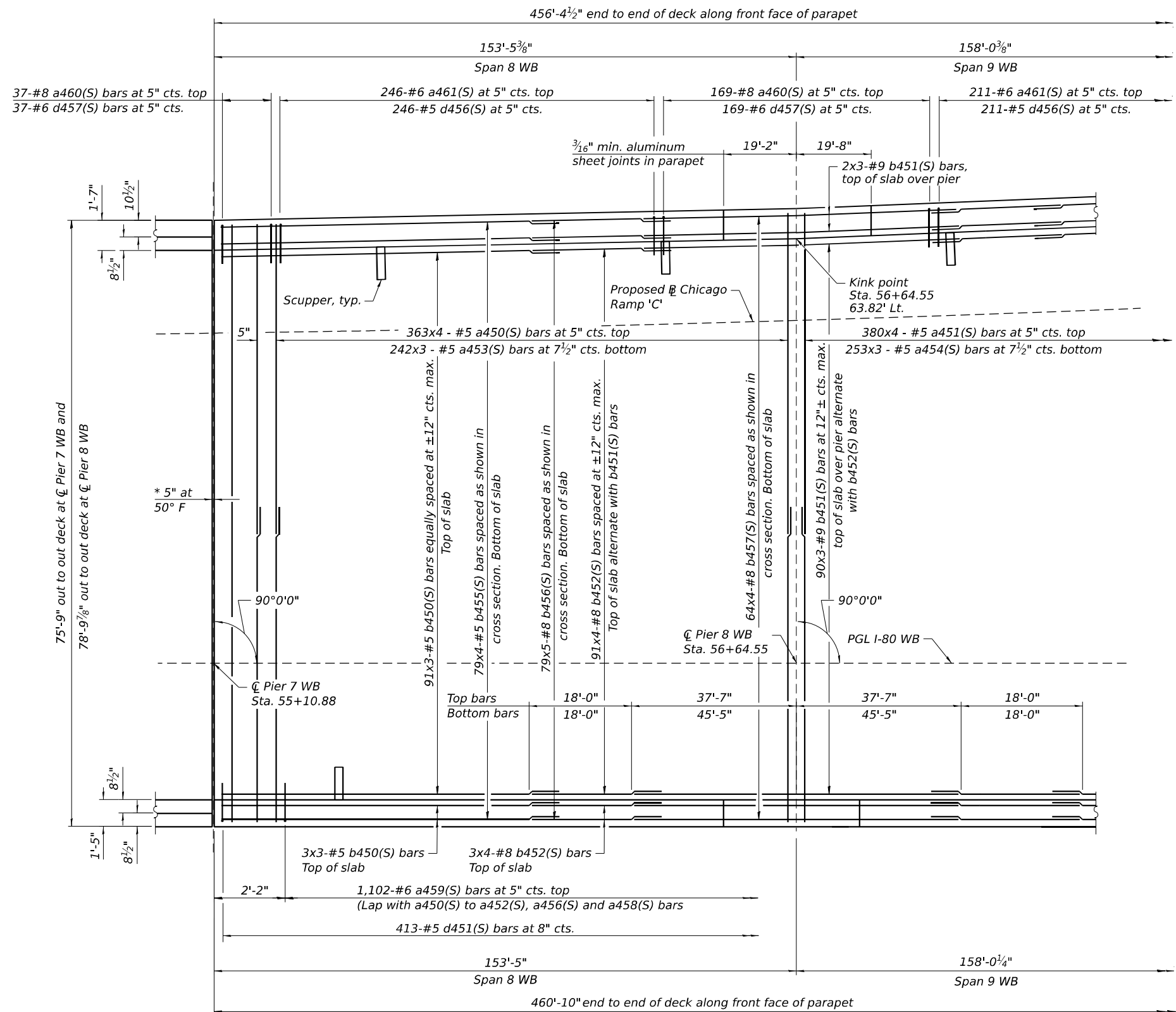
**DECK POURING SEQUENCE - UNIT 3 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET 5-138 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	719
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



For bars near joint see sheet S-161



PARTIAL PLAN - UNIT 4 WB

MINIMUM BAR LAP

#5 bar = 3'-6"
#6 bar = 4'-10"
#8 bar = 7'-10"
#9 bar = 8'-7"

#6 bar = 4'-10"

#8 bar = 7'-10"

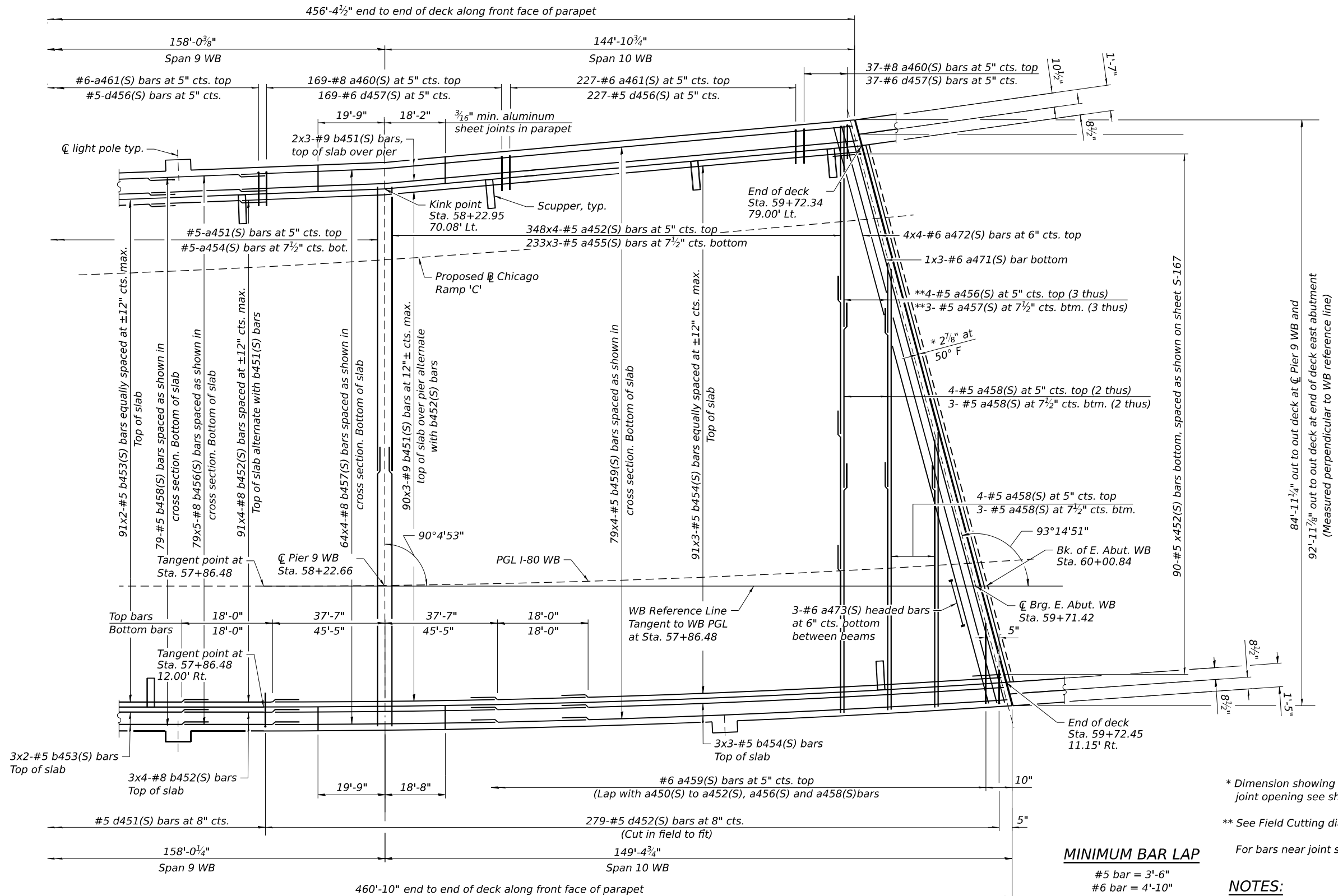
#9 bar = 8'-7"

- NOTES:

1. See sheet S-145 for superstructure details and Bill of Material.
2. Offsets for scupper and light pole locations are measured off of WB PGL.
3. Bars indicated thus, 32 x 2 - #5 etc. indicates 32 lines of bars with 2 lengths per line.
4. For Cross Section see sheet S-141.
5. Longitudinal bars in deck to be kinked as necessary at pier.

 WSP USA Inc. 30 N. LASALLE STREET SUITE 4200 CHICAGO, IL 60602 TEL: (312) 782-8150 FAX: (312) 782-1684	USER NAME = USSJ696614	DESIGNED - LAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PLAN 1 - UNIT 4 WB STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 32,000 ' / in.	CHECKED - PJL	REVISED -			I-80	FAI 80 21 STRUCTURE 2	WILL	1230	720
	PLOT DATE = 11/5/2025	DRAWN - BK	REVISED -			CONTRACT NO. 62R23				
	PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -			SHEET S-139 OF S-333 SHEETS				

MODEL Default:
FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH4001401180022\03-W59\CAD\62R23-RB-1-Sheet5\Structure\0998309-42R23-5340-DK02.dgn



PARTIAL PLAN - UNIT 4 WB

* Dimension showing concrete opening. For joint opening see sheet S-167

** See Field Cutting diagram on sheet S-145

For bars near joint see sheet S-167

MINIMUM BAR LAP

#5 bar = 3'-6"
#6 bar = 4'-10"
#8 bar = 7'-10"
#9 bar = 8'-7"

NOTES:

- See sheet S-145 for superstructure details and Bill of Material.
- Bars indicated thus, 32 x 2 - #5 etc. indicates 32 lines of bars with 2 lengths per line.
- For Cross Section see sheet S-141.
- "a" Bars are to be placed perpendicular to the WB Reference line. "b" Bars are to be placed flared between girders.
- Longitudinal bars in deck to be kinked as necessary at pier.



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

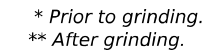
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVISED -	
PLOT SCALE = 32,000 ' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

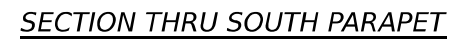
**DECK PLAN 2 - UNIT 4 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-140 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	721
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

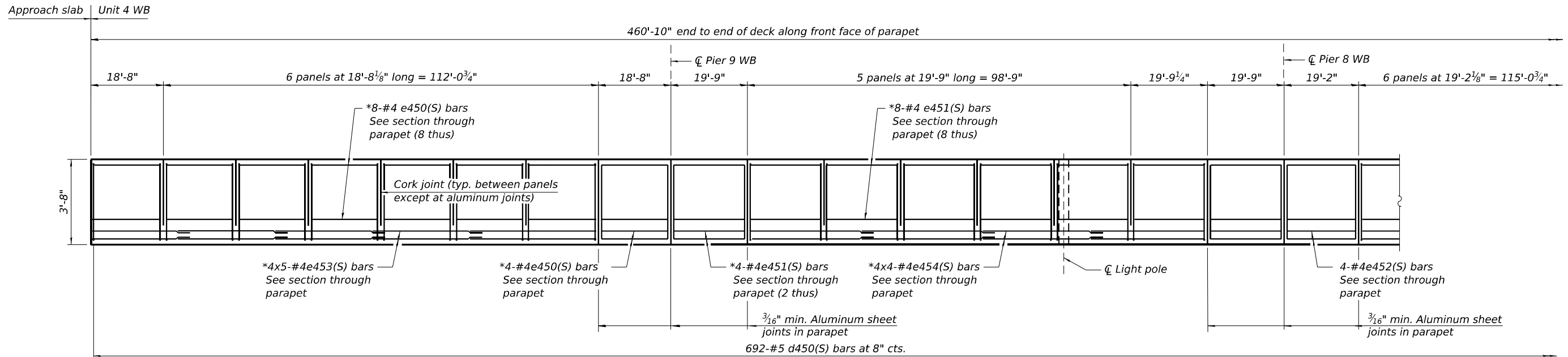


*** Post and connection to parapet to be designed by the Contractor, See Noise Abatement Wall Plans and Special Provisions.



	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
Number of Bars in Span 8 near Pier 7	23-a477(S)	16-a476(S) 2-b466(S)	16-a476(S) 2-b466(S)	16-a476(S) 2-b466(S)	16-a476(S) 2-b466(S)	16-a476(S) 2-b466(S)	16-a476(S) 2-b466(S)	24-a475(S) 2-b466(S)	31-a475(S) 2-b466(S)	29-a475(S) 2-b466(S)
		13-a475(S)	12-a475(S)	12-a475(S)	11-a475(S)	10-a475(S)	7-a475(S)			
No bars	0'-0"	92'-2"	85'-9"	87'-3"	92'-8"	93'-3"	97'-6"	105'-6"	96'-8"	97'-1"
	115-a476(S) 2X6-b466(S)									
		18-a475(S)	26-a475(S)	25-a475(S)	20-a475(S)	21-a475(S)	19-a475(S)			
Number of Bars in Span 8 near Pier 8	16-a477(S)	16-a476(S) 2x2-b466(S)	16-a476(S) 2x2-b466(S)	16-a476(S) 2x2-b466(S)	16-a476(S) 2x2-b466(S)	16-a476(S) 2x2-b466(S)	16-a476(S) 2x2-b466(S)	27-a475(S) 2-b466(S)	29-a475(S) 2-b466(S)	29-a475(S) 2-b466(S)
Number of Bars in Span 9 near Pier 8	16-a477(S) 2X6-b466(S)	143-a476(S) 2X6-b466(S)	142-a476(S) 2X6-b466(S)	158-a476(S) 2X6-b466(S)	158-a476(S) 2X6-b466(S)	158-a476(S) 2X6-b466(S)	158-a476(S) 2X6-b466(S)	32-a476(S) 2X6-b466(S)	35-a475(S) 2x2-b466(S)	34-a475(S) 2x2-b466(S)
No bars	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	99'-4"	103'-7"
								94-a475(S) 32-a476(S)		
Number of Bars in Span 9 near Pier 9	143-a478(S)	16-a477(S)	16-a477(S)						25-a475(S) 2-b466(S)	22-a475(S) 2-b466(S)
Number of Bars in Span 10 near Pier 9	30-a478(S)	15-a477(S)	15-a477(S)	44-a476(S)	30-a476(S)	30-a476(S)	30-a476(S)	30-a476(S)		26-a475(S) 2-b466(S)
No bars	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	111'-6"
	94-a477(S)	116-a476(S)	116-a476(S)	74-a475(S)	87-a475(S)	88-a475(S)	88-a475(S)	89-a475(S)	149-a475(S)	
Number of Bars in Span 10 near Abut	2X6-b466(S) 22-a478(S)	2X6-b466(S) 15-a477(S)	2X6-b466(S) 15-a477(S)	2X6-b466(S) 29-a476(S)	2X6-b466(S) 30-a476(S)	2X6-b466(S) 30-a476(S)	2X6-b466(S) 30-a476(S)	2X6-b466(S) 30-a476(S)	2X6-b466(S) 30-a476(S)	2-b466(S) 14-a475(S)

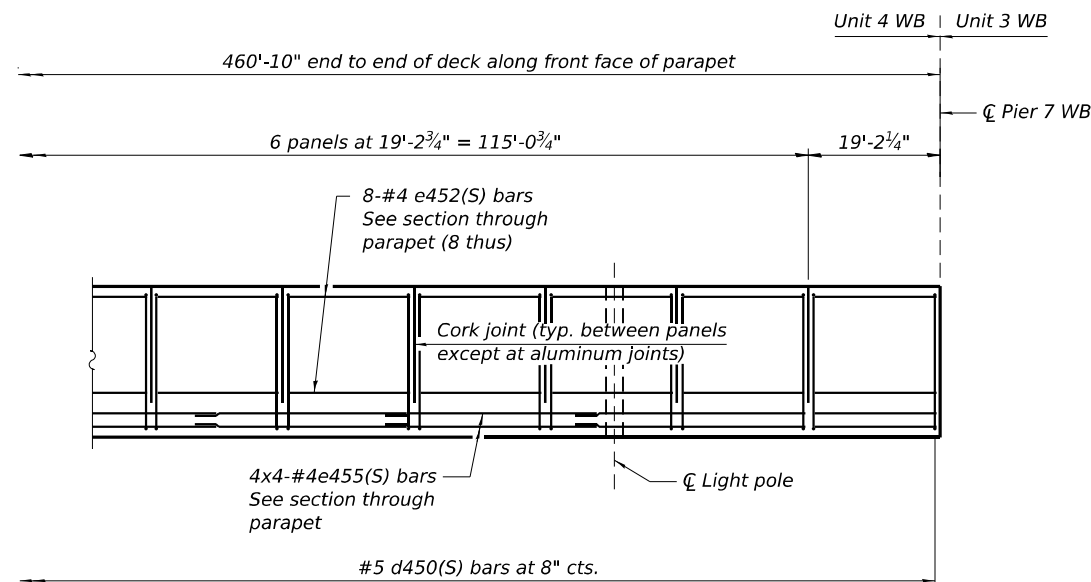
Note:
#4-a475(S), a476(S), a477(S) and a478(S) bars are spaced at 12" centers above the beam as shown in the Fillet Detail. #4-b466(S) shall be placed as shown in the Fillet Detail. Bars can be cut to fit.



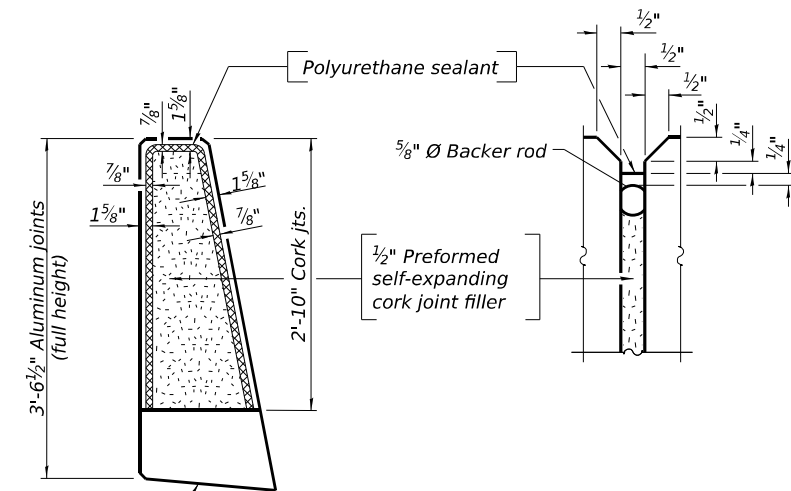
PARTIAL INSIDE ELEVATION OF SOUTH PARAPET

* Bars to be furnished straight and sprung into place to fit.

MINIMUM BAR LAP
#4 bar = 2'-5"



PARTIAL INSIDE ELEVATION OF SOUTH PARAPET



PARAPET JOINT DETAILS

Notes:
The 3/16" minimum aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated with 5 mills of either bitumen paint or epoxy paint to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET ELEVATION 2 - UNIT 4 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET 5-144 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	725
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

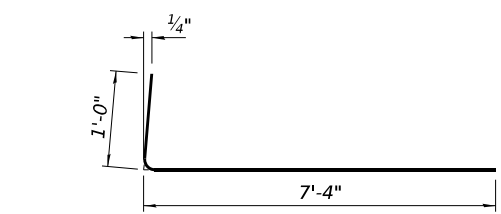
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVIS	REVIS
PLOT SCALE = 28,000 ' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

UNIT 4 WB
SUPERSTRUCTURE
BILL OF MATERIAL

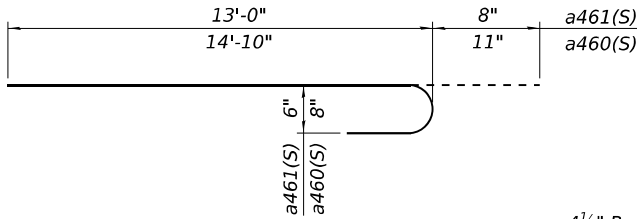
Bar	No.	Size	Length	Shape
a450(S)	1,452	#5	22'-3"	=====
a451(S)	1,520	#5	23'-10"	=====
a452(S)	1,392	#5	25'-10"	=====
a453(S)	726	#5	27'-8"	=====
a454(S)	759	#5	29'-8"	=====
a455(S)	699	#5	32'-5"	=====
a456(S)	12	#5	36'-4"	=====
a457(S)	9	#5	36'-4"	=====
a458(S)	21	#5	33'-4"	=====
a459(S)	1,102	#6	8'-4"	=====
a460(S)	412	#8	15'-9"	=====
a461(S)	684	#6	13'-8"	=====
a462(S)	36	#5	27'-6"	=====
a463(S)	2	#5	2'-11"	=====
a464(S)	2	#5	5'-6"	=====
a465(S)	7	#5	4'-7"	=====
a466(S)	7	#5	7'-2"	=====
a467(S)	1	#5	1'-2"	=====
a468(S)	1	#5	2'-5"	=====
a469(S)	1	#5	1'-4"	=====
a470(S)	1	#5	2'-7"	=====
a471(S)	3	#6	32'-3"	=====
a472(S)	16	#6	26'-10"	=====
a473(S)	27	#6	8'-10"	=====
a474(S)	80	#5	5'-0"	=====
a475(S)	1,188	#4	4'-10"	=====
a476(S)	1,833	#4	5'-2"	=====
a477(S)	241	#4	5'-6"	=====
a478(S)	195	#4	5'-8"	=====
b450(S)	291	#5	36'-1"	=====
b451(S)	564	#9	30'-10"	=====
b452(S)	776	#8	33'-8"	=====
b453(S)	194	#5	28'-9"	=====
b454(S)	291	#5	34'-9"	=====
b455(S)	316	#5	26'-0"	=====
b456(S)	790	#8	31'-8"	=====
b457(S)	512	#8	28'-7"	=====
b458(S)	79	#5	38'-3"	=====
b459(S)	316	#5	25'-0"	=====
b466(S)	280	#4	30'-0"	=====
d450(S)	692	#5	7'-0"	=====
d451(S)	413	#5	7'-6"	=====
d452(S)	279	#5	7'-9"	=====
d453(S)	1,096	#5	10'-0"	=====
d454(S)	412	#6	8'-7"	=====
d455(S)	684	#5	8'-1"	=====
d456(S)	684	#5	9'-1"	=====
d457(S)	412	#6	9'-7"	=====
d458(S)	6	#6	5'-3"	=====
d459(S)	22	#6	8'-11"	=====
d460(S)	3	#6	7'-7"	=====

Bar	No.	Size	Length	Shape
e450(S)	68	#4	18'-4"	=====
e451(S)	72	#4	19'-5"	=====
e452(S)	68	#4	18'-10"	=====
e453(S)	20	#4	28'-10"	=====
e454(S)	16	#4	31'-3"	=====
e455(S)	16	#4	35'-4"	=====
e456(S)	58	#6	18'-10"	=====
e457(S)	2	#8	18'-10"	=====
e458(S)	68	#6	19'-5"	=====
e459(S)	4	#8	19'-5"	=====
e460(S)	58	#6	17'-9"	=====
e461(S)	2	#8	17'-9"	=====
e462(S)	40	#6	36'-2"	=====
e463(S)	8	#8	37'-1"	=====
e464(S)	40	#6	32'-3"	=====
e465(S)	8	#8	33'-2"	=====
e466(S)	40	#6	34'-4"	=====
e467(S)	8	#8	35'-2"	=====
m450(S)	18	#6	4'-5"	=====
m451(S)	90	#6	6'-7"	=====
m452(S)	40	#5	4'-0"	=====
m453(S)	18	#6	5'-3"	=====
m454(S)	90	#6	7'-5"	=====
m455(S)	48	#5	3'-0"	=====
s450(S)	117	#5	18'-0"	=====
s451(S)	72	#5	9'-4"	=====
x450(S)	56	#5	6'-11"	=====
x451(S)	54	#5	5'-5"	=====
x452(S)	90	#5	8'-3"	=====
Concrete Superstructure			Cu Yd.	1,430.6
Reinforcement Bars, Stainless Steel			Pound	596,280
Bar Splicers			Each	184
Protective Coat			Sq. Yd.	4,636
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	2,655
Diamond Grinding (Bridge Section)			Sq. Yd.	3,863

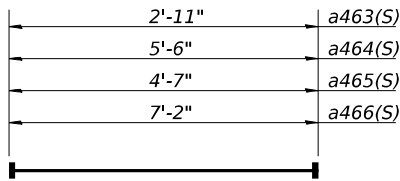
Note: Bar terminators paid for separately.
See Total Bill of Materials.



BAR a459(S)

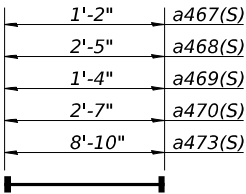


BAR a460(S), a461(S)



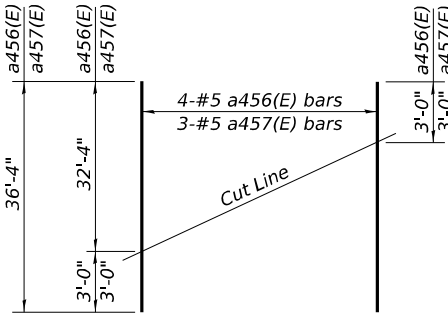
HEADED BAR a463(S), a464(S), a465(S), a466(S)

(Headed 4-#5 a463(S) Bar terminators)
(Headed 4-#5 a464(S) Bar terminators)
(Headed 14-#5 a465(S) Bar terminators)
(Headed 14-#5 a466(S) Bar terminators)



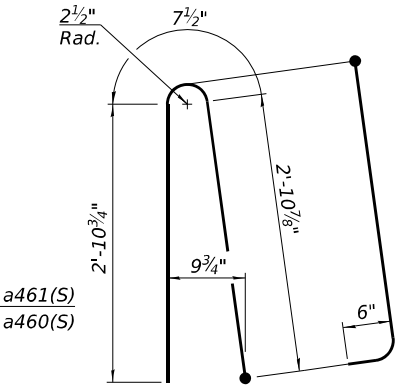
HEADED BAR a467(S), a468(S), a469(S), a470(S), a473(S)

(Headed 2-#5 a467(S) Bar terminators)
(Headed 2-#5 a468(S) Bar terminators)
(Headed 2-#5 a469(S) Bar terminators)
(Headed 2-#5 a470(S) Bar terminators)
(Headed 54-#6 a473(S) Bar terminators)

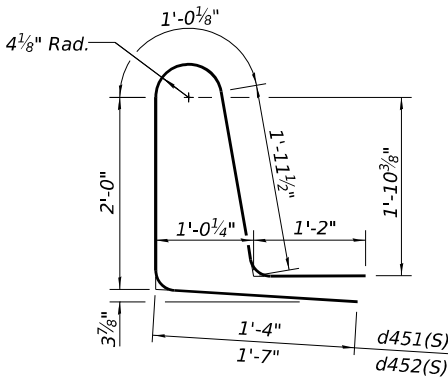


FIELD CUTTING DIAGRAM

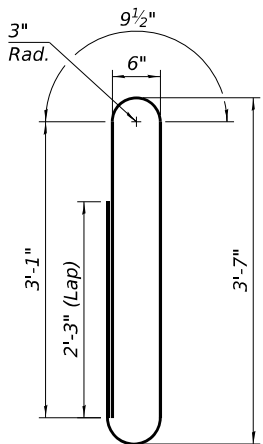
Order 3 thus for each bar full length.
Cut as shown and use remainder of
bars as shown in plan on sheet S-140



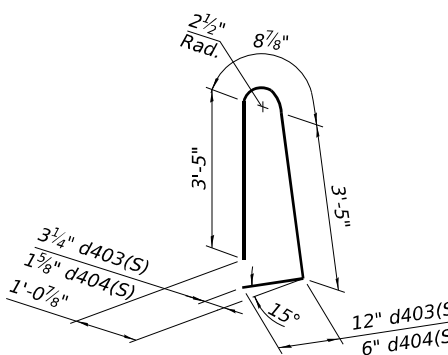
BAR d450(S)



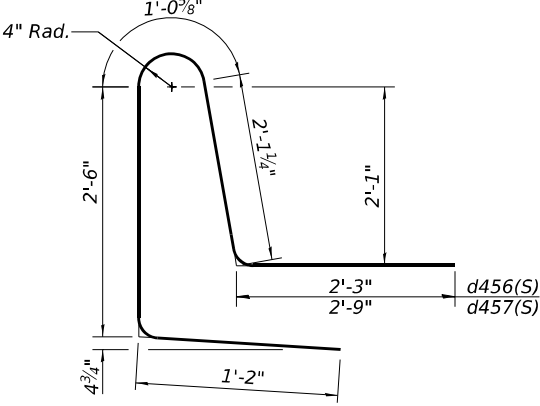
BAR d451(S) & d452(S)



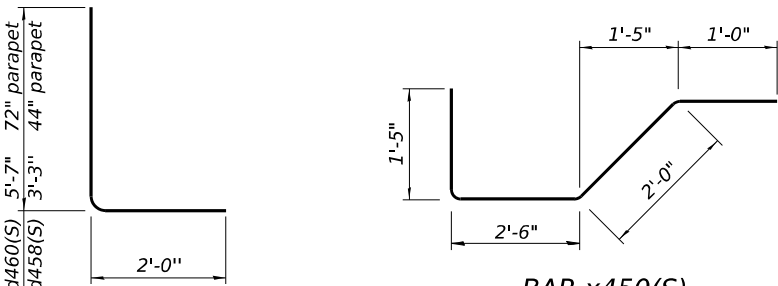
BAR d453(S)



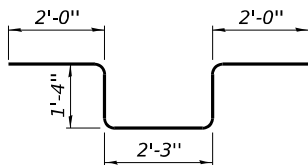
BAR d454(S) or d455(S)
(Trimetric View)



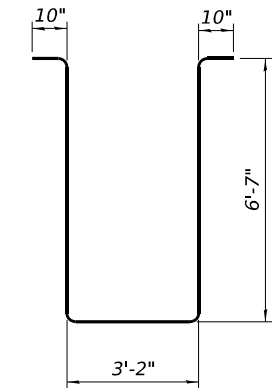
BAR d456(S) or d457(S)



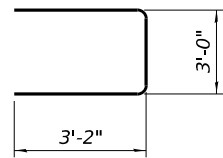
BAR d458(S) & d460(S)



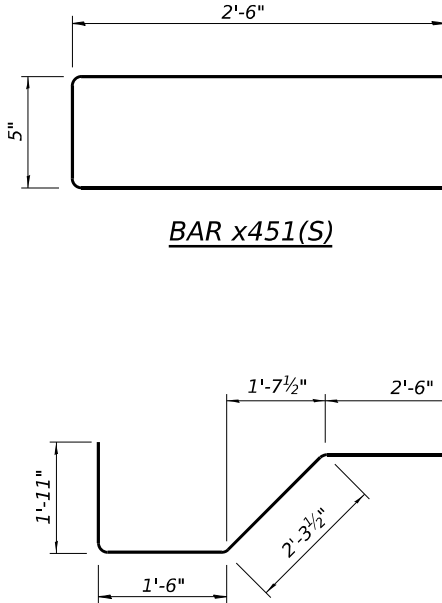
BAR d459(S)



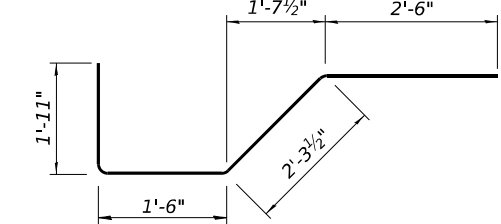
BAR s450(S)



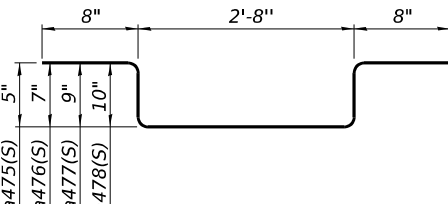
BAR s451(S)



BAR x451(S)



BAR x452(S)



BAR a475(S), a476(S), a477(S), a478(S)

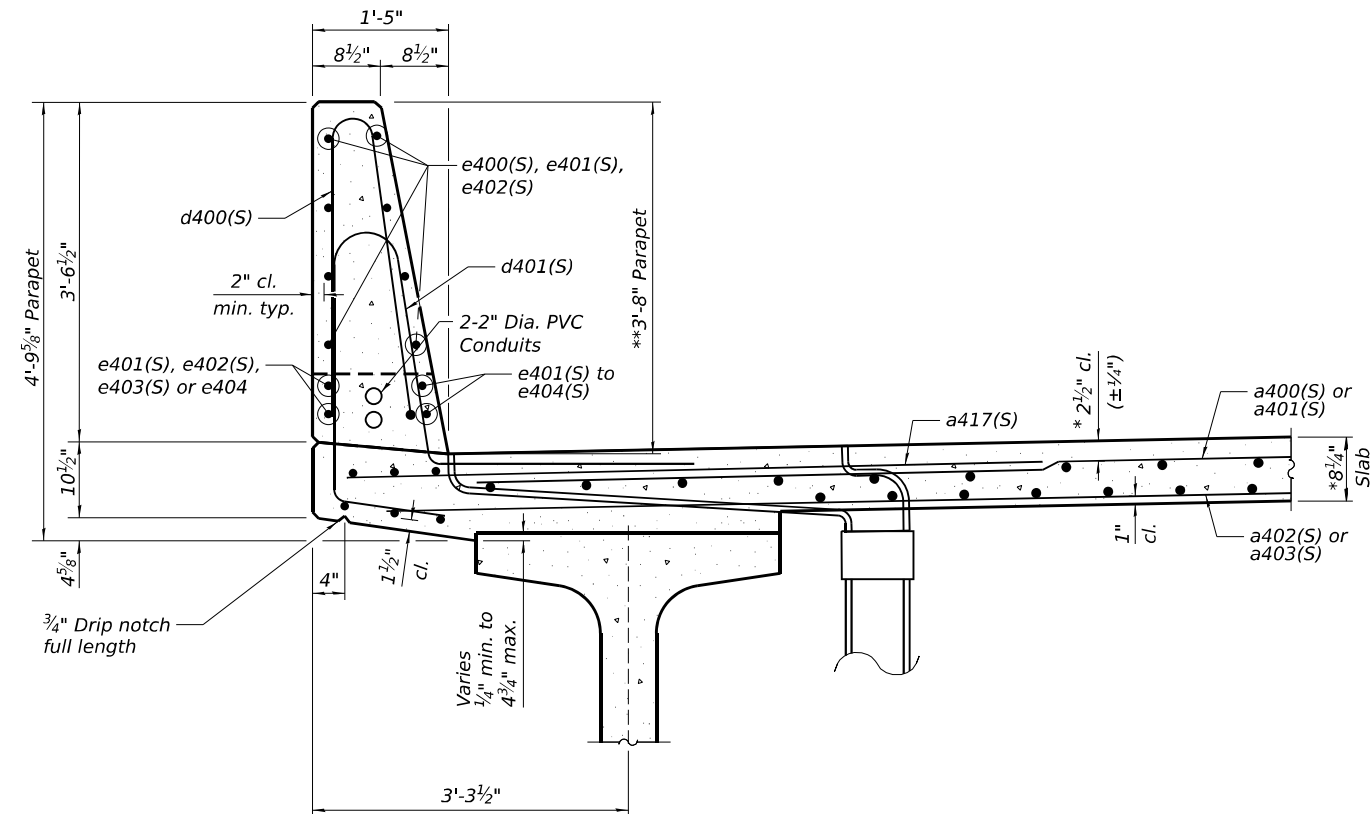
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS - UNIT 4 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

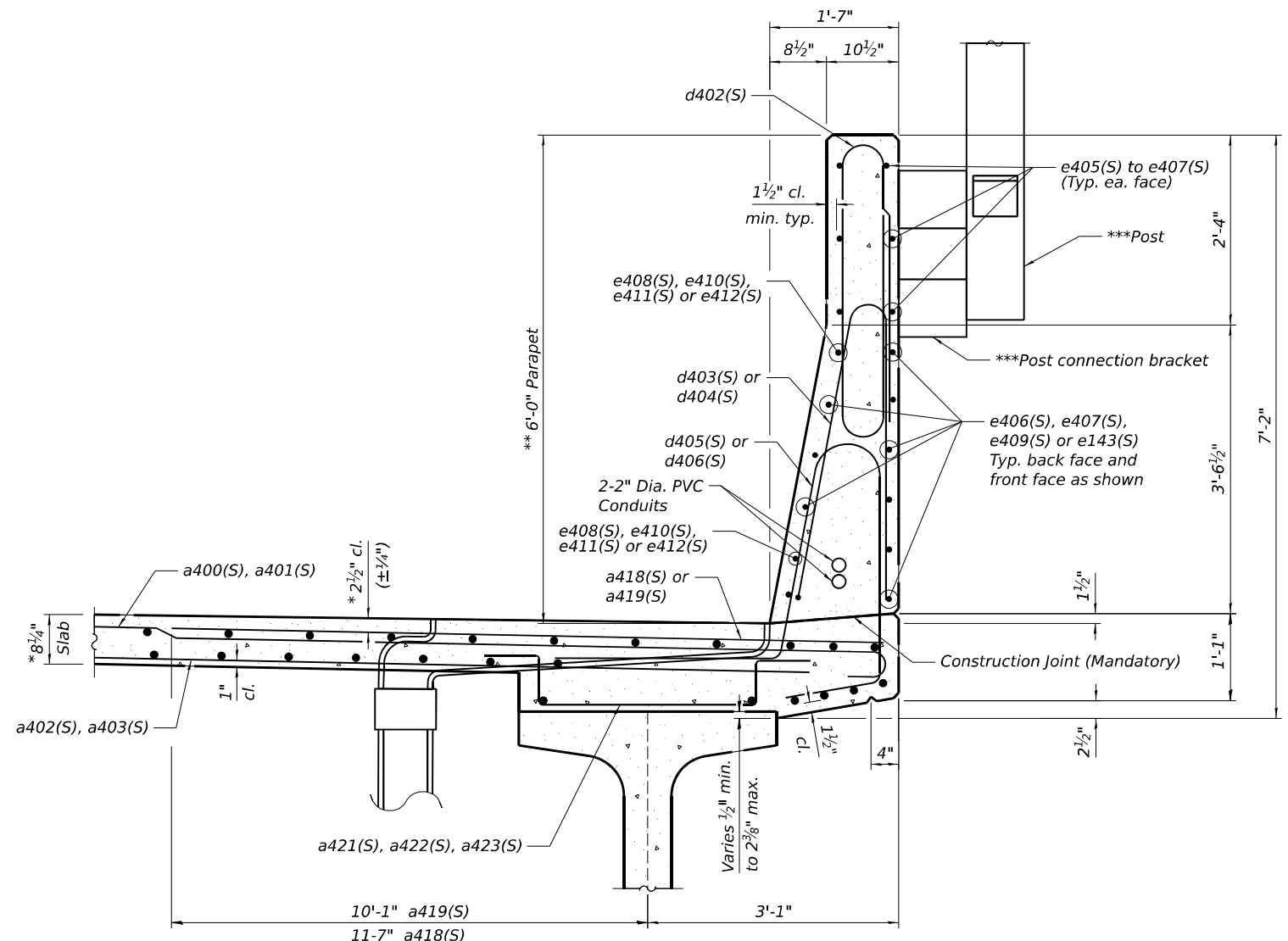
SHEET S-145 OF S-333 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	726
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

USER NAME	= USSJ696614
DESIGNED	- LAS
CHECKED	- PJL
PLOT SCALE	= 6,000' / in.
DRAWN	- BK
CHECKED	- LAS
PLOT DATE	= 11/5/2025
REVISED	-
REVISED	-
REVISED	-
REVISED	-

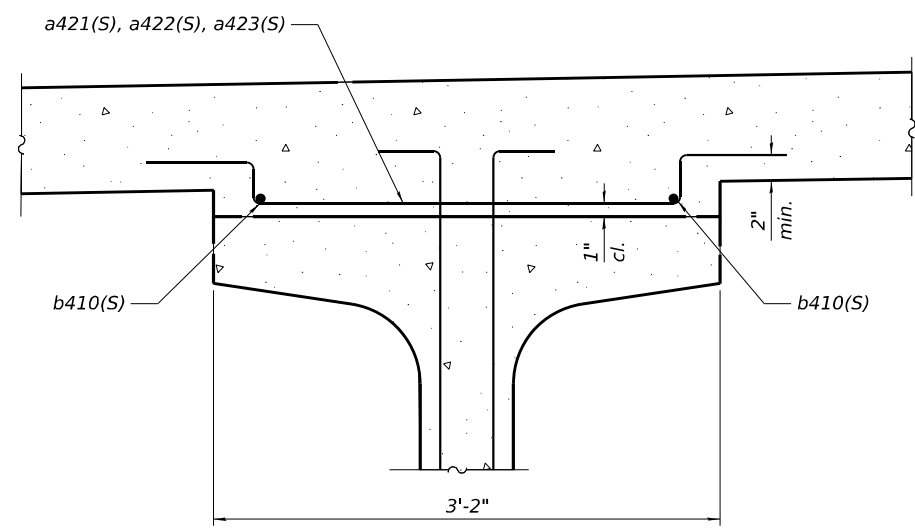


SECTION THRU NORTH PARAPET



SECTION THRU SOUTH PARAPET

*** Post and connection to parapet to be designed by the Contractor, See Noise Abatement Wall Plans and Special Provisions



FILLET DETAIL

* Prior to grinding.
** After grinding.

NUMBER OF REINFORCEMENT BARS IN FILLET

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12
Number of Bars in Span 9 near Pier 8	25-a421(S) 2-b410(S)	21-a421(S) 2-b410(S)	27-a421(S) 2-b410(S)	16-a422(S) 2x2-b410(S)	16-a422(S) 2x2-b410(S)	16-a422(S) 2x2-b410(S)	16-a422(S) 2x2-b410(S)	32-a421(S) 2-b410(S)	29-a421(S) 2-b410(S)	31-a421(S) 2-b410(S)	32-a421(S) 2-b410(S)	17-a423(S) 2-b410(S)
No Bars	55'-8"	69'-3"	67'-9"	60'-7"	64'-8"	66'-6"	68'-3"	98'-11"	100'-5"	101'-8"	102'-11"	0'-0"
	38-a421(S) 16-a422(S)	30-a421(S) 16-a422(S)	42-a422(S)	38-a422(S)	32-a422(S)	27-a422(S)	27-a422(S)					128-a422(S) 2x6-b410(S)
Number of Bars in Span 9 near Pier 9	16-a423(S) 2x3-b410(S)	16-a423(S) 2x3-b410(S)	16-a423(S) 2x2-b410(S)	16-a423(S) 2x2-b410(S)	16-a423(S) 2x2-b410(S)	16-a423(S) 2x2-b410(S)	16-a423(S) 2x2-b410(S)	28-1a421(S) 2-b410(S)	31-1a421(S) 2-b410(S)	28-1a421(S) 2-b410(S)	28-1a421(S) 2-b410(S)	17-a423(S)
Number of Bars in Span 10 near Pier 9	15-a423(S) 29-a422(S)	44-a422(S)	30-a422(S)	30-a422(S)	30-a422(S)	15-a422(S)	45-a422(S) 69-a421(S)	80-a421(S)	82-a421(S)	77-a421(S)	80-a421(S)	
	70-a421(S) 2x5-b410(S)	57-a421(S) 2x5-b410(S)	72-a421(S) 2x5-b410(S)	72-a421(S) 2x5-b410(S)	74-a421(S) 2x5-b410(S)	105-a421(S) 2x5-b410(S)						157-a422(S) 2x6-b410(S)
No Bars	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	22'-1"	71'-6"	70'-2"	77'-0"	75'-5"	0'-0"
Number of Bars in Span 10 near Abut.	15-a422(S) 15-a423(S)	29-a422(S)	44-a422(S)	45-a422(S)	45-a422(S)	30-a422(S)	2-b410(S)					

Note:
#4-a421(S), a422(S) and a423(S) bars are spaced at 12" centers above the beam as shown in the Fillet Detail. #4-b410(S) shall be placed as shown in the Fillet Detail. Bars can be cut to fit.

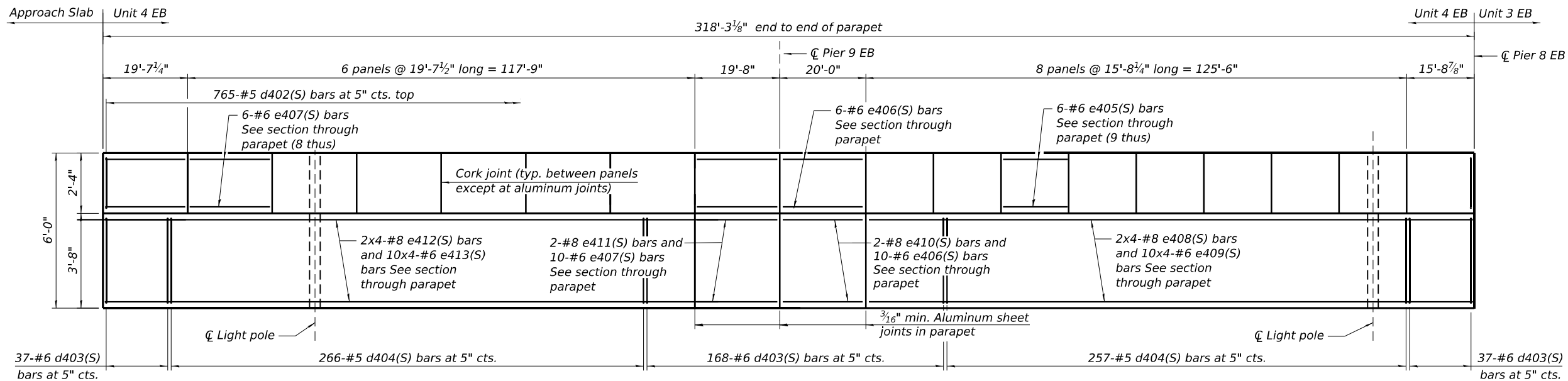
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET SECTION - UNIT 4 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET 5-148 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	729
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

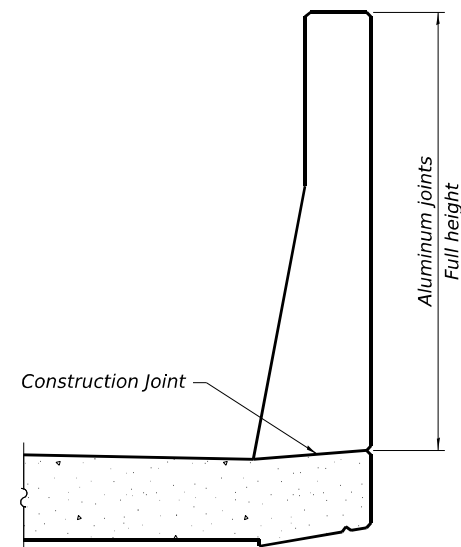
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVIS	REVISED -
PLOT SCALE = 6,000' / in.	DRAWN - PP	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -



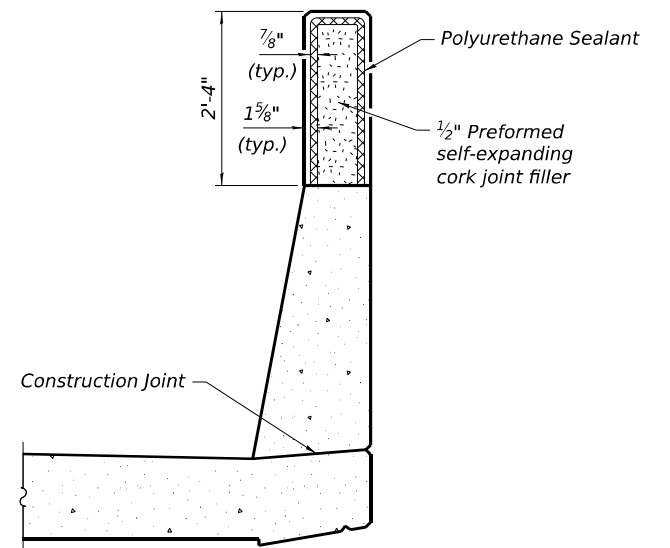
INSIDE ELEVATION OF SOUTH PARAPET

MINIMUM BAR LAP

#4 bar = 2'-5"
#6 bar = 3'-7"
#8 bar = 4'-9"



ALUMINUM PARAPET JOINT DETAILS



CORK PARAPET JOINT DETAILS

For parapet joint notes see sheet S-150

MODEL Default: p:\projects\transys\corp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CAD\62023-RB-1-Sheets\Structural\0998309-42R23-5349-2K411.dgn



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

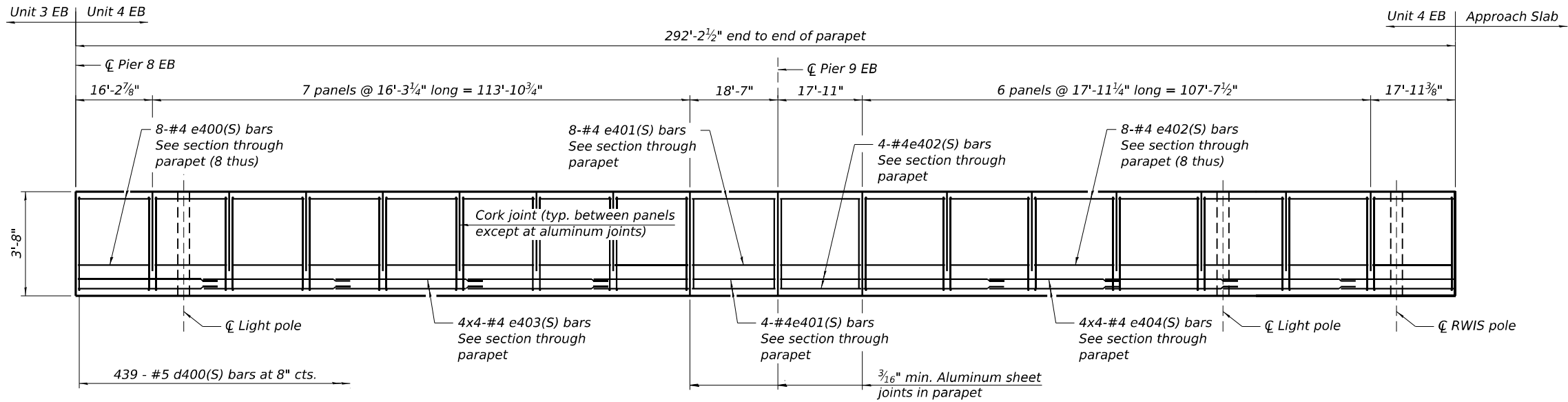
USER NAME	= USSJ696614	DESIGNED	- LAS	REVISED	-
		CHECKED	- PJL	REVISED	-
PLOT SCALE	= 28,000 ' / in.	DRAWN	- PP	REVISED	-
PLOT DATE	= 11/5/2025	CHECKED	- LAS	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET ELEVATION 1 - UNIT 4 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

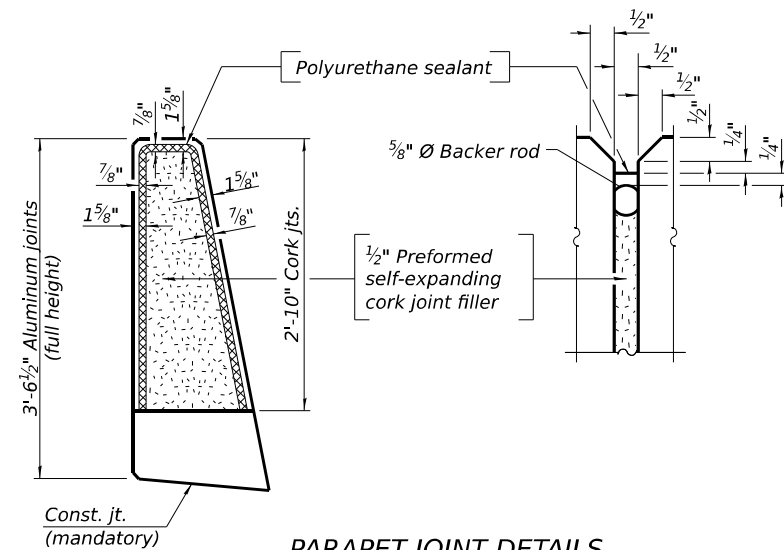
SHEET 5-149 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	730
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF NORTH PARAPET

MINIMUM BAR LAP
#4 bar = 2'-5"



PARAPET JOINT DETAILS

Notes:
The 3/16" minimum aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated with 5 mils of either bitumen paint or epoxy paint to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Model: Default
File Name: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CH4001401180022\03-WSP\Structural\0998309-42R23-5350-DK12.dgn



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVIS	REVISED -
PLOT SCALE = 28,000 ' / in.	DRAWN - PP	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET ELEVATION 2 - UNIT 4 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET 5-150 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	731
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

MODEL Default:
FILE NAME: p:\proj\transys\transys\corp\ppl\hatched\Documents\Projects_2018\CH4001\401180022\03-WSP\CAD\62R23-RB-1\Sheet\STRUCTURAL\0998309-42R23-S3F1-DK413.dgn

UNIT 4 EB
SUPERSTRUCTURE
BILL OF MATERIAL

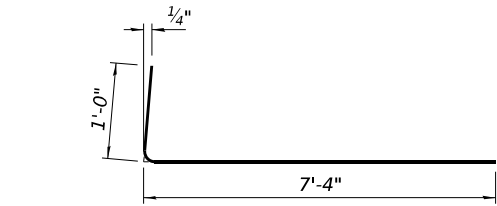
Bar	No.	Size	Length	Shape
a400(S)	1,432	#5	27'-6"	=====
a401(S)	1,452	#5	30'-10"	=====
a402(S)	717	#5	34'-8"	=====
a403(S)	678	#5	39'-0"	=====
a404(S)	66	#5	30'-2"	=====
a405(S)	32	#5	33'-10"	=====
a406(S)	22	#5	33'-2"	=====
a407(S)	16	#6	32'-7"	=====
a408(S)	4	#6	31'-1"	=====
a409(S)	33	#6	9'-0"	=====
a410(S)	36	#5	32'-0"	=====
a411(S)	11	#5	4'-0"	=====
a412(S)	11	#5	6'-7"	=====
a413(S)	1	#5	1'-4"	=====
a414(S)	1	#5	2'-8"	=====
a415(S)	1	#5	1'-2"	=====
a416(S)	1	#5	2'-5"	=====
a417(S)	697	#6	8'-4"	=====
a418(S)	242	#8	15'-9"	=====
a419(S)	523	#6	13'-8"	=====
a420(S)	40	#5	5'-0"	=====
a421(S)	1,331	#4	4'-10"	=====
a422(S)	994	#4	5'-2"	=====
a423(S)	191	#4	5'-6"	=====
b400(S)	464	#5	29'-8"	=====
b401(S)	339	#9	32'-8"	=====
b402(S)	464	#8	34'-3"	=====
b403(S)	464	#5	28'-8"	=====
b404(S)	285	#5	36'-10"	=====
b405(S)	475	#8	32'-1"	=====
b406(S)	312	#8	30'-0"	=====
b407(S)	285	#5	34'-4"	=====
b410(S)	190	#4	32'-0"	=====
d400(S)	439	#5	7'-0"	=====
d401(S)	439	#5	7'-6"	=====
d402(S)	765	#5	10'-0"	=====
d403(S)	242	#6	8'-7"	=====
d404(S)	523	#5	8'-1"	=====
d405(S)	523	#5	9'-1"	=====
d406(S)	242	#6	9'-7"	=====
d407(S)	9	#6	5'-3"	=====
d408(S)	38	#6	8'-11"	=====
d409(S)	6	#6	7'-7"	=====

Bar	No.	Size	Length	Shape
e400(S)	64	#4	15'-11"	=====
e401(S)	12	#4	18'-3"	=====
e402(S)	68	#4	17'-7"	=====
e403(S)	16	#4	34'-4"	=====
e404(S)	16	#4	33'-2"	=====
e405(S)	54	#6	15'-4"	=====
e406(S)	16	#6	19'-8"	=====
e407(S)	58	#6	19'-3"	=====
e408(S)	8	#8	38'-10"	=====
e409(S)	40	#6	37'-11"	=====
e410(S)	2	#8	19'-8"	=====
e411(S)	2	#8	19'-4"	=====
e412(S)	8	#8	37'-10"	=====
e413(S)	40	#6	37'-0"	=====
m400(S)	22	#6	4'-11"	=====
m401(S)	132	#6	7'-1"	=====
m402(S)	24	#5	4'-0"	=====
m403(S)	24	#5	3'-0"	=====
s400(S)	66	#5	19'-6"	=====
s401(S)	44	#5	11'-4"	=====
x400(S)	61	#5	6'-11"	=====
x401(S)	59	#5	5'-5"	=====
X402(S)	110	#5	8'-3"	=====
Concrete Superstructure			Cu Yd.	1,113.9
Reinforcement Bars, Stainless Steel			Pound	434,120
Bar Splicers			Each	215
Protective Coat			Sq. Yd.	3,691
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	2,038
Diamond Grinding (Bridge Section)			Sq. Yd.	3,159

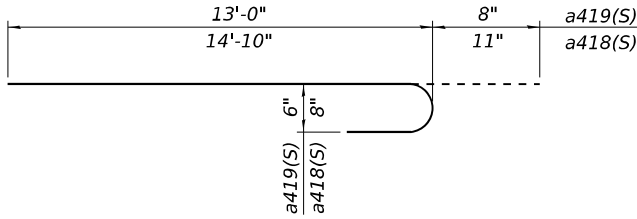
Note: Bar terminators paid for separately.
See Total Bill of Materials.

FIELD CUTTING DIAGRAM

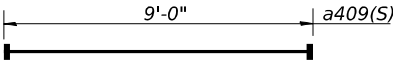
Order a405(S) and a406(S) bars full length.
Cur as shown and use remainder of bars
as shown in plans on sheet S-146



BAR a417(S)

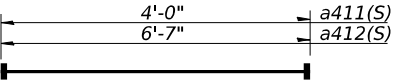


BAR a418(S), a419(S)



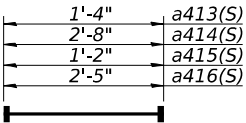
HEADED BAR a409(S)

(Headed 66-#6 a409(S) Bar terminators)



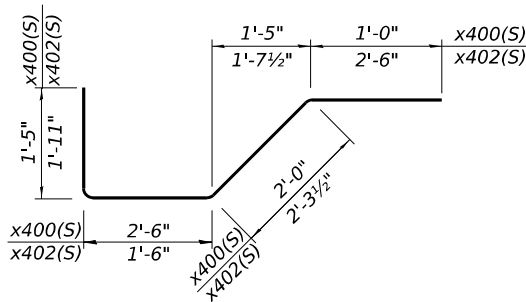
HEADED BAR a411(S), a412(S)

(Headed 22-#5 a411(S) Bar terminators)
(Headed 22-#5 a412(S) Bar terminators)

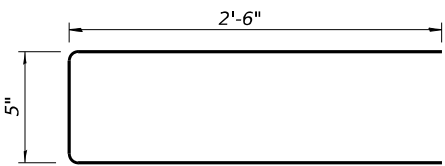


HEADED BAR a413(S), a414(S),
a415(S), a416(S)

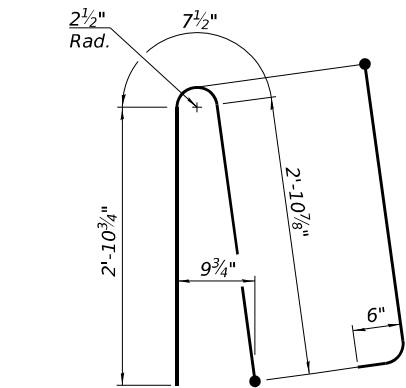
(Headed 2-#5 a413(S) Bar terminators)
(Headed 2-#5 a414(S) Bar terminators)
(Headed 2-#5 a415(S) Bar terminators)
(Headed 2-#5 a416(S) Bar terminators)



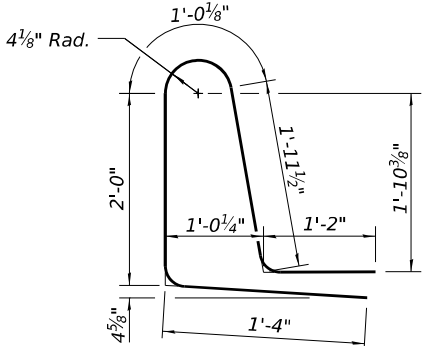
BAR x400(S) or x402(S)



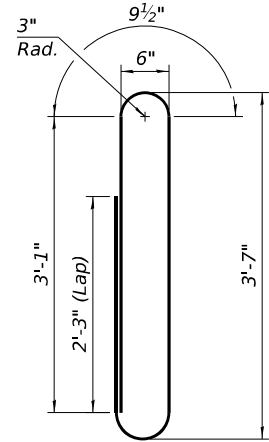
BAR x401(S)



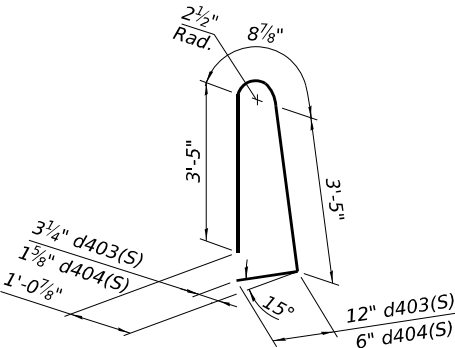
BAR d400(S)



BAR d401(S)

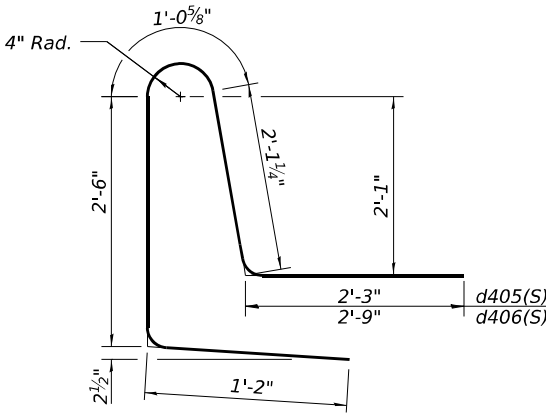


BAR d402(S)

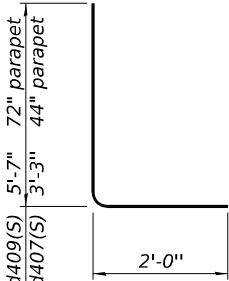


BAR d403(S) or d404(S)

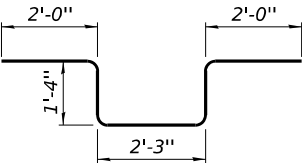
(Trimetric View)



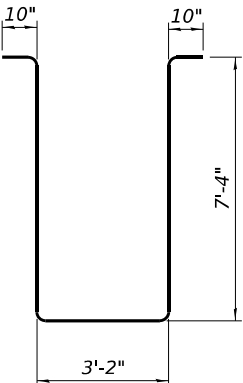
BAR d405(S), d406(S)



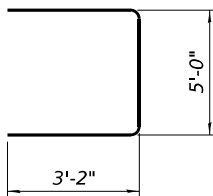
BAR d407(S) & d409(S)



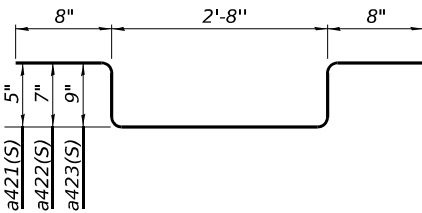
BAR d408(S)



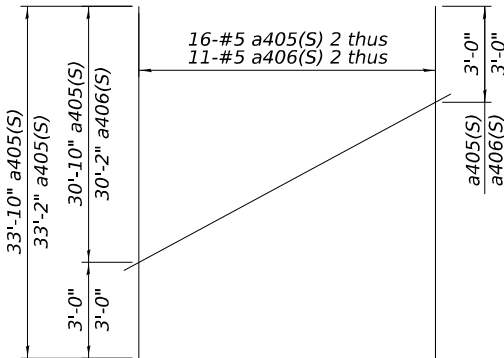
BAR s400(S)



BAR s401(S)



BAR a421(S), a422(S), a423(S)



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 400
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

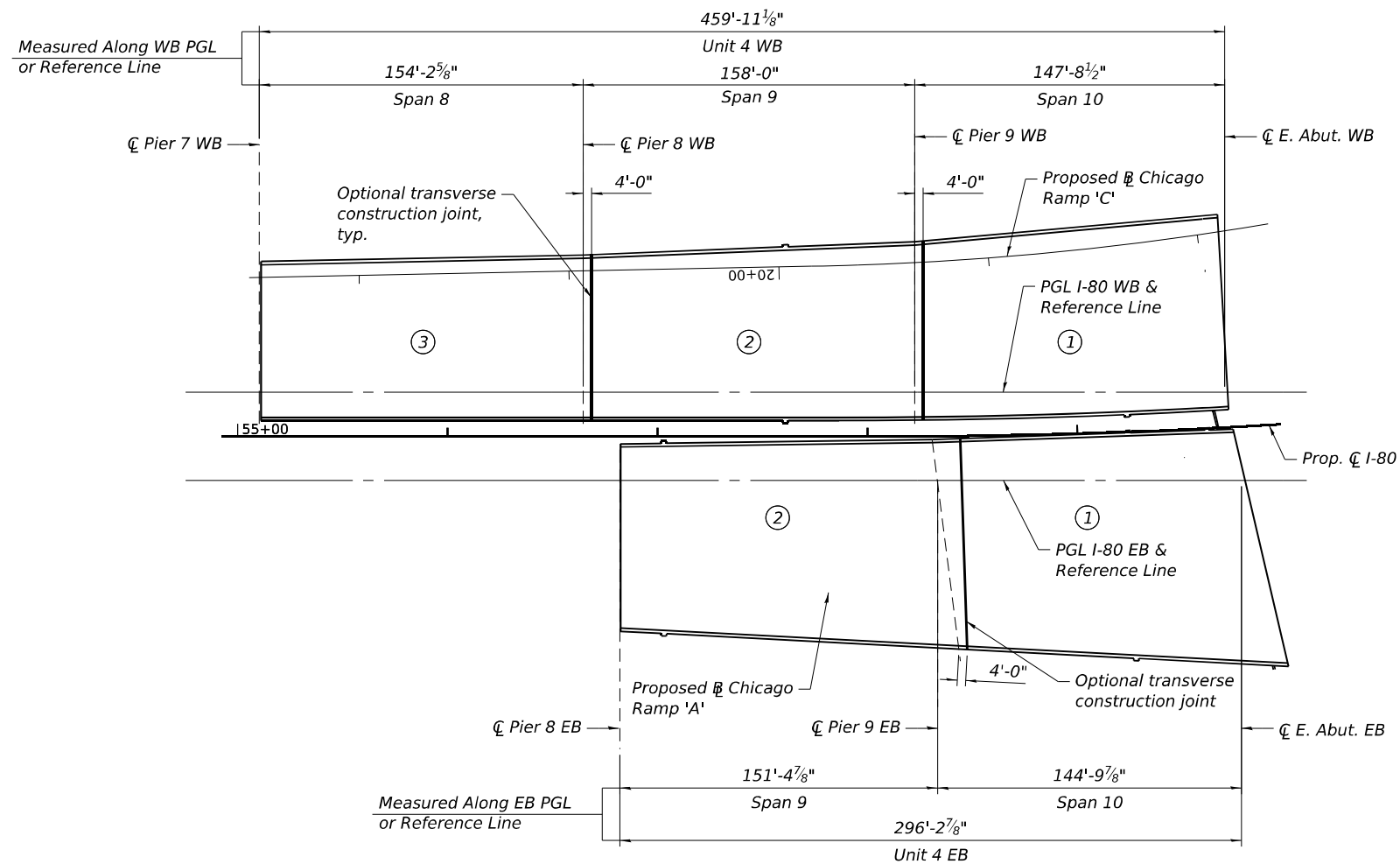
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	CHECKED - LAS	REVISED -
PLOT SCALE = 6,000' / in.	DRAWN - PP	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS - UNIT 4 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-151 OF S-333 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	732
		CONTRACT NO. 62R23		
ILLINOIS		FED. AID PROJECT		



DECK POURING SEQUENCE - UNIT 4

NOTES ON DECK POURING SEQUENCE:

- When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
 - At least 72 hours shall have elapsed from the end of the previous pour.
 - The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compressive strength of 4000 psi.

MODEL Default:
FILE NAME: p:\projects\transys\corp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CAD\62023-RB-1-Sheets\Structure\0998309-42R23-5352-DK14.dgn



WSP USA Inc.

30 N. LA SALLE STREET

SUITE 4000

CHICAGO, IL 60602

TEL: (312) 782-8150

FAX: (312) 782-1684

USER NAME	= USSJ696614	DESIGNED -	LAS	REVISED -	
		CHECKED -	PJL	REVISED -	
PLOT SCALE	= 0:0 3/16 : 1 in.	DRAWN -	BK	REVISED -	
PLOT DATE	= 11/5/2025	CHECKED -	LAS	REVISED -	

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

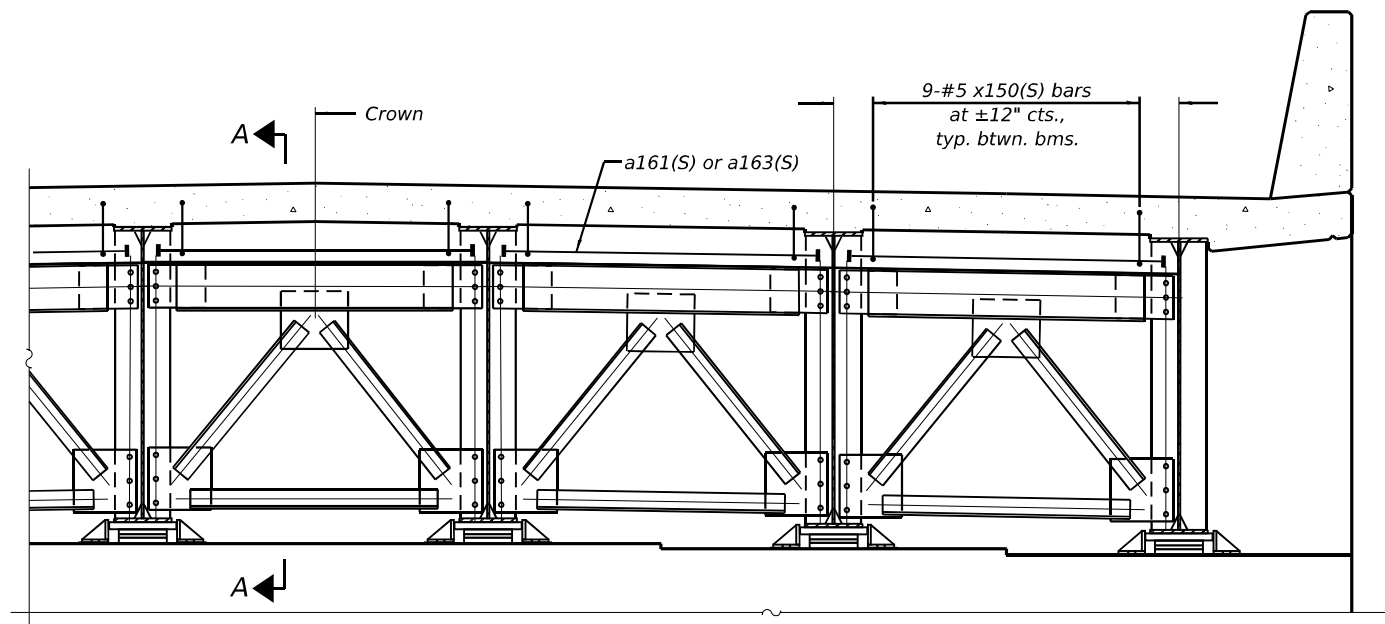
DECK POURING SEQUENCE - UNIT 4 WB & EB

STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-152 OF S-333 SHEETS

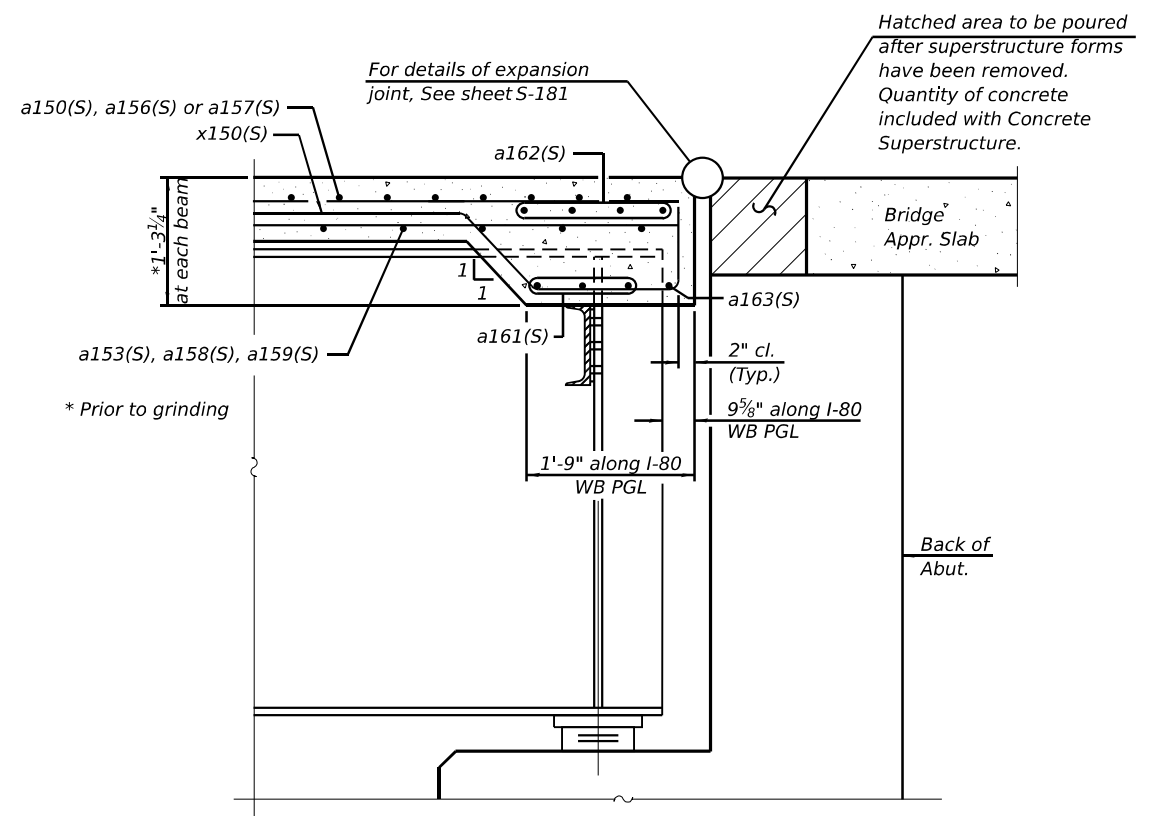
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	733
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

Model: Default
File Name: p:\projects\trans\systems-pw\hntb\com\trans\corp-pw\hntb\hntb\Documents\Projects_2018\CH4001\401180022\03-WSP\CAD\62R23-RB-1-Sheets\Structural\0998309-42R23-S3F3-D6601.dgn



DIAPHRAGM AT WEST ABUTMENT WB

Notes:
See sheet S-104 for superstructure details and Bill of Material.
The x150(S) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.



SECTION A-A
(at Rt. L's)
(Full cross frame not shown for clarity)



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4100
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME	= USSJ696614
PLOT SCALE	= 32,000 ' / in.
PLOT DATE	= 11/5/2025

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

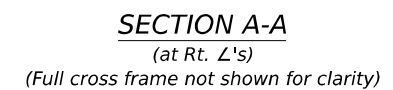
REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DIAPHRAGM DETAILS - WEST ABUTMENT WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-153 OF S-333 SHEETS

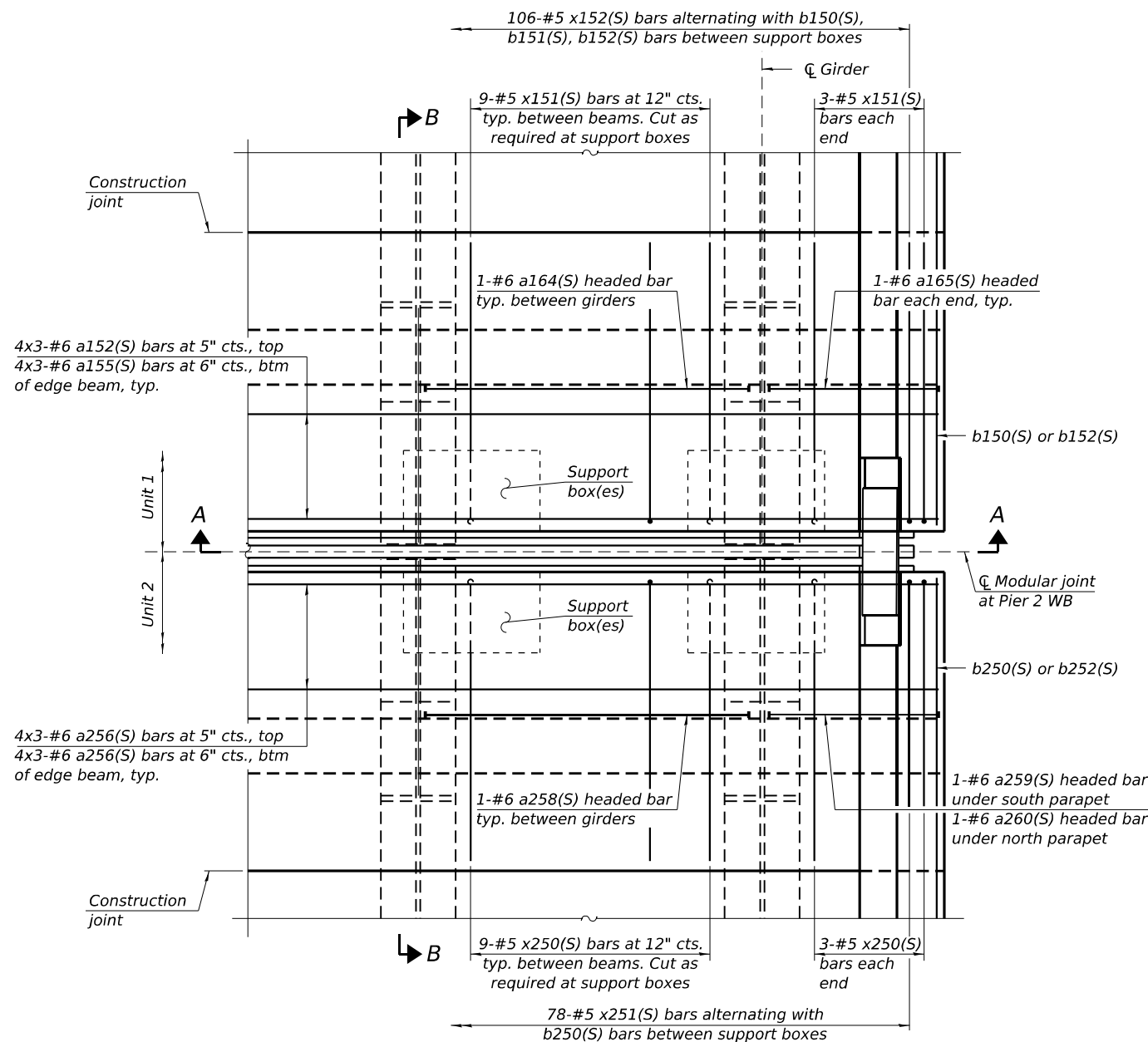
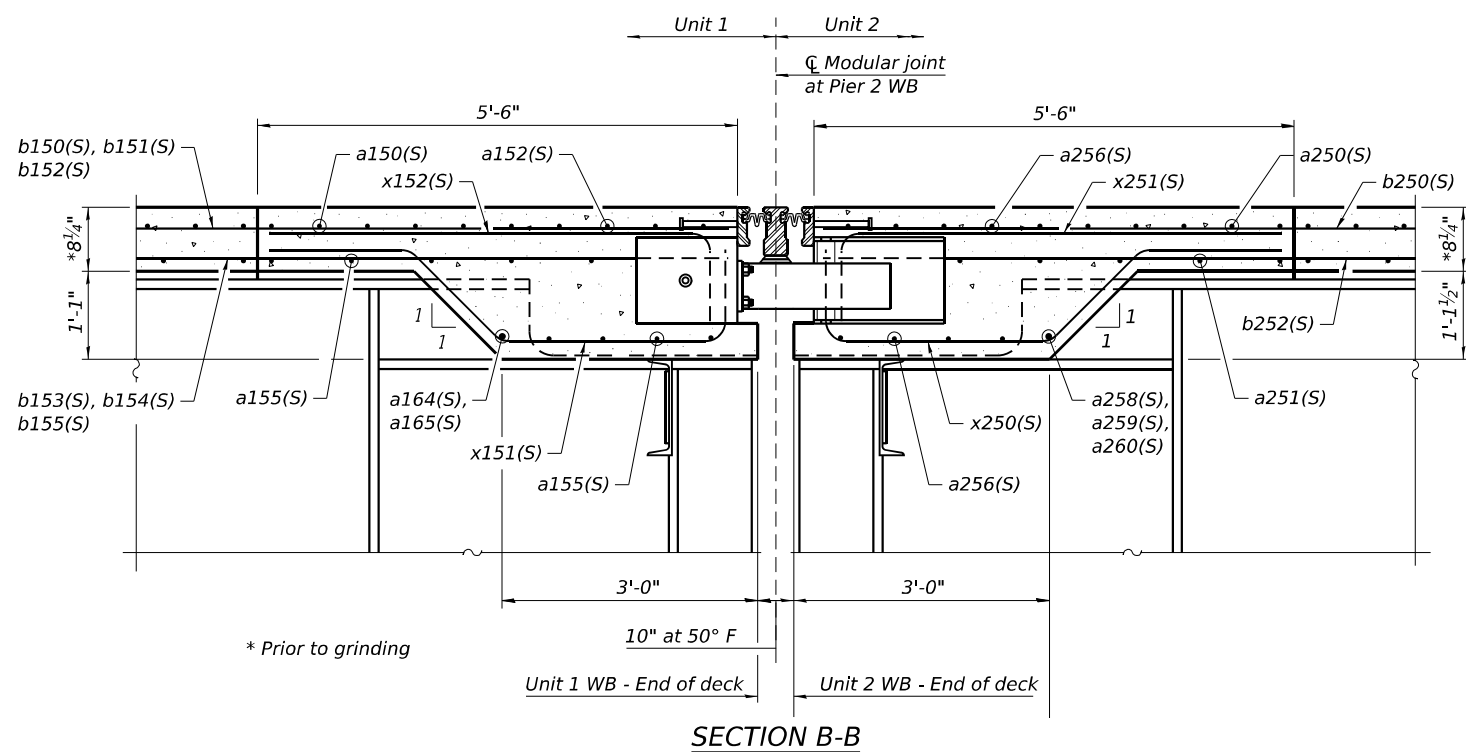
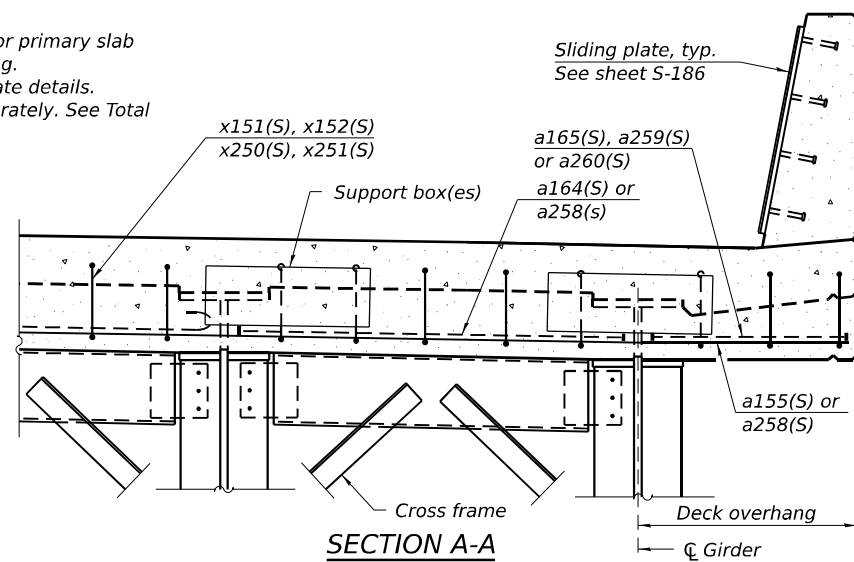
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	734
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



Notes:
See sheet S-108 for superstructure details and Bill of Material.
The x100(S) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

NOTES:

1. See sheets S-101 and S-110 for primary slab reinforcement size and spacing.
2. See sheet S-186 for sliding plate details.
3. Bar terminators, paid for separately. See Total Bill of Material.



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS - PIER 2 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	736
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

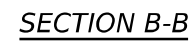
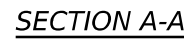
SHEET S-155 OF 5-333 SHEETS



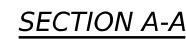
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME	= USSJ696614
DESIGNED	- LAS
CHECKED	- PJL
PLOT SCALE	= 32,000' / in.
DRAWN	- BK
CHECKED	- LAS
PLOT DATE	= 11/5/2025
REVISED	-
REVISED	-
REVISED	-
REVISED	-

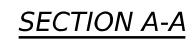
1. See sheets S-105 and S-117 for primary slab reinforcement size and spacing.
2. See sheet S-186 for sliding plate details.
3. Bar terminators, paid for separately. See Total Bill of Material.

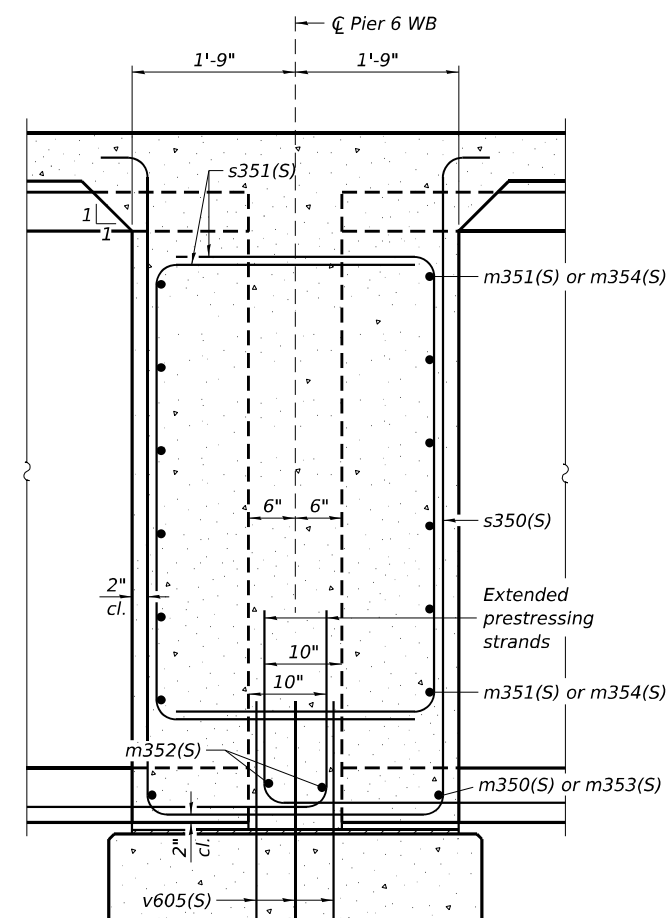


1. See sheets S-112 and S-125 for primary slab reinforcement size and spacing.
2. See sheet S-186 for sliding plate details.
3. Bar terminators, paid for separately. See Total Bill of Material.
4. For details of Bar Splicers (S) see sheet S-317.

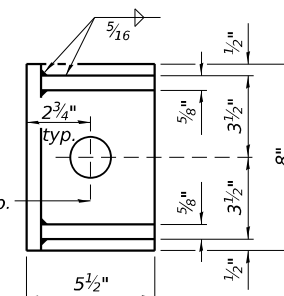
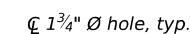


1. See sheets S-119 and S-131 for primary slab reinforcement size and spacing.
2. See sheet S-186 for sliding plate details.
3. Bar terminators, paid for separately. See Total Bill of Material.
4. For details of Bar Splicers (S) see sheet S-317.



[illegible]

1. See sheet S-130 for superstructure details and Bill of Material. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
2. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
3. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.



SIDE RETAINER

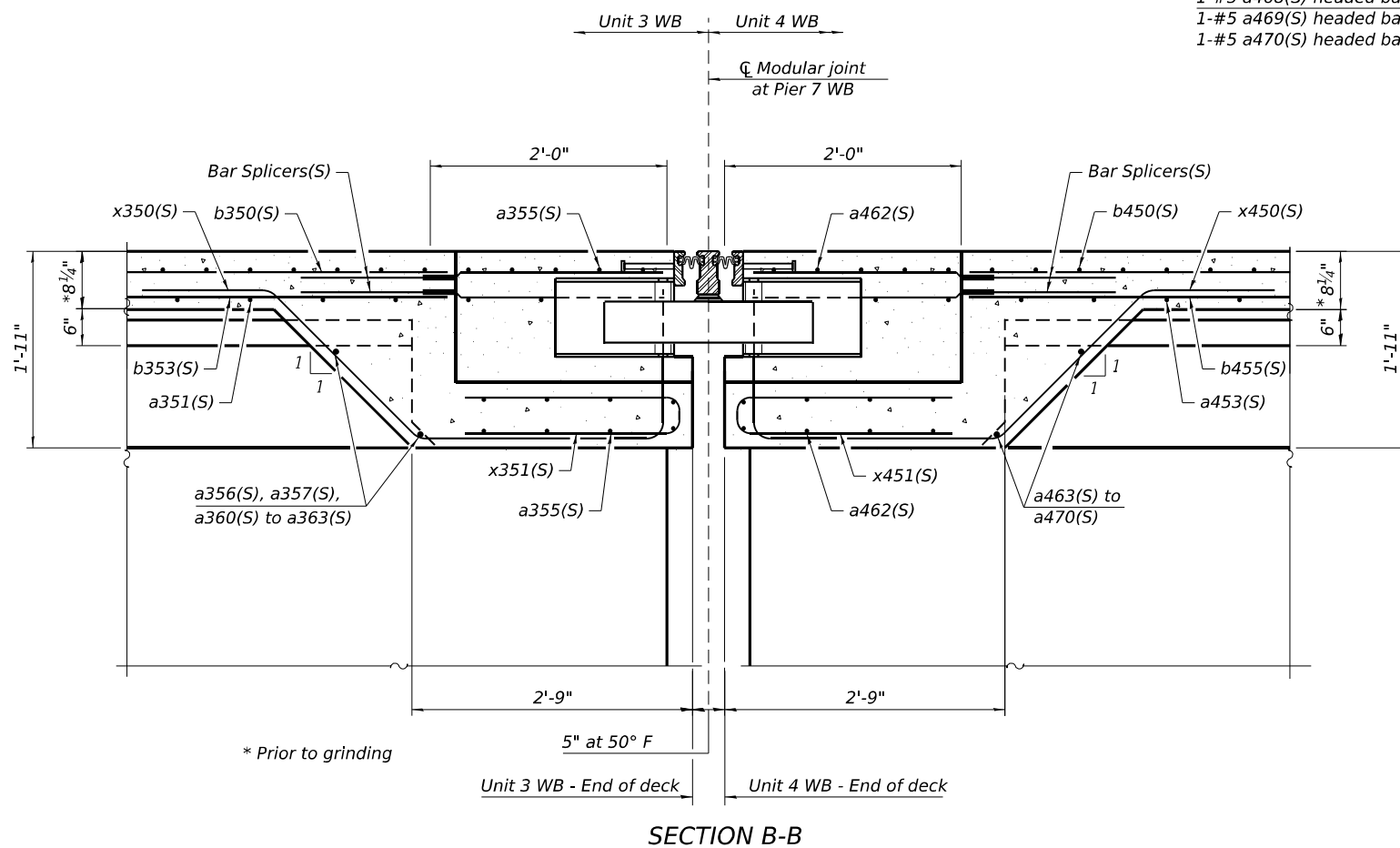
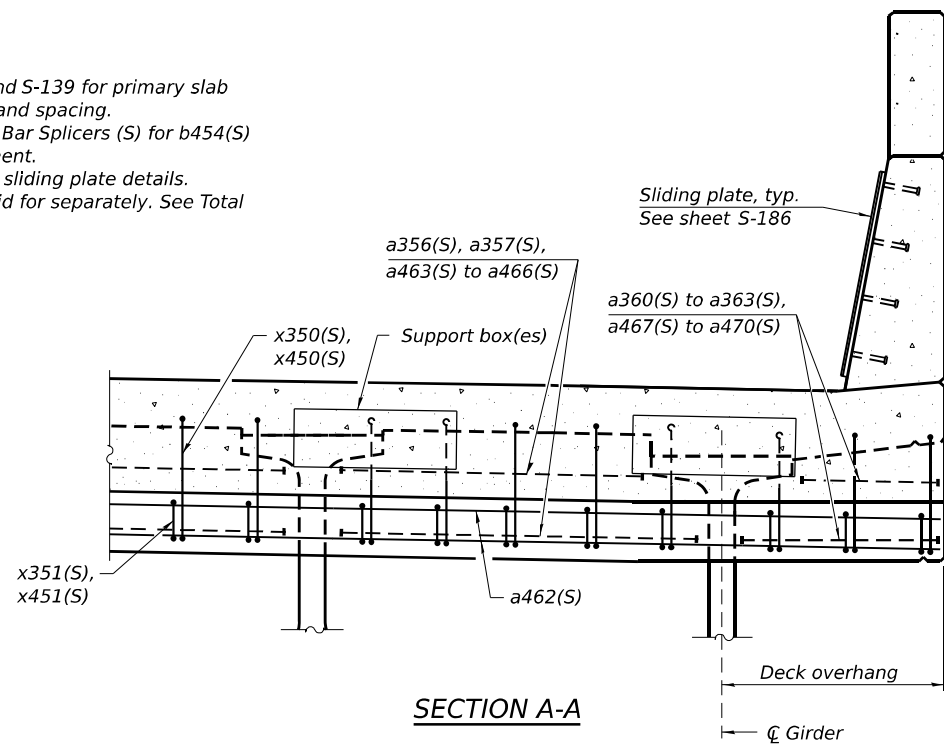
*(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.*

NOTES:

1. See sheet S-137 for superstructure details and Bill of Material. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
2. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
3. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

NOTES:

- See sheets S-125 and S-139 for primary slab reinforcement size and spacing.
- See sheet S-317 for Bar Splicers (S) for b454(S) and b455(S) placement.
- See sheet S-186 for sliding plate details.
- Bar terminators, paid for separately. See Total Bill of Material.

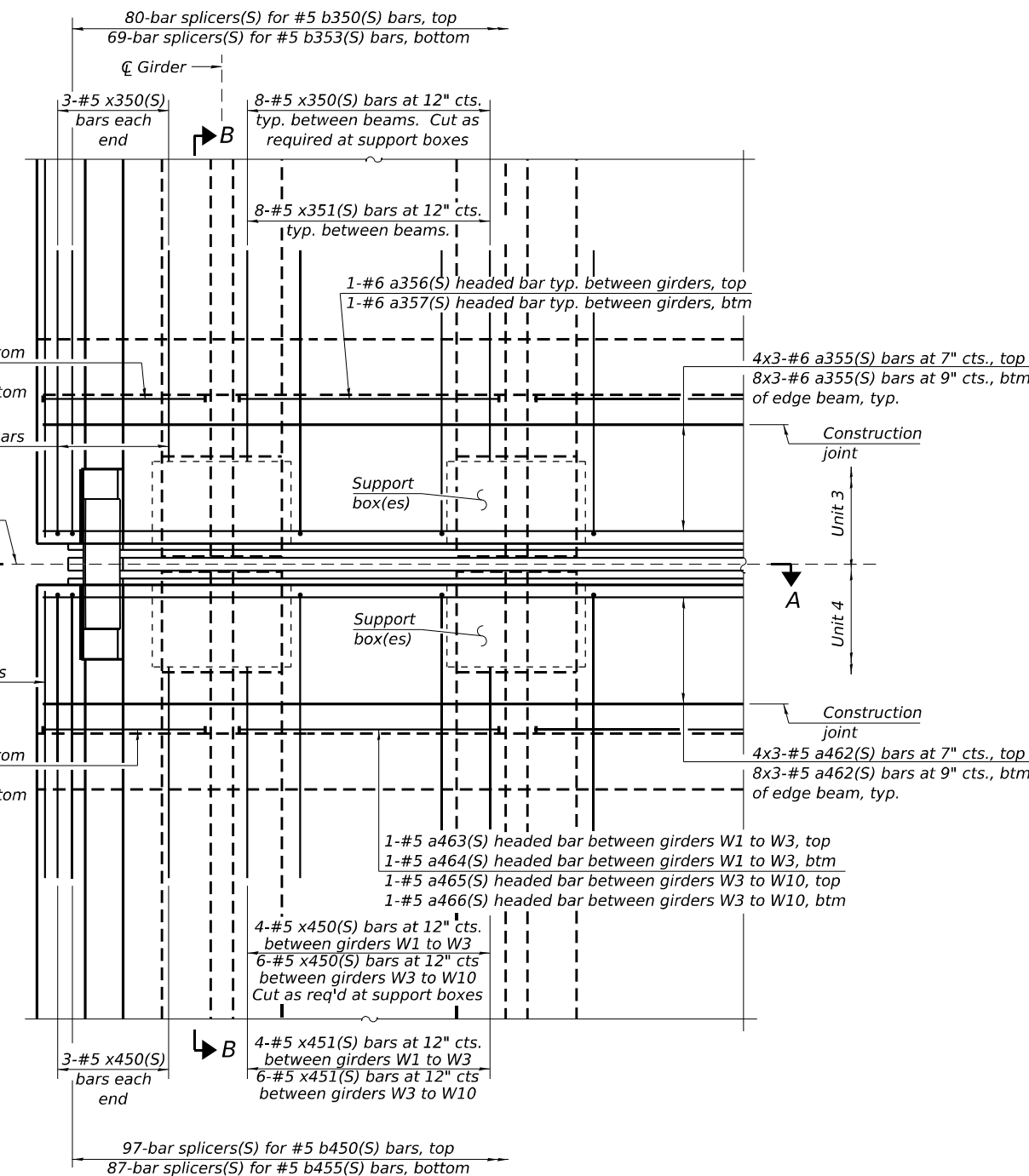


- 1-#6 a360(S) headed bar North parapet top
- 1-#6 a361(S) headed bar North parapet bottom
- 1-#6 a362(S) headed bar South parapet top
- 1-#6 a363(S) headed bar South parapet bottom

- 2-#5 x351(S) bars typ. each end

- 2-#5 x451(S) bars typ. each end

- 1-#5 a467(S) headed bar North parapet top
- 1-#5 a468(S) headed bar North parapet bottom
- 1-#5 a469(S) headed bar South parapet top
- 1-#5 a470(S) headed bar South parapet bottom



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS - PIER 7 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-161 OF S-333 SHEETS

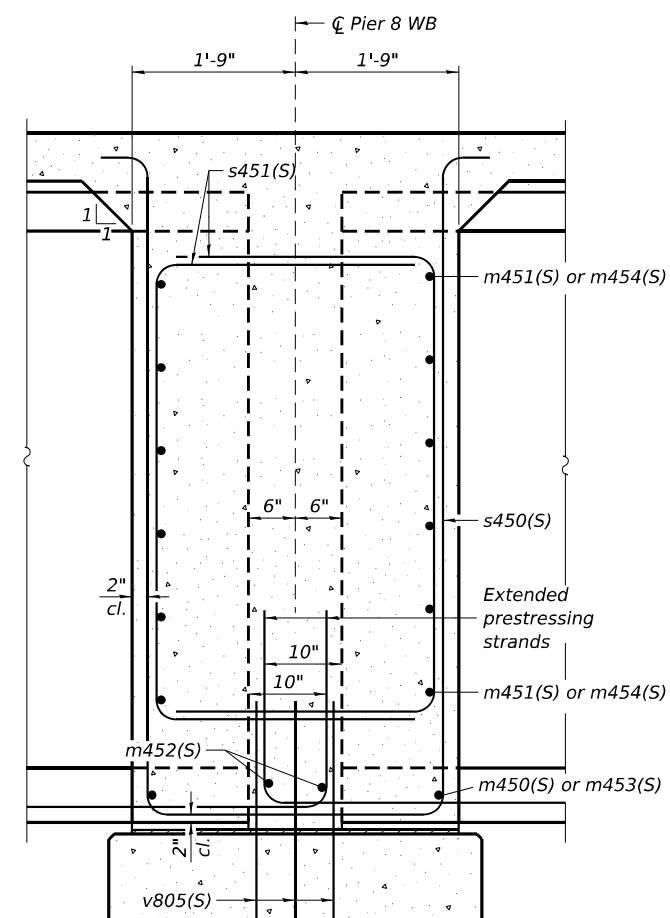
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	742
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

USER NAME	= USSJ696614
DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

REVISD	-
REVISD	-
REVISD	-
REVISD	-

* Prior to grinding

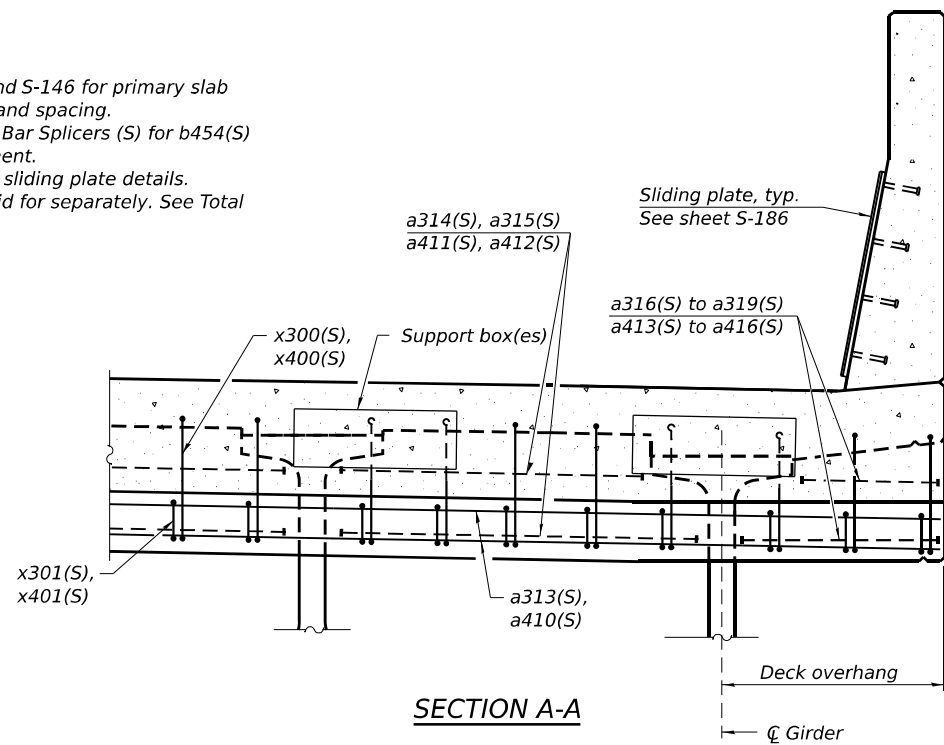
5" at 50° F



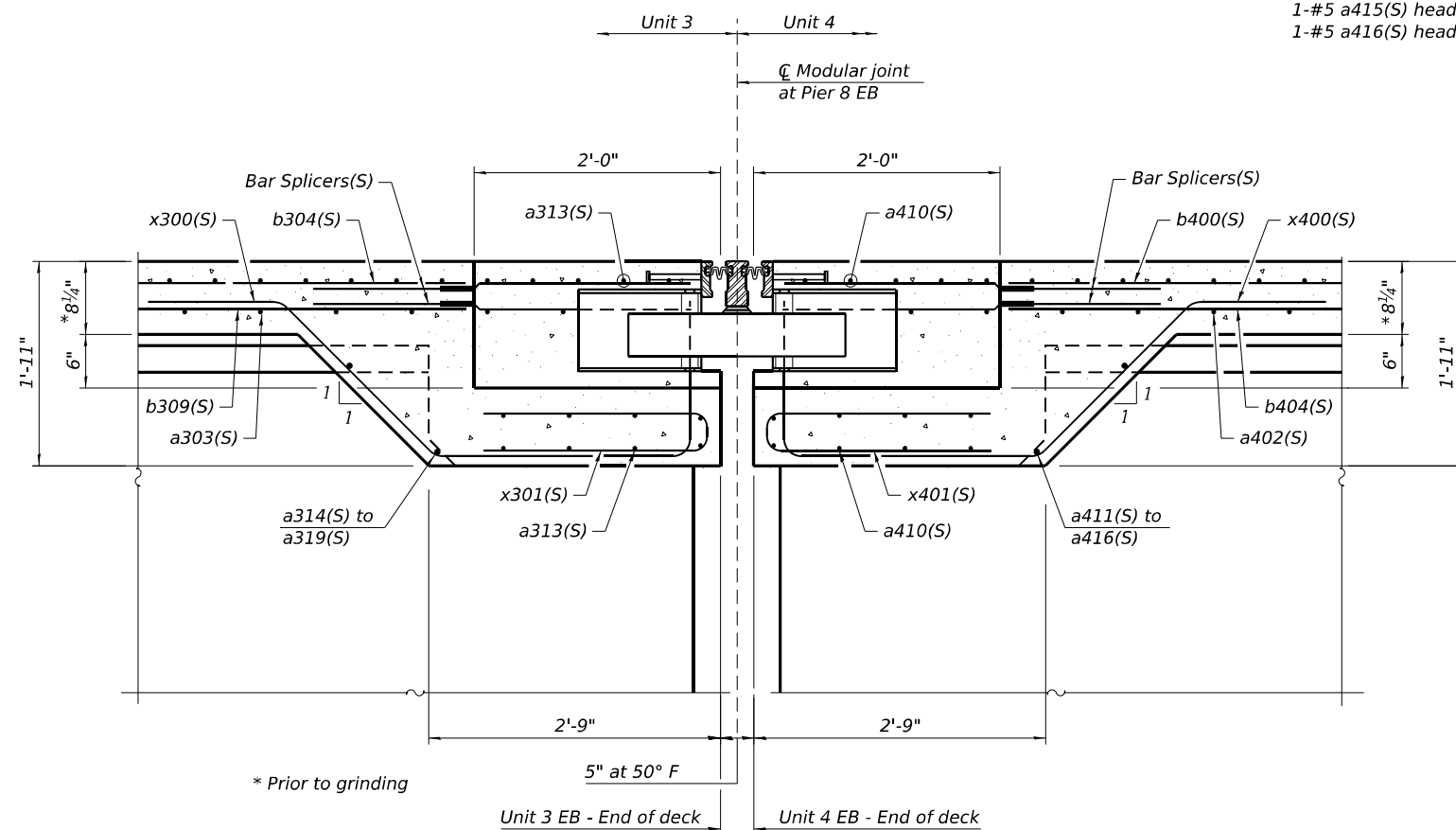
1. See sheet S-145 for superstructure details and Bill of Material. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
2. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
3. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

NOTES:

- See sheets S-132 and S-146 for primary slab reinforcement size and spacing.
- See sheet S-317 for Bar Splicers (S) for b454(S) and b455(S) placement.
- See sheet S-186 for sliding plate details.
- Bar terminators, paid for separately. See Total Bill of Material.



SECTION A-A



SECTION B-B

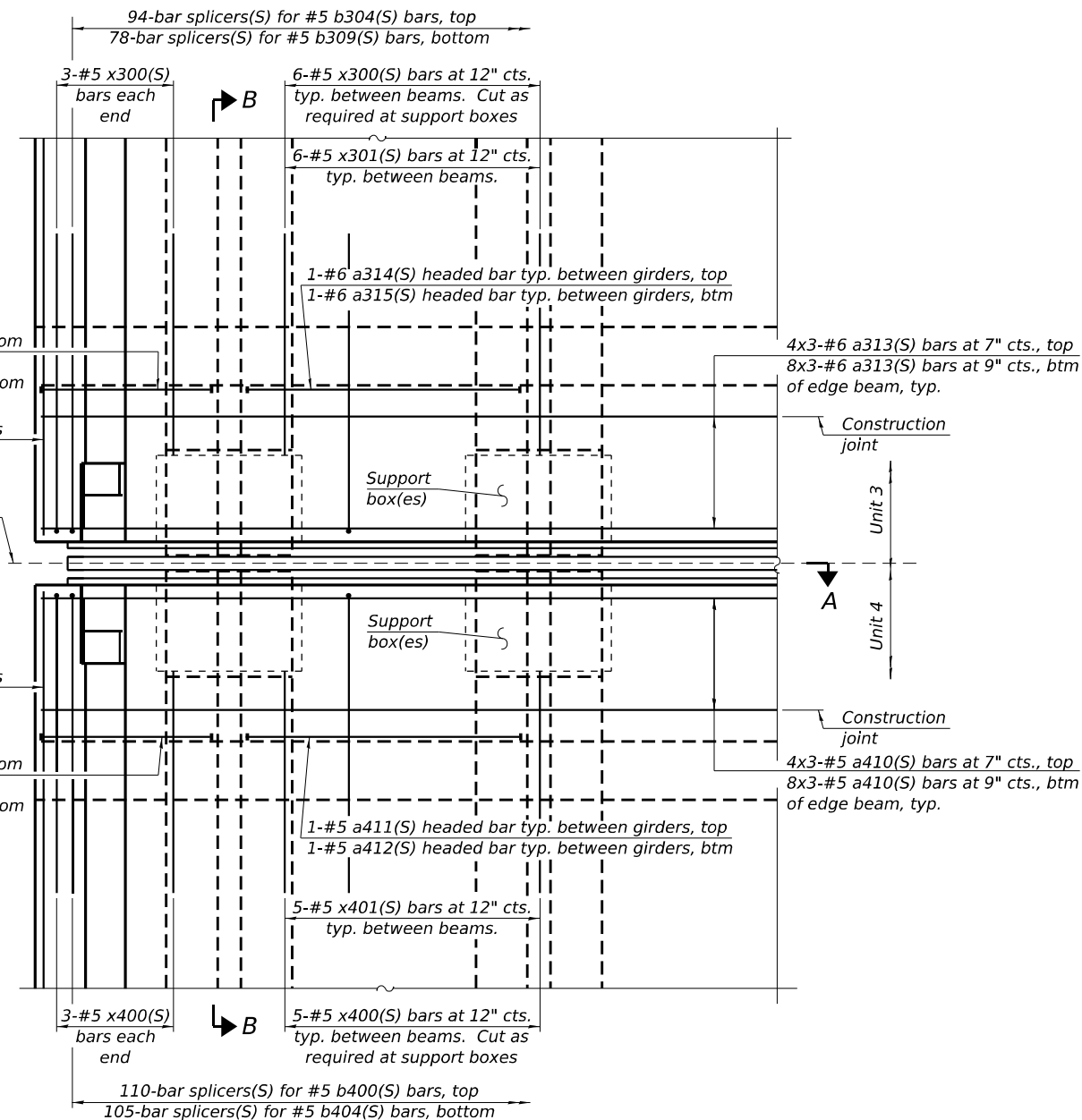
- 1-#6 a316(S) headed bar North parapet top
- 1-#6 a317(S) headed bar North parapet bottom
- 1-#6 a318(S) headed bar South parapet top
- 1-#6 a319(S) headed bar South parapet bottom

2-#5 x301(S) bars typ. each end

Modular joint at Pier 8 EB

- 1-#5 a413(S) headed bar North parapet top
- 1-#5 a414(S) headed bar North parapet bottom
- 1-#5 a415(S) headed bar South parapet top
- 1-#5 a416(S) headed bar South parapet bottom

2-#5 x401(S) bars typ. each end



PARTIAL PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS - PIER 8 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-164 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	745
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

USER NAME	= USSJ696614
DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

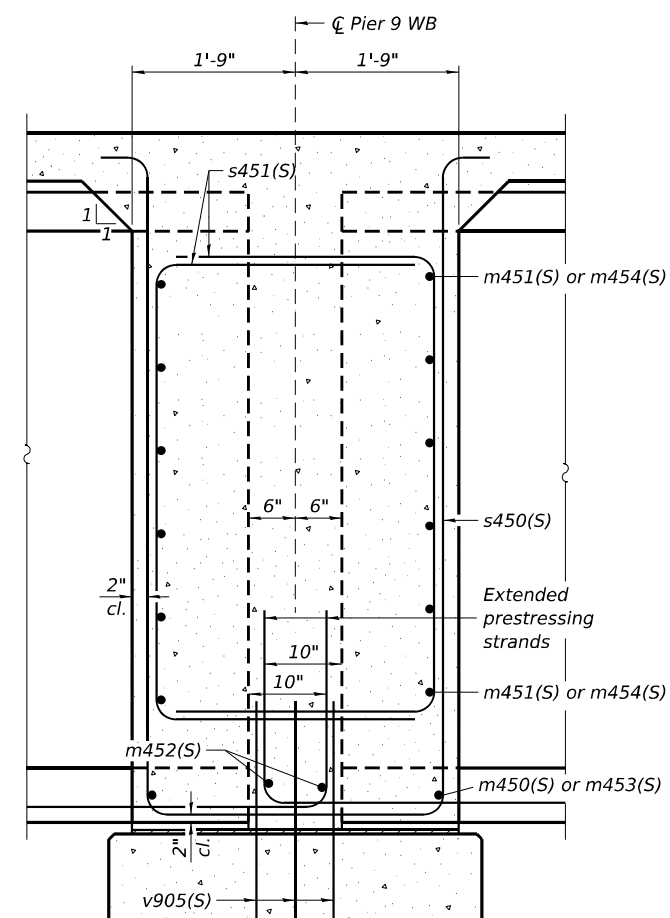
DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

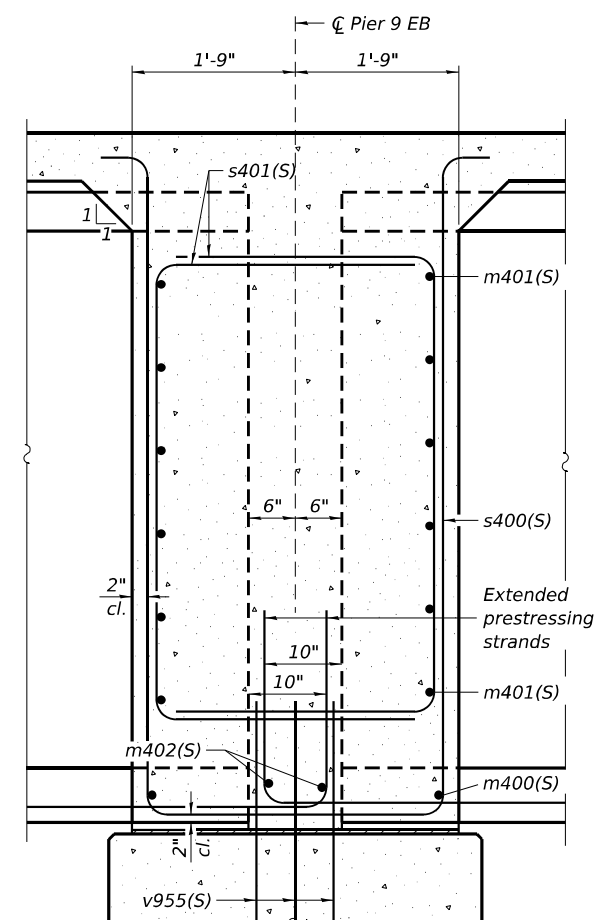
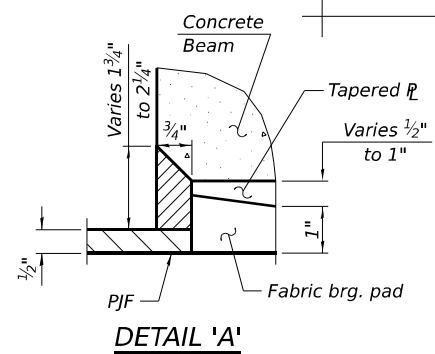
DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

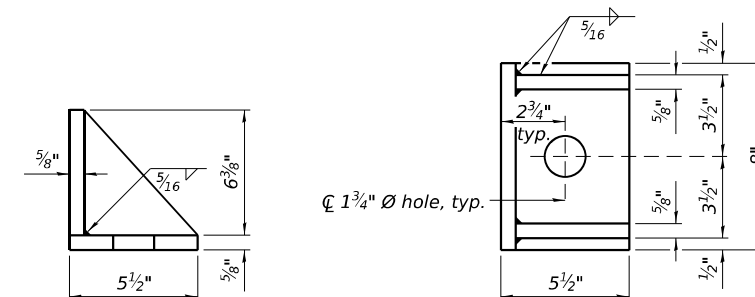
DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS



1. See sheet S-145 for superstructure details and Bill of Material. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
2. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
3. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.



SECTION A-A

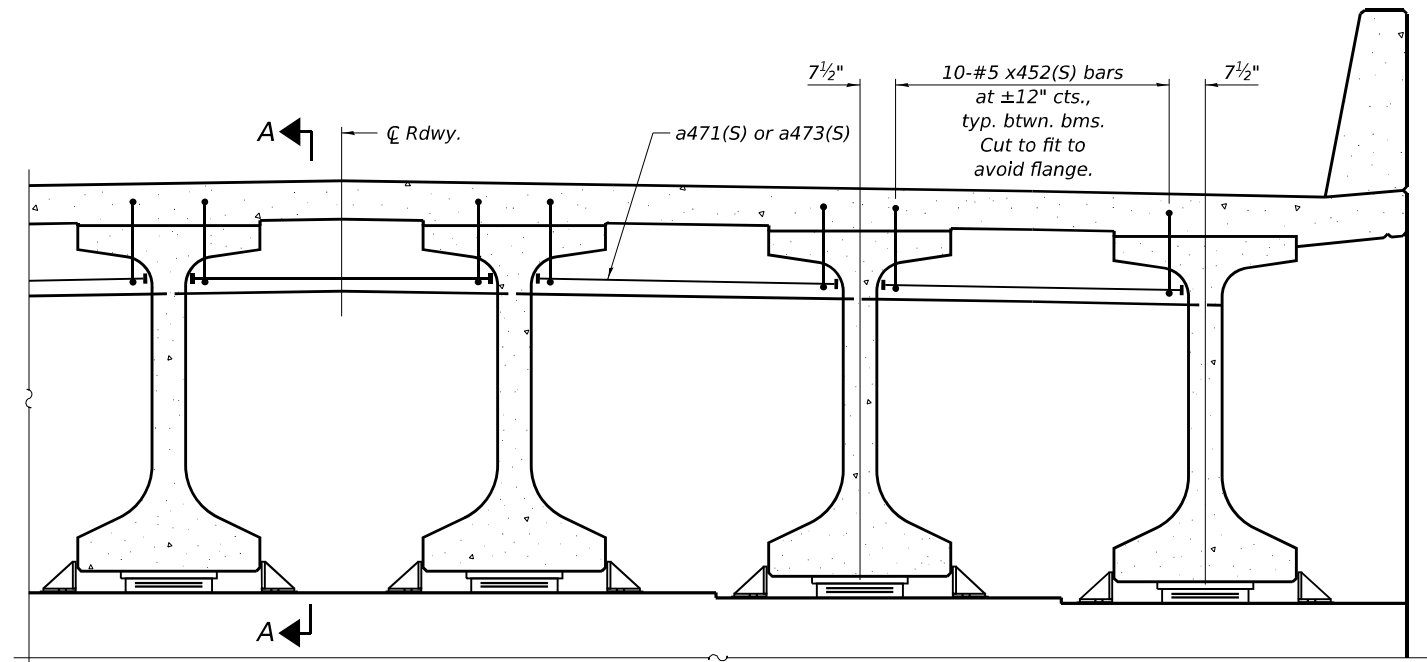


SIDE RETAINER

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

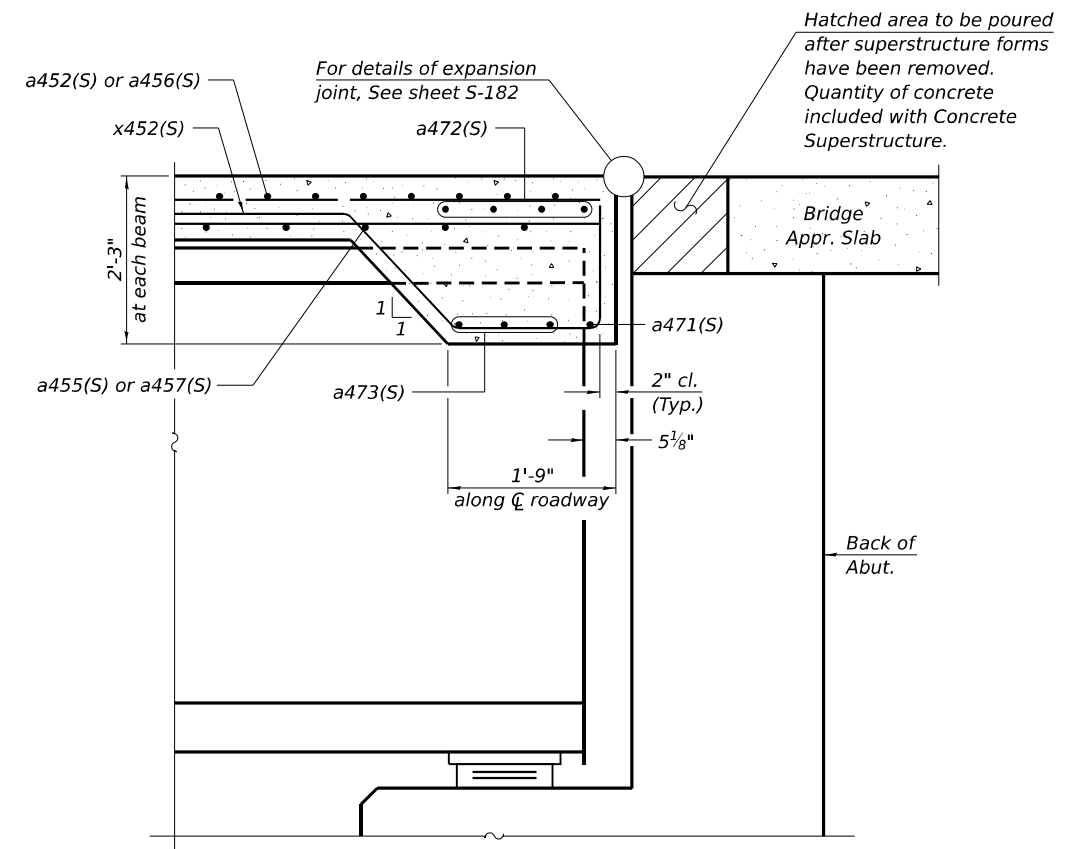
NOTES:

1. See sheet S-151 for superstructure details and Bill of Material. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
2. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
3. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.



DIAPHRAGM AT EAST ABUTMENT WB

Notes:
See sheet S-145 for superstructure details and Bill of Material.
The x452(S) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.



SECTION A-A
(at Rt. L's)

MODEL Default:
FILE NAME: p:\projects\trans\systems-pw\hntb\comtrans\scorp-pw\hntb\Documents\Projects_2018\CH4001401180022\03-WSP\CD\62023-RB-1-Sheets\Structural\0998309-42R23-S367-20615.dgn

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVISED -	
PLOT SCALE = 32,000 ' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS - EAST ABUTMENT WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-167 OF S-333 SHEETS

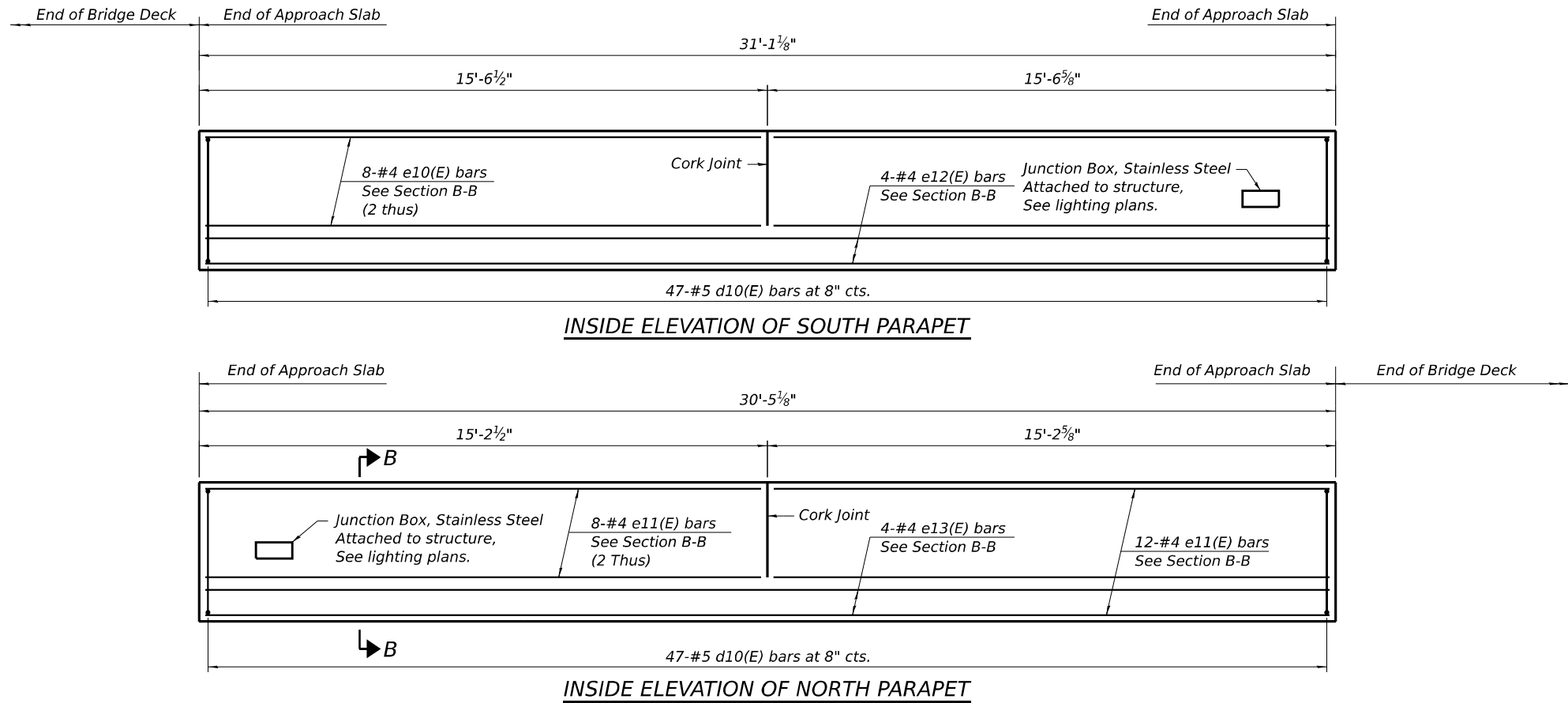
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	748
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



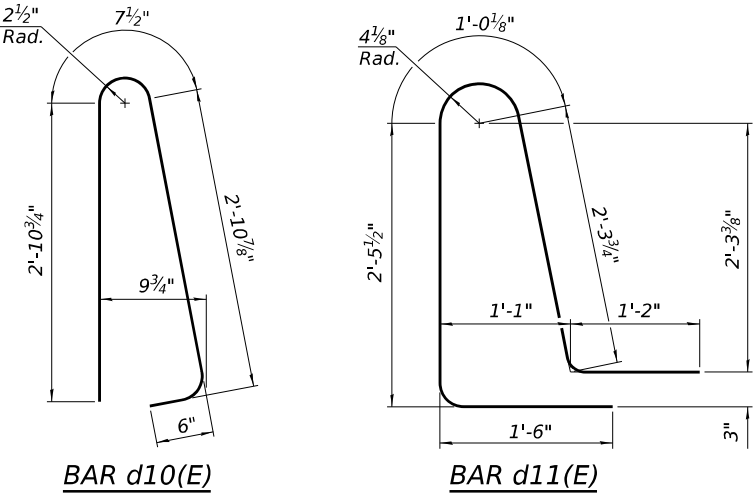
SECTION A-A
(at Rt. $\angle$'s)



MODEL Default:
FILE NAME: p:\proj\transys\scorp\ppl\hatched\Documents\Projects_2018\CH4001\401180022\03-WSP\CD\62023-WB-1\Sheet\Structure\0998309-42R23-5371-ASW103.dgn

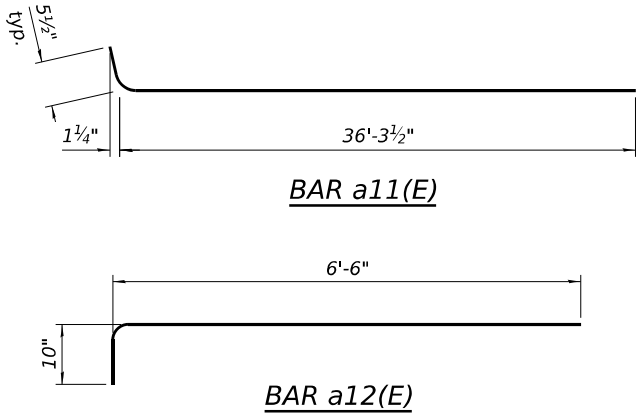
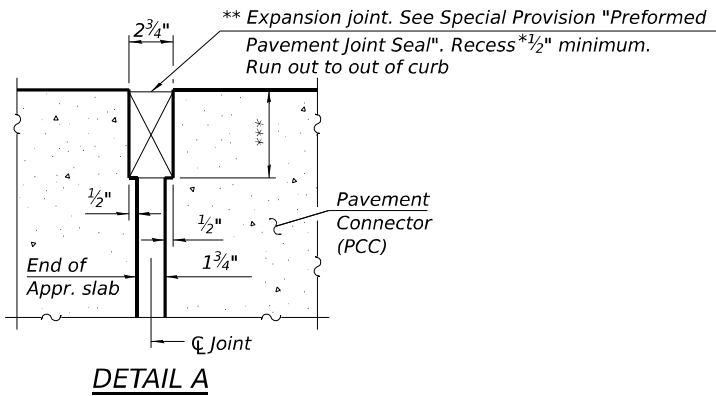
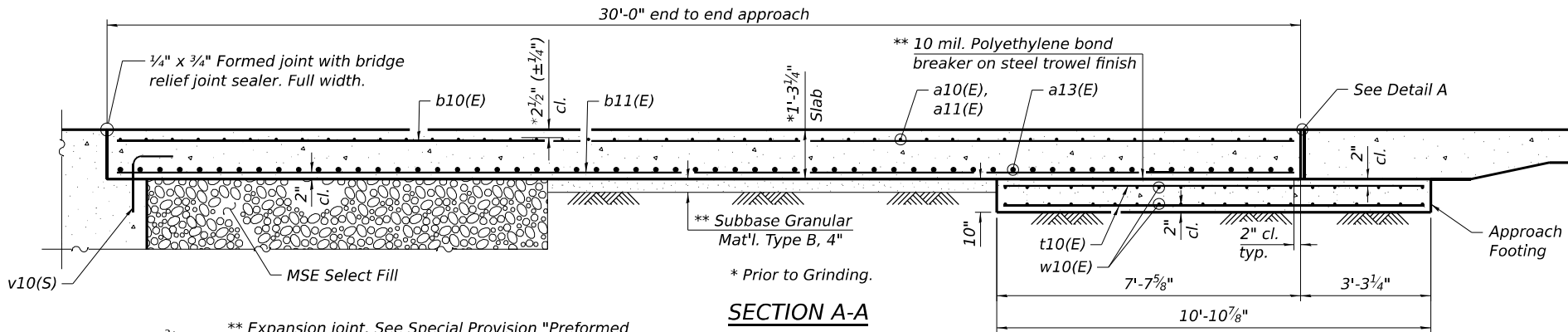


Notes:
Parapet concrete shall be paid for as Concrete Superstructure.
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
Approach footing concrete shall be paid for as Concrete Structures.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures.
See sheet S-251 for hatched block details.
For Section B-B see sheet S-170.
For Cork Joint Detail, see sheet S-103



WEST APPROACH (WB)
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	46	#5	36'-0"	┌───┐
a11(E)	92	#5	36'-9"	┌───┐
a12(E)	92	#5	7'-4"	┌───┐
a13(E)	183	#8	37'-11"	┌───┐
b10(E)	145	#5	29'-8"	───
b11(E)	232	#9	29'-8"	───
d10(E)	94	#5	7'-0"	└─┘
d11(E)	94	#5	8'-6"	└─┘
e10(E)	16	#4	15'-2"	───
e11(E)	16	#4	14'-10"	───
e12(E)	4	#4	30'-9"	───
e13(E)	4	#4	30'-1"	───
t10(E)	194	#4	10'-7"	───
w10(E)	120	#5	37'-0"	───
Concrete Superstructure			Cu Yd.	8.7
Concrete Superstructure (Approach Slab)			Cu Yd.	134.3
Concrete Structures			Cu Yd.	29.6
Reinforcement Bars, Epoxy Coated			Pound	60,390
Protective Coat			Sq. Yd.	347
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	220
Diamond Grinding (Bridge Section)			Sq. Yd.	295



** Cost included with Concrete Superstructure (Approach Slab).
*** Per manufacturer recommendations



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614
DESIGNED - LAS
CHECKED - PJL
PLOT SCALE = 4:0,000 "1" / in.
DRAWN - BK
CHECKED - LAS
PLOT DATE = 11/5/2025

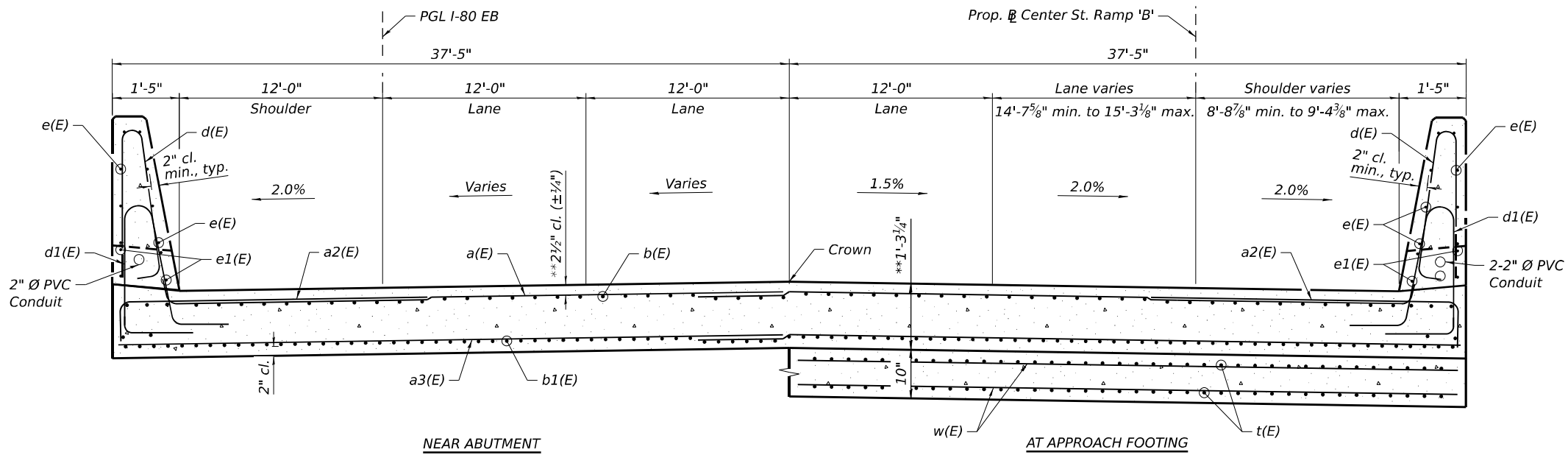
DESIGNED - LAS
CHECKED - PJL
DRAWN - BK
CHECKED - LAS
REVISD -
REVISD -
REVISD -
REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST APPROACH SLAB DETAILS - WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

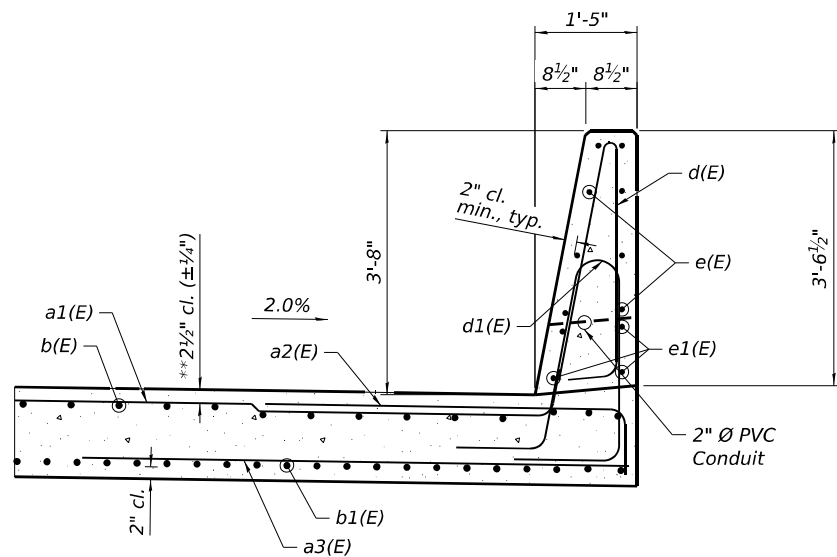
SHEET S-171 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	752
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



CROSS SECTION
(Looking East)

** Prior to Grinding.



SECTION B-B

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST APPROACH SLAB CROSS SECTION - EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	754
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

SHEET S-173 OF S-333 SHEETS

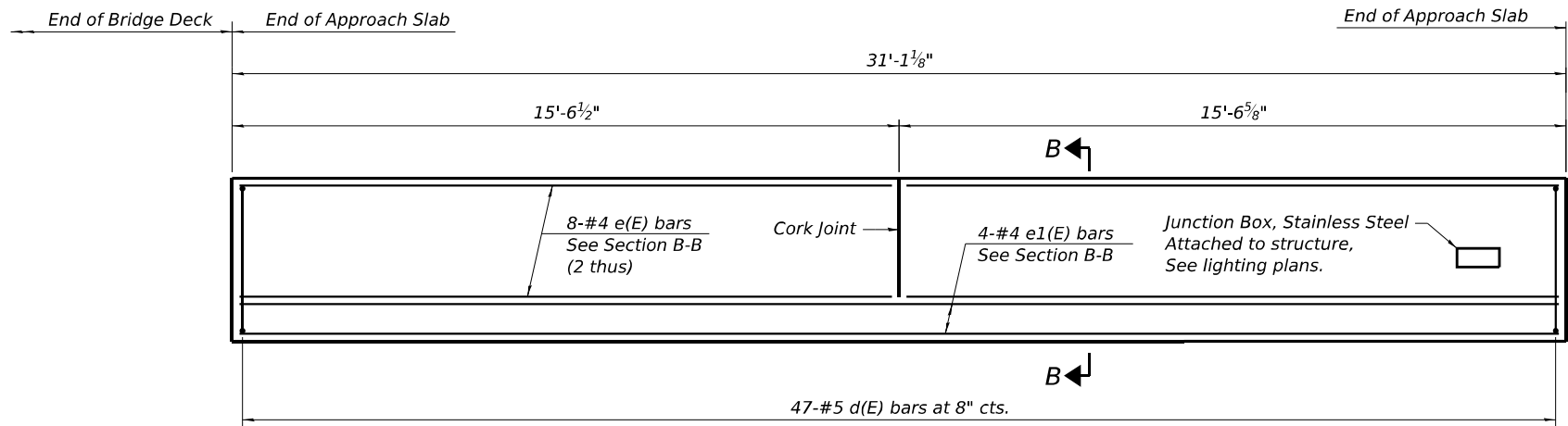


WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

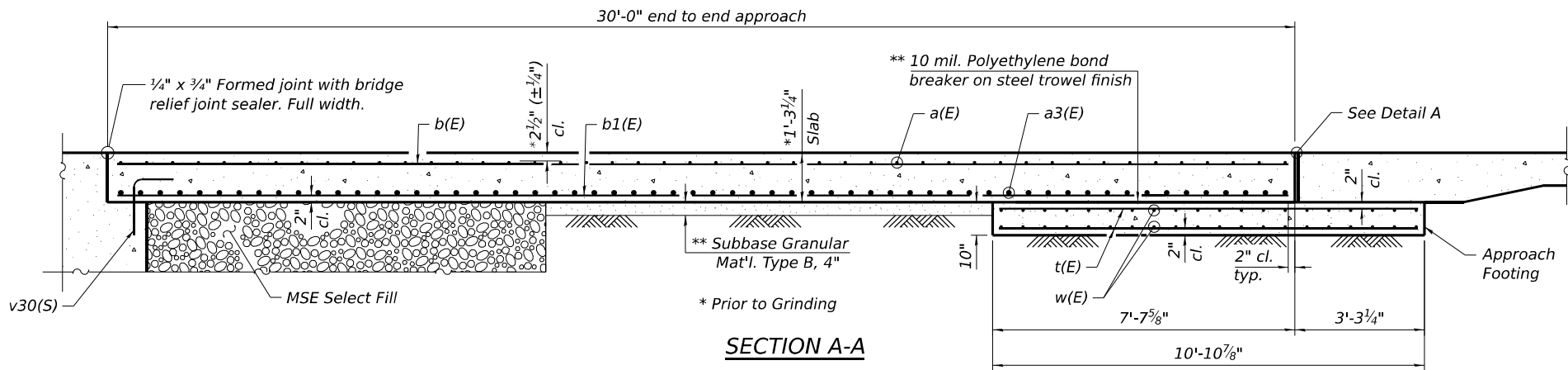
USER NAME	= USSJ696614
DESIGNED	- LAS
CHECKED	- PJL
PLOT SCALE	= 4,000' / in.
PLOT DATE	= 11/5/2025

DESIGNED	- LAS
CHECKED	- PJL
DRAWN	- BK
CHECKED	- LAS

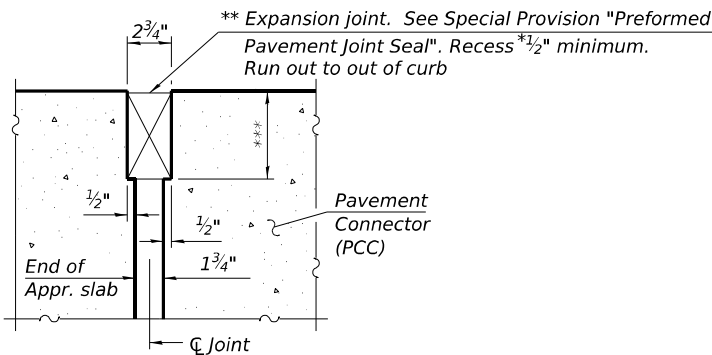
REVISED	-
REVISED	-
REVISED	-
REVISED	-



INSIDE ELEVATION OF PARAPET

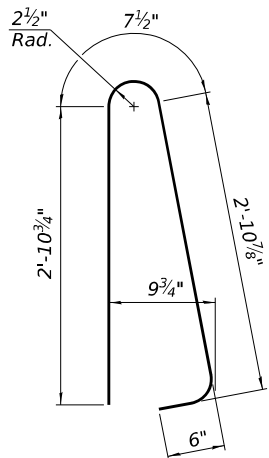


SECTION A-A

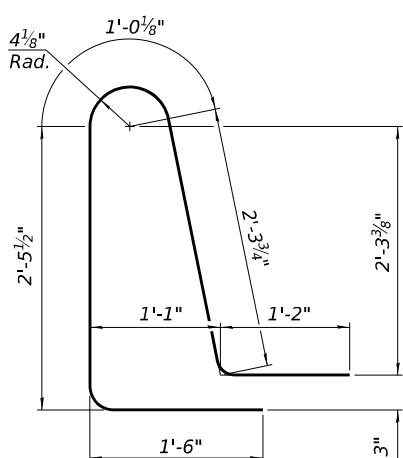


DETAIL A

Notes:
Parapet concrete shall be paid for as Concrete Superstructure.
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
Approach footing concrete shall be paid for as Concrete Structures.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures.
See sheet S-252 for hatched block details.
For Section B-B see sheet S-173.
For Cork Joint Detail, see sheet S-103.



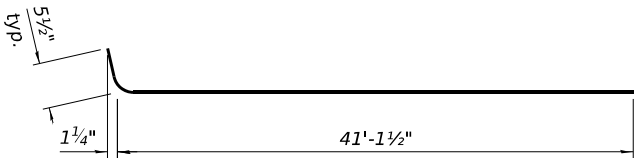
BAR d(E)



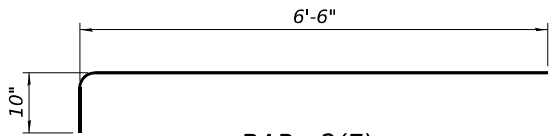
BAR d1(E)

WEST APPROACH (EB)
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	92	#5	41'-8"	—
a2(E)	92	#5	7'-4"	—
a3(E)	122	#8	43'-0"	—
b(E)	113	#5	29'-8"	—
b1(E)	181	#9	29'-8"	—
d(E)	94	#5	7'-0"	⌋
d1(E)	94	#5	8'-6"	⌋
e(E)	32	#4	15'-2"	—
e1(E)	8	#4	30'-9"	—
t(E)	152	#4	10'-7"	—
w(E)	80	#5	42'-4"	—
Concrete Superstructure			Cu Yd.	8.8
Concrete Superstructure (Approach Slab)			Cu Yd.	105.7
Concrete Structures			Cu Yd.	23.1
Reinforcement Bars, Epoxy Coated			Pound	47,090
Protective Coat			Sq. Yd.	270
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	176
Diamond Grinding (Bridge Section)			Sq. Yd.	227



BAR a(E)



BAR a2(E)

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

*** Per manufacturer recommendations

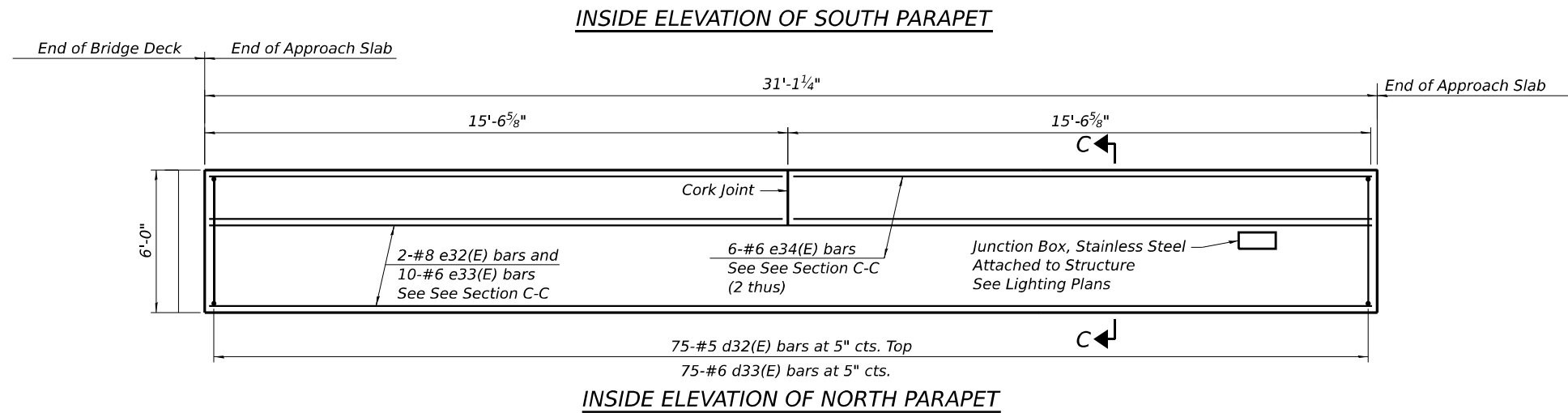
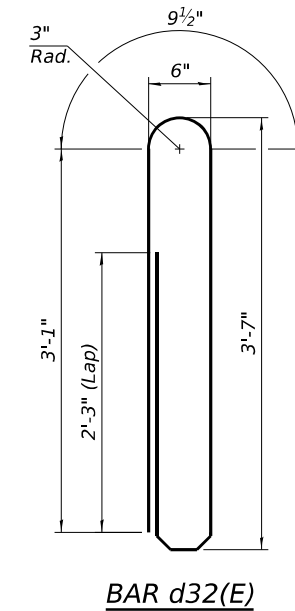
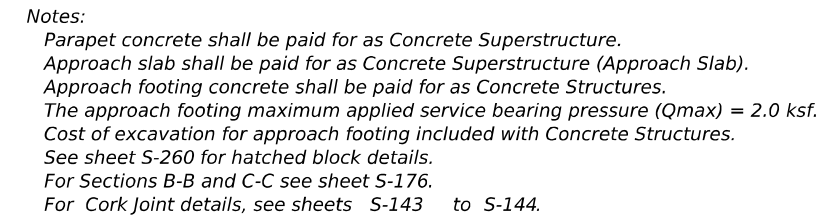
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST APPROACH SLAB DETAILS - EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

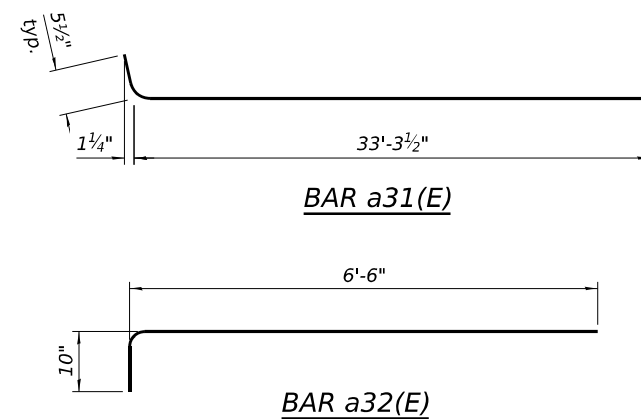
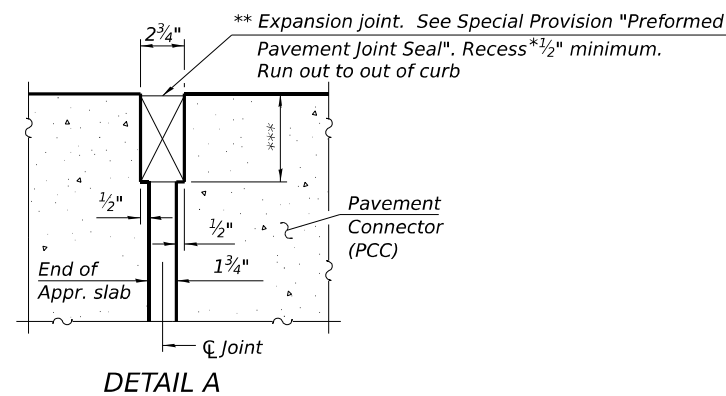
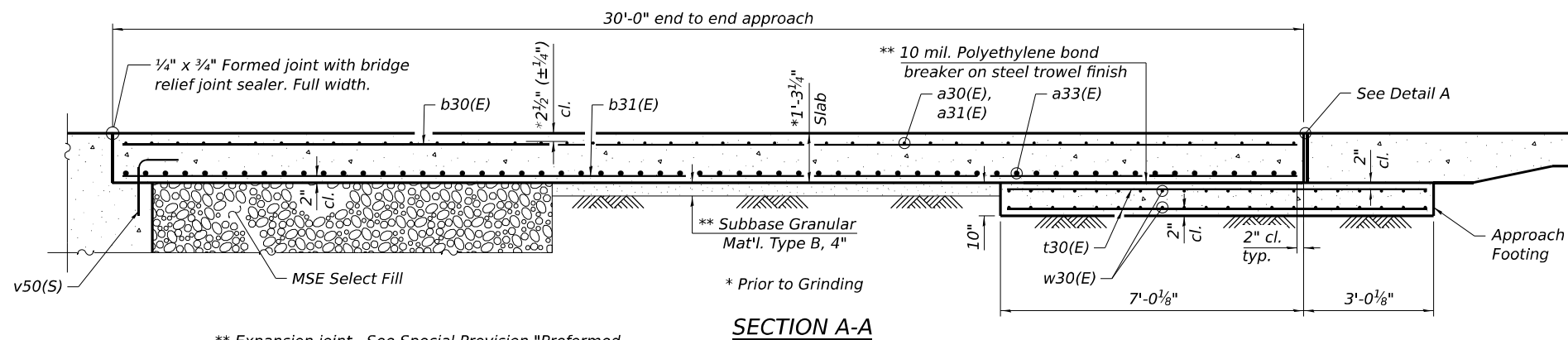
SHEET S-174 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	755
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
	CHECKED - PJL	REVISED -
PLOT SCALE = 4,000' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -



<i>Bar</i>	<i>No.</i>	<i>Size</i>	<i>Length</i>	<i>Shape</i>
a30(E)	46	#5	33'-3"	
a31(E)	92	#5	33'-9"	
a32(E)	92	#5	7'-4"	
a33(E)	183	#8	35'-0"	
b30(E)	144	#5	29'-8"	
b31(E)	230	#9	29'-8"	
d30(E)	47	#5	7'-0"	
d31(E)	47	#5	8'-6"	
d32(E)	75	#5	10'-0"	
d33(E)	75	#6	8'-7"	
d34(E)	75	#6	9'-0"	
e30(E)	16	#4	15'-2"	
e31(E)	4	#4	30'-8"	
e32(E)	2	#8	30'-9"	
e33(E)	10	#6	30'-9"	
e34(E)	12	#6	15'-2"	
t30(E)	194	#4	9'-8"	
w30(E)	120	#5	34'-1"	
Concrete Superstructure			Cu Yd.	11.8
Concrete Superstructure (Approach Slab)			Cu Yd.	133.3
Concrete Structures			Cu Yd.	29.5
Reinforcement Bars, Epoxy Coated			Pound	60,490
Protective Coat			Sq. Yd.	344
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	178
Diamond Grinding (Bridge Section)			Sq. Yd.	300

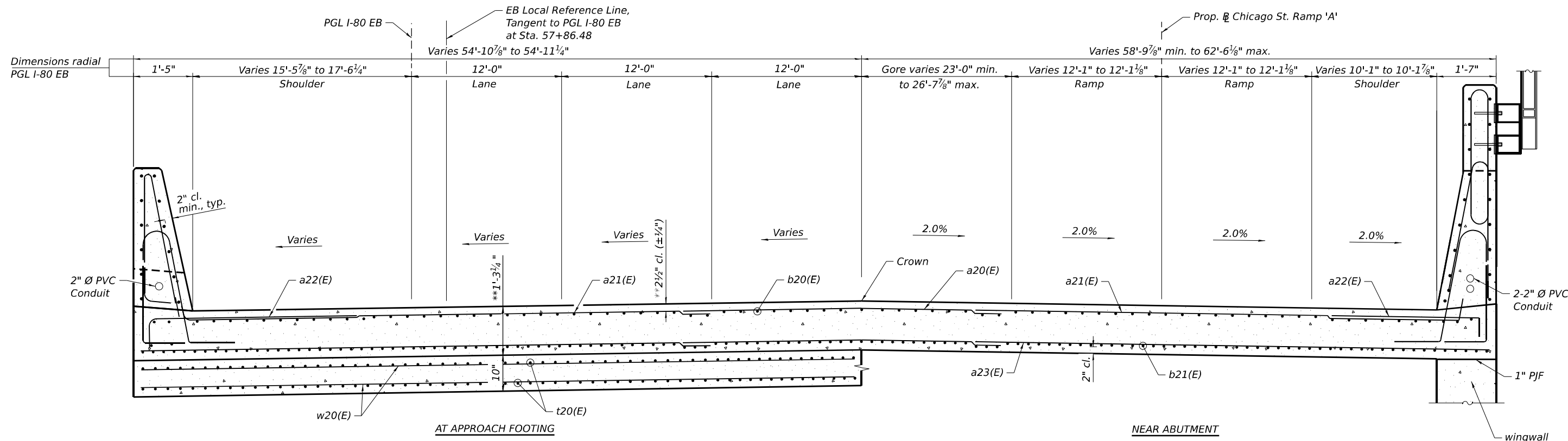


*** Per manufacturer recommendations

<i>Point/ Location</i>	<i>Top</i>	<i>Bottom</i>
<i>A</i>	<i>565.65</i>	<i>564.82</i>
<i>B</i>	<i>566.47</i>	<i>565.64</i>
<i>C</i>	<i>568.17</i>	<i>567.34</i>
<i>D</i>	<i>566.57</i>	<i>565.73</i>
<i>E</i>	<i>565.37</i>	<i>564.54</i>
<i>F</i>	<i>566.18</i>	<i>565.35</i>
<i>G</i>	<i>567.89</i>	<i>567.05</i>
<i>H</i>	<i>566.25</i>	<i>565.41</i>

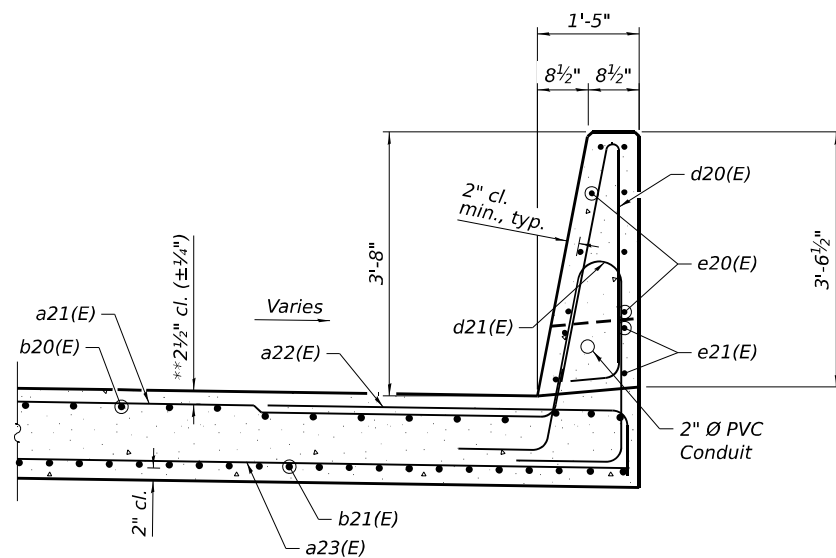


For Cross Section see Sheet S-179
For Section A-A see Sheet S-180
t20(E) bars to be cut in field
as required at notch in approach footing

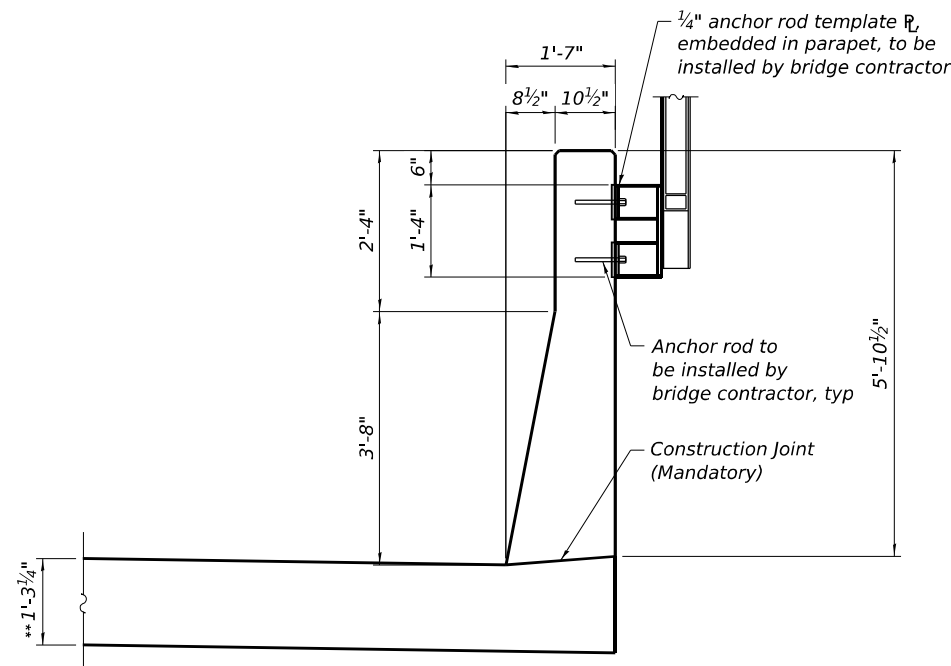


** Prior to grinding.

CROSS SECTION
(Looking East)

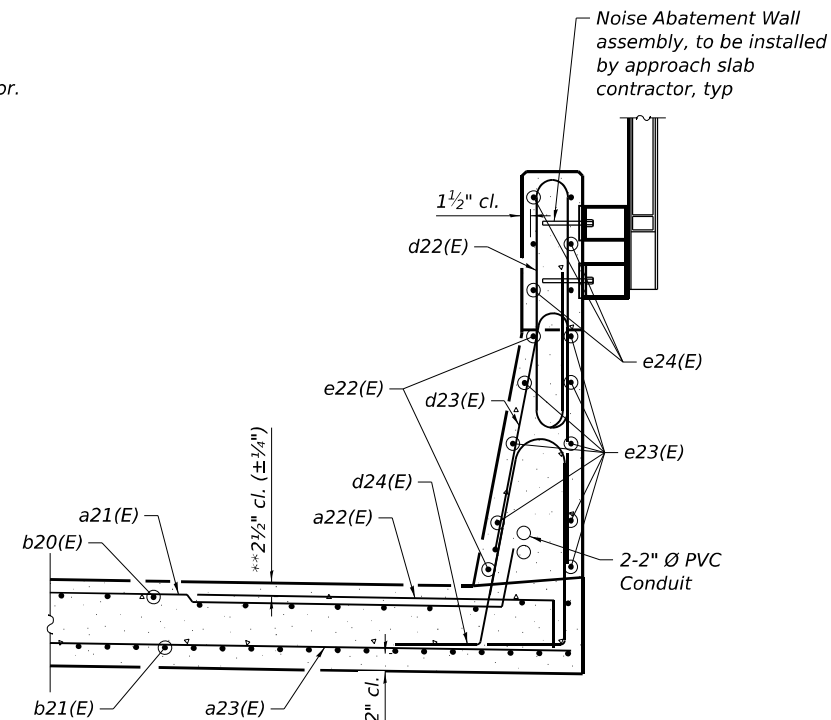


SECTION B-B



Post and post connection bracket details shown for information only. See Noise Abatement Wall plans for details.

**NOISE ABATEMENT WALL
MOUNTED ON APPROACH SLAB
CONFIGURATION**



Note:
Cost of four anchor rods, template plate, and associated hardware included in the cost for one each of Noise Abatement Wall Anchor Rod Assembly

**NOISE ABATEMENT WALL
MOUNTED ON APPROACH SLAB
REINFORCEMENT**

SECTION C-C

MODEL: Default
FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CD\62R23-RB-1_Sheets\Structural\0998309-42R23-5379-ASE105.dgn

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

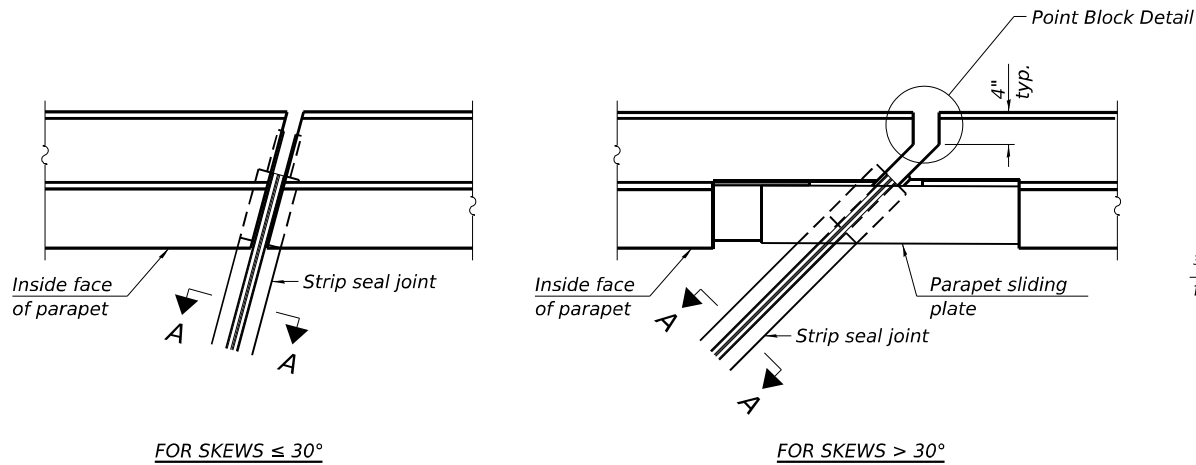
USER NAME = USSJ696614	DESIGNED - LAS	REVISED -
CHECKED - PJL	REVISED -	
PLOT SCALE = 6.333' / in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

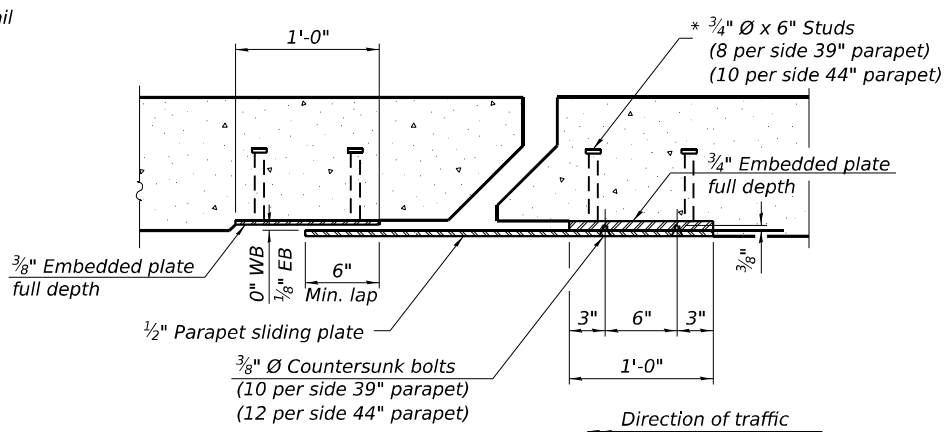
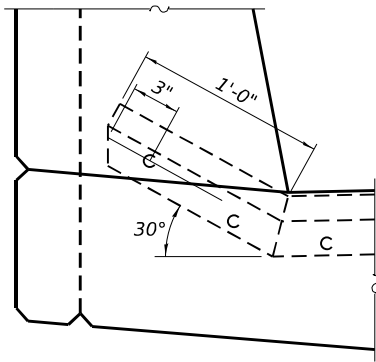
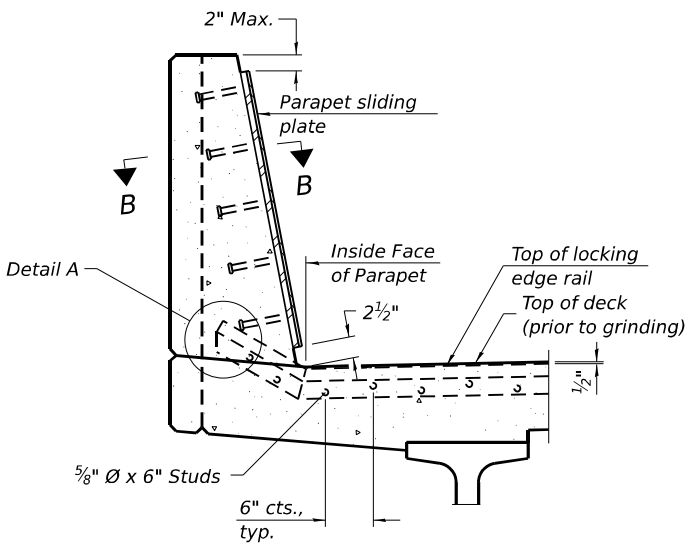
**EAST APPROACH SLAB CROSS SECTION - EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET 5-179 OF 5-333 SHEETS

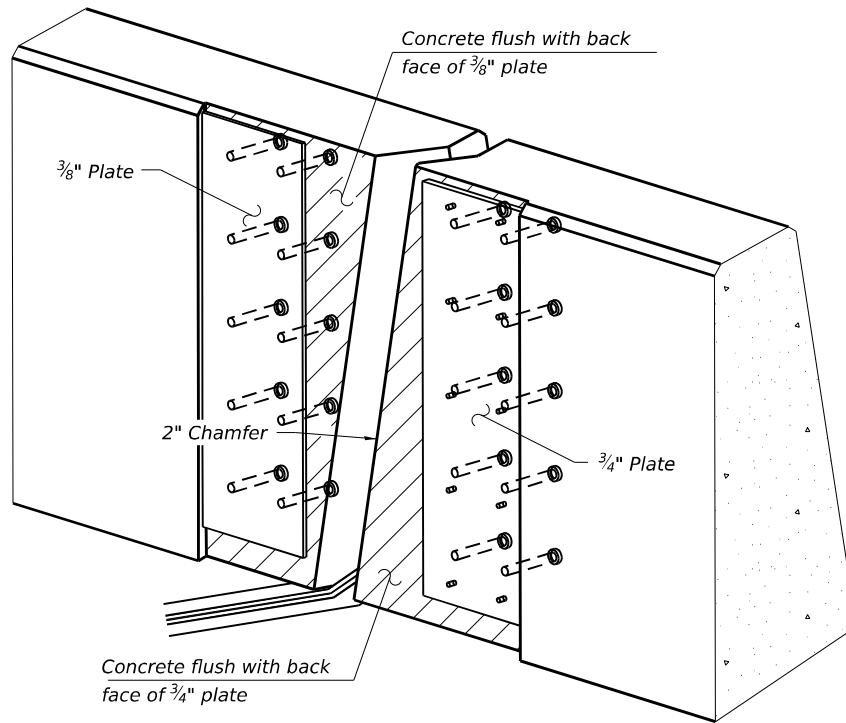
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	760
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



PLAN AT PARAPET

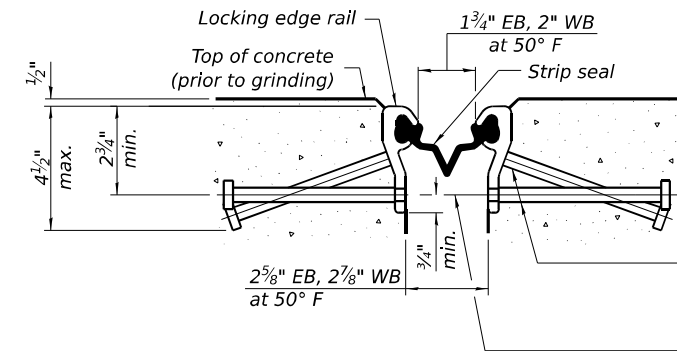


SECTION B-B



TRIMETRIC VIEW

(Showing embedded plates only)

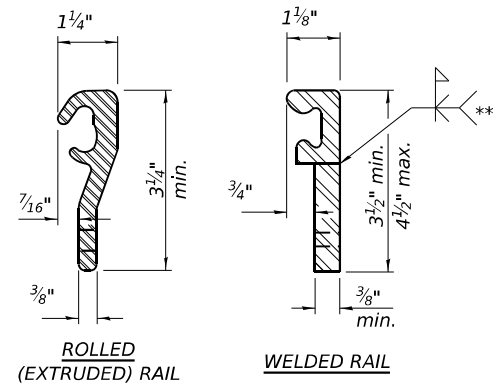
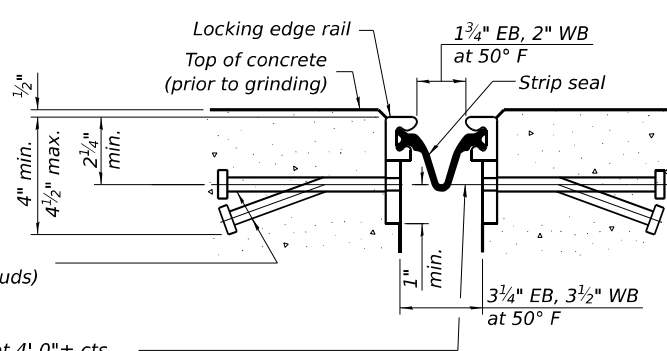


* $\frac{5}{8}$ " $\varnothing$ x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

$\frac{3}{8}$ " $\varnothing$ threaded rods in $\frac{7}{16}$ " $\varnothing$ holes at 4'-0" $\pm$ 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

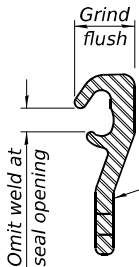
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



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

BILL OF MATERIAL - WB

Item	Unit	Total
Preformed Joint Strip Seal	Foot	93



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 - EB

Item	Unit	Total
Preformed Joint Strip Seal	Foot	115

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The 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 $\frac{3}{16}$ " 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.

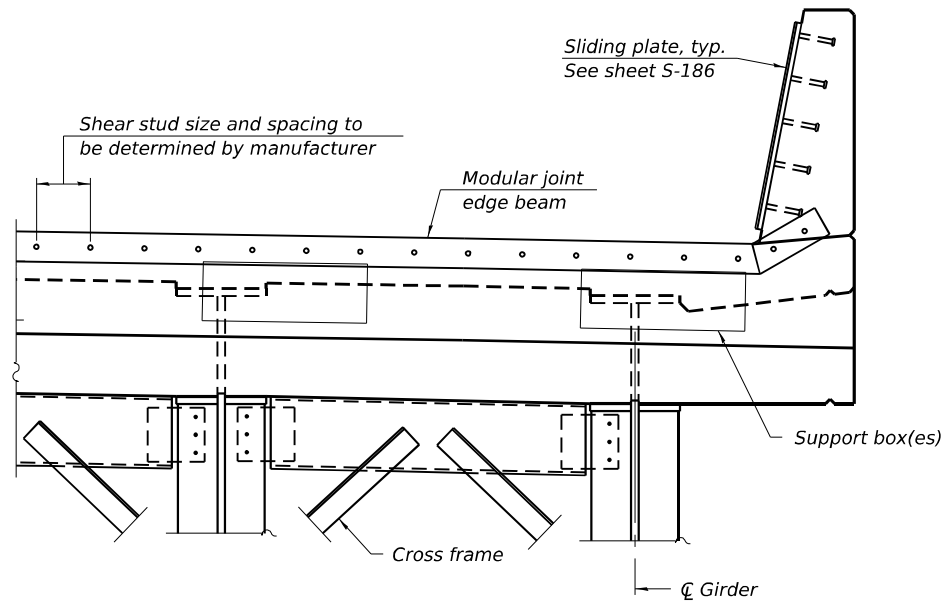
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

39" constant slope barrier shown, 44" constant slope barrier similar as noted.

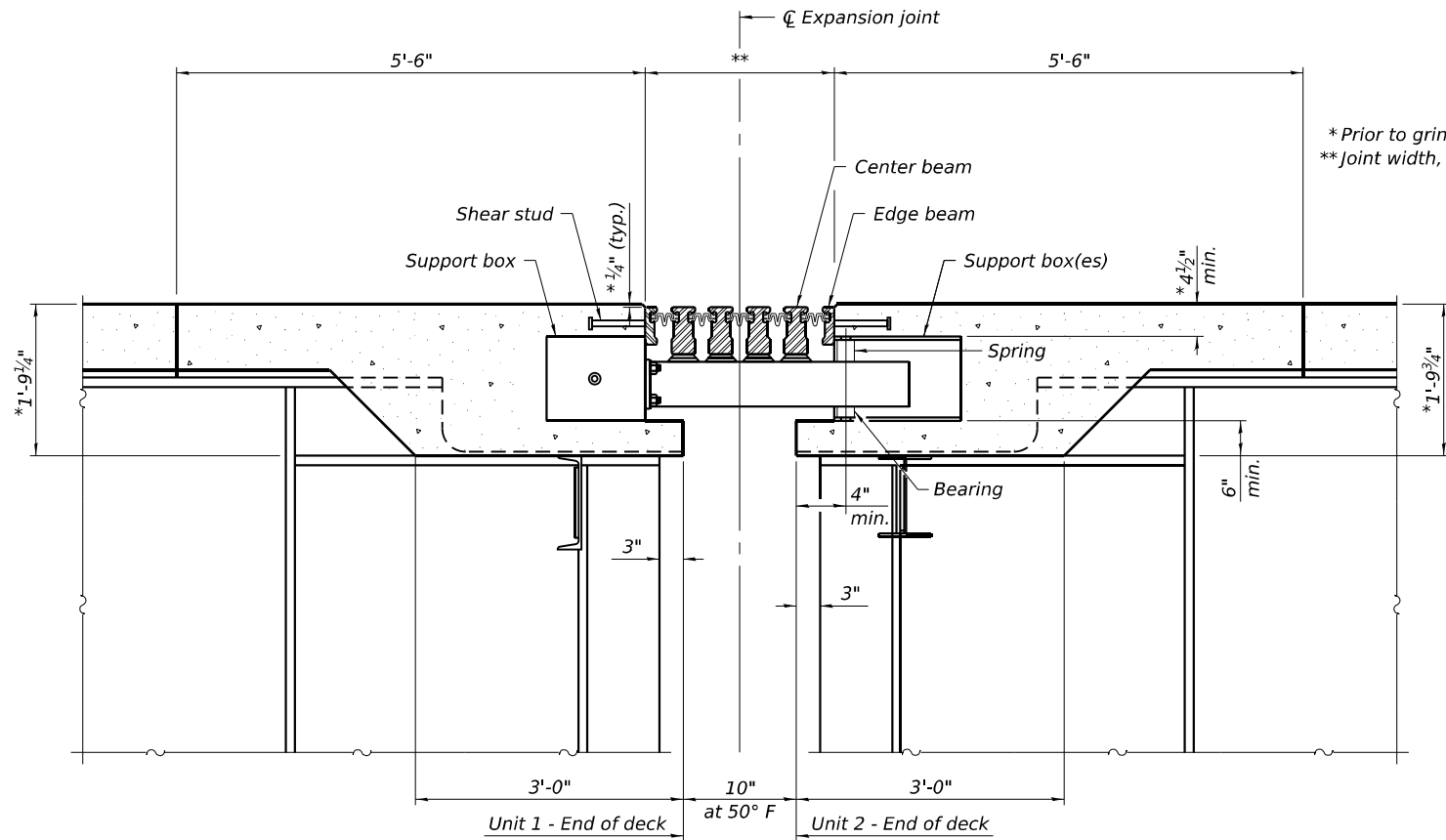
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to 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.

ADJUSTMENT FOR TEMPERATURE:

- When adjusting the joint opening for temperature variations, the location of fixity for Unit 4 WB shall be assumed to be half-way between fixed piers (middle of Span 9 WB).

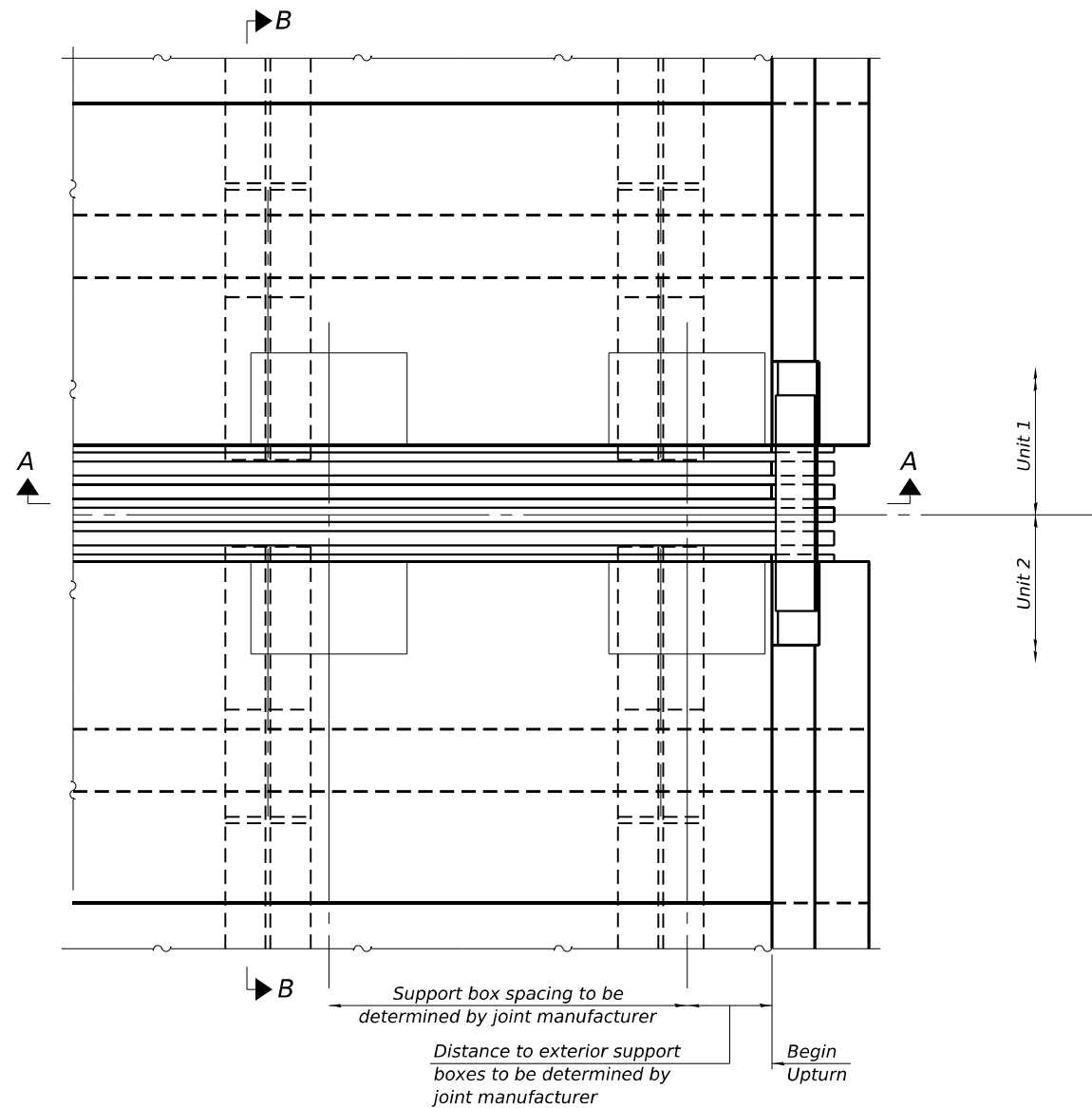


SECTION A-A



SECTION B-B

(Dimensions shown at right $\angle$'s to the joint)



PARTIAL PLAN

Notes:
Actual dimensions may vary depending on modular joint manufacturer's design.
Modular expansion joints shall be installed with forming and reinforcement bars in place prior to pouring the adjoining concrete deck span.
Modular joint assemblies shall be temporarily supported off the beam ends until the concrete is placed. Additional supports, if required by design, shall be detailed on the shop drawings to connect to the top chord of the cross frames.
Modular expansion joints shall be adjusted for temperature prior to pouring the blockout area.
Modular expansion joints shall be assembled in their final relative position with ends in place for shop inspection and acceptance.
For beam coping and modular joint diaphragm details see sheets S-206 and S-219.
Bars in the blockout may be adjusted in the field if necessary to miss joint support boxes, as approved by the Engineer.

PIER 2 WB

Total Long. Movement (in.)	Total Lateral Movement (in.)	Joint Size (in.)
12"	-	15"

PIER 2 EB

Total Long. Movement (in.)	Total Lateral Movement (in.)	Joint Size (in.)
12"	-	15"

BILL OF MATERIAL - WB

Item	Unit	Quantity
Modular Expansion Joint, 15"	Foot	74

BILL OF MATERIAL - EB

Item	Unit	Quantity
Modular Expansion Joint, 15"	Foot	72

EJ-MOD-FD-PIER

5-15-2023



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614	DESIGNED - PSK	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 0:2" = 1' / in.	DRAWN - SJJ	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PSK	REVISED -

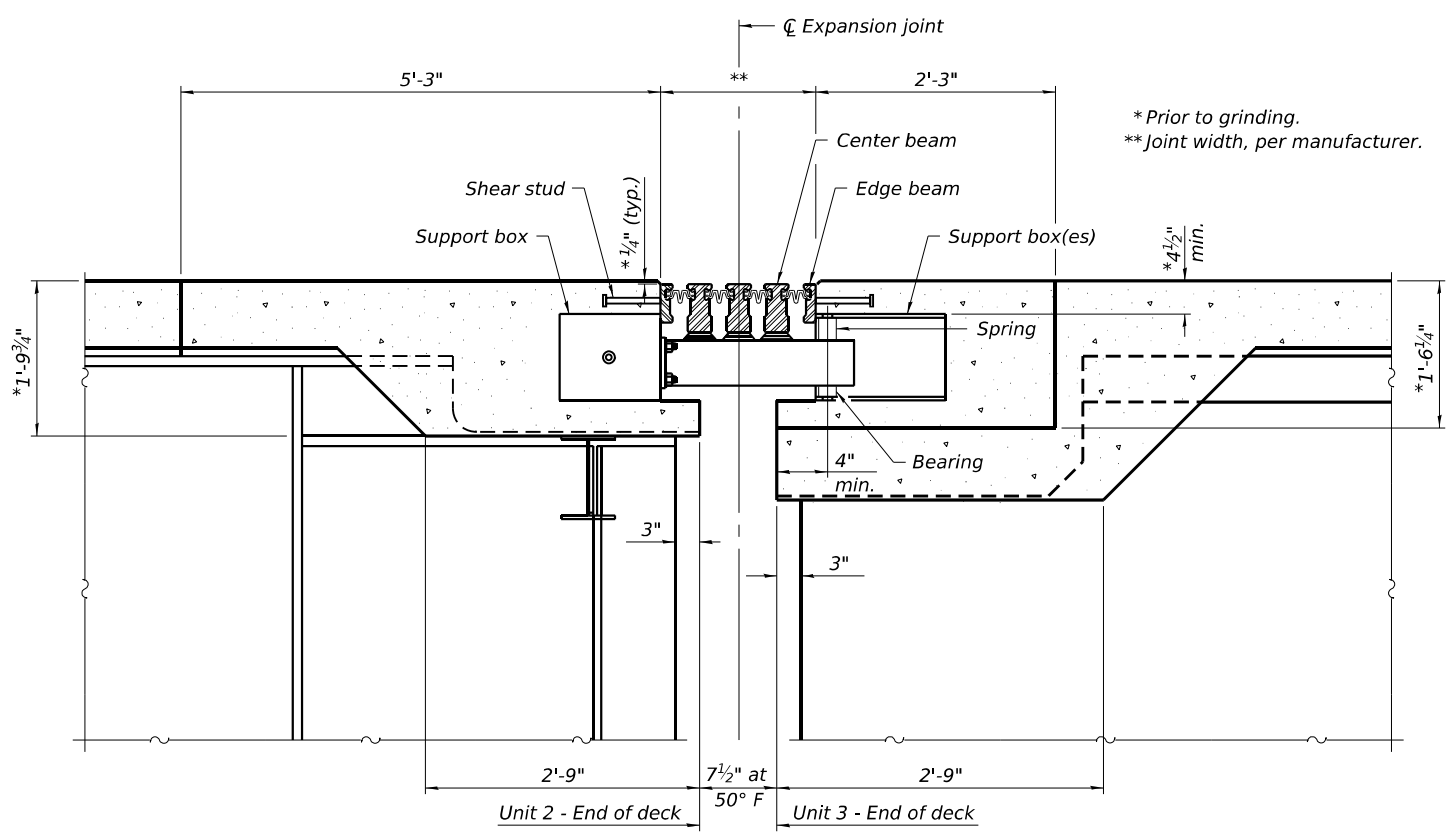
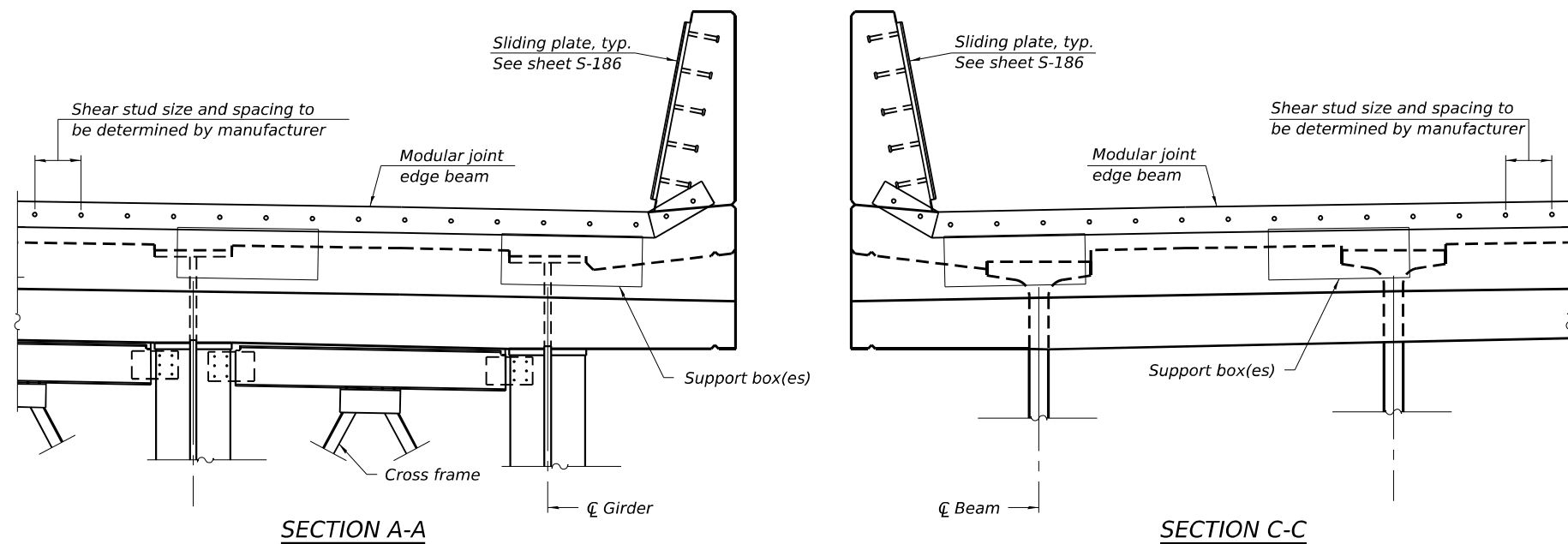
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODULAR EXPANSION JOINT - PIER 2 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-183 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	764
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

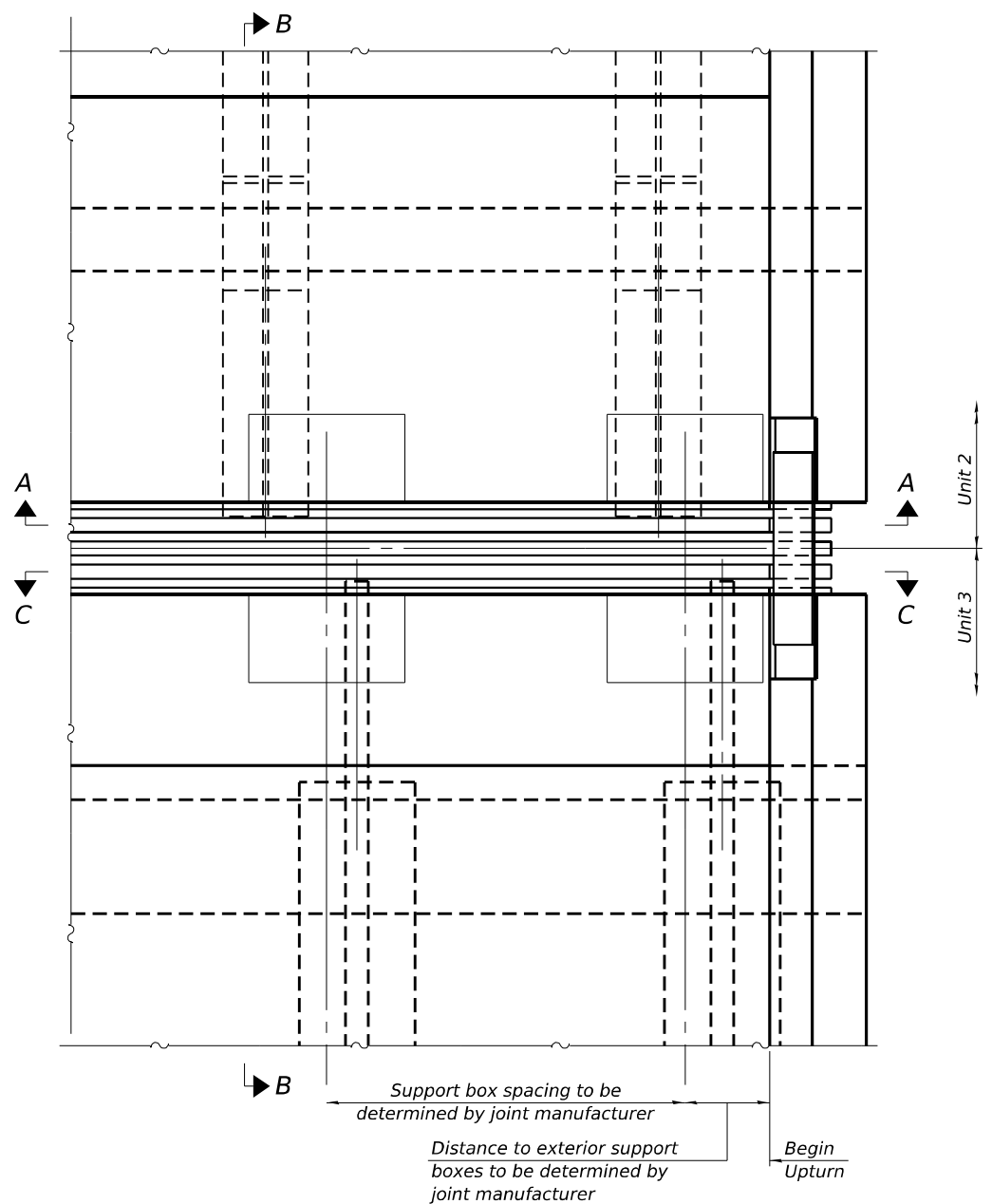
MODEL Default:
FILE NAME: p:\projects\transys\corp\ppl\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CAD\62R23-RB-1-Sheets\Structure\0998309-62R23-S\04-EB\02.dgn



SECTION B-B
(Dimensions shown at right L's to the joint)

ADJUSTMENT FOR TEMPERATURE:

1. When adjusting the joint opening for temperature variations, the location of fixity for Unit 3 EB shall be assumed to be half-way between fixed piers (middle of Span 7 EB).



PARTIAL PLAN

PIER 5 WB

Total Long. Movement (in.)	Total Lateral Movement (in.)	Joint Size (in.)
8 1/2"	-	12"

PIER 5 EB

Total Long. Movement (in.)	Total Lateral Movement (in.)	Joint Size (in.)
10"	-	12"

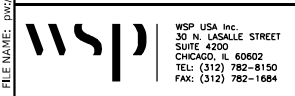
BILL OF MATERIAL - WB

Item	Unit	Quantity
Modular Expansion Joint, 12"	Foot	72

BILL OF MATERIAL - EB

Item	Unit	Quantity
Modular Expansion Joint, 12"	Foot	72

Notes:
Actual dimensions may vary depending on modular joint manufacturer's design.
Modular expansion joints shall be installed with forming and reinforcement bars in place prior to pouring the adjoining concrete deck span at end of Unit 2.
Modular joint assemblies shall be temporarily supported off the beam ends until the concrete is placed. Additional supports, if required by design, shall be detailed on the shop drawings to connect to the top chord of the cross frames at end of Unit 2.
Modular expansion joint assembly shall be installed after the concrete ledge below the blockout has been poured and reached required strength as specified on the General Plan and Elevation at end of Unit 3.
Modular expansion joints shall be adjusted for temperature prior to pouring the blockout area.
Modular expansion joints shall be assembled in their final relative position with ends in place for shop inspection and acceptance.
For modular joint diaphragm and beam coping details see sheets S-219, S-223 and S-225.
Bars in the blockout may be adjusted in the field if necessary to miss joint support boxes, as approved by the Engineer.



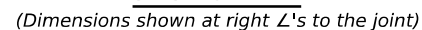
USER NAME = USSJ696614	DESIGNED - PSK	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 0:2 " = 1" / in.	DRAWN - SJJ	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PSK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MODULAR EXPANSION JOINT - PIER 5 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-184 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	765
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



1. When adjusting the joint opening for temperature variations, the location of fixity for Unit 3 EB shall be assumed to be half-way between fixed piers (middle of Span 7 EB).
2. When adjusting the joint opening for temperature variations, the location of fixity for Unit 4 WB shall be assumed to be half-way between fixed piers (middle of Span 9 WB).



<i>Total Long. Movement (in.)</i>	<i>Total Lateral Movement (in.)</i>	<i>Joint Size (in.)</i>
5¼"	-	9"

<i>Total Long. Movement (in.)</i>	<i>Total Lateral Movement (in.)</i>	<i>Joint Size (in.)</i>
5½"	-	9"

Item	Unit	Quantity
Modular Expansion Joint, 9"	Foot	73

Item	Unit	Quantity
Modular Expansion Joint, 9"	Foot	87

Actual dimensions may vary depending on modular joint manufacturer's design.

Modular expansion joint assembly shall be installed after the concrete ledge below the blockout has been poured and reached required strength as specified on the General Plan and Elevation.

Modular expansion joints shall be adjusted for temperature prior to pouring the blockout area.

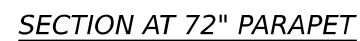
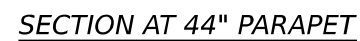
Modular expansion joints shall be assembled in their final relative position with ends in place for shop inspection and acceptance.

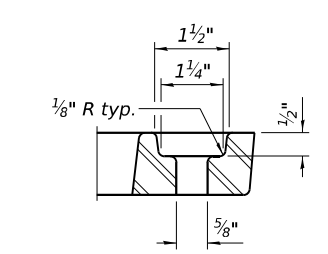
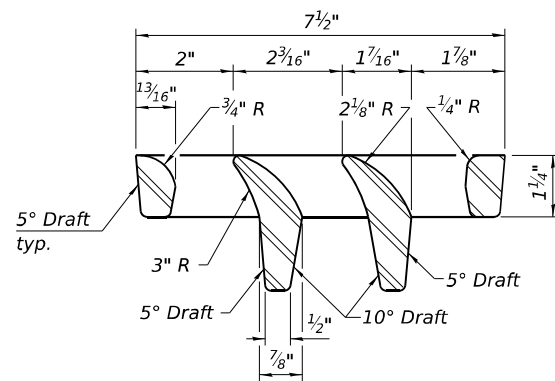
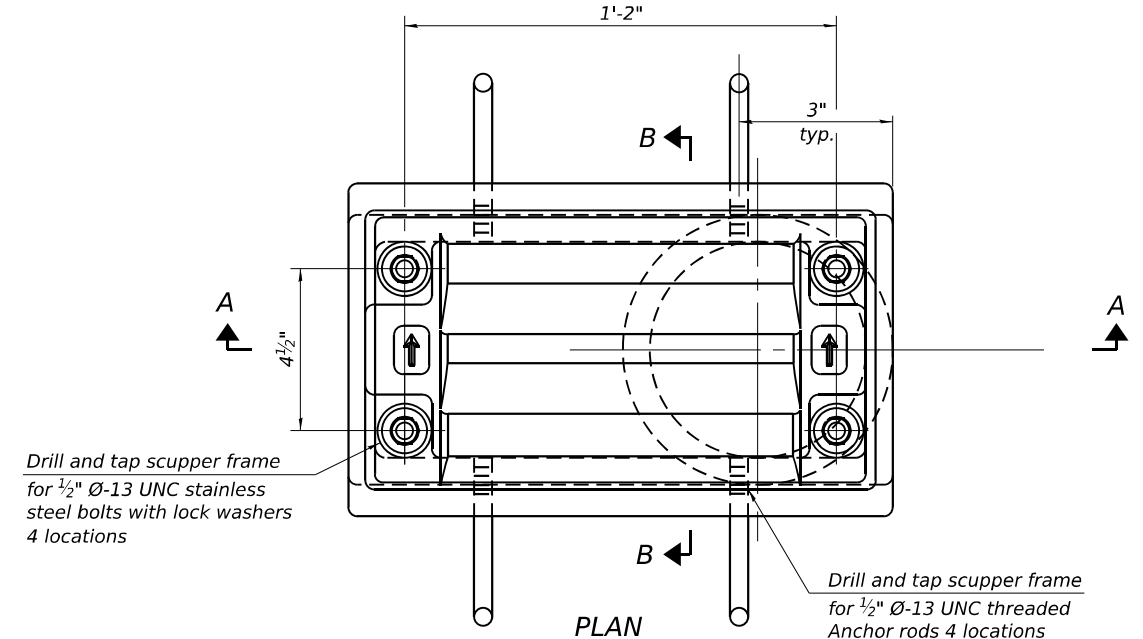
For beam coping details see sheets S-223, S-227, S-229 and S-233.

Bars in the blockout may be adjusted in the field if necessary to miss joint support boxes, as approved by the Engineer.



- Notes:**
*All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
 Cost of parapet sliding plates, embedded plates, and anchorage studs, is included with Modular Expansion Joint of the width shown on sheets S-183 thru S-185.
 Actual dimension of joint opening may vary based on modular joint manufacturer's design.*





Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.

Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.

Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

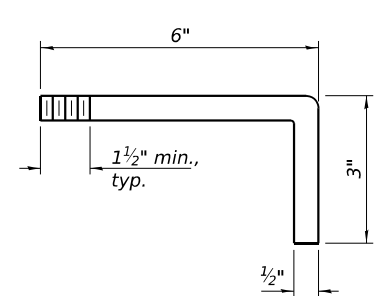
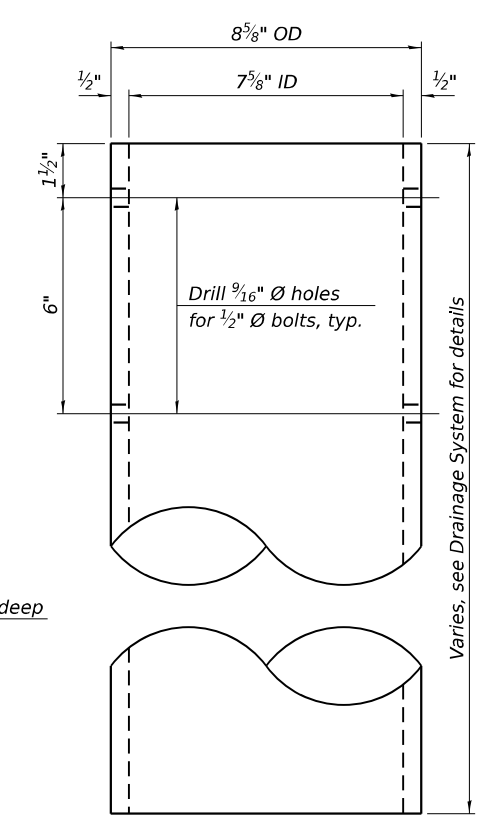
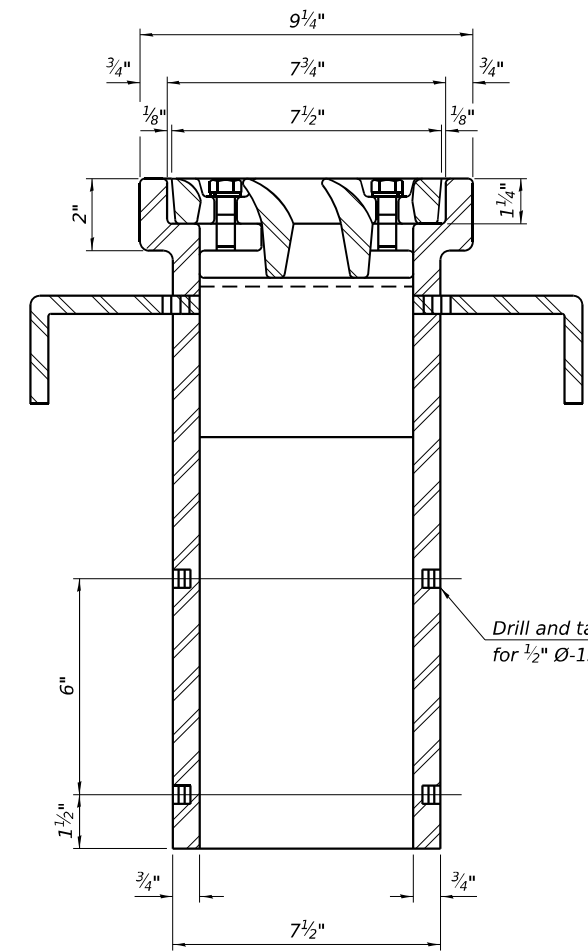
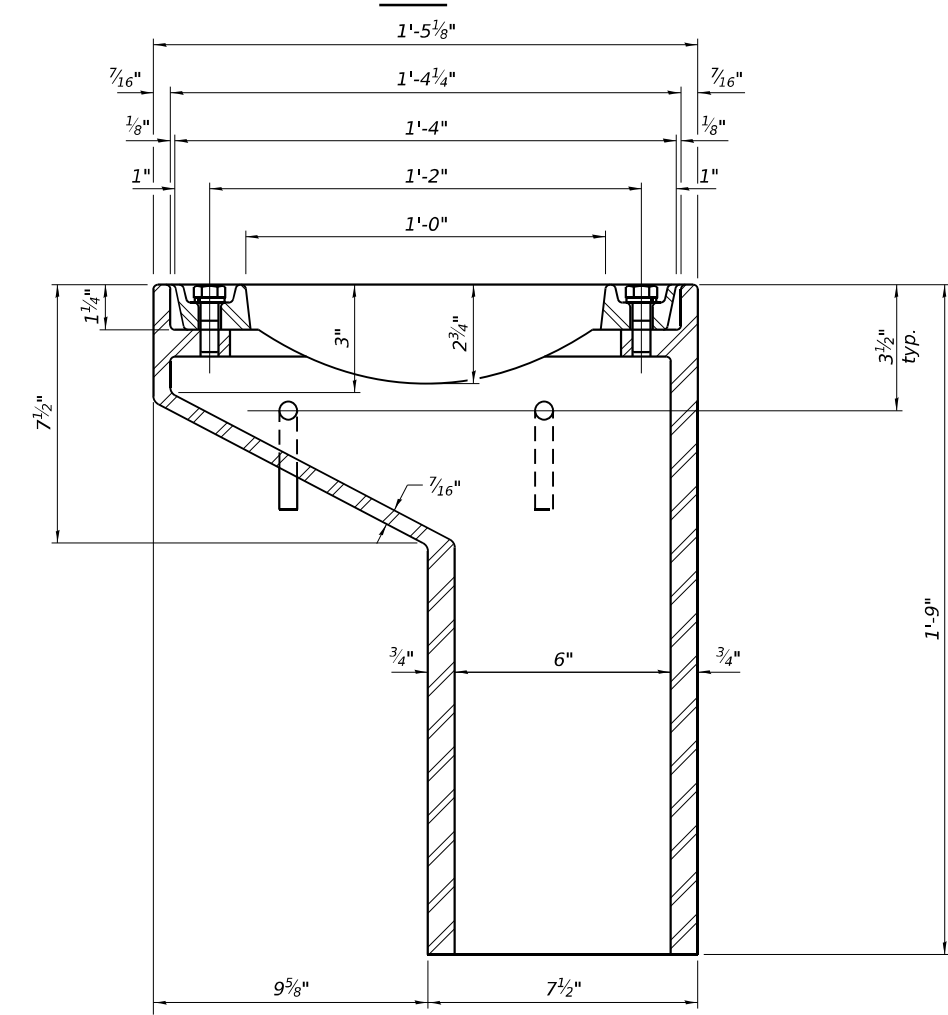
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.

As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.

Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be pigmented or painted to match the color of the adjacent beam.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scuppers, DS-11.



See deck sheets S-102, S-106, S-113, and S-120 for scupper location relative to parapet.

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-11	Each	34

DS-11

5-15-2023

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPERS, DS-11
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-187 OF S-333 SHEETS

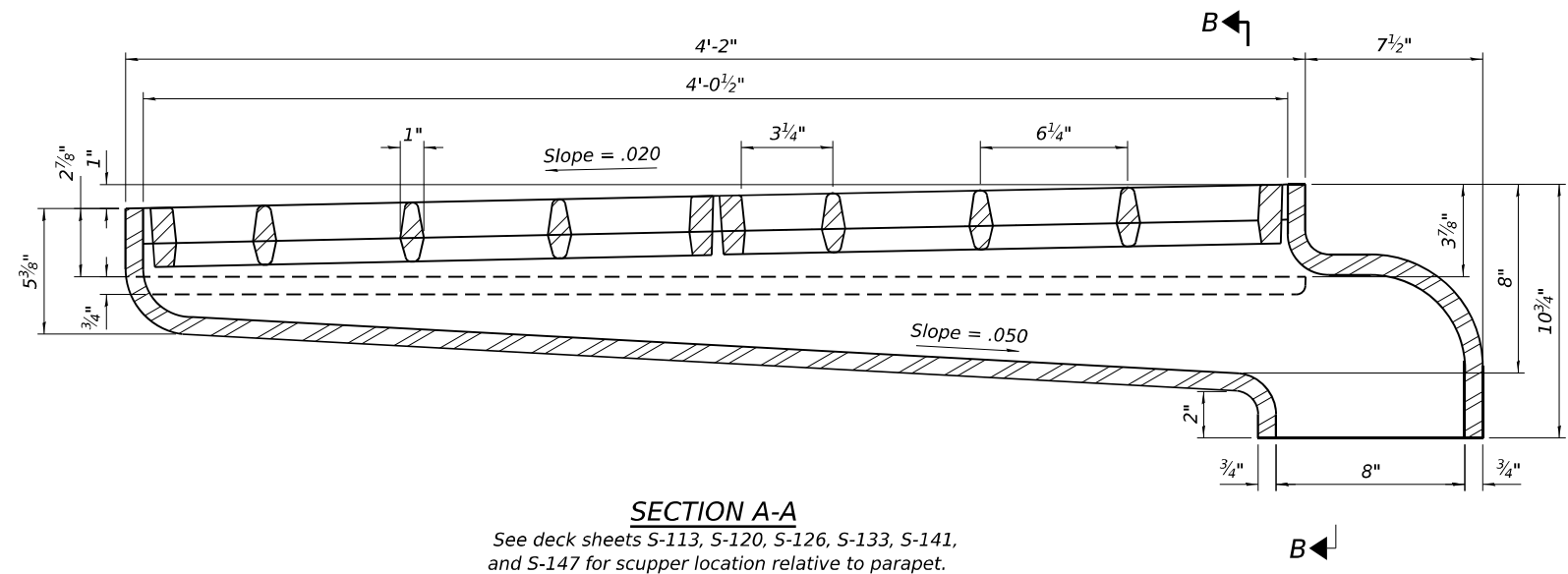
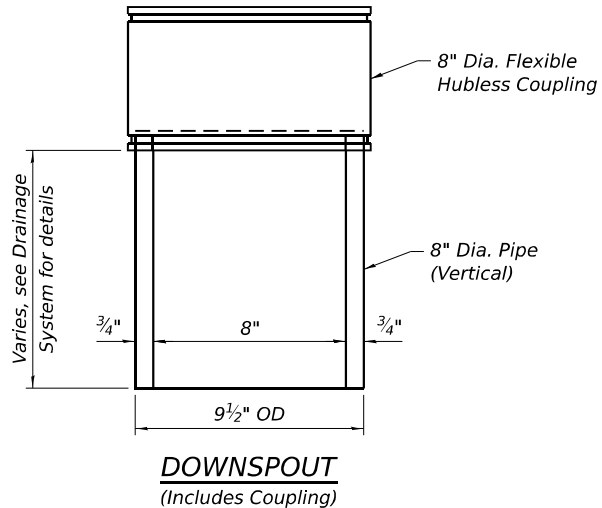
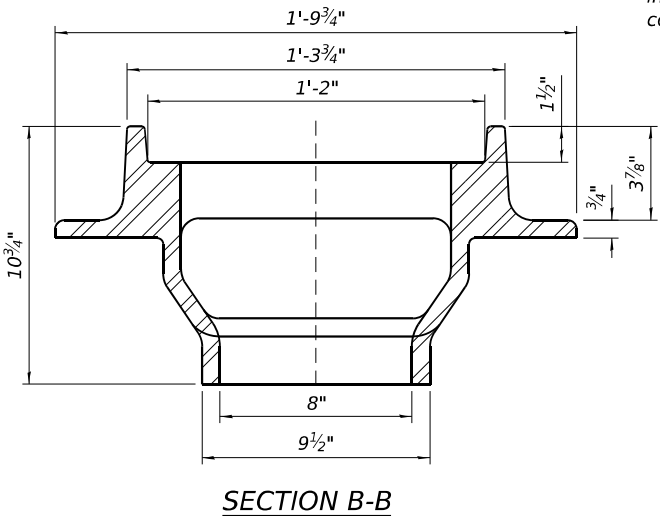
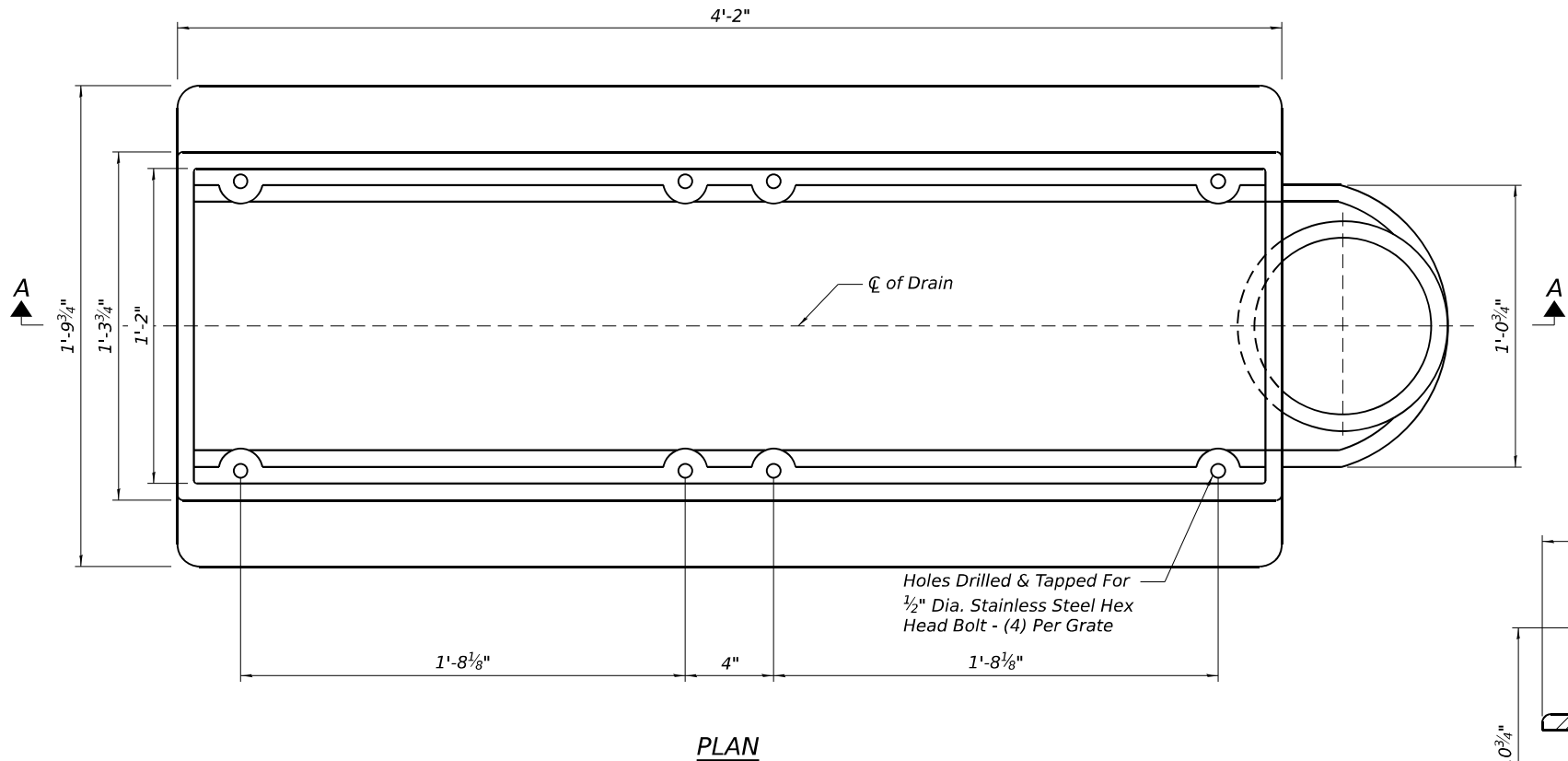
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	768
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

MODEL Default: p:\projects\trans\scupper\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CAD\62R23-RB-1-Sheet\Structural\0998309-8325-S-187-DS-11.dgn

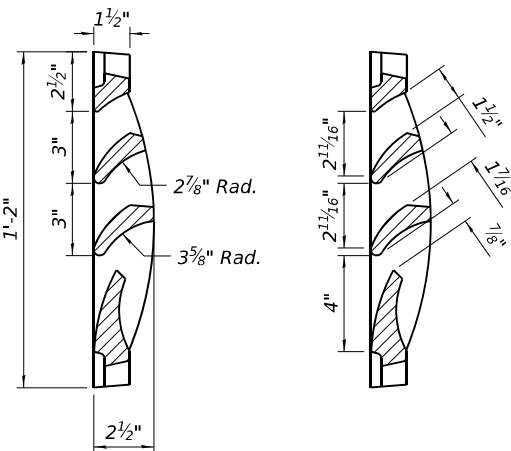
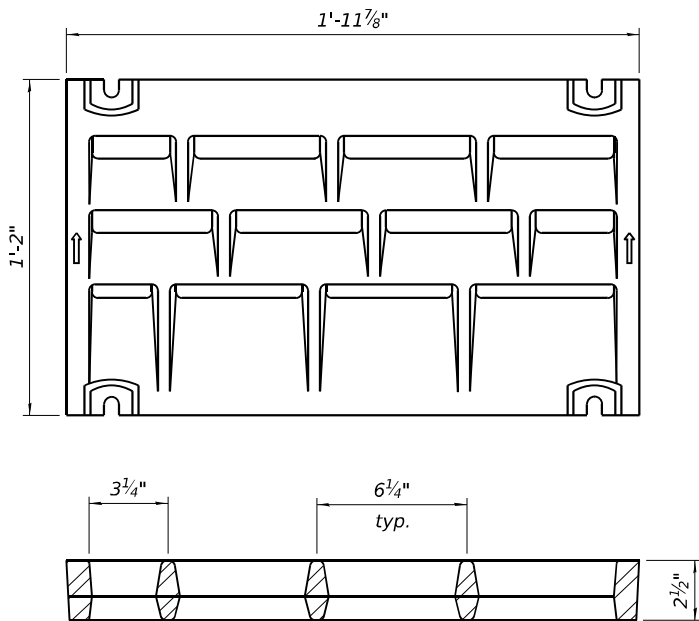


WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

Notes:
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.
Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.
Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.
Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.
As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.
Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be pigmented or painted to match the color of the adjacent beam.
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper (Special).



See deck sheets S-113, S-120, S-126, S-133, S-141, and S-147 for scupper location relative to parapet.



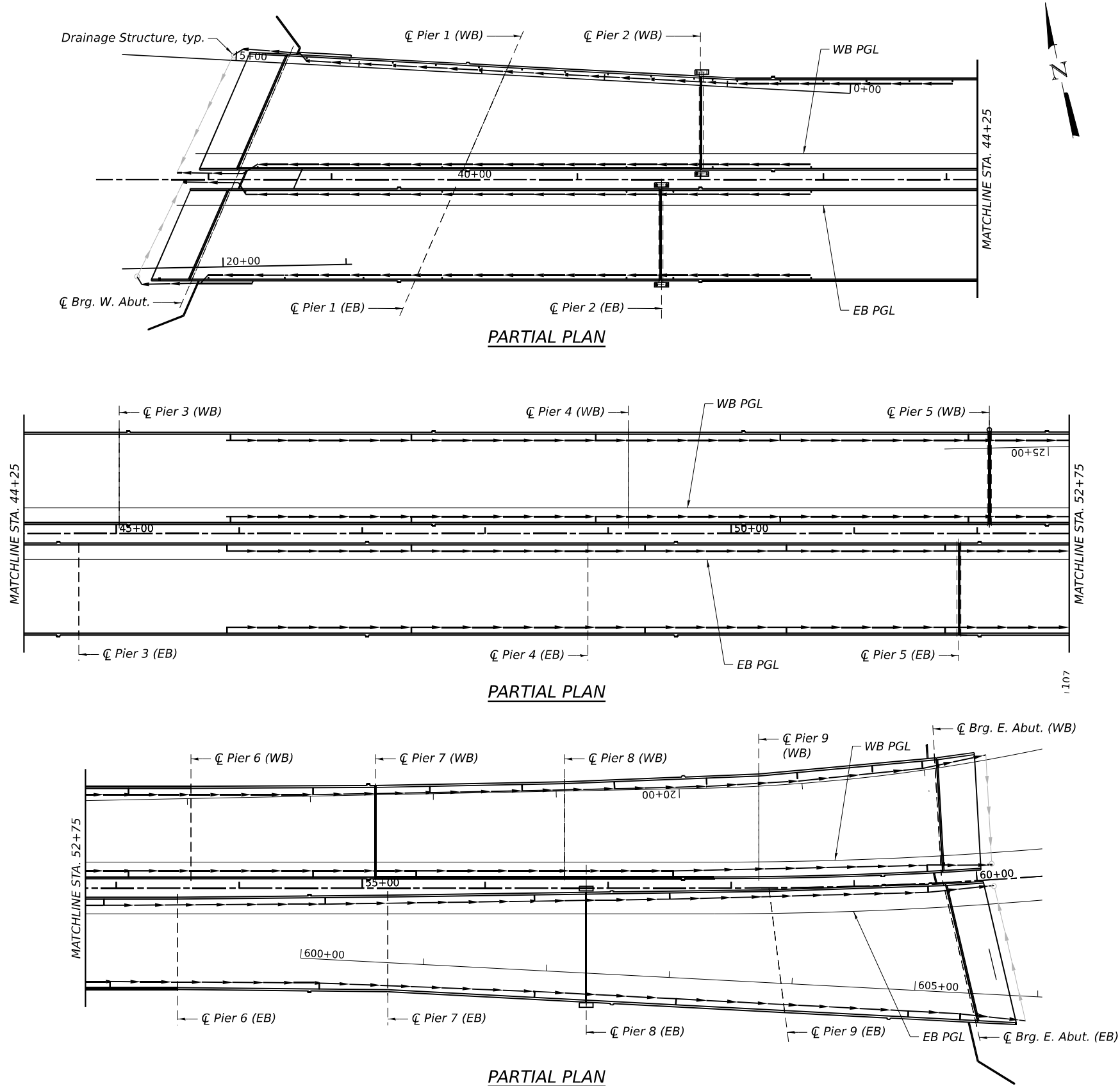
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers (Special)	Each	45

USER NAME = USSJ696614	DESIGNED - SJJ	REVISED -
	CHECKED - PJL	REVISED -
PLOT SCALE = 0:2" = 1' / in.	DRAWN - SJJ	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PJL	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	769
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

MODEL Default: p:\projects\trans\trans\pwr\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CD\62023-RB-1-Sheets\Structure\0998309-42R23-5409-2501.dgn
FILE NAME: p:\projects\trans\trans\pwr\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CD\62023-RB-1-Sheets\Structure\0998309-42R23-5409-2501.dgn



**EB SCUPPER
LOCATIONS TABLES**

Inside Scuppers		
Station	Offset (ft)	Type
38+30	12.0' LT	DS-11
39+90	12.0' LT	DS-11
41+40	12.0' LT	DS-11
41+78	12.0' LT	DS-11
42+90	12.0' LT	DS-11
45+90	12.0' LT	Special
47+40	12.0' LT	Special
49+30	12.0' LT	Special
50+45	12.0' LT	Special
51+74	12.0' LT	Special
52+90	12.0' LT	Special
54+70	13.2' LT	Special
56+40	15.4' LT	Special
57+50	17.0' LT	Special
59+60	17.8' LT	Special

**WB SCUPPER
LOCATIONS TABLES**

Inside Scuppers		
Station	Offset (ft)	Type
38+40	12.0' RT	DS-11
39+90	12.0' RT	DS-11
41+40	12.0' RT	DS-11
42+10	12.0' RT	DS-11
42+90	12.0' RT	DS-11
45+93	12.0' RT	Special
47+40	12.0' RT	Special
48+90	12.0' RT	Special
50+40	12.0' RT	Special
51+93	12.0' RT	Special
53+10	12.0' RT	Special
54+60	12.0' RT	Special
55+44	12.0' RT	Special
57+53	12.0' RT	Special
59+60	12.0' RT	Special

Outside Scuppers		
Station	Offset (ft)	Type
38+00	60.0' RT	DS-11
38+62	60.0' RT	DS-11
39+26	60.0' RT	DS-11
39+90	60.0' RT	DS-11
41+40	60.0' RT	DS-11
41+78	60.0' RT	DS-11
42+90	60.0' RT	DS-11
45+90	60.0' RT	Special
47+40	60.0' RT	Special
49+30	60.0' RT	Special
50+45	60.0' RT	Special
51+74	60.0' RT	Special
52+95	60.0' RT	Special
54+65	61.2' RT	Special
56+40	68.0' RT	Special
57+55	74.0' RT	Special
59+40	87.7' RT	Special
59+80	92.2' RT	Special

Outside Scuppers		
Station	Offset (ft)	Type
38+80	78.6' LT	DS-11
39+15	76.7' LT	DS-11
39+50	74.9' LT	DS-11
39+85	73.0' LT	DS-11
40+20	71.1' LT	DS-11
40+55	69.3' LT	DS-11
40+90	67.4' LT	DS-11
41+25	65.5' LT	DS-11
41+60	63.6' LT	DS-11
41+95	61.8' LT	DS-11
42+10	61.0' LT	DS-11
42+30	60.0' LT	DS-11
42+65	60.0' LT	DS-11
43+00	60.0' LT	DS-11
43+35	60.0' LT	DS-11
43+70	60.0' LT	DS-11
44+05	60.0' LT	DS-11
45+93	60.0' LT	Special
47+40	60.0' LT	Special
48+90	60.0' LT	Special
50+40	60.0' LT	Special
51+93	60.0' LT	Special
53+10	60.0' LT	Special
54+60	60.5' LT	Special
55+55	61.6' LT	Special
56+30	63.1' LT	Special
57+05	65.4' LT	Special
57+80	68.4' LT	Special
58+55	72.2' LT	Special
59+18	75.9' LT	Special
59+60	77.7' LT	Special

- NOTES:**
- Scupper offsets are measured relative the respective profile grade lines.

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614	DESIGNED - SJJ	REVISED -
	CHECKED - PJL	REVISED -
PLOT SCALE = 0.2" = 1' / in.	DRAWN - SJJ	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PJL	REVISED -

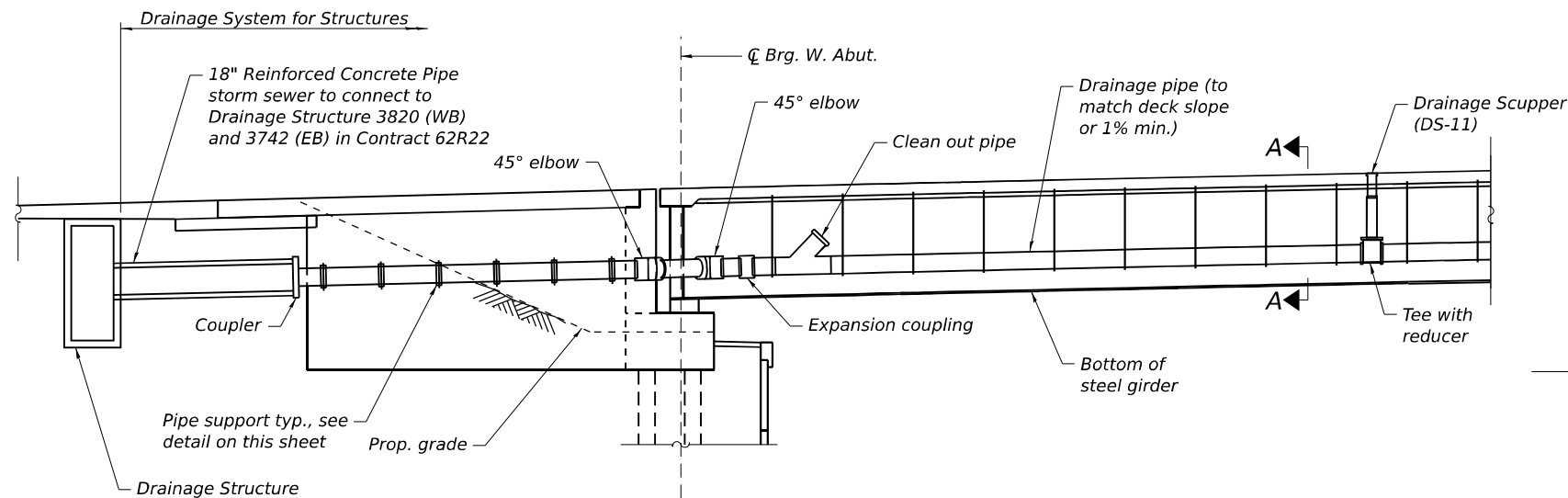
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SYSTEM PLAN
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

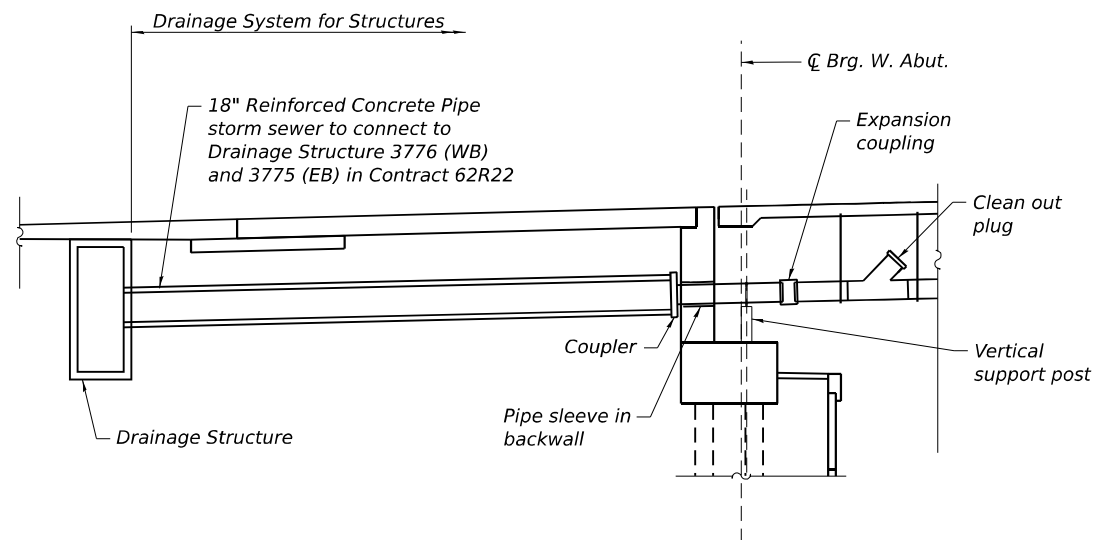
SHEET 5-189 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	770
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

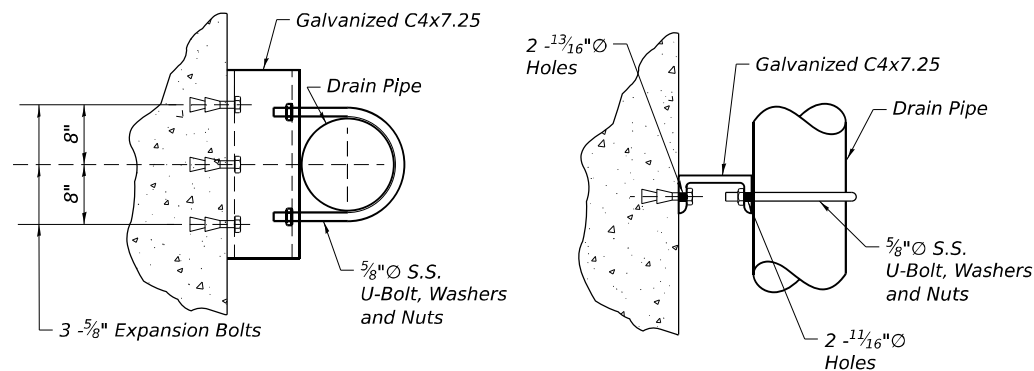
MODEL Default:
FILE NAME: p:\projects\trans\trans\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CD\62R23-RB-1-Sheets\Structure.dwg
PROJECT: 2018 CH401 401180022 03-WSP CD 62R23-RB-1-Sheets\Structure.dwg



ELEVATION - W. ABUT.
(Showing N. Parapet (WB), S. Parapet (EB) similar)



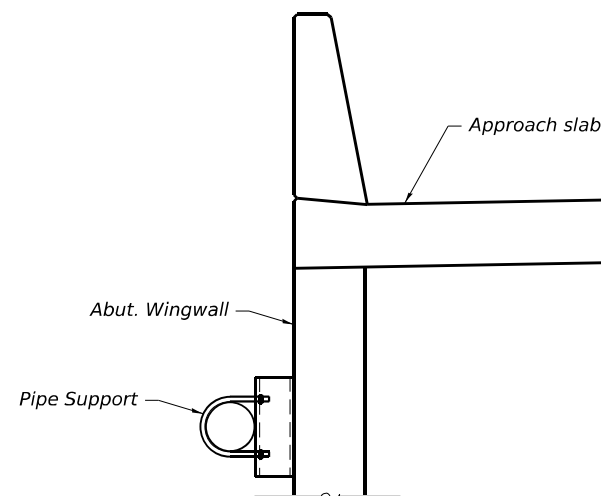
ELEVATION - W. ABUT.
(Showing S. Parapet (WB), N. Parapet (EB) similar)



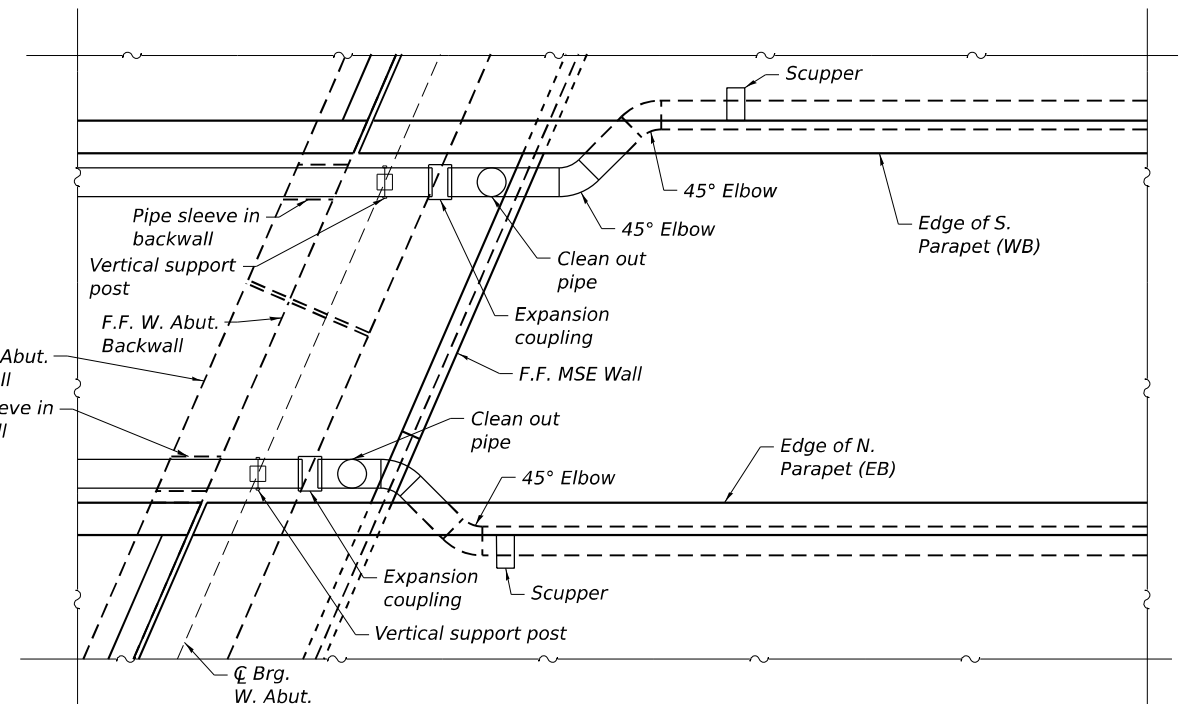
ELEVATION

PIPE SUPPORT DETAIL

PLAN



TYP. SECTION - W. ABUT.
AT WINGWALLS



PLAN - W. ABUT. MEDIAN

NOTES:

1. Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendations, not to exceed 6' cts. Cost included with "Drainage System for Structures".
2. All pipes, pipe fittings and brackets needed shall be included with the cost of "Drainage System for Structures".
3. Drain pipes and fittings shall be 15" dia.
4. For Section A-A, see sheet S-191.
5. Drainage System shall connect to drainage structure. See Drainage Schedule for stationing and offset of drainage structure.



WSP USA INC.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614
DESIGNED - SJJ
CHECKED - PJL
PLOT SCALE = 12:6 " = 1" / in.
PLOT DATE = 11/5/2025

DESIGNED - SJJ
CHECKED - PJL
DRAWN - SJJ
CHECKED - PJL

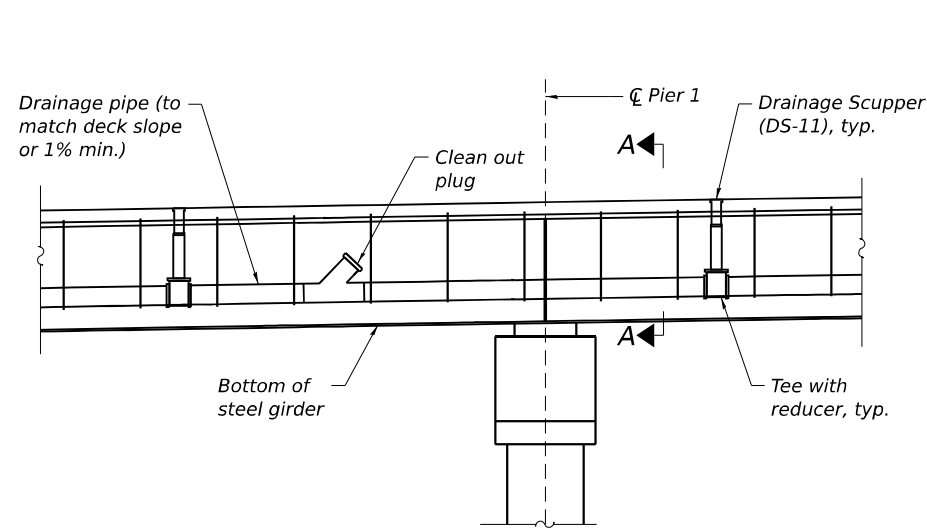
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

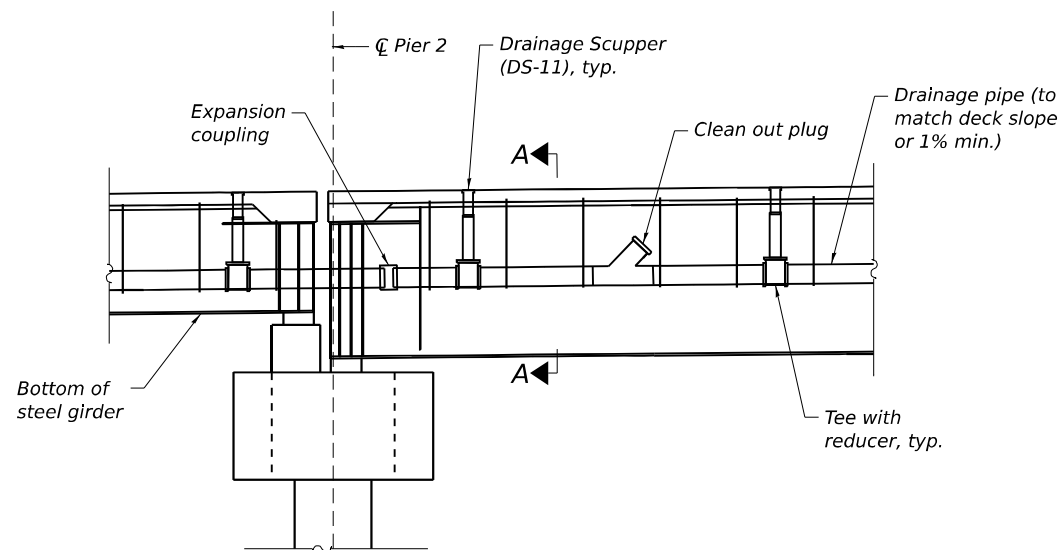
DRAINAGE SYSTEM 1
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-190 OF 5-333 SHEETS

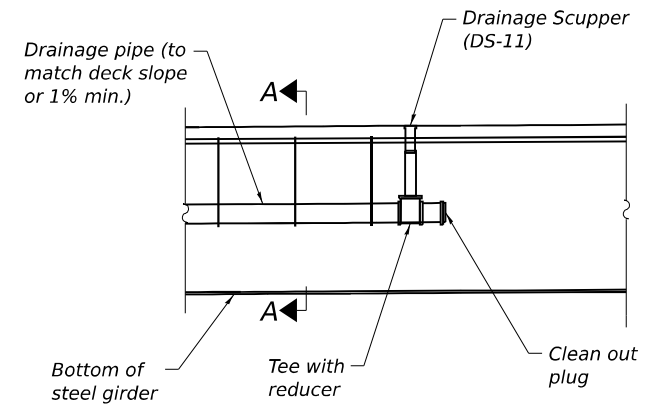
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	771
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



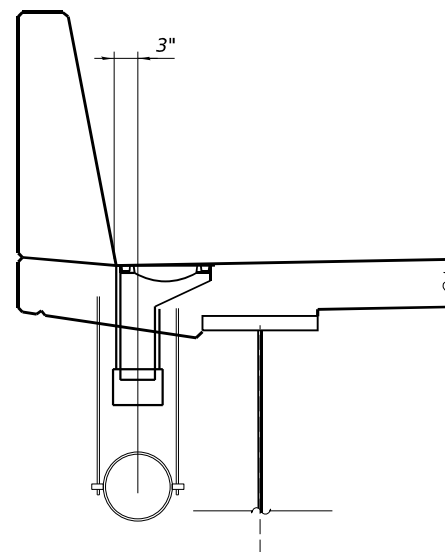
ELEVATION - SPAN 1
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



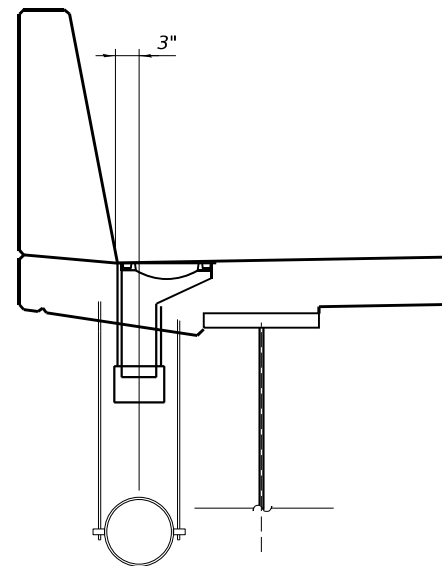
ELEVATION - PIER 2
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



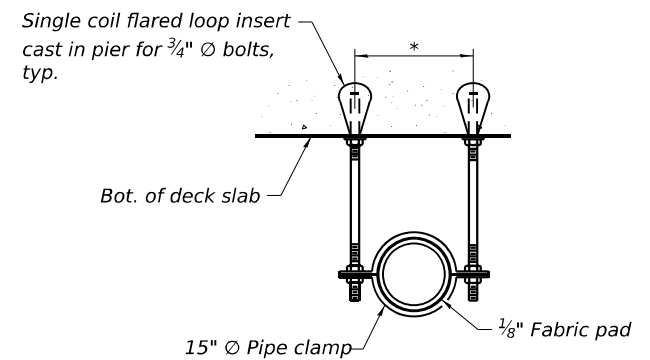
ELEVATION - SPAN 3
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



TYP. SECTION - SPANS 1 & 2



TYP. SECTION - SPAN 3



SECTION A-A
*Dimension as required
by pipe clamp

NOTES:

1. Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendations, not to exceed 6' cts. Cost included with "Drainage System for Structures".
2. All pipes, pipe fittings and brackets needed shall be included with the cost of "Drainage System for Structures".
3. Drain pipes and fittings shall be 15" dia.

MODEL Default:
FILE NAME: p:\projects\trans\trans\corporate\ppl\hosted\Documents\Projects_2018\CH401\401180022\03-WSP\Sheet\Structure.dwg
PROJECT: 2018 CH401 401180022 03-WSP CAD 6/2023 RB-1 Sheet/Structure.dwg

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

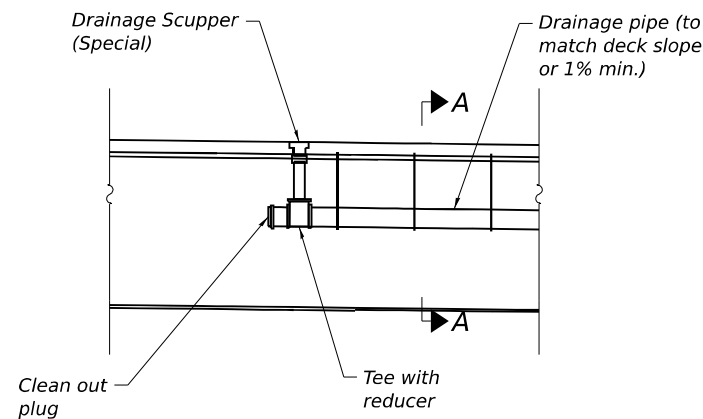
USER NAME	= USSJ696614	DESIGNED -	SJJ	REVISED -	
		CHECKED -	PJL	REVISED -	
PLOT SCALE	= 12:6 " = 1/2" / in.	DRAWN -	SJJ	REVISED -	
PLOT DATE	= 11/5/2025	CHECKED -	PJL	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

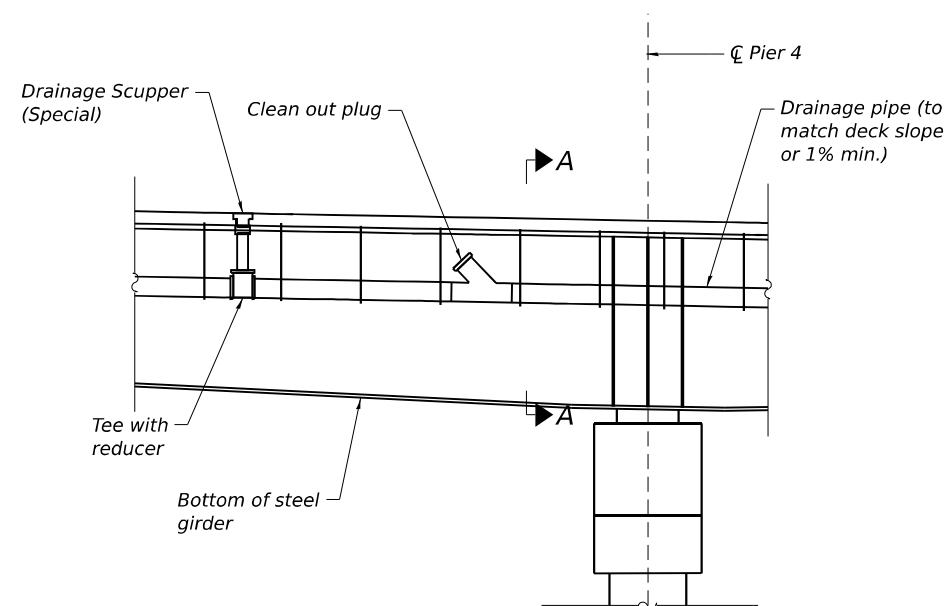
**DRAINAGE SYSTEM 2
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-191 OF S-333 SHEETS

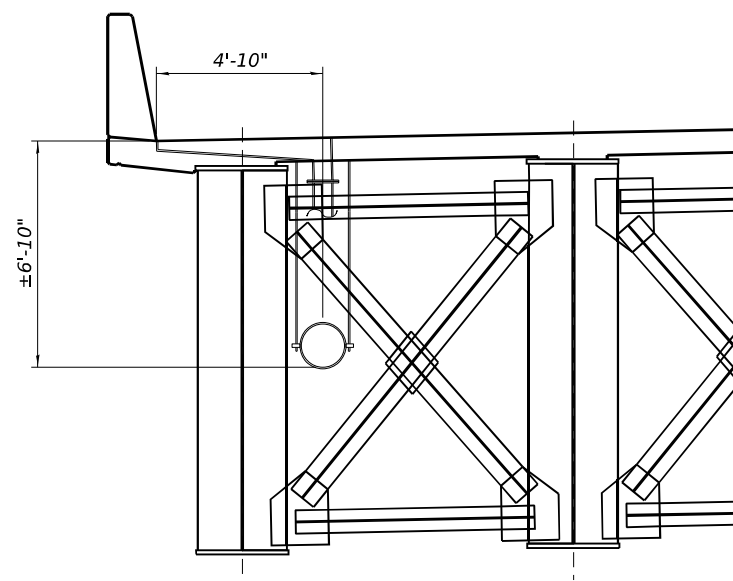
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	772
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



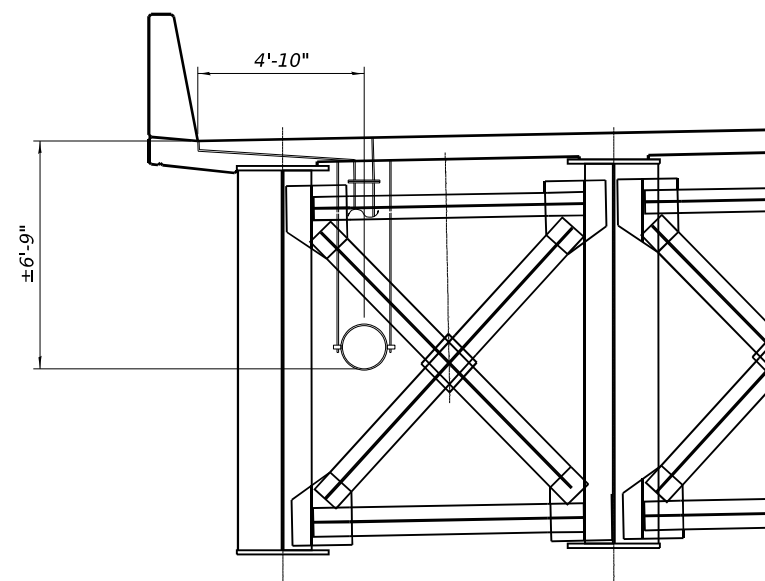
ELEVATION - SPAN 4
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



ELEVATION - PIER 4
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



SECTION - PIER 4



SECTION - SPANS 4 & 5

NOTES:

1. Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendations, not to exceed 6' cts. Cost included with "Drainage System for Structures".
2. All pipes, pipe fittings and brackets needed shall be included with the cost of "Drainage System for Structures".
3. Drain pipes and fittings shall be 15" dia.
4. For Section A-A, see sheet S-191.

MODEL Default:
FILE NAME: p:\projects\trans\corp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CD\62R23-RB-1_Sheets\Structural\0998309-42R23-5412-2504.dgn

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

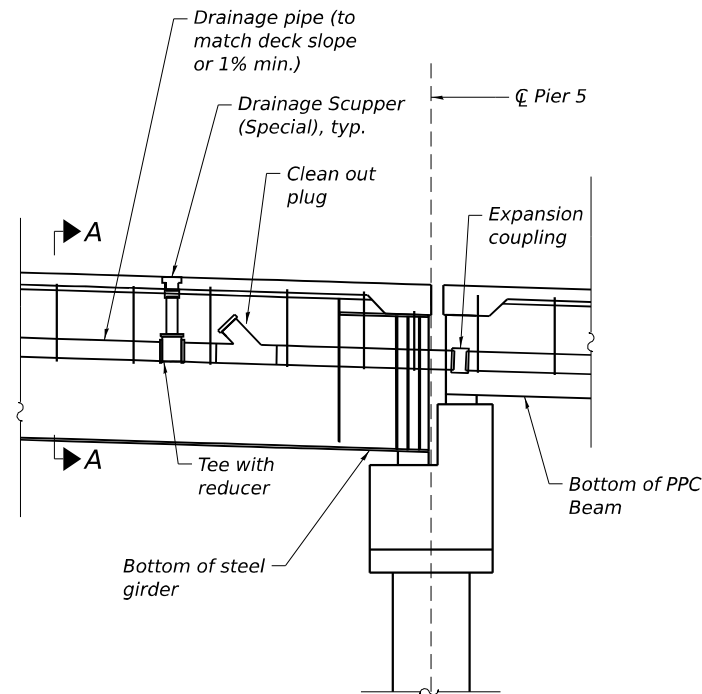
USER NAME = USSJ696614	DESIGNED - SJJ	REVISED -
	CHECKED - PJL	REVISED -
PLOT SCALE = 12:6 " / in.	DRAWN - SJJ	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PJL	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

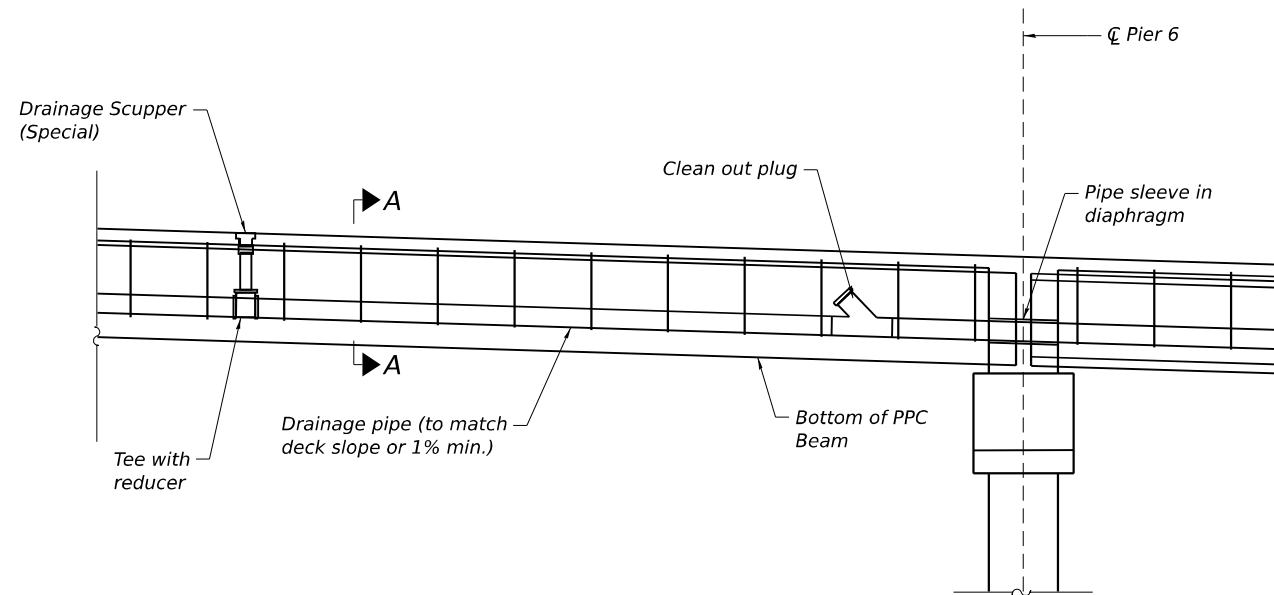
**DRAINAGE SYSTEM 3
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-192 OF S-333 SHEETS

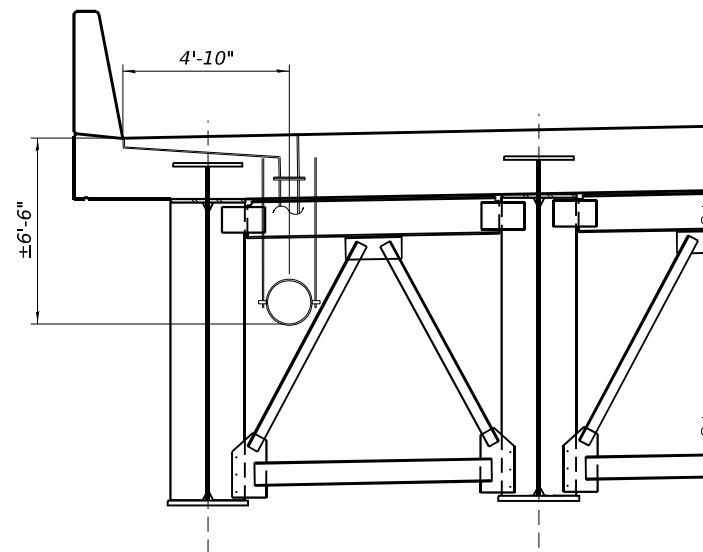
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	773
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



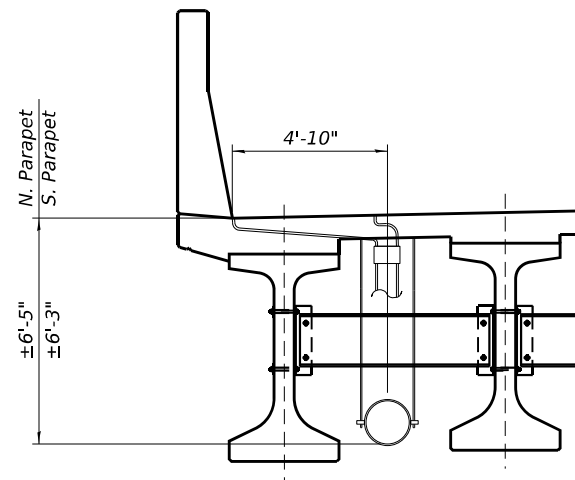
ELEVATION - PIER 5
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



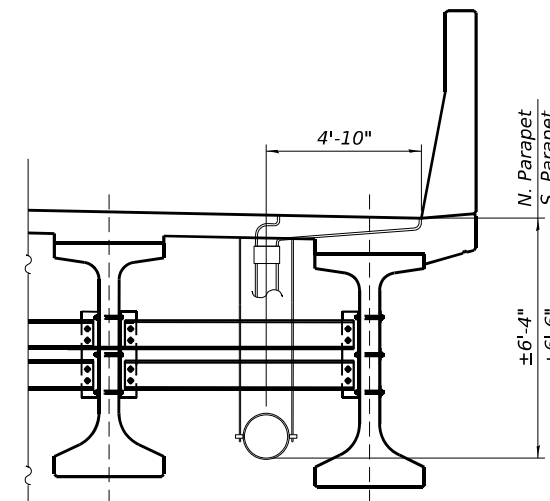
ELEVATION - PIER 6
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



TYP. SECTION - SPAN 5 AT PIER 5



TYP. SECTION - SPAN 6 - WB



TYP. SECTION - SPAN 6 - EB

NOTES:

1. Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendations, not to exceed 6' cts. Cost included with "Drainage System for Structures".
2. All pipes, pipe fittings and brackets needed shall be included with the cost of "Drainage System for Structures".
3. Drain pipes and fittings shall be 15" dia.
4. For Section A-A, see sheet S-191.
5. For Typical Section - Spans 4 & 5, see sheet S-192.

MODEL Default:
FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CAD\62R23-RB-1\Sheet\Structure\0998309-62R23-5413-0505.dgn

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

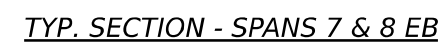
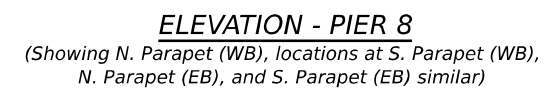
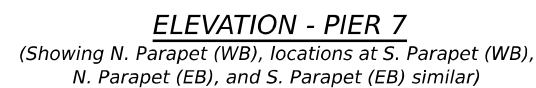
USER NAME = USSJ696614	DESIGNED - SJJ	REVISED -
CHECKED - PJL	REVIS	ED -
PLOT SCALE = 12:6 " / in.	DRAWN - SJJ	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PJL	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

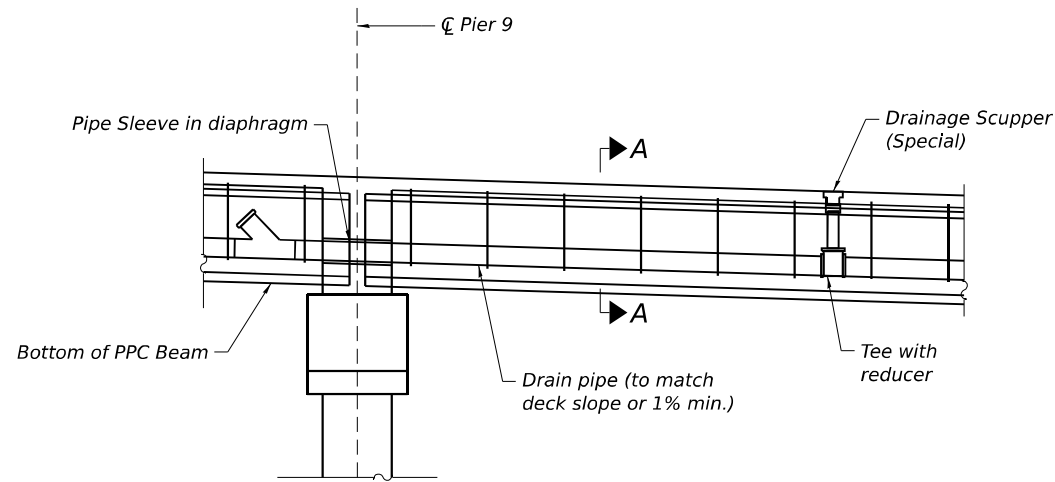
**DRAINAGE SYSTEM 4
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-193 OF 5-333 SHEETS

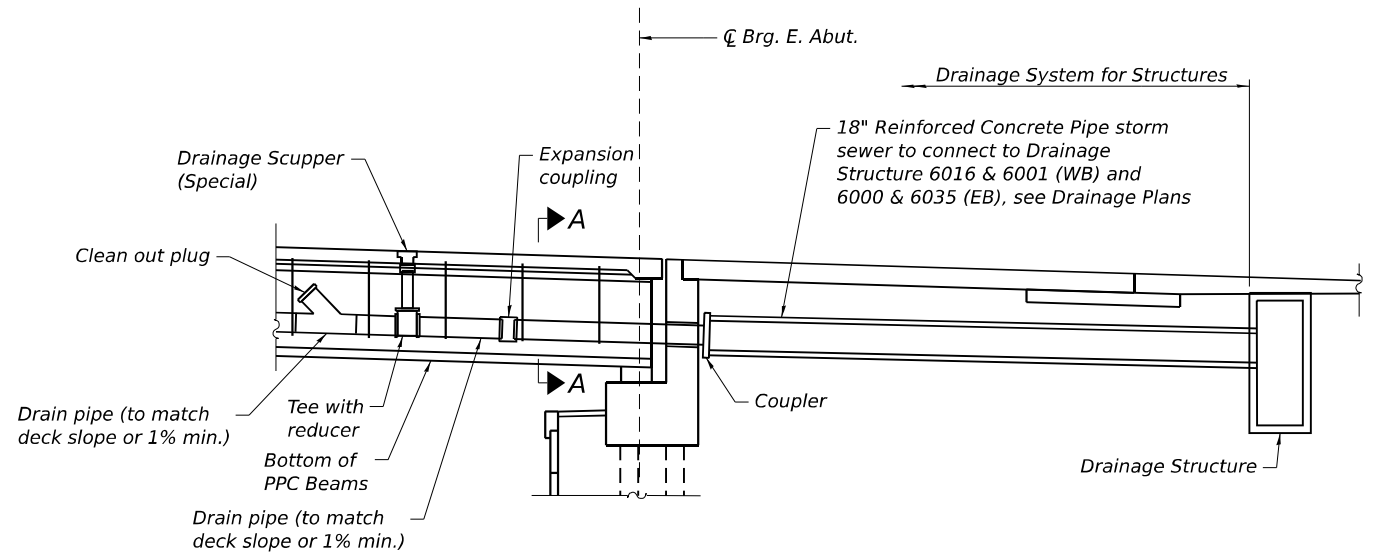
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	774
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



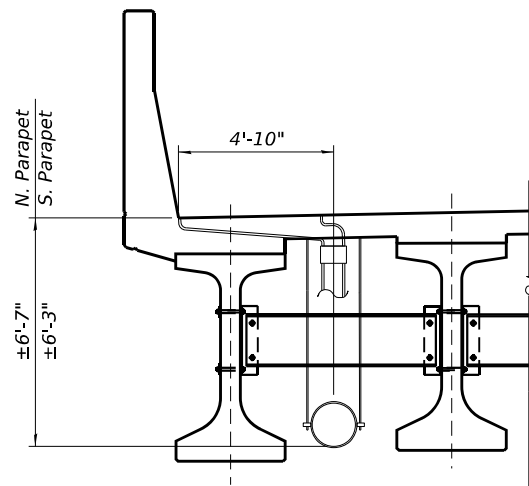
1. *Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendations, not to exceed 6' cts. Cost included with "Drainage System for Structures".*
2. *All pipes, pipe fittings and brackets needed shall be included with the cost of "Drainage System for Structures".*
3. *Drain pipes and fittings shall be 15" dia.*
4. *For Section A-A, see sheet S-191.*



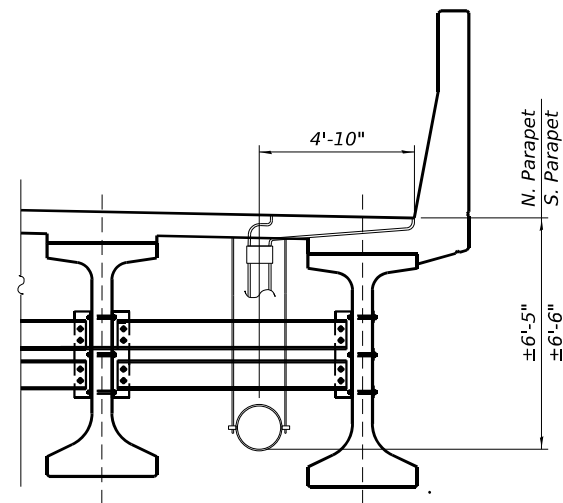
ELEVATION - PIER 9
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



ELEVATION - E. ABUT.
(Showing N. Parapet (WB), locations at S. Parapet (WB),
N. Parapet (EB), and S. Parapet (EB) similar)



TYP. SECTION - SPANS 9 & 10 WB



TYP. SECTION - SPANS 9 & 10 EB

NOTES:

1. Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendations, not to exceed 6' cts. Cost included with "Drainage System for Structures".
2. All pipes, pipe fittings and brackets needed shall be included with the cost of "Drainage System for Structures".
3. Drain pipes and fittings shall be 15" dia, except in Span 9 at the N. Parapet (WB) which transitions to 18" dia.
4. For Section A-A, see sheet S-191.
5. Drainage system shall connect to drainage structure. See Drainage Schedule for stationing and offset of drainage structure.

MODEL: Default
FILE NAME: p:\projects\trans\systems-pwr\bea\l\com\trans\corp-pwr\labeled\Documents\Projects_2018\CH401\401180022\03-MS9\CAD\62023-RB-1\Sheet\Structure\0998309-82R23-5415-0507.dgn

wsp
WSP USA Inc.
30 N. LAGALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

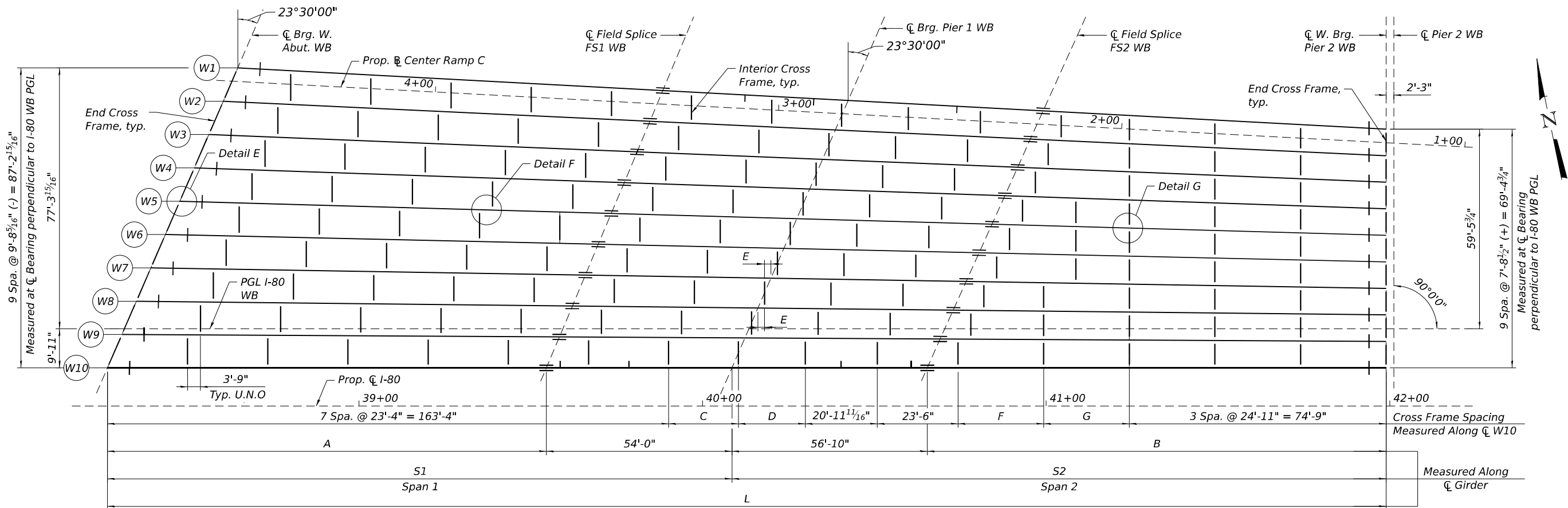
USER NAME = USSJ696614	DESIGNED - SJJ	REVISED -
CHECKED - PJL	REVIS	ED -
PLOT SCALE = 12:6 " / in.	DRAWN - SJJ	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PJL	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

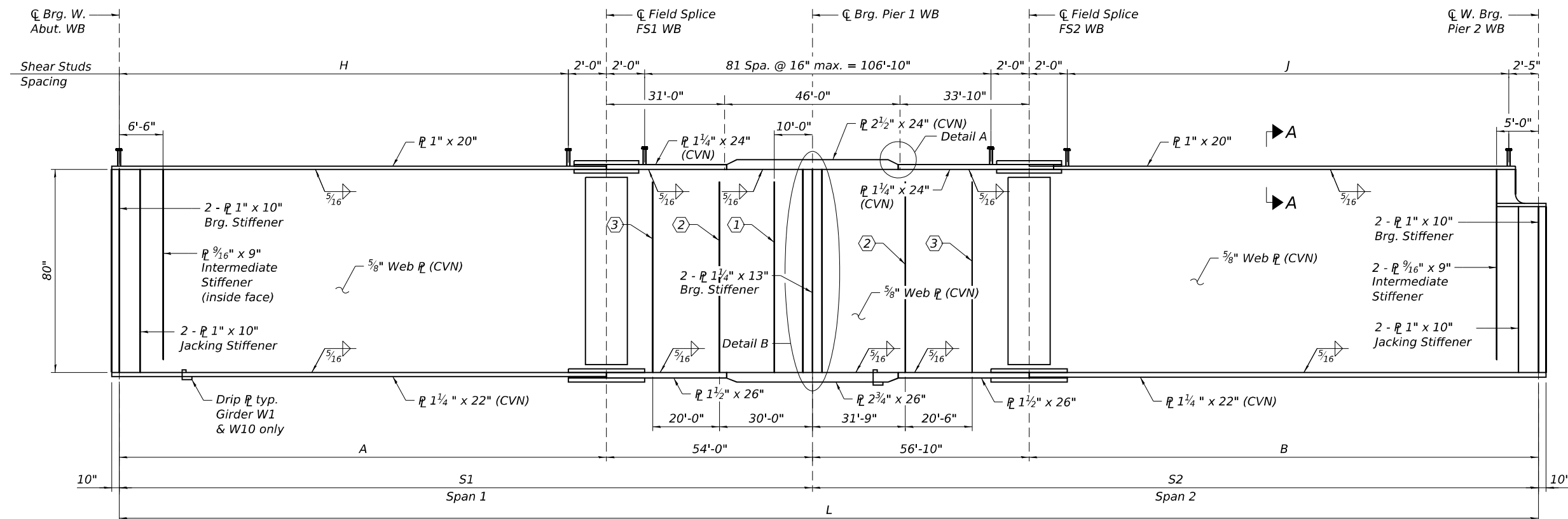
**DRAINAGE SYSTEM 6
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-195 OF S-333 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	776
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



FRAMING PLAN - UNIT 1 WB



GIRDER ELEVATION - UNIT 1 WB

- ① $\frac{1}{16}$ " x 9" Intermediate Stiffener at W1 (inside face)
- ② $\frac{1}{16}$ " x 9" Intermediate Stiffener at W1 and W10 (inside face)
- ③ $\frac{1}{16}$ " x 9" Intermediate Stiffener at W10 (inside face)

NOTES:

1. Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.
2. All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
3. All dimensions are horizontal.
4. For Framing Plan Details, Section A-A, and Detail A and Drip Plate details, see sheet S-198.
5. For Girder Moment and Reaction tables, see sheet S-199.
6. For Camber Diagram and Top of Web Elevation Table, see sheet S-201.
7. For Girder Bolted Field Splice Details, see sheet S-202.
8. For abutment cross frames, Detail E, and stiffener details, see sheet S-204.
9. For interior cross frames details, and Details F and G, see sheet S-205.
10. For Pier 2 cross frames details, see sheet S-206.
11. All interior cross frames are perpendicular to PGL WB.
12. All structural steel shall be AASHTO M270 Grade 50W.

MODEL Default: FILE NAME: p:\projects\trans\scorp\p1\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CD\62R23-RB-1\Sheet\Structural\0998309-62R23-5501-594101.dgn

wsp
WSP USA INC.
30 N. LA SALLE STREET
SUITE 400
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614
DESIGNED - FIM
CHECKED - LAS
PLOT SCALE = 32:0" = 1" / in.
DRAWN - FIM/MHD
PLOT DATE = 11/5/2025

DESIGNED - FIM
CHECKED - LAS
DESIGNED - FIM
CHECKED - LAS
DESIGNED - FIM
CHECKED - LAS

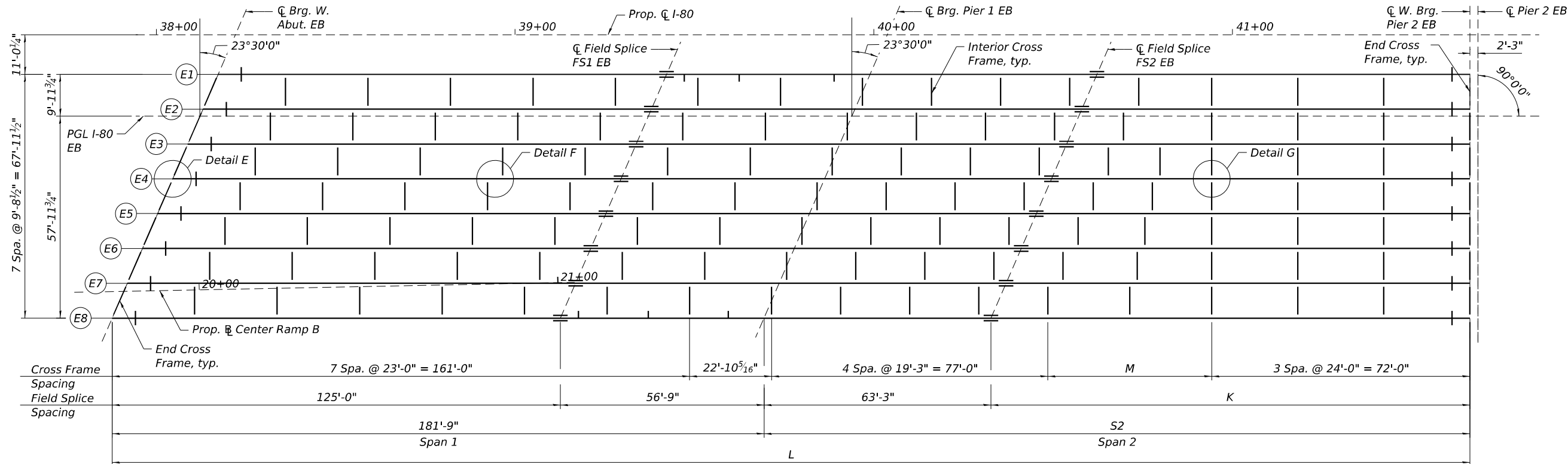
REVISED -
REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

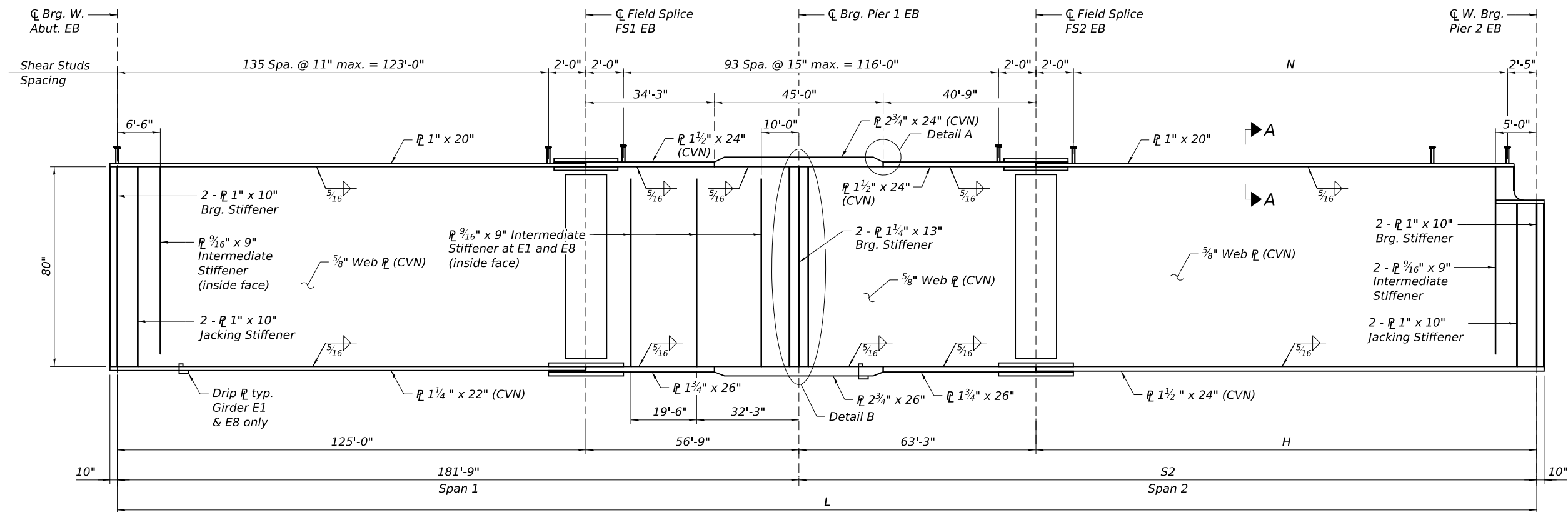
**FRAMING PLAN & ELEVATION - UNIT 1 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET 5-196 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	777
CONTRACT NO. 62R23				
ILLINOIS		FED. AID PROJECT		



FRAMING PLAN - UNIT 1 EB



GIRDER ELEVATION - UNIT 1 EB

NOTES:

1. Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.
2. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.
3. All dimensions are horizontal.
4. For Framing Plan Details, Section A-A, and Detail A and Drip Plate details, see sheet S-198.
5. For Girder Moment and Reaction tables, see sheet S-200.
6. For Camber Diagram and Top of Web Elevation Table, see sheet S-201.
7. For Girder Bolted Field Splice Details, see sheet S-203.
8. For abutment cross frames, Detail E, and stiffener details, see sheet S-204.
9. For interior cross frames details, and Details F and G, see sheet S-205.
10. For Pier 2 cross frames details, see sheet S-206.
11. All interior cross frames are parallel to the C of Pier 2 EB.
12. All structural steel shall be AASHTO M270 Grade 50W.

MODEL Default: FILE Name: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CD\62R23-RB-1-Sheets\Structure\0998309-42R23-5502-24102.dgn

WSP
WSP USA INC.
30 N. LA SALLE STREET
SUITE 400
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614	DESIGNED - FIM	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 32:0 " = 1"	DRAWN - FIM	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN & ELEVATION - UNIT 1 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-197 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	778
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

GIRDER LENGTHS - UNIT 1 WB

Girder	S1	S2	L
W1	177'-10 ⁹ / ₁₆ "	156'-9 ⁵ / ₈ "	334'-8 ³ / ₁₆ "
W2	178'-3 ³ / ₄ "	160'-5 ³ / ₄ "	338'-9 ¹ / ₂ "
W3	178'-9"	164'-2"	342'-11"
W4	179'-2 ³ / ₁₆ "	167'-10 ¹ / ₁₆ "	347'-0 ⁵ / ₈ "
W5	179'-7 ³ / ₈ "	171'-7 ¹ / ₁₆ "	351'-2 ⁷ / ₁₆ "
W6	180'-0 ⁹ / ₁₆ "	175'-3 ⁷ / ₈ "	355'-4 ⁷ / ₁₆ "
W7	180'-5 ¹ / ₁₆ "	179'-0 ¹ / ₁₆ "	359'-6 ¹ / ₂ "
W8	180'-10 ¹³ / ₁₆ "	182'-9 ¹⁵ / ₁₆ "	363'-8 ³ / ₄ "
W9	181'-3 ¹⁵ / ₁₆ "	186'-7 ¹ / ₄ "	367'-11 ³ / ₁₆ "
W10	181'-9"	190'-4 ¹ / ₁₆ "	372'-1 ¹¹ / ₁₆ "

FIELD SPLICE SPACING - UNIT 1 WB

Location	A	B
W1	123'-10 ⁹ / ₁₆ "	99'-11 ⁵ / ₈ "
W2	124'-3 ³ / ₄ "	103'-7 ³ / ₄ "
W3	124'-9"	107'-4"
W4	125'-2 ³ / ₁₆ "	111'-0 ⁷ / ₁₆ "
W5	125'-7 ³ / ₈ "	114'-9 ¹ / ₁₆ "
W6	126'-0 ⁹ / ₁₆ "	118'-5 ⁷ / ₈ "
W7	126'-5 ¹ / ₁₆ "	122'-2 ¹ / ₁₆ "
W8	126'-10 ¹³ / ₁₆ "	125'-11 ¹⁵ / ₁₆ "
W9	127'-3 ¹⁵ / ₁₆ "	129'-9 ¹ / ₄ "
W10	127'-9"	133'-6 ¹ / ₁₆ "

CROSS FRAME SPACING - UNIT 1 WB

Location	C	D	E	F	G
W1-W2	20'-4 ³ / ₈ "	19'-4 ⁵ / ₈ "	1'-10 ⁵ / ₁₆ "	19'-10"	--
W2-W3	20'-4 ¹ / ₁₆ "	19'-4 ³ / ₁₆ "	1'-10 ³ / ₈ "	23'-7"	--
W3-W4	20'-4 ⁷ / ₈ "	19'-4 ¹ / ₈ "	1'-10 ⁷ / ₁₆ "	27'-4"	--
W4-W5	20'-4 ¹⁵ / ₁₆ "	19'-4 ¹ / ₁₆ "	1'-10 ¹ / ₂ "	15'-6 ¹ / ₂ "	15'-6 ¹ / ₂ "
W5-W6	20'-4 ⁷ / ₈ "	19'-4 ¹ / ₈ "	1'-10 ⁹ / ₁₆ "	19'-3 ¹ / ₂ "	15'-6 ¹ / ₂ "
W6-W7	20'-4 ³ / ₄ "	19'-4 ¹ / ₄ "	1'-10 ⁵ / ₈ "	23'-0 ¹ / ₂ "	15'-6 ¹ / ₂ "
W7-W8	20'-4 ¹ / ₂ "	19'-4 ¹ / ₂ "	1'-10 ⁵ / ₈ "	17'-5"	24'-11"
W8-W9	20'-4 ³ / ₁₆ "	19'-4 ¹³ / ₁₆ "	1'-10 ¹ / ₁₆ "	21'-2"	24'-11"
W9-W10	20'-3 ³ / ₄ "	19'-5 ¹ / ₄ "	1'-10 ³ / ₄ "	24'-11"	24'-11"

SHEAR STUDS SPACING - UNIT 1 WB

Location	H	J
W1	133 Spa. @ 11" max. = 121'-10 ⁹ / ₁₆ "	89 Spa. @ 13" max. = 95'-6 ⁵ / ₈ "
W2	134 Spa. @ 11" max. = 122'-3 ³ / ₄ "	92 Spa. @ 13" max. = 99'-2 ³ / ₄ "
W3	134 Spa. @ 11" max. = 122'-9"	95 Spa. @ 13" max. = 102'-11"
W4	135 Spa. @ 11" max. = 123'-2 ³ / ₁₆ "	99 Spa. @ 13" max. = 106'-7 ¹ / ₁₆ "
W5	135 Spa. @ 11" max. = 123'-7 ³ / ₈ "	102 Spa. @ 13" max. = 110'-4 ¹ / ₁₆ "
W6	136 Spa. @ 11" max. = 124'-0 ⁹ / ₁₆ "	106 Spa. @ 13" max. = 114'-0 ⁷ / ₈ "
W7	136 Spa. @ 11" max. = 124'-5 ¹ / ₁₆ "	109 Spa. @ 13" max. = 117'-9 ¹ / ₁₆ "
W8	137 Spa. @ 11" max. = 124'-10 ¹³ / ₁₆ "	113 Spa. @ 13" max. = 121'-6 ¹⁵ / ₁₆ "
W9	137 Spa. @ 11" max. = 125'-3 ¹ / ₁₆ "	116 Spa. @ 13" max. = 125'-4 ¹ / ₄ "
W10	138 Spa. @ 11" max. = 125'-9"	120 Spa. @ 13" max. = 129'-1 ¹ / ₁₆ "

GIRDER LENGTHS - UNIT 1 EB

Girder	S2	L
E1	167'-2 ¹⁵ / ₁₆ "	348'-11 ¹⁵ / ₁₆ "
E2	171'-5 ⁹ / ₁₆ "	353'-2 ⁹ / ₁₆ "
E3	175'-8 ¹ / ₄ "	357'-5 ¹ / ₄ "
E4	179'-10 ⁷ / ₈ "	361'-7 ⁷ / ₈ "
E5	184'-1 ⁹ / ₁₆ "	365'-10 ⁹ / ₁₆ "
E6	188'-4 ³ / ₁₆ "	370'-1 ³ / ₁₆ "
E7	192'-6 ⁷ / ₈ "	374'-3 ⁷ / ₈ "
E8	196'-9 ¹ / ₂ "	378'-6 ¹ / ₂ "

FIELD SPLICE SPACING - UNIT 1 EB

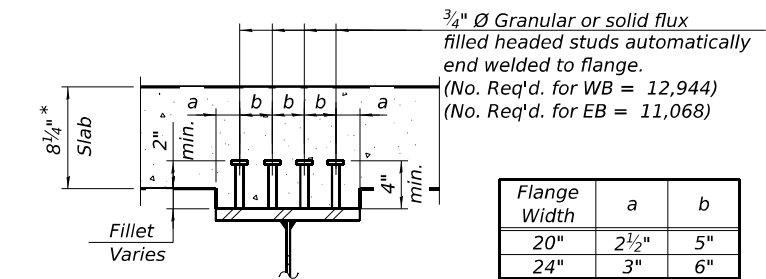
Location	K
E1	103'-11 ¹⁵ / ₁₆ "
E2	108'-2 ⁹ / ₁₆ "
E3	112'-5 ¹ / ₄ "
E4	116'-7 ⁷ / ₈ "
E5	120'-10 ⁹ / ₁₆ "
E6	125'-1 ³ / ₁₆ "
E7	129'-3 ⁷ / ₈ "
E8	133'-6 ¹ / ₂ "

CROSS FRAME SPACING - UNIT 1 EB

Location	M
E1 - E2	1 Spa. @ 20'-4 ¹ / ₄ "
E2 - E3	1 Spa. @ 24'-6 ¹⁵ / ₁₆ "
E3 - E4	2 Spa. @ 14'-4 ¹³ / ₁₆ " (-)
E4 - E5	2 Spa. @ 16'-6 ⁷ / ₈ "
E5 - E6	2 Spa. @ 18'-7 ⁷ / ₁₆ "
E6 - E7	2 Spa. @ 20'-8 ¹³ / ₁₆ " (-)
E7 - E8	2 Spa. @ 22'-10 ¹ / ₈ " (-)

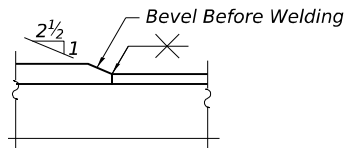
SHEAR STUDS SPACING - UNIT 1 EB

Girder	N
E1	100 Spa. @ 12" max. = 99'-6 ⁵ / ₁₆ "
E2	104 Spa. @ 12" max. = 103'-9 ⁹ / ₁₆ "
E3	109 Spa. @ 12" max. = 108'-0 ¹ / ₄ "
E4	113 Spa. @ 12" max. = 112'-2 ⁷ / ₈ "
E5	117 Spa. @ 12" max. = 116'-5 ⁵ / ₁₆ "
E6	121 Spa. @ 12" max. = 120'-8 ³ / ₁₆ "
E7	125 Spa. @ 12" max. = 124'-10 ⁷ / ₈ "
E8	130 Spa. @ 12" max. = 129'-1 ¹ / ₂ "

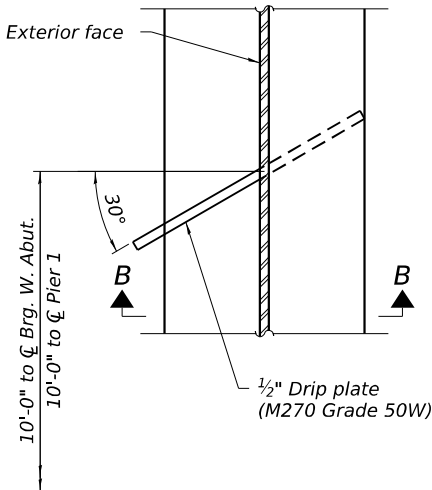


* Prior to grinding

SECTION A-A

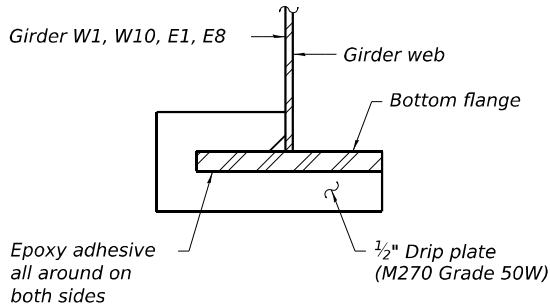


DETAIL A

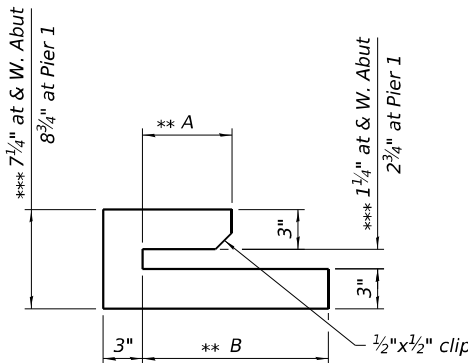


DRIP PLATE - PLAN

(8 Required, see Framing Plans for locations)



SECTION B-B



** Adjust A and B to fit girder bottom flange.
*** Adjust dimensions as required for thickness tolerance and fit-up.

DRIP PLATE - ELEVATION

MODEL Default:
FILE NAME: p:\wsp\transystems-pw\hantley.com\transys\corp\pw\hantley.com\transys\cur\al\0998309-42\23-5504-20104.dgn

UNIT 1 WB INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier 1	0.6 Sp. 2
I_s	(in ⁴)	103,895	249,950	103,895
$I_c (n)$	(in ⁴)	225,133	--	217,330
$I_c (3n)$	(in ⁴)	166,518	--	160,498
$I_c (cr)$	(in ⁴)	--	269,551	--
S_s	(in ³)	2,727	5,535	2,727
$S_c (n)$	(in ³)	3,529	--	3,497
$S_c (3n)$	(in ³)	3,240	--	3,202
$S_c (cr)$	(in ³)	--	6,270	--
S_x	(in ³)	3,505	6,374	3,475
DC1	(k')	1.46	1.70	1.34
M_{DC1}	('k)	2,778	6,938	2,684
DC2	(k')	0.19	0.19	0.19
M_{DC2}	('k)	376	935	420
DW	(k')	0.44	0.41	0.38
M_{DW}	('k)	916	1,998	818
LLDF		0.628	0.594	0.568
$M_{\text{L}} + IM$	('k)	3,201	3,753	2,996
f_t (Strength I)	(ksi)	--	--	--
$M_u + \frac{1}{3} f_t S_x$	('k)	11,464	20,376	10,868
$\Phi_f M_n$	('k)	17,496	--	17,428
f_s DC1	(ksi)	12.2	15.0	11.8
f_s DC2	(ksi)	1.4	1.8	1.6
f_s DW	(ksi)	3.4	3.8	3.1
$f_s (\text{L} + IM)$	(ksi)	10.9	7.2	10.3
f_t (Service II)	(ksi)	-	-	-
$f_s + \frac{1}{2} f_t$ (Service II)	(ksi)	31.2	30.0	29.9
Service II Resistance	(ksi)	47.5	47.5	47.5
$f_s + \frac{1}{3} f_t$ (Strength I)	(ksi)	--	41.3	--
$\Phi_f F_n$	(ksi)	--	50.0	--
V _f	(k)	79.3	72.9	70.1

UNIT 1 WB INTERIOR GIRDER REACTION TABLE				
		W. Abut.	Pier 1	Pier 2
LLDF		1.012	0.928	0.863
OCF		--	--	--
R_{DC1}	(k)	91.3	339.6	83.6
R_{DC2}	(k)	12.1	45.1	12.7
R_{DW}	(k)	29.0	97.2	24.9
R_{L}	(k)	118.3	242.7	101.8
R_{IM}	(k)	22.4	37.8	19.1
* R_{Total} (Strength I) (Impact)	(k)	439.9	1173.4	387.9
* R_{Total} (Strength I) (No Impact)	(k)	398.7	1103.9	352.7

* Limit states for moment, stress, and reaction shown include a load modifier factor of 1.05 relating to operational classification for an essential bridge

Note:
Moments and Reactions are for Girders W9 and W10.

UNIT 1 WB EXTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier 1	0.6 Sp. 2
I_s	(in ⁴)	103,895	249,950	103,895
$I_c (n)$	(in ⁴)	217,622	--	213,302
$I_c (3n)$	(in ⁴)	160,716	--	157,547
$I_c (cr)$	(in ⁴)	--	267,756	--
S_s	(in ³)	2,727	5,535	2,727
$S_c (n)$	(in ³)	3,498	--	3,480
$S_c (3n)$	(in ³)	3,203	--	3,183
$S_c (cr)$	(in ³)	--	6,199	--
S_x	(in ³)	3,477	6,362	3,456
DC1	(k')	1.38	1.64	1.32
M_{DC1}	('k)	2,588	6,894	2,871
DC2	(k')	0.19	0.19	0.19
M_{DC2}	('k)	370	957	444
DW	(k')	0.44	0.41	0.38
M_{DW}	('k)	907	2,042	867
LLDF		0.628	0.592	0.566
$M_{\text{L}} + IM$	('k)	3,229	3,810	3,072
f_t (Strength I)	(ksi)	--	--	--
$M_u + \frac{1}{3} f_t S_x$	('k)	11,244	20,521	11,361
$\Phi_f M_n$	('k)	17,470	--	17,260
f_s DC1	(ksi)	11.4	14.9	12.6
f_s DC2	(ksi)	1.4	1.9	1.7
f_s DW	(ksi)	3.4	4.0	3.3
$f_s (\text{L} + IM)$	(ksi)	11.1	7.4	10.6
f_t (Service II)	(ksi)	-	-	-
$f_s + \frac{1}{2} f_t$ (Service II)	(ksi)	30.6	30.4	31.4
Service II Resistance	(ksi)	47.5	47.5	47.5
* $f_s + \frac{1}{3} f_t$ (Strength I)	(ksi)	--	41.8	--
* $\Phi_f F_n$	(ksi)	--	50.0	--
V _f	(k)	79.7	72.8	69.7

UNIT 1 WB INTERIOR GIRDER REACTION TABLE				
		W. Abut.	Pier 1	Pier 2
LLDF		1.012	0.928	0.863
OCF		1.087	--	--
R_{DC1}	(k)	85.9	334.4	86.7
R_{DC2}	(k)	12.0	45.7	13.1
R_{DW}	(k)	28.9	98.2	25.6
R_{L}	(k)	118.6	244.2	102.7
R_{IM}	(k)	22.4	37.9	19.1
* R_{Total} (Strength I) (Impact)	(k)	433.0	1171.7	395.1
* R_{Total} (Strength I) (No Impact)	(k)	391.9	1102.3	360.0

I_s , S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

$I_c (n)$, $S_c (n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).

$I_c (3n)$, $S_c (3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c (cr)$, $S_c (cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

$M_{\text{L}} + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u : Strength I load combination of factored design moments (kip-ft.).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\text{L}} + IM$

f_t : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).

$\Phi_f M_n$: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).

M_{DC1} / S_s

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

$M_{DC2} / S_c (3n)$ or $M_{DC2} / S_c (cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).

$M_{DW} / S_c (3n)$ or $M_{DW} / S_c (cr)$ as applicable.

$f_s (\text{L} + IM)$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).

$M_{\text{L}} + IM / S_c (n)$ or $M_{\text{L}} + IM / S_c (cr)$ as applicable.

$f_s + f_t / 2$ (Service II): Sum of stresses as computed below (ksi).

f_s DC1 + f_s DC2 + f_s DW + 1.3 $f_s (\text{L} + IM)$ + $f_t / 2$

Service II Resistance: Composite (0.95R_nF_yr) or noncomposite (0.80R_nF_yr) stress capacity according to Article 6.10.4.2 (ksi).

$f_s + f_t / 3$ (Strength I): Sum of stresses as computed below on non-compact sections (ksi).

1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 $f_s (\text{L} + IM)$ + $f_t / 3$

$\Phi_f F_n$: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.

R_{DC1}: Un-factored reaction due to non-composite dead load (kip).

R_{DC2}: Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

R_{DW}: Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

R_L: Un-factored live load reaction (kip).

R_{IM}: Un-factored dynamic load allowance (impact) (kip).

R_{Total} (Strength I) (Impact): Strength I load combination of factored design reactions (kip).

1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_L + R_{IM})

R_{Total} (Strength I) (No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).

1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_L)



WSP USA Inc.
30 N. LASSALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME	= USSJ696614	DESIGNED	- FIM	REVISED	-
		CHECKED	- LAS	REVISED	-
PLOT SCALE	= 0.2' = 1 in.	DRAWN	- FIM	REVISED	-
PLOT DATE	= 11/5/2025	CHECKED	- LAS	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT AND REACTION TABLES - UNIT 1 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET 5-199 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	780
			CONTRACT NO. 62R23	
		ILLINOIS	FED. AID PROJECT	

MODEL Default:
FILE NAME: p:\proj\transystems-pw\hntb\com\transys\corp\pw\hntb\Documents\Projects_2018\CH4001401180022\03-WSP\CD\62R23-RB-1\Sheet\Structural\0998309-42R23-5505-804105.dgn

UNIT 1 EB GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier 1	0.6 Sp. 2
I_s	(in ⁴)	103,895	261,862	115,188
$I_c (n)$	(in ⁴)	227,577	--	261,292
$I_c (3n)$	(in ⁴)	168,491	--	189,984
$I_c (cr)$	(in ⁴)	--	282,716	--
S_s	(in ³)	2,727	6,304	3,263
$S_c (n)$	(in ³)	3,539	--	4,207
$S_c (3n)$	(in ³)	3,252	--	3,875
$S_c (cr)$	(in ³)	--	6,450	--
S_x	(in ³)	3,516	6,446	4,178
DC1	(k')	1.44	1.75	1.47
M_{DC1}	('k)	2,665	7,920	3,483
DC2	(k')	0.19	0.19	0.19
M_{DC2}	('k)	368	962	461
DW	(k')	0.45	0.45	0.45
M_{DW}	('k)	872	2,278	1,091
LLDF		0.650	0.647	0.644
$M_{\ell + IM}$	('k)	3,296	4,108	3,579
f_t (Strength I)	(ksi)	--	--	--
* $M_u + \frac{1}{3} f_t S_x$	('k)	11,411	22,794	13,471
$\Phi_f M_n$	('k)	17,601	--	20,808
f_s DC1	(ksi)	11.7	15.1	12.8
f_s DC2	(ksi)	1.4	1.8	1.4
f_s DW	(ksi)	3.2	4.2	3.4
$f_s (\ell + IM)$	(ksi)	11.2	7.6	10.2
f_t (Service II)	(ksi)	-	-	-
$f_s + \frac{1}{2} f_t$ (Service II)	(ksi)	30.9	31.1	30.9
Service II Resistance	(ksi)	47.5	47.5	47.5
* $f_s + \frac{1}{3} f_t$ (Strength I)	(ksi)	-	43.0	-
$\Phi_f F_n$	(ksi)	-	50.0	-
V_f	(k)	78.9	77.2	77.8

UNIT 1 EB GIRDER REACTION TABLE			
	W. Abut.	Pier 1	Pier 2
LLDF	1.013	1.013	1.013
OCF	--	--	--
R_{DC1}	(k)	90.3	378.4
R_{DC2}	(k)	12.0	45.9
R_{DW}	(k)	28.4	108.6
R_{ℓ}	(k)	118.6	263.4
R_{IM}	(k)	22.4	40.7
* $R_{Total}(\text{Strength I})(\text{Impact})$	(k)	438.1	1286.7
* $R_{Total}(\text{Strength I})(\text{No Impact})$	(k)	396.8	1211.9
426.7			

* Limit states for moment, stress, and reaction shown include a load modifier factor of 1.05 relating to operational classification for an essential bridge.

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).
- $I_c (n), S_c (n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).
- $I_c (3n), S_c (3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
- $I_c (cr), S_c (cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).
- S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
- $M_{\ell + IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u : Strength I load combination of factored design moments (kip-ft.).
1.25 ($M_{DC1} + M_{DC2}$) + 1.5 M_{DW} + 1.75 $M_{\ell + IM}$
- f_t : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).
- $\Phi_f M_n$: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).

- f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_s
- f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $M_{DC2} / S_c (3n)$ or $M_{DC2} / S_c (cr)$ as applicable.
- f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c (3n)$ or $M_{DW} / S_c (cr)$ as applicable.
- $f_s (\ell + IM)$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_{\ell + IM} / S_c (n)$ or $M_{\ell + IM} / S_c (cr)$ as applicable.
- $f_s + f_t / 2$ (Service II): Sum of stresses as computed below (ksi).
 f_s DC1 + f_s DC2 + f_s DW + 1.3 $f_s (\ell + IM)$ + $f_t / 2$
- Service II Resistance: Composite (0.95 $R_n F_y / f_t$) or noncomposite (0.80 $R_n F_y / f_t$) stress capacity according to Article 6.10.4.2 (ksi).
- $f_s + f_t / 3$ (Strength I): Sum of stresses as computed below on non-compact sections (ksi).
1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 $f_s (\ell + IM)$ + $f_t / 3$
- $\Phi_f F_n$: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).
- V_f : Maximum factored shear range in span computed according to Article 6.10.10.
- OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
- R_{DC1} : Un-factored reaction due to non-composite dead load (kip).
- R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
- R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
- R_{ℓ} : Un-factored live load reaction (kip).
- R_{IM} : Un-factored dynamic load allowance (impact) (kip).
- $R_{Total}(\text{Strength I})(\text{Impact})$: Strength I load combination of factored design reactions (kip).
1.25 ($R_{DC1} + R_{DC2}$) + 1.5 R_{DW} + 1.75 ($R_{\ell} + R_{IM}$)
- $R_{Total}(\text{Strength I})(\text{No Impact})$: Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
1.25 ($R_{DC1} + R_{DC2}$) + 1.5 R_{DW} + 1.75 (R_{ℓ})



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME	= USSJ696614	DESIGNED	-	FIM	REVISED	-
		CHECKED	-	LAS	REVISED	-
PLOT SCALE	= 0:2 " = 1 in.	DRAWN	-	FIM	REVISED	-
PLOT DATE	= 11/5/2025	CHECKED	-	LAS	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT AND REACTION TABLES - UNIT 1 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-200 OF S-333 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	781
		CONTRACT NO. 62R23		
		ILLINOIS	FED. AID PROJECT	



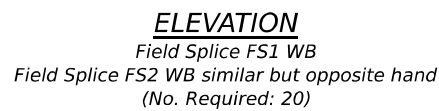
TOP OF WEB ELEVATION - UNIT 1 WB
(For Fabrication Only)

Location	℄ Brg. W. Abut. WB	℄ Field Splice FS1 WB	℄ Brg. Pier 1 WB	℄ Field Splice FS2 WB	℄ W. Brg. Pier 2 WB
Girder W1	596.151	598.544	599.278	600.268	601.574
Girder W2	596.272	598.662	599.390	600.390	601.729
Girder W3	596.389	598.766	599.501	600.515	601.883
Girder W4	596.506	598.871	599.612	600.640	602.037
Girder W5	596.406	598.964	599.710	600.747	602.154
Girder W6	596.283	599.025	599.777	600.832	602.270
Girder W7	596.091	598.870	599.610	600.655	602.062
Girder W8	595.832	598.636	599.393	600.467	601.914
Girder W9	595.535	598.373	599.155	600.262	601.760
Girder W10	595.238	598.100	598.915	600.056	601.606

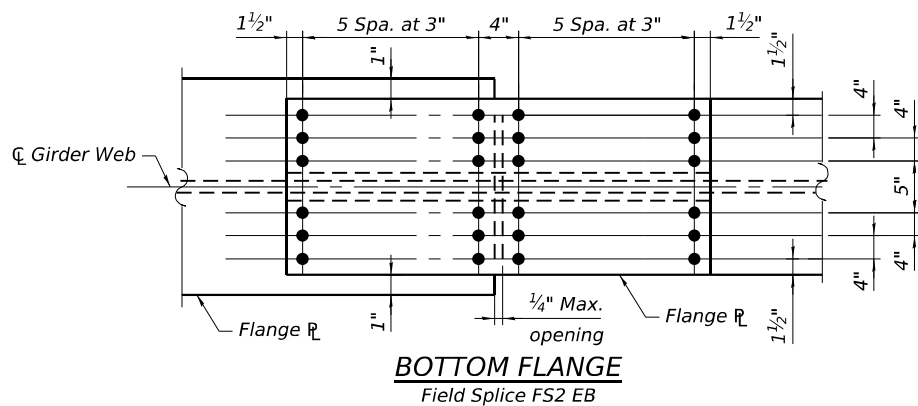
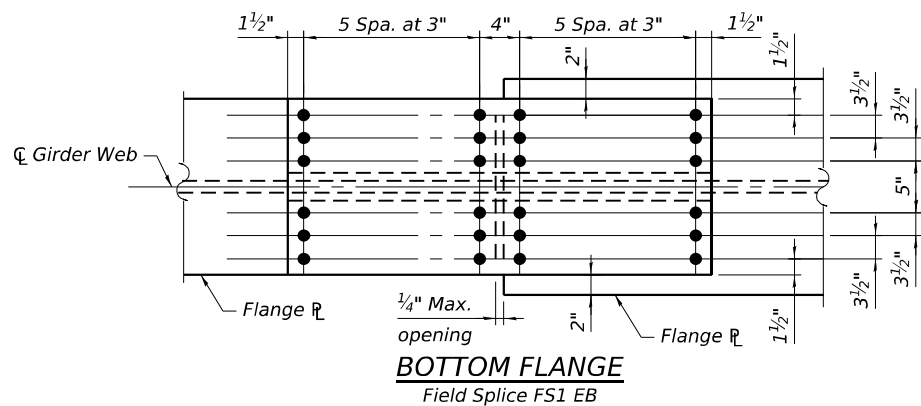
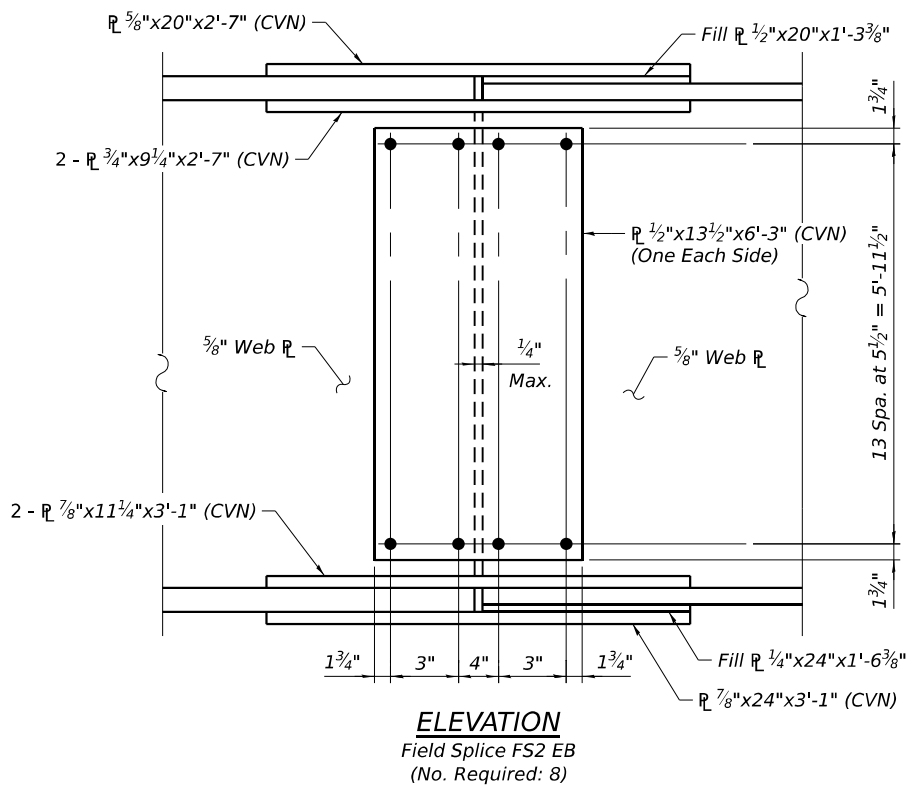
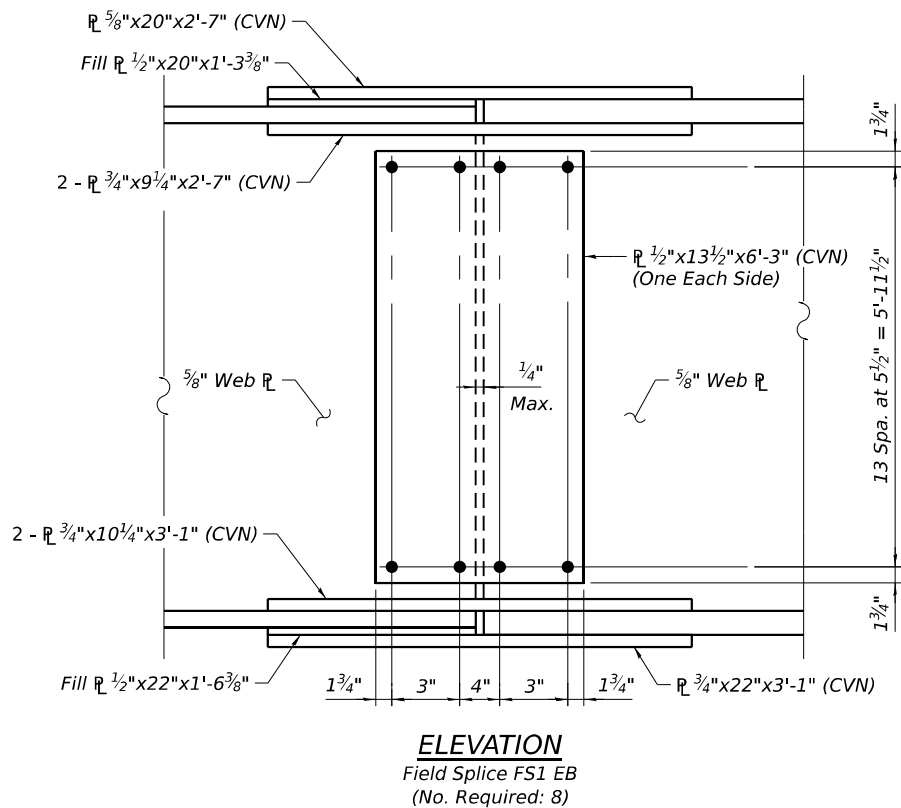
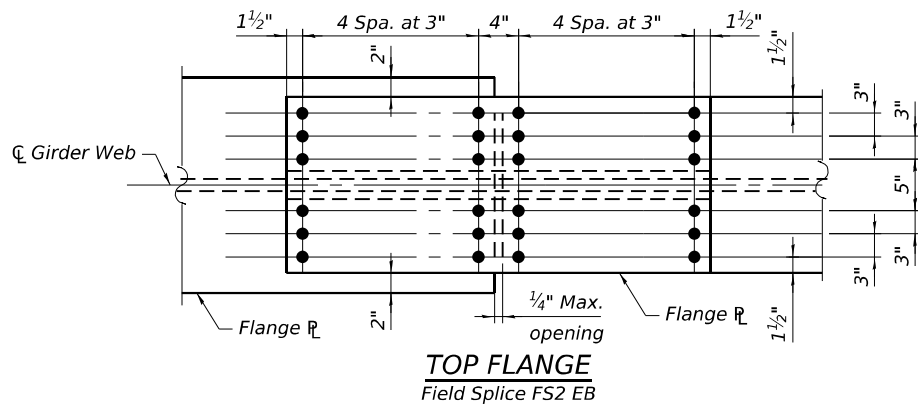
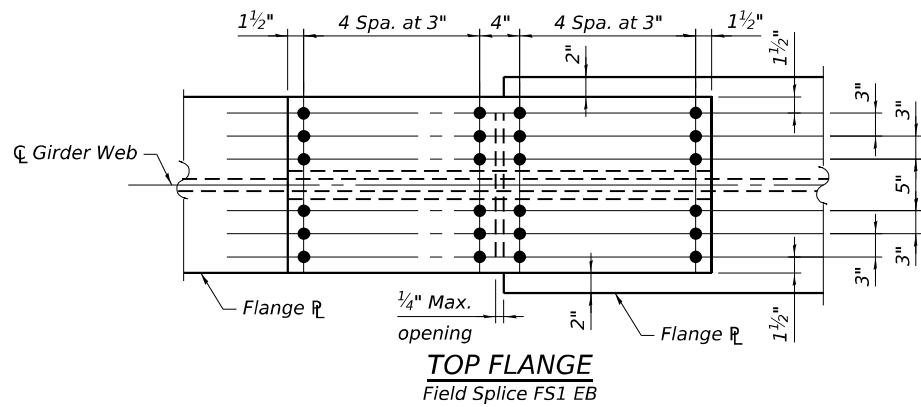
TOP OF WEB ELEVATION - UNIT 1 EB
(For Fabrication Only)

Location	℄ Brg. W. Abut. EB	℄ Field Splice FS1 EB	℄ Brg. Pier 1 EB	℄ Field Splice FS2 EB	℄ W. Brg. Pier 2 EB
Girder E1	594.999	597.898	598.725	599.912	601.266
Girder E2	595.088	598.005	598.844	600.014	601.460
Girder E3	594.890	598.069	598.963	600.219	601.655
Girder E4	594.666	598.108	599.045	600.336	601.813
Girder E5	594.409	597.989	598.968	600.293	601.813
Girder E6	594.121	597.710	598.732	600.090	601.655
Girder E7	593.797	597.394	598.459	599.849	601.460
Girder E8	593.472	597.070	598.185	599.607	601.266

1. For framing plan and girder elevations, see Sheets S-196 and S-197.



1. Fasteners shall be ASTM F3125 Grade A325 Type 3 weathering steel bolts in unpainted areas. Bolts $\frac{7}{8}$ " Ø, holes $1\frac{1}{16}$ " Ø.
2. Load carrying components designated (CVN) denotes Charpy V-Notch Impact Energy Requirements, Zone 2.
3. Class B contact surface, for slip resistance, shall be provided for all connections.
4. All structural steel shall be AASHTO M270 Grade 50W.



NOTES:

- Fasteners shall be ASTM F3125 Grade A325 Type 3 weathering steel bolts in unpainted areas. Bolts 7/8" Ø, holes 1 1/16" Ø.
- Load carrying components designated (CVN) denotes Charpy V-Notch Impact Energy Requirements, Zone 2.
- Class B contact surface, for slip resistance, shall be provided for all connections.
- All structural steel shall be AASHTO M270 Grade 50W.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FIELD SPLICE DETAILS - UNIT 1 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-203 OF S-333 SHEETS

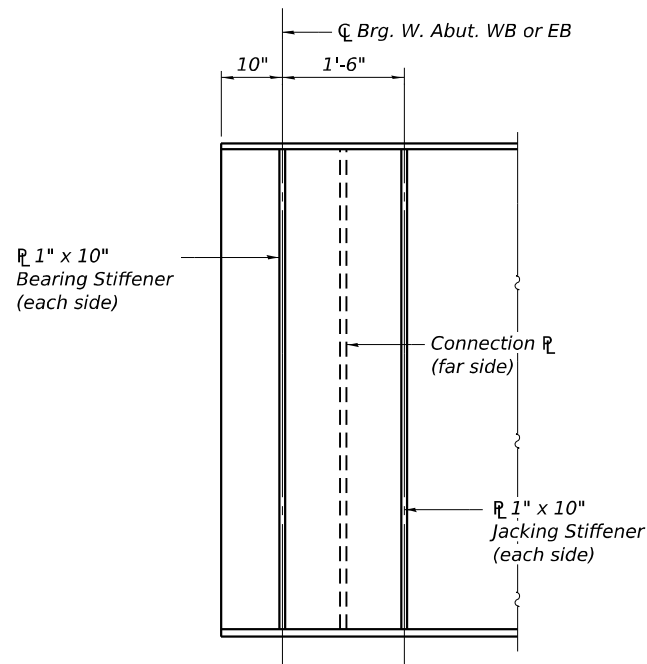
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	784
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CAD\62R23-RB-1-Sheets\Structural\0998309-42R23-5508-84108.dgn

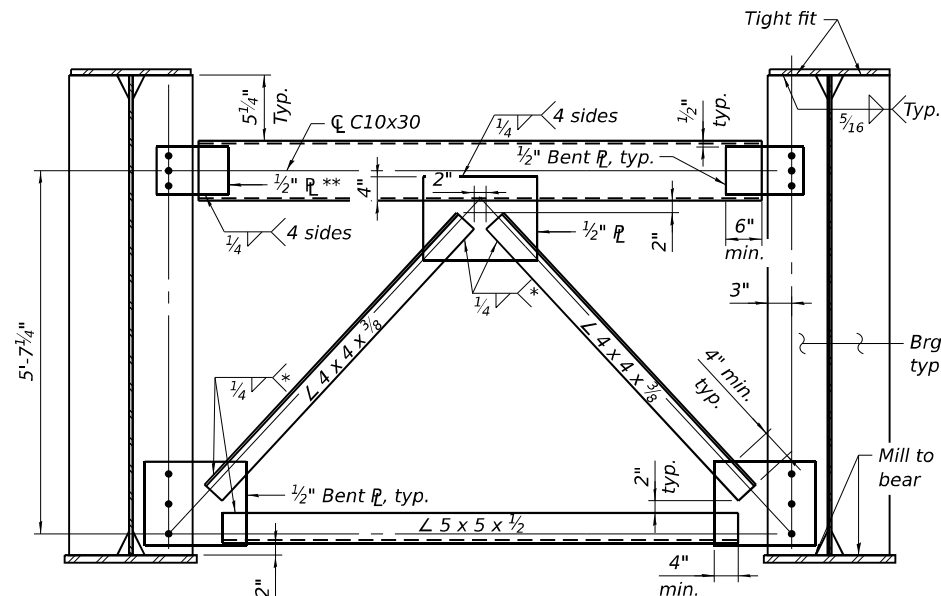


WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614	DESIGNED - FIM	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 0.2" = 1' / in.	DRAWN - FIM	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -



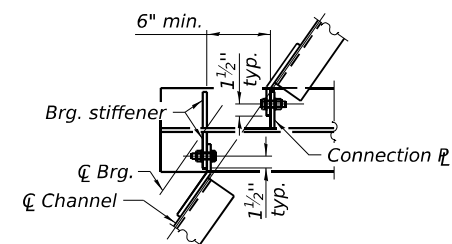
TYPICAL GIRDER END - W. ABUT. WB & EB



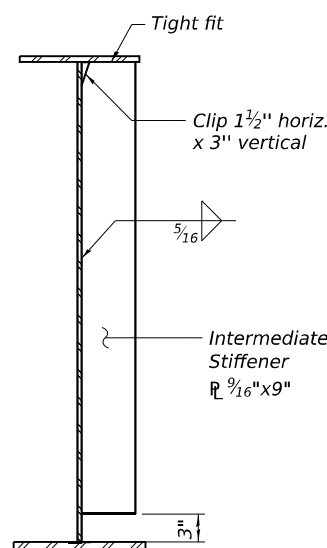
* Weld angles along 3 sides on one face of gusset plate.

END CROSS-FRAME WB & EB

At West Abutment
(No. Required WB = 9)
(No. Required EB = 7)

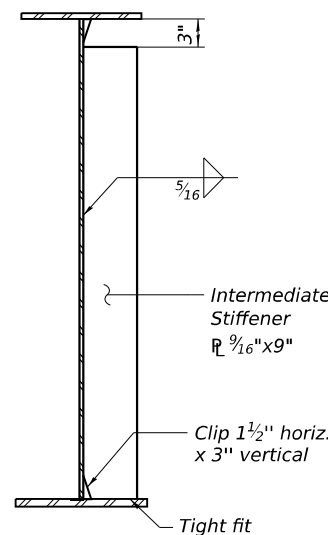


DETAIL E



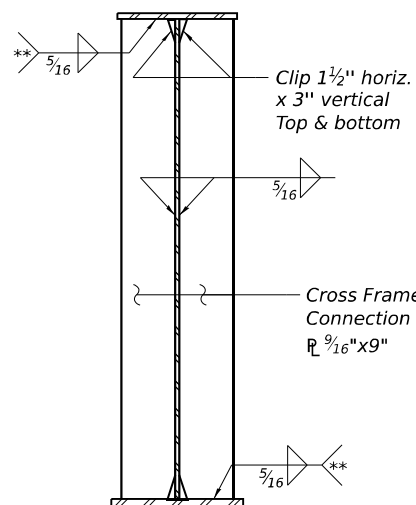
INTERMEDIATE STIFFENER

Near West Abutment
(No. Plates Required WB = 10)
(No. Plates Required EB = 8)



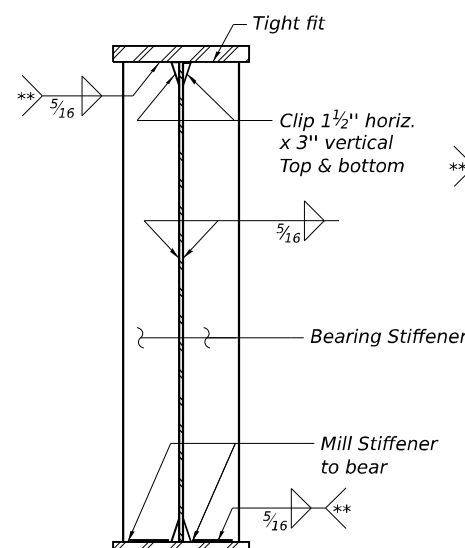
INTERMEDIATE STIFFENER

Near Pier 1
(No. Plates Required WB = 7)
(No. Plates Required EB = 20)



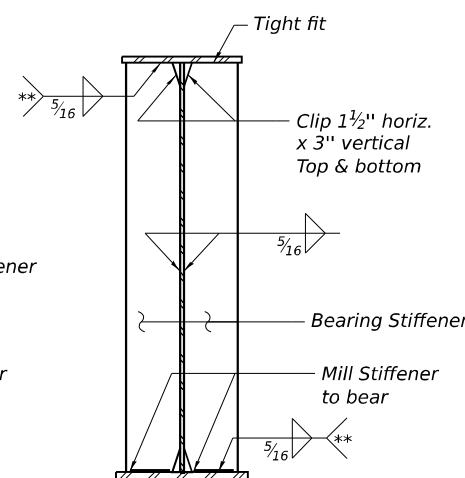
CONNECTION PLATE

(No. Plates Required WB = 270)
(No. Plates Required EB = 220)



BEARING & JACKING STIFFENER

At West Abutment
(No. Plates Required WB = 40)
(No. Plates Required EB = 32)
At Pier 1
(No. Plates Required WB = 60)
(No. Plates Required EB = 48)



BEARING & JACKING STIFFENER

At Pier 2
(No. Plates Required WB = 40)
(No. Plates Required EB = 32)

NOTES:

- For location of cross frames, see sheet S-196 and S-197.
- Bearing and jacking stiffeners to be vertical under full dead load, unless noted otherwise.
- For end cross frames, Detail 1 5/16" Ø holes for all 3/4" Ø bolts.
- Two hardened washers required for each set of oversized hole.
- Place cross frame with channel flanges outward from abutment backwall.
- Class B contact surface, for slip resistance, shall be provided for all crossframes.
- All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
- All structural steel shall be AASHTO M270 Grade 50W.

** Stop welds 1/4" (± 1/8") as shown on sheet S-55. Typical.

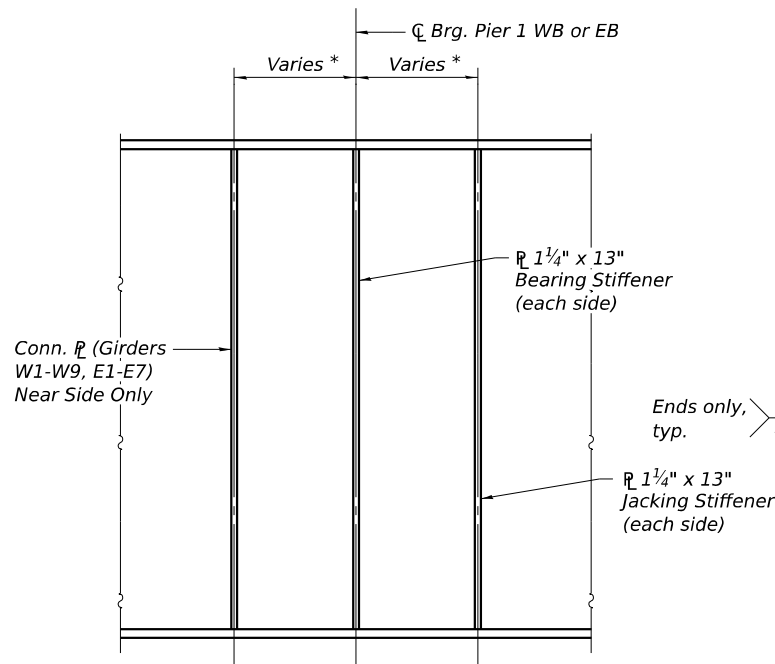
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENT END CROSS FRAME DETAILS - UNIT 1 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-204 OF S-333 SHEETS

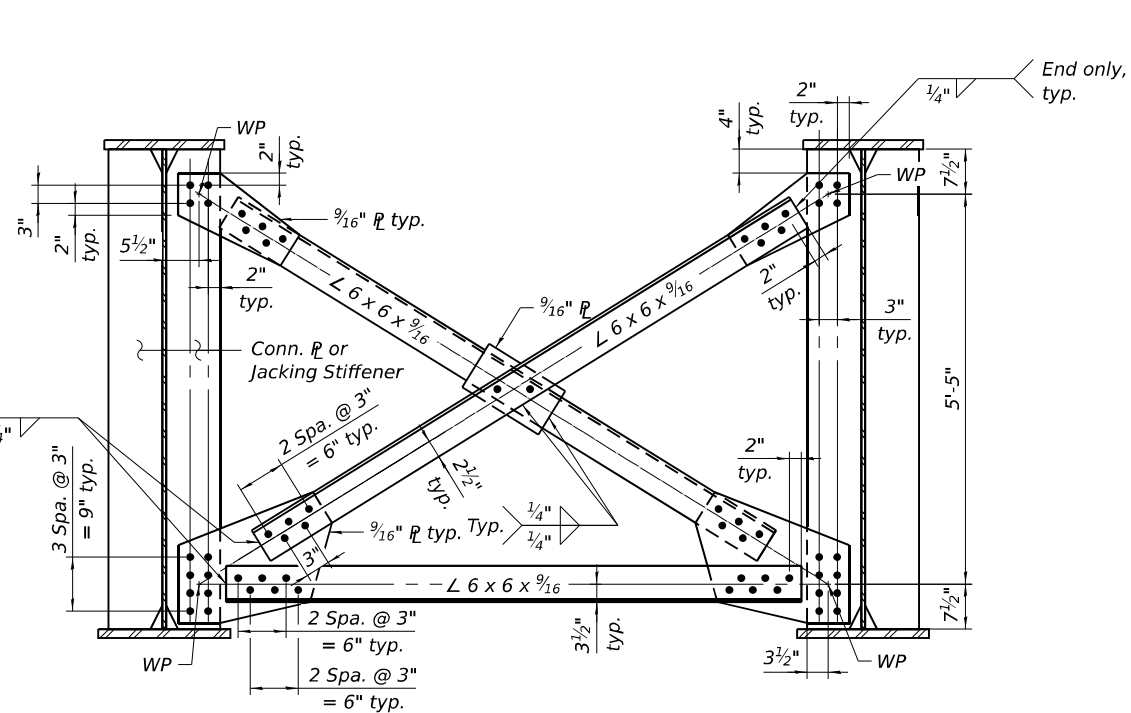
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	785
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

USER NAME = USSJ696614	DESIGNED - FIM	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 0.2" = 1' / in.	DRAWN - FIM	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -



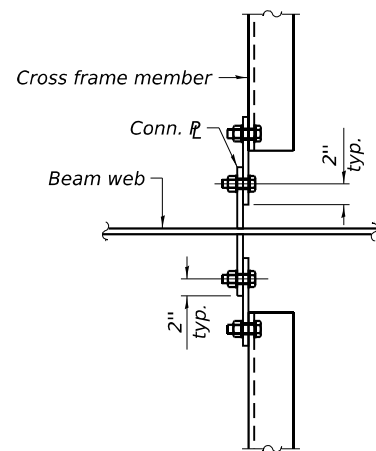
DETAIL B

* Jacking stiffeners and cross frame connection plates near Pier 1 shall be located to match interior cross frames. See framing plan sheets for locations of cross frames.

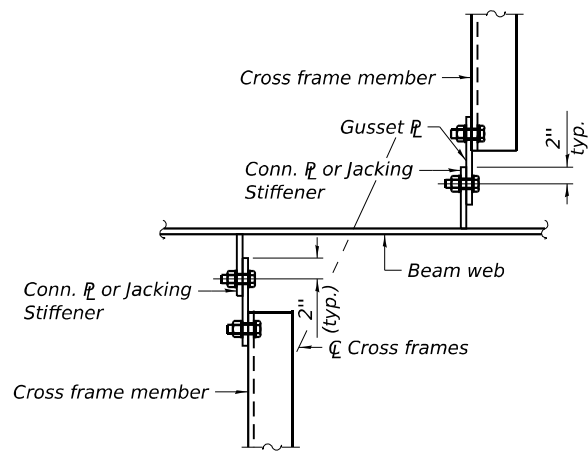


INTERIOR CROSS-FRAME

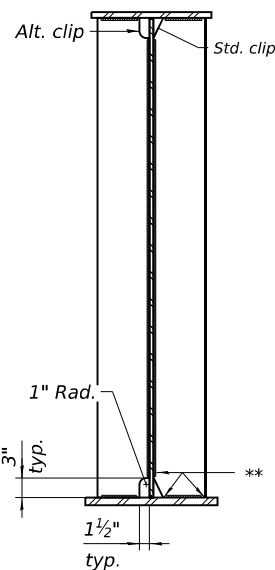
(No Required WB = 132)
(No Required EB = 110)



DETAIL G

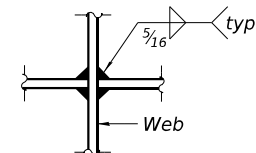


DETAIL F



WELD LIMITS AND CLIP DETAILS

** Stop welds 1/4" ($\pm 1/8$ ") from edges as shown.
Typical.



WEB WELD DETAIL

NOTES:

- For location of cross frames, see sheet S-196 and S-197.
- All interior cross frame connections shall be ASTM F3125, Grade A325 Type 3, 7/8" $\varnothing$ bolts in 1 1/16" $\varnothing$ holes, unless noted otherwise.
- Two hardened washers required for each set of oversized hole.
- Class B contact surface, for slip resistance, shall be provided for all crossframes.
- All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
- All structural steel shall be AASHTO M270 Grade 50W.
- Cross frame bottom chord, diagonal members, and gusset plates shall be fully shop assembled to the required shop fabricated geometry and shall utilize bolts and erection pins per Art. 505.04(f). Shop bolting shall be in accordance with Art. 505.04(f) and 505.08(h) and shall have shop inspection by IDOT representative. After all bolts at a cross frame have been fully torqued, the cross frames shall be shop welded. The cross frames and gussets shall be delivered to the erector as an assembled cross-frame.

MODEL Default:
FILE NAME: p:\proj\transys\transys\corp\proj\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CD\62R23-RB-1\Sheet\Structural\0998309-82R23-5510-841110.dgn



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

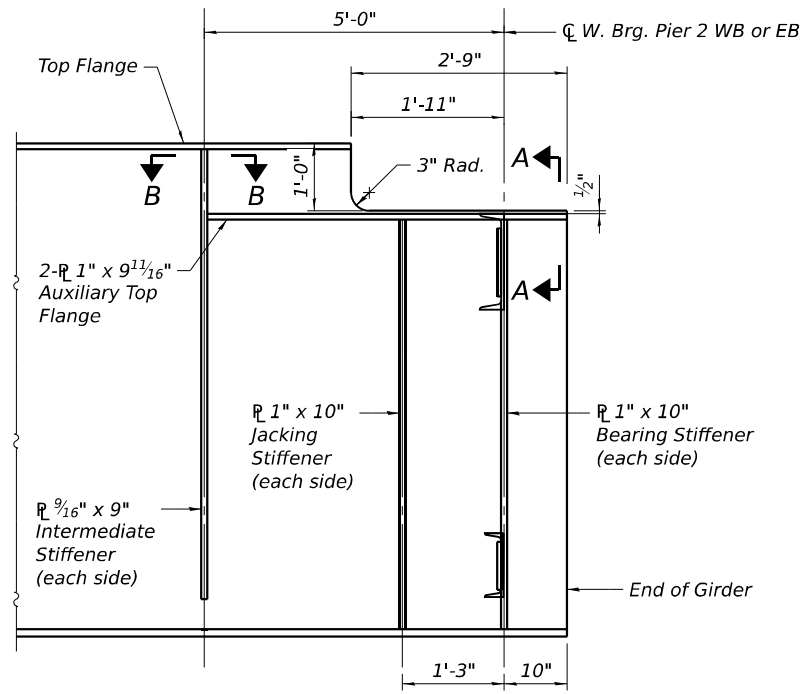
USER NAME = USSJ696614	DESIGNED - FIM	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 0:2" = 1' / in.	DRAWN - FIM	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

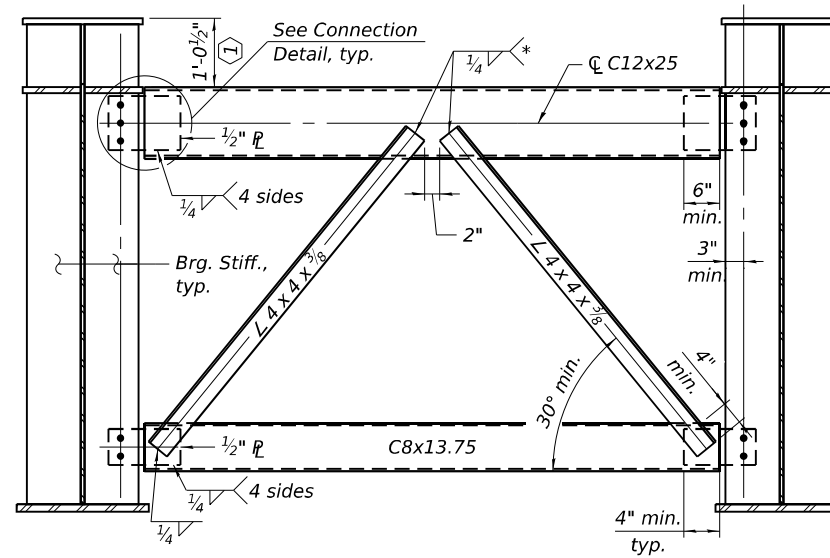
**INTERIOR CROSS FRAME DETAILS - UNIT 1 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-205 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	786
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



TYPICAL GIRDER END AT PIER 2 WB & EB

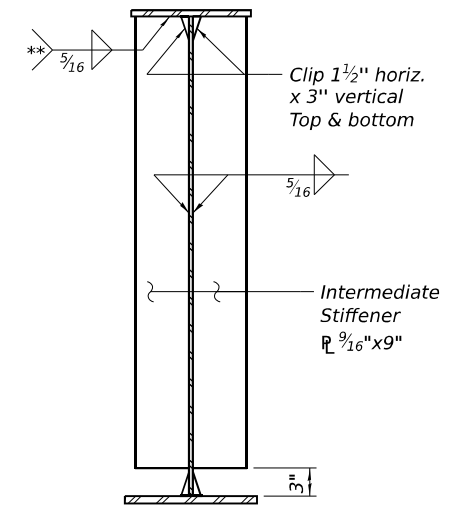


* Weld angles along 3 sides on one face of the channel.

① Constant across structure.

END CROSS-FRAME

At Pier 2
(No. Required WB = 9)
(No. Required EB = 7)



** Stop welds 1/4" ($\pm 1/8$ ") as shown on sheet S-55. Typical.

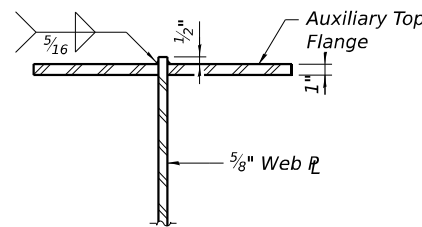
INTERMEDIATE

STIFFENER

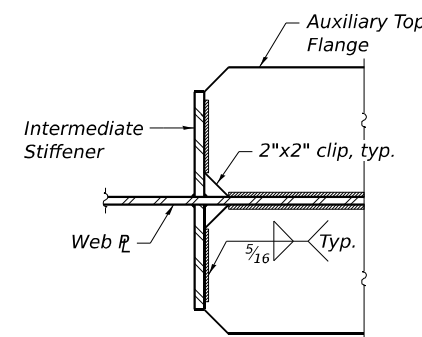
Near Pier 2
(No. Plates Required WB = 20)
(No. Plates Required EB = 16)

NOTES:

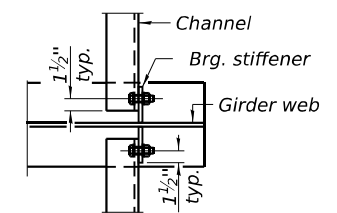
- For location of cross frames, see sheet S-196 and S-197.
- Bearing and jacking stiffeners to be vertical under full dead load, unless noted otherwise.
- For end cross frames, Detail 15/16" ϕ holes for all 3/4" ϕ bolts.
- Two hardened washers required for each set of oversized hole.
- Place cross frame with channel flanges outward from joint.
- Place bolts to maintain minimum 1 1/2" clearance between channels and edge of 1/2" mounting plates.
- Class B contact surface, for slip resistance, shall be provided for all crossframes.
- All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
- All structural steel shall be AASHTO M270 Grade 50W.



SECTION A-A



SECTION B-B



CONNECTION DETAIL

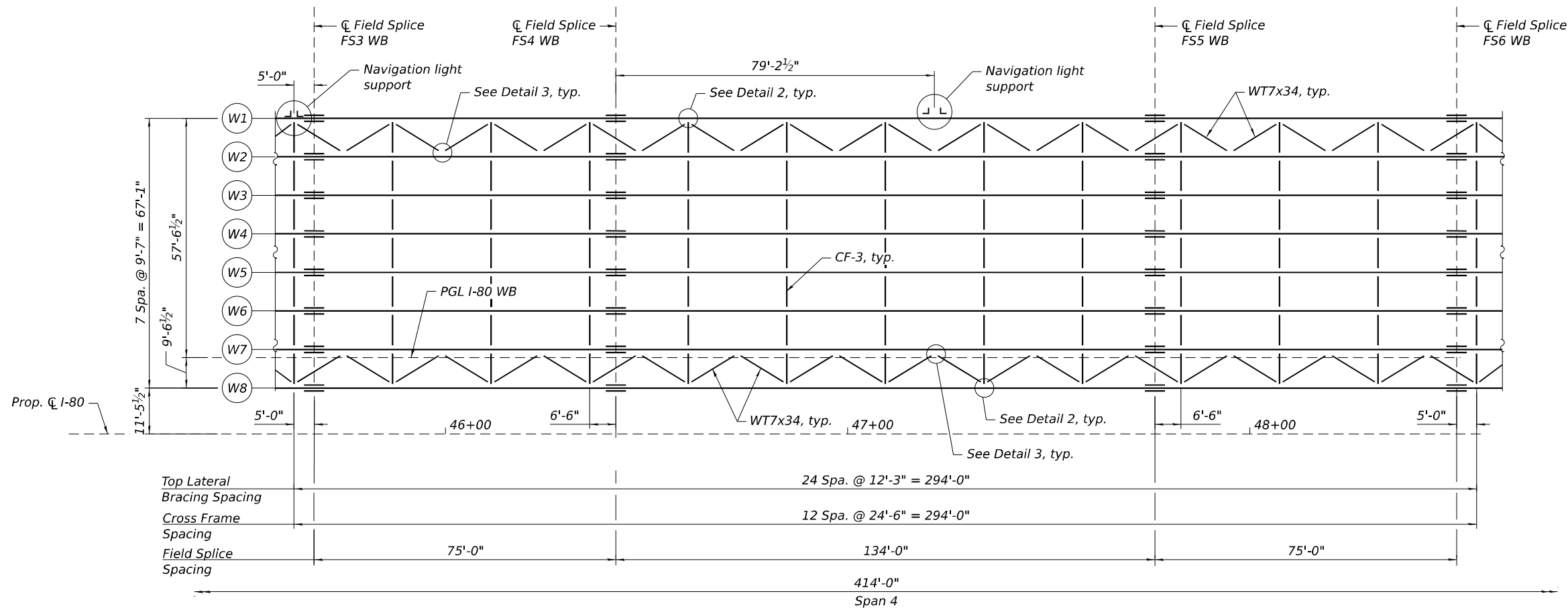
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MODULAR JOINT STEEL DETAILS - UNIT 1 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

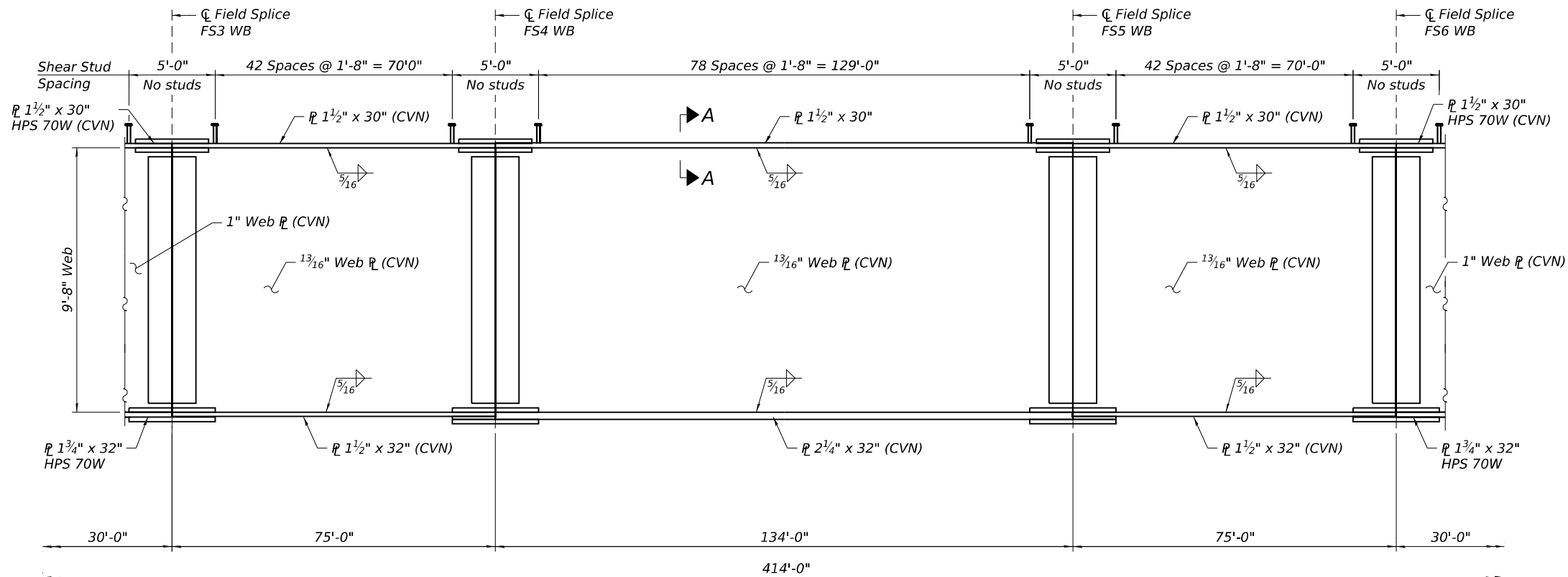
SHEET S-206 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	787
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

USER NAME = USSJ696614	DESIGNED - FIM	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 0.2" = 1' / in.	DRAWN - FIM	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -



PARTIAL FRAMING PLAN - UNIT 2 WB



PARTIAL ELEVATION - UNIT 2 WB

NOTES:

1. Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.
2. All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
3. All dimensions are horizontal.
4. All steel shall be M270 Grade 50W except as otherwise noted.
5. For Girder Moment and Reaction tables, see sheet S-213.
6. For Camber Diagram, see sheet S-215.
7. For Section A-A, Detail C, and Girder Bolted Field Splice Details, see sheet S-216.
8. For Interior and Pier Cross Frame Details, see sheet S-217.
9. For Stiffener Details, see sheet S-218.
10. For lateral bracing details see sheet S-220.
11. For navigation light support, see sheet S-221.

MODEL Default:
FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH4001401180022\03-WSP\CH4001401180022-03-WSP\CH4001401180022-03-WSP.dgn

wsp
WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

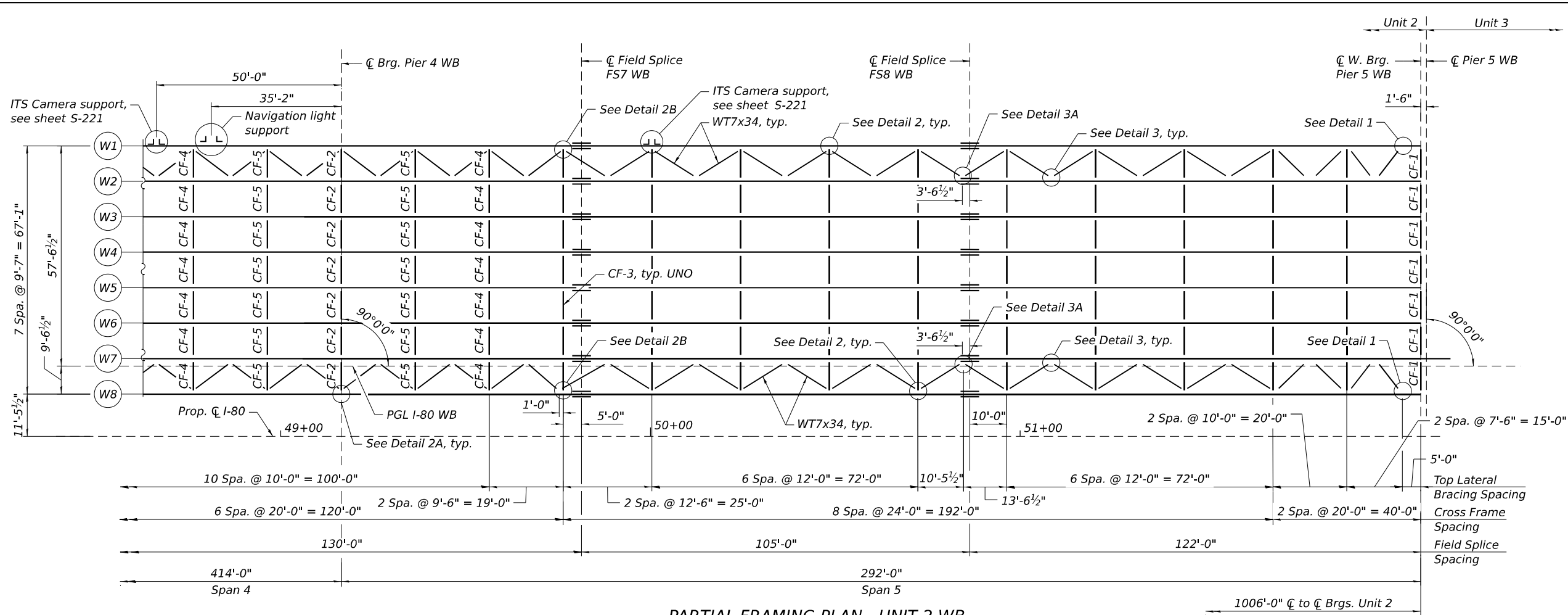
USER NAME	= USSJ696614	DESIGNED	- KB	REVISED	-
		CHECKED	- LAS	REVISED	-
PLOT SCALE	= 32:0 "/ in.	DRAWN	- BK	REVISED	-
PLOT DATE	= 11/5/2025	CHECKED	- LAS	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

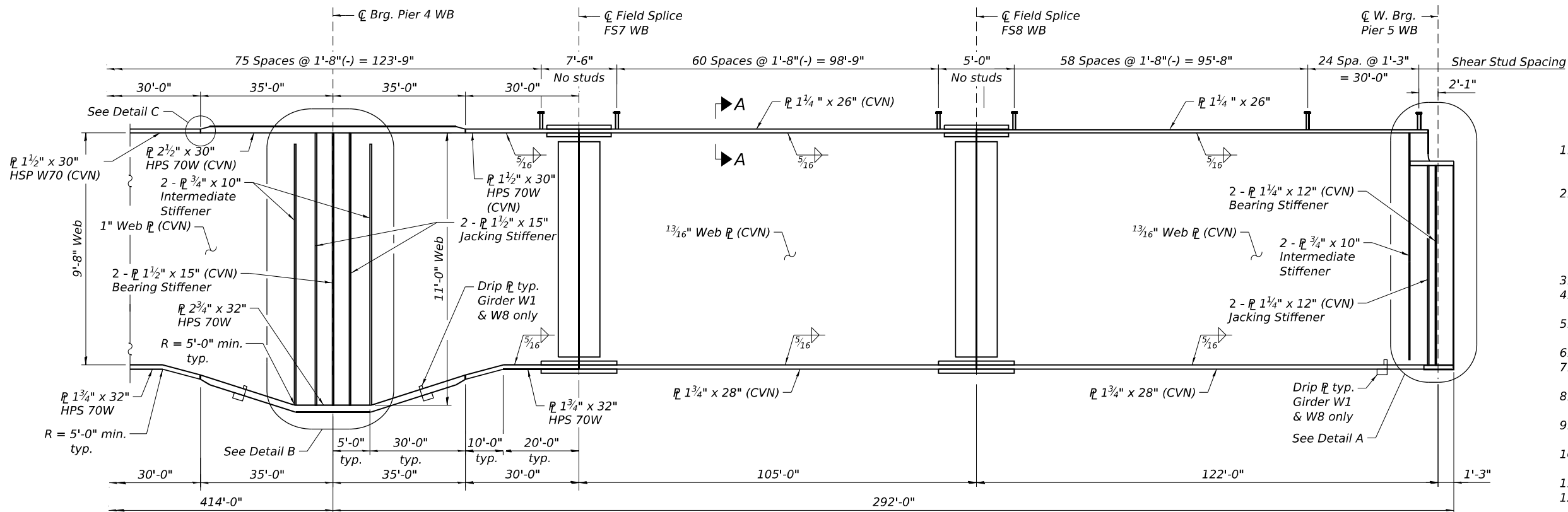
FRAMING PLAN AND ELEVATION 2 - UNIT 2 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-208 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	789
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



PARTIAL FRAMING PLAN - UNIT 2 WB



PARTIAL ELEVATION - UNIT 2 WB

NOTES:

1. Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.
2. All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
3. All dimensions are horizontal.
4. All steel shall be M270 Grade 50W except as otherwise noted.
5. For Girder Moment and Reaction tables, see sheet S-213.
6. For Camber Diagram, see sheet S-215.
7. For Section A-A, Detail C, and Girder Bolted Field Splice Details, see sheet S-216.
8. For Interior and Pier Cross Frame Details, see sheet S-217.
9. For Detail B, Stiffener Details and drip $\bar{r}$ details, see sheet S-218.
10. For Detail A and End Cross Frame Details, see sheet S-219.
11. For lateral bracing details see sheet S-220.
12. For navigation light support, see sheet S-221.

MODEL Default:
 FILE NAME: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CH401\401180022\03-WSP\Structural\0998309-42R23-551-4-24103.dgn



WSP USA INC.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614
DESIGNED - KB
CHECKED - LAS
PLOT SCALE = 32:0" = 1" / in.
DRAWN - BK
CHECKED - LAS
PLOT DATE = 11/5/2025

DESIGNED - KB
CHECKED - LAS
DRAWN - BK
CHECKED - LAS

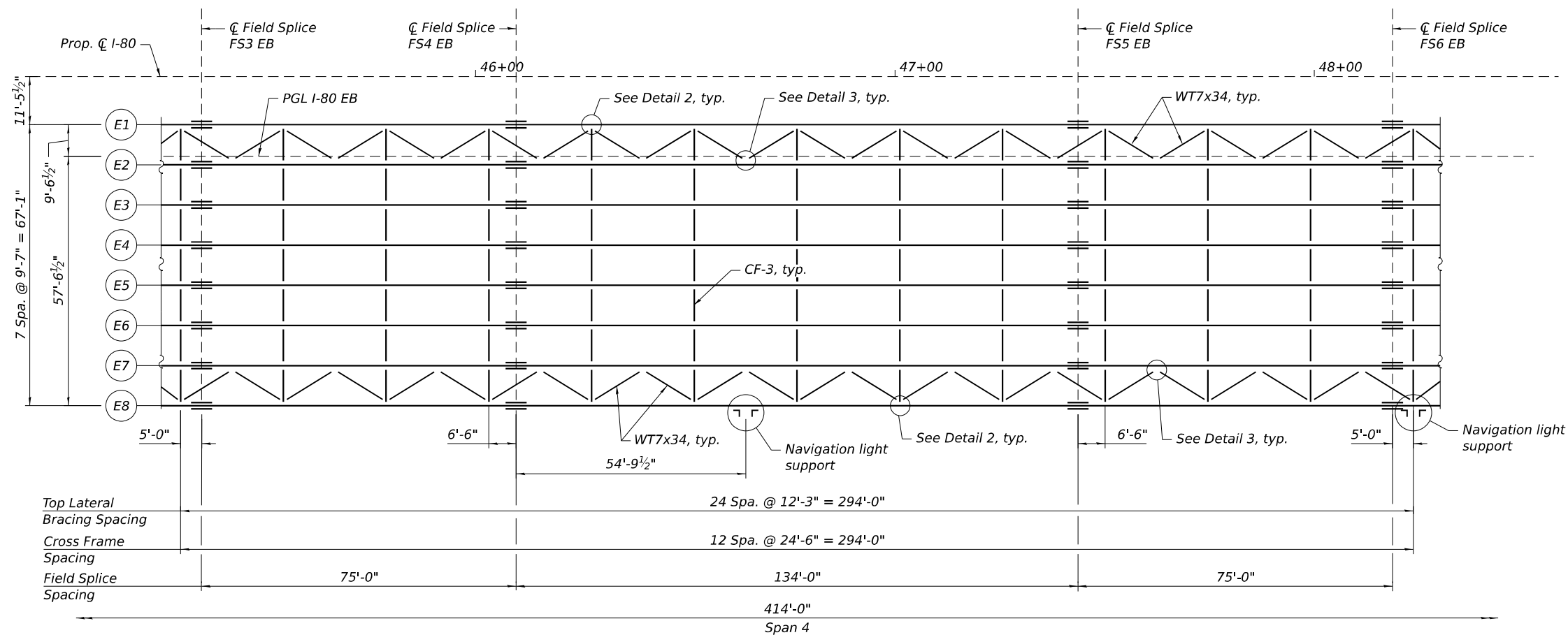
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

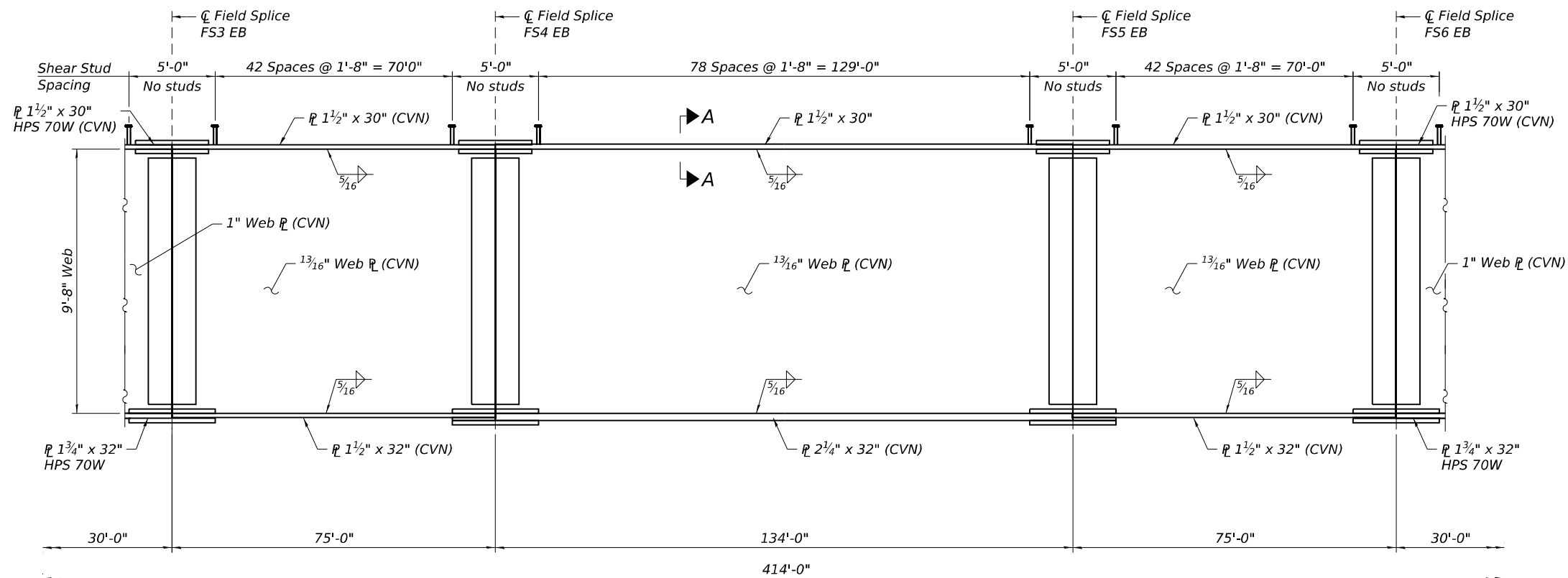
FRAMING PLAN AND ELEVATION 3 - UNIT 2 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-209 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	790
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				



PARTIAL FRAMING PLAN - UNIT 2 EB



PARTIAL ELEVATION - UNIT 2 EB

NOTES:

1. Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.
2. All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
3. All dimensions are horizontal.
4. All steel shall be M270 Grade 50W except as otherwise noted.
5. For Girder Moment and Reaction tables, see sheet S-213.
6. For Camber Diagram, see sheet S-215.
7. For Section A-A, Detail C, and Girder Bolted Field Splice Details, see sheet S-216.
8. For Interior and Pier Cross Frame Details, see sheet S-217.
9. For Stiffener Details, see sheet S-218.
10. For lateral bracing details see sheet S-220.
11. For navigation light support see sheet S-221.

MODEL Default:
FILE Name: p:\projects\trans\scorp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CH401\401180022\03-WSP\Structural\0998309-8325-5516-84105.dgn



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME = USSJ696614	DESIGNED - KB	REVISED -
	CHECKED - LAS	REVISED -
PLOT SCALE = 32:0'"/in.	DRAWN - BK	REVISED -
PLOT DATE = 11/5/2025	CHECKED - LAS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN AND ELEVATION 2 - UNIT 2 EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB**

SHEET S-211 OF 5-333 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	792
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

MODEL Default:
FILE NAME: p:\proj\transys\transys\corp\ppl\hatched\Documents\Projects_2018\CH401\401180022\03-WSP\CD\62R23-BB-1-Sheet8-Structural\0998309-42R23-5518-BB107.dgn

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 3 or 0.6 Sp. 5	Pier 3 or Pier 4	0.5 Sp. 4
I _s	(in ⁴)	381,789	927,761	500,420
I _c (n)	(in ⁴)	711,669	--	877,851
I _c (3n)	(in ⁴)	531,054	--	664,814
I _c (cr)	(in ⁴)	--	984,195	--
S _s	(in ³)	7,047	12,976	9,511
S _c (n)	(in ³)	8,743	--	11,300
S _c (3n)	(in ³)	7,986	--	10,463
S _c (cr)	(in ³)	--	14,263	--
S _x	(in ³)	8,685	14,197	11,228
DC1	(k ⁴)	1.77	2.31	1.94
M _{DC1}	(⁴ k)	8,282	26,462	13,246
DC2	(k ⁴)	0.16	0.19	0.16
M _{DC2}	(⁴ k)	733	2,101	1,016
DW	(k ⁴)	0.48	0.48	0.48
M _{DW}	(⁴ k)	2,296	6,476	3,292
LLDF		*	*	*
M _ƒ + IM	(⁴ k)	7,259	9,676	8,457
f _t (Strength I)	(ksi)	--	--	--
** M _u + 1/3 f _t S _x	(⁴ k)	28,787	65,468	39,444
Φ _f M _n	(⁴ k)	38,599	--	45,162
f _s DC1	(ksi)	14.1	24.5	16.7
f _s DC2	(ksi)	1.0	1.8	1.2
f _s DW	(ksi)	3.5	5.5	3.8
f _s (ƒ+IM)	(ksi)	10.0	8.1	9.0
f _t (Service II)	(ksi)	-	-	-
f _s + ƒ _t /2 (Service II)	(ksi)	31.6	42.3	33.4
Service II Resistance	(ksi)	47.5	54.7	47.5
** f _s + ƒ _t /3 (Strength I)	(ksi)	-	58.0	-
Φ _f F _n	(ksi)	-	68.4	-
V _r	(k)	82.1	99.5	62.8

Note: The analysis considers 2 scenarios: stresses resulting from the staged construction sequence and stresses assuming a single deck pour.

INTERIOR GIRDER REACTION TABLE		
	Pier 2 & Pier 5	Pier 3 & Pier 4
LLDF	*	*
OCF	--	--
R _{DC1}	(k) 173.7	759.3
R _{DC2}	(k) 11.7	52.9
R _{DW}	(k) 46.6	187.3
R _ƒ	(k) 120.2	287.4
R _{IM}	(k) 19.9	35.4
** R _{Total} (Strength I) (Impact)	(k) 574.2	1,954.2
** R _{Total} (Strength I) (No Impact)	(k) 537.6	1,889.1

EXTERIOR GIRDER REACTION TABLE		
	Pier 2 & Pier 5	Pier 3 & Pier 4
LLDF	*	*
OCF	--	--
R _{DC1}	(k) 174.1	755.0
R _{DC2}	(k) 29.7	102.9
R _{DW}	(k) 44.8	163.9
R _ƒ	(k) 128.9	296.5
R _{IM}	(k) 20.5	38.0
** R _{Total} (Strength I) (Impact)	(k) 612.6	1,998.8
** R _{Total} (Strength I) (No Impact)	(k) 574.9	1,929.0

* See LLDF Tables below

** Limit states for moment, stress, and reaction shown include a load modifier factor of 1.05 relating to operational classification for an essential bridge

EXTERIOR GIRDER LIVE LOAD + IMPACT DISTRIBUTION FACTORS											
Span/Support	Positive Moment			Negative Moment			Shear			Reactions	Deflection
	1 Lane	Design	Fatigue	1 Lane	Design	Fatigue	1 Lane	Design	Fatigue	Design	Design
Pier 2 & 5	--	--	--	--	--	--	0.70	0.83	0.64	0.83	--
Spans 3 & 5	0.48	0.72	0.39	--	--	--	--	--	--	--	0.49
Piers 3 & 4	--	--	--	0.51	0.77	0.41	0.71	0.91	0.70	0.91	--
Span 4	0.47	0.71	0.37	--	--	--	--	--	--	--	0.49

INTERIOR GIRDER LIVE LOAD + IMPACT DISTRIBUTION FACTORS											
Span/Support	Positive Moment			Negative Moment			Shear			Reactions	Deflection
	1 Lane	Design	Fatigue	1 Lane	Design	Fatigue	1 Lane	Design	Fatigue	Design	Design
Pier 2 & 5	--	--	--	--	--	--	0.57	0.77	0.49	0.77	--
Spans 3 & 5	0.38	0.63	0.30	--	--	--	--	--	--	--	0.49
Piers 3 & 4	--	--	--	0.41	0.66	0.34	0.53	0.81	0.55	0.81	--
Span 4	0.38	0.62	0.30	--	--	--	--	--	--	--	0.49

NOTES:

- Moments and Reactions are for Interior Girder W2 and Exterior Girder W1.
- Live load distribution for design was determined by a refined method of analysis.
- The live load + impact distribution factors provided in the tables on this sheet were computed for HL-93 loading only, and are intended to be used to approximate HL-93 live load + impact demands.
- The live load + impact distribution factors are in the form of a ratio of the girder live load demand obtained from the refined method of analysis caused by HL-93 loading, divided by the girder live load demand obtained from the application of a single lane of HL-93 loading acting on a single isolated girder.
- Example calculation of exterior girder live load design moment in Span 3 based on the distribution factors provided in the tables:

- A. From a line girder analysis with a distribution factor of 1.0 lane, the live load moment at Span 3 is found to be:

M_ƒ + IM = 11,614 k-ft per lane

- B. From the Exterior Girder Live Load + Impact Distribution Factor table shown on this sheet, the design distribution factor for positive moment in Span 3 is 0.72. Therefore, the live load + impact moment at Span 3 based on the refined method of analysis is:

0.72 x 11,614 k-ft = 8,355 k-ft

- I_s , S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).
- I_c (n), S_c (n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).
- I_c (3n), S_c (3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
- I_c (cr), S_c (cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).
- S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
- M_ƒ + IM: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u : Strength I load combination of factored design moments (kip-ft.).
- 1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_ƒ + IM
- f_t : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).
- Φ_f M_n : Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).
- f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
- M_{DC1} / S_s
- f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
- M_{DC2} / S_c (3n) or M_{DC2} / S_c (cr) as applicable.
- f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
- M_{DW} / S_c (3n) or M_{DW} / S_c (cr) as applicable.
- f_s (ƒ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
- M_ƒ + IM / S_c (n) or M_ƒ + IM / S_c (cr) as applicable.
- f_s + f_t / 2 (Service II): Sum of stresses as computed below (ksi).
- f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (ƒ + IM) + f_t / 2
- Service II Resistance: Composite (0.95R_nF_{yr}) or noncomposite (0.80R_nF_{yr}) stress capacity according to Article 6.10.4.2 (ksi).
- f_s + f_t / 3 (Strength I): Sum of stresses as computed below on non-compact sections (ksi).
- 1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (ƒ + IM) + f_t / 3
- Φ_f F_n : Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).
- V_r : Maximum factored shear range in span computed according to Article 6.10.10.
- OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
- R_{DC1} : Un-factored reaction due to non-composite dead load (kip).
- R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
- R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
- R_ƒ : Un-factored live load reaction (kip).
- R_{IM} : Un-factored dynamic load allowance (impact) (kip).
- R_{Total} (Strength I) (Impact): Strength I load combination of factored design reactions (kip).
- 1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_ƒ + R_{IM})
- R_{Total} (Strength I) (No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
- 1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_ƒ)



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

USER NAME	= USSJ696614	DESIGNED	- KB	REVISED	-
		CHECKED	- PSK	REVISED	-
PLOT SCALE	= 0:2.0000' = 1" / in.	DRAWN	- KB	REVISED	-
PLOT DATE	= 11/5/2025	CHECKED	- PSK	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT AND REACTION TABLES - UNIT 2 WB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-213 OF S-333 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	794
		CONTRACT NO. 62R23		
		ILLINOIS	FED. AID PROJECT	

	0.4 Sp. 3 or 0.6 Sp. 5	Pier 3 or Pier 4	0.5 Sp. 4
I_s	(in ⁴) 381,789	927,761	500,420
I_c (n)	(in ⁴) 711,669	--	877,851
I_c (3n)	(in ⁴) 531,054	--	664,814
I_c (cr)	(in ⁴) --	984,195	--
S_s	(in ³) 7,047	12,976	9,511
S_c (n)	(in ³) 8,743	--	11,300
S_c (3n)	(in ³) 7,986	--	10,463
S_c (cr)	(in ³) --	14,263	--
S_x	(in ³) 8,684	14,196	11,229
$DC1$	(k/ft) 1.77	2.31	1.94
M_{DC1}	(ft-k) 8,368	26,591	13,087
$DC2$	(k/ft) 0.16	0.19	0.16
M_{DC2}	(ft-k) 980	2,077	902
DW	(k/ft) 0.48	0.48	0.48
M_{DW}	(ft-k) 2,308	6,427	3,243
LLDF	*	*	*
M_{t+IM}	(ft-k) 7,141	9,676	8,375
f_t (Strength I)	(ksi) --	--	--
$M_u + \frac{1}{3} f_t S_x$	(ft-k) 29,026	65,529	38,857
$\phi_r M_n$	(ft-k) 38,599	--	45,162
f_s DC1	(ksi) 14.3	24.6	16.5
f_s DC2	(ksi) 1.1	1.8	1.0
f_s DW	(ksi) 3.5	5.4	3.7
f_s (t+IM)	(ksi) 9.8	8.1	8.9
f_t (Service II)	(ksi) -	-	-
$f_s + \frac{f_t}{3}$ (Service II)	(ksi) 31.9	42.3	32.8
Service II Resistance	(ksi) 47.5	54.7	47.5
$f_s + \frac{f_t}{3}$ (Strength I)	(ksi) -	58.0	-
$\phi_r F_n$	(ksi) -	68.4	-
V_r	(k) 82.6	99.1	62.8

Note: The analysis considers 2 scenarios: stresses resulting from the staged construction sequence and stresses assuming a single deck pour.

INTERIOR GIRDER REACTION TABLE		
	Pier 2 & Pier 5	Pier 3 & Pier 4
LLDF	*	*
OCF	--	--
R_{DC1}	(k)	759.3
R_{DC2}	(k)	52.9
R_{DW}	(k)	187.3
$R_{\frac{1}{2}}$	(k)	287.4
R_{Im}	(k)	35.4
$R_{Total}(Strength\ I)(Impact)$	(k)	1,954.2
$R_{Total}(Strength\ I)(No\ Impact)$	(k)	1,889.1

	0.4 Sp. 3 or 0.6 Sp. 5	Pier 3 or Pier 4	0.5 Sp. 4
I_s	(in ⁴) 381,789	927,761	500,420
I_c (n)	(in ⁴) 691,824	--	853,640
I_c (3n)	(in ⁴) 519,126	--	651,303
I_c (cr)	(in ⁴) --	976,214	--
S_s	(in ³) 7,047	12,976	9,511
S_c (n)	(in ³) 8,674	--	11,220
S_c (3n)	(in ³) 7,924	--	10,397
S_c (cr)	(in ³) --	14,079	--
S_x	(in ³) 8,617	14,023	11,152
$DC1$	(k/ft) 1.68	2.22	1.85
M_{DC1}	(k) 8,383	26,191	13,055
$DC2$	(k/ft) 0.33	0.19	0.33
M_{DC2}	(k) 1,060	2,506	893
DW	(k/ft) 0.45	0.36	0.45
M_{DW}	(k) 2,249	6,133	3,163
$LLDF$	*	*	*
M_{t+IM}	(k) 8,196	11,193	9,594
f_t (Strength I)	(ksi) --	--	--
$M_u + \frac{1}{3} f_t S_x$	(k) 30,996	67,891	40,917
$\Phi_r M_n$	(k) 36,918	--	43,184
f_s DC1	(ksi) 14.3	24.2	16.5
f_s DC2	(ksi) 1.6	2.1	1.0
f_s DW	(ksi) 3.4	5.1	3.7
f_s (t+IM)	(ksi) 11.3	9.5	10.3
f_t (Service II)	(ksi) -	-	-
$f_s + \frac{f_t}{2}$ (Service II)	(ksi) 33.6	44.0	34.5
Service II Resistance	(ksi) 47.5	55.3	47.5
$f_s + \frac{f_t}{3}$ (Strength I)	(ksi) -	60.0	-
$\Phi_r F_n$	(ksi) -	68.4	-
V_r	(k) 69.0	94.5	68.7

	Pier 2 & Pier 5	Pier 3 & Pier 4
LLDF	*	*
OCF	--	--
R_{DC1} (k)	174.1	755.0
R_{DC2} (k)	29.7	102.9
R_{DW} (k)	44.8	163.9
R_L (k)	128.9	296.5
R_{Im} (k)	20.5	38.0
R_{Total} (Strength I) (Impact) (k)	612.6	1,998.8
R_{Total} (Strength I) (No Impact) (k)	574.9	1,929.0

* See LLDF Tables on sheet S-213

**** Limit states for moment, stress, and reaction shown include a load modifier factor of 1.05 relating to operational classification for an essential bridge**

NOTES:

1. Moments and Reactions are for Interior Girder E7 and Exterior Girder E8.
2. Live load distribution for design was determined by a refined method of analysis.
3. The live load + impact distribution factors provided in the tables on this sheet were computed for HL-93 loading only, and are intended to be used to approximate HL-93 live load + impact demands.
4. The live load + impact distribution factors are in the form of a ratio of the girder live load demand obtained from the refined method of analysis caused by HL-93 loading, divided by the girder live load demand obtained from the application of a single lane of HL-93 loading acting on a single isolated girder.
5. Example calculation of exterior girder live load design moment in Span 3 based on the distribution factors provided in the tables:

- A. From a line girder analysis with a distribution factor of 1.0 lane, the live load moment at Span 3 is found to be:

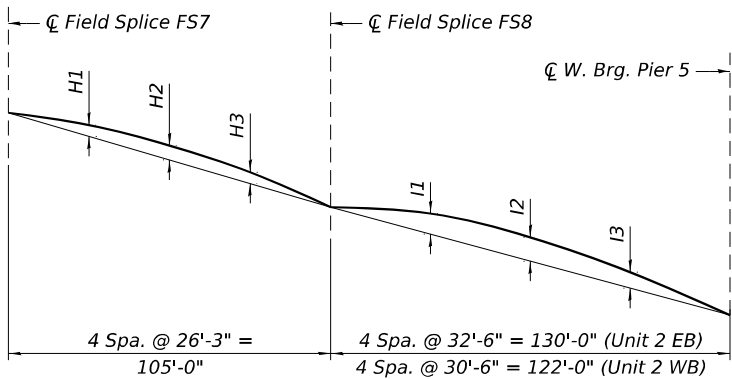
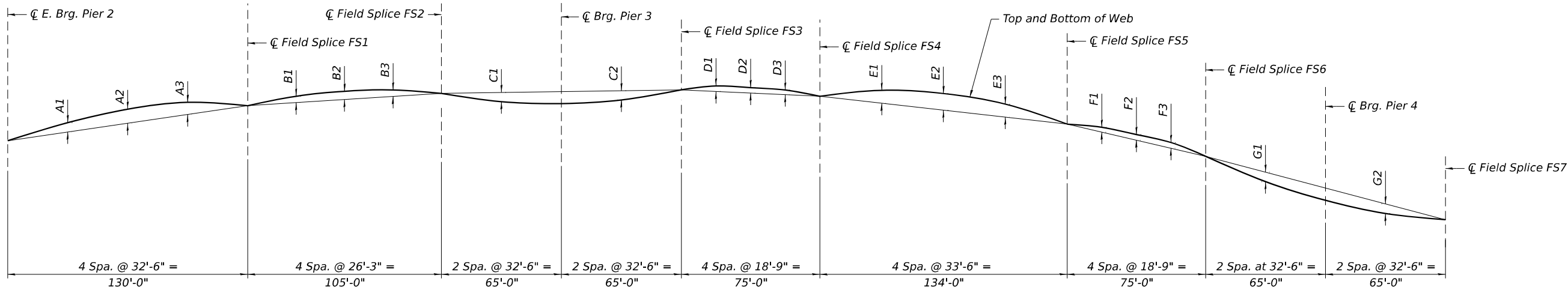
$$M_{L+IM} = 11,838 \text{ k-ft per lane}$$

- B. From the Exterior Girder Live Load + Impact Distribution Factor table shown on this sheet, the design distribution factor for positive moment in Span 3 is 0.72. Therefore, the live load + impact moment at Span 3 based on the refined method of analysis is:

$$0.72 \times 11,838 \text{ k-ft} = 8,196 \text{ k-ft}$$

I_s, S_s :	Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in. ⁴ and in. ³).
$I_c(n), S_c(n)$:	Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in. ⁴ and in. ³).
$I_c(3n), S_c(3n)$:	Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in. ⁴ and in. ³).
$I_c(cr), S_c(cr)$:	Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in. ⁴ and in. ³).
S_x :	Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in. ³).
DC1:	Un-factored non-composite dead load (kips/ft.).
M_{DC1} :	Un-factored moment due to non-composite dead load (kip-ft.).
DC2:	Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2} :	Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW:	Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW} :	Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
LLDF:	Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
$M_L + IM$:	Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_u :	Strength I load combination of factored design moments (kip-ft.). $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
f_t :	Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).
$\Phi_f M_n$:	Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).
$f_s DC1$:	Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi). M_{DC1} / S_s
$f_s DC2$:	Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi). $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.
$f_s DW$:	Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi). $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.
$f_s (L + IM)$:	Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi). $M_L + IM / S_c(n)$ or $M_L + IM / S_c(cr)$ as applicable.
$f_s + f_t / 2$ (Service II):	Sum of stresses as computed below (ksi). $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L + IM) + f_t / 2$
Service II Resistance:	Composite (0.95R _{nF_{yr}}) or noncomposite (0.80R _{nF_{yr}}) stress capacity according to Article 6.10.4.2 (ksi).
$f_s + f_t / 3$ (Strength I):	Sum of stresses as computed below on non-compact sections (ksi). $1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (L + IM) + f_t / 3$
$\Phi_f F_n$:	Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).
V_f :	Maximum factored shear range in span computed according to Article 6.10.10.
OCF:	Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
R_{DC1} :	Un-factored reaction due to non-composite dead load (kip).
R_{DC2} :	Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
R_{DW} :	Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
R_L :	Un-factored live load reaction (kip).
R_{IM} :	Un-factored dynamic load allowance (impact) (kip).
Strength I (Impact):	Strength I load combination of factored design reactions (kip). $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_L + R_{IM})$
Strength I (No Impact):	Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip). $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_L)$

MODEL Default:
FILE NAME: p:\projtrans\systems-pw\bartley.com\trans\corp\pw\labeled\Documents\Projects_2018\CH4001401180022703-WSP\CAD\62R23-RB-1\Sheet\Structure\0998309-62R23-5570-84109.dgn



CAMBER DIAGRAM - UNIT 2

CAMBER DIMENSIONS - UNIT 2

Location	☐ E. Brg. Pier 2	A1	A2	A3	☐ FS1	B1	B2	B3	☐ FS2	C1	☐ Brg. Pier 3	C2	☐ FS3	D1	D2	D3	☐ FS4	E1	E2	E3
Girder E1 to E8	0"	2½"	3⅝"	3"	0"	1⅝"	1¾"	1¼"	0"	-2½"	-3⅝"	-2⅝"	0"	⅝"	⅞"	¾"	0"	3½"	4⅝"	3½"
Girder W1 to W8	0"	2½"	3⅝"	2⅝"	0"	1⅝"	1¾"	1¼"	0"	-2½"	-3⅝"	-2⅝"	0"	⅝"	⅞"	⅞"	0"	3½"	4⅝"	3½"

CAMBER DIMENSIONS - UNIT 2 (CONT.)

Location	☐ FS5	F1	F2	F3	☐ FS6	G1	☐ Brg. Pier 4	G2	☐ FS7	H1	H2	H3	☐ FS8	I1	I2	I3	☐ W. Brg. Pier 5
Girder E1 to E8	0"	¾"	⅞"	⅝"	0"	-2⅝"	-3⅝"	-2½"	0"	1¼"	1¾"	1⅝"	0"	3"	3⅝"	2½"	0"
Girder W1 to W8	0"	⅞"	⅞"	⅝"	0"	-2⅝"	-3"	-2⅝"	0"	1¼"	1¾"	1½"	0"	2½"	3"	2⅝"	0"

TOP OF WEB ELEVATION - UNIT 2 EB

(For Fabrication Only)

Location	☐ E. Brg. Pier 2	☐ FS1	☐ FS2	☐ Brg. Pier 3	☐ FS3	☐ FS4	☐ FS5	☐ FS6	☐ Brg. Pier 4	☐ FS7	☐ FS8	☐ W. Brg. Pier 5
Girder E1	601.250	603.004	602.778	602.598	602.938	603.297	602.033	600.259	598.691	597.644	595.890	591.681
Girder E2	601.441	603.196	602.970	602.790	603.130	603.488	602.225	600.451	598.883	597.836	596.081	591.872
Girder E3	601.633	603.388	603.161	602.981	603.322	603.680	602.416	600.642	599.075	598.028	596.273	592.064
Girder E4	601.789	603.543	603.317	603.137	603.477	603.836	602.572	600.798	599.230	598.183	596.429	592.219
Girder E5	601.789	603.543	603.317	603.137	603.477	603.836	602.572	600.798	599.230	598.183	596.429	592.219
Girder E6	601.633	603.388	603.161	602.981	603.322	603.680	602.416	600.642	599.075	598.028	596.273	592.064
Girder E7	601.441	603.196	602.970	602.790	603.130	603.488	602.225	600.451	598.883	597.836	596.081	591.872
Girder E8	601.250	603.004	602.778	602.598	602.938	603.297	602.033	600.259	598.691	597.644	595.890	591.681

TOP OF WEB ELEVATION - UNIT 2 WB

(For Fabrication Only)

Location	☐ E. Brg. Pier 2	☐ FS1	☐ FS2	☐ Brg. Pier 3	☐ FS3	☐ FS4	☐ FS5	☐ FS6	☐ Brg. Pier 4	☐ FS7	☐ FS8	☐ W. Brg. Pier 5
Girder W1	601.583	603.157	602.796	602.539	602.806	603.082	601.658	599.772	598.089	596.914	594.953	590.933
Girder W2	601.775	603.349	602.987	602.730	602.998	603.274	601.849	599.964	598.281	597.106	595.145	591.124
Girder W3	601.967	603.540	603.179	602.922	603.190	603.465	602.041	600.156	598.473	597.297	595.337	591.316
Girder W4	602.122	603.696	603.334	603.078	603.345	603.621	602.197	600.311	598.628	597.453	595.492	591.471
Girder W5	602.122	603.696	603.334	603.078	603.345	603.621	602.197	600.311	598.628	597.453	595.492	591.471
Girder W6	601.967	603.540	603.179	602.922	603.190	603.465	602.041	600.156	598.473	597.297	595.337	591.316
Girder W7	601.775	603.349	602.987	602.730	602.998	603.274	601.849	599.964	598.281	597.106	595.145	591.124
Girder W8	601.583	603.157	602.796	602.539	602.806	603.082	601.658	599.772	598.089	596.914	594.953	590.933

NOTES:

1. Camber values shown here were developed based on the deck pour sequence shown on sheet S-124.
2. Any deviation from the pouring sequence will result in changes to the camber. If the contractor chooses to change the sequence, then the proposed plan revisions and design calculations shall be submitted to the engineer for review and approval. The plan and calculations shall be prepared and sealed by a Licensed Structural Engineer in Illinois.
3. The theoretical deflections used to determine the girder camber values and top of web elevations shown in these tables include the weight of steel, deck concrete, and the parapets. The net effects of temporary formwork, assumed to be 10psf of the deck surface area, placed on the noncomposite structure and later removed from the composite structure are included in these theoretical deflections.



WSP USA Inc.
30 N. LA SALLE STREET
SUITE 4000
CHICAGO, IL 60602
TEL: (312) 782-8150
FAX: (312) 782-1684

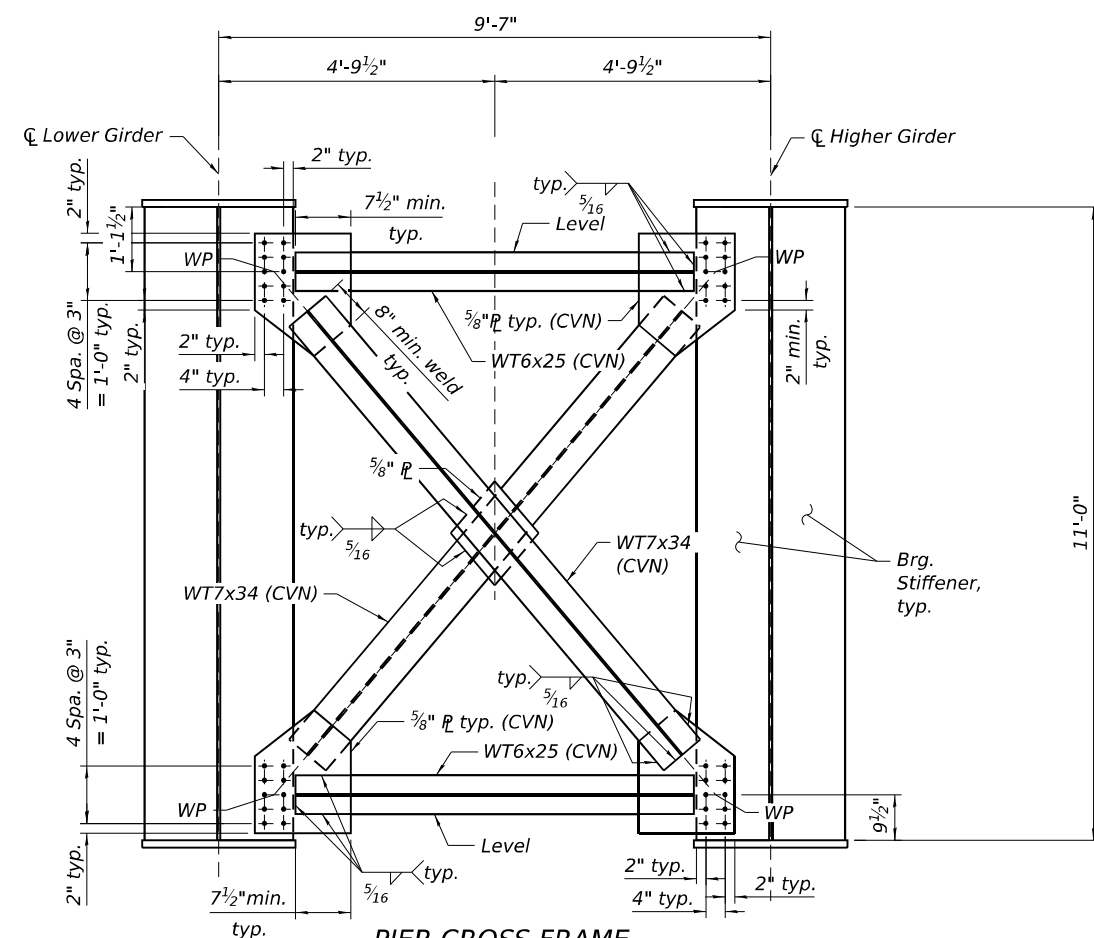
USER NAME = USSJ696614	DESIGNED - KB	REVISED -
	CHECKED - PSK	REVISED -
PLOT SCALE = 62:6 " = 1"	DRAWN - KB	REVISED -
PLOT DATE = 11/5/2025	CHECKED - PSK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

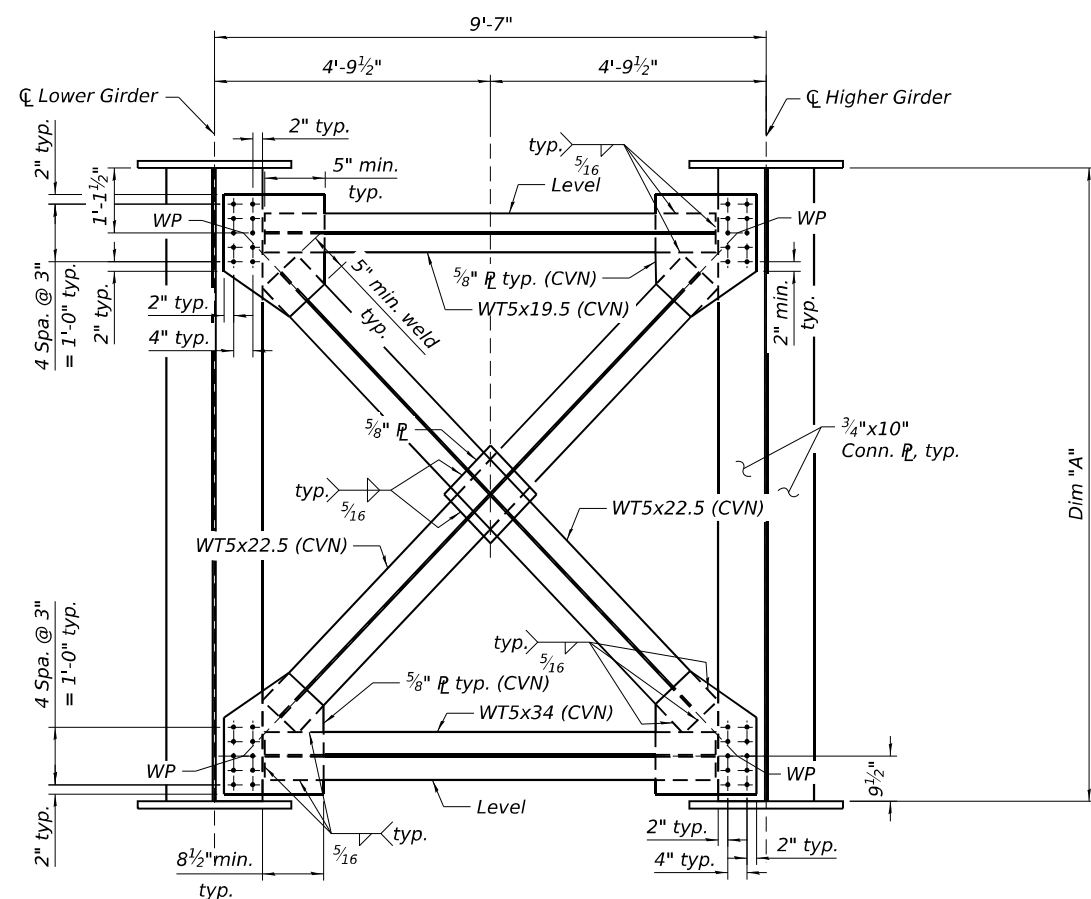
CAMBER DIAGRAM - UNIT 2 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-215 OF S-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	796
CONTRACT NO. 62R23				
ILLINOIS		FED. AID PROJECT		



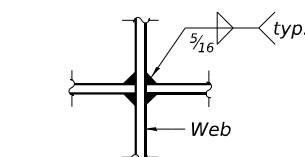
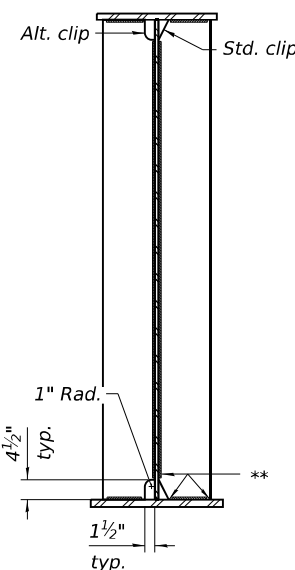
PIER CROSS FRAME
At Piers 3 & 4
(CF-2 - 14 Required EB, 14 Required WB)



INTERIOR CROSS FRAME
(CF-3, CF-4, & CF-5)

Cross Frame	Web Dim "A"	Number Required *			
		Span 3	Span 4	Span 5	Total
CF-3	9'-8"	70	91	70	231
CF-4	9'-10"	7	14	7	28
CF-5	10'-6"	7	14	7	28

* Number required per structure EB & WB.



WEB WELD DETAIL

WELD LIMITS AND CLIP DETAILS

** Stop welds 1/4" ($\pm 1/6$ ") from edges as shown.
Typical.

NOTES:

- All steel for the cross frames and connection plates shall conform to the requirements of AASHTO M270 Grade 50W, unless otherwise noted.
- All steel for the bearing stiffeners, jacking stiffeners and transverse stiffeners shall conform to the requirements of AASHTO M270 Grade 50W.
- For location of cross frames, see sheets S-207 to S-212.
- All bolted cross frame connections shall be ASTM F3125, Grade A325 Type 3, 7/8"Ø bolts in 1 1/16"Ø holes, unless otherwise noted.
- Two hardened washers required for each oversized hole.
- Class B contact surface, for slip resistance, shall be provided for all crossframes.
- All cross frames between girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor bolts.
- Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR CROSS FRAME DETAILS - UNIT 2 WB & EB
STRUCTURE NUMBER 099-8309 WB AND 099-8325 EB

SHEET S-217 OF 5-333 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-80	FAI 80 21 STRUCTURE 2	WILL	1230	798
CONTRACT NO. 62R23				
ILLINOIS FED. AID PROJECT				

USER NAME	= USSJ696614
DESIGNED	- KB
CHECKED	- LAS
DRAWN	- BK
CHECKED	- PSK
PLOT DATE	= 11/5/2025

REVISED	-
REVISED	-
REVISED	-
REVISED	-

