STRUCTURE NO. 8C082I255R014.9

STA. 667+32 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURE
PROPOSED GUIDE SIGN ON STRUCTURE

SIGN PANEL REMOVAL - TYPE 3, 150 SF
SIGN PANEL - TYPE 3, 131.8 SF

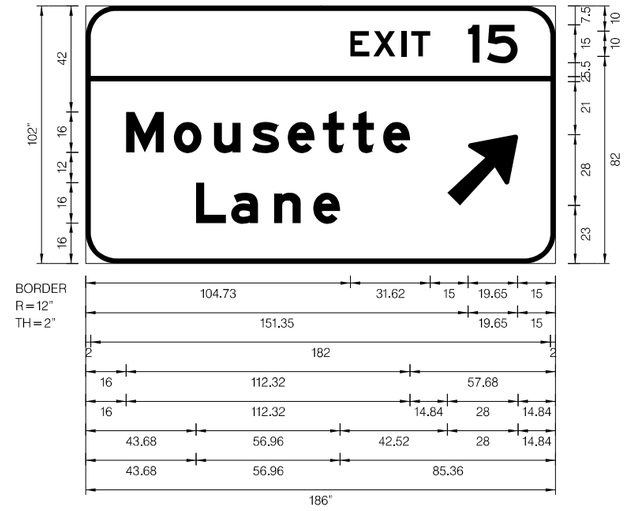
PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL

1:60

WIDTH x HGHT.	186" x 102"	
BORDER WIDTH	2"	
CORNER RADIUS	12"	
MOUNTING	Overhead	
BACKGROUND	TYPE:	Reflective – ZZ
	COLOR:	Green
LEGEND/BORDER	TYPE:	Reflective – ZZ
	COLOR:	White

SYMBOL	ROT	X	Y	WID	HT
Exit Arrow (Type A) 2012	315	143.16	23	22.25	35.65



Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																												SERIES-SIZE
	E		X		I		T		1		5																	E 2000
104.73	7.5	1.68	8.7	2.4	1.8	2.04	7.5	15	4.5	3.0	12.15	15																10,15
	M		o		u		s		e		t		t		e													EM 2000
16.0	14.88	4	10.88	4.96	10.56	4.64	10.56	3.52	10.56	3.36	8.32	3.52	8.32	3.68	10.56	57.68												1612
	L		a		n		e																					EM 2000
43.68	11.84	2.08	10.56	6.4	10.56	4.96	10.56	85.36																				1612

ABNA
DESIGN FIRM REG. 184.002117
745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
Ph. 773-681-4788
www.abnacorp.com

USER NAME = muddin	DESIGNED - MSU	REVISED -	
	DRAWN - MSU	REVISED -	
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -	
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 22 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	201
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: J:\2023\96044\WO 2\Cadd\Design\Plans\D9376403-Sign-022.dgn

STA. 671+82 FAI-255 NORTH BOUND
EXISTING STANDARD SIGN ON WOOD SIGN SUPPORT
PROPOSED STANDARD SIGN E5-1a ON WOOD SIGN SUPPORT AT STA 671+87 OFFSET +64 FT

SIGN PANEL REMOVAL - TYPE 3, 27.1 SF
SIGN PANEL - TYPE 3, 32.5 SF

PHOTO COURTESY OF GOOGLE EARTH

ABNA
DESIGN FIRM REG. 184.002117
745 McClintock Drive
Suite 210
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Ph. 773-681-4788
www.abnacorp.com

USER NAME = muddin	DESIGNED - MSU	REVISED -
	DRAWN - MSU	REVISED -
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 23 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	202
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: J:\2023\60441WO 2\Cadd\Design\Plbn\0876K05-Sign-023.dgn

STA. 692+40 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT
PROPOSED GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT AT STA 692+45

STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY									CONCRETE FOUNDATIONS	SIGN PANEL - TYPE 3	SIGN PANEL REMOVAL - TYPE 3
SIZE	NEAR POST		MIDDLE POST		FAR POST		STUB POST (FT)	WEIGHT (POUND)			
	OFFSET (FT)	LENGTH (FT)	OFFSET (FT)	LENGTH (FT)	OFFSET (FT)	LENGTH (FT)			CU YD	SF	SF
W16X45	84.39	29.88	89.63	33.03	94.88	35.26	10.5	4890.15	6.69	315	315

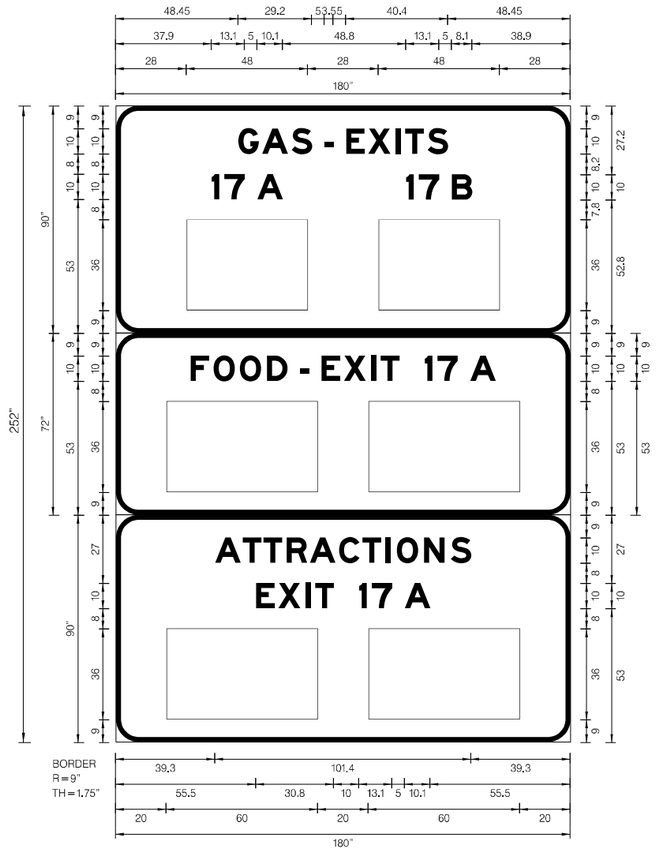
PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL

1:60

WIDTH x HGHT.	180" x 252"	
BORDER WIDTH	2"	
CORNER RADIUS	9"	
MOUNTING	Ground	
BACKGROUND	TYPE:	Reflective – AP
	COLOR:	Blue
LEGEND/BORDER	TYPE:	Reflective – AP
	COLOR:	White

SYMBOL	ROT	X	Y	WID	HT



Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																											SERIES-SIZE
	G		A		S		–		E		X		I		T		S										EM 2000
48.45	8.1	1.4	10.1	1.5	8.1	5	3.5	5	7.4	1.4	8.7	2.1	2	1.8	7.4	1.5	8.1	48.45									10
	1		7		A		1		7		B																EM 2000
37.9	3	2	8.1	5	10.1	48.8	3	2	8.1	5	8.1	38.9															10
	F		O		O		D		–		E		X		I		T		1		7		A				EM 2000
29.55	7.4	1.7	8.4	2	8.4	2.4	8.1	5	3.5	5	7.4	1.4	8.7	2.1	2	1.8	7.4	10	3	2	8.1	5	10.1	29.55				10
	A		T		T		R		A		C		T		I		O		N		S						EM 2000
39.3	10.1	0.8	7.4	0.8	7.4	1.8	8.1	1.1	10.1	1.4	8.1	1.2	7.4	1.8	2	2.2	8.4	2.4	8.1	2.5	8.1	39.3						10
	E		X		I		T		1		7		A														EM 2000
55.5	7.4	1.4	8.7	2.1	2	1.8	7.4	10	3	2	8.1	5	10.1	55.5														10

MODEL: Default
FILE NAME: J:\2021\76044\WO 2\Cadd\Design\Plan\0876K05-Sign-024.dgn

ABNA DESIGN FIRM REG. 184.002117
745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
Ph. 773-681-4788
www.abnacorp.com

USER NAME = muddin	DESIGNED - MSU	REVISED -	
	DRAWN - MSU	REVISED -	
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -	
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 24 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	203
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

STA. 748+20 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT
PROPOSED GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT AT STA 748+25

STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY									CONCRETE FOUNDATIONS	SIGN PANEL - TYPE 3	SIGN PANEL REMOVAL - TYPE 3
SIZE	NEAR POST		MIDDLE POST		FAR POST		STUB POST (FT)	WEIGHT (POUND)			
	OFFSET (FT)	LENGTH (FT)	OFFSET (FT)	LENGTH (FT)	OFFSET (FT)	LENGTH (FT)			CU YD	SF	SF
W16X45	68.33	28.47	74.45	30.01	80.56	33.31	10.5	4603.05	6.69	297.5	332.5

PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL
1:60

WIDTH x HGHT.	210" x 204"	
BORDER WIDTH	2"	
CORNER RADIUS	12"	
MOUNTING	Ground	
BACKGROUND	TYPE:	Reflective – ZZ
	COLOR:	Green
LEGEND/BORDER	TYPE:	Reflective – ZZ
	COLOR:	White

SYMBOL	ROT	X	Y	WID	HT
M1–I100A	0	87	126	36	36

Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																											SERIES-SIZE
	E		X		I		T		S		1		7		A		–		B								E 2000
67.06	7.5	1.68	8.7	2.4	1.8	2.04	7.5	1.32	8.1	15	4.5	2.55	12.15	8	15.3	5	5.25	7.5	12.15	15							10,15
	B		e		l		l		e		v		i		I		l		e								EM 2000
46.04	12.96	3.04	10.56	4.96	3.2	6.4	3.2	4.96	10.56	3.2	12.32	4.64	3.2	6.4	3.2	6.4	3.2	4.96	10.56	46.04							1612
	M		i		s		s		o		u		r		i		A		v		e						EM 2000
22.92	14.88	5.44	3.2	4.64	10.56	3.2	10.56	3.52	10.88	4.96	10.56	6.4	8	3.84	3.2	16	16.16	2.08	12.32	3.2	10.56	22.92					1612
	E		a		s		t		S		t		L		o		u		i		s						EM 2000
18.04	11.84	2.88	10.56	4.64	10.56	3.36	8.32	16	12.96	3.36	8.32	16	11.84	2.08	10.88	4.96	10.56	6.4	3.2	4.64	10.56	18.04					1612
	1		M		I		L		E																		E 2000
78.7	4.5	15	9.4	2.6	1.8	2.6	7.5	1.7	7.5	78.7																	15,10

MODEL: Default
FILE NAME: J:\2021\6044\WO 2\Cadd\Design\Plan\D876K05-Sign-025.dgn

ABNA DESIGN FIRM REG. 184.002117
745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
Ph. 773-881-4788
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USER NAME = muddin	DESIGNED - MSU	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGNING PLANS
	DRAWN - MSU	REVISED -		
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -		SCALE: SHEET 25 OF 35 SHEETS STA. TO STA.
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -		

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	204
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

STA. 769+96 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT
PROPOSED GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT AT STA 761+70

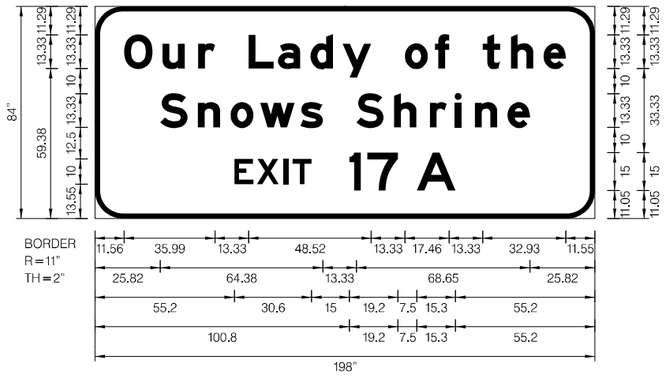
STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY							CONCRETE FOUNDATIONS	SIGN PANEL - TYPE 3	SIGN PANEL REMOVAL - TYPE 3
SIZE	NEAR POST		FAR POST		STUB POST (FT)	WEIGHT (POUND)			
	OFFSET (FT)	LENGTH (FT)	OFFSET (FT)	LENGTH (FT)			CU YD	SF	SF
W10X26	66.9	17.33	72.59	20.45	6	1138.28	2.54	115.5	111.1

PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL
1:60

WIDTH x HGHT.	198" x 84"	
BORDER WIDTH	2"	
CORNER RADIUS	11"	
MOUNTING	Ground	
BACKGROUND	TYPE:	Reflective
	COLOR:	Brown
LEGEND/BORDER	TYPE:	Reflective
	COLOR:	White

SYMBOL	ROT	X	Y	WID	HT



Panel Style: guide_fwy_recreational.ssi
M.U.T.C.D.: 2009 Edition

Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																											SERIES-SIZE
	O		u		r		L		a		d		y		o		f		t		h		e				EM 2000
11.56	11.2	4.0	8.8	5.33	6.67	13.33	9.86	1.74	8.8	12.93	8.8	3.86	11.33	13.33	9.06	2.8	5.6	13.33	6.93	4.27	8.8	4.13	8.8	11.56				13.33 10
	S		n		o		w		s		S		h		r		i		n		e						EM 2000
25.82	10.8	4.13	8.8	4.13	9.06	2.67	13.6	2.4	8.8	13.33	10.8	4.13	8.8	5.33	6.67	3.19	2.67	5.33	8.8	4.13	8.8	25.82						13.33 10
	E		X		I		T		1		7		A														E 2000
55.2	7.5	1.4	8.7	2.0	1.8	1.7	7.5	15	4.5	2.55	12.15	7.5	15.3	55.2													10,15

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Suite 210
Burr Ridge, IL 60527
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USER NAME = murddin	DESIGNED - MSU	REVISED -	
	DRAWN - MSU	REVISED -	
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -	
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 26 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	205
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: J:\2021\6044\WO 2\Cadd\Design\Plan\D876K05-Sign-026.dgn

STA. 776+04 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT
PROPOSED GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT AT STA 769+80

STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY							CONCRETE FOUNDATIONS	SIGN PANEL - TYPE 3	SIGN PANEL REMOVAL - TYPE 3
SIZE	NEAR POST		FAR POST		STUB POST (FT)	WEIGHT (POUND)			
	OFFSET (FT)	LENGTH (FT)	OFFSET (FT)	LENGTH (FT)			CU YD	SF	SF
W8X18	82.9	19.0	88.59	19.87	5	789.66	1.4	95	171.7

PHOTO COURTESY OF GOOGLE EARTH

ILLINOIS STANDARD
D11-I101

COLOR			
	WHEEL & BORDER	BROWN	REFLECTORIZED
	CASINO & BACKGROUND	WHITE	REFLECTORIZED

SIGN SIZE	DIMENSIONS	
	A	B
24 X 24	24.00	1.50

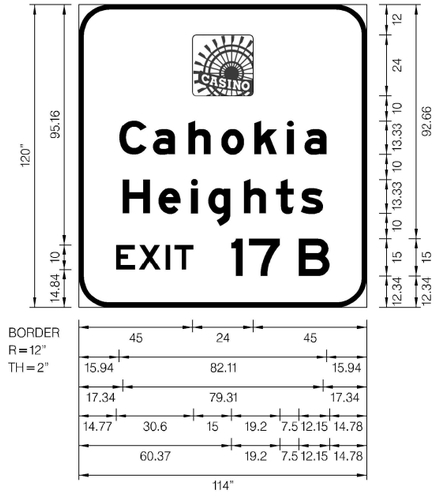
SIGN SIZE	MARGIN	BORDER
24 X 24	0.50	0.50

All dimensions in inches. Sign not to scale.

SIGN DETAIL
1:60

WIDTH x HGHT.	114" x 120"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective – ZZ
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective – ZZ
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT
D11–I101	0	45	84	24	24



Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																														SERIES-SIZE
	C		a		h		o		k		i		a																	EM 2000
15.94	10.8	2.53	8.8	5.33	8.8	4.13	9.06	4.14	8.8	4.13	2.67	4.13	8.8	15.94																13.3310
	H		e		i		g		h		t		s																	EM 2000
17.34	10.8	3.33	8.8	4.13	2.67	4.13	8.8	5.33	8.8	4.0	6.93	2.8	8.8	17.34																13.3310
	E		X		I		T		1		7		B																	E 2000
14.78	7.5	1.4	8.7	2.0	1.8	1.7	7.5	15	4.5	2.55	12.15	7.5	12.15	14.78																10,15

MODEL: Default
FILE NAME: J:\2023\6644\WO 2\Cadd\Design\Plan\0876K05-Sign-027.dgn

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745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
Ph. 773-881-4788
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USER NAME = muddin	DESIGNED - MSU	REVISED -	
	DRAWN - MSU	REVISED -	
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -	
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 27 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	206
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

STA. 787+79 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT
PROPOSED GUIDE SIGN ON STRUCTURAL STEEL SIGN SUPPORT AT STA 777+90

NOTE:
THE PROPOSED SIGN IS MOVED TO THE LOCATION 989 FT SOUTH FROM EXISTING LOCATION ALONG I-255 NB (APPROXIMATELY 1/2 MILE BEFORE EXIT 17 A) BECAUSE OF THE OBSTRUCTION BY NOISE WALL.

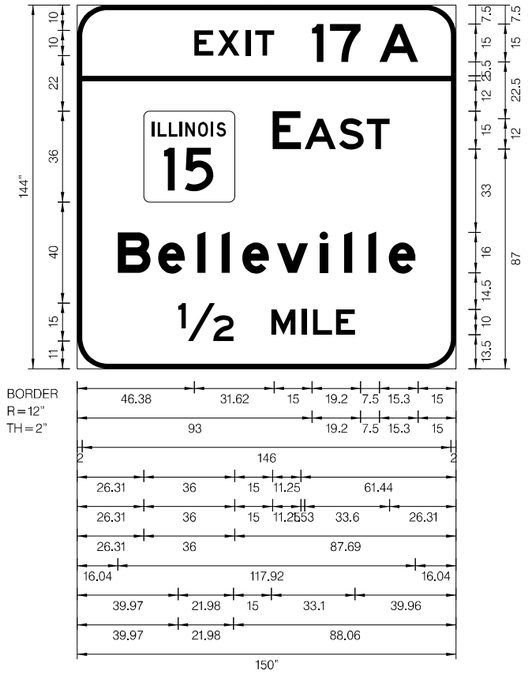
STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY							CONCRETE FOUNDATIONS	SIGN PANEL - TYPE 3	SIGN PANEL REMOVAL - TYPE 3
SIZE	NEAR POST		FAR POST		STUB POST (FT)	WEIGHT (POUND)			
	OFFSET (FT)	LENGTH (FT)	OFFSET (FT)	LENGTH (FT)			CU YD	SF	SF
W14X30	67.5	20.96	75	23.4	6	1510.8	3.8	150	186.5

PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL
1:60

WIDTH x HGHT.	150" x 144"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective – ZZ
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective – ZZ
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT
M1-I100A	0	26.31	66	36	36



Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																												SERIES-SIZE
	E		X		I		T		1		7		A															E 2000
46.38	7.5	1.68	8.7	2.4	1.8	2.04	7.5	15	4.5	2.55	12.15	8	15.3	15														10,15
	E		A		S		T																					E 2000
77.31	11.25	1.53	12.24	1.32	9.72	1.32	9	26.31																				15,12
	B		e		l		l		e		v		i		l		l		e									EM 2000
16.04	12.96	3.04	10.56	4.96	3.2	6.4	3.2	4.96	10.56	3.2	12.32	4.64	3.2	6.4	3.2	6.4	3.2	4.96	10.56	16.04								16,12
	12		M		I		L		E																			E 2000
39.96	21.98	15	9.4	2.6	1.8	2.6	7.5	1.7	7.5	39.96																		15,10

MODEL: Default
FILE NAME: J:\2021\6044\WO 2\Cadd\Design\Plan\D876K05-Sign-028.dgn

ABNA DESIGN FIRM REG. 184.002117
745 McClintock Drive
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Burr Ridge, IL 60527
Ph. 773-881-4788
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USER NAME = muddin	DESIGNED - MSU	REVISED -	
	DRAWN - MSU	REVISED -	
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -	
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 28 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	207
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

STRUCTURE NO. 8S082I255R016.5

STA. 801+00 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURE
PROPOSED GUIDE SIGN ON STRUCTURE

SIGN PANEL REMOVAL - TYPE 3, 222.8 SF
SIGN PANEL - TYPE 3, 253.8 SF

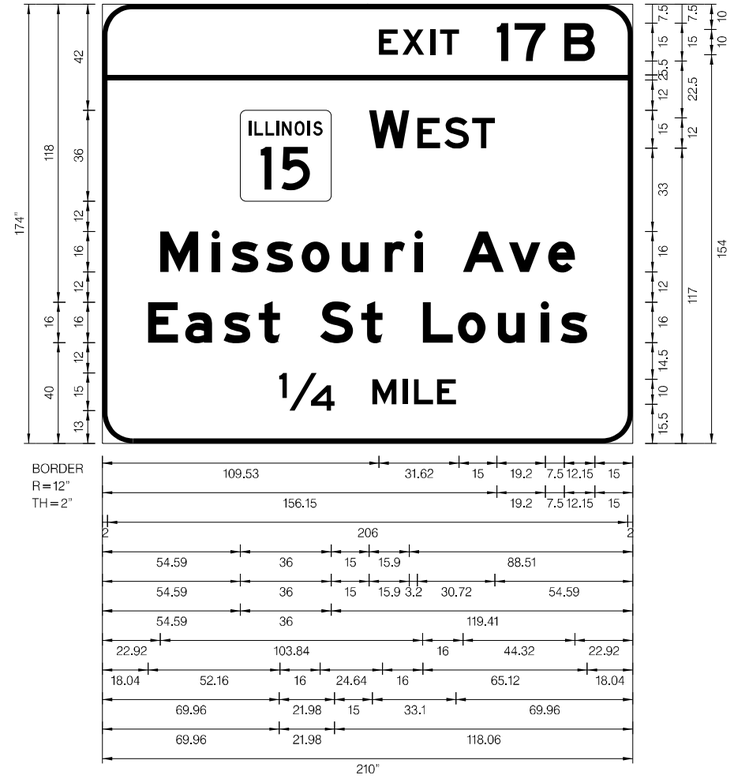
PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL

1:60

WIDTH x HGHT.	210" x 174"	
BORDER WIDTH	2"	
CORNER RADIUS	12"	
MOUNTING	Overhead	
BACKGROUND	TYPE:	Reflective – ZZ
	COLOR:	Green
LEGEND/BORDER	TYPE:	Reflective – ZZ
	COLOR:	White

SYMBOL	ROT	X	Y	WID	HT
M1-I100A	0	54.59	96	36	36



Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																											SERIES-SIZE
	E		X		I		T		1		7		B														E 2000
109.53	7.5	1.68	8.7	2.4	1.8	2.04	7.5	15	4.5	2.55	12.15	8	12.15	15													10,15
	W		E		S		T																				E 2000
105.59	15.9	3.2	9	1.68	9.72	1.32	9	54.59																			15,12
	M		i		s		s		o		u		r		i		A		v		e						EM 2000
22.92	14.88	5.44	3.2	4.64	10.56	3.2	10.56	3.52	10.88	4.96	10.56	6.4	8	3.84	3.2	16	16.16	2.08	12.32	3.2	10.56	22.92					16\12
	E		a		s		t		S		t		L		o		u		i		s						EM 2000
18.04	11.84	2.88	10.56	4.64	10.56	3.36	8.32	16	12.96	3.36	8.32	16	11.84	2.08	10.88	4.96	10.56	6.4	3.2	4.64	10.56	18.04					16\12
	14		M		I		L		E																		E 2000
69.96	21.98	15	9.4	2.6	1.8	2.6	7.5	1.7	7.5	69.96																	15,10

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 29 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	208
		CONTRACT NO. 76K05		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
FILE NAME: J:\2021\6044\WO 2\Cadd\Design\Plan\0876K05-Sign-029.dgn

STRUCTURE NO. 8S082I255R016.5

STA. 801+00 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURE
PROPOSED GUIDE SIGN ON STRUCTURE

SIGN PANEL REMOVAL - TYPE 3, 131.4 SF
SIGN PANEL - TYPE 3, 155 SF

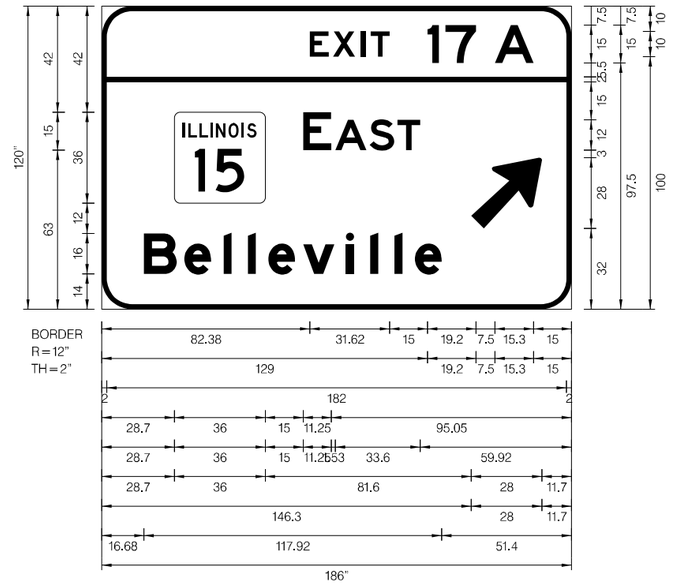
PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL

1:60

WIDTH x HGHT.	186" x 120"	
BORDER WIDTH	2"	
CORNER RADIUS	12"	
MOUNTING	Overhead	
BACKGROUND	TYPE:	Reflective – ZZ
	COLOR:	Green
LEGEND/BORDER	TYPE:	Reflective – ZZ
	COLOR:	White

SYMBOL	ROT	X	Y	WID	HT
M1–I100 –1	0	28.7	46	36	36
Exit Arrow (Type A) 2012	315	146.3	32	22.25	35.65



Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																												SERIES-SIZE
	E		X		I		T		1		7		A															E 2000
81.9	7.5	1.68	8.7	2.4	1.8	2.04	7.5	15	4.5	2.55	12.15	8	15.3	16														10,15
	E		A		S		T																					E 2000
79.7	11.25	1.53	12.24	1.32	9.72	1.32	9	59.92																				15,12
	B		e		l		l		e		v		i		l		l		e									EM 2000
16.68	12.96	3.04	10.56	4.96	3.2	6.4	3.2	4.96	10.56	3.2	12.32	4.64	3.2	6.4	3.2	6.4	3.2	4.96	10.56	51.4								1612

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FILE NAME: J:\2023\6044\WO 2\Cadd\Design\Plans\087E605-Sign-030.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 30 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	209
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

STRUCTURE NO. 8C082I255R016.8

STA. 822+36 FAI-255 NORTH BOUND
EXISTING GUIDE SIGN ON STRUCTURE
PROPOSED GUIDE SIGN ON STRUCTURE

SIGN PANEL REMOVAL - TYPE 3, 213.6 SF
SIGN PANEL - TYPE 3, 250 SF

PHOTO COURTESY OF GOOGLE EARTH

SIGN DETAIL

1:60

WIDTH x HGHT.	240" x 150"	
BORDER WIDTH	2"	
CORNER RADIUS	12"	
MOUNTING	Overhead	
BACKGROUND	TYPE:	Reflective – ZZ
	COLOR:	Green
LEGEND/BORDER	TYPE:	Reflective – ZZ
	COLOR:	White

SYMBOL	ROT	X	Y	WID	HT
M1–I100A	0	69.59	72	36	36
Exit Arrow (Type A) 2012	315	210.56	47	22.25	35.65

Dimensions are in Inches (")

LETTER WIDTHS AND SPACES																												SERIES-SIZE
	E		X		I		T		t		7		B															E 2000
139.53	7.5	1.68	8.7	2.4	1.8	2.04	7.5	15	4.5	2.55	12.15	8	12.15	15														10,15
	W		E		S		T																					E 2000
120.59	15.9	3.2	9	1.68	9.72	1.32	9	69.59																				15,12
	M		i		s		s		o		u		r		i		A		v		e							EM 2000
22.08	14.88	5.44	3.2	4.64	10.56	3.2	10.56	3.52	10.88	4.96	10.56	6.4	8	3.84	3.2	16	16.16	2.08	12.32	3.2	10.56	53.76						1612
	E		a		s		t		S		t		L		o		u		i		s							EM 2000
17.2	11.84	2.88	10.56	4.64	10.56	3.36	8.32	16	12.96	3.36	8.32	16	11.84	2.08	10.88	4.96	10.56	6.4	3.2	4.64	10.56	48.88						1612

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 31 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	210
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

STA. 824+22 FAI-255 NORTH BOUND
EXISTING STANDARD SIGN ON WOOD SIGN SUPPORT
PROPOSED STANDARD SIGN E5-1a ON WOOD SIGN SUPPORT AT STA 824+29 OFFSET +55 FT

SIGN PANEL REMOVAL - TYPE 3, 33.4 SF
SIGN PANEL - TYPE 3, 45 SF

PHOTO COURTESY OF GOOGLE EARTH

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	DRAWN - MSU	REVISED -
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS

SCALE: | SHEET 32 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	211
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

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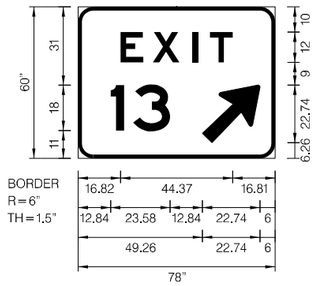
FILE NAME: J:\2023\60441WO 2\Cadd\Design\Plan\0876K05-Sign-032.dgn

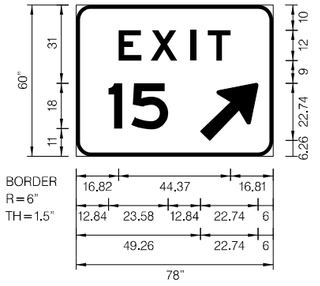
STANDARD SIGN E5-1a

FROM MUTCD TABLE 2E-1

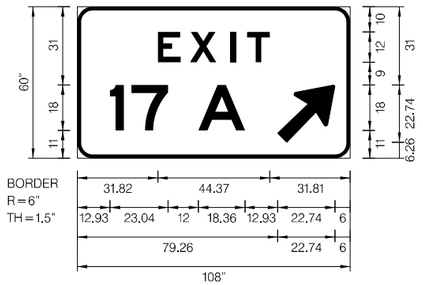
Sign or Plaque	Sign Designation	Section	Minimum Size
Exit Gore (with exit number)			
1-, 2-Digit Exit Number	E5-1a	2E.37	78 x 60
3-Digit Exit Number	E5-1a	2E.37	96 x 60
1-Digit Exit Number (with single letter suffix)	E5-1a	2E.37	90 x 60
2-Digit Exit Number (with single letter suffix)	E5-1a	2E.37	108 x 60
3-Digit Exit Number (with single letter suffix)	E5-1a	2E.37	126 x 60
1-Digit Exit Number (with dual letter suffix)	E5-1a	2E.37	120 x 60
2-Digit Exit Number (with dual letter suffix)	E5-1a	2E.37	138 x 60
3-Digit Exit Number (with dual letter suffix)	E5-1a	2E.37	156 x 60



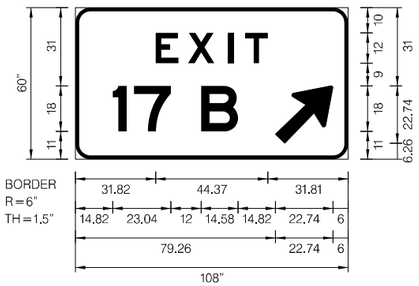
STA 587+15 SB &
STA 579+40 NB



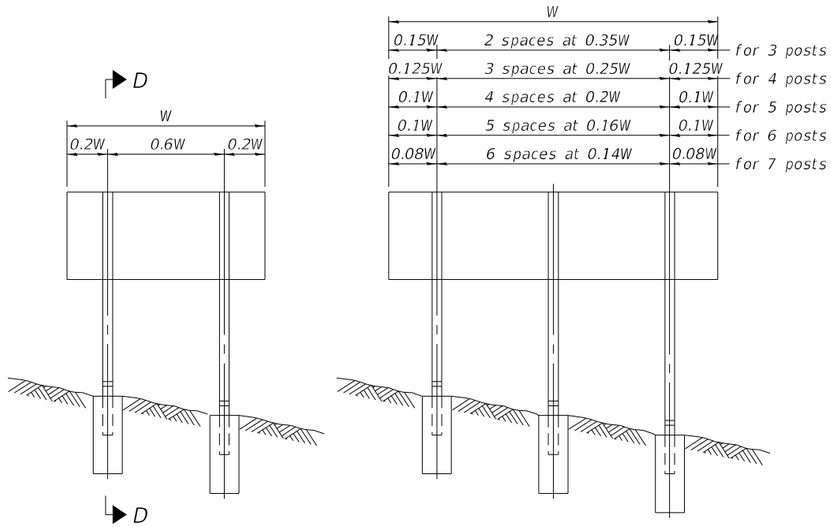
STA 696+36 SB (NEW) &
STA 671+87 NB



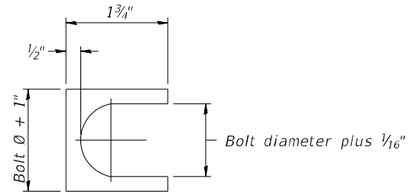
STA 805+47 NB (NEW)



STA 824+28 NB

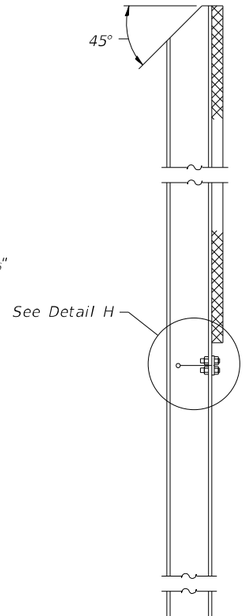


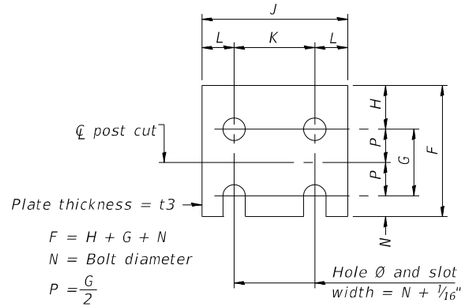
ELEVATION



SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

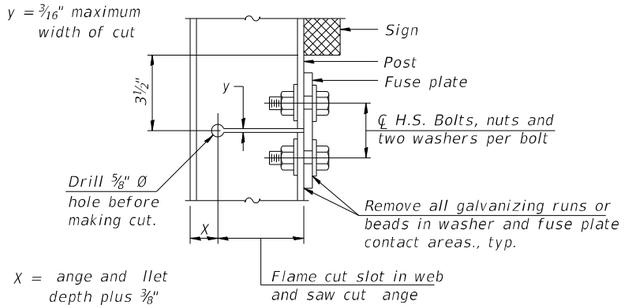




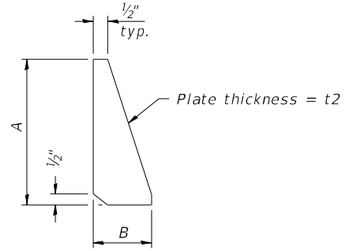
FUSE PLATE DATA		
N = Bolt Diameter	G	H
½"	2"	1⅛"
⅝"	2¼"	1¼"
¾"	2½"	1⅜"
⅞"	2¾"	1½"
1"	3"	1⅝"
1⅛"	3¼"	1¾"
1¼"	3½"	1⅞"

FUSE PLATE DETAIL

(Install with notches down.)

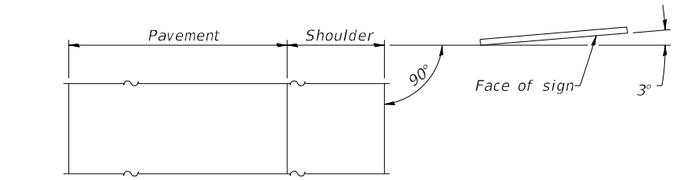


DETAIL H

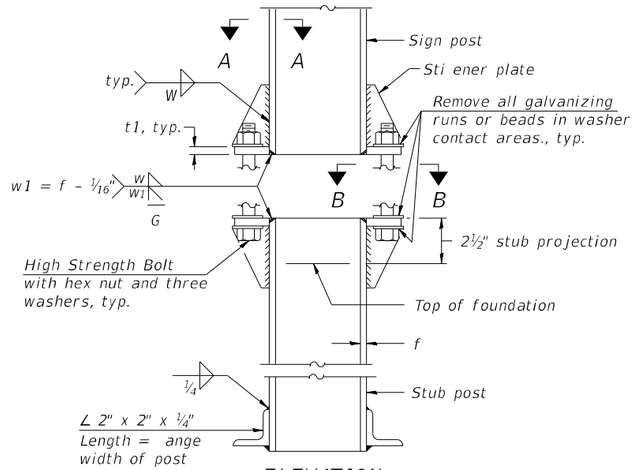


STIFFENER PLATE DETAIL

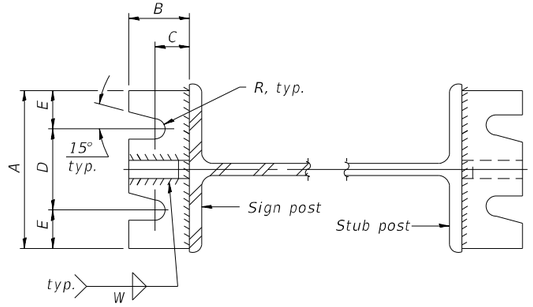
Diameter



LOCATION SKETCH

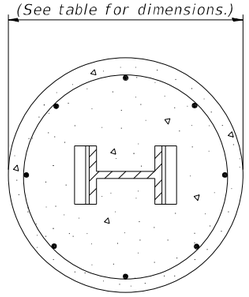


ELEVATION
SIGN POST & STUB POST

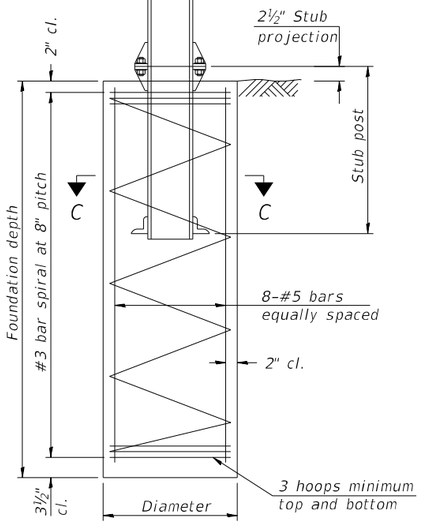


SECTION A-A

SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
Structural steel - 20,000 p.s.i.
Reinforcing steel - 20,000 p.s.i.
Concrete - 1,400 p.s.i.
Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.

BAW-A-1 2-17-2017

(Sheet 1 of 2)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE STEEL SIGN POST DETAILS

SCALE: | SHEET 34 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	213
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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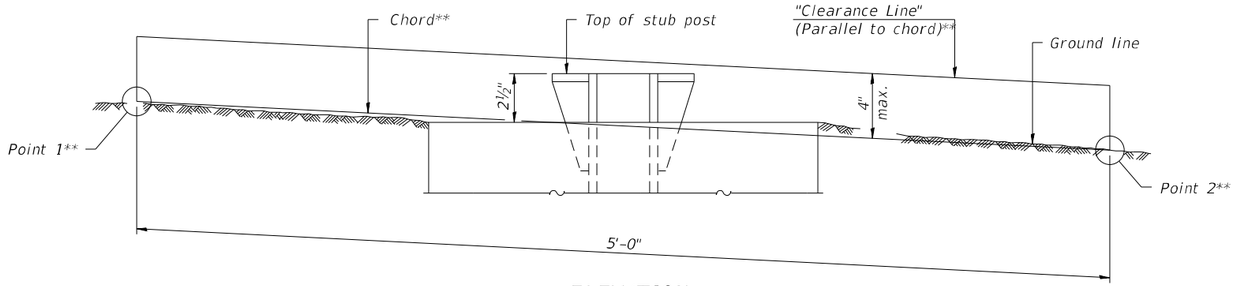
POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA			
	Foundation			Reinforcement				Stub Post														
	Diameter	* Minimum Depth	Concrete (1) cu. yds.)	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length	lbs. (2)	Length	Bolt Size	A	B	C	D	E	t1	t2	R	W	J	K	L	t3
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8½"	79'-0"	78	2'-3"	⅝" x 3¼"	6"	2¼"	1¼"	3½"	1⅛"	¾"	½"	11/32"	¼"	4"	2¼"	⅞"	¼"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8½"	79'-0"	78	2'-6"	⅝" x 3¼"	6"	2¼"	1¼"	3½"	1⅛"	¾"	½"	11/32"	¼"	6"	3½"	1¼"	⅜"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8½"	79'-0"	78	2'-6"	¾" x 3¾"	6"	2½"	1⅜"	3¼"	1⅜"	1"	½"	13/32"	5/16"	5¼"	2¾"	1¼"	⅜"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2½"	105'-0"	92	3'-0"	¾" x 3¾"	6"	2½"	1⅜"	3¼"	1⅜"	1"	½"	13/32"	5/16"	5¾"	2¾"	1½"	½"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2½"	112'-0"	98	3'-0"	⅞" x 4"	7"	2¾"	1½"	4"	1½"	1"	¾"	15/32"	⅜"	5¾"	2¾"	1½"	⅝"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2½"	119'-0"	107	3'-0"	⅞" x 4"	7"	2¾"	1½"	4"	1½"	1"	¾"	15/32"	⅜"	6½"	3½"	1½"	⅝"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8½"	145'-0"	113	3'-0"	⅞" x 4"	7"	2¾"	1½"	4"	1½"	1"	¾"	15/32"	⅜"	6¾"	3½"	1⅝"	½"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8½"	153'-0"	122	3'-6"	1" x 4½"	7½"	3"	1¾"	4"	1¾"	1¼"	¾"	17/32"	⅜"	6¾"	3½"	1⅝"	½"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8½"	162'-0"	130	3'-6"	1" x 4½"	7½"	3"	1¾"	4"	1¾"	1¼"	¾"	17/32"	⅜"	7"	3½"	1¾"	½"

*Dimensional changes required for varying site conditions shall be approved by the Engineer.

POST	FUSE PLATE BOLT SIZE																			
	Sign Height																			
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"
W6x9	½" x 1½"	½" x 1½"	½" x 1½"	½" x 1½"	——	——	——	——	——	——	——	——	——	——	——	——	——	——	——	——	——
W6x15	½" x 1¾"	½" x 1¾"	½" x 1¾"	⅝" x 2"	⅝" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	——	——	——	——	——	——	——	——	——	——	——	——
W8x18	½" x 1¾"	½" x 1¾"	½" x 1¾"	½" x 1¾"	⅝" x 2"	⅝" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	¾" x 2"	——	——	——	——	——	——	——	——	——	——	——
W10x22	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2"	⅝" x 2"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	——	——	——	——	——	——	——	——
W10x26	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2¼"	⅝" x 2¼"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	——	——	——	——	——	——	——
W12x26	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2¼"	⅝" x 2¼"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	——	——	——	——	——	——
W14x30	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2"	⅝" x 2"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	¾" x 2¼"	——	——	——	——	——
W14x38	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2¼"	⅝" x 2¼"	¾" x 2½"	¾" x 2½"	¾" x 2½"	¾" x 2½"	⅞" x 2½"	⅞" x 2½"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"
W16x45	——	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	½" x 2"	⅝" x 2¼"	⅝" x 2¼"	⅝" x 2¼"	¾" x 2½"	¾" x 2½"	⅞" x 2½"	⅞" x 2½"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"	1" x 2¾"



ELEVATION

GROUND LINE & STUB POST

** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

(1) Quantity includes all concrete necessary for one foundation.

(2) Includes reinforcement bars and spiral hooping for one foundation.

BAW-A-2 2-17-2017

(Sheet 2 of 2)

ABNA DESIGN FIRM REG. 184.002117
745 McClintock Drive Suite 210 Burr Ridge, IL 60527 Ph. 773-881-4788 www.abnacorp.com

USER NAME = muddin	DESIGNED - MSU	REVISED -	
	DRAWN - MSU	REVISED -	
PLOT SCALE = 0.167 ' / in.	CHECKED - JMO	REVISED -	
PLOT DATE = 3/20/2024	DATE - 03/04/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE STEEL SIGN POST TABLES

SCALE: | SHEET 35 OF 35 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	214
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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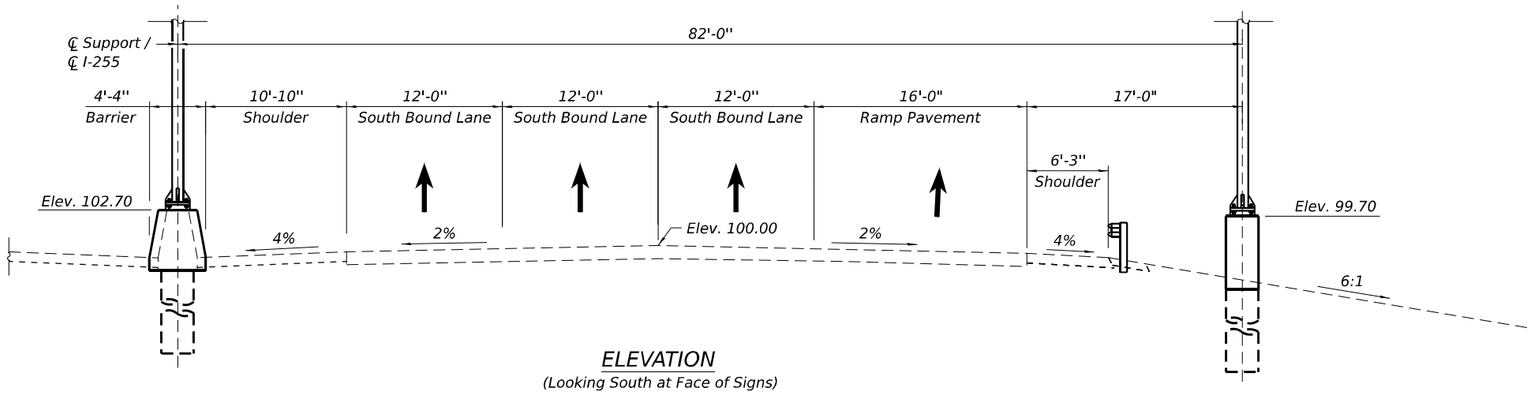
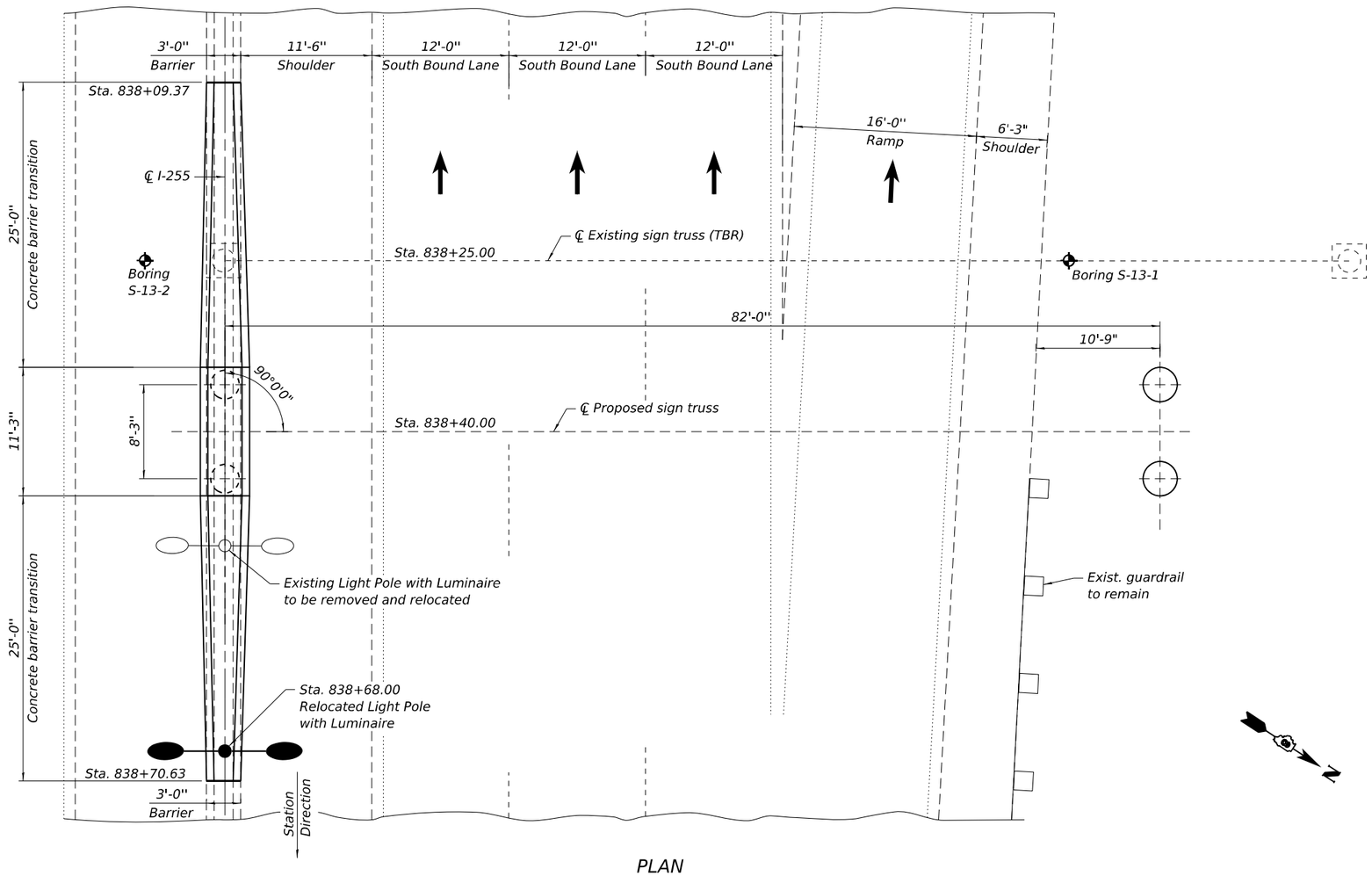
Benchmark: BM255-22 Cut square on the N end of the NW parapet wall above brdige name plate
for SB I-255 bridge (SN 022-0227) over IL 13/15 Elevation 435.336



ELEVATION
(Looking South at Face of Signs)



PLAN

BILL OF MATERIAL

Item	Unit	Total
Concrete Barrier Transition	Foot	50
Relocate Existing Light Pole with Luminaire	Each	1
Light Pole Foundation, 30" diameter	Foot	5
Light Pole Foundation, Integral with Barrier wall	Each	1

LEGEND

Soil Boring Location (1981)

Signed: _____
Stephen E. Alsbury, S.E. Ill. Lic. No. 081-5261
Expires: 11/30/2024
Date: Feb. 13, 2024

LICENSED STRUCTURAL ENGINEER
STEPHEN E. ALSBURY
081-5261
STATE OF ILLINOIS

MODEL: Default
FILE NAME: J:\2022\6060\Cadd\Design\Plan\OHSS SHEETS ORD\D876K05_001_GPE-ORD.dgn

ABNA
DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -
	DRAWN - MBJ	REVISED -
PLOT SCALE = NTS	CHECKED - SEA	REVISED -
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -

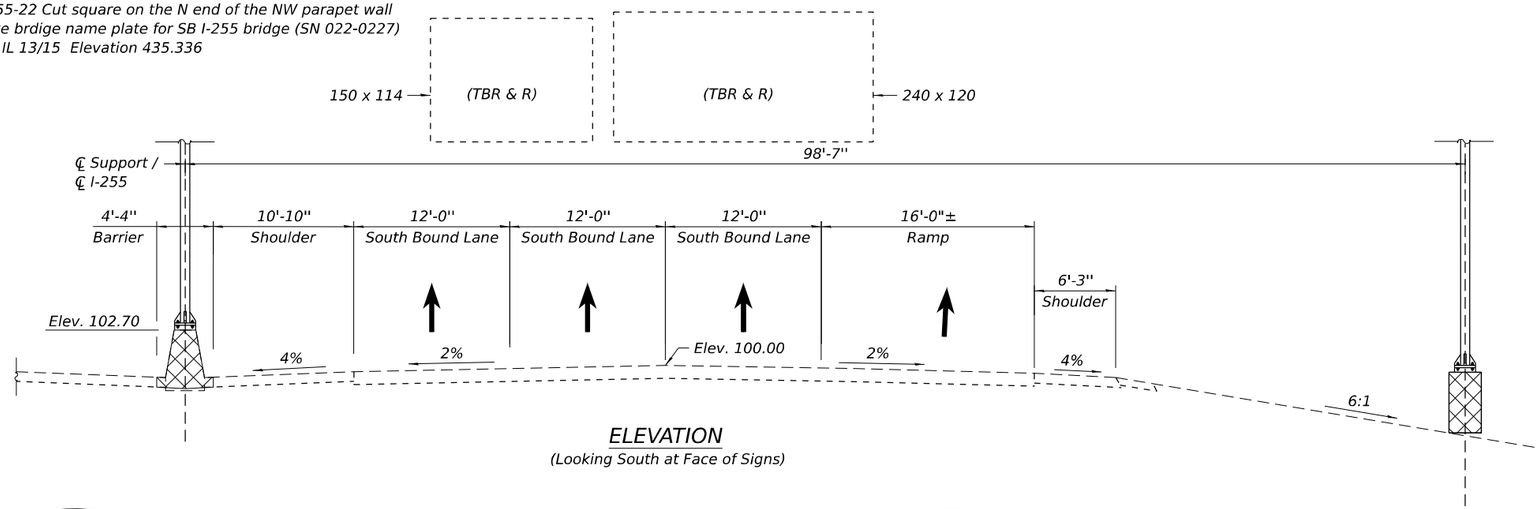
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
SIGN TRUSS NO. 8S0821255L017.1

SCALE: N.T.S. | SHEET 1 OF 17 SHEETS | STA. | TO STA.

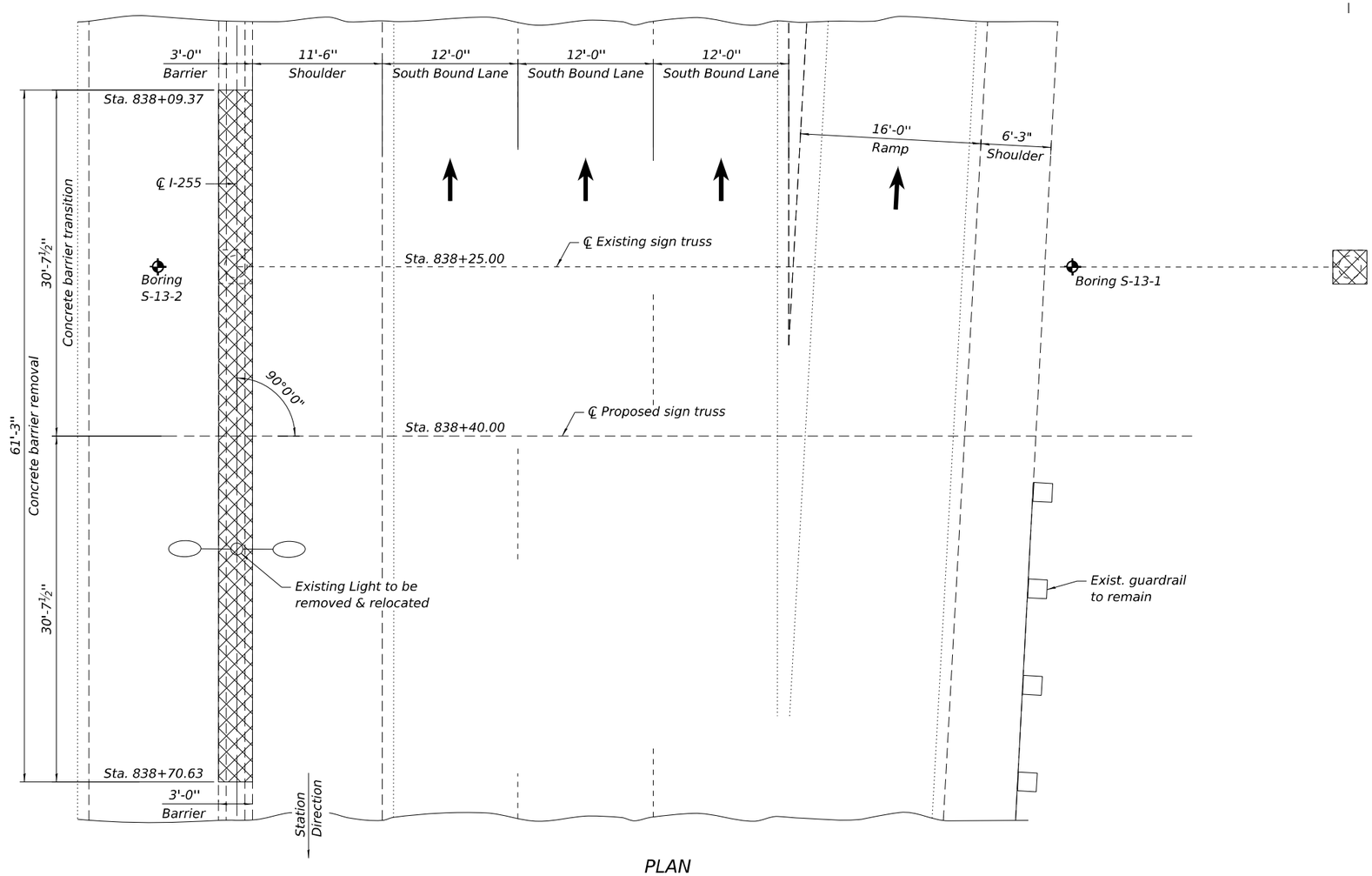
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	215
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

Benchmark: BM255-22 Cut square on the N end of the NW parapet wall above brdige name plate for SB I-255 bridge (SN 022-0227) over IL 13/15 Elevation 435.336



ELEVATION

(Looking South at Face of Signs)



PLAN

BILL OF MATERIAL

Item	Unit	Total
Concrete Barrier Removal	Foot	62
Removal Overhead Sign Structural Span	Each	1
Remove and Relocate Sign Panel Assembly - Type B	Each	2

LEGEND

Soil Boring Location (1981)

Concrete Removal

N

MODEL: Default
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ABNA DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -
	DRAWN - MBJ	REVISED -
PLOT SCALE = NTS	CHECKED - SEA	REVISED -
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVALS
SIGN TRUSS NO. 8S0821255L017.1

SCALE: N.T.S. | SHEET 2 OF 17 SHEETS | STA. | TO STA.

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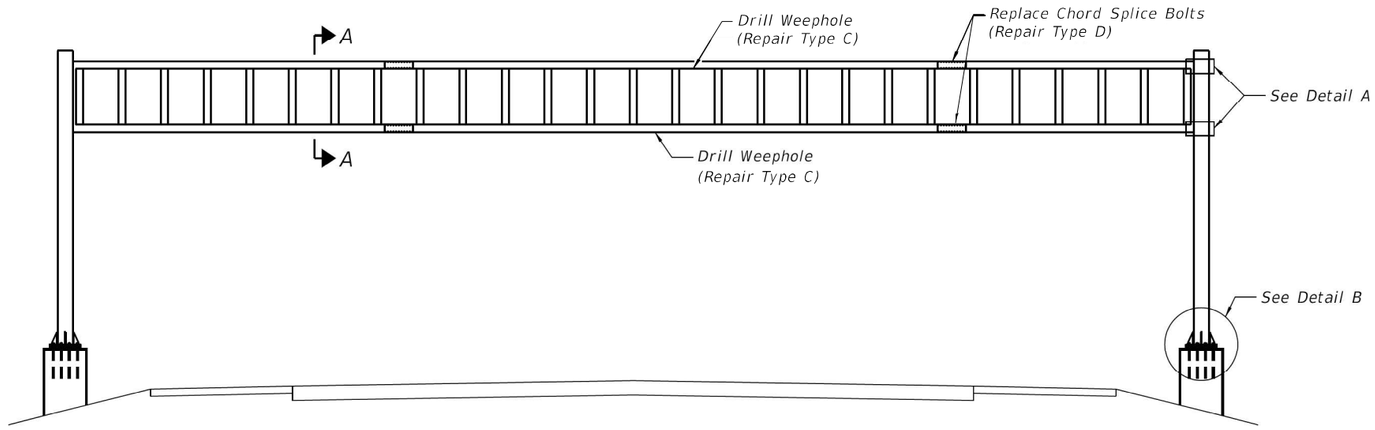
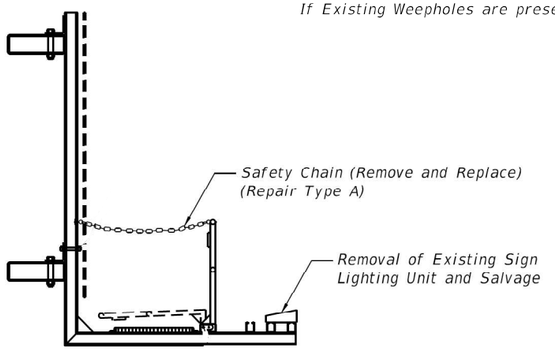
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		



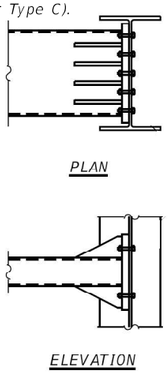
SPAN SIGN STRUCTURE – ELEVATION

Weepholes shall be drilled at low point(s) of top and bottom chord. The Contractor shall identify and mark the low point(s). Locations shall be approved by the Engineer prior to drilling of holes.

If Existing Weepholes are present, Enlarge to 3/8" (Repair Type C).



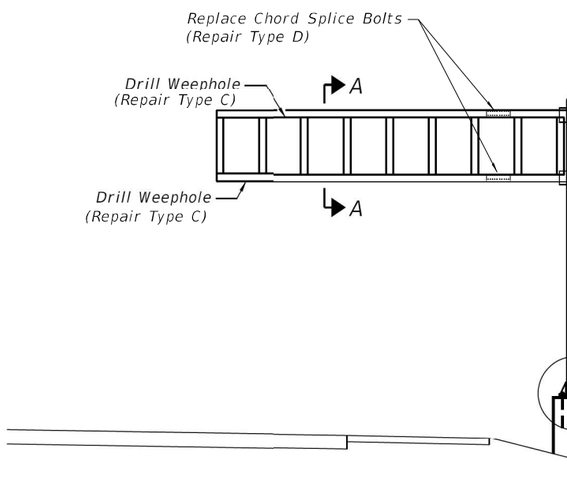
SECTION A-A



PLAN

ELEVATION

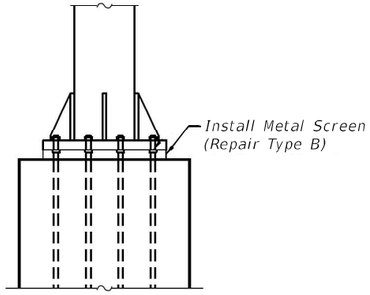
DETAIL A



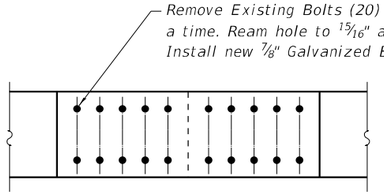
CANTILEVER SIGN STRUCTURE – ELEVATION

Weepholes shall be drilled at low point(s) of top and bottom chord. The Contractor shall identify and mark the low point(s). Locations shall be approved by the Engineer prior to drilling of holes.

If Existing Weepholes are present, Enlarge to 3/8" (Repair Type C).



DETAIL B



REPAIR DETAIL D

SIGN TRUSS REPAIR SCHEDULE

Structure Number	Type	Walkway Length	Safety Chain Repair A	Rodent Screen Repair B	Weep Holes Repair C	Splice Bolts Repair D	Removal of Lighting Units	Disconnect Lighting
8S0821255L013.4	Span	40	1	2	2	80	2	1
8C0821255L015.5	Cantilever	20	1	–	2	40	1	1
8C0821255L016.7	Cantilever	20	1	–	2	40	–	–
8C0821255R013.1	Cantilever	20	1	1	2	40	1	1
8S0821255R016.5	Span	40	1	–	2	80	1	1
8C0821255R014.9	Cantilever	20	1	1	2	40	1	1
8C0821255R016.8	Cantilever	20	1	–	2	40	–	–
Totals			7	4	14	360	6	5

SIGN TRUSS REPAIR DESCRIPTIONS

Repair A: Replace Safety Chains
Repair B: Install Screens
Repair C: Drill Weepholes
Repair D: Replace Chord Splice Bolts

Notes:

Removal of Existing Sign Lighting Units and Terminate Electrical Service to Truss on all Sign Structures Noted.

MODEL: Default
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ABNA DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -	
	DRAWN - MBJ	REVISED -	
PLOT SCALE = NTS	CHECKED - SEA	REVISED -	
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN TRUSS REPAIR DETAILS

SCALE: N.T.S. | SHEET 3 OF 17 SHEETS | STA. | TO STA.

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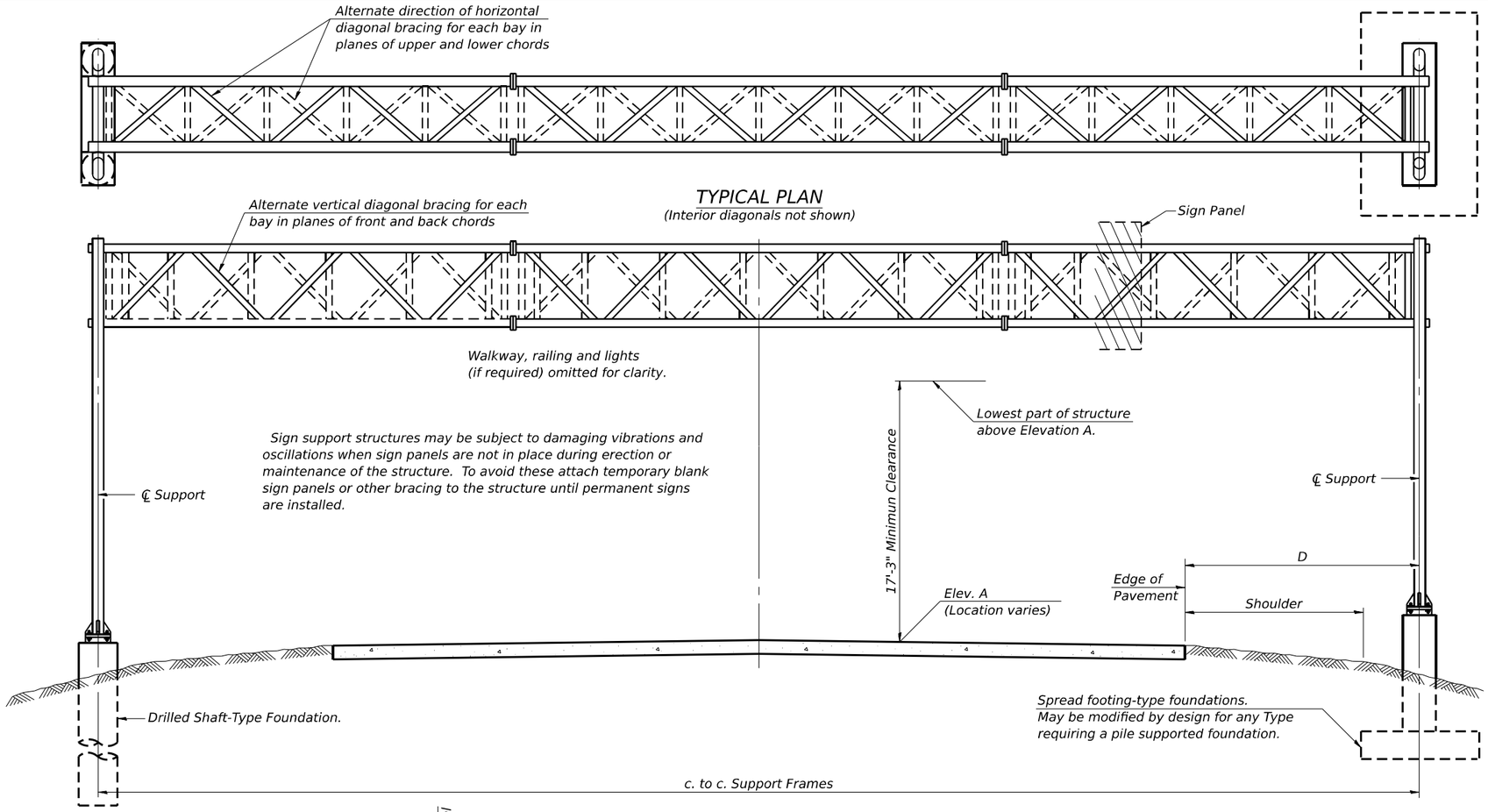
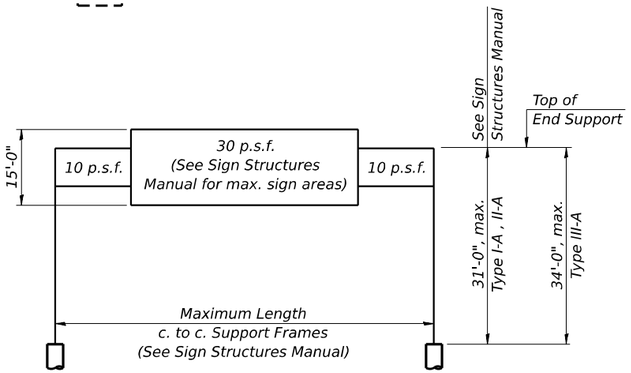
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			



TYPICAL PLAN
(Interior diagonals not shown)



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

TYPICAL ELEVATION
(Looking at Face of Signs**)

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
8S0821255L017.1	838+40.00	I-A	82'-0"	100.00	17'-0"	10'-0"	319

** *Looking upstation for structures with signs both sides.*

* *If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.*

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specificiations.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.*
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	82
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	-
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	-
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	36
CONCRETE FOUNDATIONS	Cu. Yds.	-
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	34.6

OS-A-1 5-15-2023

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ABNA DESIGN FIRM REG. 184.002117

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PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - GENERAL PLAN & ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

SCALE: N.T.S. | SHEET 4 OF 17 SHEETS | STA. | TO STA.

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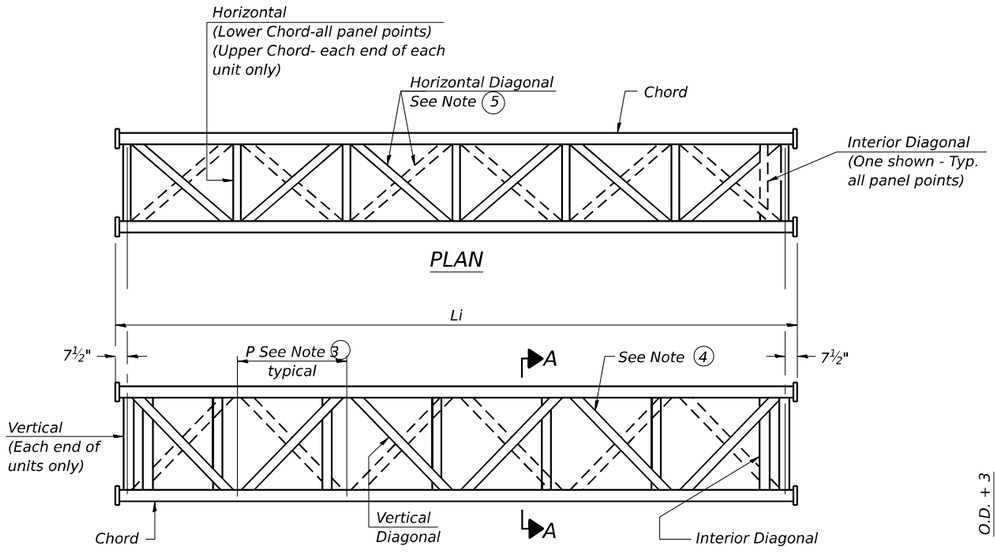
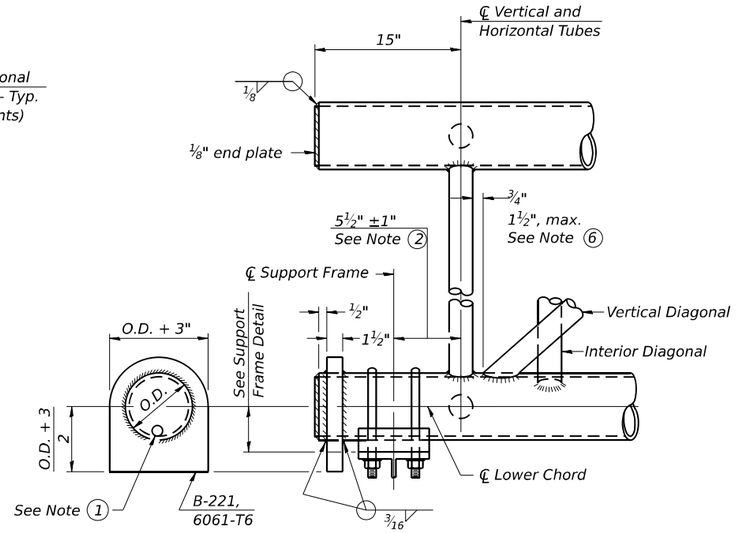
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

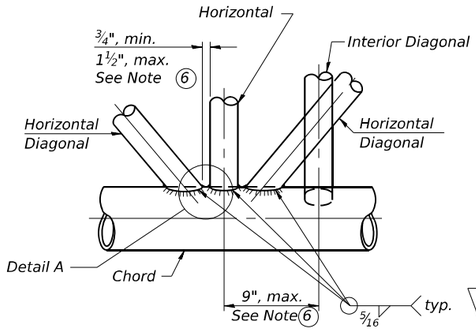


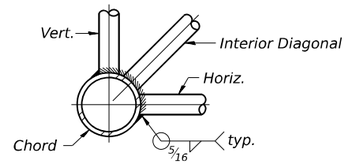
ELEVATION
TYPICAL INTERIOR UNIT

Even number of panels/interior unit required.

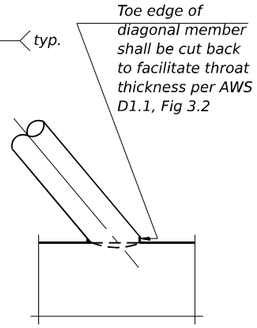


SUPPORT END DETAIL FOR EXTERIOR UNIT

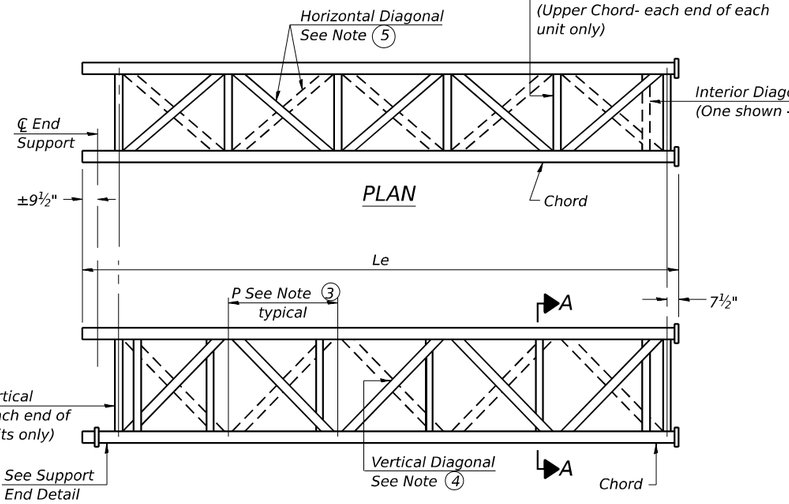




TYPICAL JOINT DETAILS

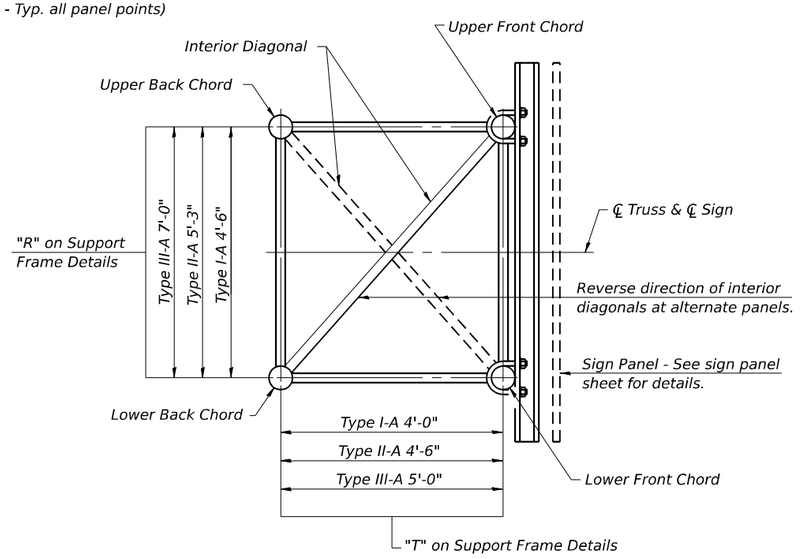


DETAIL A



ELEVATION
TYPICAL EXTERIOR UNIT

Even or odd number of panels/exterior units allowed.



SECTION A-A

1. Contractor may alternatively use standard aluminum drive-fit cap to close end. ½" Ø drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
2. 5½" end dimension may vary by ±1" to provide uniform panel spacing (P).
3. Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
4. Vertical Diagonals in front and back face shall alternate.
5. Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
6. All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a ¾" minimum to 1½" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

OS-A-2

5-15-2023

ABNA DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -
	DRAWN - MBJ	REVISED -
PLOT SCALE = NTS	CHECKED - SEA	REVISED -
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

SCALE: N.T.S. | SHEET 5 OF 17 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	219
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

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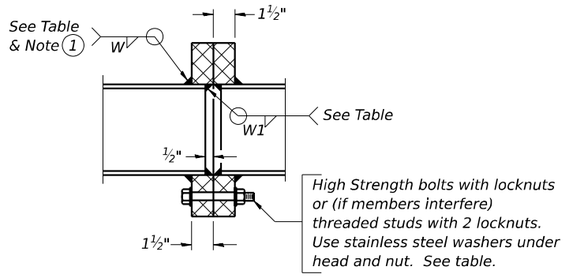
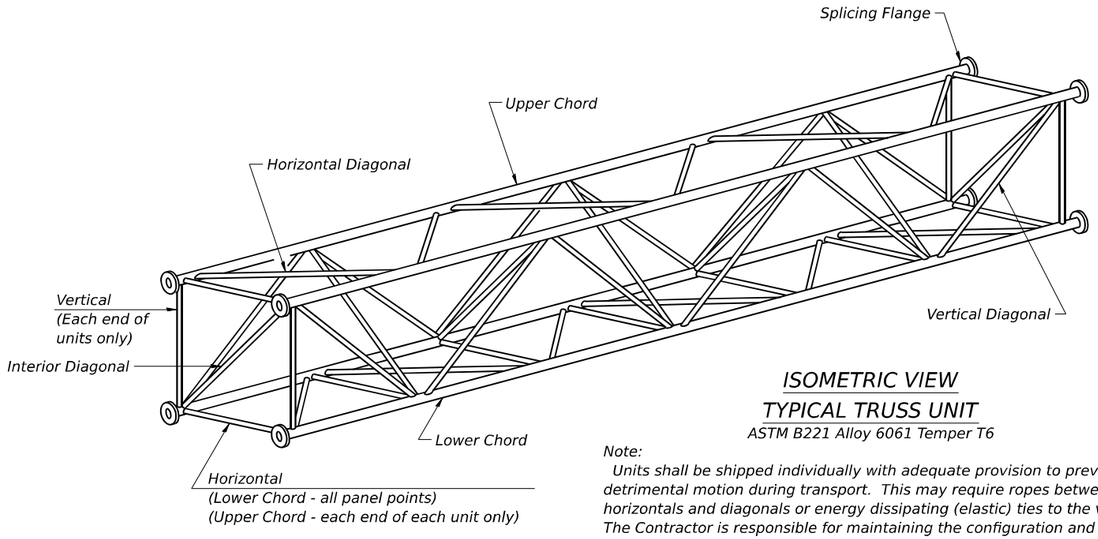
TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical,Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(Le)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(Li)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W1		
8S0821255L017.1	838+40.00	I-A	5	26'-5½"	4'-11"	1	6	30'-9"	4'-11"	5"	5/16"	2½"	5/16"	2⅜"	6	⅞"	5/16"	¼"	8¾"	11¾"



SECTION B-B

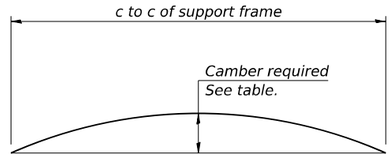
(1) *Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.*



ISOMETRIC VIEW
TYPICAL TRUSS UNIT

ASTM B221 Alloy 6061 Temper T6

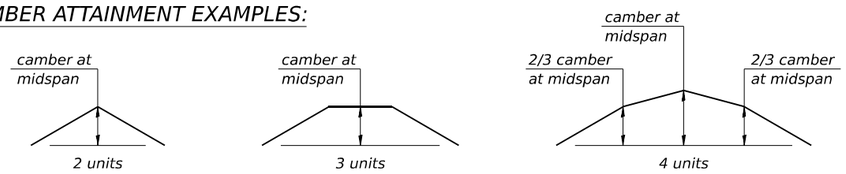
Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



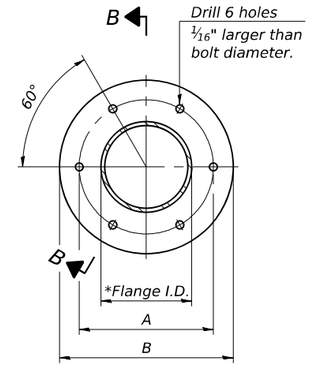
CAMBER DIAGRAM

Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

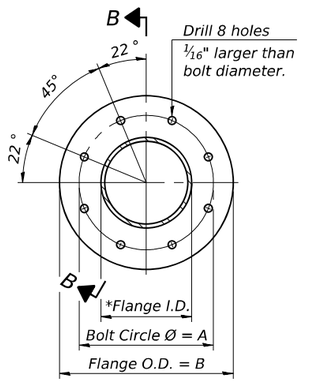
CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A

SPLICING FLANGES

ASTM B221, Alloy 6061-T6
or ASTM B209, Alloy 6061-T651
**To fit O.D. of Chord with maximum gap of 1/16".*

MODEL: Default
FILE NAME: J:\2022\6080\Cadd\Design\Plan\OHSS SHEETS ORD\D876K05_006_TRUSS DETAILS-ORD.dgn

OS4-A-2 5-15-2023

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	DRAWN - MBJ	REVISED -	
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PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

SCALE: N.T.S. | SHEET 6 OF 17 SHEETS | STA. | TO STA.

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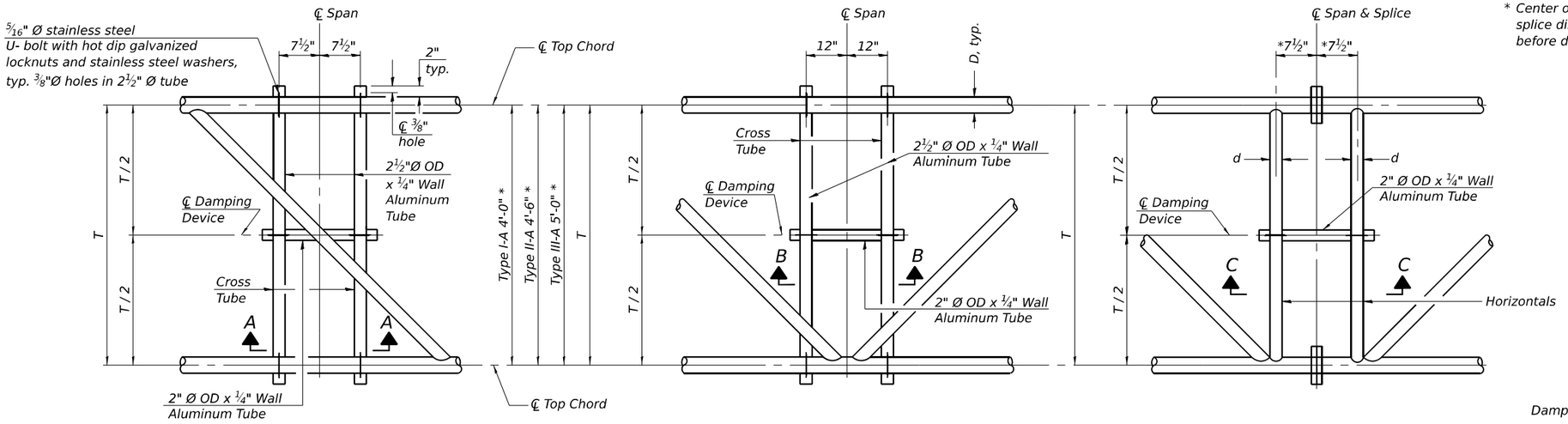
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		



* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

PLAN DETAIL "A"
℄ Span between Panel Points

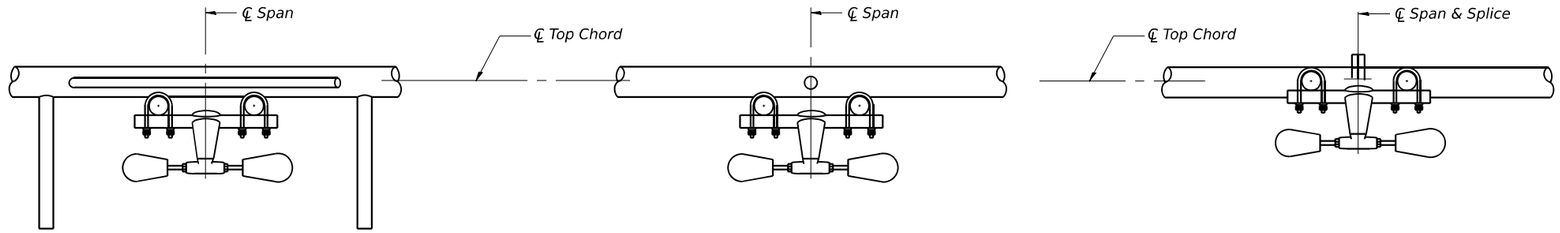
PLAN DETAIL "B"
℄ Span at Panel Point

PLAN DETAIL "C"
℄ Span at ℄ Chord Splice

NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

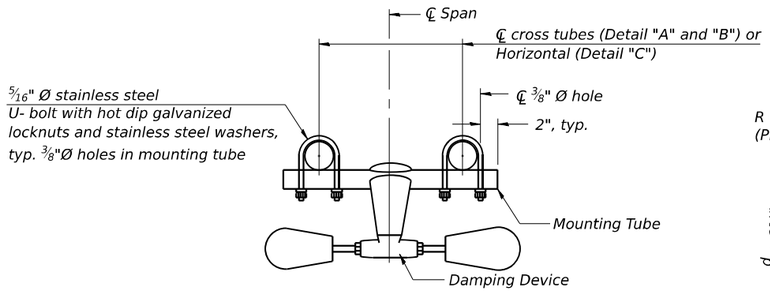
Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



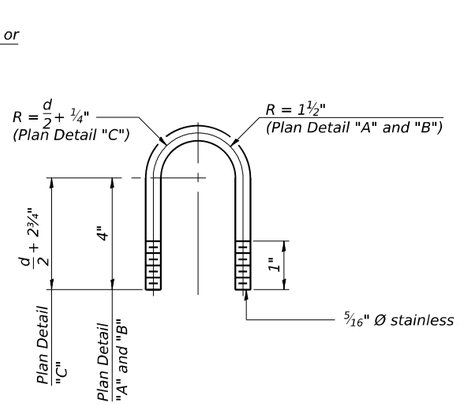
SECTION A-A

SECTION B-B

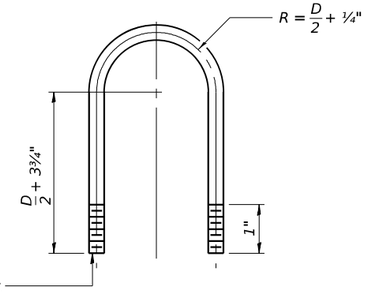
SECTION C-C



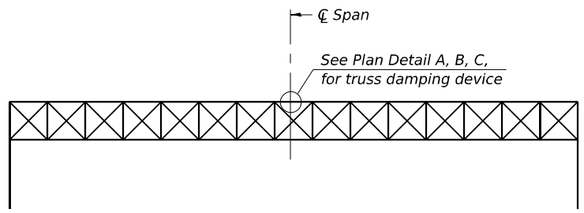
TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical - Detail "A" and "B")



ELEVATION
Aluminum Overhead Sign Truss

OS-A-D 5-15-2023

USER NAME =	DESIGNED - SEA	REVISED -	
	DRAWN - MBJ	REVISED -	
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PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -	

ABNA DESIGN FIRM REG. 184.002117

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

SCALE: N.T.S. | SHEET 7 OF 17 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	221
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

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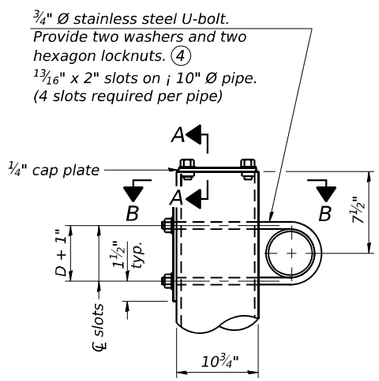
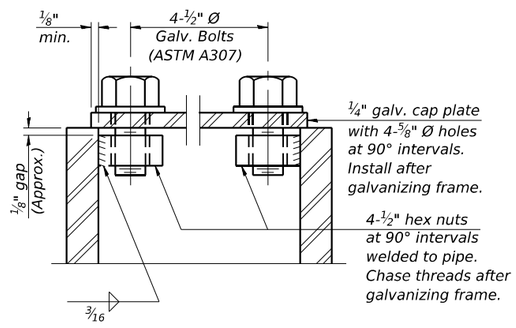
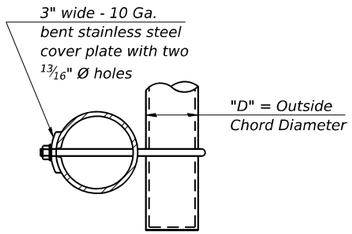


DETAIL A

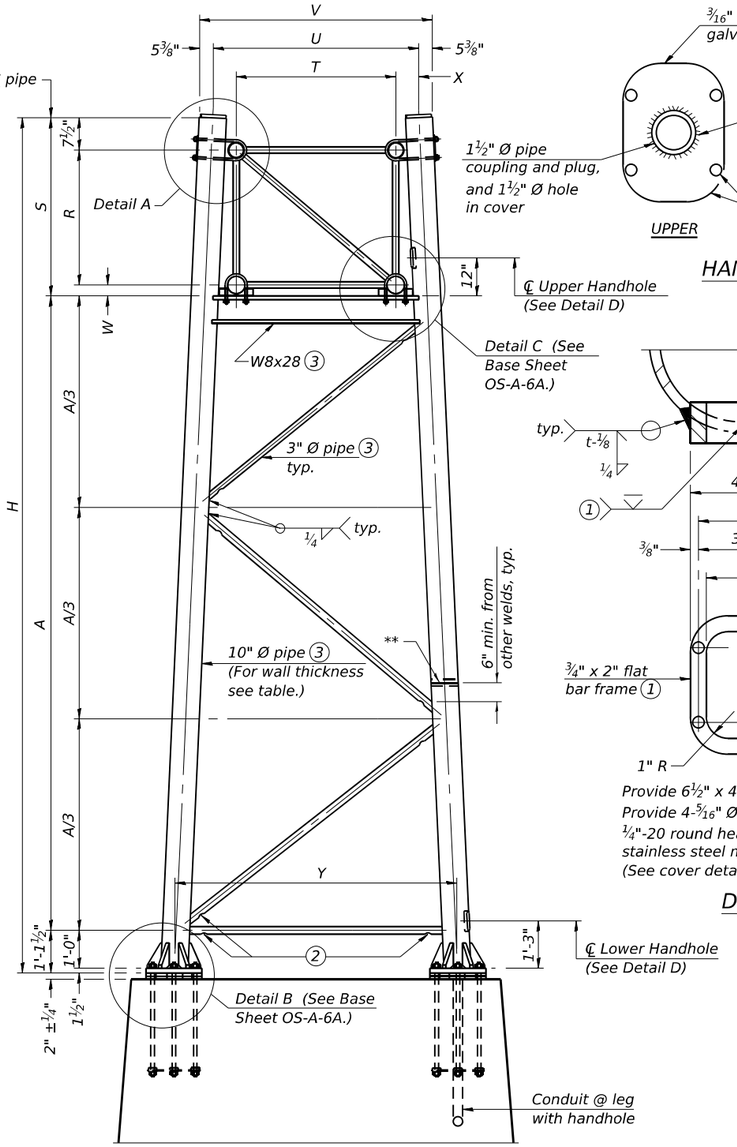


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.

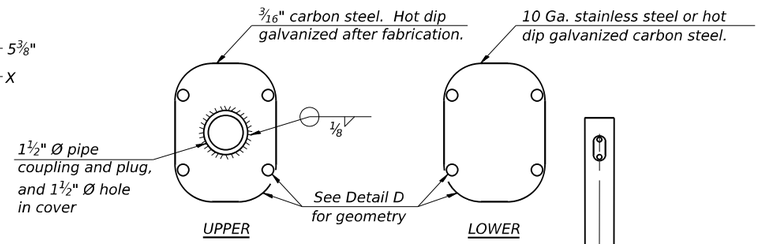


SECTION B-B

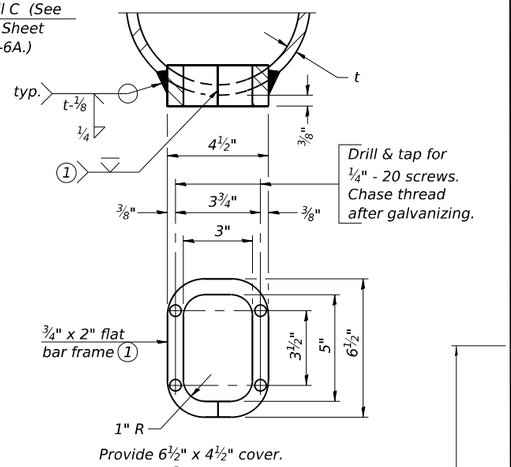


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

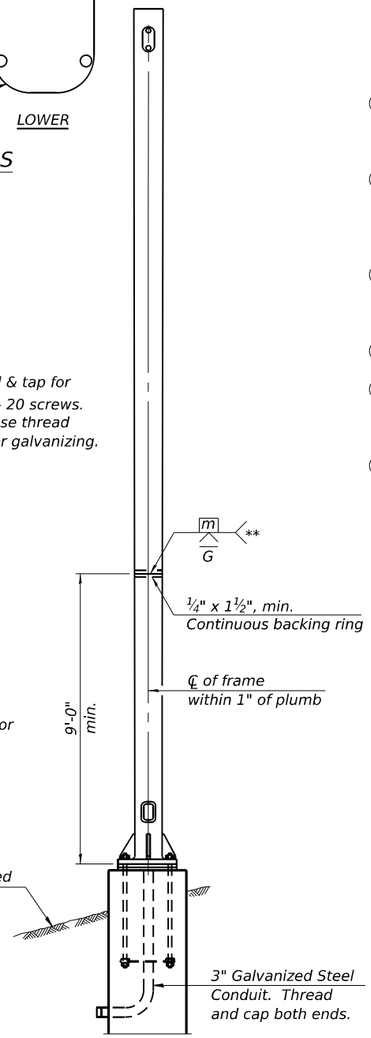


HANDHOLE COVERS



Provide 6½" x 4½" cover.
Provide 4-5/16" Ø holes in cover for ¼"-20 round head hot dip galvanized or stainless steel machine screws. (See cover details)

DETAIL D



END ELEVATION

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

1. *In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500µ in or less.*
2. *Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.*
3. *Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.*
4. *See General Notes for fasteners.*
5. *Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.*
6. *"H" based on 15'-0" or actual sign height, whichever is greater.*

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6"	5'-5½"	4'-0"	5'-6"	6'-4¾"	4"	9"	8'-3"
II-A (5)	5'-3"	6'-3¼"	4'-6"	6'-1"	6'-11¾"	4¾"	9½"	8'-3"

10" Ø PIPE TRUSS SUPPORT FRAME

** *One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.*

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H (6)	A
		Left	Right				
8S0821255L017.1	838+40.00	X		I-A	0.279	26'-8"	19'-11"
			X	I-A	0.279	29'-8"	22'-11"

OS-A-6 5-15-2023

MODEL: Default
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

SCALE: N.T.S. | SHEET 8 OF 17 SHEETS | STA. | TO STA.

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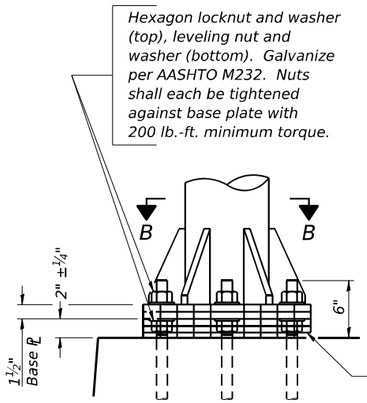
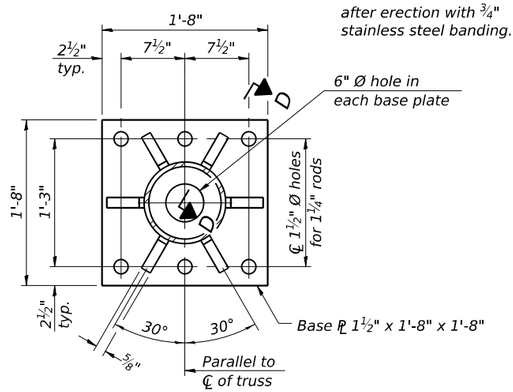
	ILLINOIS FED. AID PROJECT			

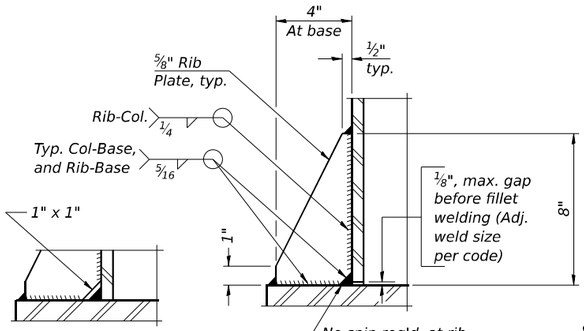


DETAIL B

Ribs shall be cut to fit slope of pipe.

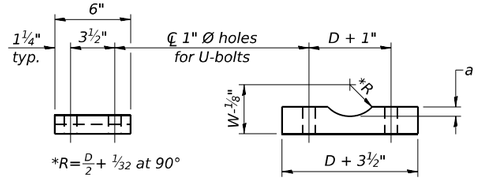


SECTION B-B



** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib ¼" from snip.

SECTION D-D

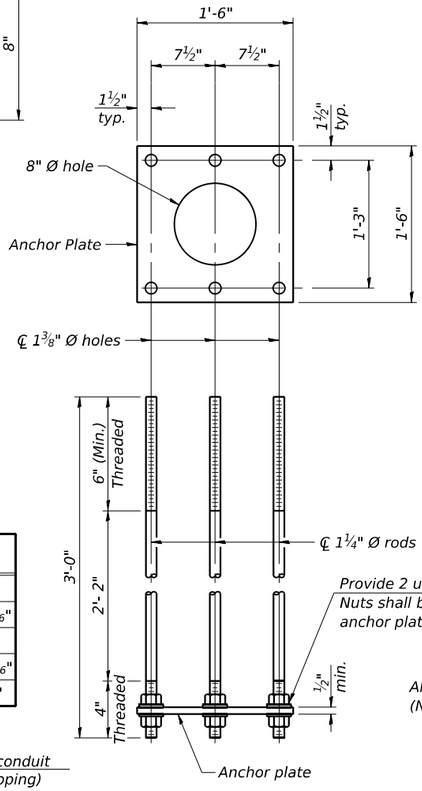


D = Outside Diameter of Chord.
For W, see Base Sheet OS-A-6.

SADDLE SHIM DETAIL

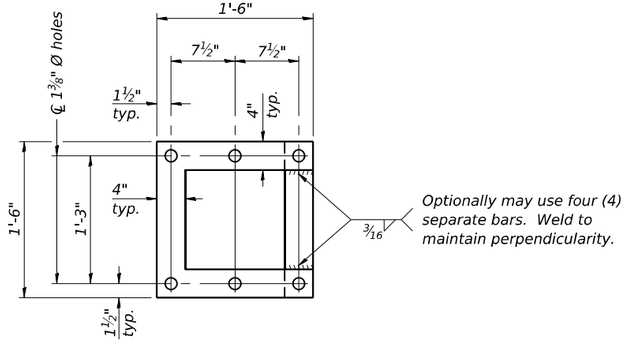
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	¾"
5½"	13/16"
6"	⅞"
6½"	15/16"
7"	1"

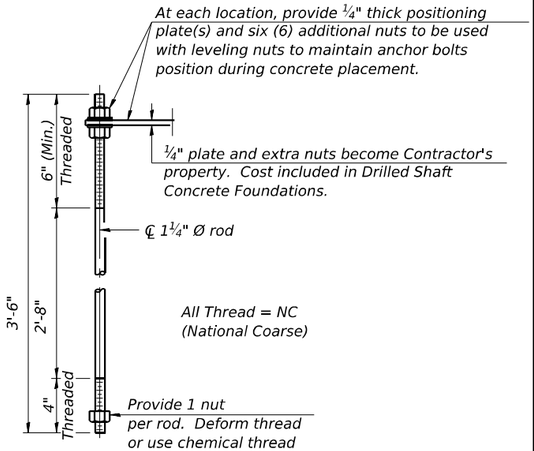


ANCHOR ROD DETAIL

Spread Footing Foundation



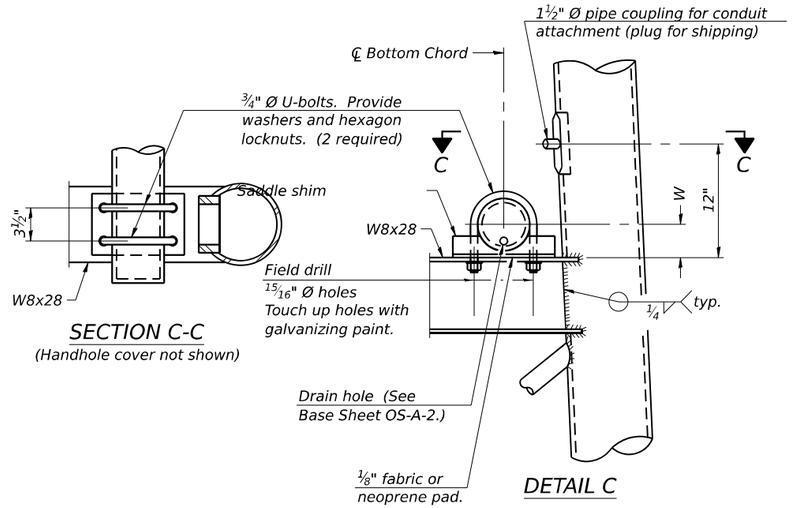
POSITIONING PLATE(S)



ANCHOR ROD DETAIL

Drilled Shaft Foundation

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C

(Handhole cover not shown)

DETAIL C

10" Ø PIPE SUPPORT FRAME DETAILS

OS-A-6A 5-15-2023

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PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

SCALE: N.T.S. | SHEET 9 OF 17 SHEETS | STA. | TO STA.

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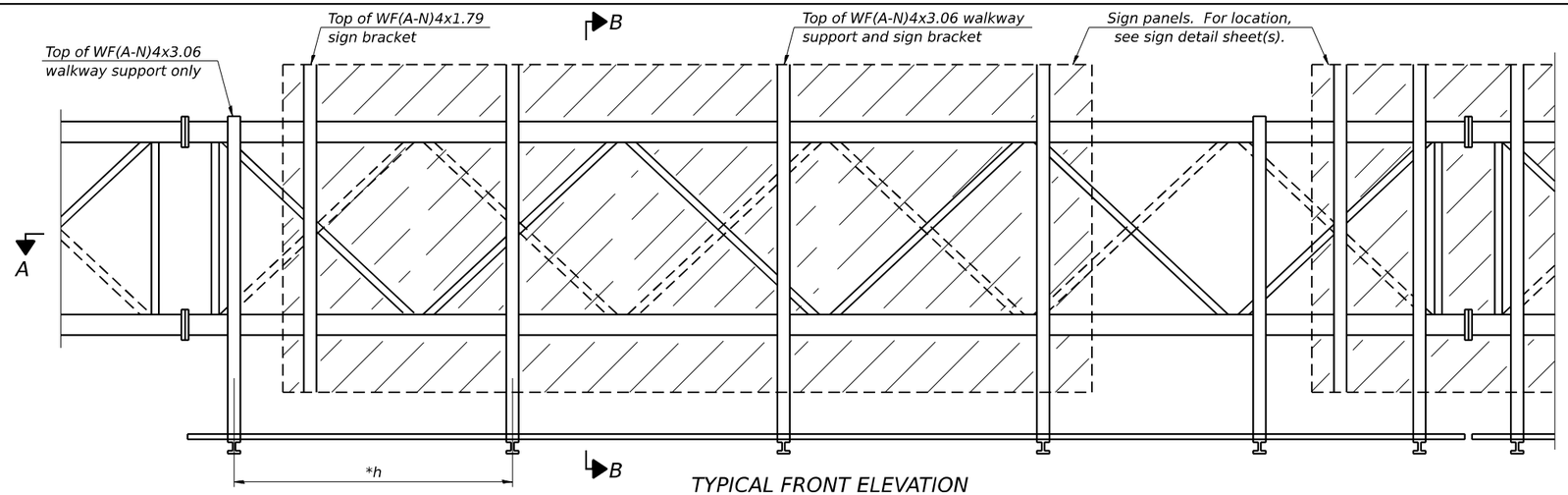
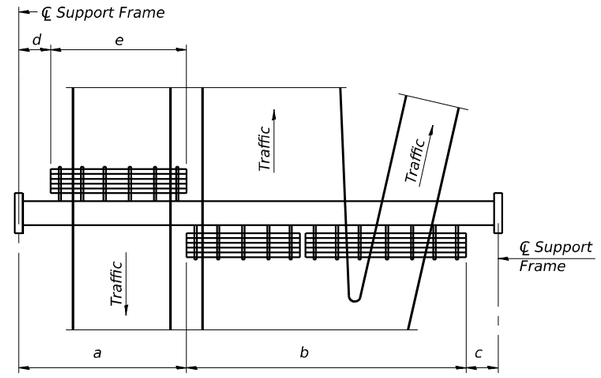


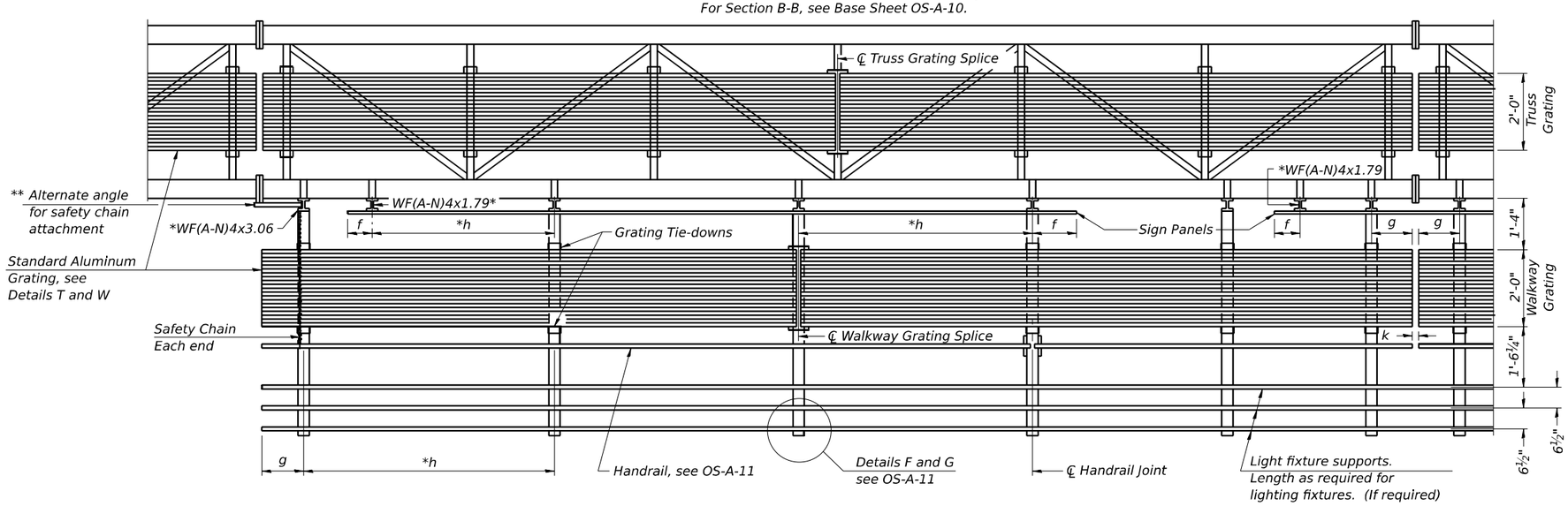
TYPICAL FRONT ELEVATION

With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Handrail joints, grating, and light support splices placed as needed.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:
** Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:*

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

*** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.*

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
For Handrail Details see Base Sheet OS-A-11.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
8S0821255L017.1	838+40.00	29'-0"	36'-0"	17'-0"	-	-	36'-0"

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

OS-A-9 5-15-2023

MODEL: Default
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SCALE: N.T.S. | SHEET 10 OF 17 SHEETS | STA. | TO STA.

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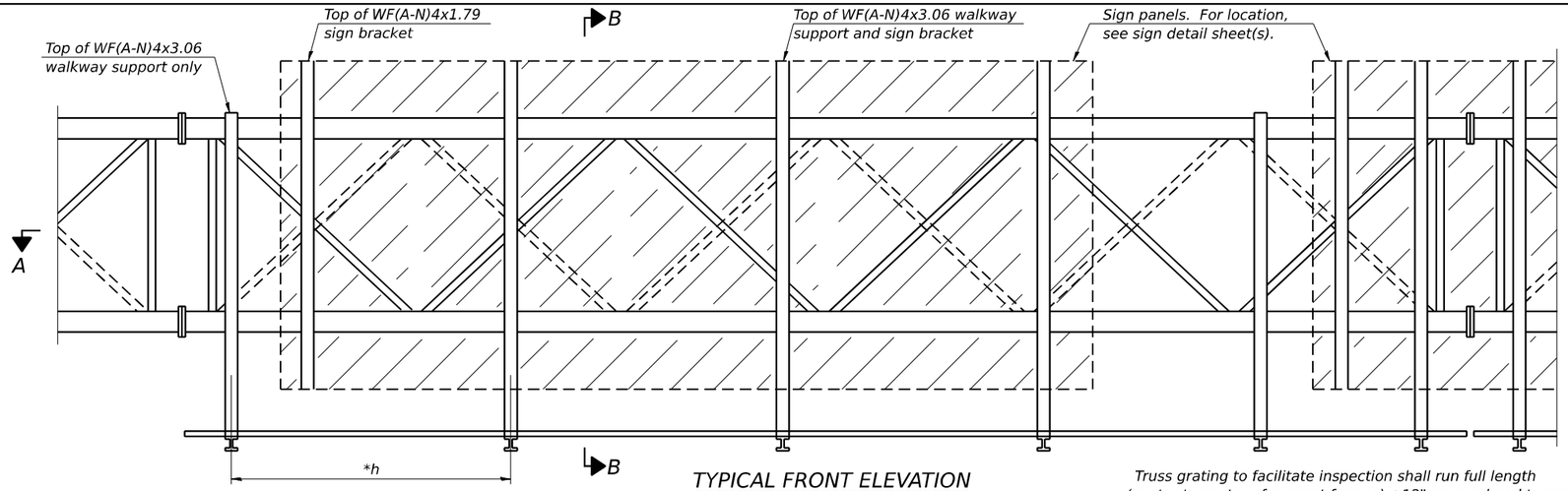
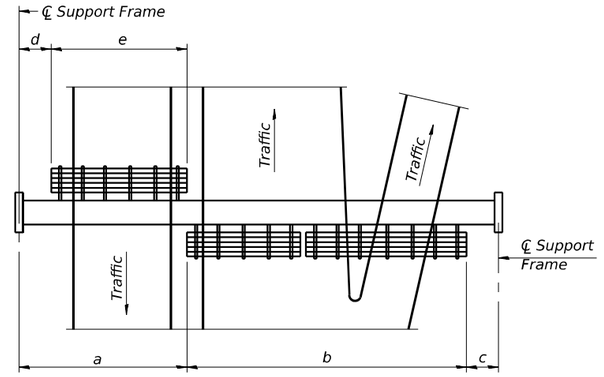
		ILLINOIS	FED. AID PROJECT	



TYPICAL FRONT ELEVATION

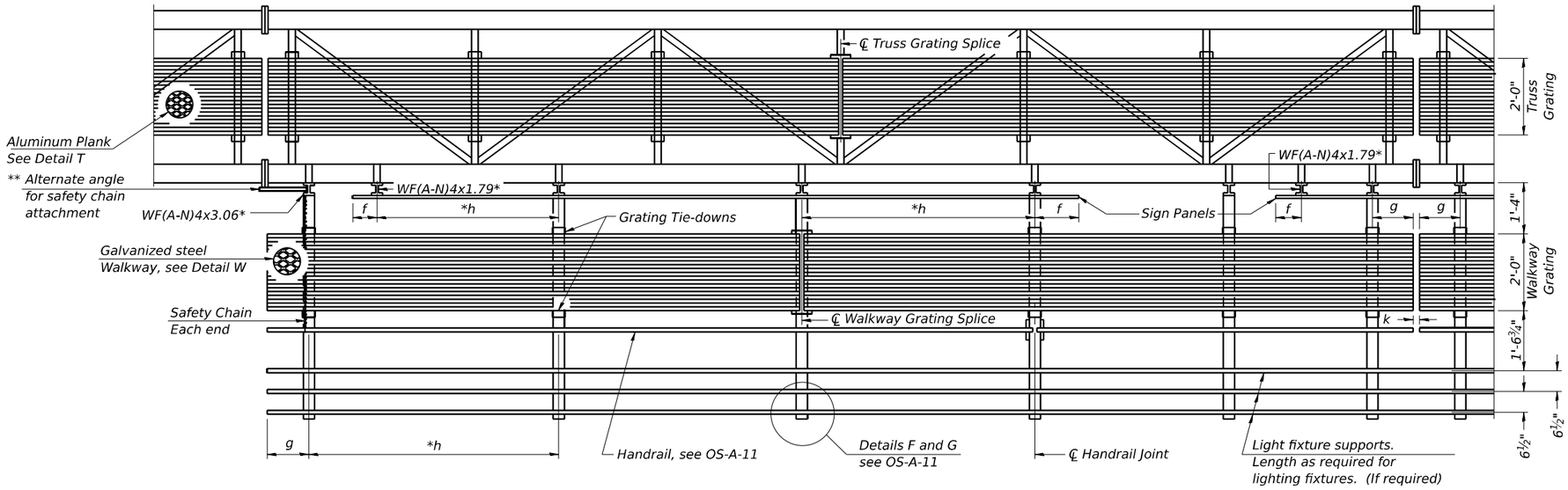
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Handrail joints, grating, and light support splices placed as needed.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Note:
Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-9, and may be substituted by Contractor at no change in contract cost.

Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
8S0821255L017.1	838+40.00	29'-0"	36'-0"	17'-0"	-	-	36'-0"

Notes:
* *Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:*

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ¡ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

** *If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.*

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
For handrail details see base sheet OS-A-11.

MODEL: Default
FILE NAME: J:\2022\6060\Cadd\Design\Plan\OHSS SHEETS ORD\D878K05_011_TRUSS DETAILS-ORD.dgn

OS-A-9S 5-15-2023

ABNA DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -
	DRAWN - MBJ	REVISED -
PLOT SCALE = NTS	CHECKED - SEA	REVISED -
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS

SCALE: N.T.S. | SHEET 11 OF 17 SHEETS | STA. | TO STA.

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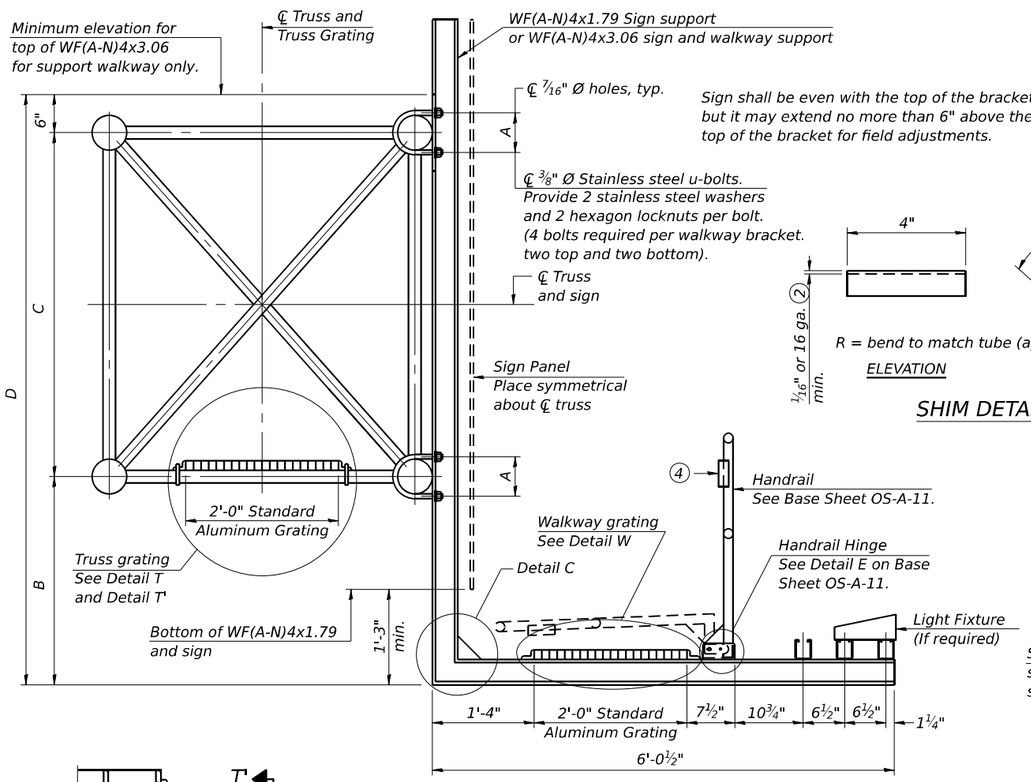
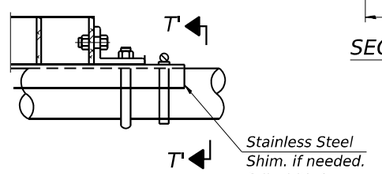
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			



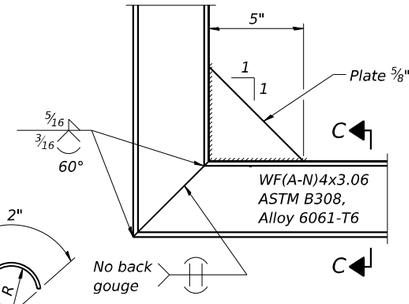
SECTION B-B



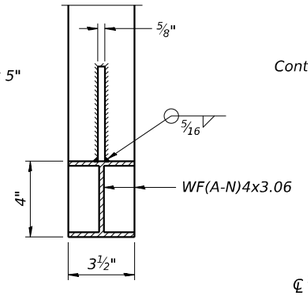
DETAIL T'
(Truss grating splice)

Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.

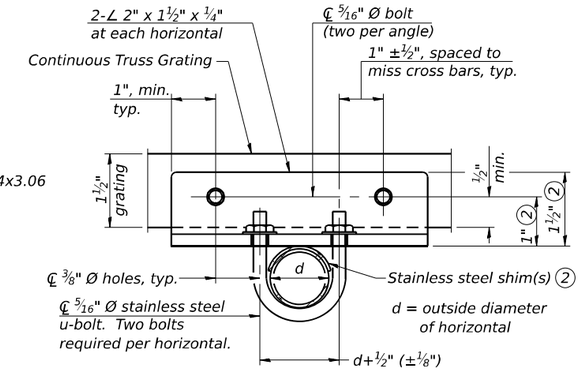
SHIM DETAIL



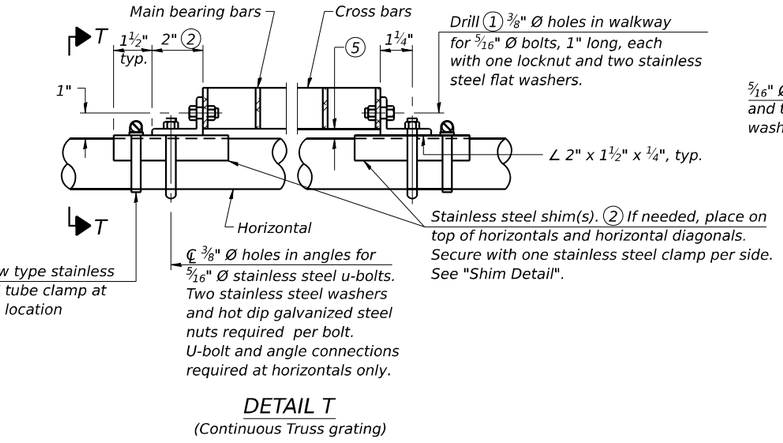
DETAIL C



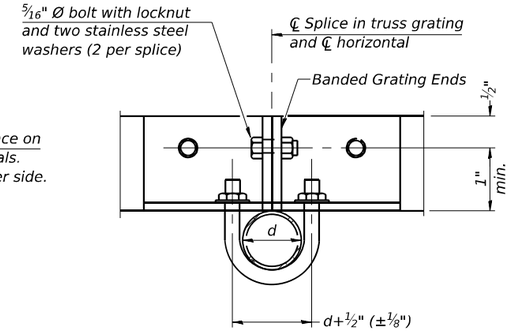
SECTION C-C



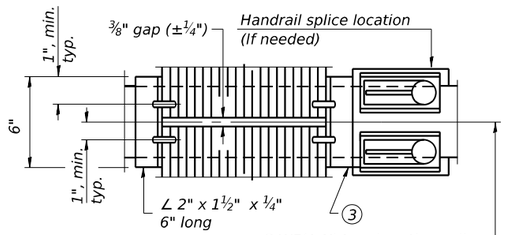
SECTION T-T



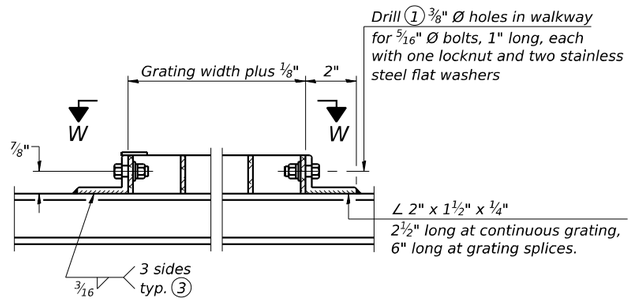
DETAIL T
(Continuous Truss grating)



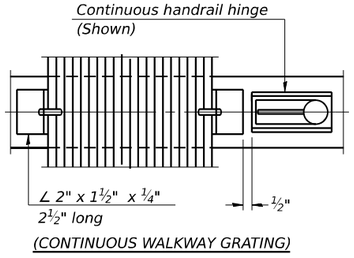
SECTION T'-T'



(AT WALKWAY GRATING SPLICE)



DETAIL W
(Walkway grating)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1½" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.

Cross bars shall be 3/16" x 1½" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 $in.^3$ per bar, a depth of 1½", spaced on 1 3/16" centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	⑥ B	C	⑥ D
8S0821255L017.1	838+40.00	5½"	4'-0"	4'-6"	9'-0"

1. Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
2. Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
3. If Handrail Joint present, weld angle to WF(A-N)4 and ¼" extension bars. (See Base Sheet OS-A-11.)
4. ℄ ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.
5. Tube to grating gap may vary from 0 to ½", max. to align walkway, allow for camber, etc.
6. Based on actual height of tallest sign given on OS-A-1.

OS-A-10 5-15-2023

MODEL: Default
FILE NAME: J:\2022\6060\Cadd\Design\Plan\OHSS SHEETS ORD\D878K05_012_TRUSS DETAILS-ORD.dgn

ABNA DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -	
	DRAWN - MBJ	REVISED -	
PLOT SCALE = NTS	CHECKED - SEA	REVISED -	
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SCALE: N.T.S. | SHEET 12 OF 17 SHEETS | STA. | TO STA.

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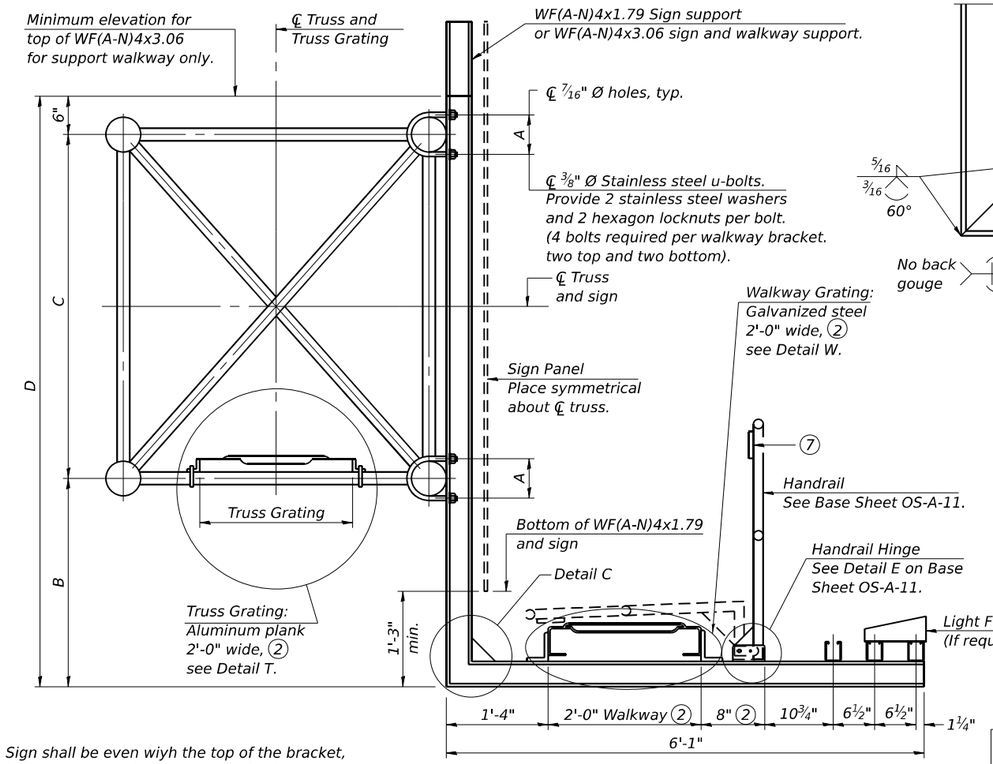
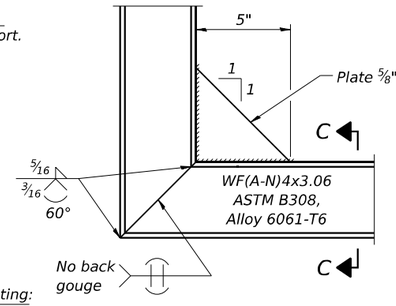
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

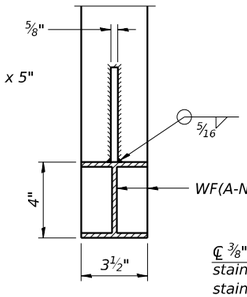


SECTION B-B

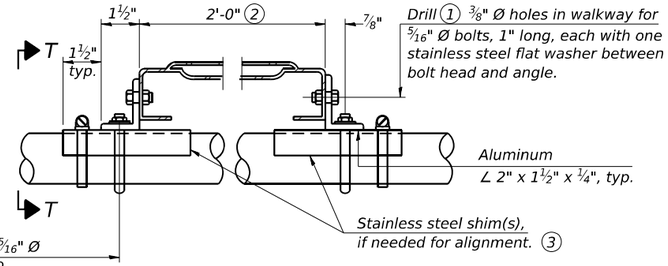
Sign shall be even wiyh the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.



DETAIL C

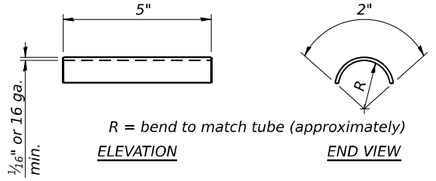


SECTION C-C

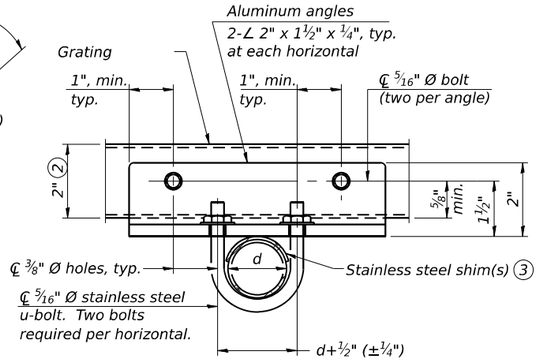


℄ 3/8" Ø holes in angles for 5/16" Ø stainless steel u-bolts. Two stainless steel washers and hot dip galvanized steel nuts required per bolt. U-bolt and angle connections required at horizontals only.

DETAIL T
(Truss grating at horizontal)

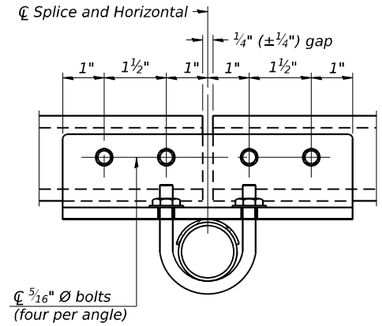


SHIM DETAIL



SECTION T-T
(Truss Grating Continuous)

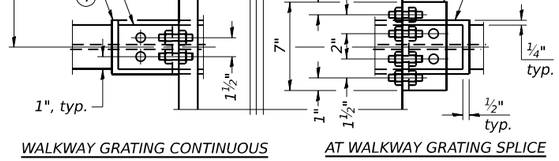
d = outside diameter of horizontal



SECTION T-T
(Truss Grating Splice)

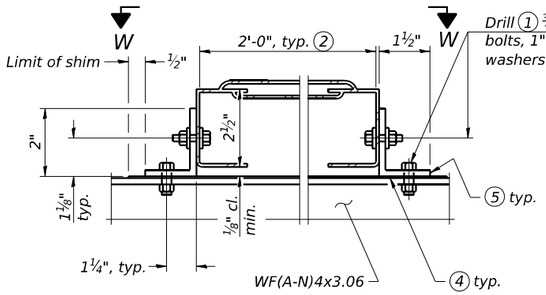
Alternate splice details and locations may be used subject to the Engineer's review and approval.

ALUMINUM TRUSS GRATING



WALKWAY GRATING CONTINUOUS AT WALKWAY GRATING SPLICE

SECTION W-W



DETAIL W
GALVANIZED STEEL WALKWAY GRATING

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a 6'-0" clear span. Walkway and truss grating dimensions are nominal and may vary (width ±½", depth ±½") based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

(3) Stainless steel shims shall be placed under angles at horizontals and horizontal diagonals if needed to compensate for alignment variations and differences in horizontal diagonal pipe sizes beyond adjustment provided by angles. Secure with one stainless steel clamp per location, see "Shim Detail". Thicker shim plates may be used when needed subject to shims performing properly.

(4) 1/16" (or 16 ga.) x 2½" x 4" stainless steel shim adhered to top of WF(A-N)4x3.06 beneath each galvanized angle. Adhesives for shims shall be suitable for materials joined and full exposure conditions.

(5) Galvanized steel ∠ 2" x 2" x ¼", 3½" long with continuous grating, 7" long at grating splice.

(6) Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-10 and may be substituted by Contractor at no change in contract cost.

(7) ℄ ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.

(8) Based on actual height of tallest sign given on OS-A-1.

Structure Number	Station	A	(8) B	C	(8) D
8S0821255L017.1	838+40.00	5½"	4'-0"	4'-6"	9'-0"

OS-A-10S 5-15-2023

ABNA DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -
	DRAWN - MBJ	REVISED -
PLOT SCALE = NTS	CHECKED - SEA	REVISED -
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS

SCALE: N.T.S. | SHEET 13 OF 17 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	227
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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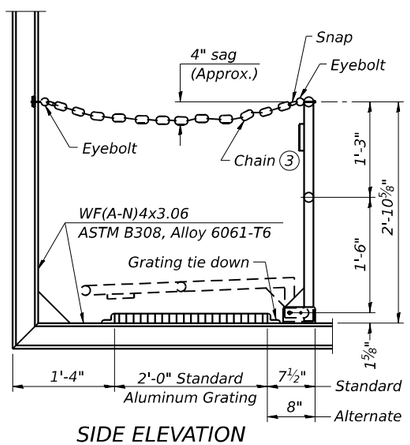
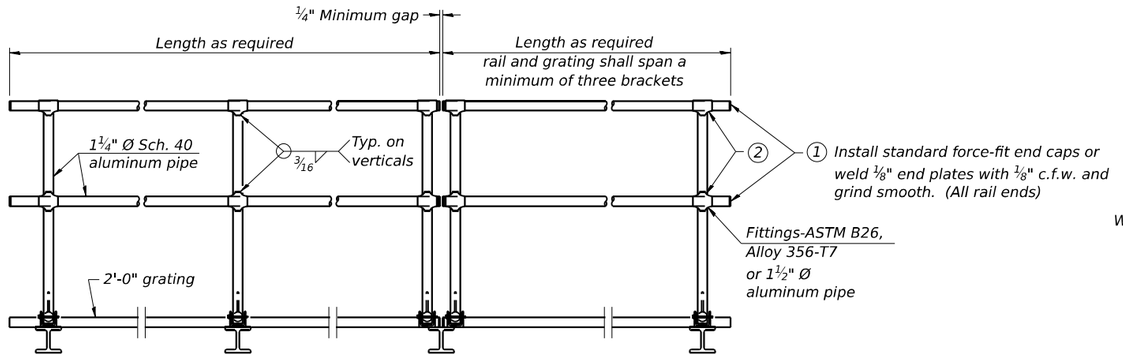


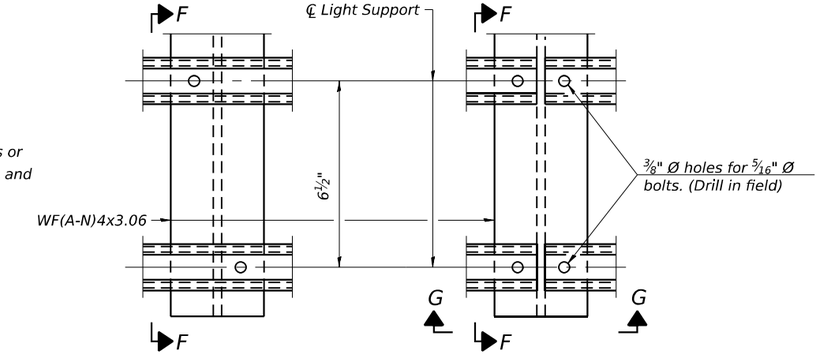
SIDE ELEVATION

(Showing safety chain w/o sign)



FRONT ELEVATION

(2) *Horizontal handrail member shall be continuous thru fitting. Provide 7/16" Ø hole in fitting for 3/8" Ø bolt. Field drill 7/16" Ø hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16"Ø holes on top rail at ends only.)*

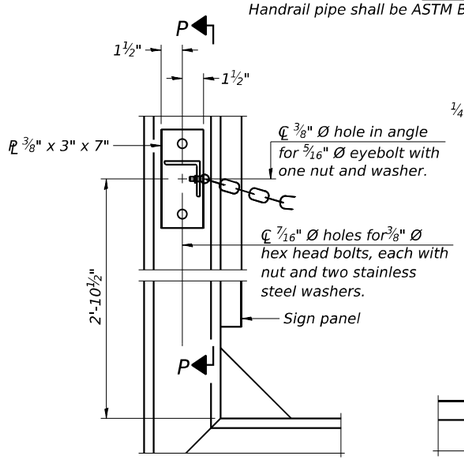


DETAIL F

DETAIL G

HANDRAIL DETAILS

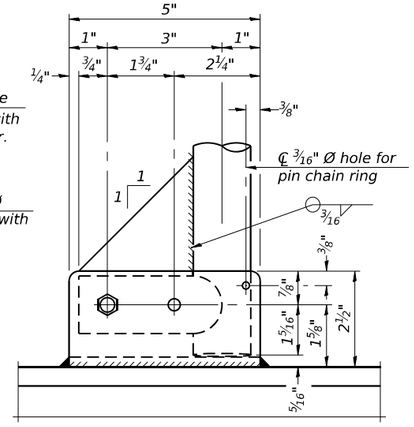
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.



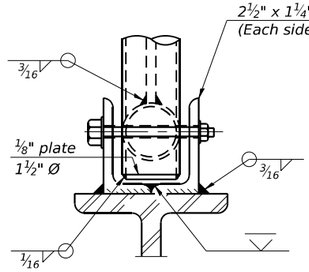
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"

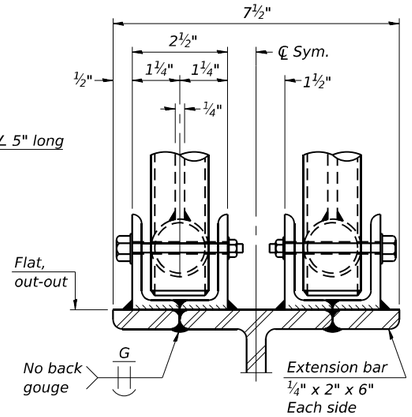


SIDE ELEVATION



FRONT ELEVATION

See "Elevation" at right for dimensions.



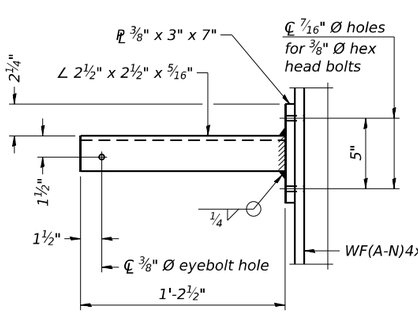
ELEVATION AT HANDRAIL JOINT (4)

SECTION F-F

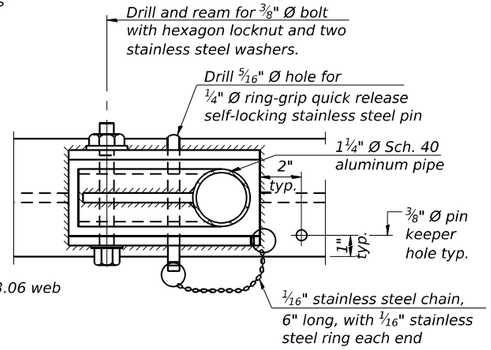
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

(5) *Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.*

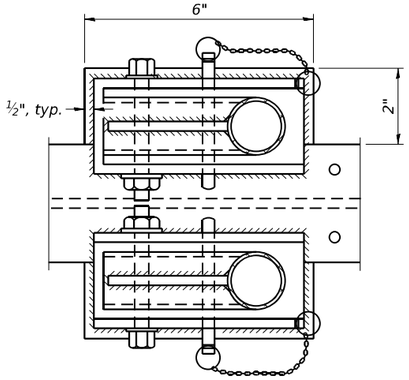


SECTION P-P



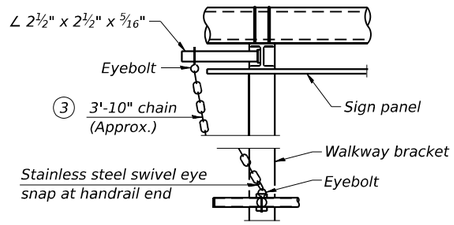
PLAN

DETAIL E HANDRAIL HINGE



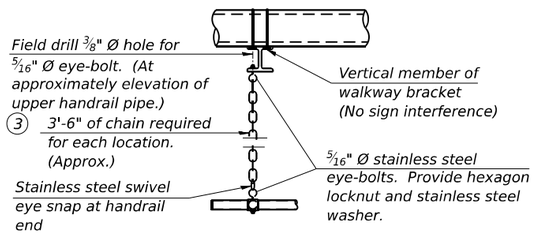
PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN

One required for each end of each walkway.

(3) *3/16" Type 304L stainless steel chain, approximately 12 links per foot.*

(4) *Extrusions may be used in lieu of the details shown, with approval of the Engineer.*

OS-A-11 5-15-2023

MODEL: Default
FILE NAME: J:\2022\60060\Cadd\Design\Plan\OHSS SHEETS ORD\D878K05_014_TRUSS DETAILS-ORD.dgn

ABNA DESIGN FIRM REG. 184.002117

USER NAME =	DESIGNED - SEA	REVISED -
	DRAWN - MBJ	REVISED -
PLOT SCALE = NTS	CHECKED - SEA	REVISED -
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS

SCALE: N.T.S. | SHEET 14 OF 17 SHEETS | STA. | TO STA.

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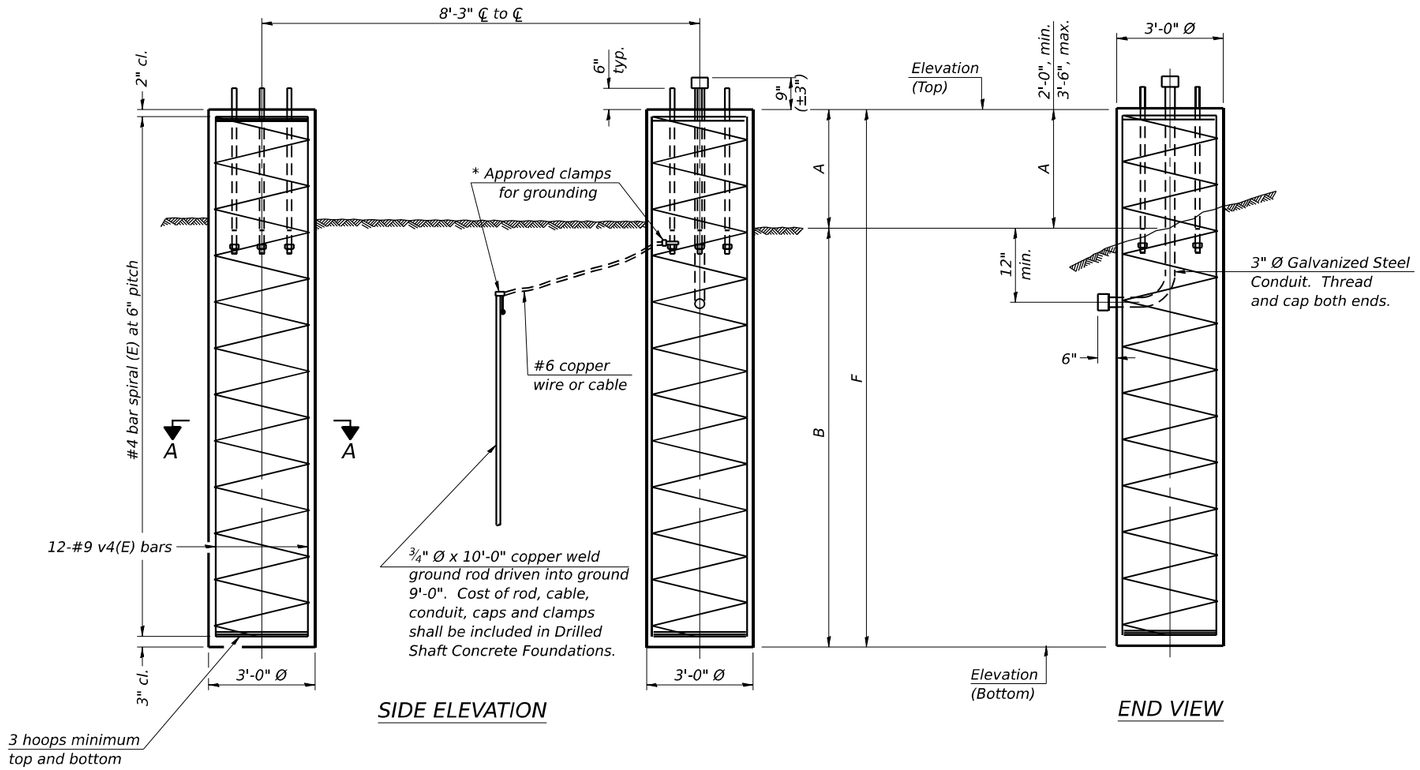
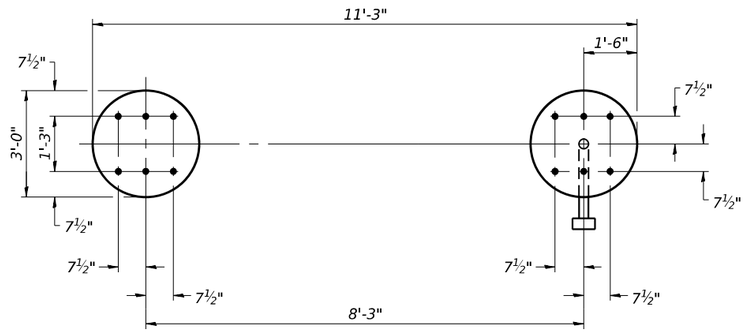
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		



SIDE ELEVATION

END VIEW



PLAN

For anchor rod size and placement, see Support Frame Detail Sheet.

** Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.*

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	16	#9	F less 5"	——
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

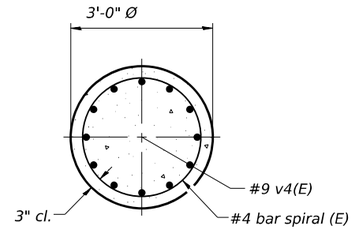
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



SECTION A-A

DETAILS FOR 10" Ø SUPPORT FRAME
TYPE I-A or II-A TRUSS

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
8S0821255L017.1	838+40.00						99.7	73.7	3'-1"	22'-11"	26'-0"	13.6

OS4-F3

5-15-2023

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ABNA DESIGN FIRM REG. 184.002117

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	DRAWN - MBJ	REVISED -	
PLOT SCALE = NTS	CHECKED - SEA	REVISED -	
PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

SCALE: N.T.S. | SHEET 15 OF 17 SHEETS | STA. | TO STA.

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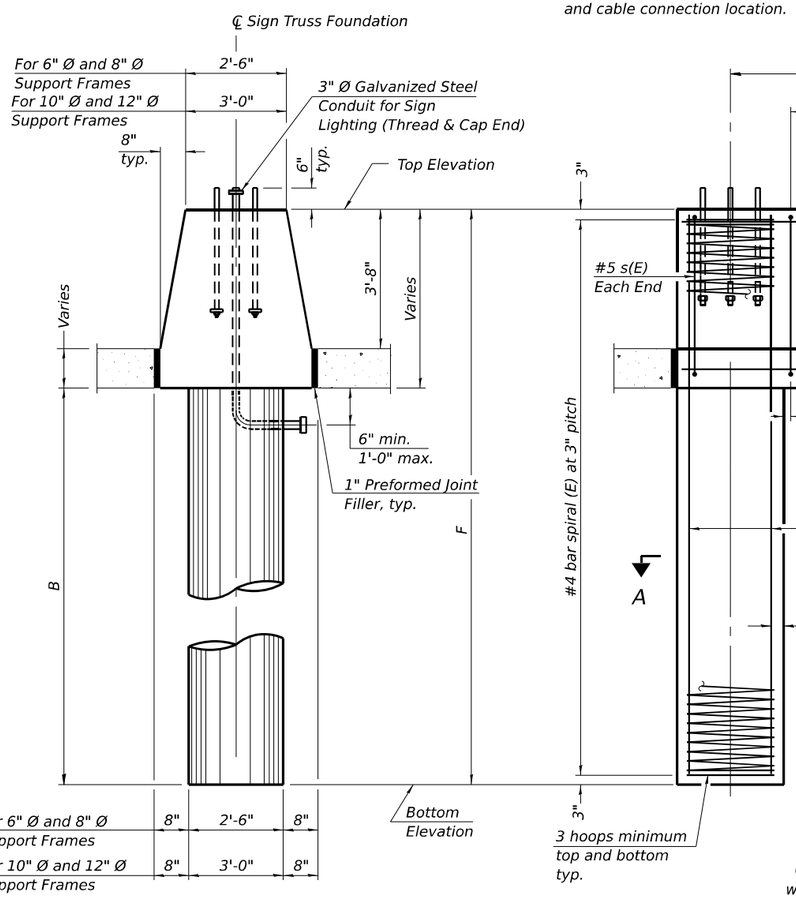
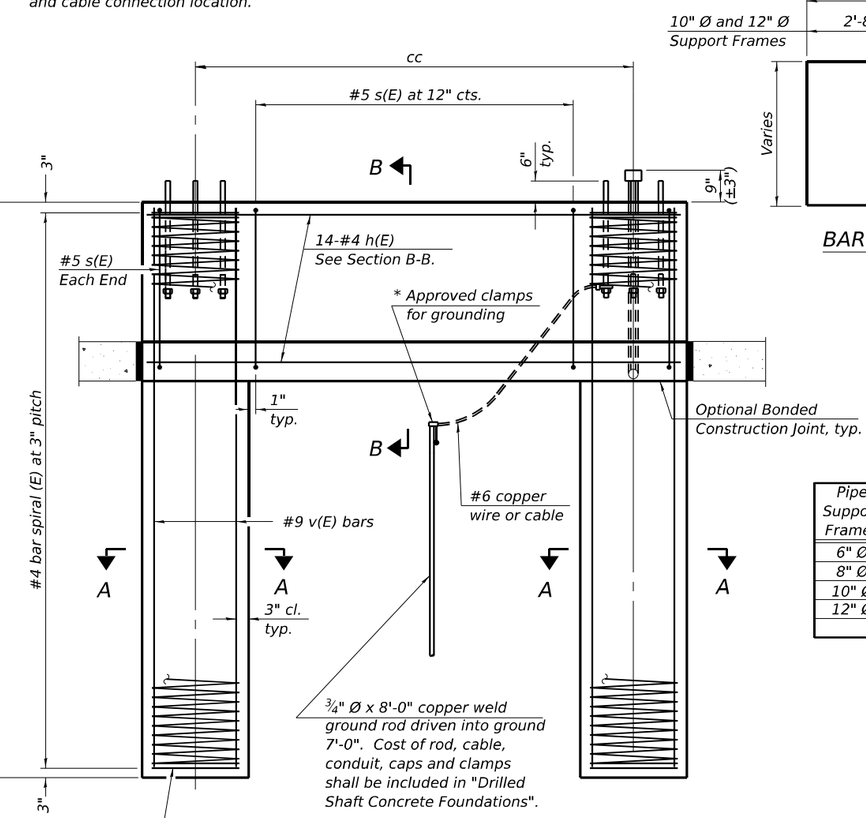
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

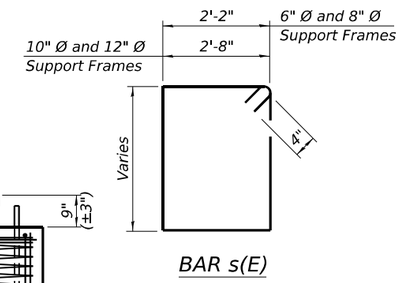


END VIEW



SIDE ELEVATION

Concrete Foundation poured monolithically with no construction joint.



BAR s(E)

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

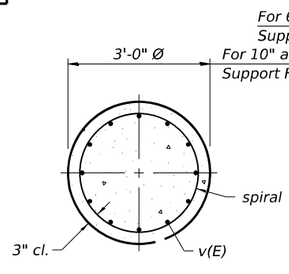
BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	14	#4	M less 4"	——
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	——
v(E)	24	#9	F less 0'-5"	——
#4(E) bar spiral. See Side Elevation				

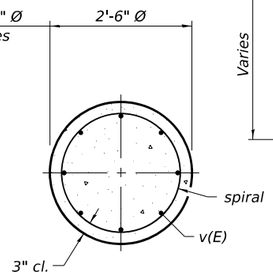
6" Ø and 8" Ø Support Frame

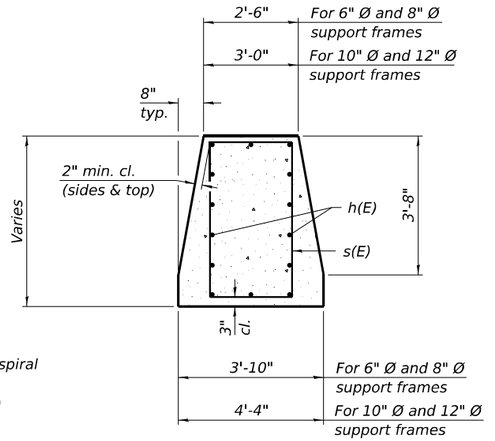
10" Ø and 12" Ø Support Frame

Pipe Support Frames	cc	M	a	a/2
6" Ø	7'-0"	9'-6"	0'-11"	5½"
8" Ø	7'-6"	10'-0"	1'-1½"	6¾"
10" Ø	8'-3"	11'-3"	1'-3"	7½"
12" Ø	9'-0"	12'-0"	1'-6"	9"

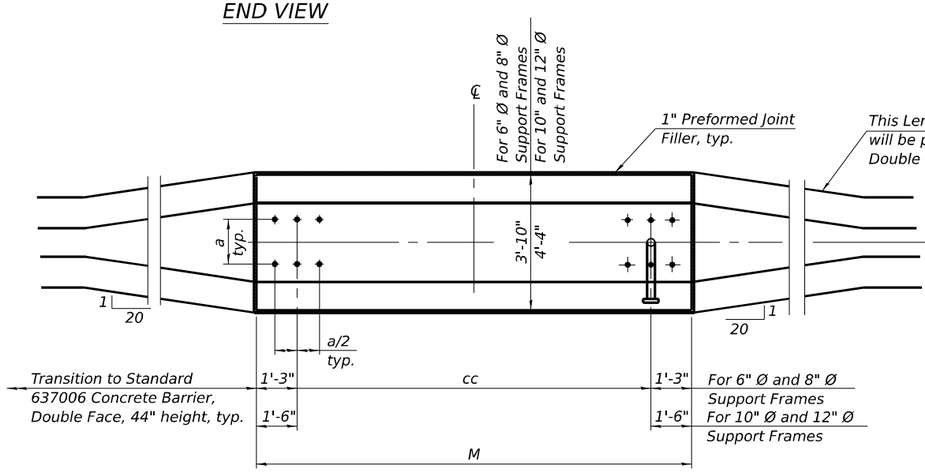


SECTION A-A





SECTION B-B



PLAN

Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
8S0821255L017.1	838+40.00	102.7	72.0	26'-0"	30'-8"					21.0

OS4-MED 5-15-2023

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS

SCALE: N.T.S. | SHEET 16 OF 17 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	230
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

SW 1/4, Section 28, T 2 N, R 9 W, 3rd P.M.

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 1Sh.

PROJECT _____ BRIDGE FAI 270 Date 8-31-81

ROUTE FAI 270 Sign Truss Bored By L. Ford

SEC. 82(2,3,4)SB STA. 838+25 Checked By R. Nebelsick

COUNTY St. Clair

Boring No. S-13-1
Station 838+25
Offset 74' Lt. ℄

Surface Water El. _____
Groundwater El. at Completion _____
After _____ Hours _____

	Elevation		N	Qu t/s.f.	w (%)
Ground Surface 415.2	0				
413.9 GROUND SURFACE ELEVATION @ PROPOSED FOOTING					
DARK GRAY CLAY	DAMP,STIFF	10	S 1.2	23	
410.7	-5				
BROWN SILT	DAMP VERY SOFT	5	S 0.2	15	
408.7					
BROWN SILTY FINE GRAINED SAND					
406.2+	DAMP,LOOSE	6	NC	-	
	-10				
(SOME CLAY STREAKS)	WET,SOFT	4	S 0.5	30	
BROWN SANDY SILT					
401.2+	WET,SOFT	6	S 0.3	28	
400.2 F.W.	-15				
	WET,LOOSE	7	NC	-	
GRAY FINE GRAINED SAND					
	WET,MEDIUM	15	NC	-	
	-20				
	WET,MEDIUM	16	NC	-	
	WET,MEDIUM	19	NC	-	
	-25				
389.2	WET,DENSE	38	NC	-	
END OF BORING					
	-30				
	-35				
	-40				
	-45				

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

SW 1/4, Section 28, T 2 N, R 9 W, 3rd P.M.

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 1 Sh.

PROJECT _____ BRIDGE FAI 270 Date 8-31-81

ROUTE FAI 270 Sign Truss Bored By L. Ford

SEC. 82(2,3,4)SB STA. 838+25 Checked By R. Nebelsick

COUNTY St. Clair

Boring No. S-13-2
Station 838+25
Offset 7' Rt. ℄

Surface Water El. _____
Groundwater El. at Completion _____
After _____ Hours _____

	Elevation		N	Qu t/s.f.	w (%)
Ground Surface 414.7	0				
GRAY SILTY CLAY					
410.7+	DAMP,STIFF	6	S 1.2	25	
	-5				
BROWN CLAYEY SILT	DAMP,STIFF	7	S 1.3	23	
406.4	DAMP,SOFT	5	S 0.4	30	
	-10				
BROWN SILT	WET,SOFT	6	S 0.5	31	
	WET,SOFT	6	S 0.4	28	
	-15				
398.8	WET,MEDIUM	12	S 0.7	29	
397.8 F.W.					
BROWN FINE GRAINED SAND	WET,LOOSE	5	NC	-	
	-20				
393.8	WET,LOOSE	8	NC	-	
GRAY FINE GRAINED SAND	WET,MEDIUM	13	NC	-	
	-25				
388.8	WET,DENSE	33	NC	-	
END OF BORING					
	-30				
	-35				
	-40				
	-45				

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

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	DRAWN - MBJ	REVISED -	
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PLOT DATE = 3/20/2024	DATE - 3/20/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
SIGN TRUSS NO. 8S0821255L017.1

SCALE: N.T.S. | SHEET 17 OF 17 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	231
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

LIGHTING LEGEND

OR

OR

OR

PROPOSED LIGHTING UNIT (OUTPUT DESIGNATION F), ALUMINUM LIGHT POLE, 25 FT. M.H., 8 FT. MAST ARM

PROPOSED LIGHTING UNIT (OUTPUT DESIGNATION H), ALUMINUM LIGHT POLE, 45 FT. M.H., 8 FT. MAST ARM

EXISTING LIGHTING UNIT TO REMAIN

EXISTING LIGHTING CONTROLLER (TO BE REMOVED)

PROPOSED LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480VOLT, 60AMP

PROPOSED JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 18"X12"X8"

PROPOSED HANDHOLE

EXISTING ELECTRIC SERVICE INSTALLATION TO BE REMOVED

PROPOSED ELECTRIC SERVICE INSTALLATION

EXISTING UNIT DUCT TO BE ABANDONED

EXISTING CONDUIT TO BE ABANDONED

PROPOSED UNIT DUCT/CABLE IN CONDUIT, SIZE AS SPECIFIED

PROPOSED UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA

EXISTING LIGHT POLE LEGEND (TO BE REMOVED)

BOLT PATTERN	50' MH POLES				20' MH POLES	17' MH POLES
	400W	310W	400W/ 310W	250W	150W	150W
18"R						
17"R						
15"R						

CABLE/CONDUIT LEGEND

(A) UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO.8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE

(B) 2" PVC CONDUIT EMBEDDED IN STRUCTURE, 2-1C NO. 8, 1/C NO.8 GROUND, (XLP-TYPE USE).

BILL OF MATERIALS

SP	CODE NO.	ITEM	UNIT	QTY.
	80400100	ELECTRIC SERVICE INSTALLATION	EACH	4
	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	787
	81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	17911
	81301370	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 18" X 12" X 8"	EACH	4
	81603000	UNIT DUCT, 600V, 2-1C NO.8, 1/C NO.8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	14074
	81702420	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 8	FOOT	17911
	82110006	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION F	EACH	34
	82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	145
	82500340	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480VOLT, 60AMP	EACH	4
	83009300	LIGHT POLE, ALUMINUM, 45 FT. M.H., 8 FT. MAST ARM	EACH	33
	83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	80.0
	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	240.5
	83800506	BREAKAWAY DEVICE, COUPLING WITH ALUMINUM SKIRT OVER STAINLESS STEEL SCREEN	EACH	212
	84200600	REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	111
	84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	4
	84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	4
	84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	4
	89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	157
*	X8360103	LIGHT POLE FOUNDATION, INTEGRAL WITH BARRIER WALL	EACH	61
	XXXXXXXX	LIGHT POLE, ALUMINUM, 45 FT. M.H., 8 FT. MAST ARM - TWIN	EACH	56
	XXXXXXXX	LIGHT POLE, ALUMINUM, 25 FT. M.H., 8 FT. MAST ARM - TWIN	EACH	9
	XXXXXXXX	LIGHT POLE, ALUMINUM, 25 FT. M.H., 8 FT. MAST ARM	EACH	16

INDEX OF SHEETS

HIGHWAY STANDARDS

812001-01	RACEWAYS EMBEDDED IN STRUCTURE
821101-02	LUMINAIRE WIRING IN POLE
825016-04	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480V
830001-03	LIGHT POLE ALUMINIUM MAST ARM
836001-02	LIGHT POLE FOUNDATION WITH 44 IN (1120 MM) CONCRETE BARRIER
836001-04	LIGHT POLE FOUNDATION

NOTE

INTERMEDIATE ENHANCED REFERENCE LOCATION SIGN (D10-5) PANELS TO BE BANDED WITH THE LIGHTING POLES. REFER TO THE SIGNING SHEETS FOR MILE POST MARKER SIGN SCHEDULE AND LOCATIONS.

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745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
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www.abnacorp.com

USER NAME = muddin	DESIGNED - FPE	REVISED -
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PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING LEGEND, INDEX, HIGHWAY STANDARDS AND BILL OF MATERIALS

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

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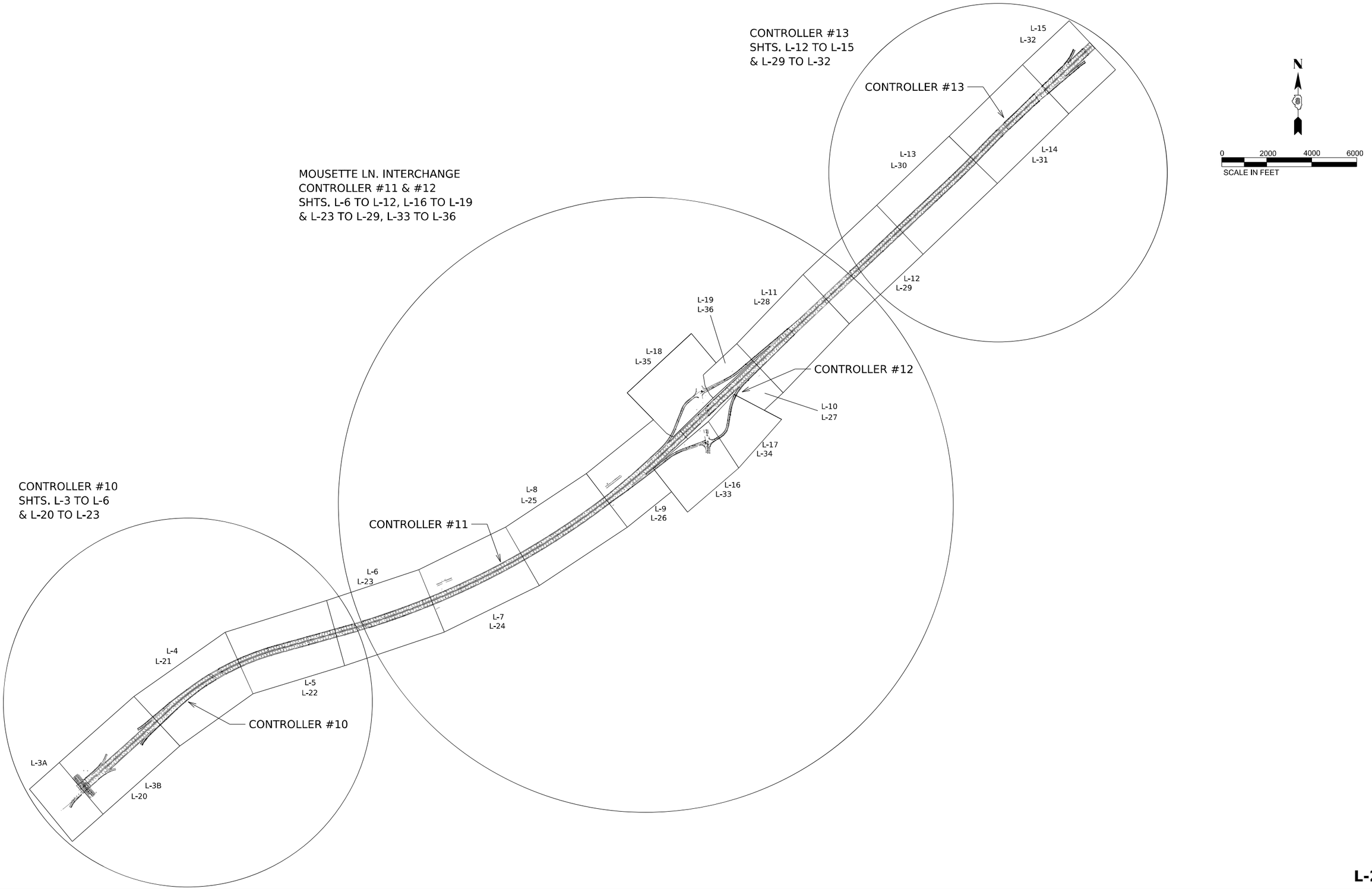

L-2

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LIGHTING KEY MAP

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

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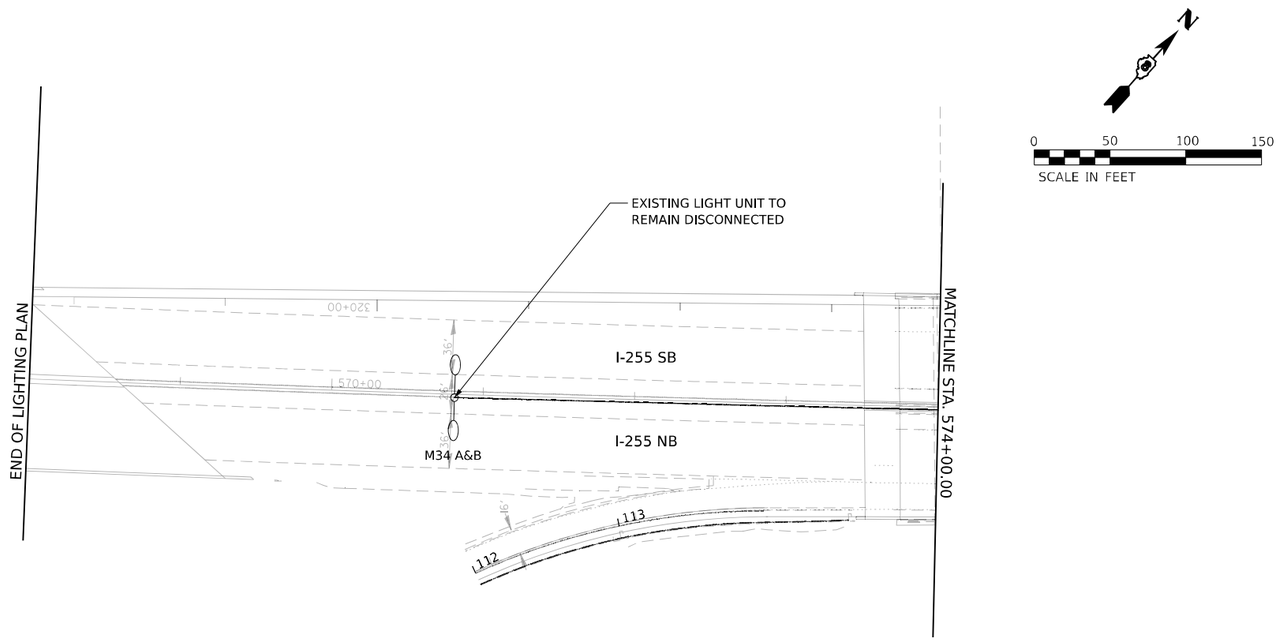
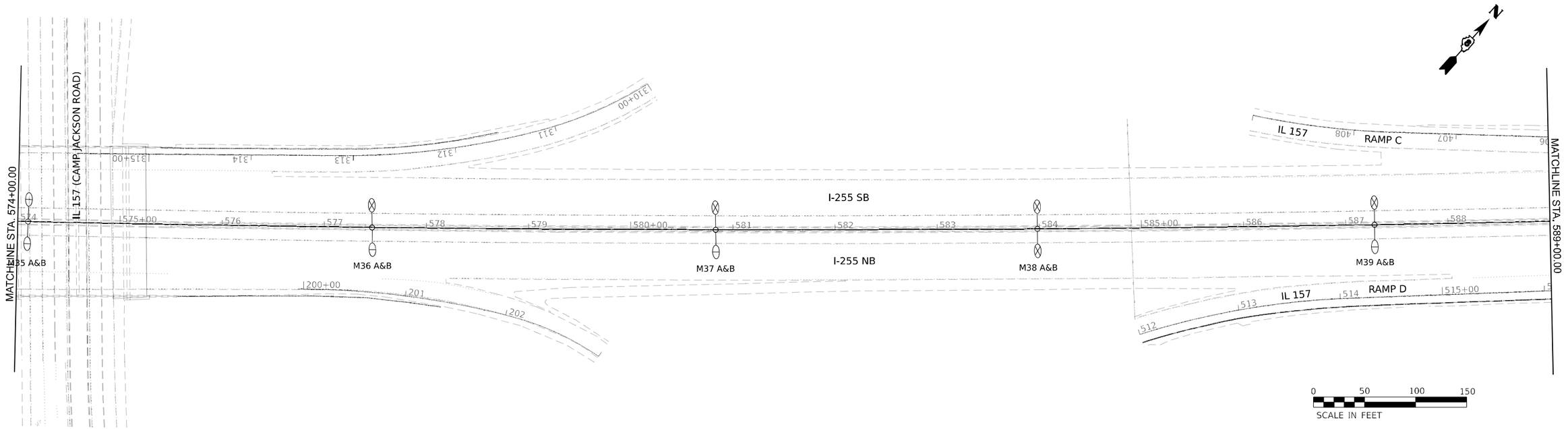


L-3A



L-3B

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #10

SCALE: | SHEET 01 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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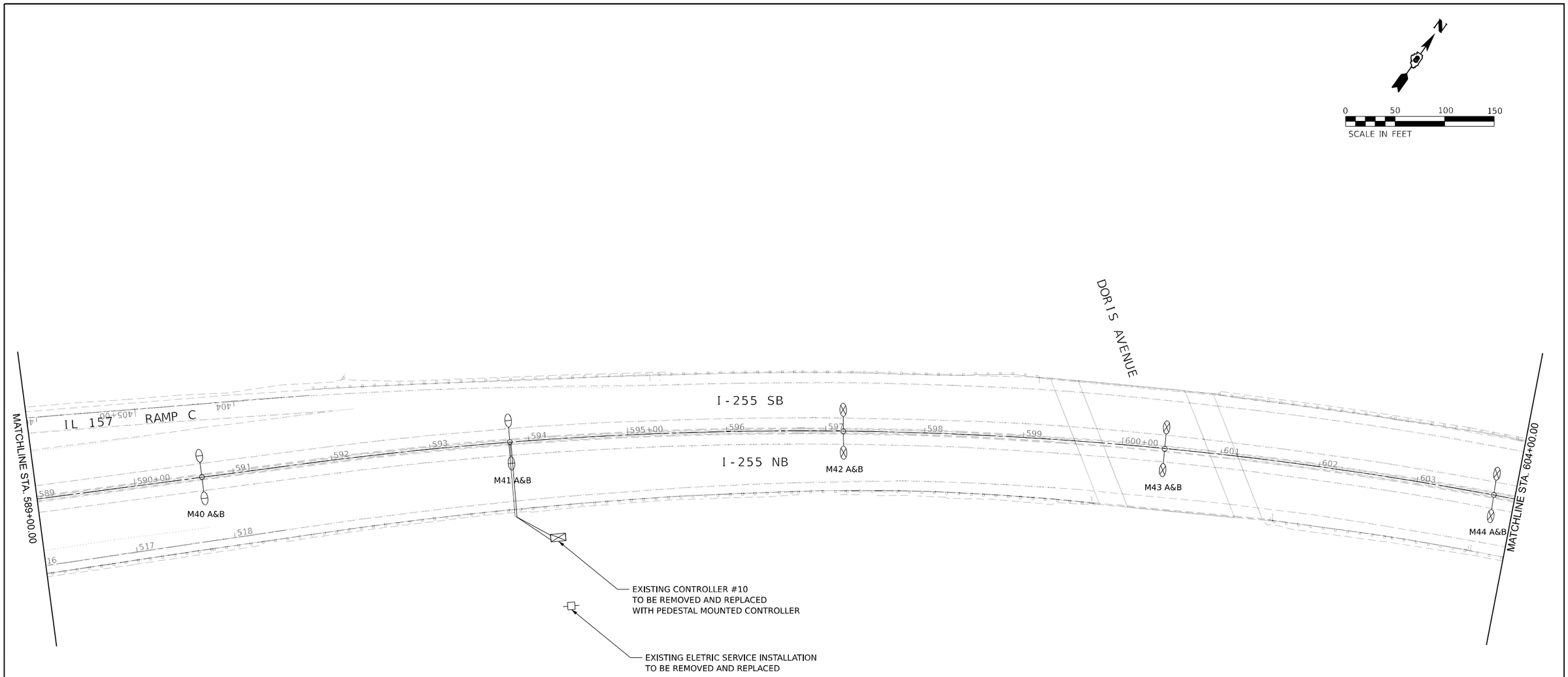
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-4

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PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #10

SCALE: | SHEET 02 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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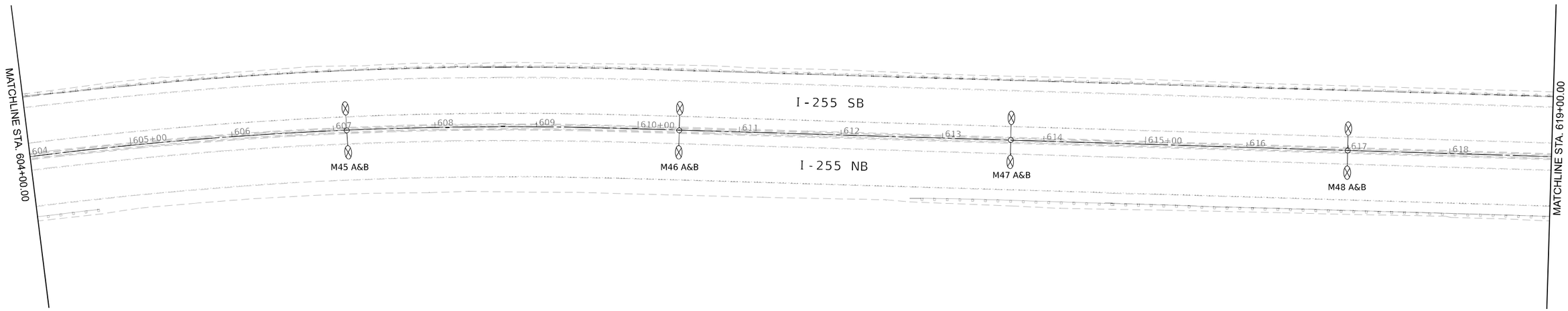
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-5

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PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #10

SCALE: | SHEET 03 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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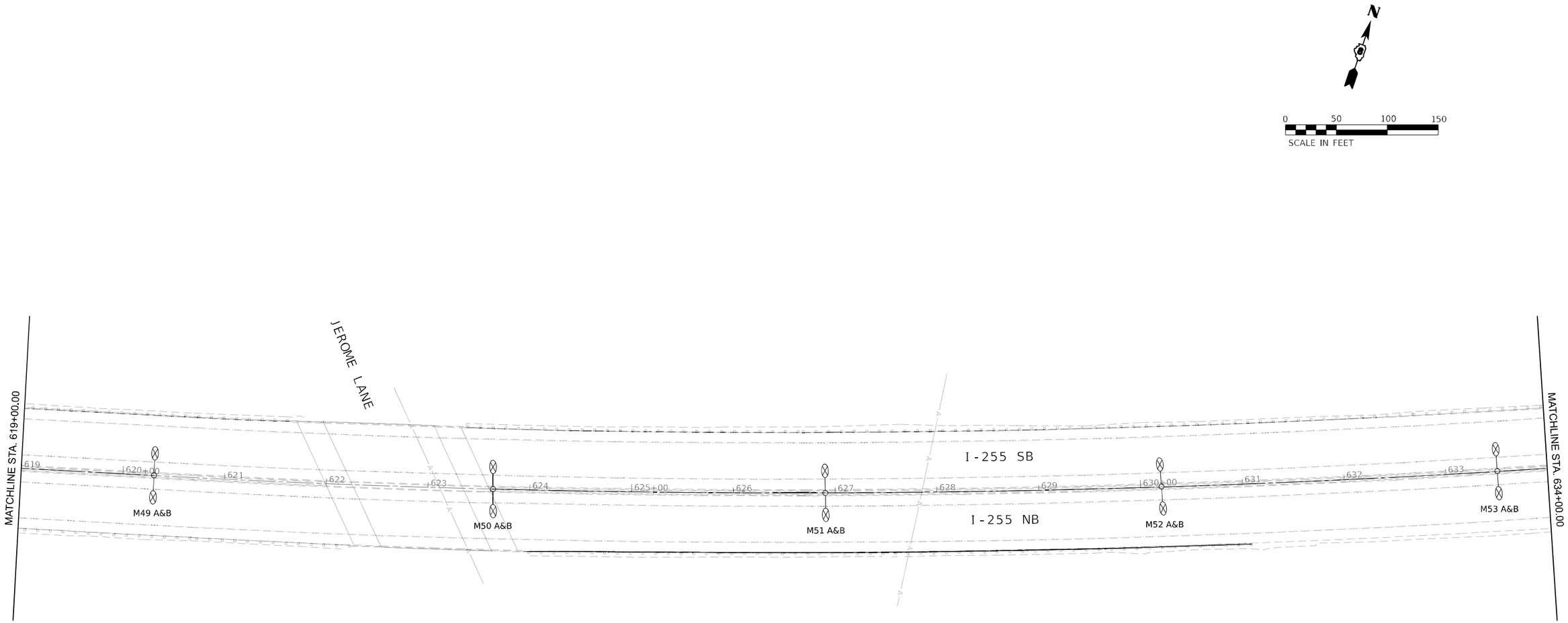
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



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	DRAWN - MSU	REVISED -
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PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #10 AND #11

SCALE: | SHEET 04 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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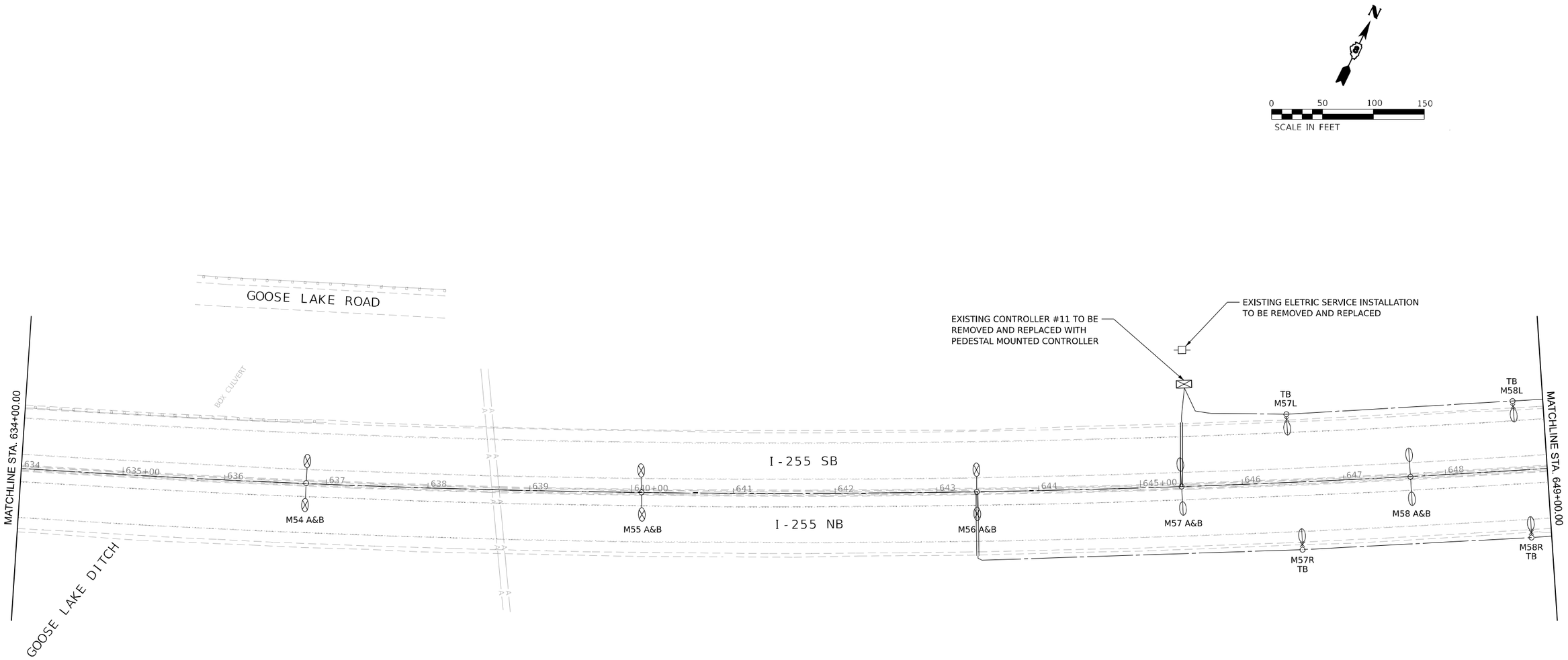
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-7

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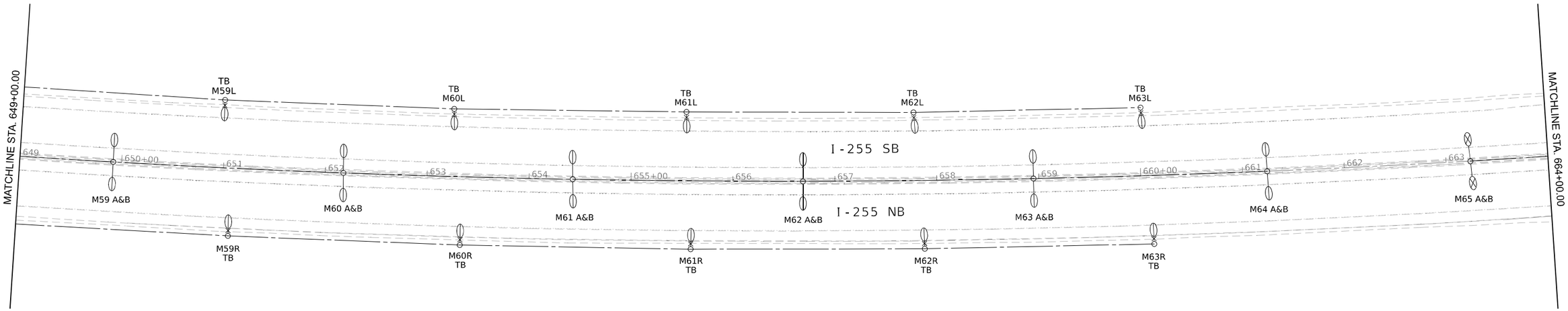
USER NAME = muddin	DESIGNED - FPE	REVISED -
	DRAWN - MSU	REVISED -
PLOT SCALE = 99.999800 ' / in.	CHECKED - JMO	REVISED -
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #11

SCALE: | SHEET 05 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	238
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-8

MODEL: Plan 6 [Sheet]
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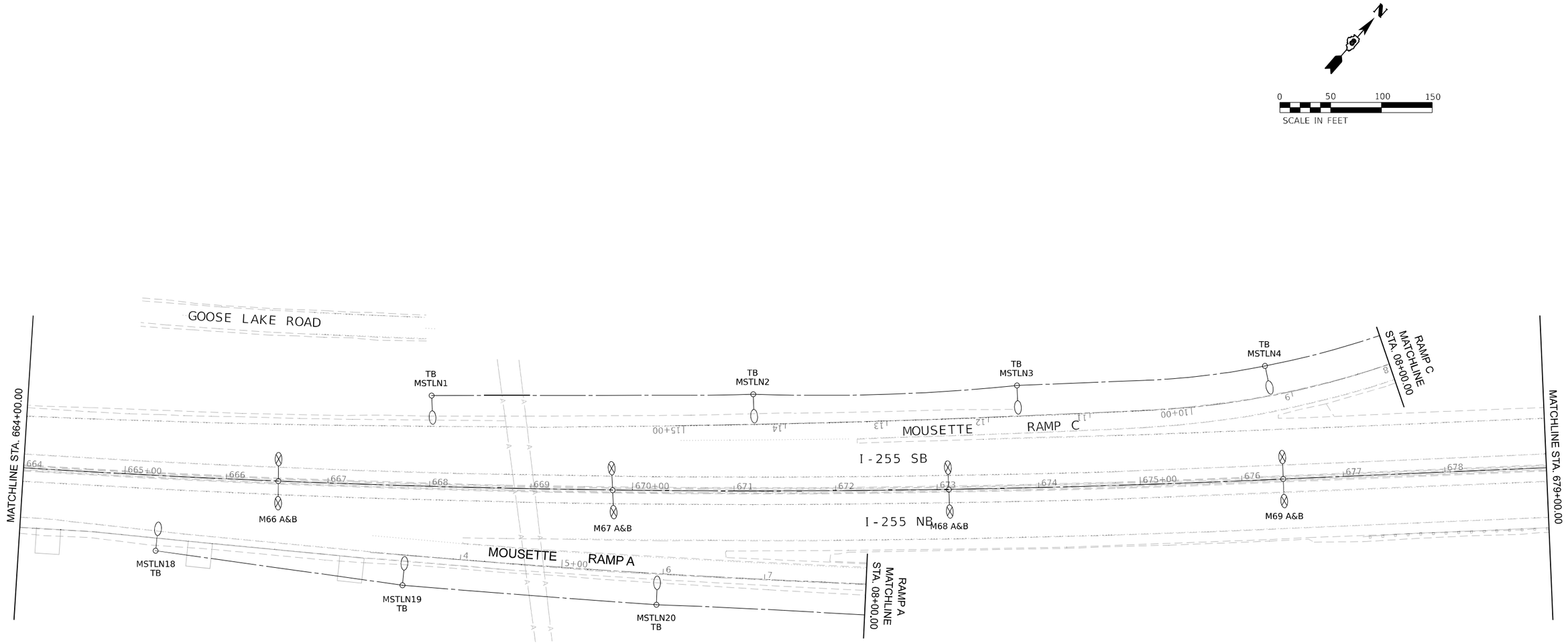
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #11 AND #12

SCALE: | SHEET 06 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	239
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-9

MODEL: Plan 7 (Sheet)
FILE NAME: J:\2022\6060\Cad\Design\Plan\D076K05-sht-Plan-EXISTING.dgn

ABNA DESIGN FIRM REG. 184.002117	USER NAME = muddin	DESIGNED - FPE	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING LIGHTING REMOVAL PLAN CONTROLLER #12
745 McClintock Drive Suite 210 Burr Ridge, IL 60527 Ph: 773-681-4788 www.abnacorp.com		DRAWN - MSU	REVISED -		
	PLOT SCALE = 99.999800 ' / in.	CHECKED - JMO	REVISED -		SCALE: SHEET 07 OF 17 SHEETS STA. TO STA.
	PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -		

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	240
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

N

0 50 100 150
SCALE IN FEET

(SEE L-18)
MATCHLINE B

(SEE L-19)
MATCHLINE C

MATCHLINE STA. 679+00.00

679 680+00 681 682 683 684 685+00 686 687 688 689 690+00 691 692 693

M70 A&B M71 A&B M72 A&B M73 A&B M74 A&B

I-255 SB

I-255 NB

MOUSETTE LANE

MATCHLINE A
(SEE L-16)

MATCHLINE STA. 694+00.00

10+00 11 12 13 14

MSTLN32
TB

MSTLN33
TB

RAMP B

RAMP B
MATCHLINE
STA. 09+10.00

MOUSETTE

EXISTING ELETRIC SERVICE INSTALLATION
TO BE REMOVED AND REPLACED

EXISTING CONTROLLER #12 TO BE
REMOVED AND REPLACED WITH
PEDESTAL MOUNTED CONTROLLER

L-10

MODEL: Plan: 8 [Sheet]
FILE NAME: J:\3022\60606\Cadd\Design\Plan\D876K05-sht-4plan-EXISTING.dgn

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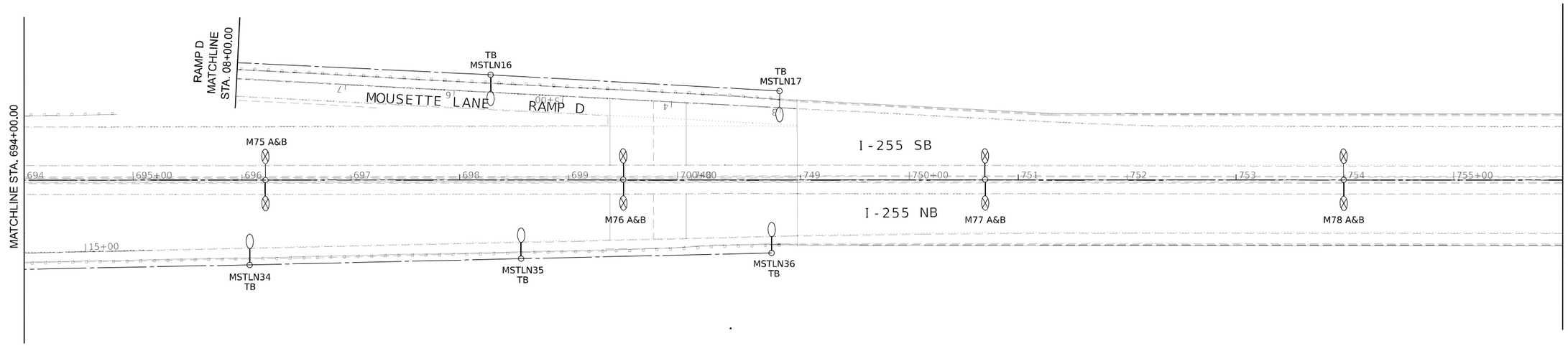
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -	

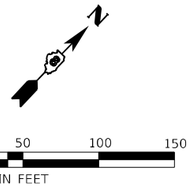
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #12

SCALE: | SHEET 08 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	241
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			





L-11

MODEL: Plan 9 [Sheet]
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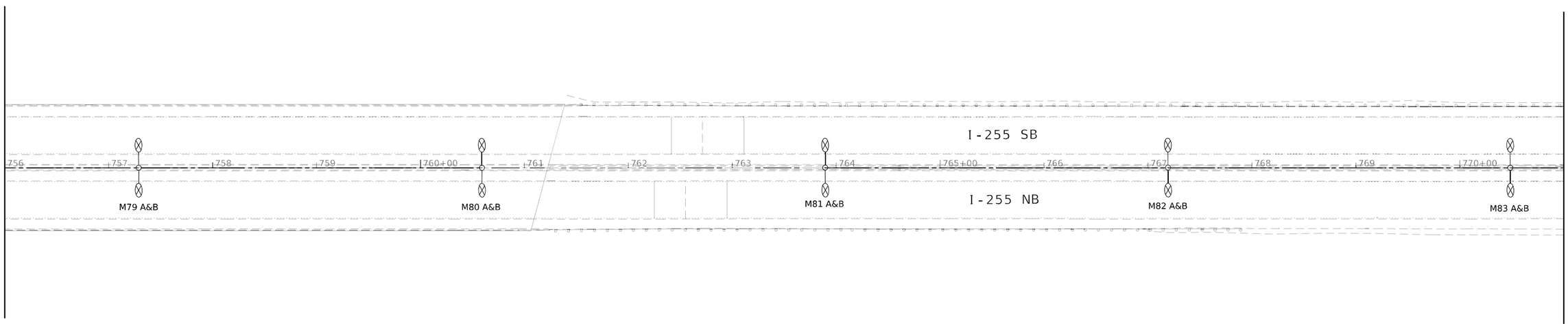
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #12

SCALE: | SHEET 09 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	242
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-12

MODEL: Plan 10 [Sheet]
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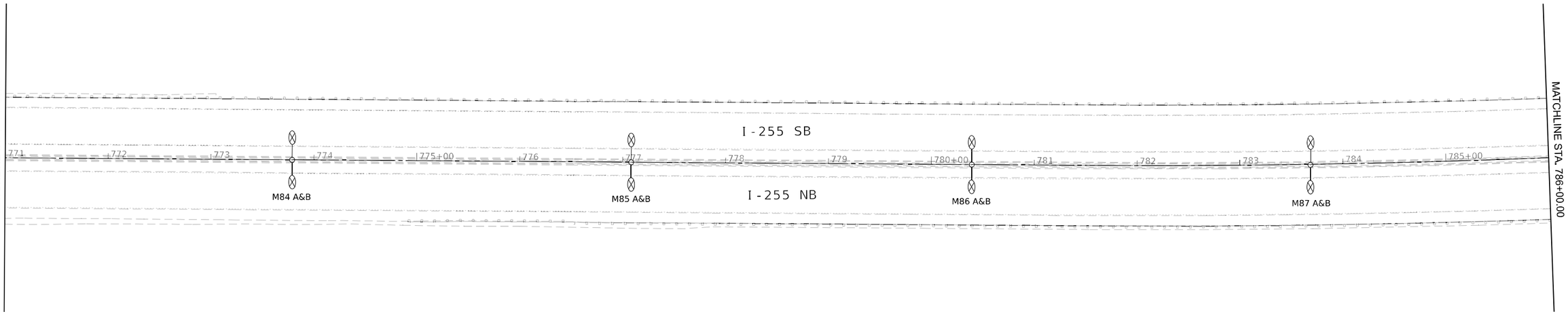
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

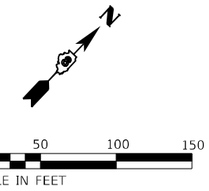
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #12 AND #13

SCALE: | SHEET 10 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	243
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			





L-13

MODEL: Plan 11 [Sheet]
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	DRAWN - MSU	REVISED -
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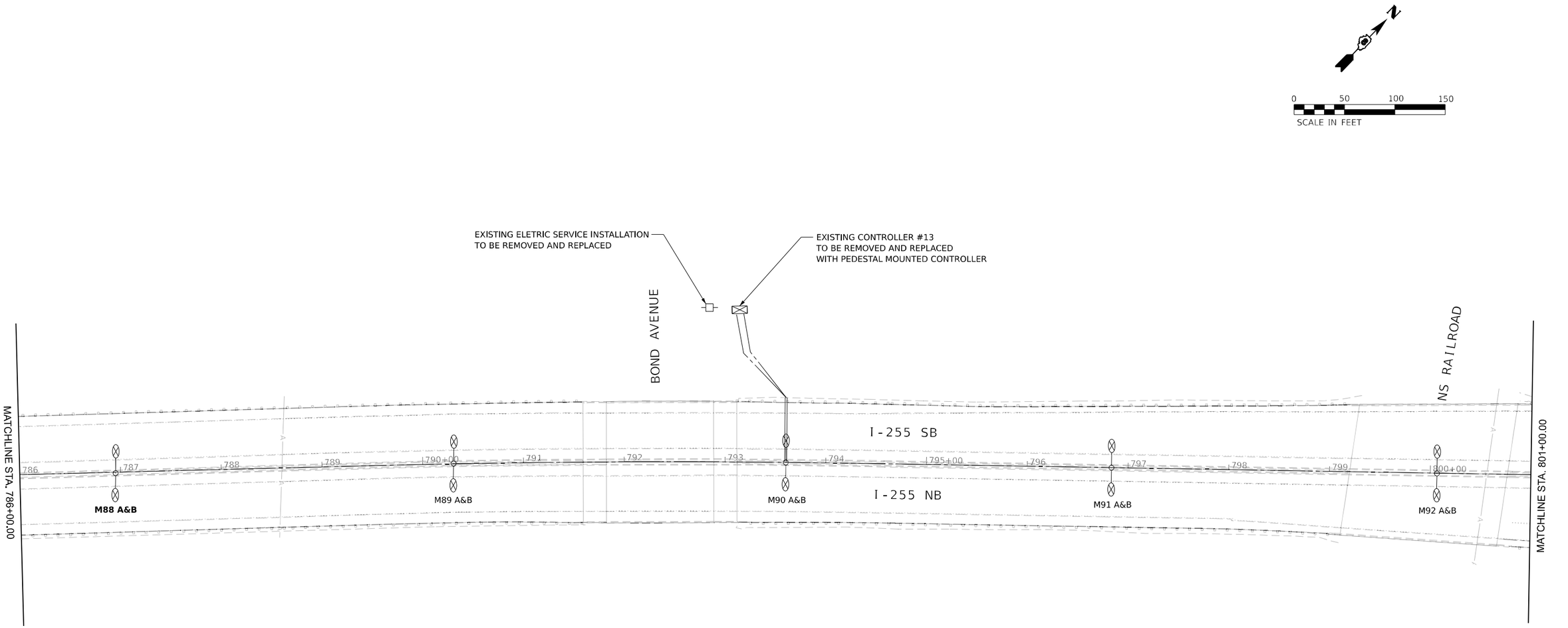
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #13

SCALE: | SHEET 11 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	244
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-14

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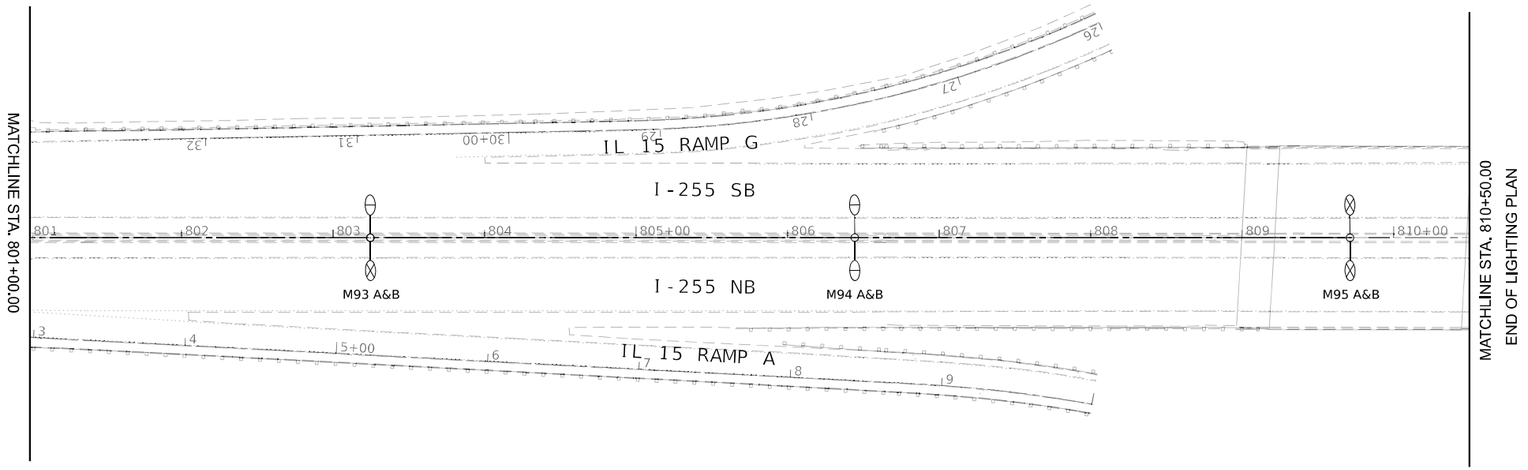
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

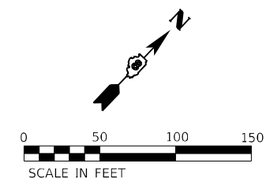
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #13

SCALE: | SHEET 12 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	245
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		





L-15

MODEL: Plan 13 [Sheet]
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PLOT SCALE = 99.999800 ' / in.	CHECKED - JMO	REVISED -
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #13

SCALE: | SHEET 13 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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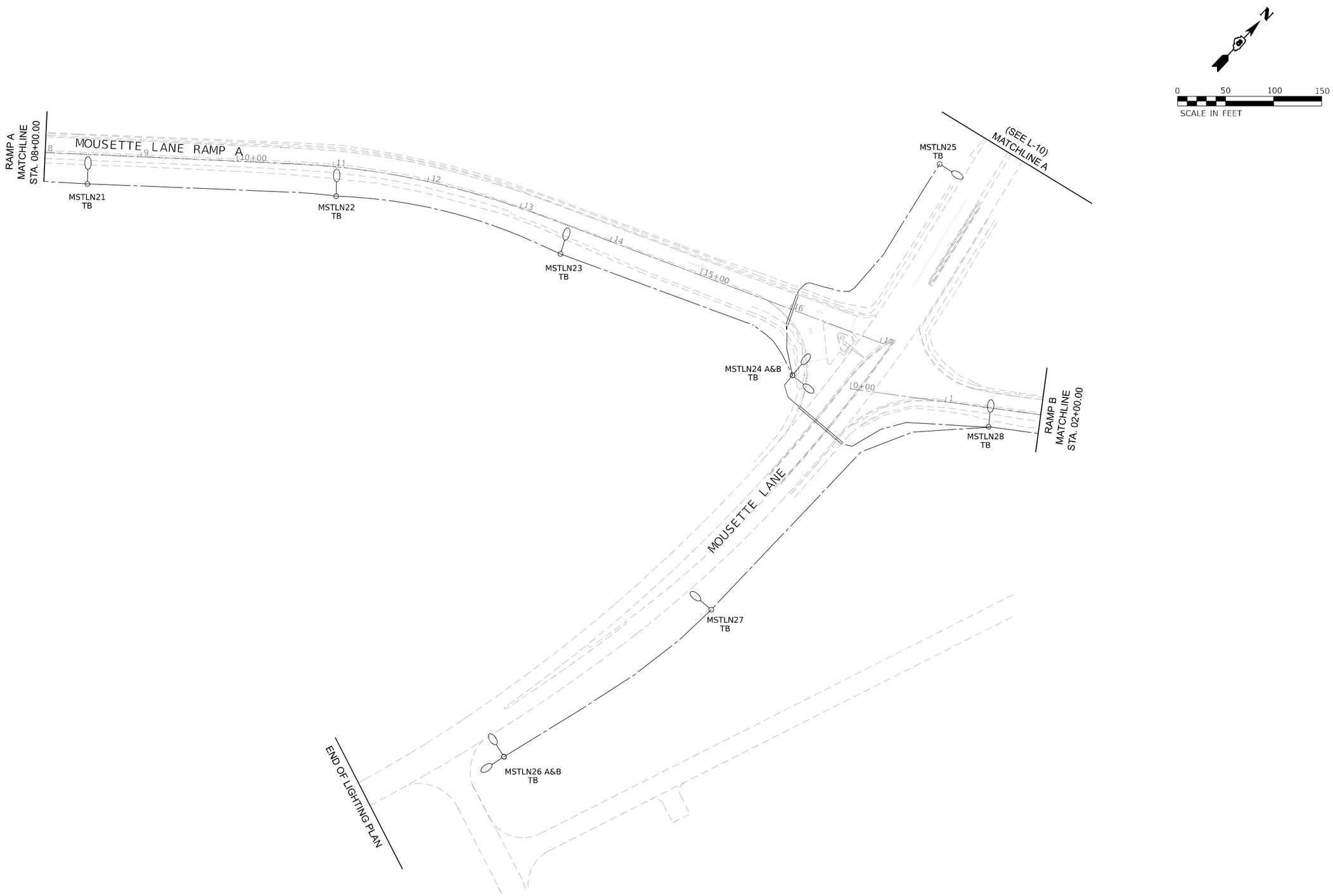
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-16

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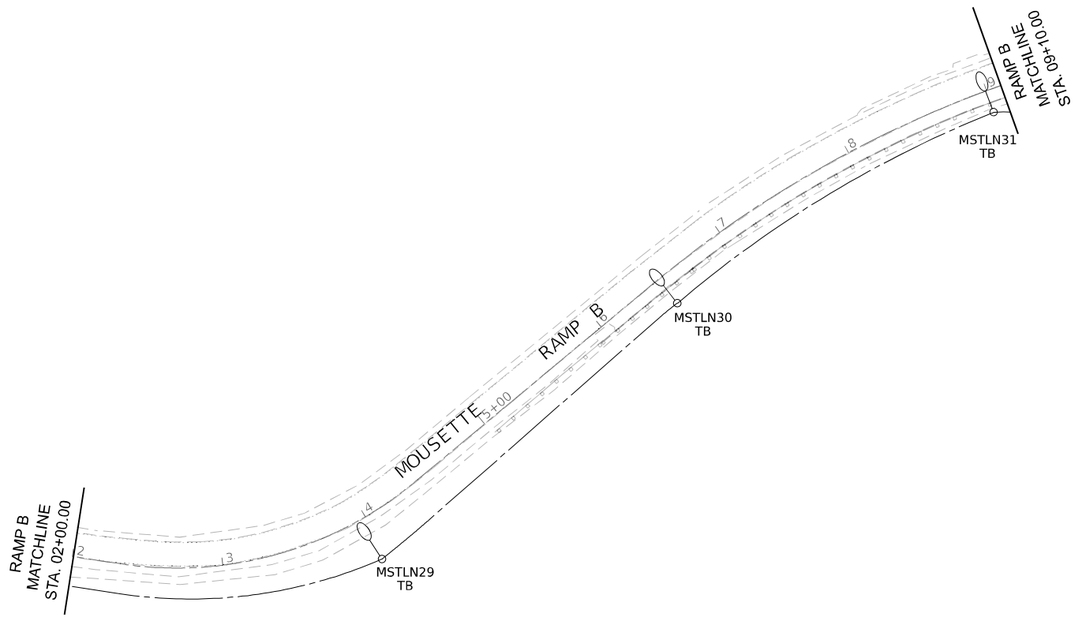
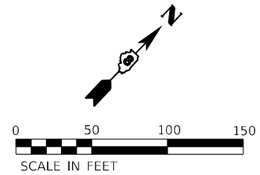
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #12

SCALE: | SHEET 14 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	247
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			





L-17

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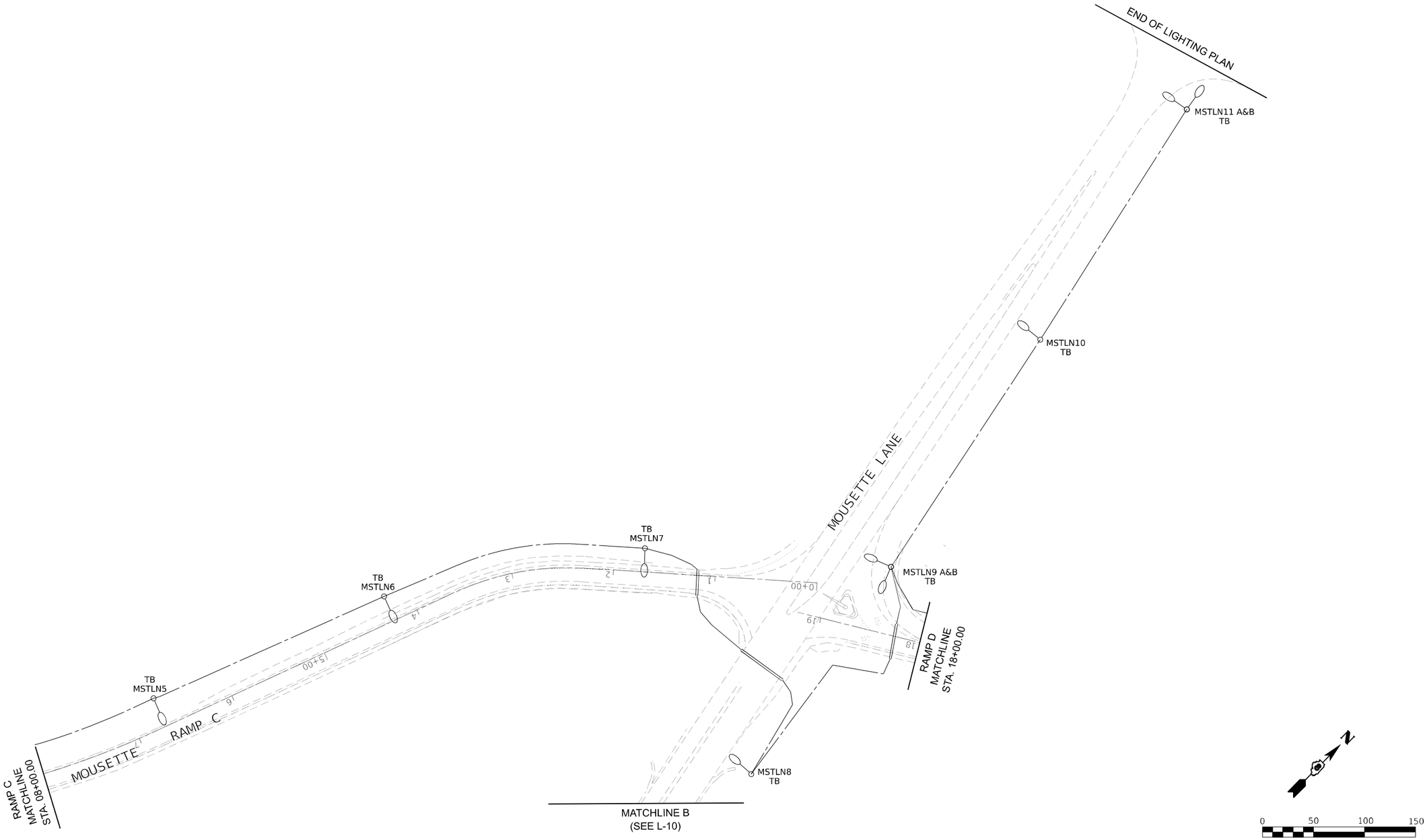
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #12

SCALE: | SHEET 15 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	248
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-18

MODEL: Plan 16 [Sheet]
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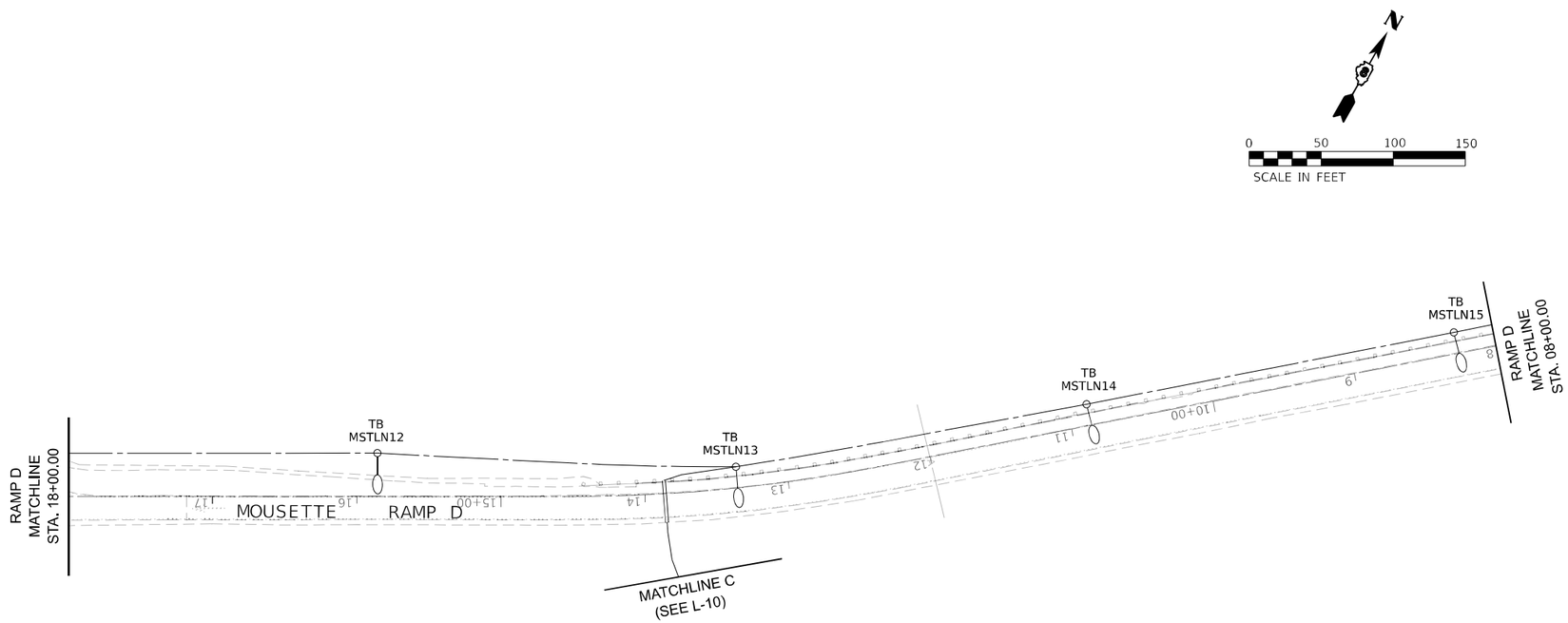
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #12

SCALE: | SHEET 16 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	249
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-19

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL PLAN
CONTROLLER #12

SCALE: | SHEET 17 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	250
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

N

0 50 100 150
SCALE IN FEET

MATCHLINE STA. 574+00.00

IL 157 (CAMP JACKSON ROAD)

EXISTING R.O.W.

IL 157 RAMP C

MATCHLINE STA. 589+00.00

CONTROLLER #10
CIRCUIT A

I-255 SB

I-255 NB

M35 A&B

M36 A&B

M37 A&B

M38 A&B

M39 A&B

INSTALL EMBEDDED CONDUIT
EXPANSION/DEFLECTION COUPLING

IL 157 RAMP D

EXISTING R.O.W.

L-20

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	PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #10

SCALE: | SHEET 01 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	251
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

MODEL: Plan 1 [Sheet]
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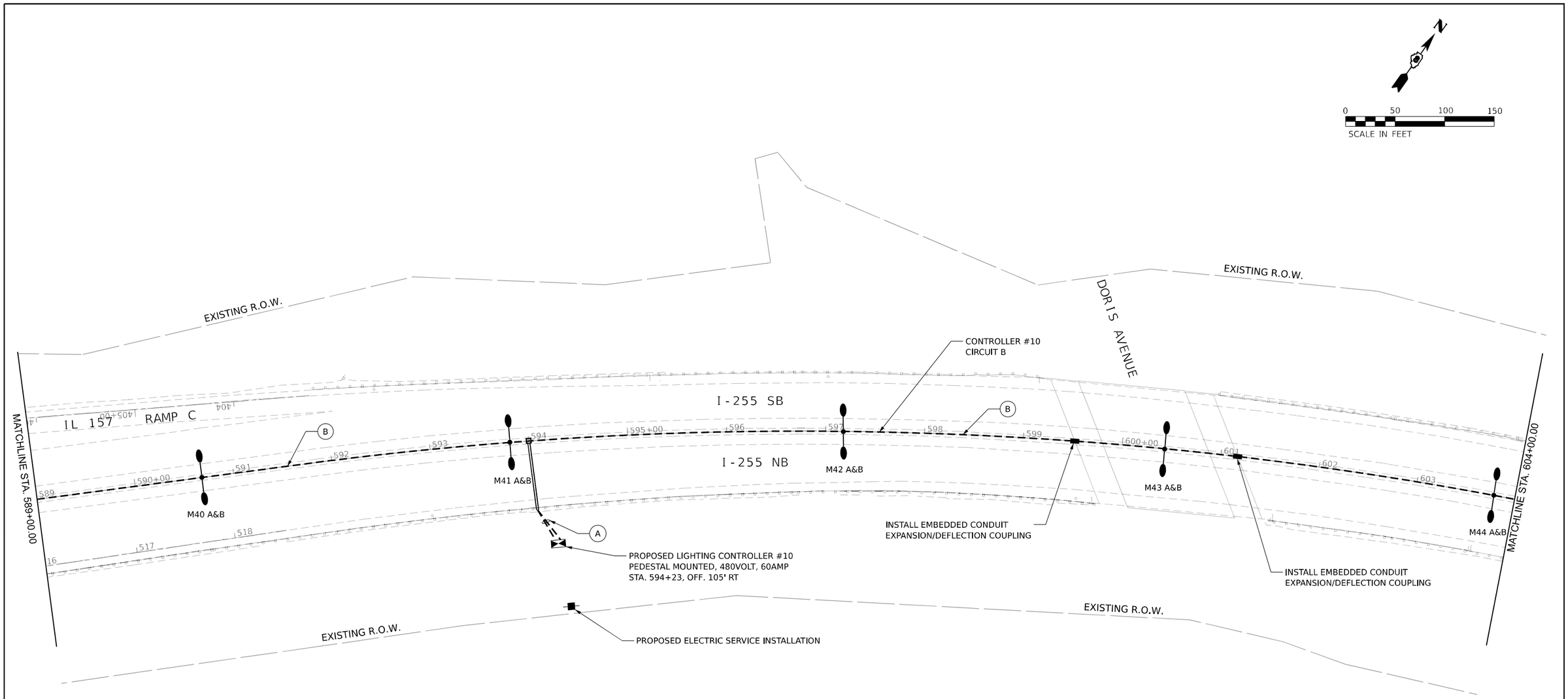

L-21

MODEL: Plan 2 [Sheet]
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DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #10

SCALE: | SHEET 02 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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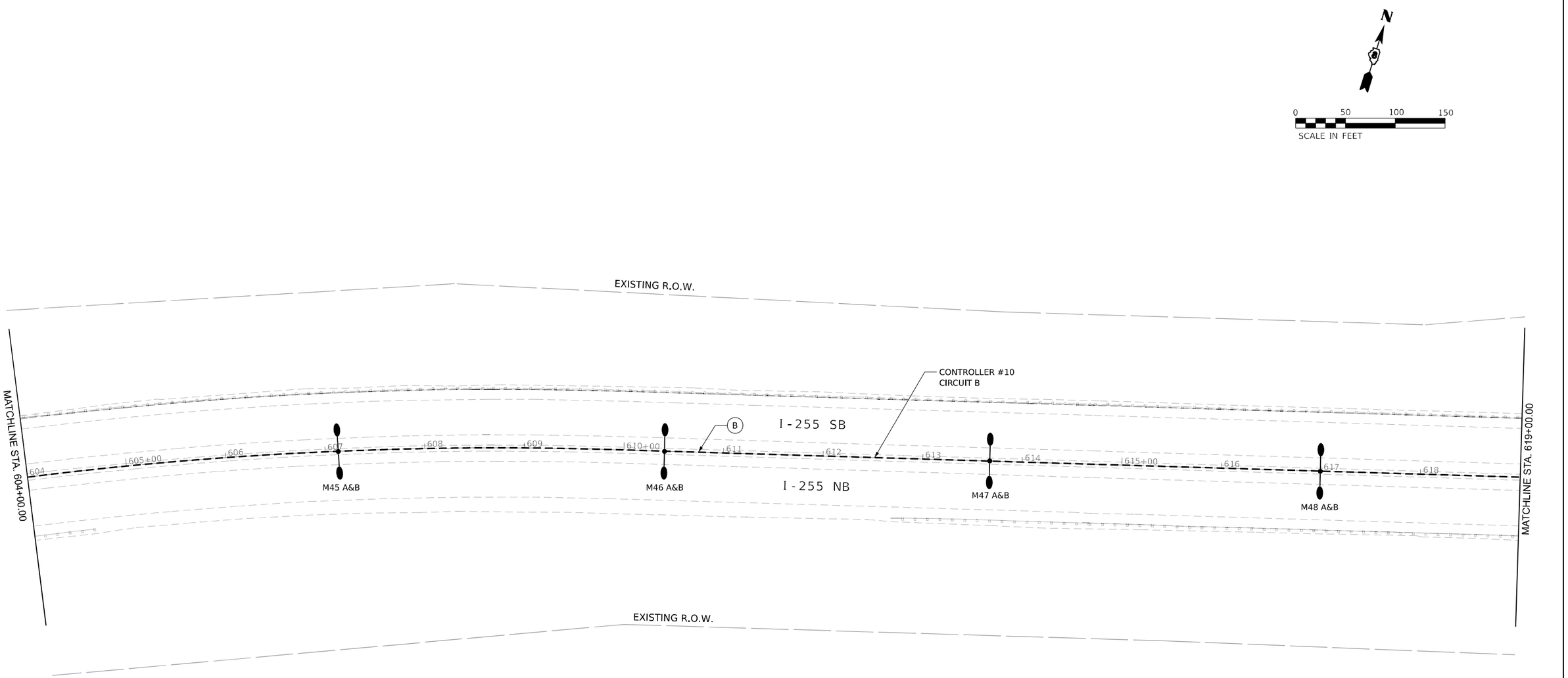
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-22

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	DRAWN - MSU	REVISED -
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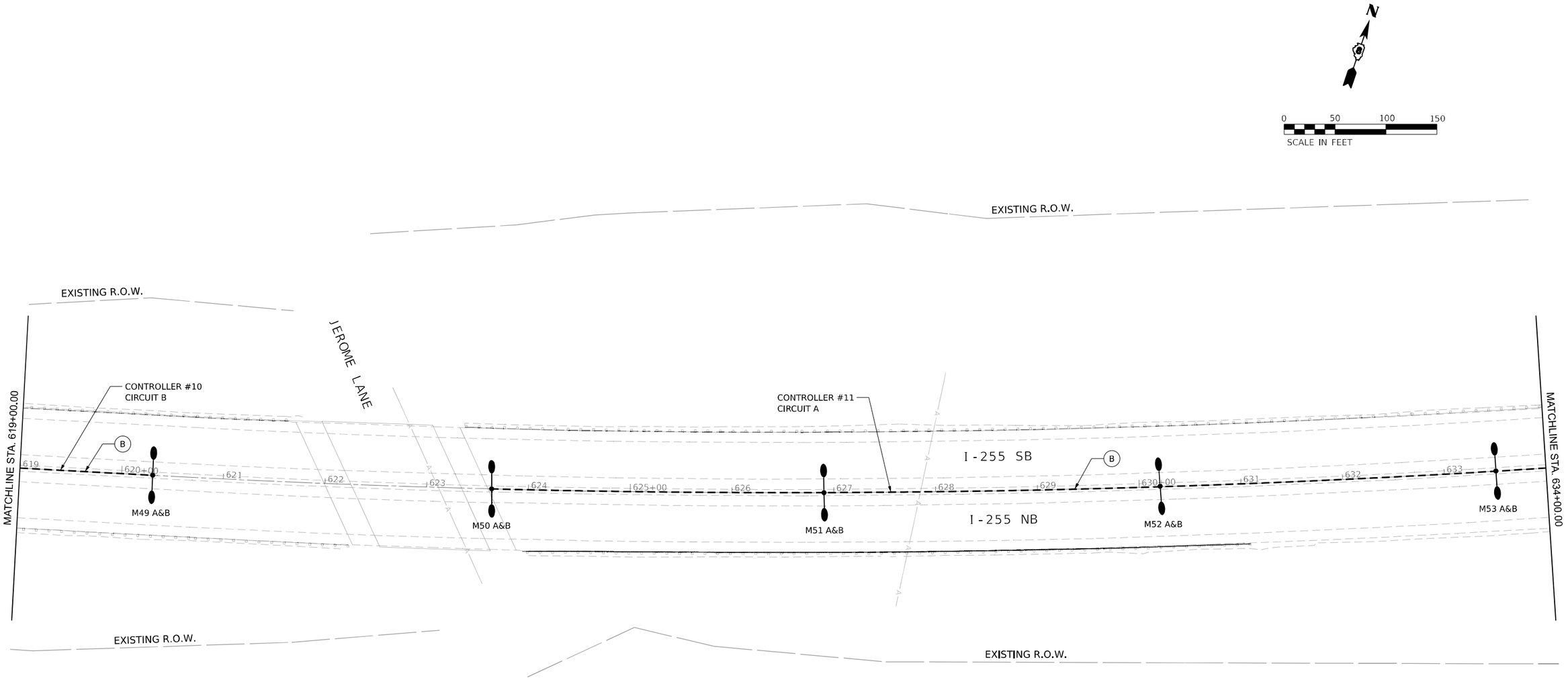
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #10

SCALE: | SHEET 03 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	253
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-23

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #10 AND #11

SCALE: | SHEET 04 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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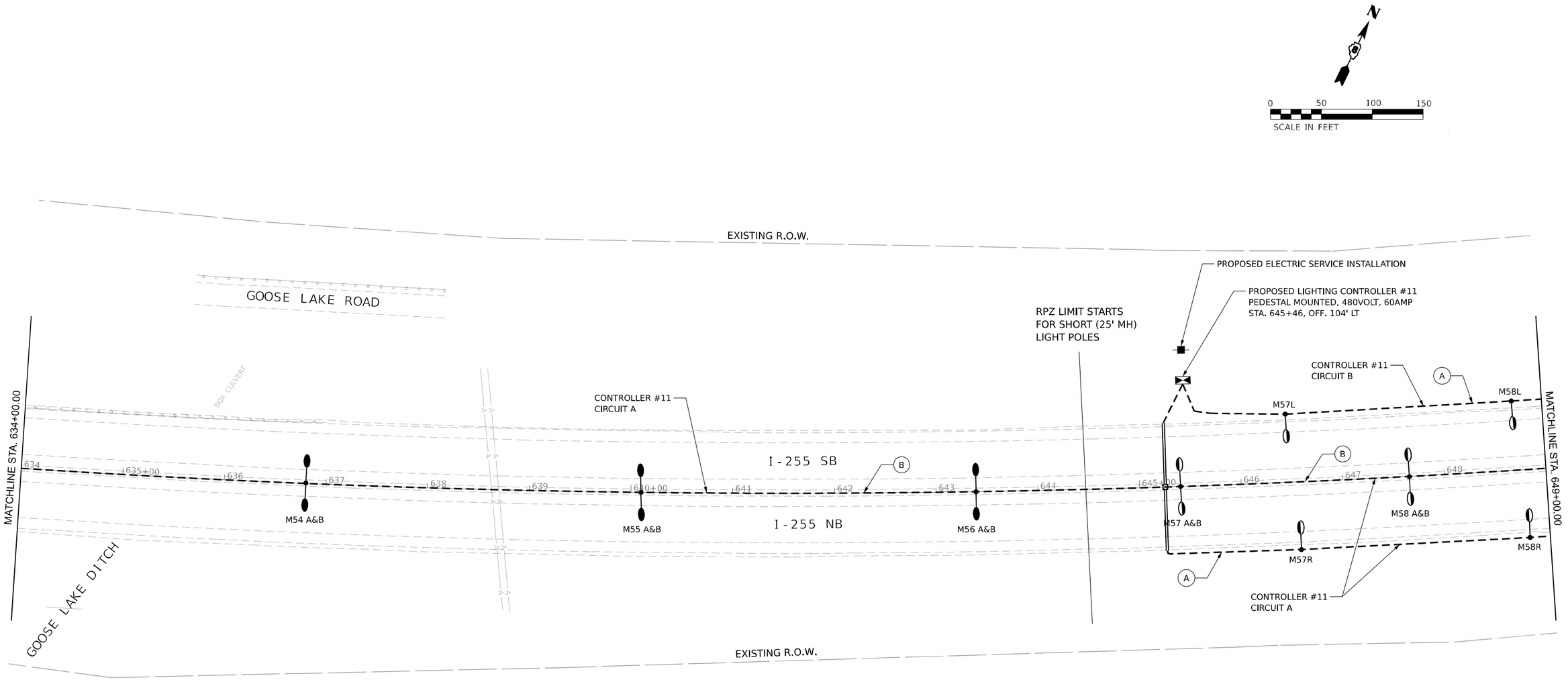
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-24

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #11

SCALE: | SHEET 05 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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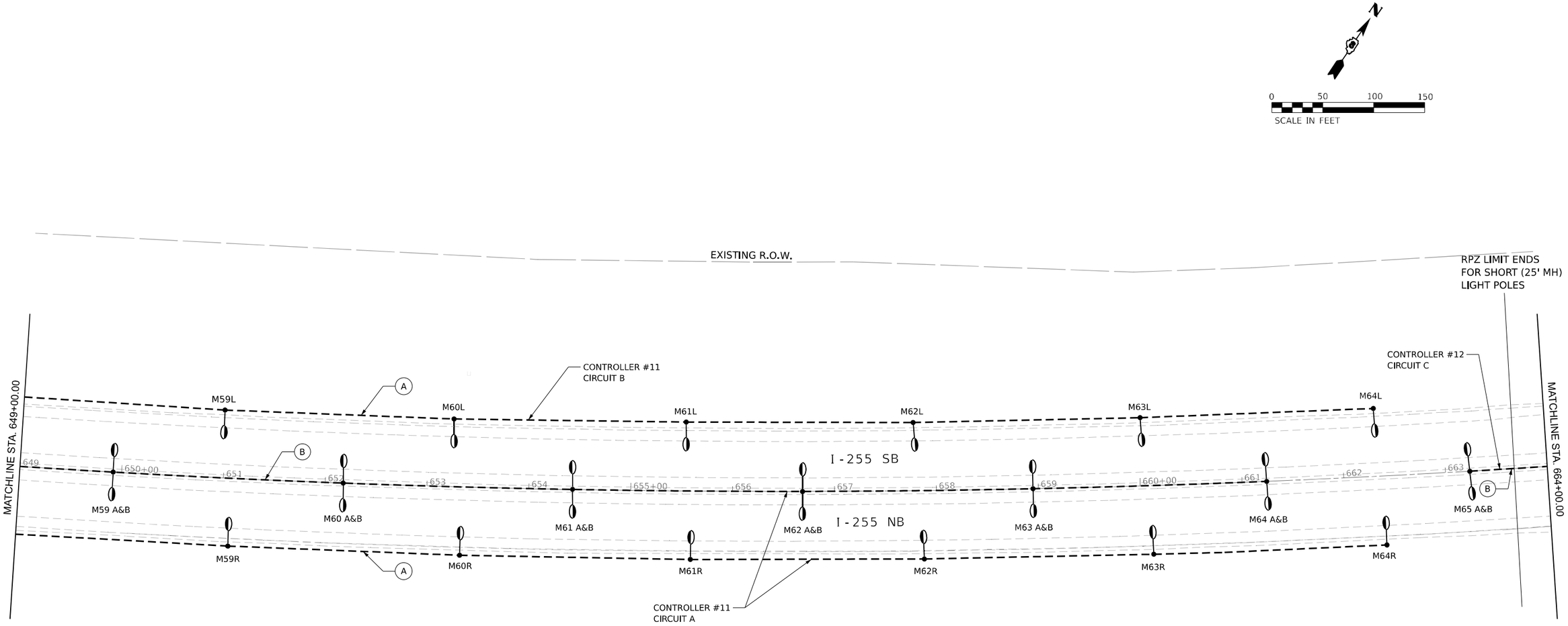
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-25

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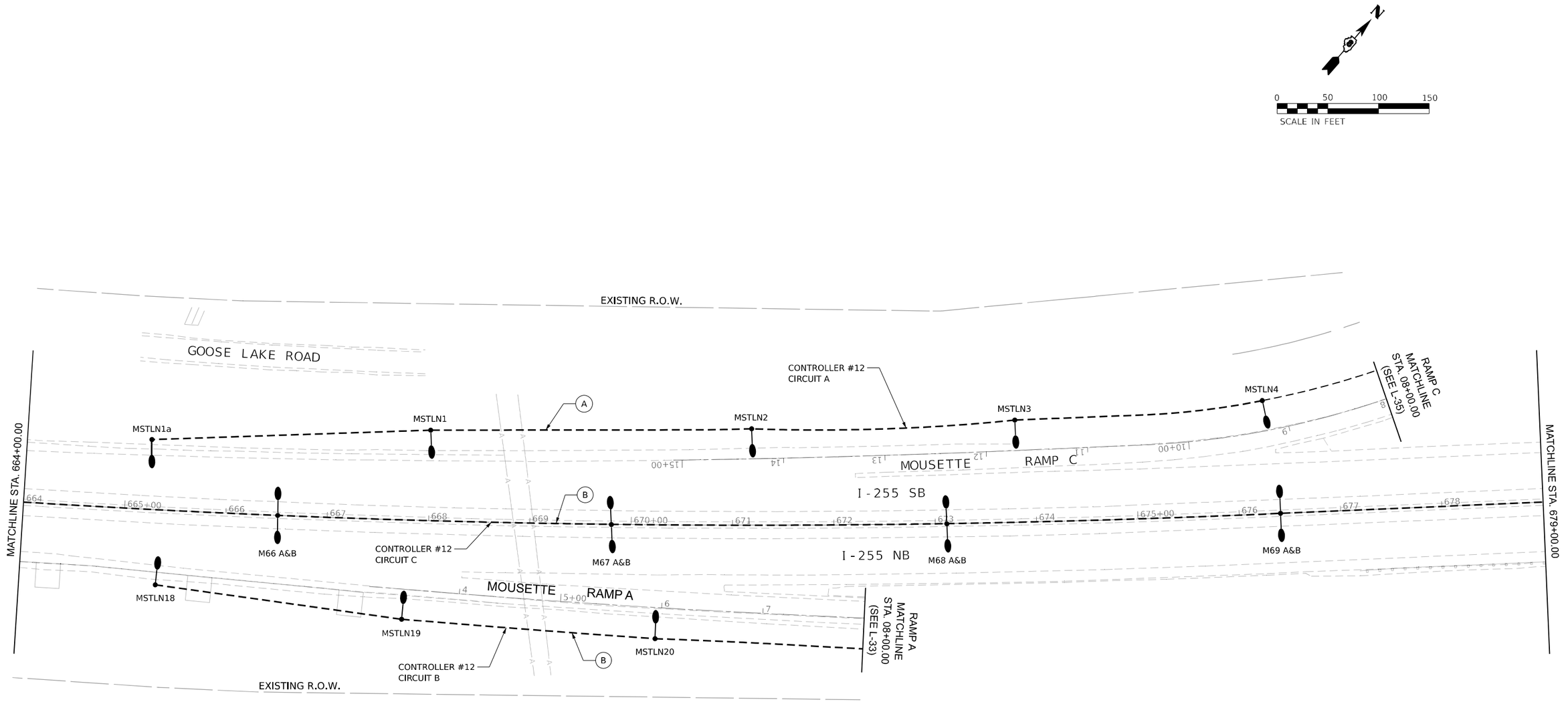
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #11

SCALE: | SHEET 06 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	256
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-26

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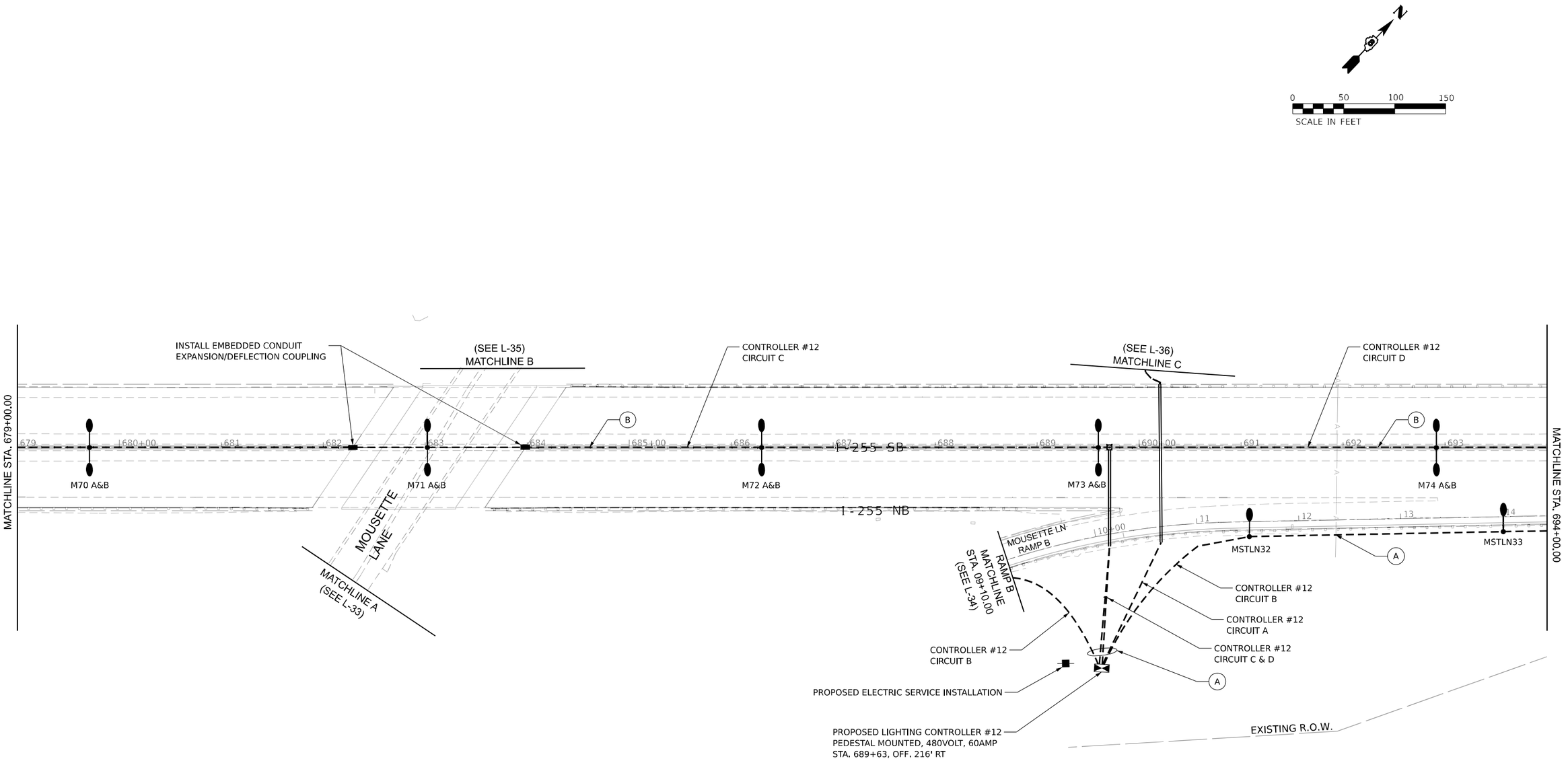
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #12

SCALE: | SHEET 07 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	257
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-27

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PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #12

SCALE: | SHEET 08 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	258
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

MODEL: Plan - B [Sheet]
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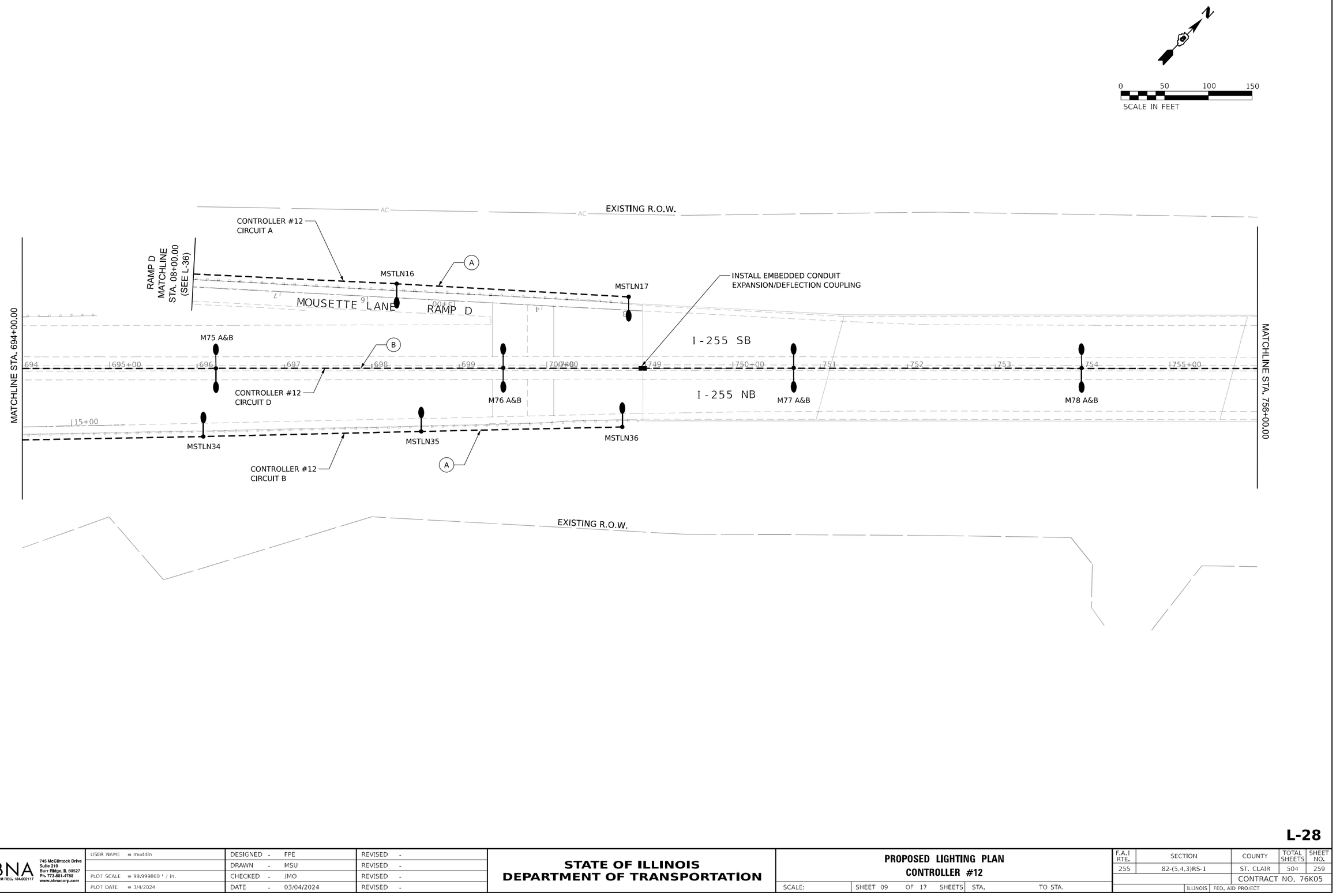

L-28

MODEL: Plan 9 [Sheet]
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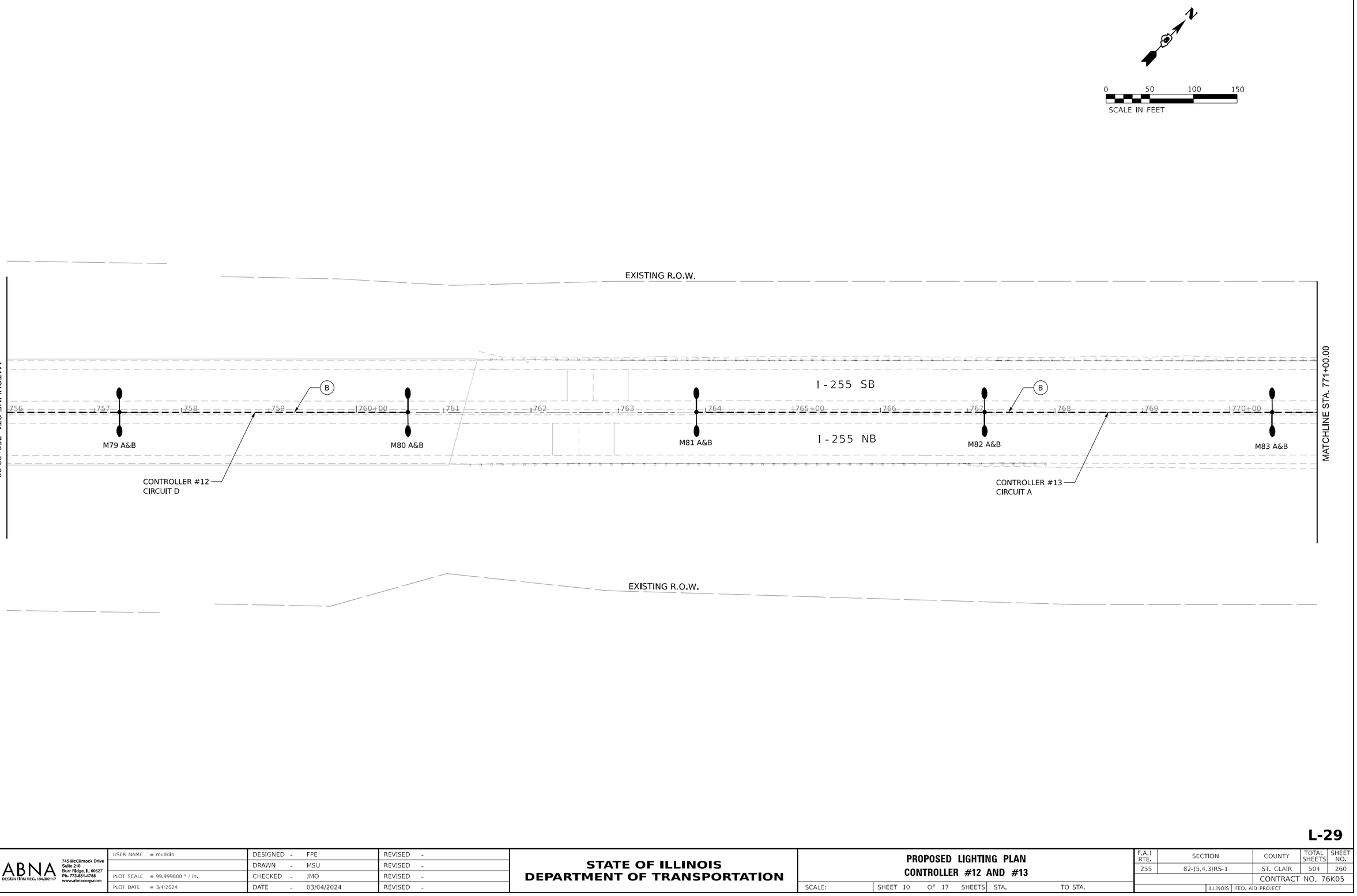
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #12

SCALE: | SHEET 09 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	259
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



L-29

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #12 AND #13

SCALE: | SHEET 10 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	260
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

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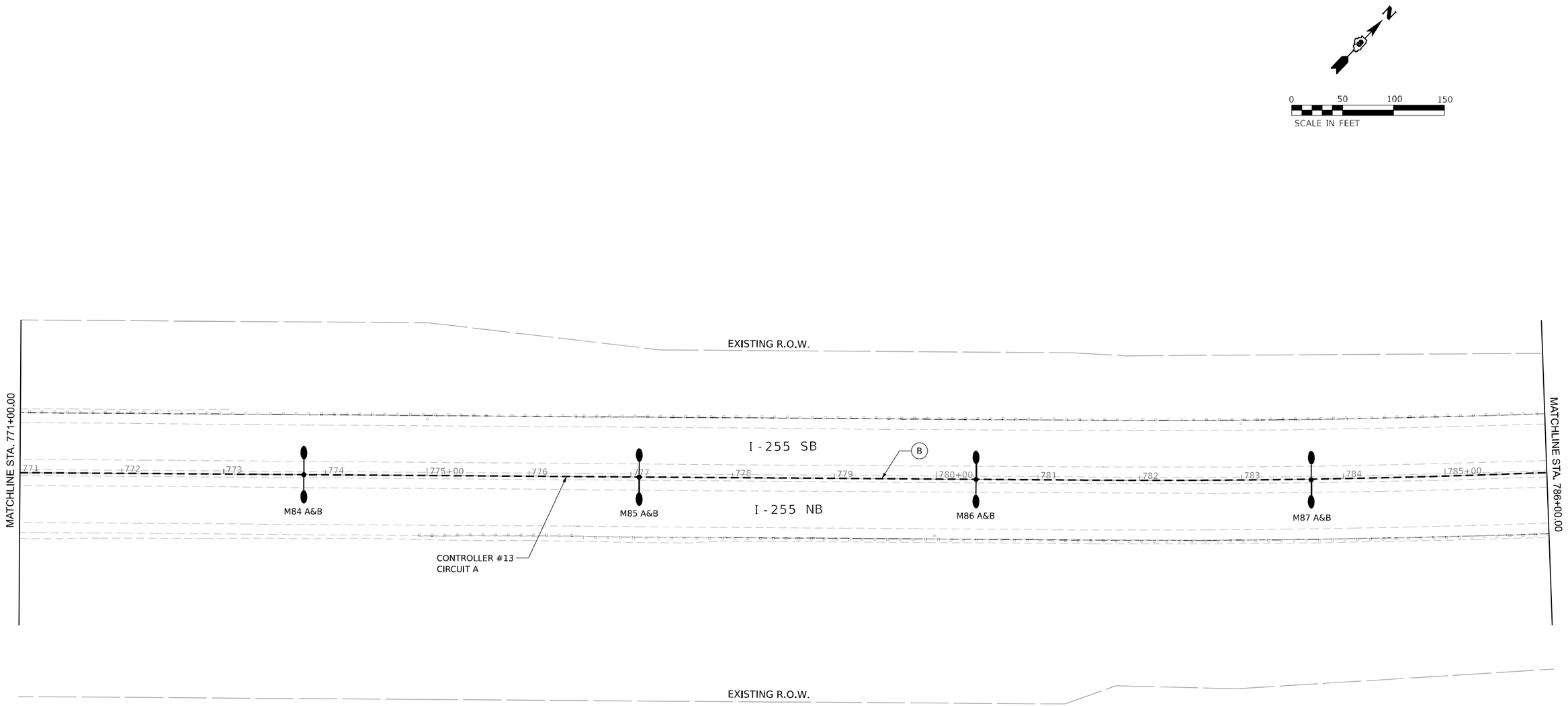

L-30

MODEL: Plan 11 [Sheet]
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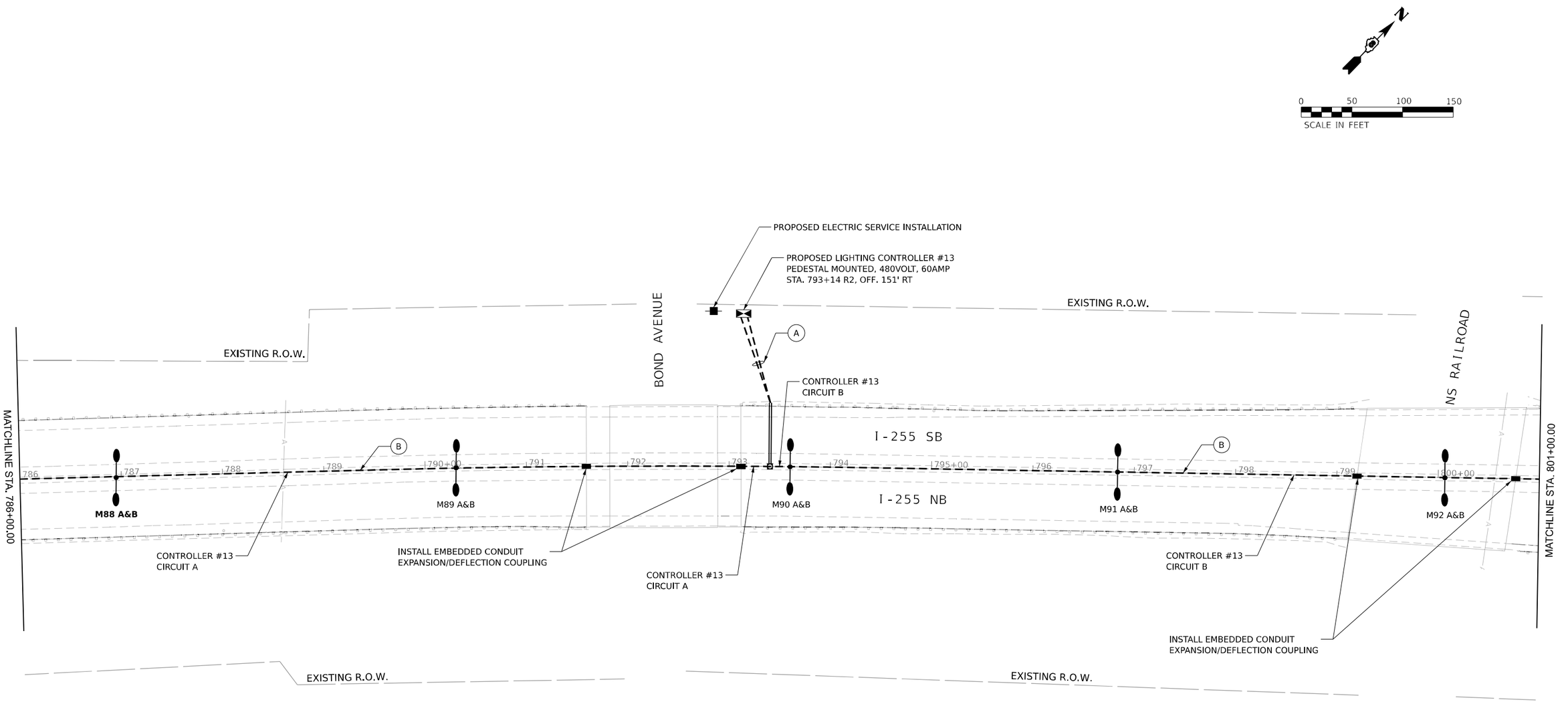
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #13

SCALE: | SHEET 11 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	261
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-31

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #13

SCALE: | SHEET 12 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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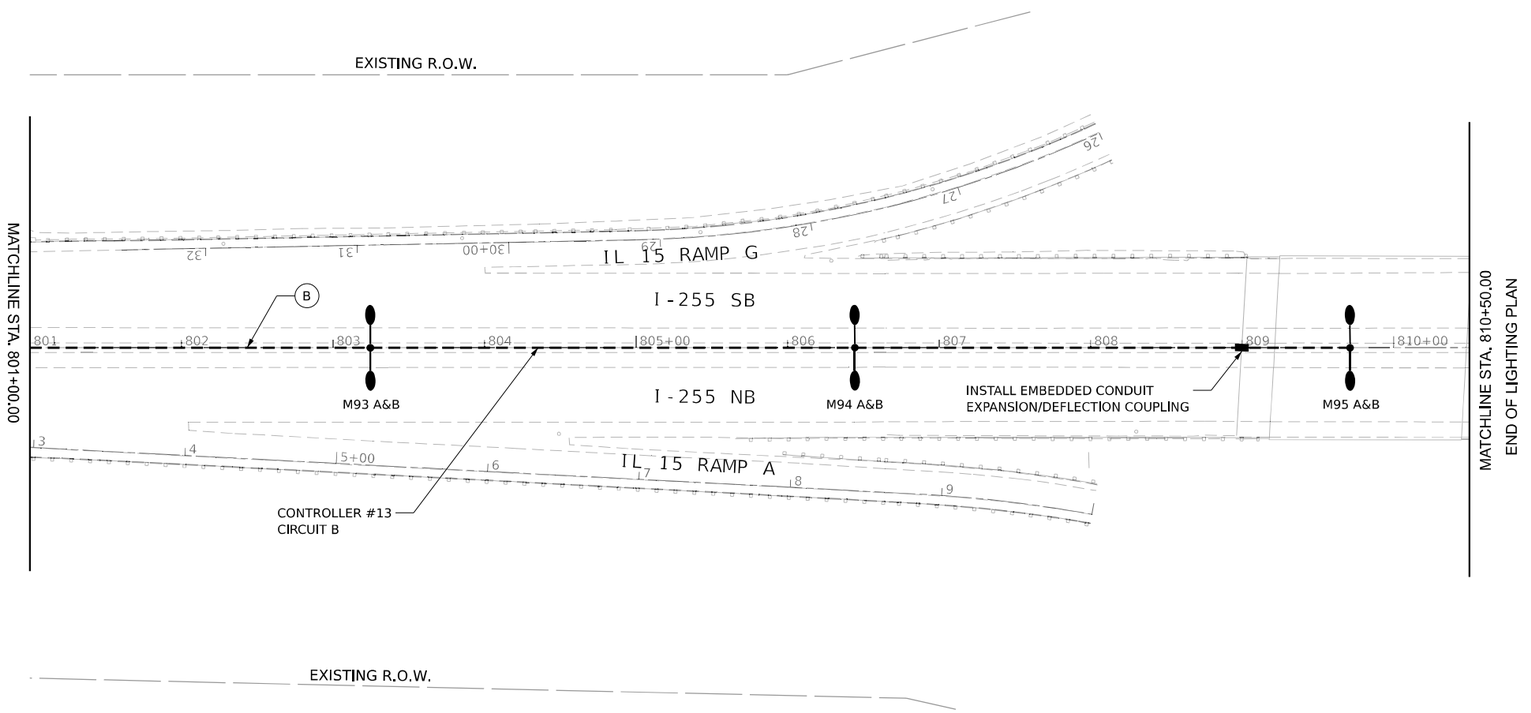
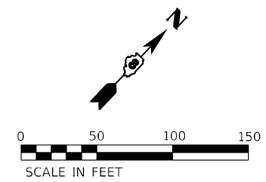
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			





L-32

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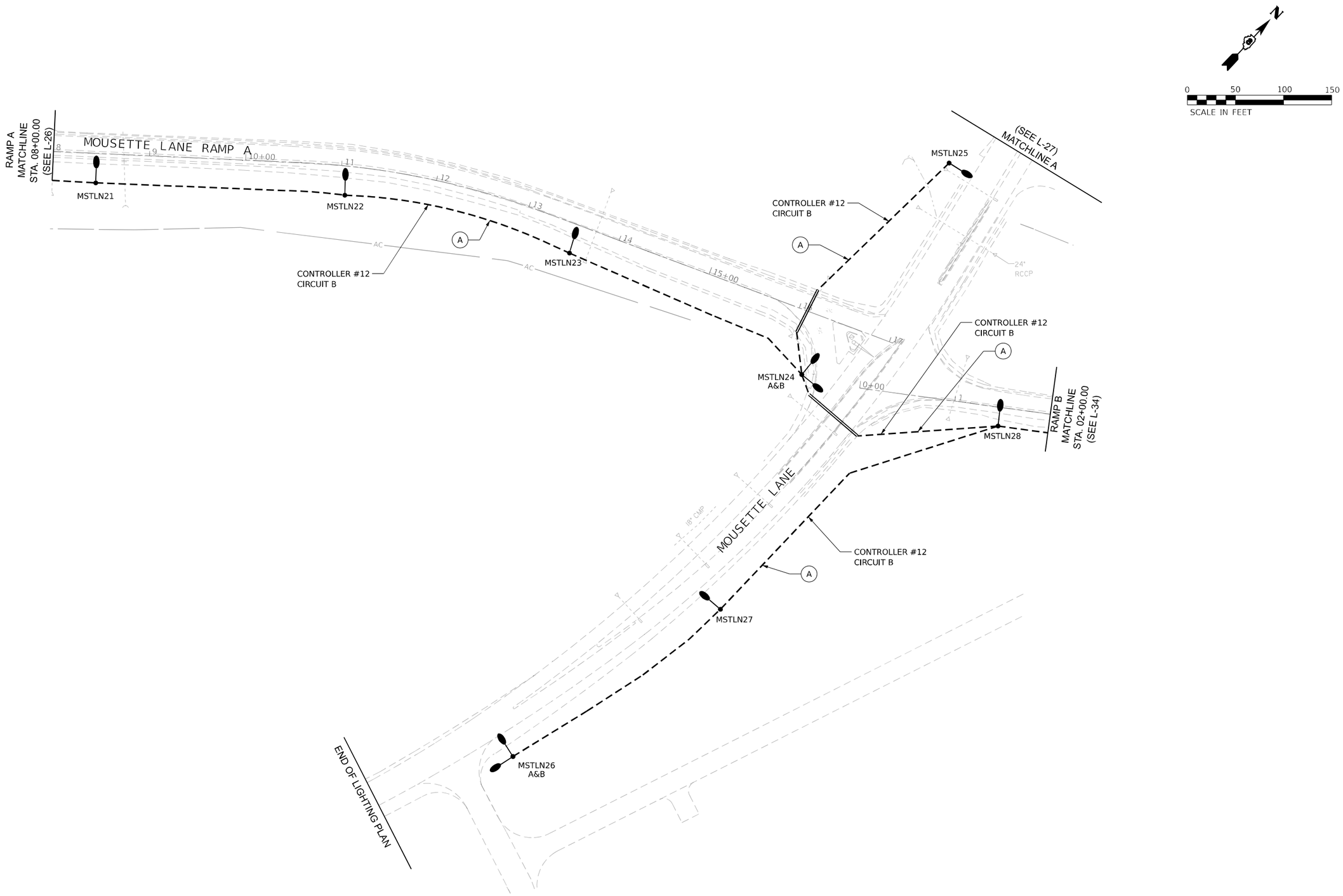
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #13

SCALE: | SHEET 13 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	263
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



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L-33

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		DRAWN - MSU	REVISED -		
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	PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -		

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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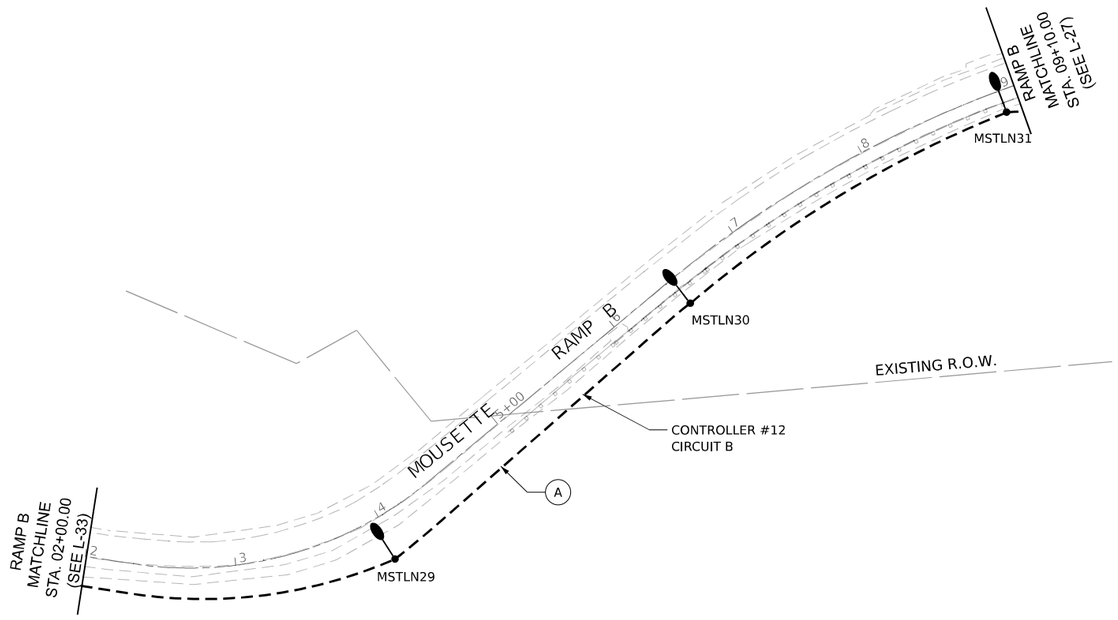
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #12

SCALE: | SHEET 15 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	265
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

MODEL: Plan 15 [Sheet]
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END OF LIGHTING PLAN

MSTLN11
A&B

CONTROLLER #12
CIRCUIT A

MSTLN10

A

MOUSETTE LANE

EXISTING R.O.W.

AC

MSTLN7

MSTLN9
A&B

MSTLN6

CONTROLLER #12
CIRCUIT A

MSTLN5

RAMP C

MOUSETTE

2-24"
RCCP

RAMP C
MATCHLINE
STA. 08+00.00
(SEE L-26)

RAMP D
MATCHLINE
STA. 18+00.00
(SEE L-36)

MSTLN8

MATCHLINE B
(SEE L-27)

N

0 50 100 150
SCALE IN FEET

L-35

MODEL: Plan 16 [Sheet]
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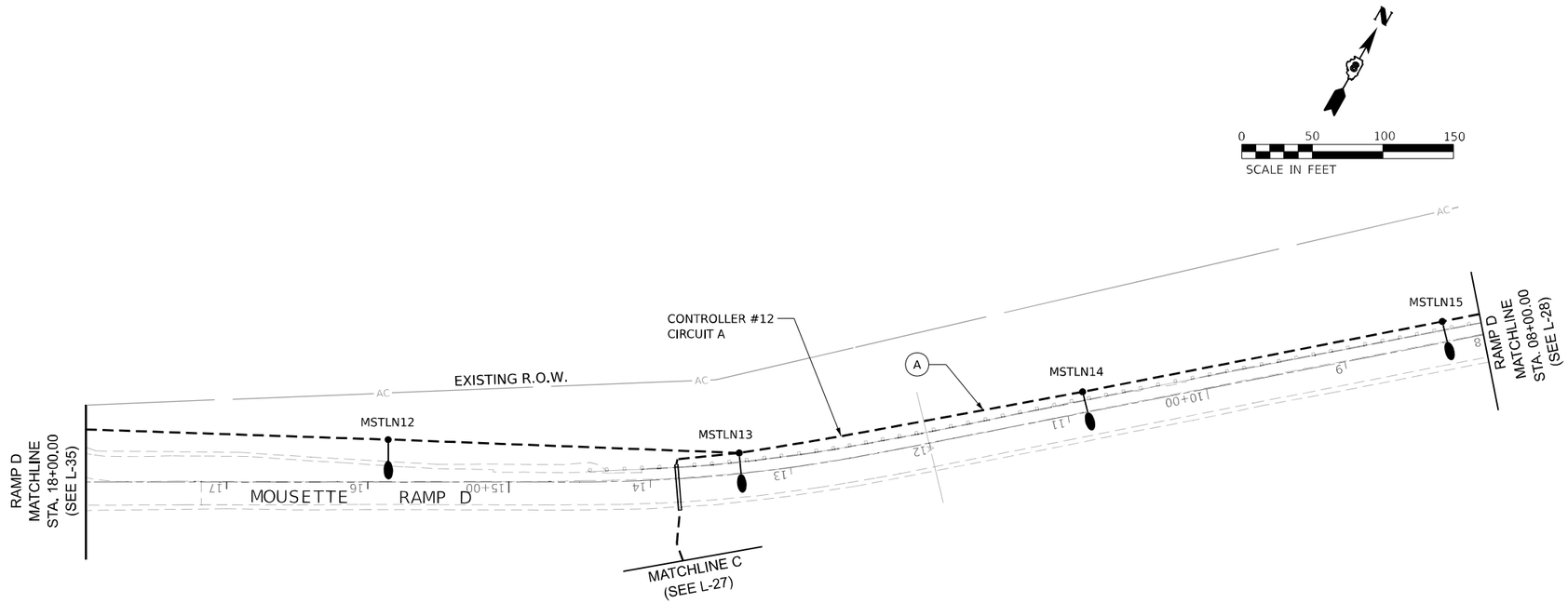
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #12

SCALE: | SHEET 16 OF 17 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	266
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			



L-36

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
CONTROLLER #12

SCALE: | SHEET 17 OF 17 SHEETS | STA. | TO STA.

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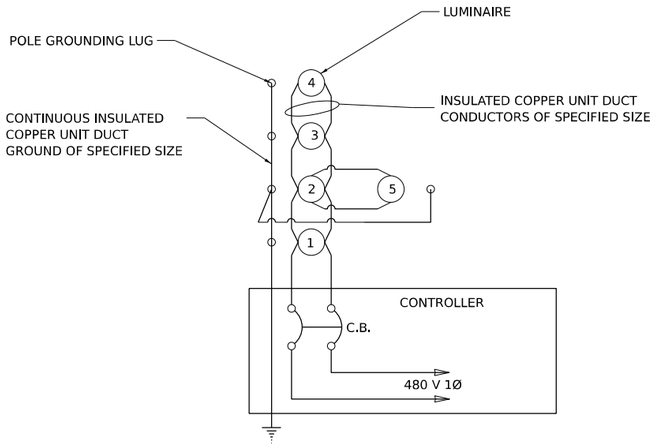
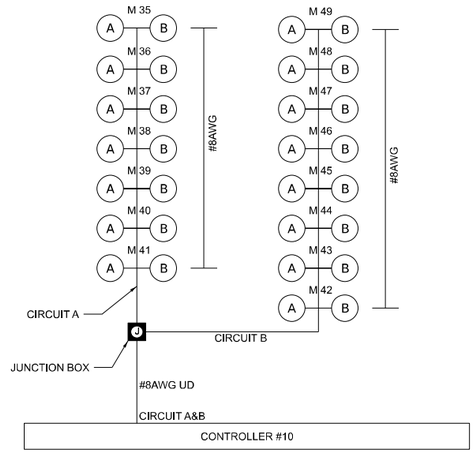
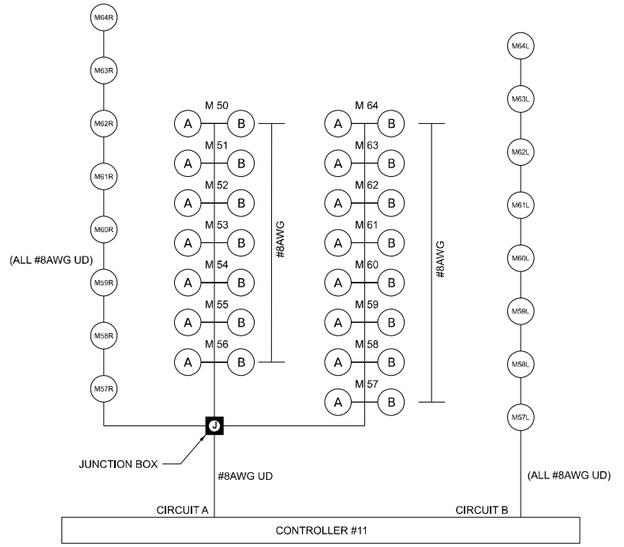
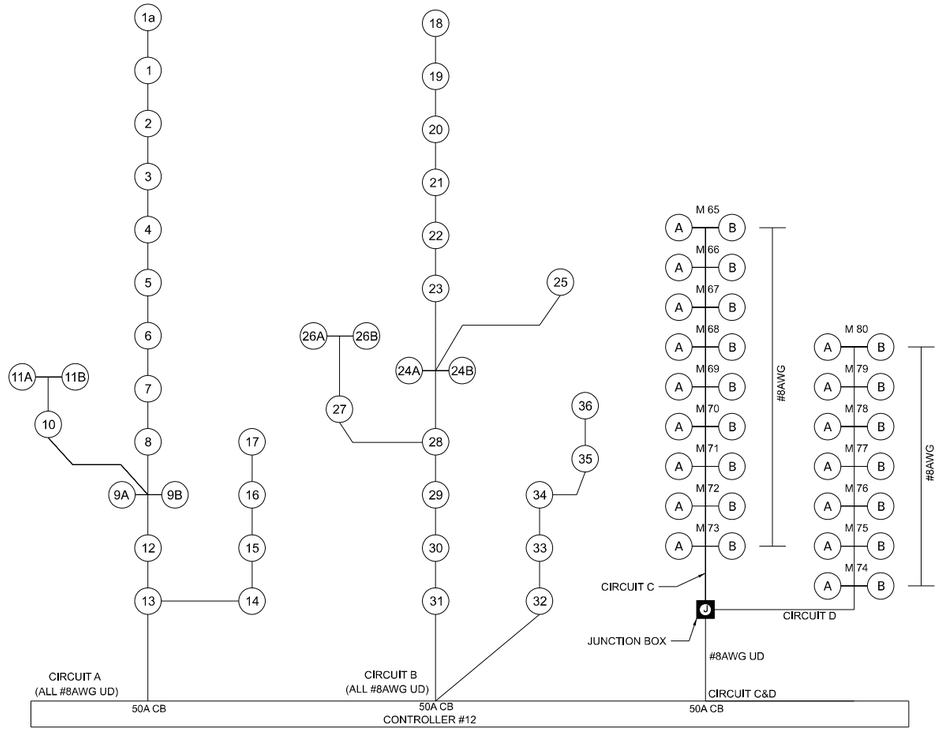
	ILLINOIS FED. AID PROJECT			

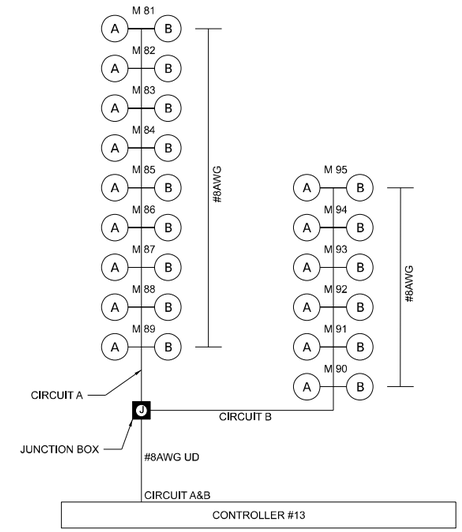


TYPICAL WIRING DIAGRAM









#8AWG UD = UNIT DUCT, 600V, 2-1C NO.8, 1/C NO.8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE

#8AWG = ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 8

L-37

MODEL: WiringDiagram1 [Sheet]
FILE NAME: J:\2022\76060\Cad\Design\Plan\D876K05-sht-wiring_diagram.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING WIRING DIAGRAM

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	268
		CONTRACT NO. 76K05		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation

Luminaire Performance Table

Project

Date	Contract Number	Section Number	County
08/12/2023	76K05	82-(5,4,3)RS-1	St. Clair

Marked Route Number	Municipality
FAI -255	East St. Louis, IL

Roadway

Lane Width	# of Lanes	Median Width	I.E.S. Surface Classification	Q-Zero Value
17 ft	2	3.7 ft	R3	0.07

Structure

Mounting Height	Arm Length	Set-Back	Number of Luminaires (Highmast & Sign Lighting Only)
25 ft	8 ft	10 ft	N/A

Luminaire

Description	I.E.S. Lateral Distribution	I.E.S. Vertical Distribution
Output Designation F	Type III-IV	Short

Total Light Loss Factor (LLF)	B-U-G Rating	Shields	Dimming Protocol
0.7	U = 0	N/A	0-10 V

Layout

Spacing (to Nearest 5 ft)	Configuration (Opposite, Staggered, 1 Sided, or Median)
225 ft	Median

Performance

Average Illuminance, E_{AVE} (fc)	Uniformity Ratio, E_{AVE}/E_{MIN}
N/A	N/A

Average Luminance, L_{AVE} (cd/m^2)	Uniformity Ratio, L_{AVE}/L_{MIN}	Uniformity Ratio, L_{MAX}/L_{MIN}	Veiling Luminance Ratio, L_V/L_{AVE}
0.6	3.5	6.0	Less than or equal to 0.3:1

Light Trespass

Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, E_H	Max. Vertical Illuminance at ROW, E_V
N/A	N/A	N/A

Notes

1. Set-Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.
2. Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to the roadway.
3. Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment Factors" (EF) = 0.95.
4. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.
5. Lighting calculations shall be performed in one direction only.
6. Compliance with performance criteria shall be held to one significant digit.

Printed 06/09/23

BDE 5630 (04/10/19)

Illinois Department of Transportation

Luminaire Performance Table

Project

Date	Contract Number	Section Number	County
08/12/2023	76K05	82-(5,4,3)RS-1	St. Clair

Marked Route Number	Municipality
FAI -255	East St. Louis, IL

Roadway

Lane Width	# of Lanes	Median Width	I.E.S. Surface Classification	Q-Zero Value
17 ft	2	3.7 ft	R3	0.07

Structure

Mounting Height	Arm Length	Set-Back	Number of Luminaires (Highmast & Sign Lighting Only)
45 ft	8 ft	10 ft	N/A

Luminaire

Description	I.E.S. Lateral Distribution	I.E.S. Vertical Distribution
Output Designation H	Type III	Medium

Total Light Loss Factor (LLF)	B-U-G Rating	Shields	Dimming Protocol
0.7	U = 0	N/A	0-10 V

Layout

Spacing (to Nearest 5 ft)	Configuration (Opposite, Staggered, 1 Sided, or Median)
325 ft	Median

Performance

Average Illuminance, E_{AVE} (fc)	Uniformity Ratio, E_{AVE}/E_{MIN}
N/A	N/A

Average Luminance, L_{AVE} (cd/m^2)	Uniformity Ratio, L_{AVE}/L_{MIN}	Uniformity Ratio, L_{MAX}/L_{MIN}	Veiling Luminance Ratio, L_V/L_{AVE}
0.6	3.5	6.0	Less than or equal to 0.3:1

Light Trespass

Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, E_H	Max. Vertical Illuminance at ROW, E_V
N/A	N/A	N/A

Notes

1. Set-Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.
2. Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to the roadway.
3. Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment Factors" (EF) = 0.95.
4. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.
5. Lighting calculations shall be performed in one direction only.
6. Compliance with performance criteria shall be held to one significant digit.

Printed 06/09/23

BDE 5630 (04/10/19)

ABNA DESIGN FIRM REG. 184.002117
745 McClintock Drive
Suite 210
Burr Ridge, IL 60527
Ph. 773-881-4788
www.abnacorp.com

USER NAME = mcddin	DESIGNED - FPE	REVISED -	
	DRAWN - MSU	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED - JMO	REVISED -	
PLOT DATE = 3/4/2024	DATE - 03/04/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LUMINAIRE PERFORMANCE TABLE

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	269
		CONTRACT NO. 76K05		
	ILLINOIS FED. AID PROJECT			

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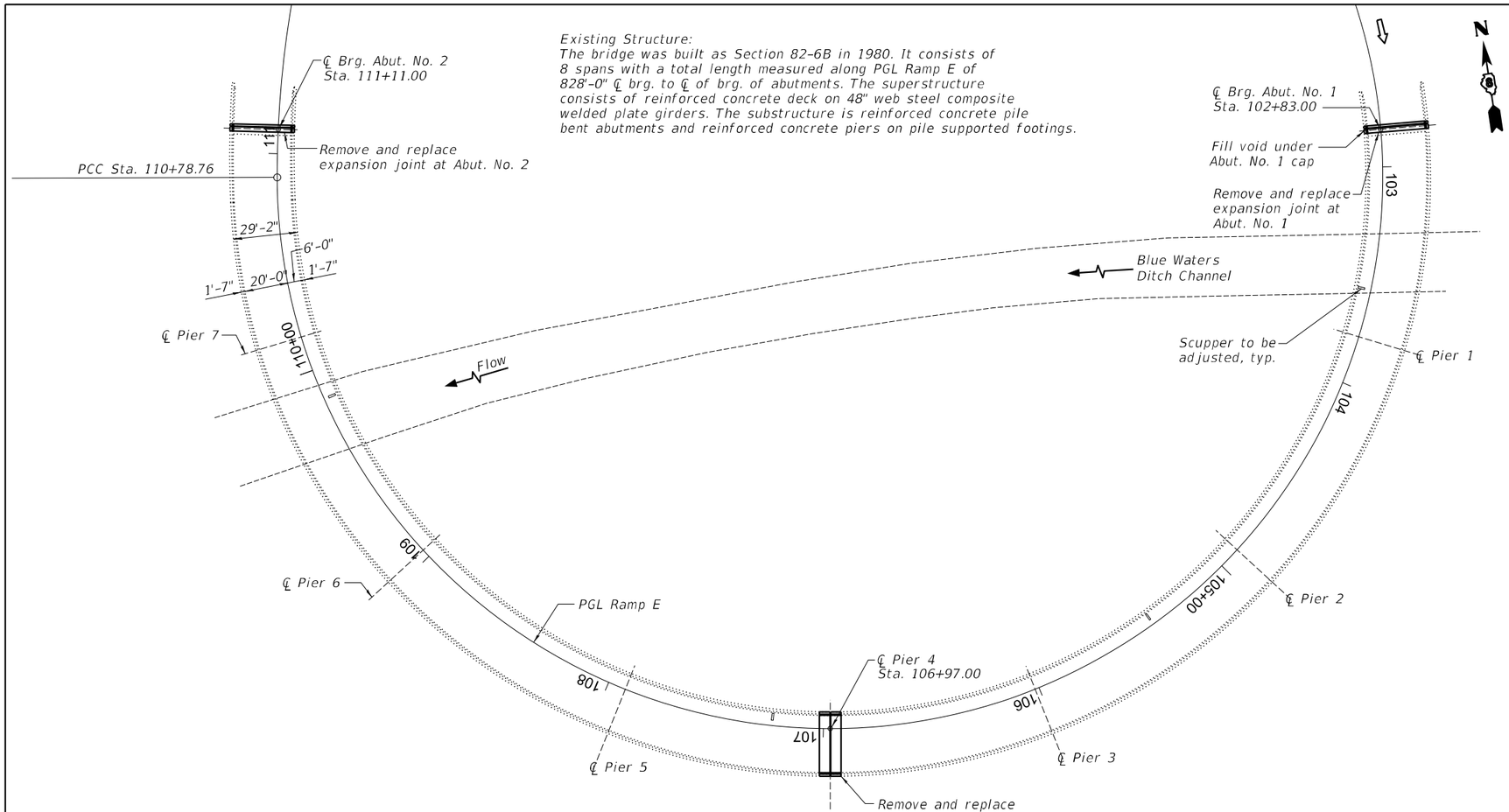


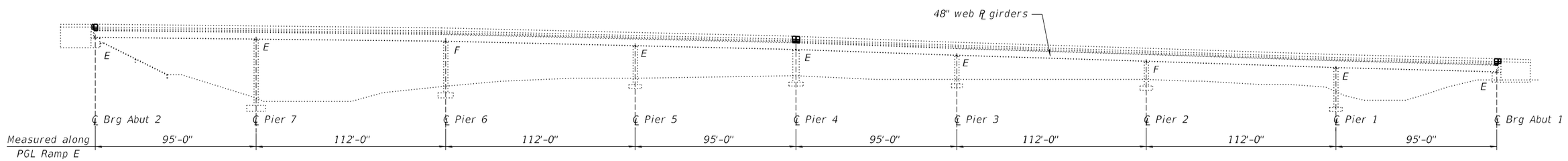
PLAN

Existing Structure:
The bridge was built as Section 82-6B in 1980. It consists of 8 spans with a total length measured along PGL Ramp E of 828'-0" ℄ brg. to ℄ of brg. of abutments. The superstructure consists of reinforced concrete deck on 48" web steel composite welded plate girders. The substructure is reinforced concrete pile bent abutments and reinforced concrete piers on pile supported footings.

INDEX OF SHEETS

SCOPE OF WORK

1. Replace expansion joints at Abut. 1 and Abut. 2 with Preformed Joint Strip Seal.
2. Replace cross frames and replace expansion joint at Pier 4 with a new modular joint.
3. Substructure repairs at Abut. 1, Abut. 2 and Pier 4.
4. Clean and paint girder fascias and other isolated locations.
5. Deck Slab Repairs, ¾" hydroscarification, and 2½" microsilica concrete overlay on the deck, including Diamond Grinding for bridge deck surface smoothness and longitudinal grooving.
6. Repair girder ends with structural plates where web holes exist.
7. Fill void near and under Abut. 1 cap.



ELEVATION

DESIGN SPECIFICATIONS

(New Construction) 2002 AASHTO Standard Specifications, 17th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 4,000 psi (Repair concrete)
fy = 50,000 psi (M270 Grade 50)
fy = 60,000 psi (Reinforcement)

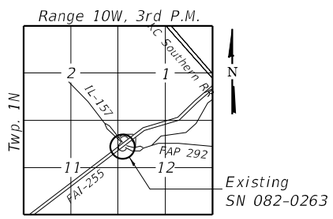
LOADING HS 20-44

Original Construction

LICENSED STRUCTURAL ENGINEER
JEREMY BUENING
081-006696
STATE OF ILLINOIS

Jeremy Buening, P.E., S.E.
License Expires 11/30/24

3/1/24
Date



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
FAI 255 RAMP E OVER BLUE WATERS DITCH
SECTION 82-(5,4,3)RS-1
ST. CLAIR COUNTY
STATION 106+97.00
STRUCTURE NUMBER 082-0263

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CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -
	CHECKED - JMB	REVISED -
PLOT SCALE =	DRAWN - RLK	REVISED -
PLOT DATE =	CHECKED - JMB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 082-0263
SHEET 1 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	270
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

Fasteners shall be ASTM F3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts ¾" Ø, holes 13/16" Ø, Bolts ⅞" Ø, holes 15/16" Ø,unless otherwise noted.

All structural steel for repair of primary members (plate girders and cross frames) shall be AASHTO M270 Grade 50 and shall be galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel".

No field welding is permitted except as specified in the contract documents.

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

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

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". The exterior surfaces and bottom of the bottom flange of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning (SSPC-SP15.

All isolated locations of painting at the interior of the structure as specified on the framing plan shall be cleaned per Near White Blast Cleaning (SSPC-SP10).

The designated areas cleaned per Near White Blast Cleaning (SSPC-SP10) and per Commercial Grade Power Tool Cleaning (SSPC-SP15) shall be painted according to the requirements of (Organic Zinc-Rich Primer/Epoxy Intermediate Coat/Urethane Top Coat -OZ/E/U). The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown (Munsell No. 2.5YR 3/4).

A minimum of 2 air monitors will be required to monitor abrasive blasting operations at this site. See special provision for "Containment and Disposal of Lead Paint Cleaning Residues."

SSPC-QP1 (and SSPC-QP2) Certification is required for this Contract.

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

Expansion joints shall be fabricated and installed according to the Manufacturer's recommendations and as approved by the Engineer.

Expansion joints shall be fabricated to conform to the existing cross slopes of the bridge.

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

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

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

Cross frame connection holes shall be 15/16" dia. for ⅞" dia. bolts. Two hardened washers shall be required at diaphragm connections.

Protective coat shall be applied to new concrete structure surfaces, to the top and front of parapets, and to surface of concrete overlay.

All new girder end repair and bolts not associated with diaphragm replacement are paid for as Structural Steel Repair.

All new cross frames, connection plates and diaphragm supporting angles and diaphragm bolts to be paid for as Furnishing and Erecting Structural Steel.

Removal of existing cross frames to be paid for as Structural Steel Removal.

GENERAL NOTES (CONT.)

If existing name plate falls within the limits of Concrete Removal, it shall be removed and reinstalled in its original location in accordance with IDOT Std. 515001. Cost included with Concrete Superstructure.

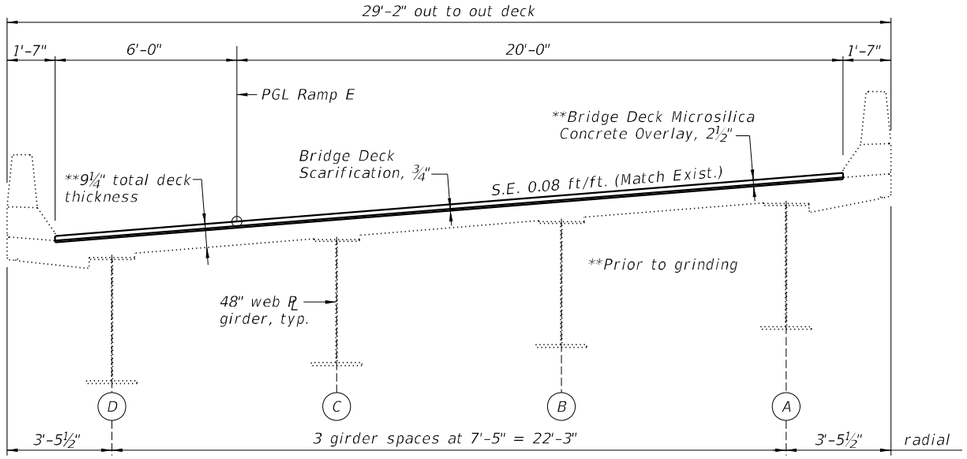
The anchorage section of the guardrail in conflict with the removal and reconstruction of the parapet portion shall be removed during concrete removal and reattached after the concrete has cured. Cost included in Concrete Removal

The Contractor shall exercise extreme care with any existing conduits in sections of the parapet to be removed and to protect and support the conduit. The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.

Road to be closed to traffic during construction

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	17.9		17.9
Concrete Superstructure	Cu. Yd.	25.2		25.2
Protective Coat	Sq. Yd.	3160		3160
Furnishing and Erecting Structural Steel	Pound	6,260		6,260
Cleaning and Painting Steel Bridge No. 1	L Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	3,580		3,580
Preformed Joint Strip Seal	Foot	62.5		62.5
Structural Steel Removal	Pound	5,990		5,990
Structural Steel Repair	Pound	390		390
Bridge Deck Microsilica Concrete Overlay, 2½ Inch	Sq. Yd.	2,421		2,421
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L Sum	1		1
Bridge Deck Scarification ¾ Inch	Sq. Yd.	2,421		2,421
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.		323	323
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	141		141
Drainage Scuppers to be Adjusted	Each	4		4
Diamond Grinding (Bridge Section)	Sq. Yd.	2,087		2,087
Modular Expansion Joint 6"	Foot	28		28
Rock Fill	Ton	7		7
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1,518		1,518
Temporary Shoring and Cribbing	Each			1



CROSS SECTION THRU BRIDGE DECK

(Looking north)

PARTIAL PLAN - EAST PORTION OF BRIDGE

BILL OF MATERIAL

	SYMBOL	ITEM	UNIT	QUANTITY
		Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	96
*		Deck Slab Repair (Partial)	Sq. Yd.	24
		Protective Coat	Sq. Yd.	1,580
		Bridge Deck Microsilica Concrete Overlay, 2½ Inches	Sq. Yd.	1,211
		Bridge Deck Scarification, ¾"	Sq. Yd.	1,211
		Diamond Grinding (Bridge Section)	Sq. Yd.	1,044
		Bridge Deck Grooving (Longitudinal)	Sq. Yd.	759

**For Information only to assist the Contractor in bidding. See Special Provisions for Bridge Deck Microsilica Concrete Overlay.*

Notes:

Areas of deck repairs are estimated and will be paid for as specified in the Special Provision for Bridge Deck Microsilica Concrete Overlay.

Actual type, location, and dimensions of deck repairs are to be determined and documented by the ENGINEER during construction. ENGINEER shall sound deck after deck scarification.

Protective Coat shall be applied to new concrete structure surfaces, to the top and front of parapets, and to surface of concrete overlay.

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CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARTIAL DECK REPAIR PLAN – EAST
STRUCTURE NO. 082–0263
SHEET 3 OF 29 SHEETS

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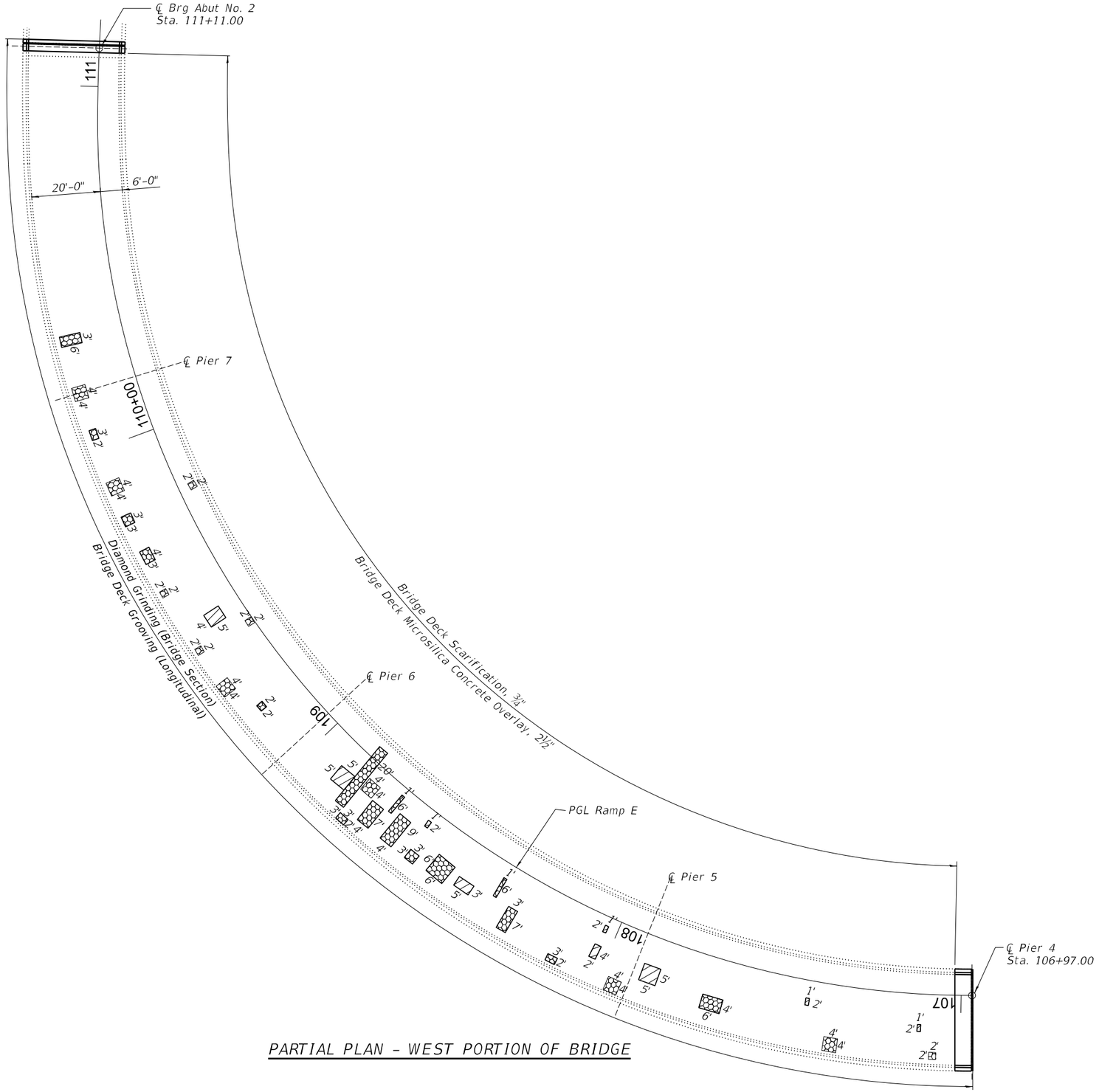
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		



PARTIAL PLAN - WEST PORTION OF BRIDGE

N

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	45
*	Deck Slab Repair (Partial)	Sq. Yd.	11
	Protective Coat	Sq. Yd.	1,580
	Bridge Deck Microsilica Concrete Overlay, 2½ Inches	Sq. Yd.	1,210
	Bridge Deck Scarification, ¾"	Sq. Yd.	1,210
	Diamond Grinding (Bridge Section)	Sq. Yd.	1,043
	Bridge Deck Grooving (Longitudinal)	Sq. Yd.	759

*For Information only to assist the Contractor in bidding. See Special Provisions for Bridge Deck Microsilica Concrete Overlay.

Notes:
Areas of deck repairs are estimated and will be paid for as specified in the Special Provision for Bridge Deck Microsilica Concrete Overlay.

Actual type, location, and dimensions of deck repairs are to be determined and documented by the ENGINEER during construction. ENGINEER shall sound deck after deck scarification.

Protective Coat shall be applied to new concrete structure surfaces, to the top and front of parapets, and to surface of concrete overlay.

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CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

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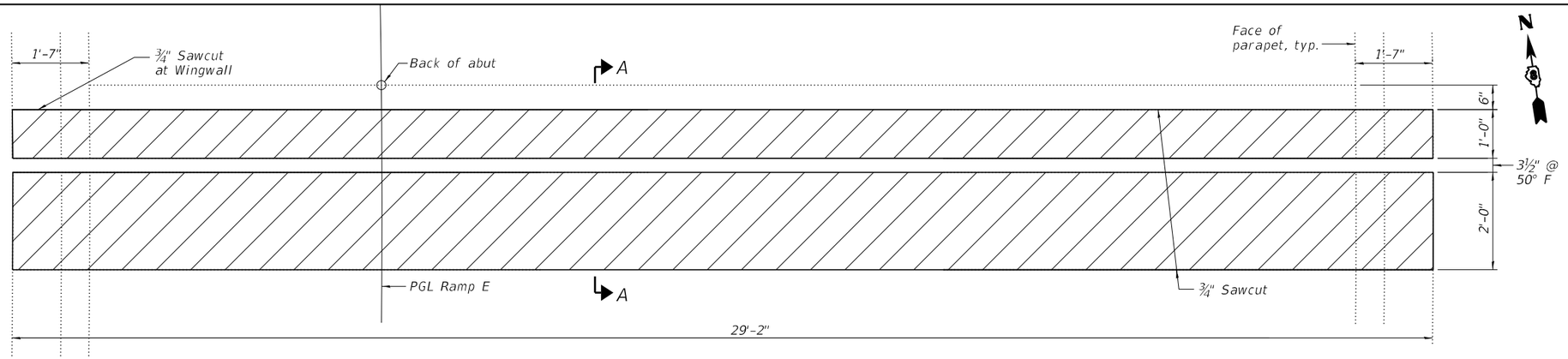
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARTIAL DECK REPAIR PLAN – WEST
STRUCTURE NO. 082–0263
SHEET 4 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	273
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

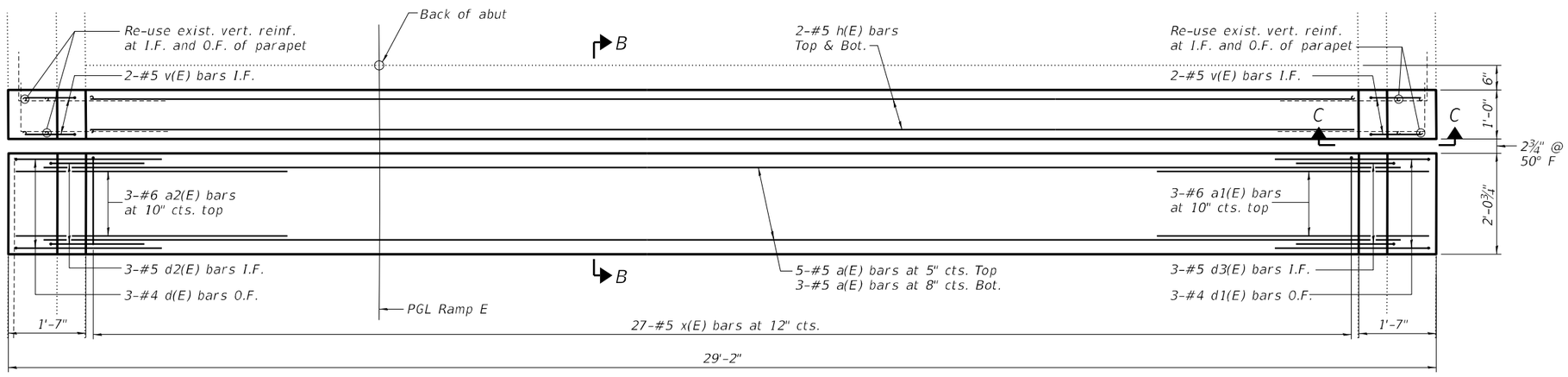


ABUTMENT NO. 1 PLAN SHOWING JOINT REMOVAL

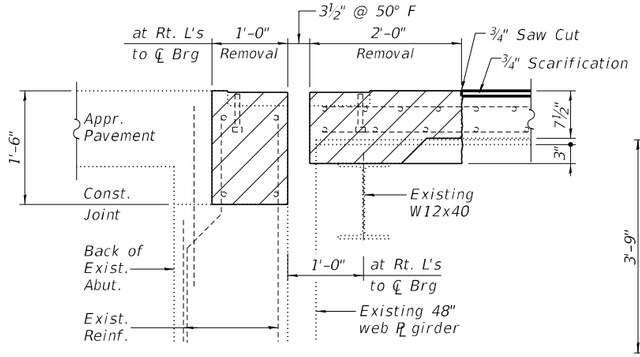
BILL OF MATERIAL - ABUT. NO. 1

Bar	No.	Size	Length	Shape
a(E)	8	#5	27'-9"	
a1(E)	3	#6	5'-2"	
a2(E)	3	#6	5'-2"	
h(E)	4	#5	25'-9"	
d(E)	3	#4	5'-9"	
d1(E)	3	#4	5'-9"	
d2(E)	3	#5	4'-0"	
d3(E)	3	#5	4'-1"	
v(E)	4	#5	5'-2"	
x(E)	27	#5	2'-5"	
Concrete Removal			Cu. Yd.	4.1
Concrete Superstructure			Cu. Yd.	4.6
Reinforcement Bars, Epoxy Coated			Pound	520

Reinforcement bars designated (E) shall be epoxy coated.



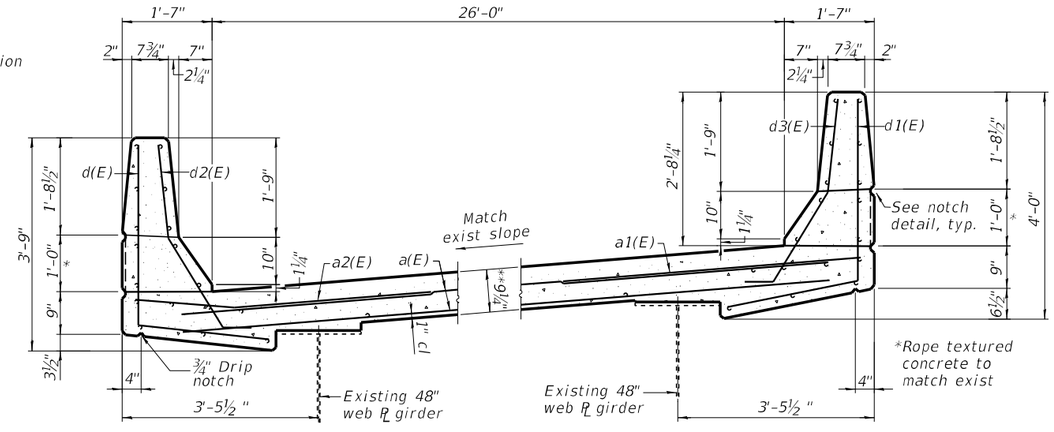
ABUTMENT NO. 1 PLAN SHOWING JOINT REPLACEMENT



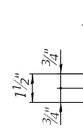
SECTION A-A

Note:
Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

**Prior to grinding



SECTION THRU BRIDGE DECK



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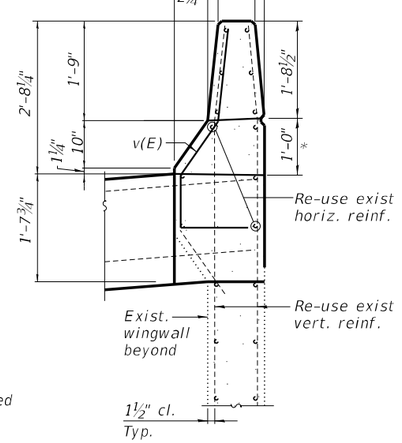

SECTION C-C

LEGEND

- Concrete Removal
- Existing Reinforcement
- Proposed Reinforcement

Notes:
Existing longitudinal and transverse bars in deck and approaches shall be cleaned and straightened and incorporated into new work. Cost included with Concrete Removal.

See Sheet 6 of 29 for Section B-B and for a2(E), d(E) thru d3(E), v(E), and x(E) bar details.

I.F. = Inside face
O.F. = Outside face

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CONSULTING ENGINEERS
184-001397

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PLOT DATE =	CHECKED - JMB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1 JOINT REPLACEMENT
STRUCTURE NO. 082-0263
SHEET 5 OF 29 SHEETS

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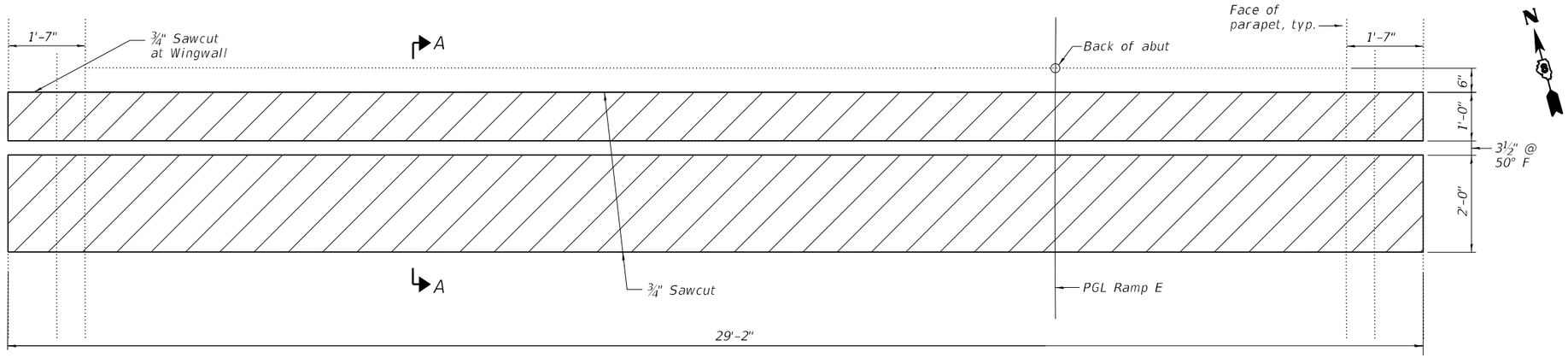
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	



ABUTMENT NO. 2 PLAN SHOWING JOINT REMOVAL

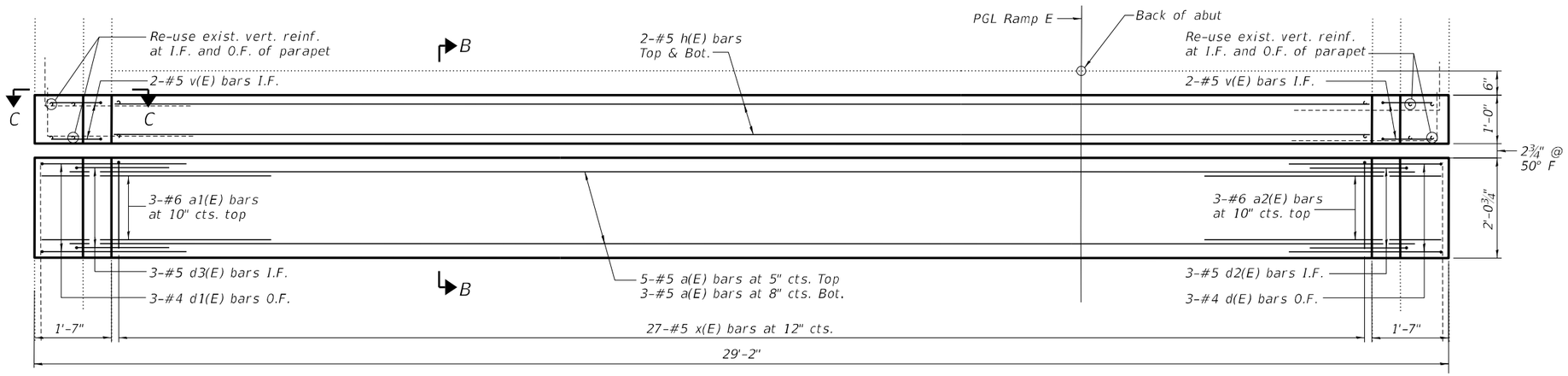
BILL OF MATERIAL – ABUT. NO. 2

Bar	No.	Size	Length	Shape
a(E)	8	#5	27'-9"	
a1(E)	3	#6	5'-2"	
a2(E)	3	#6	5'-2"	
h(E)	4	#5	25'-9"	
d(E)	3	#4	5'-9"	
d1(E)	3	#4	5'-9"	
d2(E)	3	#5	4'-0"	
d3(E)	3	#5	4'-1"	
v(E)	4	#5	5'-2"	
x(E)	27	#5	2'-5"	
Concrete Removal			Cu. Yd.	4.1
Concrete Superstructure			Cu. Yd.	4.6
Reinforcement Bars, Epoxy Coated			Pound	520

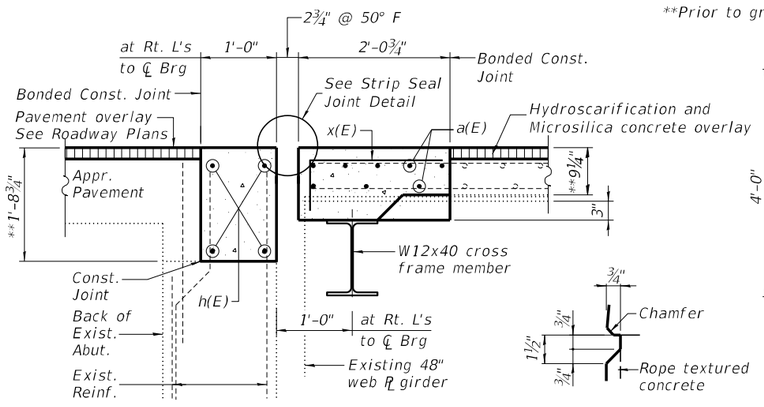
Reinforcement bars designated (E) shall be epoxy coated.

LEGEND

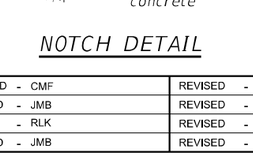
- Concrete Removal
- Existing Reinforcement
- Proposed Reinforcement



ABUTMENT NO. 2 PLAN SHOWING JOINT REPLACEMENT



SECTION B-B



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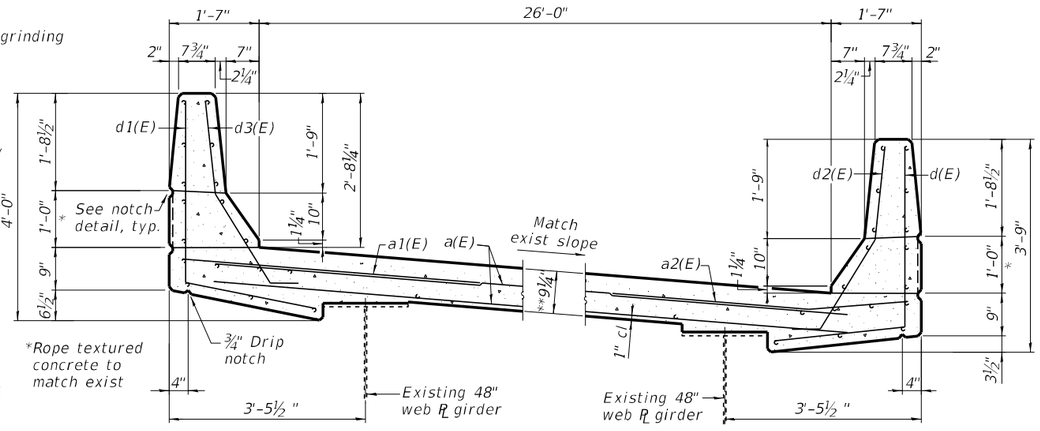
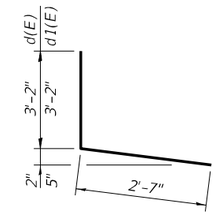
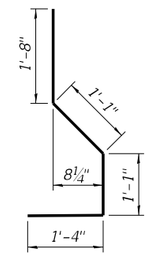


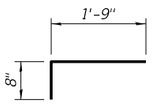
SECTION THRU BRIDGE DECK



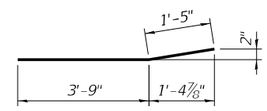
BAR d(E) & d1(E)



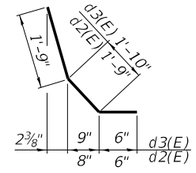
BAR v(E)



BAR x(E)



BAR a2(E)



BAR d2(E) & d3(E)

Notes:
Existing longitudinal and transverse bars in deck and approaches shall be cleaned and straightened and incorporated into new work. Cost included with Concrete Removal.

See Sheet 5 of 29 for Section A-A and Section C-C.

I.F. = Inside face
O.F. = Outside face

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STATE OF ILLINOIS
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ABUTMENT NO. 2 JOINT REPLACEMENT
STRUCTURE NO. 082-0263
SHEET 6 OF 29 SHEETS

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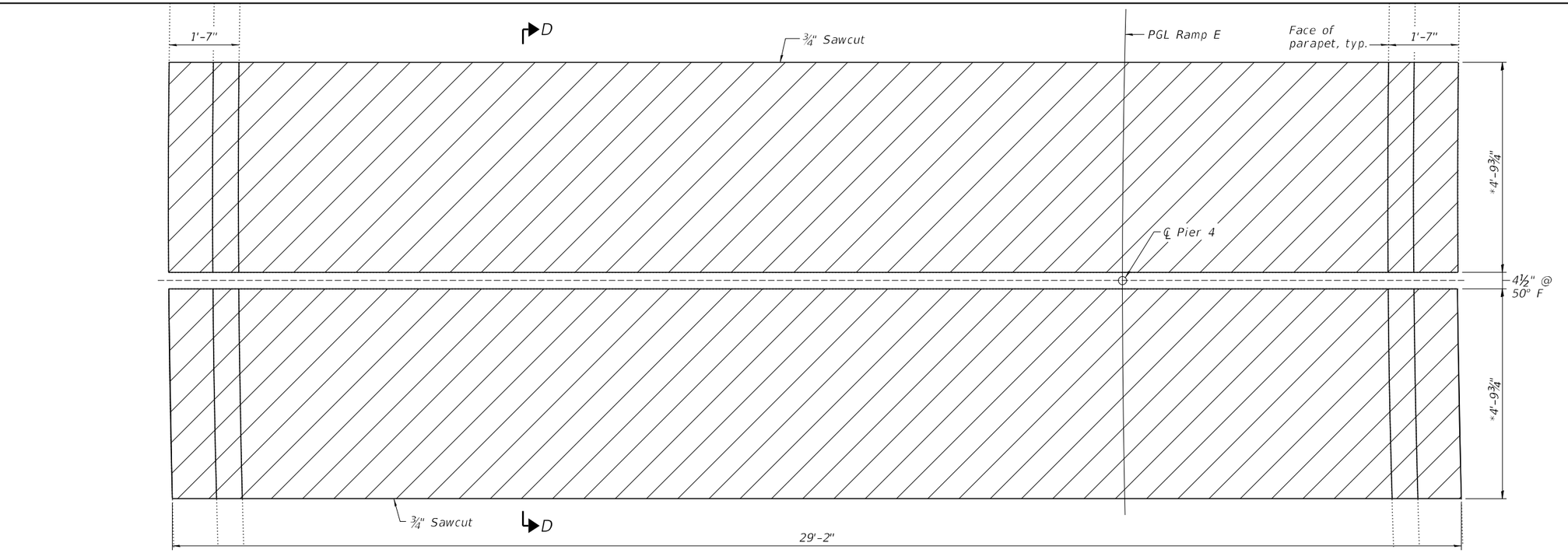
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	



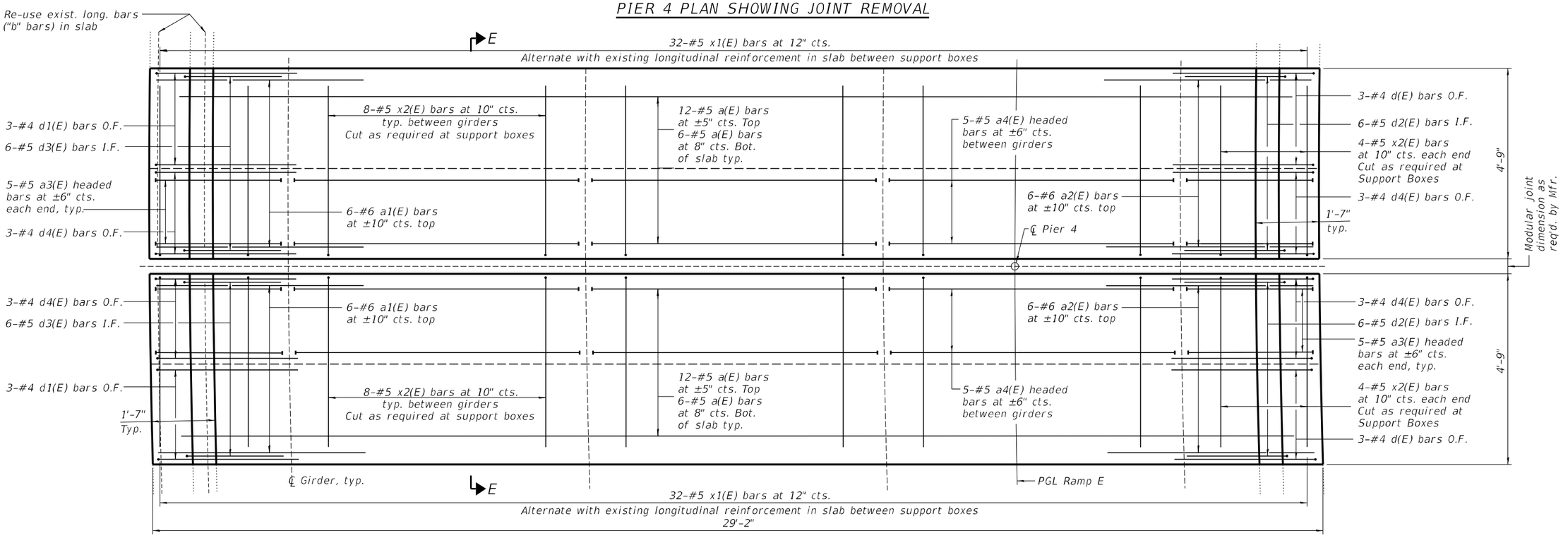
PIER 4 PLAN SHOWING JOINT REMOVAL

LEGEND
- Concrete Removal
- Existing Reinforcement
- Proposed Reinforcement

*Minimum removal length shall be increased as required per manufacturer's modular joint width. Increase shall be ½ x (Mfr's dim. -6")

Notes:
See Sheet 8 of 29 for Section Thru Bridge Deck, Section D-D, x1(E), x2(E) and d4(E) bar details, and Bill of Material.

I.F. = Inside Face
O.F. = Outside Face



PIER 4 PLAN SHOWING JOINT REPLACEMENT

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PLOT DATE =	CHECKED - JMB	REVISED -	

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PIER 4 JOINT REPLACEMENT
STRUCTURE NO. 082-0263
SHEET 7 OF 29 SHEETS

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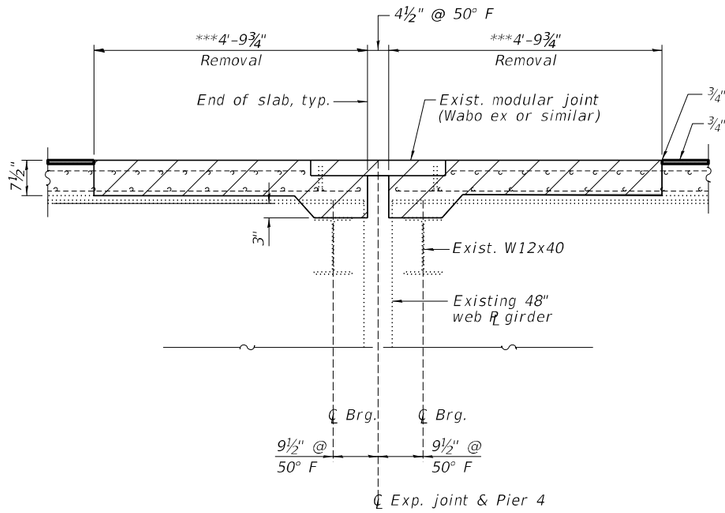
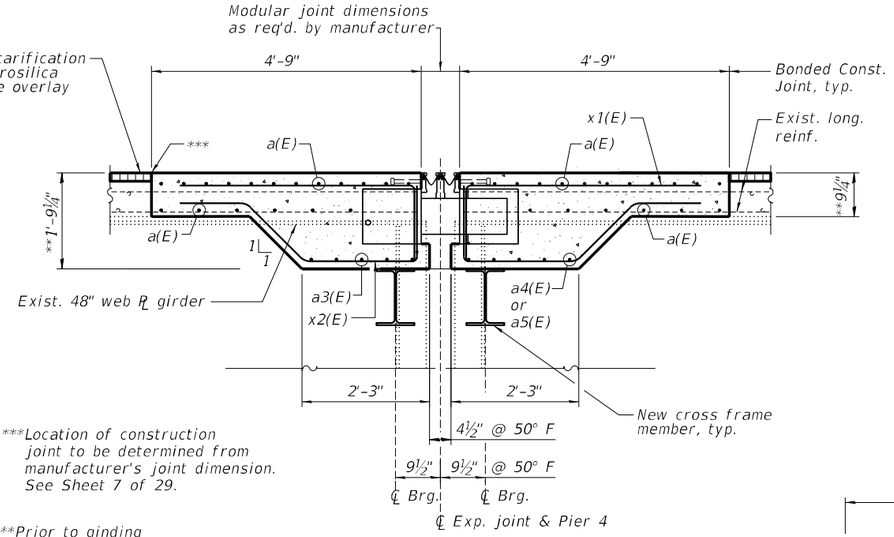
	ILLINOIS FED. AID PROJECT			



SECTION D-D



***Location of construction joint to be determined from manufacturer's joint dimension. See Sheet 7 of 29.

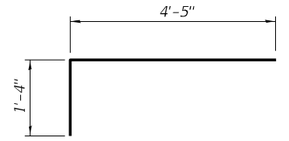
**Prior to ginding

SECTION E-E

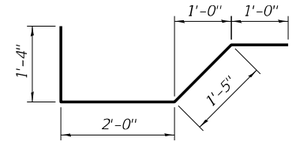
BILL OF MATERIAL - PIER 4

Bar	No.	Size	Length	Shape
a(E)	36	#5	27'-9"	
a1(E)	12	#6	5'-2"	
a2(E)	12	#6	5'-2"	
a3(E)	20	#5	3'-1"	
a4(E)	30	#5	7'-2"	
d(E)	6	#4	5'-9"	
d1(E)	6	#4	5'-9"	
d2(E)	12	#5	4'-0"	
d3(E)	12	#5	4'-1"	
d4(E)	12	#4	7'-2"	
x1(E)	64	#5	5'-9"	
x2(E)	64	#5	5'-9"	
Concrete Removal			Cu. Yd.	9.7
Concrete Superstructure			Cu. Yd.	16.0
Reinforcement Bars, Epoxy Coated			Pound	2540

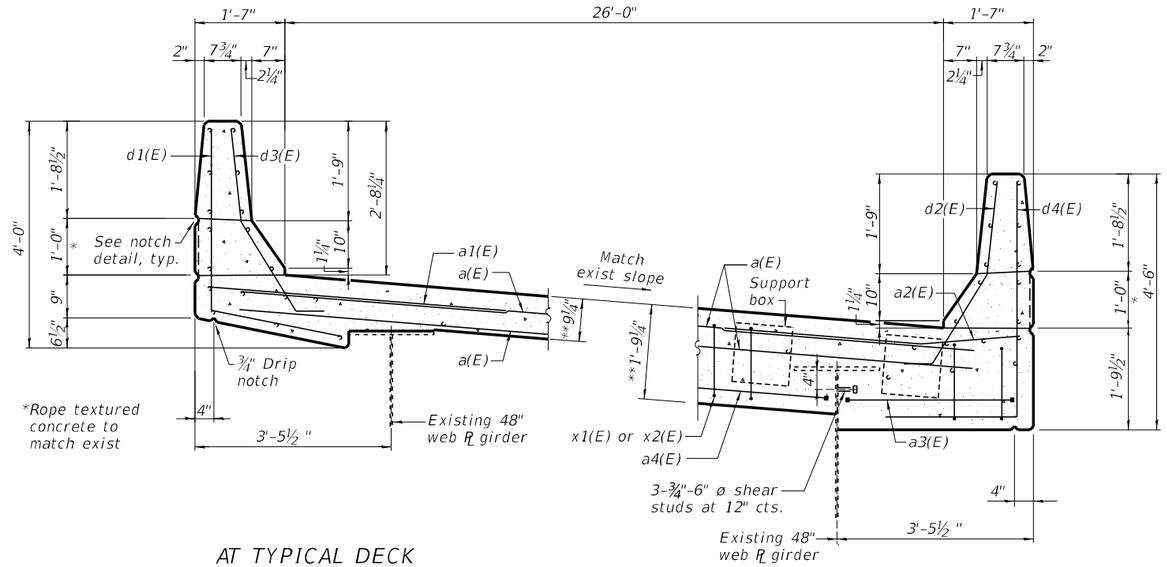
Reinforcement bars designated (E) shall be epoxy coated.



BAR x1(E)



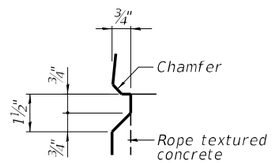
BAR x2(E)



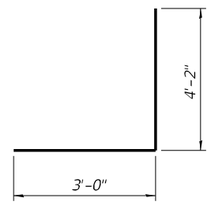
AT TYPICAL DECK

AT DECK EDGE BEAM

SECTION THRU BRIDGE DECK



NOTCH DETAIL



BAR d4(E)

LEGEND

- Concrete Removal
- Existing Reinforcement
- Proposed Reinforcement

Note:
Shear studs at exterior girder overhang shall be granular or solid ux lled headed studs conforming to Article 1006.32 of the Standard Speci cations, automatically end welded.
Cost included with Modular Expansion Joint, 6".

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PIER 4 JOINT REPLACEMENT
STRUCTURE NO. 082-0263
SHEET 8 OF 29 SHEETS

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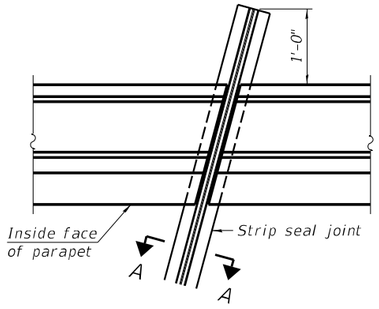
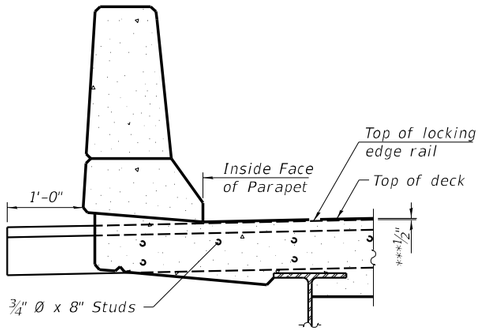
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			



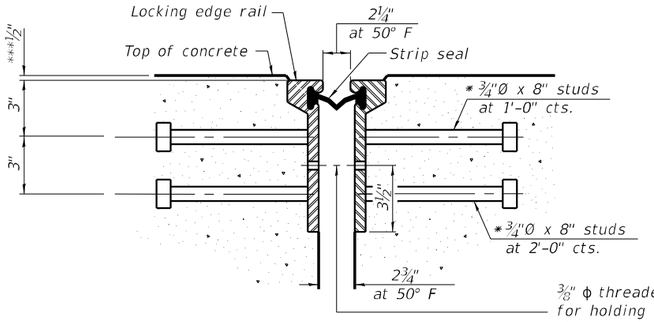
FOR SKEWS ≤ 30°

PLAN AT PARAPET

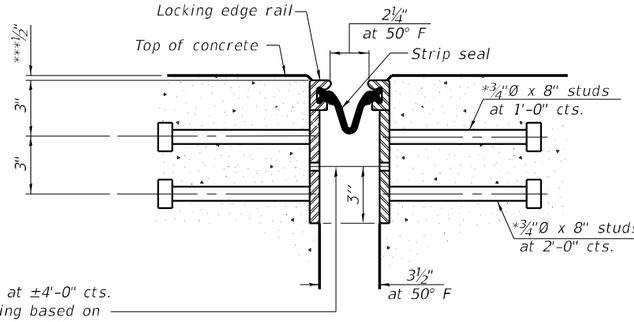


***Prior to grinding

ELEVATION AT PARAPET



SHOWING ROLLED RAIL JOINT

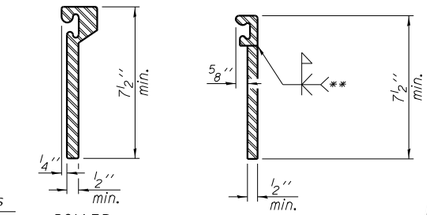


SHOWING WELDED RAIL JOINT

⅜" ϕ threaded rods in 7/16" ϕ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

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

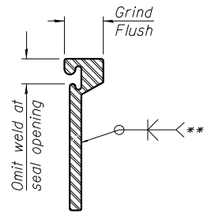


ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

Notes:

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

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed.

The manufacturer's recommended installation methods shall be followed.

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

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

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

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

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	62.5

EJ-SS (TALL WITHOUT GUTTER) 10-1-19

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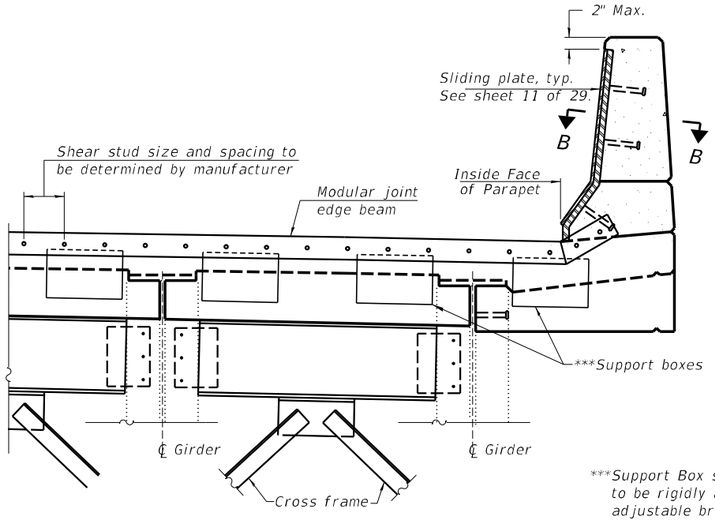
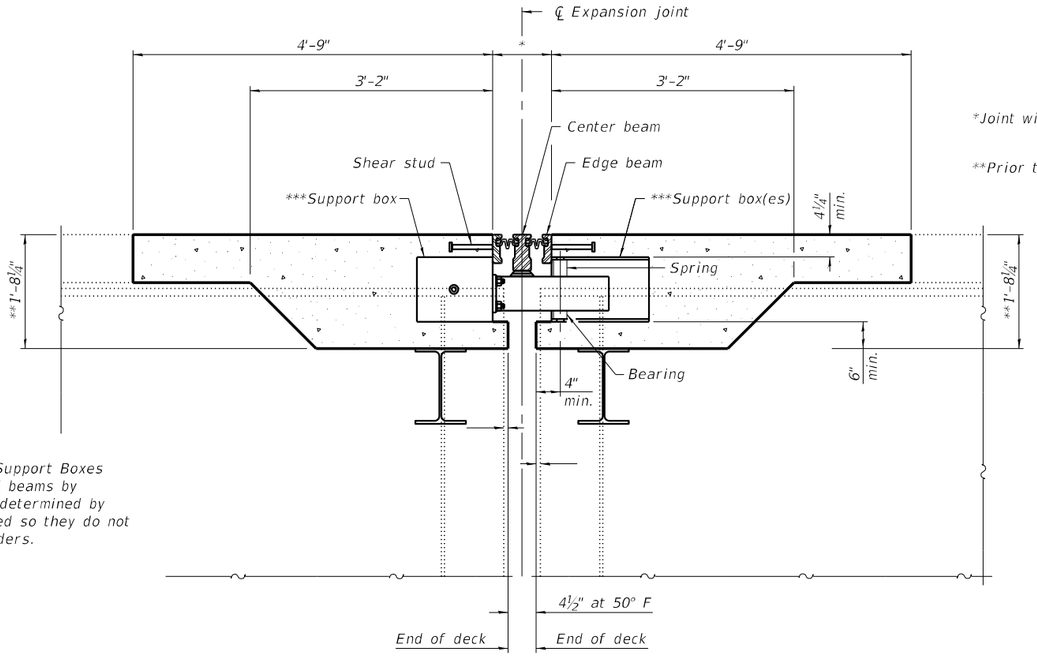
PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 082-0263
SHEET 9 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	278
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			



SECTION A-A

***Support Box spacing per manufacturer. Support Boxes to be rigidly attached to diaphragms and beams by adjustable brackets, stools or shims as determined by manufacturer. Support Boxes to be spaced so they do not interfere with existing top flange of girders.

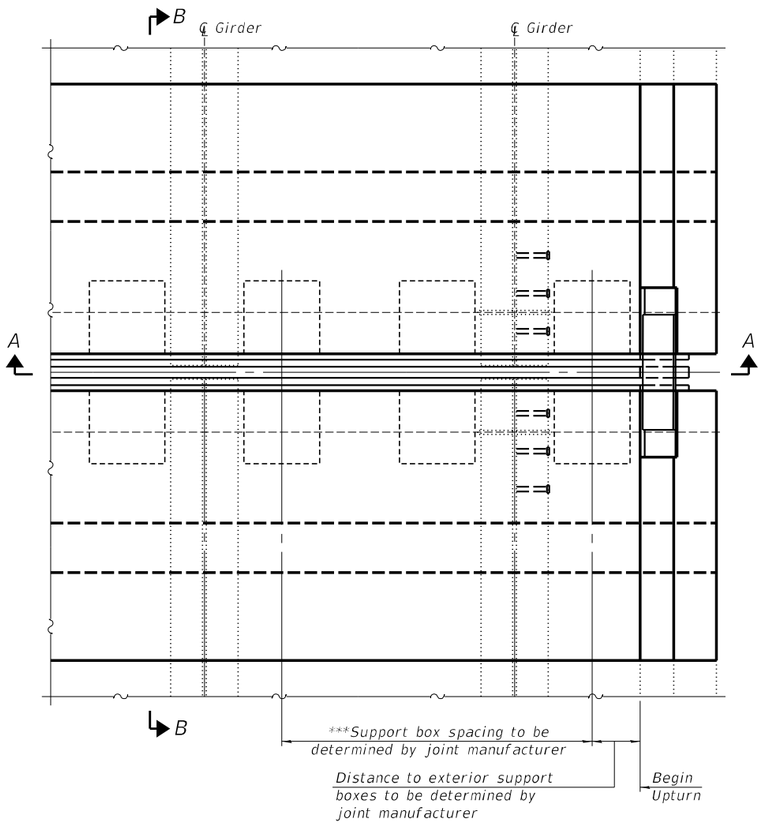


*Joint width, per manufacturer.

**Prior to grinding

SECTION B-B

(Dimensions shown at right ℄'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.

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

Total Long. Movement (in.)	Total Lateral Movement (in.)	Joint Size (in.)
5½"	0	6

BILL OF MATERIAL

Item	Unit	Quantity
Modular Expansion Joint, 6"	Foot	28

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MODULAR JOINT DETAILS
STRUCTURE NO. 082-0263
SHEET 10 OF 29 SHEETS

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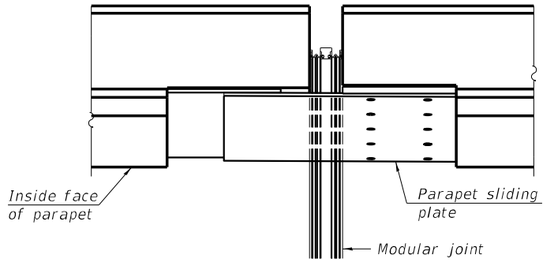
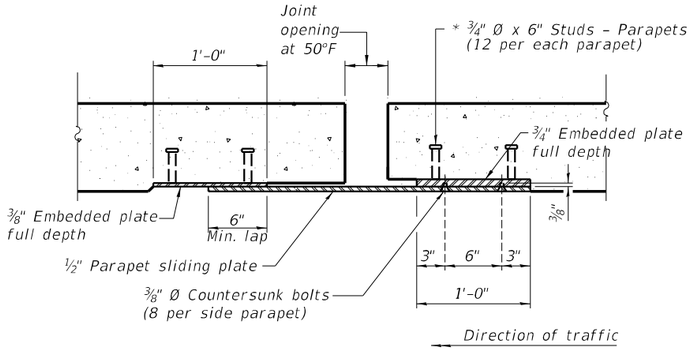
	ILLINOIS	FED. AID PROJECT		



PLAN AT PARAPET



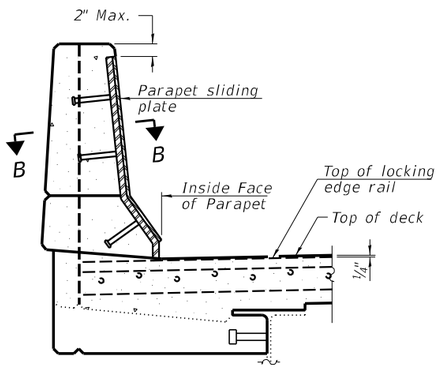
SECTION B-B

Notes:

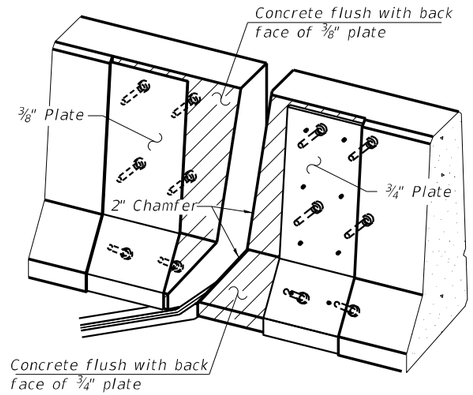
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Cost of parapet sliding plates, embedded plates, and anchorage studs, is included with Modular Expansion Joint 6".

Actual dimension of joint opening may vary based on modular joint manufacturer's design.



SECTION AT PARAPET



TRIMETRIC VIEW
(Showing embedded plates only)

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

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MODULAR JOINT DETAILS
STRUCTURE NO. 082–0263
SHEET 11 OF 29 SHEETS

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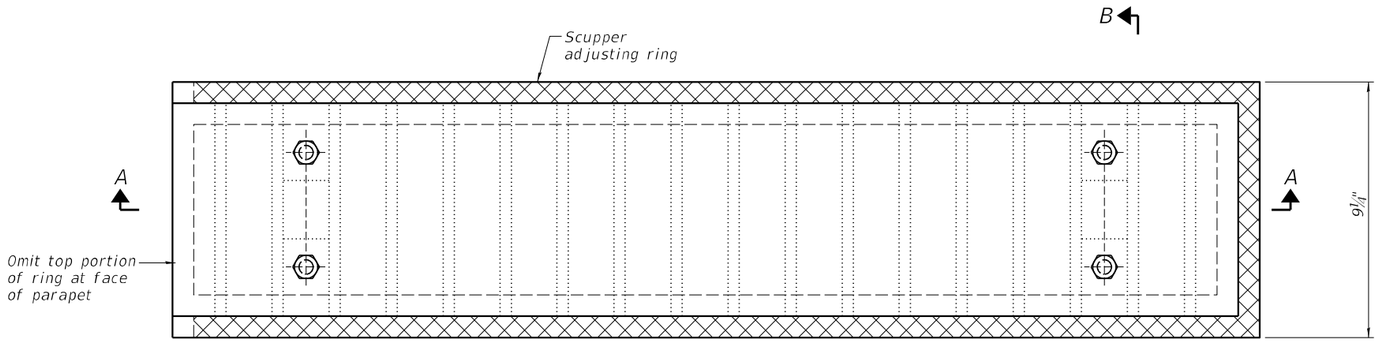
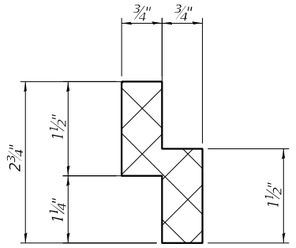
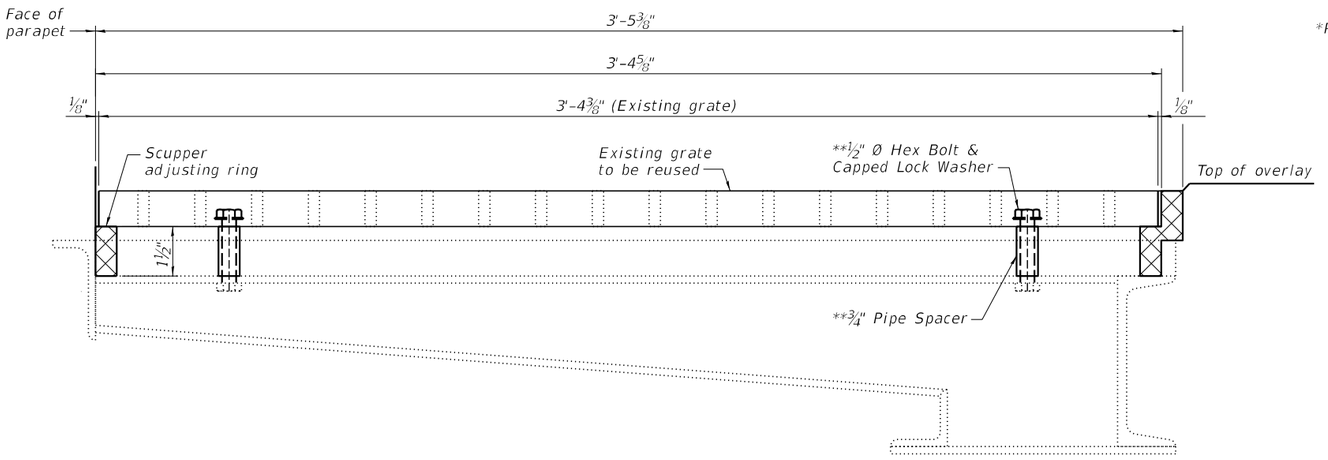


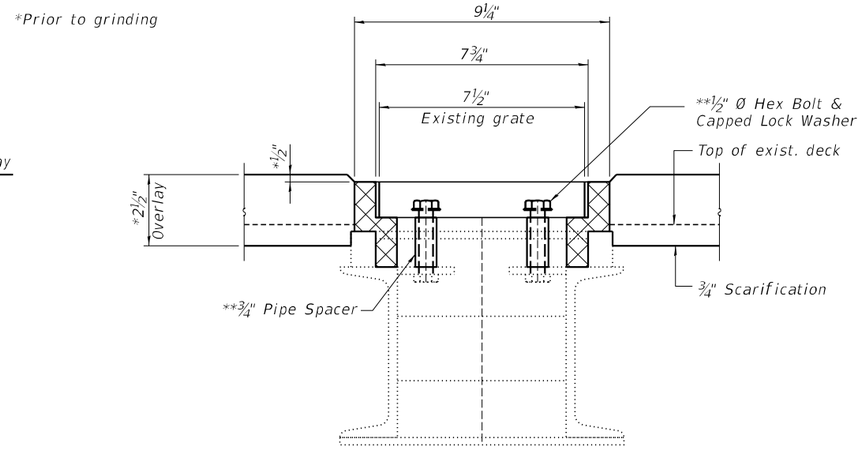
PLAN



SCUPPER ADJUSTING RING



SECTION A-A



SECTION B-B

NOTES

All structural steel shall conform to AASHTO M-270, Grade 36.

The adjusting scupper ring, ¾" pipe sleeve spacers, bolts and lock washers shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel."

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

Shop plans for proposed scupper ring shall be submitted for approval prior to fabrication.

The CONTRACTOR shall ensure that no damage is done to existing grates.

Cost of all labor and materials necessary to remove existing grates, clean existing scuppers, install adjusting scupper rings, and reinstall grates is included in the cost per unit each for Drainage Scupper to be Adjusted.

DRAINAGE SCUPPER TO BE ADJUSTED

**Contractor to field verify bolt and thread size

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers To Be Adjusted	Each	4

MODEL: Default
FILE NAME: scupperadj.dgn

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SCUPPER ADJUSTING DETAILS
STRUCTURE NO. 082-0263
SHEET 12 OF 29 SHEETS

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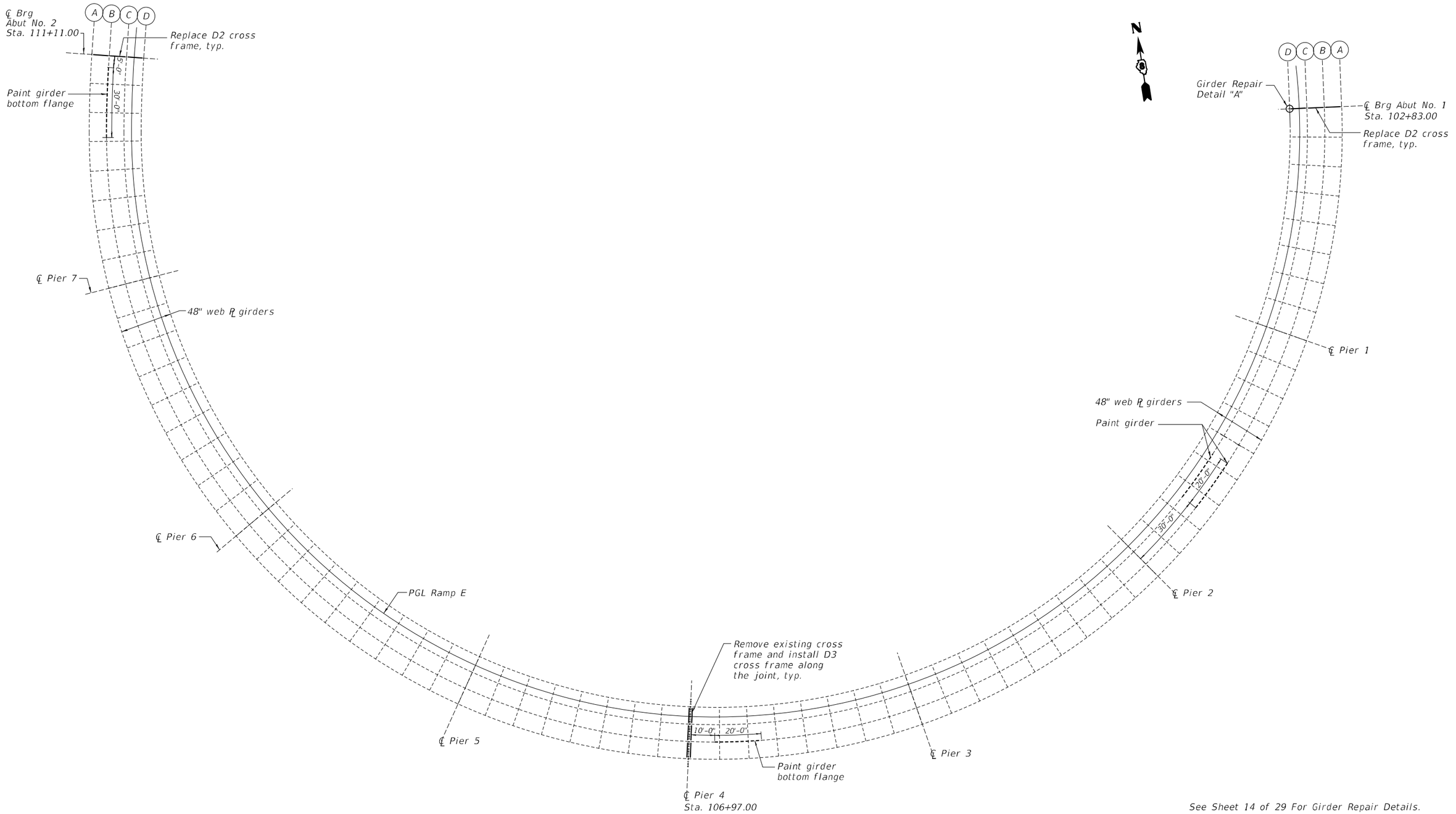
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		



See Sheet 14 of 29 For Girder Repair Details.

PLAN

MODEL: Default
FILE NAME: frmgplan082-0263.dgn

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CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

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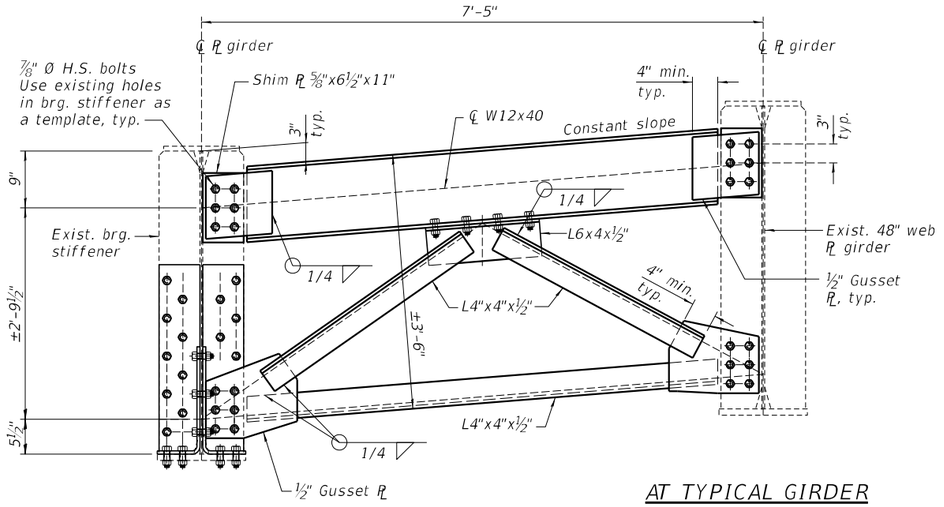
PLOT DATE =	CHECKED - JMB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 082–0263
SHEET 13 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	282
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

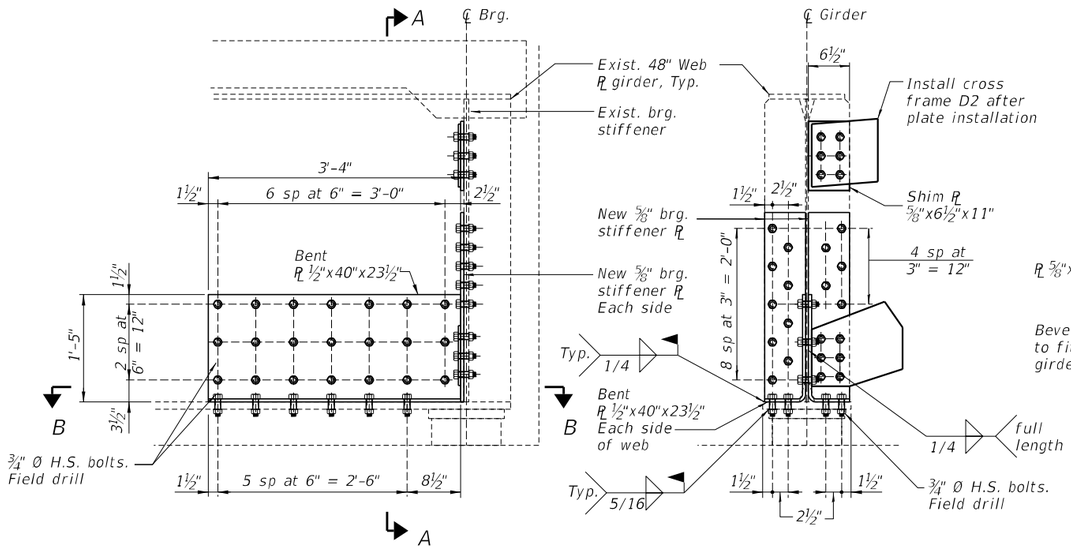


AT GIRDER REPAIR

AT TYPICAL GIRDER

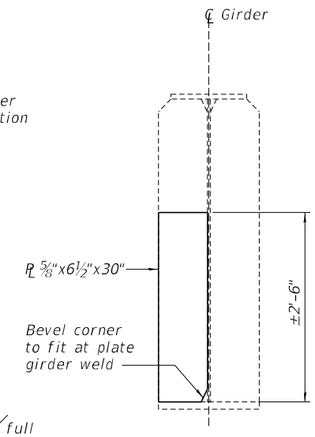
CROSS FRAME D2

(6 required)



ELEVATION AT END OF GIRDER - D

SECTION A-A



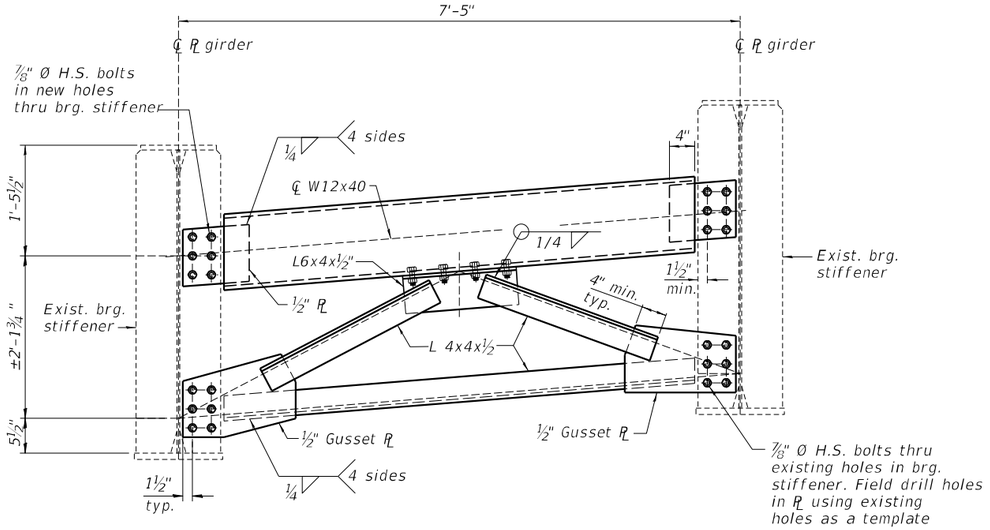
BEARING STIFFENER

Bearing stiffener plate shown on one side only.

END OF GIRDER REPAIR DETAIL "A"

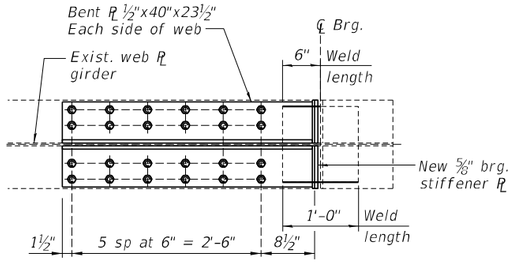
(1 required)

Clearance for tightening of bolts is less than the desired minimum. Tighten all bolts through girder flange and web first. Tightening of lower cross frame bolts may require alternative methods.



TYPICAL CROSS FRAME D3 AT PIER 4

(6 required)



SECTION B-B

All bolts not shown in this detail.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	390
Furnishing and Erecting Structural Steel	Pound	6,260
Structural Steel Removal	Pound	5,990

Notes:

Contractor shall verify existing conditions and dimensions prior to fabrication of steel members for repair locations and cross frames (or diaphragms). Dimensions shown taken from existing plans.

Refer to existing bridge plans for additional framing layout dimensions.

All structural steel shall be AASHTO M270 Grade 36 and shall be galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel".

All girder ends of structure shall be reviewed and inspected by the Department prior to Contractor ordering materials to confirm condition. The Contractor shall provide access with the proper equipment and traffic control. The cost of this work shall be included in "Furnishing and Erecting Structural Steel".

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184-001397

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PLOT DATE =	CHECKED - JMB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL GIRDER REPAIR DETAILS
STRUCTURE NO. 082-0263
SHEET 14 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	283
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

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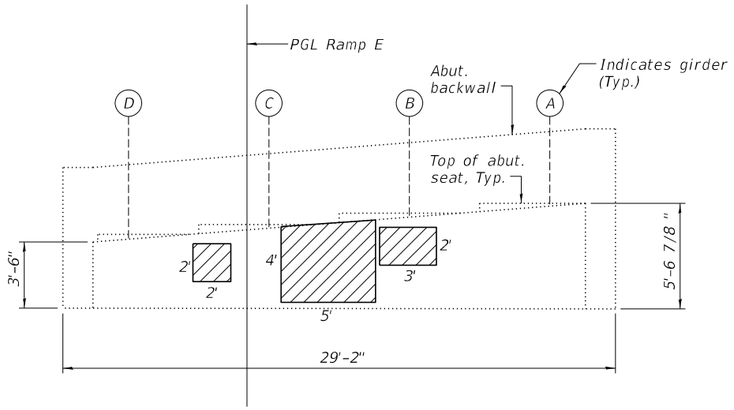
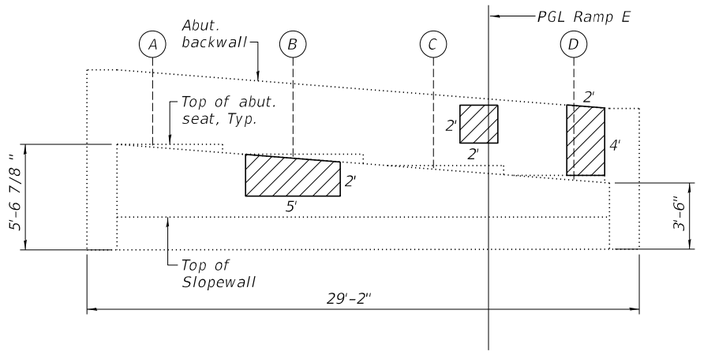


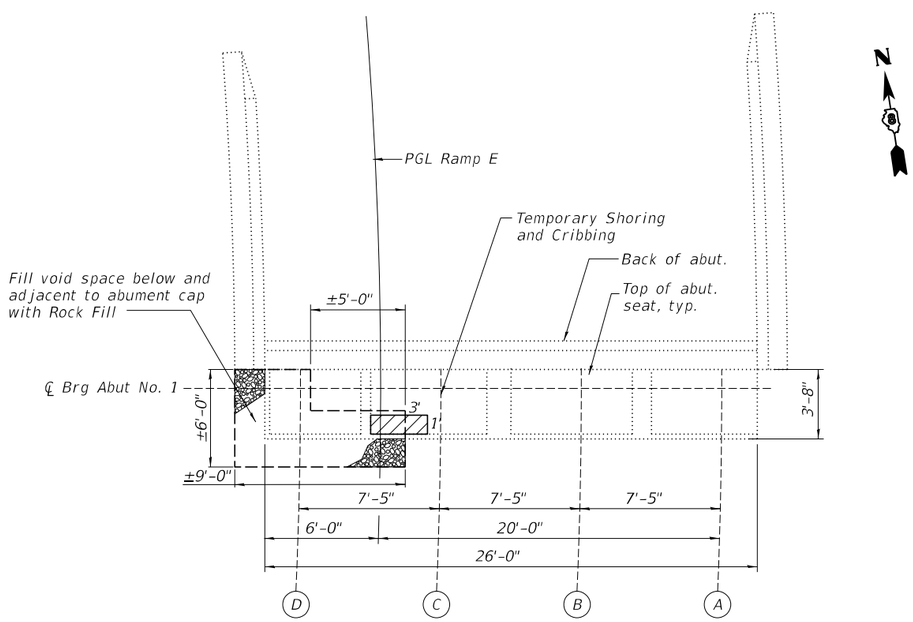
ABUTMENT NO. 1 REPAIRS - ELEVATION



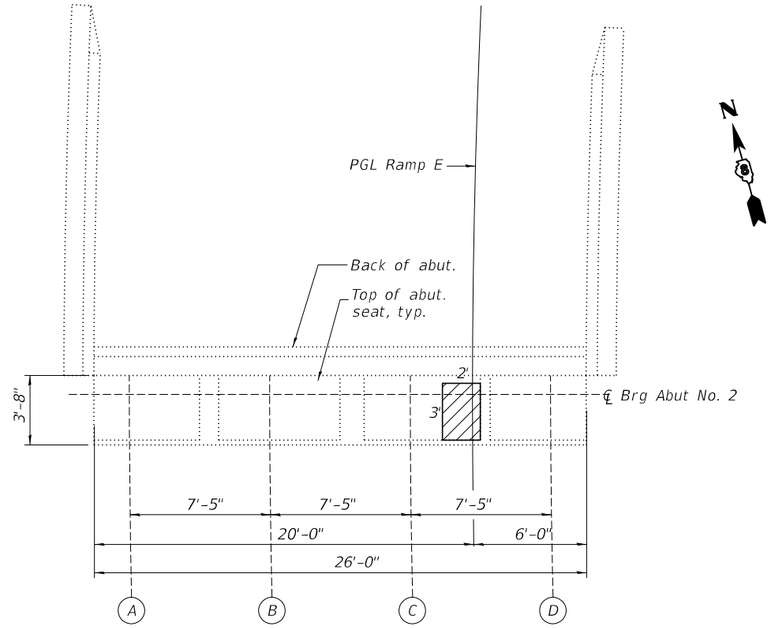
ABUTMENT NO. 2 REPAIRS - ELEVATION

BEAM REACTIONS

Reaction		Abut 1
R_{DL}	(k)	67.3
R_{LL}	(k)	47.4
R_{IMP}	(k)	10.4
R_{TOTAL}	(k)	125.1



ABUTMENT NO. 1 REPAIRS - PLAN



ABUTMENT NO. 2 REPAIRS - PLAN

Fill entire void space below and adjacent to abutment with Rock Fill. Quantity shown is the estimated quantity, exact quantity to be determined in the field. Filling of void shall be completed from the side. Required excavation included in the cost of Rock Fill.

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal To or Less Than 5")	Sq. Ft.	61
	Rock Fill	Ton	7
	Temporary Shoring and Cribbing	Each	1

Temporary Shoring and Cribbing is an estimated quantity, locations to be determined in the field

*ROCK FILL QUANTITY

Length (Ft.)	Width (Ft.)	Avg. Depth (Ft.)
4	6	3
5	4	2

*Approximate dimensions for determining volume of Rock Fill.

MODEL: $MODELNAME$
FILE NAME: $FILE$

$DATE$ $TIME$

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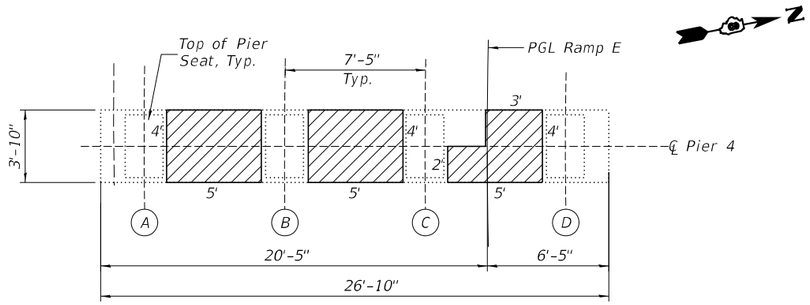
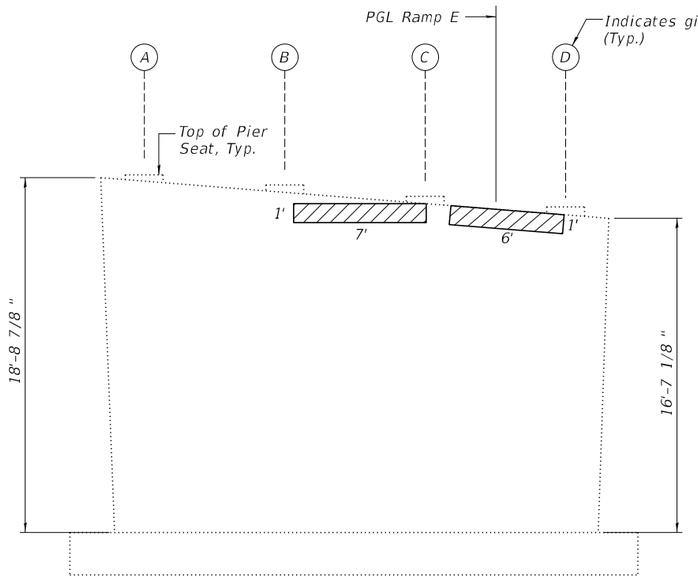
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT REPAIRS
STRUCTURE NO. 082-0263
SHEET 15 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	284
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

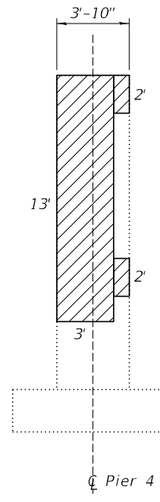


PIER 4 REPAIRS - PLAN

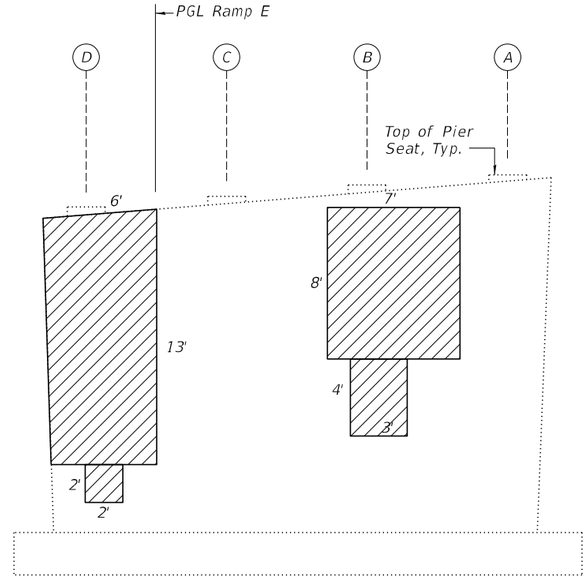


PIER 4 REPAIRS - EAST FACE ELEVATION

(Looking West)



PIER 4 REPAIRS - NORTH END VIEW



PIER 4 REPAIRS - WEST FACE ELEVATION

(Looking East)

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
▨	Structural Repair of Concrete (Depth Equal To or Less Than 5")	Sq. Ft.	262

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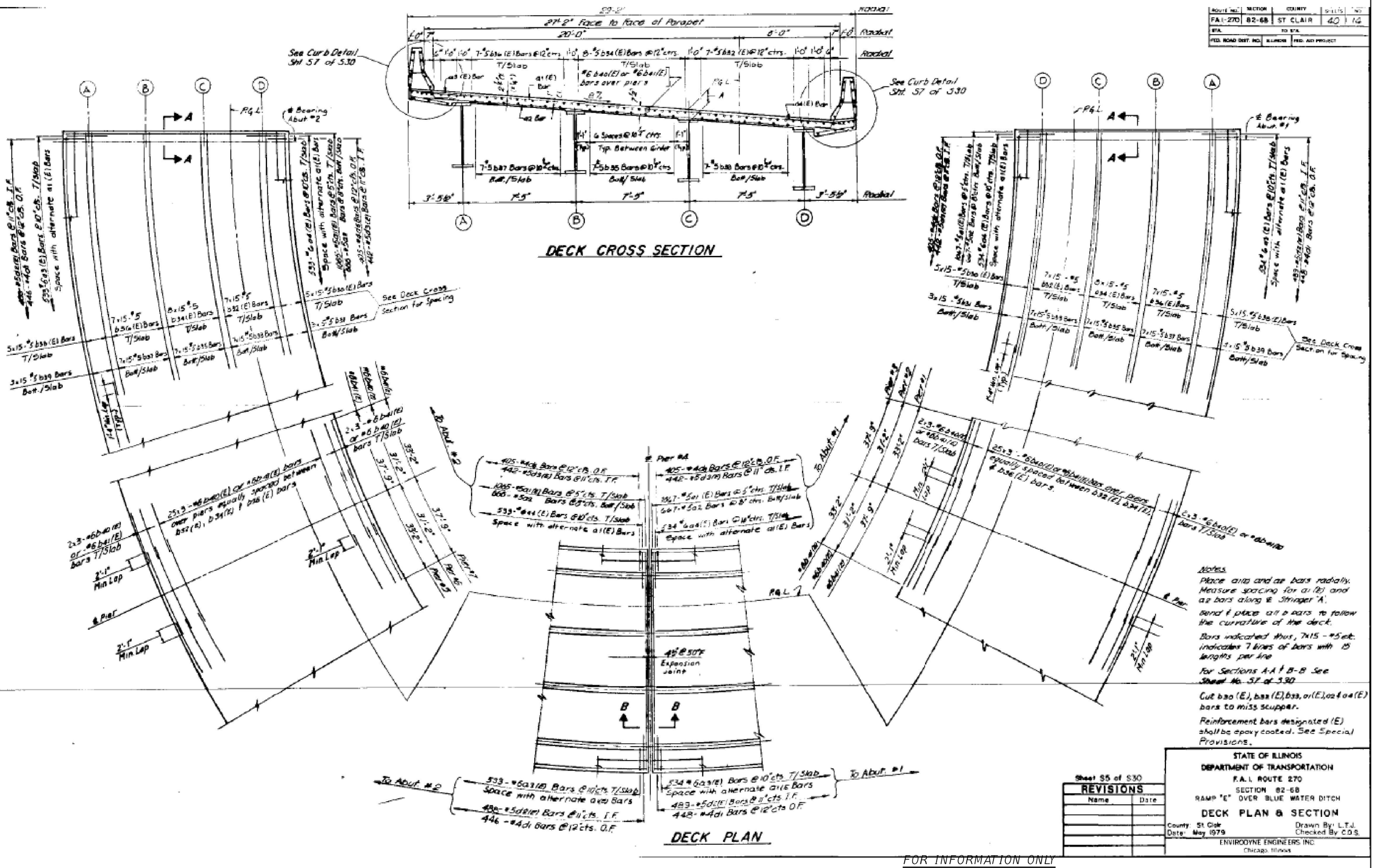
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 4 REPAIRS
STRUCTURE NO. 082-0263
SHEET 16 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	285
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
FA I-270	82-6B	ST CLAIR	40	16
BTA.		TO BTA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Sheet 55 of 530

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH

DECK PLAN & SECTION

County: St Clair — Drawn By: L.T.J.
Date: May 1979 — Checked By: C.D.S.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

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CHASTAIN & ASSOCIATES LLC
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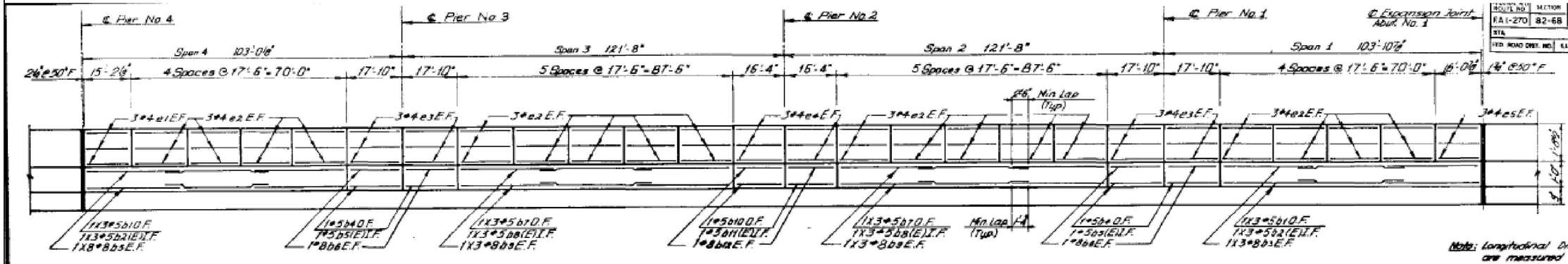
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 17 OF 29 SHEETS

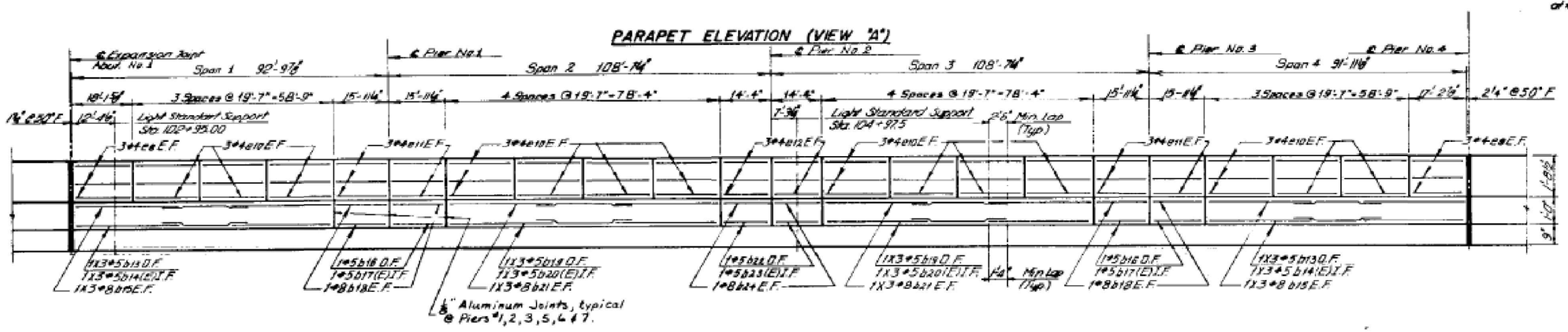
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	286
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-270	82-6B	ST. CLAIR	40	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Note: Longitudinal Dimensions are measured along the curve of the Outside Face of Parapet

PARAPET ELEVATION (VIEW "A")



PARAPET ELEVATION (VIEW "B")

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
a1(E)	2132	#5	27'-9"	
a2	1939	#5	27'-9"	
a3(E)	1067	#6	5'-7"	
a4(E)	1067	#6	5'-7"	
a5(E)	48	#5	2'-0"	

BILL OF MATERIAL

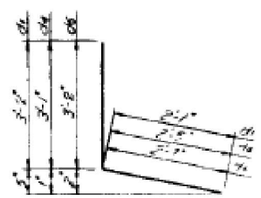
BAR	No.	SIZE	LENGTH	SHAPE
b1	12	#5	29'-6"	
b2(E)	12	#5	23'-6"	
b3	24	#8	30'-3"	
b4	8	#5	17'-6"	
b5(E)	8	#5	17'-6"	
b6	16	#8	17'-6"	
b7	12	#5	30'-0"	
b8(E)	12	#5	30'-0"	
b9	24	#8	30'-9"	
b10	4	#5	16'-0"	
b11(E)	4	#5	16'-0"	
b12	8	#8	15'-0"	
b13	12	#5	28'-7"	
b14(E)	12	#5	28'-7"	
b15	24	#8	27'-8"	
b16	8	#5	15'-7"	
b17(E)	8	#5	15'-7"	
b18	16	#8	15'-7"	
b19	12	#5	28'-11"	
b20(E)	12	#5	28'-11"	
b21	24	#8	27'-8"	
b22	4	#5	14'-0"	
b23(E)	4	#5	14'-0"	
b24	8	#8	14'-0"	

BILL OF MATERIAL

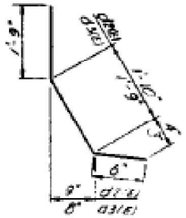
BAR	No.	SIZE	LENGTH	SHAPE
b30(E)	150	#5	28'-5"	
b31	90	#5	28'-5"	
b 92(E)	210	#5	29'-3"	
b 93	210	#5	29'-3"	
b 94(E)	240	#5	30'-0"	
b 95	210	#5	30'-0"	
b 96(E)	210	#5	30'-10"	
b 97	210	#5	30'-10"	
b 98(E)	150	#5	31'-3"	
b 99	90	#5	31'-3"	
b 40(E)	174	#6	22'-3"	
b41(E)	384	#6	28'-1"	
d1	594	#4	5'-9"	
d2(E)	377	#5	4'-1"	
d3(E)	864	#5	4'-0"	
d4	15	#6	5'-8"	
d5	30	#6	9'-9"	
d6	810	#4	5'-9"	

BILL OF MATERIAL

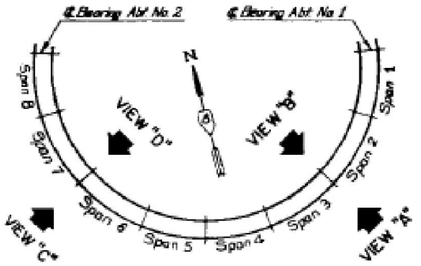
BAR	No.	SIZE	LENGTH	SHAPE
e1	12	#4	14'-10"	
e2	216	#4	17'-2"	
e3	48	#4	17'-6"	
e4	24	#4	16'-0"	
e5	6	#4	16'-9"	
e6	6	#4	18'-8"	
e8	6	#4	17'-10"	
e9	12	#4	16'-11"	
e10	168	#4	19'-3"	
e11	48	#4	15'-7"	
e12	24	#4	14'-0"	
e13	6	#4	18'-3"	
Class X Concrete			Cu. Yds.	813.3
Reinforcement Bars			Lbs.	690320
Reinforcement Bars (Epoxy Coated)			Lbs.	138320



BARS d1, d4 & d6

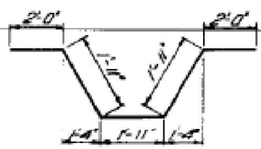


BARS d2(E) & d3(E)



KEY PLAN

BAR a4 (E)



BAR d5

Notes:
1. For View "C" and View "D" see Sht 37 of 330.
2. For Details of Light Standard Supports see Sheet S8, for Locations see Sheet S1.

Sheet 56 of 330

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DI

DECK DETAILS - I

County: St. Clair — Drawn By: L.T.J.
Date: May 1979 — Checked By: C.D.S.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

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MODEL: Default
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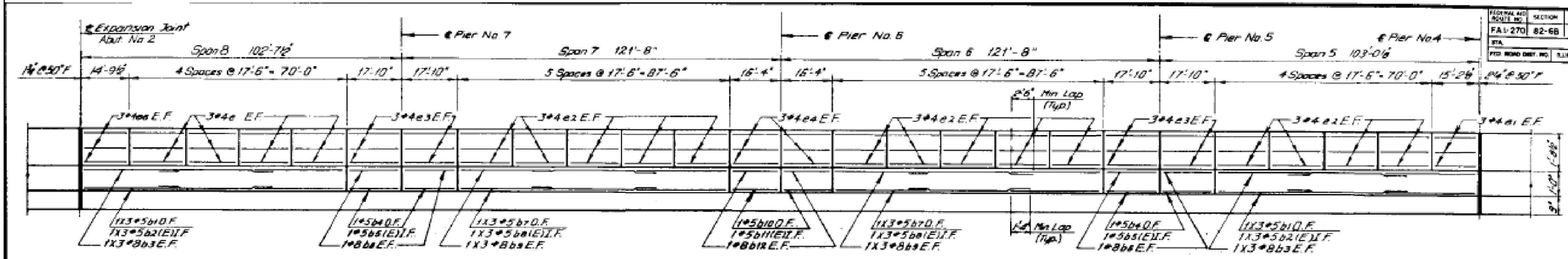
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

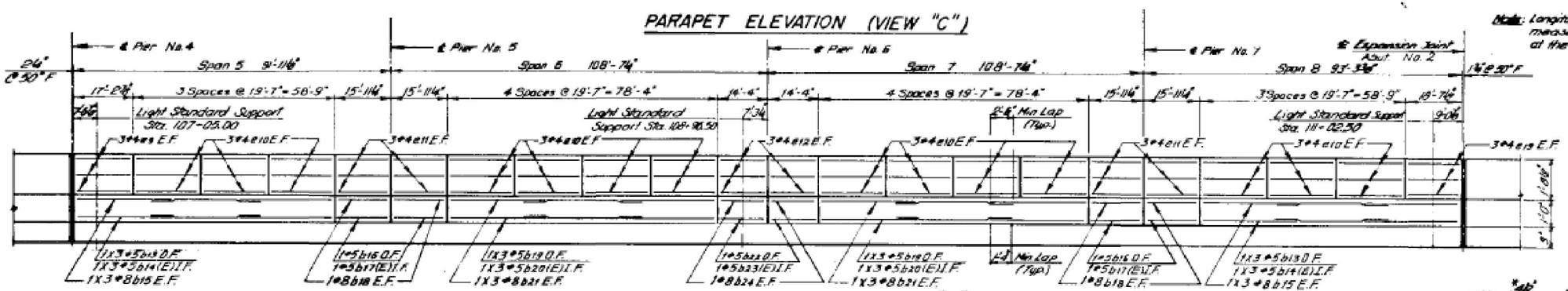
EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 18 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	287
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST CLAIR	40	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

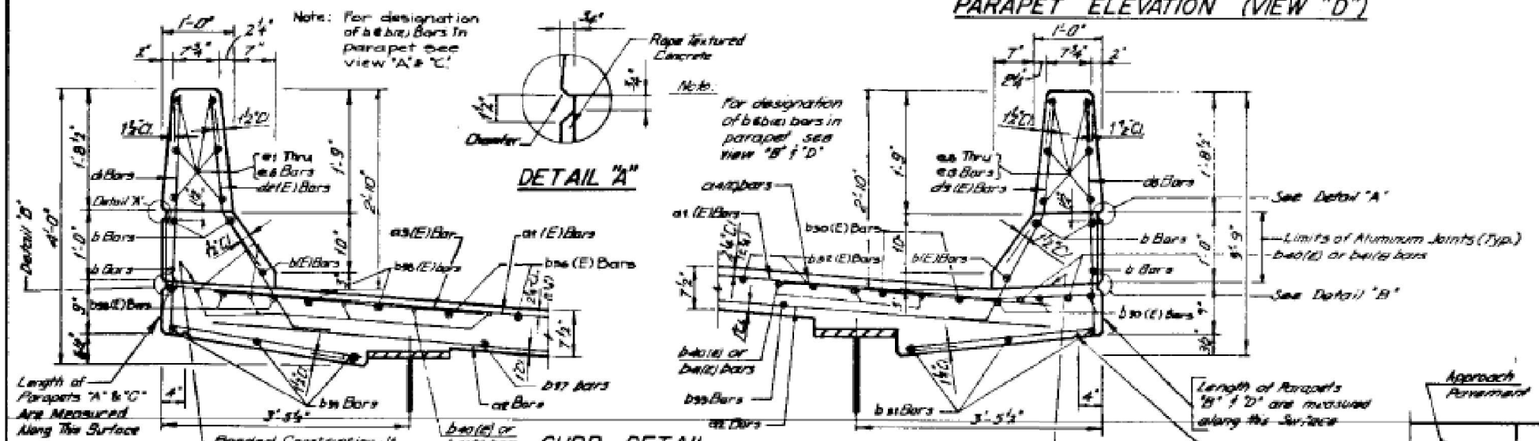


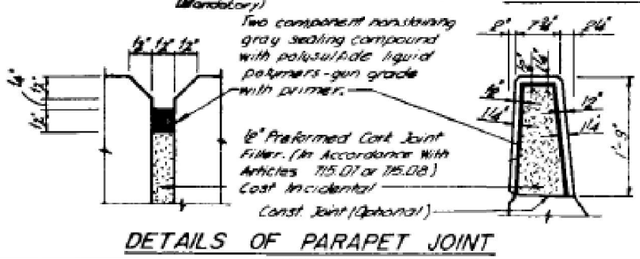
PARAPET ELEVATION (VIEW "C")

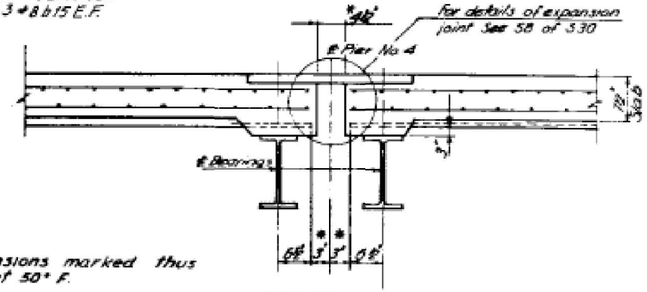


Note: Longitudinal Dimensions are measured along the curve at the Outside Face of Parapet.

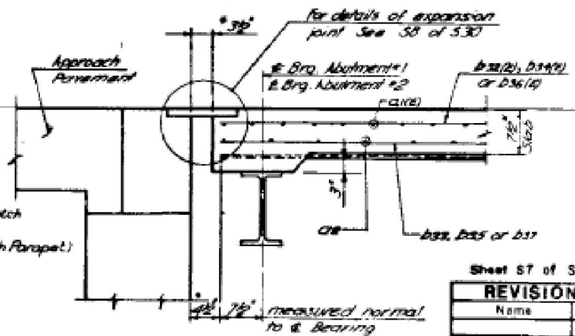
PARAPET ELEVATION (VIEW "D")







Note * Dimensions marked thus are at 50° F.



Note: For View "A" and "B" see Sht. 56 of 330

Sheet 57 of 330

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
DECK DETAILS - 2
County: St. Clair
Date: May 1979
Drawn By: L.T.J
Checked By: C.D.S
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
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PLOT DATE =	CHECKED - JMB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

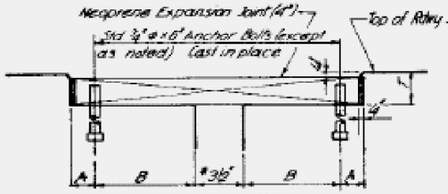
EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 19 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	288
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ALTERNATE NEOPRENE EXPANSION JOINT (4")

(See Several Provisions)



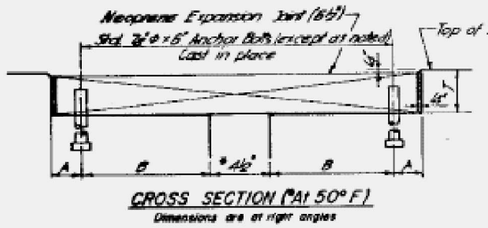
CROSS SECTION (*At 50°F)

Dimension are at right angles

Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 400A	General Tire Company	T=2½", A=1'-3½", B=8½"
WABOFLEX, MODEL SR4	Watson Bowman Associates, Inc.	T=2¾", A=1'-8⅛", B=8⅛"
FEL-SPAN, MODEL T-40 Set joint seal 2⅛" at 50°F Use ½"ø x 8" Anchor Bolts Max. expansion length = 300'	Fel-Pro Building Products Inc.	T=2⅜", A=2'-4", B=2'-5⅛"
WABO ELASTODAM, TYPE 400 Set joint seal 2⅛" at 50°F Use ½"ø x 6" Anchor Bolt Max. expansion length	Watson Bowman Associates Inc.	T=2⅛", A=2'-4", B=2'-5⅛"

4" NEOPRENE EXPANSION JOINT (At Abutments)

Note: Joint openings shall be adjusted in accordance with article 503.07 (c) of the Std. Specs when the deck is poured at ambient temperature other than 50°F.



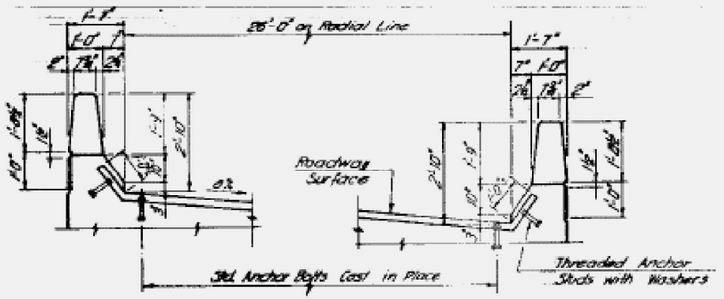
CROSS SECTION (*At 50°F)

Dimensions are at right angles

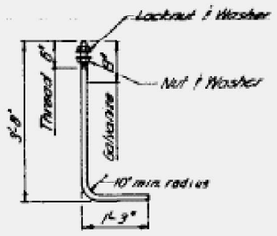
ALTERNATE NEOPRENE EXPANSION JOINTS (6'2")

Model	Supplier	Blockout Dimensions
TRANSFLEX, MODEL 650	General Tire Company	T=3¼", A=2'-2", B=9½"
WABOFLEX, MODEL SR 6.5 Use ¾"ø x 8" Anchor Bolts	Watson Bowman Associates Inc.	T=3¼", A=2'-2", B=9⅜"

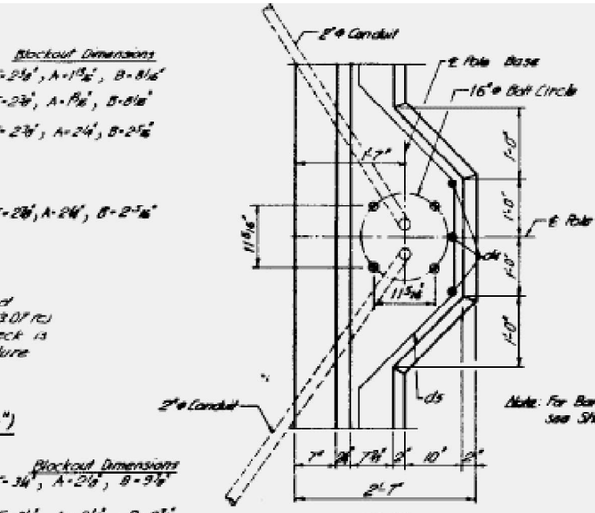
6½" NEOPRENE EXPANSION JOINT (At Pier No.4)



NEOPRENE EXPANSION JOINT DETAILS

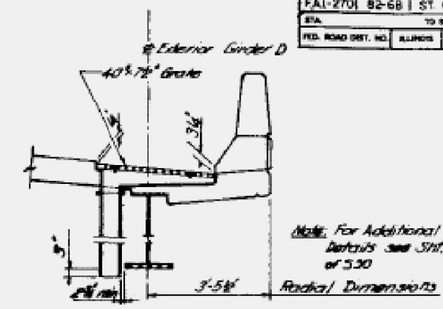


1¼"ø ANCHOR BOLT
(150,000 Min. Yield Bolt)



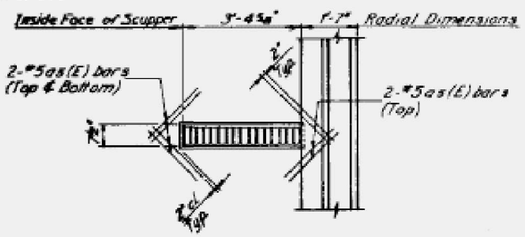
PLAN

Note: For Bar Details see Sheet No. 36 of 530

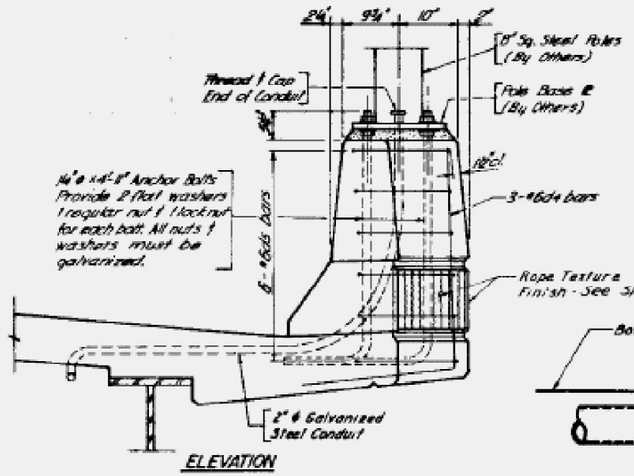


Note: For Additional Scupper Details see Sht. No. 59 of 530

SECTION AT SCUPPER DRAIN

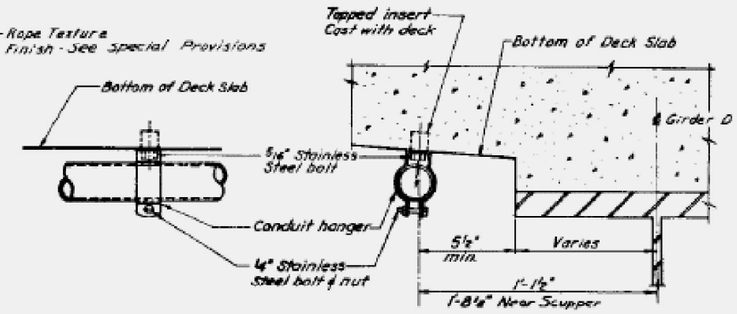


PLAN AT SCUPPER DRAIN



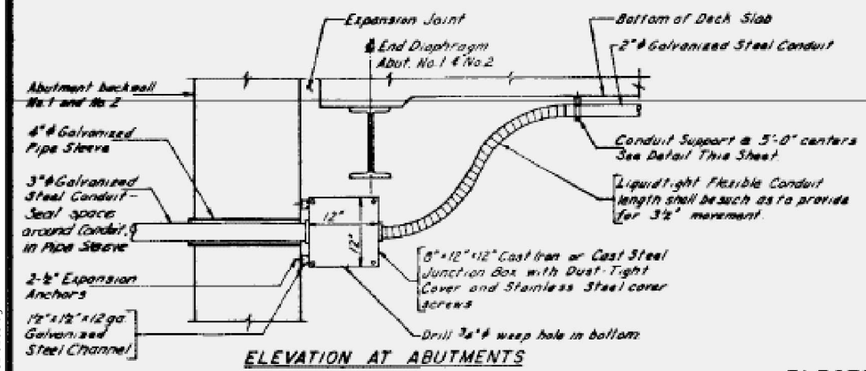
ELEVATION

LIGHT POLE FOUNDATION DETAIL

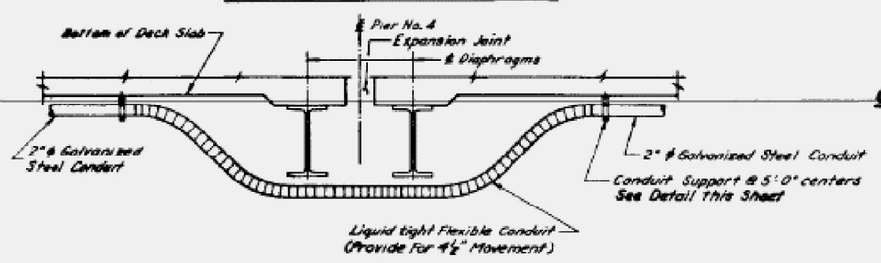


CONDUIT SUPPORT DETAIL

(At 5'-0" Centers)



ELEVATION AT ABUTMENTS



ELEVATION AT PIER NO. 4

Notes:
1. Conduit shall be ANSI C80.1 or C80.3.
2. Conduit Supports shall be everdur alloy with Stainless Steel hardware.
3. Conduit minimum 15" bending radius.
4. Conduit shall be bent to provide 3" min. clearance at scupper drains.

ELECTRICAL DETAILS

Sheet 58 of 530

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
EXPANSION, LIGHTING & ELEC. DETAILS
County: St. Clair — Drawn By: L.Sz.
Date: May 1979 — Checked By: C.D.S.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: existplans082x0263.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -	
	CHECKED - JMB	REVISED -	
PLOT SCALE =	DRAWN - RLK	REVISED -	
PLOT DATE =	CHECKED - JMB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 20 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5.4.3)RS-1	ST. CLAIR	504	289
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

MOMENT TABLE
(COMPOSITE IN POSITIVE MOMENT AREAS)

		GIRDER A				GIRDER B			
		04 SPAN 1 06 SPAN 4 04 SPAN 5 06 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	05 SPAN 2 05 SPAN 3 05 SPAN 6 05 SPAN 7	PIER 2 PIER 6	04 SPAN 1 06 SPAN 4 04 SPAN 5 06 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	05 SPAN 2 05 SPAN 3 05 SPAN 6 05 SPAN 7	PIER 2 PIER 6
Is	(in^4)	34744	67032	28717	61326	23204	55613	21814	50059
Ic	(in^4)	65219		84010		62442		57025	
Ss	(in^3)	1859	2489	1753	2292	1194	2099	1065	1907
Sc	(in^3)	2794		2395		1605		1433	
DL	(k/ft)	1.038	1.038	1.073	1.073	0.977	0.977	0.989	0.989
Mpl - bending	(ft-k)	917	1711	527	1360	585	1401	394	1208
fs non-comp	(ksi)	5.9	8.3	3.6	7.1	5.9	8.0	3.9	7.6
Spl	(ft^3)	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373
Mspl - bending	(ft-k)	362	584	285	501	270	463	209	430
MLL - bending	(ft-k)	1306	1122	1334	1140	852	810	844	860
Mimp-bending	(ft-k)	289	225	272	232	190	158	168	178
Mcomp-bending	(ft-k)	1971	1934	1891	1873	1312	1441	1191	1466
fs - comp.	(ksi)	9.9	9.3	9.5	9.8	9.8	8.2	10.0	9.2
fs - warping (D.L.)	(ksi)	1.2	1.2	0.8	1.0	1.3	1.0	1.1	0.9
fs - warping (S.D.L.)	(ksi)	0.4	0.4	0.4	0.3	0.6	0.3	0.6	0.2
fs - warping (L.L.)	(ksi)	1.9	1.1	2.1	1.4	2.1	0.8	2.6	1.0
fs - warping (TOTAL)	(ksi)	3.5	2.7	3.3	2.7	4.0	2.1	4.3	2.1
Fs - TOTAL	(ksi)	19.3	20.3	16.4	19.6	19.7	18.3	18.2	18.9
VR	(k)	79.2		80.8		64.1		61.9	

REACTION TABLE

	GIRDER A				GIRDER B			
	ABUT #1 ABUT #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	** PIER 4	ABUT #1 ABUT #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	** PIER 4
RDL (k)	67.3	163.9	146.7	66.4	45.9	189.6	180.8	44.9
RLL (k)	47.4	59.3	59.1	47.3	42.1	77.9	81.4	42.6
IMP (k)	10.4	14.1	14.1	10.4	9.5	16.1	16.8	9.5
R TOTAL (k)	125.1	241.3	229.9	124.1	98.1	283.6	279.0	97.0

** From Span 4 only

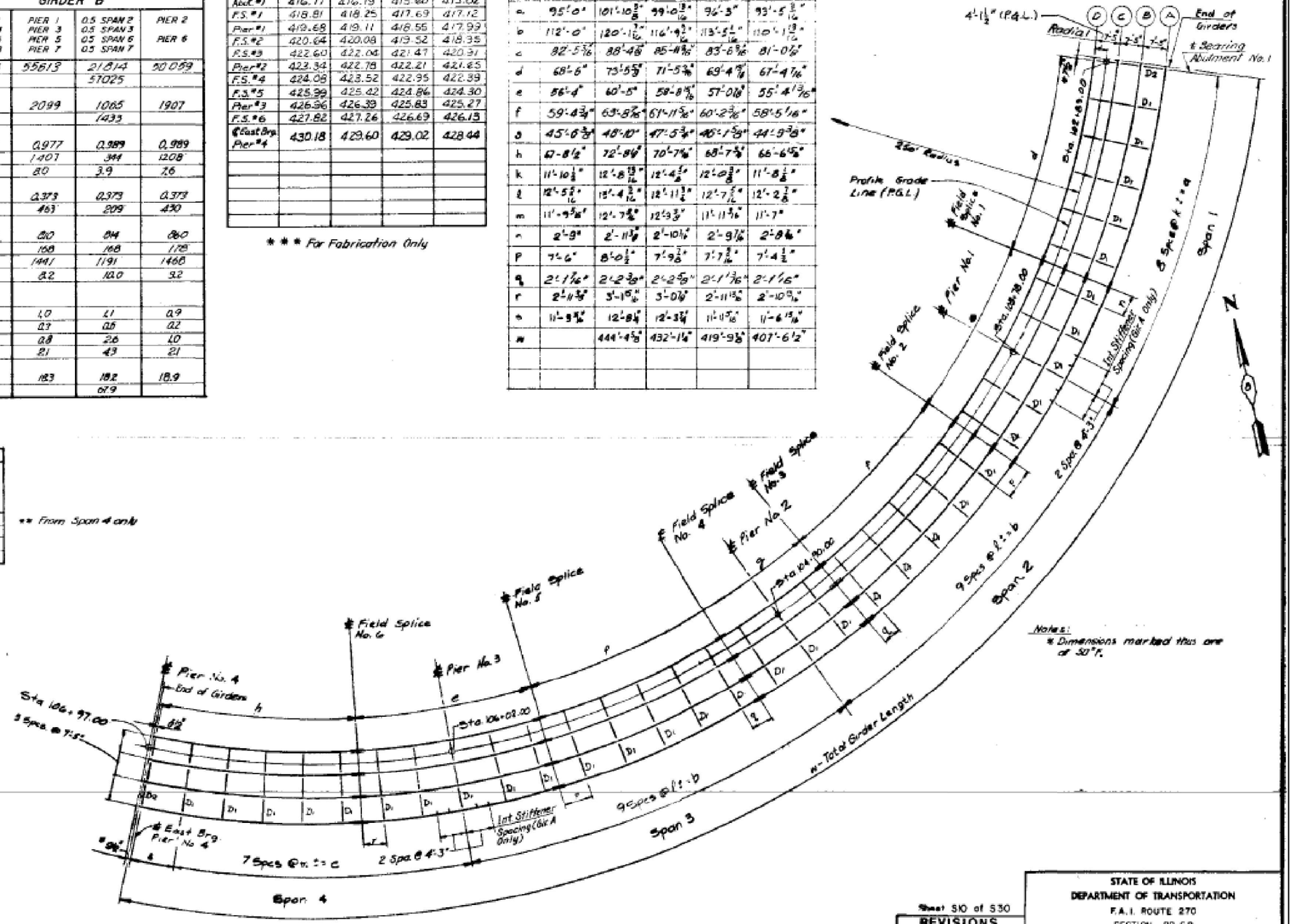
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs non-comp.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs-comp
VR is the maximum (+ Impact shear range in span used to determine shear connector spacing.

*** TOP OF WEB ELEVATIONS

GIRDER / LOCATION	A	B	C	D
Abut #1	416.77	416.19	415.60	415.02
F.S. #1	418.81	418.25	417.69	417.12
Pier #1	419.68	419.11	418.55	417.99
F.S. #2	420.64	420.08	419.52	418.35
F.S. #3	422.60	422.04	421.47	420.31
Pier #2	423.34	422.78	422.21	421.65
F.S. #4	424.08	423.52	422.95	422.39
F.S. #5	425.39	425.42	424.86	424.30
Pier #3	426.96	426.39	425.83	425.27
F.S. #6	427.82	427.26	426.69	426.13
℄ East Brg. Pier #4	430.18	429.60	429.02	428.44

*** For Fabrication Only

GIRDER / ℄ on P&L.	A	B	C	D
R	250'-0"	248'-1 1/2"	246'-2 1/2"	246'-10 1/2"
a	95'-0"	101'-10 3/8"	99'-0 13/16"	96'-5"
b	112'-0"	120'-1 7/16"	116'-9 1/16"	113'-5 1/16"
c	82'-5 7/16"	88'-4 7/8"	85'-8 5/16"	83'-6 5/16"
d	68'-6"	73'-5 5/8"	71'-5 3/16"	69'-4 7/16"
e	56'-4"	60'-5"	58'-8 5/16"	57'-0 1/8"
f	59'-4 3/4"	63'-8 7/16"	61'-11 5/16"	60'-2 3/16"
g	45'-6 3/4"	48'-10"	47'-5 3/4"	46'-1 5/8"
h	67'-8 1/2"	72'-8 9/16"	70'-7 1/16"	68'-7 5/8"
k	11'-10 1/8"	12'-8 13/16"	12'-4 1/2"	12'-0 3/8"
l	12'-5 1/16"	13'-4 3/16"	12'-11 1/8"	12'-7 1/16"
m	11'-9 5/8"	12'-7 1/8"	12'-3 3/8"	11'-11 5/16"
n	2'-9"	2'-11 1/8"	2'-10 1/16"	2'-9 1/16"
P	7'-6"	8'-0 1/2"	7'-9 3/16"	7'-7 7/8"
q	2'-1 7/16"	2'-2 3/8"	2'-2 5/16"	2'-1 1/16"
r	2'-11 3/8"	3'-1 5/16"	3'-0 1/16"	2'-11 1/16"
s	11'-9 1/8"	12'-8 1/4"	12'-3 1/16"	11'-11 7/16"
w		444'-4 5/8"	432'-1 1/16"	419'-9 1/8"



Notes:
* Dimensions marked thus are at 50°F.

FOR INFORMATION ONLY

Sheet 510 of 530

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
FRAMING PLAN-I & STEEL STRESSES
County: St. Clair — Drawn By: L.Sz.
Date: May 1979 — Checked By: R.A.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
FILE NAME: existplans082-0263.dgn
3/1/2024 3:25:22 PM

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

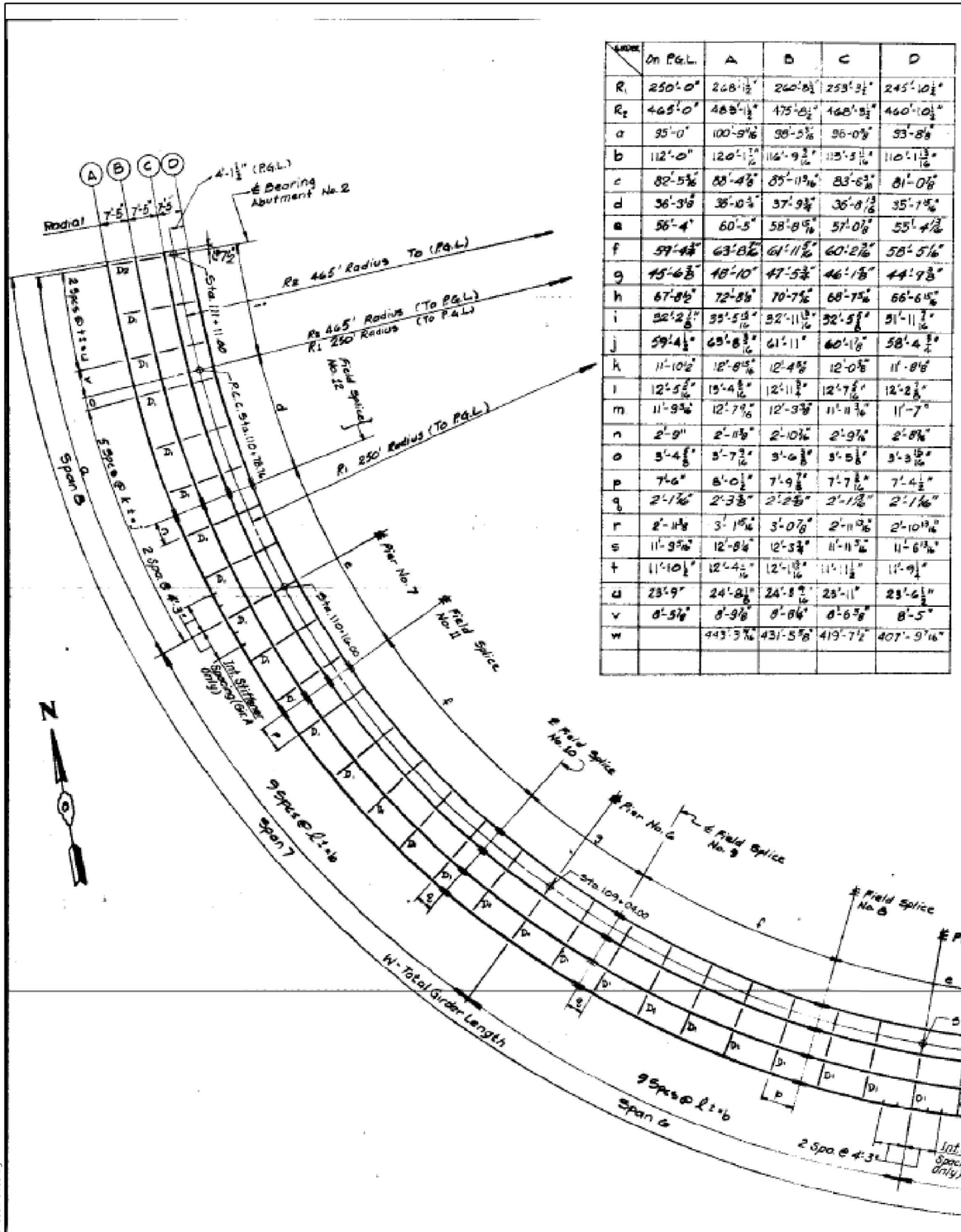
USER NAME =	DESIGNED - CMF	REVISED -
	CHECKED - JMB	REVISED -
PLOT SCALE =	DRAWN - RLK	REVISED -
PLOT DATE =	CHECKED - JMB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 21 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	290
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	20
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



GIRDER	On P&L.	A	B	C	D
R_1	250'-0"	248'-1½"	260'-8½"	259'-3½"	245'-10½"
R_2	465'-0"	463'-1½"	475'-6½"	468'-5½"	460'-10½"
a	95'-0"	100'-9 11/16"	98'-5 5/16"	96'-0 9/16"	93'-8 9/16"
b	112'-0"	120'-1 7/16"	116'-9 3/16"	115'-5 11/16"	110'-1 13/16"
c	82'-5 5/16"	88'-4 9/16"	85'-11 9/16"	83'-6 5/16"	81'-0 9/16"
d	36'-3 9/16"	38'-10 3/16"	37'-9 3/16"	36'-8 1/16"	35'-7 15/16"
e	56'-4"	60'-5"	58'-8 15/16"	57'-0 7/8"	55'-4 7/16"
f	59'-4 3/16"	63'-8 7/16"	61'-11 5/16"	60'-2 7/16"	58'-5 7/16"
g	45'-6 3/16"	48'-10"	47'-5 3/16"	46'-1 5/8"	44'-9 3/16"
h	67'-8 1/2"	72'-8 5/8"	70'-7 5/16"	68'-7 5/16"	66'-6 15/16"
i	32'-2 1/16"	35'-5 15/16"	32'-11 13/16"	32'-5 5/8"	31'-11 7/16"
j	59'-4 1/2"	63'-8 3/16"	61'-11"	60'-1 7/8"	58'-4 3/4"
k	11'-10 1/2"	12'-8 15/16"	12'-4 5/8"	12'-0 3/8"	11'-8 1/8"
l	12'-5 1/16"	13'-4 5/16"	12'-11 3/4"	12'-7 1/16"	12'-2 3/8"
m	11'-9 3/16"	12'-7 1/16"	12'-3 3/8"	11'-11 3/16"	11'-7"
n	2'-9"	2'-11 3/8"	2'-10 1/16"	2'-9 1/16"	2'-8 1/16"
o	5'-4 1/8"	5'-7 3/16"	5'-6 3/8"	5'-5 1/8"	5'-3 15/16"
p	7'-6"	8'-0 1/2"	7'-9 7/8"	7'-7 5/16"	7'-4 3/4"
q	2'-1 1/16"	2'-3 5/8"	2'-2 5/8"	2'-1 1/16"	2'-1/16"
r	2'-11 1/8"	3'-1 5/16"	3'-0 7/8"	2'-11 13/16"	2'-10 13/16"
s	11'-9 5/16"	12'-8 1/4"	12'-3 1/4"	11'-11 5/16"	11'-6 13/16"
t	11'-10 1/2"	12'-4 1/16"	12'-1 3/16"	11'-11 1/2"	11'-9 1/4"
u	23'-9"	24'-8 1/16"	24'-8 9/16"	23'-11"	23'-6 1/2"
v	8'-5 1/8"	8'-9 1/8"	8'-8 1/4"	8'-6 5/8"	8'-5"
w		443'-3 7/16"	431'-5 5/8"	419'-7 1/2"	407'-9 7/16"

MOMENT TABLE
(COMPOSITE IN POSITIVE MOMENT AREAS)

	GIRDER C				GIRDER D			
	Q4 SPAN 1 Q6 SPAN 4 Q4 SPAN 5 Q6 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	Q5 SPAN 2 Q5 SPAN 3 Q5 SPAN 6 Q5 SPAN 7	PIER 2 PIER 6	Q4 SPAN 1 Q6 SPAN 4 Q4 SPAN 5 Q6 SPAN 8	PIER 1 PIER 3 PIER 5 PIER 7	Q5 SPAN 2 Q5 SPAN 3 Q5 SPAN 6 Q5 SPAN 7	PIER 2 PIER 6
Is (in⁴)	19054	44608	19054	36822	17440	39259	17440	36822
Ic (in⁴)	51246		51246		45256		45256	
Ss (in³)	916	1716	916	1429	786	1525	786	1429
Sc (in³)	1261		1261		1087		1087	
Dt (ft)	0.943	0.943	0.957	0.957	0.903	0.903	0.919	0.919
Mdl - bending (k')	398	1111	313	878	332	1031	267	965
fs non-comp. (ksi)	5.2	7.8	4.1	7.4	5.1	8.1	4.1	8.1
Sac (in³)	0.373	0.371	0.373	0.373	0.373	0.373	0.372	0.373
Mdc - bending (k')	204	352	187	299	183	303	161	302
Mdl bending (k')	630	605	637	550	612	570	643	585
Mdw - bending (k')	143	127	133	115	140	121	130	124
Mcomp - bending (k')	977	1084	957	964	915	994	904	1011
fs - comp. (ksi)	9.3	7.6	9.1	8.1	10.1	7.8	10.0	8.5
fs warping (D.L.) (ksi)	1.3	1.0	1.1	1.0	1.3	1.0	1.2	1.0
fs warping (S.D.L.) (ksi)	0.6	0.2	0.6	0.2	0.6	0.2	0.5	0.2
fs warping (L.L.) (ksi)	2.2	0.8	2.4	0.9	2.4	0.8	2.6	0.9
fs warping (env.) (ksi)	4.1	2.0	4.1	2.1	4.3	2.0	4.4	2.1
fs total (ksi)	18.6	17.4	17.3	17.6	19.5	17.9	18.5	18.7
VR (k)	56.2		52.5		50.1		52.5	

REACTION TABLE

	GIRDER C				GIRDER D			
	ABUT #1 ABUT #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	**PIER 4	ABUT #1 ABUT #2	PIER 1 PIER 3 PIER 5 PIER 7	PIER 2 PIER 6	**PIER 4
PDL (k)	39.5	146.6	182.6	39.2	33.2	159.4	156.2	33.3
PLL (k)	40.6	63.9	60.5	40.6	35.0	63.2	64.2	35.7
IMP (k)	9.2	13.4	12.7	9.2	8.2	13.4	13.7	8.2
P total (k)	89.3	223.9	195.8	89.0	77.0	236.0	234.1	77.2

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs - non-comp.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs - comp.
VR is the maximum L + Impact shear range in span used to determine shear connector spacing.

***TOP OF WEB ELEVATIONS

GIRDER / LOCATION	A	B	C	D
℄ West Brg. Pier #4	430.24	429.65	429.07	428.49
F.S. #7	432.10	431.54	430.98	430.42
Pier #5	432.80	432.24	431.68	431.12
F.S. #8	433.53	432.97	432.40	431.84
F.S. #9	434.78	434.22	433.66	433.10
Pier #6	435.18	434.62	434.06	433.50
F.S. #10	435.55	434.99	434.42	433.86
F.S. #11	436.28	435.72	435.16	434.60
Pier #7	436.56	435.99	435.43	434.87
F.S. #12	436.75	436.18	435.62	435.06
Abut. #8	437.15	436.56	435.99	435.40

*** For Fabrication Only

Notes:
* Dimensions marked thus are at 50° F.
** From Span 5 only

Sheet 511 of 530

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH

FRAMING PLAN - 2 & STEEL STRESSES

County: St. Clair
Date: May 1979
Drawn By: L. Sz.
Checked By: R.A.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: exist\plans\082-0263.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -	
	CHECKED - JMB	REVISED -	
PLOT SCALE =	DRAWN - RLK	REVISED -	
PLOT DATE =	CHECKED - JMB	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 22 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	291
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-270	82-6B	ST CLAIR	40	21
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GIRDER "A"

GIRDER "B"

GIRDER "C"

GIRDER "D"

Brg. Stiff 2 PLS 6½" x ⅜"

Bottom Flange Lengths 7½"

Top Flange Lengths

Spacing of Shear Connectors

Span 4, Span 5

Span 3, Span 6

Span 2, Span 7

Span 1, Span 8

ELEVATIONS OF GIRDERS

Notes

For Details of intermediate stiffeners See Sheet 514 of 530

NTR designates those flange plates subject to supplemental requirements for notch toughness.

All web plates are subject to supplemental requirements for notch toughness.

Sheet 512 of 530

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
GIRDER ELEVATIONS
County St Clair
Date: May 1979
Drawn By: L.S.
Checked By: R.A.
ENVIRODYNE ENGINEERS INC
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: exist\plans\082-0263.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -	
	CHECKED - JMB	REVISED -	
PLOT SCALE =	DRAWN - RLK	REVISED -	
PLOT DATE =	CHECKED - JMB	REVISED -	

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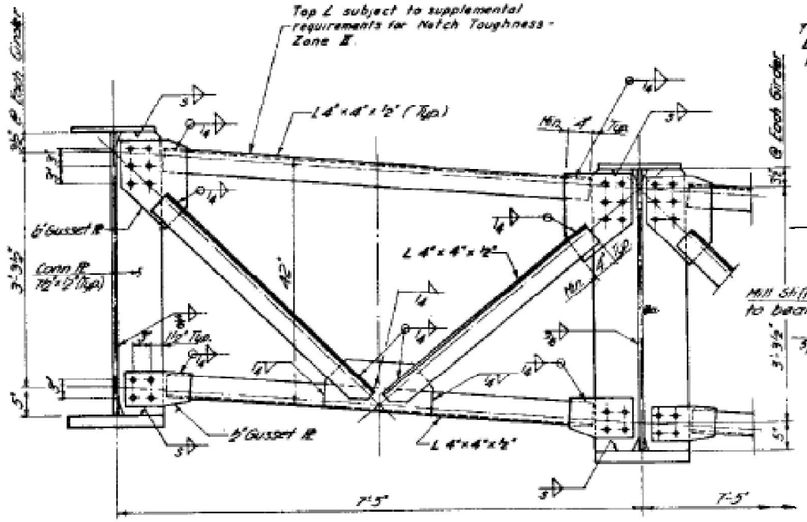
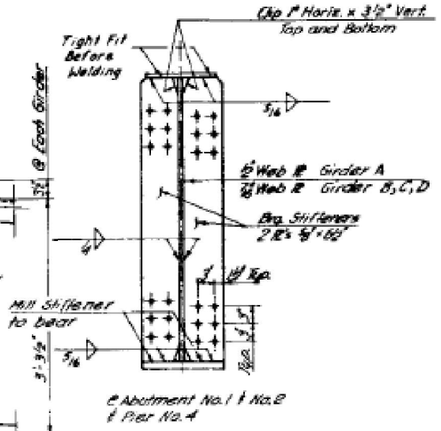
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

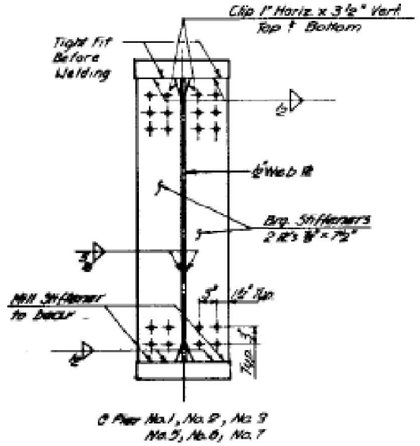
EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 23 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	292
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

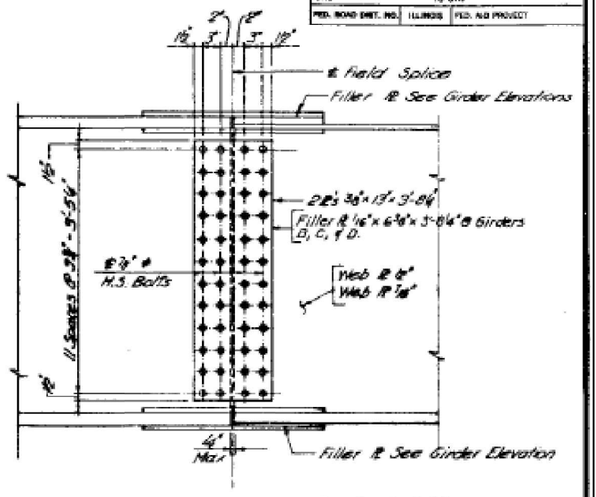
ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
FAI-270	82-6B	ST. CLAIR	40	23
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

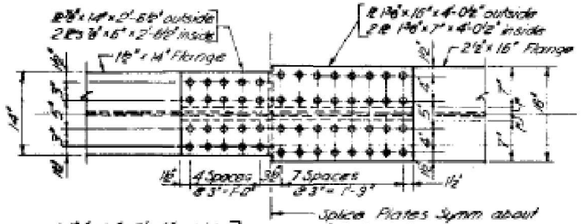


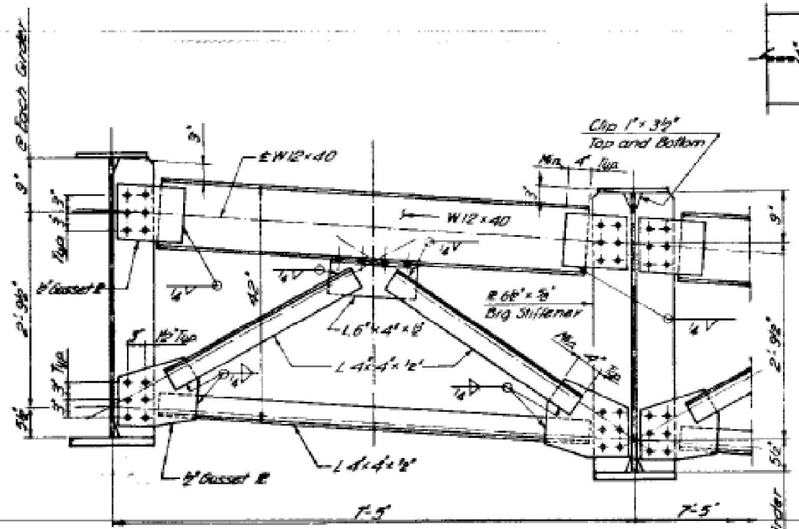




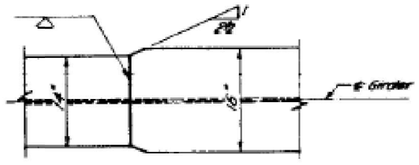
BEARING STIFFENER DETAILS







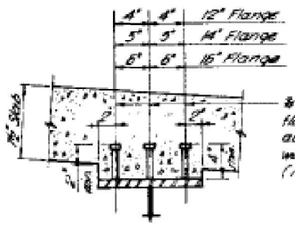
INTERMEDIATE DIAPHRAGM - D1



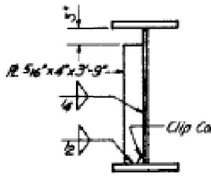
VARIABLE FLANGE WIDTH

VARIABLE FLANGE THICKNESS

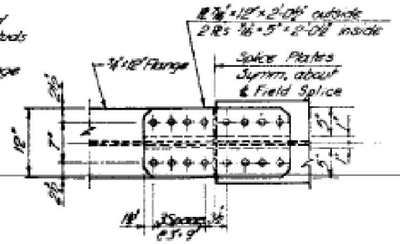
WELDED FLANGE SPLICE DETAILS

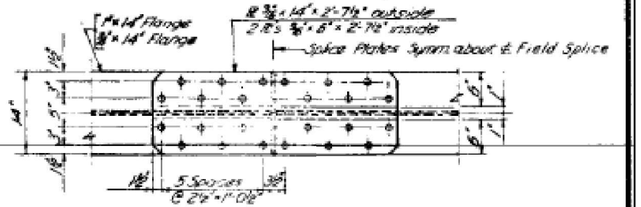


SHEAR STUD DETAILS



INTERMEDIATE STIFFENER DETAIL





FIELD SPLICE DETAILS

Note: Use ⅞" ø High Strength Bolts for diaphragms and field Splices, with 15/16" ø holes in gusset plates and ⅞" ø holes in Conn. plates. Hardened washers shall be required over holes in gusset plates.
Use 15/16" ø holes in Splice Plates.

WELD SIZE = S - TABLE	
Material Thickness of Thicker Part Joined (Inches)	Minimum Fillet Weld Size = S (Inches)
Over ¼" to ¾"	¼
Over ¾" to 1½"	5/16
Over 1½" to 2¼"	⅜
Over 2¼" to 6"	½

Note: All splice plates except filler plates are subject to supplemental requirements for Notch Toughness - Zone 2.

Flange splice plates are based on the flange on the midspan side of splice.

Sheet 514 of 530

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
STRUCTURAL STEEL DETAILS
County: St. Clair
Date: May 1979
Drawn By: L.St.
Checked By:
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: existplans082-0263.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -
	CHECKED - JMB	REVISED -
PLOT SCALE =	DRAWN - RLK	REVISED -
PLOT DATE =	CHECKED - JMB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 24 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	293
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

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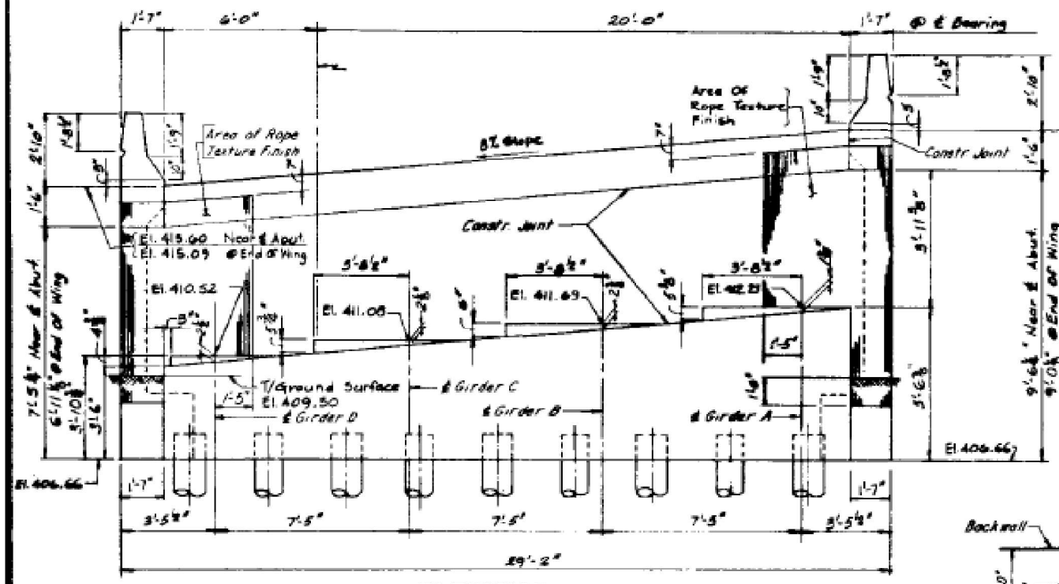
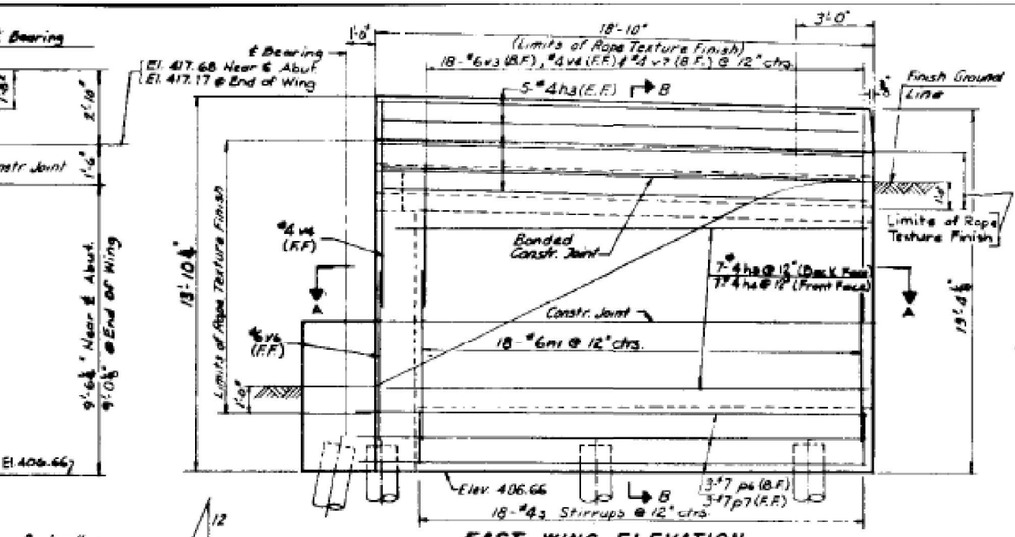
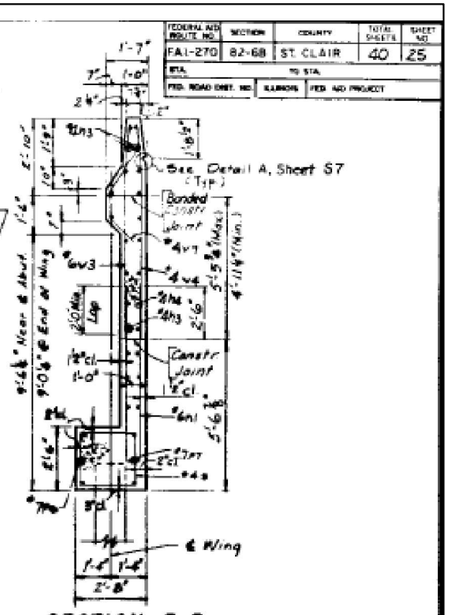
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-270	82-6B	ST. CLAIR	40	25
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



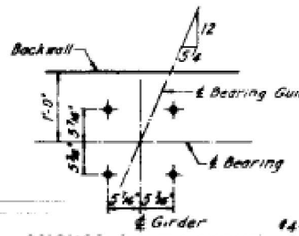
ELEVATION



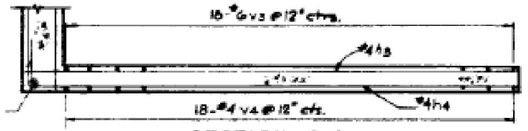
EAST WING ELEVATION



SECTION B-B



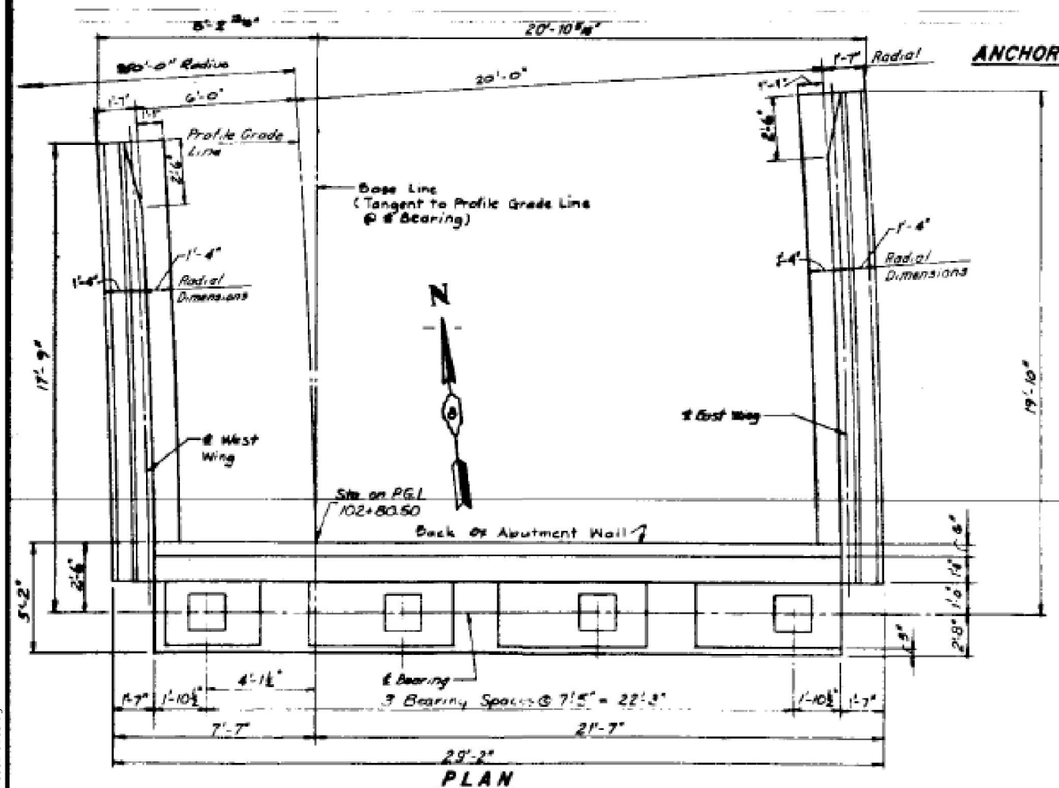
ANCHOR BOLT LAYOUT



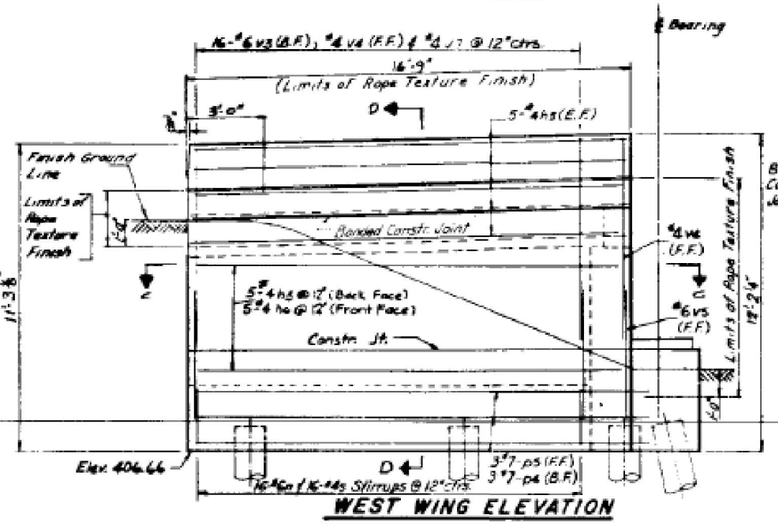
SECTION A-A

NOTE: For Rope Texture Finish see Special Provisions.

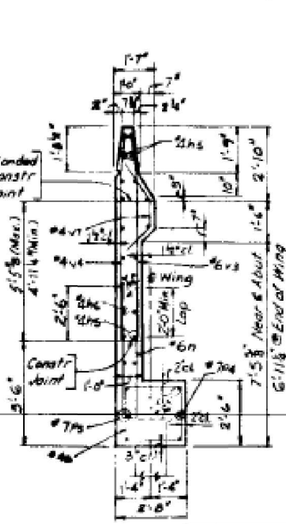
(B.F.) = Back Face
(F.F.) = Front Face
(E.F.) = Each Face



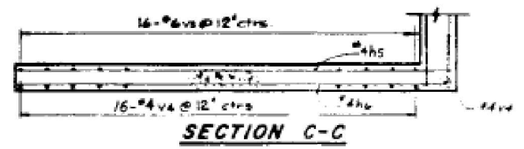
PLAN



WEST WING ELEVATION



SECTION D-D



SECTION C-C

Sheet S16 of S30

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH

ABUTMENT NO.1 PLAN & ELEVATION

County: St. Clair — Drawn By: T.J.
Date: May 2020 — Checked By: R.A.

ENVIRODYNE ENGINEERS, INC.
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: exist\plans\082-0263.dgn
3/1/2024 3:25:29 PM

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -
	CHECKED - JMB	REVISED -
PLOT SCALE =	DRAWN - RLK	REVISED -
PLOT DATE =	CHECKED - JMB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 25 OF 29 SHEETS

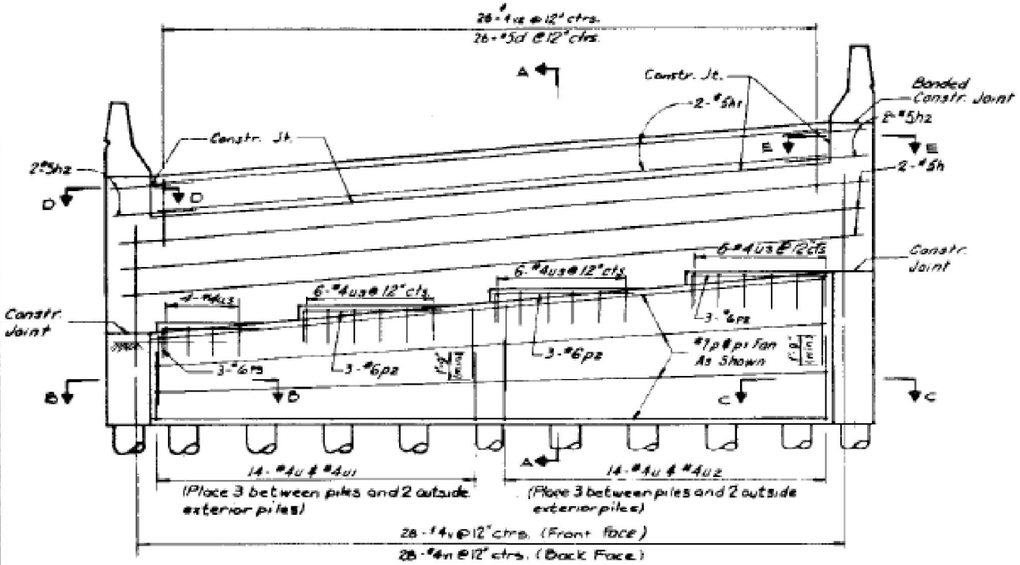
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	294
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	26
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

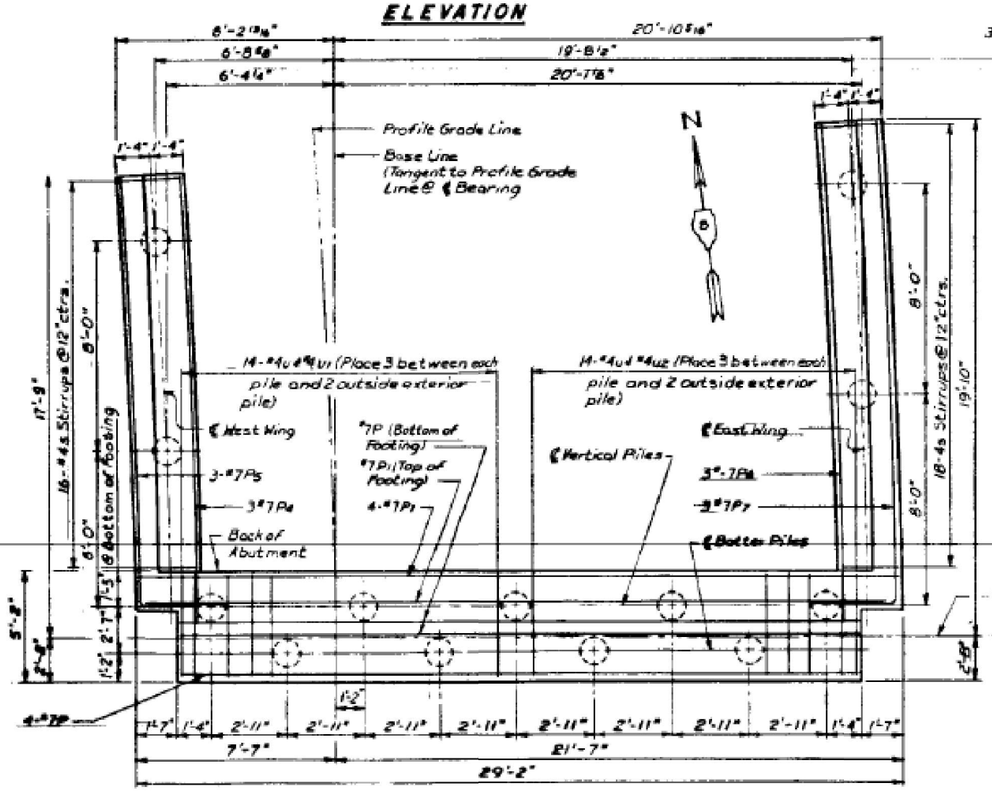
ABUTMENT NO.1
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d	26	#5	2'-6"	
h	6	#5	28'-10"	
h1	4	#5	26'-0"	
h2	8	#5	4'-0"	
h3	17	#4	18'-6"	
h4	7	#4	19'-10"	
h5	15	#4	16'-5"	
h6	5	#4	17'-9"	
n	16	#6	10'-3"	
n1	18	#6	14'-5"	
p	6	#7	25'-8"	
p1	5	#7	28'-10"	
p2	9	#6	6'-6"	
p3	3	#6	4'-6"	
p4	5	#7	17'-1"	
p5	5	#7	19'-11"	
p6	5	#7	19'-2"	
p7	5	#7	22'-0"	
s	34	#4	9'-7"	
u	28	#4	10'-10"	
u1	14	#4	10'-2"	
u2	14	#4	12'-4"	
u3	22	#4	5'-10"	
v	28	#4	6'-11"	
v1	28	#4	5'-6"	
v2	26	#4	3'-7"	
v3	34	#6	7'-8"	
v4	36	#4	7'-8"	
v5	1	#6	4'-9"	
v6	1	#6	6'-10"	
v7	34	#4	6'-10"	
Reinforcement Bars			Pounds	4460
Class X Concrete			Cu. Yds.	53.7
Concrete Piles			Lin. Ft.	624
Test Piles Concrete			Each	1

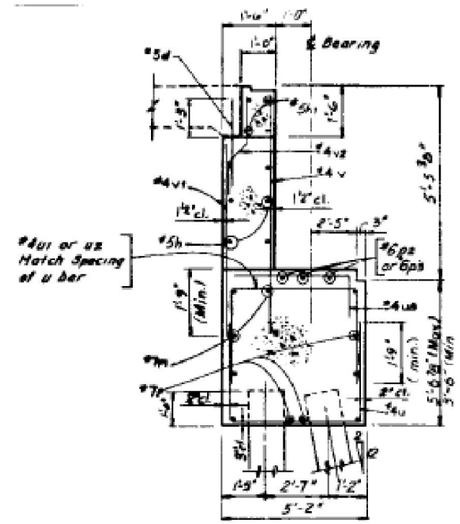
BAR	Dimension A	Dimension B
h2	3'-0"	1'-0"
h4	18'-6"	1'-4"
h6	16'-5"	1'-4"
p2	5'-3"	1'-8"
p3	3'-3"	1'-3"
p5	16'-5"	3'-6"
p7	18'-6"	3'-6"
u3	4'-7"	1'-5"



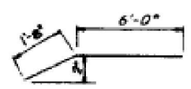
ELEVATION



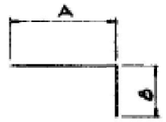
PLAN - PILE CAP

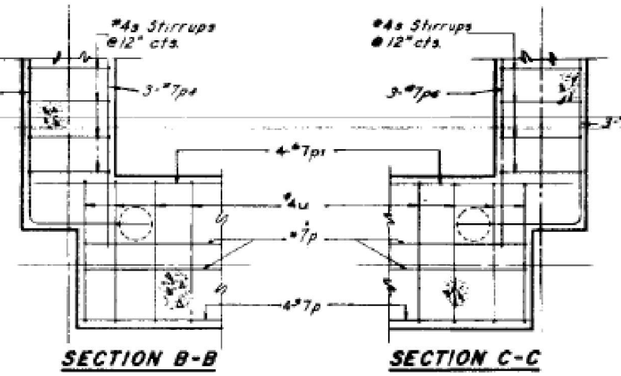


SECTION A-A



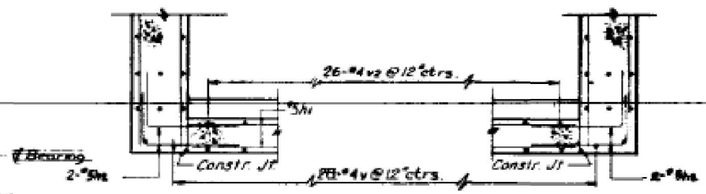
BARS v3, v4





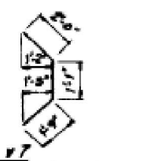
SECTION B-B

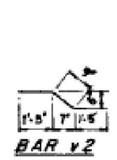
SECTION C-C

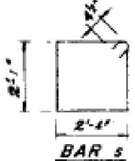


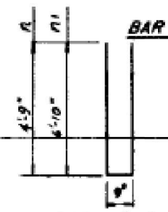
SECTION D-D

SECTION E-E









PILE TABLE

LOCATION	LENGTH	CAPACITY	TYPE	NO. REQ'D.	TEST PILE
Abut #1	52	45T	Conc.	8	1
Wings	52	45T	Conc.	4	0

Sheet 517 of 530

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
ABUTMENT #1 - REINFORCING

County: St. Clair
Date: May 1979

Drawn By: L.T.H.
Checked By: R.A.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: exist\plans\082-0263.dgn
3/1/2024 3:25:31 PM

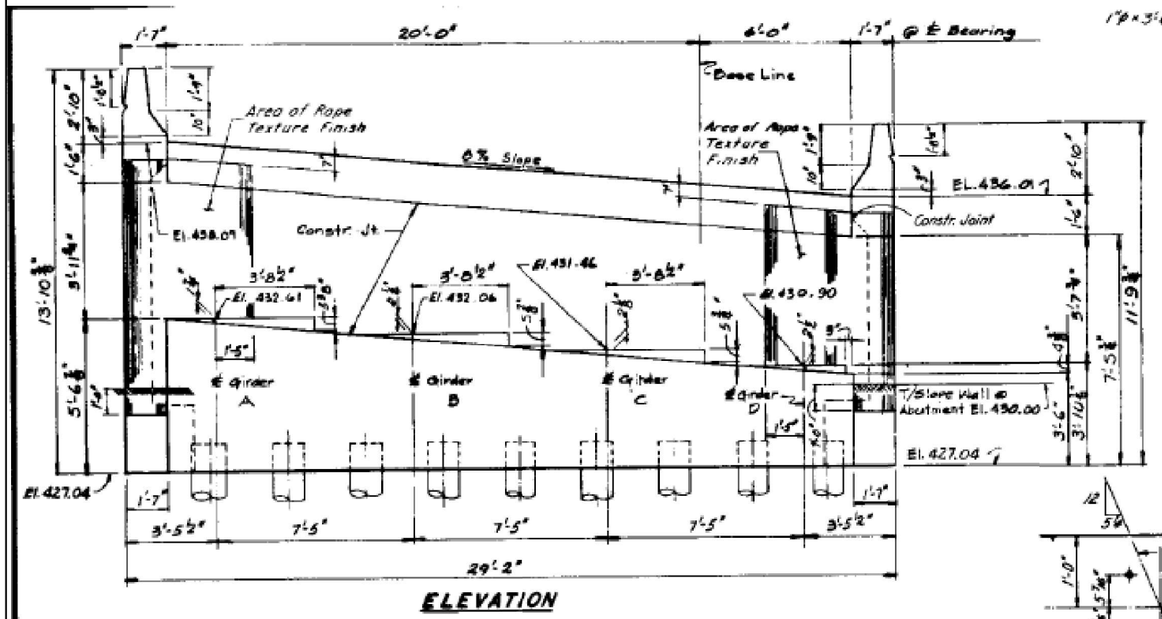
CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -	
	CHECKED - JMB	REVISED -	
PLOT SCALE =	DRAWN - RLK	REVISED -	
PLOT DATE =	CHECKED - JMB	REVISED -	

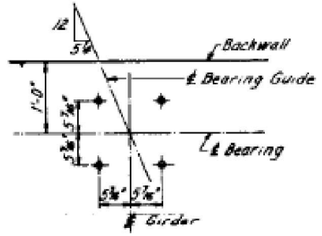
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 26 OF 29 SHEETS

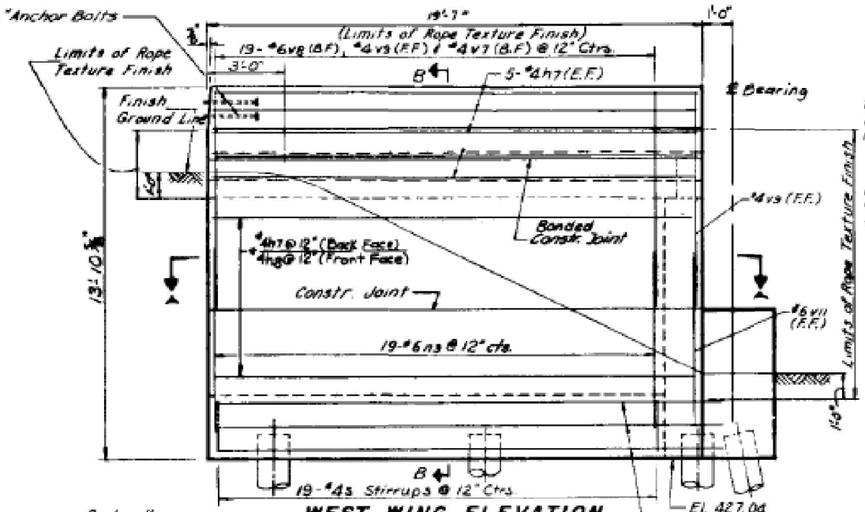
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	295
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		



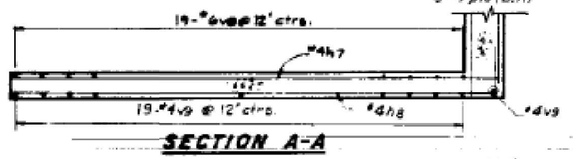
ELEVATION



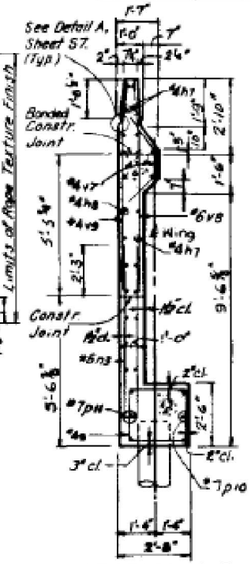
ANCHOR BOLT LAYOUT



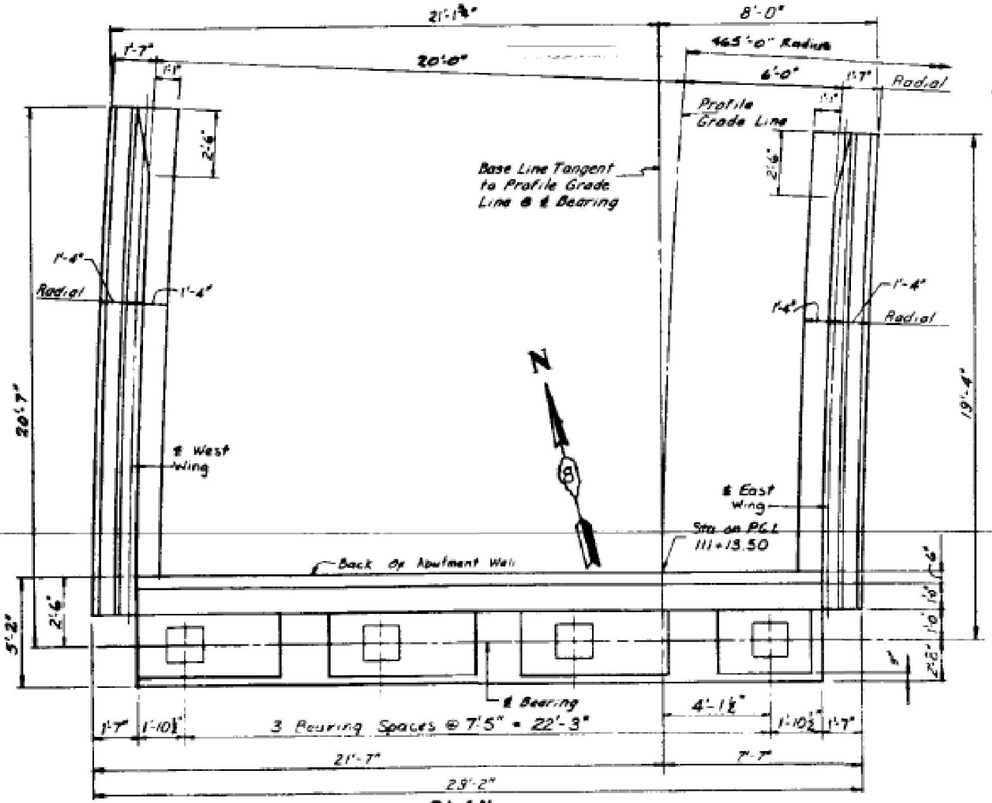
WEST WING ELEVATION



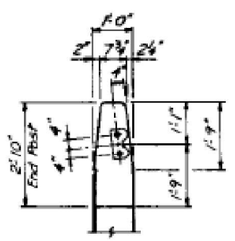
SECTION A-A



SECTION B-B

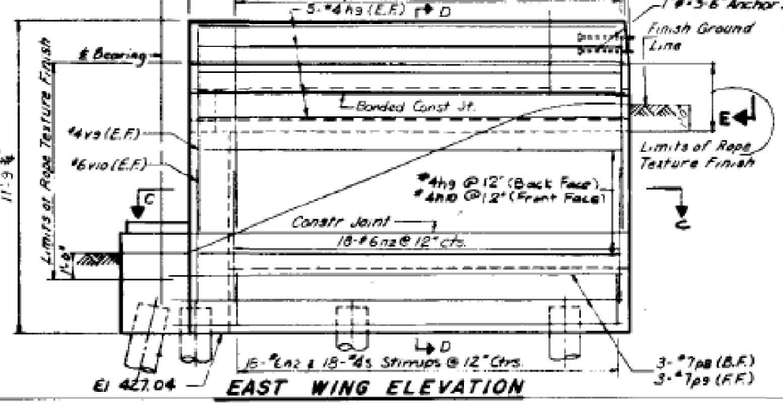


PLAN

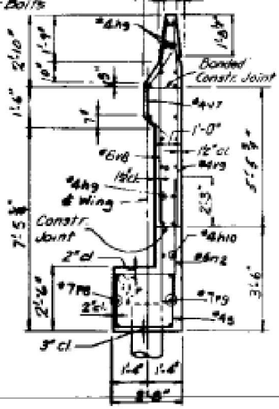


VIEW E-E

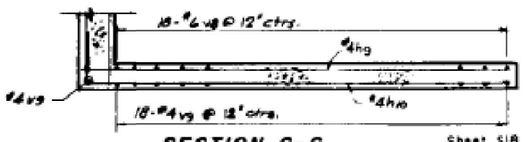
(Anchor Bolts of About #2 Cost Incidental)



EAST WING ELEVATION



SECTION D-D



SECTION C-C

NOTE: For Rope Texture Finish see Special Provisions

F.F. = Front Face
B.F. = Back Face
E.F. = Each Face

Sheet 518 of 530

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH

ABUTMENT NO.2 PLAN & ELEVATION

County: St. Clair
Date: May 1979
Drawn By: L T J
Checked By: R A

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	27
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

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PLOT DATE =	CHECKED - JMB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 27 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	296
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

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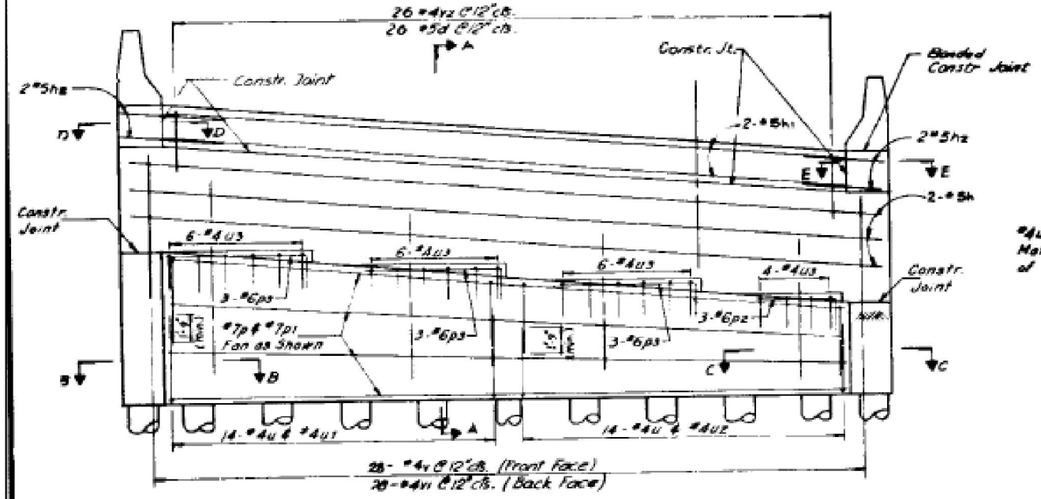
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	28
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ABUTMENT NO. 2
BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
d	26	#5	2'-6"	
h	4	#5	28'-10"	
h1	4	#5	26'-10"	
h3	8	#5	4'-0"	
h7	17	#4	19'-3"	
h8	7	#4	20'-7"	
h9	15	#4	18'-5"	
h10	5	#4	19'-4"	
n12	18	#6	9'-9"	
n13	19	#6	13'-11"	
P	6	#7	28'-8"	
P1	5	#7	28'-10"	
P2	9	#6	6'-6"	
P3	3	#6	4'-6"	
P8	3	#7	18'-8"	
P9	3	#7	21'-6"	
P10	3	#7	19'-11"	
P11	3	#7	22'-9"	
S	37	#4	9'-7"	
u	28	#4	10'-10"	
u1	14	#4	10'-2"	
u2	14	#4	12'-4"	
u5	22	#4	5'-10"	
V	28	#4	6'-11"	
V1	28	#4	5'-6"	
V2	26	#4	3'-7"	
V7	37	#4	4'-10"	
V8	37	#6	8'-2"	
V9	39	#4	8'-2"	
V10	1	#6	4'-6"	
V11	1	#6	6'-7"	

Reinforcement Bars	Pounds	4670
Class X Concrete	Cu. Yds.	55.6
Concrete Piles	Lin. Ft.	816
Test Piles Concrete	Each	1

BAR	Dimension A	Dimension B
h2	5'-0"	1'-0"
h8	14'-3"	14'-1"
h10	18'-0"	1'-4"
P2	5'-3"	1'-3"
P3	3'-3"	1'-3"
P8	18'-0"	3'-6"
P11	19'-8"	3'-6"
u3	4'-7"	1'-3"



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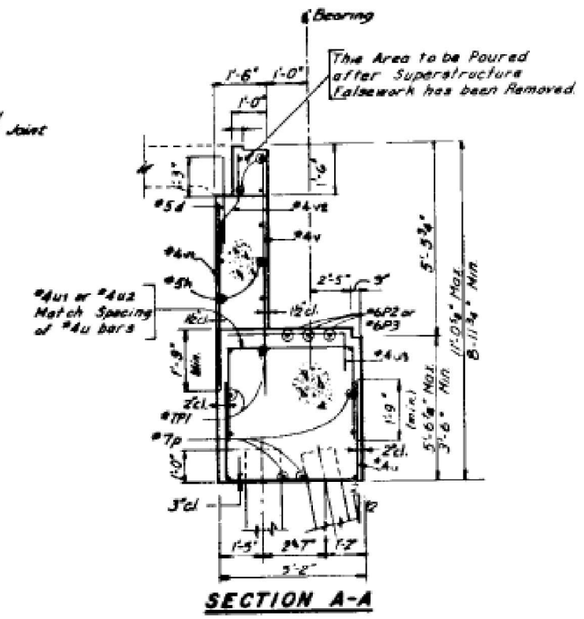
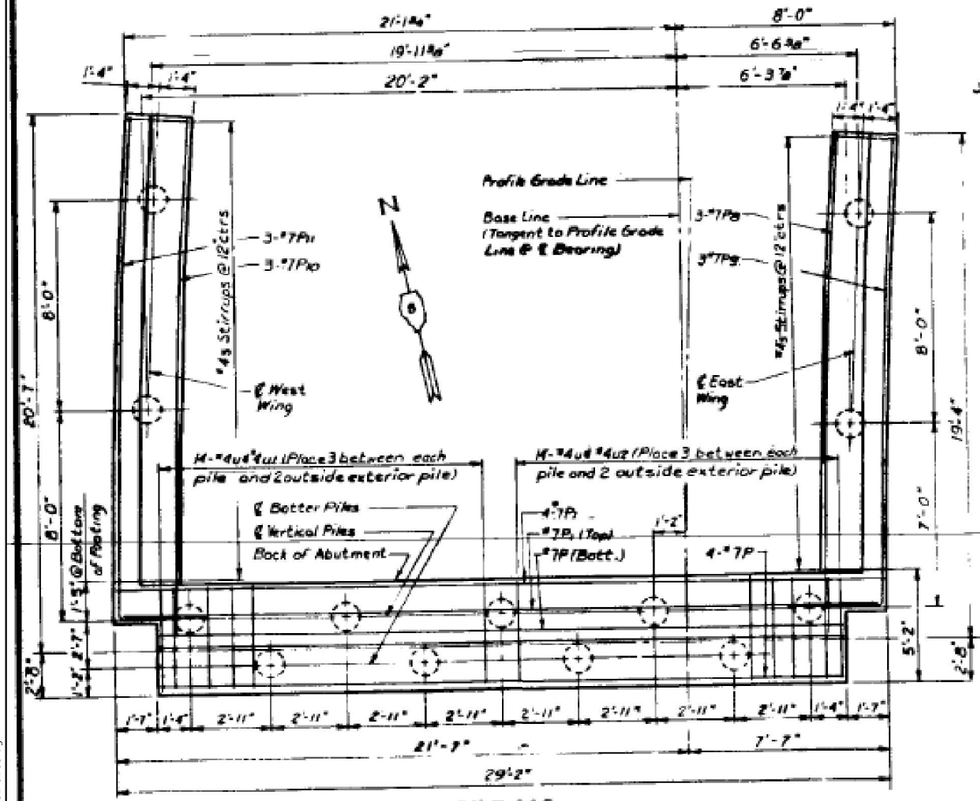
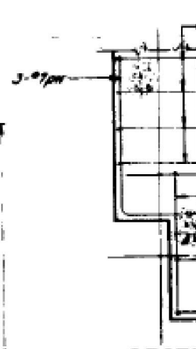


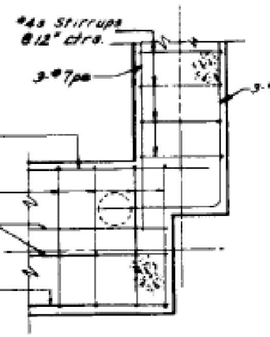
SECTION A-A



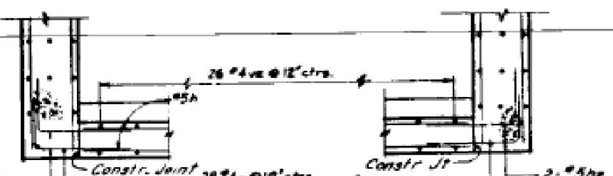
PLAN - PILE CAP



SECTION B-B

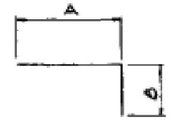


SECTION C-C



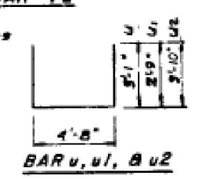
SECTION D-D

SECTION E-E



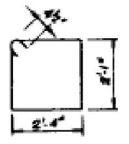
BAR v4

BAR v2

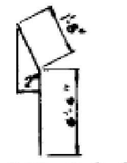


BAR u, u1, & u2

BAR v2 & v3



BAR s



BAR v8 & v9

PILE TABLE					
LOCATION	LENGTH	CAPACITY	TYPE	NO. REQ'D.	TEST PILE
Abut. #2	68	45T	Conc.	8	1
Wings	68	45T	Conc.	4	0

Sheet S19 of S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH

ABUTMENT NO.2 REINFORCING

County: St. Clair
Date: May 1979
Drawn By: L.T.J.
Checked By: R.A.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: exist\plans\082-0263.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -	
	CHECKED - JMB	REVISED -	
PLOT SCALE =	DRAWN - RLK	REVISED -	
PLOT DATE =	CHECKED - JMB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 28 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	297
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

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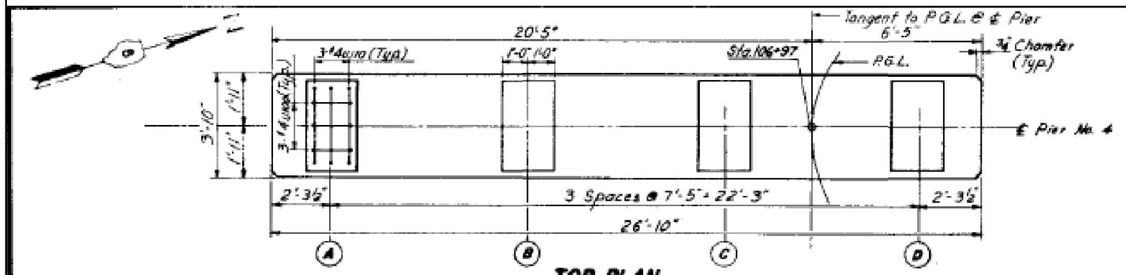
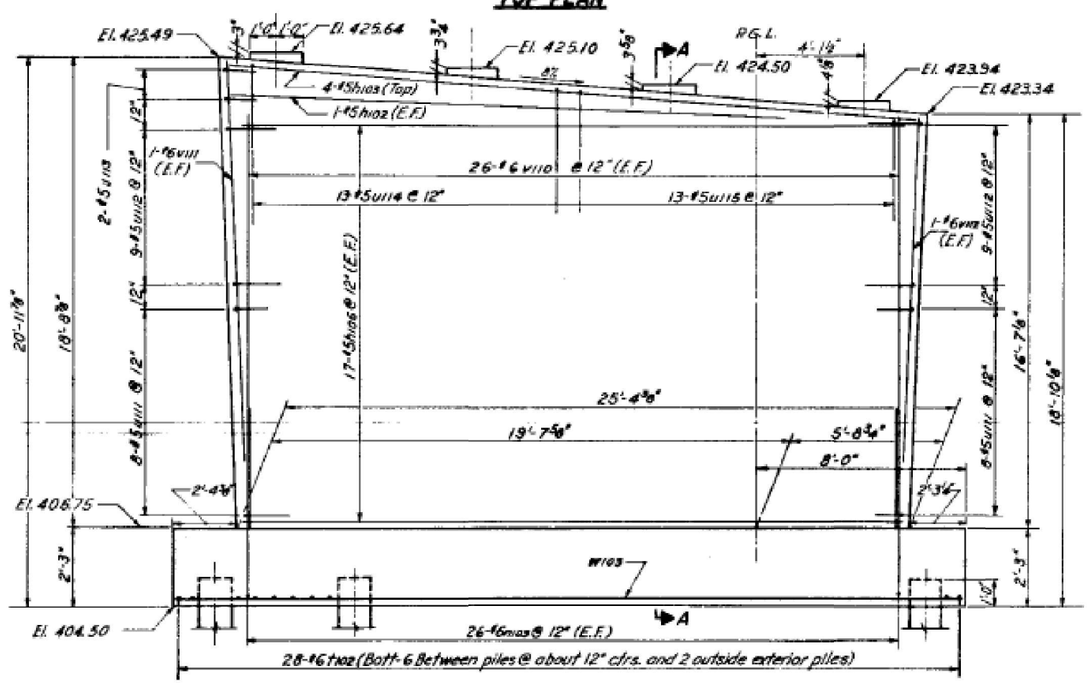
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-270	82-6B	ST. CLAIR	40	32
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TOP PLAN



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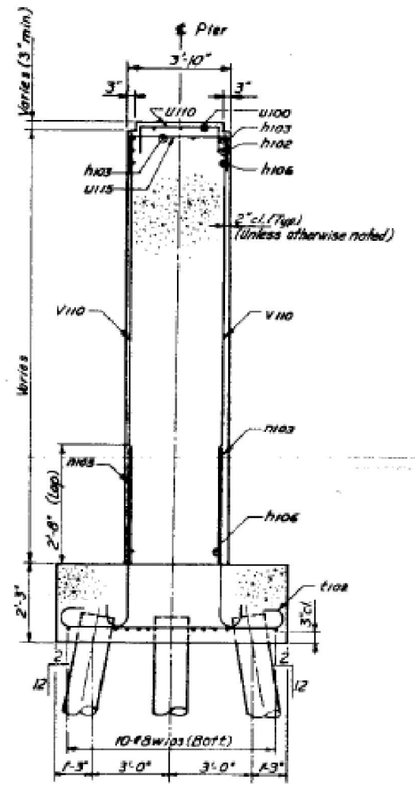
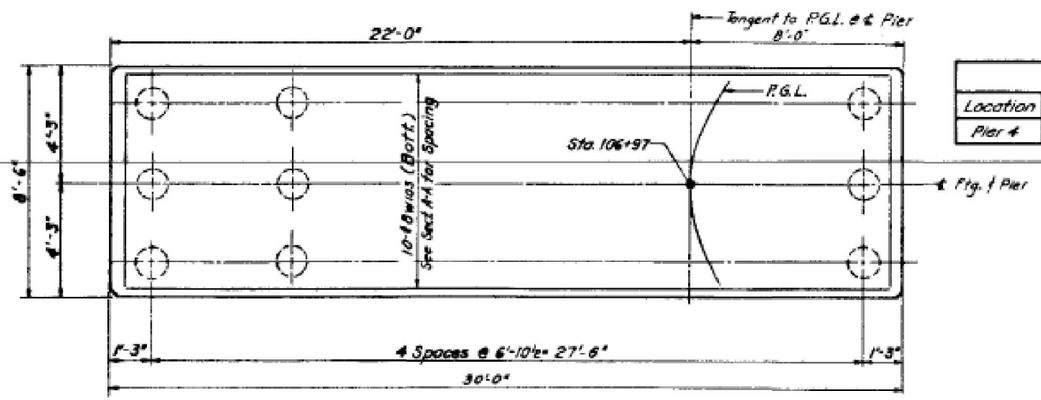


SECTION A-A

PILE DATA					
Location	Length	Capacity	Type	No. Reqrd.	Test Pile
Pier 4	38'	45 T	Concrete	14	1

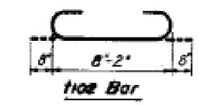


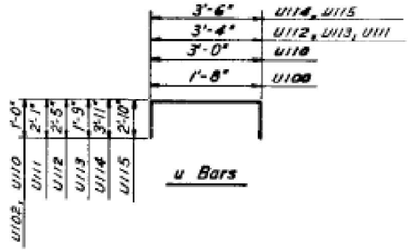
FOOTING PLAN

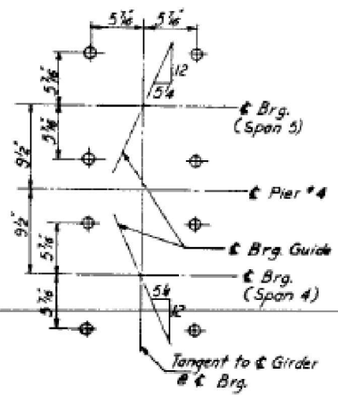
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h102	2	#5	21'-0"	—
h103	4	#5	26'-7"	—
h106	34	#5	25'-0"	—
h103	52	#6	5'-3"	⊃
t107	28	#6	9'-6"	⊂
*U100	12	#4	3'-8"	⊏⊐
*U110	12	#4	5'-0"	⊏⊐
U111	16	#5	7'-6"	⊏⊐
U112	18	#5	8'-2"	⊏⊐
U113	2	#5	6'-10"	⊏⊐
U114	13	#5	11'-4"	⊏⊐
U115	13	#5	9'-2"	⊏⊐
V110	52	#6	16'-5"	—
V111	2	#6	15'-9"	—
V112	2	#6	13'-8"	—
W103	10	#8	29'-8"	—
Concrete Piles			Lin. Ft.	532
Test Piles Concrete			Each	1
Reinforcement Bars			Lb.	4650
Class X Concrete			Cu. Yd.	87.1

* Place u100 / u110 to clear anchor bolts.







ANCHOR BOLTS

SHEET S23 OF S30

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 270
SECTION 82-6B
RAMP "E" OVER BLUE WATER DITCH
PIER No. 4

County: St Clair — Drawn By: T.S.
Date: May 1979 — Checked By: J.F.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

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FILE NAME: c:\stplans\082-0263.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

USER NAME =	DESIGNED - CMF	REVISED -
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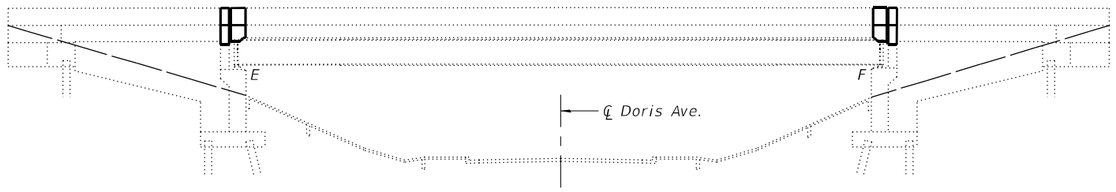
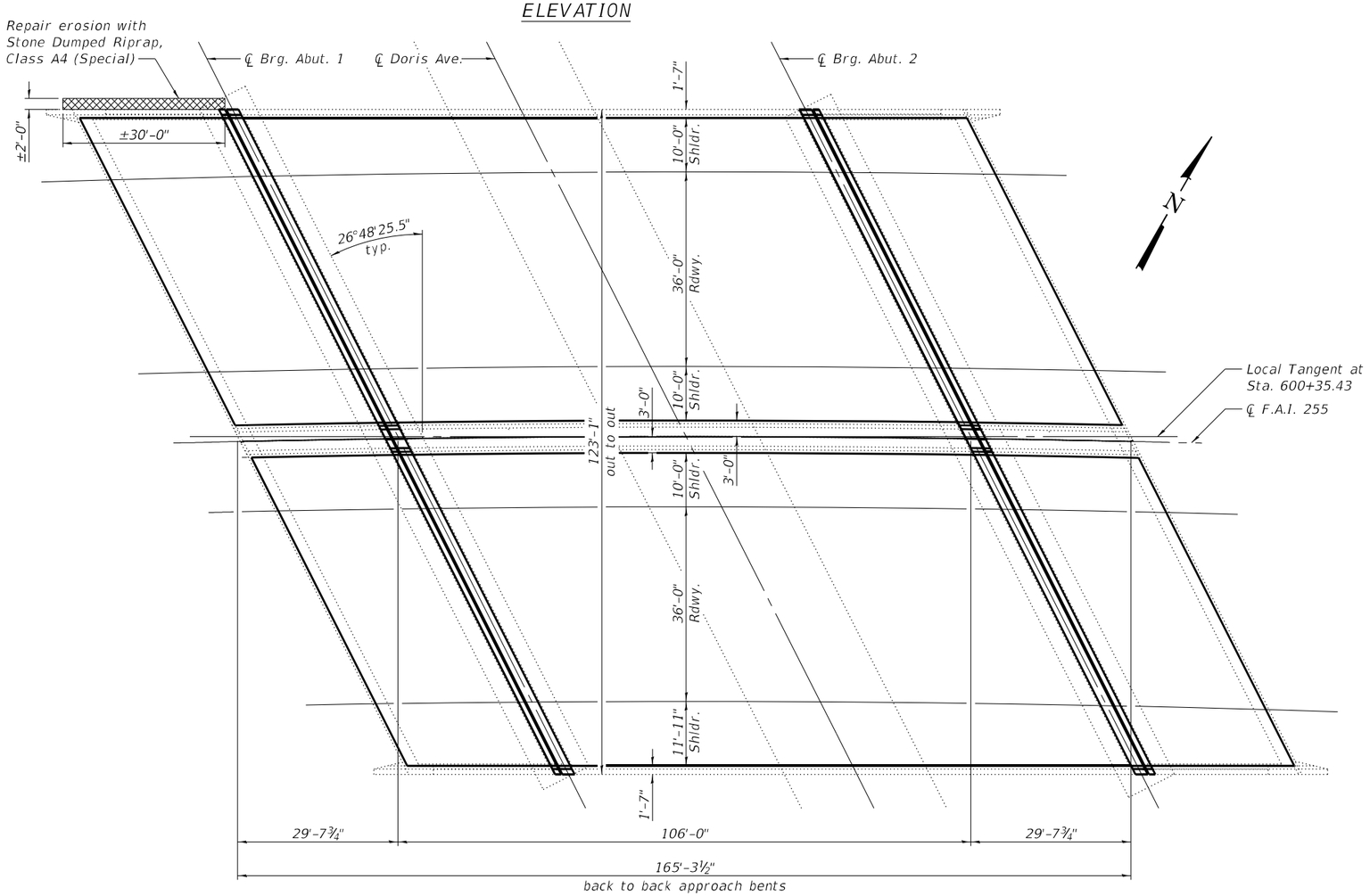
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 082-0263
SHEET 29 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	298
		CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		



ELEVATION

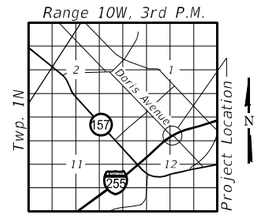


PLAN

SCOPE OF WORK

1. Replace expansion joints.
2. Clean and paint girder ends.
3. Repair girder ends and replace steel end diaphragms.
4. Perform scarification on bridge deck and approach slabs.
5. Deck slab repair as directed by the Engineer.
6. Install microsilica concrete overlay on bridge deck and approach slabs.
7. Up to ¼ inch to be ground off the bridge deck, bridge approach slabs, and microsilica concrete overlay.
8. Remove and replace longitudinal joint sealer.
9. Structural repair of concrete at abutments.

INDEX OF SHEETS



LOCATION SKETCH

DANIEL GEORGE LUTZ
081 006772
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

DATE: 3/1/2024

EXPIRATION: 11/30/2024

GENERAL PLAN & ELEVATION
I-255 OVER DORIS AVENUE
F.A.I. RTE. 255
SEC 82-(5,4,3)RS-1
ST. CLAIR COUNTY
STATION 600+35.43
STRUCTURE NO. 082-0223

FILE NAME: H:\P220059 - I-255\Bridge\Microstation\082-0223\0820223-001-General Plan & Elevation.dgn

OATES ASSOCIATES
www.oatesassociates.com
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115

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PLOT DATE =	3/1/2024	CHECKED -	BB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 082-0223
SHEET 1 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	82-(5,4,3)RS-1	ST. CLAIR	504	299
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	26.4
Protective Shield	Sq. Yd.	1,481
Concrete Superstructure	Cu. Yd.	30.8
Protective Coat	Sq. Yd.	2,085
Furnishing and Erecting Structural Steel	Pound	8,900
Reinforcement Bars, Epoxy Coated	Pound	6,380
Preformed Joint Strip Seal	Foot	263
Structural Steel Removal	Pound	8,900
Structural Steel Repair	Pound	2,490
Containment and Disposal of Lead Paint Cleaning Residues No. 2	L. Sum	1
Cleaning Bridge Seats	Sq. Ft.	672
Cleaning and Painting Steel Bridge No. 2	L. Sum	1
Bridge Deck Scarification 3/4"	Sq. Yd.	1,986
Bridge Deck Microsilica Concrete Overlay 2½"	Sq. Yd.	1,986
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	1,368
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	1
Silicone Joint Sealer, ½"	Foot	328
Silicone Joint Sealer, 1"	Foot	5
Diamond Grinding (Bridge Section)	Sq. Yd.	1,928
Temporary Shoring and Cribbing	Each	26
Stone Dumped Riprap, Class A4 (Special)	Ton	10
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1,311

GENERAL NOTES

Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ in. diameter, holes $\frac{13}{16}$ in. diameter, unless otherwise noted.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC – SP3 standards). Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be paid for according to Article 109.04 of the Standard Specifications.

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

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

All structural steel used in the girder end repairs and diaphragm replacement shall be hot dipped galvanized according to the Special Provision for "Hot Dip Galvanizing for Structural Steel" and shall not be painted.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures". Cost included in Structural Steel Repair.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All girders, bearings and other structural steel within 5 ft (measured along the girder) of either side of deck joints shall be cleaned per Near White Blast Cleaning – SSPC– SP10. The exterior surfaces and bottom of the bottom flange of the fascia girders shall be cleaned per Commercial Grade Power Tool Cleaning – SSPC– SP15. The designated areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning shall be painted according to the requirements of Paint System 1 – OZ/E/U. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia girders shall be Reddish Brown, Munsell No. 2.5YR 3/4.

A minimum of 4 air monitors will be required to monitor abrasive blasting operations at this site. See Special Provisions for "Containment and Disposal of Lead Paint Cleaning Residues."

SSPC QP1 and QP2 Contractor Certification is required for this Contract.

Areas of deck slab repair are estimated. The Engineer shall show actual locations of deck slab repairs on as-built plans.

The concrete at joints shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

Protective coat shall be applied to new concrete surfaces only.

Slipforming of the parapet will not be allowed.