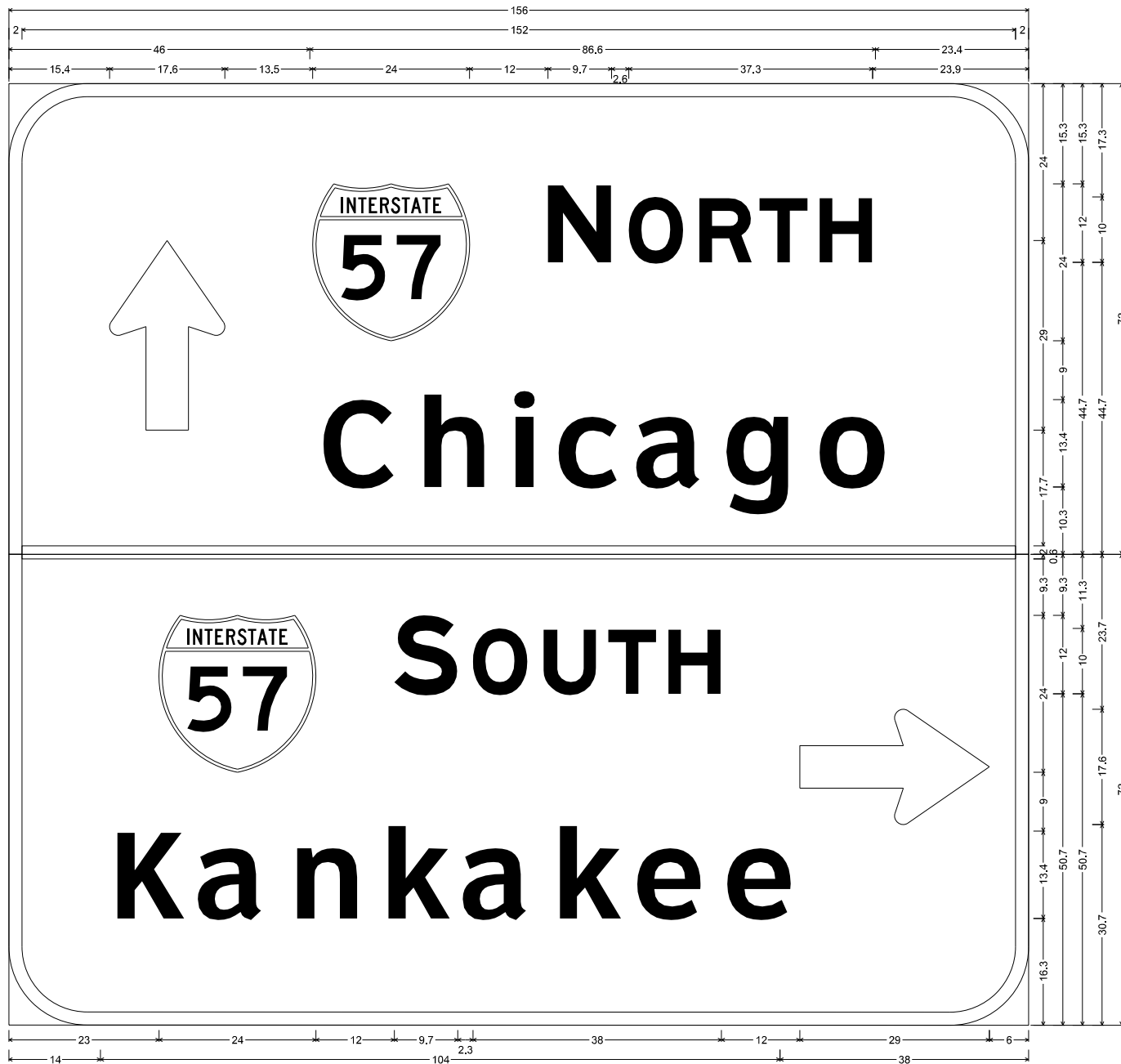


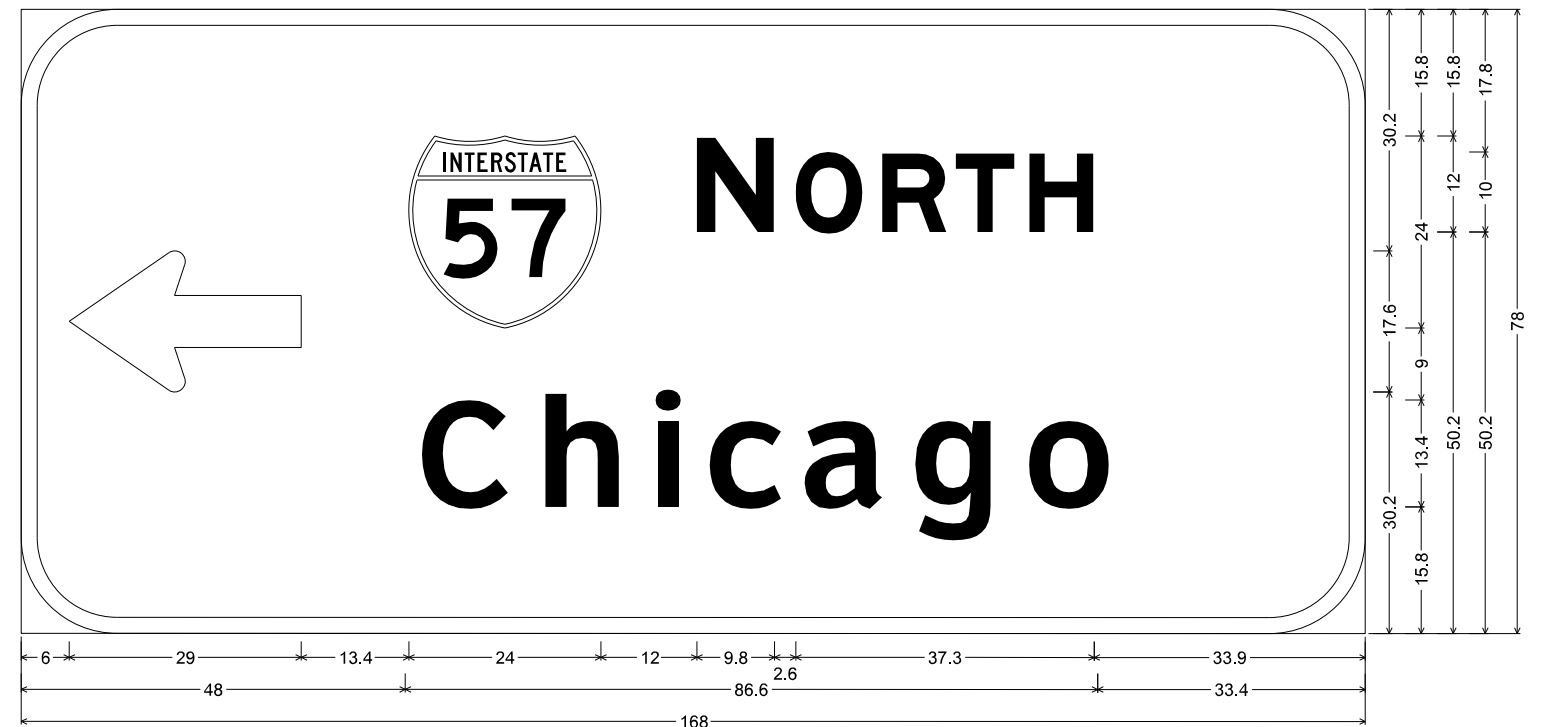
EB-60-BS-150-P
STA 7465+00



12.0" Radius, 2.0" Border, White on Green;
Standard Arrow Custom 29.0" X 17.6" 90°; [NORTH] E Mod 2K; [Chicago] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, White on Green;
[SOUTH] E Mod 2K; [Kankakee] ClearviewHwy-5-W; Standard Arrow Custom 29.0" X 17.6" 0°;
Table of widths and spaces.

↑	6.0	29.0	13.4	24.0	12.0	9.8	2.6	8.4	2.4	8.1	1.1	7.4	1.8	8.1	33.9
C	48.0	10.9	4.0	9.4	4.6	3.2	4.1	9.1	3.1	9.9	3.6	9.8	4.5	10.4	33.4
↓	2.0	152.0	2.0												
⊙	23.0	24.0	12.0	9.7	2.3	8.4	2.4	8.1	1.8	7.4	1.8	8.1	12.0	29.0	6.0
K	14.0	10.5	2.8	10.0	4.2	9.3	4.9	9.5	2.7	9.9	4.2	9.4	2.9	9.9	3.9

EB-60-SP-157-P
STA 7478+15



12.0" Radius, 2.0" Border, White on Green;
Standard Arrow Custom 29.0" X 17.6" 180°; [NORTH] E Mod 2K; [Chicago] ClearviewHwy-5-W;
Table of widths and spaces.

←	6.0	29.0	13.4	24.0	12.0	9.8	2.6	8.4	2.4	8.1	1.1	7.4	1.8	8.1	33.9
C	48.0	10.9	4.0	9.4	4.6	3.2	4.1	9.1	3.1	9.9	3.6	9.8	4.5	10.4	33.4



LAYOUT	DPA	03.06.2013
DRAWN	MWH	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME = D:\309H0038-shh-sign\012.dgn
MODEL NAME = Default

USER NAME = MWH
DESIGNED - DPA
DRAWN - MV
CHECKED - DPA
DATE - 12.03.13

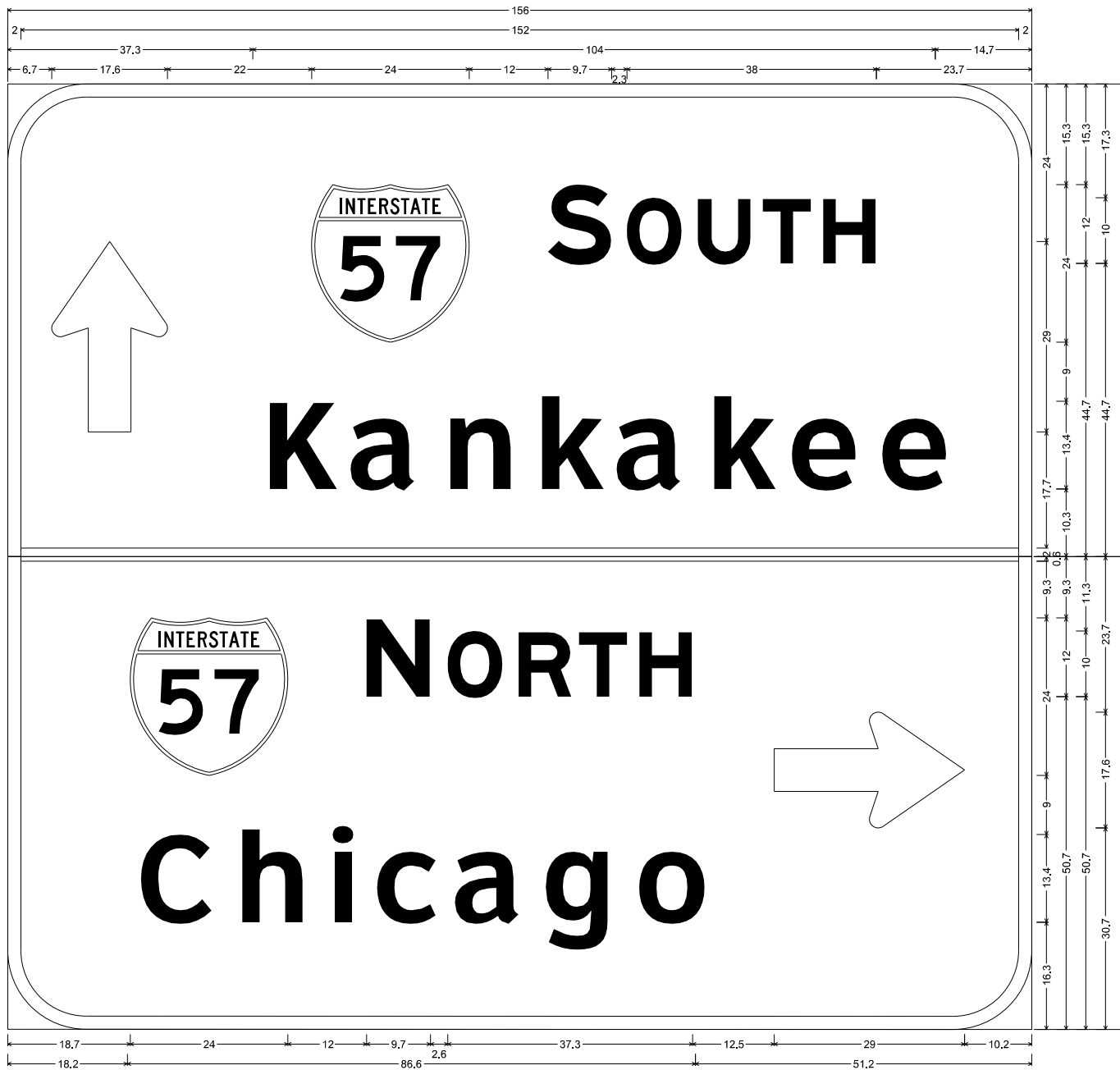
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAIL
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL
SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	401
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

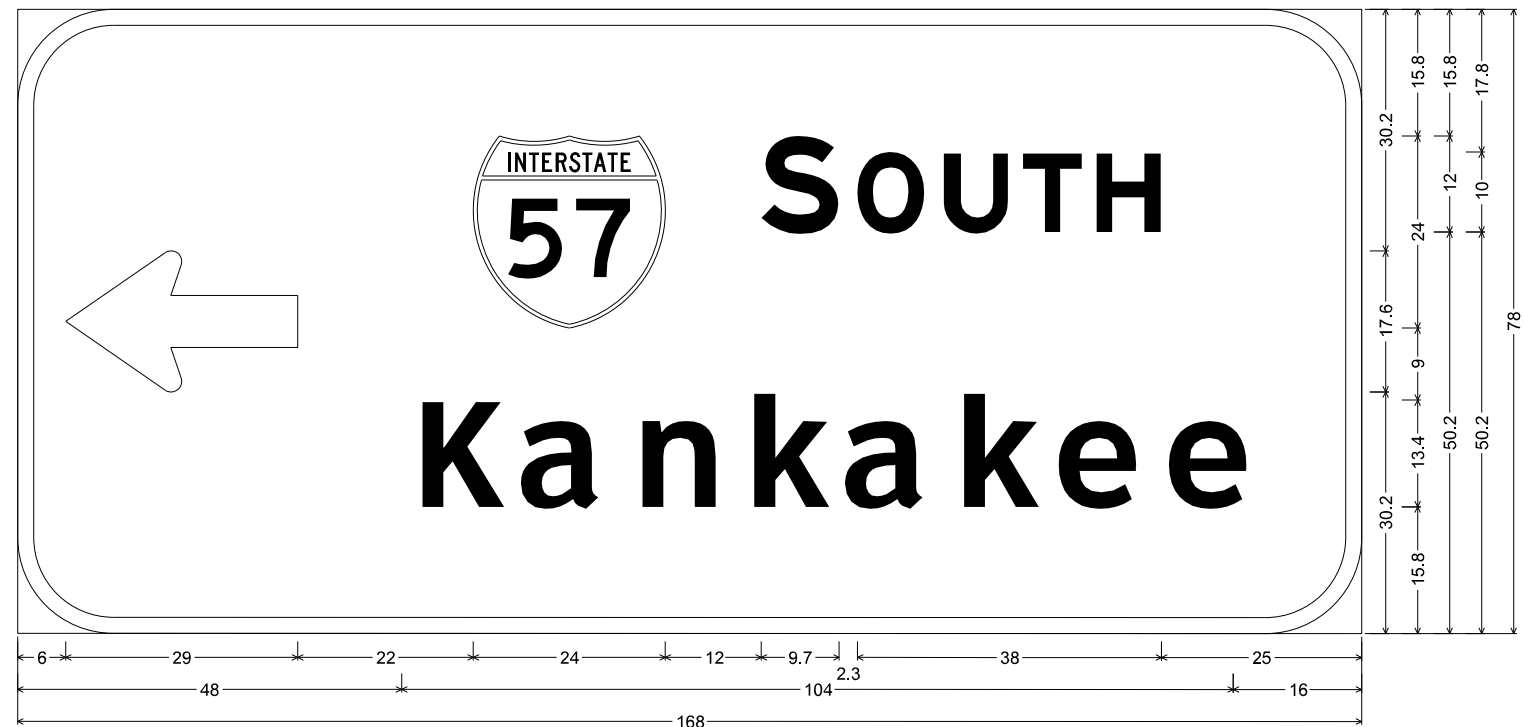
WB-60-BS-144-P
STA 7483+00



12.0" Radius, 2.0" Border, White on Green;
Standard Arrow Custom 29.0" X 17.6" 90°; [SOUTH] E Mod 2K; [Kankakee] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, White on Green;
[NORTH] E Mod 2K; [Chicago] ClearviewHwy-5-W; Standard Arrow Custom 29.0" X 17.6" 0°;
Table of widths and spaces.

6.7	17.6	22.0	24.0	12.0	9.7	2.3	8.4	2.4	8.1	1.8	7.4	1.8	8.1	23.7		
K	a	n	k	a	k	e	e									
37.3	10.5	2.9	9.9	4.2	9.4	4.9	9.5	2.6	9.9	4.2	9.5	2.8	9.9	3.9	9.9	14.7
2.0	152.0	2.0														
18.7	24.0	12.0	9.7	2.6	8.4	2.4	8.1	1.1	7.4	1.8	8.1	12.5	29.0	10.2		
C	h	i	c	a	g	o										
18.2	10.9	4.0	9.4	4.6	3.2	4.2	9.1	3.0	9.9	3.8	9.8	4.5	10.4	51.2		

WB-60-SP-137-P
STA 7472+10



12.0" Radius, 2.0" Border, White on Green;
Standard Arrow Custom 29.0" X 17.6" 180°; [SOUTH] E Mod 2K; [Kankakee] ClearviewHwy-5-W;
Table of widths and spaces.

6.0	29.0	22.0	24.0	12.0	9.7	2.3	8.4	2.4	8.1	1.8	7.4	1.8	8.1	25.0		
K	a	n	k	a	k	e	e									
48.0	10.5	2.8	10.0	4.2	9.3	4.9	9.5	2.7	9.9	4.1	9.5	2.9	9.9	3.9	9.9	16.0



LAYOUT	DPA	03.06.2013
DRAWN	MWH	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME =	D389H0038-sht-sign013.dgn	USER NAME =	MWH	DESIGNED -	DPA	REVISED -	
MODEL NAME =	Default	DRAWN -	MV	CHECKED -	DPA	REVISED -	
		PLOT SCALE =	AS SHOWN	DATE -	12.03.13	REVISED -	

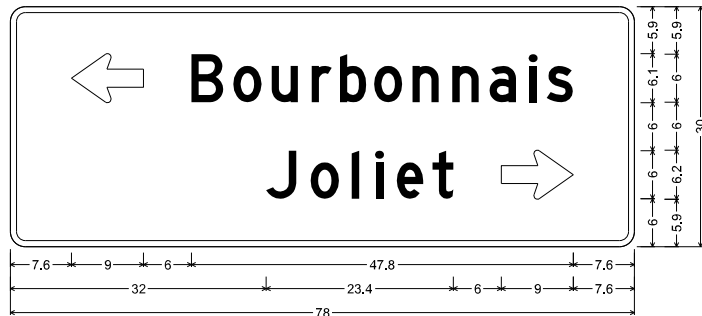
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAIL
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	402
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66982	

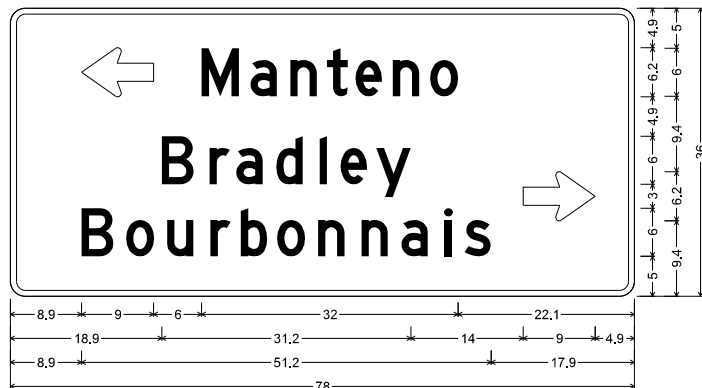
WB-60-WP-108-P
STA 7451+50



D1-2; 1.9" Radius, 0.8" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180°; [Bourbonnais] D 84% spacing;
[Joliet] D 106% spacing; Standard Arrow Custom 9.0" X 6.1" 0°;
Table of widths and spaces.

←	7.6	9.0																																																		
B	o	u	r	b	o	n	a	i	s	J	o	l	i	e	t																																					
6.0	4.1	1.2	3.4	1.4	3.3	1.6	2.6	1.0	3.3	1.0	3.4	1.4	3.3	1.6	3.4	1.3	3.3	1.7	0.9	1.2	3.4	7.6	32.0	3.7	1.8	3.5	1.7	0.9	2.1	0.9	1.7	3.3	1.2	2.6	6.0	9.0	7.6															

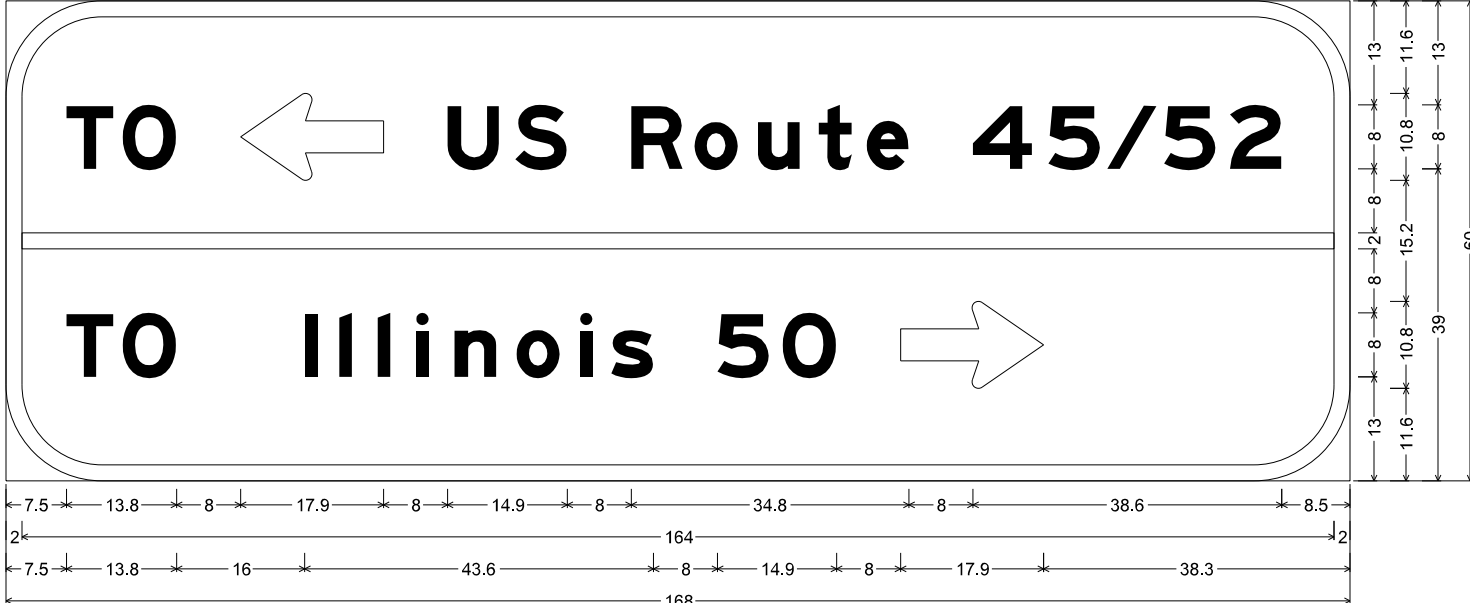
EB-60-WP-186A-P
STA 7451+50



D1-2; 1.9" Radius, 0.8" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180°; [Manteno] D 84% spacing;
[Bradley] D 106% spacing; [Bourbonnais] D 106% spacing;
Standard Arrow Custom 9.0" X 6.1" 0°;
Table of widths and spaces.

←	7.6	9.0																																														
M	a	n	t	e	n	o	b	o	r	o	n	n	a	i	s	B	r	a	d	l	e	y	B	o	u	r	b	o	n	n	a	i	s															
8.9	9.0	6.0	4.6	1.5	3.4	1.6	3.3	1.2	2.7	0.9	3.4	1.3	3.4	1.3	3.4	22.1	18.9	4.1	1.9	2.5	0.8	3.4	1.6	3.4	2.1	0.9	1.6	3.4	1.1	4.4	14.0	9.0	4.9															

NB-RD-BS-162A-P
STA 5432+50



12.0" Radius, 2.0" Border, White on Green;
[TO] E Mod 2K; Standard Arrow Custom 17.9" X 10.9" 180°; [US Route 45/52] E Mod 2K; [TO] E Mod 2K; [Illinois 50] E Mod 2K;
Standard Arrow Custom 17.9" X 10.9" 0°;
Table of letter and object lefts.

T	O	←	U	S	R	o	u	t	e	4	5	/	5	2										
7.5	14.6	29.3	55.2	63.7	78.1	86.1	94.0	101.6	107.6	120.9	130.3	137.7	144.7	153.0										
—																								
2.0																								
T	O	I	I	I	i	n	o	i	s	5	0	↔												
7.5	14.6	37.3	41.6	46.4	51.2	56.0	63.8	71.7	75.6	88.9	97.1	111.8												

SB-RA-BS-133A-P
STA 4435+00



12.0" Radius, 2.0" Border, White on Green;
[TO] E Mod 2K; Standard Arrow Custom 17.9" X 10.9" 180°; [Illinois 50] E Mod 2K; [TO] E Mod 2K; [US Route 45/52] E Mod 2K;
Standard Arrow Custom 17.9" X 10.9" 0°;
Table of letter and object lefts.

T	O	←	I	I	I	i	n	o	i	s	5	0													
7.5	14.6	37.3	63.2	67.5	72.3	77.1	81.9	89.7	97.6	101.5	114.8	123.0													
—																									
2.0																									
T	O	U	S	R	o	u	t	e	4	5	/	5	2	↔											
7.5	14.6	29.3	37.8	52.3	60.2	68.1	75.7	81.7	95.0	104.4	111.8	118.9	127.1	141.6											



LAYOUT	DPA	03.06.2013
DRAWN	MWH	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME =	USER NAME = MWH	DESIGNED - DPA	REVISED -
D389H0038-shr-sign014.dgn		DRAWN - MV	REVISED -
MODEL NAME =		CHECKED - DPA	REVISED -
Default		DATE - 12.03.13	REVISED -

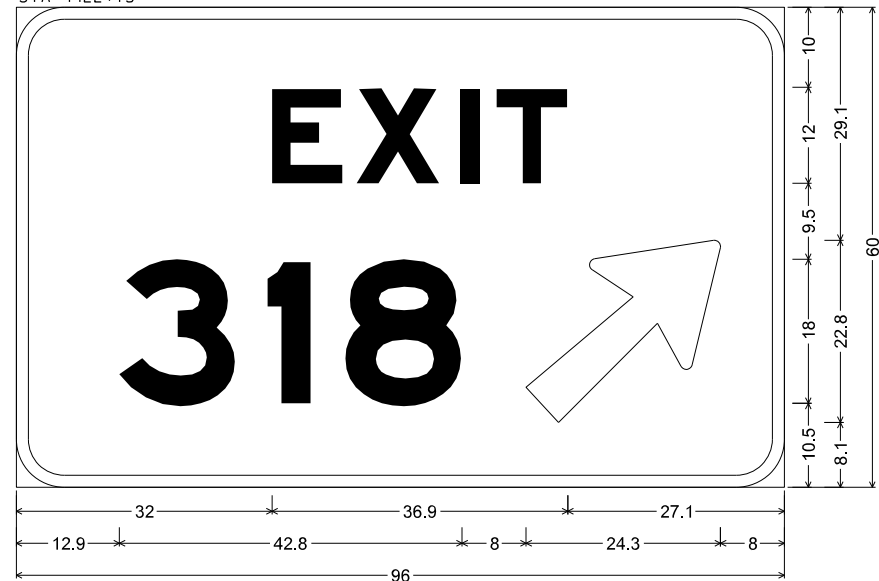
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAIL
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL
SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	403
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

NB-RD-WP-275-P
STA 5422+50

SB-RA-WP-278-P
STA 4422+75



6.0" Radius, 1.5" Border, White on Green;
[EXIT] E Mod 2K; [318] E Mod 2K; Arrow 133 - 30.0" 43°;
Table of letter and object lefts.

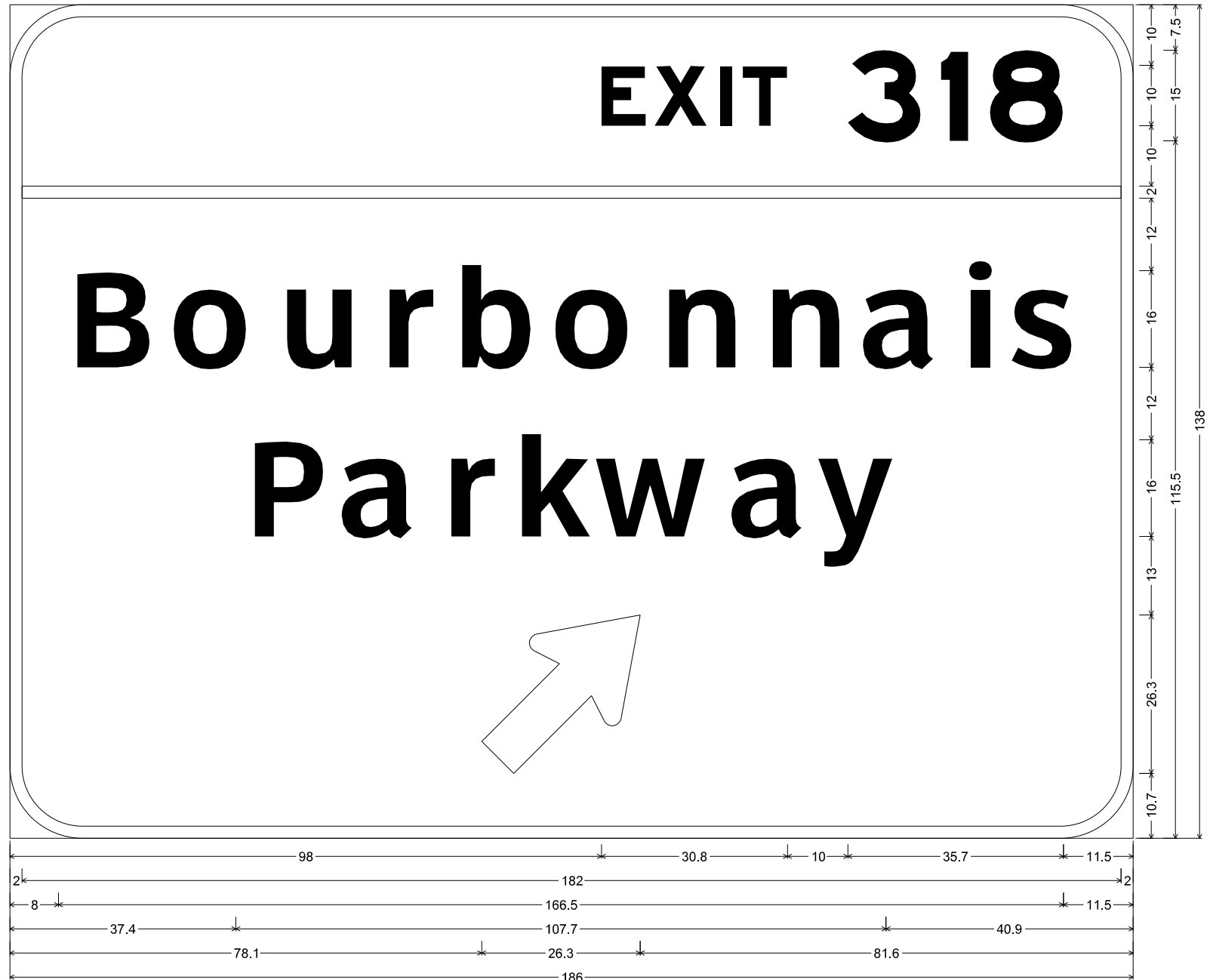
E	X	I	T
32.0	42.5	55.5	60.1
3	1	8	↗
12.9	31.4	41.1	63.7

NB-57-BS-271-P
STA 439+00

SB-57-BS-284-P
STA 511+00

NB-RD-CL-273-P
STA 5418+58

SB-RA-CL-280-P
STA 4418+74



12.0" Radius, 2.0" Border, White on Green;
[EXIT 318] E Mod 2K; [Bourbonnais] ClearviewHwy-5-W; [Parkway] ClearviewHwy-5-W; Standard Arrow Custom 33.4" X 20.3" 45°;
Table of widths and spaces.

E	X	I	T	3	1	8								
98.0	7.4	1.4	8.7	2.1	2.0	1.8	7.4	10.0	12.1	3.3	4.5	3.6	12.2	11.5

2.0	182.0	2.0
-----	-------	-----

B	o	u	r	b	o	n	n	a	i	s												
8.0	12.2	4.7	12.5	5.4	11.0	5.9	7.6	4.5	11.6	4.7	12.5	5.4	11.2	6.0	11.2	5.0	11.9	4.7	3.8	4.4	10.3	11.5

P	a	r	k	w	a	y								
37.4	11.7	4.0	11.9	5.0	7.5	4.5	11.4	2.3	18.6	3.3	11.9	3.1	12.5	40.9

↗	78.1	26.3	81.6
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LAYOUT	DPA	03.06.2013
DRAWN	MWH	10.15.2013
REVIEWED	DPA	10.17.2013

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MODEL NAME = Default

USER NAME = MWH
PLOT SCALE = AS SHOWN
PLOT DATE = 12\03\2013

DESIGNED - DPA
DRAWN - MV
CHECKED - DPA
DATE - 12.03.13

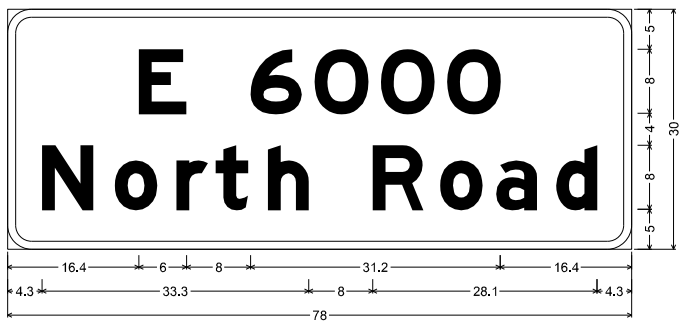
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAIL
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL
SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	404
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66982	

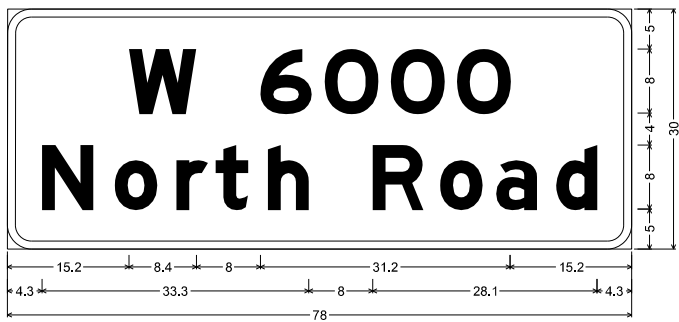
NOTE:
SEE MAST ARM DIAGRAM SHEETS FOR MAST ARM
LOCATION AND PLACEMENT. THESE SIGNS SHALL
HAVE TYPE ZZ SHEETING.



3.0" Radius, 1.0" Border, White on Green;
[E 6000] E Mod; [North Road] E Mod;

Table of widths and spaces.

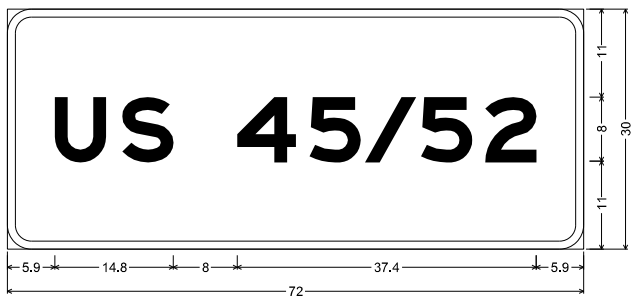
E	6	O	O	O	16.4	6.0	8.0	6.3	1.7	6.6	1.7	6.6	1.6	6.7	16.4												
N	o	r	t	h	R	o	a	d	4.3	6.4	2.7	5.3	2.4	3.9	1.0	4.0	2.5	5.1	8.0	6.4	2.1	5.2	1.8	5.0	2.5	5.1	4.3



3.0" Radius, 1.0" Border, White on Green;
[W 6000] E Mod; [North Road] E Mod;

Table of widths and spaces.

W	6	O	O	O	15.2	8.4	8.0	6.4	1.6	6.7	1.6	6.6	1.7	6.6	15.2												
N	o	r	t	h	R	o	a	d	4.3	6.4	2.7	5.3	2.4	3.9	1.0	4.0	2.5	5.1	8.0	6.4	2.1	5.2	1.8	5.0	2.5	5.1	4.3



3.0" Radius, 1.0" Border, White on Green;
[US 45/52] E Mod;

Table of widths and spaces.

U	S	4	5	/	5	2	5.9	6.4	2.0	6.4	8.0	7.4	1.6	6.4	0.6	6.4	0.6	6.4	1.6	6.4	5.9
---	---	---	---	---	---	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



3.0" Radius, 1.0" Border, White on Green;
[Illinois] E Mod; [Route 50] E Mod;

Table of widths and spaces.

I	L	I	I	I	n	o	I	s	14.7	1.6	3.2	1.5	3.1	1.5	3.1	1.5	3.0	5.1	2.5	5.2	2.5	1.5	2.2	5.1	14.7
R	o	u	t	e	s	o	7.5	6.4	2.0	5.3	2.4	5.1	2.3	4.0	1.8	5.1	8.0	6.3	1.7	6.6	7.5				

NB-57-BS-272-P
STA 443+27

SB-57-BS-283-P
STA 508+49



12.0" Radius, 2.0" Border, White on Green;
[EXIT 318] E Mod 2K; [Bourbonnais] ClearviewHwy-5-W; [Parkway] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[RIGHT LANE] E Mod 2K; [EXIT ONLY] E Mod 2K;

Table of widths and spaces.

E	X	I	T	3	I	8	98.0	7.4	1.4	8.7	2.1	2.0	1.8	7.4	10.0	12.1	3.3	4.5	3.6	12.2	11.5												
2.0	182.0	2.0																															
B	o	u	r	b	o	n	n	a	i	s	8.0	12.2	4.7	12.5	5.4	11.0	5.9	7.6	4.5	11.6	4.7	12.5	5.4	11.2	6.0	11.2	5.0	11.9	4.7	3.8	4.4	10.3	11.5
P	a	r	k	w	a	y	37.4	11.7	4.0	11.9	5.0	7.5	4.5	11.4	2.3	18.6	3.3	11.9	3.1	12.5	40.9												
R	I	G	H	T	L	A	N	E	47.7	8.1	2.1	2.0	2.4	8.1	2.4	8.1	1.8	7.4	10.0	7.4	0.6	10.1	1.8	8.1	2.8	7.4	47.7						
E	X	I	T	O	N	L	Y	52.7	7.4	1.4	8.7	2.1	2.0	1.8	7.4	10.0	8.4	2.4	8.1	2.8	7.4	0.6	10.1	52.7									



LAYOUT	DPA	03.06.2013
DRAWN	MWH	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME =
D389H0038-sht-sign016.dgn
MODEL NAME =
Default

USER NAME = MWH
PLOT SCALE = AS SHOWN
PLOT DATE = 12/03/2013

DESIGNED - DPA
DRAWN - MV
CHECKED - DPA
DATE - 12.03.13

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAIL
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL

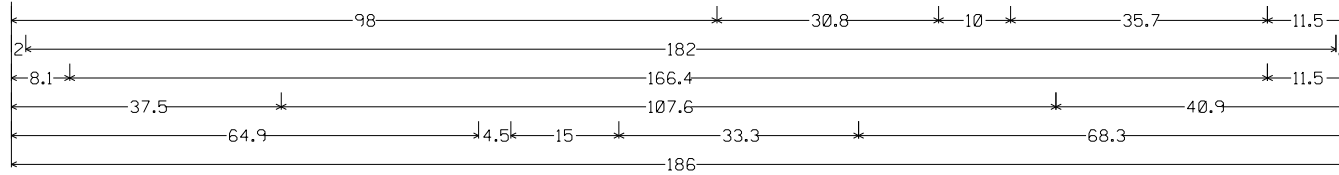
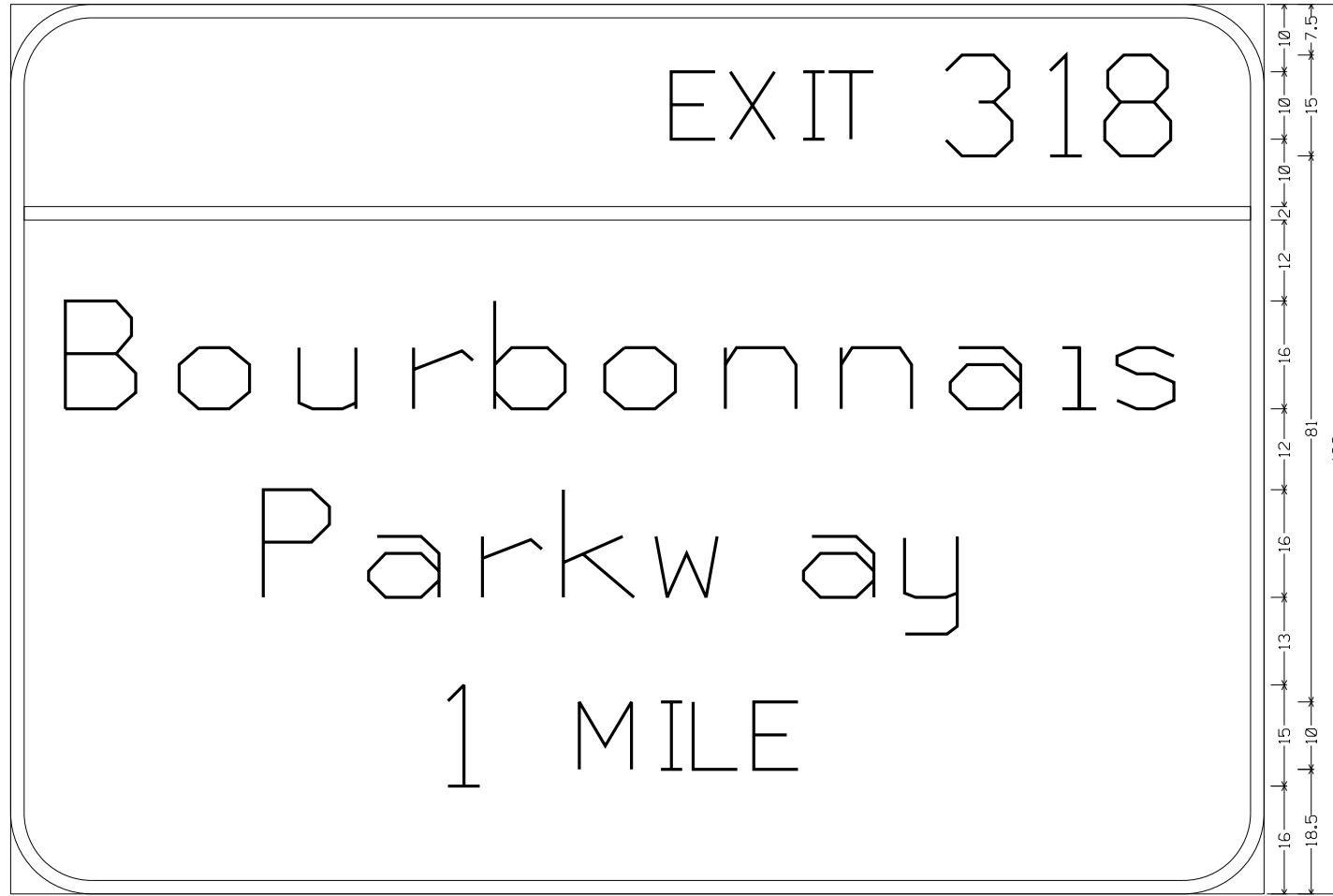
SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	405
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



NB-57-BS-270A-P
STA 404+95

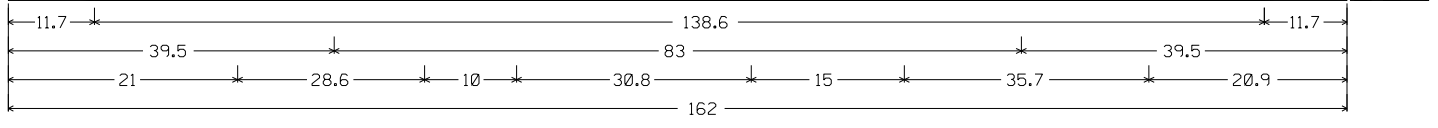
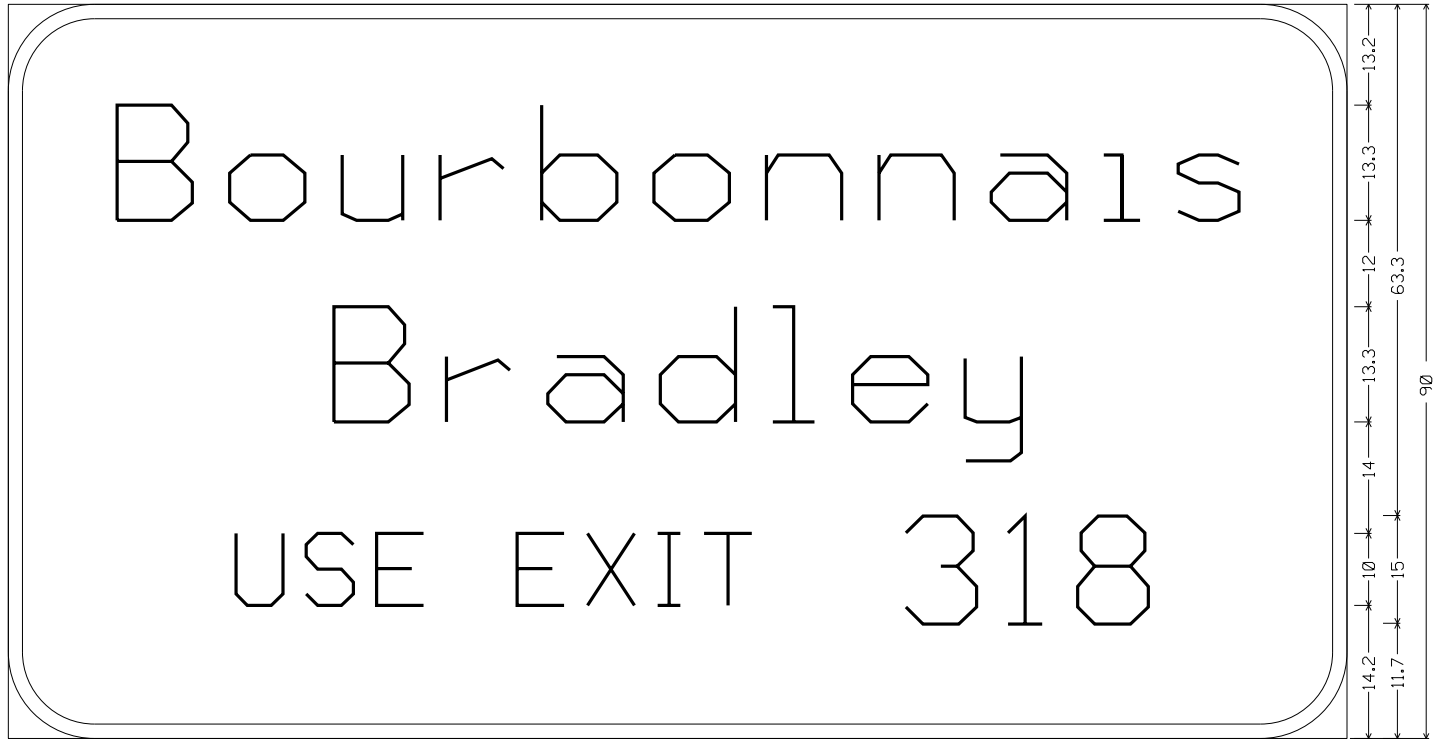
SB-57-BS-285A-P
STA 546+80



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 318] E Mod 2K; [Bourbonnais] ClearviewHwy-5-W; [Parkway] ClearviewHwy-5-W; [1 MILE] E Mod 2K;
 Table of widths and spaces.

E	X	I	T	3	1	8	
98.0	7.4	1.4	8.7	2.1	2.0	1.8	7.4
10.0	12.2	3.3	4.5	3.6	12.1	11.5	
2.0	182.0	2.0					
B	o	u	r	b	o	n	n
8.1	12.2	4.7	12.5	5.3	11.0	6.0	7.5
4.5	11.7	4.7	12.4	5.5	11.2	5.9	11.3
4.9	12.0	4.7	3.8	4.3	10.3	11.5	
P	a	r	k	w	a	y	
37.5	11.6	4.0	11.9	5.0	7.5	4.5	11.4
2.4	18.5	3.3	12.0	3.0	12.5	40.9	
I	M	I	L	E			
64.9	4.5	15.0	9.3	2.8	2.0	2.8	7.4
1.6	7.4	68.3					

SB-57-BS-288-P
STA 533+60



12.0" Radius, 2.0" Border, White on Green;
 (Bourbonnais) ClearviewHwy-5-W; (Bradley) ClearviewHwy-5-WW; (USE EXIT 318) E Mod 2K;
 Table of distances between letter and object lefts.

B	o	u	r	b	o	n	n	a	i	s
11.7	14.1	14.9	14.1	10.0	13.7	14.8	14.3	13.5	13.9	6.8
8.5	11.7									
B	r	a	d	l	e	y				
39.5	14.7	9.2	13.6	14.7	7.7	12.7	10.4	39.5		
U	S	E	E	X	I	T	3	1	8	
21.0	10.6	10.6	17.4	8.8	10.8	3.8	22.4	15.4	8.1	12.1
21.0										

LAYOUT
DRAWN
REVIEWED
SIGLAYER
SIGGRAPHIC
SIGSCHEMATIC
SIGTEXT
DATE: 9/25/2014

FILE NAME =	USER NAME = MWH	DESIGNED -	REVISED -
MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED -	REVISED -
MODEL	PLOT DATE = 9/25/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

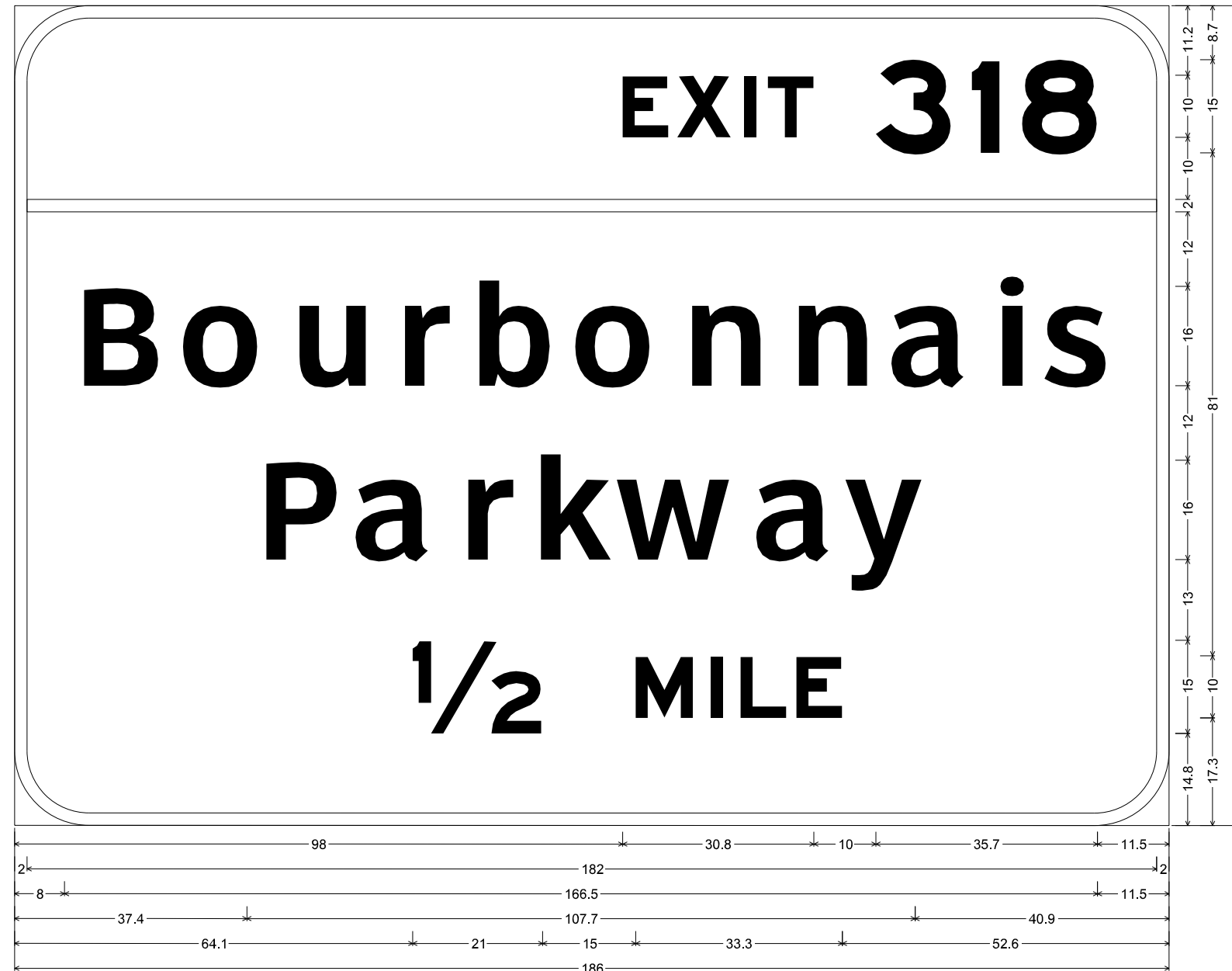
SIGNING DETAIL			
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)			
BOURBONNAIS, IL			
SCALE: AS SHOWN	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	406
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 66982	



NB-57-BS-270B-P
STA 431+35

SB-57-BS-285-P
STA 520+40



12.0" Radius, 2.0" Border, White on Green;
[EXIT 318] E Mod 2K; [Bourbonnais] ClearviewHwy-5-W; [Parkway] ClearviewHwy-5-W; [1/2 MILE] E Mod 2K;
Table of widths and spaces.

98.0	E	7.4	X	1.4	8.7	I	2.1	2.0	1.8	T	7.4	10.0	3	12.1	3.3	1	4.5	3.6	8	12.2	11.5												
2.0																						2.0											
8.0	B	12.2	4.7	o	12.5	5.4	u	11.0	5.9	r	7.6	4.5	b	11.6	4.7	o	12.5	5.4	n	11.2	6.0	n	11.2	5.0	a	11.9	4.7	i	3.8	4.4	s	10.3	11.5
37.4	P	11.7	4.0	a	11.9	5.0	r	7.5	4.5	k	11.4	2.3	w	18.6	3.3	a	11.9	3.1	y	12.5	40.9												
64.1	1/2	21.0	15.0	M	9.3	2.8	I	2.0	2.8	L	7.4	1.6	E	7.4	52.6																		

LAYOUT	DPA	03.06.2013
DRAWN	MWH	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME = D:\09H0038-sht-sign\018.dgn
MODEL NAME = Default

USER NAME = MWH
PLOT SCALE = AS SHOWN
PLOT DATE = 12\03\2013

DESIGNED - DPA
DRAWN - MV
CHECKED - DPA
DATE - 12.03.13

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAIL
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL
SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	407
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66982	



EB-60-SP-153-P
STA 7472+10

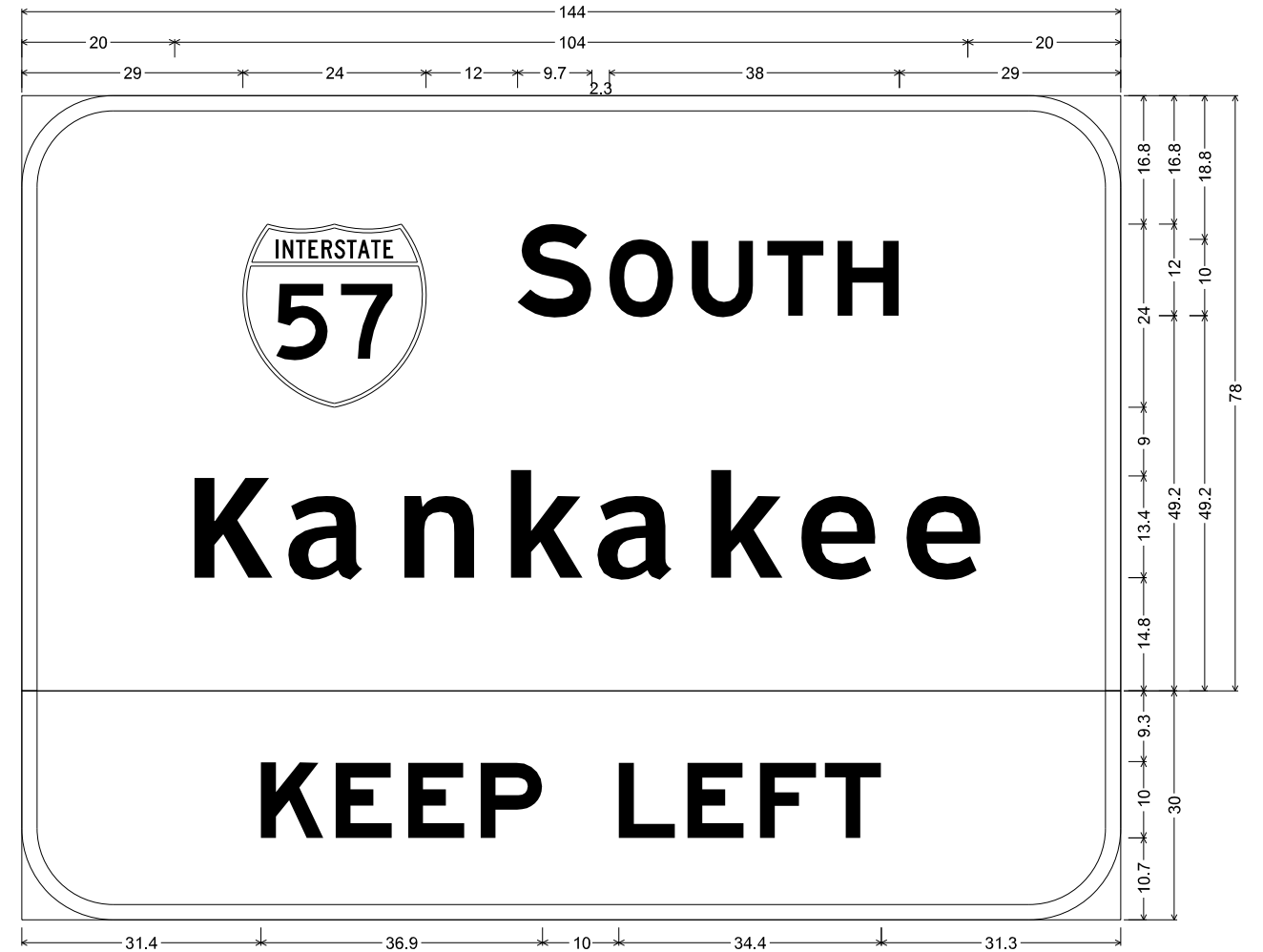


12.0" Radius, 2.0" Border, White on Green;
[NORTH] E Mod 2K; [Chicago] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[KEEP LEFT] E Mod 2K;

Table of widths and spaces.

29.2	24.0	12.0	9.7	2.6	8.4	2.4	8.1	1.1	7.4	1.8	8.1	29.2					
28.7	10.9	4.0	9.4	4.6	3.2	4.2	9.1	3.0	9.9	3.6	9.8	4.5	10.4	28.7			
31.4	K	8.2	1.6	7.4	2.1	7.4	2.1	8.1	10.0	7.4	1.5	7.4	2.1	7.4	1.1	7.4	31.4

WB-60-SP-141-P
STA 7478+15



12.0" Radius, 2.0" Border, White on Green;
[SOUTH] E Mod 2K; [Kankakee] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[KEEP LEFT] E Mod 2K;

Table of widths and spaces.

29.0	24.0	12.0	9.7	2.3	8.4	2.4	8.1	1.8	7.4	1.8	8.1	29.0					
20.0	K	10.5	2.9	9.9	4.2	9.4	4.9	9.4	2.7	9.9	4.2	9.5	2.8	9.9	3.9	9.9	20.0
31.4	K	8.2	1.6	7.4	2.1	7.4	2.1	8.1	10.0	7.4	1.5	7.4	2.1	7.4	1.1	7.4	31.4

LAYOUT	DPA	03.06.2013
DRAWN	MWH	10.15.2013
REVIEWED	DPA	10.17.2013

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MODEL NAME = Default

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PLOT SCALE = AS SHOWN	DRAWN - MV	REVISED -
PLOT DATE = 12\03\2013	CHECKED - DPA	REVISED -
	DATE - 12.03.13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAIL
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	408
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66982	

℄ I-57

55'-9"

32'-0"



1'-3"
Walkway railing omitted for clarity
lights (not required)

19'-0" Minimum Clearance
17'-3" Minimum Clearance
with a future 15'-0" Tall Sign

56'-0"

15'-8"
Ramp D

16'-1"

High Point
Elev. 682.97

Edge of Pavement

Top of Foundation
El. 683.82

2'-4"

CANTILEVER MOUNTED SIGN NO. 3C0461057R318.2

STA. 457+80
(Looking North)

All dimensions are
perpendicular to I-57

12/02/2013
c:\p\se\work\do_no_delete\dms56013\0309H0088-shr-sign-lev01.dgn

LAYOUT	FLN	06.17.2013
DRAWN	MGM	06.19.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME = hussu00411	DESIGNED - FLN	REVISED
PLOT SCALE =	CHECKED - DPA	REVISED
PLOT DATE = 12\02\2013	DRAWN - MGM	REVISED
	CHECKED - FLN	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGNING PLANS
STRUCTURE ELEVATION DETAILS**

SHEET NO. 1 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	409
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

℄ I-57

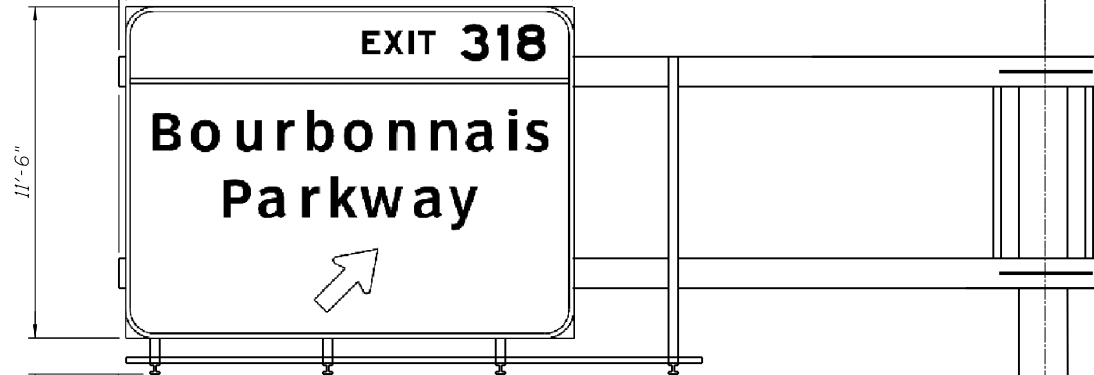
56'-2³/₈"

32'-0"

1"

15'-6"

16'-5"



Walkway railing omitted for clarity
lights (not required)

19'-0" Minimum Clearance
17'-3" Minimum Clearance
with a future 15'-0" Tall Sign

56'-0"

16'-1³/₈"
Ramp A

16'-1"

High Point
Elev. 671.93

Edge of Pavement

Top of Foundation
El. 672.92

2'-5"

CANTILEVER MOUNTED SIGN NO. 3C0461057L318.9

STA. 493+90
(Looking South)

All dimensions are
perpendicular to I-57

12/02/2013
c:\p\se\work\do_no_delete\dms56013\0309H0038-shr-sign-lev002.dgn

LAYOUT	FLN	06.17.2013
DRAWN	MGM	06.19.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

Hanson Professional Services Inc.

USER NAME = hussu00411	DESIGNED - FLN	REVISED
	CHECKED - DPA	REVISED
PLOT SCALE =	DRAWN - MGM	REVISED
PLOT DATE = 12\02\2013	CHECKED - FLN	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**


**OVERHEAD SIGNING PLANS
STRUCTURE ELEVATION DETAILS**

SHEET NO. 2 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	410
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

12/02/2013
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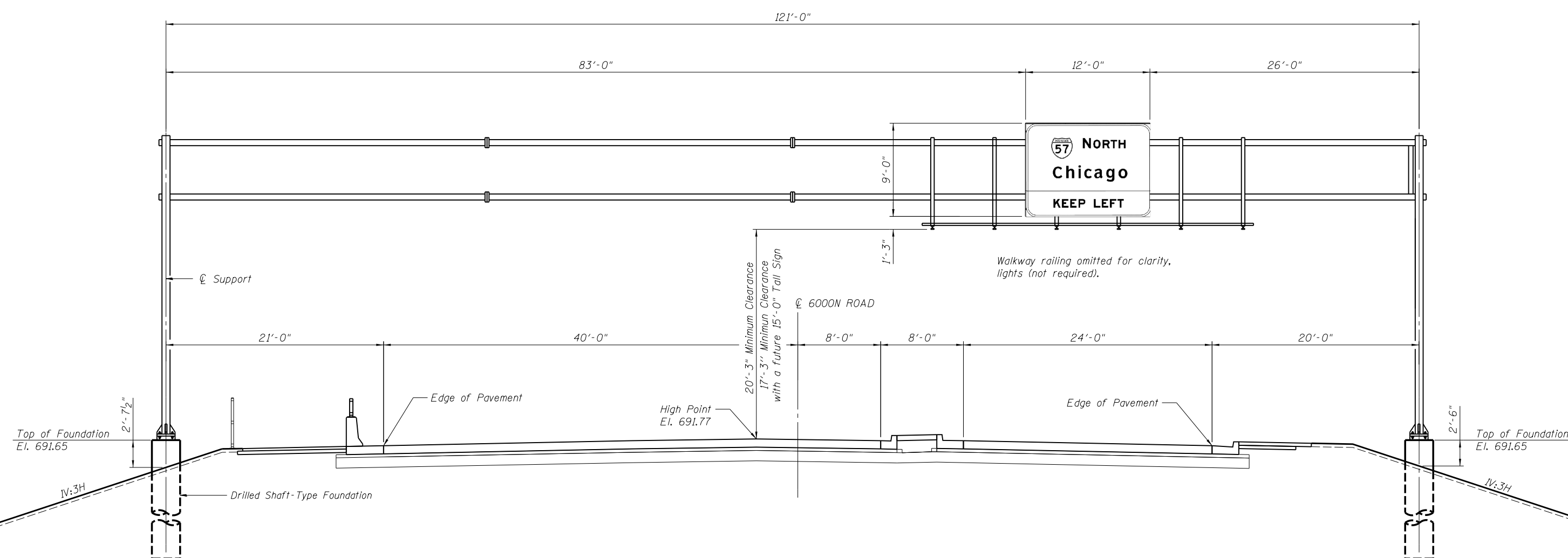
LAYOUT	FLN	06.17.2013
DRAWN	MGM	06.19.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #184-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISED
		CHECKED - DPA	REVISED
	PLOT SCALE =	DRAWN - MGM	REVISED
	PLOT DATE = 12\02\2013	CHECKED - FLN	REVISED

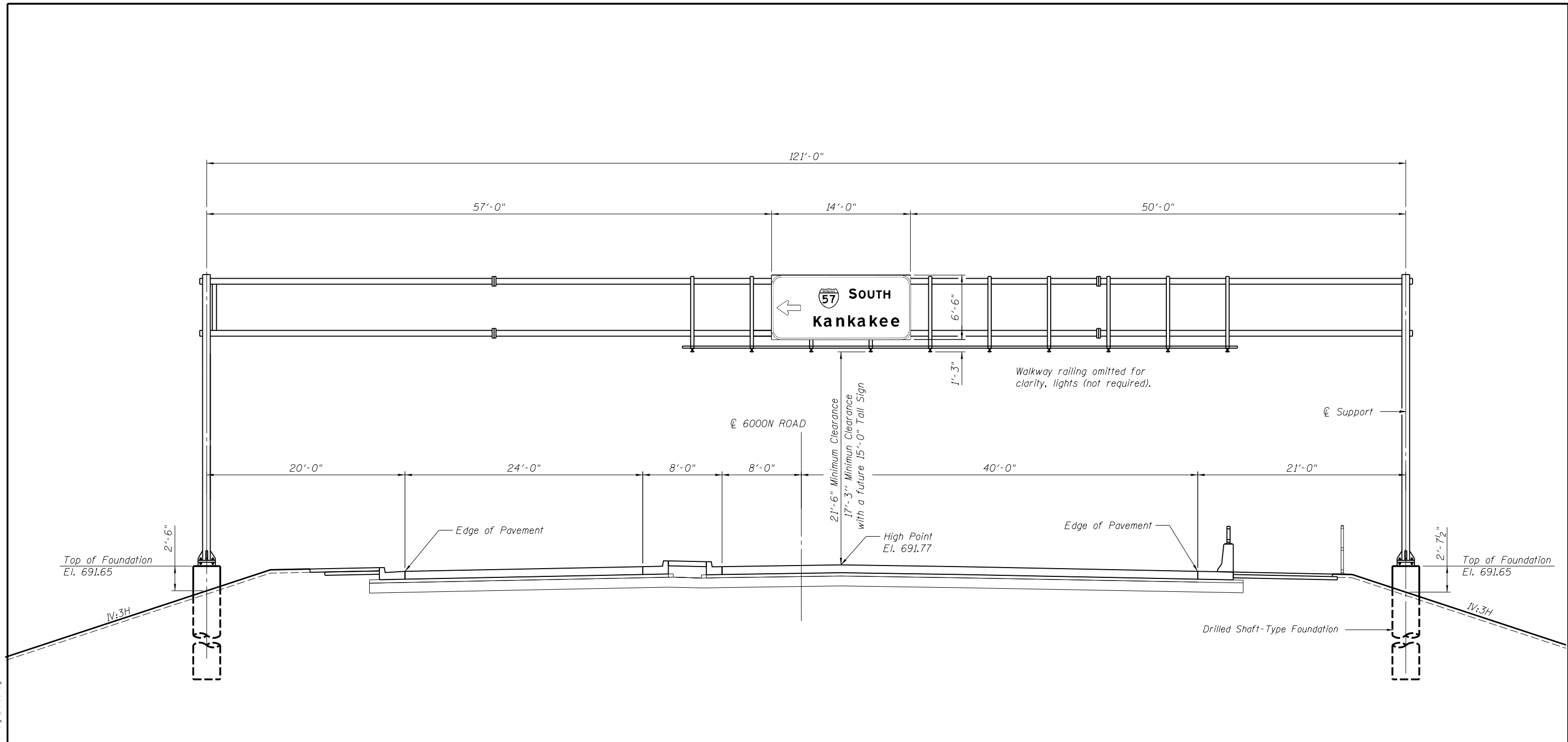
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGNING PLANS
 STRUCTURE ELEVATION DETAILS**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	411
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



OVERHEAD SIGN STRUCTURE NO. 3S046LBOUR000.5
 STA. 7472+10 (Looking East)



OVERHEAD SIGN STRUCTURE NO. 3S046LBOUR000.5
 STA. 7472+10 (Looking West)

12/02/2013
 c:\p\se_work\do_no_delete\dms56013\0309H0038-shr-signElev004.dgn

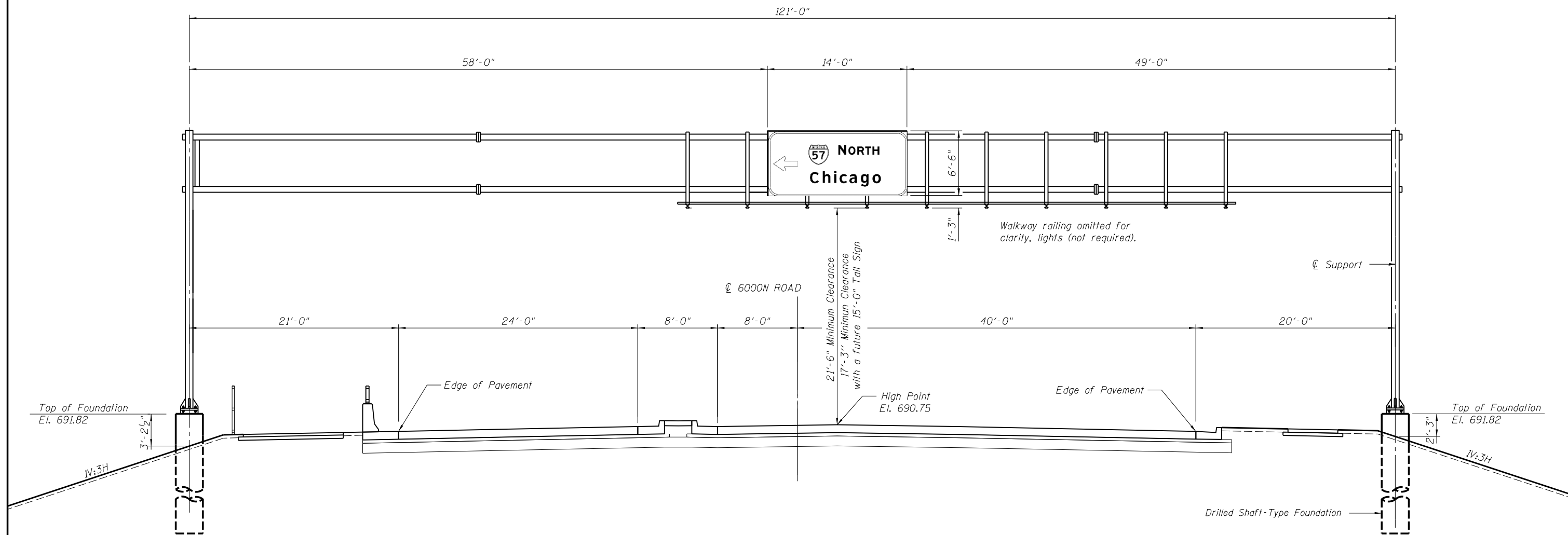
LAYOUT	FLN	06.17.2013
DRAWN	MGM	06.19.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #184-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISED
		CHECKED - DPA	REVISED
	PLOT SCALE =	DRAWN - MGM	REVISED
	PLOT DATE = 12\02\2013	CHECKED - FLN	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGNING PLANS
STRUCTURE ELEVATION DETAILS
 SHEET NO. 4 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	412
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



OVERHEAD SIGN STRUCTURE NO. 3S046LBOUR000.6

STA. 7478+15 (Looking East)

12/02/2013
 c:\p\se_work\do_no_delete\dms56013\0309H0038-shr-sign-lev005.dgn

LAYOUT	FLN	06.17.2013
DRAWN	MGM	06.19.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

Hanson Professional Services Inc.

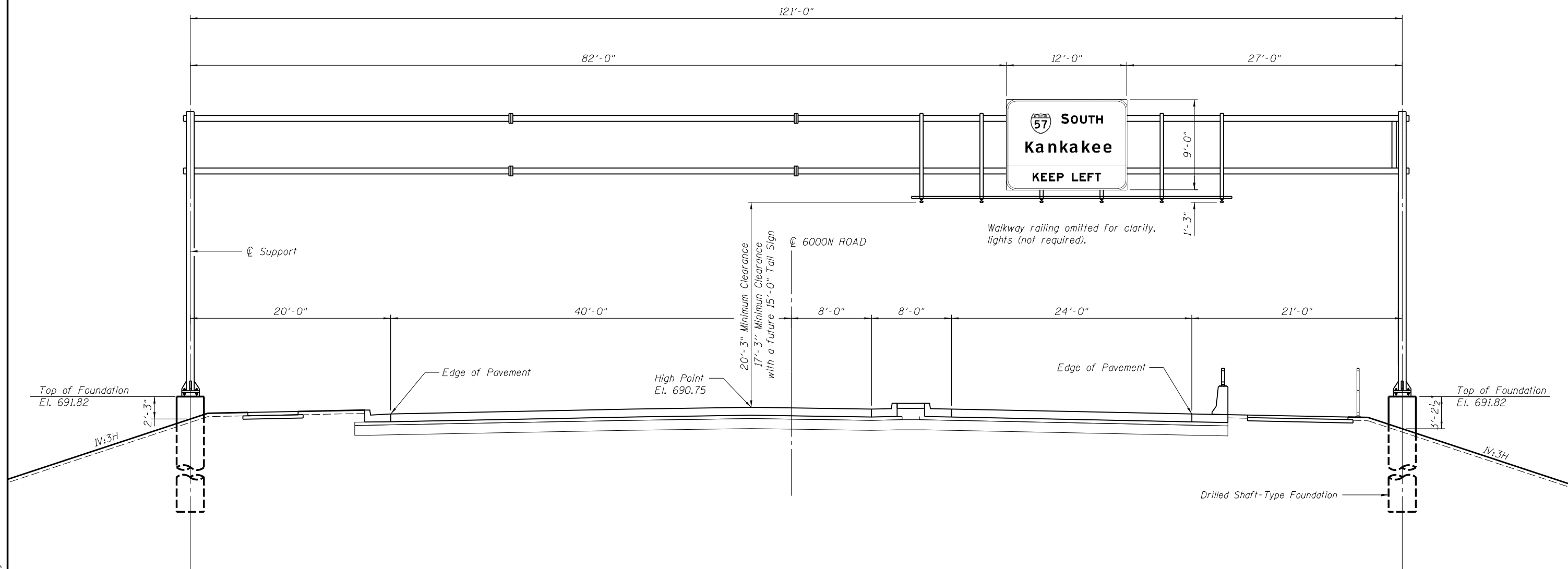
USER NAME = hussu00411	DESIGNED - FLN	REVISED
	CHECKED - DPA	REVISED
PLOT SCALE =	DRAWN - MGM	REVISED
PLOT DATE = 12\02\2013	CHECKED - FLN	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGNING PLANS
STRUCTURE ELEVATION DETAILS**

SHEET NO. 5 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	413
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



OVERHEAD SIGN STRUCTURE NO. 3S046LBOUR000.6
 STA. 7478+15 (Looking West)

12/02/2013
 c:\p\se_work\do_no_delete\dms56013\0309H0038-shr-sign-lev06.dgn

LAYOUT	FLN	06.17.2013
DRAWN	MGM	06.19.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #184-001084
 HANSON
 Hanson Professional Services Inc.

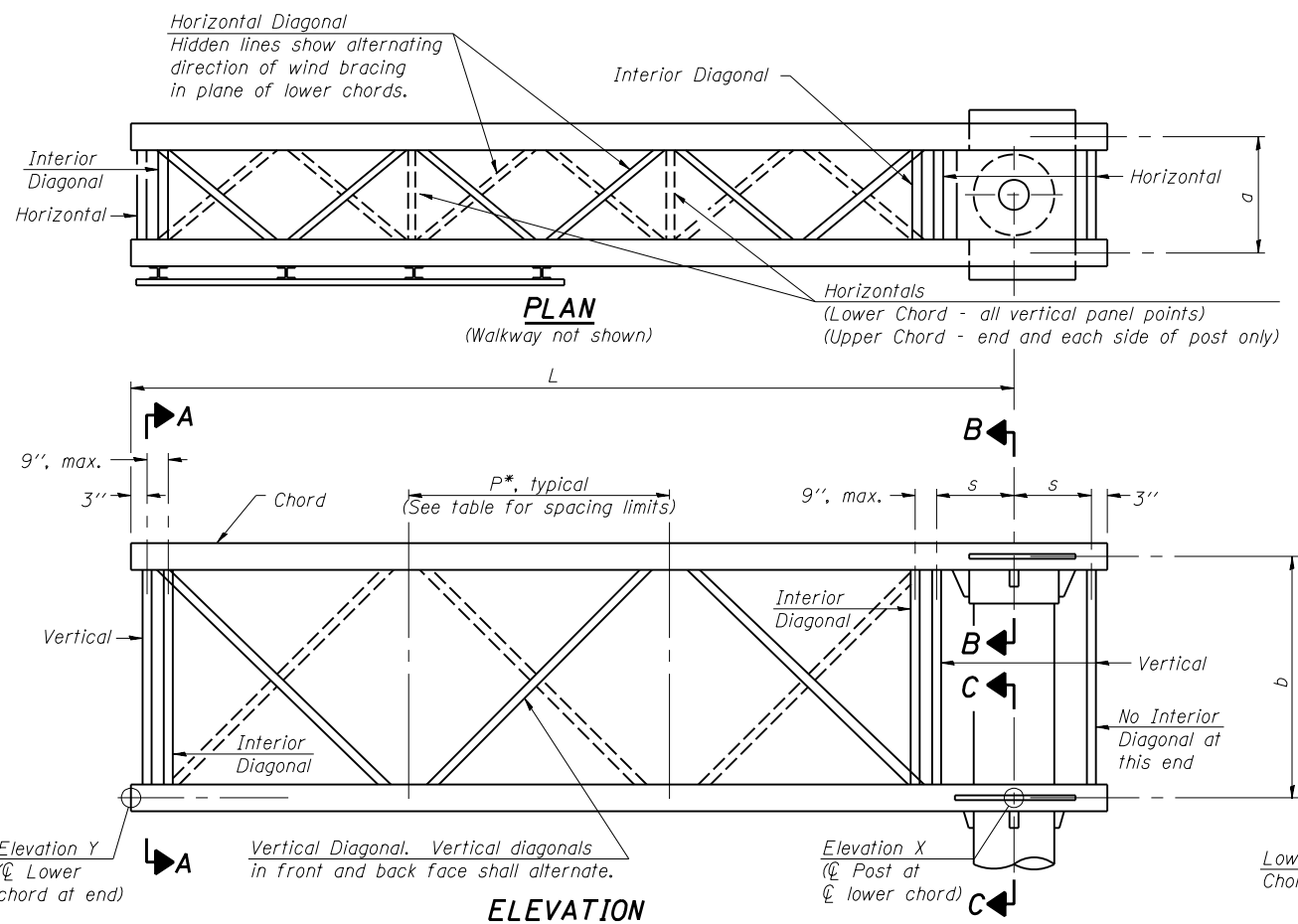
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PLOT SCALE =		DRAWN -	MGM	REVISED
PLOT DATE =	12\02\2013	CHECKED -	FLN	REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGNING PLANS
 STRUCTURE ELEVATION DETAILS**

SHEET NO. 6 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	414
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



TYPICAL TRUSS UNIT
(Sign and walkway omitted for clarity)

Note: For Section B-B and Section C-C, see Base Sheet OSC-A-3.

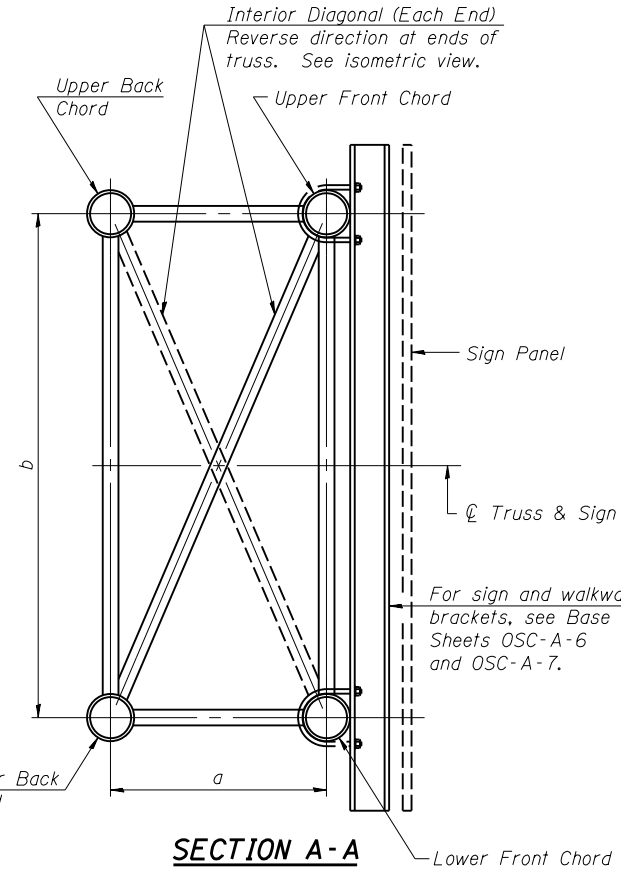
There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

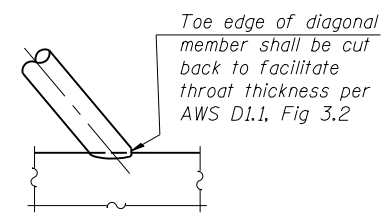
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	5/16"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3 1/2"	3/8"

*P = (L - s - 3") / # Panels

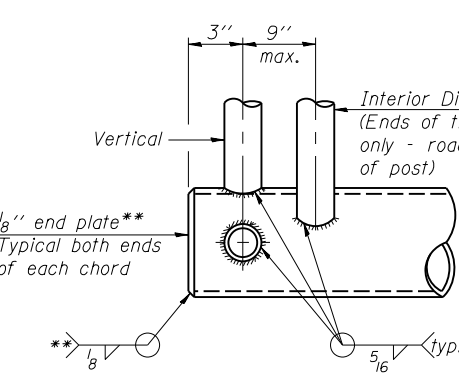
Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
3C0461057R318.2	457+80	III-C-A	32'-0"	6	5'-0"
3C0461057L318.9	493+90	III-C-A	32'-0"	6	5'-0"



SECTION A-A

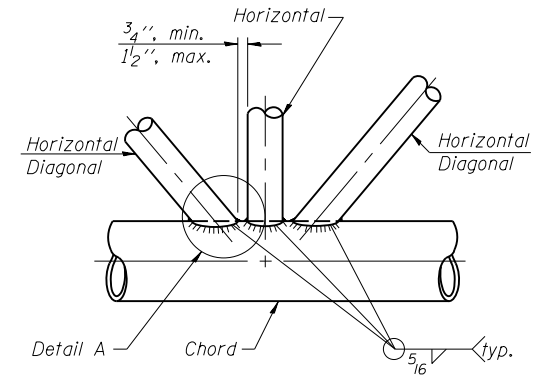


DETAIL A

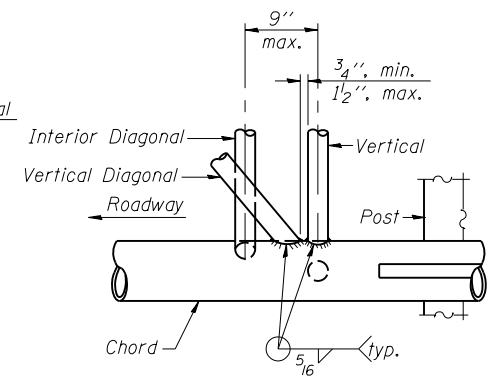


CANTILEVER END JOINT DETAIL

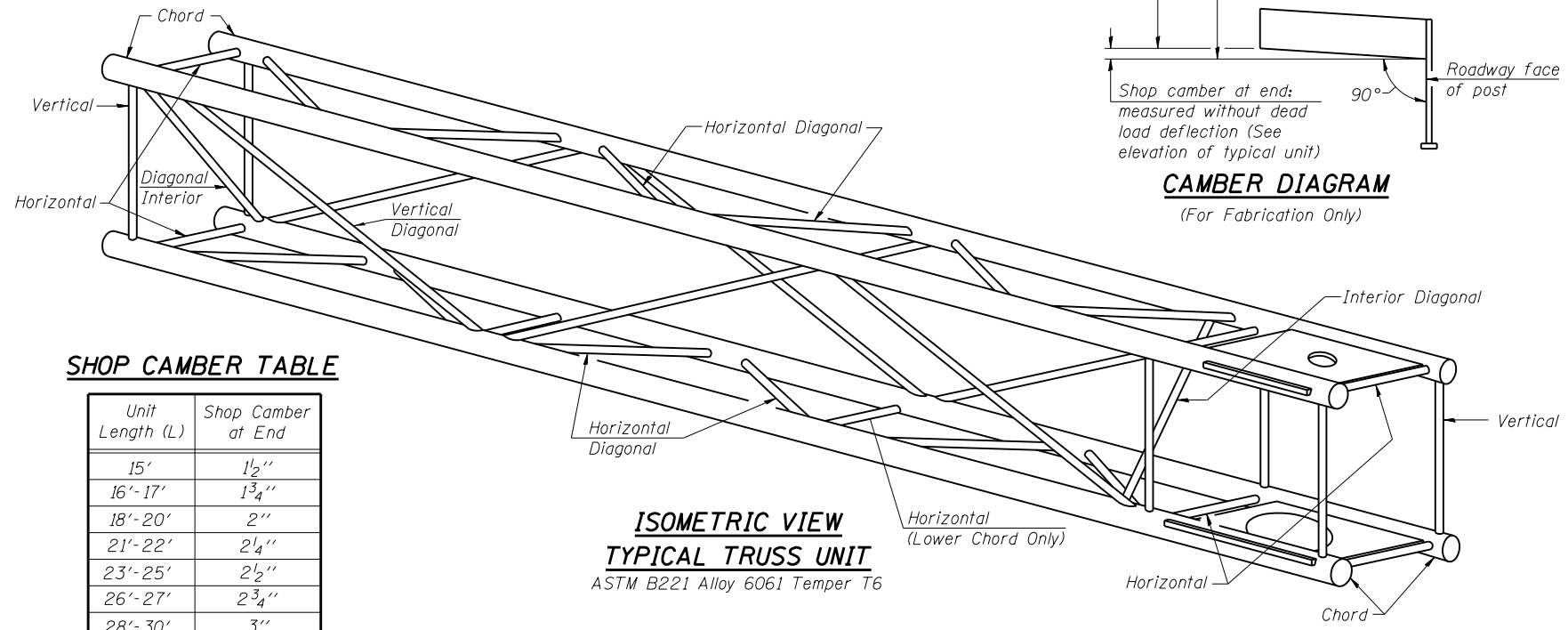
** Contractor may alternatively use standard aluminum drive-fit cap to close ends. 1/2" ϕ Drain hole in end plate / drive-fit cap.



TRUSS INTERIOR JOINT DETAIL



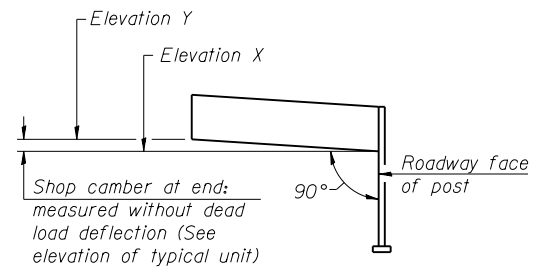
POST END JOINT DETAIL



ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"



CAMBER DIAGRAM
(For Fabrication Only)

12/02/2013 c:\p\se-work\cd_rnf_delete\dms5603\0309H0038-shr-signstr002.dgn

LAYOUT: 06.10.2013
DRAWN: 06.11.2013
REVIEWED: 10.17.2013

OSC-A-2

6-1-12

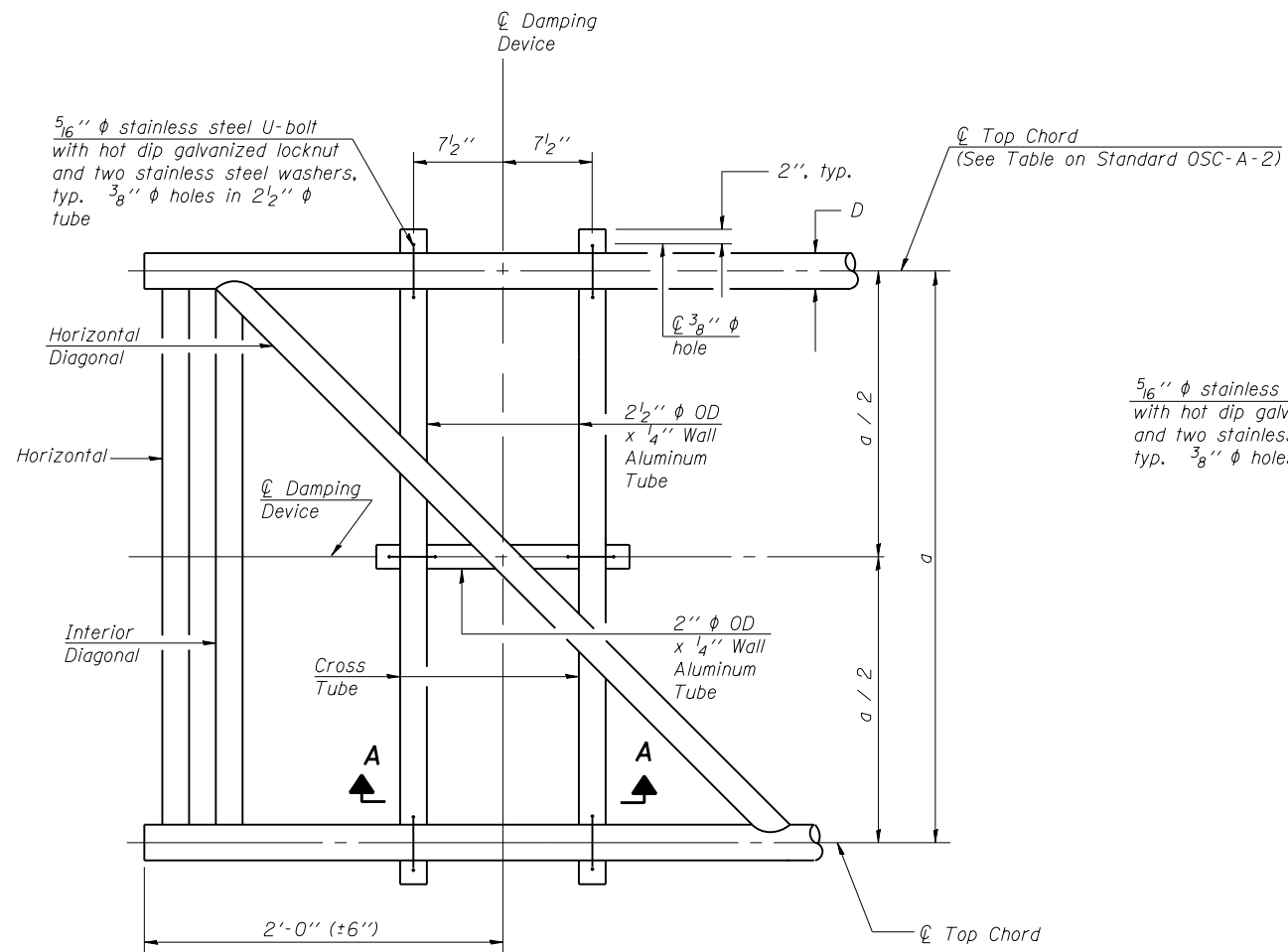
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	PLOT SCALE =	CHECKED - DPA	REVISED
Hanson Professional Services Inc.	PLOT DATE = 12/02/2013	DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

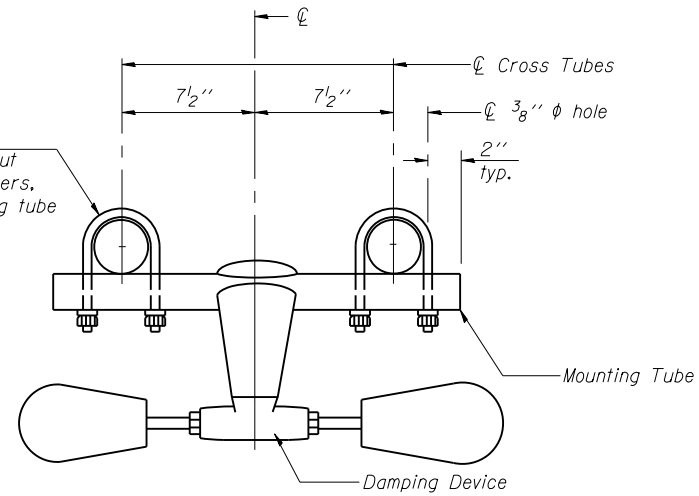
CANTILEVER SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

SHEET NO. 2 OF 9 SHEETS

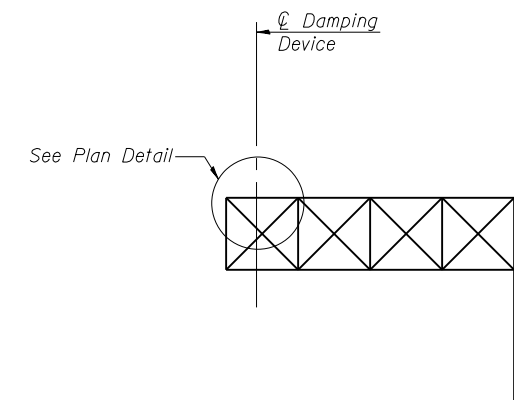
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	416
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



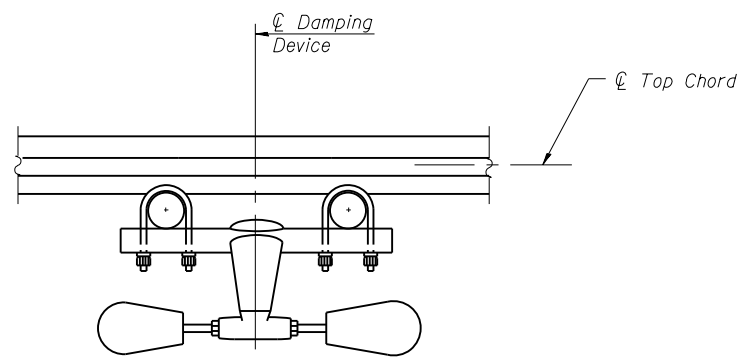
PLAN DETAIL



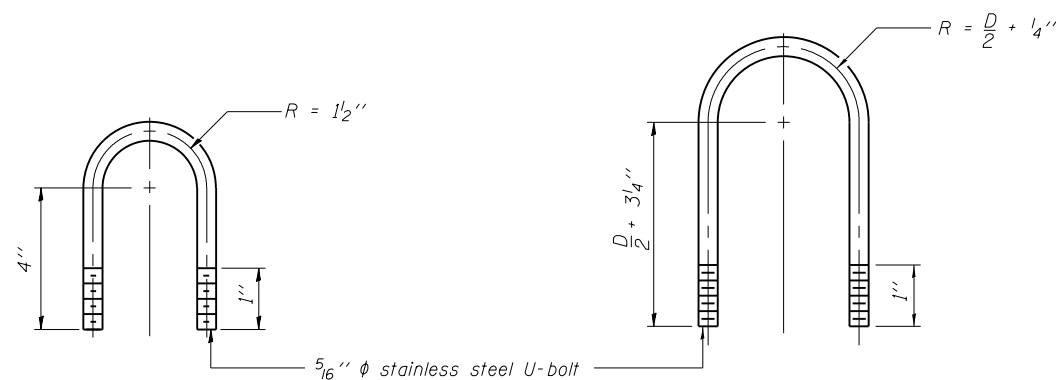
TRUSS DAMPING DEVICE CONNECTION DETAIL



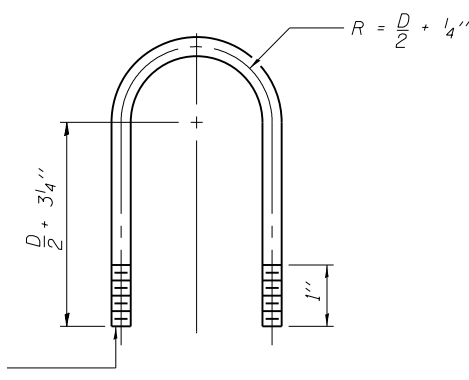
ELEVATION
Aluminum Cantilever Sign Structure



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical)

GENERAL NOTES

- Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)
- Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6

12/02/2013 c:\p\se-work\do_no_delete\dms56013\0309\0038-shr-signstr003.dgn

LAYOUT	FLN	06.10.2013
DRAWN	MGM	06.11.2013
REVIEWED	FLN	10.17.2013

OSC-A-D

6-1-12



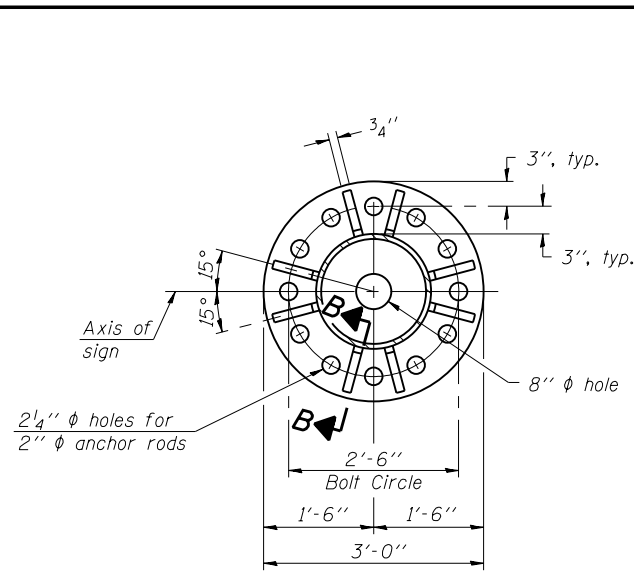
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PLOT SCALE =	CHECKED - DPA	REVISED
PLOT DATE = 12\02\2013	DRAWN - MGM	REVISED
	CHECKED - FLN	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

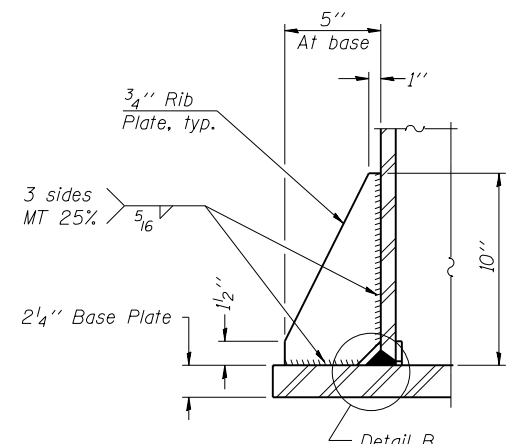
CANTILEVER SIGN STRUCTURES
DAMPING DEVICE

SHEET NO. 3 OF 9 SHEETS

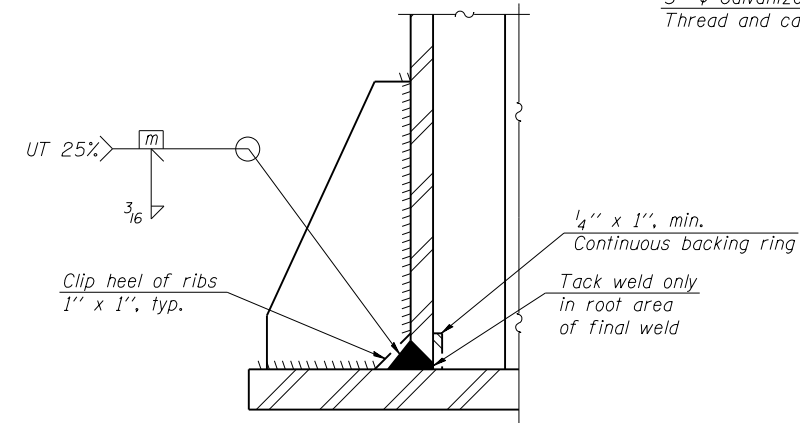
F.A.I. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	417
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



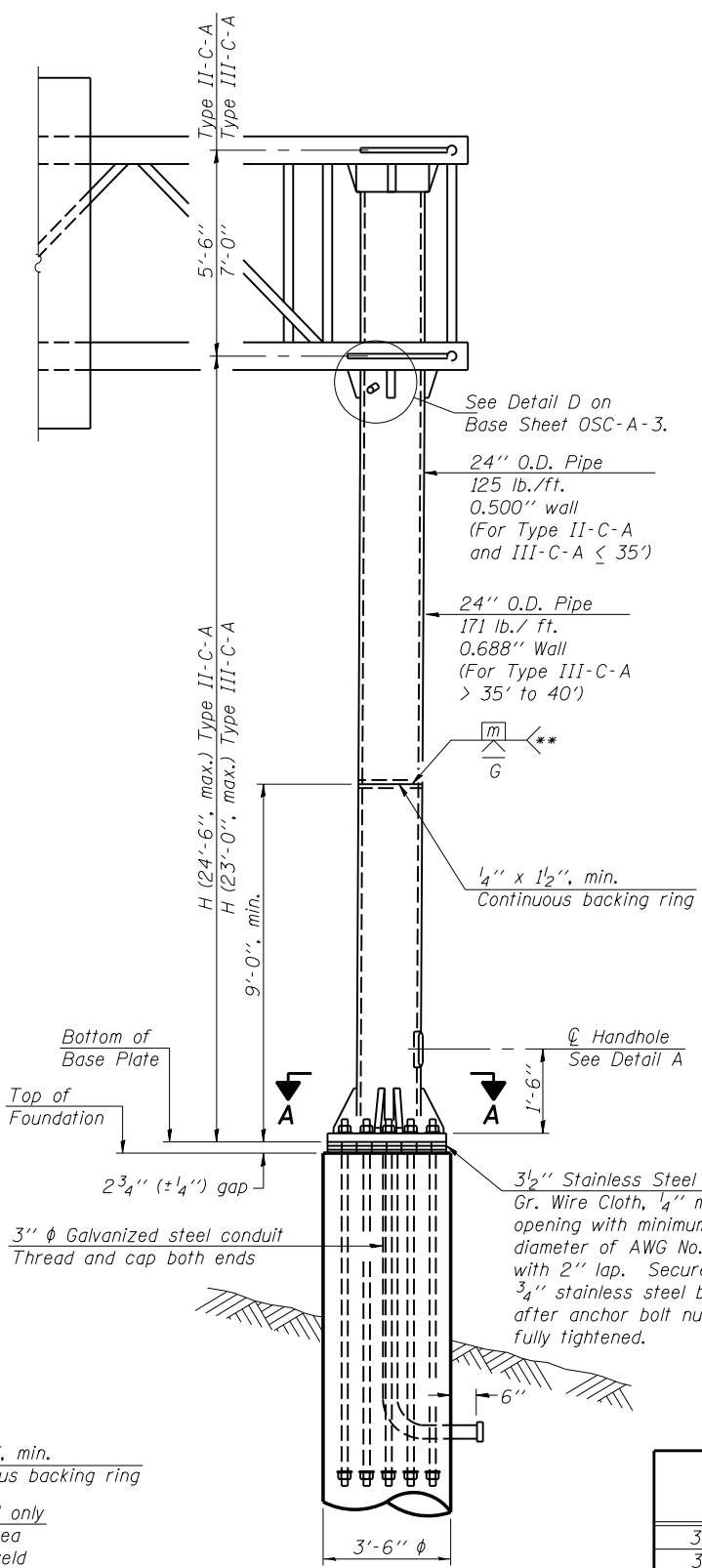
SECTION A-A



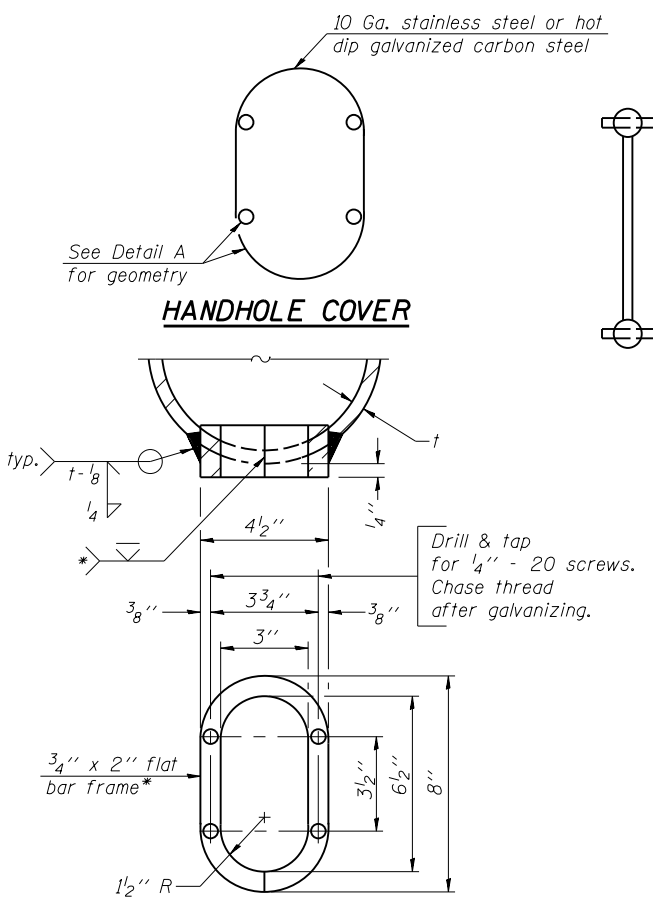
SECTION B-B



DETAIL B
(Typical rib)



FRONT ELEVATION
For Foundation Details see Base Sheet OSC-A-9.



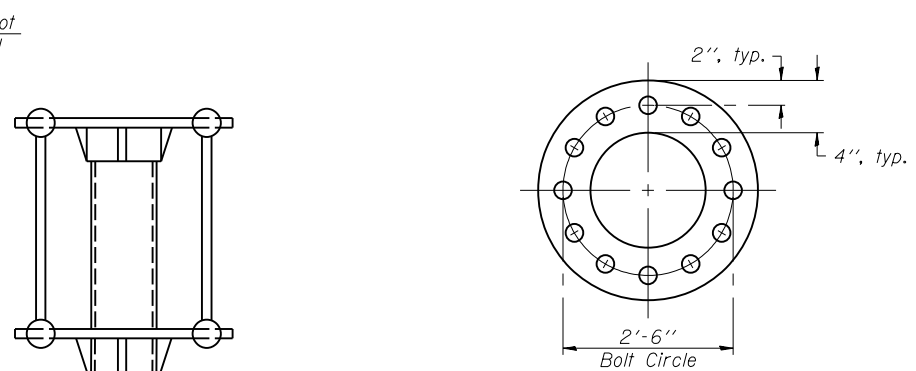
DETAIL A

* Bent bars may be butt welded top and bottom or bottom only. 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 500 μin or less.

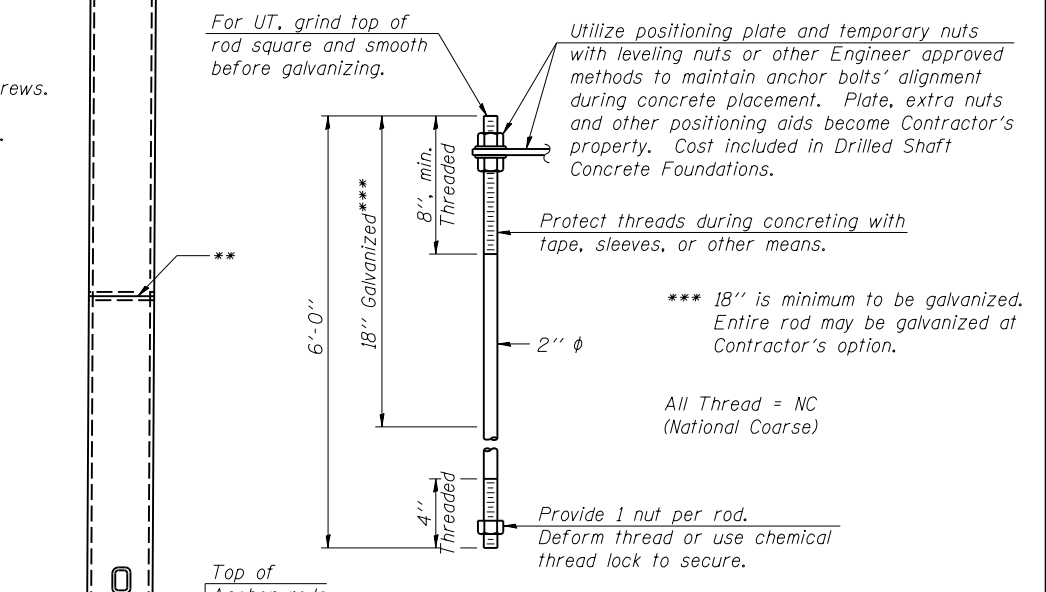
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
3C0461057R318.2	457+80	21'-5"
3C0461057L318.9	493+90	21'-5"

Note: "H" based on 15'-0" or actual sign height, whichever is greater.



SUGGESTED POSITIONING PLATE



ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum***) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III inspector, qualified in accord with ANSI guidelines, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

*** 18" is minimum to be galvanized. Entire rod may be galvanized at Contractor's option.

All Thread = NC (National Coarse)

Provide 1 nut per rod. Deform thread or use chemical thread lock to secure.

SIDE ELEVATION

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LAYOUT
FLN 06.10.2013
DRAWN MGM 06.11.2013
REVIEWED FLN 10.17.2013

OSC-A-5
PROFESSIONAL DESIGN FIRM LICENSE #184-001084
HANSON
Hanson Professional Services Inc.

6-1-12

USER NAME = hussu00411	DESIGNED - FLN	REVISOR
PLOT SCALE =	CHECKED - DPA	REVISION
PLOT DATE = 12/02/2013	DRAWN - MGM	REVISION
	CHECKED - FLN	REVISION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - TYPE II-C-A & III-C-A
TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST

SHEET NO. 5 OF 9 SHEETS

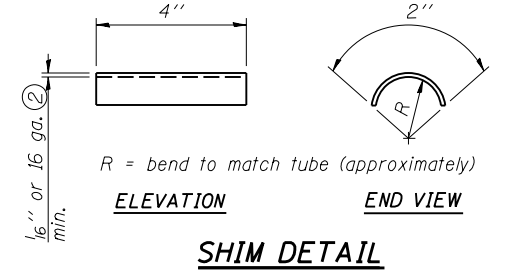
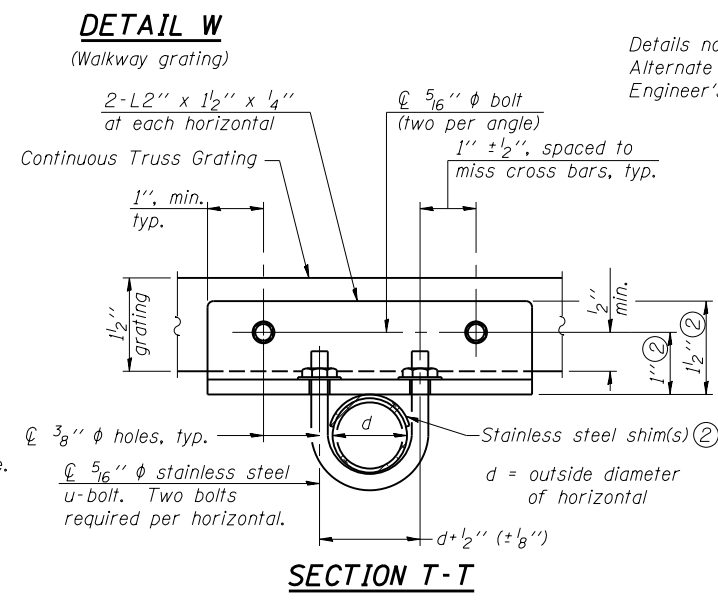
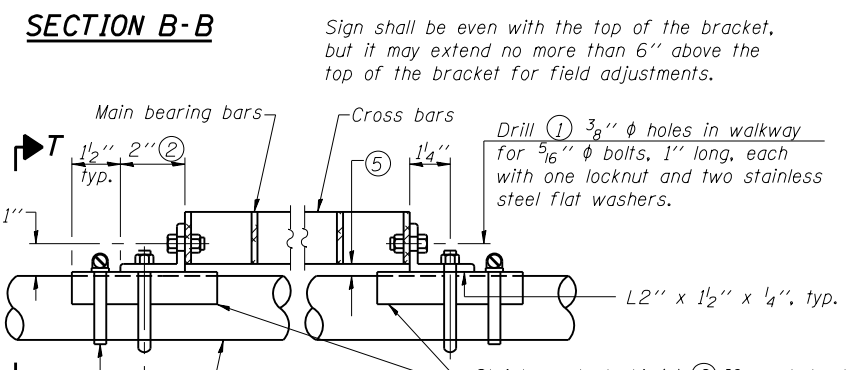
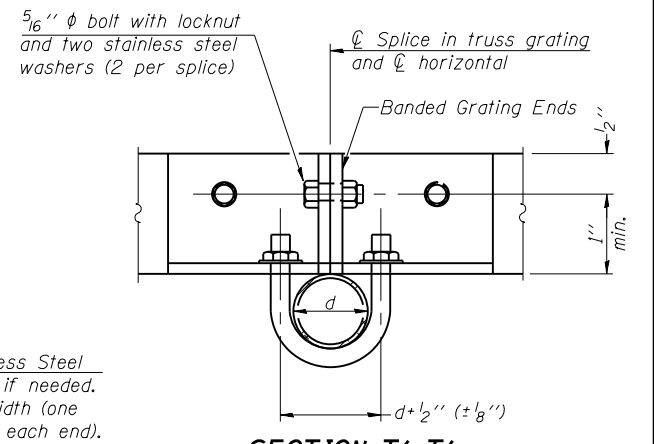
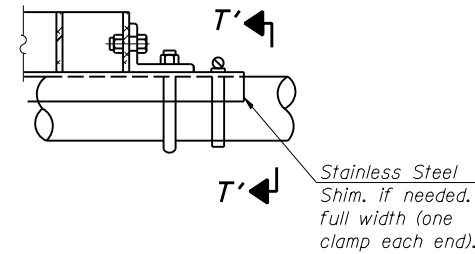
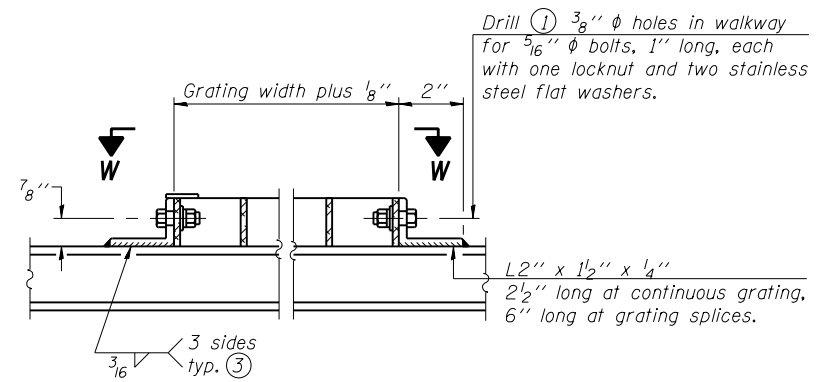
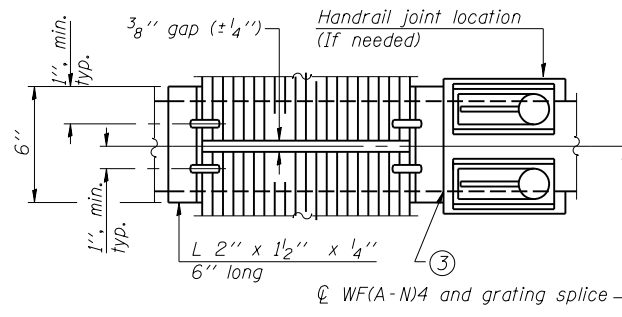
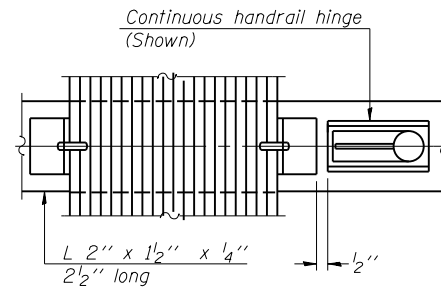
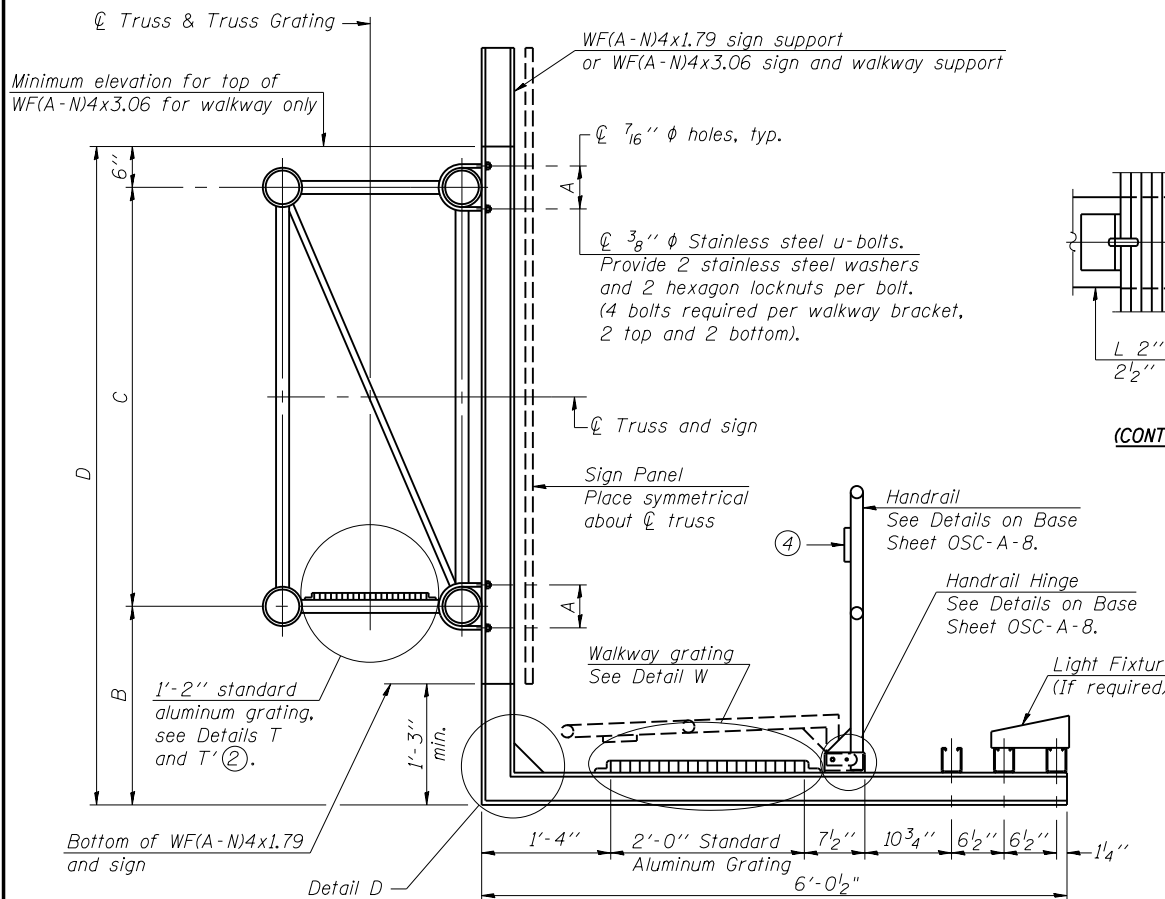
F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	419
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars (MBB) shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
 Cross bars (CB) shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

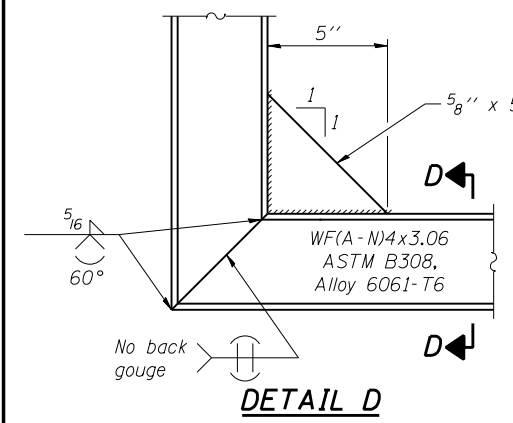
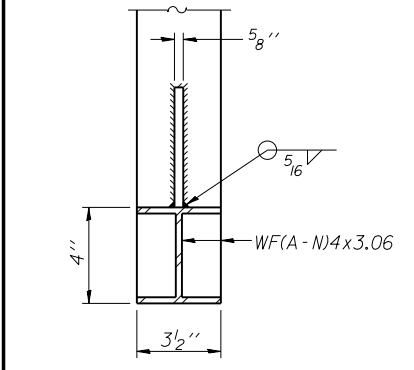
OR

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 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.



- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- 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.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSC-A-8.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual sign height, D_s, given on OSC-A-1.

Structure Number	Station	A	(6) B	C	(6) D
3C0461057R318.2	457+80	7 1/2"	3'-6"	7'-0"	11'-0"
3C0461057L318.9	493+90	7 1/2"	3'-6"	7'-0"	11'-0"



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LAYOUT
 FLN 06.10.2013
 DRAWN MGM 06.11.2013
 REVIEWED FLN 10.17.2013

OSC-A-7 6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #194-001094	USER NAME = hussu00411	DESIGNED - FLN	REVISED
		CHECKED - DPA	REVISED
		DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED

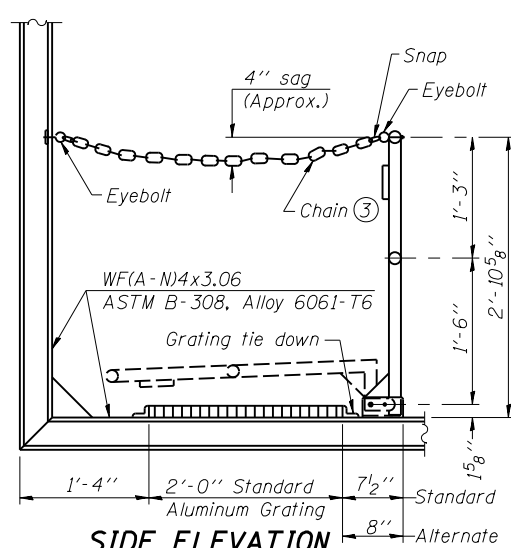
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - WALKWAY DETAILS
 ALUMINUM TRUSS & STEEL POST

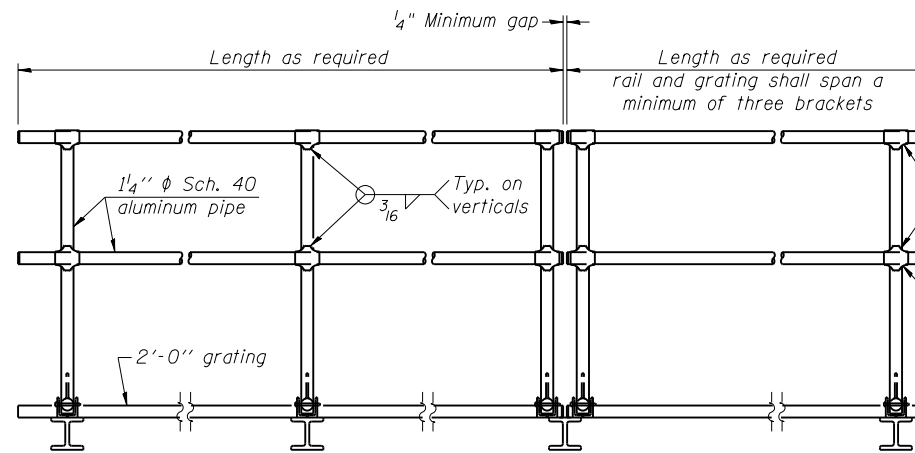
F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	421
CONTRACT NO. 66982				

SHEET NO. 7 OF 9 SHEETS

ILLINOIS FED. AID PROJECT



SIDE ELEVATION
(Showing Safety Chain W/O Sign)

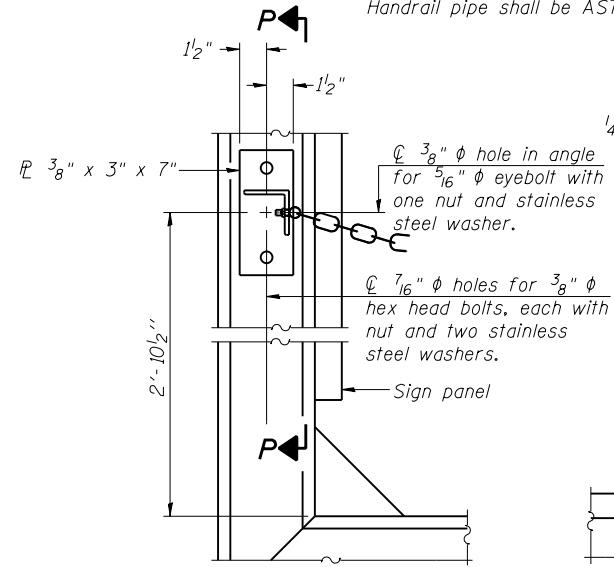


FRONT ELEVATION

HANDRAIL DETAILS

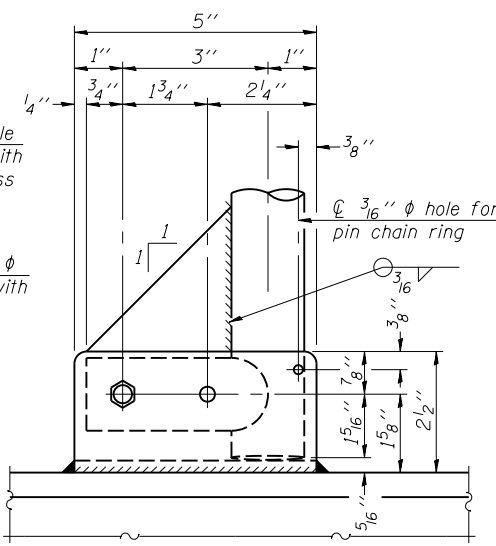
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
Fittings-ASTM B26, Alloy 356-T7 or 1 1/2" diameter aluminum pipe
② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" diameter hole in fitting for 3/8" diameter bolt. Field drill 7/16" diameter hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" diameter eyebolts in 7/16" diameter holes on top rail at ends only.)

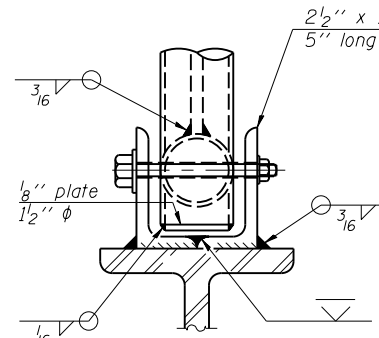


ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)

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



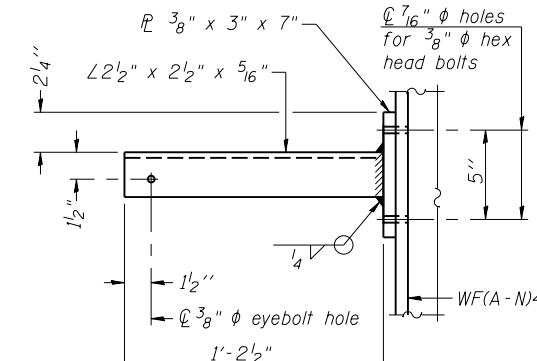
SIDE ELEVATION



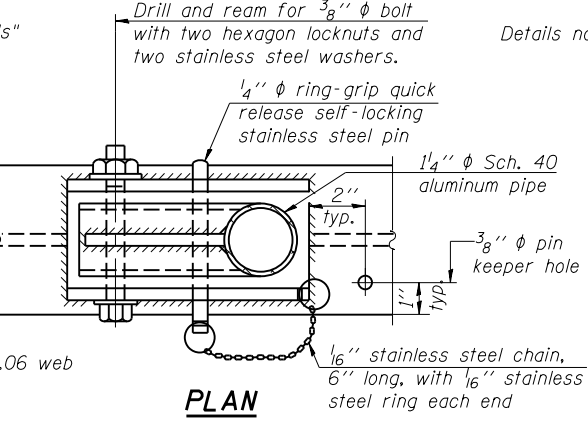
FRONT ELEVATION

Details not shown same as "ELEVATION" at right.

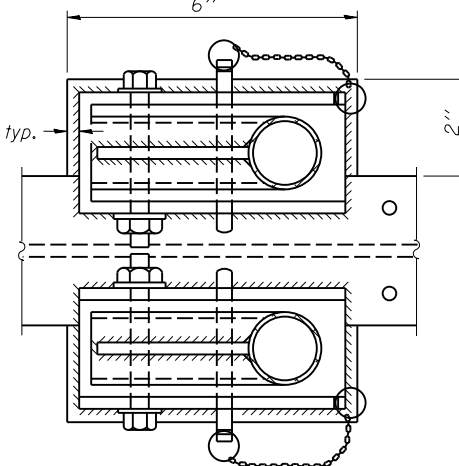
ELEVATION AT HANDRAIL JOINT ④
Details not shown same as "FRONT ELEVATION"



SECTION P-P

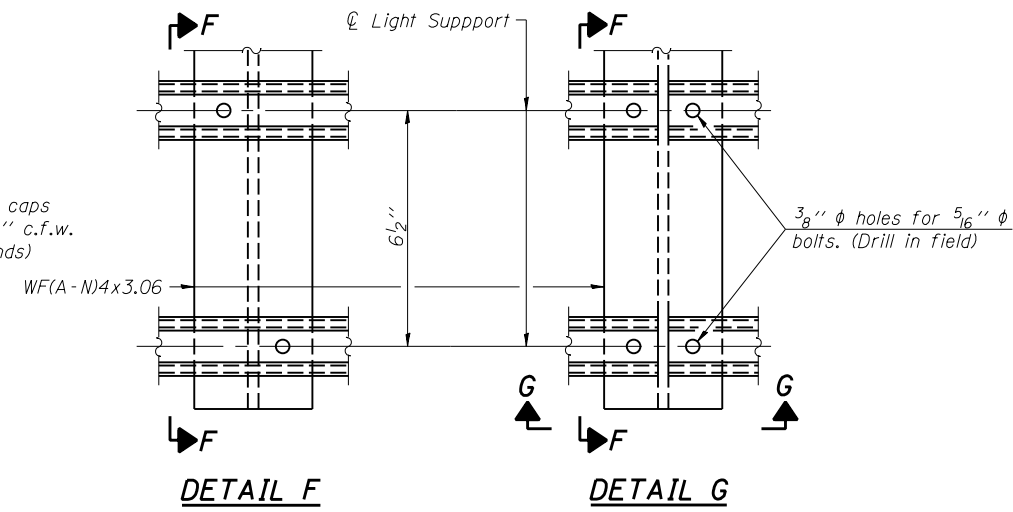


DETAIL E HANDRAIL HINGE



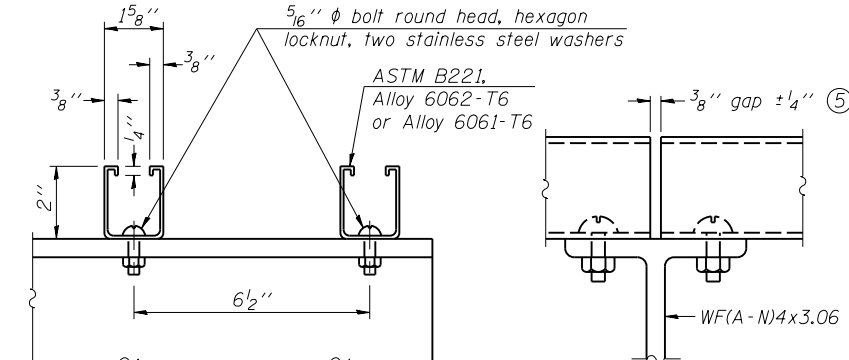
PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"



DETAIL F

DETAIL G

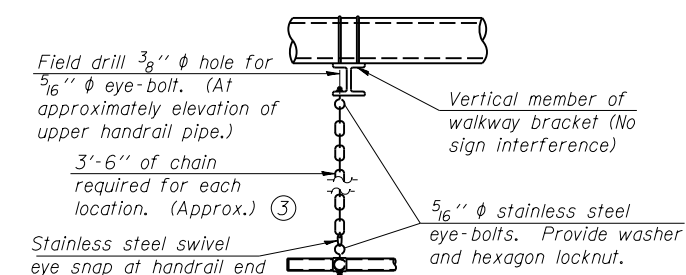


SECTION F-F

SECTION G-G

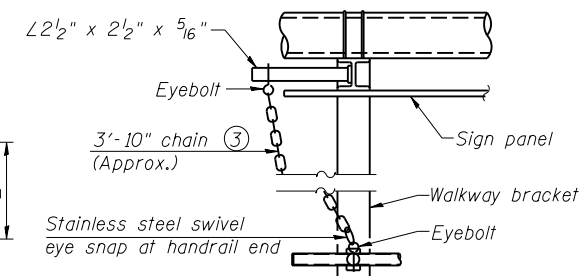
LIGHTING FIXTURE MOUNTS (IF REQUIRED)

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



SAFETY CHAIN

One required for each end of each walkway.



ALTERNATE SAFETY CHAIN ATTACHMENT

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

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.

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LAYOUT	FLN	06.10.2013
DRAWN	MGM	06.11.2013
REVIEWED	FLN	10.17.2013

OSC-A-8

6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #184-001084
 Hanson Professional Services Inc.

USER NAME = hussu00411	DESIGNED - FLN	REVISED
PLOT SCALE =	CHECKED - DPA	REVISED
PLOT DATE = 12/02/2013	DRAWN - MGM	REVISED
	CHECKED - FLN	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - HANDRAIL DETAILS
ALUMINUM TRUSS & STEEL POST

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	422
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

SHEET NO. 8 OF 9 SHEETS

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.
f_y = 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 Specifications.

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.

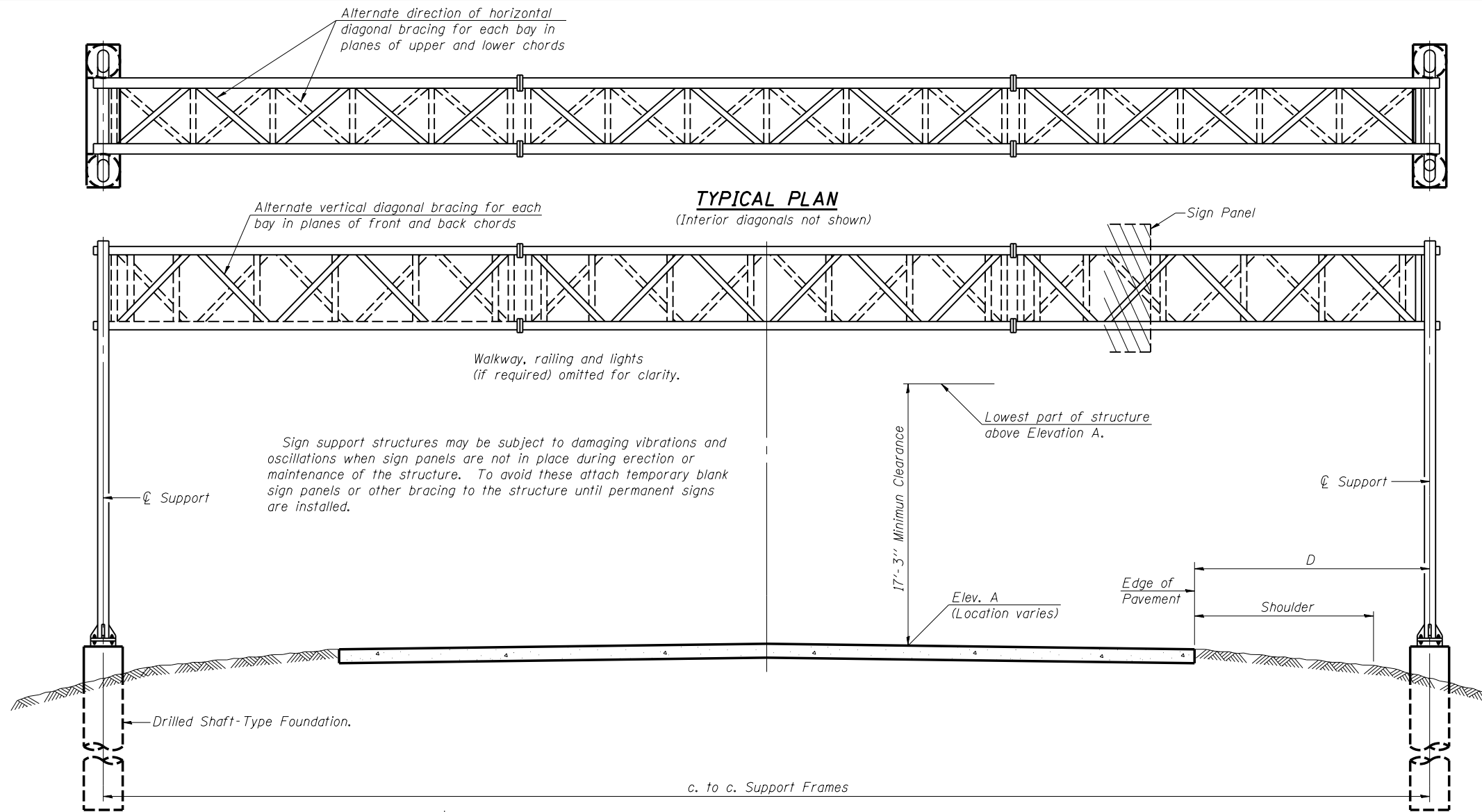
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

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	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	242
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	176
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	49.6



TYPICAL ELEVATION

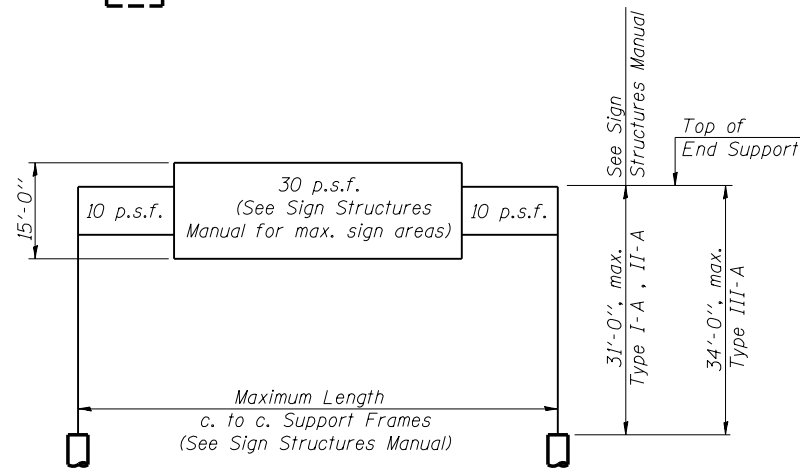
(Looking at Face of Signs)**)

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
3S046LB0UR000.5	7472+10	II-A	121'-0"	691.77	20'-0"	9'-0"	199 SF
3S046LB0UR000.6	7478+15	II-A	121'-0"	690.75	20'-0"	9'-0"	199 SF

**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.



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.

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LAYOUT
DRAWN
REVIEWED
FLN 06.11.2013
MGM 06.12.2013
FLN 10.17.2013

OS-A-1 6-1-12



DESIGNED - FLN	REVISOR
CHECKED - DPA	REVISOR
DRAWN - MGM	REVISOR
CHECKED - FLN	REVISOR
USER NAME = hussu00411	
PLOT SCALE =	
PLOT DATE = 12\02\2013	

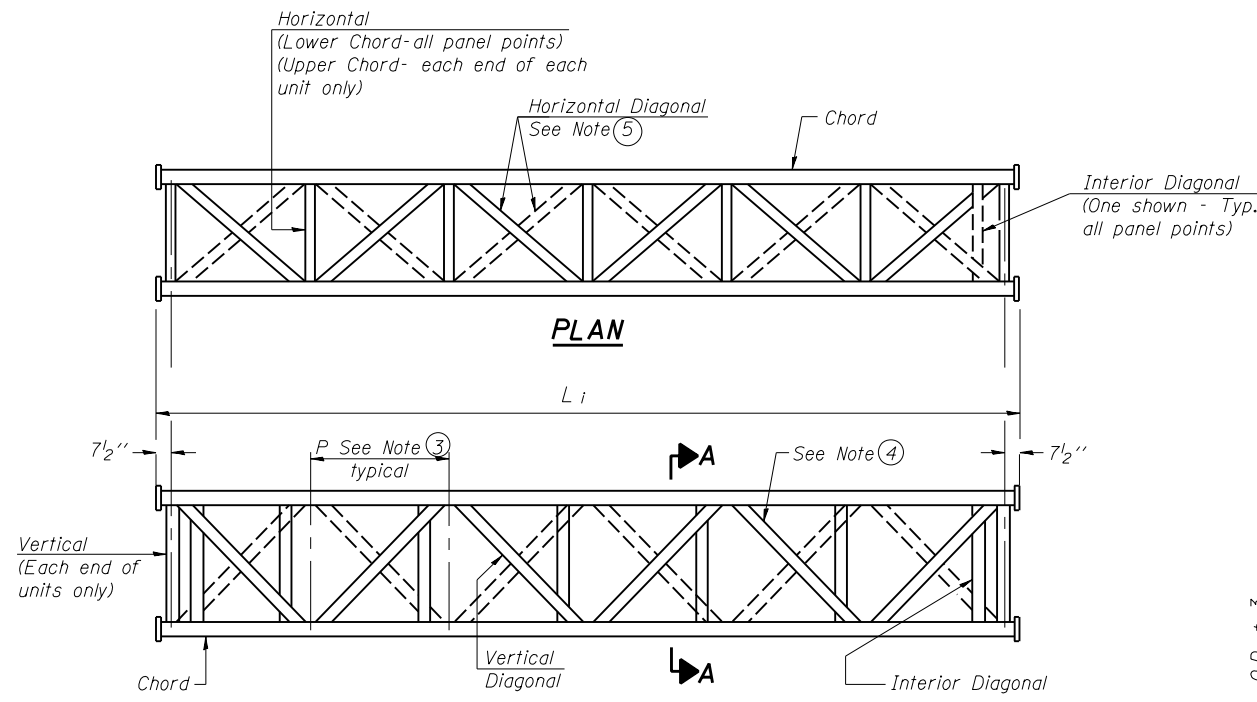
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

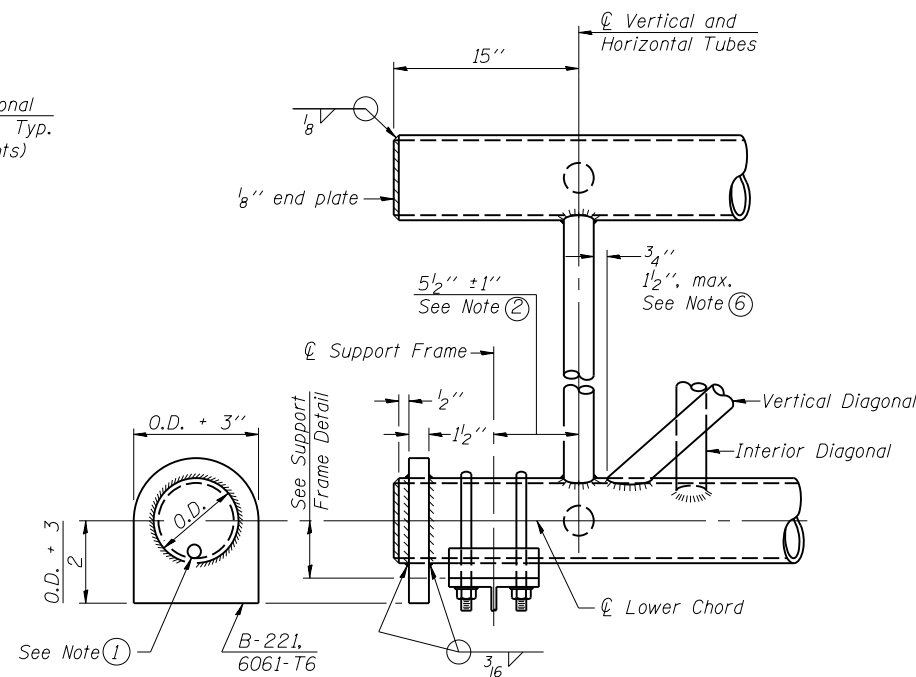
SHEET NO. 1 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	425
CONTRACT NO.			66982	

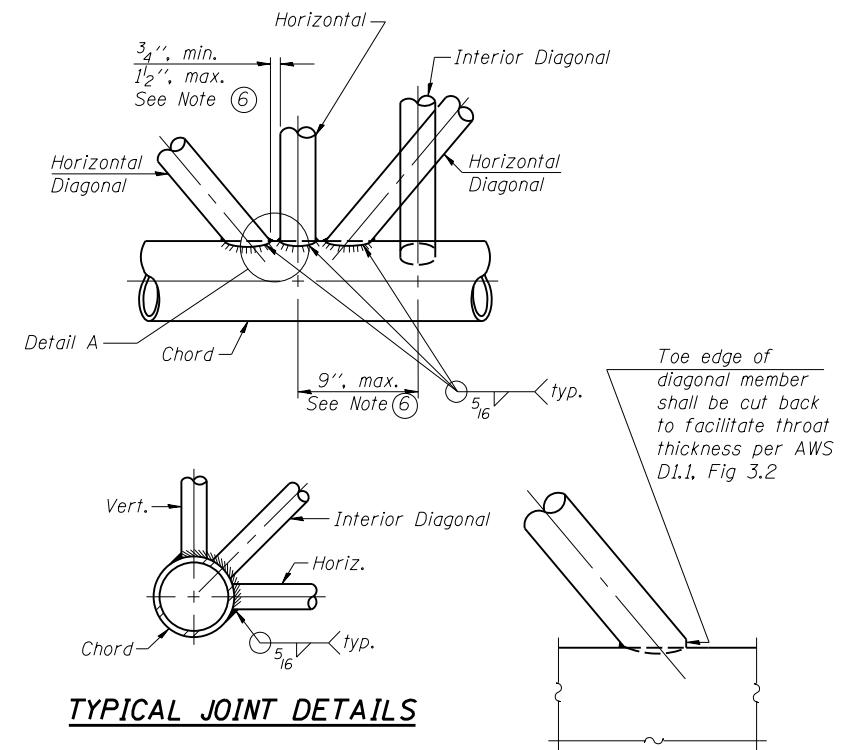
ILLINOIS FED. AID PROJECT



**ELEVATION
TYPICAL INTERIOR UNIT**
Even number of panels/interior unit required.

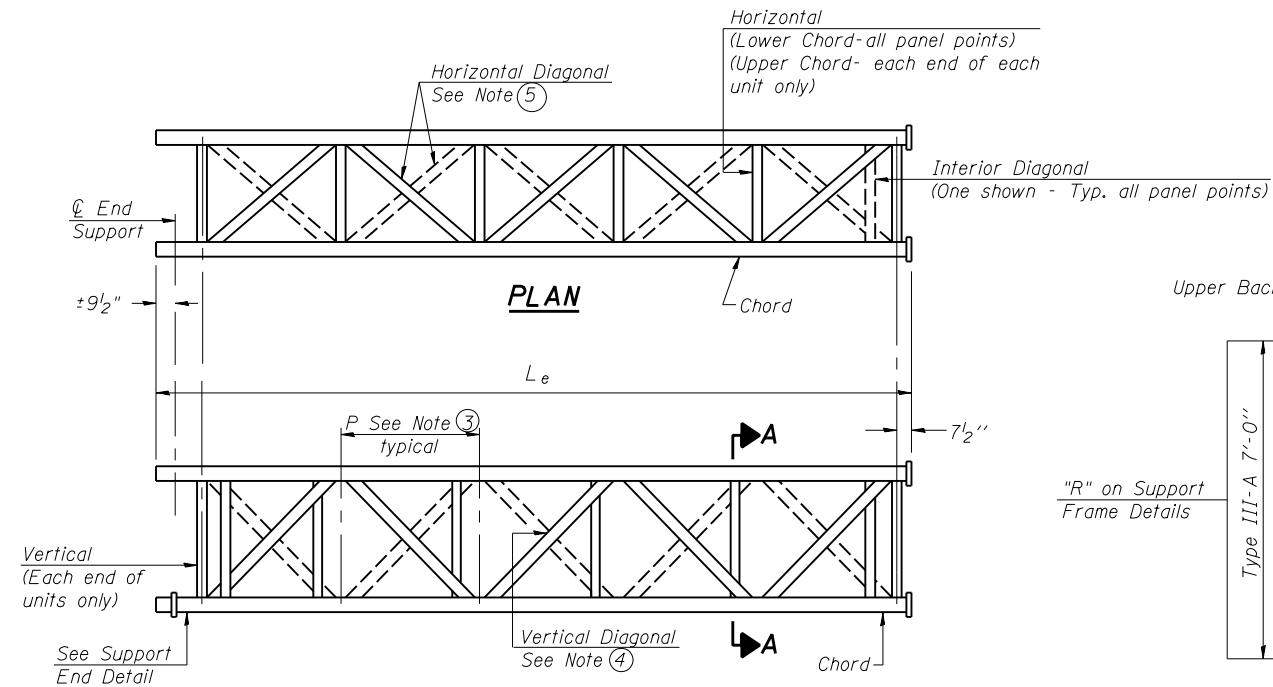


SUPPORT END DETAIL FOR EXTERIOR UNIT

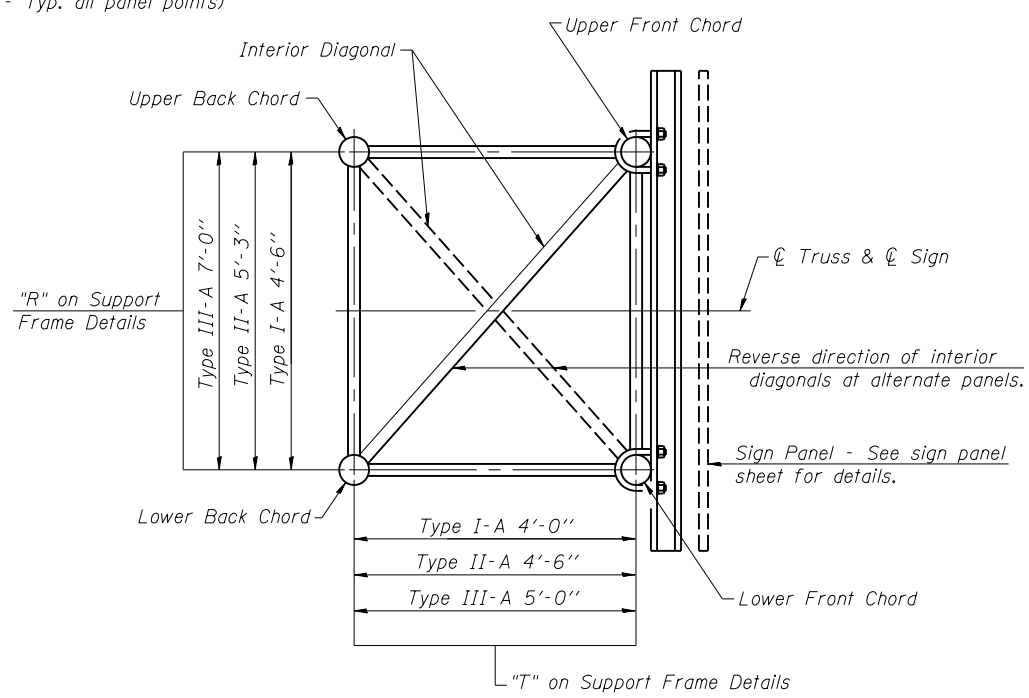


TYPICAL JOINT DETAILS

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. 1/2" φ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" 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 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

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LAYOUT	FLN	06.11.2013
DRAWN	MGM	06.12.2013
REVIEWED	FLN	10.17.2013

05-A-2

6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #184-001084
 Hanson Professional Services Inc.

USER NAME = hussu00411	DESIGNED - FLN	REVISD
PLOT SCALE =	CHECKED - DPA	REVISD
PLOT DATE = 12\02\2013	DRAWN - MGM	REVISD
	CHECKED - FLN	REVISD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

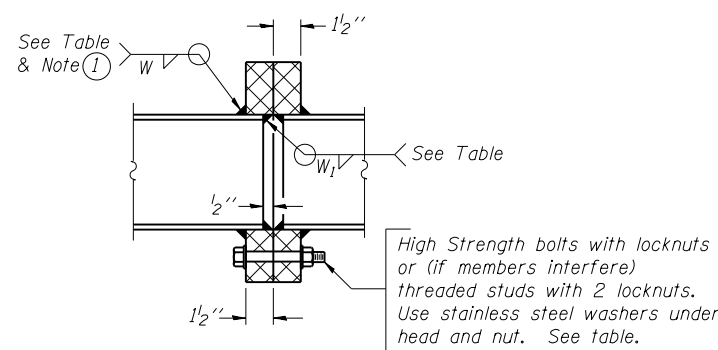
SHEET NO. 2 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	426
CONTRACT NO.			66982	

ILLINOIS FED. AID PROJECT

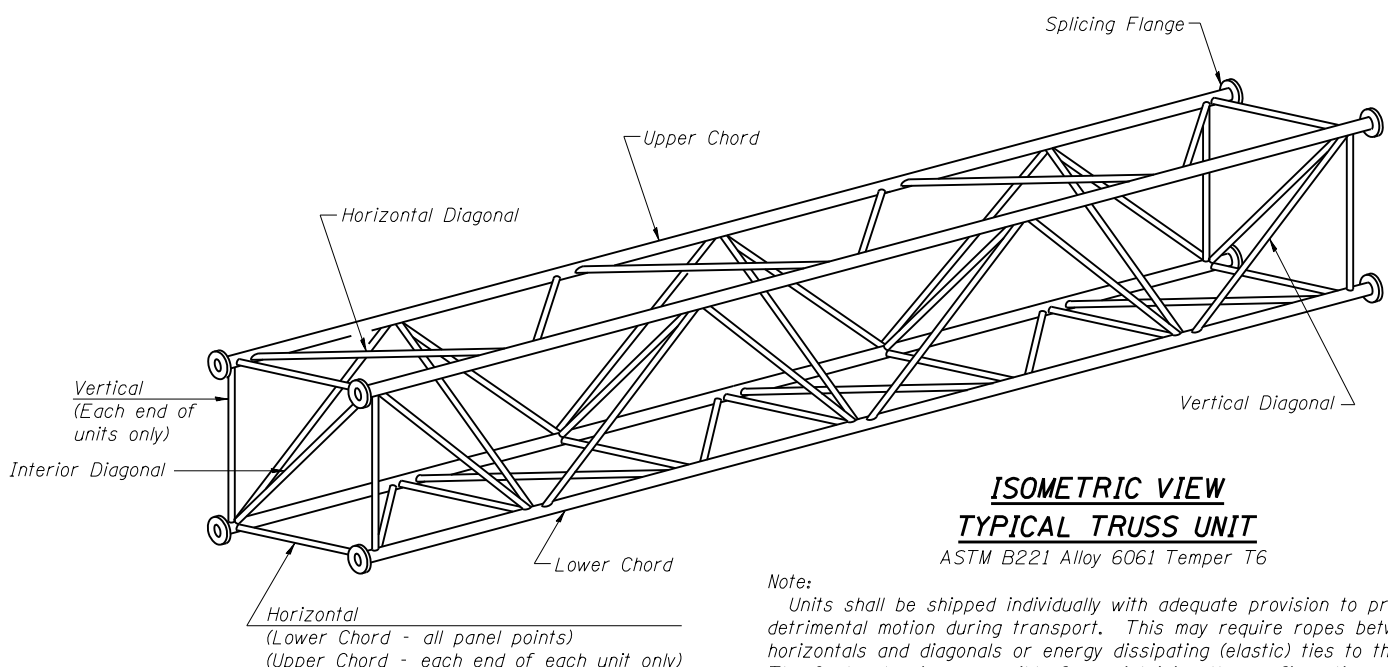
TRUSS UNIT TABLE

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.(L _e)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L _i)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W ₁		
3S046LBOUR000.5	7472+10	II-A	6	31'-0"	4'-10 1/4"	2	6	30'-4 1/2"	4'-10 1/4"	7"	3/8"	3"	5/16"	4 1/4"	8	1"	7/16"	5/16"	11 1/2"	15"
3S046LBOUR000.6	7478+15	II-A	6	31'-0"	4'-10 1/4"	2	6	30'-4 1/2"	4'-10 1/4"	7"	3/8"	3"	5/16"	4 1/4"	8	1"	7/16"	5/16"	11 1/2"	15"



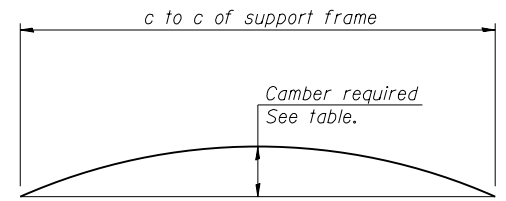
SECTION B-B

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

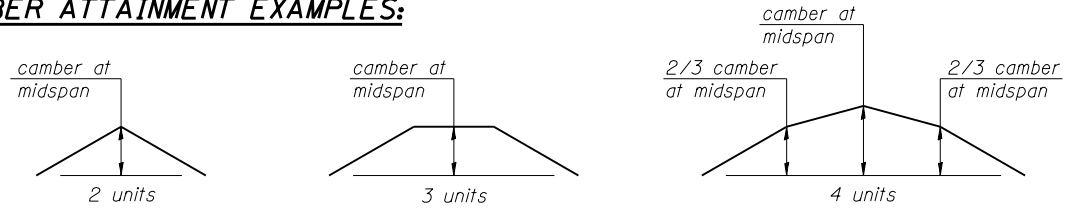
Note: Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection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



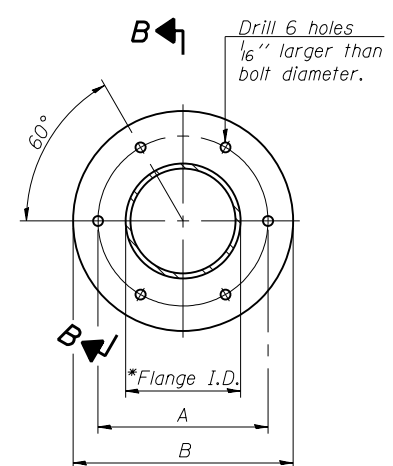
CAMBER DIAGRAM

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

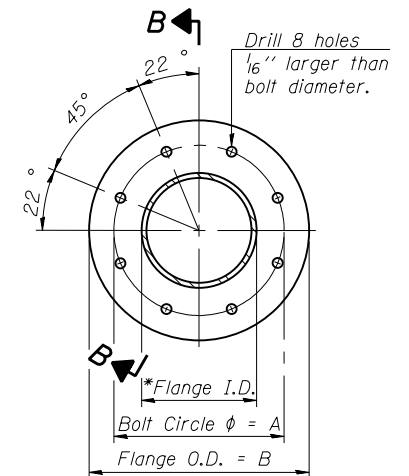
CAMBER ATTAINMENT EXAMPLES:



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".

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LAYOUT	FLN	06.11.2013
DRAWN	MGM	06.12.2013
REVIEWED	FLN	10.17.2013

OS4-A-2

6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #184-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISED
		CHECKED - DPA	REVISED
		DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED
	PLOT DATE = 12\02\2013		

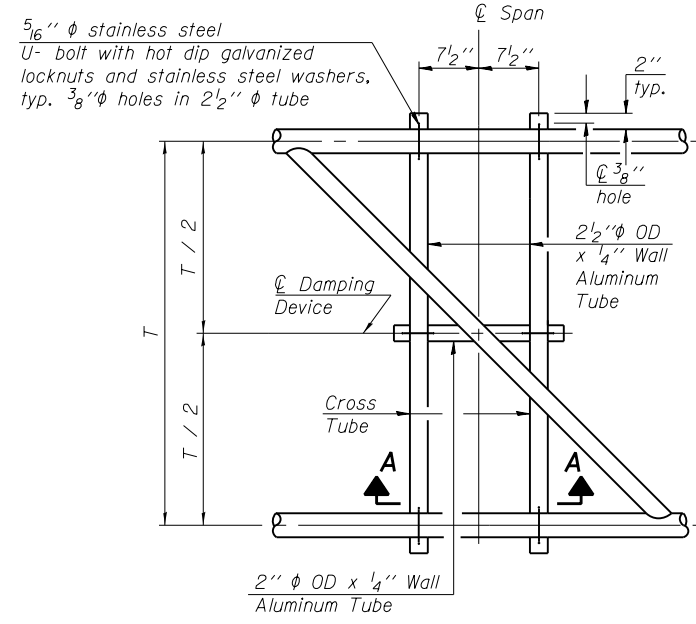


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

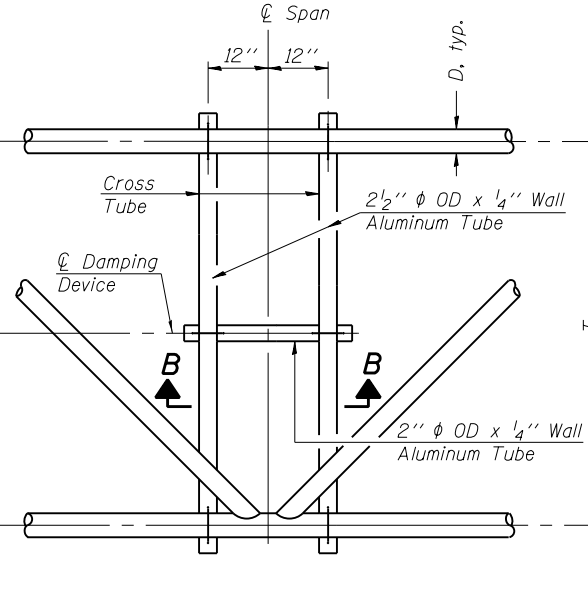
OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

SHEET NO. 3 OF 10 SHEETS

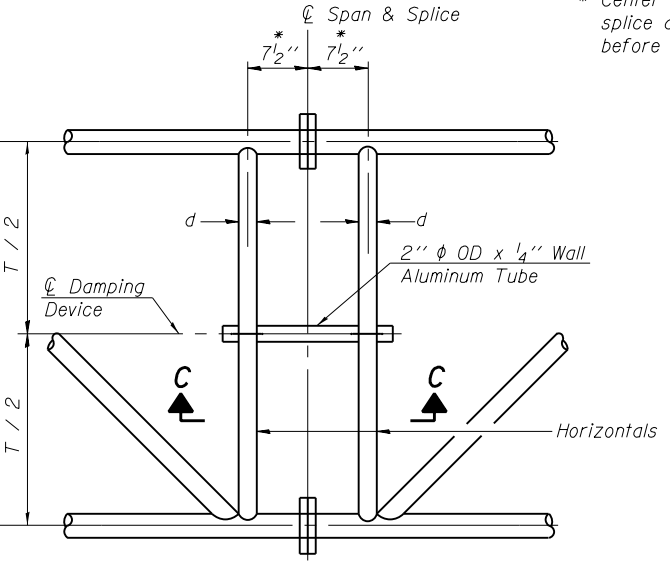
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	427
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



PLAN DETAIL "A"
 ☉ Span between Panel Points



PLAN DETAIL "B"
 ☉ Span at Panel Point

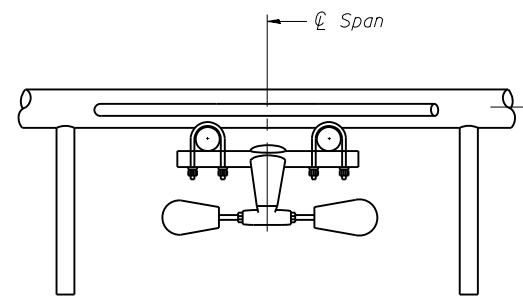


PLAN DETAIL "C"
 ☉ Span at ☉ Chord Splice

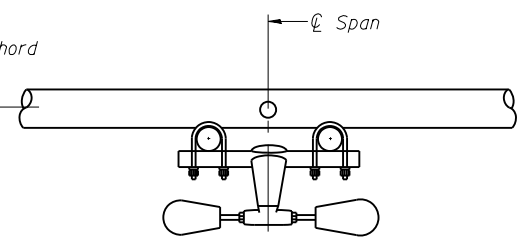
* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

NOTES

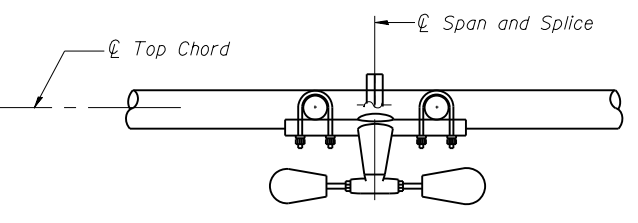
- Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...
- Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



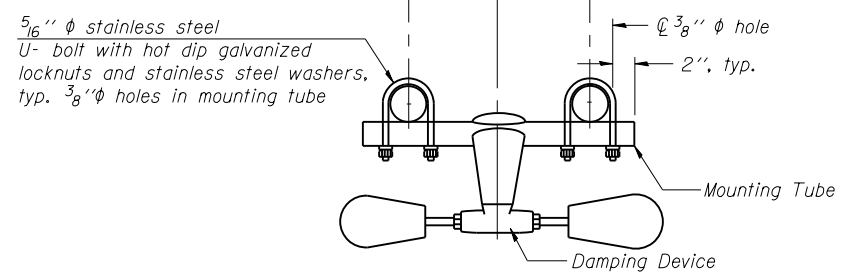
SECTION A-A



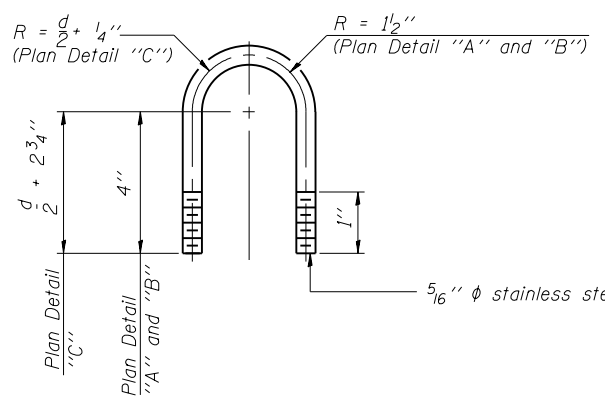
SECTION B-B



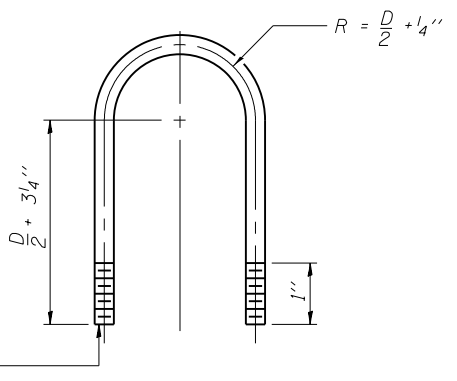
SECTION C-C



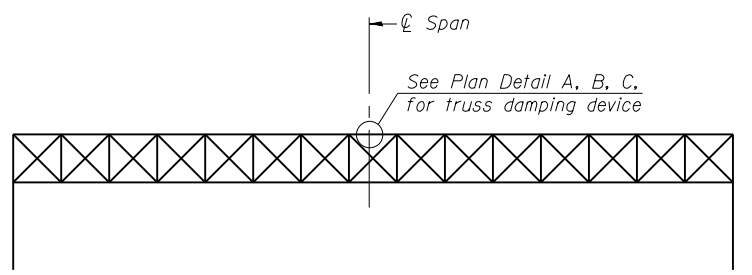
TRUSS DAMPING DEVICE CONNECTION DETAIL
 (Typical)



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

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LAYOUT	FLN	06.11.2013
DRAWN	MGM	06.12.2013
REVIEWED	FLN	10.17.2013

OS-A-D 6-1-12



PROFESSIONAL DESIGN FIRM LICENSE #184-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISED
		CHECKED - DPA	REVISED
		DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED
PLOT SCALE =			
PLOT DATE = 12/02/2013			

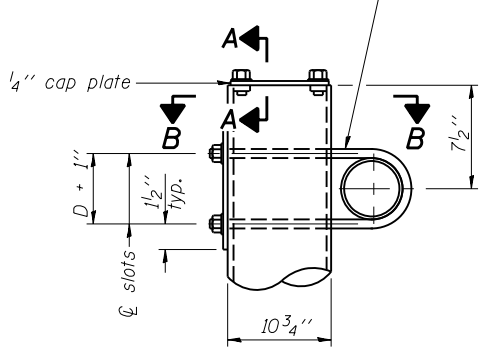
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
 DAMPING DEVICE

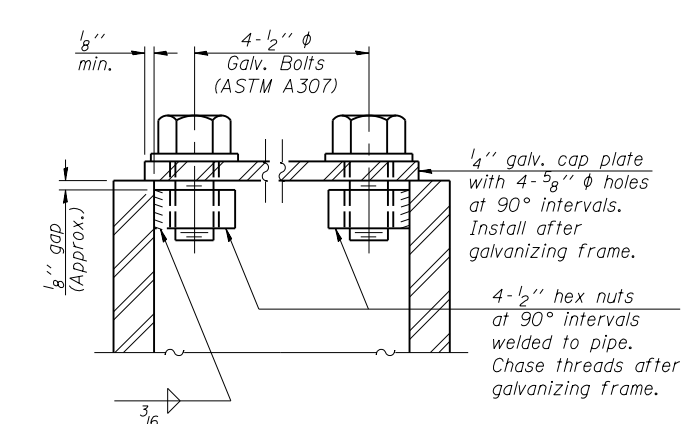
SHEET NO. 4 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	428
			CONTRACT NO.	66982
ILLINOIS FED. AID PROJECT				

3/4" φ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1 3/16" x 2" slots on 10" φ pipe.
(4 slots required per pipe)

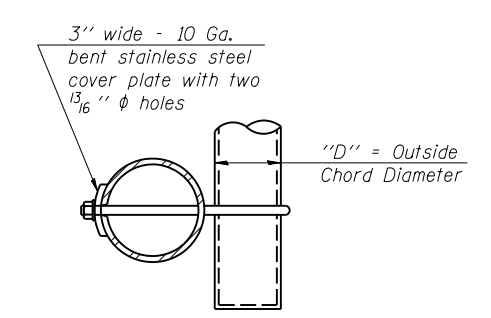


DETAIL A

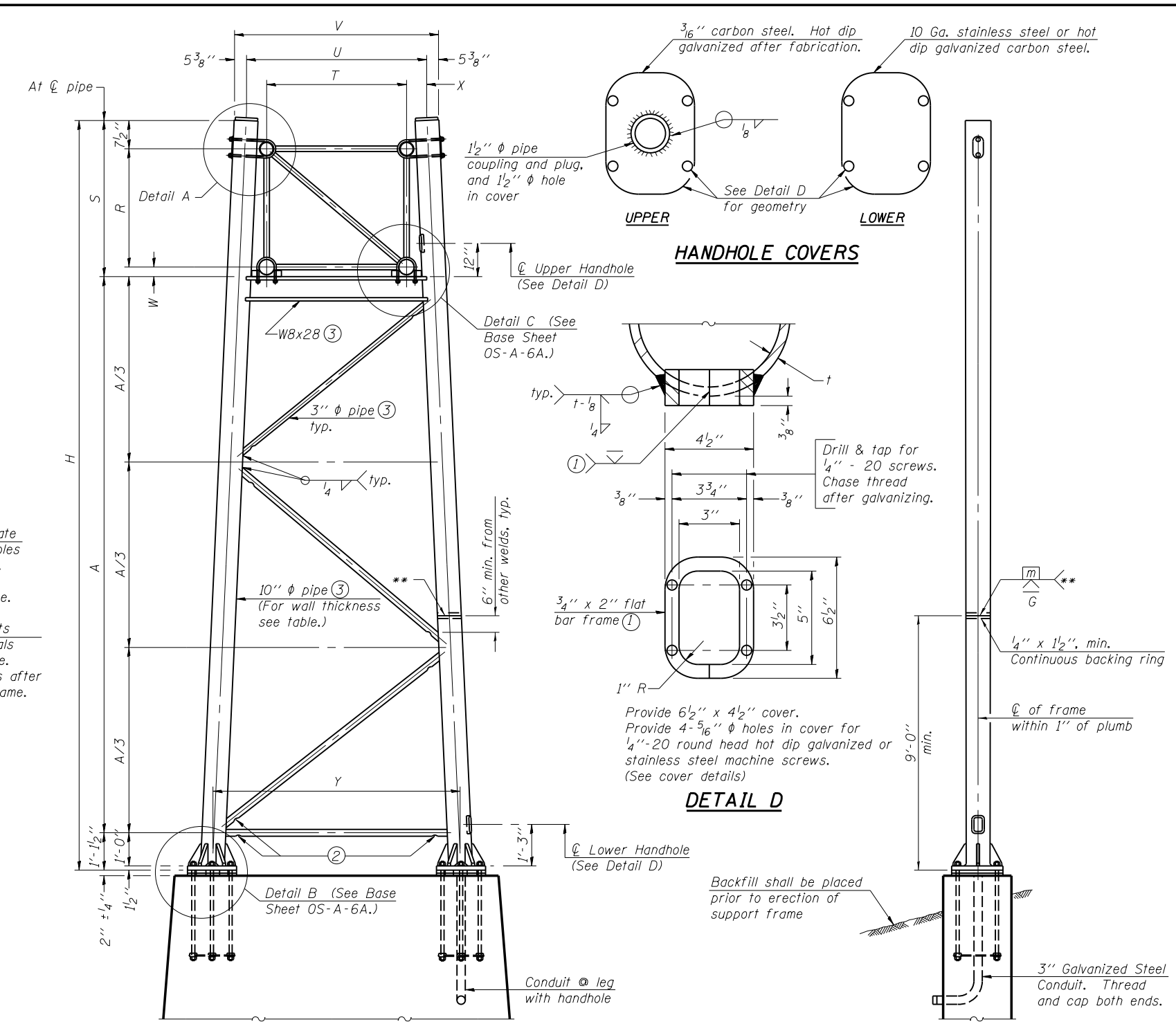


SECTION A-A

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

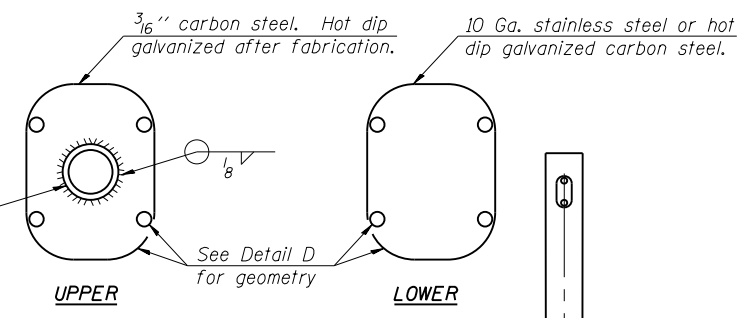


SECTION B-B

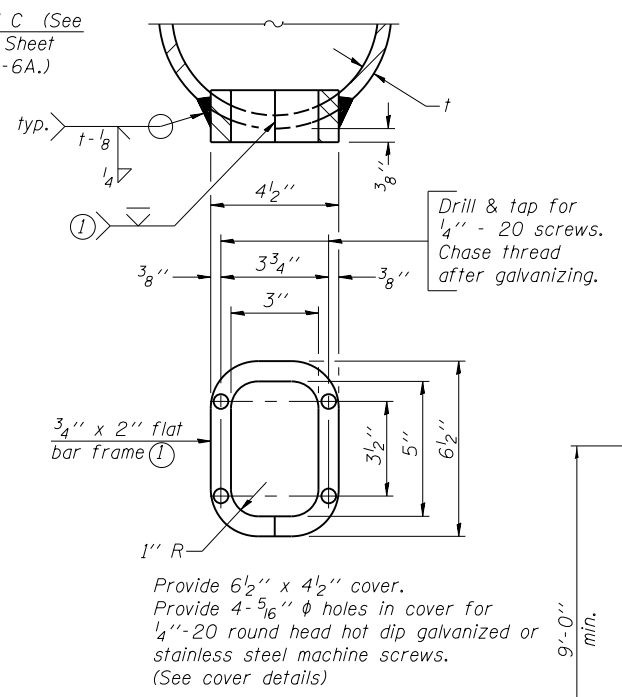


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

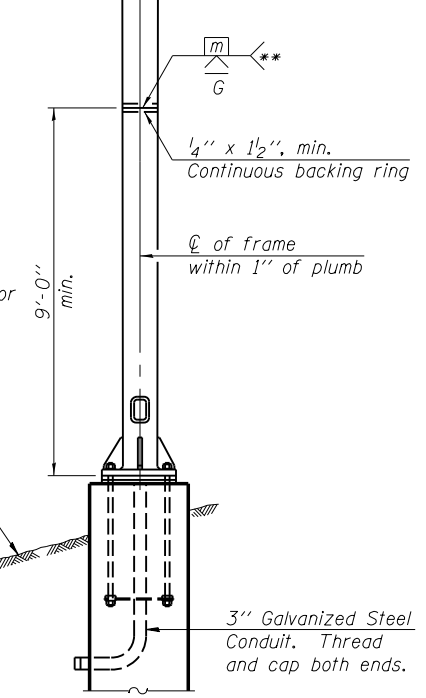
SIDE ELEVATION



HANDHOLE COVERS



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 500 μin 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'-5 1/2"	4'-0"	5'-6"	6'-4 3/4"	4"	9"	8'-3"
II-A ⑤	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"

10" φ 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				
3S046LBOUR000.5	7472+10	X	X	II-A	0.365"	29'-3"	21'-10 1/4"
3S046LBOUR000.6	7478+15	X	X	II-A	0.365"	28'-1"	20'-8 1/4"

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LAYOUT: FLN 06.11.2013
DRAWN: MGM 06.12.2013
REVIEWED: FLN 10.17.2013

OS-A-6

6-1-12

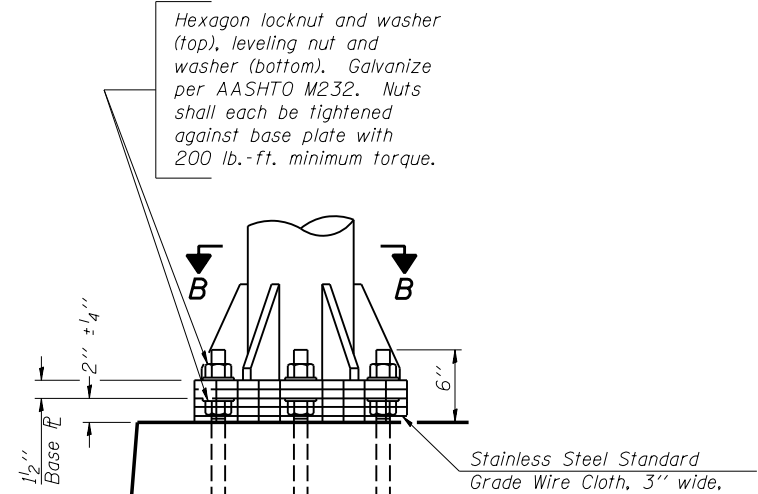
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HANSON Hanson Professional Services Inc.		CHECKED - DPA	REVISED
	PLOT SCALE =	DRAWN - MGM	REVISED
	PLOT DATE = 12/02/2013	CHECKED - FLN	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS**

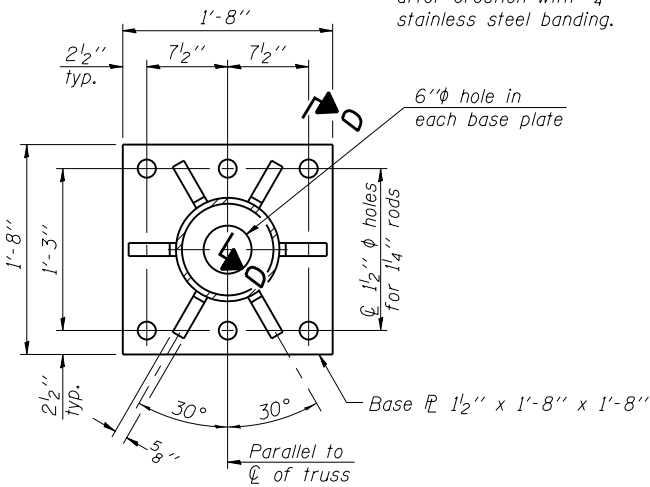
SHEET NO. 5 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	429
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

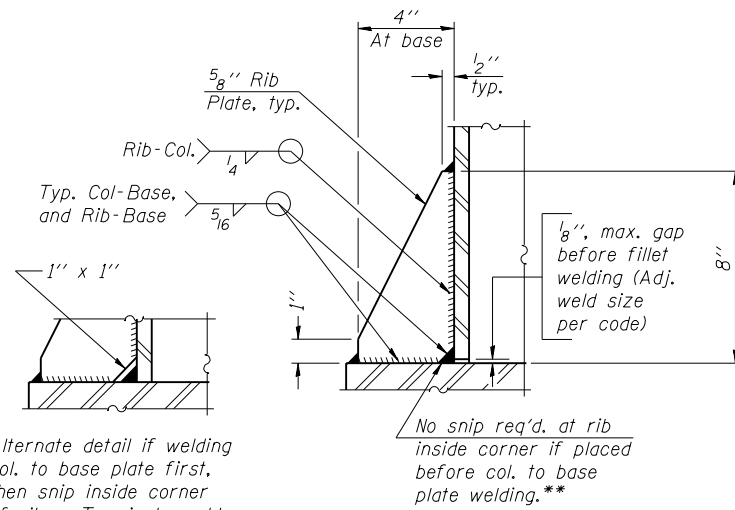


DETAIL B

Ribs shall be cut to fit slope of pipe.
Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.

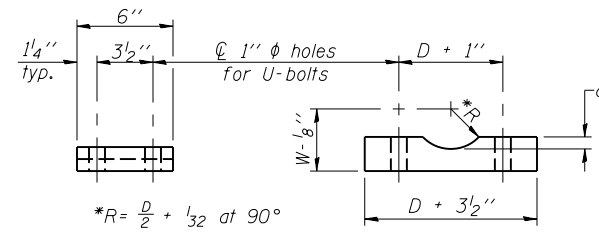


SECTION B-B



SECTION D-D

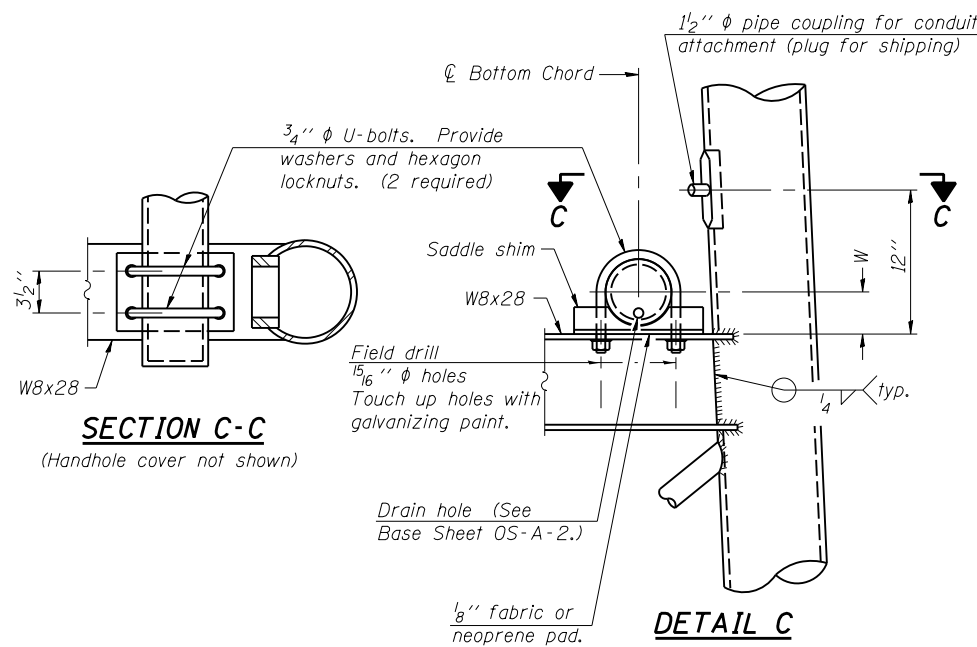
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.



SADDLE SHIM DETAIL

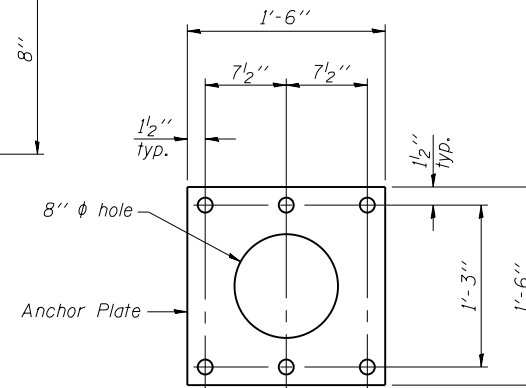
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"
7"	1"

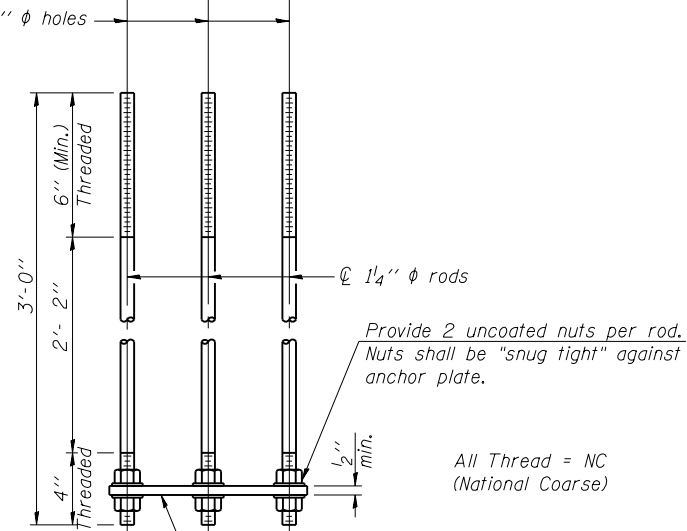


SECTION C-C

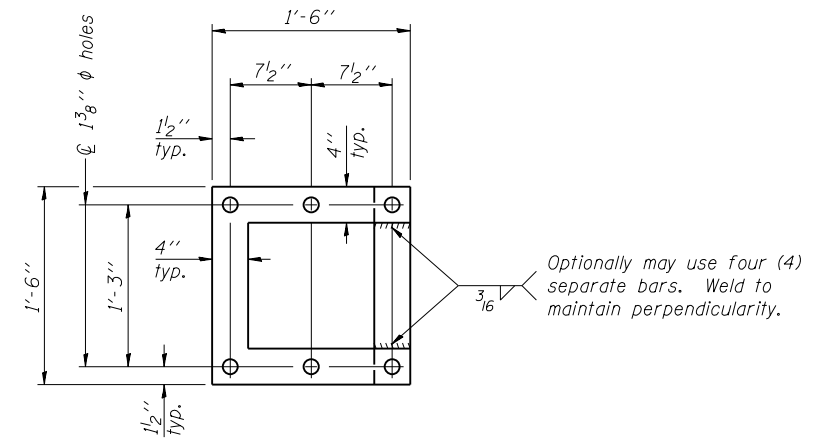
DETAIL C



ANCHOR ROD DETAIL
Spread Footing Foundation

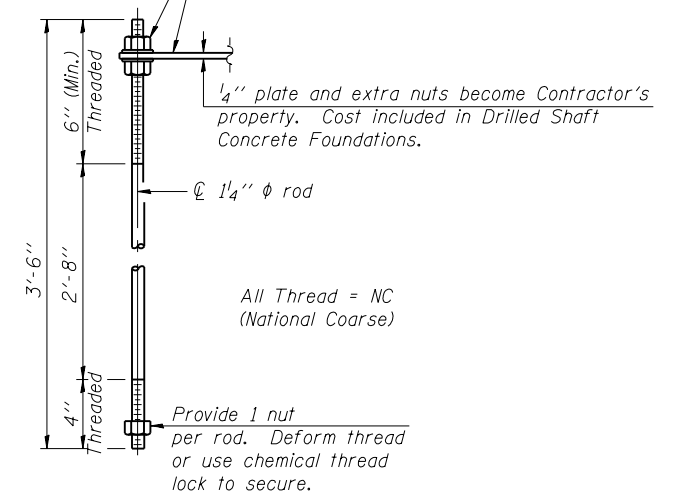


All Thread = NC
(National Coarse)



POSITIONING PLATE(S)

At each location, provide 1/4" thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.



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.

10" PIPE SUPPORT FRAME DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	430
CONTRACT NO.			66982	

SHEET NO. 6 OF 10 SHEETS

ILLINOIS FED. AID PROJECT

OS-A-6A

6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME = hussu00411

DESIGNED - FLN

REVISED

CHECKED - DPA

REVISED

PLOT SCALE =

DRAWN - MGM

REVISED

PLOT DATE = 12/02/2013

CHECKED - FLN

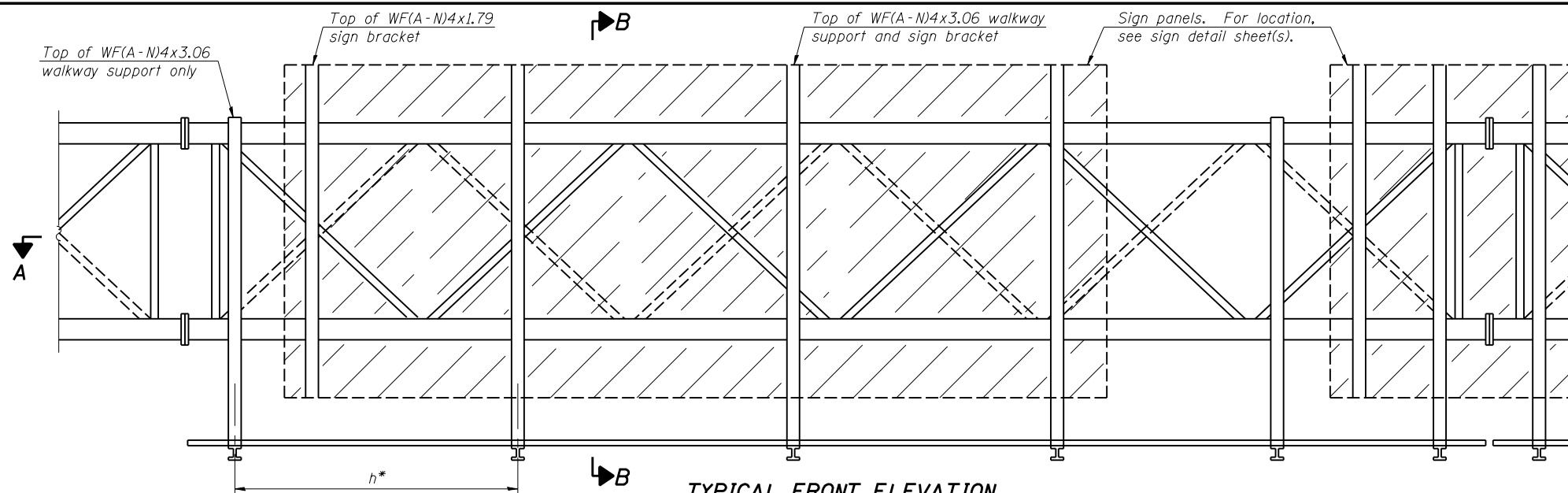
REVISED



Hanson Professional Services Inc.

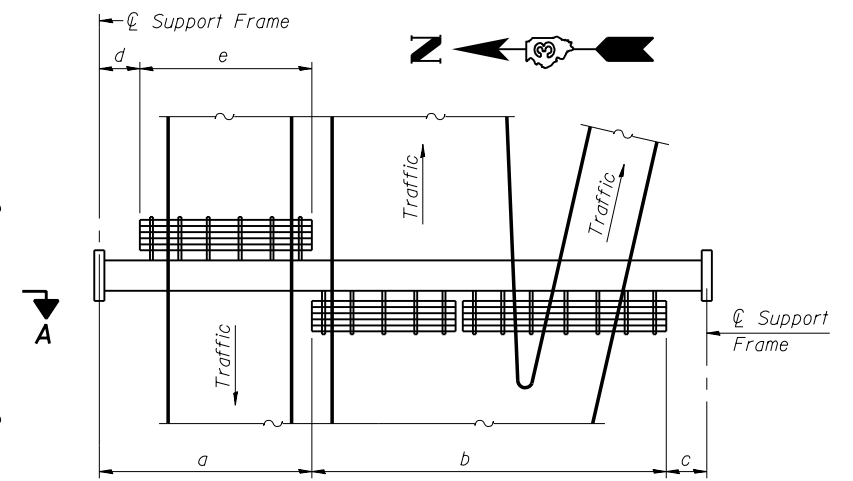
LAYOUT	FLN	06.11.2013
DRAWN	MGM	06.12.2013
REVIEWED	FLN	10.17.2013

12/02/2013
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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)

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 ϕ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ϕ of nearest support bracket)

h = 6'-0" maximum (ϕ to ϕ 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

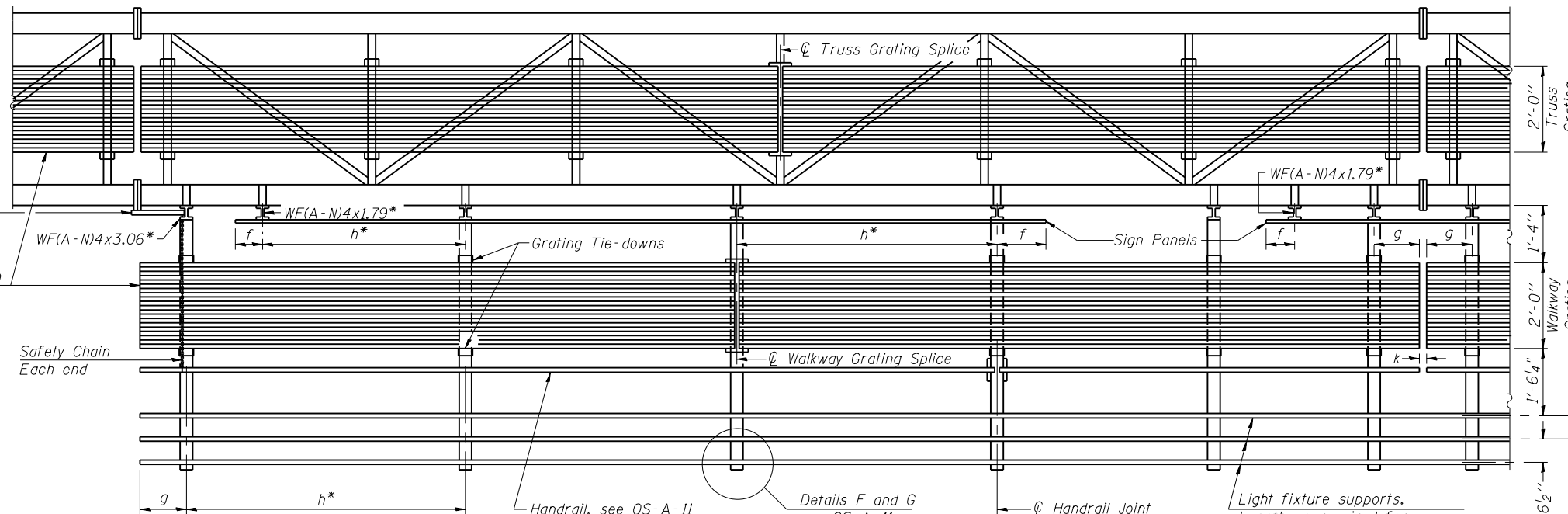
** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

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.

** Alternate angle for safety chain attachment

Standard Aluminum Grating, see Details T and W



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.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
3S046LBOUR000.5	7472+10	73'-0"	32'-0"	16'-0"	17'-0"	56'-0"	88'-0"
3S046LBOUR000.6	7478+15	49'-0"	56'-0"	16'-0"	17'-0"	32'-0"	88'-0"

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

Walkway and Truss Grating width dimensions are nominal and may vary $\pm 1/2"$ based on available standard widths.

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LAYOUT
DRAWN
REVIEWED

FLN 06.11.2013
MGM 06.12.2013
FLN 10.17.2013

OS-A-9

6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #184-001084
HANSON
Hanson Professional Services Inc.

USER NAME = hussu00411
DESIGNED - FLN
CHECKED - DPA
DRAWN - MGM
PLOT SCALE =
PLOT DATE = 12/02/2013

DESIGNED - FLN
CHECKED - DPA
DRAWN - MGM
CHECKED - FLN

REVISED
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REVISED

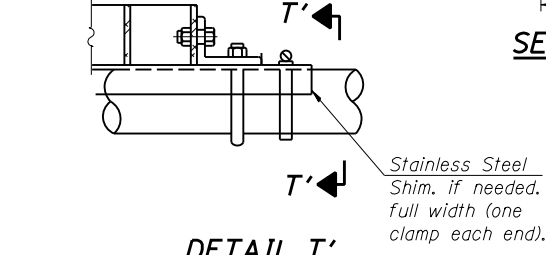
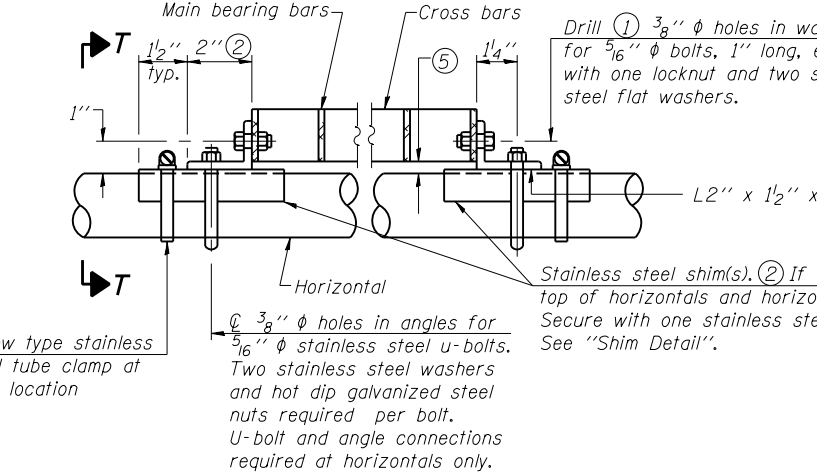
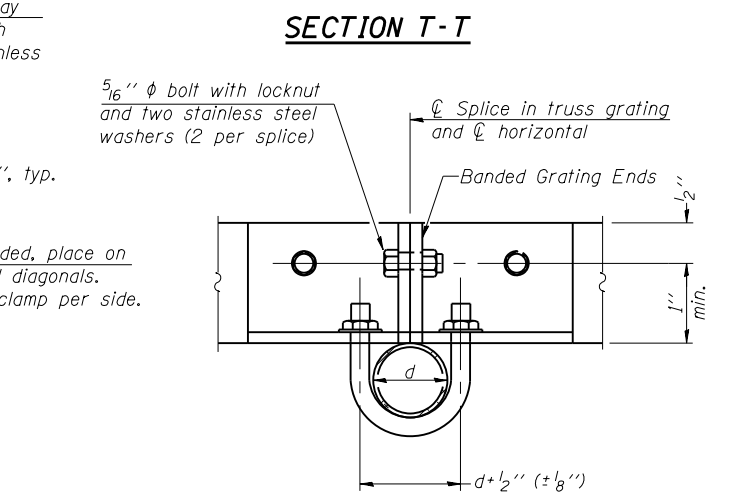
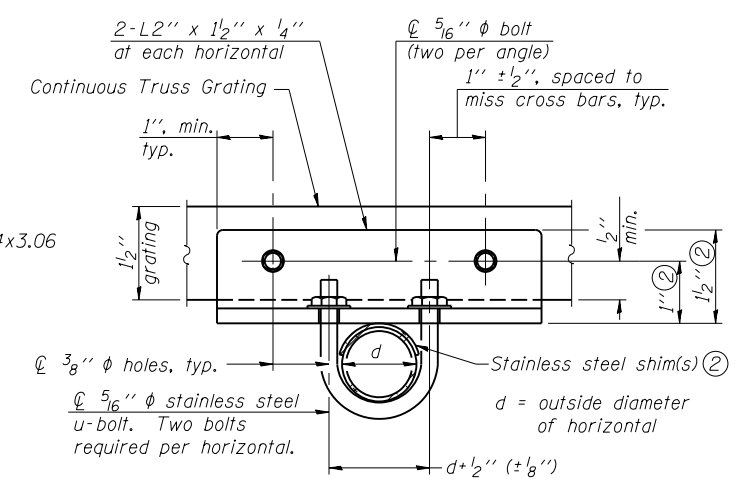
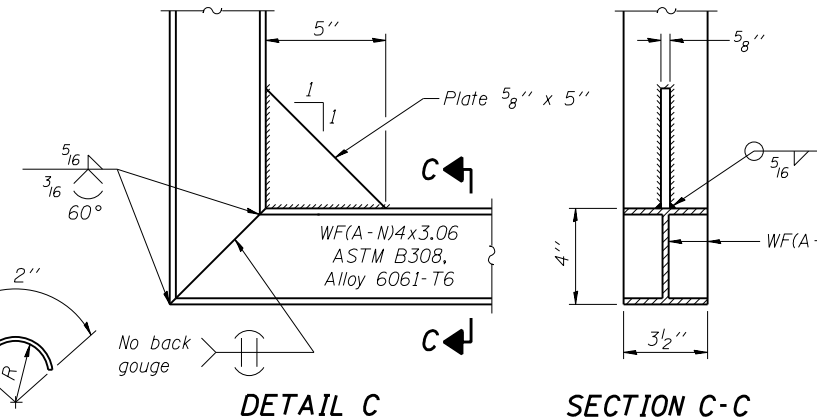
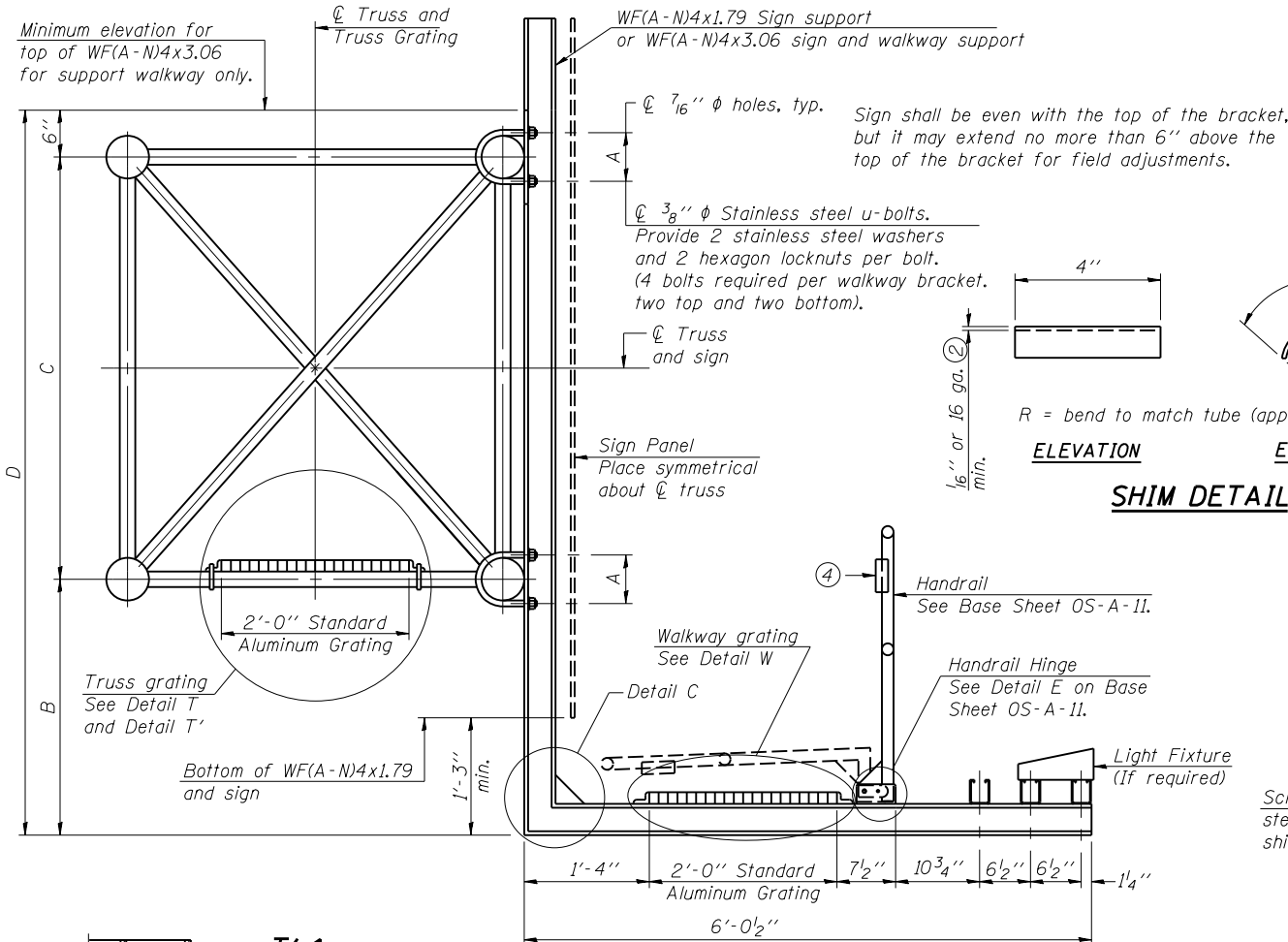
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS**

SHEET NO. 7 OF 10 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	431
CONTRACT NO.			66982	

ILLINOIS FED. AID PROJECT

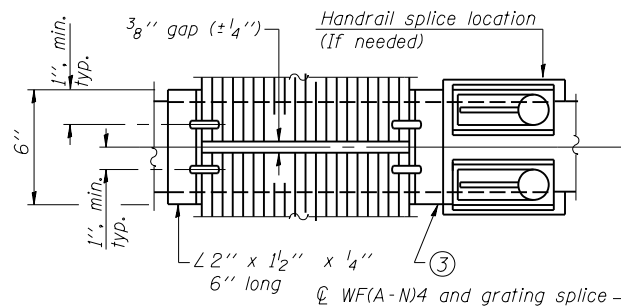


SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

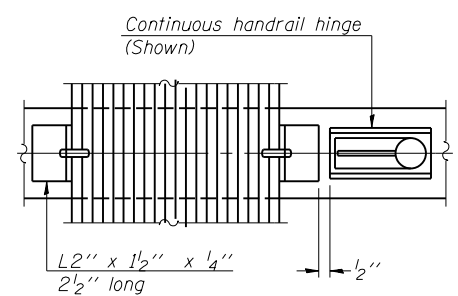
Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.
 Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

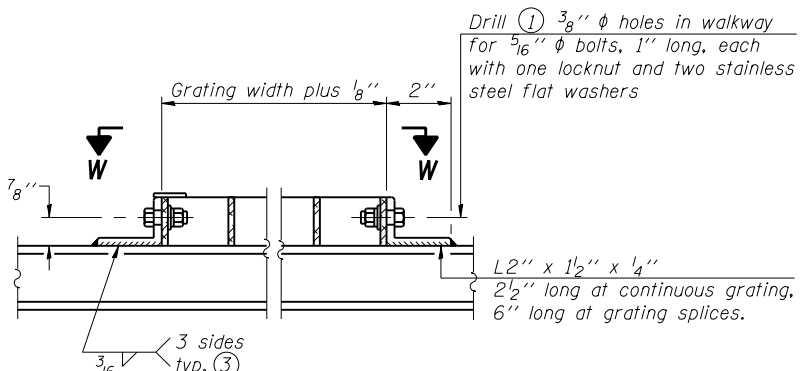
Aluminum Grating with modified "4" sections for main bearing bars shall meet the following requirements:
 Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.



(AT WALKWAY GRATING SPLICE)



(CONTINUOUS WALKWAY GRATING)



DETAIL W (Walkway grating)

Structure Number	Station	A	⑥ B	C	⑥ D
3S046LBOUR000.5	7472+10	7 1/2"	5'-9"	5'-3"	11'-6"
3S046LBOUR000.6	7478+15	7 1/2"	5'-9"	5'-3"	11'-6"

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- 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.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual height of tallest sign given on OS-A-1.

12/02/2013 c:\p\se-work\vd_nof_delete\dms560\3\029\0038-shf-signstr\01008.dgn

LAYOUT: FLN 06.11.2013
 DRAWN: MGM 06.12.2013
 REVIEWED: FLN 10.17.2013

OS-A-10

6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #194-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISED
HANSON Hanson Professional Services Inc.	PLOT SCALE =	CHECKED - DPA	REVISED
	PLOT DATE = 12/02/2013	DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
 ALUMINUM WALKWAY DETAILS

SHEET NO. 8 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	432
CONTRACT NO. 66982			ILLINOIS FED. AID PROJECT	

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#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.

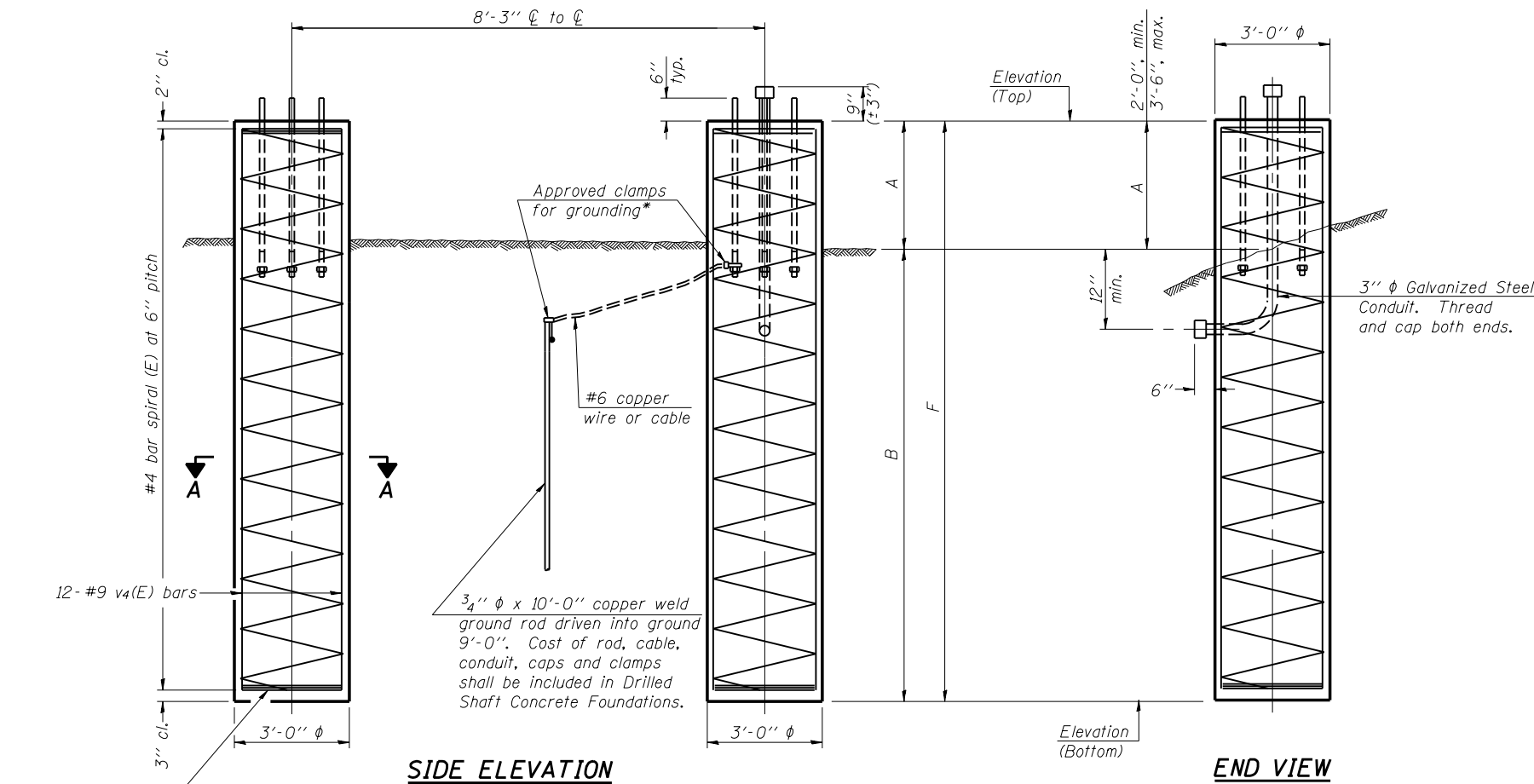
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District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

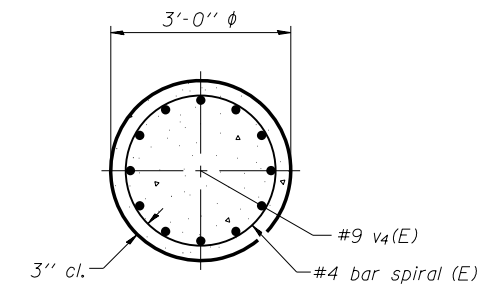
Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

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



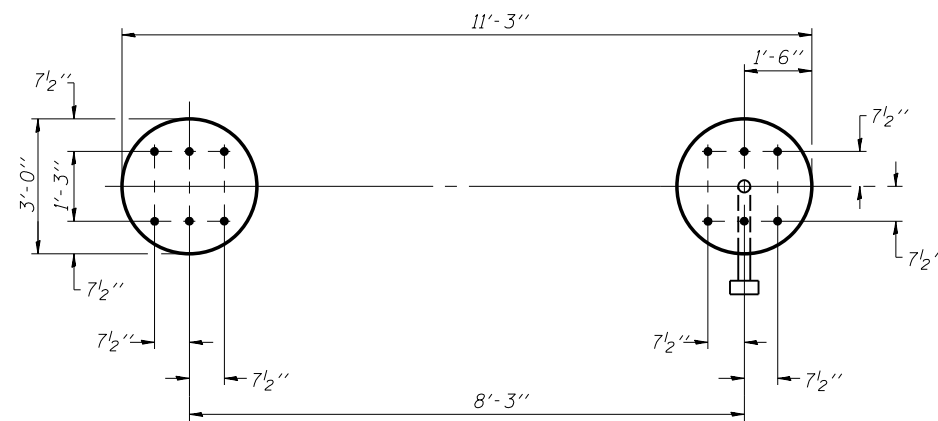
SIDE ELEVATION

END VIEW



SECTION A-A

3 hoops minimum top and bottom



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.

**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	
3S046LB0UR000.5	7472+10	691.65	668.02	2'-7 1/2"	21'-0"	23'-7 1/2"	691.65	668.15	2'-6"	21'-0"	23'-6"	24.7
3S046LB0UR000.6	7478+15	691.82	667.61	3'-2 1/2"	21'-0"	24'-2 1/2"	691.82	668.57	2'-3"	21'-0"	23'-3"	24.9

12/02/2013 c:\p\se\work\do_no_delete\dms56013\0309H0038-shr-signstr-0101.dgn

LAYOUT	FLN	06.11.2013
DRAWN	MGM	06.12.2013
REVIEWED	FLN	10.17.2013

OS4-F3

6-1-12

PROFESSIONAL DESIGN FIRM LICENSE #184-001084
 Hanson Professional Services Inc.

USER NAME = hussu00411	DESIGNED - FLN	REVISED
PLOT SCALE =	CHECKED - DPA	REVISED
PLOT DATE = 12\02\2013	DRAWN - MGM	REVISED
	CHECKED - FLN	REVISED

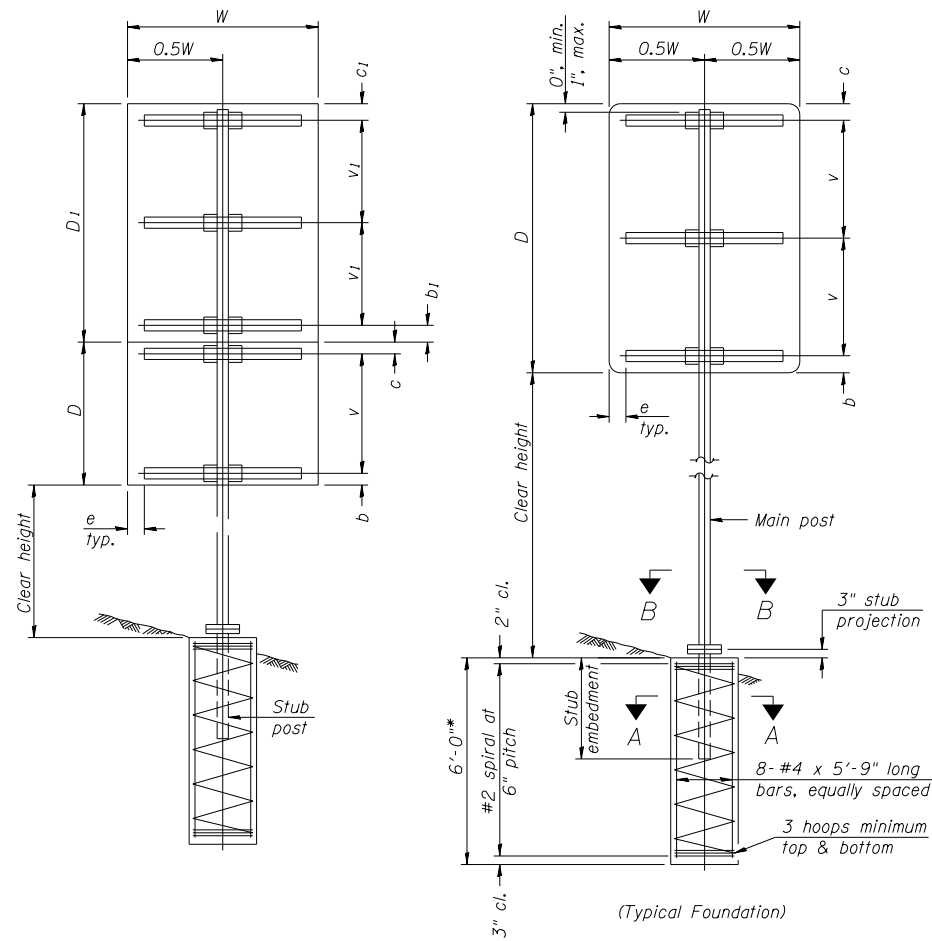
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

SHEET NO. 10 OF 10 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	434
CONTRACT NO.			66982	

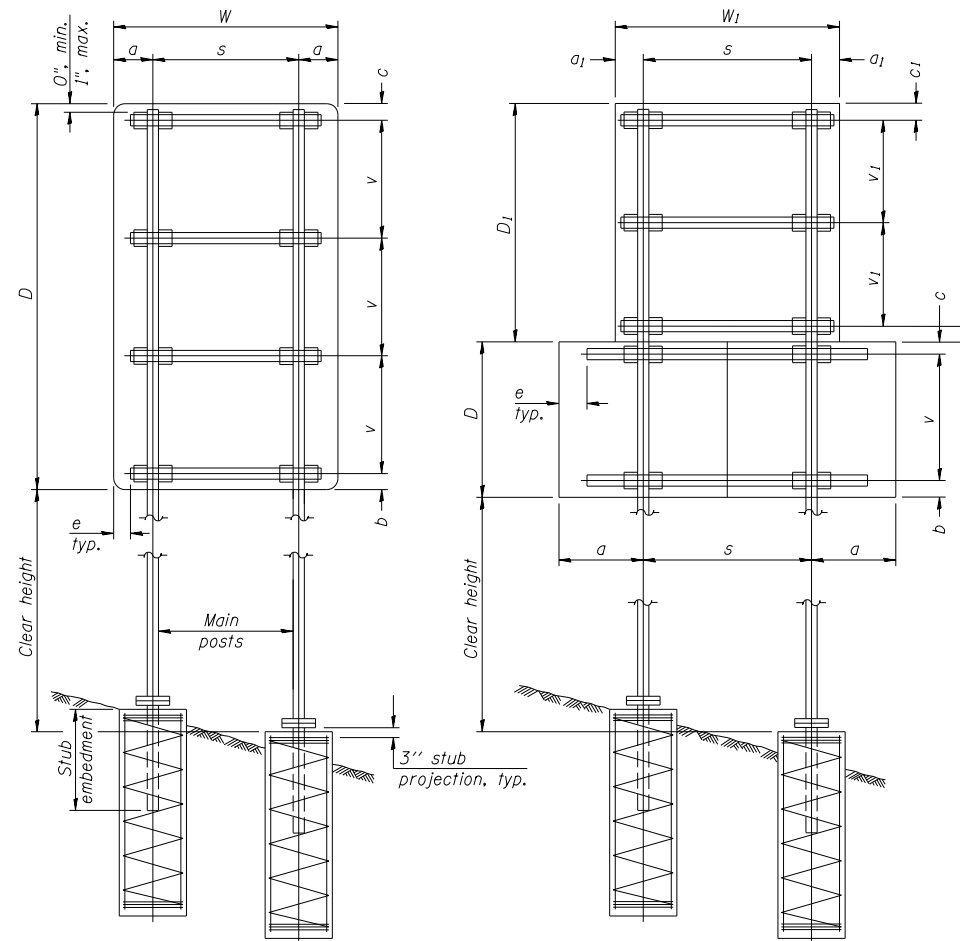
ILLINOIS FED. AID PROJECT



SINGLE POST ASSEMBLY EXAMPLES

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

a or $a_1 = 6"$ min. to $2'-0"$ max. (Approximately $0.2W$ or $0.2W_1$)
 b or $b_1 = 3"$ min. to $4"$ max
 c or $c_1 = 3"$ min. to $4"$ max
 $e = 0"$ min. to $6"$ max
 $s = 3'-0"$ min. to $6'-0"$ max. (Approximately $0.6W$ or $0.6W_1$)
 v or $v_1 = 2'-0"$ min. to $2'-11"$ max.



DUAL POST ASSEMBLY EXAMPLES

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.

One foundation requires 0.7 cubic yards of concrete and 46 pounds of reinforcement bars and spiral hoops.

LOADING: 80 mph wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
 Structural steel - 20,000 psi
 Reinforcing steel - 20,000 psi
 Concrete - 1,400 psi
 Footing soil pressure - 2,000 psf

After fabrication, the post, fuse plate, base 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.

For Sections A-A and B-B, see Base Sheet BAT-A-2.

FOUNDATIONS:
 All necessary excavation or drilling (except in rock); backfilling with excavated material; disposal of unsuitable or surplus material; formwork; and furnishing and placing the Class SI Concrete and reinforcement bars, shall be included in the pay item used for foundations.

The measurement of the tubular steel shall be computed on the basis of the weight per foot of the support, multiplied by the combined length of the main posts and stub posts.

MAIN POST STEEL TUBING	WEIGHT PER FOOT (POUND)	STUB POST TABLE		MAIN POST TABLE				
		Stub Embedment	Stub Post Length	Bolt Size	A	t	R	Bolt Circle
3" x 2" x 1/4"	7.11	2'-0"	2'-3"	1/2" x 2 3/4"	8 1/4"	5/8"	9 3/32"	6 1/2"
4" x 2" x 1/4"	8.81	2'-0"	2'-3"	1/2" x 2 3/4"	8 1/4"	5/8"	9 3/32"	6 1/2"
4" x 3" x 1/4"	10.51	2'-3"	2'-6"	5/8" x 3 1/4"	10"	3/4"	11 3/32"	8"
5" x 3" x 1/4"	12.21	2'-3"	2'-6"	5/8" x 3 1/4"	10"	3/4"	11 3/32"	8"
6" x 3" x 1/4"	13.91	2'-3"	2'-6"	5/8" x 3 1/4"	11 1/2"	3/4"	13 3/32"	9 1/2"
6" x 4" x 1/4"	15.62	2'-3"	2'-6"	3/4" x 3 1/2"	11 1/2"	3/4"	13 3/32"	9 1/2"
6" x 4" x 5/16"	19.08	2'-3"	2'-6"	3/4" x 3 1/2"	11 1/2"	3/4"	13 3/32"	9 1/2"
7" x 5" x 1/4"	19.02	2'-6"	2'-9"	3/4" x 3 1/2"	1'-2"	3/4"	13 3/32"	1'-0"
8" x 4" x 1/4"	19.02	2'-6"	2'-9"	3/4" x 3 1/2"	1'-2"	3/4"	13 3/32"	1'-0"
8" x 6" x 1/4"	22.42	2'-6"	2'-9"	7/8" x 3 1/2"	1'-2"	3/4"	15 3/32"	1'-0"

BAT-A-1

6-1-12

(Sheet 1 of 2)

LAYOUT	FLN	06.11.2013
DRAWN	MGM	06.12.2013
REVIEWED	FLN	10.17.2013

FILE NAME = D309H0038-sht-details011
 MODEL NAME = Default

USER NAME = MWH
 PLOT SCALE = AS SHOWN
 PLOT DATE = 12\02\2013

DESIGNED - FLN
 DRAWN - MGM
 CHECKED - DPA
 DATE - 12.03.13

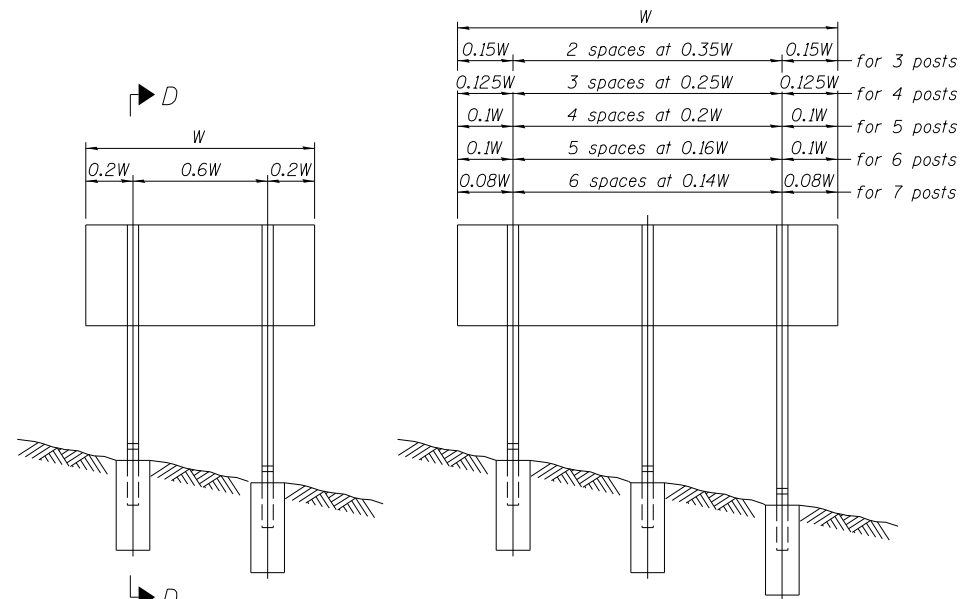
REVISED -
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 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

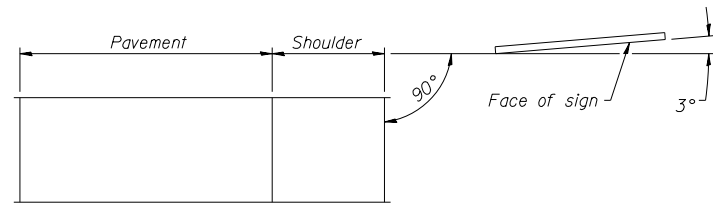
BREAK-AWAY TUBULAR STEEL
 SIGN POSTS AND FOUNDATIONS

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

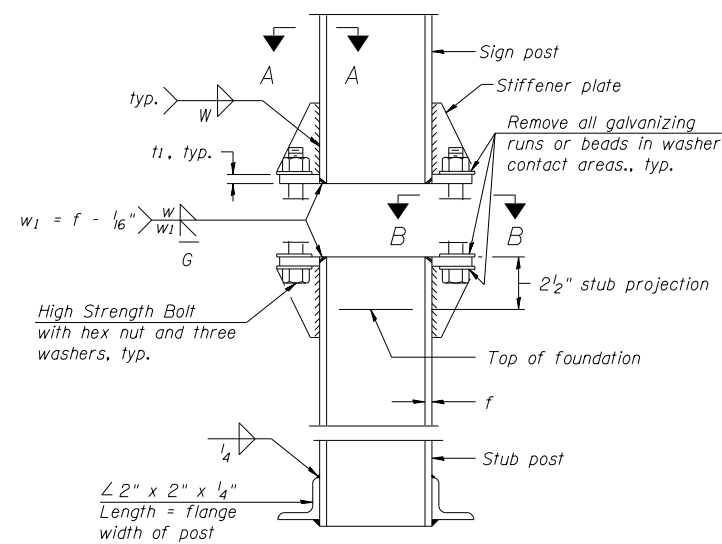
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	435
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



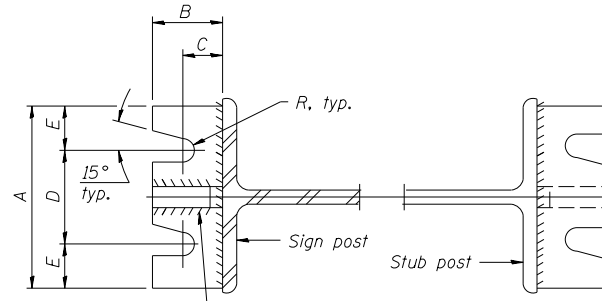
ELEVATION



LOCATION SKETCH

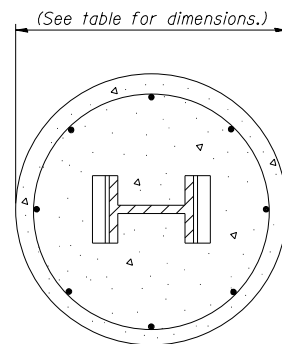


ELEVATION
SIGN POST & STUB POST

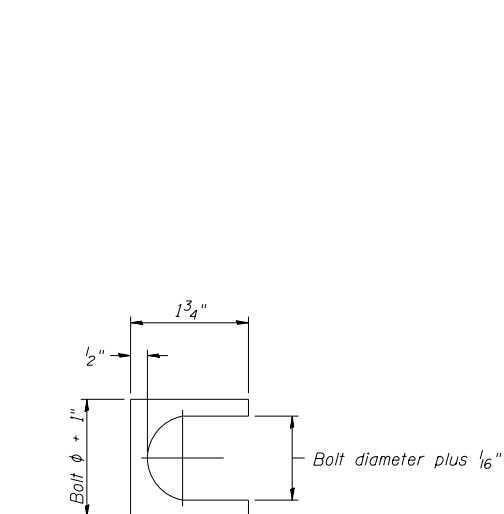


SECTION A-A

SECTION B-B

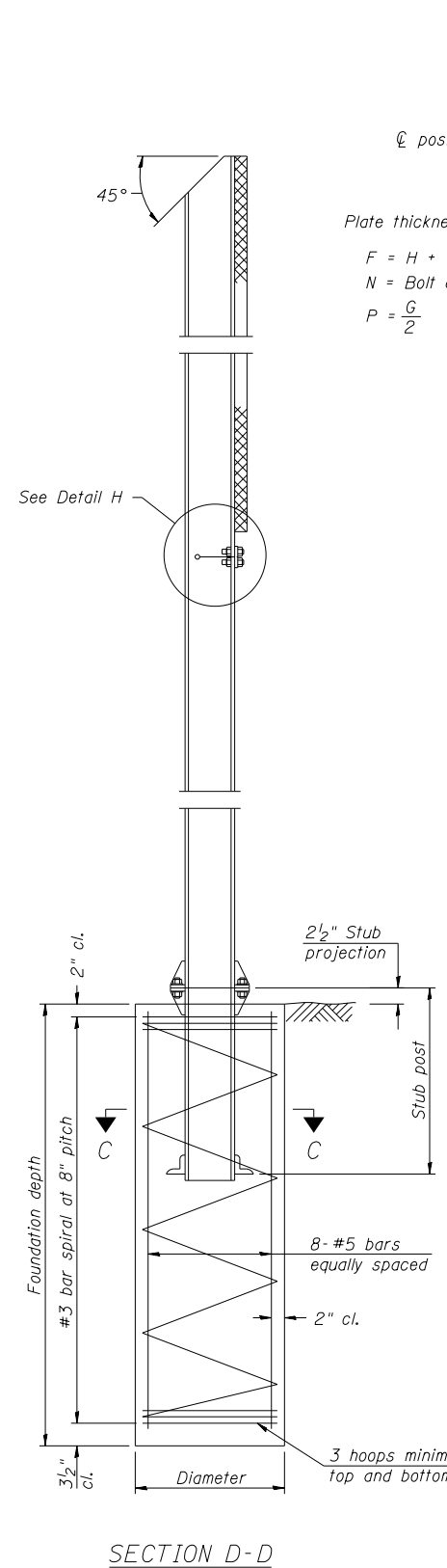


SECTION C-C

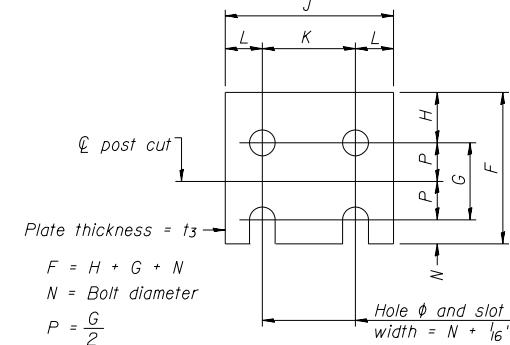


SHIM DETAIL

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

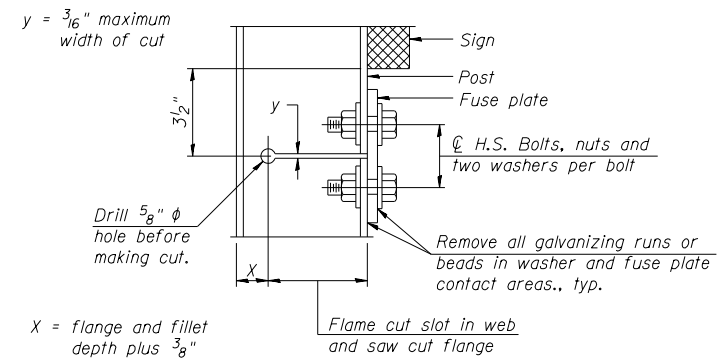


SECTION D-D

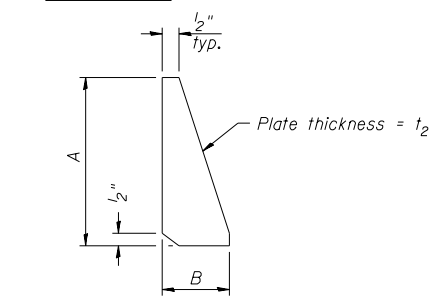


FUSE PLATE DETAIL
(Install with notches down.)

FUSE PLATE DATA		
N = Bolt Diameter	G	H
1/2"	2"	1 1/8"
5/8"	2 1/4"	1 1/4"
3/4"	2 1/2"	1 3/8"
7/8"	2 3/4"	1 1/2"
1"	3"	1 5/8"
1 1/8"	3 1/4"	1 3/4"
1 1/4"	3 1/2"	1 7/8"



DETAIL H



STIFFENER PLATE DETAIL
Diameter

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub 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.

(Sheet 1 of 2)

LAYOUT	FLN	06.11.2013
DRAWN	MGM	06.12.2013
REVIEWED	FLN	10.17.2013

FILE NAME = D309H0038-sht-details013
MODEL NAME = Default

BAW-A-1

6-1-12

DESIGNED - FLN	REVISOR -
DRAWN - MGM	REVISOR -
CHECKED - DPA	REVISOR -
DATE - 12.03.13	REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST DETAILS

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

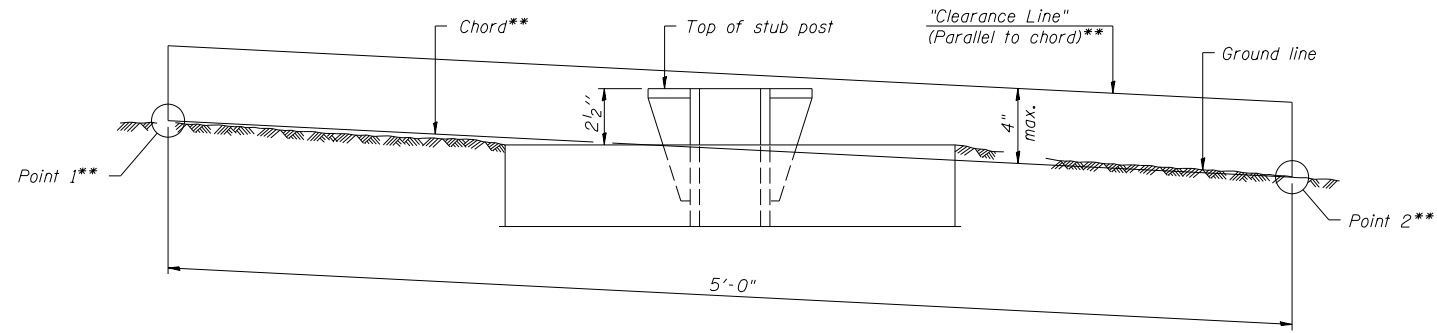
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	437
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA				
	Foundation			Reinforcement				Stub Post Length	Bolt Size	A	B	C	D	E	t ₁	t ₂	R	W	J	K	L	t ₃	
	Diameter	Minimum Depth	Concrete (cu. yds.) ①	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length	lbs. ②																
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	5/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1 1/4"	4"	2 1/4"	7/8"	1/4"	
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	5/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/8"	
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 3/2"	5/16"	5 1/4"	2 3/4"	1 1/4"	3/8"	
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 3/2"	5/16"	5 3/4"	2 3/4"	1 1/2"	1/2"	
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	1 5/32"	3/8"	5 3/4"	2 3/4"	1 1/2"	5/8"	
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	1 5/32"	3/8"	6 1/2"	3 1/2"	1 1/2"	5/8"	
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	1 5/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"	
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"	
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	3/8"	7"	3 1/2"	1 3/4"	1/2"	

*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	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---	---
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---	---	---	---	---
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"
W16x45	---	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"



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.

FLN 06.11.2013
 MCM 06.12.2013
 FLN 10.17.2013

BAW-A-2 6-1-12

FILE NAME =	USER NAME = MWH	DESIGNED - FLN	REVISED -
D309H0038-sht-details014		DRAWN - MCM	REVISED -
MODEL NAME =		CHECKED - DPA	REVISED -
Default		DATE - 12.03.13	REVISED -

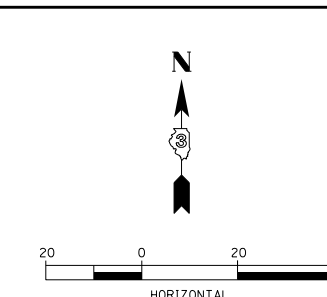
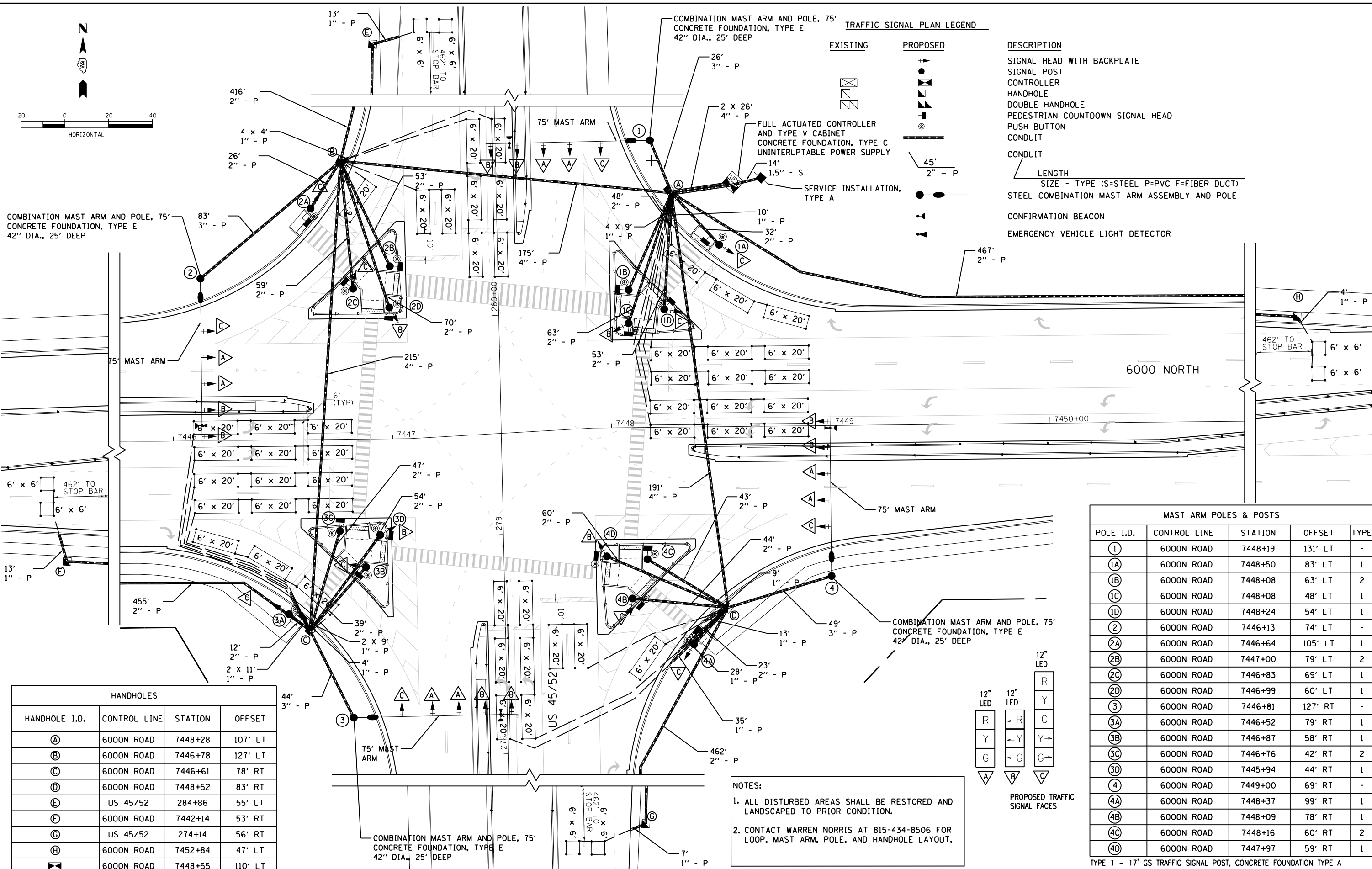
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST TABLES

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	438
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

(Sheet 2 of 2)



TRAFFIC SIGNAL PLAN LEGEND

EXISTING	PROPOSED	DESCRIPTION
		SIGNAL HEAD WITH BACKPLATE
		SIGNAL POST
		CONTROLLER
		HANDHOLE
		DOUBLE HANDHOLE
		PEDESTRIAN COUNTDOWN SIGNAL HEAD
		PUSH BUTTON
		CONDUIT
		CONDUIT LENGTH
		SIZE - TYPE (S=STEEL P=PVC F=FIBER DUCT)
		STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
		CONFIRMATION BEACON
		EMERGENCY VEHICLE LIGHT DETECTOR

COMBINATION MAST ARM AND POLE, 75' CONCRETE FOUNDATION, TYPE E 42" DIA., 25' DEEP

COMBINATION MAST ARM AND POLE, 75' CONCRETE FOUNDATION, TYPE E 42" DIA., 25' DEEP

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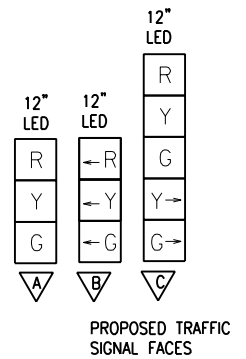
COMBINATION MAST ARM AND POLE, 75' CONCRETE FOUNDATION, TYPE E 42" DIA., 25' DEEP

COMBINATION MAST ARM AND POLE, 75' CONCRETE FOUNDATION, TYPE E 42" DIA., 25' DEEP

HANDHOLES			
HANDHOLE I.D.	CONTROL LINE	STATION	OFFSET
A	6000 ROAD	7448+28	107' LT
B	6000 ROAD	7446+78	127' LT
C	6000 ROAD	7446+61	78' RT
D	6000 ROAD	7448+52	83' RT
E	US 45/52	284+86	55' LT
F	6000 ROAD	7442+14	53' RT
G	US 45/52	274+14	56' RT
H	6000 ROAD	7452+84	47' LT
I	6000 ROAD	7448+55	110' LT

MAST ARM POLES & POSTS				
POLE I.D.	CONTROL LINE	STATION	OFFSET	TYPE
1	6000 ROAD	7448+19	131' LT	-
1A	6000 ROAD	7448+50	83' LT	1
1B	6000 ROAD	7448+08	63' LT	2
1C	6000 ROAD	7448+08	48' LT	1
1D	6000 ROAD	7448+24	54' LT	1
2	6000 ROAD	7446+13	74' LT	-
2A	6000 ROAD	7446+64	105' LT	1
2B	6000 ROAD	7447+00	79' LT	2
2C	6000 ROAD	7446+83	69' LT	1
2D	6000 ROAD	7446+99	60' LT	1
3	6000 ROAD	7446+81	127' RT	-
3A	6000 ROAD	7446+52	79' RT	1
3B	6000 ROAD	7446+87	58' RT	1
3C	6000 ROAD	7446+76	42' RT	2
3D	6000 ROAD	7445+94	44' RT	1
4	6000 ROAD	7449+00	69' RT	-
4A	6000 ROAD	7448+37	99' RT	1
4B	6000 ROAD	7448+09	78' RT	1
4C	6000 ROAD	7448+16	60' RT	2
4D	6000 ROAD	7447+97	59' RT	1

NOTES:
 1. ALL DISTURBED AREAS SHALL BE RESTORED AND LANDSCAPED TO PRIOR CONDITION.
 2. CONTACT WARREN NORRIS AT 815-434-8506 FOR LOOP, MAST ARM, POLE, AND HANDHOLE LAYOUT.



LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013
DATE		

FILE NAME = D389H0038-sh-t-ts001
 MODEL NAME =
 Default

USER NAME = MWH
 PLOT SCALE = AS SHOWN
 PLOT DATE = 12\02\2013

DESIGNED - TMA
 DRAWN - TMA
 CHECKED - KJB
 DATE - 12.03.13

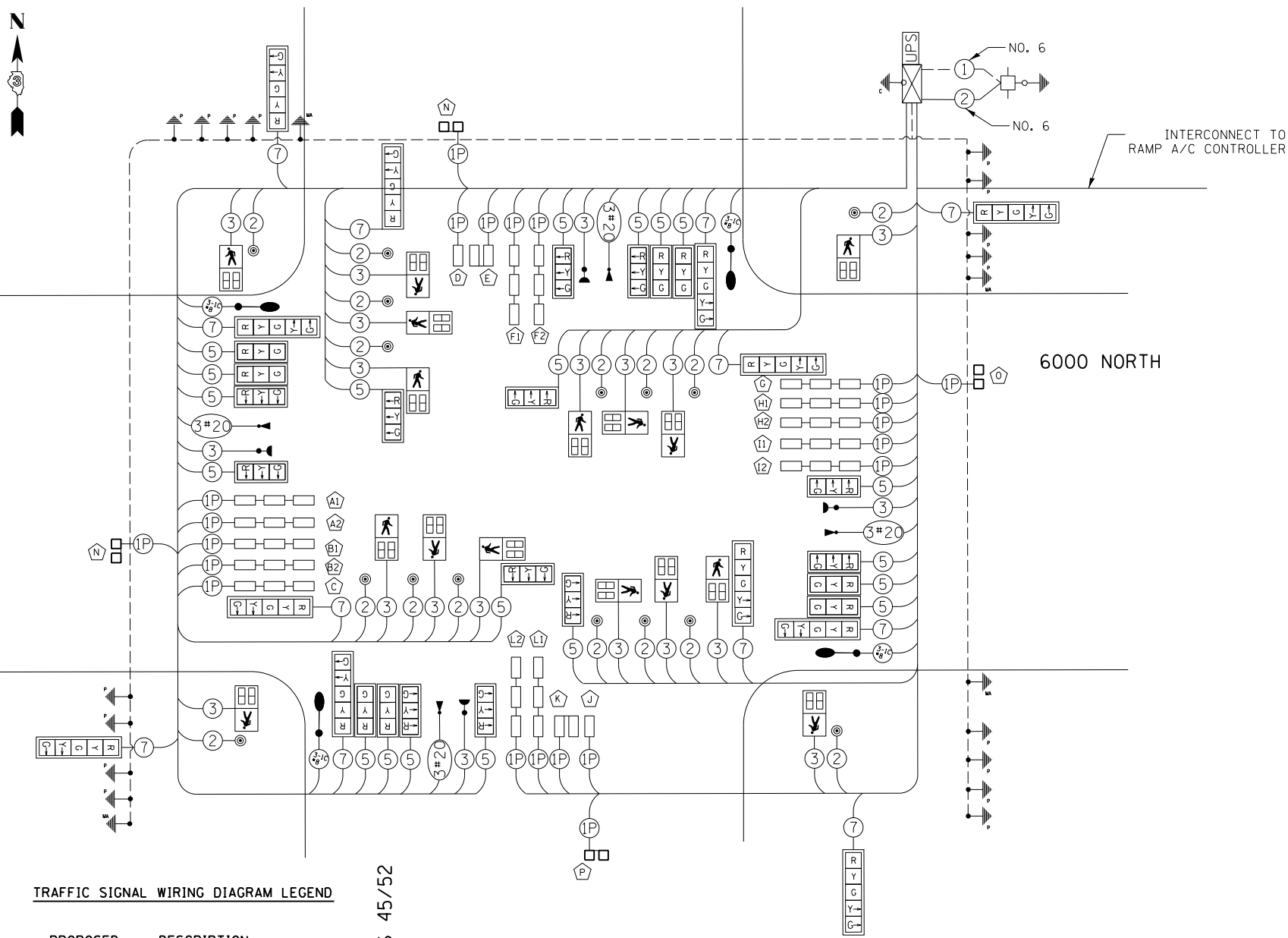
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SIGNAL PLAN (6000N & US45 / 52)
 I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL**

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	439
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66982		



INTERSECTION SIGNAL QUANTITIES

PAY ITEM	DESCRIPTION	UNIT	Quantity
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2
72000100	SIGN PANEL - TYPE 1	SQ FT	75.04
80500100	SERVICE INSTALLATION, TYPE A	EACH	1
81028190	UNDERGROUND CONDUIT, GALVANIZED STEEL, 1 1/2" DIA.	FOOT	14
81028320	UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	219
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	2526
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	202
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	633
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7
81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
81702120	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	4212
82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	4
86000300	MASTER CONTROLLER IN TYPE V CABINET	EACH	1
86200200	UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
86400100	TRANSCIEVER - FIBEROPTIC	EACH	1
87300305	ELECTRIC CABLE IN TRENCH, LEAD-IN, NO. 14 1 PAIR	FOOT	7057
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	4670
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	6293
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	7133
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	3664
87301295	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 20 3C	FOOT	1511
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	30
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO 6 1C	FOOT	1793
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	4
87502510	TRAFFIC SIGNAL POST, GALVANIZED STEEL 17 FT.	EACH	12
87703120	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 75 FT.	EACH	4
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	48
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	3
87800420	CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	100
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	16
88040150	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	8
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
88102825	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN	EACH	16
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	32
88500100	INDUCTIVE LOOP DETECTOR	EACH	16
88600200	DETECTOR LOOP, TYPE II	FOOT	4197
88700090	CONFIRMATION BEACON	EACH	4
88700200	LIGHT DETECTOR	EACH	4
88700300	LIGHT DETECTOR AMPLIFIER	EACH	4
88800100	PEDESTRIAN PUSH-BUTTON	EACH	16
X8860100	LOOP DETECTOR TESTING	EACH	1
20033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

DETECTOR LOOP INDUCTANCE CHART

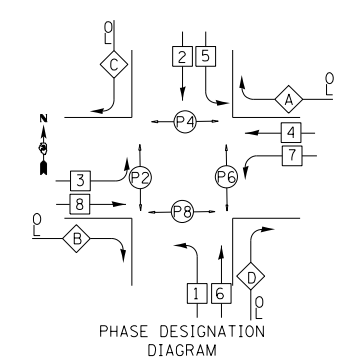
DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	364	31098	ON
B	4	358	31341	ON
C	4	339	32172	ON
D	4	319	34612	OFF
E	4	325	34334	ON
F	4	332	33923	ON
G	4	306	36940	ON
H	4	309	36078	ON
I	4	324	35736	OFF
J	4	325	34168	ON
K	4	334	33684	ON
L	4	345	33144	ON
M	6	354	28593	ON
N	6	331	30632	ON
O	6	318	31861	ON
P	6	336	30087	ON

TRAFFIC SIGNAL WIRING DIAGRAM LEGEND

- ELECTRIC CABLE DENOTING NUMBER OF CONDUCTORS
- SIGNAL FACE WITH BACKPLATE
- SIGNAL FACE
- DIRECTIONAL SIGNAL SECTION
- 12" SIGNAL SECTION
- WALK/DON'T WALK SECTION + COUNT DOWN
- GROUND WIRE (MAST ARM, POLE, CONTROLLER)
- PEDESTRIAN PUSHBUTTON
- CONDUIT
- LUMINAIRE

US 45/52

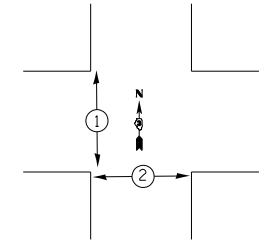
CONTROLLER SEQUENCE



OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 4	+ 5
B	= 8	+ 1
C	= 2	+ 3
D	= 6	+ 7

SEQUENCE LEGEND

- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE NUMBER REFERS TO ASSOCIATED PHASE



PROPOSED PRIORITY UNITS

PRIORITY LANE INTERVAL	1	2
MOVEMENT		

NOTES:

- ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A PHASE(S) SHALL BE IDENTICAL TO NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 857001.
- ALL RED CLEARANCE INTERVALS MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
		INCAND.	LED		
SIGNAL (RED)	20		17	50	170
(YELLOW)	20		25	25	125
(GREEN)	20		15	25	75
ARROW	120		12	10	144
PED. SIGNAL	16		25	100	400
CONTROLLER	1		100	100	100
TOTAL:					1014

ENERGY COSTS TO: VILLAGE OF BRADLEY
147 S. MICHIGAN AVE.
BRADLEY, IL 60915
(815) 932-2125

ENERGY SUPPLY: CONTACT: _____
PHONE: _____
COMPANY: _____

LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013
FILE NAME	D389H0038-sh-t-ts002	
MODEL NAME	Default	

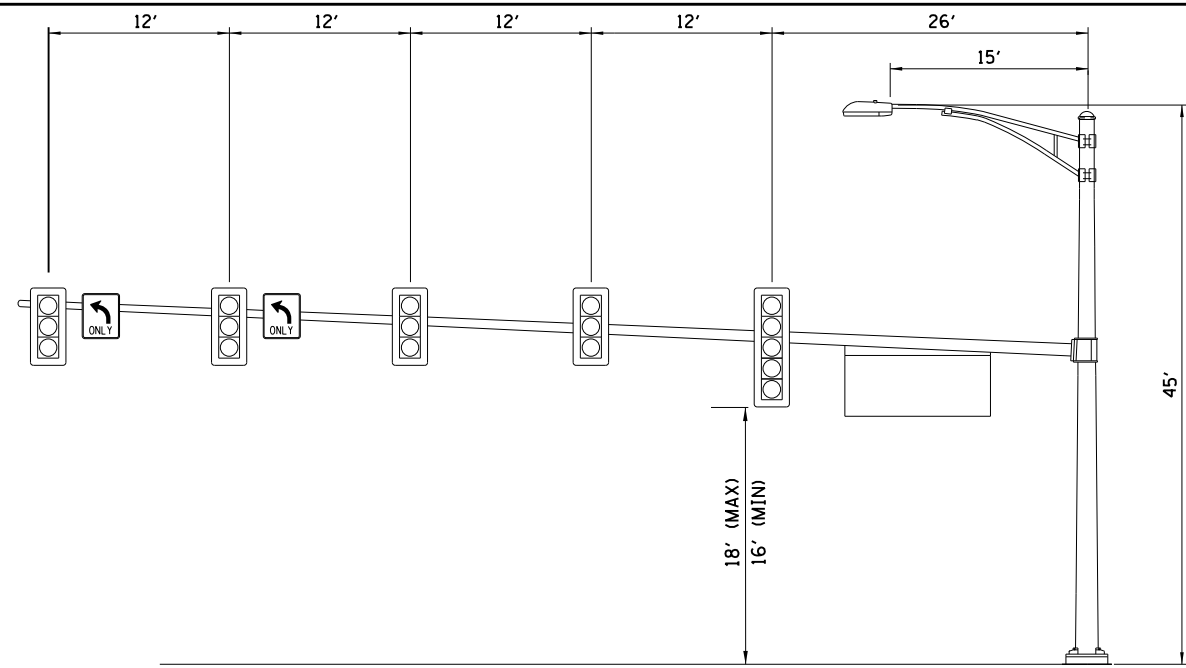
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MODEL NAME =		CHECKED - KJB	REVISED -
Default		DATE - 12.03.13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

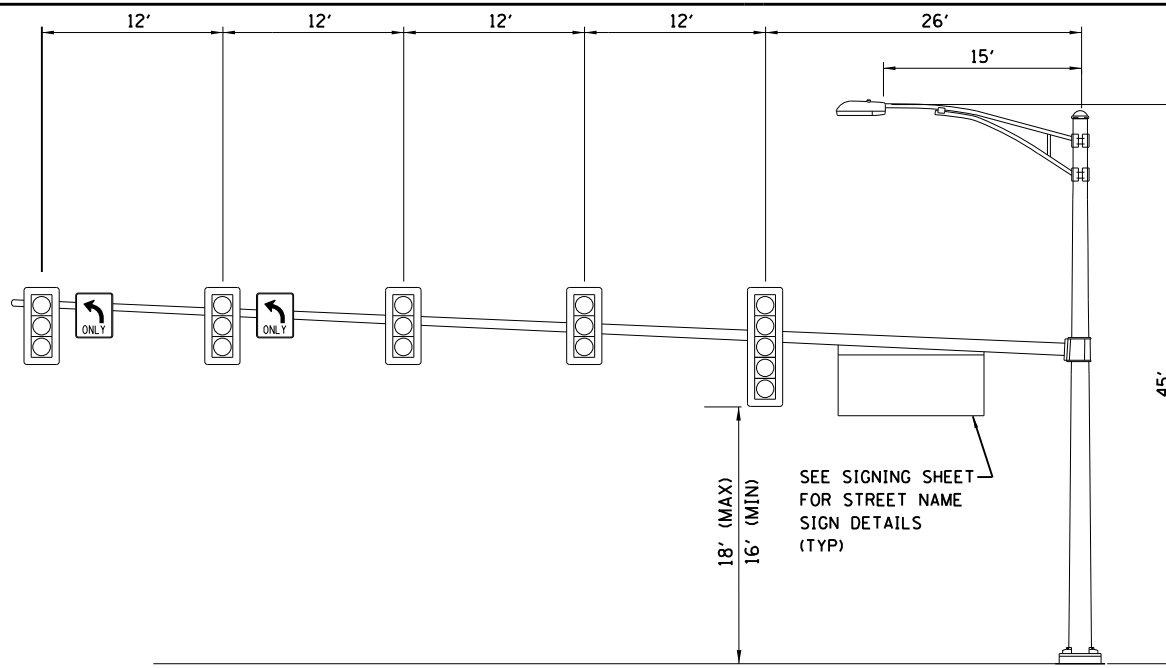
**CABLE PLAN (6000N & US45 / 52)
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

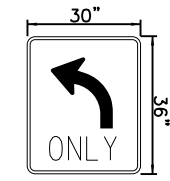
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	440
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



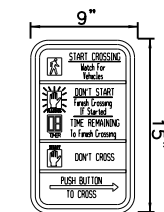
POST 1 AND 3
NTS



POST 2 AND 4
NTS

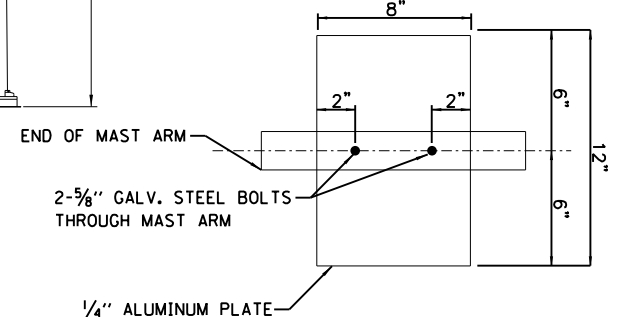


R3-5
8 SIGNS REQUIRED: 7.5 SQ. FT. EACH
THIS SIGN SHALL BE LOCATED 0'-9" TO THE RIGHT OF THE 3 SECTION SIGNAL HEAD AS INDICATED.



R10-3e
16 SIGNS REQUIRED FOR INTERSECTION: 0.94 SQ. FT. EACH
THIS SIGN SHALL BE LOCATED ABOVE ALL PEDESTRIAN PUSH BUTTONS.

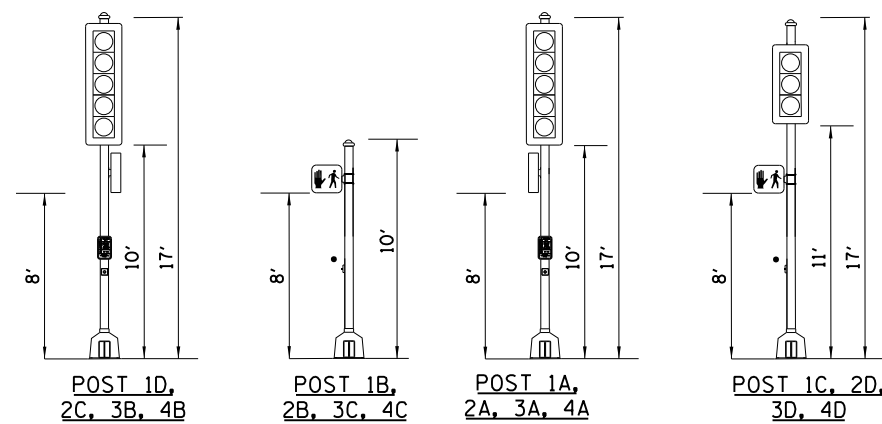
DAMPENING PLATE DETAIL



DAMPENING DEVICE SHALL CONSIST OF AN 8" X 12" TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON THE TOP OF THE MAST ARM. COST IS INCIDENTAL TO MAST ARM QUANTITY (NOT TO SCALE)

GENERAL SIGNAL NOTES

- THE CONTRACTOR SHALL CONTACT THE ILLINOIS DEPARTMENT OF TRANSPORTATION (815-434-8506) A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION (J.U.L.I.E. 800-892-0123).
- THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY, INCIDENTAL TO THE CONDUIT PAY ITEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATION. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK.
- ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATION AND AS DIRECTED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATIONS.
- THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON. COST TO BE INCLUDED WITH THE TRAFFIC SIGNAL CONTROLLER PAY ITEM.
- THE MAST ARMS SHALL BE LOCATED A MINIMUM OF 8' FROM THE BACK OF CURB TO THE FACE OF THE FOUNDATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SIGNAL LOCATIONS SHALL NOT INTERFERE WITH SIDEWALK OR BIKE TRAIL.
- TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INSPECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.
- A 1/4 INCH DIAMETER CONTINUOUS RODENT RESISTANT NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OR CONTROLLER. THIS COST SHALL BE INCLUDED IN THE CONDUIT PAY ITEM.
- THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CORD WITHIN THE POLICE DOOR COMPARTMENT. THIS WORK SHALL BE INCLUDED IN THE CONTROLLER CABINET PAY ITEM.
- THE SURGE PROTECTOR IN THE CONTROLLER CABINET SHALL HAVE AN INDICATOR LIGHT.
- NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT GREATER THAN 2' MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
- ALL MAST ARM MOUNTED SIGNAL HEADS ON AN INDIVIDUAL MAST ARM SHALL BE MOUNTED SO THAT THE RED INDICATIONS ARE LEVEL WITH EACH OTHER AND MAINTAIN A 16' MINIMUM CLEARANCE FROM THE HIGHEST POINT OF THE ROADWAY.
- THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID FORT COPPER.
- DOUBLE FUSED FUSE HOLDERS AND SURGE ARRESTORS ARE TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR IN THE BASE OF THE COMBINATION MAST ARM AS INCIDENTAL TO THE LIGHT FIXTURE PAY ITEMS. THE LIGHT FIXTURE ON THE COMBINATION MAST ARM SHALL BE ATTACHED TO A 15' ARM UNLESS SPECIFICALLY STATE OTHERWISE ELSEWHERE IN THE PLANS OR ADS DIRECTED BY THE ENGINEER
- BACKPLATES SHALL BE LOUVERED, FORMED PLASTIC.
- DOUBLE HANDHOLES SHALL BE FURNISHED WITH RECESSED, INTEGRAL, HINGED, LIDS.
- ALL THREADS OF BOLTS USED IN THE ASSEMBLY OF THE TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
- ALL MAST ARM POLES SHALL BE PROTECTED BY A STAINLESS STEEL MESH SCREENING AROUND THE BASEBOLTS TO PREVENT RODENT ENTRY. THE MESH SHALL BE SECURED TO THE BASE BY STAINLESS STEEL BANKING AS INCIDENTAL TO THE INDIVIDUAL MAST ARM ASSEMBLY PAY ITEM.
- THE CONTROLLER CABINET SHALL BE PLACED SO THAT A TECHNICIAN MAY SEE THE INTERSECTION OVER THE TOP OF THE CABINET WHILE WATCHING THE COMPONENTS IN THE CABINET. THE BOTTOM OF THE CONTROLLER CABINET SHALL BE A MINIMUM OF 1 FOOT ABOVE THE NEAREST HANDHOLE.
- THE ELEVATION OF THE TOP OF THE DOUBLE HANDHOLE SHALL BE LESS THAN THE ELEVATION OF THE TOP OF THE CONTROLLER FOUNDATION.
- ALL TRAFFIC SIGNALS SHALL HAVE 12" SINGLE LED LENSES
- ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE 3' OF SLACK CABLE IN EACH TRAFFIC SIGNAL STRUCTURE: MAST ARM, POST, CONTROLLER, AND HANDHOLES. THE SLACK WHICH IS IN ADDITION TO THE VERTICAL LENGTH OF THE CABLE DEFINED IN THE SPECIFICATIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR EACH CABLE. THESE REQUIREMENTS SHALL BE IN ADDITION TO THE EXTRA CABLE REQUIREMENTS AS SPECIFIED IN SECTIONS 871 AND 873 OF THE STANDARD SPECIFICATIONS.
- THE DOUBLE HANDHOLE SHALL HAVE 13' OF SLACK IN EACH CABLE NEATLY WOUND ON THE HOOKS. THE CABLE SHALL BE PAID FOR AT ITS INDIVIDUAL UNIT PRICE.



- ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED; CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.
- CHANGEABLE MESSAGE SIGNS ARE REQUIRED FOR BOTH DIRECTIONS LEADING UP TO THE 6000N SIGNALS ON US 45/52 AND ILLINOIS ROUTE 50. ONE WEEK PRIOR TO TURN-ON, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/TURN ON DATE." FOR THREE WEEKS AFTER, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/BE PREPARED TO STOP".
- THE CONTRACTOR SHALL PROVIDE A SELF-ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATE BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.
- ALL TRAFFIC SIGNAL HEADS SHALL BE 12" POLYCARBONATE.
- ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.
- ALL VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL HAVE POLY CARBONATE BLACK HOUSING AND BLACK BRACKETS.
- ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL BE EQUIPPED WITH ALPHA GUARD MONITORS.
- ALL GROUNDING MATERIALS FOR CONCRETE FOUNDATIONS SHALL REFER TO THE SECTION 806 OF THE STANDARD SPECIFICATIONS.
- ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION.
- THE FIBER OPTIC CABLE SHALL BE LABELED WITH DIRECTION AND ASSIGNMENT NUMBER.
- ALL PUSH BUTTONS SHALL BE A BULLDOG, 4VER, OR EQUIVALENT.

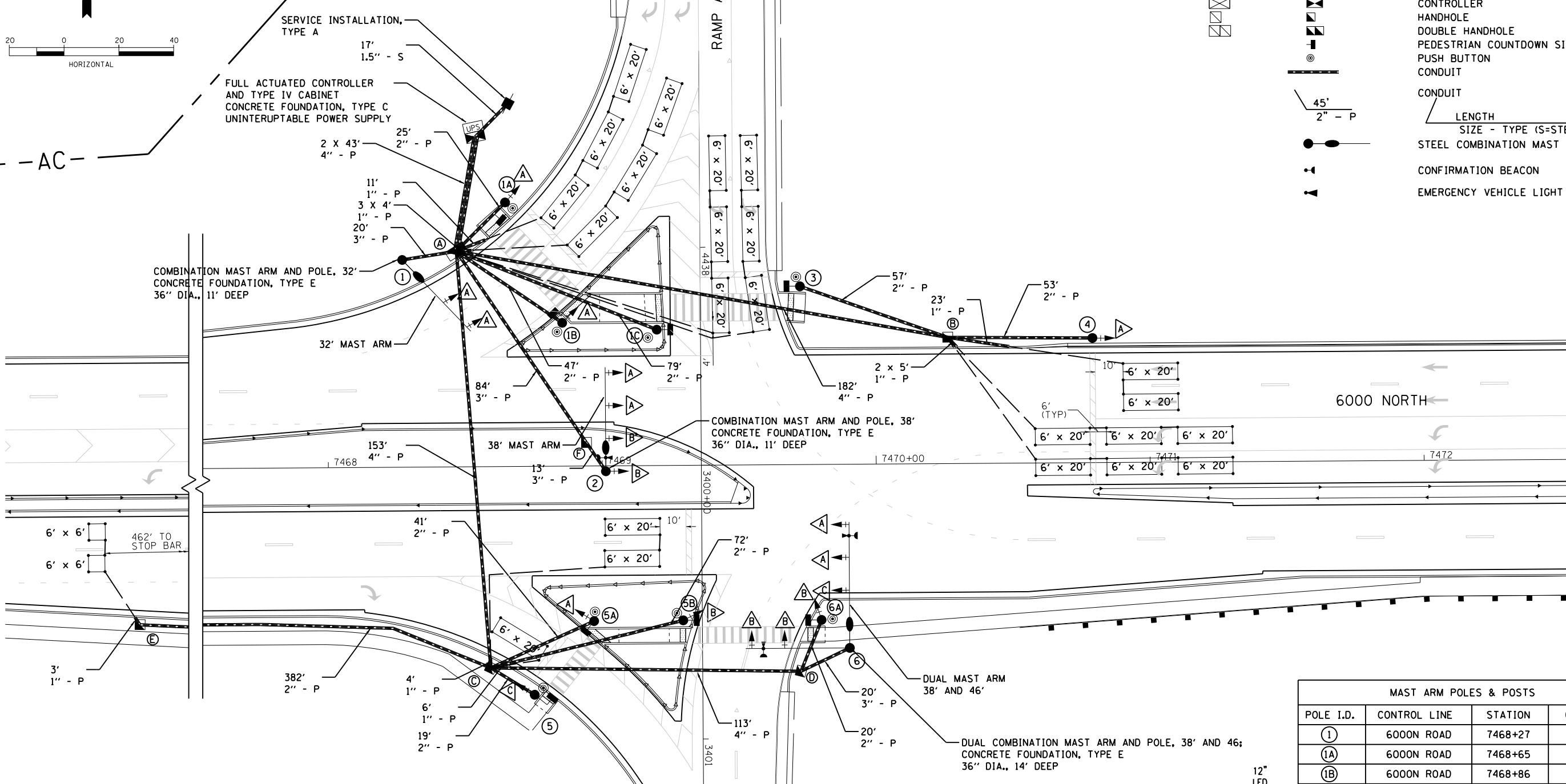
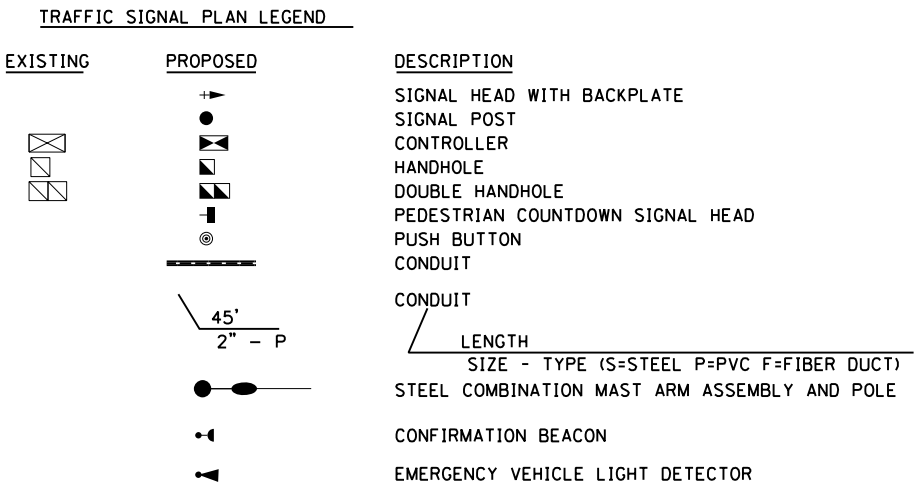
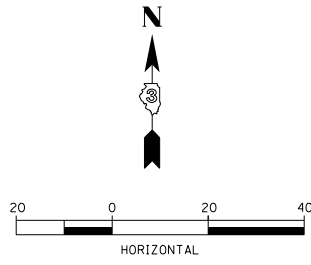
LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013

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D309H0038-shr-ts003		DRAWN -	REVISED -
MODEL NAME =		CHECKED - KJB	REVISED -
Default		DATE - 12.03.13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM DIAGRAM (6000N & US45 / 52) I-57 AND 6000N RD (BOURBONNAIS PARKWAY) BOURBONNAIS, IL			
SCALE: AS SHOWN	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	441
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

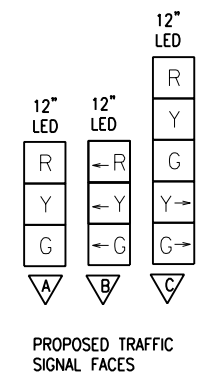


HANDHOLES			
HANDHOLE I.D.	CONTROL LINE	STATION	OFFSET
A	6000 ROAD	7468+47	79' LT
B	6000 ROAD	7470+26	46' LT
C	6000 ROAD	7468+59	74' RT
D	6000 ROAD	7469+72	76' RT
E	6000 ROAD	7464+80	56' RT
F	6000 ROAD	7468+94	9' LT
[Symbol]	6000 ROAD	7468+59	121' LT

MAST ARM POLES & POSTS				
POLE I.D.	CONTROL LINE	STATION	OFFSET	TYPE
1	6000 ROAD	7468+27	76' LT	-
1A	6000 ROAD	7468+65	96' LT	1
1B	6000 ROAD	7468+86	52' LT	1
1C	6000 ROAD	7469+20	50' LT	2
2	6000 ROAD	7469+01	2' RT	-
3	6000 ROAD	7469+73	65' LT	2
4	6000 ROAD	7470+79	46' LT	1
5	6000 ROAD	7468+75	83' RT	1
5A	6000 ROAD	7468+97	57' RT	1
5B	6000 ROAD	7469+29	57' RT	1
6	6000 ROAD	7469+90	67' RT	-
6A	6000 ROAD	7469+80	57' RT	1

NOTES:

- ALL DISTURBED AREAS SHALL BE RESTORED AND LANDSCAPED TO PRIOR CONDITION.
- CONTACT WARREN NORRIS AT 815-434-8506 FOR LOOP, MAST ARM, POLE, AND HANDHOLE LAYOUT.



LAYOUT TMA 03.06.2013
 DRAWN TMA 10.15.2013
 REVIEWED KJB 10.17.2013

FILE NAME = D:\389H\0038-shr-tt-004
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 DRAWN - TMA
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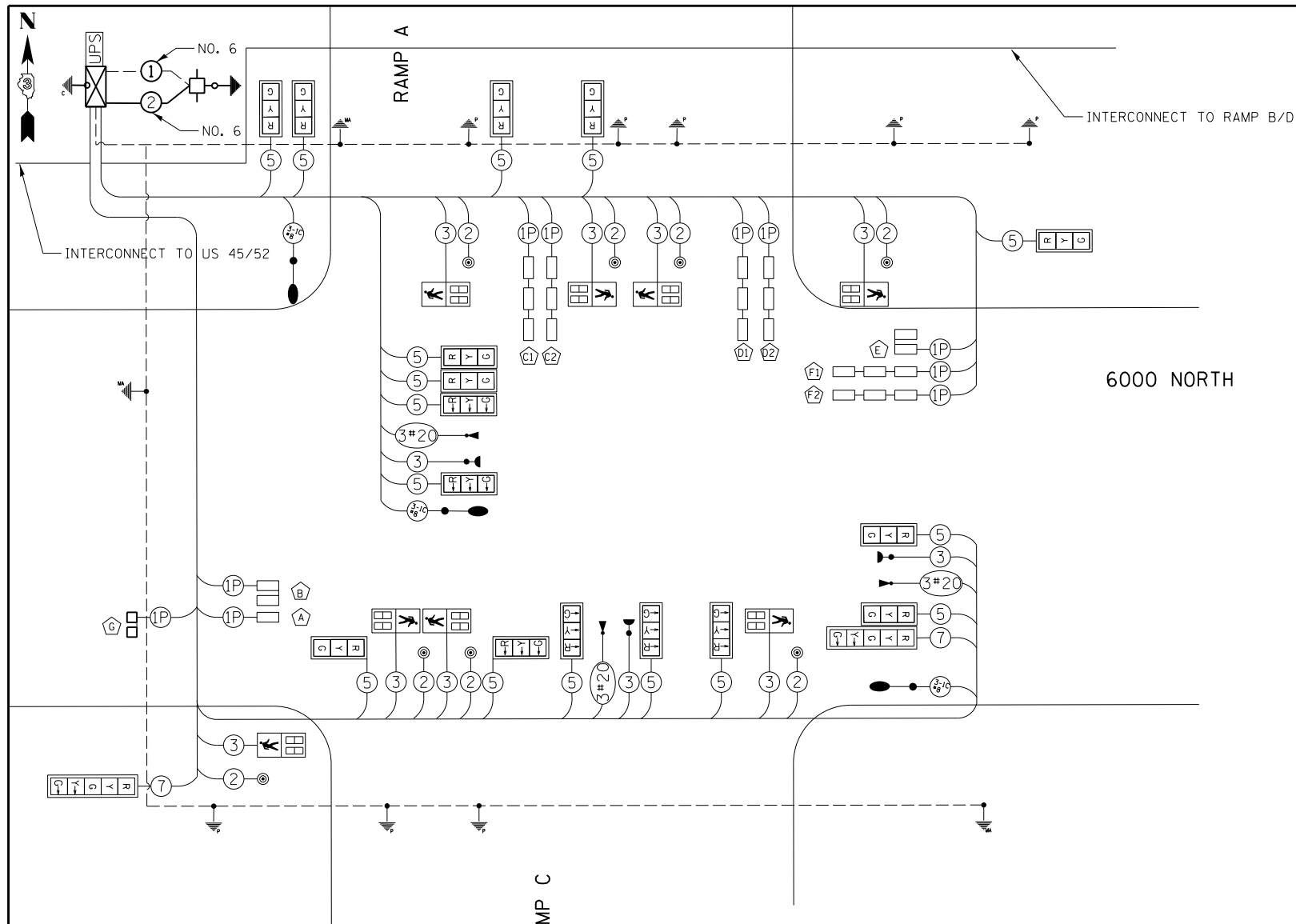
REVISD -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SIGNAL PLAN (6000 & RAMP A-C)
 I-57 AND 6000 RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	442
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



INTERSECTION SIGNAL QUANTITIES

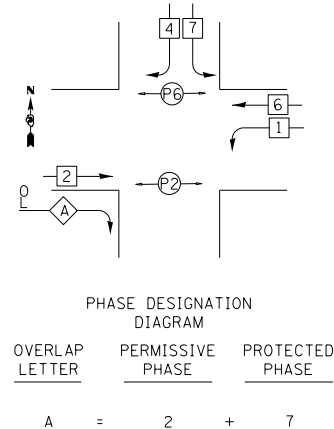
PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	37.52
80500100	SERVICE INSTALLATION, TYPE A	EACH	1
81028190	UNDERGROUND CONDUIT, GALVANIZED STEEL, 1 1/2" DIA.	FOOT	17
81028320	UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	69
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	795
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	137
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	534
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	5
81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
81702120	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	2366
82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	3
86200200	UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
86400100	TRANSCIEVER - FIBEROPTIC	EACH	1
87300305	ELECTRIC CABLE IN TRENCH, LEAD-IN, NO. 14 1 PAR	FOOT	2022.5
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1850
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2939
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	4041
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	656
87301295	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 20 3C	FOOT	1033
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	33
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1230
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2
87502510	TRAFFIC SIGNAL POST, GALVANIZED STEEL 17 FT.	EACH	7
87702890	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 32 FT.	EACH	1
87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1
87704420	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 38 FT. AND 46 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	27
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	3
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	36
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	7
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	9
88040150	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
88102825	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIME	EACH	8
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	18
88500100	INDUCTIVE LOOP DETECTOR	EACH	10
88600200	DETECTOR LOOP, TYPE II	FOOT	1836
88700090	CONFIRMATION BEACON	EACH	3
88700200	LIGHT DETECTOR	EACH	3
88700300	LIGHT DETECTOR AMPLIFIER	EACH	3
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
X8860100	LOOP DETECTOR TESTING	EACH	1

TRAFFIC SIGNAL WIRING DIAGRAM LEGEND

PROPOSED	DESCRIPTION
⑤	ELECTRIC CABLE DENOTING NUMBER OF CONDUCTORS
⊠	SIGNAL FACE WITH BACKPLATE
⊠	SIGNAL FACE
⊠	DIRECTIONAL SIGNAL SECTION
R	12" SIGNAL SECTION
⊠	WALK/DON'T WALK SECTION + COUNT DOWN
⊠	GROUND WIRE (MAST ARM, POLE, CONTROLLER)
⊠	PEDESTRIAN PUSHBUTTON
—	CONDUIT
⊠	LUMINAIRE

RAMP C

CONTROLLER SEQUENCE



SEQUENCE LEGEND

- ⊠ SINGLE ENTRY PHASE
- ⊠ DUAL ENTRY PHASE
- ⊠ OVERLAP
- ⊠ PEDESTRIAN PHASE NUMBER REFERS TO ASSOCIATED PHASE

PROPOSED PRIORITY UNITS

PRIORITY LANE INTERVAL	1	2
MOVEMENT	↔	↓

NOTES:

- ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A PHASE(S) SHALL BE IDENTICAL TO NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 857001.
- ALL RED CLEARANCE INTERVALS MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	320	34588	ON
B	4	333	33900	OFF
C	4	311	36416	ON
D	4	327	35391	ON
E	4	329	33900	OFF
F	4	331	33797	ON
G	6	328	30908	ON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
		INCAND.	LED		
SIGNAL (RED)	12		17	50	102
(YELLOW)	12		25	25	75
(GREEN)	12		15	25	45
ARROW	40		12	10	48
PED. SIGNAL	8		25	100	200
CONTROLLER	1		100	100	100
ENERGY COSTS TO: IDOT					TOTAL: 570
700 EAST NORRIS DRIVE OTTAWA, IL 61350-0697 (815) 434-6131					
ENERGY SUPPLY: CONTACT: _____ PHONE: _____ COMPANY: _____					

LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013

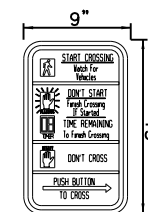
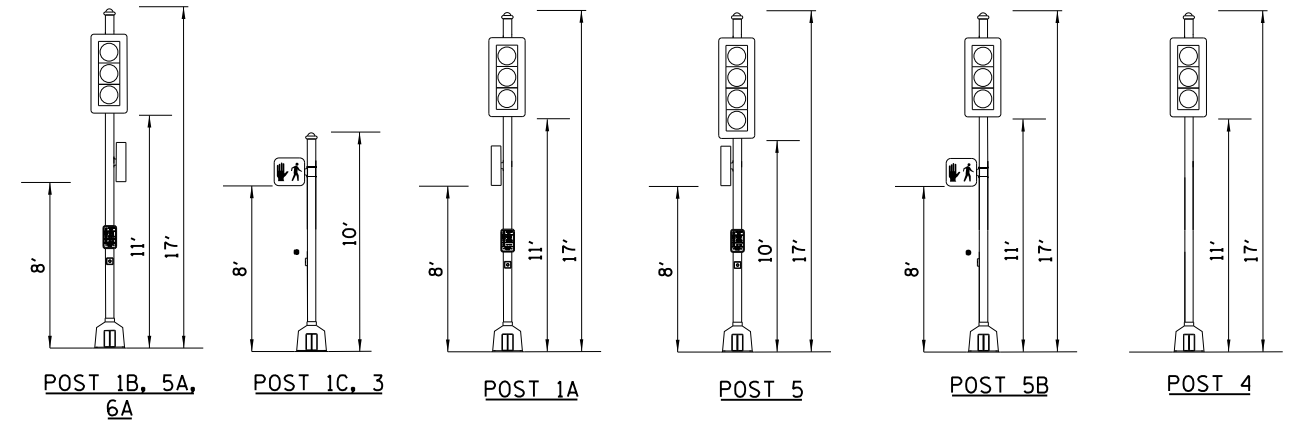
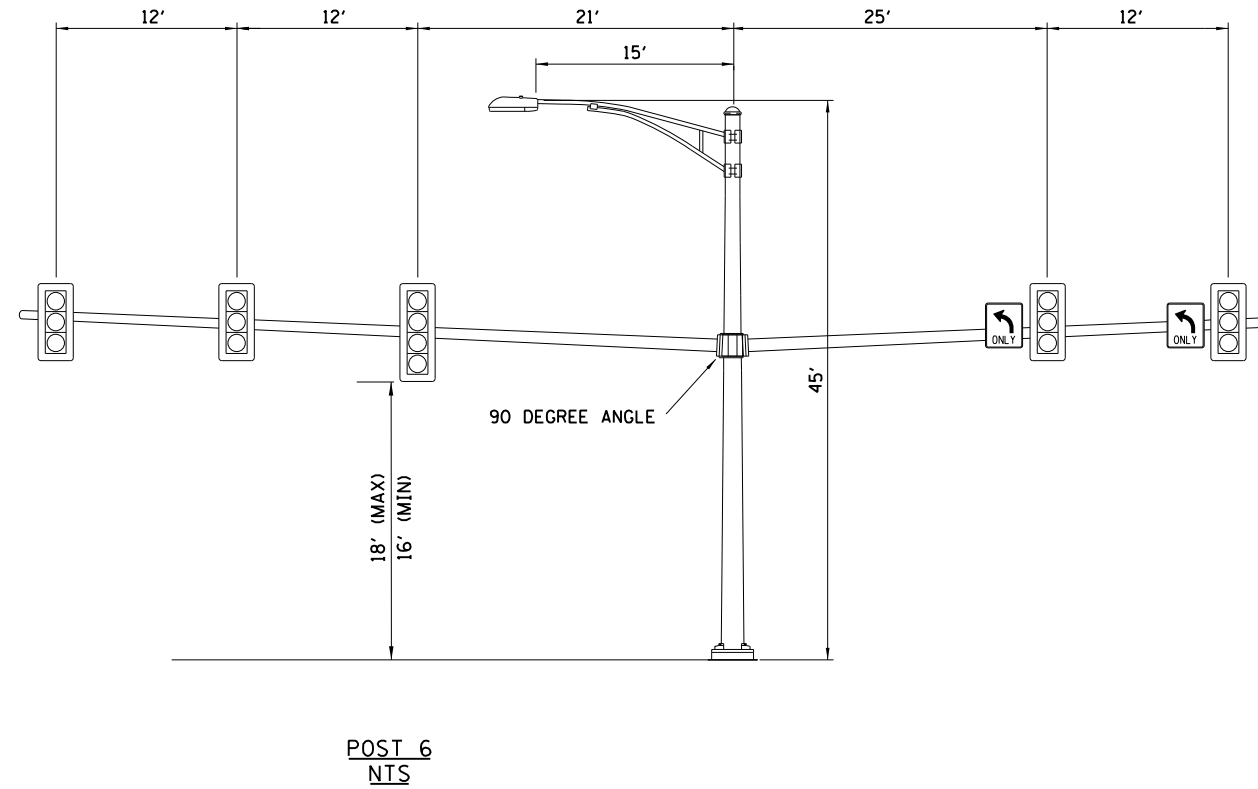
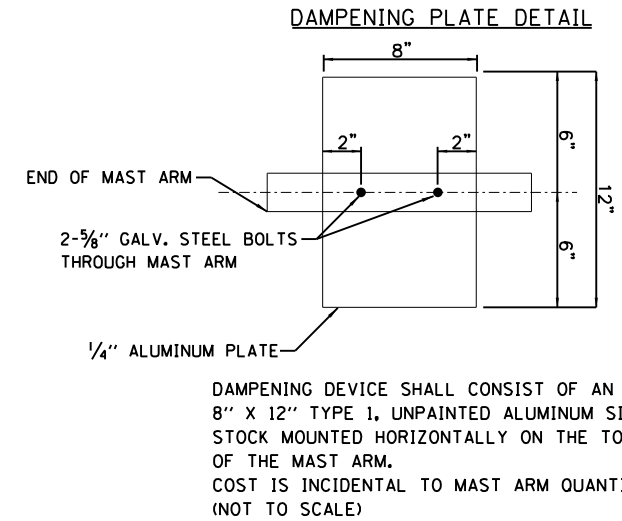
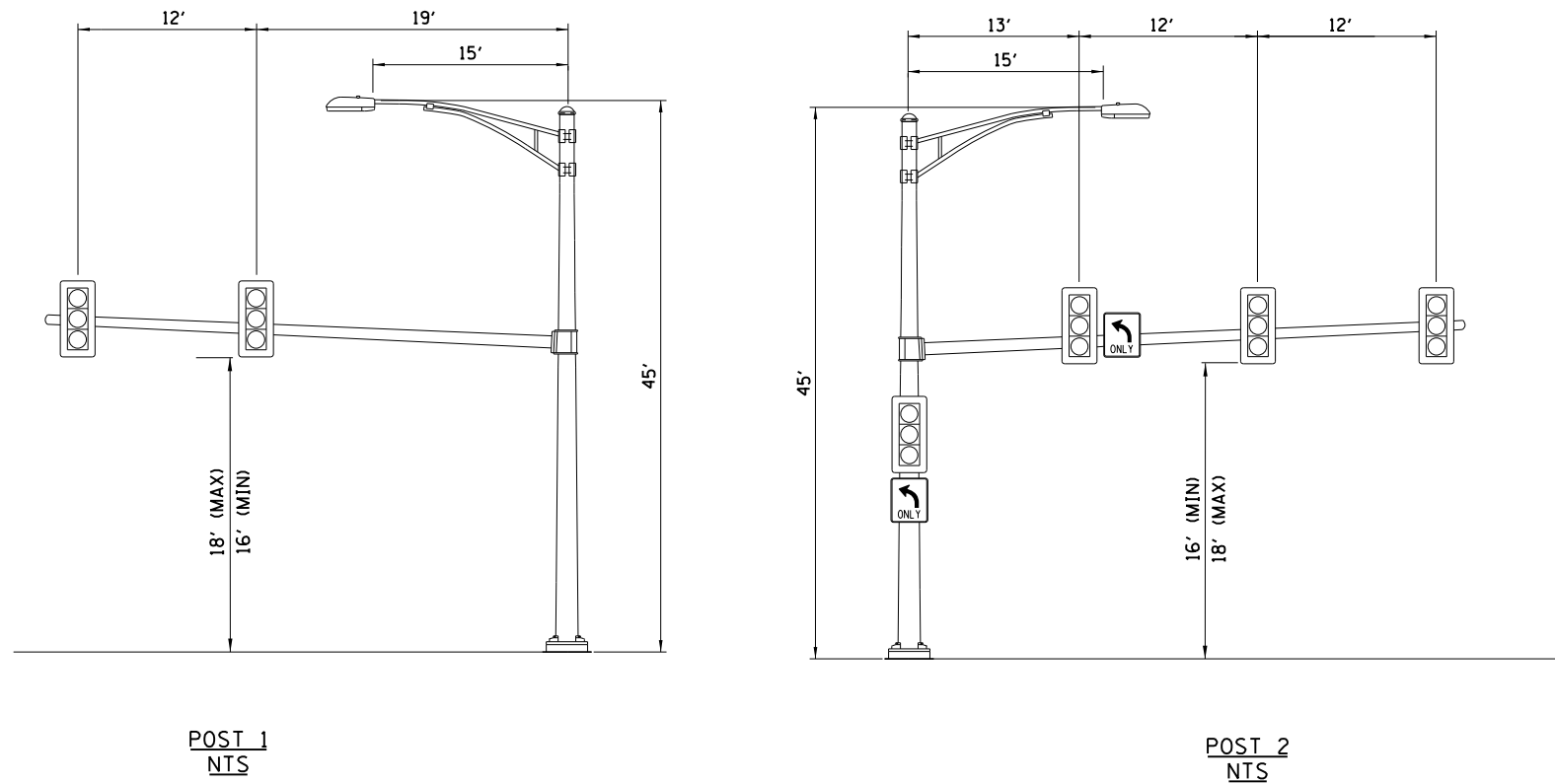
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MODEL NAME =		CHECKED - KJB	REVISED -
Default		DATE - 12.03.13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN (6000N & RAMP A-C)
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	443
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



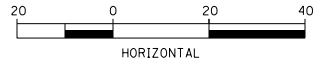
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DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013

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MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED - KJB	REVISED -
Default	PLOT DATE = 12\02\2013	DATE - 12.03.13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-57 AND 6000N RD (BOURBONNAIS PARKWAY) BOURBONNAIS, IL			
SCALE: AS SHOWN	SHEET NO.	OF SHEETS	STA. TO STA.

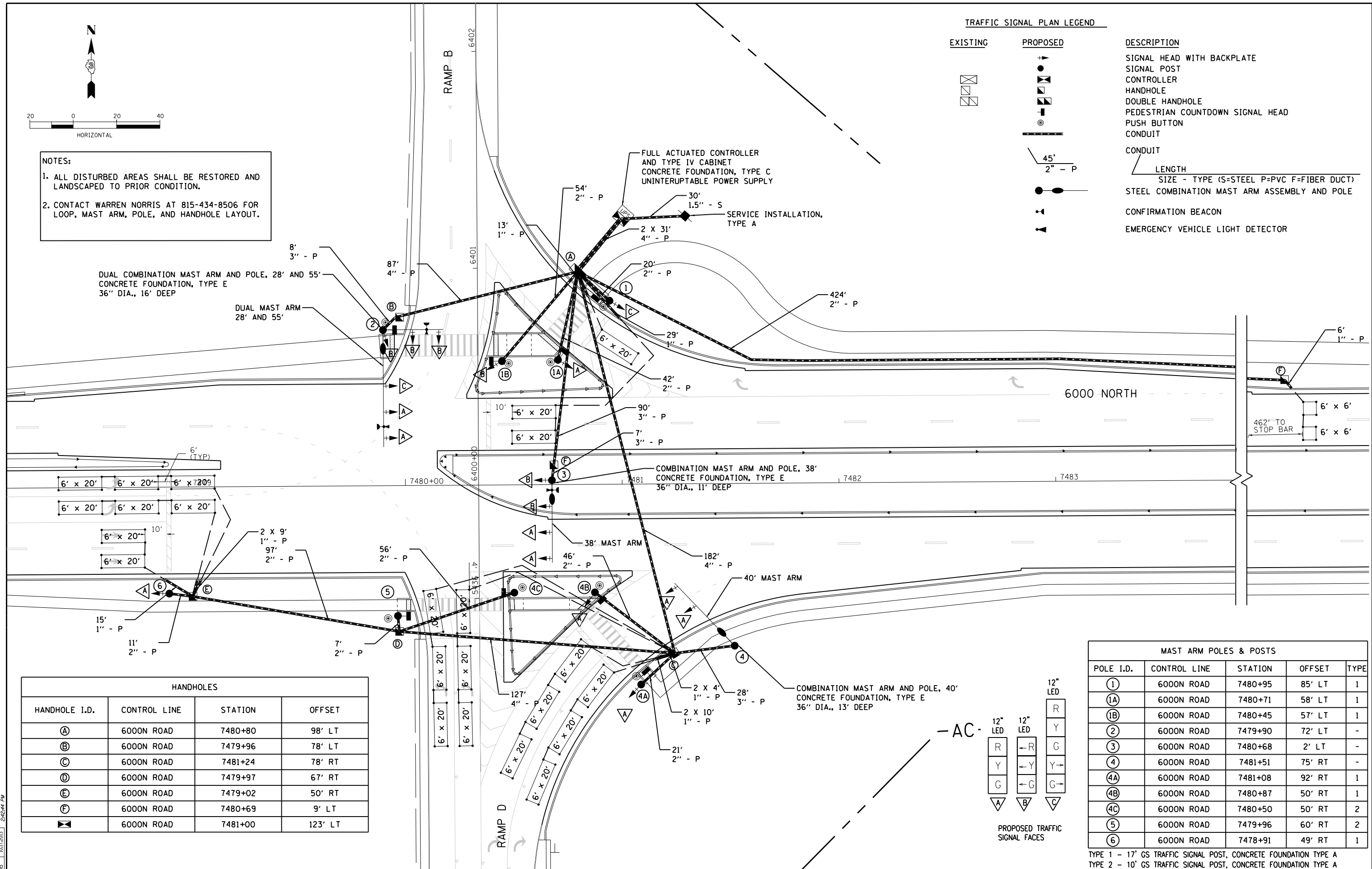
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	444
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



NOTES:
 1. ALL DISTURBED AREAS SHALL BE RESTORED AND LANDSCAPED TO PRIOR CONDITION.
 2. CONTACT WARREN NORRIS AT 815-434-8506 FOR LOOP, MAST ARM, POLE, AND HANDHOLE LAYOUT.

TRAFFIC SIGNAL PLAN LEGEND

EXISTING	PROPOSED	DESCRIPTION
		SIGNAL HEAD WITH BACKPLATE
		SIGNAL POST
		CONTROLLER
		HANDHOLE
		DOUBLE HANDHOLE
		PEDESTRIAN COUNTDOWN SIGNAL HEAD
		PUSH BUTTON
		CONDUIT
		CONDUIT LENGTH
		STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
		CONFIRMATION BEACON
		EMERGENCY VEHICLE LIGHT DETECTOR



HANDHOLES			
HANDHOLE I.D.	CONTROL LINE	STATION	OFFSET
A	6000 ROAD	7480+80	98' LT
B	6000 ROAD	7479+96	78' LT
C	6000 ROAD	7481+24	78' RT
D	6000 ROAD	7479+97	67' RT
E	6000 ROAD	7479+02	50' RT
F	6000 ROAD	7480+69	9' LT
	6000 ROAD	7481+00	123' LT

MAST ARM POLES & POSTS				
POLE I.D.	CONTROL LINE	STATION	OFFSET	TYPE
1	6000 ROAD	7480+95	85' LT	1
1A	6000 ROAD	7480+71	58' LT	1
1B	6000 ROAD	7480+45	57' LT	1
2	6000 ROAD	7479+90	72' LT	-
3	6000 ROAD	7480+68	2' LT	-
4	6000 ROAD	7481+51	75' RT	-
4A	6000 ROAD	7481+08	92' RT	1
4B	6000 ROAD	7480+87	50' RT	1
4C	6000 ROAD	7480+50	50' RT	2
5	6000 ROAD	7479+96	60' RT	2
6	6000 ROAD	7478+91	49' RT	1

TYPE 1 - 17' GS TRAFFIC SIGNAL POST, CONCRETE FOUNDATION TYPE A
 TYPE 2 - 10' GS TRAFFIC SIGNAL POST, CONCRETE FOUNDATION TYPE A

LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013
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MODEL NAME	Default	

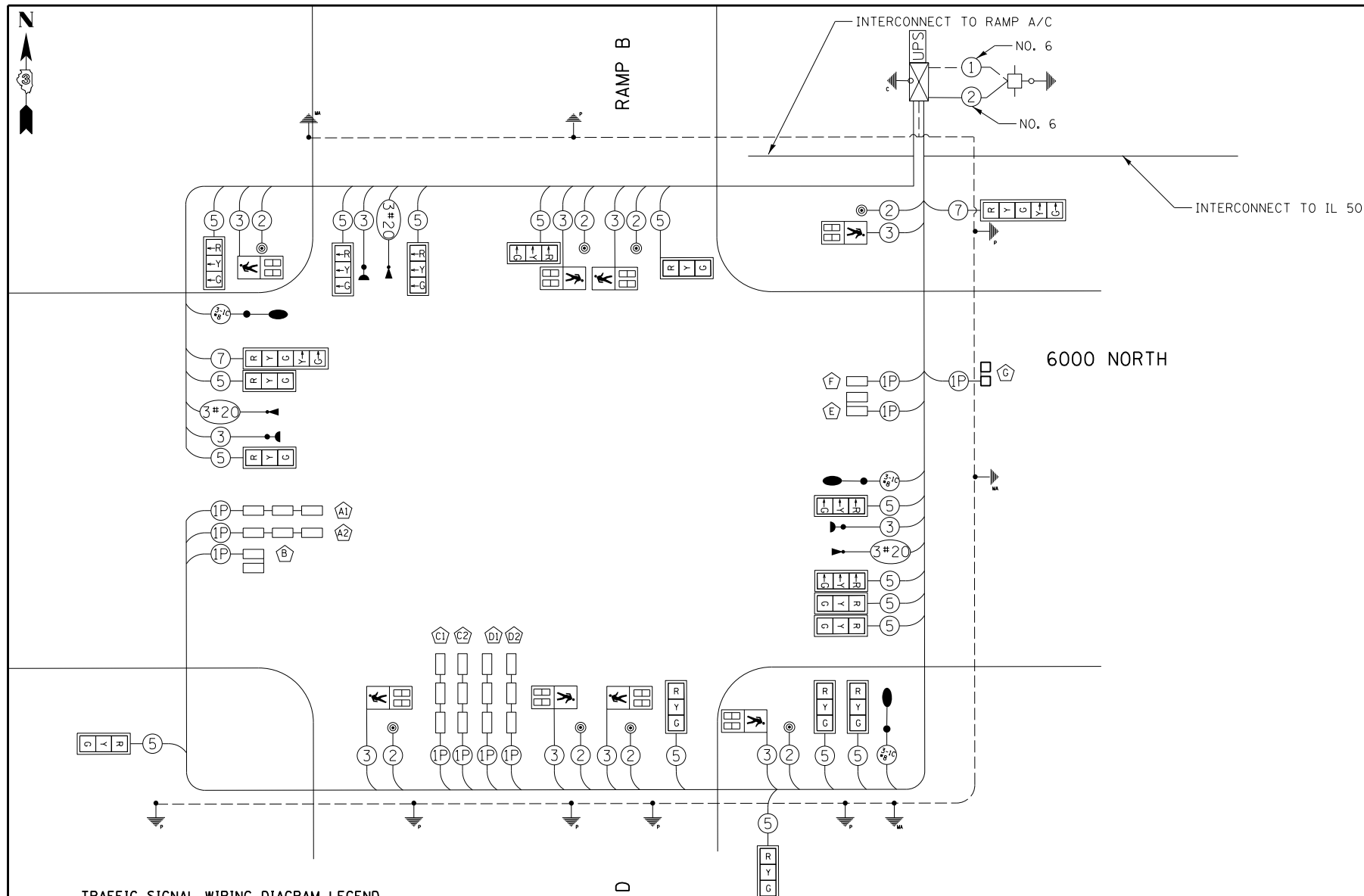
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MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED - KJB	REVISOR -
Default	PLOT DATE = 12/02/2013	DATE - 12.03.13	REVISOR -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SIGNAL PLAN (6000 & RAMP B-D)
 I-57 AND 6000 RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	445
CONTRACT NO. 66982				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.



INTERSECTION SIGNAL QUANTITIES

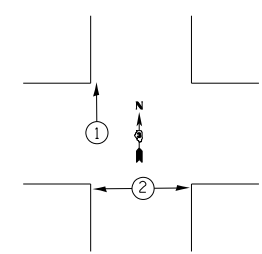
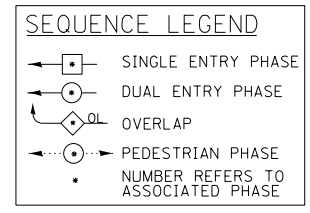
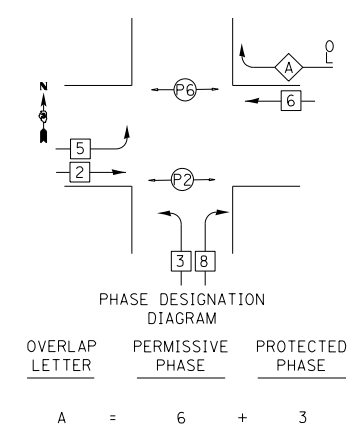
PAY ITEM	DESCRIPTION	UNIT	Quantity
72000100	SIGN PANEL - TYPE 1	SQ FT	45
80500100	SERVICE INSTALLATION, TYPE A	EACH	1
81028190	UNDERGROUND CONDUIT, GALVANIZED STEEL, 1 1/2" DIA.	FOOT	30
81028320	UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	109
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	778
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	133
81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	458
81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	6
81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
81702120	ELECTRIC CABLE IN CONDUIT 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	2255
82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	3
86200200	UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
86400100	TRANSCEIVER - FIBEROPTIC	EACH	1
87300305	ELECTRIC CABLE IN TRENCH, LEAD-IN, NO. 14 1 PAIR	FOOT	2946
87301215	ELECTRIC CABLE IN CONDUIT SIGNAL NO. 14 2C	FOOT	1817
87301225	ELECTRIC CABLE IN CONDUIT SIGNAL NO. 14 3C	FOOT	2419
87301245	ELECTRIC CABLE IN CONDUIT SIGNAL NO. 14 5C	FOOT	3671
87301255	ELECTRIC CABLE IN CONDUIT SIGNAL NO. 14 7C	FOOT	281
87301295	ELECTRIC CABLE IN CONDUIT SIGNAL NO. 20 3C	FOOT	547
87301805	ELECTRIC CABLE IN CONDUIT SERVICE, NO. 6 2C	FOOT	46
87301900	ELECTRIC CABLE IN CONDUIT EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1093
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2
87502510	TRAFFIC SIGNAL POST, GALVANIZED STEEL 17 FT.	EACH	6
87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1
87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	1
87704355	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 28 FT. AND 55 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	24
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	3
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	40
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	7
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	9
88040150	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
88102825	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIME	EACH	8
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	18
88500100	INDUCTIVE LOOP DETECTOR	EACH	10
88600200	DETECTOR LOOP, TYPE II	FOOT	1811
88700090	CONFIRMATION BEACON	EACH	3
88700200	LIGHT DETECTOR	EACH	3
88700300	LIGHT DETECTOR AMPLIFIER	EACH	3
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
X8860100	LOOP DETECTOR TESTING	EACH	1

TRAFFIC SIGNAL WIRING DIAGRAM LEGEND

- PROPOSED**
- DESCRIPTION**
- ELECTRIC CABLE DENOTING NUMBER OF CONDUCTORS
- SIGNAL FACE WITH BACKPLATE
- SIGNAL FACE
- DIRECTIONAL SIGNAL SECTION
- 12" SIGNAL SECTION
- WALK/DON'T WALK SECTION + COUNT DOWN
- GROUND WIRE (MAST ARM, POLE, CONTROLLER)
- PEDESTRIAN PUSHBUTTON
- CONDUIT
- LUMINAIRE

RAMP D

CONTROLLER SEQUENCE



PRIORITY LANE INTERVAL	1	2
MOVEMENT		

- NOTES:**
- ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A PHASE(S) SHALL BE IDENTICAL TO NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 857001.
 - ALL RED CLEARANCE INTERVALS MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	351	31492	ON
B	4	344	31772	OFF
C	4	345	33187	ON
D	4	327	34086	ON
E	4	325	35642	OFF
F	4	307	36733	ON
G	6	315	32191	ON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
		INCAND.	LED		
SIGNAL (RED)	12		17	50	102
(YELLOW)	12		25	25	75
(GREEN)	12		15	25	45
ARROW	40		12	10	48
PED. SIGNAL	8		25	100	200
CONTROLLER	1		100	100	100
ENERGY COSTS TO: IDOT					TOTAL: 570
700 EAST NORRIS DRIVE OTTAWA, IL 61350-0697 (815) 434-6131					
ENERGY SUPPLY: CONTACT: _____					
PHONE: _____					
COMPANY: _____					

LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013

FILE NAME =	USER NAME = MWH	DESIGNED - TMA	REVISED -
D389H0038-sh-t-ts008		DRAWN - TMA	REVISED -
MODEL NAME =		CHECKED - KJB	REVISED -
Default		DATE - 12.03.13	REVISED -

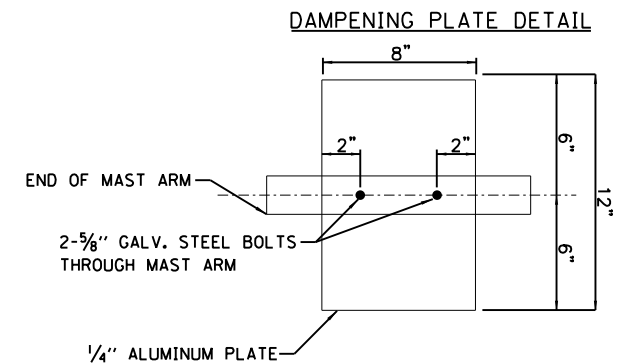
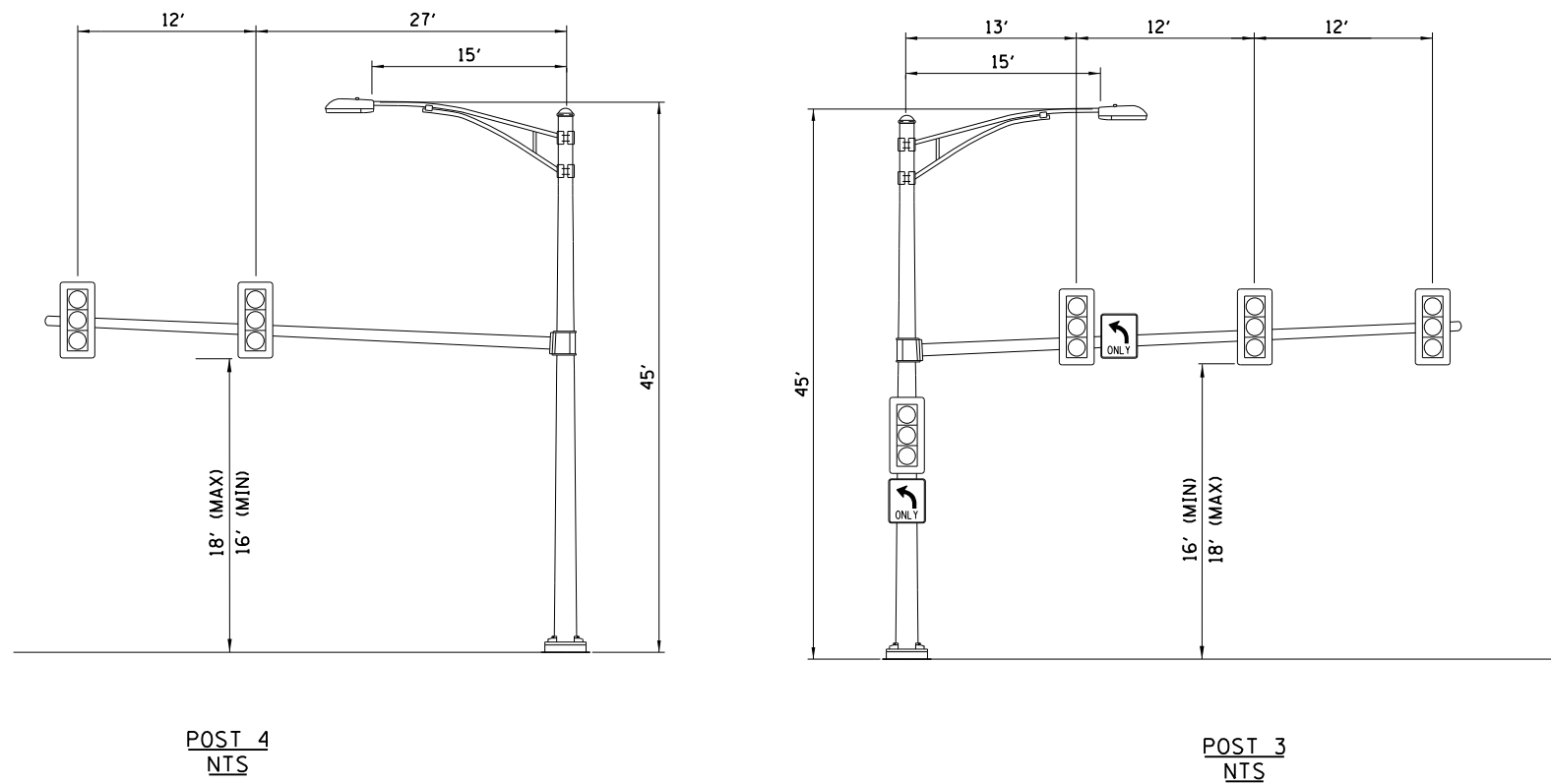
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN (6000N & RAMP B-D) I-57 AND 6000N RD (BOURBONNAIS PARKWAY) BOURBONNAIS, IL

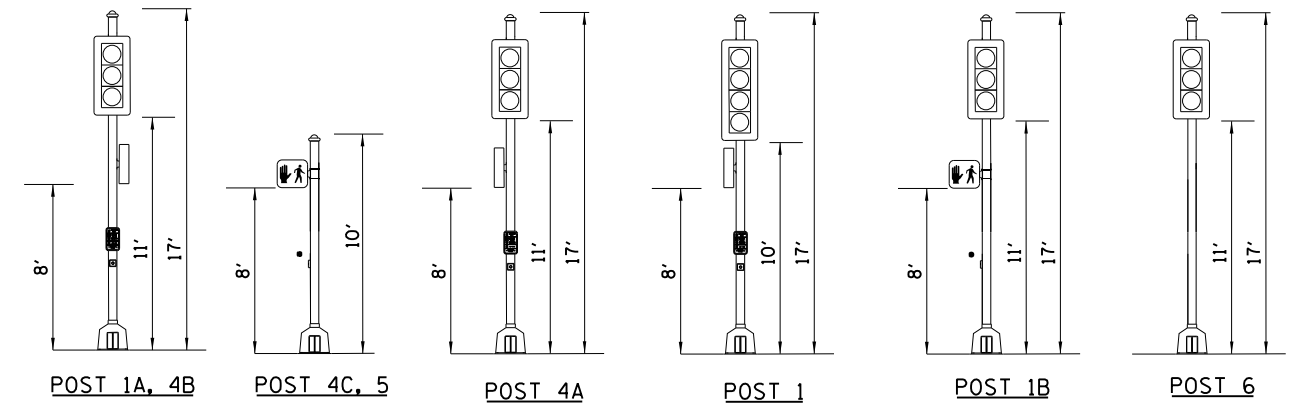
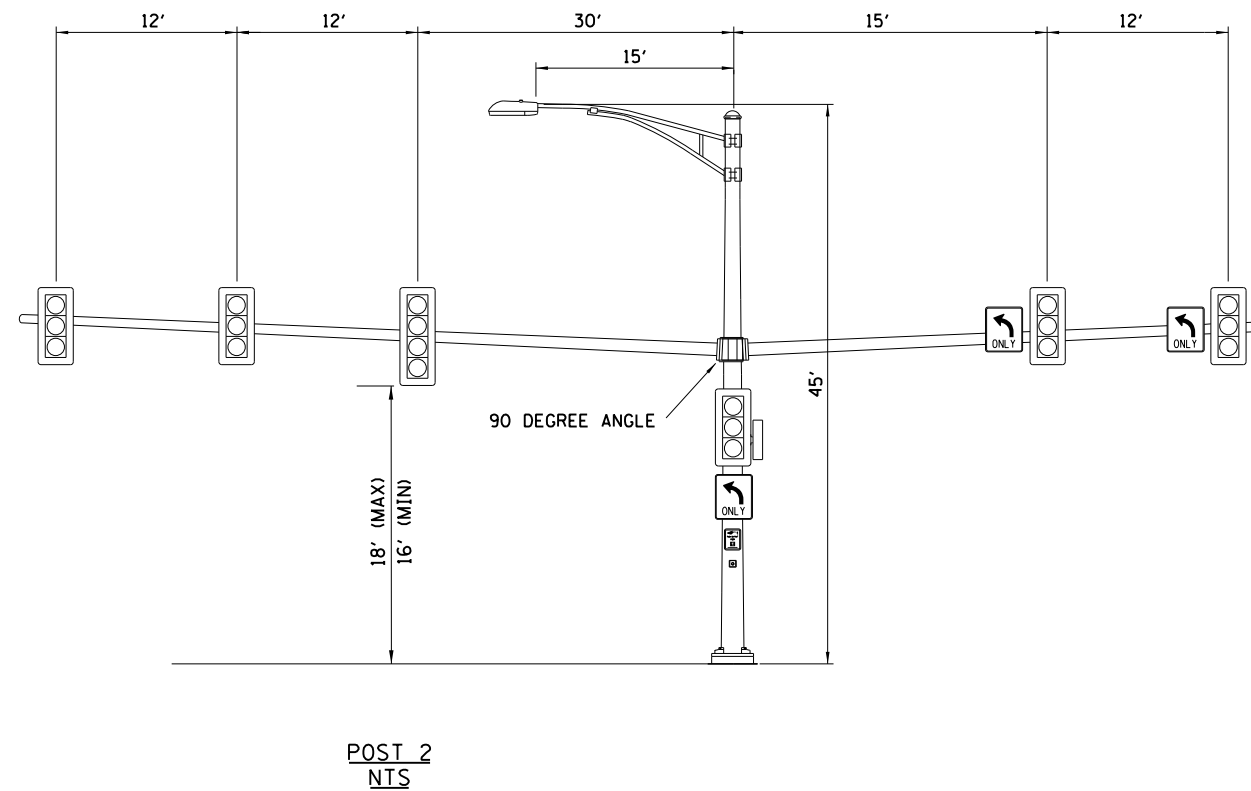
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	446
CONTRACT NO. 66982				

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

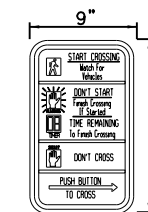


DAMPENING DEVICE SHALL CONSIST OF AN 8" X 12" TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON THE TOP OF THE MAST ARM. COST IS INCIDENTAL TO MAST ARM QUANTITY (NOT TO SCALE)



R3-5
5 SIGNS REQUIRED: 7.5 SO. FT. EACH

THIS SIGN SHALL BE LOCATED 0'-9" TO THE RIGHT OF THE 3 SECTION SIGNAL HEAD AS INDICATED.



R10-3e
8 SIGNS REQUIRED FOR INTERSECTION: 0.94 SO. FT. EACH

THIS SIGN SHALL BE LOCATED ABOVE ALL PEDESTRIAN PUSH BUTTONS.

LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013

FILE NAME =	USER NAME = MWH	DESIGNED -	REVISED -
D389H0038-shr-ts009		DRAWN -	REVISED -
MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED - KJB	REVISED -
Default	PLOT DATE = 12\02\2013	DATE - 12.03.13	REVISED -

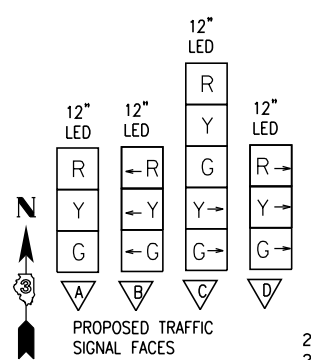
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM DIAGRAM (6000N & RAMP B-D)
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL

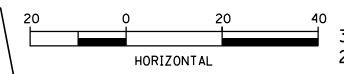
SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	447
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

- NOTES:
1. ALL DISTURBED AREAS SHALL BE RESTORED AND LANDSCAPED TO PRIOR CONDITION.
 2. DEPTH OF MAST ARM FOUNDATIONS SHALL BE 3.5' DEEP IN SOIL, AND 9.5' DEEP IN ROCK. NO ADDITIONAL COMPENSATION FOR ROCK EXCAVATION WILL BE ALLOWED TO CONSTRUCT TRAFFIC SIGNAL FOUNDATIONS TO THE DEPTH SHOWN IN THE PLANS.
 3. CONTACT WARREN NORRIS AT 815-434-8506 FOR LOOP, MAST ARM, POLE, AND HANDHOLE LAYOUT.

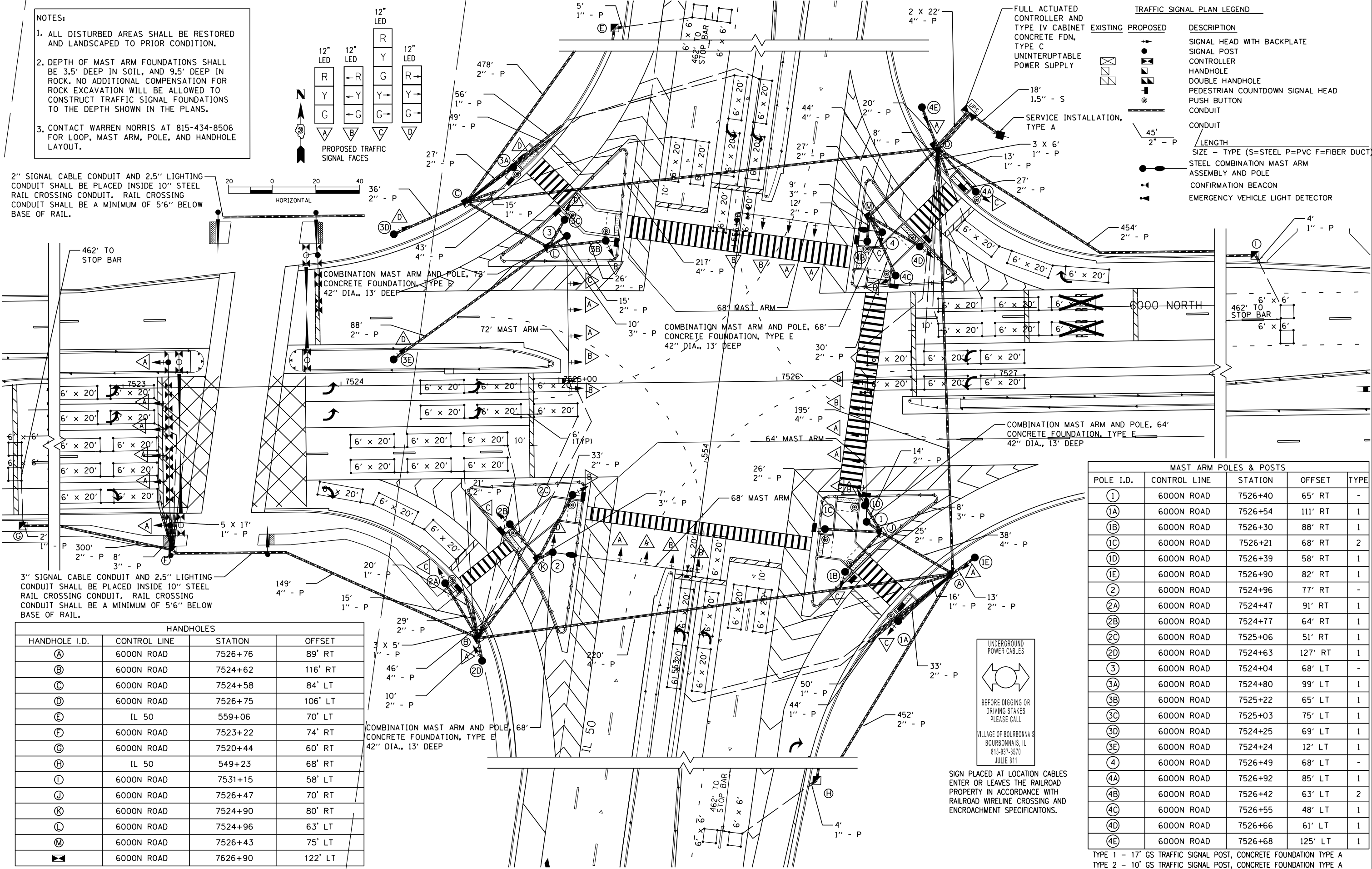


2" SIGNAL CABLE CONDUIT AND 2.5" LIGHTING CONDUIT SHALL BE PLACED INSIDE 10" STEEL RAIL CROSSING CONDUIT. RAIL CROSSING CONDUIT SHALL BE A MINIMUM OF 5'6" BELOW BASE OF RAIL.



TRAFFIC SIGNAL PLAN LEGEND

EXISTING	PROPOSED	DESCRIPTION
+	+	SIGNAL HEAD WITH BACKPLATE
○	○	SIGNAL POST
□	□	CONTROLLER HANDHOLE
□	□	DOUBLE HANDHOLE
○	○	PEDESTRIAN COUNTDOWN SIGNAL HEAD
○	○	PUSH BUTTON
○	○	CONDUIT
—	—	LENGTH
—	—	SIZE - TYPE (S=STEEL P=PVC F=FIBER DUCT)
—	—	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
—	—	CONFIRMATION BEACON
—	—	EMERGENCY VEHICLE LIGHT DETECTOR



3" SIGNAL CABLE CONDUIT AND 2.5" LIGHTING CONDUIT SHALL BE PLACED INSIDE 10" STEEL RAIL CROSSING CONDUIT. RAIL CROSSING CONDUIT SHALL BE A MINIMUM OF 5'6" BELOW BASE OF RAIL.

HANDHOLES			
HANDHOLE I.D.	CONTROL LINE	STATION	OFFSET
A	6000 ROAD	7526+76	89' RT
B	6000 ROAD	7524+62	116' RT
C	6000 ROAD	7524+58	84' LT
D	6000 ROAD	7526+75	106' LT
E	IL 50	559+06	70' LT
F	6000 ROAD	7523+22	74' RT
G	6000 ROAD	7520+44	60' RT
H	IL 50	549+23	68' RT
I	6000 ROAD	7531+15	58' LT
J	6000 ROAD	7526+47	70' RT
K	6000 ROAD	7524+90	80' RT
L	6000 ROAD	7524+96	63' LT
M	6000 ROAD	7526+43	75' LT
□	6000 ROAD	7626+90	122' LT

MAST ARM POLES & POSTS				
POLE I.D.	CONTROL LINE	STATION	OFFSET	TYPE
1	6000 ROAD	7526+40	65' RT	-
1A	6000 ROAD	7526+54	111' RT	1
1B	6000 ROAD	7526+30	88' RT	1
1C	6000 ROAD	7526+21	68' RT	2
1D	6000 ROAD	7526+39	58' RT	1
1E	6000 ROAD	7526+90	82' RT	1
2	6000 ROAD	7524+96	77' RT	-
2A	6000 ROAD	7524+47	91' RT	1
2B	6000 ROAD	7524+77	64' RT	1
2C	6000 ROAD	7525+06	51' RT	1
2D	6000 ROAD	7524+63	127' RT	1
3	6000 ROAD	7524+04	68' LT	-
3A	6000 ROAD	7524+80	99' LT	1
3B	6000 ROAD	7525+22	65' LT	1
3C	6000 ROAD	7525+03	75' LT	1
3D	6000 ROAD	7524+25	69' LT	1
3E	6000 ROAD	7524+24	12' LT	1
4	6000 ROAD	7526+49	68' LT	-
4A	6000 ROAD	7526+92	85' LT	1
4B	6000 ROAD	7526+42	63' LT	2
4C	6000 ROAD	7526+55	48' LT	1
4D	6000 ROAD	7526+66	61' LT	1
4E	6000 ROAD	7526+68	125' LT	1

TYPE 1 - 17' GS TRAFFIC SIGNAL POST, CONCRETE FOUNDATION TYPE A
 TYPE 2 - 10' GS TRAFFIC SIGNAL POST, CONCRETE FOUNDATION TYPE A

FILE NAME =
 USER NAME = MWH
 DESIGNED - I TMA
 DRAWN - M TMA
 CHECKED - DPA
 DATE - 12.12.13

DESIGNED - I TMA
 DRAWN - M TMA
 CHECKED - DPA
 DATE - 12.12.13

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

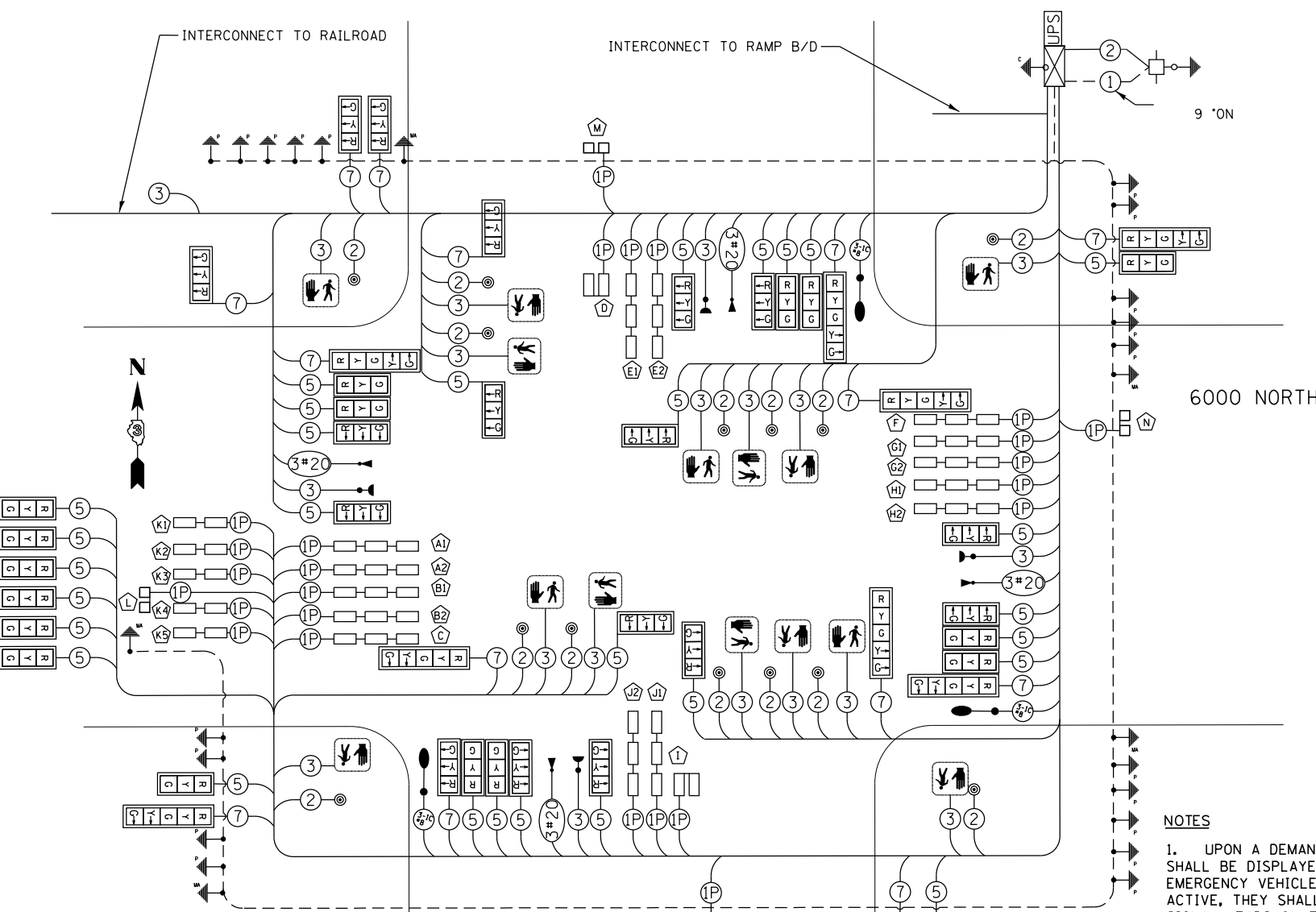
SIGNAL PLAN (6000N & IL-50)
 I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	448

CONTRACT NO. 66982
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

LAYOUT DPA 03.06.2013
 DRAWN MMH 12.12.2013
 REVIEWED DPA 12.12.2013



SUMMARY OF QUANTITIES

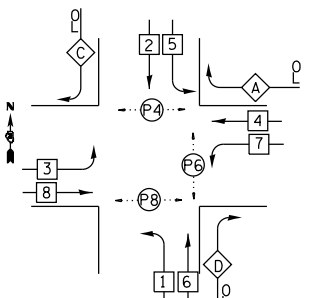
PAY ITEM	UNIT	QUANTITY
CHANGEABLE MESSAGE SIGN	CAL MO	2
SIGN PANEL - TYPE 1	SQ FT	140
SERVICE INSTALLATION, TYPE A	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 1/2" DIA.	FOOT	18
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	923
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	2196
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	37
UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	996
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	12
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	3195
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	3
UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
TRANSCIEVER - FIBEROPTIC	EACH	1
ELECTRIC CABLE IN TRENCH, LEAD-IN, NO. 14 1 PAIR	FOOT	6856
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	4253
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	5896
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	13777
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	3235
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 20 3C	FOOT	1545
ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	1000
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	34
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1700
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 17 FT.	EACH	17
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 64 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 68 FT.	EACH	2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 72 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	51
CONCRETE FOUNDATION, TYPE C	FOOT	3
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	52
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	13
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	21
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	7
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED	EACH	14
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	43
INDUCTIVE LOOP DETECTOR	EACH	15
DETECTOR LOOP, TYPE II	FOOT	4180
CONFIRMATION BEACON	EACH	4
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	14
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
LOOP DETECTOR TESTING	EACH	1

TRAFFIC SIGNAL WIRING DIAGRAM LEGEND

- PROPOSED
- DESCRIPTION
- ELECTRIC CABLE DENOTING NUMBER OF CONDUCTORS
- SIGNAL FACE WITH BACKPLATE
- SIGNAL FACE
- DIRECTIONAL SIGNAL SECTION
- 12" SIGNAL SECTION
- WALK/DON'T WALK SECTION
- GROUND WIRE (MAST ARM, POLE, CONTROLLER)
- PEDESTRIAN PUSHBUTTON
- CONDUIT
- LUMINAIRE

SEE LIGHTING PLAN

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	4	5
C	2	3
D	6	7

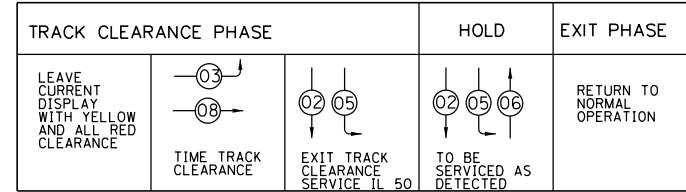
SEQUENCE LEGEND

- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

NOTES

- UPON A DEMAND FOR RAILROAD PREEMPTION, THE PROPER CLEARANCES SHALL BE DISPLAYED TO TERMINATE THE ACTIVE NORMAL PHASES OR EMERGENCY VEHICLE PREEMPTION PHASES. IF PHASES 03 AND 08 ARE ACTIVE, THEY SHALL REMAIN ACTIVE. THE ADVANCED EASTBOUND TRAFFIC SIGNAL HEADS ON THE RAILROAD CANTILEVER SHALL BE DISPLAYED AS RED. PHASES 03 AND 08 SHALL BE DISPLAYED AS THE TRACK CLEARANCE INTERVAL AND THEN SHALL CLEAR TO DISPLAY PHASES 02 AND 06 DURING THE HOLD INTERVAL, CYCLING TO PHASE 02 AND 05 WHEN CALLED. AFTER THE RAILROAD DEMAND IS RELEASED, THE PROPOSED CLEARANCE INTERVALS SHALL BE DISPLAYED TO RESUME NORMAL OPERATION OR EMERGENCY VEHICLE PREEMPTION.
- AMBER AND ALL RED PHASES ARE SUGGESTED TO BE 4.5 SECONDS AND 3.0 SECONDS RESPECTIVELY

PROPOSED RAILROAD PREEMPTION



PRIORITY LANE INTERVAL	1	2
MOVEMENT	↓	←

NOTES:

- ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A PHASE(S) SHALL BE IDENTICAL TO NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 857001.
- ALL RED CLEARANCE INTERVALS MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	366	30904	ON
B	4	357	31250	ON
C	4	345	31767	ON
D	4	341	33176	OFF
E	4	353	32609	ON
F	4	308	36777	ON
G	4	318	36134	ON
H	4	328	35536	ON
I	4	338	33505	OFF
J	4	346	33090	ON
K	4	369	29952	ON
L	6	357	28392	ON
M	6	344	29654	ON
N	6	319	31871	ON
O	6	340	29991	ON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	26		17	50	221
(YELLOW)	26		25	25	163
(GREEN)	26		15	25	98
ARROW	208		12	10	250
PED. SIGNAL	14		25	100	350
CONTROLLER	1		100	100	100
TOTAL:					1182

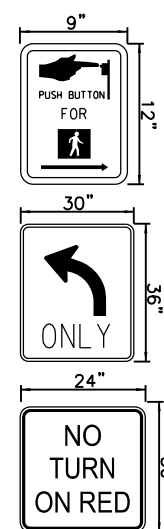
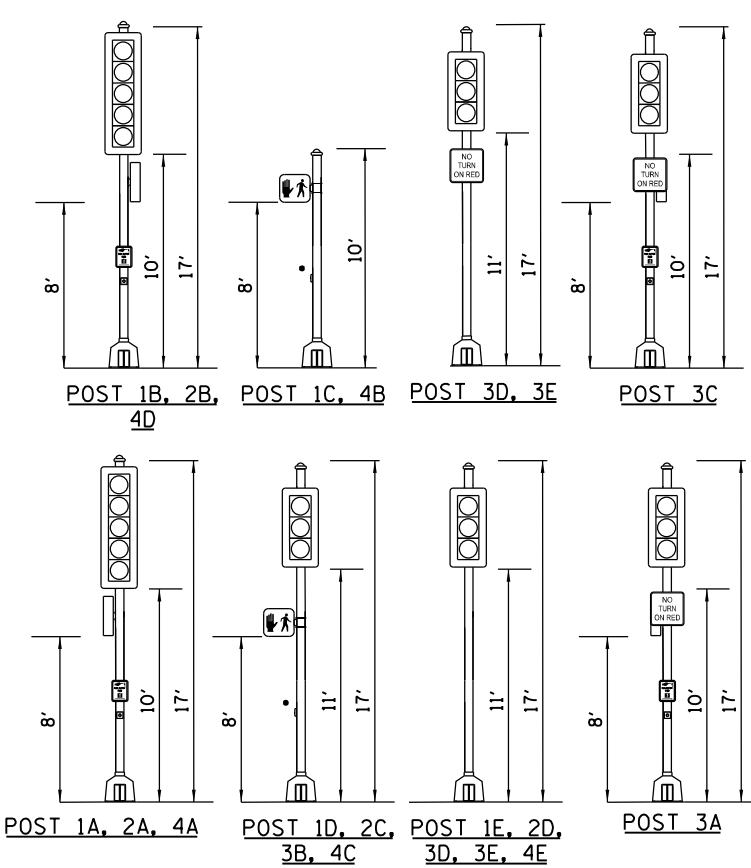
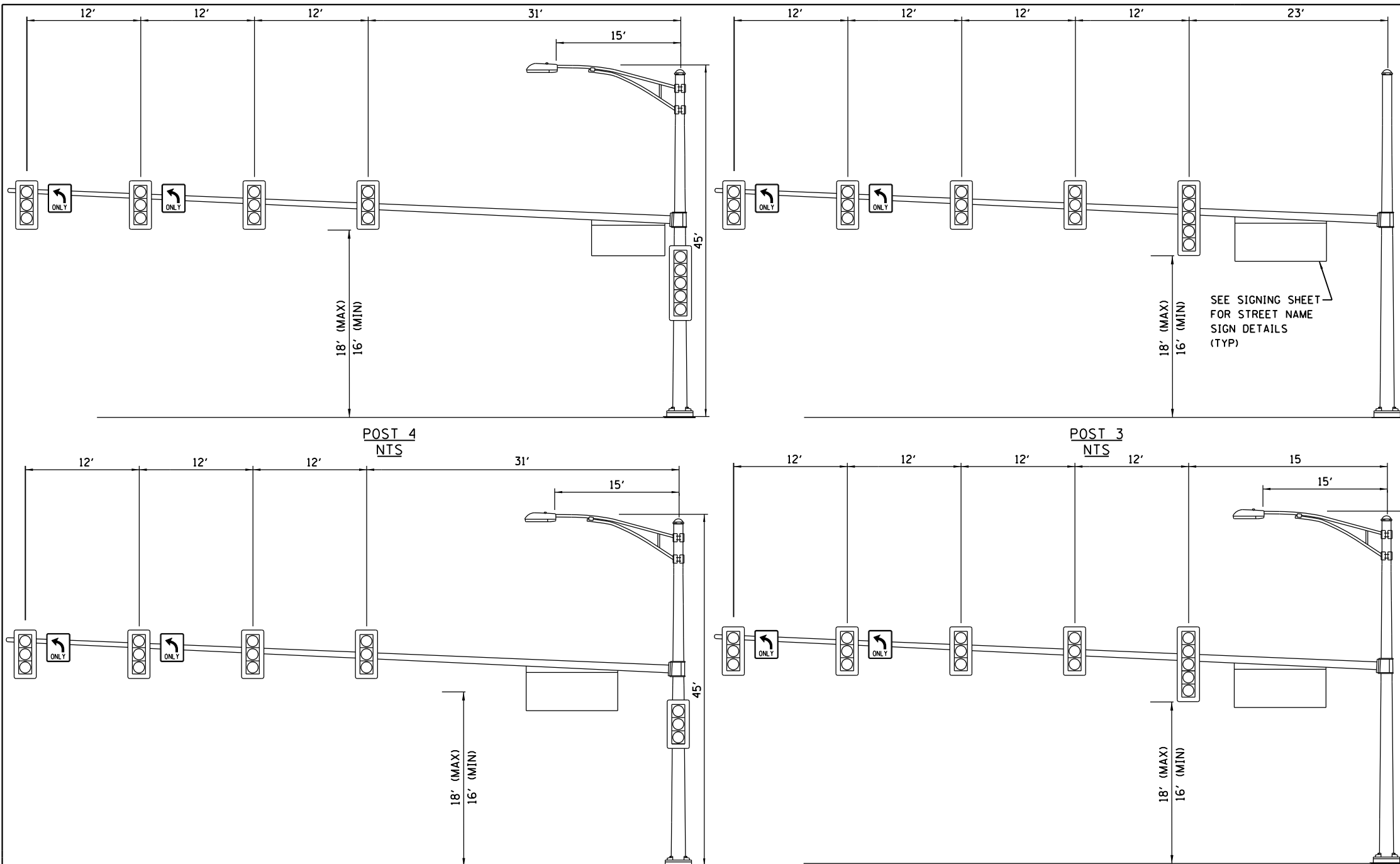
ENERGY COSTS TO: VILLAGE OF BRADLEY
 147 S. MICHIGAN AVE.
 BRADLEY, IL 60915
 (815) 932-2125
 ENERGY SUPPLY: CONTACT: _____
 PHONE: _____
 COMPANY: _____

DATE: 12/10/2014
 TIME: 8:15 AM
 LAYOUT: _____
 DRAWN: _____
 REVIEWED: _____

FILE NAME =	USER NAME = corcoranm	DESIGNED - TMA	REVISED -
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MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED -	REVISED -
	PLOT DATE = 12/10/2014	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CABLE PLAN (6000 & IL 50)				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-57 AND 6000 RD (BOURBONNAIS PARKWAY)				57	(46-1)HBK-1	KANKAKEE	819	449
BOURBONNAIS, IL				CONTRACT NO. 66982				
SCALE: AS SHOWN		SHEET NO. OF SHEETS STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



• R10-3
16 SIGNS REQUIRED FOR INTERSECTION:
0.75 SQ. FT. EACH

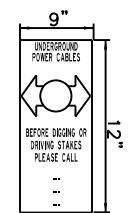
THIS SIGN SHALL BE LOCATED ABOVE ALL PEDESTRIAN PUSH BUTTONS.

R3-5
8 SIGNS REQUIRED: 7.5 SQ. FT. EACH

THIS SIGN SHALL BE LOCATED 0'-9" TO THE RIGHT OF THE 3 SECTION SIGNAL HEAD AS INDICATED.

R10-11
4 SIGNS REQUIRED FOR INTERSECTION: 5.00 SQ. FT. EACH

THIS SIGN SHALL BE LOCATED JUST BELOW THE TRAFFIC SIGNAL HEAD

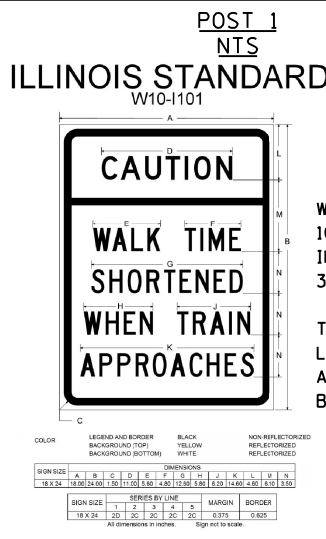


DAMPENING PLATE DETAIL

2-5/8" GALV. STEEL BOLTS THROUGH MAST ARM
END OF MAST ARM

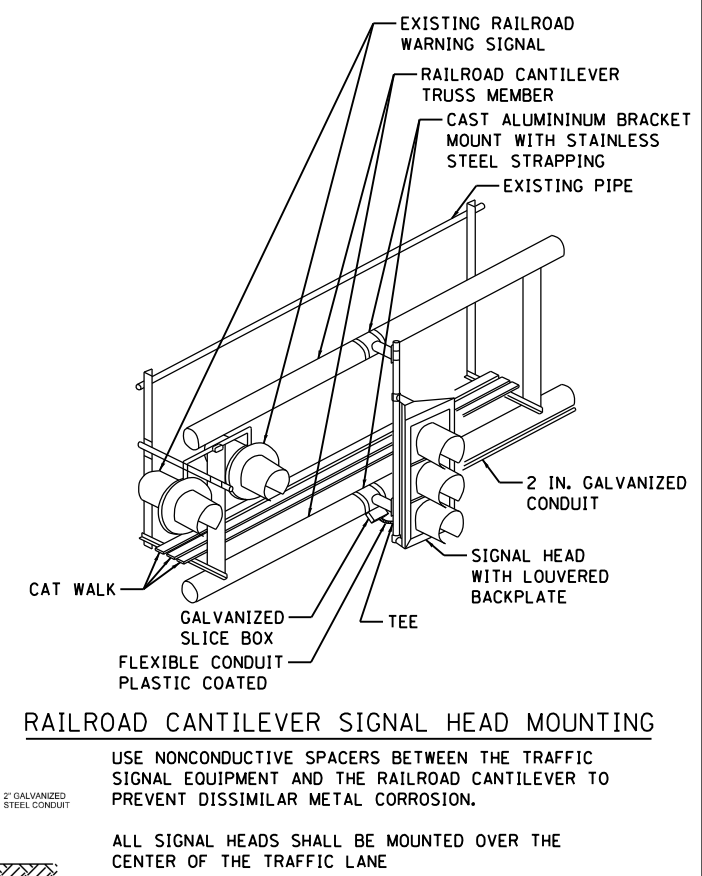
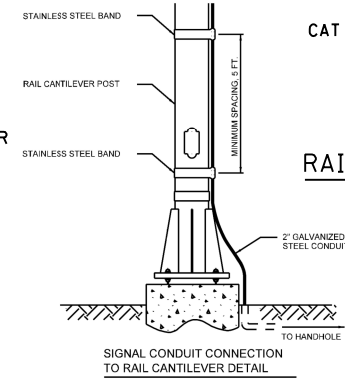
1/4" ALUMINUM PLATE

DAMPENING DEVICE SHALL CONSIST OF AN 8" X 12" TYPE 1, UNPAINTED ALUMINUM STOCK MOUNTED HORIZONTALLY ON THE TOP OF THE MAST ARM. COST IS INCIDENTAL TO MAST ARM QUANTITY (NOT TO SCALE)



W10-1101
16 SIGNS REQUIRED FOR INTERSECTION:
3.00 SQ. FT. EACH

THIS SIGN SHALL BE LOCATED ABOVE ALL PEDESTRIAN PUSH BUTTONS SIGNS.



LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.16.2013
REVIEWED	KJB	10.17.2013
Default		

FILE NAME = D389H0038-sh-t-ts012
MODEL NAME =
Default

USER NAME = MWH
DESIGNED -
DRAWN -
CHECKED - KJB
DATE - 12.03.13

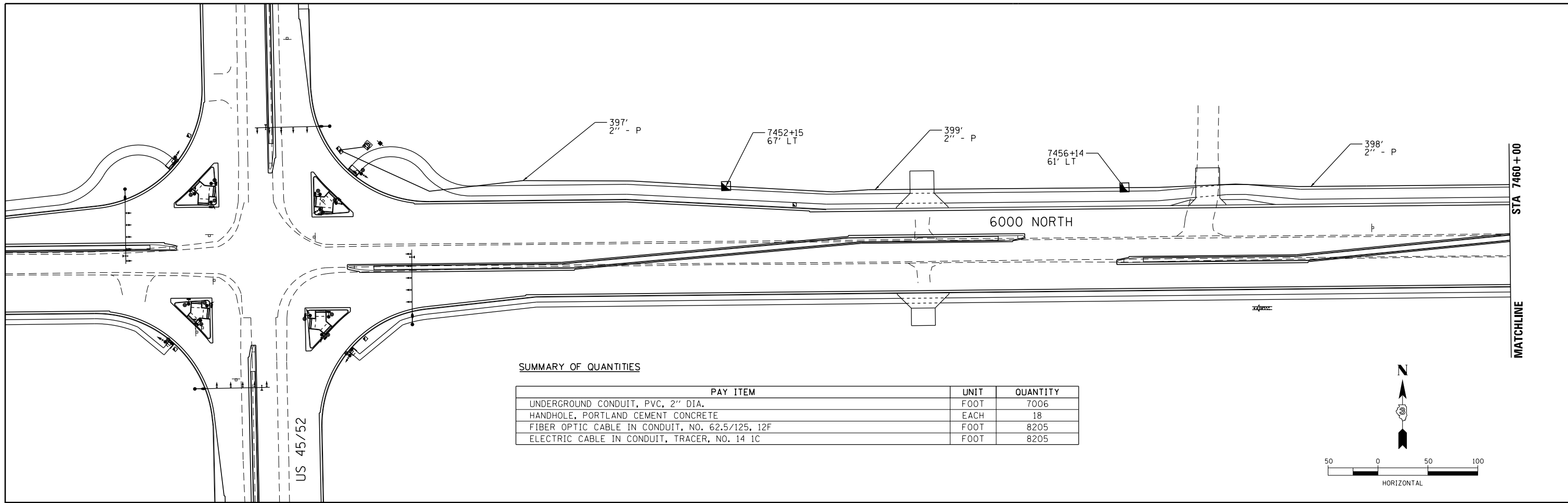
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM DIAGRAM (6000N & IL-50)
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL

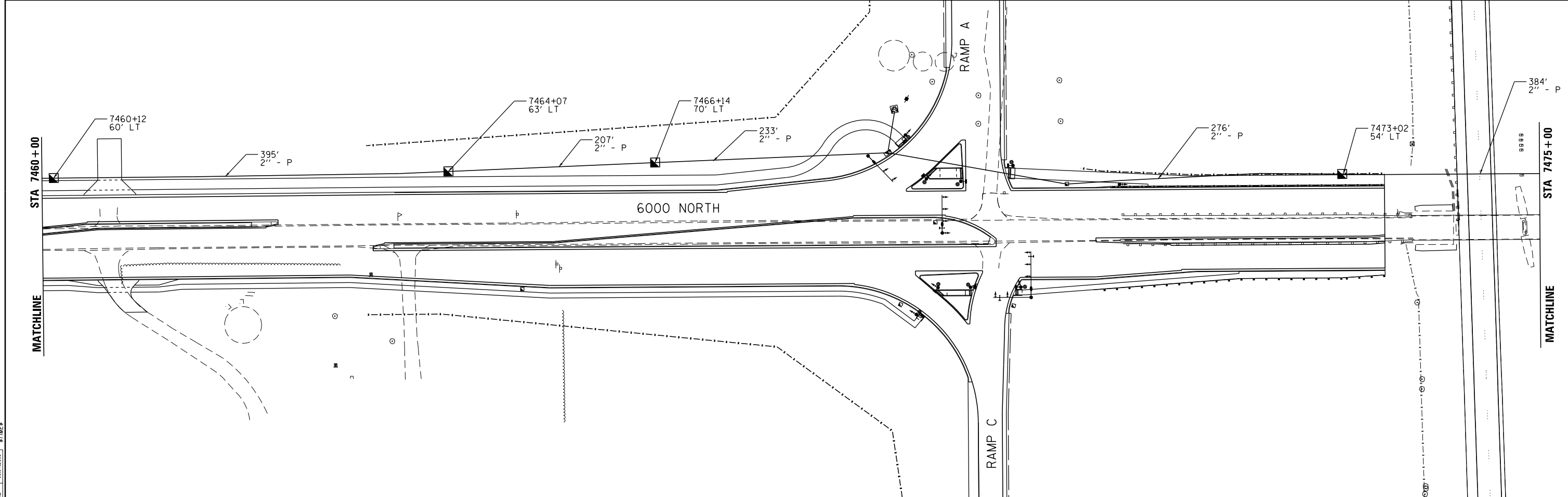
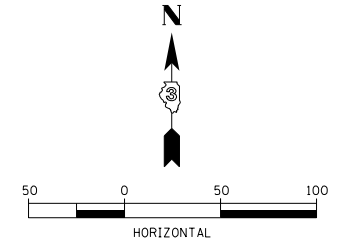
SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	450
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



SUMMARY OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	7006
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	18
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 12F	FOOT	8205
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	8205



LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013

FILE NAME = D:\309H0038-sht-ts013
 MODEL NAME =

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 PLOT DATE = 1/22/2014

DESIGNED - TMA
 DRAWN - TMA
 CHECKED - KJB
 DATE - 12.03.13

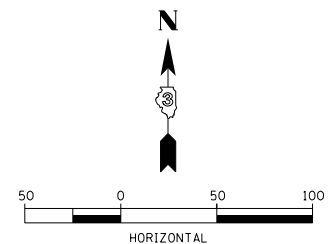
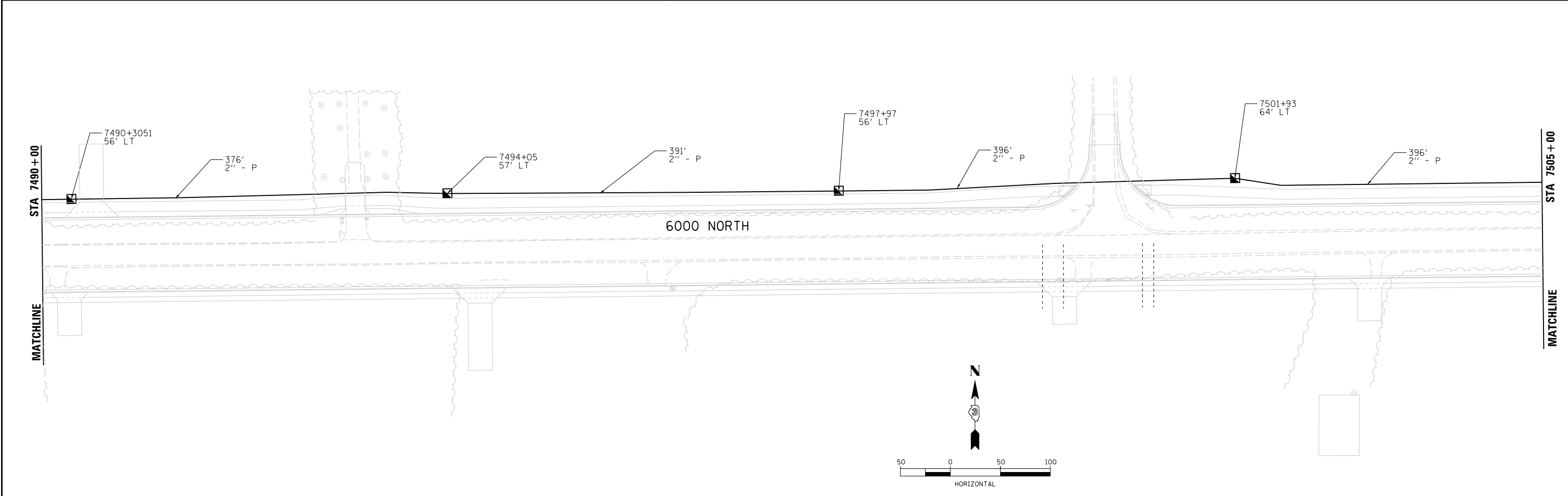
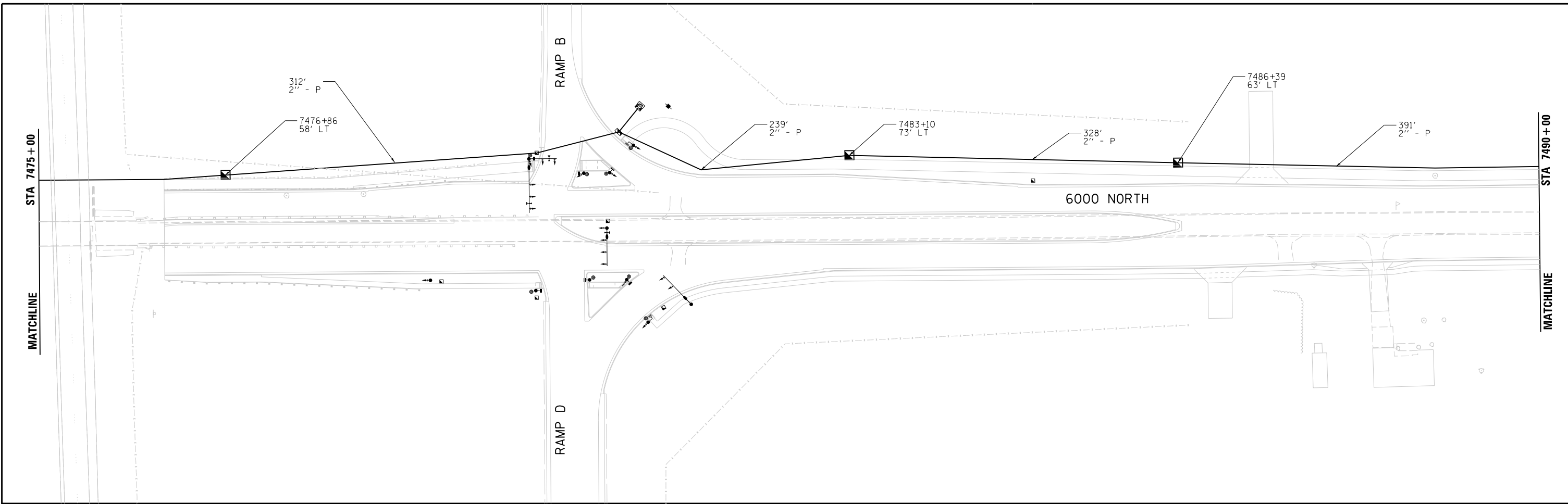
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
 I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL**

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	451
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66982	



LAYOUT	TMA	03.06.2013
DRAWN	TMA	10.15.2013
REVIEWED	KJB	10.17.2013

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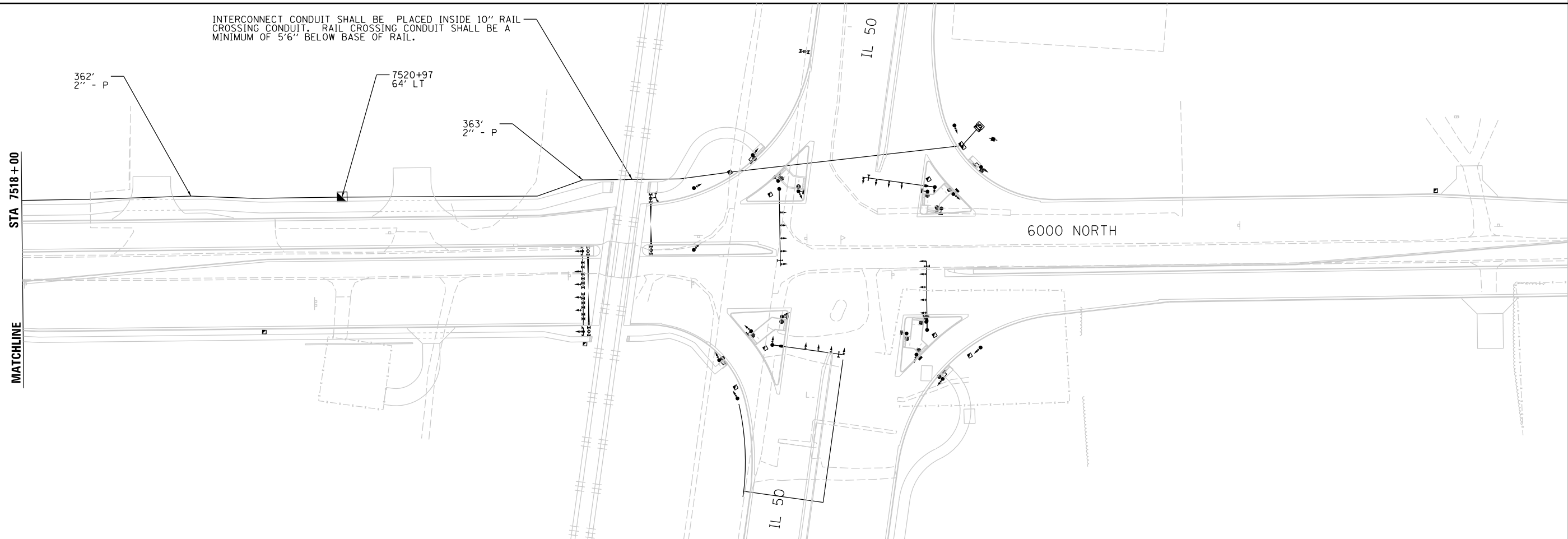
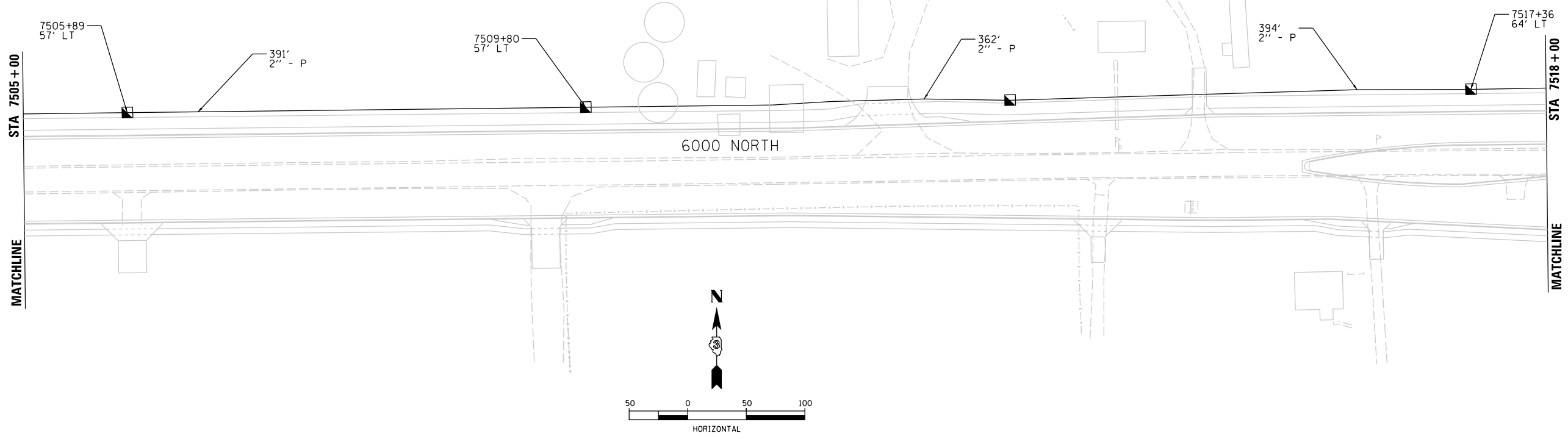
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
 I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	452
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.



LAYOUT	DPA	03.06.2013
DRAWN	MWH	12.12.2013
REVIEWED	DPA	12.12.2013

FILE NAME = D309H0038-shr-ts015.dgn

USER NAME = MWH
 DESIGNED - C
 DRAWN - A
 CHECKED - DPA
 DATE - 12.12.13

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
 I-57 AND 6000 RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	453
CONTRACT NO. 66982				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

SEQUENCE OF OPERATION

PHASE	1+5				2+5			1+6			2+6						2+6						4+7																												
	1	2A	2B	3A	3B	4A	4B	5	6A	6B	7	8	9A	9B	10	11	12A	12B	13A	13B	14A	14B	15A	15B	16	17A	17B	17C	17D	18A	18B	19A	19B	19C	19D	20A	20B	20C	20D	21	22	23A	23B	24A	24B						
CHANGE TO		2+5		1+6		2+6		2+6				2+6				1+5 4+7 4+8		3+7 3+8		2+5		1+6			4+7				3+8		1+5 1+6 4+8		2+5 2+6						4+8		1+5 1+6 2+5 2+6										
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	N/B	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	Y	R	Y	R	Y	R	G	G	R	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			
IL 50 MIDDLE MAST ARM SIGNALS	N/B	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	Y	R	Y	R	Y	R	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	N/B	G	Y	R	G	G	Y	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	S/B	R	R	R	R	R	R	G	G	G	R	R	R	R	G	G	Y	R	G	G	G	G	Y	R	G	G	G	Y	R	G	G	G	G	Y	R	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	
IL 50 MIDDLE MAST ARM SIGNALS	S/B	R	R	R	R	R	R	G	G	G	R	R	R	R	G	G	Y	R	Y	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	S/B	G	G	G	Y	R	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH MIDDLE MAST ARM SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH SIGNALS ON RAILROAD MAST, WEST OF TRACKS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH MIDDLE MAST ARM SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PEDESTRIAN SIGNALS CROSSING, IL 50 ON SOUTH SIDE OF 6000 NORTH		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		
PEDESTRIAN SIGNALS CROSSING, IL 50 ON NORTH SIDE OF 6000 NORTH		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		
PEDESTRIAN SIGNALS CROSSING, 6000 NORTH ON EAST SIDE OF IL 50		H	H	H	H	H	H	H	H	H	•P	••FH	H	H	•P	••FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		

- TO APPEAR ONLY UPON PUSHBUTTON ACTIVATION
 - FLASHING HAND IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE
 - ⊖ THE ILLUMINATED PERSON OR FLASHING HAND INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT ARROW TIME IS NOT SUFFICIENT TO COMPLETE THE ILLUMINATED PERSON OR FLASHING HAND INTERVALS.
- ILLUMINATED PERSON AND FLASHING HAND TIMINGS TO BE SET ONLY ON PHASES WHERE THE ILLUMINATED PERSON AND FLASHING HAND ARE INDICATED IN THE SEQUENCE OF OPERATION.
- ILLUMINATED PERSON - "WALK"
- P = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
- FH = ILLUMINATED SOLID HAND = DON'T WALK
- H = PHASE 2+6 SHALL BE PLACED ON RECALL

CONTINUED ON NEXT SHEET



LAYOUT	TMA	12.08.2013
DRAWN	TMA	12.08.2013
REVIEWED	KJB	12.08.2013


FILE NAME = D309H0038-sh-t-ts016	USER NAME = MWH	DESIGNED - TMA	REVISED -
MODEL NAME = Default	PLOT SCALE = AS SHOWN	DRAWN - TMA	REVISED -
	PLOT DATE = 12/9/2014	CHECKED - KJB	REVISED -
		DATE - 12.03.13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CABLE PLAN (6000N & IL 50) I-57 AND 6000N RD (BOURBONNAIS PARKWAY) BOURBONNAIS, IL			
SCALE: AS SHOWN	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	453A
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 66982

SEQUENCE OF OPERATION

																					F L A S H	
PHASE	1+5																					
INTERVAL	25	26	27A	27B	27C	27D	28A	28B	28C	28D	29A	29B	29C	29D	30	31	32A	32B	32C	32D		
CHANGE TO			4+8				1+5 1+6				2+5 2+6						1+5 1+6 2+5 2+6					
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
IL 50 MIDDLE MAST ARM SIGNALS	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	N/B																					
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	S/B	G	G	G	G	Y	R	G	G	Y	R	G	G	G	G	R	R	R	R	R	R	
IL 50 MIDDLE MAST ARM SIGNALS	S/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	S/B																					
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	E/B	G	G	G	G	G	Y	R	R	R	Y	R	R	R	G	G	Y	R	R	R	R	
6000 NORTH MIDDLE MAST ARM SIGNALS	E/B	G	G	G	G	G	G	G	Y	R	G	G	Y	R	G	G	G	G	Y	R	R	
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	E/B																					
6000 NORTH SIGNALS ON RAILROAD MAST, WEST OF TRACKS	E/B	G	G	G	G	G	G	G	Y	R	G	G	Y	R	G	G	G	G	Y	R	R	
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	W/B																					
6000 NORTH MIDDLE MAST ARM SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	R	
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	W/B																					
PEDESTRIAN SIGNALS CROSSING, IL 50 ON SOUTH SIDE OF 6000 NORTH		•P	••FH	H	H	H	H	H	H	H	H	H	H	H	H	•P	••FH	H	H	H	H	D A R K
PEDESTRIAN SIGNALS CROSSING, IL 50 ON NORTH SIDE OF 6000 NORTH		H	H	H	H	H	H	H	H	H	H	H	H	H	H	•P	••FH	H	H	H	H	
PEDESTRIAN SIGNALS CROSSING, 6000 NORTH ON EAST SIDE OF IL 50		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	

- TO APPEAR ONLY UPON PUSHBUTTON ACTIVATION
 - FLASHING HAND IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE
 - THE ILLUMINATED PERSON OR FLASHING HAND INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT ARROW TIME IS NOT SUFFICIENT TO COMPLETE THE ILLUMINATED PERSON OR FLASHING HAND INTERVALS.
- ILLUMINATED PERSON AND FLASHING HAND TIMINGS TO BE SET ONLY ON PHASES WHERE THE ILLUMINATED PERSON AND FLASHING HAND ARE INDICATED IN THE SEQUENCE OF OPERATION.
- ILLUMINATED PERSON - "WALK"
- P = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
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LAYOUT	TMA	12.08.2013
DRAWN	TMA	12.08.2013
REVIEWED	KJB	12.08.2013

FILE NAME =	D309H0038-sht-ts017	USER NAME =	MWH	DESIGNED -	TMA	REVISED -	
MODEL NAME =	Default	PLOT SCALE =	AS SHOWN	CHECKED -	KJB	REVISED -	
		PLOT DATE =	12/9/2014	DATE -	12.03.13	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CABLE PLAN (6000N & IL 50) I-57 AND 6000N RD (BOURBONNAIS PARKWAY) BOURBONNAIS, IL			
SCALE: AS SHOWN	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	453B
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1		1		1		5		5		7		7		10		10		10		16		16		16		16		21		21												
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	1AA	1BB	1CC	1DD	1EE	1FF	1GG	1HH	1JJ	1KK	1LL	1MM	1NN	1PP	1QQ	1RR	1SS		
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	1D	3 OR 5	1F	4	1H	2, 3, OR 5	4	2	1M	1N	3, 4, OR 5	1Q	1R	2	1T	1U	3 OR 5	1W	1X	4	1Z	1AA	1BB	2	1DD	3	1FF	1GG	1HH	4	1KK	1LL	1MM	5	1PP	1QQ	2, 3 OR 4	1SS	5		
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	N/B	R	R	R	R	R	R	R	R	G	G	Y	R	G	G	G	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
IL 50 MIDDLE MAST ARM SIGNALS	N/B	R	R	R	R	R	R	R	R	G	G	Y	R	G	G	G	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	N/B	G	G	Y	R	Y	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	S/B	R	R	R	R	R	Y	R	G	R	R	R	R	G	Y	R	G	Y	R	G	G	G	G	G	Y	R	Y	R	G	G	G	G	G	G	Y	R	R	R	R	R	R	R	
IL 50 MIDDLE MAST ARM SIGNALS	S/B	R	R	R	R	R	Y	R	G	R	R	R	R	G	Y	R	G	Y	R	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	S/B	Y	R	Y	R	G	G	Y	R	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH MIDDLE MAST ARM SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH SIGNALS ON RAILROAD MAST, WEST OF TRACKS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH MIDDLE MAST ARM SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PEDESTRIAN SIGNALS CROSSING, IL 50 ON SOUTH SIDE OF 6000 NORTH		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
PEDESTRIAN SIGNALS CROSSING, IL 50 ON NORTH SIDE OF 6000 NORTH		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	FH	H	H	FH	H	
PEDESTRIAN SIGNALS CROSSING, 6000 NORTH ON EAST SIDE OF IL 50		H	H	H	H	H	H	H	H	FH	FH	H	H	FH	H	H	FH	H	H	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	

◇ EMERGENCY VEHICLE PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3, 4, OR 5 IS TERMINATED

- P = ILLUMINATED PERSON - "WALK"
- FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
- H = ILLUMINATED SOLID HAND = DON'T WALK



LAYOUT	TMA	12.08.2013
DRAWN	TMA	12.08.2013
REVIEWED	KJB	12.08.2013

FILE NAME =	USER NAME = MWH	DESIGNED - TMA	REVISED -
D309H0038-sh1-ts018		DRAWN - TMA	REVISED -
MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED - KJB	REVISED -
Default	PLOT DATE = 12/9/2014	DATE - 12.03.13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN (6000N & IL 50)
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: AS SHOWN SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	453C
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 66982	

CONTINUED ON NEXT SHEET

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

																					PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	PREEMPTOR NUMBER 6	CLEAR TO NORMAL SEQUENCE					
	25					25					30					30														
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1TT	1UU	1VV	1WW	1XX	1YY	1ZZ	1AAA	1BBB	1CCC	1DDD	1EEE	1FFF	1GGG	1HHH	1JJJ	1KKK	1LLL	1MMM	1NN	1PPP	1QQQ	1RRR	1SSS	1TTT	1UUU				
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION NUMBER	1UU	1VV	1WW	1XX	2 OR 5	1ZZ	1AAA	3	1CCC	1DDD	1EEE	1FFF	4	1HHH	1JJJ	1KKK	1LLL	2 OR 4	1NNN	1PPP	3	1RRR	1SSS	1TTT	1UUU	5				
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	R
IL 50 MIDDLE MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	R
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	R
IL 50 NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	G	G	G	Y	R	G	Y	R	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R
IL 50 MIDDLE MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R
IL 50 FAR LEFT AND LEFT TWO MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	G	G	G	Y	R	G	G	G	G	Y	R	R	R	G	G	G	Y	R	G	G	G	G	G	G	Y	R	R	G	R	R
6000 NORTH MIDDLE MAST ARM SIGNALS	G	G	G	Y	R	G	G	G	G	Y	R	R	R	G	G	G	Y	R	G	G	G	G	G	G	Y	R	R	G	R	R
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	G	G	G	Y	R	G	G	G	G	Y	R	R	R	G	G	G	Y	R	G	G	G	G	G	G	Y	R	R	G	R	R
6000 NORTH SIGNALS ON RAILROAD MAST, WEST OF TRACKS	G	G	G	Y	R	G	G	G	G	Y	R	R	R	G	G	G	Y	R	G	G	G	G	G	G	Y	R	R	G	R	R
6000 NORTH NEAR RIGHT AND RIGHT MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	Y	R	G	Y	R	G	G	G	G	G	R	R	R	G
6000 NORTH MIDDLE MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	Y	R	G	Y	R	G	G	G	G	G	R	R	R	G
6000 NORTH FAR LEFT AND LEFT TWO MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G
PEDESTRIAN SIGNALS CROSSING, IL 50 ON SOUTH SIDE OF 6000 NORTH	FH	H	H	H	H	FH	H	H	FH	H	H	H	H	FH	H	H	H	H	FH	H	H	FH	H	H	H	H	H	H	H	H
PEDESTRIAN SIGNALS CROSSING, IL 50 ON NORTH SIDE OF 6000 NORTH	H	H	H	H	H	H	H	H	H	H	H	H	H	FH	H	H	H	H	FH	H	H	FH	H	H	H	H	H	H	H	H
PEDESTRIAN SIGNALS CROSSING, 6000 NORTH ON EAST SIDE OF IL 50	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

◊ EMERGENCY VEHICLE PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3, 4, OR 5 IS TERMINATED.

- P = ILLUMINATED PERSON - "WALK"
- FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
- H = ILLUMINATED SOLID HAND = DON'T WALK



LAYOUT	TMA	12/08/2013
DRAWN	TMA	12/08/2013
REVIEWED	KJB	12/08/2013

FILE NAME =	USER NAME = MWH	DESIGNED - TMA	REVISED -
D309h0038-shr-ts019		DRAWN - TMA	REVISED -
MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED - KJB	REVISED -
Default	PLOT DATE = 12/9/2014	DATE - 12.03.13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CABLE PLAN (6000N & IL 50) I-57 AND 6000N RD (BOURBONNAIS PARKWAY) BOURBONNAIS, IL			
SCALE: AS SHOWN	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	453D
CONTRACT NO. 66982				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

RAILROAD PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER											PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	PREEMPTOR NUMBER 6	PREEMPTOR NUMBER 2															
	1	5	7	10	16	21	25	30	2	3	4	5																		
CHANGE FROM EMERGENCY SEQUENCE OF OPERATION INTERVAL NUMBER											2	3	4	5																
RAILROAD VEHICLE PREEMPTION SEQUENCE OF OPERATION NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	2	3	4	5	CLEAR TO NORMAL SEQUENCE	
CHANGE TO RAILROAD VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	1D	2	1F	2	1H	2	1K	2	1M	2	1P	2	1R	2	1T	2	1V	2	1X	2	1Z	2	3	4	5			
IL 50 N/B NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	R	R	R	R	Y	R	Y	R	R _Y	R	R _Y	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	G	△	
IL 50 N/B MIDDLE MAST ARM SIGNALS	R	R	R	R	Y	R	Y	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	G	△	
IL 50 N/B FAR LEFT AND LEFT TWO MAST ARM SIGNALS	Y _←	R _←	R _←	R _←	Y _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	Y _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	△	
IL 50 S/B NEAR RIGHT AND RIGHT MAST ARM SHAFT SIGNALS	R _→	R _→	Y _→	R _→	R _→	R _→	Y _→	R _→	Y _→	R _→	R _→	R _→	Y _→	R _→	R _→	R _→	R _→	R _→	R _→	Y _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	△	
IL 50 S/B MIDDLE MAST ARM SIGNALS	R	R	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	G	△	
IL 50 S/B FAR LEFT AND LEFT TWO MAST ARM SIGNALS	Y _←	R _←	Y _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	Y _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	△	
6000 NORTH E/B NEAR RIGHT AND RIGHT MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	R	R	G	G	R	R	R	R	G	Y	R	R	△	
6000 NORTH E/B MIDDLE MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	R	R	G	G	R	R	R	R	G	Y	R	R	△	
6000 NORTH E/B FAR LEFT AND LEFT TWO MAST ARM SIGNALS	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	G _←	G _←	R _←	R _←	R _←	R _←	Y _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	△	
6000 NORTH E/B SIGNALS ON RAILROAD MAST, WEST OF TRACKS	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	△
6000 NORTH W/B NEAR RIGHT AND RIGHT MAST ARM SIGNALS	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	Y _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	R _→	△	
6000 NORTH W/B MIDDLE MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	△
6000 NORTH W/B FAR LEFT AND LEFT TWO MAST ARM SIGNALS	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	Y _←	R _←	Y _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	R _←	Y _←	R _←	R _←	R _←	R _←	△	
PEDESTRIAN SIGNALS CROSSING, IL 50 ON SOUTH SIDE OF 6000 NORTH	H	H	H	H	H	H	H	H	H	H	H	H	FH	H	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	△	
PEDESTRIAN SIGNALS CROSSING, IL 50 ON NORTH SIDE OF 6000 NORTH	H	H	H	H	H	H	H	H	H	H	FH	H	H	H	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	△	
PEDESTRIAN SIGNALS CROSSING, 6000 NORTH ON EAST SIDE OF IL 50	H	H	H	H	FH	H	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	△	

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

P = ILLUMINATED PERSON - "WALK"

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LAYOUT	TMA	12.08.2013
DRAWN	TMA	12.08.2013
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D309H0038-sh-t-ts020		DRAWN - TMA	REVISED -
MODEL NAME =	PLOT SCALE = AS SHOWN	CHECKED - KJB	REVISED -
Default	PLOT DATE = 12/9/2014	DATE - 12.03.13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CABLE PLAN (6000N & IL 50)			
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)			
BOURBONNAIS, IL			
SCALE: AS SHOWN	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	453E
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 66982	

GENERAL LIGHTING NOTES

- ALL PROPOSED LIGHTING UNITS SHALL BE LABELED ACCORDING TO THE STANDARD SPECIFICATIONS, WITH POLE NUMBERS ATTACHED WITH STAINLESS STEEL BANDING. LIGHTING UNIT NUMBERING SHALL BE AS DIRECTED BY THE ENGINEER.
- EXISTING LIGHT POLES AND FOUNDATIONS TO BE REMOVED, AND ALL ASSOCIATED HARDWARE AND APPURTENANCES, SHALL NOT BE SALVAGED BUT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH OTHER TRADES.
- CONTRACTOR SHALL INSTALL LIGHT POLES AT THE LOCATIONS INDICATED ON THE PLANS, MAINTAINING ADEQUATE CLEARANCE FROM OVERHEAD UTILITY LINES. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CLEARANCES PER THE NATIONAL ELECTRICAL SAFETY CODE AND/OR THE REQUIREMENTS OF THE UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL CONFLICTS BETWEEN PROPOSED LIGHT POLE LOCATIONS AND UTILITY LINES. THE LOCATION OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. REROUTING, DISCONNECTION, RELOCATION, PROTECTION ETC., OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE APPLICABLE UNDERGROUND CONDUIT OR UNIT DUCT PAY ITEM.
- PROPOSED LIGHT POLES ALONG BOURBONNAIS PKWY. TO BE INSTALLED AT A 15 FEET SETBACK FROM THE EDGE OF TRAVELED PAVEMENT, 5 FEET BEHIND THE GUARDRAIL OR 2 FEET BEHIND SIDEWALK OR PATH UNLESS NOTED OTHERWISE ON THE PLANS. NO POLES TO BE INSTALLED IN THE FLOWLINE OF DITCH. POLE SETBACK TO BE INCREASED IF NECESSARY AS DIRECTED BY THE ENGINEER.
- NO LIGHTING CIRCUIT OR PORTION THEREOF SHALL BE REMOVED FROM NIGHTTIME OPERATION WITHOUT APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE LIGHTING SYSTEM UNTIL IDOT HAS TAKEN ACCEPTANCE OF THE SYSTEM. ALL EXISTING CIRCUITS AND CABLES TO THE LIGHT POLES SHALL BE MAINTAINED AS NEEDED AND THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.
- BREAKAWAY DEVICES SHALL NOT BE INSTALLED FOR POLES LOCATED BEHIND THE GUARDRAIL OR MOUNTED ON BRIDGE PARAPET WALLS.
- UNDERGROUND COILABLE NON-METALLIC CONDUIT SHALL BE SCHEDULE 80.
- LIGHT POLE FOUNDATIONS SHALL BE INSTALLED PLUMB AND FLUSH WITH THE PROPOSED GRADE AND SHALL MEET THE HEIGHT REQUIREMENTS OF ARTICLE 836.03 OF THE STANDARD SPECIFICATIONS. AFTER UNIT DUCT IS INSTALLED, FOUNDATIONS SHALL BE FILLED WITH FINE AGGREGATE ACCORDING TO ARTICLE 836.03. WASHERS USED TO INSTALL THE POLE SHALL BE LARGE ENOUGH TO FULLY COVER THE SLOTTED HOLES IN THE POLE BASE PLATE. THE VOIDS ON THE BOTTOM SIDE OF THE ALUMINUM POLE BASE MUST BE SEALED FROM RODENT ENTRY WITH STAINLESS STEEL SCREEN.
- STAINLESS STEEL SCREEN INSTALLED AROUND BREAKAWAY COUPLINGS OR ANCHOR RODS AND NUTS SHALL BE ACCORDING TO ART. 1070.04(c)(2)(c) OF THE STANDARD SPECIFICATIONS EXCEPT THE MINIMUM WIRE DIAMETER SHALL BE AWG NO. 16 (1.6mm)
- LIGHT TOWER IDENTIFICATION SHALL BE ATTACHED TO THE LIGHT TOWER AS DESCRIBED IN STANDARD 830006 AND IN ACCORDANCE TO ARTICLE 1069.06 IN THE STANDARD SPECIFICATIONS. THE LOCATION NUMBER TO BE USED IS 136. THE CONTRACTOR SHALL CONTACT WARREN NORRIS AT (815) 434-8506 FOR THE LOCATION OF THE DECALS ON THE LIGHT TOWERS. THIS SHALL BE INCLUDED IN THE COST OF LIGHT TOWER OF THE MOUNTING HEIGHT AND LUMINAIRE MOUNTING POSITION SPECIFIED.

LEGEND

Weathering Steel

- PROPOSED LIGHT TOWER, 100 FT. MH, WITH 6-400W HPS LUMINAIRES
- PROPOSED LIGHT TOWER, 110 FT. MH, WITH 6-400W HPS LUMINAIRES
- PROPOSED LIGHT TOWER, 100 FT. MH, WITH 4-400W HPS LUMINAIRES
- PROPOSED LIGHT TOWER, 110 FT. MH, WITH 4-400W HPS LUMINAIRES
- PROPOSED LIGHTING UNIT, 50 FT. ALUMINUM POLE, 15 FT DAVIT ARM, 400W HPS LUMINAIRE, M-C-3
- COMBINATION LIGHTING UNIT, 45 FT. MH, 15 FT MAST ARM, 400W HPS LUMINAIRE, M-C-3
- PROPOSED LIGHTING CONTROLLER
- ELECTRIC SERVICE INSTALLATION
- JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, SIZE AS NOTED
- PROPOSED UNIT DUCT, SIZE AS NOTED
- PROPOSED COILABLE NON-METALLIC CONDUIT, SIZE AS NOTED
- PROPOSED ELECTRIC CABLE IN CONDUIT, SIZE AS NOTED

CABLE/CONDUIT SCHEDULE

- A UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO. 8 GROUND (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE
- B UNIT DUCT, 600V, 2-1C NO. 6, 1/C NO. 8 GROUND (XLP-TYPE USE), 1" DIA. POLYETHYLENE
- C UNIT DUCT, 600V, 2-1C NO. 4, 1/C NO. 6 GROUND (XLP-TYPE USE), 1" DIA. POLYETHYLENE
- D UNIT DUCT, 600V, 2-1C NO. 2, 1/C NO. 4 GROUND (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE
- E ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 2-1C NO. 2, 2-1C NO. 8, 1/C NO. 8 GROUND, 1/C NO. 4 GROUND IN 2" DIA. STAINLESS STEEL CONDUIT ATTACHED IN STRUCTURE.

LIGHTING SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QTY
ELECTRIC SERVICE INSTALLATION	EACH	3
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	80
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2 1/2" DIA.	FOOT	1629
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 3" DIA.	FOOT	350
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 4" DIA.	FOOT	150
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	600
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 8"	EACH	8
UNIT DUCT, 600V, 2-1C NO.8, 1/C NO.8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	10974
UNIT DUCT, 600V, 2-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	5050
UNIT DUCT, 600V, 2-1C NO.6, 1/C NO.8 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	8235
UNIT DUCT, 600V, 2-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	2277
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	1920
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 4	FOOT	640
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2	FOOT	1280
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	69
LUMINAIRE, SODIUM VAPOR, HIGH MAST, HORIZONTAL MOUNT, 400 WATT	EACH	84
UNDERPASS LUMINAIRE, 150 WATT, HIGH PRESSURE SODIUM VAPOR	EACH	4
LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480VOLT, 60AMP	EACH	2
LIGHTING CONTROLLER, BASE MOUNTED, 200AMP	EACH	1
LIGHT POLE, ALUMINUM, 50 FT. M.H., 15 FT. DAVIT ARM	EACH	56
LIGHT TOWER, 100 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 4	EACH	5
LIGHT TOWER, 100 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 6	EACH	1
LIGHT TOWER, 110 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 4	EACH	4
LIGHT TOWER, 110 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 6	EACH	7
LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 8'	EACH	56
LIGHT TOWER FOUNDATION, 48" DIAMETER	FOOT	269
BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	224
REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	2
CONDUIT ATTACHED TO STRUCTURE, 1" DIA, STAINLESS STEEL	FOOT	10
CONDUIT ATTACHED TO STRUCTURE, 2" DIA, STAINLESS STEEL	FOOT	40
TEMPORARY LIGHTING SYSTEM	L SUM	1

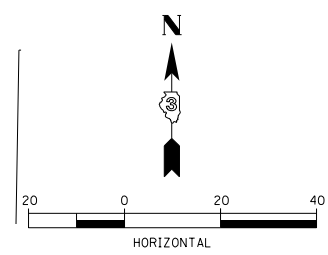
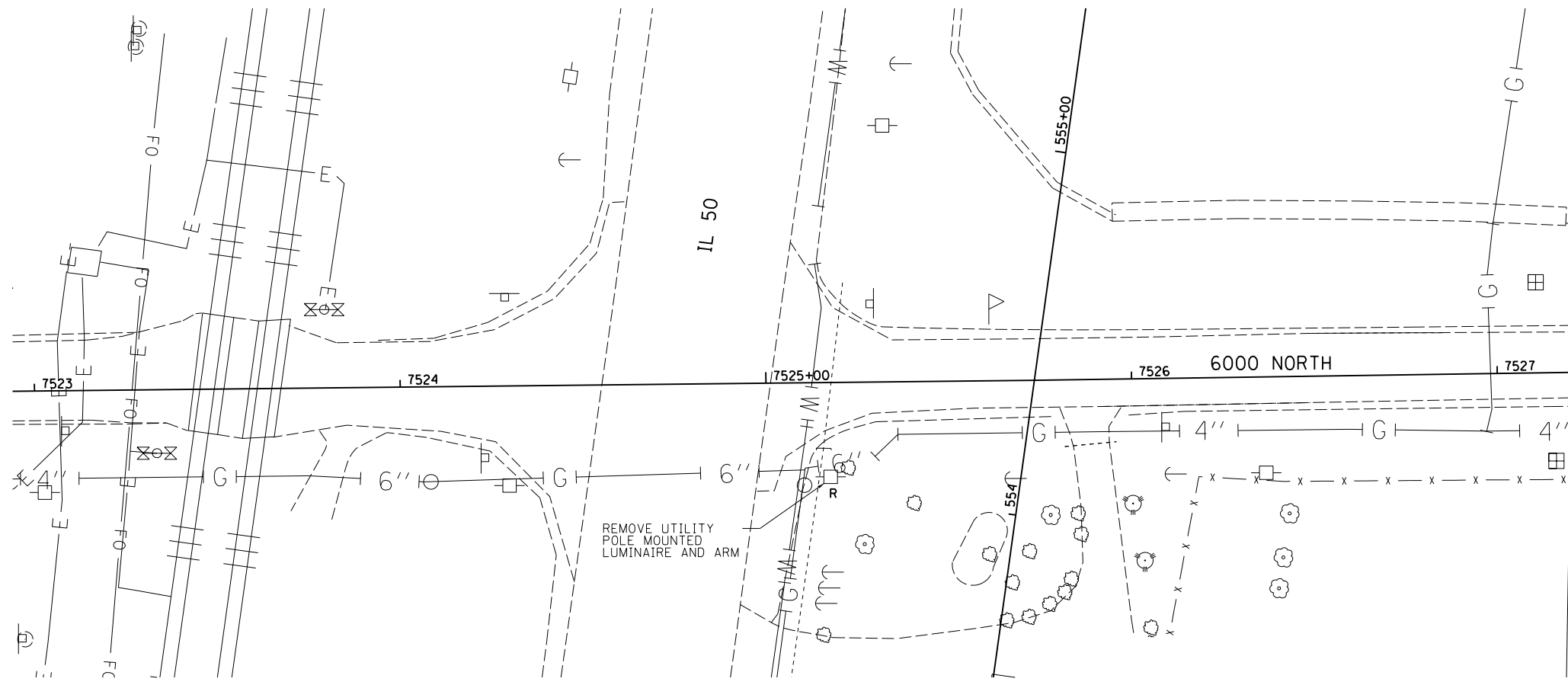
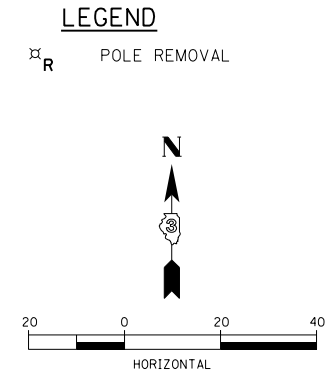
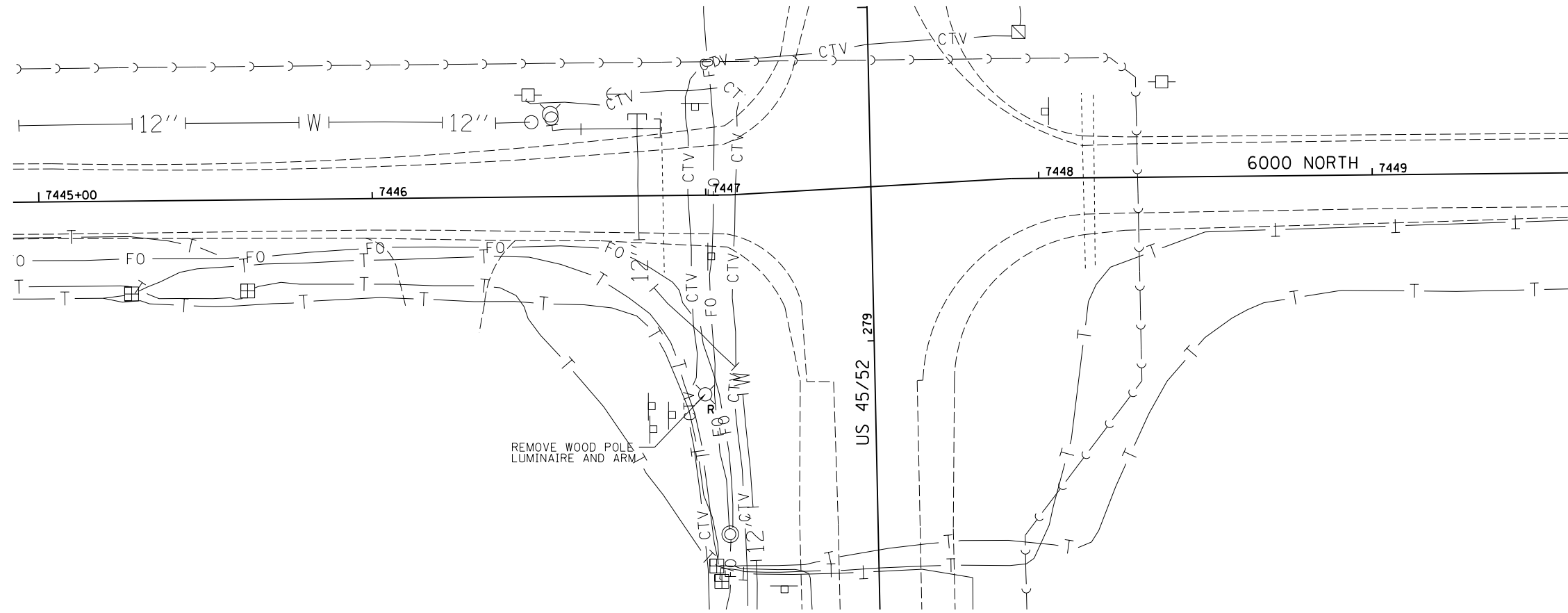
INDEX OF SHEETS

L-1	GENERAL NOTES, LEGEND, SCHEDULES AND INDEX OF SHEETS
L-2	EXISTING LIGHTING REMOVAL PLAN
L-2A - L-2B	TEMPORARY LIGHTING PLANS
L-3 - L-10	PROPOSED LIGHTING PLANS
L-11	HIGH MAST LUMINAIRE AIMING DIAGRAM
L-12 - L-14	WIRING DIAGRAMS
L-15	LUMINAIRE PERFORMANCE TABLES
L-16 - L-17	LIGHTING DETAILS

L-1 *Rel*

DATE	05/02/2011
DRAWN	JULIEN
CHECKED	JULIEN
DATE	01/12/2011

FILE NAME : D:\09\10030\shs-light1001	USER NAME : carcaranm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, LEGEND, SCHEDULES AND INDEX OF SHEETS I-57 AND 6000 RD (BOURBONNAIS PARKWAY) BOURBONNAIS, IL	F.A.I. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
PLOT SCALE : 1/80.0000 / in.	CHECKED -	REVISED -	57			(46-1)HBK-1	KANKAKEE	819	454	
PLOT DATE : 10/1/2014	DATE -	REVISED -	CONTRACT NO. 66982							
			ILLINOIS FED. AID PROJECT							



LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013

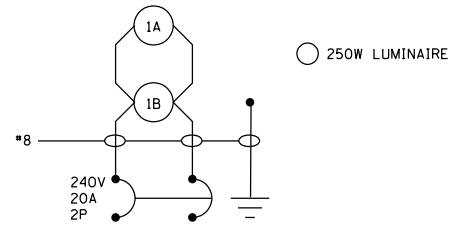
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	PLOT DATE = 12/03/2013	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING LIGHTING REMOVAL PLAN			
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)			
BOURBONNAIS, IL			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	455
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				

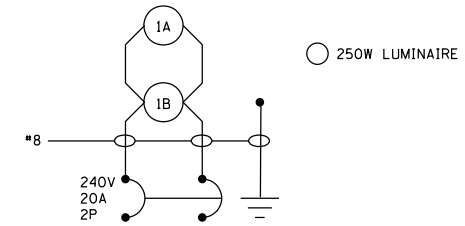


CIRCUIT DIAGRAM

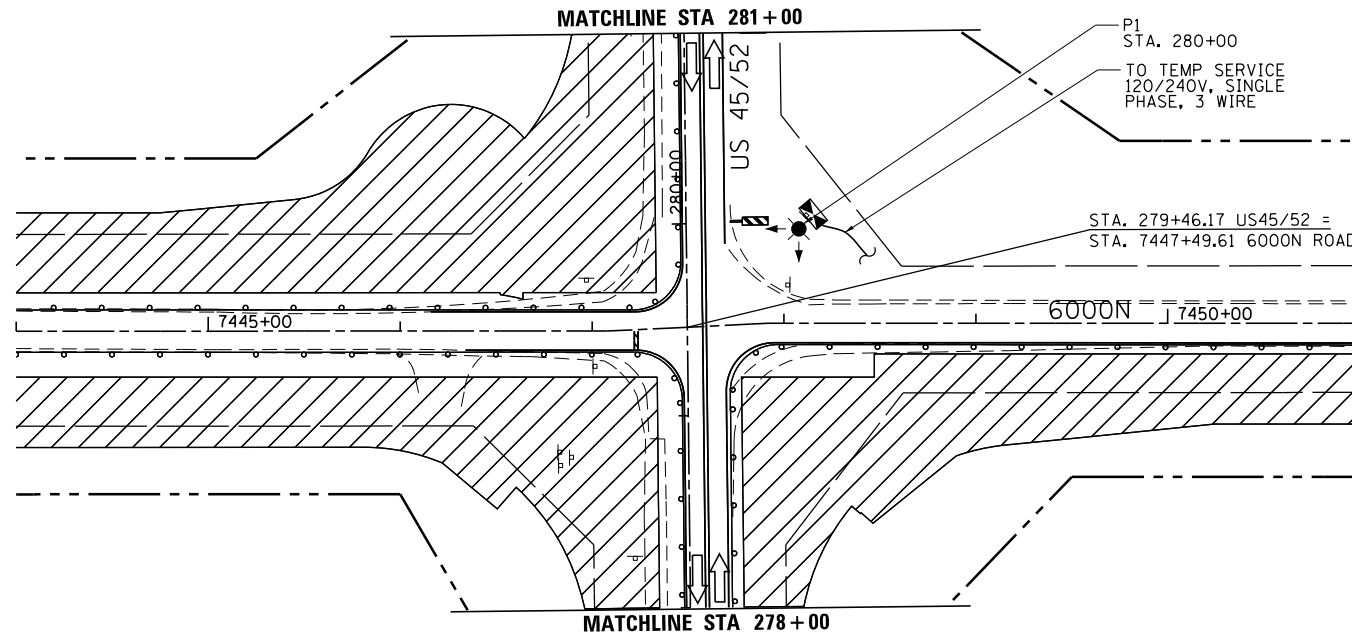
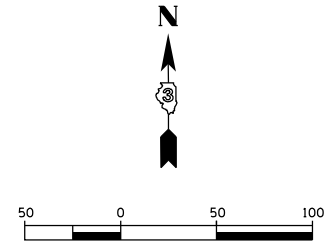
LEGEND

TEMPORARY LIGHTING UNIT, 50 FT. WOOD POLE, CLASS 3 WITH 2-250W HPS MULTIMOUNT LUMINAIRES, 42 FT. MOUNTING HEIGHT, ARROWS INDICATE LUMINAIRE AIMING DIRECTION.

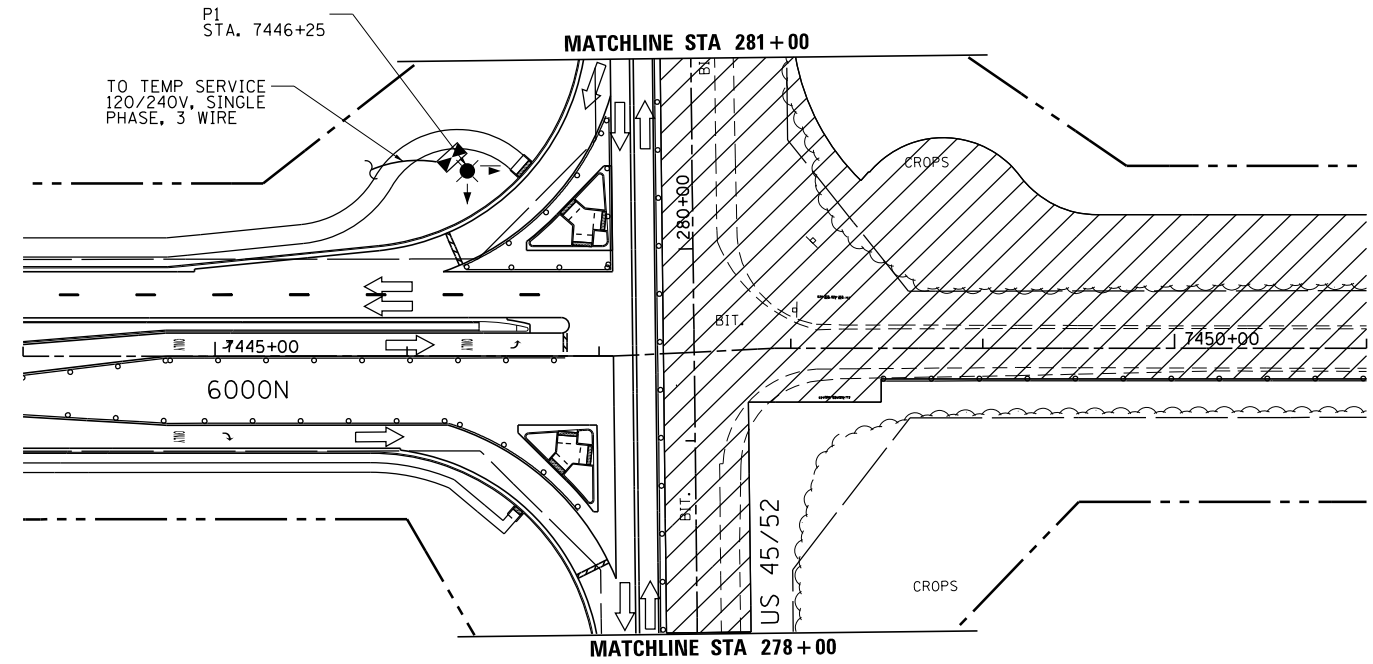
TEMPORARY LIGHTING CONTROLLER



CIRCUIT DIAGRAM



TEMPORARY LIGHTING PLAN
STAGES 1A AND 1B



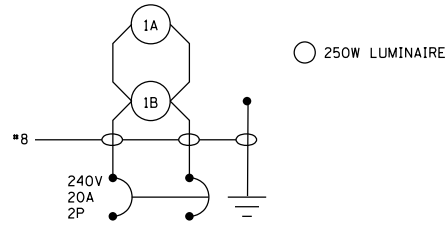
TEMPORARY LIGHTING PLAN
STAGES 1C AND WINTER SHUTDOWN

NOTES

- TEMPORARY WOOD POLES SHALL BE TALLER AS NEEDED TO MAINTAIN 42 FT. LUMINAIRE MOUNTING HEIGHT.
- TEMPORARY WOOD POLES SHALL BE SETBACK MIN 30 FT. FROM EDGE OF PAVEMENT OR 4 FT BEHIND THE GUARDRAIL OR BARRIER.
- CONTRACTOR CAN USE PROPOSED PERMANENT LIGHTING EQUIPMENT (POLES, CONTROLLER, WIRING) TO PROVIDE TEMPORARY INTERSECTION LIGHTING IF CONSTRUCTION STAGING ALLOWS IT AND IF APPROVED BY THE ENGINEER.
- TEMPORARY WOOD POLE LOCATIONS CAN BE ADJUSTED AS NEEDED TO MAINTAIN ADEQUATE CLEARANCE FROM OVERHEAD UTILITY LINES AND AS APPROVED BY THE ENGINEER. SEE GENERAL NOTES.

L-2A

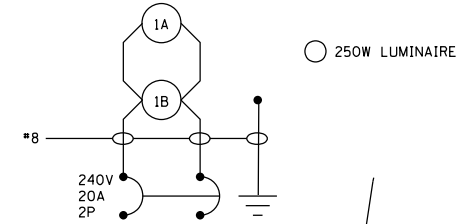
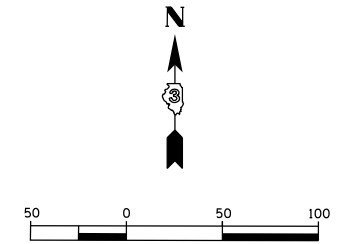
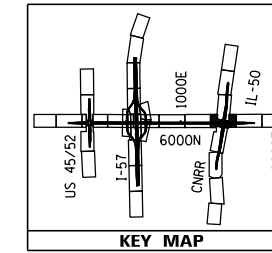
FILE NAME =	USER NAME = corcoranlm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-57 AND 6000N (BOURBONNAIS PARKWAY) BOURBONNAIS, IL	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\pwork\pwidot\corcoranlm\140378748\1309H0038-sht-light020.dgn		DRAWN -	REVISED -			57	(46-1)HBK-1	KANKAKEE	819	456
PLOT SCALE = 100.000' / in.		CHECKED -	REVISED -			SCALE: SHEET OF SHEETS STA. TO STA.		CONTRACT NO. 66982		
PLOT DATE = 9/24/2014		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				



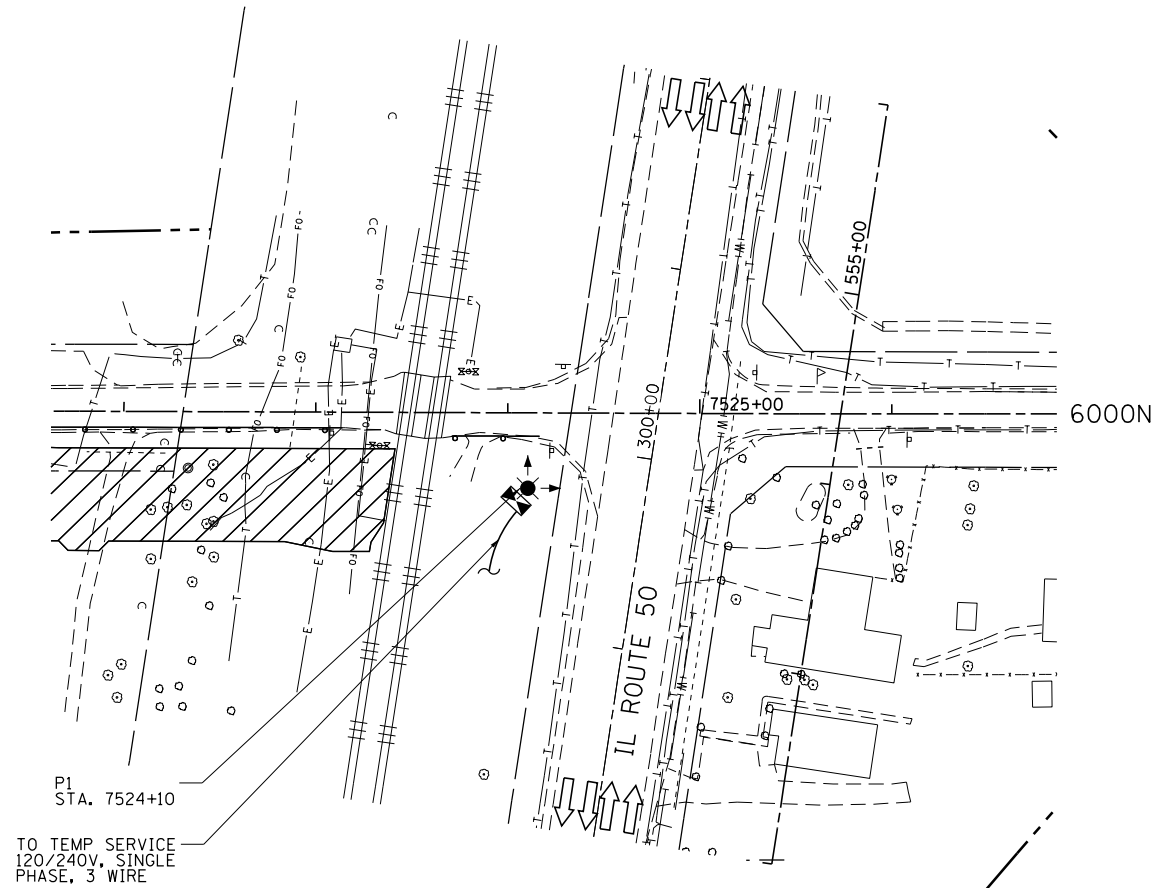
CIRCUIT DIAGRAM

LEGEND

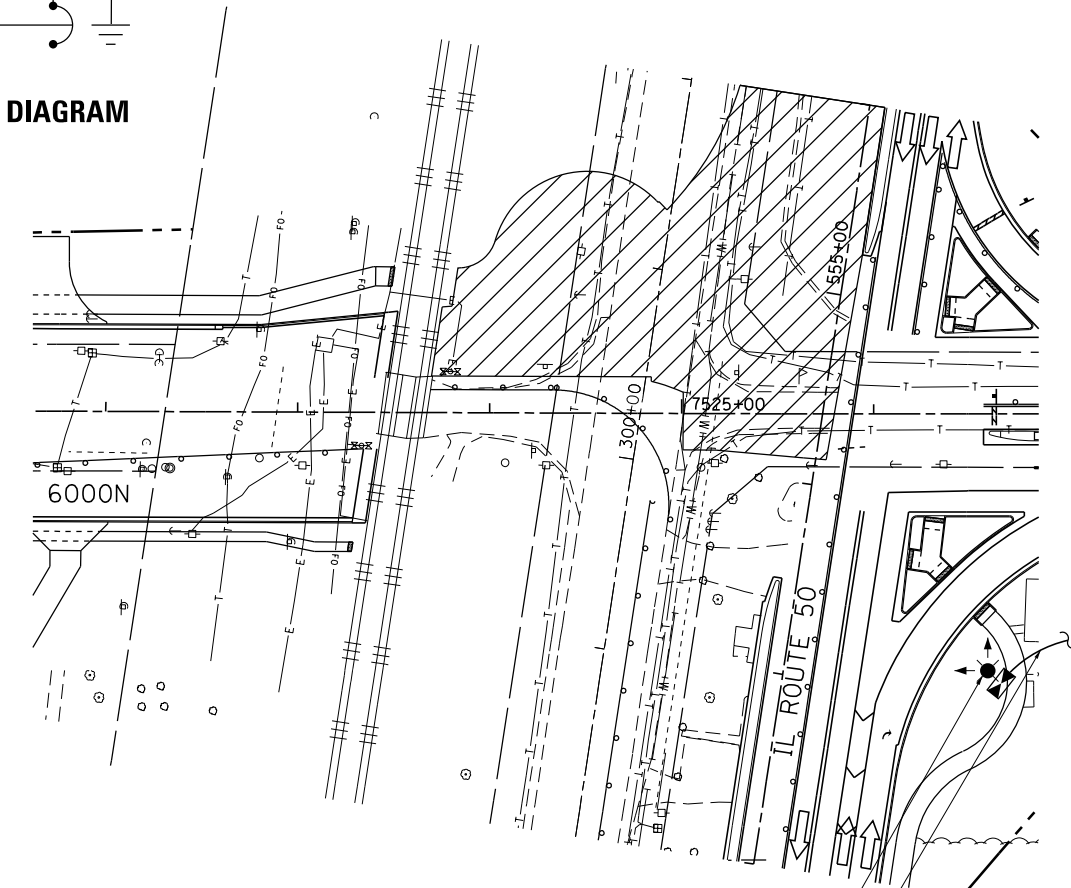
- TEMPORARY LIGHTING UNIT, 50 FT. WOOD POLE, CLASS 3 WITH 2-250W HPS MULTIMOUNT LUMINAIRES, 42 FT. MOUNTING HEIGHT, ARROWS INDICATE LUMINAIRE AIMING DIRECTION.
- TEMPORARY LIGHTING CONTROLLER



CIRCUIT DIAGRAM



TEMPORARY LIGHTING PLAN
STAGES 1A AND 2A



TEMPORARY LIGHTING PLAN
STAGES 2B AND 2C

NOTES

1. TEMPORARY WOOD POLES SHALL BE TALLER AS NEEDED TO MAINTAIN 42 FT. LUMINAIRE MOUNTING HEIGHT.
2. TEMPORARY WOOD POLES SHALL BE SETBACK MIN 30 FT. FROM EDGE OF PAVEMENT OR 4 FT BEHIND THE GUARDRAIL OR BARRIER.
3. CONTRACTOR CAN USE PROPOSED PERMANENT LIGHTING EQUIPMENT (POLES, CONTROLLER, WIRING) TO PROVIDE TEMPORARY INTERSECTION LIGHTING IF CONSTRUCTION STAGING ALLOWS IT AND IF APPROVED BY THE ENGINEER.
4. TEMPORARY WOOD POLE LOCATIONS CAN BE ADJUSTED AS NEEDED TO MAINTAIN ADEQUATE CLEARANCE FROM OVERHEAD UTILITY LINES AND AS APPROVED BY THE ENGINEER. SEE GENERAL NOTES.

LAYOUT	DPA	05.13.2013
DRAWN	JDM	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME =	USER NAME = corcoranlm	DESIGNED -	REVISED -
\\p1\eswork\p1dot\corcoranlm\d0412638\0909H0038-sht-light021.dgn		DRAWN -	REVISED -
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MODELNAME	PLOT DATE = 9/24/2014	DATE -	REVISED -

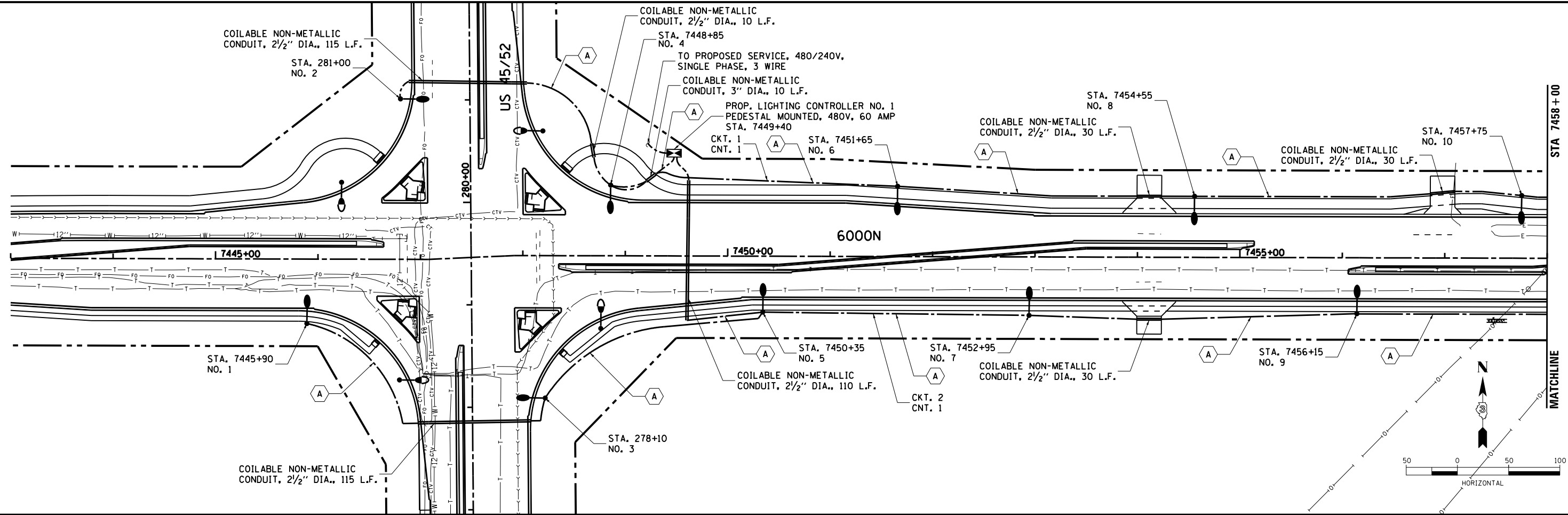
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING PLAN
1-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	457
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				

L-2B



- NOTES:**
- SEE SHEET L-1 FOR GENERAL NOTES, LEGEND, AND CABLE/CONDUIT SCHEDULE.
 - SEE TRAFFIC SIGNAL PLANS FOR COMBINATION LIGHTING CIRCUITING.

LAYOUT	DPA	05.13.2013
DRAWN	JDM	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME = D:\309H\0038-sht-light\003.dgn

USER NAME = angel

PLOT SCALE = 100.000' / in.

PLOT DATE = 8/7/2014

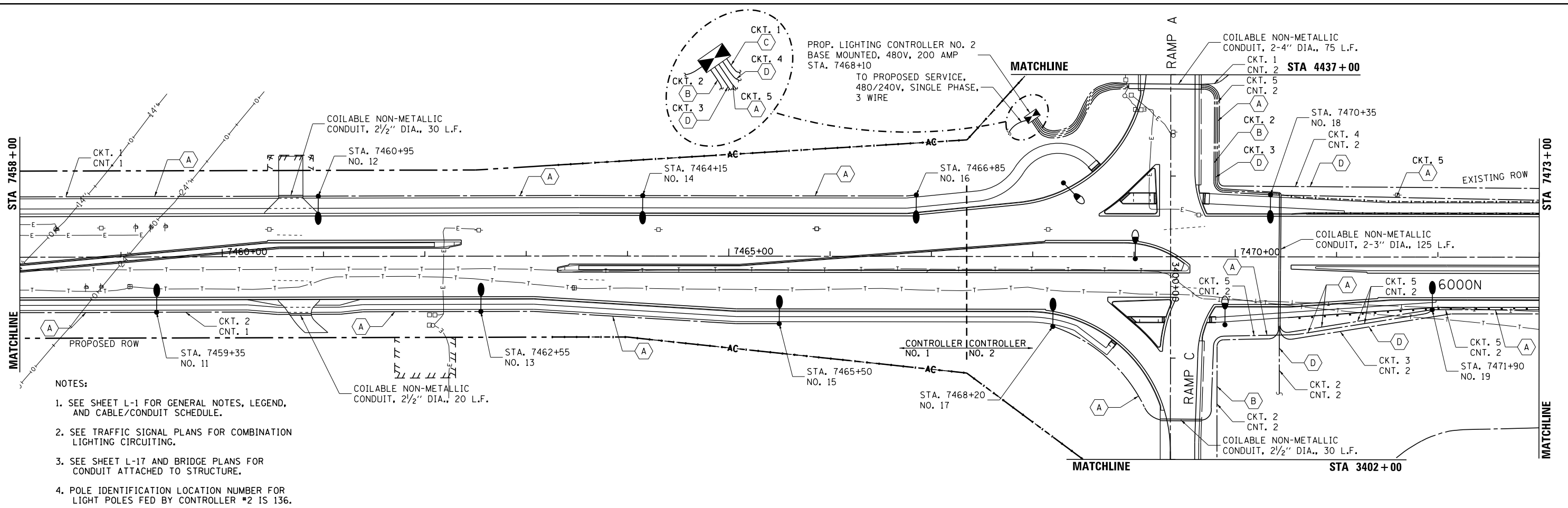
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CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

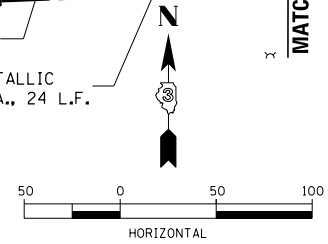
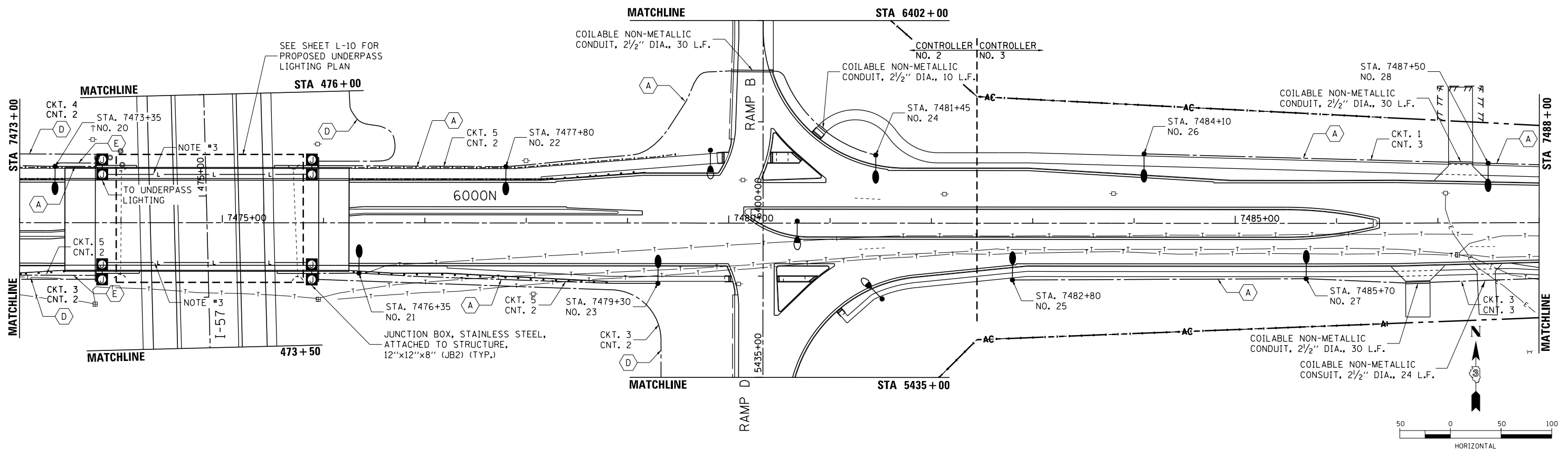
**PROPOSED LIGHTING PLAN
1-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: SHEET OF SHEETS STA. 7443+00 TO STA. 7457+75

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	458
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



- NOTES:
- SEE SHEET L-1 FOR GENERAL NOTES, LEGEND, AND CABLE/CONDUIT SCHEDULE.
 - SEE TRAFFIC SIGNAL PLANS FOR COMBINATION LIGHTING CIRCUITING.
 - SEE SHEET L-17 AND BRIDGE PLANS FOR CONDUIT ATTACHED TO STRUCTURE.
 - POLE IDENTIFICATION LOCATION NUMBER FOR LIGHT POLES FED BY CONTROLLER #2 IS 136.



L-4

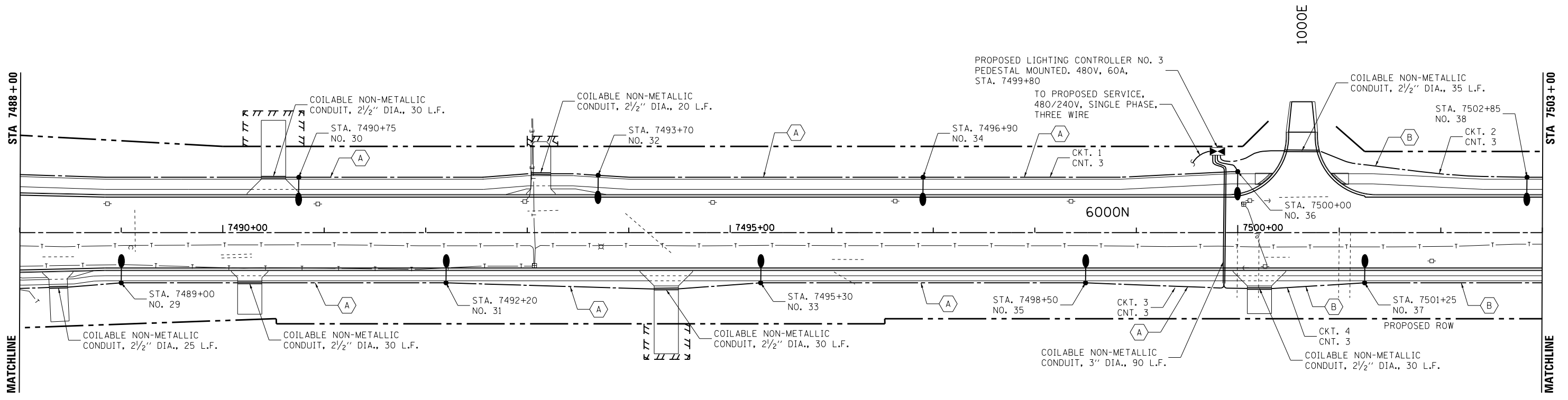
LAYOUT SIGLAYER ASSIGATER
DRAWN SIGLAYER ASSIGATER
REVIEWED SIGLAYER ASSIGATER

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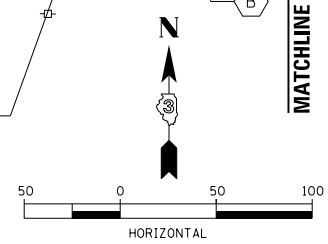
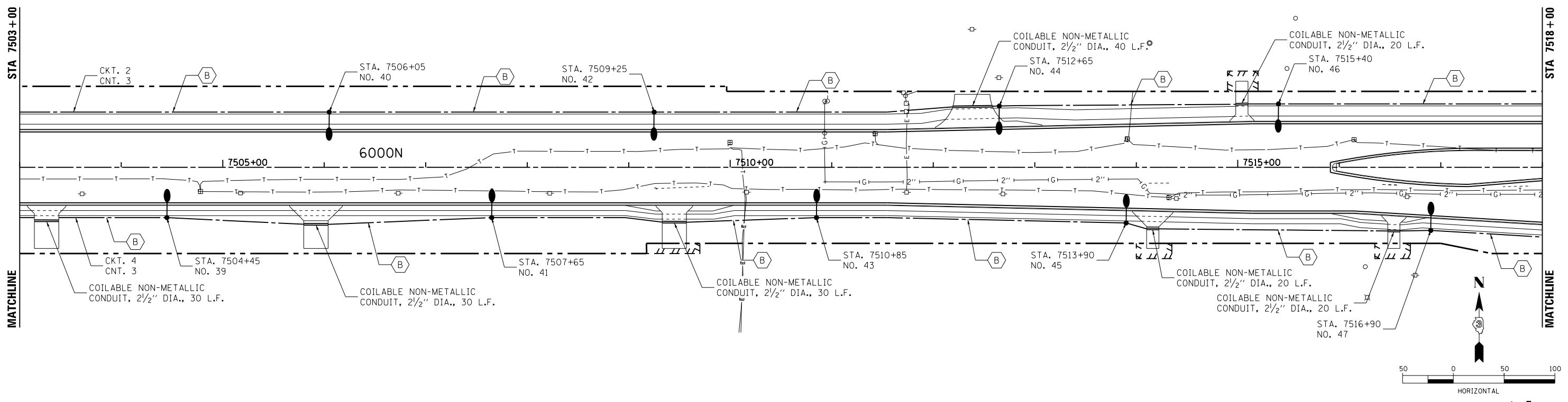
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED LIGHTING PLAN			
I-57 AND 6000 RD (BOURBONNAIS PARKWAY)			
BOURBONNAIS, IL			
SCALE:	SHEET	OF SHEETS	STA. \$STA1\$ TO STA. \$STA2\$

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	459
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



- NOTES:
1. SEE SHEET L-1 FOR GENERAL NOTES, LEGEND, AND CABLE/CONDUIT SCHEDULE.
 2. SEE TRAFFIC SIGNAL PLANS FOR COMBINATION LIGHTING CIRCUITING.



L-5

LAYOUT	DPA	05.09.2013
DRAWN	JDM	10.15.2013
REVIEWED	DPA	10.17.2013

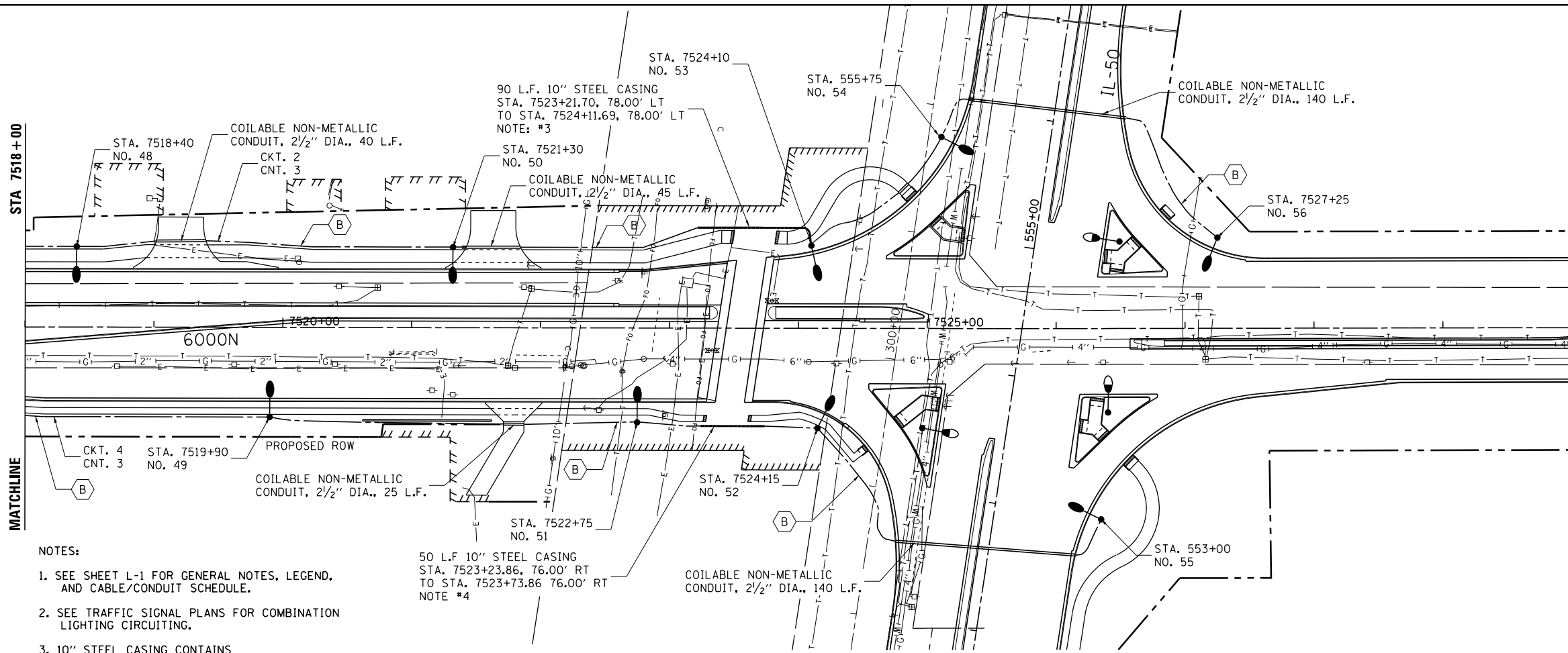
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Default	PLOT DATE = 12/03/2013	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: SHEET OF SHEETS STA. 7488+00 TO STA. 7518+00

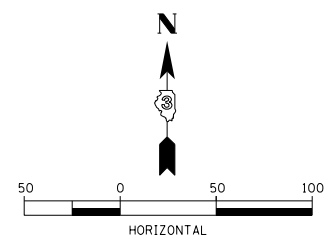
F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	460
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



- NOTES:
- SEE SHEET L-1 FOR GENERAL NOTES, LEGEND, AND CABLE/CONDUIT SCHEDULE.
 - SEE TRAFFIC SIGNAL PLANS FOR COMBINATION LIGHTING CIRCUITING.
 - 10" STEEL CASING CONTAINS
90 L.F. 2" PVC CONDUIT
90 L.F. COILABLE NON-METALLIC CONDUIT, 2 1/2" DIA.
 - 10" STEEL CASING CONTAINS
50 L.F. 3" PVC CONDUIT
50 L.F. COILABLE NON-METALLIC CONDUIT, 2 1/2" DIA.
 - 10" STEEL CASING SHALL BE A MINIMUM DEPTH OF 5'-6" BELOW BASE OF RAIL.



SIGN PLACED AT LOCATION CABLES ENTER OR LEAVES THE RAILROAD PROPERTY IN ACCORDANCE WITH RAILROAD WIRELINE CROSSING AND ENCROACHMENT SPECIFICATIONS.



LAYOUT	DPA	05.15.2013
DRAWN	JDM	10.15.2013
REVIEWED	DPA	10.17.2013

FILE NAME =	USER NAME = corcoranlm	DESIGNED -	REVISED -
\\files\work\p\dot\corcoranlm\d0412638\0910038-sht-light006.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
MODELNAME	PLOT DATE = 9/24/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

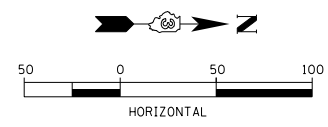
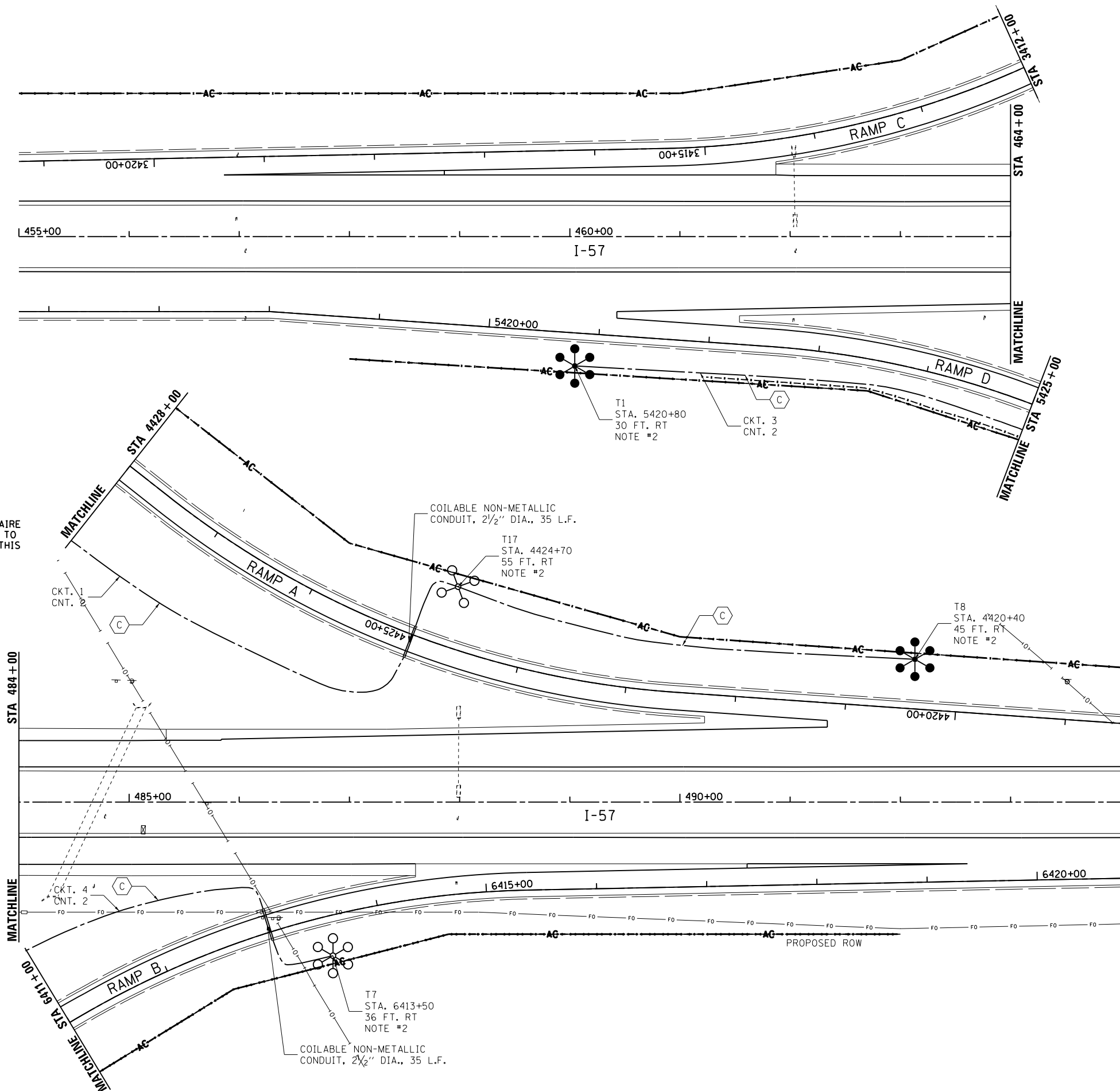
PROPOSED LIGHTING PLAN			
1-57 AND 6000N RD (BOURBONNAIS PARKWAY)			
BOURBONNAIS, IL			
SCALE:	SHEET	OF	SHEETS
			STA. 7518+00 TO STA. 7530+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	461
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



NOTES:

1. SEE SHEET L-1 FOR GENERAL NOTES, LEGEND, AND CABLE/CONDUIT SCHEDULE.
2. CONTRACTOR SHALL FINISH AND INSTALL LUMINAIRE SHIELDS DESIGNED TO LIMIT LIGHT TRESSPASS TO ADJACENT CULTIVATION FIELDS. THE COST OF THIS WORK SHALL BE INCLUDED IN A HIGH MAST LUMINAIRE PAY ITEM.



L-7

LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013

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USER NAME = hussu00411
PLOT SCALE = 100.000' / in.
PLOT DATE = 12/03/2013

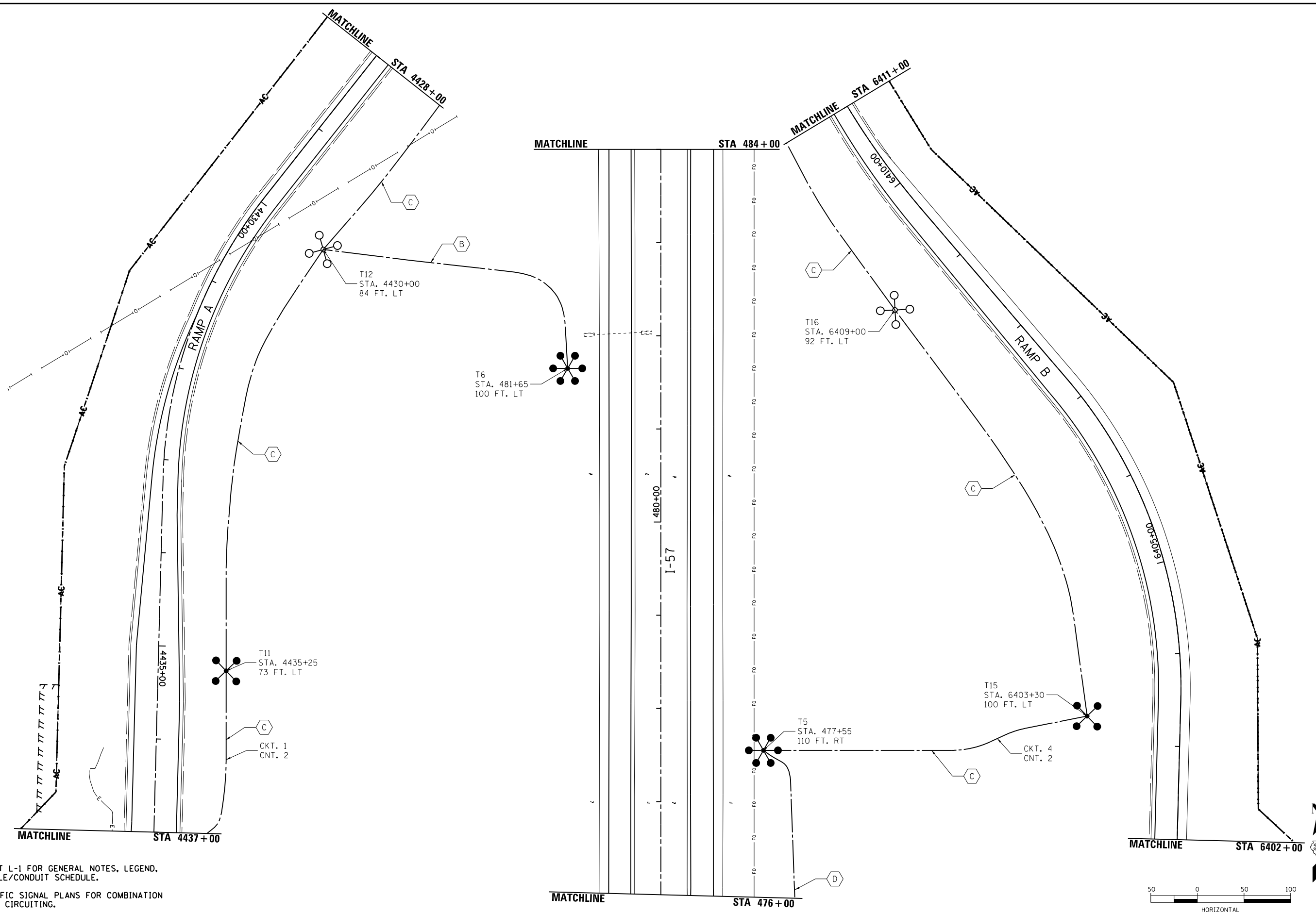
DESIGNED	-	REVISED	-
DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: SHEET OF SHEETS STA. 450+00 TO STA. 465+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	462
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



- NOTES:
1. SEE SHEET L-1 FOR GENERAL NOTES, LEGEND, AND CABLE/CONDUIT SCHEDULE.
 2. SEE TRAFFIC SIGNAL PLANS FOR COMBINATION LIGHTING CIRCUITING.

LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013

FILE NAME =
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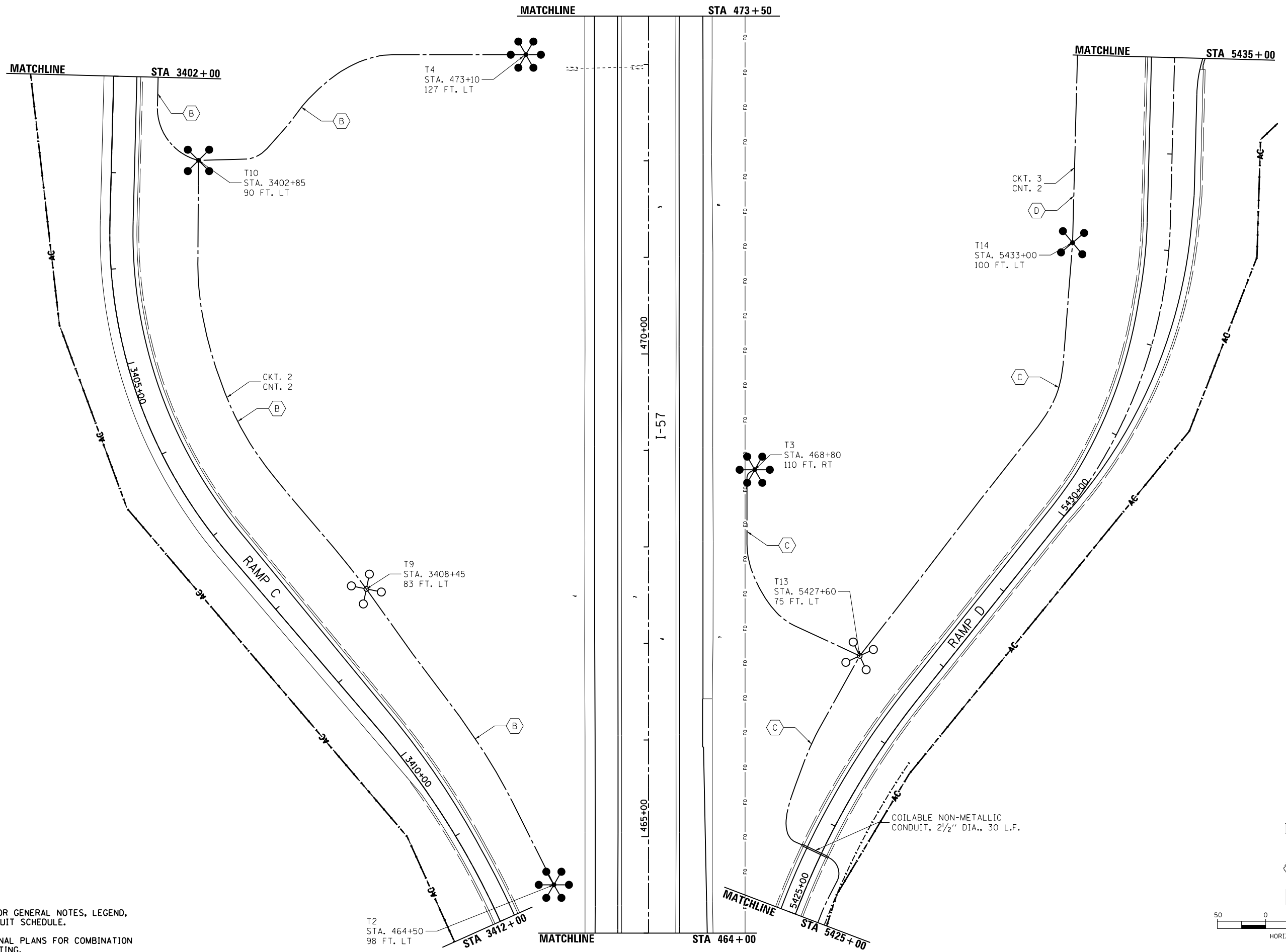
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: SHEET OF SHEETS STA. 484+00 TO STA. 495+00

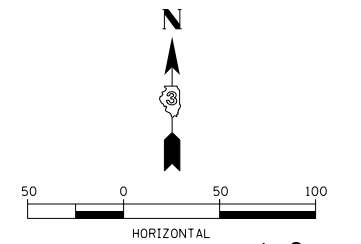
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	463
CONTRACT NO. 66982				

ILLINOIS FED. AID PROJECT



NOTES:

- SEE SHEET L-1 FOR GENERAL NOTES, LEGEND, AND CABLE/CONDUIT SCHEDULE.
- SEE TRAFFIC SIGNAL PLANS FOR COMBINATION LIGHTING CIRCUITING.



LAYOUT	DPA	05/09/2013	huss00411
DRAWN	JDM	10/15/2013	10/15/2013
REVIEWED	DPA	10/17/2013	10/17/2013

FILE NAME = D:\309h\0038-sht-light\009

USER NAME = huss00411

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DATE	-	REVISED	-

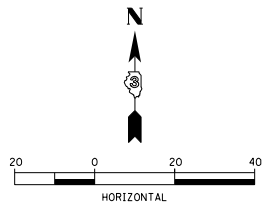
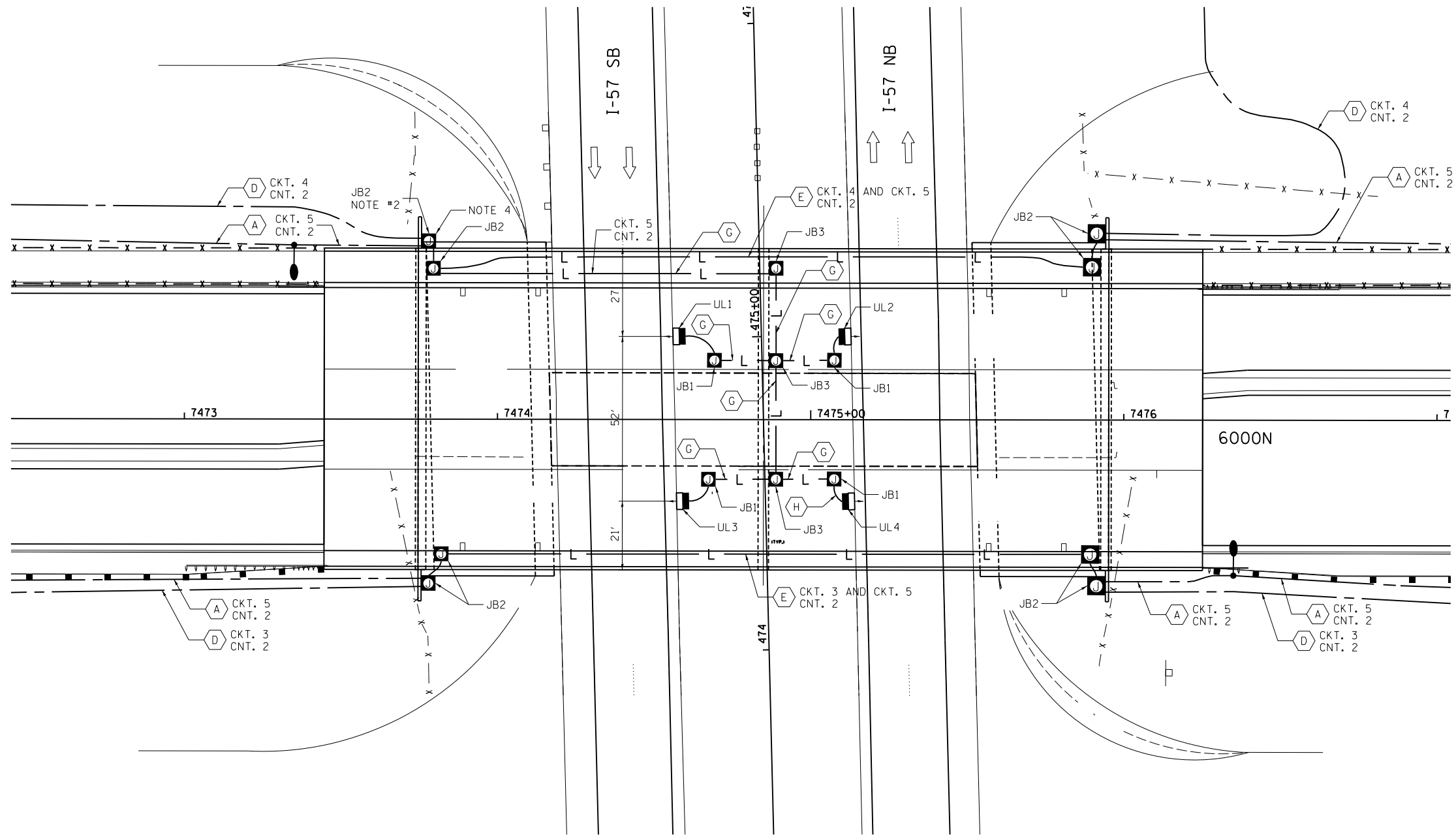
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
I-57 AND 6000 RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	464
CONTRACT NO. 66982				

SCALE: SHEET OF SHEETS STA. 476+00 TO STA. 480+00

ILLINOIS FED. AID PROJECT



LEGEND

PROPOSED UNDERPASS LUMINAIRE, SUSPENDED FROM BRIDGE DECK, ARROW INDICATES LUMINAIRE AIMING DIRECTION

JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, SIZE TO NEC BUT SHALL NOT BE SMALLER THAN:

JB1 6"x6"x4"
 JB2 12"x12"x8"
 JB3 12"x10"x6"

- L - ELECTRIC CABLE IN CONDUIT, SIZE AS NOTED

NOTES

1. PROPOSED UNDERPASS LUMINAIRES SHALL BE SUSPENDED MOUNTED, OFFSET 6 FEET FROM EDGE OF PAVEMENT. SEE DRAWING L-16 FOR LUMINAIRE INSTALLATION DETAILS.
2. CONDUIT AND WIRING FROM JUNCTION BOX AT BRIDGE ABUTMENT TO THE UNDERPASS LUMINAIRES SHALL BE INCIDENTAL TO THE COST OF THE UNDERPASS LUMINAIRE INCLUDES ALL APPURTANCES INCLUDING BUT NOT LIMITED TO: STRAPS, CLAMPS, HANGERS, FITTINGS, ATTACHMENTS, HARDWARE, JUNCTION BOXES, ETC.
3. ANY CONDUIT THAT PENETRATES THE GROUND SHALL BE STAINLESS STEEL. ALL HARDWARE AND APURTENANCES SHALL BE STAINLESS STEEL.
4. SEE SHEET L-17 FOR CONDUIT DETAIL.

CABLE/CONDUIT SCHEDULE

- ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE), 2-1C NO. 10, 1/C NO. 10 GROUND IN 1" DIA. RGC ATTACHED TO STRUCTURE
- ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE), 2-1C NO. 10, 1/C NO. 10 GROUND IN 3/4" DIA. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT.

LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013

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 PLOT DATE = 12\03\2013

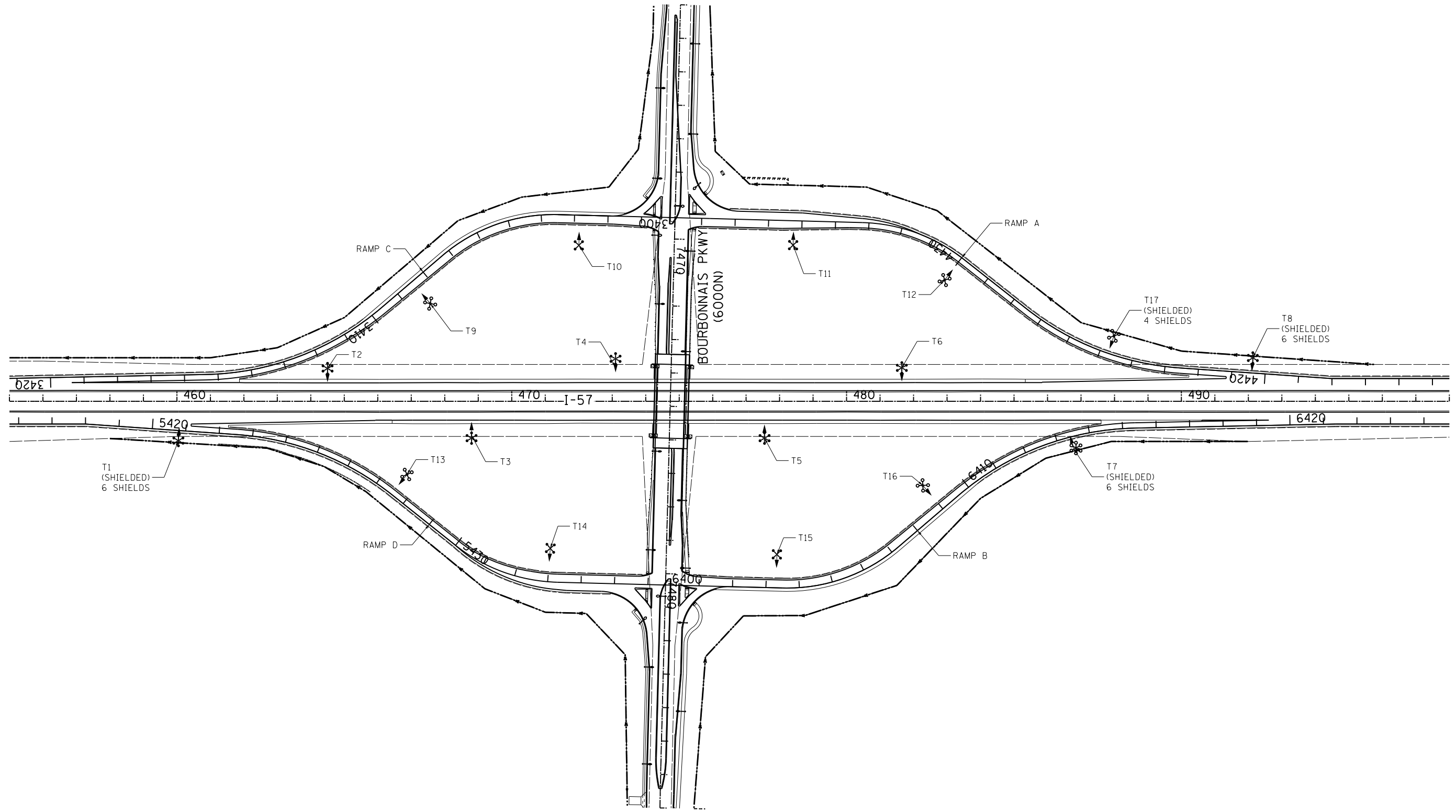
DESIGNED -
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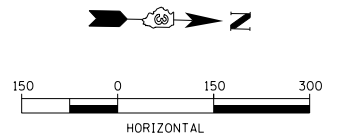
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED UNDERPASS LIGHTING PLAN
 I-57 AND 6000 RD (BOURBONNAIS PARKWAY)
 BOURBONNAIS, IL**
 SCALE: SHEET OF SHEETS STA. 465+00 TO STA. 473+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	465
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



NOTE:
ALL LUMINAIRES ON THE RING TO BE AIMED AS INDICATED BY THE ARROW.



LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013

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USER NAME = hussu00411

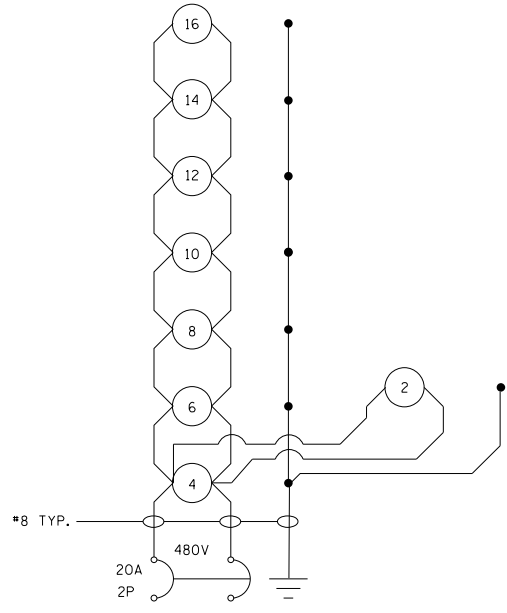
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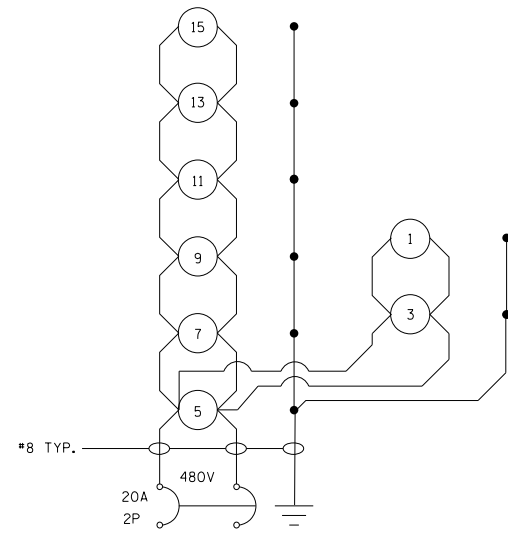
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HIGH MAST LUMINAIRE AIMING DIAGRAM
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	466
CONTRACT NO. 66982				



LIGHTING CKT 1 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #1



LIGHTING CKT 2 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #1

NOTE:
ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

○ 400W PROPOSED LUMINAIRE

LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013

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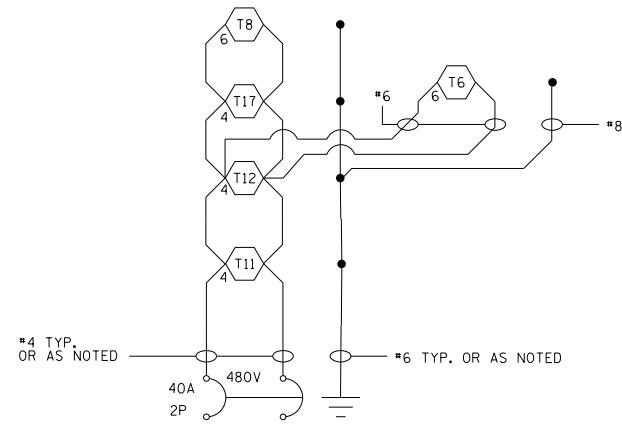
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

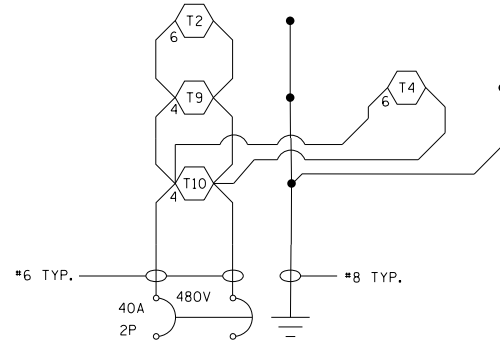
**WIRING DIAGRAMS PROPOSED CONTROLLER #1
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: SHEET OF SHEETS STA. TO STA.

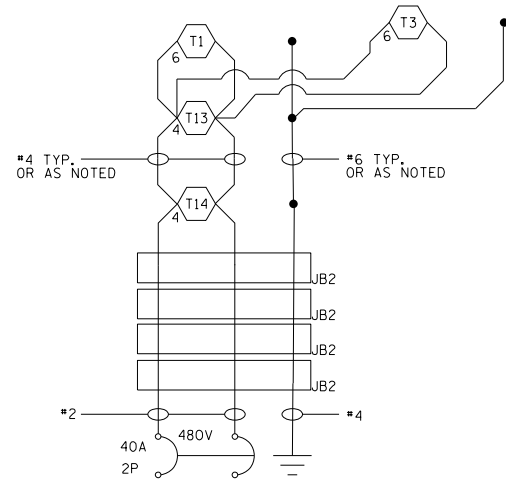
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	467
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



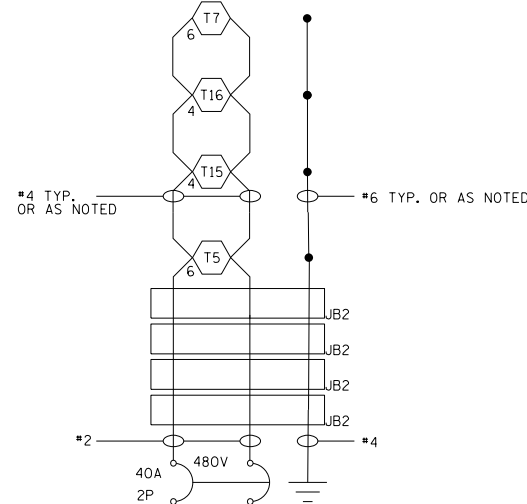
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PROPOSED LIGHTING CONTROLLER #2



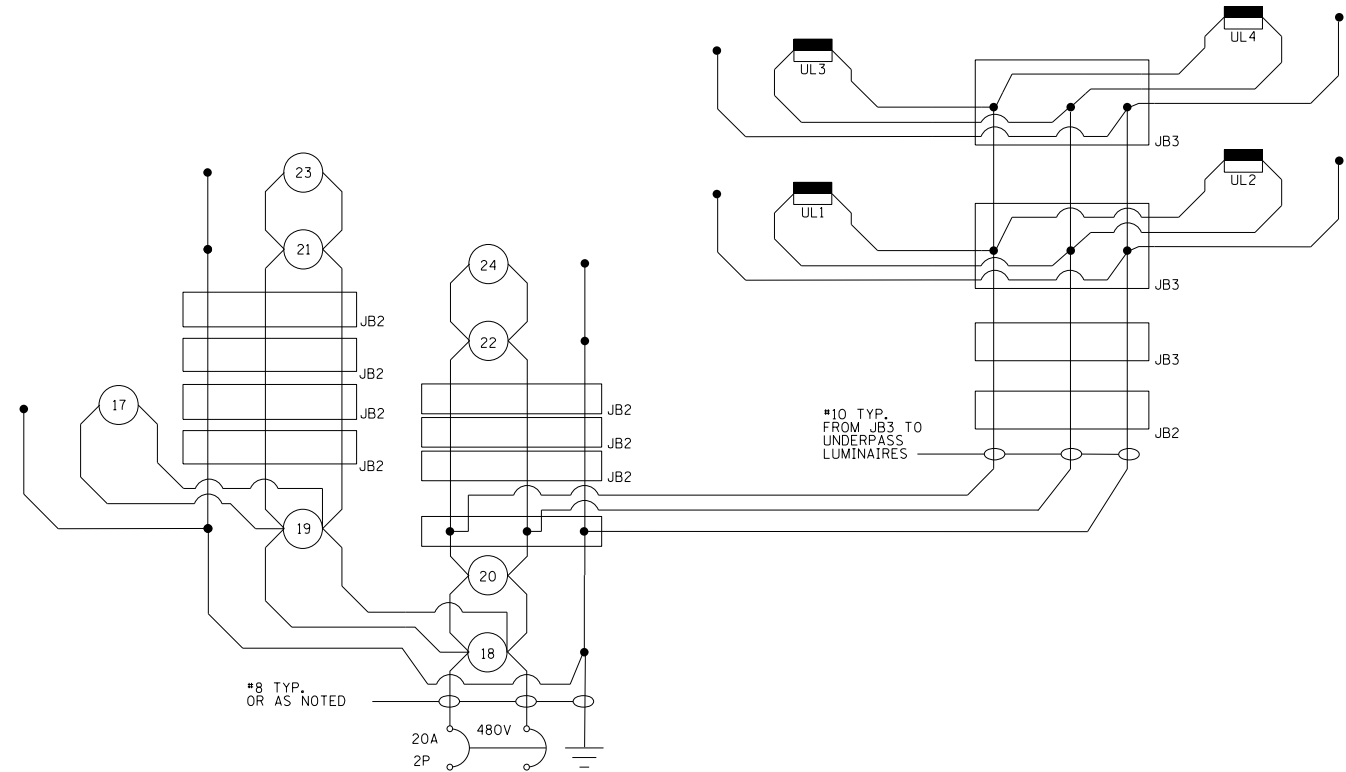
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PROPOSED LIGHTING CONTROLLER #2



LIGHTING CKT 3 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #2



LIGHTING CKT 4 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #2



LIGHTING CKT 5 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #2

- 400W PROPOSED LUMINAIRE
- ⬢ 400W HPS TOWER LUMINAIRE
- ⬢ 150W HPS UNDERPASS LUMINAIRE
- JUNCTION BOX

NOTE:

ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013
GEN		

FILE NAME = D309H0038-sht-light013

USER NAME = hussu00411

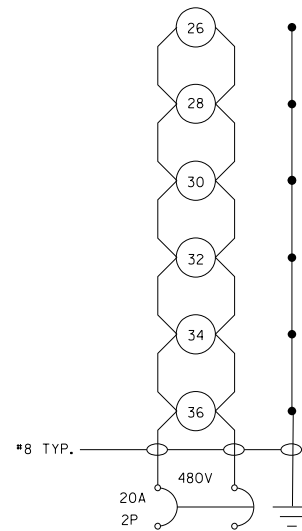
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DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

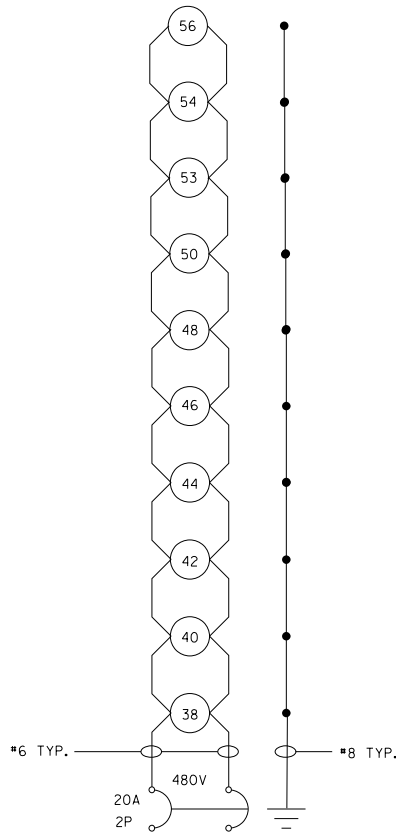
**WIRING DIAGRAMS PROPOSED CONTROLLER #2
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

SCALE: SHEET OF SHEETS STA. TO STA.

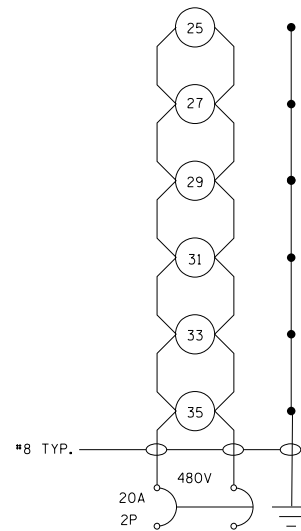
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	468
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



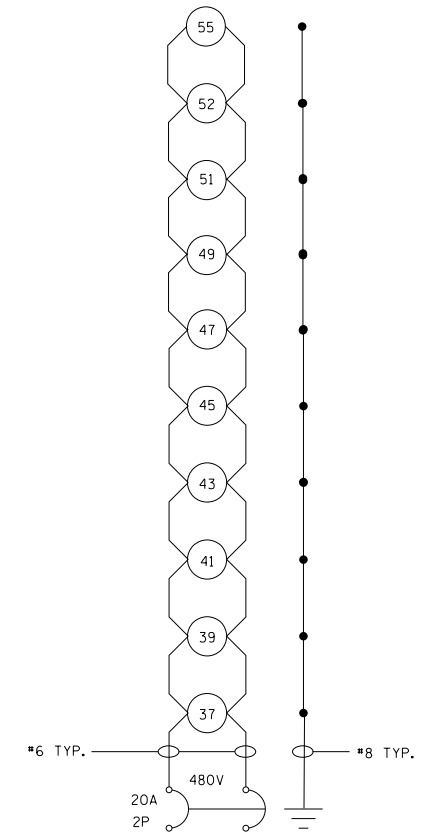
LIGHTING CKT 1 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #3



LIGHTING CKT 2 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #3



LIGHTING CKT 3 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #3



LIGHTING CKT 4 (PROPOSED)
PROPOSED LIGHTING CONTROLLER #3

NOTES:

- ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

○ 400W PROPOSED LUMINAIRE

LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013

FILE NAME =
D309H0038-sht-light014

USER NAME = hussu00411

DESIGNED -
DRAWN -

REVISED -
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REVISED -
REVISED -

PLOT SCALE = 100.0000' / in.
PLOT DATE = 12/03/2013

CHECKED -
DATE -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIRING DIAGRAMS PROPOSED CONTROLLER #3
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	469
CONTRACT NO. 66982				

ILLINOIS FED. AID PROJECT

ILLINOIS DEPARTMENT OF TRANSPORTATION
400W HIGH MAST LUMINAIRE PERFORMANCE TABLE

03/18/13

GIVEN CONDITIONS		
ROADWAY DATA:	Pavement Width	24 FT
	Number Of Lanes (In Direction of Travel)	2
	Median Width	64 FT
	IES Surface Classification	R3
	Q-Zero Value	.07
LIGHT POLE DATA:	Mounting Height	110 FT
	Mast Arm Length	FT
	Pole Set-Back From Edge Of Pavement	45 FT
LUMINAIRE DATA:	Lamp Type	(6) 400W HPS
	Lamp Lumens	50000
	IES Vertical Distribution	
	IES Control Of Distribution	C
	IES Lateral Distribution	3
	Total Light Loss Factor	0.684
LAYOUT DATA:	Spacing	790 FT
	Configuration	Staggered
	Luminaire Overhang Over Edge Of Pavement Lane	N/A

NOTE: Variations from the above specified IES distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

ILLUMINATION:	Average Horizontal Illumination, (E _{Ave})	0.90 fc
	Uniformity Ratio, (E _{Ave} /E _{Min})	3.0
LUMINANCE:	Average Luminance: (L _{Ave})	0.60 Cd/m ²
	Uniformity Ratios: (L _{Ave} /L _{Min})	3.5
	(L _{Max} /L _{Min})	6.0
	Maximum Veiling Luminance Ratio: (L _v /L _{Ave})	0.30

ILLINOIS DEPARTMENT OF TRANSPORTATION
150W UNDERPASS LUMINAIRE PERFORMANCE TABLE

GIVEN CONDITIONS		
ROADWAY DATA:	Pavement Width	24 FT
	Number Of Lanes	2
	Median Width	N/A
	IES Surface Classification	R3
	Q-Zero Value	.07
MOUNTING DATA:	Mounting Height	16 FT
	Mounting Type	Suspended
	Set-Back From Edge Of Pavement	6 FT
LUMINAIRE DATA:	Lamp Type	HPS
	Lamp Lumens	16,000
	IES Vertical Distribution	M
	IES Control Of Distribution	C
	IES Lateral Distribution	4
	Total Light Loss Factor	0.684
LAYOUT DATA:	Spacing	52 FT
	Configuration	Single Sided
	Luminaire Overhang Over Edge Of Pavement Lane	-6 FT

NOTE: Variations from the above specified IES distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

ILLUMINATION:	Average Horizontal Illumination, (E _{Ave})	0.90 fc
	Uniformity Ratio, (E _{Ave} /E _{Min})	3.0
LUMINANCE:	Average Luminance: (L _{Ave})	0.60 Cd/m ²
	Uniformity Ratios: (L _{Ave} /L _{Min})	3.5
	(L _{Max} /L _{Min})	6.0
	Maximum Veiling Luminance Ratio: (L _v /L _{Ave})	0.30

ILLINOIS DEPARTMENT OF TRANSPORTATION
400W HORIZONTAL MOUNT LUMINAIRE PERFORMANCE TABLE

03/18/13

GIVEN CONDITIONS		
ROADWAY DATA:	Pavement Width	24 FT
	Number Of Lanes (In Direction of Travel)	2
	Median Width	32 FT
	IES Surface Classification	R3
	Q-Zero Value	.07
LIGHT POLE DATA:	Mounting Height	50 FT
	Mast Arm Length	15 FT
	Pole Set-Back From Edge Of Pavement	15 FT
LUMINAIRE DATA:	Lamp Type	HPS
	Lamp Lumens	50000
	IES Vertical Distribution	M
	IES Control Of Distribution	FC
	IES Lateral Distribution	3
	Total Light Loss Factor	0.684
LAYOUT DATA:	Spacing	325 FT
	Configuration	Staggered
	Luminaire Overhang Over Edge Of Pavement Lane	0 FT

NOTE: Variations from the above specified IES distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

ILLUMINATION:	Average Horizontal Illumination, (E _{Ave})	0.90 fc
	Uniformity Ratio, (E _{Ave} /E _{Min})	3.0
LUMINANCE:	Average Luminance: (L _{Ave})	0.60 Cd/m ²
	Uniformity Ratios: (L _{Ave} /L _{Min})	3.5
	(L _{Max} /L _{Min})	6.0
	Maximum Veiling Luminance Ratio: (L _v /L _{Ave})	0.30

ILLINOIS DEPARTMENT OF TRANSPORTATION
LUMINAIRE PERFORMANCE TABLE - TEMPORARY LIGHTING

11/22/13

GIVEN CONDITIONS		
ROADWAY DATA:	Pavement Width	24 FT
	Number Of Lanes	2
	Median Width	FT
	IES Surface Classification	R3
	Q-Zero Value	.07
LIGHT POLE DATA:	Mounting Height	42 FT
	Mast Arm Length	N/A FT
	Pole Set-Back From Edge Of Pavement	30 FT
LUMINAIRE DATA:	Lamp Type	HPS
	Lamp Lumens	28500
	IES Vertical Distribution	L
	IES Control Of Distribution	NC
	IES Lateral Distribution	4
	Total Light Loss Factor	0.684
LAYOUT DATA:	Spacing	140 FT
	Configuration	Single Side
	Luminaire Overhang Over Edge Of Pavement Lane	-30 FT

NOTE: Variations from the above specified IES distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

ILLUMINATION:	Average Horizontal Illumination, (E _{Ave})	0.9 fc
	Uniformity Ratio, (E _{Ave} /E _{Min})	3.0
LUMINANCE:	Average Luminance: (L _{Ave})	0.6 Cd/m ²
	Uniformity Ratios: (L _{Ave} /L _{Min})	3.5
	(L _{Max} /L _{Min})	6.0
	Maximum Veiling Luminance Ratio: (L _v /L _{Ave})	0.3



LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013
GEN		

FILE NAME = D:\309H\0038-shr-light\015

USER NAME = hussu00411

DESIGNED -
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DATE -

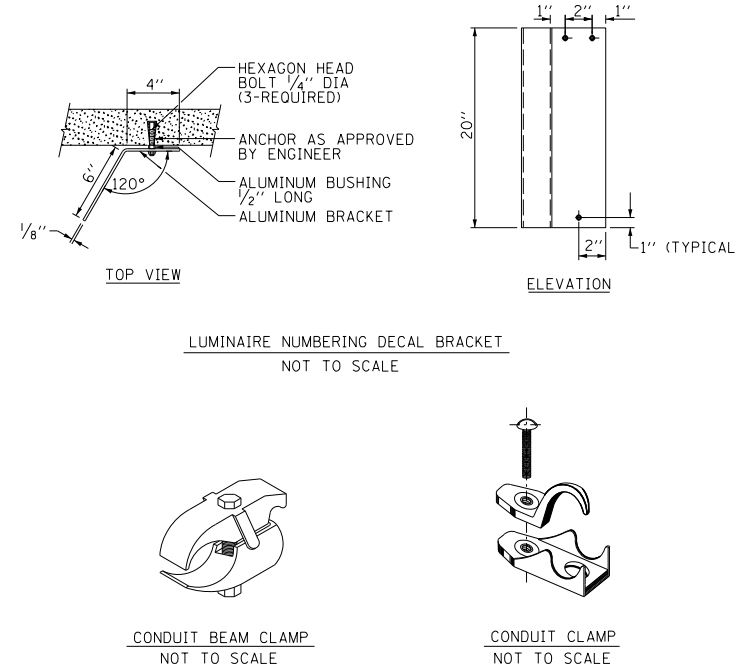
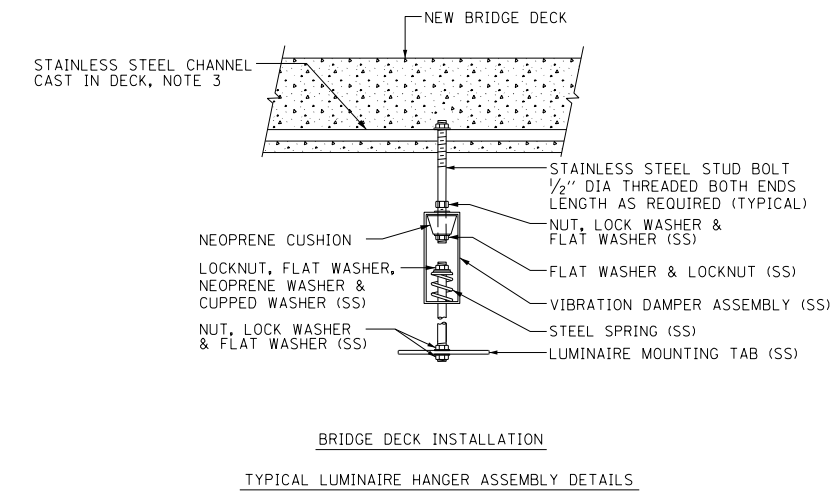
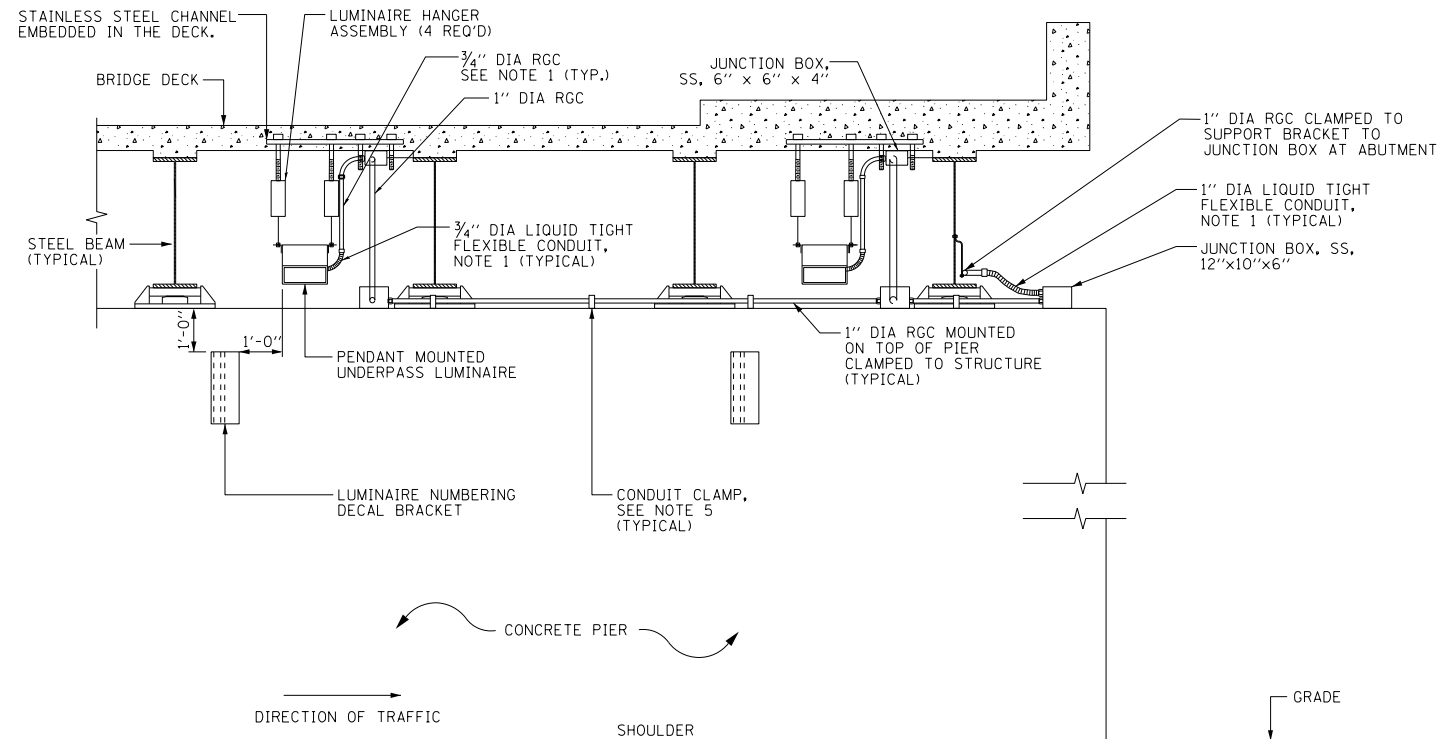
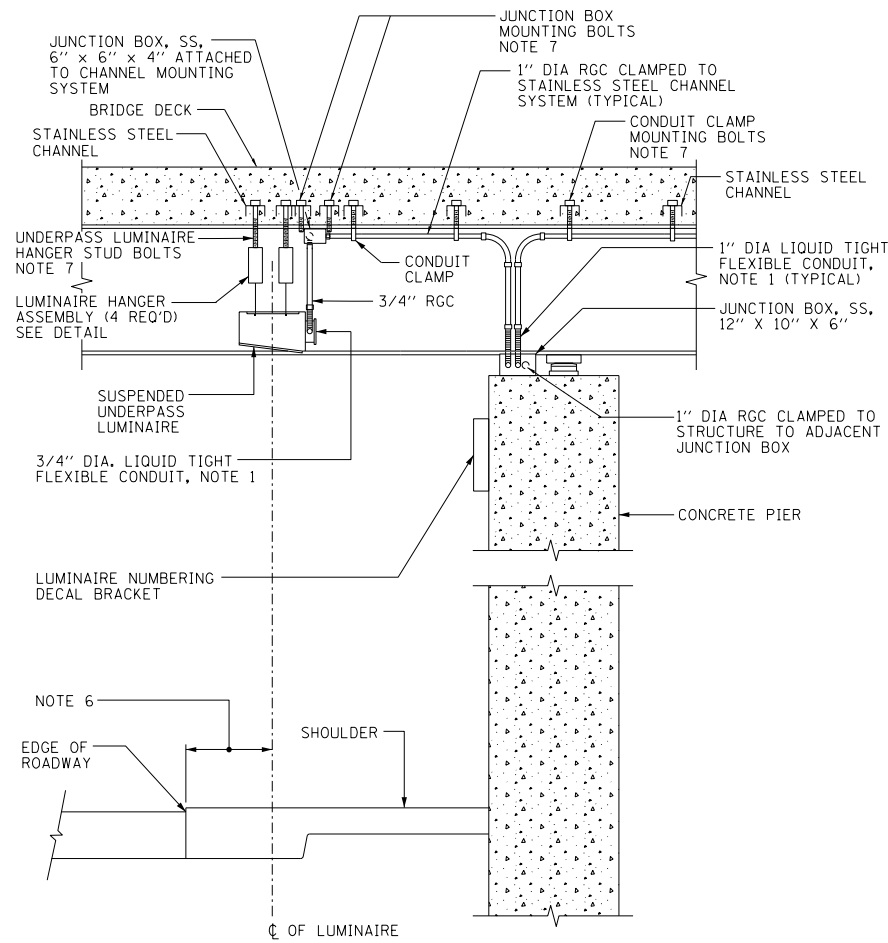
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LUMINAIRE PERFORMANCE TABLES
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HKB-1	KANKAKEE	819	470
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



NOTES:

1. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT SHALL BE RESISTANT TO OIL, WATER, CHEMICAL, AND UV AND SHALL BE SUITABLE FOR OUTDOOR, DIRECT BURY, AND EXTREME COLD USE ACCORDING TO NEC ART. 356. THE CONDUIT LENGTH SHALL NOT EXCEED 6 FT. CONDUIT FITTINGS SHALL BE STAINLESS STEEL.
2. SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
3. THE STAINLESS STEEL CHANNEL SHALL BE CAST IN DECK ABOVE BOTTOM REBAR. THE CHANNEL SHALL BE LONG ENOUGH TO SUPPORT UNDERPASS LUMINAIRE, JUNCTION BOX AND CONDUIT CLAMP MOUNTING HARDWARE.
4. THE UNDERPASS LUMINAIRE HANGER ASSEMBLY SHALL BE INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE PAY ITEM.
5. SECURE THE CONDUIT WITH CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION.
6. ALL UNDERPASS LUMINAIRES MUST BE CENTERED IN THE BEAM SPACE AS INDICATED ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGR. LUMINAIRE SETBACK SHALL BE AS INDICATED IN PLANS.
7. ALL HARDWARE ATTACHED TO THE BRIDGE DECK (CLAMPS, JUNCTION BOXES, LUMINAIRE HANGERS) SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED TO STAINLESS STEEL CHANNEL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING CHANNEL, STUD BOLT AND MOUNTING BOLT LOCATIONS WITH BRIDGE DECK CONTRACTOR.

LAYOUT	DPA	05/09/2013
DRAWN	JDM	10/15/2013
REVIEWED	DPA	10/17/2013
GEN		

FILE NAME =	USER NAME = hussu00411	DESIGNED -	REVISED -
D309H0038-sht-light016		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

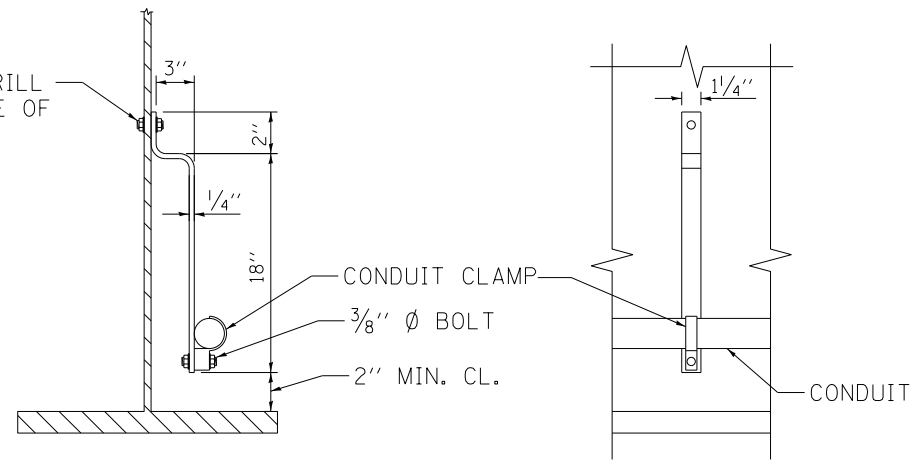
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUSPENDED MOUNT UNDERPASS LUMINAIRE INSTALLATION DETAILS			
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)			
BOURBONNAIS, IL			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

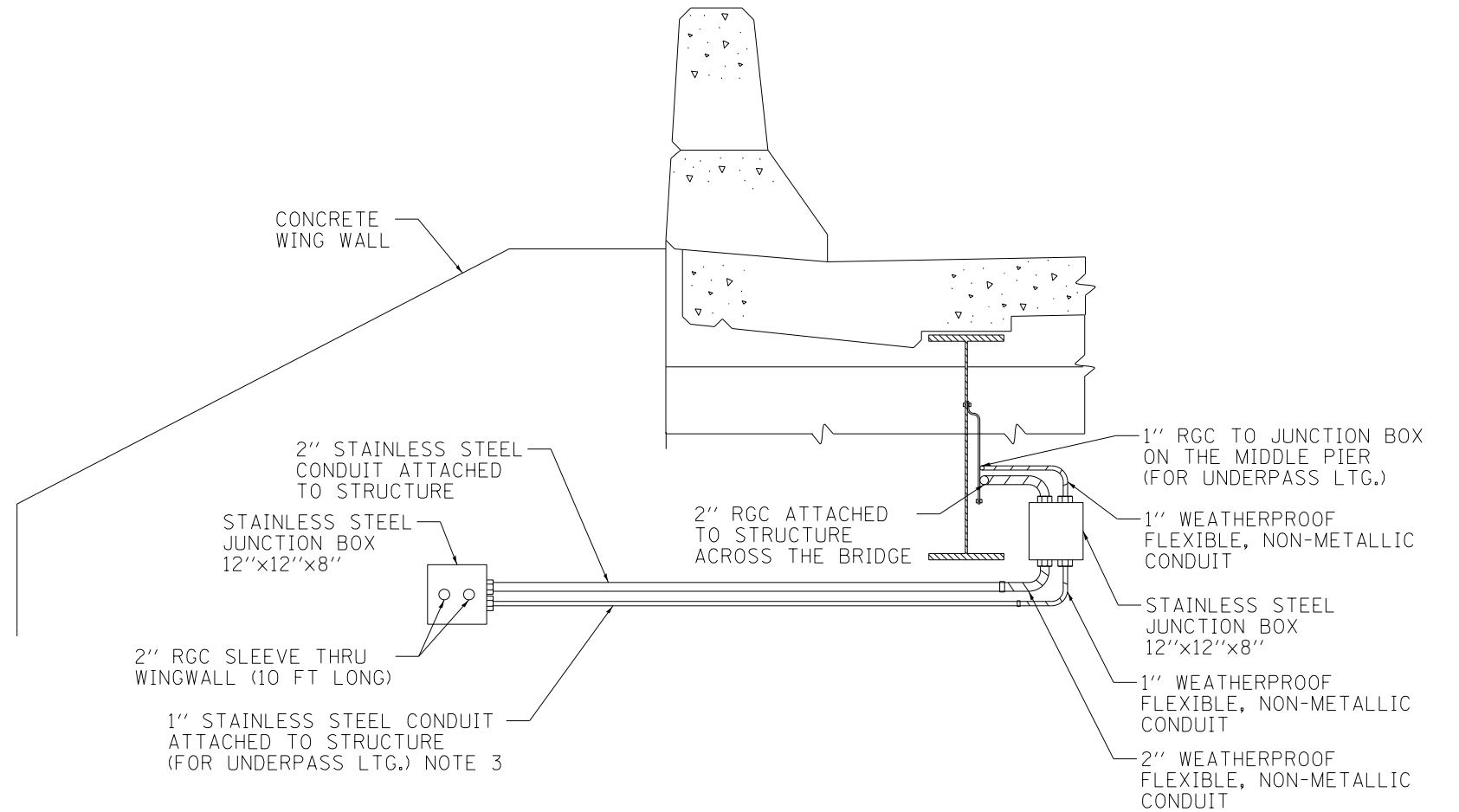
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	471
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



1/2" Ø BOLT. DRILL HOLE IN MIDDLE OF 1/3 WEB ONLY.



CONDUIT SUPPORT BRACKET



CONDUIT DETAIL

- NOTES:
1. LFNC SHALL BE RESISTANT TO OIL, WATER, CHEMICAL, AND UV AND SHALL BE SUITABLE FOR OUTDOOR, DIRECT BURY, AND EXTREME COLD USE ACCORDING TO NEC ART. 356.
 2. LFNC LENGTH SHALL NOT EXCEED 6'.
 3. 1" CONDUIT FEED FROM JUNCTION BOX ATTACHED TO WINGWALL TO UNDERPASS LIGHTING IS REQUIRED AT NORTHWEST QUADRANT ONLY.

L-17

LAYOUT	DPA	05.09.2013
DRAWN	JDM	10.15.2013
REVIEWED	DPA	10.17.2013
GEN		

FILE NAME =	D309H0038-sht-light019
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USER NAME =	hussu00411
PLOT SCALE =	100.0000' / in.
PLOT DATE =	12\03\2013

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CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

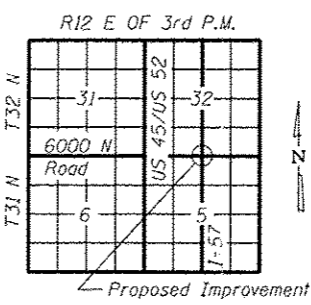
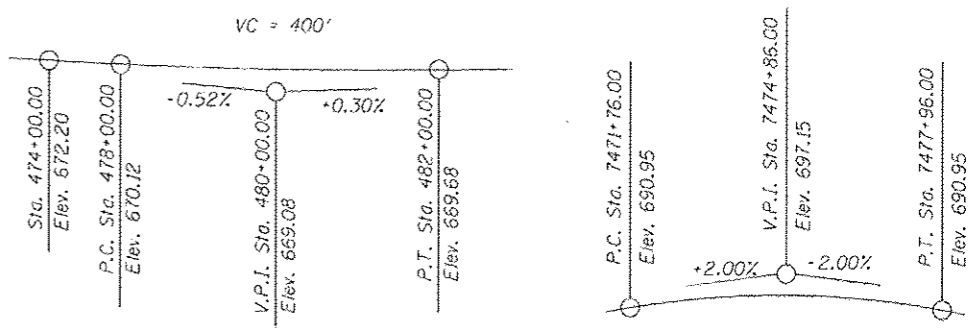
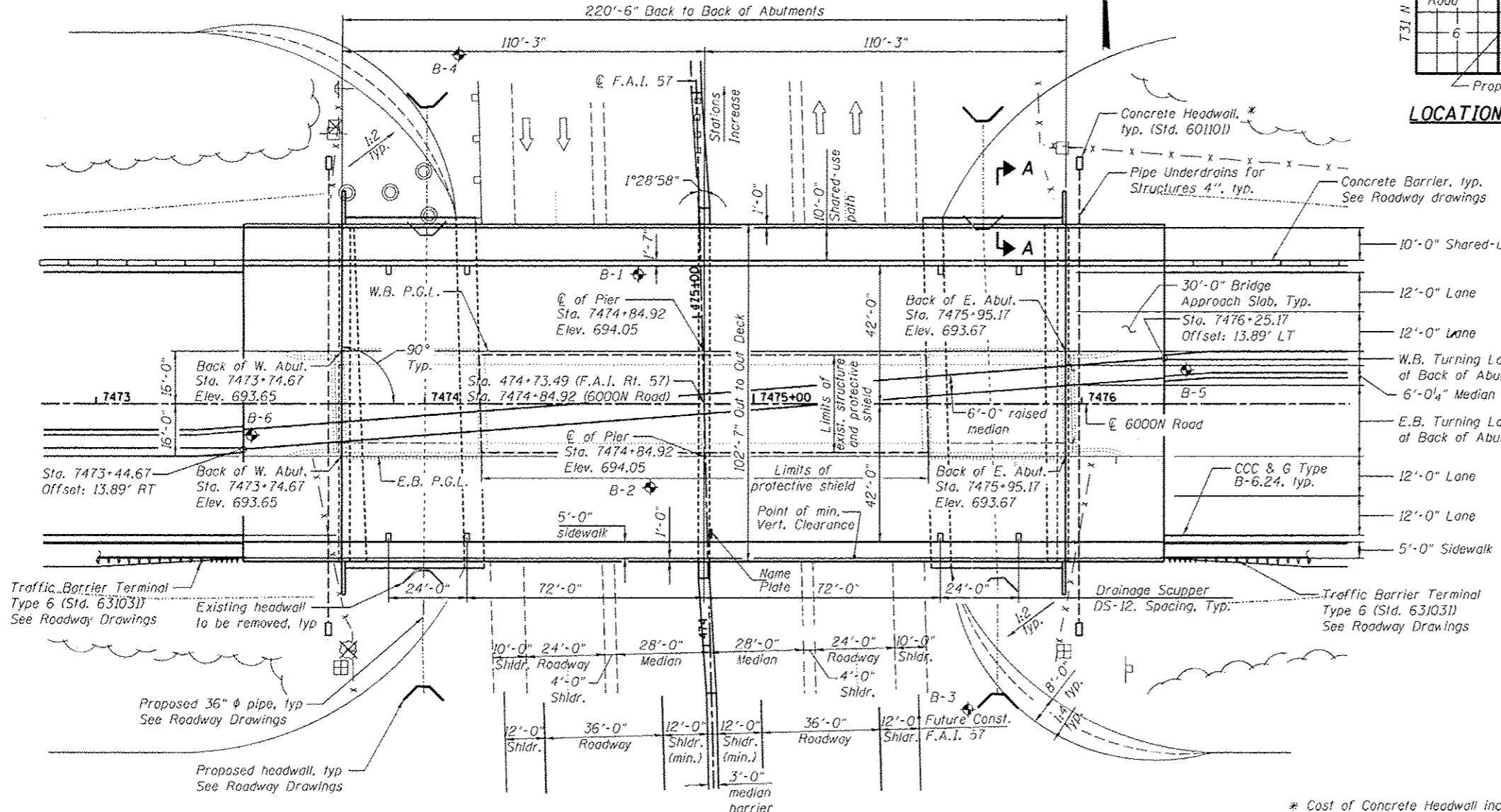
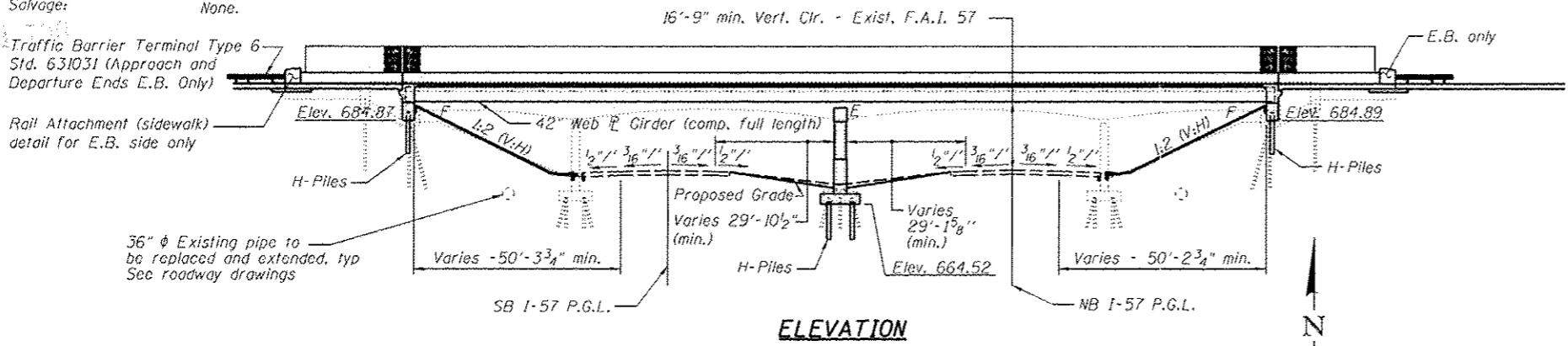
**CONDUIT DETAILS
I-57 AND 6000N RD (BOURBONNAIS PARKWAY)
BOURBONNAIS, IL**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	472
CONTRACT NO. 66982				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

Benchmark: Chiseled square in N.E. corner of concrete attenuator pad, sta 475+17, 4' LT. of C.F.A.I. 57 . Elev. 669.399.

Existing Structure: S.N. 046-0086. Built as F.A.I Rt. 57 Sec. 16-1 HB in 1964. The superstructure consists of a 226'-0" (back to back of abutments) by 29'-8" wide reinforced concrete deck on four span continuous reinforced concrete haunched girders supported by pile bent abutments and hammerhead piers. 6000 N Road traffic shall be detoured during construction.

Salvage: None.



DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications, 5th Edition with 2010 Interims

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270, Grade 50)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.071g
Design Spectral Acceleration at 0.2 sec. (SD3) = 0.124g
Soil Site Class = C



Francis L. Nauman
SIGNATURE
12/03/2013
DATE
LIC. EXP. DATE = 11/30/2014

APPROVED
For Structural Adequacy Only
De Carl Pongrac
Engineer of Bridges & Structures

GENERAL PLAN & ELEVATION
6000 ROAD OVER I-57
FAI 57 SECTION NO. (46-1) HBK-1
KANKAKEE COUNTY
STATION 7474+84.92
STRUCTURE NO. 046-0148

* Cost of Concrete Headwall included in the cost of Pipe Underdrains for Structures 4"

12/03/2013
12/27/2012
12/09/2013
10/31/2013

PROFESSIONAL DESIGN FIRM LICENSE #184-000884	USER NAME = mador/83377	DESIGNED - FLN	REVISED
HANSON Hanson Professional Services Inc.		CHECKED - JKR	REVISED
PLDT SCALE =		DRAWN - MCM	REVISED
PLDT DATE = 12/13/2013		CHECKED - FLN	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 046-0148
SHEET NO. 1 OF 44 SHEETS

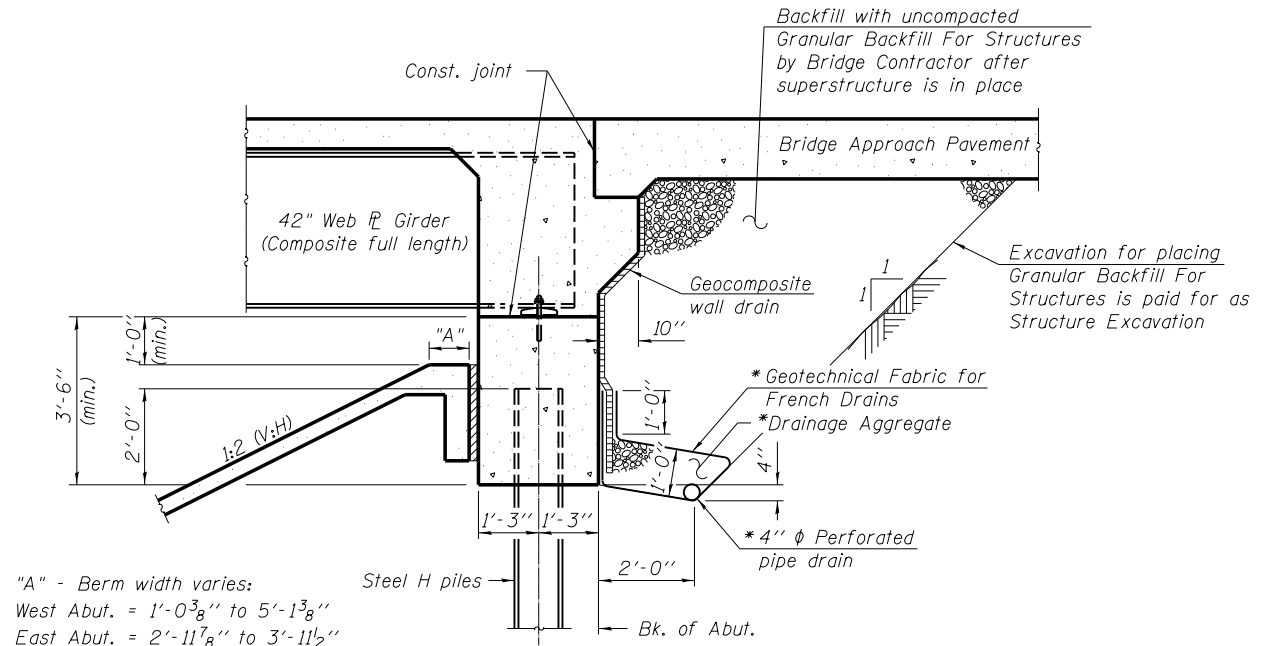
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	473
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66982	

INDEX OF SHEETS

1. General Plan & Elevation
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3. Substructure Layout
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5. Top of Slab Elevation (Sheet 2 of 5)
6. Top of Slab Elevation (Sheet 3 of 5)
7. Top of Slab Elevation (Sheet 4 of 5)
8. Top of Slab Elevation (Sheet 5 of 5)
9. Top of Approach Slab Elevations (Sheet 1 of 2)
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11. Superstructure
12. Superstructure Details (Sheet 1 of 2)
13. Superstructure Details (Sheet 2 of 2)
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15. Integral Abutment Diaphragm Details
16. Drainage Scupper, DS-12
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19. Bridge Fence Railing, Parapet Mounted
20. Bridge Fence Railing, Sidewalk Mounted
21. Structural Steel
22. Structural Steel Details
23. Bearing Details (Fixed Bearing)
24. Bearing Details (HLMR Bearing)
25. West Abutments
26. East Abutment
27. Pier
28. Pier Details
29. Bar Splicer Assembly & Mechanical Splicer Details
30. HP Pile Details
31. Boring Logs (Sheet 1 of 4)
32. Boring Logs (Sheet 2 of 4)
33. Boring Logs (Sheet 3 of 4)
34. Boring Logs (Sheet 4 of 4)
- 35.-44. Existing Bridge Drawings

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 3	Each	1	—	1
Protective Shield	Sq. Yd.	437	—	437
Structure Excavation	Cu. Yd.	—	364	364
Concrete Structures	Cu. Yd.	—	361.5	361.5
Concrete Superstructure	Cu. Yd.	1,118.7	—	1,118.7
Bridge Deck Grooving	Sq. Yd.	2,302	—	2,302
Concrete Encasement	Cu. Yd.	—	16.4	16.4
Protective Coat	Sq. Yd.	3,480	—	3,480
Furnishing and Erecting Structural Steel	L. Sum	1	—	1
Stud Shear Connectors	Each	12,480	—	12,480
Reinforcement Bars, Epoxy Coated	Pound	260,120	66,360	326,480
Bar Splicers	Each	206	—	206
Bridge Fence Railing	Foot	272	—	272
Bridge Fence Railing (Sidewalk)	Foot	280	—	280
Parapet Railing	Foot	280	—	280
Slope Wall 4 Inch	Sq. Yd.	—	1,077	1,077
Furnishing Steel Piles HP 14x73	Foot	—	2,128	2,128
Driving Piles	Foot	—	2,128	2,128
Test Pile Steel HP 14x73	Each	—	3	3
Pile Shoes	Each	—	60	60
Name Plates	Each	—	1	1
Anchor Bolts 1"	Each	—	52	52
Anchor Bolts 1/4"	Each	—	26	26
Geocomposite Wall Drain	Sq. Yd.	—	184	184
High Load Multi-Rotational Bearings, Guided Expansion, 450K	Each	13	—	13
Granular Backfill for Structures	Cu. Yd.	—	380	380
Drainage Scuppers, DS-12	Each	8	—	8
Pipe Underdrains for Structures 4"	Foot	—	276	276



"A" - Berm width varies:
 West Abut. = 1'-0 3/8" to 5'-1 3/8"
 East Abut. = 2'-11 7/8" to 3'-11 1/2"

SECTION THRU INTEGRAL ABUTMENT

* Included in the cost of Pipe Underdrains for Structures.

Note:
 All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersection with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

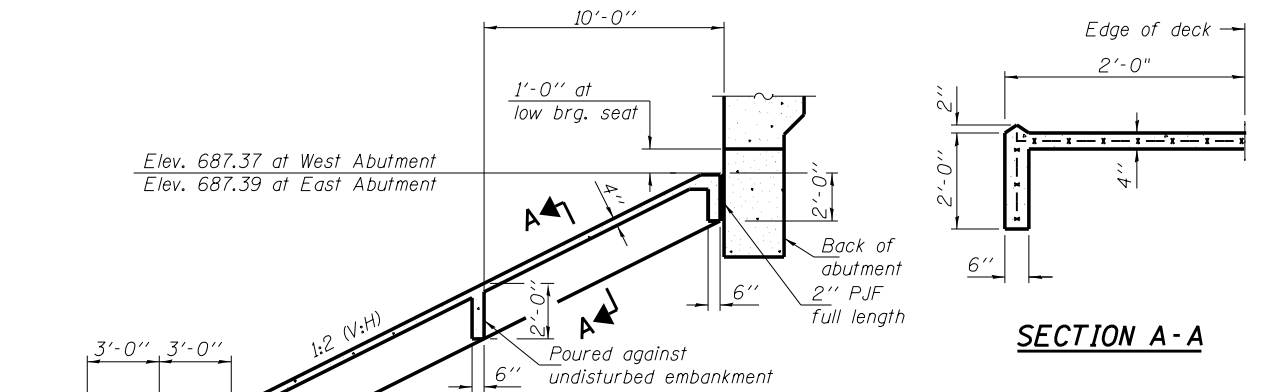
GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 7/8 in. ϕ , holes 15/16 in. ϕ , unless otherwise noted.
2. Calculated weight of Structural Steel = 649,540 lbs (AASHTO M270 Grade 50) 59,680 lbs (AASHTO M270 Grade 36)
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
8. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. 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 Interstate Green, Munsell No. 7.5G 4/8. See Section 506 of the Standard Specifications.
9. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
10. The maximum pay length of Protective Shield shall extend from the inside face of the existing west pier cap to the inside face of the east pier cap. The maximum pay width of Protective Shield shall be equal to the overall deck width of the existing bridge.
11. The existing concrete slope walls and paved ditches shall be completely removed. The cost of this removal shall be included in the cost of REMOVAL OF EXISTING STRUCTURES NO. 3.

STATION 474+73.49
 BUILT 201- BY
 STATE OF ILLINOIS
 F.A.I. 57 SEC. (46-1)HBK-1
 LOADING HL-93
 STR. NO. 046-0148

NAME PLATE

See Std. 515001
 Locate Name Plate on Pier as indicated on Sheet 27 of 44



SECTION THRU CONCRETE SLOPEWALL

Note:
 Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0 weighing 58 lbs. per 100 sq. ft.

12/02/2013 c:\p\se-work\vol._ref_delete\dms56035\0460148\66982-002-GenData.dgn

LAYOUT
 FLN 01.02.2013
 DRAWN 07.08.2013
 REVIEWED 10.11.2013



USER NAME = hussu00411	DESIGNED - FLN	REVISED
PLOT SCALE =	CHECKED - JKR	REVISED
PLOT DATE = 12\02\2013	DRAWN - MGM	REVISED
	CHECKED - FLN	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

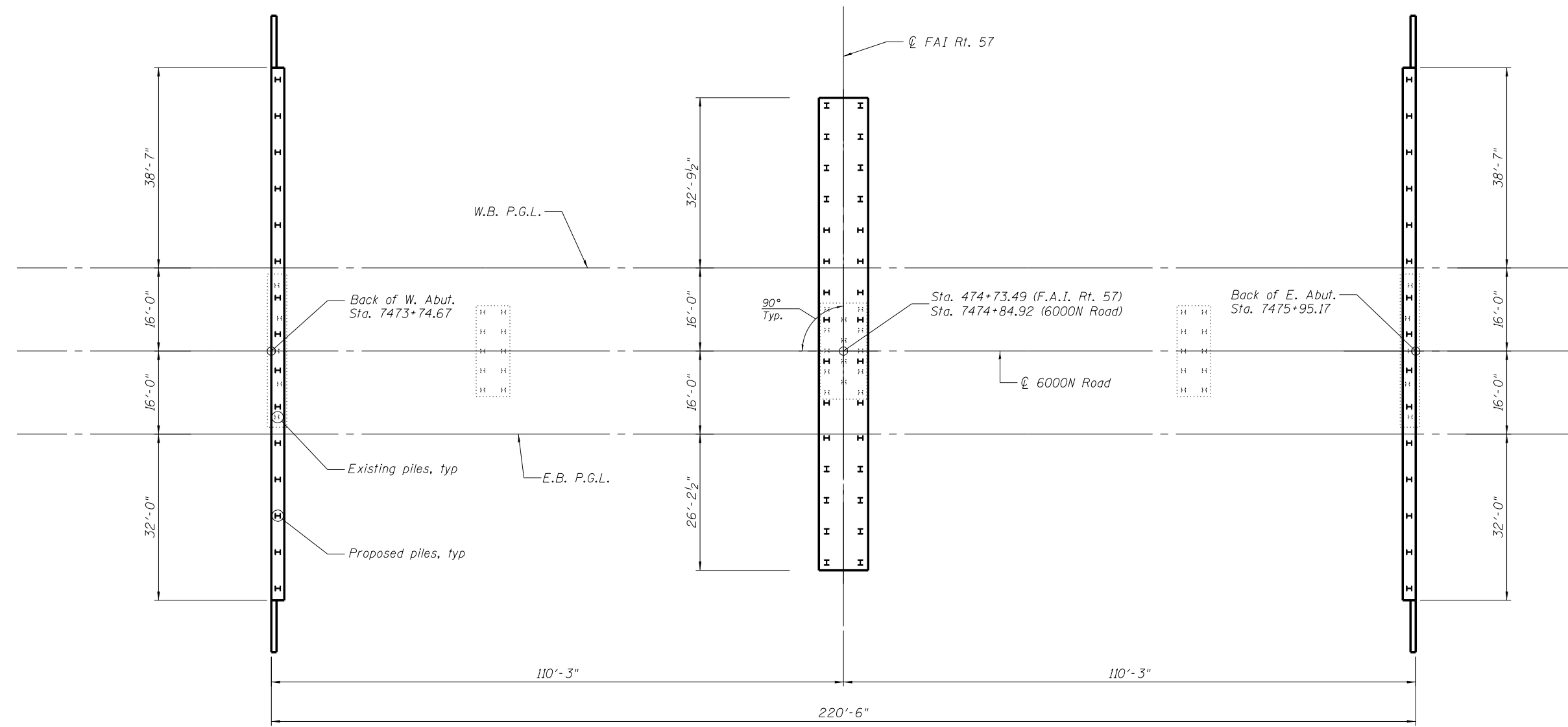
GENERAL DATA
 STRUCTURE NO. 046-0148

SHEET NO. 2 OF 44 SHEETS

F.A.I. RTE. 57	SECTION (46-1)HBK-1	COUNTY KANKAKEE	TOTAL SHEETS 819	SHEET NO. 474
CONTRACT NO. 66982			ILLINOIS FED. AID PROJECT	

12/02/2013
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LAYOUT	FLN	01.15.2013
DRAWN	MGM	07.09.2013
REVIEWED	FLN	10.17.2013



SUBSTRUCTURE LAYOUT

PROFESSIONAL DESIGN FIRM LICENSE #194-001084
HANSON
 Hanson Professional Services Inc.

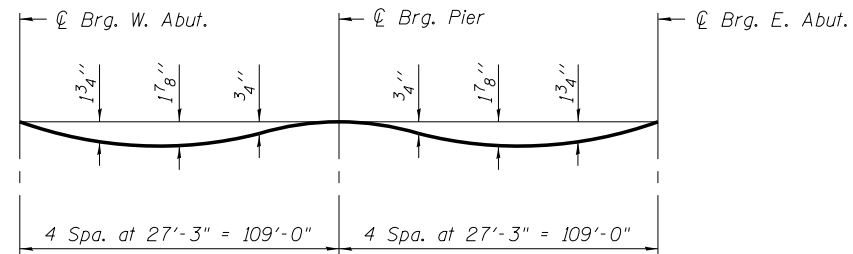
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		CHECKED -	JKR	REVISED
PLOT SCALE =		DRAWN -	MGM	REVISED
PLOT DATE =	12\02\2013	CHECKED -	FLN	REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SUBSTRUCTURE LAYOUT
 STRUCTURE NO. 046-0148**

SHEET NO. 3 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	475
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

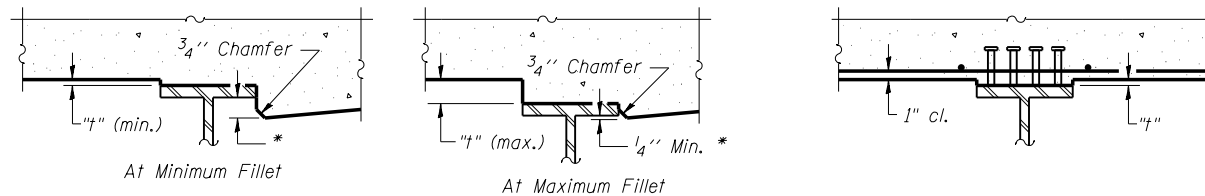


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets 5 thru 8 of 44.



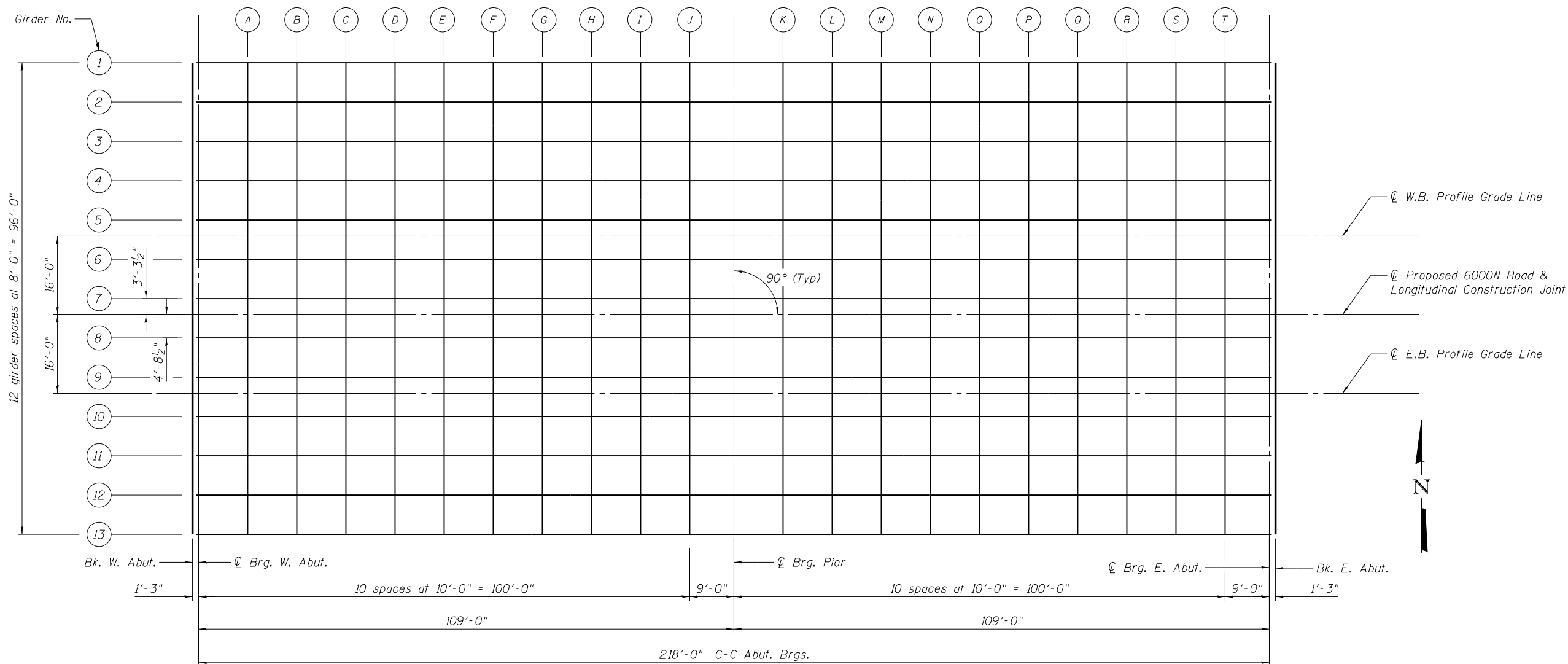
EXTERIOR GIRDERS

* Variable (Not less than 1/4")

INTERIOR GIRDERS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 5 thru 8 of 44, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS



DIAGRAMMATIC PLAN

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LAYOUT	FLN	01.06.2013
DRAWN	MGM	07.08.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001084
HANSON
 Hanson Professional Services Inc.

USER NAME = hussu00411	DESIGNED - FLN	REVISED
PLOT SCALE =	CHECKED - JKR	REVISED
PLOT DATE = 12\02\2013	DRAWN - MGM	REVISED
	CHECKED - FLN	REVISED

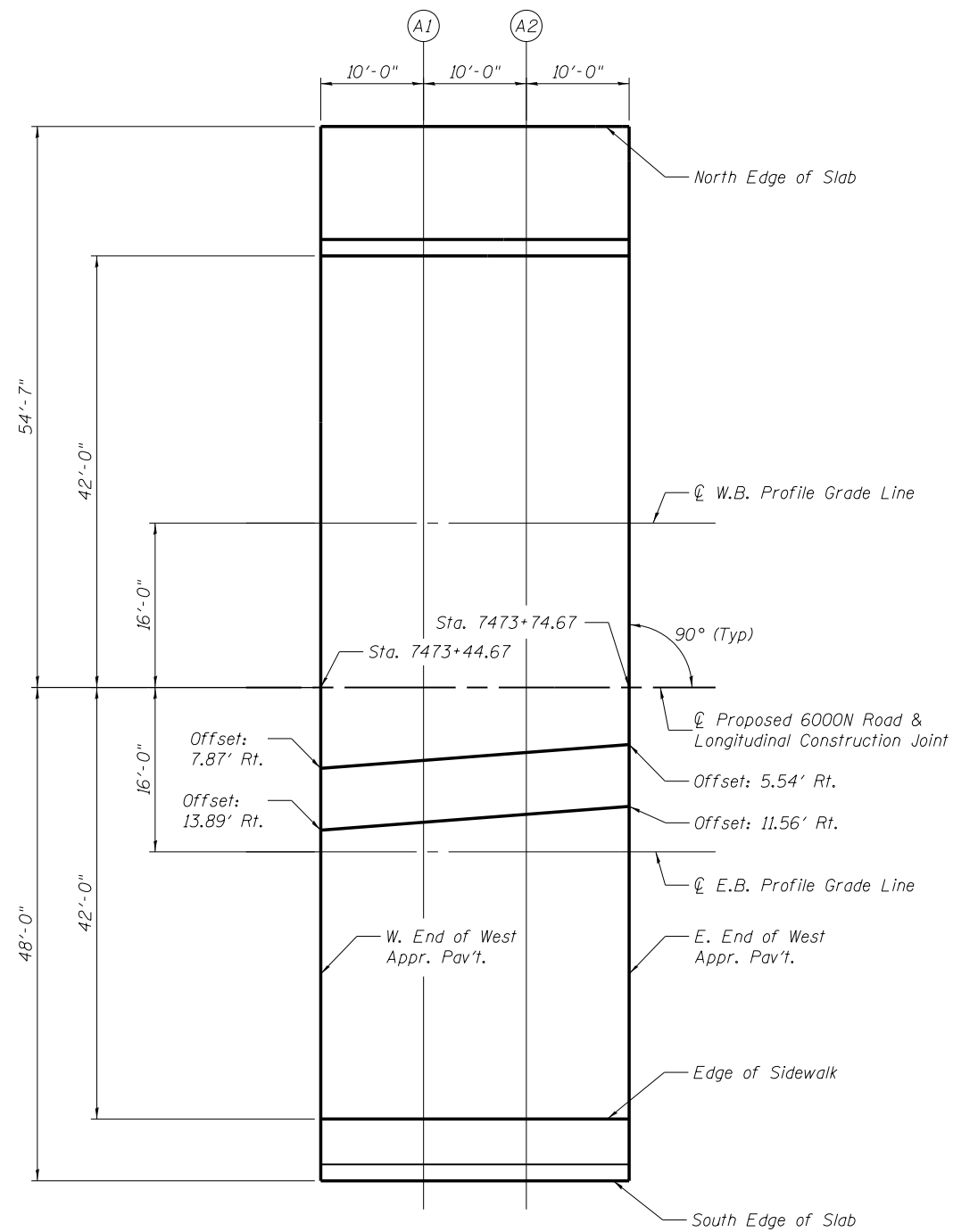
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 1 OF 5)
 STRUCTURE NO. 046-0148**

SHEET NO. 4 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	476
CONTRACT NO.			66982	

ILLINOIS FED. AID PROJECT



PLAN
West Approach



NORTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pav't.	7473+44.67	-54.58	692.60
A1	7473+54.67	-54.58	692.69
A2	7473+64.67	-54.58	692.77
E. End West Appr. Pav't.	7473+74.67	-54.58	692.85

☉ E.B. PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pav't.	7473+44.67	16.00	693.41
A1	7473+54.67	16.00	693.49
A2	7473+64.67	16.00	693.58
E. End West Appr. Pav't.	7473+74.67	16.00	693.65

☉ W.B. PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pav't.	7473+44.67	-16.00	693.41
A1	7473+54.67	-16.00	693.49
A2	7473+64.67	-16.00	693.58
E. End West Appr. Pav't.	7473+74.67	-16.00	693.65

EDGE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pav't.	7473+44.67	42.00	692.86
A1	7473+54.67	42.00	692.95
A2	7473+64.67	42.00	693.03
E. End West Appr. Pav't.	7473+74.67	42.00	693.11

☉ PROPOSED 6000N ROAD & LONGITUDINAL CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pav't.	7473+44.67	0.00	693.66
A1	7473+54.67	0.00	693.74
A2	7473+64.67	0.00	693.83
E. End West Appr. Pav't.	7473+74.67	0.00	693.90

SOUTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pav't.	7473+44.67	48.00	693.07
A1	7473+54.67	48.00	693.16
A2	7473+64.67	48.00	693.24
E. End West Appr. Pav't.	7473+74.67	48.00	693.32

Notes:
Offsets are to ☉ Proposed 6000N Road.
Negative (-) offsets are offsets to the left of the ☉ while looking upstation.

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LAYOUT	FLN	01.14.2013
DRAWN	MGM	07.09.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001084

Hanson Professional Services Inc.

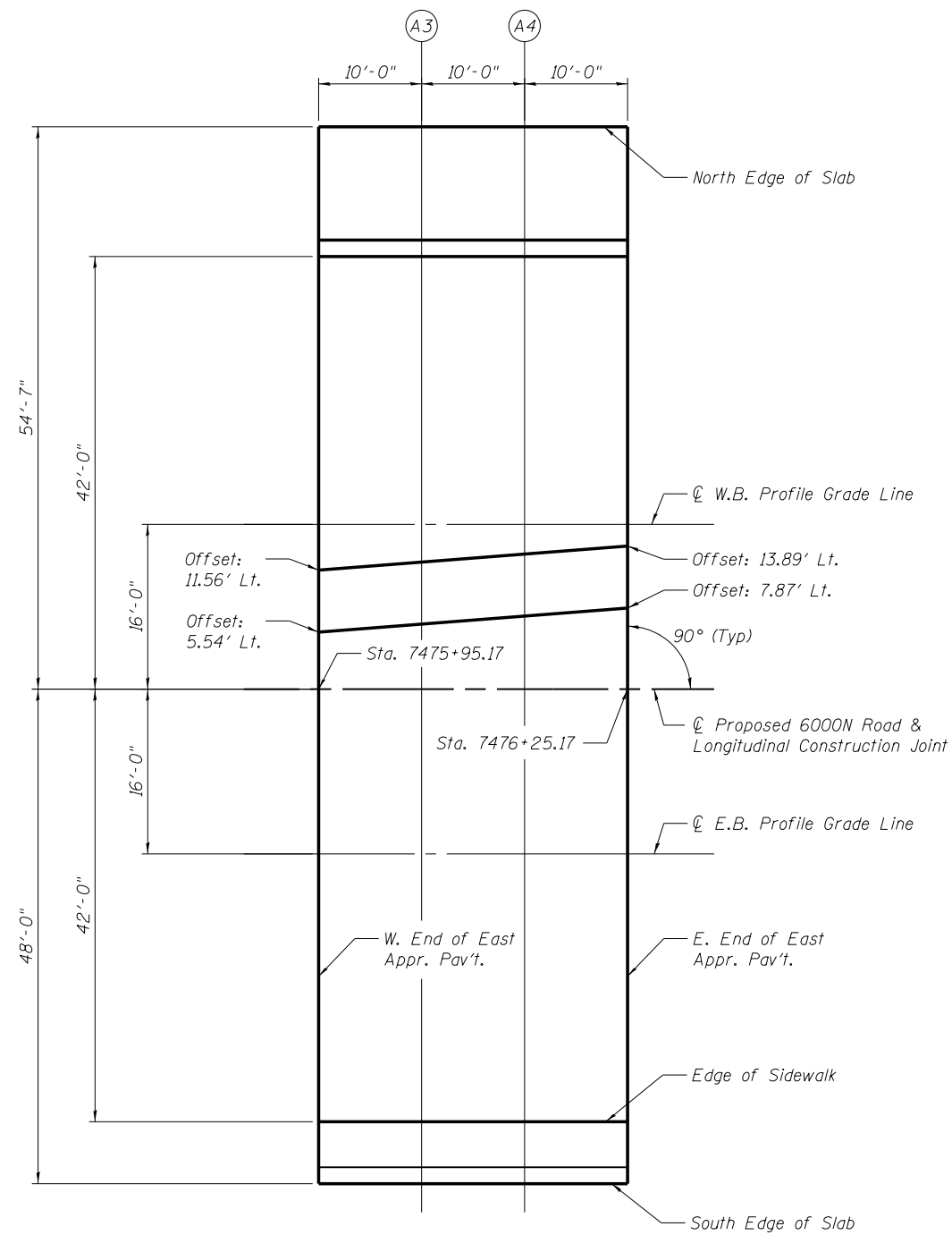
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PLOT DATE = 12\02\2013	DRAWN - MGM	REVISION
	CHECKED - FLN	REVISION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS (SHEET 1 OF 2)
STRUCTURE NO. 046-0148

SHEET NO. 9 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	481
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



PLAN
East Approach



NORTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Pav't.	7475+95.17	-54.58	692.86
A3	7476+05.17	-54.58	692.79
A4	7476+15.17	-54.58	692.71
E. End East Appr. Pav't.	7476+25.17	-54.58	692.62

☉ E.B. PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Pav't.	7475+95.17	16.00	693.67
A3	7476+05.17	16.00	693.59
A4	7476+15.17	16.00	693.51
E. End East Appr. Pav't.	7476+25.17	16.00	693.43

☉ W.B. PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Pav't.	7475+95.17	-16.00	693.67
A3	7476+05.17	-16.00	693.59
A4	7476+15.17	-16.00	693.51
E. End East Appr. Pav't.	7476+25.17	-16.00	693.43

EDGE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Pav't.	7475+95.17	42.00	693.12
A3	7476+05.17	42.00	693.05
A4	7476+15.17	42.00	692.97
E. End East Appr. Pav't.	7476+25.17	42.00	692.88

☉ PROPOSED 6000N ROAD & LONGITUDINAL CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Pav't.	7475+95.17	0.00	693.92
A3	7476+05.17	0.00	693.84
A4	7476+15.17	0.00	693.76
E. End East Appr. Pav't.	7476+25.17	0.00	693.68

SOUTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Pav't.	7475+95.17	48.00	693.33
A3	7476+05.17	48.00	693.26
A4	7476+15.17	48.00	693.18
E. End East Appr. Pav't.	7476+25.17	48.00	693.09

Notes:
Offsets are to ☉ Proposed 6000N Road.
Negative (-) offsets are offsets to the left of the ☉ while looking upstation.

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LAYOUT	FLN	01.14.2013
DRAWN	MGM	07.09.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001094

 Hanson Professional Services Inc.

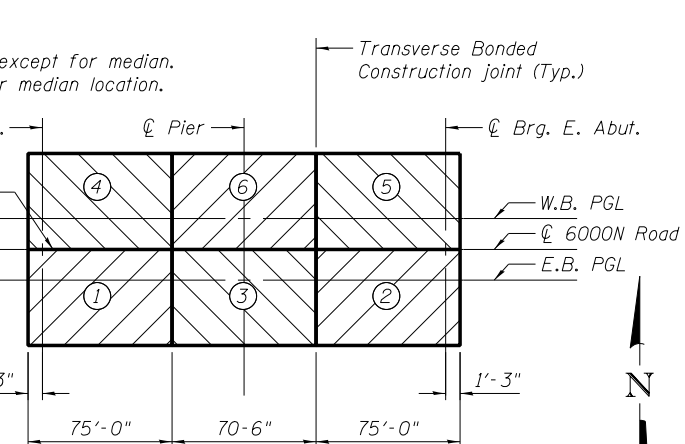
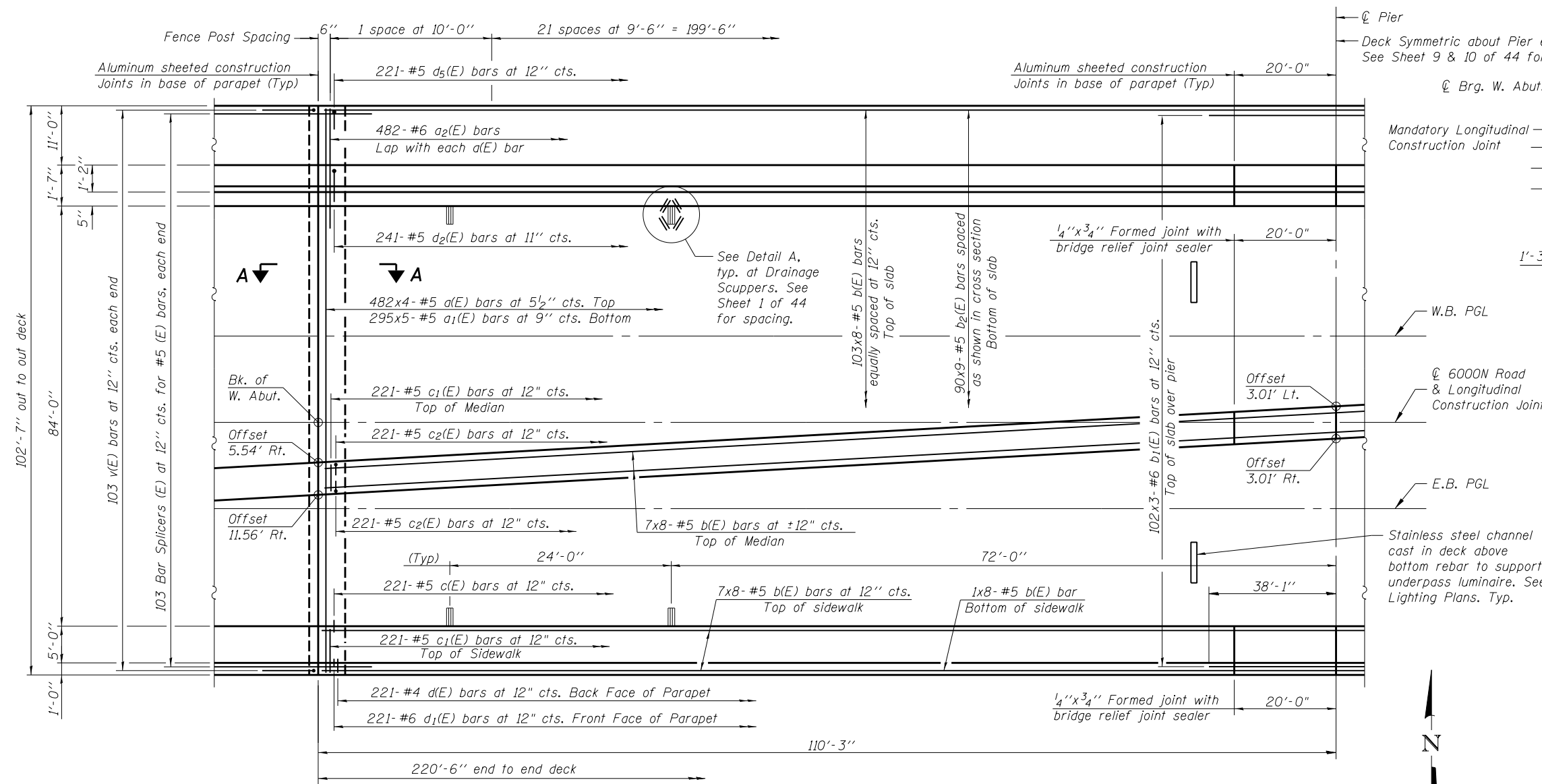
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	CHECKED - JKR	REVISION
PLOT SCALE =	DRAWN - MGM	REVISION
PLOT DATE = 12\02\2013	CHECKED - FLN	REVISION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS (SHEET 2 OF 2)
STRUCTURE NO. 046-0148

SHEET NO. 10 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	482
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



- DECK POURING SEQUENCE**
- The concrete deck slab segments shall be poured in numerical order as shown above.
- When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
- At least 72 hours shall have elapsed from the end of the previous pour.
 - The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.
- A delay of 21 days shall be provided between the completion of deck pour (3) and the beginning of deck pour (4).

- MIN. BAR LAP**
- #5 = 2'-7" (UNO)
 - #5 = 3'-3" (a(E) bars)
 - #6 = 3'-1"

Notes:

See Sheets 12 and 13 of 44 for superstructure details and Bill of Material.

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

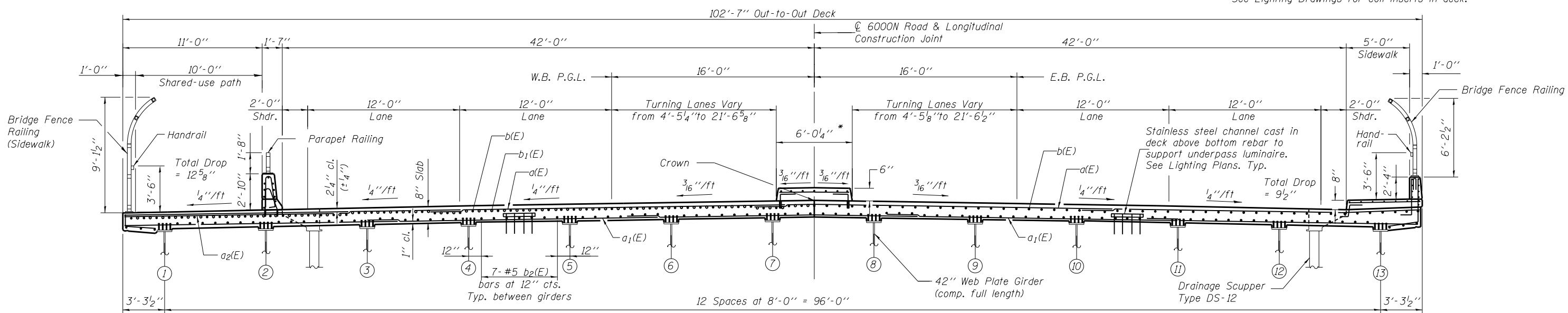
See Sheet 12 of 44 for parapet reinforcement.

See Sheet 15 of 44 for Section A-A.

See Sheet 12 of 44 for Detail A.

See Lighting Drawings for coil inserts in deck.

PARTIAL PLAN



NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN

* 6'-0" measured perpendicular to inside turning lane.

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LAYOUT	FLN	02.04.2013
DRAWN	MGM	07.08.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISED
HANSON		CHECKED - JKR	REVISED
Hanson Professional Services Inc.		DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 046-0148
SHEET NO. 11 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	483
CONTRACT NO. 66982			ILLINOIS FED. AID PROJECT	

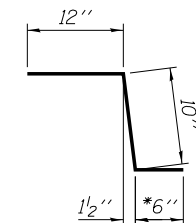
**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	1928	#5	28'-2"	—
a ₁ (E)	1475	#5	22'-3"	—
a ₂ (E)	482	#6	17'-6"	—
a ₃ (E)	64	#5	2'-0"	—
b(E)	944	#5	29'-11"	—
b ₁ (E)	306	#6	27'-7"	—
b ₂ (E)	810	#5	26'-11"	—
c(E)	221	#5	2'-4"	⌋
c ₁ (E)	442	#5	5'-7"	—
c ₂ (E)	442	#5	1'-3"	⌋
d(E)	221	#4	5'-7"	⌋
d ₁ (E)	221	#6	4'-4"	⌋
d ₂ (E)	241	#5	4'-8"	⌋
d ₃ (E)	241	#5	5'-7"	⌋
d ₄ (E)	48	#4	2'-0"	⌋
d ₅ (E)	221	#5	2'-8"	⌋
e(E)	150	#4	17'-9"	—
e ₁ (E)	30	#4	19'-8"	—
e ₂ (E)	6	#4	31'-6"	—
e ₃ (E)	4	#8	47'-10"	—
e ₄ (E)	2	#4	19'-8"	—
e ₅ (E)	2	#8	19'-8"	—
m(E)	30	#6	36'-5"	—
m ₁ (E)	52	#6	11'-4"	—
m ₂ (E)	24	#6	7'-8"	—
m ₃ (E)	4	#6	2'-11"	—
s(E)	204	#5	6'-10"	⌋
s ₁ (E)	180	#4	11'-2"	⌋
v(E)	206	#5	4'-1"	⌋
Reinforcement Bars, Epoxy Coated		Pound	187,190	
Concrete Superstructure		Cu. Yds.	766.2	

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.

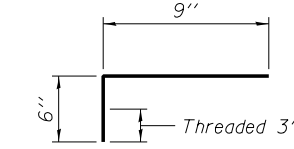
MIN. BAR LAP

#4 = 2'-1"
#8 = 5'-5"



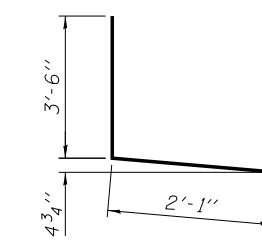
BAR c(E)

*In lieu of bottom leg, the deck may be drilled and the c(E) bar set according to Article 509.06 of the Standard Specifications. Drilled holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". Contractor shall take all necessary precautions to prevent drilled-hole interference with deck reinforcement bars. Locate longitudinal bars to miss drilled locations. Locate drilled holes to miss transverse bars in deck.

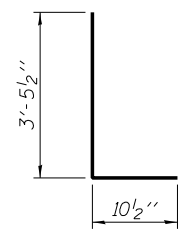


BAR c₂(E)

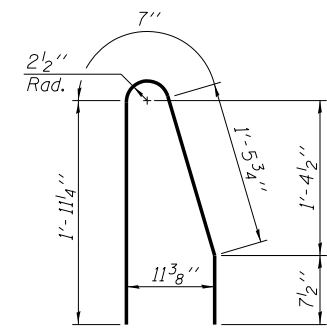
(Adjust bars in deck to avoid cutting bars)



BAR d(E)

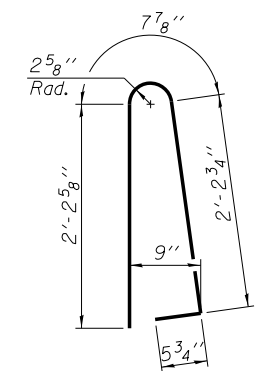


BAR d₁(E)

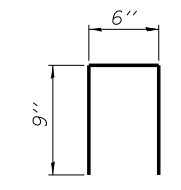


BAR d₂(E)

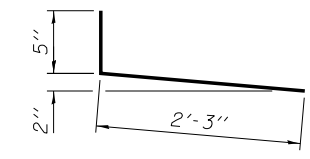
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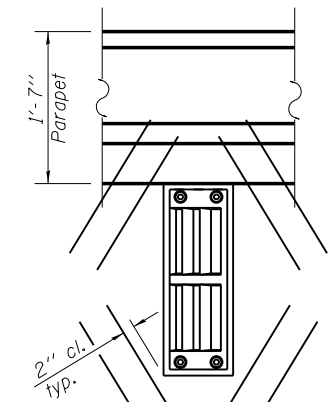
BAR d₃(E)



BAR d₄(E)



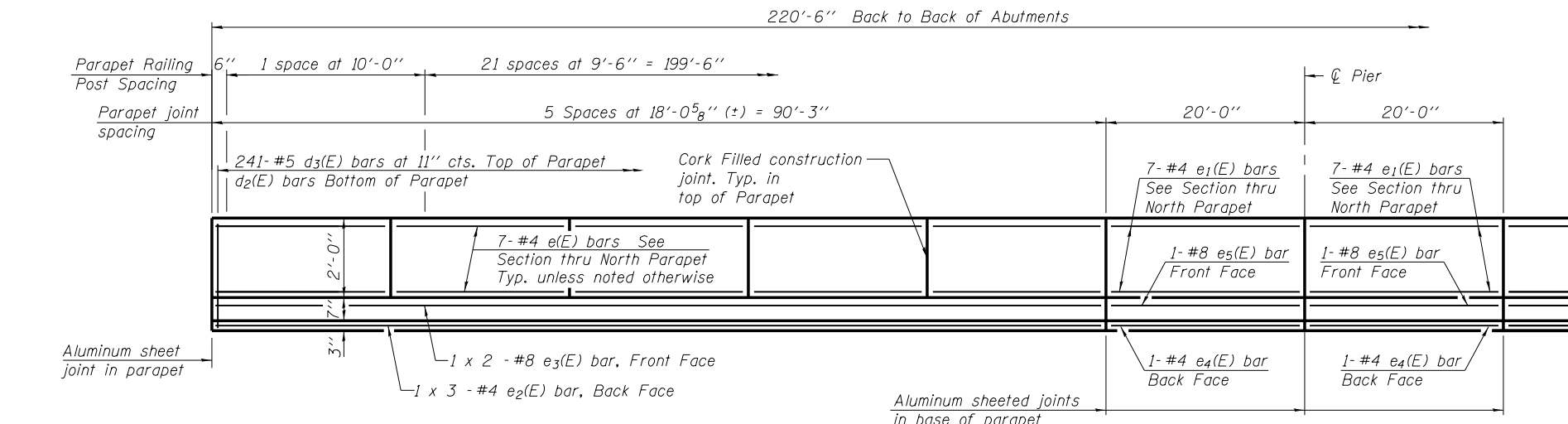
BAR d₅(E)



DETAIL A

Notes:
Cut longitudinal reinforcement to clear drainage scuppers.
Drains shall be located clear of all diaphragms.

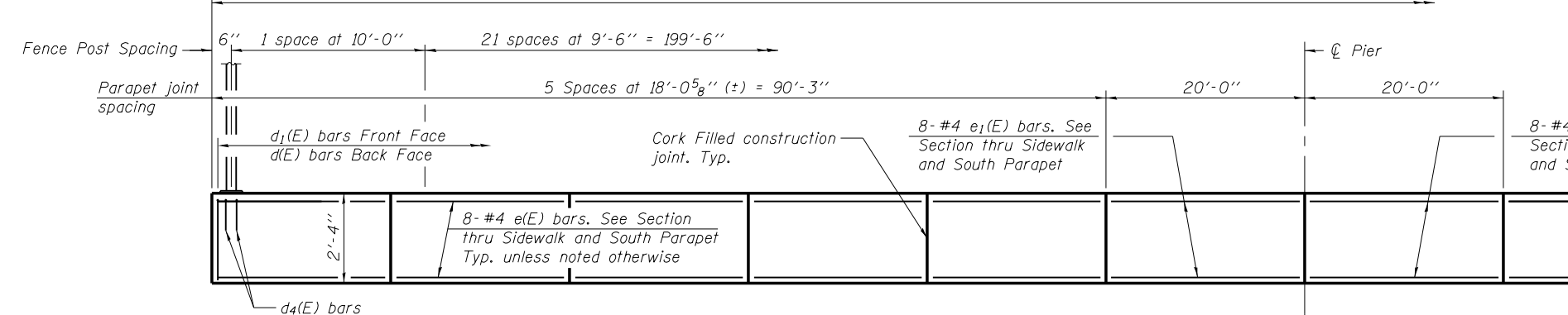
220'-6" Back to Back of Abutments



INSIDE ELEVATION OF NORTH PARAPET

(Looking North)
(Parapet Railing not shown for clarity)

220'-6" Back to Back of Abutments



INSIDE ELEVATION OF SOUTH PARAPET

(Looking South)
(Bridge Fence Railing not shown for clarity)

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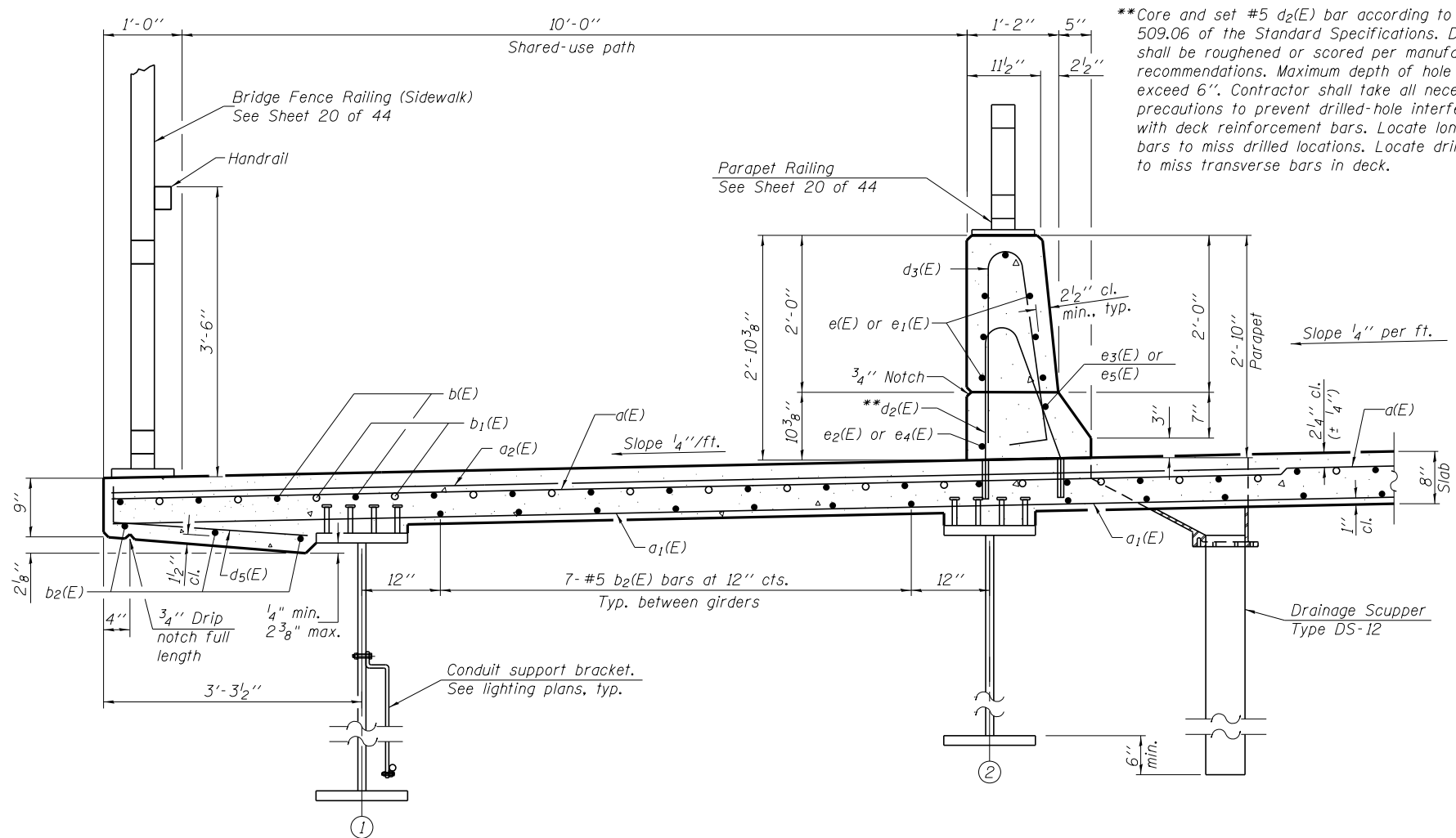
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DRAWN	MGM	07.09.2013
REVIEWED	FLN	10.17.2013

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	PLOT DATE = 12/02/2013	CHECKED - FLN	REVISED

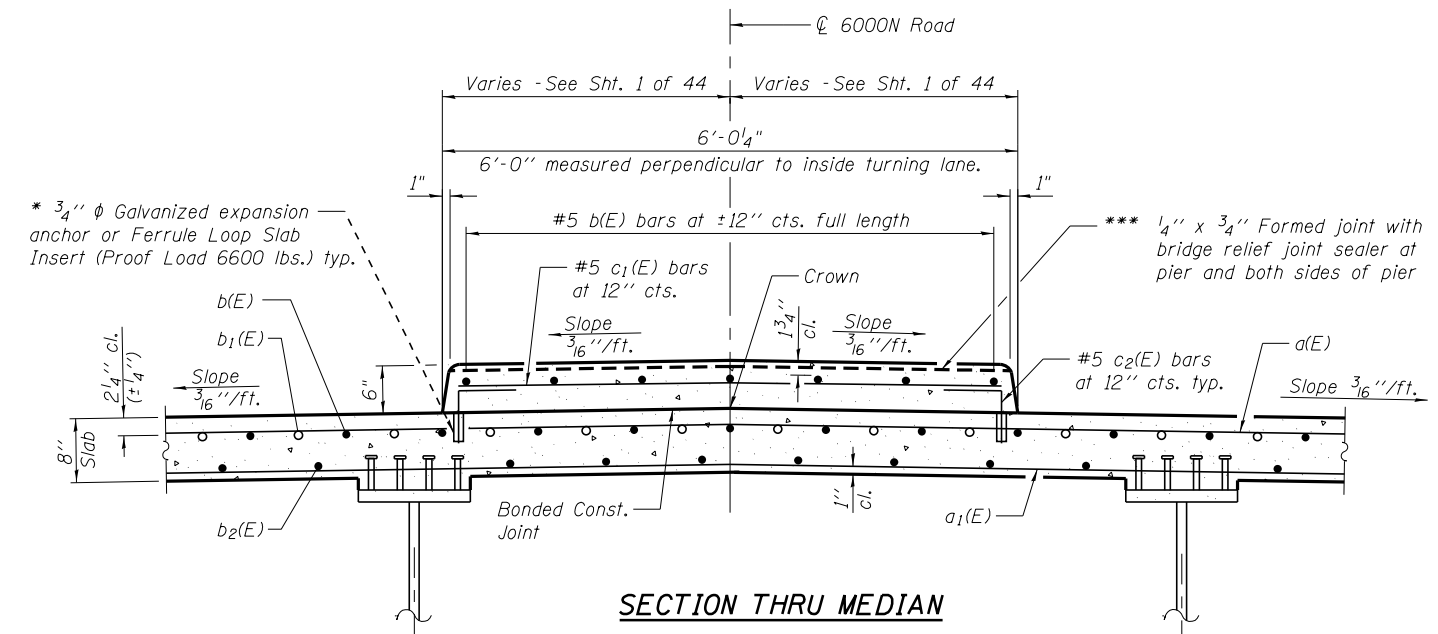
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUPERSTRUCTURE DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 046-0148
SHEET NO. 12 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	484
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



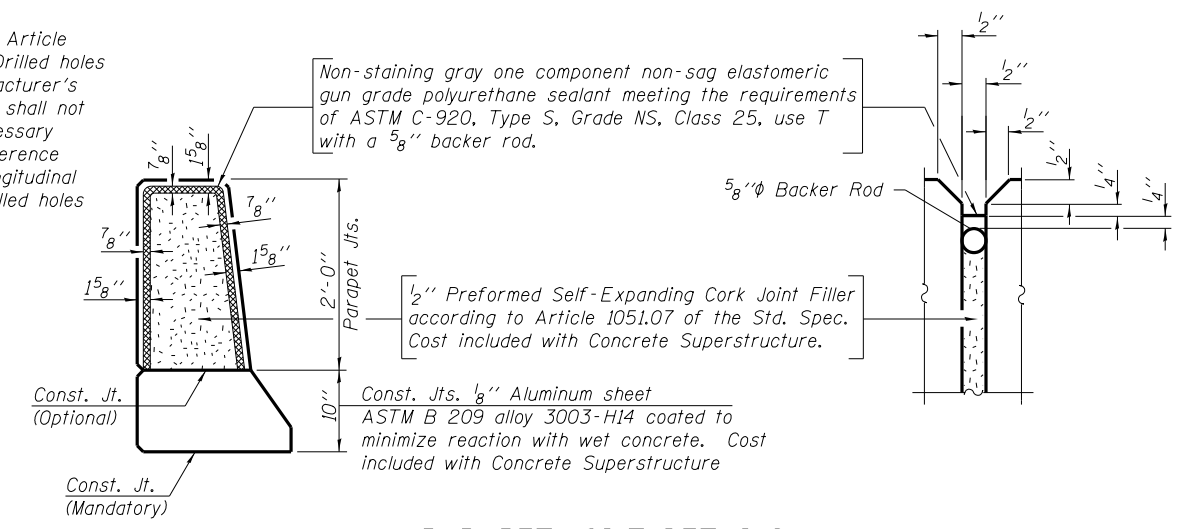
SECTION THRU NORTH PARAPET



SECTION THRU MEDIAN

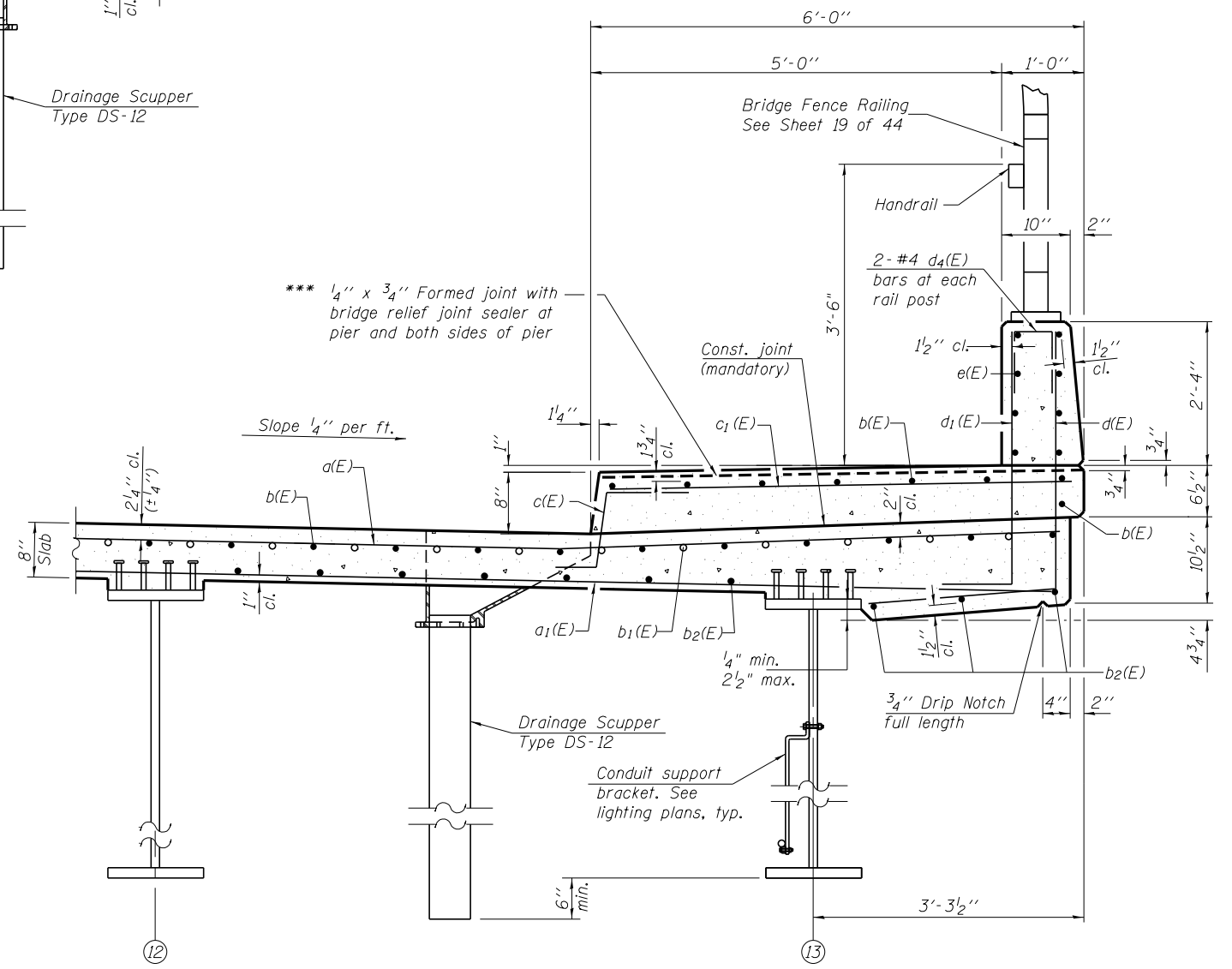
* The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.
 *** Full width along joint-backer rod not required.

Notes:
 Adjust bars in deck to avoid cutting bars.



PARAPET JOINT DETAILS

North Parapet shown
 South Parapet similar
 (No aluminum sheeted joint in sidewalk)



SECTION THRU SIDEWALK AND SOUTH PARAPET

9/24/2014
 c:\pwwork\pwwork\corcoranim\0378748\0460148\66982-013 Super Detail2.dgn

LAYOUT
 DRAWN
 REVIEWED



PROFESSIONAL DESIGN FIRM LICENSE #194-001094	USER NAME = corcoranim	DESIGNED - #DESIGN#	REVISED - #REVDATE1#
		CHECKED - #CHECKED#	REVISED - #REVDATE2#
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

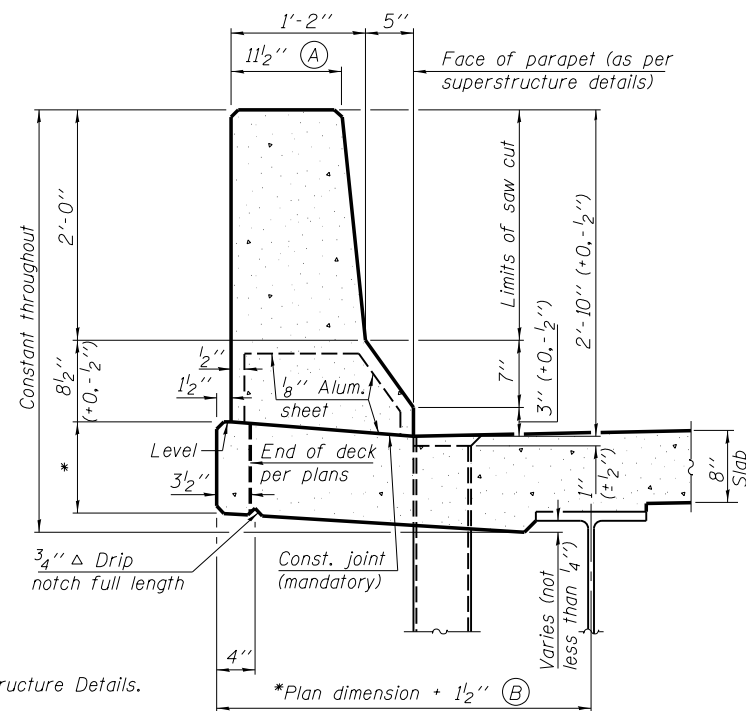
**SUPERSTRUCTURE DETAILS (SHEET 2 OF 2)
 STRUCTURE NO. 046-0148**

SHEET NO. 13 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	485
CONTRACT NO. 66982			ILLINOIS FED. AID PROJECT	

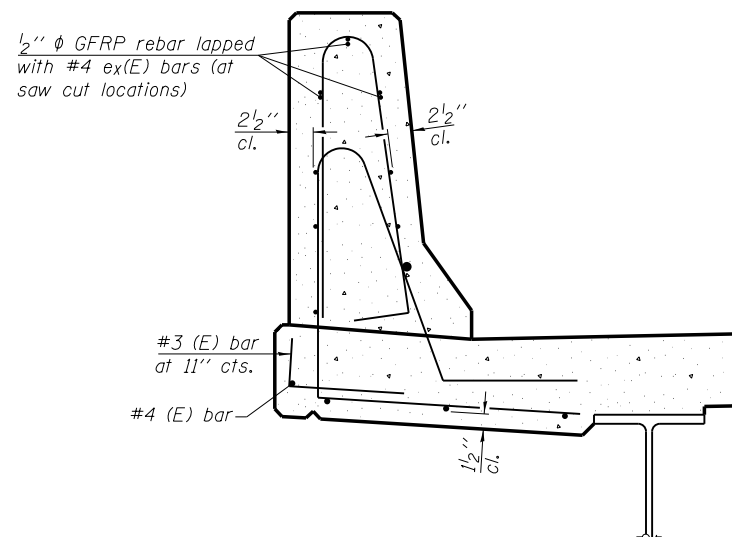
GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler. Steel superstructure shown. Other superstructure types similar.



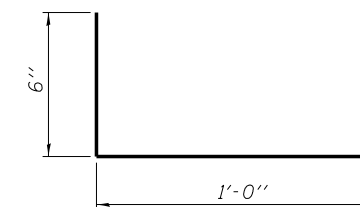
34" F SHAPE PARAPET SECTION
(Showing dimensions)

*See Superstructure Details.

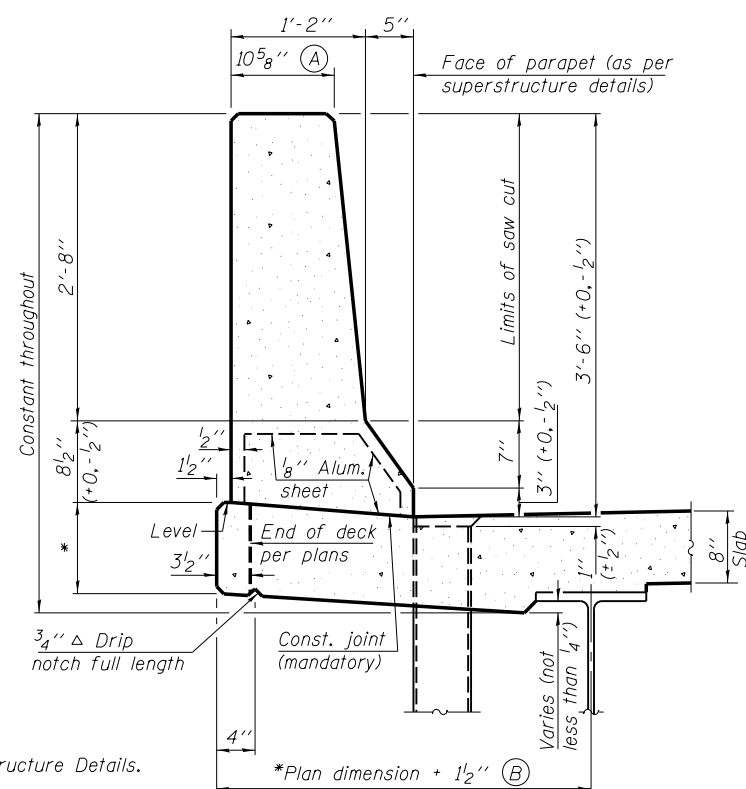


SECTION

(34" parapet shown - 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

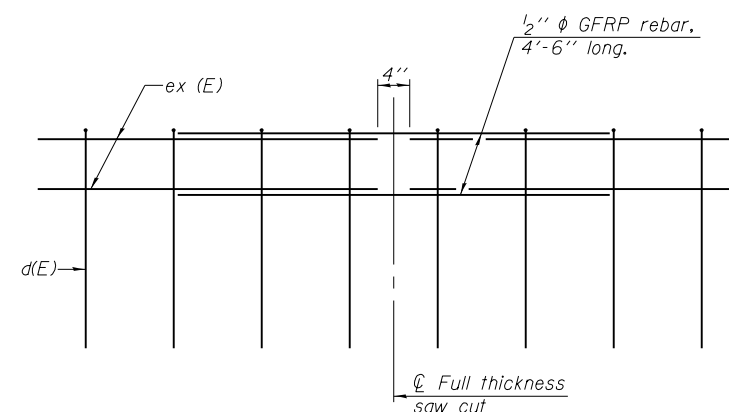


#3 (E) BAR



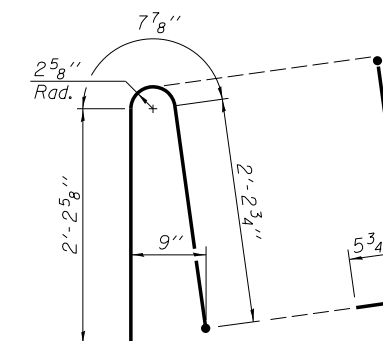
42" F SHAPE PARAPET SECTION
(Showing dimensions)

*See Superstructure Details.

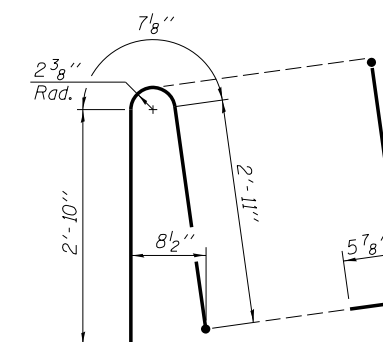


GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)



ALTERNATE BAR d(E)
(For 34" parapet when conduit is present)



ALTERNATE BAR d(E)
(For 42" parapet when conduit is present)

12/02/2013 c:\p\se_wor\k\ob_no_delete\dms56035\0460148-66982-014-Cons\Slip Form.dgn

LAYOUT	FLN	01.26.2013
DRAWN	MGM	07.08.2013
REVIEWED	FLN	10.17.2013

SFP 34-42

8-16-12



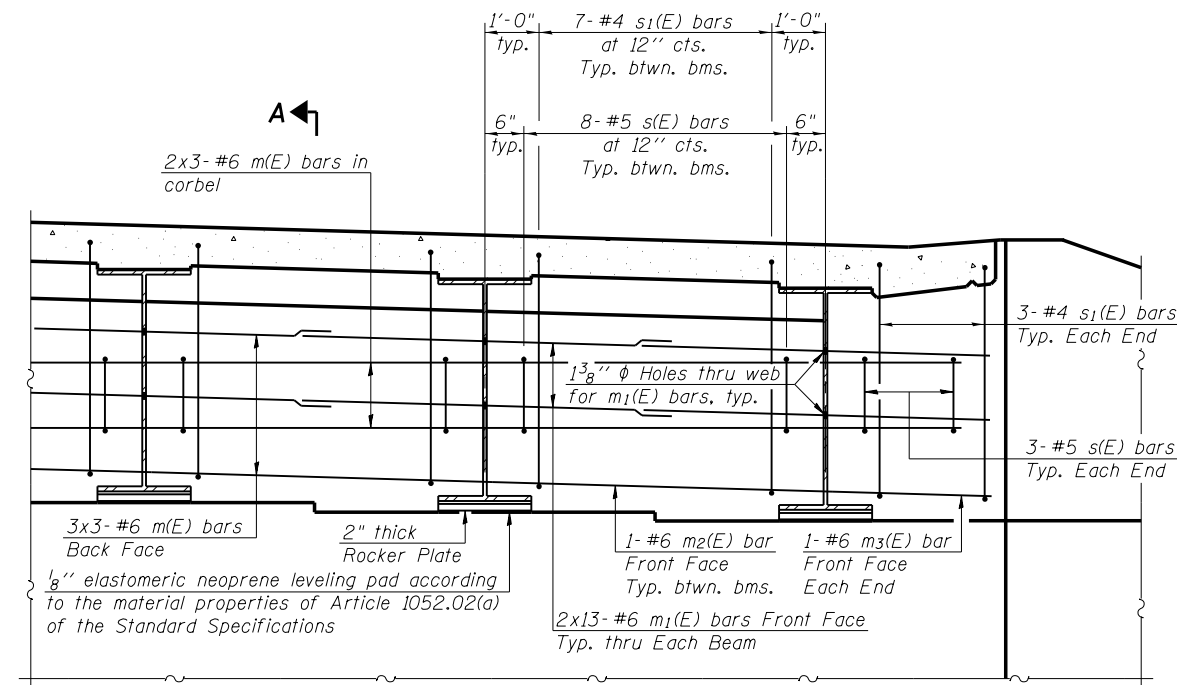
PROFESSIONAL DESIGN FIRM LICENSE #194-001094	USER NAME = hussu00411	DESIGNED - FLN	REVISED
		CHECKED - JKR	REVISED
	PLOT SCALE =	DRAWN - MGM	REVISED
	PLOT DATE = 12\02\2013	CHECKED - FLN	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

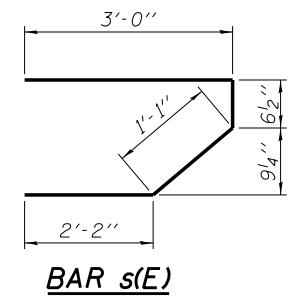
**CONCRETE PARAPET SLIP FORMING OPTION
STRUCTURE NO. 046-0148**

SHEET NO. 14 OF 44 SHEETS

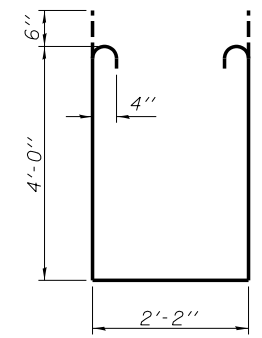
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	486
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



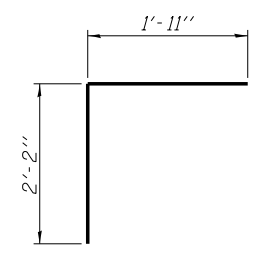
DIAPHRAGM ELEVATION AT ABUTMENT
(Sidewalk, Parapet & Bridge Fence not shown for clarity)



BAR s(E)



BAR s1(E)

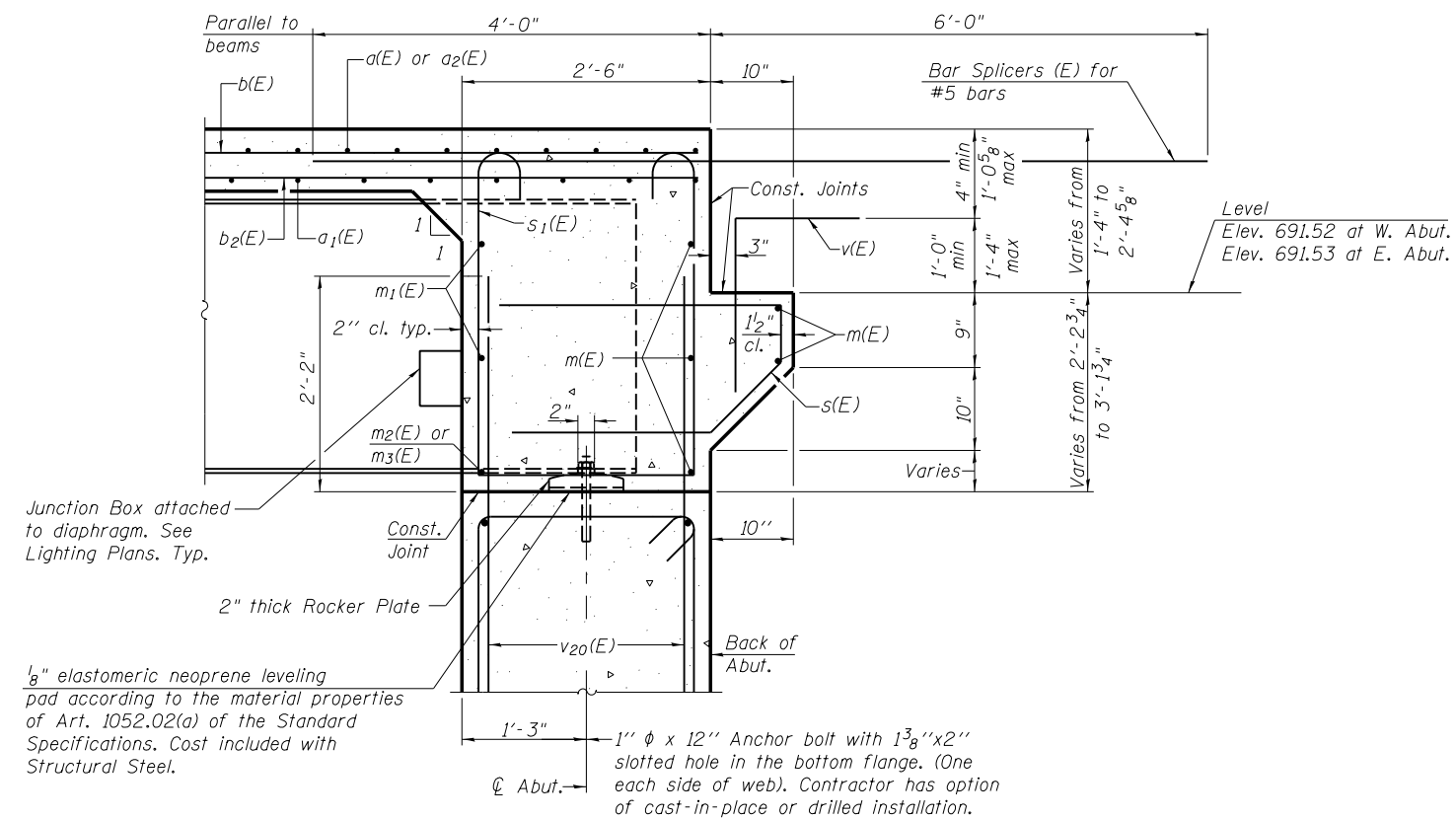


BAR v(E)

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 12 of 44.
Concrete in diaphragm is included with Concrete Superstructure on sheet 12 of 44.
Bars indicated thus 2x3-#6 etc. indicates 2 lines of bars with 3 lengths per line.

MIN. BAR LAP

#6 bar = 3'-4"



SECTION A-A

12/02/2013 c:\p\se-work\abutment\diaphragm\diaphragm.dgn

LAYOUT	FLN	01.26.2013
DRAWN	MGM	07.08.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001084
 HANSON
 Hanson Professional Services Inc.

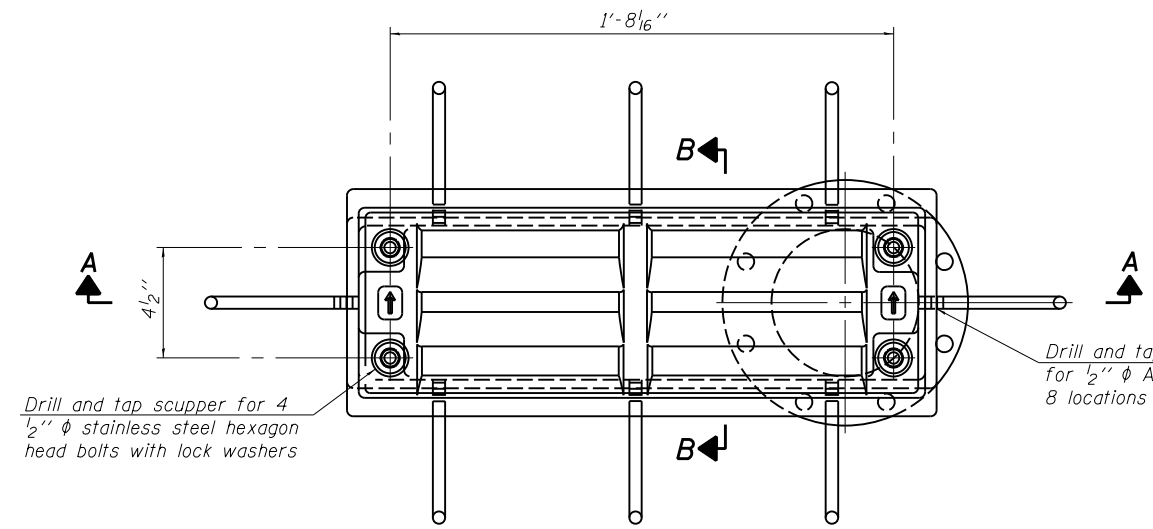
USER NAME =	hussu00411	DESIGNED -	FLN	REVISED	
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PLOT SCALE =		DRAWN -	MGM	REVISED	
PLOT DATE =	12\02\2013	CHECKED -	FLN	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

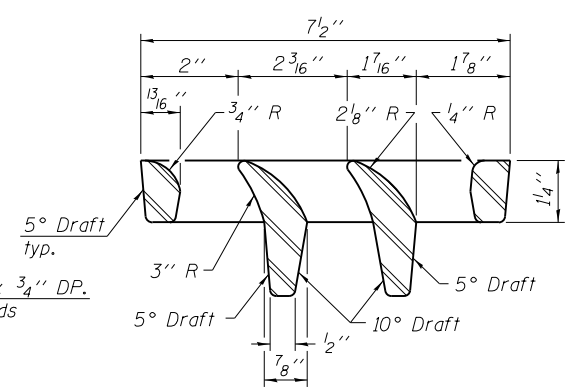
INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 046-0148

SHEET NO. 15 OF 44 SHEETS

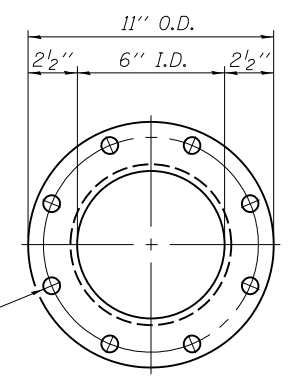
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	487
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



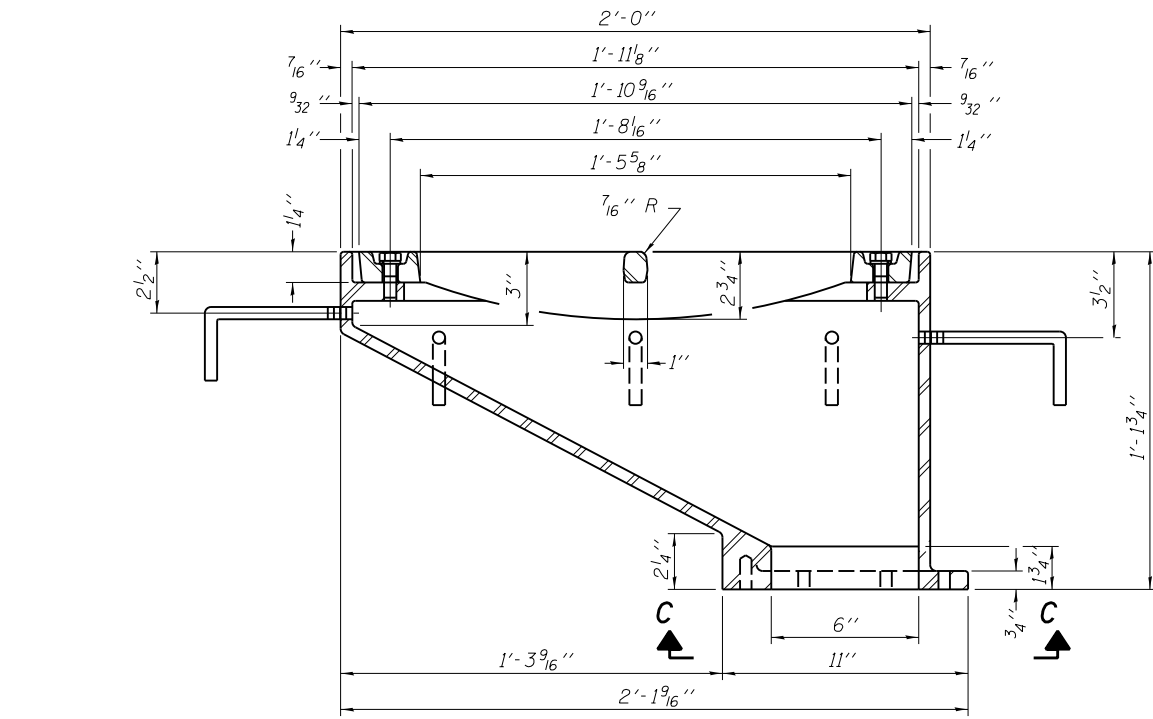
PLAN



VANE GRATE DETAIL

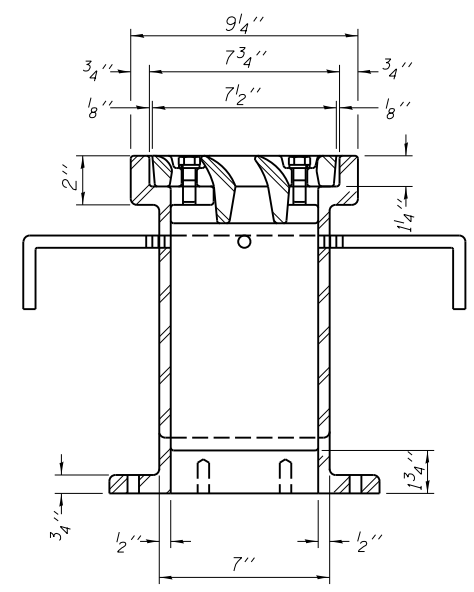


VIEW C-C

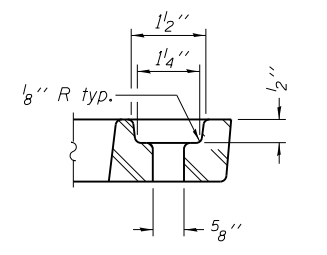
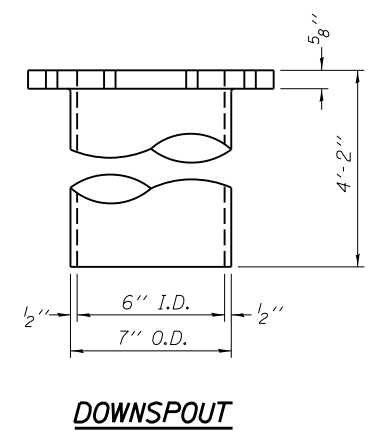


SECTION A-A

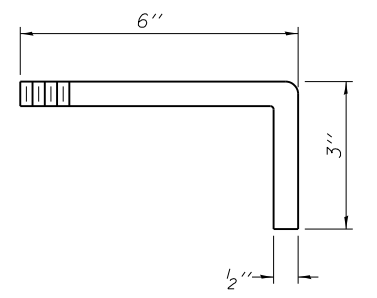
See sheet 13 of 44 for scupper location relative to parapet.



SECTION B-B



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	8

12/02/2013
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LAYOUT	FLN	01.26.2013
DRAWN	MGM	07.08.2013
REVIEWED	FLN	10.17.2013

DS-12

7-1-10



PROFESSIONAL DESIGN FIRM LICENSE #194-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISED
		CHECKED - JKR	REVISED
		DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED
PLOT SCALE =			
PLOT DATE = 12\02\2013			

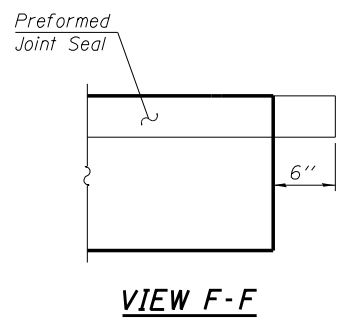
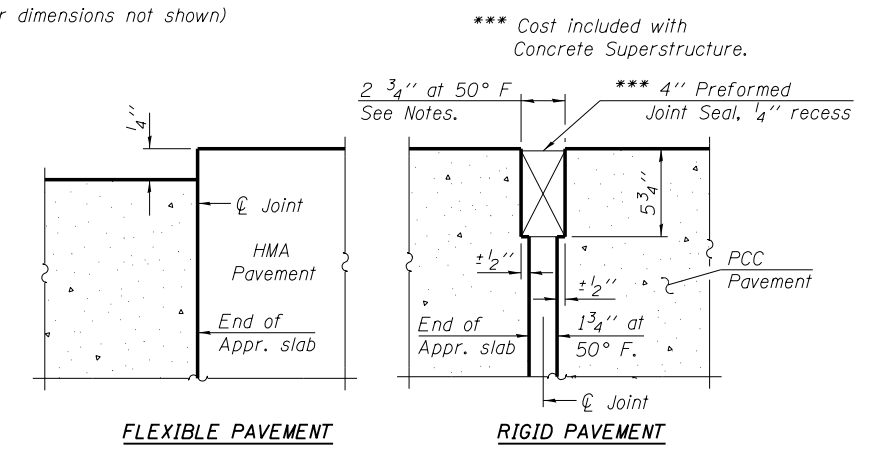
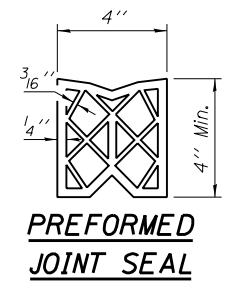
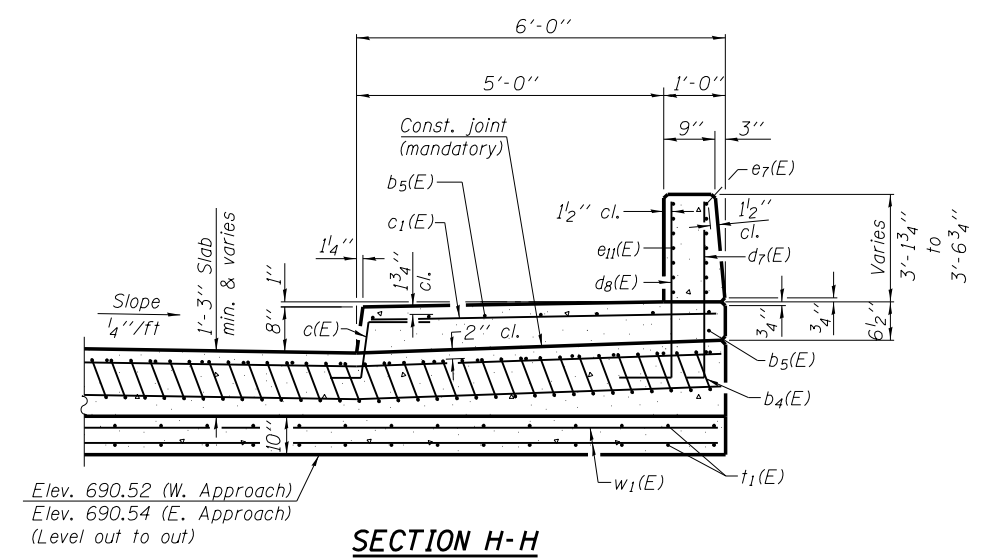
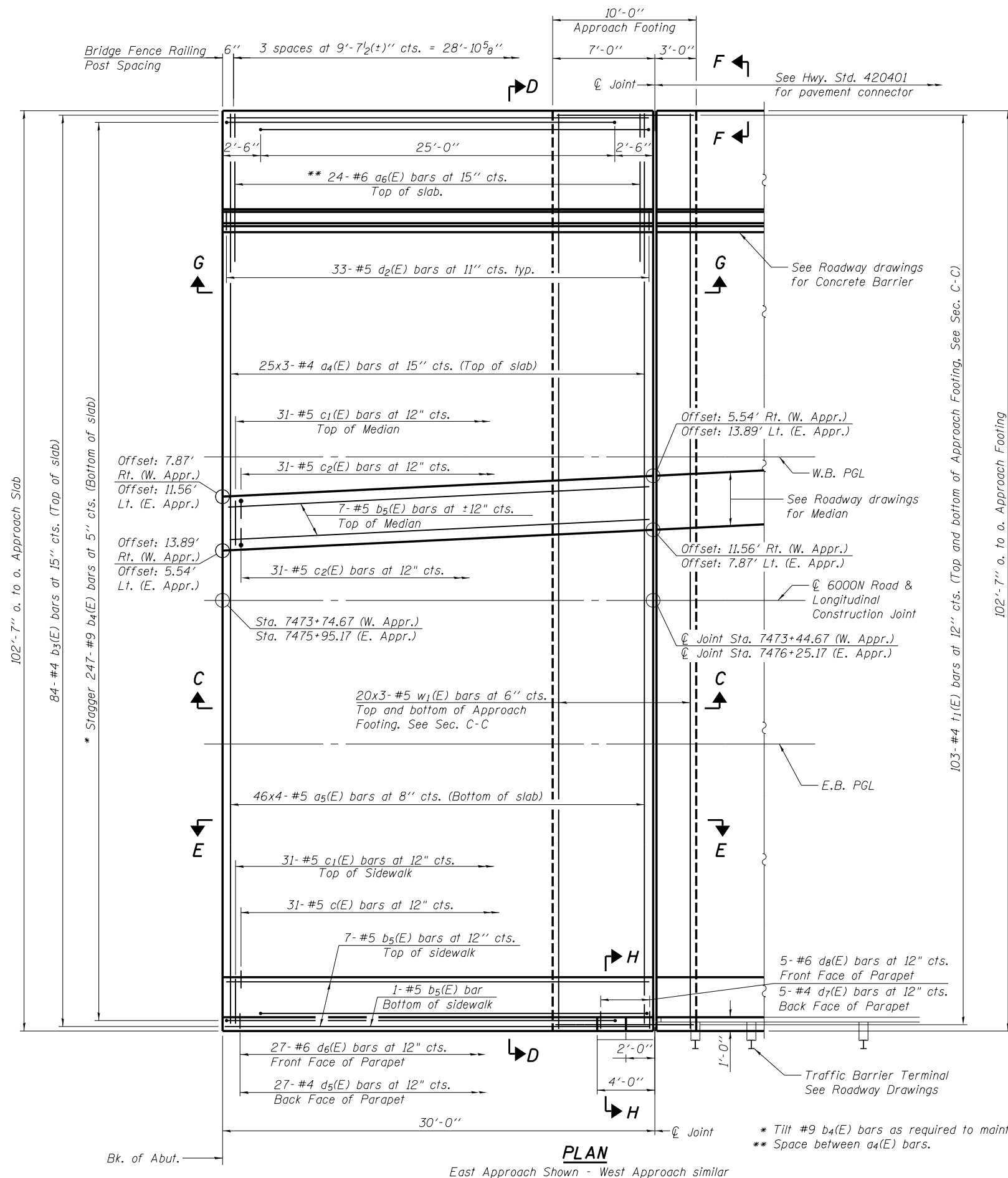
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SCUPPER, DS-12
 STRUCTURE NO. 046-0148**

SHEET NO. 16 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	488
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

Notes:
 See sheet 18 of 44 for Sections C-C & D-D and Views E-E & G-G.
 a₄(E) and a₅(E) bar spacings measured along \bar{C} Rdwy.
 The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1 1/2" for installation purposes.
 Bar indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



MIN. BAR LAP
 #4 = 2'-4"
 #5 = 2'-7"

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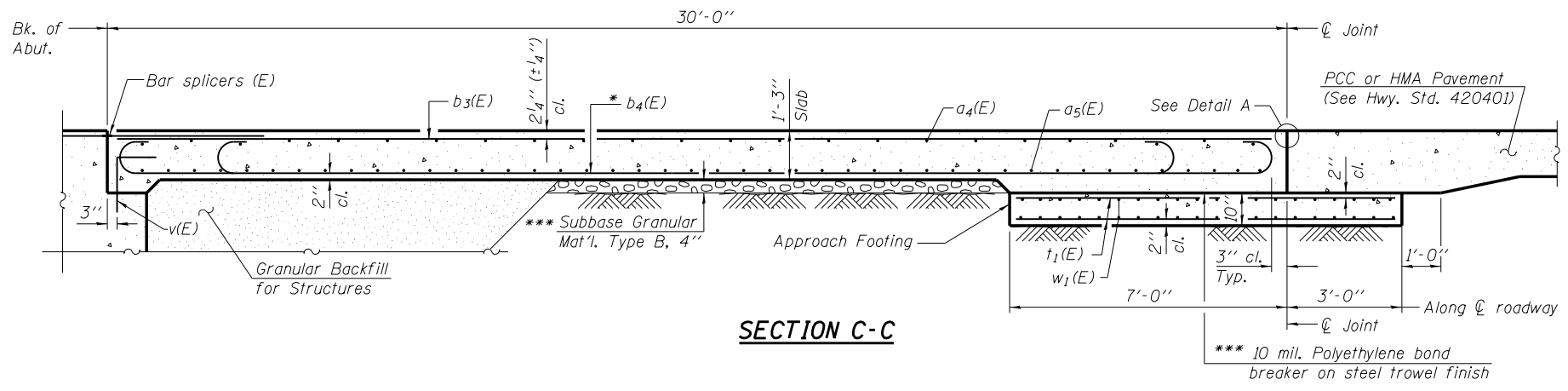
LAYOUT	FLN	02.04.2013
DRAWN	MGM	07.08.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001094	USER NAME = hussu00411	DESIGNED - FLN	REVISOR
HANSON Hanson Professional Services Inc.		CHECKED - JKR	REVISOR
	PLOT SCALE =	DRAWN - MGM	REVISOR
	PLOT DATE = 12\02\2013	CHECKED - FLN	REVISOR

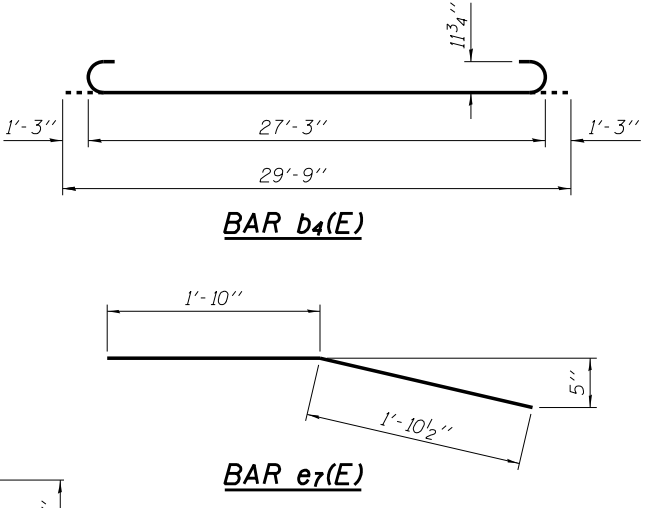
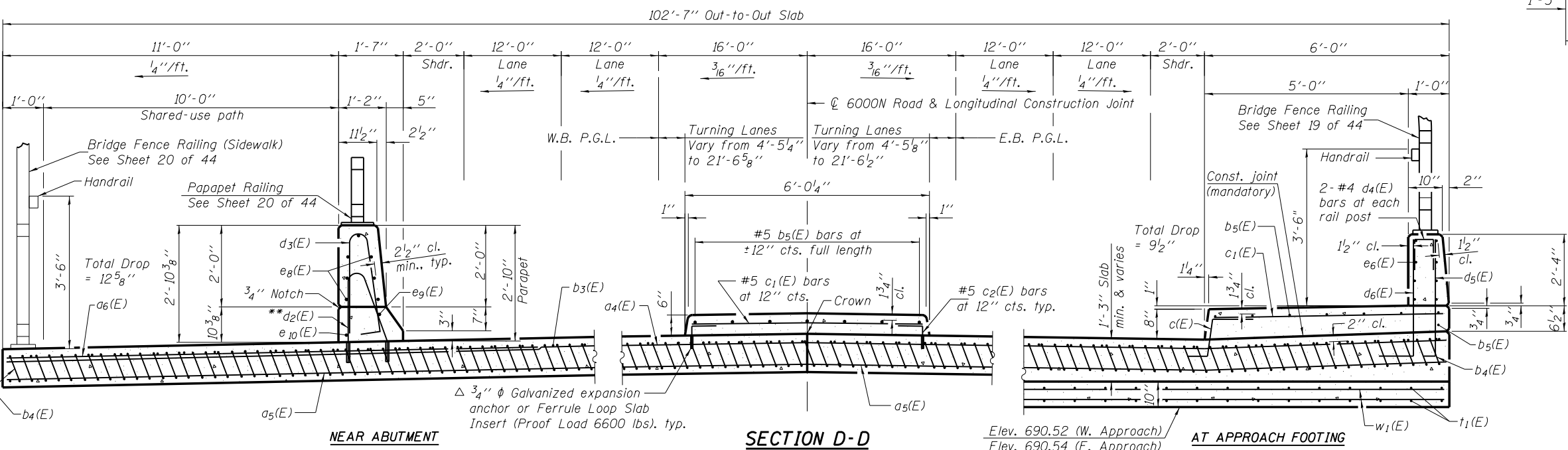
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS (SHEET 1 OF 2)
 STRUCTURE NO. 046-0148
 SHEET NO. 17 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	489
CONTRACT NO. 66982			ILLINOIS FED. AID PROJECT	

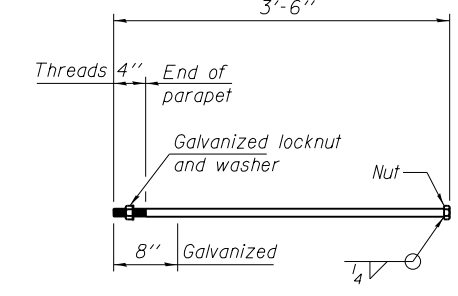
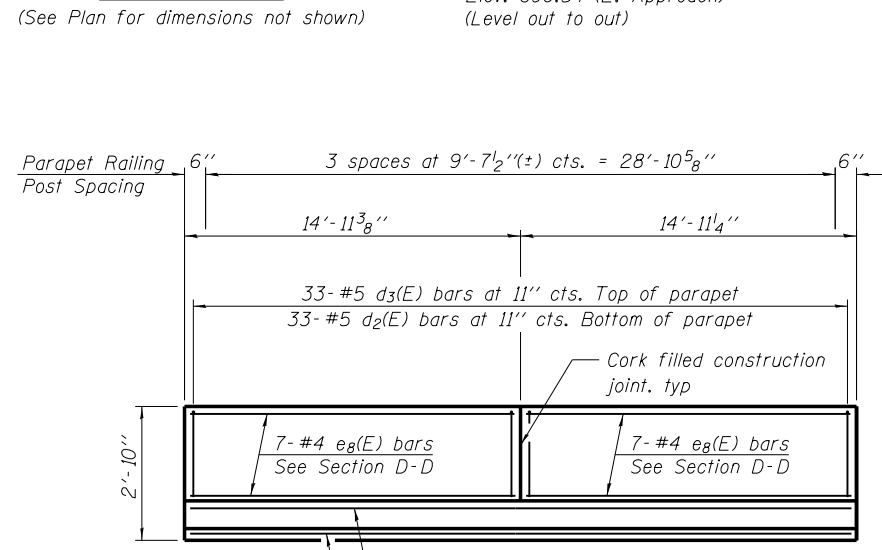
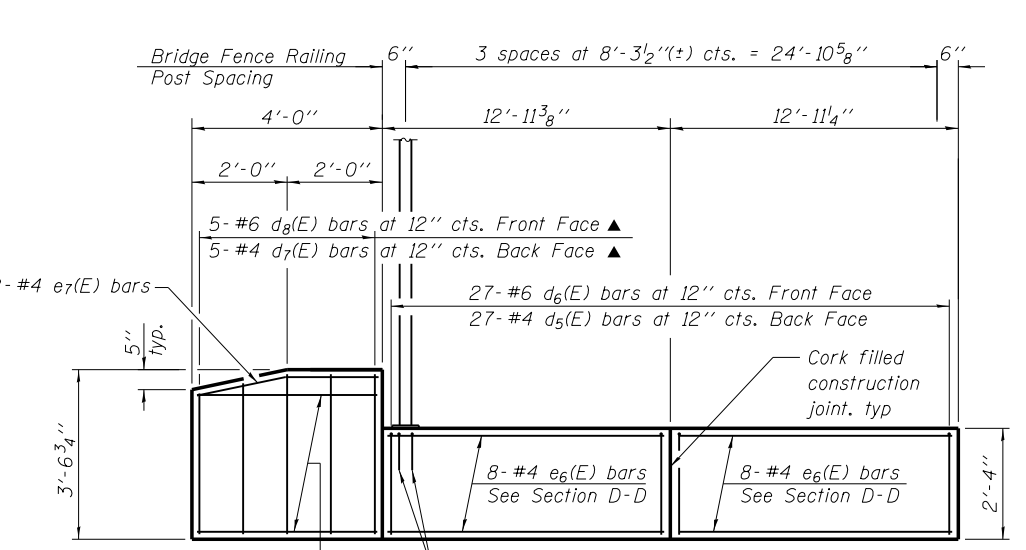


Notes:
 See sheet 17 of 44 for Detail A, Section H-H and View B-B.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 15 of 44.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 For bar splicer details, see sheet 29 of 44.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 44.
 For additional parapet, sidewalk and median bar details, see sheet 12 of 44.
 See Sheet 13 of 44 for cork filled construction joints.



**TWO APPROACHES
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a4(E)	150	#4	35'-9"	
a5(E)	368	#5	27'-8"	
a6(E)	48	#6	17'-6"	
b3(E)	168	#4	29'-8"	
b4(E)	494	#9	29'-9"	
b5(E)	30	#5	29'-8"	
c(E)	62	#5	2'-4"	
c1(E)	124	#5	5'-7"	
c2(E)	124	#5	1'-3"	
d2(E)	66	#5	4'-8"	
d3(E)	66	#5	5'-7"	
d4(E)	16	#4	2'-0"	
d5(E)	54	#4	4'-6"	
d6(E)	54	#6	4'-8"	
d7(E)	10	#4	5'-8"	
d8(E)	10	#6	5'-10"	
e6(E)	32	#4	12'-7"	
e7(E)	4	#4	3'-9"	
e8(E)	28	#4	14'-7"	
e9(E)	2	#8	29'-7"	
e10(E)	2	#4	29'-7"	
e11(E)	24	#4	3'-8"	
t1(E)	412	#4	9'-8"	
w1(E)	240	#5	35'-11"	
Concrete Superstructure			Cu. Yd.	352.5
Concrete Structures			Cu. Yd.	63.3
Reinforcement Bars, Epoxy Coated			Pound	84,580



VIEW E-E

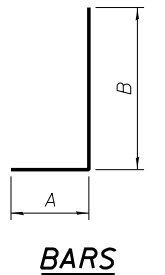
- * Tilt #9 b4(E) bars as required to maintain clearance.
- ** Core and set #5 d2(E) bars according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6".
- *** Cost included with Concrete Superstructure.
- ▲ Cut bars in the field as required
- △ The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

VIEW G-G

- 1- #8 e9(E) bar, front face
- 1- #4 e10(E) bar, back face

A & B DIMENSIONS

Bar	A	B
d5(E)	10 1/2"	3'-7 1/2"
d6(E)	1'-0 1/2"	3'-7 1/2"
d7(E)	10 1/2"	4'-9 1/2"
d8(E)	1'-0 1/2"	4'-9 1/2"



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 LAYOUT: FLN 02.04.2013
 DRAWN: MGM 07.09.2013
 REVIEWED: FLN 10.17.2013

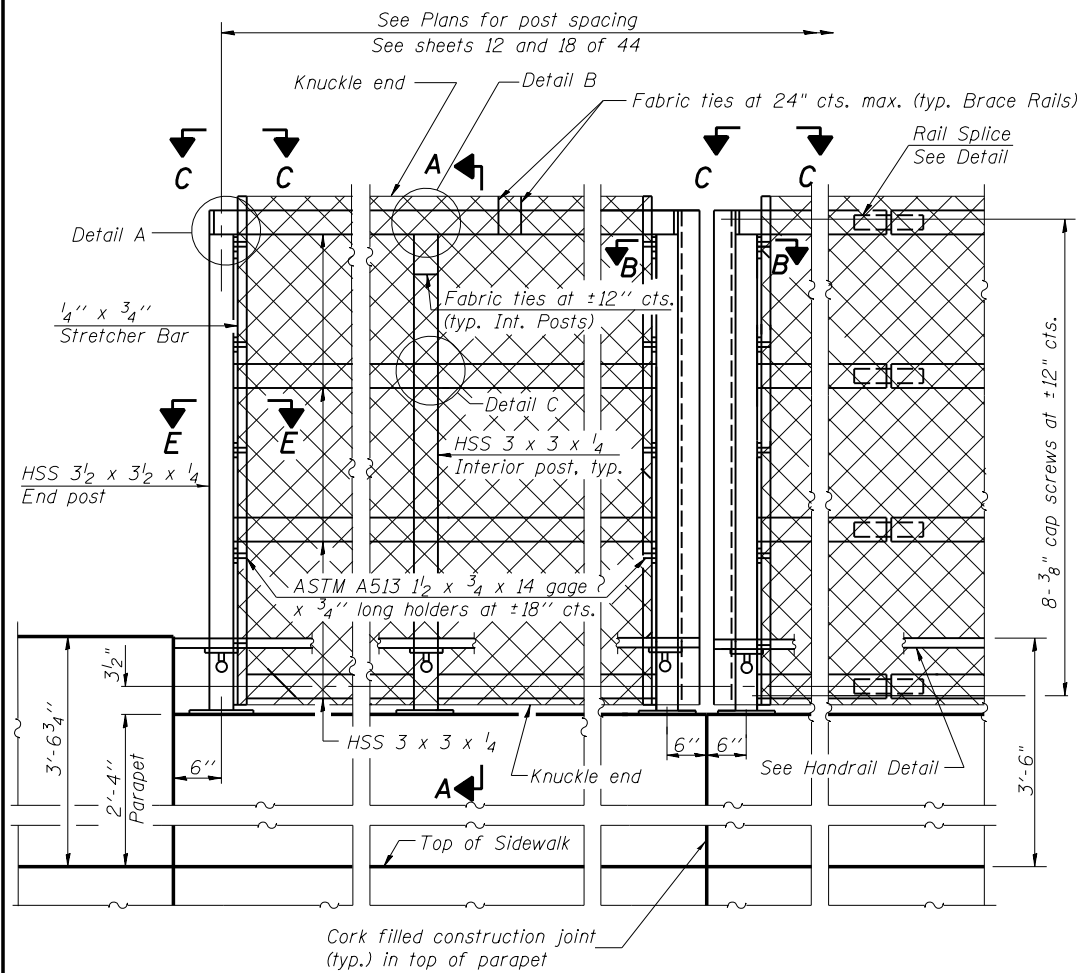


PROFESSIONAL DESIGN FIRM LICENSE #194-001084	USER NAME = hussu00411	DESIGNED - FLN	REVISOR
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		DRAWN - MGM	REVISION
		CHECKED - FLN	REVISION

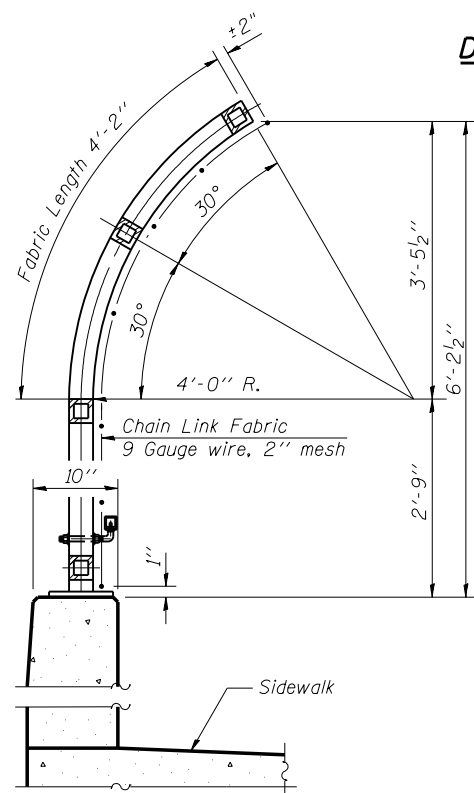
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS (SHEET 2 OF 2)
STRUCTURE NO. 046-0148**

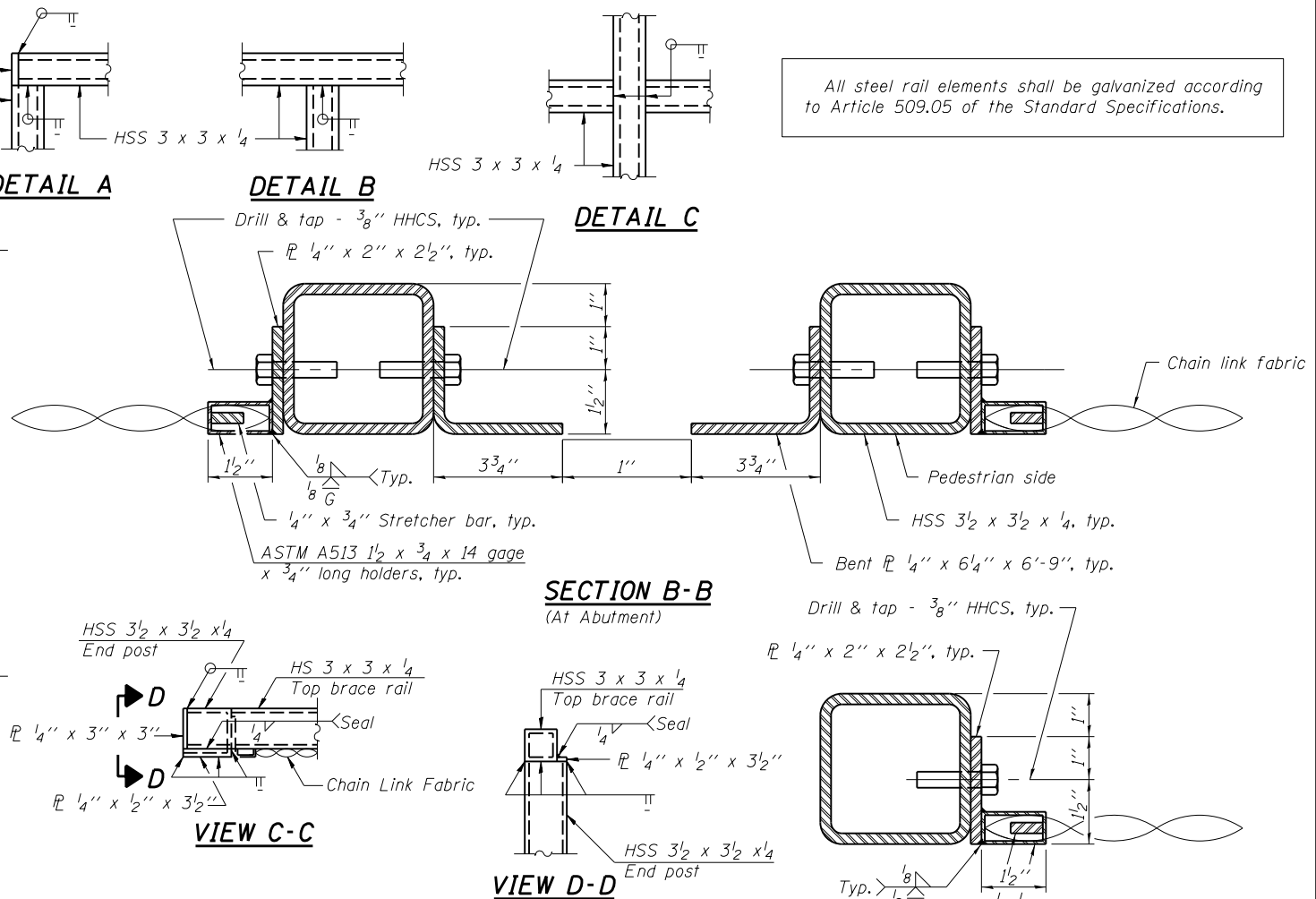
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	490
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				



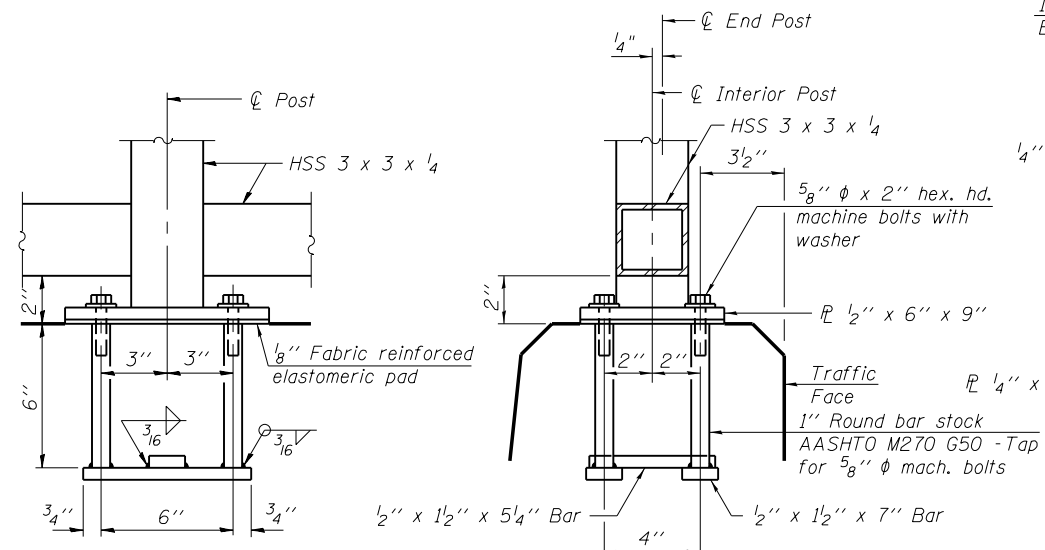
ELEVATION
(Inside Face)



SECTION A-A

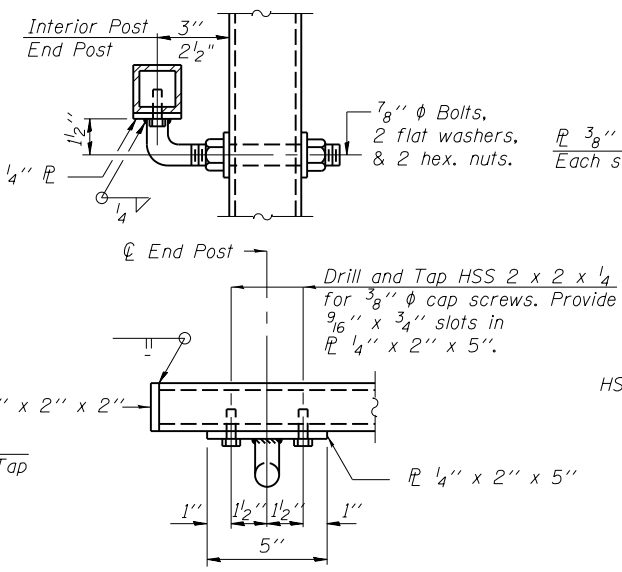


All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

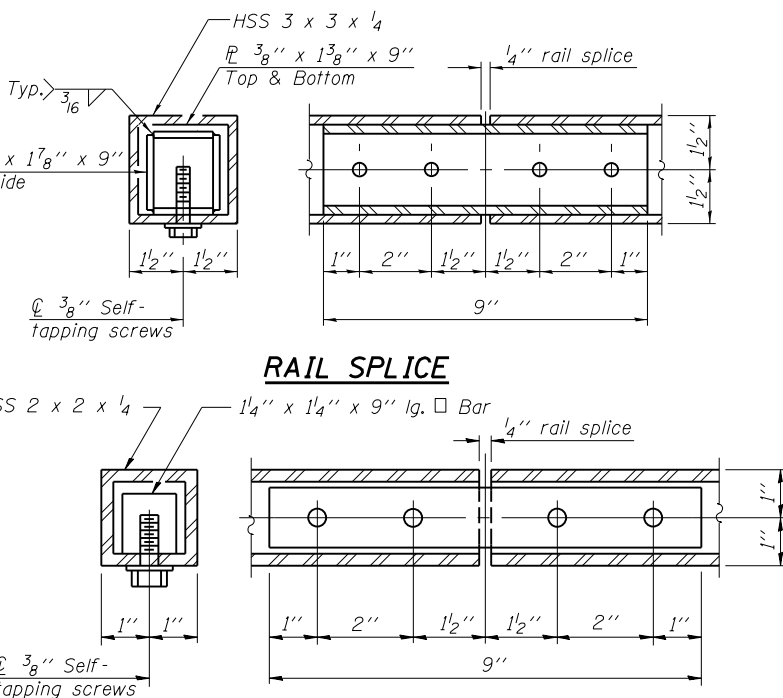


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

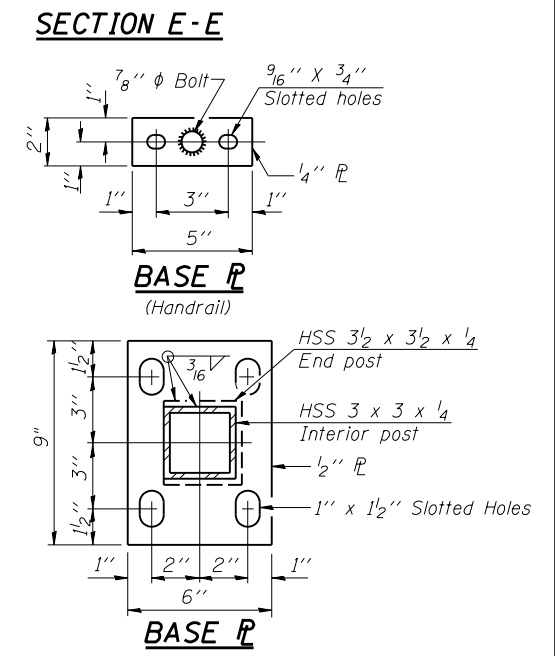


HANDRAIL DETAIL



RAIL SPLICE

HANDRAIL SPLICE



BASE PL
(Handrail)

BASE PL

BILL OF MATERIAL

Item	Unit	Quantity
Bridge Fence Railing	Foot	272

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LAYOUT: 01.14.2013
DRAWN: 07.09.2013
REVIEWED: 10.17.2013



PROFESSIONAL DESIGN FIRM LICENSE #194-001094	USER NAME = hussu00411	DESIGNED - FLN	REVISIONS
		CHECKED - JKR	REVISIONS
		DRAWN - MGM	REVISIONS
		CHECKED - FLN	REVISIONS

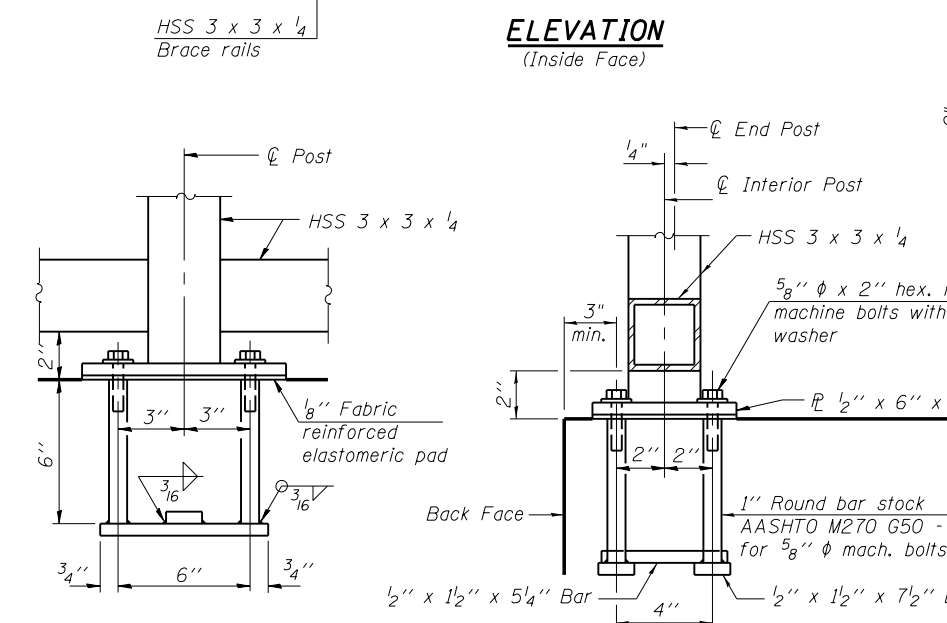
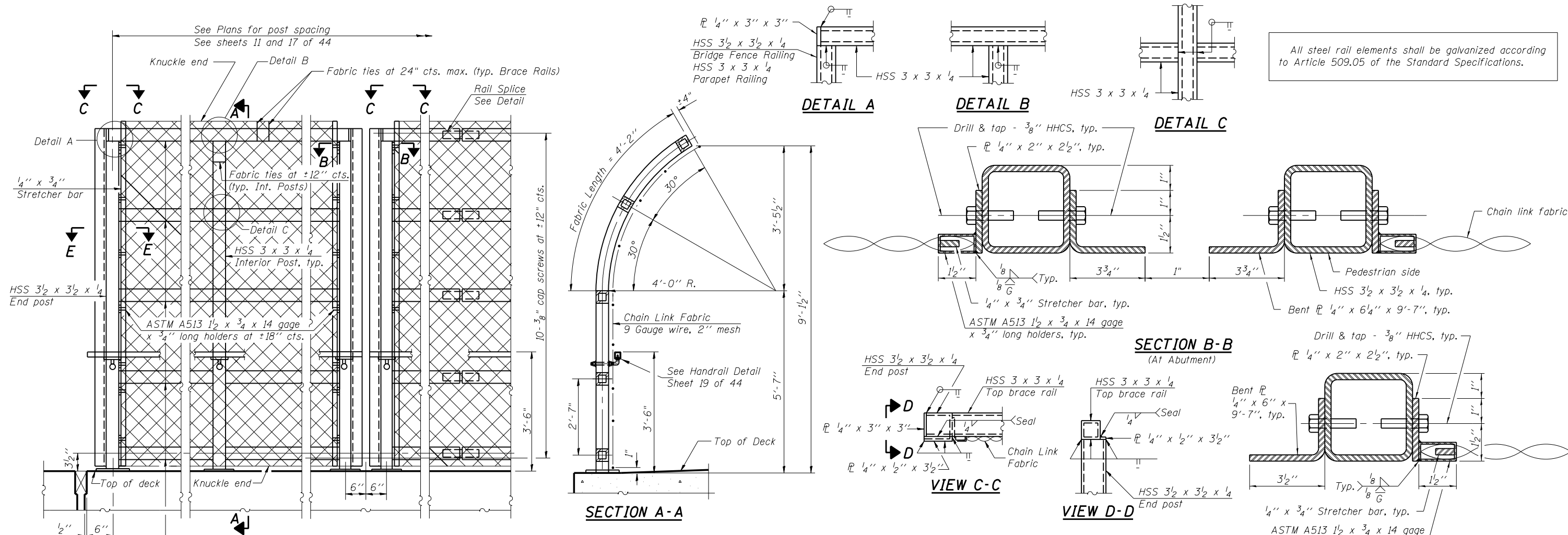
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE FENCE RAILING, PARAPET MOUNTED
STRUCTURE NO. 046-0148

SHEET NO. 19 OF 44 SHEETS

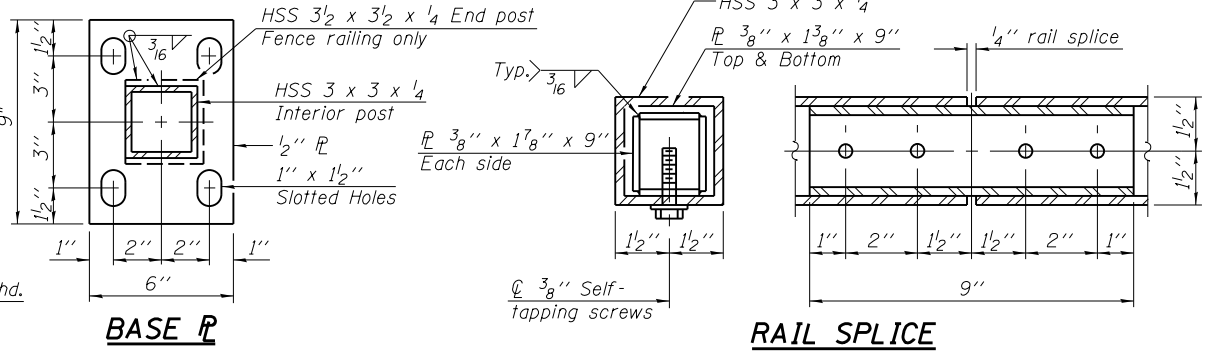
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	491
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



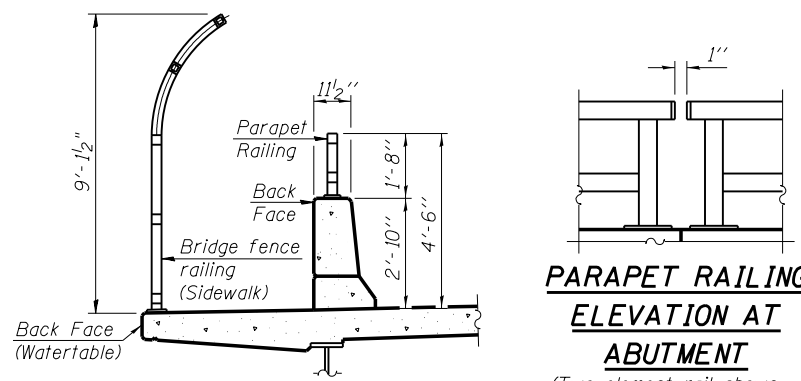
ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



BASE P

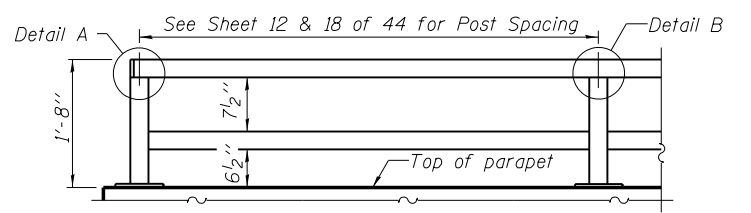
RAIL SPLICE



SECTION THRU DECK

PARAPET RAILING ELEVATION AT ABUTMENT

(Two element rail shown - Three element rail similar)



PARAPET RAILING ELEVATION

(Inside Face of two element rail)

BILL OF MATERIAL

Item	Unit	Quantity
Bridge Fence Railing (Sidewalk)	Foot	280
Parapet Railing	Foot	280

12/02/2013
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LAYOUT	FLN	01.14.2013
DRAWN	MGM	07.09.2013
REVIEWED	FLN	10.17.2013

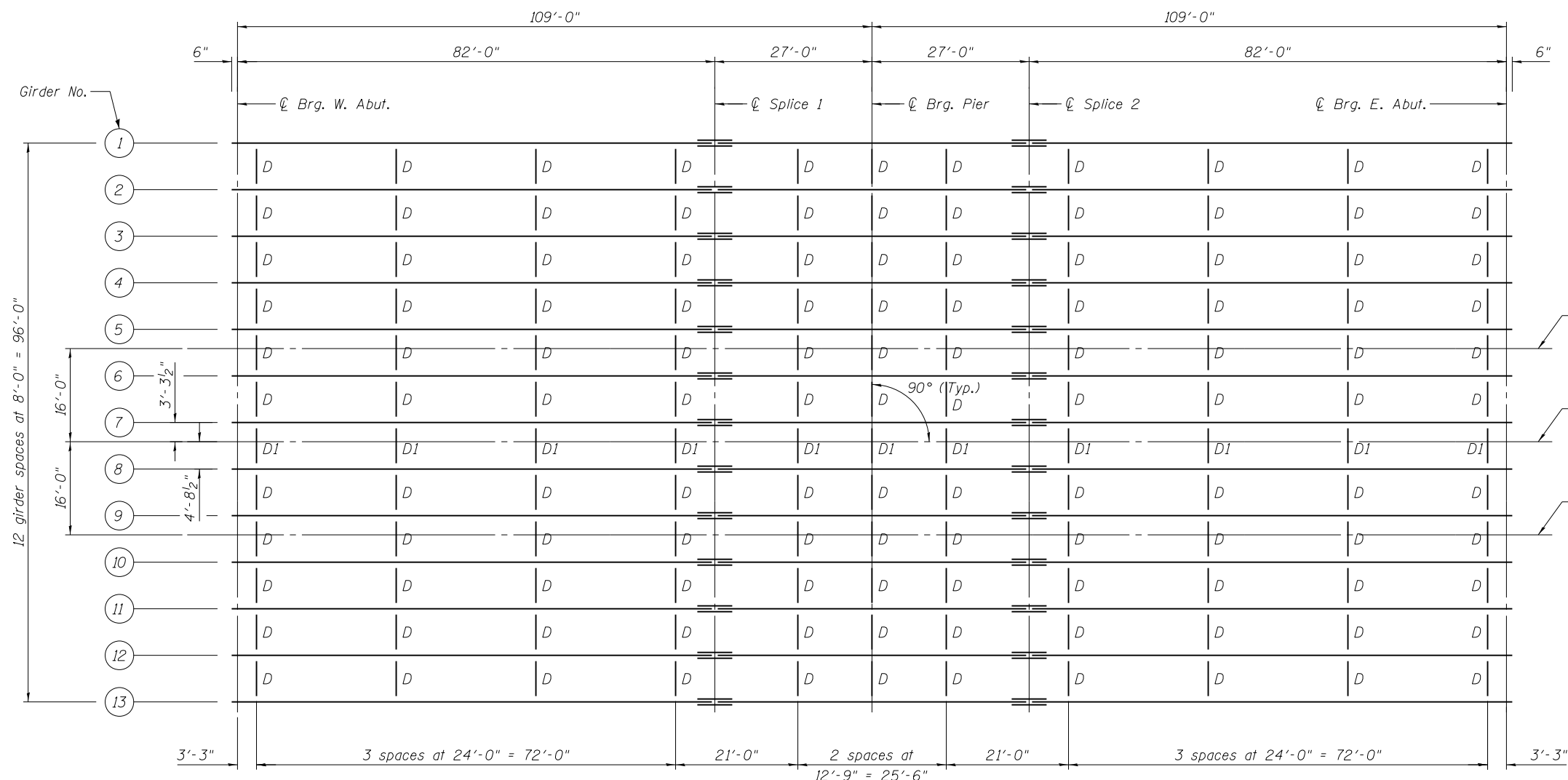
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HANSON		CHECKED - JKR	REVISD
Hanson Professional Services Inc.		DRAWN - MGM	REVISD
		CHECKED - FLN	REVISD

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

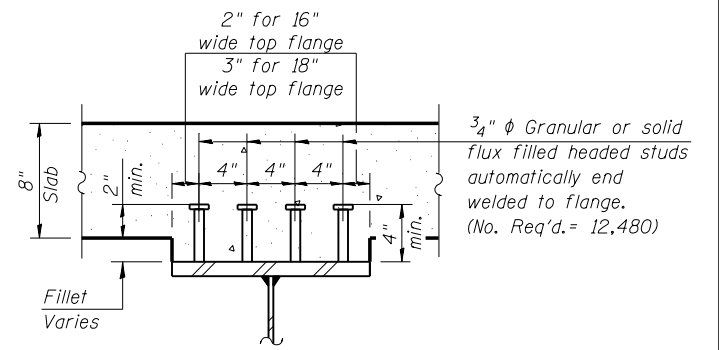
**BRIDGE FENCE RAILING, SIDEWALK MOUNTED
STRUCTURE NO. 046-0148**

SHEET NO. 20 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	492
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

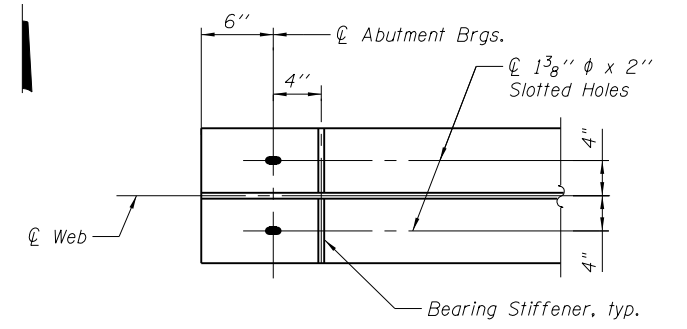


FRAMING PLAN

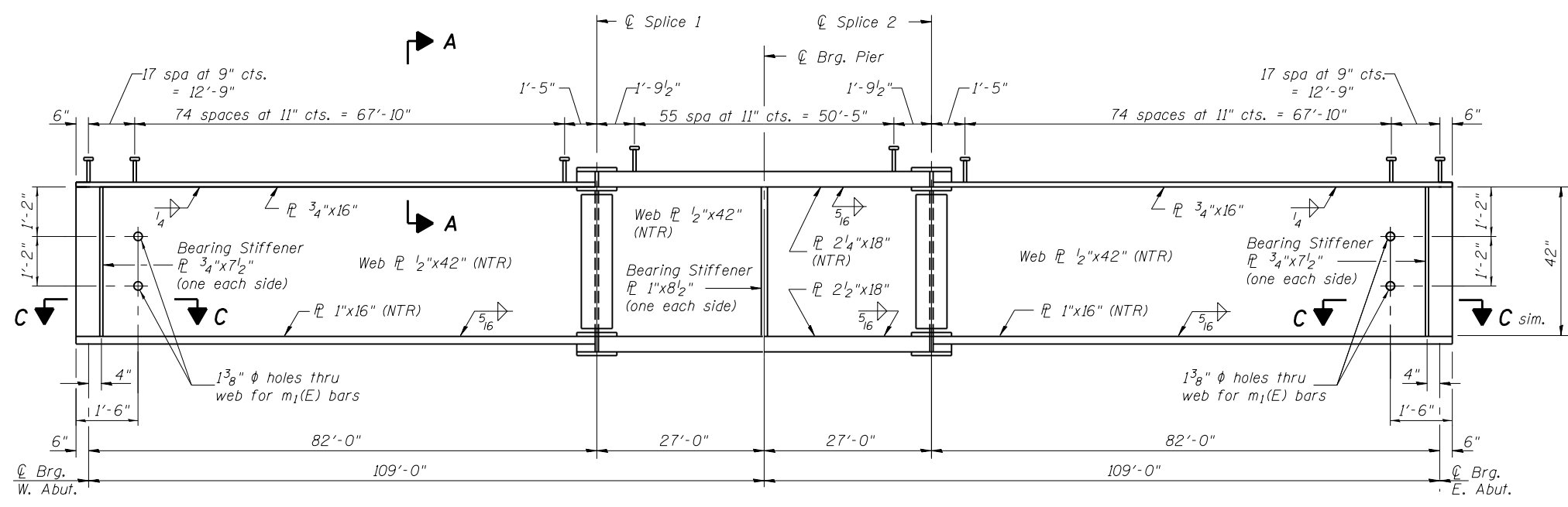


SECTION A-A

Notes:
 All beams and splice plates, except filler plates, shall be AASHTO M270 Grade 50.
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 See Sheet 15 of 44 for Concrete Diaphragm.
 See Sheet 22 of 44 for Steel Diaphragm.
 See Sheet 24 of 44 for Splice Details.
 Drains shall be located clear of all diaphragms.
 See Lighting drawings for holes in the web of the girders for Conduit Support Brackets.



SECTION C-C



GIRDER ELEVATION
(Looking North)

SECTION THRU BEARING STIFFENER

(Bearing Stiffeners at abutments and pier)
 See Girder Elevation for dimensions of bearing stiffeners

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LAYOUT	FLN	01.18.2013
DRAWN	MGM	07.09.2013
REVIEWED	FLN	10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001094

Hanson Professional Services Inc.

USER NAME =	hussu00411	DESIGNED -	FLN	REVISED	
		CHECKED -	JKR	REVISED	
PLOT SCALE =		DRAWN -	MGM	REVISED	
PLOT DATE =	12\02\2013	CHECKED -	FLN	REVISED	

STATE OF ILLINOIS
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STRUCTURAL STEEL
STRUCTURE NO. 046-0148

SHEET NO. 21 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	493
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				

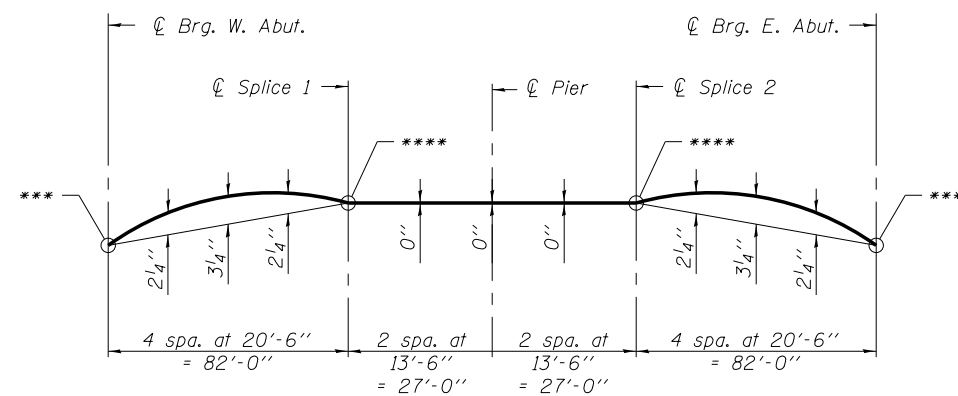
TOP OF WEB ELEVATIONS (For fabrication only)

	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8	Girder 9	Girder 10	Girder 11	Girder 12	Girder 13
☐ Brg. W. Abut.	692.13	692.30	692.47	692.63	692.80	692.94	693.07	693.04	692.92	692.77	692.60	692.44	692.27
☐ Splice 1	692.39	692.56	692.72	692.89	693.06	693.20	693.32	693.29	693.17	693.02	692.85	692.68	692.52
☐ Pier 1	692.39	692.56	692.73	692.89	693.06	693.20	693.33	693.29	693.17	693.02	692.85	692.69	692.52
☐ Splice 2	692.39	692.56	692.73	692.89	693.06	693.20	693.33	693.30	693.17	693.02	692.85	692.69	692.52
☐ Brg. E. Abut.	692.15	692.31	692.48	692.65	692.81	692.96	693.08	693.06	692.93	692.78	692.62	692.45	692.28

	0.4 Sp. 1 or 0.6 Sp. 2	Pier
I_s	(in ⁴) 15,811	45,127
$I_c(n)$	(in ⁴) 39,867	---
$I_c(3n)$	(in ⁴) 29,609	---
$I_c(cr)$	(in ⁴) ---	50,549
S_s	(in ³) 782	2,005
$S_c(n)$	(in ³) 1,057	---
$S_c(3n)$	(in ³) 976	---
$S_c(cr)$	(in ³) ---	2,070
DC1	(k/ft.) 1.020	1.245
M _{DC1}	(k) 685	2,121
DC2	(k/ft.) 0.310	0.310
M _{DC2}	(k) 215	567
DW	(k/ft.) 0.300	0.300
M _{DW}	(k) 208	549
M _{ℓ + IM}	(k) 1,501	2,180
M _u (Strength I)	(k) 4,064	7,997
Φ _r M _n	(k) 5,273	---
f _s DC1	(ksi) 10.51	12.70
f _s DC2	(ksi) 2.64	3.29
f _s DW	(ksi) 2.56	3.18
f _s (ℓ + IM)	(ksi) 17.04	12.63
f _s (Service II)	(ksi) 37.86	35.59
0.95R _n F _y f	(ksi) 47.50	47.50
f _s (Total)(Strength I)	(ksi) ---	46.86
Φ _r F _n	(ksi) ---	50.00
V _f	(k) 62.3	62.7

* Compact section
** Non-Compact and slender sections

	Abut.	Pier
R _{DC1}	(k) 39.2	156.2
R _{DC2}	(k) 11.7	44.2
R _{DW}	(k) 11.3	42.8
R _{ℓ + IM}	(k) 98.0	201.9
R _{Total}	(k) 160.2	445.1



CAMBER DIAGRAM

*** See Table for Final Top of Web Elevation at abutment and piers.
**** Theoretical Top of Web Elevations before dead load deflections.

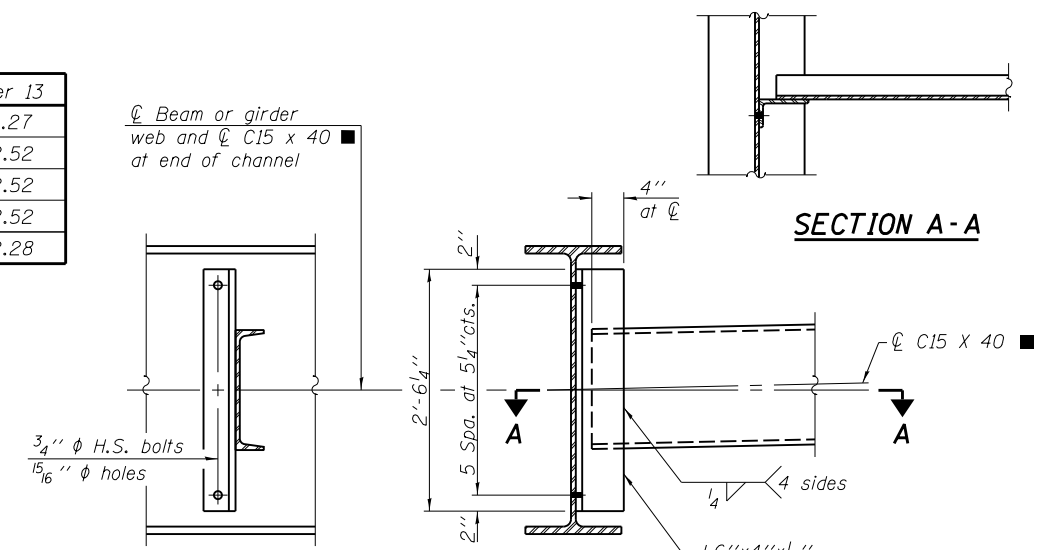
I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

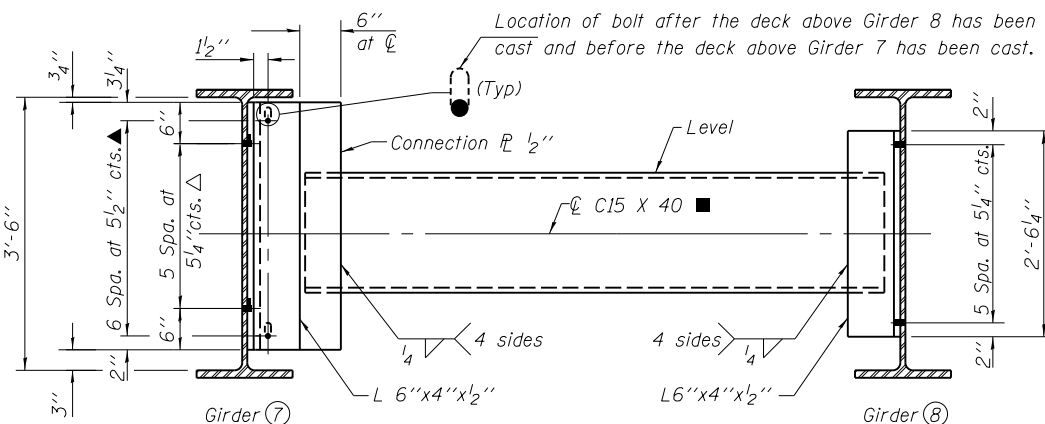
$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).

DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + IM}$
Φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}
f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
M_{DC2} / S_{c(3n)} or M_{DC2} / S_{c(cr)} as applicable.
f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
M_{DW} / S_{c(3n)} or M_{DW} / S_{c(cr)} as applicable.
f_s (ℓ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
M_{ℓ + IM} / S_{c(n)} or M_{DW} / S_{c(cr)} as applicable.
f_s (Service II): Sum of stresses as computed below (ksi).
f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (ℓ + IM)
0.95R_nF_yf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
 $1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (ℓ + IM)$
Φ_rF_n: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
V_r: Maximum factored shear range in span computed according to Article 6.10.10.



INTERIOR DIAPHRAGM D

(121 Required)
Note:
Two hardened washers for each set of oversized holes.
Alternate channel C15x50 is permitted to facilitate material acquisition. Calculated weight of structural steel is based on C15x40 section. The alternate, if utilized, shall be provided at no additional cost to the Contract.



INTERIOR DIAPHRAGM D1

(11 Required)
Δ 3/4" φ H.S. bolts, 1 3/16" φ holes in Girder 7 web and 1 3/16" x 1 7/8" vertically slotted holes in connection angle at Girder 7 end of diaphragm assembly.
▲ 3/4" φ H.S. bolts, 1 3/16" φ holes in connection angle and 1 3/16" x 1 7/8" vertically slotted holes in connection plate at Girder 7 end of diaphragm assembly.
3/4" φ H.S. bolts, 1 5/16" φ holes in all connected parts at Girder 8 end of diaphragm assembly. Other notes on Diaphragm D.

The slotted holes in the connection plate and connection angle at Girder 7 are intended to allow a differential deflection of 2" between Girders 7 & 8 after the south half of the bridge deck has been cast.

The bolts in the slotted holes shall be finger tight until deck pours 4 thru 6 (shown on sheet 11 of 44) are complete. Position slots so bolts start at one end with no concrete load on Girder 7 and finish near the opposite end under full deck load, allowing maximum displacement without laterally stressing main members. Two hardened washers are required for each slotted hole.

Diaphragm D1 assumes that the South section of the deck will be cast first. If the North section of the deck is approved to be cast first, the slotted holes in Girder 7 side will need to be relocated to Girder 8 side.

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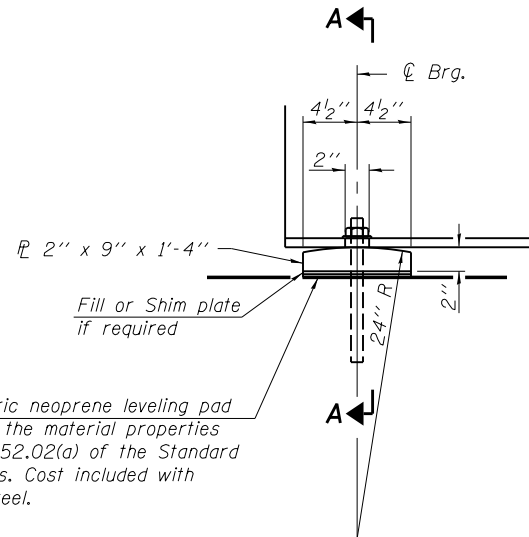
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DRAWN	MGM	07.09.2013
REVIEWED	FLN	10.17.2013

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HANSON Hanson Professional Services Inc.	PLOT SCALE =	CHECKED - JKR/FLN	REVISED
	PLOT DATE = 12/02/2013	DRAWN - MGM	REVISED
		CHECKED - FLN	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 046-0148
SHEET NO. 22 OF 44 SHEETS

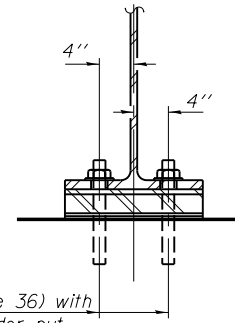
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	494
CONTRACT NO. 66982			ILLINOIS FED. AID PROJECT	



1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

ELEVATION AT ABUTMENTS

1" ϕ x 12" anchor bolts (Grade 36) with 2 1/4" x 2 1/4" x 5/16" PL washer under nut. 1 3/8" x 2" slotted hole in flange. 1 1/2" ϕ holes in bearing plate.



SECTION A-A

FIXED BEARING

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

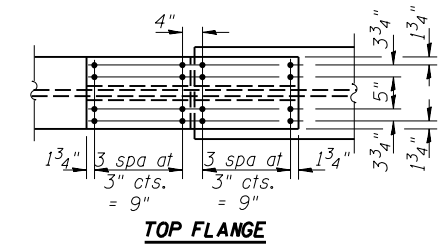
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

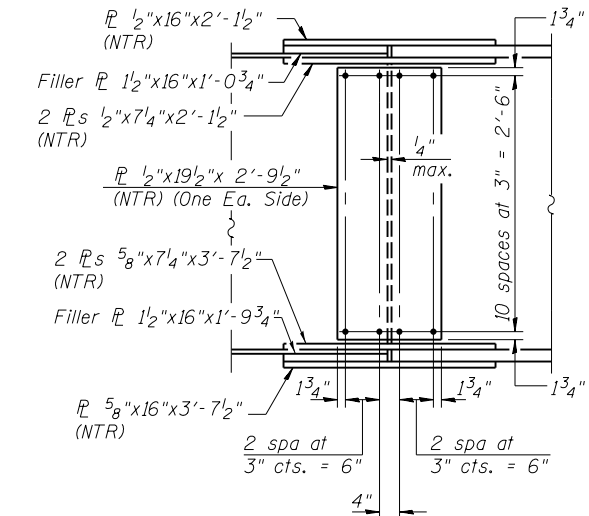
The structural steel plates of the Bearing shall conform to the requirements of AASHTO M 270 Grade 50.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

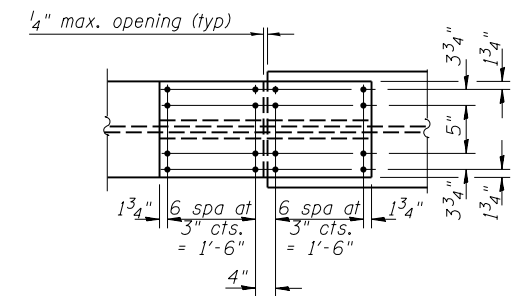
Contractor shall provide steel fill plates as required beneath Girder (7) for both abutments. Girder (7) shares a common bearing seat with Girder (8). Girder (7) is 3/8" higher than Girder (8). Total estimated fill height = 3/8". (Contractor to field verify). fill plate shall be the full dimension of the bottom bearing plate. Cost of fill or shim plates is included with Furnishing and Erecting Structural Steel.



TOP FLANGE



WEB



BOTTOM FLANGE

SPLICE #1 & #2 DETAIL

Splice #1 Looking North
Splice #2 Looking South

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	52

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LAYOUT F.L.N. 01.14.2013
DRAWN MGM 07.09.2013
REVIEWED F.L.N. 10.17.2013



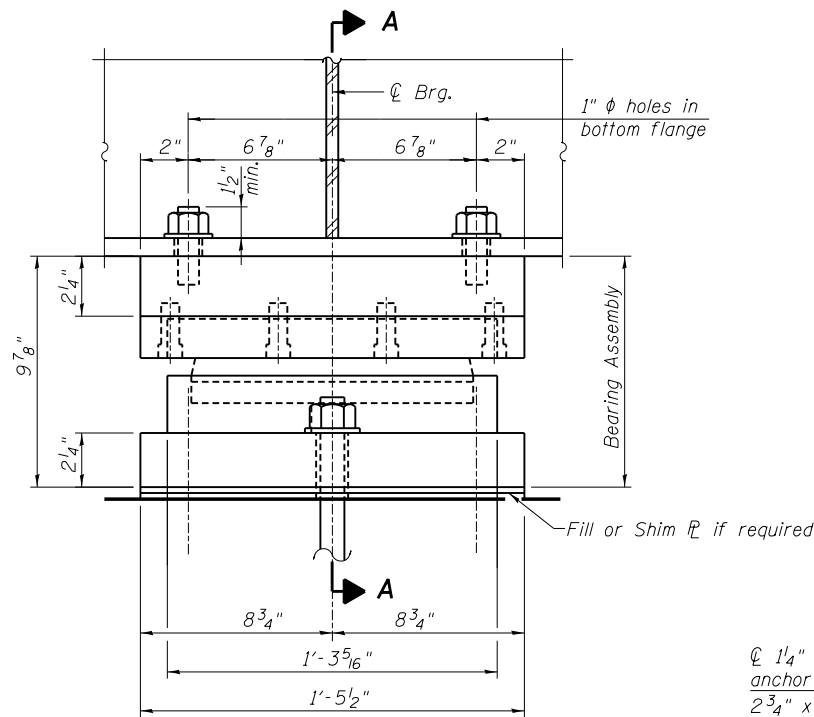
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

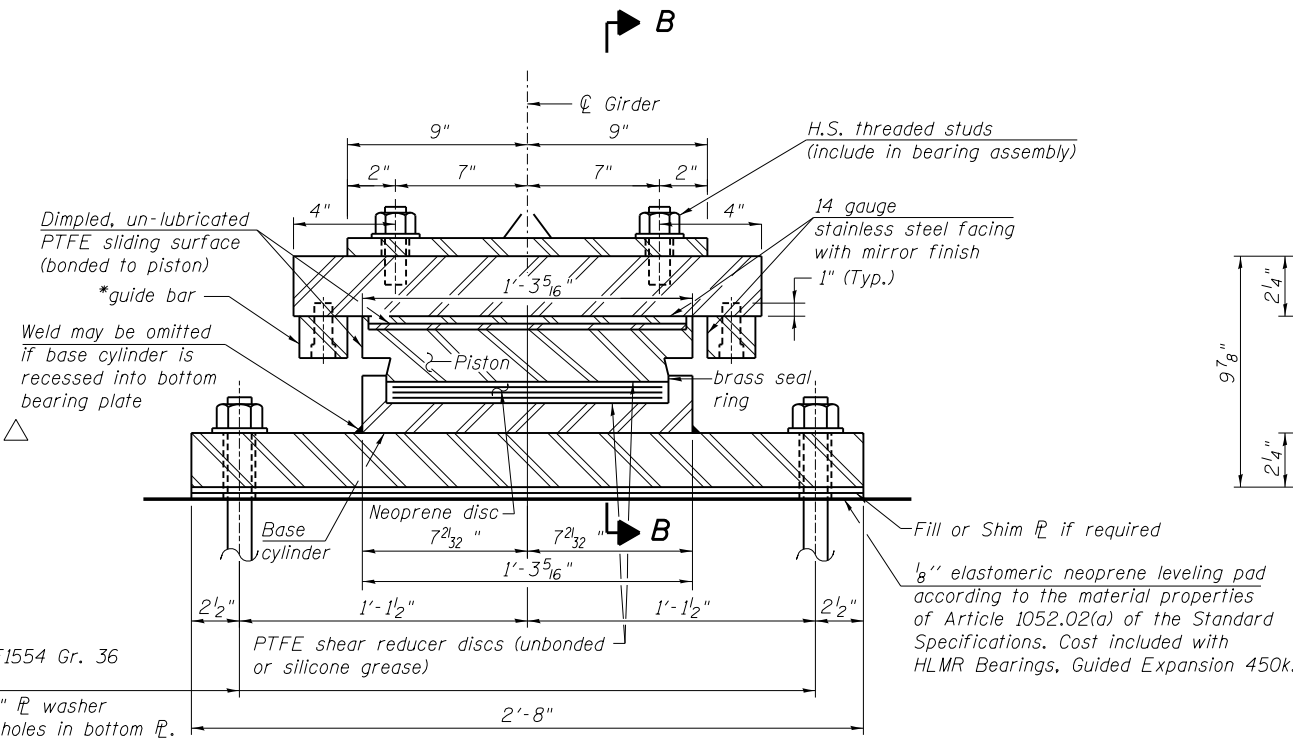
**BEARING DETAILS (FIXED BEARING)
STRUCTURE NO. 046-0148**

SHEET NO. 23 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	495
CONTRACT NO.			66982	
ILLINOIS FED. AID PROJECT				



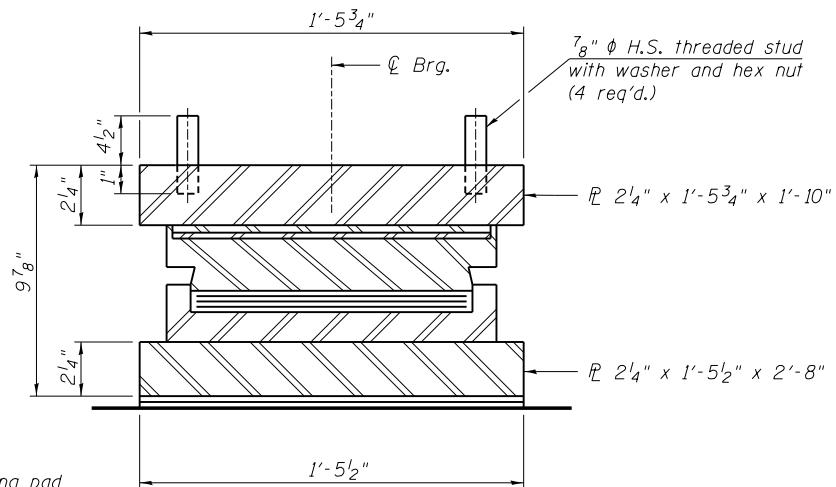
ELEVATION AT PIER



SECTION A-A

ϕ 1 1/4" ϕ x 1'-3" F1554 Gr. 36 anchor bolts with 2 3/4" x 2 3/4" x 5/16" ϕ washer under nut. 1 3/4" ϕ holes in bottom ϕ .

Δ If the pot is recessed into the bottom bearing plate, the thickness shall be 2 1/4" plus the depth of recess.



SECTION B-B
(Guide Bar omitted for clarity)

* As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

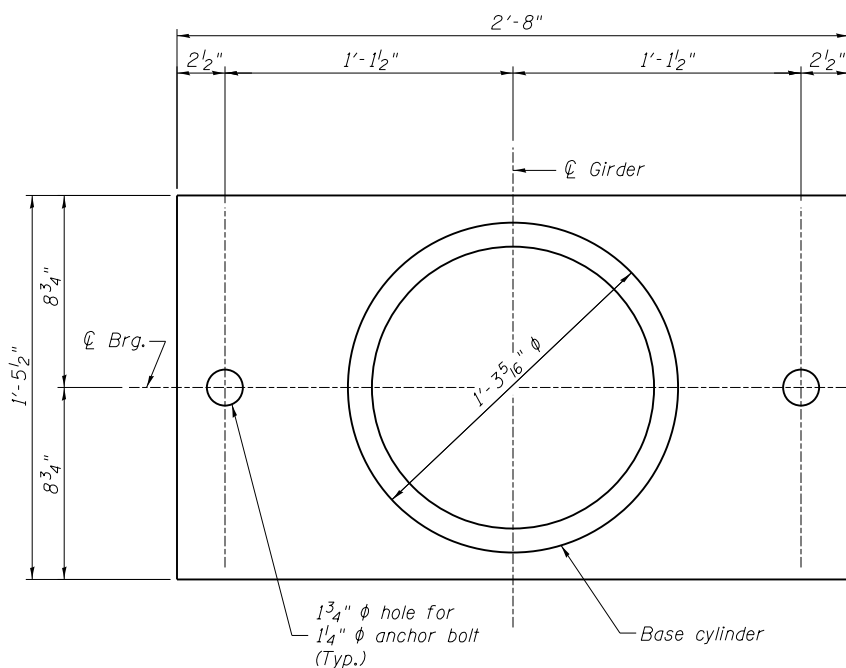
Bearing Data	
Vertical Design Load	450 K
Total Required Movement	3/4"
Maximum Factored Ultimate (Strength) Design Rotation, θ_u	0.015 rad.
Lateral Design Load, H_u	83 K

BILL OF MATERIAL

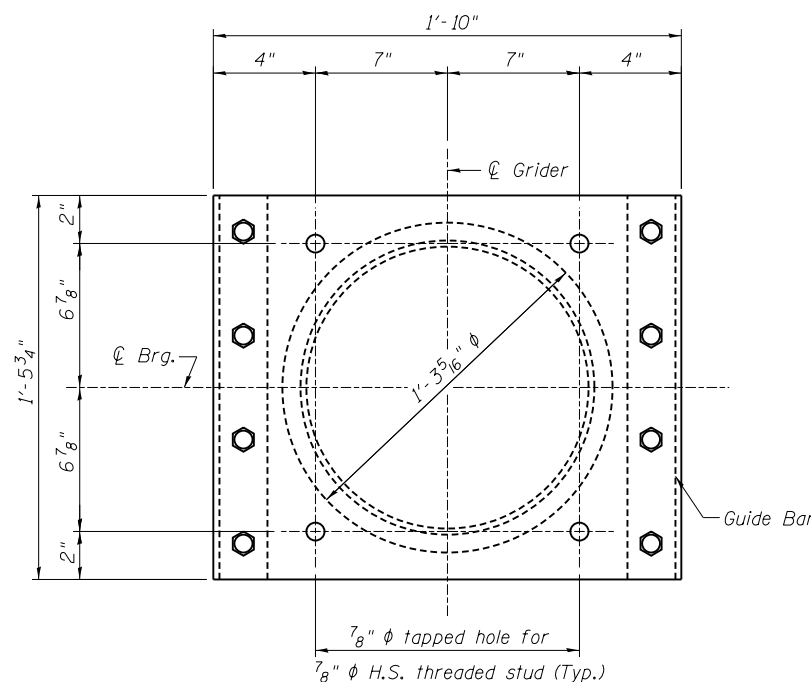
Item	Unit	Total
HLMR Bearings, Guided Expansion 450k	Each	13
Anchor Bolts, 1 1/4"	Each	26

NOTES

The structural steel plates of the Bearing Assembly shall be AASHTO M270, Grade 50. Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details. Fill or shim plate(s) shall be the full dimension of the bottom bearing plate. Cost of fill or shim plates is included in the Furnishing and Erecting Structural Steel. Contractor shall provide steel fill plates as required beneath Girder (7). Girder (7) shares a common bearing seat with Girder (8). Girder (7) is 3/8" higher than Girder (8). Total estimated fill height = 3/8". (Contractor to field verify). Fill plates shall be the full dimension of the bottom bearing plate.



BOTTOM BEARING ϕ AND BASE CYLINDER PLAN

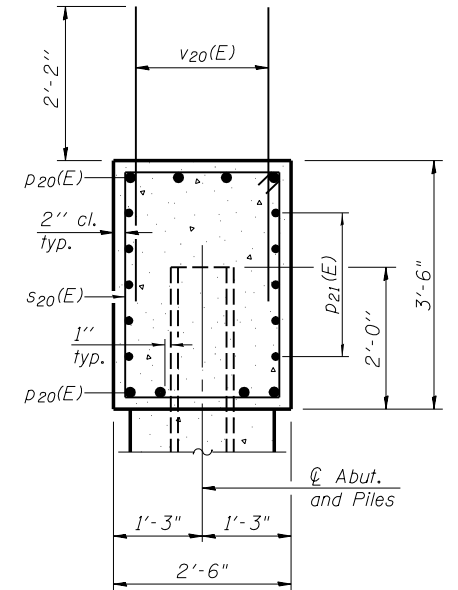
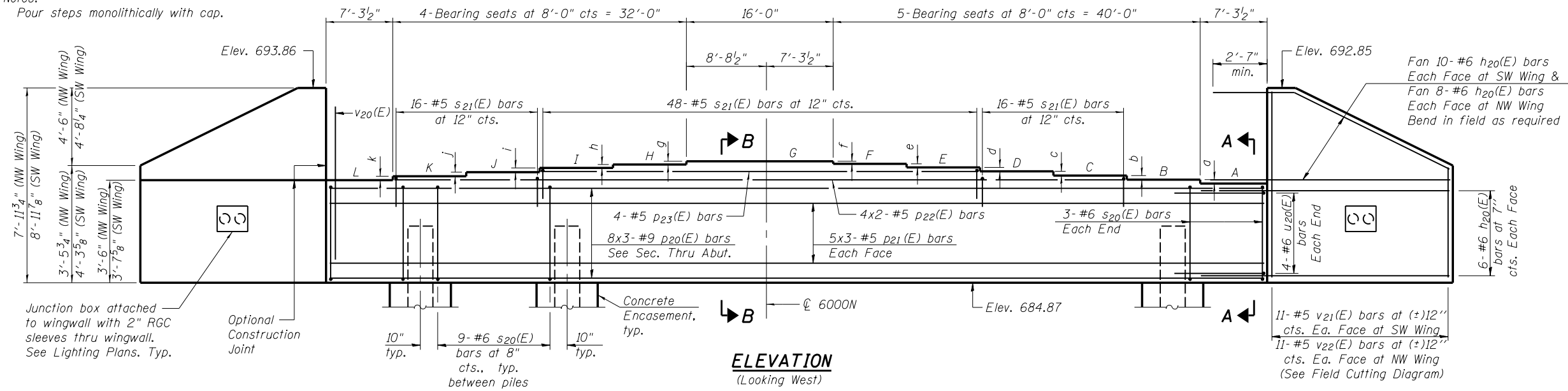


TOP BEARING ϕ AND PISTON PLAN

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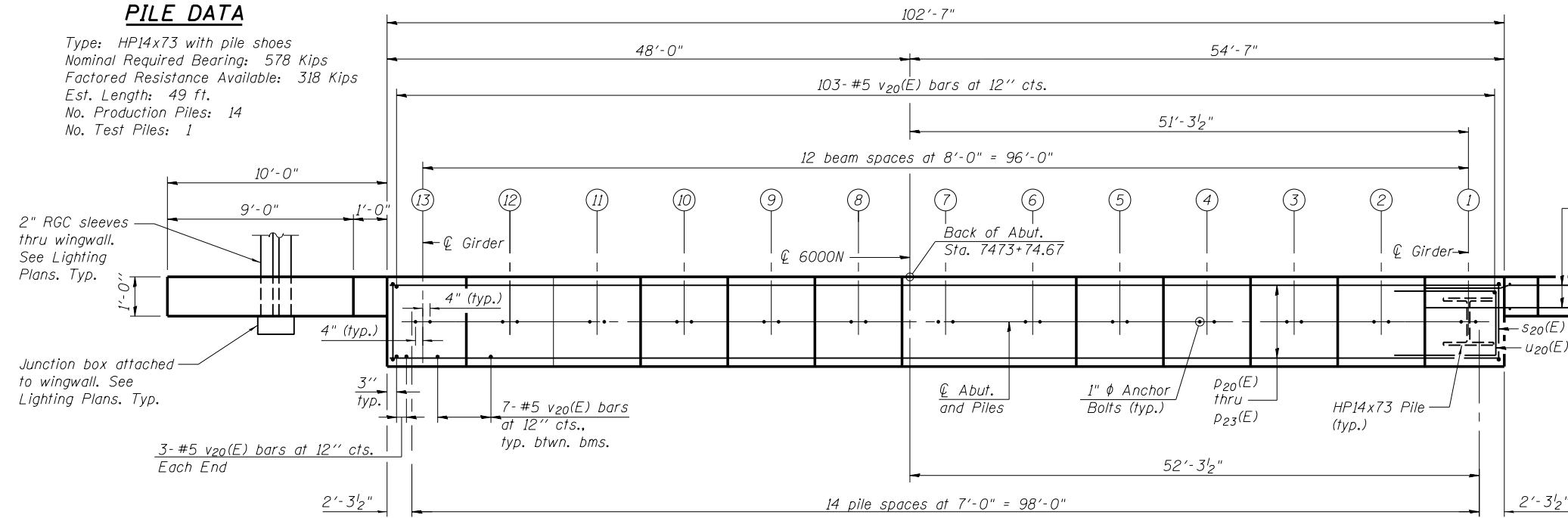
LAYOUT
FLN 01.14.2013
DRAWN MGM 07.09.2013
REVIEWED FLN 10.17.2013

Notes:
Pour steps monolithically with cap.



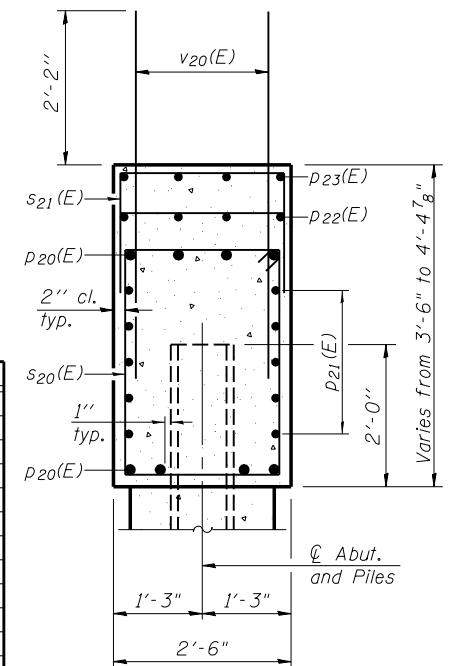
PILE DATA

Type: HP14x73 with pile shoes
Nominal Required Bearing: 578 Kips
Factored Resistance Available: 318 Kips
Est. Length: 49 ft.
No. Production Piles: 14
No. Test Piles: 1



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	60	#6	12'-7"	—
p20(E)	24	#9	40'-8"	—
p21(E)	30	#5	36'-8"	—
p22(E)	8	#5	41'-10"	—
p23(E)	4	#5	47'-9"	—
s20(E)	132	#6	12'-0"	□
s21(E)	80	#5	6'-6"	□
u20(E)	8	#6	9'-9"	—
v20(E)	193	#5	4'-4"	—
v21(E)	11	#5	12'-9"	—
v22(E)	11	#5	10'-11"	—
Structure Excavation		Cu. Yd.	70	
Concrete Structures		Cu. Yd.	42.9	
Reinforcement Bars, Epoxy Coated		Pound	10,330	
Furnishing Steel Piles, HP14x73		Foot	686	
Driving Piles		Foot	686	
Pile Shoes		Each	15	
Test Pile, Steel HP14x73		Each	1	
Concrete Encasement		Cu. Yd.	8.2	

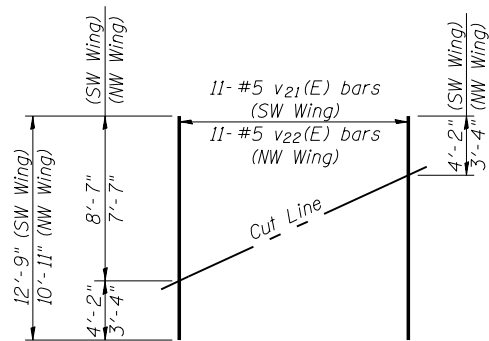


STEP HEIGHT DIMENSIONS

Description	Abut.-(in.)
a	2"
b	2"
c	2"
d	2"
e	1 3/4"
f	1 1/8"
g	1 1/2"
h	1 3/4"
i	2"
j	2"
k	2"

BEARING SEAT ELEVATIONS

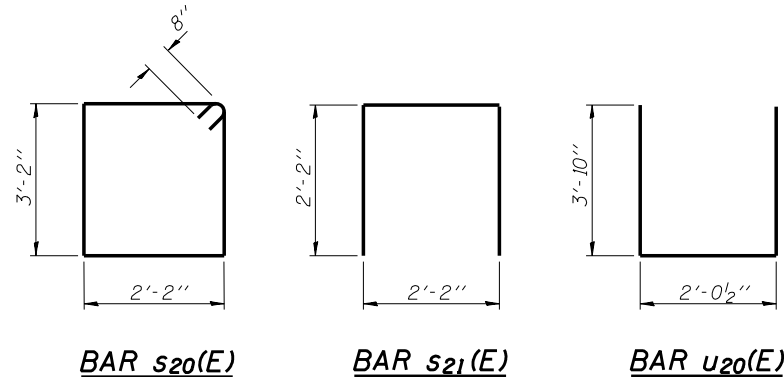
Description	Abut.
A	688.37
B	688.54
C	688.71
D	688.87
E	689.04
F	689.18
G	689.28
H	689.16
I	689.01
J	688.84
K	688.68
L	688.51



FIELD CUTTING DIAGRAM

Order v21(E) and v22(E) full length. Cut as shown and use remainder of bars in opposite face.

PLAN



SECTION B-B SEC. THRU ABUT.

MIN. BAR LAPS

#5 = 3'-8"
#9 = 9'-8"

For details of Bar Splicers, see sheet 29 of 44.
For details of piles and Concrete Encasement, see sheet 30 of 44.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 046-0148

SHEET NO. 25 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	497
CONTRACT NO.			66982	

ILLINOIS FED. AID PROJECT

PROFESSIONAL DESIGN FIRM LICENSE #194-001094

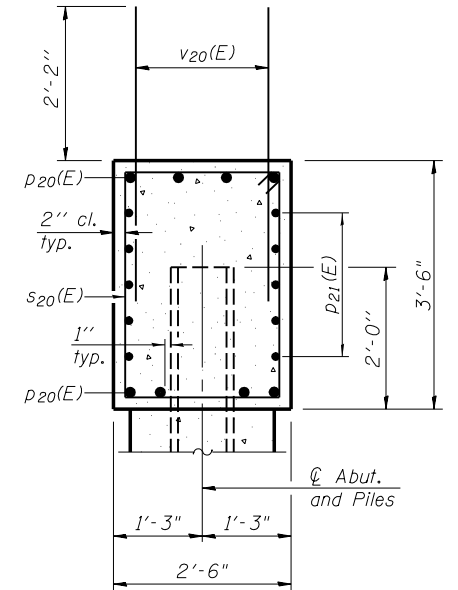
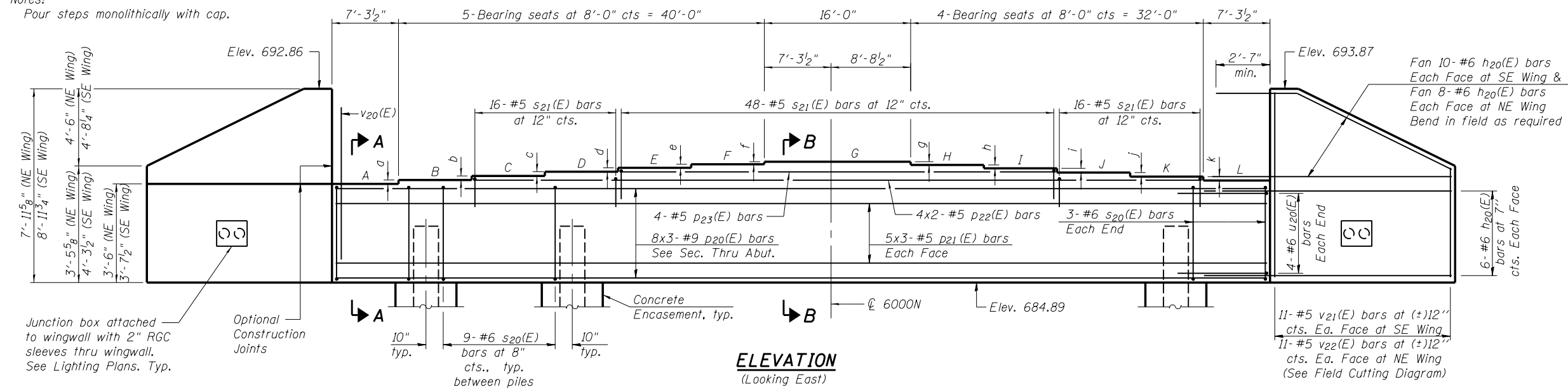


USER NAME	DESIGNED	CHECKED	REVISIONS
hussu00411	FLN	JKR	REVISIONS
	FLN	MGM	REVISIONS
	FLN	FLN	REVISIONS

12/02/2013 c:\pwwork\work\vol_no_delete\dms56035\0460148\66982-025-W_Abutment.dgn

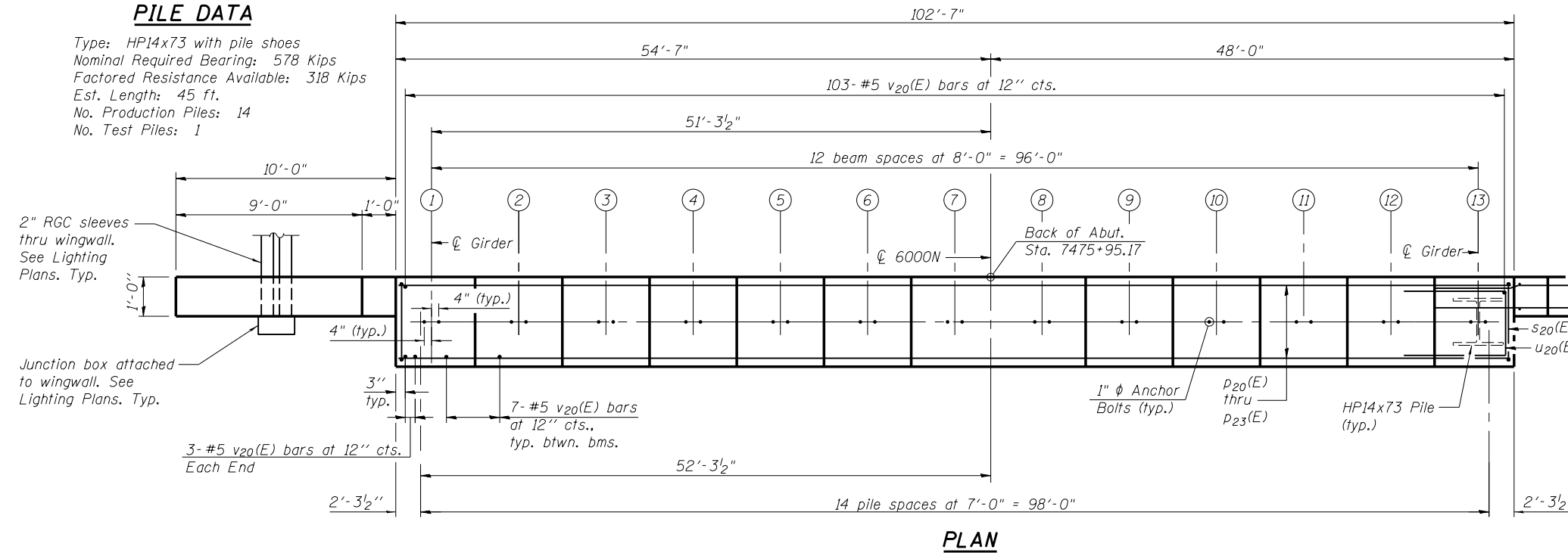
LAYOUT	FLN	DATE
FLN	01.15.2013	
MGM	07.09.2013	
REVIEWED	FLN	10.17.2013

Notes:
Pour steps monolithically with cap.



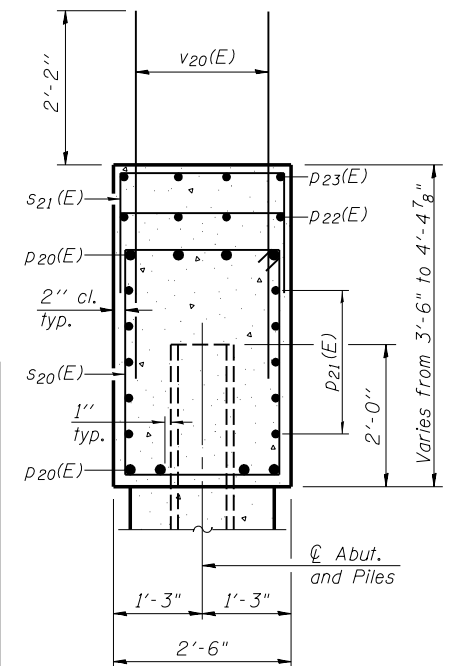
PILE DATA

Type: HP14x73 with pile shoes
Nominal Required Bearing: 578 Kips
Factored Resistance Available: 318 Kips
Est. Length: 45 ft.
No. Production Piles: 14
No. Test Piles: 1



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₂₀ (E)	60	#6	12'-7"	—
p ₂₀ (E)	24	#9	40'-8"	—
p ₂₁ (E)	30	#5	36'-8"	—
p ₂₂ (E)	8	#5	41'-10"	—
p ₂₃ (E)	4	#5	47'-9"	—
s ₂₀ (E)	132	#6	12'-0"	□
s ₂₁ (E)	80	#5	6'-6"	□
u ₂₀ (E)	8	#6	9'-9"	—
v ₂₀ (E)	193	#5	4'-4"	—
v ₂₁ (E)	11	#5	12'-9"	—
v ₂₂ (E)	11	#5	10'-11"	—
Structure Excavation		Cu. Yd.	70	
Concrete Structures		Cu. Yd.	42.9	
Reinforcement Bars, Epoxy Coated		Pound	10,330	
Furnishing Steel Piles, HP14x73		Foot	630	
Driving Piles		Foot	630	
Pile Shoes		Each	15	
Test Pile, Steel HP14x73		Each	1	
Concrete Encasement		Cu. Yd.	8.2	

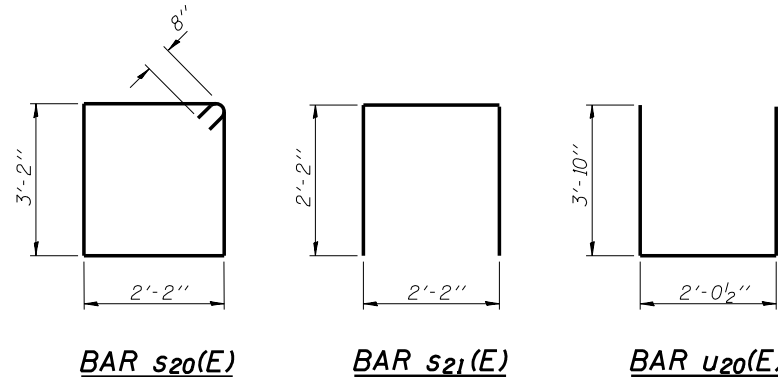
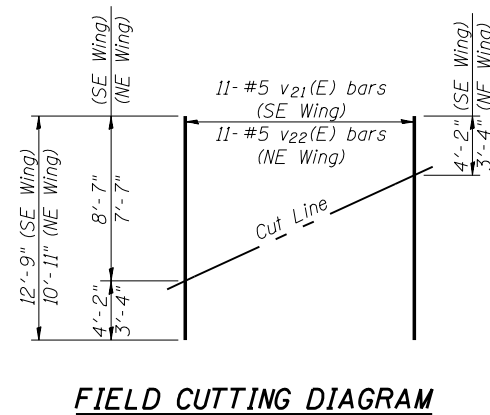


STEP HEIGHT DIMENSIONS

Description	Abut.-(in.)
a	2"
b	2"
c	2"
d	2"
e	1 3/4"
f	1 1/8"
g	1 1/2"
h	1 3/4"
i	2"
j	2"
k	2"

BEARING SEAT ELEVATIONS

Description	Abut.
A	688.39
B	688.55
C	688.72
D	688.89
E	689.05
F	689.20
G	689.30
H	689.17
I	689.02
J	688.86
K	688.69
L	688.52



For details of Bar Splicers, see sheet 29 of 44.
For details of piles and Concrete Encasement, see sheet 30 of 44.

MIN. BAR LAPS

#5 = 3'-8"
#9 = 9'-8"

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LAYOUT: FLN 01.15.2013
DRAWN: MGM 07.09.2013
REVIEWED: FLN 10.17.2013

PROFESSIONAL DESIGN FIRM LICENSE #194-001094
HANSON
Hanson Professional Services Inc.

USER NAME = hussu00411	DESIGNED - FLN	REVISOR
PLOT SCALE =	CHECKED - JKR	REVISION
PLOT DATE = 12/02/2013	DRAWN - MGM	REVISION
	CHECKED - FLN	REVISION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT
STRUCTURE NO. 046-0148

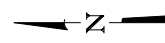
SHEET NO. 26 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	498
CONTRACT NO. 66982				

ILLINOIS FED. AID PROJECT

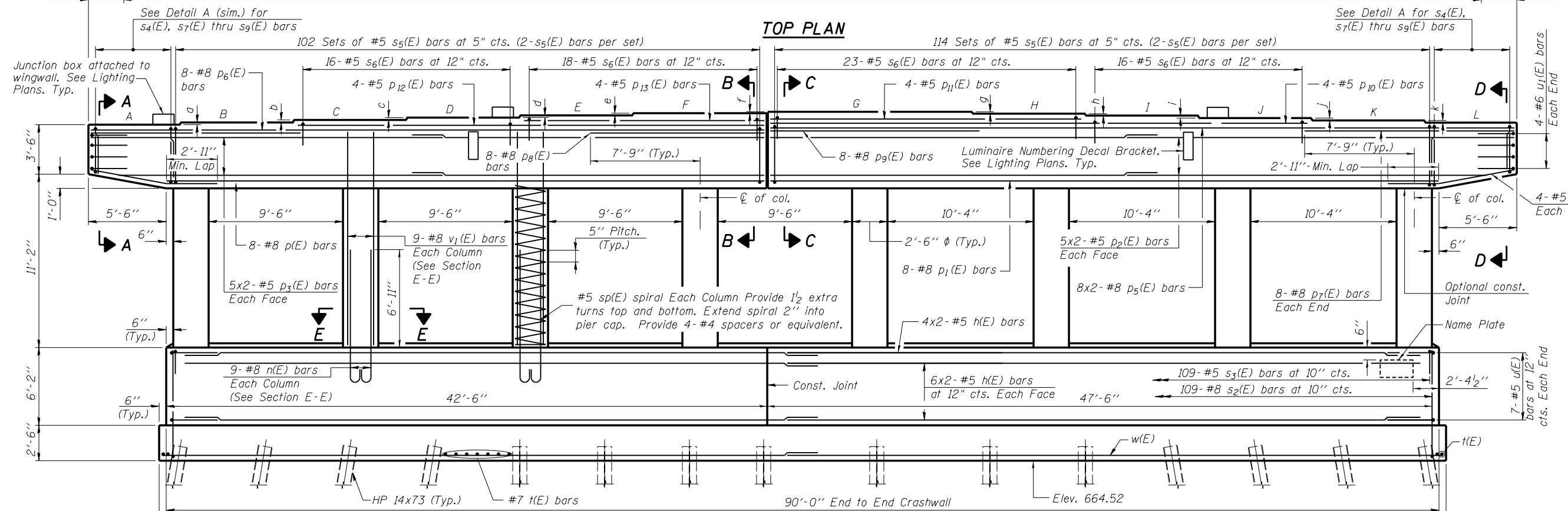
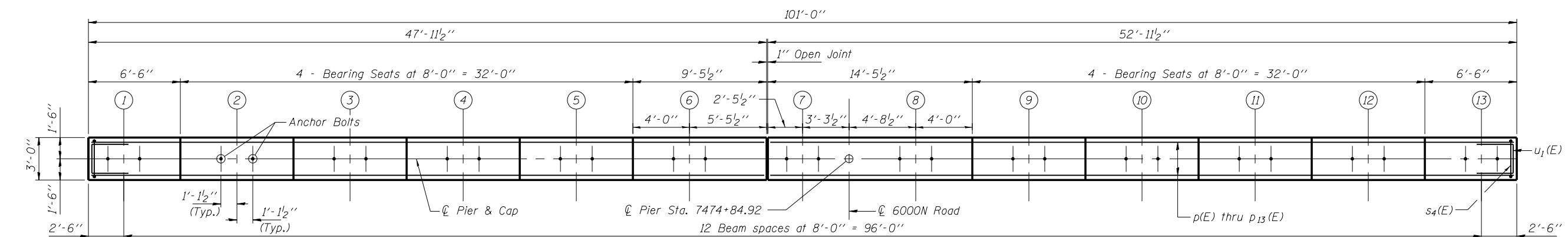
MIN. BAR LAPS

- #5 - 2'-11" (UNO)
- #8 - 7'-8"
- #5 - 3'-3" for s₄(E), s₇(E) thru s₉(E)



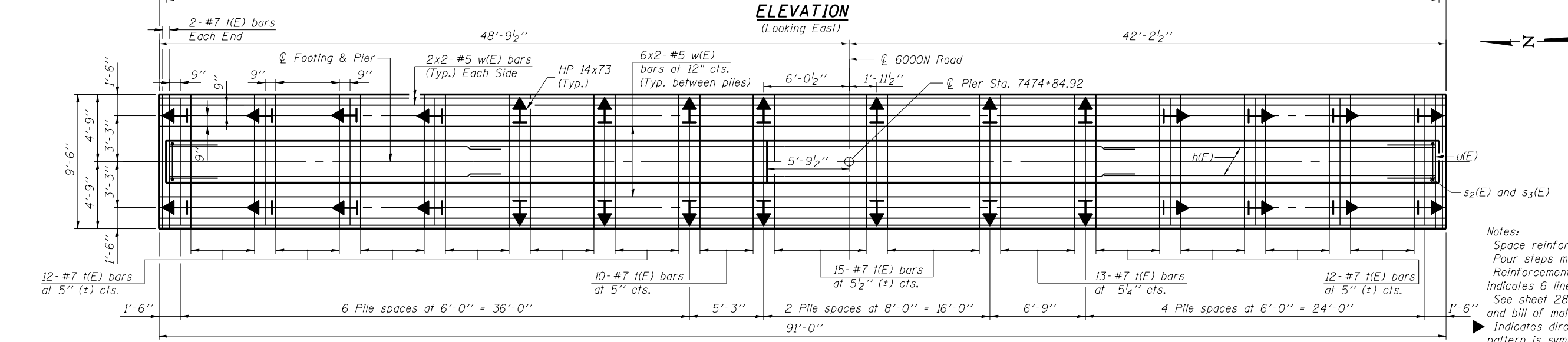
STEP HEIGHT DIMENSIONS

Description	Pier (In.)
a	2"
b	2"
c	2"
d	2"
e	1 3/4"
f	1"
g	1 1/2"
h	1 3/4"
i	2"
j	2"
k	2"



BEARING SEAT ELEVATIONS

Description	Pier
A	687.85
B	688.02
C	688.18
D	688.35
E	688.52
F	688.66
G	688.75
H	688.63
I	688.48
J	688.31
K	688.14
L	687.98



Notes:
 Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
 Reinforcement bars indicated thus 6x3- #5 etc. indicates 6 lines of bars with 3 lengths per line. See sheet 28 of 44 for pier details, sections, and bill of material.
 Indicates direction to batter the pile. Pile batter pattern is symmetrical about footing. Batter equals 2 in : 12 in (H:V).
 For details of piles see sheet 30 of 44.

12/02/2013 c:\p\se_wor\k\d_r\d_e\ele\dms56035\0460148\66982-027-Pier.dgn

LAYOUT	MNM	11.21.2012
DRAWN	DUP/MGM	07.09.2013
REVIEWED	FLN	10.17.2013

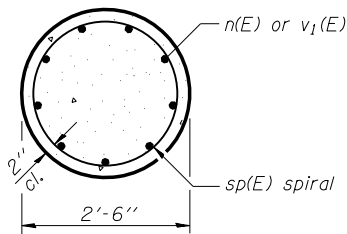
PROFESSIONAL DESIGN FIRM LICENSE #194-001094	USER NAME = hussu00411	DESIGNED - MNM	REVISED
	PLOT SCALE =	CHECKED - FLN	REVISED
Hanson Professional Services Inc.	PLOT DATE = 12/02/2013	DRAWN - DUP/MGM	REVISED
		CHECKED - FLN	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

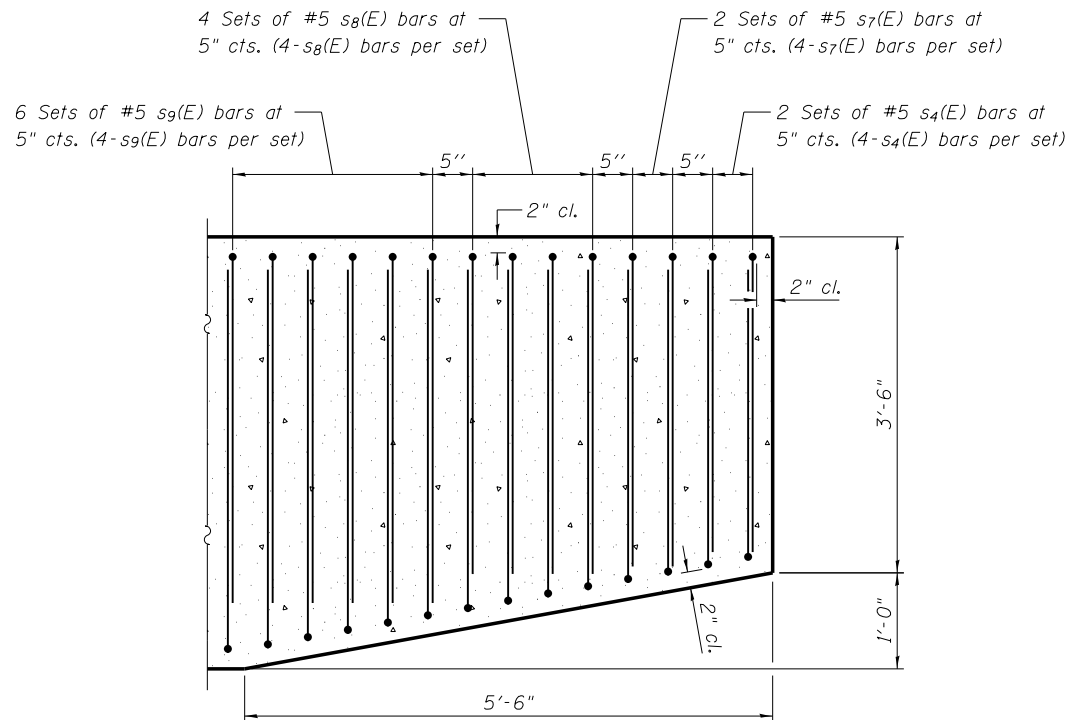
**PIER
STRUCTURE NO. 046-0148**

SHEET NO. 27 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	499
CONTRACT NO. 66982			ILLINOIS FED. AID PROJECT	

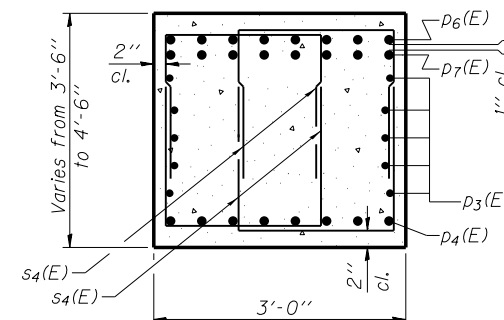


SECTION E-E

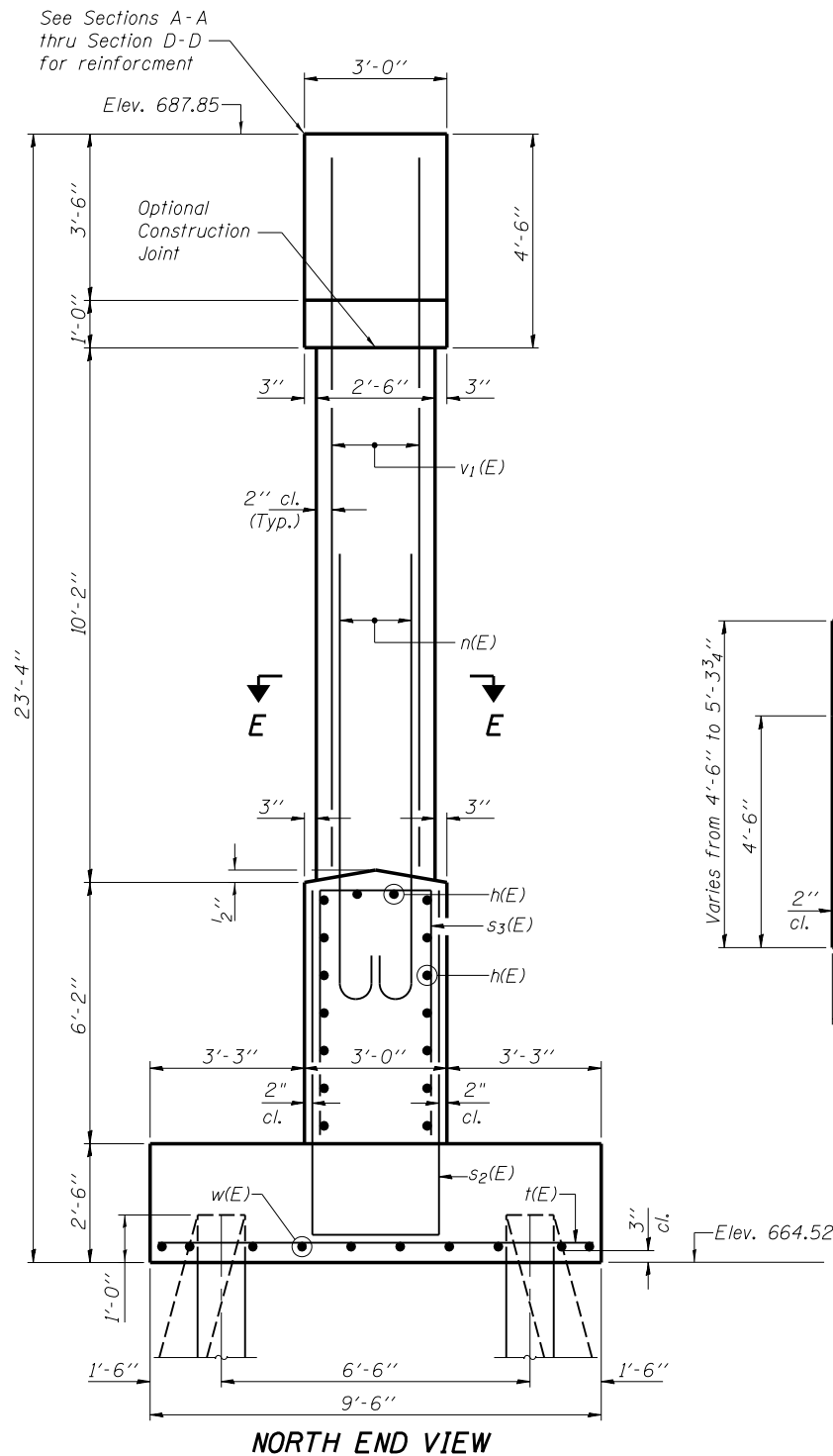


DETAIL A

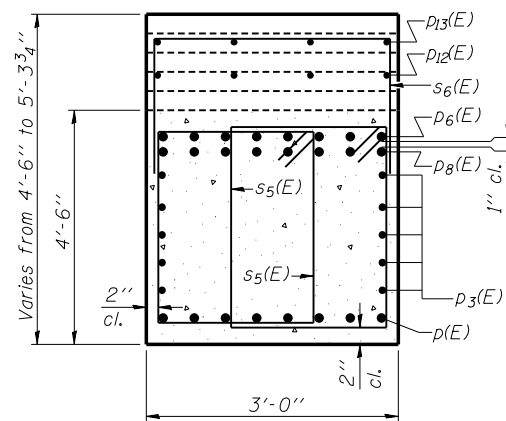
(Only s4(E), s7(E) thru s9(E) shown for clarity)



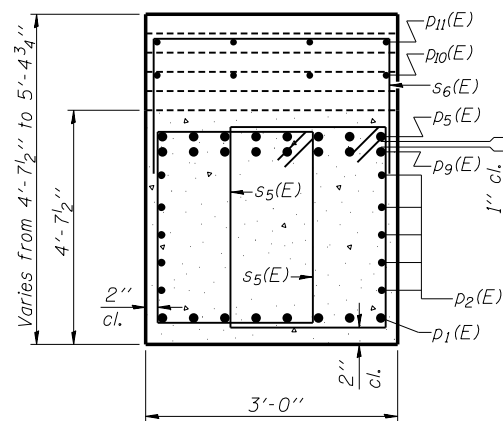
SECTION A-A



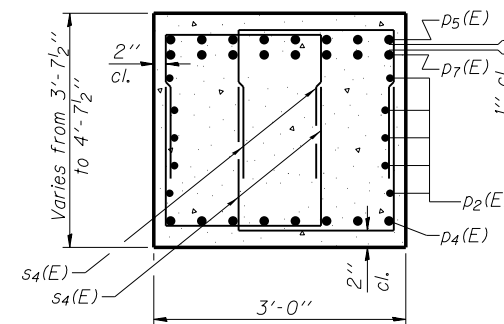
NORTH END VIEW



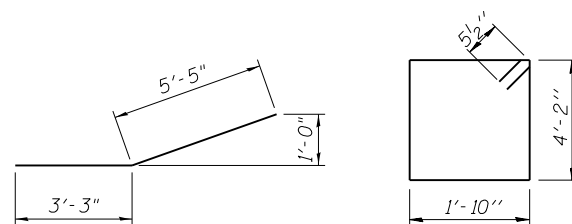
SECTION B-B



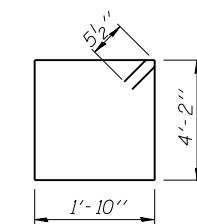
SECTION C-C



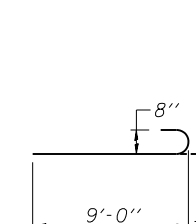
SECTION D-D



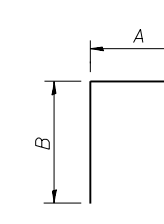
BAR p4(E)



BARS s5(E)



BARS n(E)



BARS

PILE DATA

Pile Type: HP 14x73 with pile shoes
 Nominal Required Bearing: 578 kips
 Factored Resistance Available: 318 kips
 Estimated Length: 28'
 No. Production Piles: 29
 Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n(E)	72	#8	9'-11"	
p(E)	8	#8	42'-3"	
p1(E)	8	#8	47'-3"	
p2(E)	20	#5	28'-0"	
p3(E)	20	#5	25'-4"	
p4(E)	8	#5	8'-8"	
p5(E)	16	#8	30'-4"	
p6(E)	8	#8	47'-7"	
p7(E)	16	#8	14'-10"	
p8(E)	8	#8	12'-4"	
p9(E)	8	#8	14'-10"	
p10(E)	4	#5	38'-2"	
p11(E)	4	#5	22'-2"	
p12(E)	4	#5	33'-2"	
p13(E)	4	#5	17'-2"	
s2(E)	109	#8	19'-2"	
s3(E)	109	#5	14'-8"	
s4(E)	16	#5	8'-4"	
s5(E)	432	#5	12'-11"	
s6(E)	73	#5	7'-0"	
s7(E)	16	#5	8'-6"	
s8(E)	32	#5	8'-10"	
s9(E)	48	#5	9'-4"	
sp(E)	8	#5	10'-4"	WWWW
t(E)	177	#7	9'-2"	
u(E)	14	#5	8'-4"	
u1(E)	8	#6	10'-3"	
v1(E)	72	#8	14'-2"	
w(E)	20	#5	47'-0"	
Structure Excavation			Cu. Yd.	224
Concrete Structures			Cu. Yd.	212.4
Reinforcement Bars, Epoxy Coated			Pound	34,050
Furnishing Steel Piles HP14x73			Ft.	812
Driving Piles			Ft.	812
Pile Shoes			Each	30
Test Pile Steel HP14x73			Each	1

* Length shown is height of Spiral.

A & B DIMENSIONS

BAR	A	B
s2(E)	2'-8"	8'-3"
s3(E)	2'-8"	6'-0"
s4(E)	1'-10"	3'-3"
s6(E)	2'-8"	2'-2"
s7(E)	1'-10"	3'-4"
s8(E)	1'-10"	3'-6"
s9(E)	1'-10"	3'-9"
u(E)	2'-6"	2'-11"
u1(E)	2'-6 3/4"	3'-10"

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LAYOUT: MNM 11.21.2012
 DRAWN: DUP/MGM 07.09.2013
 REVIEWED: FLN 10.17.2013



PROFESSIONAL DESIGN FIRM LICENSE #194-001094	USER NAME = hussu00411	DESIGNED - MNM	REVISED
		CHECKED - FLN	REVISED
	PLOT SCALE =	DRAWN - DUP/MGM	REVISED
	PLOT DATE = 12/02/2013	CHECKED - FLN	REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PIER DETAILS
 STRUCTURE NO. 046-0148**

SHEET NO. 28 OF 44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(46-1)HBK-1	KANKAKEE	819	500
CONTRACT NO. 66982				
ILLINOIS FED. AID PROJECT				