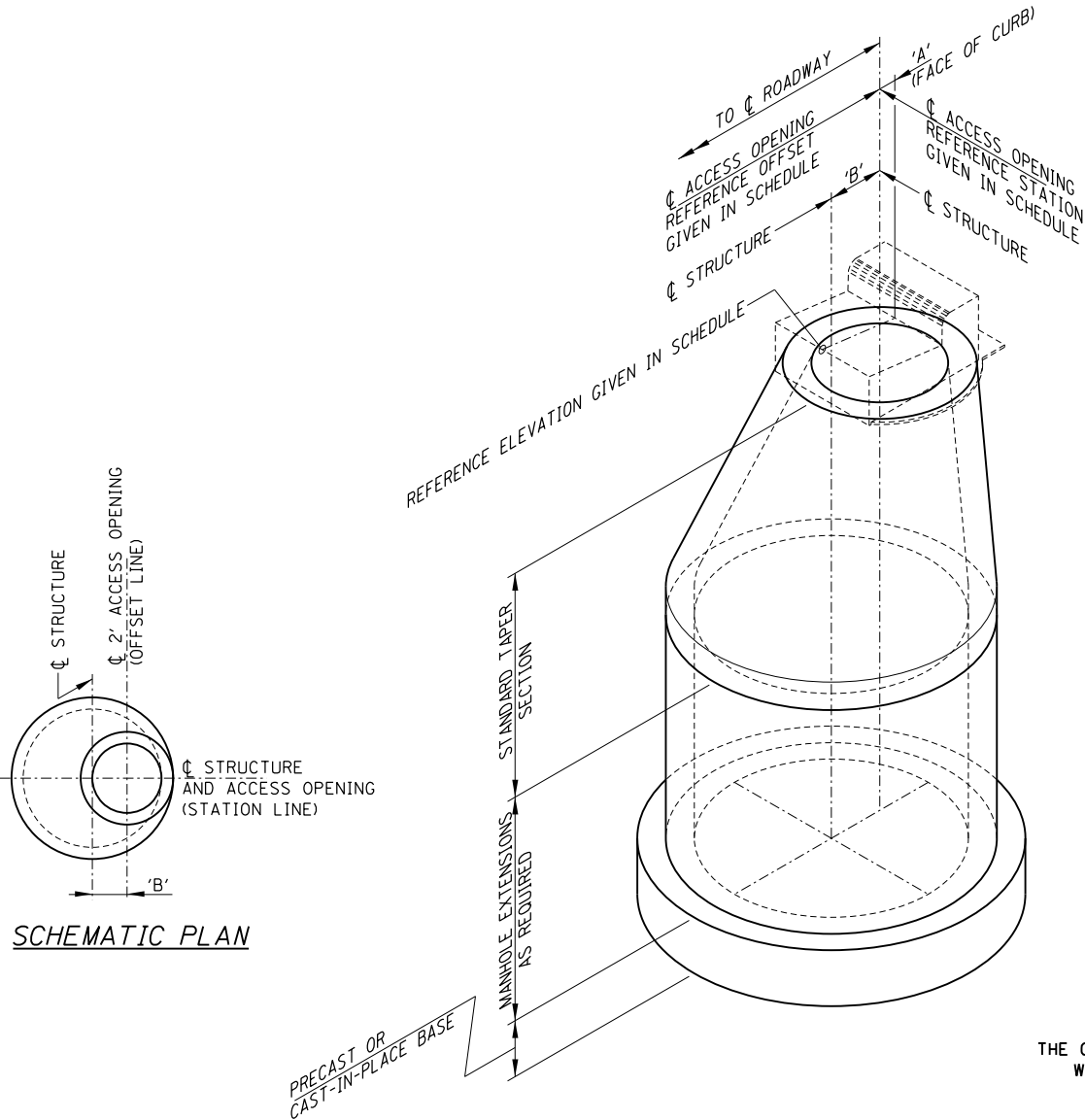


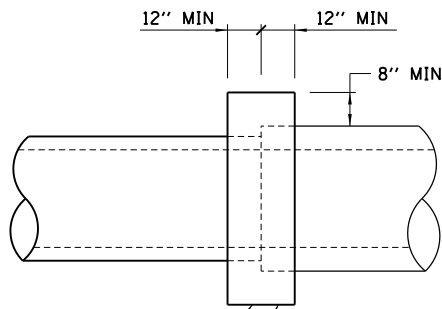
STRUCTURE TYPE	FRAME & GRATE OR LID TYPE	'A'	'B'
INLET TYPE 'A'	TYPE 3 FRAME & GRATE	0.30'	0.00'
INLET TYPE 'B'	TYPE 3 FRAME & GRATE	0.30'	0.50'
MANHOLE TYPE 'A', 5' DIA.	TYPE 1 FRAME, CLOSED LID	0.00'	1.00'
MANHOLE TYPE 'A', 4' DIA.	TYPE 8 GRATE	0.00'	1.00'
MANHOLE TYPE 'A', 4' DIA.	TYPE 11 FRAME & GRATE	0.20'	1.00'
MANHOLE TYPE 'A', 8' DIA.	TYPE 1 FRAME, CLOSED LID	0.00	3.00'



ISOMETRIC DETAIL MANHOLE OR INLET RISER

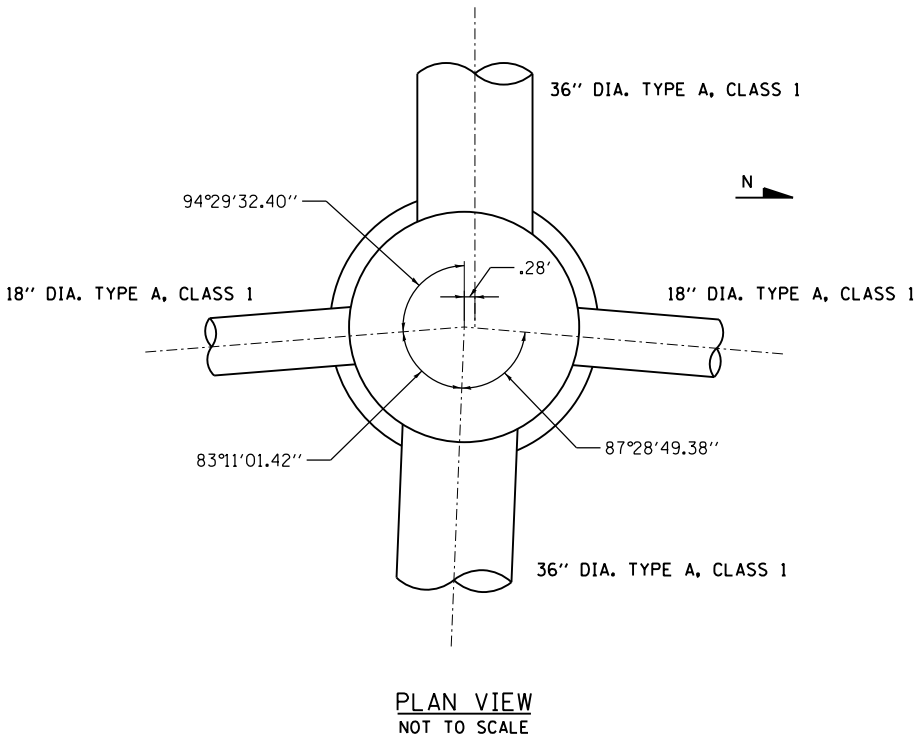
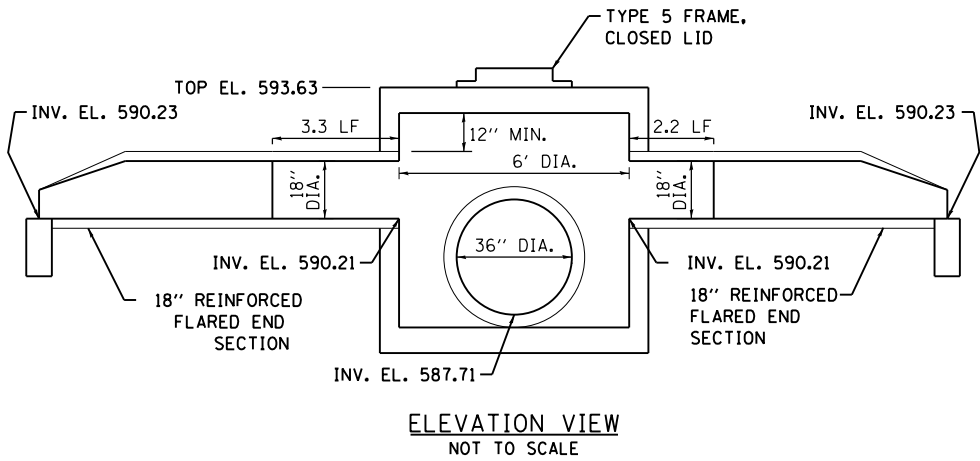
NOTES:

- SCHEMATIC DETAILS ONLY, NOT INTENDED TO REPRESENT ALL CONDITIONS.
- SEE DRAINAGE STRUCTURE SCHEDULE FOR STRUCTURES ROTATED 180° FROM DETAILS SHOWN.
- STATIONS AND OFFSETS GIVEN IN SCHEDULE ARE TO THE ϕ OF ACCESS OPENING.



CLASS SI CONCRETE COLLAR
THE COST OF CONCRETE COLLARS
WILL BE PAID FOR IN CU YD.

CONCRETE COLLARS SHALL BE USED
TO CONNECT RCCP EXTENSIONS TO
EXISTING DRAINAGE STRUCTURES
TYPICAL CONCRETE COLLAR DETAIL
NOT TO SCALE
UPRR STANDARD DETAIL SK-5 APPLIES AT RR CULVERT



MANHOLE, TYPE A, 6' DIA.
SHOOFLY STA. 396+12.33

FILE NAME =
GC-5-DRAIN.DTLS.1.dgn

USER NAME = johns00944

DESIGNED -

REVISED -

DRAWN -

REVISED -

PLOT SCALE = 100.000' / in.

CHECKED -

REVISED -

PLOT DATE = 7/29/2024

DATE -

REVISED -

STATE OF ILLINOIS
SANGAMON COUNTY HIGHWAY DEPARTMENT

DRAINAGE STRUCTURE DETAILS

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

F.A.U.
RTE.

SECTION

COUNTY

TOTAL
SHEETS

SHEET
NO.

.

SANGAMON

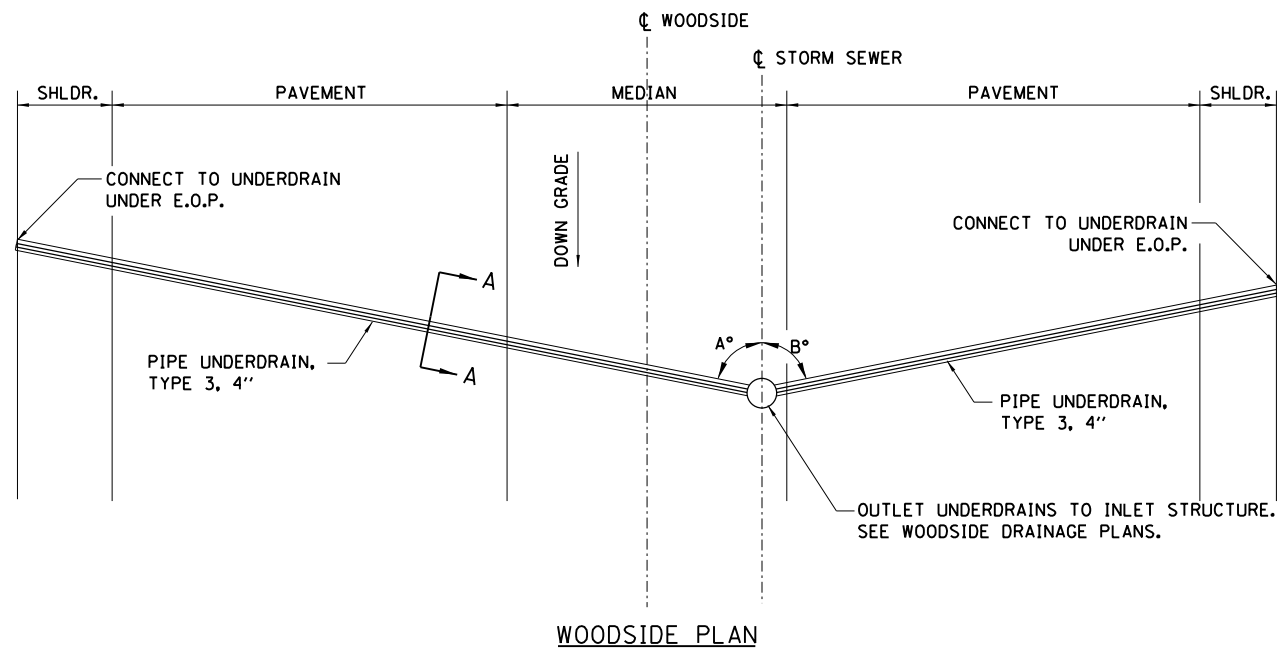
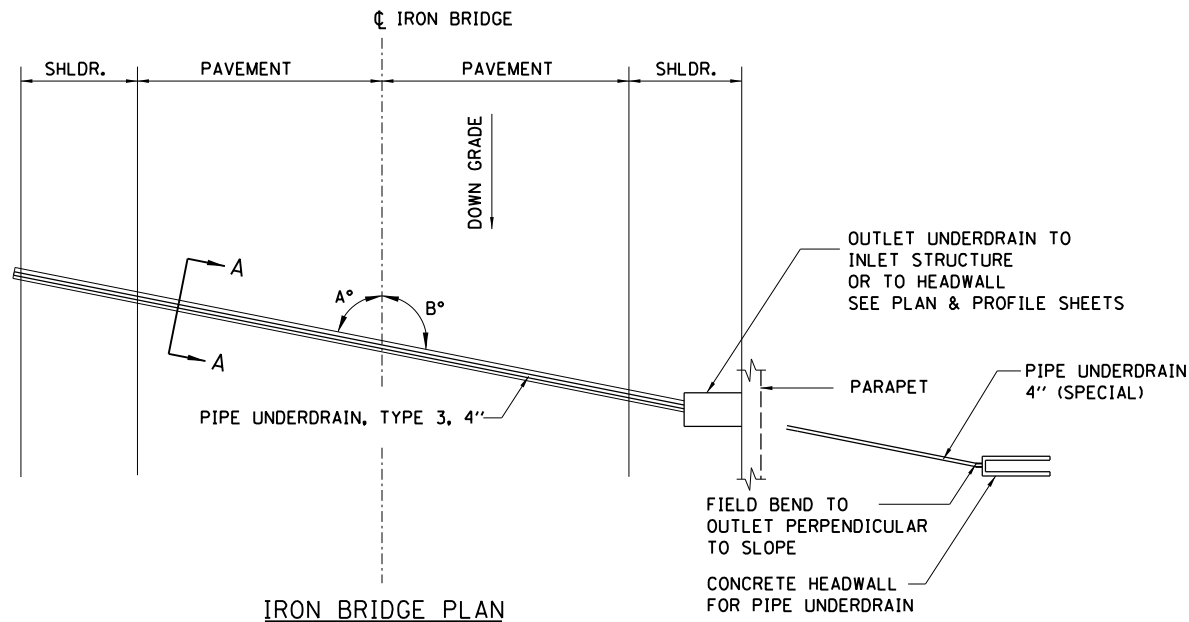
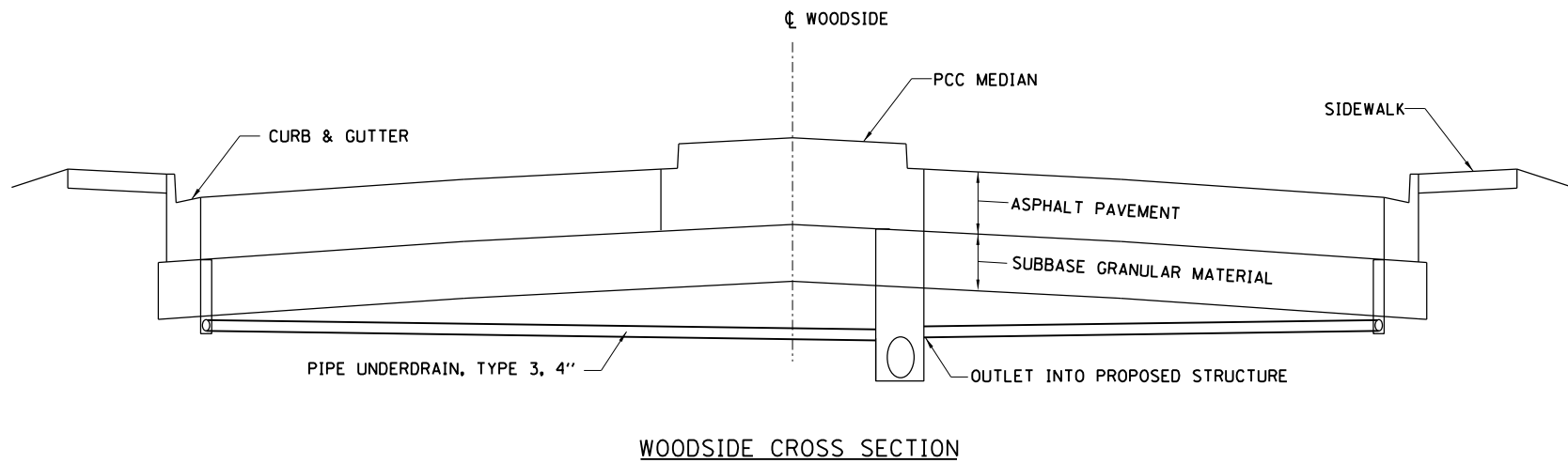
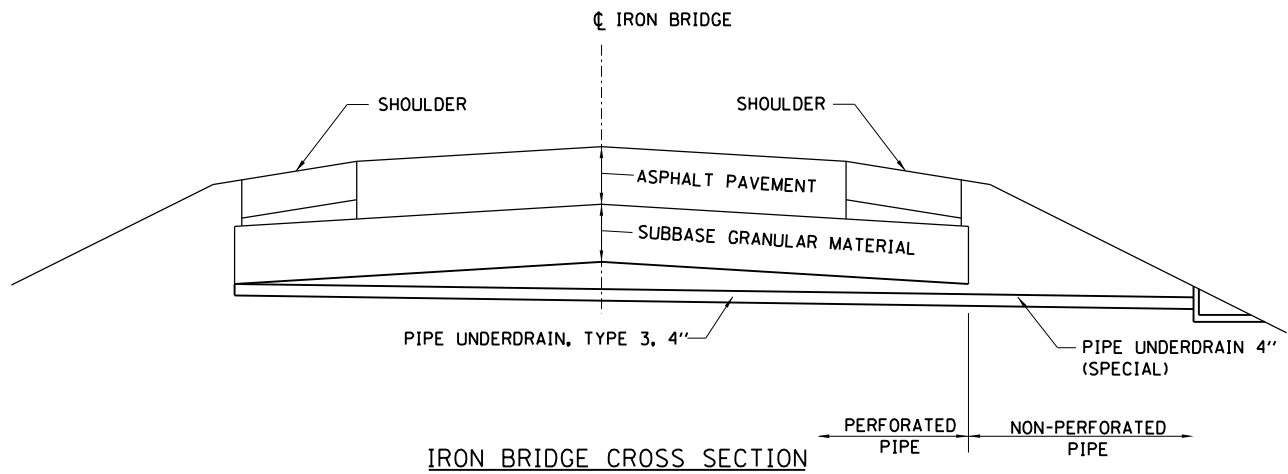
368 101

96S2002F

CONTRACT NO. 93671

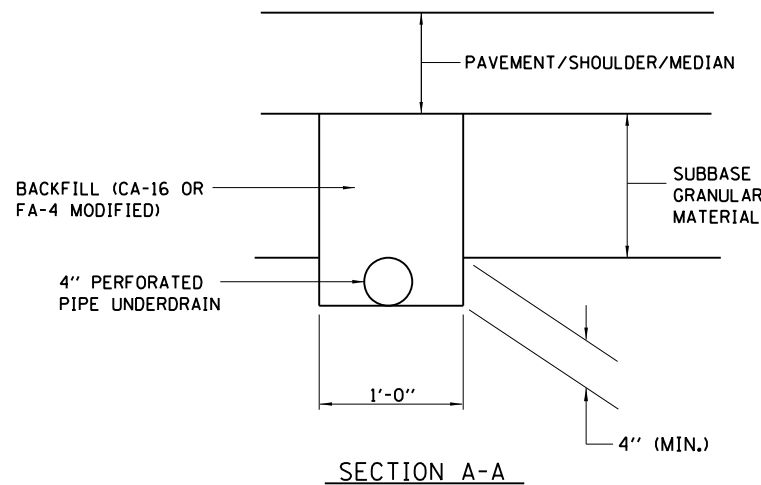
FED. ROAD DIST. NO. 6 | ILLINOIS FED. AID PROJECT 6

• 07-00164-04-FP, 07-00090-08-FP



PHASE 1 - TRANSVERSE DRAIN SCHEDULE								
IRON BRIDGE ROAD						X0326911 - TRANSVERSE DRAINS COMPLETE		60100060 - CONCRETE HEADWALL FOR PIPE DRAINS (EA)
						UNDERDRAIN 4" (FEET)	UNDERDRAIN 4", SP (FEET)	
STATION	LT/RT	STATION	LT/RT	ANGLE A	ANGLE B			
691+29.00	LT	691+17.00	RT	70	110	40		
693+98.65	LT	693+85.00	RT	70	110	41		
701+39.60	LT	707+42.00	RT	50	130	53		
704+80.00	LT	705+21.00	RT	50	130	64		
705+21.00	LT	705+36.90	RT	50	130		24	1
TOTALS						198	24	1

PHASE 2 - TRANSVERSE DRAIN SCHEDULE						
WOODSIDE ROAD STATION LT/RT STATION LT/RT ANGLE A ANGLE B						X0326911 - TRANSVERSE DRAINS COMPLETE
						UNDERDRAIN 4" (FEET)
102+10.00	RT	102+45.00	RT	41.62	49.5	45
102+10.00	LT	102+45.00	LT			52
104+10.00	RT	104+45.00	RT	42.37	50.17	45
104+10.00	LT	104+45.00	LT			52
108+02.00	RT	108+40.00	RT	47.35	39.25	47
108+02.00	LT	108+40.00	LT			54
					TOTALS	295



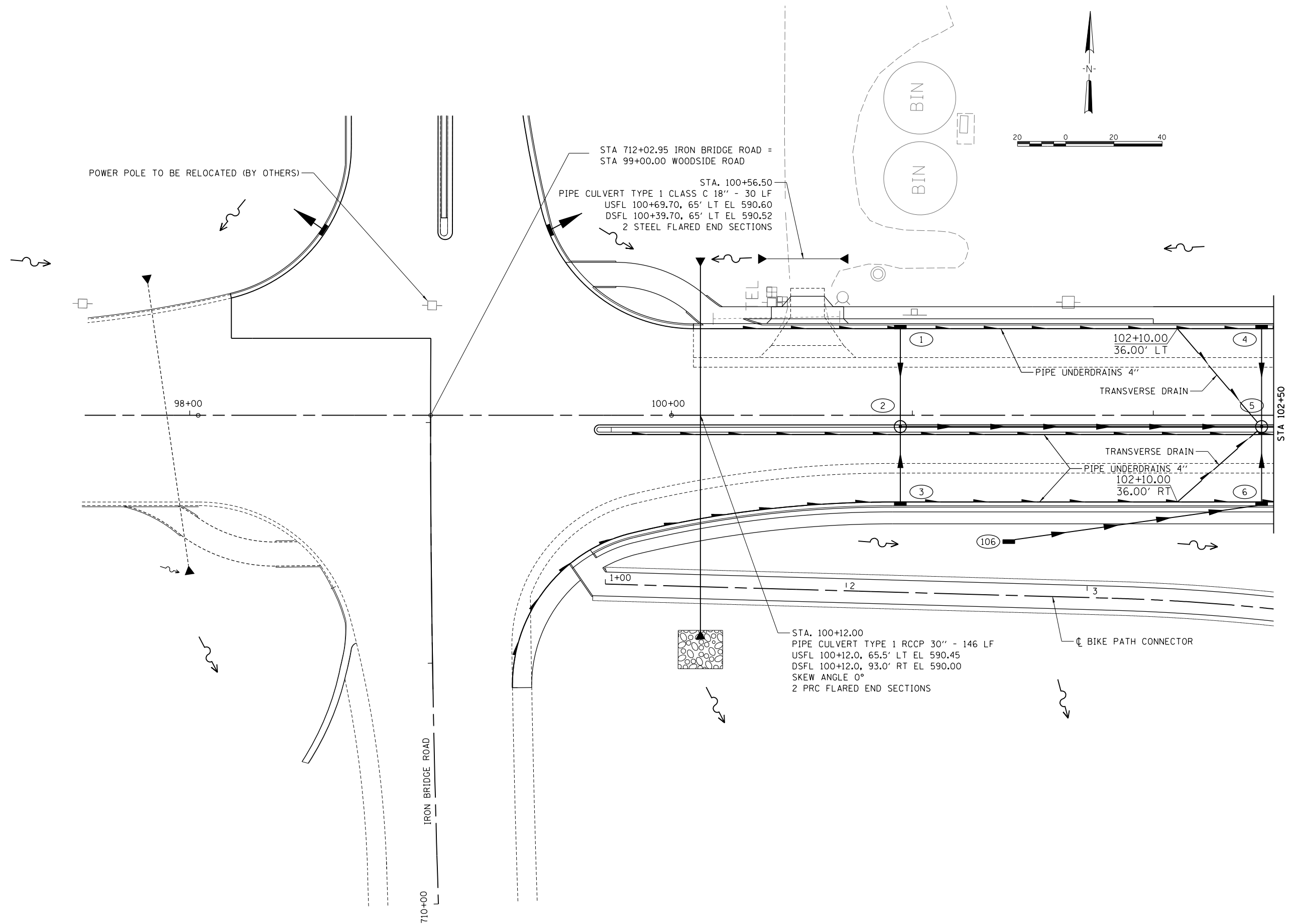
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	PLOT DATE = 7/29/2024	DATE - 8/24/2020	REVISED -

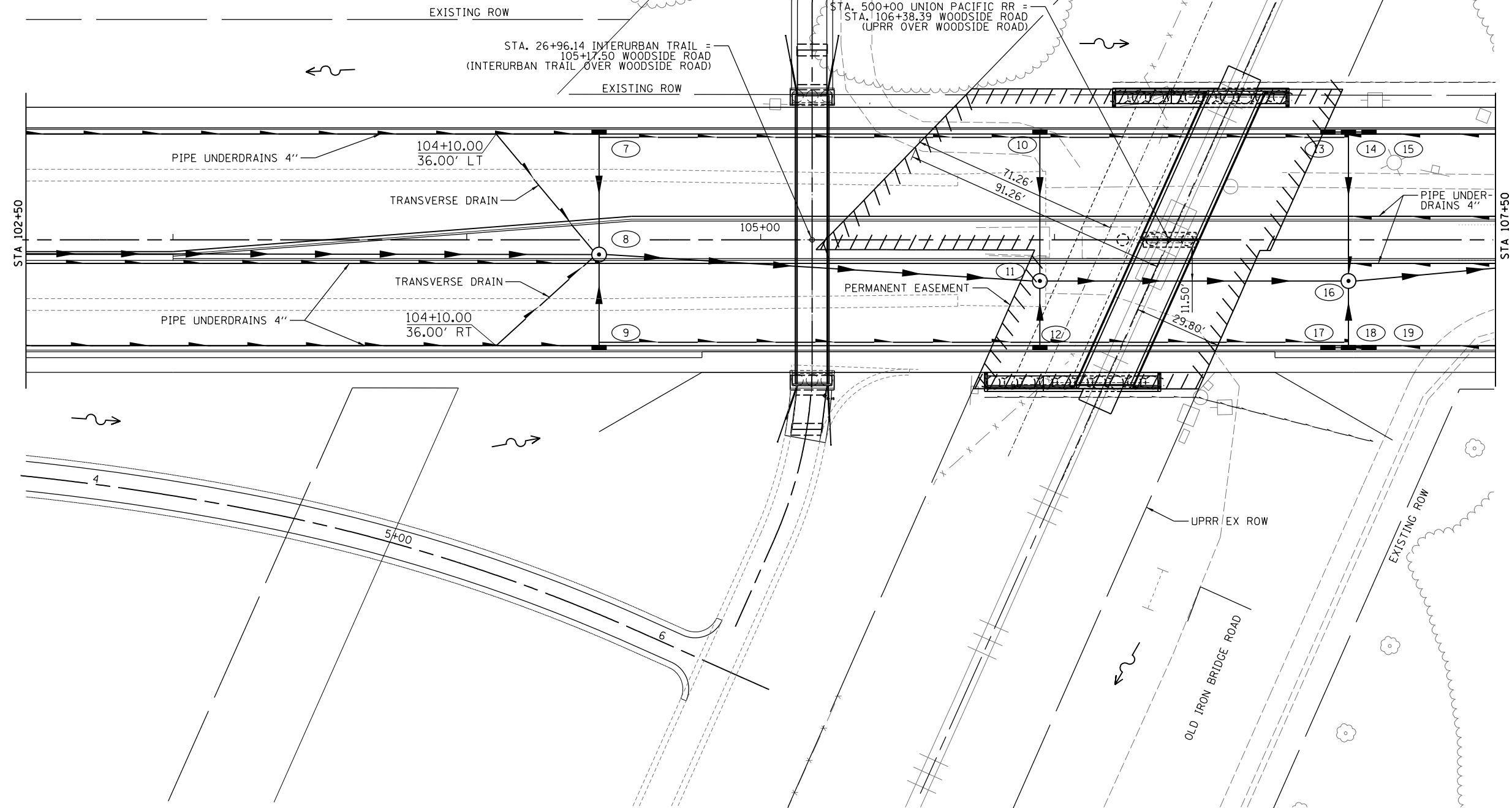
STATE OF ILLINOIS
SANGAMON COUNTY HIGHWAY DEPARTMENT

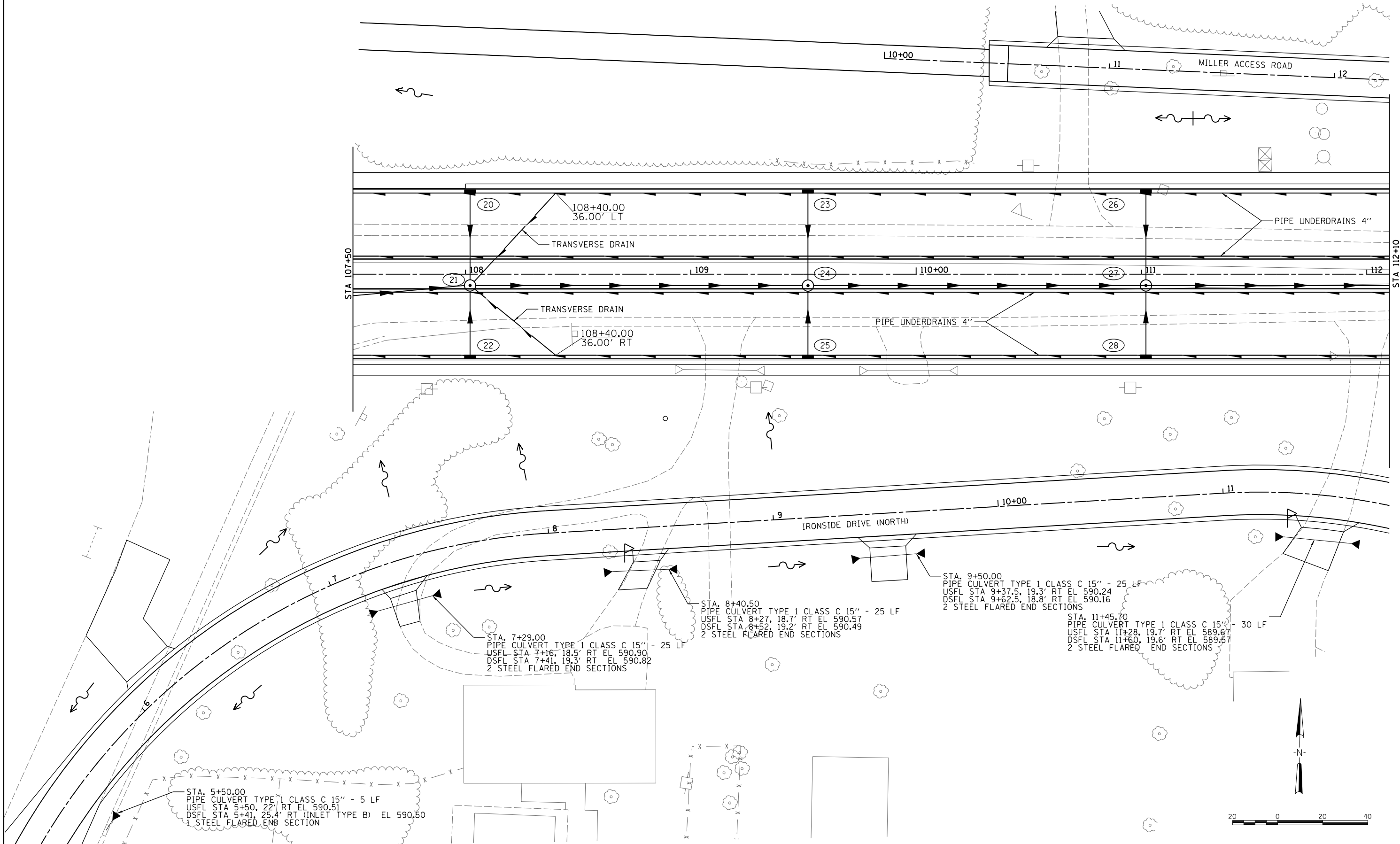
TRANSVERSE DRAIN DETAILS - PHASE 1 & 2

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

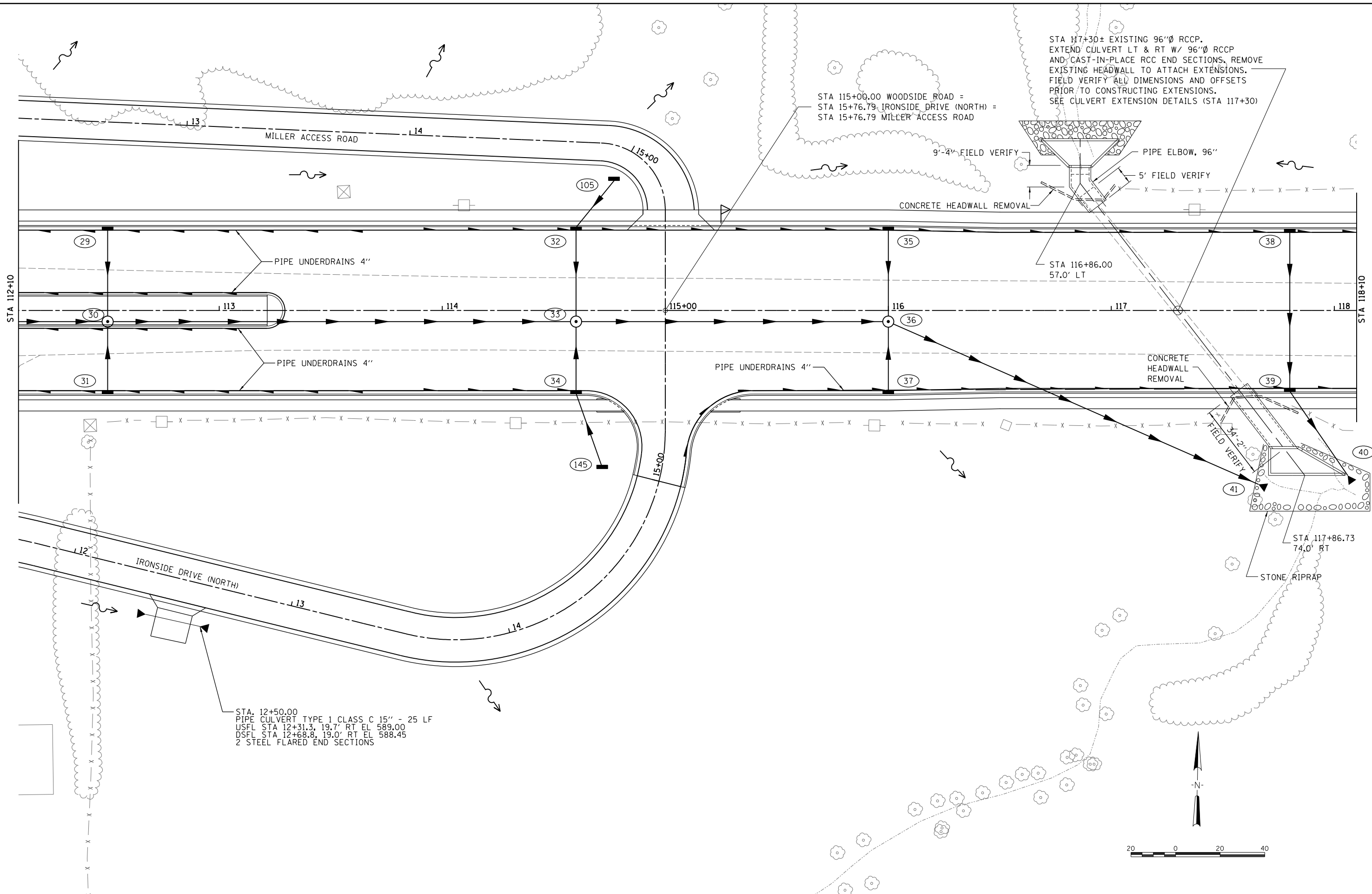
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	102
96S2002F		CONTRACT NO. 9367		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6				
• 07-00164-04-FP, 07-00090-08-FP				







FILE NAME = Ge-1-wd200P_3.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	DRAINAGE PLAN WOODSIDE ROAD 3 – PHASE 2				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -								SANGAMON	368	105
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -						96S2002F		CONTRACT NO. 93671		
	PLOT DATE = 7/29/2024	DATE -	REVISED -						SCALE:	SHEET NO.	OF	SHEETS	STA.



FILE NAME = Ge-1-wd200P_4.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	DRAINAGE PLAN WOODSIDE ROAD 4 – PHASE 2				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
		DRAWN -	REVISED -							.	SANGAMON	368	106		
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		96S2002F				CONTRACT NO. 93671						
	PLOT DATE = 7/29/2024	DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT 6		
													• 07-00164-04-FP, 07-00090-08-FP		

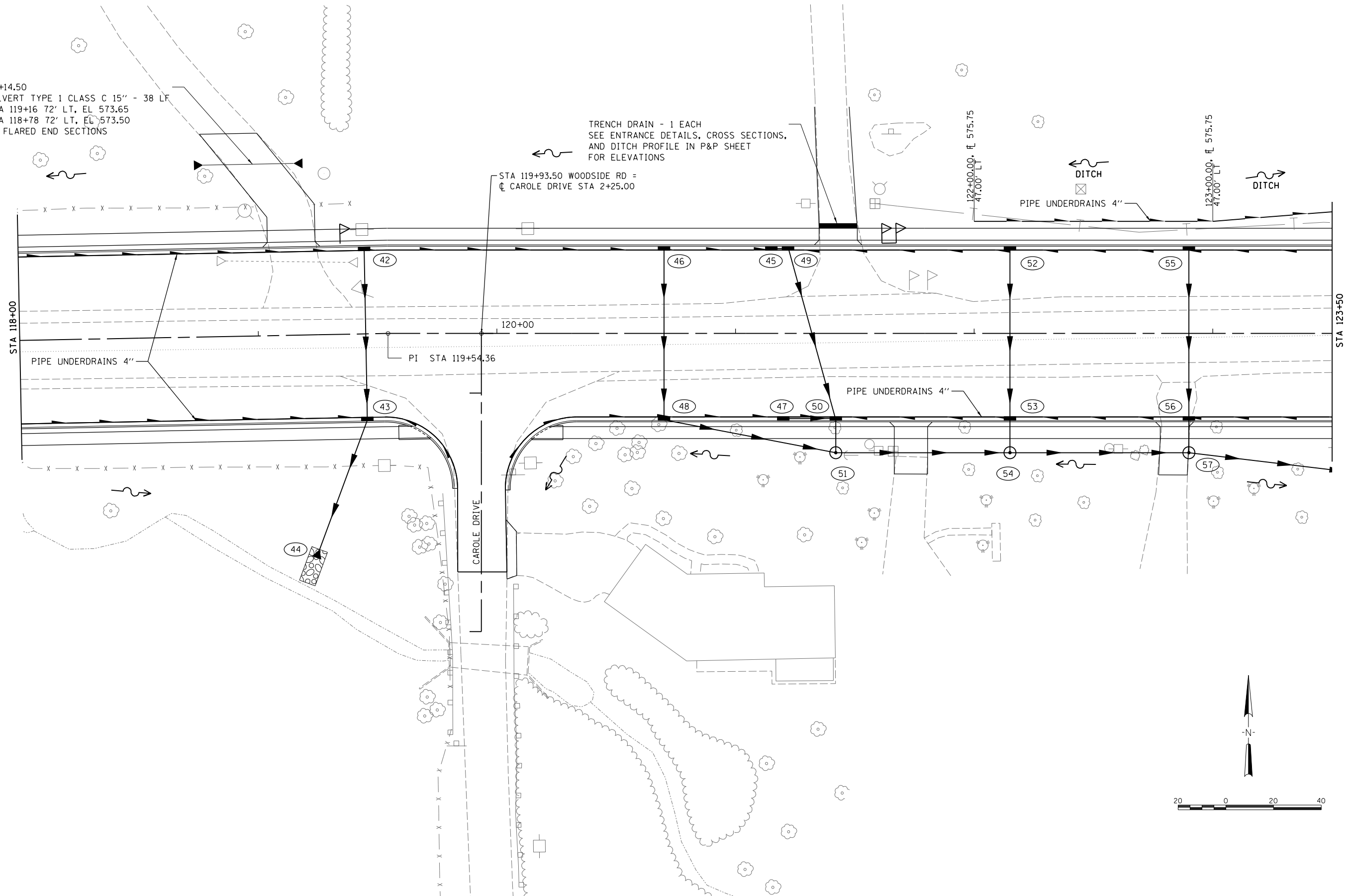
STA. 119+14.50
PIPE CULVERT TYPE 1 CLASS C 15" - 38 LF
USFL STA 119+16 72' LT, EL. 573.65
DSFL STA 118+78 72' LT, EL. 573.50
2 STEEL FLARED END SECTIONS

TRENCH DRAIN - 1 EACH
SEE ENTRANCE DETAILS, CROSS SECTIONS,
AND DITCH PROFILE IN P&P SHEET
FOR ELEVATIONS

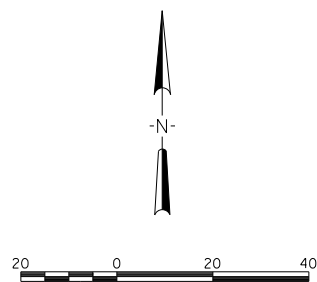
STA 119+93.50 WOODSIDE RD =
CL CAROLE DRIVE STA 2+25.00

DITCH
PIPE UNDERDRAINS 4"

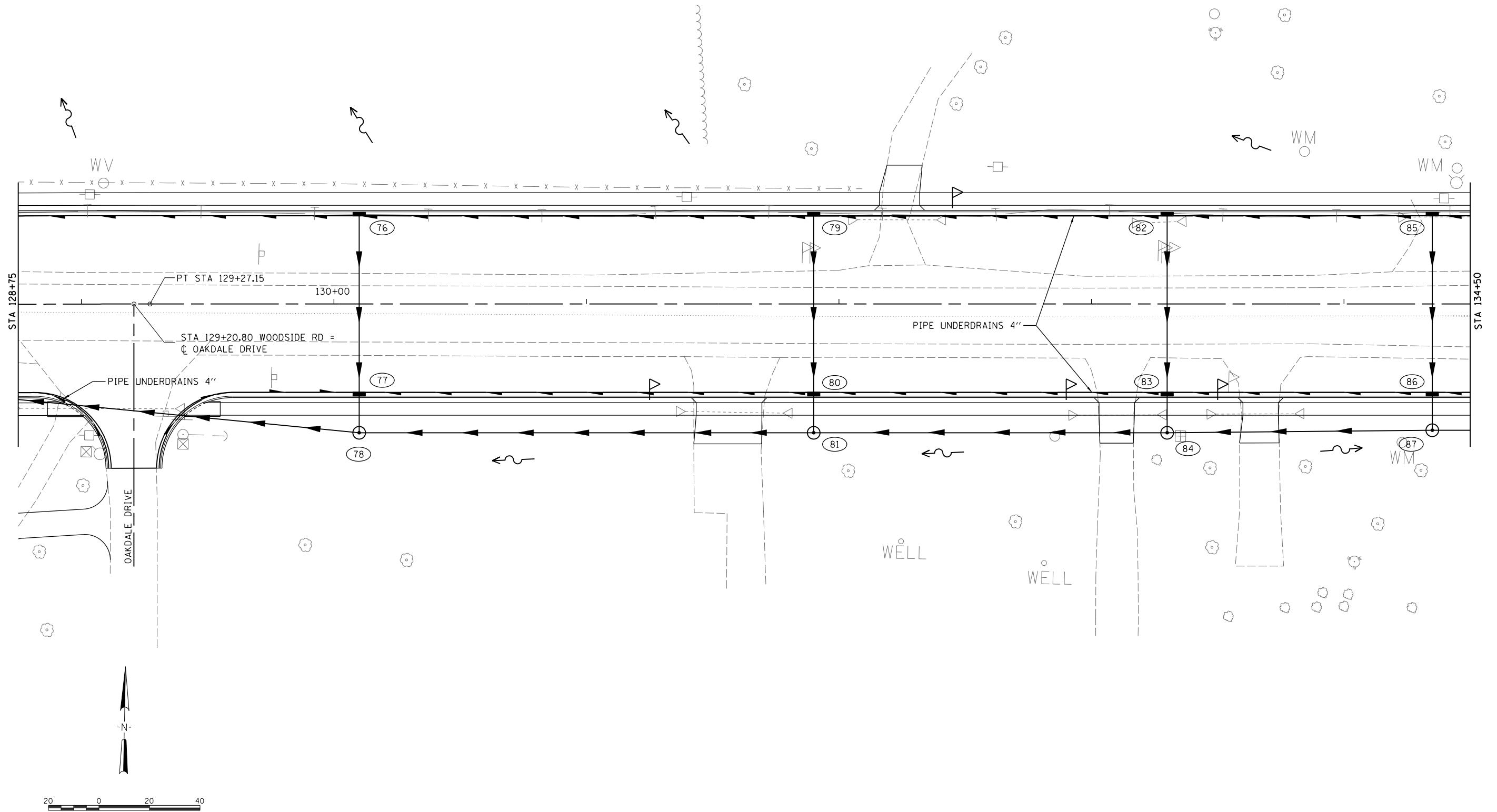
123+00.00, EL. 575.75
47.00' LT
DITCH



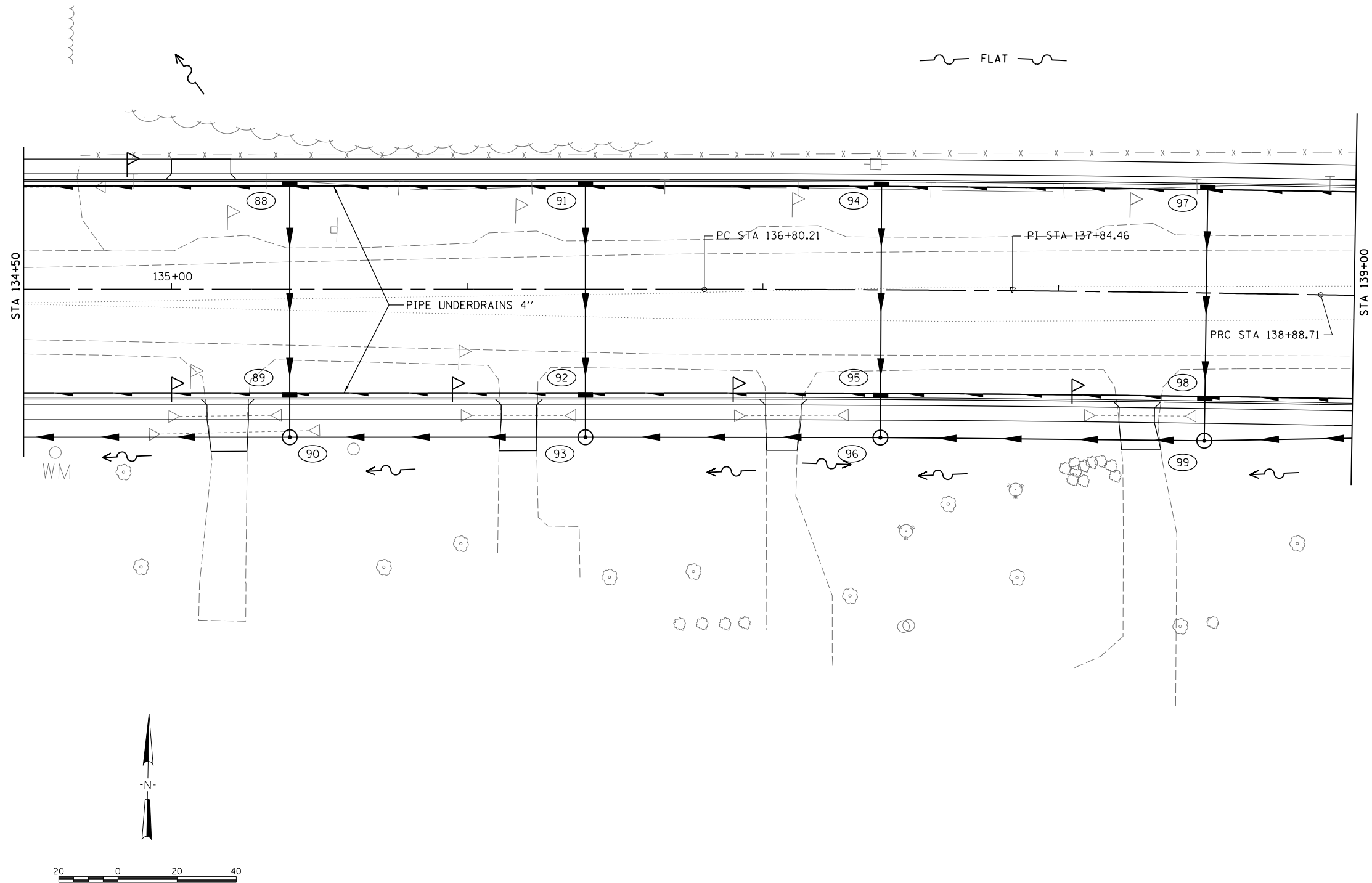
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		DRAWN -	REVISED -								SANGAMON	368	107
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -						96S2002F		CONTRACT NO. 93671		
	PLOT DATE = 7/29/2024	DATE -	REVISED -						SCALE:	SHEET NO.	OF	SHEETS	STA.



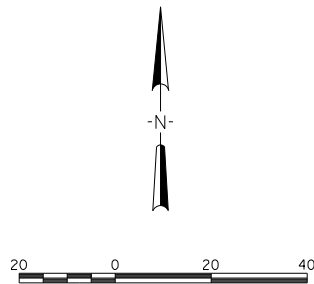
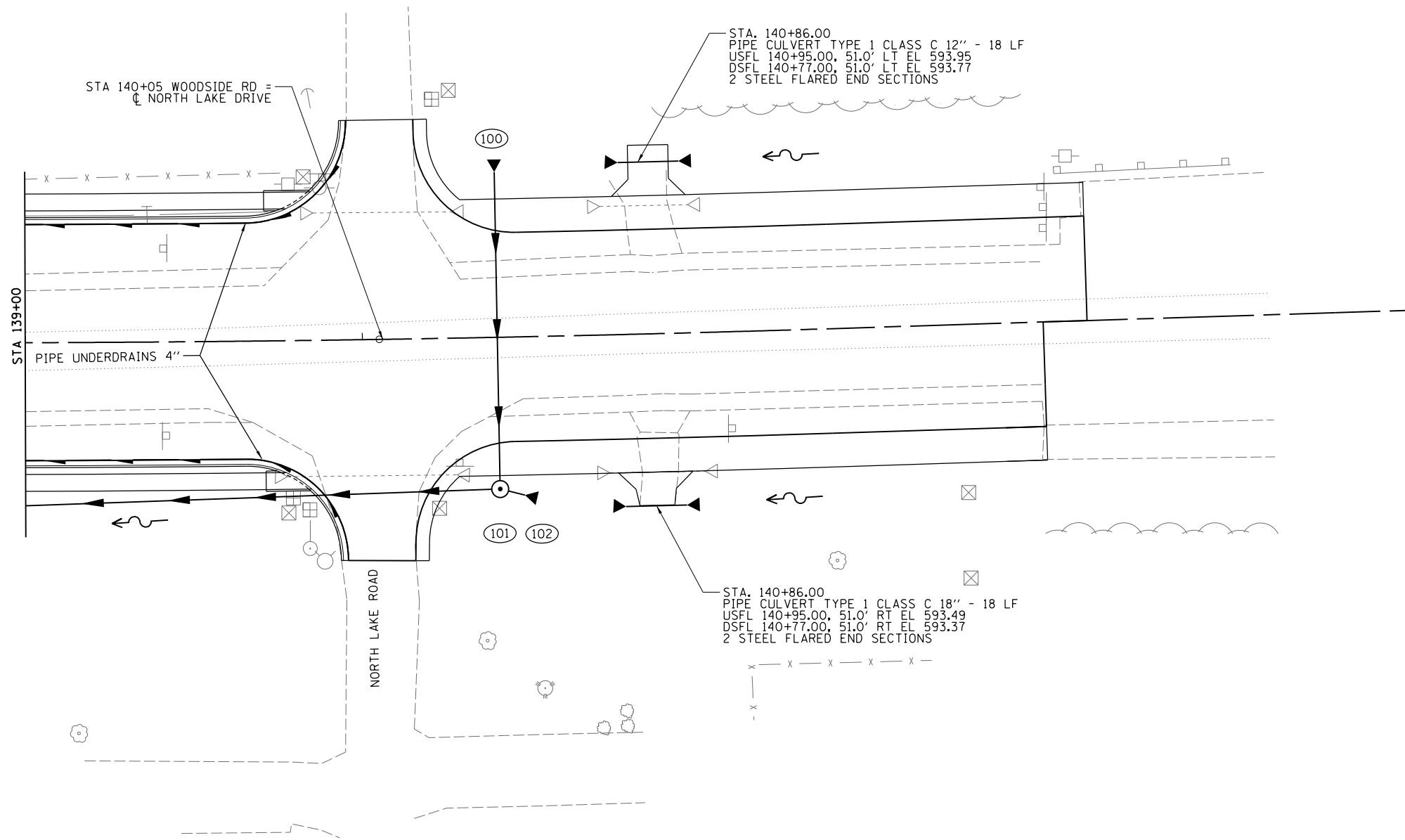
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	.	SANGAMON	368	108
96S2002F		CONTRACT NO. 93671		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6				
* 07-00164-04-FP. 07-00090-08-FP				



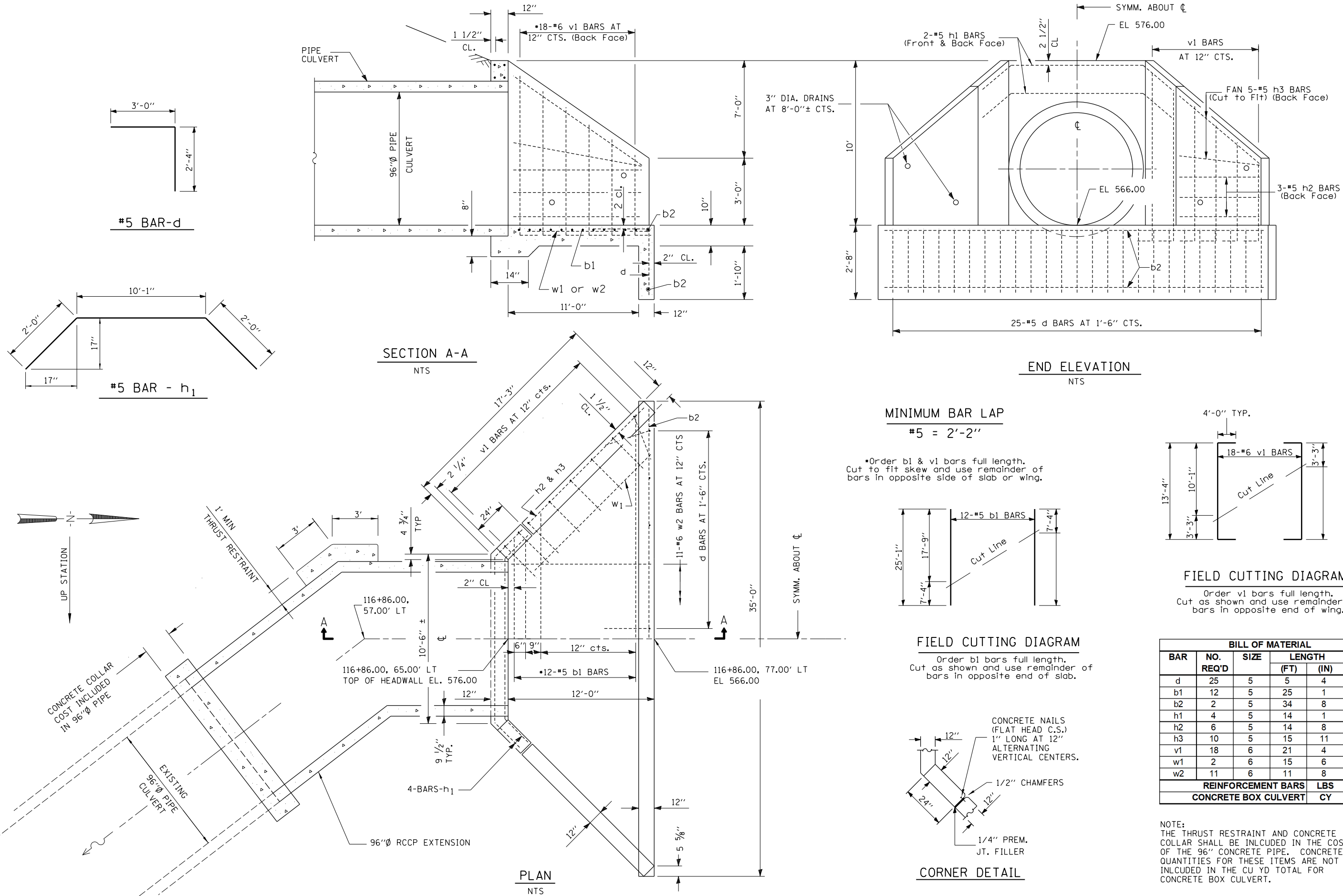
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		DRAWN -	REVISED -									368	109
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -		96S2002F				CONTRACT NO. 93671				
	PLOT DATE = 7/29/2024	DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT 6



FILE NAME = Ge-1-wd200P_8.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	DRAINAGE PLAN WOODSIDE ROAD 8 - PHASE 2			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000' / in.	DRAWN -	REVISED -						.	SANGAMON	368	110
	PLOT DATE = 7/29/2024	CHECKED -	REVISED -		96S2002F			CONTRACT NO. 93671				
		DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.	FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP



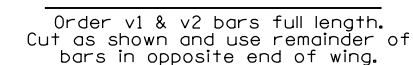
FILE NAME = Ge-1-wd20DP_9.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	DRAINAGE PLAN WOODSIDE ROAD 9 – PHASE 2				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -								SANGAMON	368	111
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -						96S2002F		CONTRACT NO. 93671		
	PLOT DATE = 7/29/2024	DATE -	REVISED -						FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6				
				SCALE:		SHEET NO.	OF	SHEETS	STA.	TO STA.			





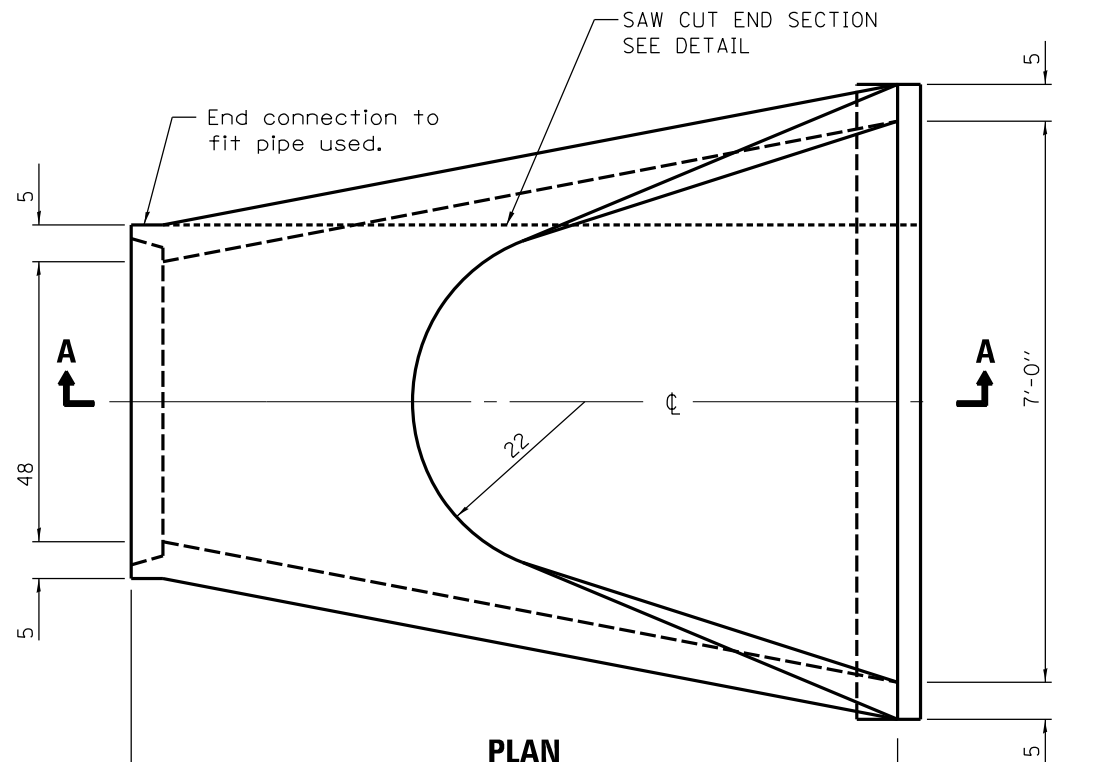
#5 = 2'-2''

*Order v1, v2, b1 & w2 bars full length.
Cut to fit skew and use remainder of
bars in opposite side of slab or wing.

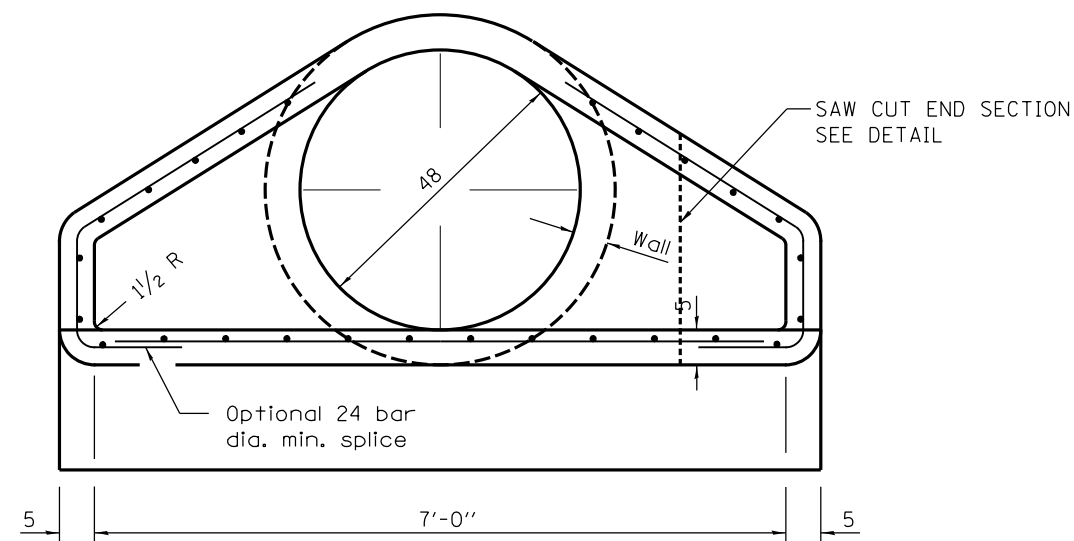


BILL OF MATERIAL					
BAR	NO. REQ'D	SIZE	LENGTH		WEIGHT (LB)
			(FT)	(IN)	
d	23	5	5	4	128
b1	12	5	26	7	333
b2	2	5	34	1	71
h0	2	5	17	5	36
h1	2	5	15	11	33
h2	3	5	22	0	11
h3	5	5	22	10	119
h4	3	5	9	8	30
h5	5	5	11	2	58
v1	13	6	21	5	418
v2	7	6	21	4	224
w1	13	6	11	8	228
w2	9	6	12	8	171
REINFORCEMENT BARS				LBS	1861
CONCRETE BOX CULVERT				CY	22.0

FILE NAME = Gc-5_RCC.END96-RT.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	CULVERT EXTENSION DETAILS – 2 (STA 117+30) WOODSIDE ROAD – PHASE 2				F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -							.	SANGAMON	368	113
	PLOT SCALE = 80.000 ' / in.	CHECKED -	REVISED -		96S2002F		CONTRACT NO. 93671						
	PLOT DATE = 7/29/2024	DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP. 07-00090-08-FP		



SECTION A-A



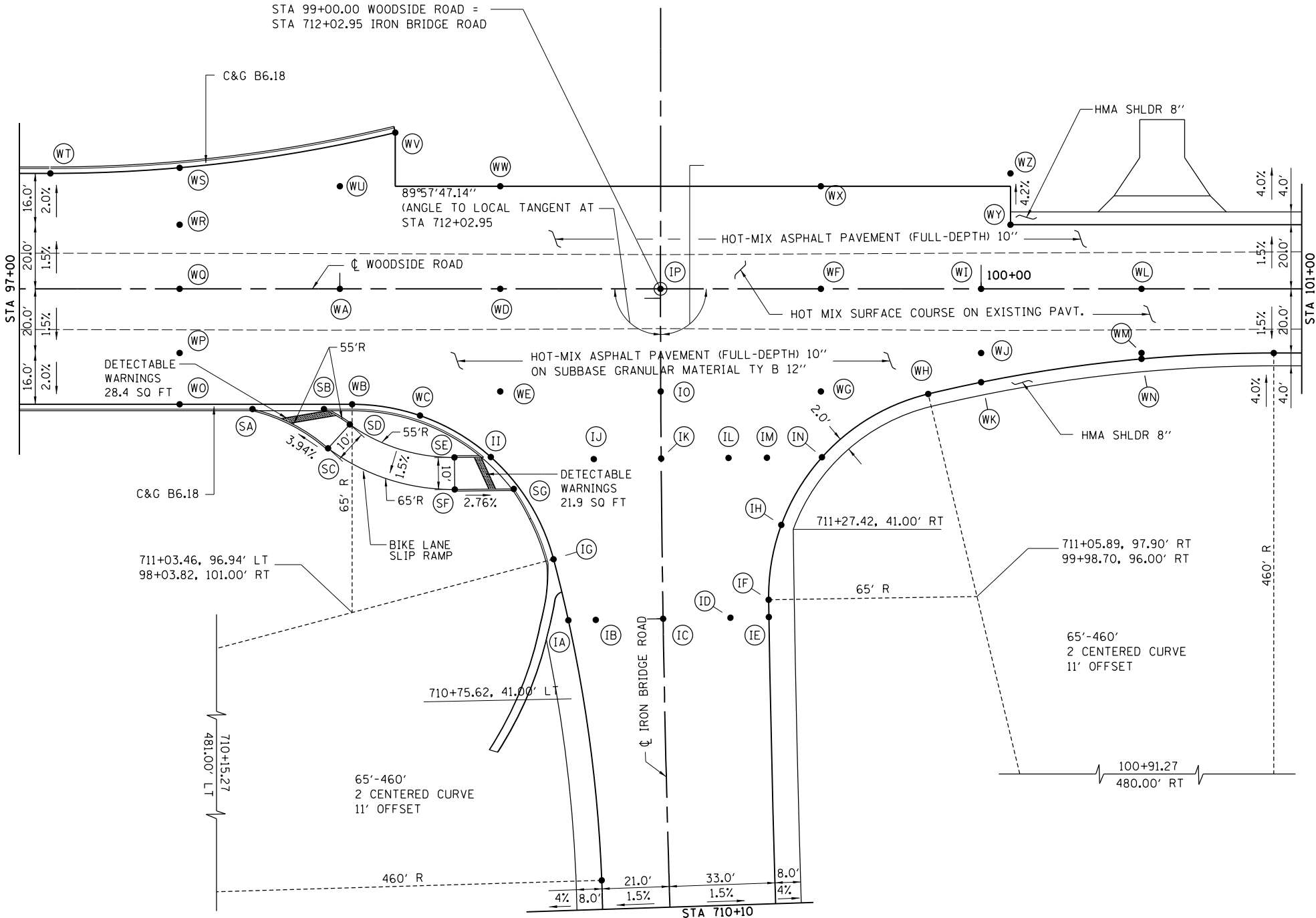
GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

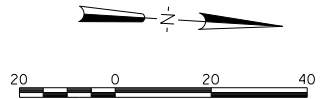
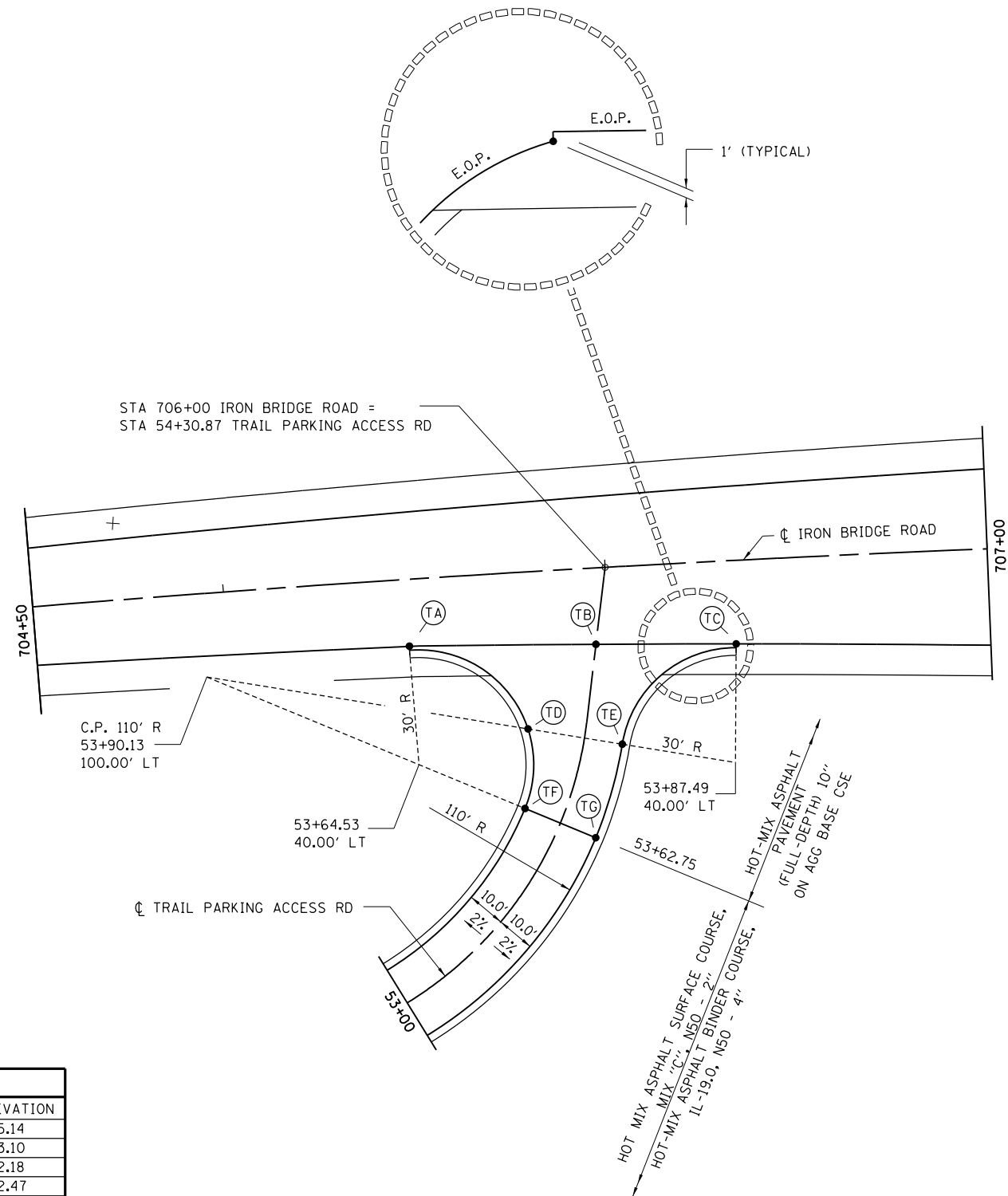
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = Ge-5.RCC.END48-RT.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	CULVERT EXTENSION DETAILS - 2 (STA 127+50) WOODSIDE ROAD - PHASE 2				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 80.000' / in.	DRAWN -	REVISED -									368	114
	PLOT DATE = 7/29/2024	CHECKED -	REVISED -		96S2002F				CONTRACT NO. 93671				
		DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP		

WOODSIDE ROAD AT IRON BRIDGE ROAD						
	STATION	OFFSET	C OR B	NORTHING	EASTING	ELEVATION
WA	98+00	0.00	WOODSIDE	1112378.322	2432821.047	597.27
WB	98+03.82	36.00	WOODSIDE	1112342.401	2432825.549	596.64
WC	98+25	39.55	WOODSIDE	1112339.256	2432846.796	596.53
WD	98+50	0.00	WOODSIDE	1112379.273	2432871.038	597.21
WE	98+50	32.00	WOODSIDE	1112347.279	2432871.647	596.73
WF	99+50	0.00	WOODSIDE	1112381.176	2432971.020	597.09
WG	99+50	32.00	WOODSIDE	1112349.182	2432971.629	596.61
WH	99+83.47	32.81	WOODSIDE	1112349.009	2433005.110	596.47
WI	100+00	0.00	WOODSIDE	1112382.128	2433021.011	597.06
WJ	100+00	20.00	WOODSIDE	1112362.132	2433021.391	596.76
WK	100+00	29.15	WOODSIDE	1112352.987	2433021.566	596.64
WL	100+50	0.00	WOODSIDE	1112383.080	2433071.002	597.08
WM	100+50	20.00	WOODSIDE	1112363.083	2433071.382	596.78
WN	100+50	21.85	WOODSIDE	1112361.228	2433071.418	596.75
WO	97+50	36.00	WOODSIDE	1112341.376	2432771.742	596.70
WP	97+50	20.00	WOODSIDE	1112357.374	2432771.438	597.02
WQ	97+50	0.00	WOODSIDE	1112377.370	2432771.057	597.32
WR	97+50	-20.00	WOODSIDE	1112397.366	2432770.677	597.02
WS	97+50	-37.77	WOODSIDE	1112415.131	2432770.338	596.63
WT	97+09.71	-36.00	WOODSIDE	1112412.597	2432730.094	596.75
WU	98+00	-32.00	WOODSIDE	1112410.316	2432820.439	596.96
WV	98+17.27	-48.75	WOODSIDE	1112427.392	2432837.386	596.43
WW	98+50	-32.00	WOODSIDE	1112411.267	2432870.430	596.61
WX	99+50	-32.00	WOODSIDE	1112413.171	2432970.411	596.49
WY	100+09.13	-20.00	WOODSIDE	1112402.298	2433029.762	596.03
WZ	100+09.13	-48.75	WOODSIDE	1112418.295	2433029.457	595.89
IA	711+00	-29.54	IRON BR	1112276.300	2432895.008	596.31
IB	711+00	-21.00	IRON BR	1112276.575	2432902.803	596.44
IC	711+00	0.00	IRON BR	1112277.335	2432923.790	596.76
ID	711+00	21.00	IRON BR	1112278.056	2432944.777	596.44
IE	711+00	33.00	IRON BR	1112278.479	2432956.770	596.20
IF	711+05.44	33.00	IRON BR	1112283.887	2432956.582	596.19
IG	711+19.03	-33.88	IRON BR	1112299.245	2432889.095	596.40
IH	711+28.84	37.76	IRON BR	1112307.281	2432960.084	596.16
IJ	711+50.88	-53.11	IRON BR	1112326.740	2432869.116	596.46
IJ	711+50	-21.00	IRON BR	1112326.722	2432901.240	596.61
IK	711+50	0.00	IRON BR	1112327.291	2432922.232	596.93
IL	711+50	21.00	IRON BR	1112327.859	2432943.225	596.61
IM	711+50	33.00	IRON BR	1112328.184	2432955.220	596.37
IN	711+50	50.17	IRON BR	1112328.649	2432972.387	596.14
IO	711+70.95	0.00	IRON BR	1112348.232	2432921.701	597.00
IP	712+02.95	0.00	IRON BR	1112380.225	2432921.029	597.15
SA	97+72.71	37.50	WOODSIDE	1112340.309	2432794.481	596.57
SB	97+95.02	37.50	WOODSIDE	1112340.734	2432816.782	596.54
SC	97+96.32	49.74	WOODSIDE	1112328.521	2432818.319	596.76
SD	98+03.10	42.30	WOODSIDE	1112336.085	2432824.948	596.91
SE	711+50.85	-64.49	IRON BR	1112326.408	2432857.747	596.82
SF	711+40.96	-64.47	IRON BR	1112316.412	2432858.038	596.67
SG	711+40.97	-46.03	IRON BR	1112316.950	2432876.475	596.33



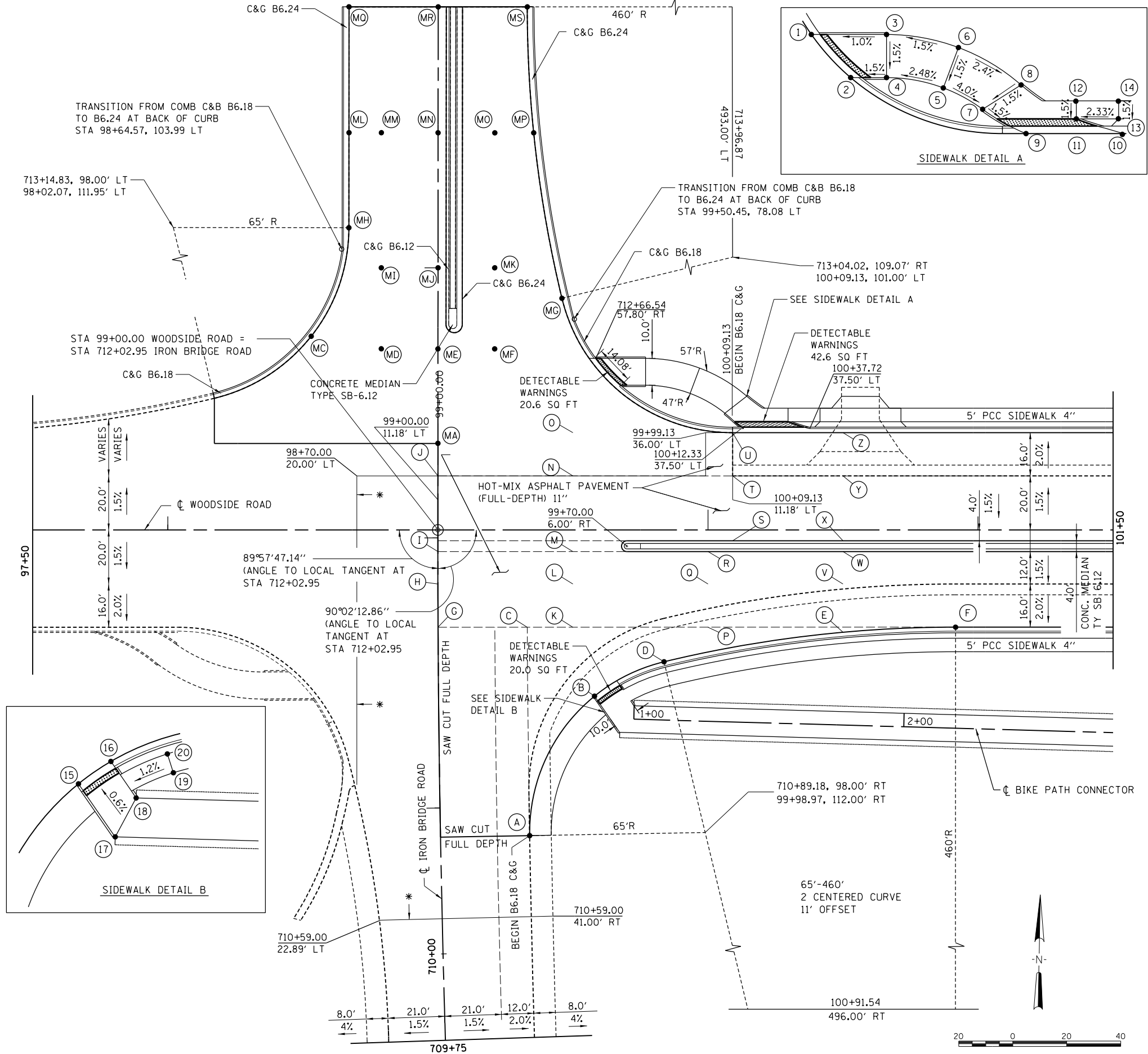
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		DRAWN - JDS	REVISED -								SANGAMON	368	115
	PLOT SCALE = 40.0000 ' / in.	CHECKED - JWM	REVISED -		96S2002F				CONTRACT NO. 93671				
	PLOT DATE = 7/29/2024	DATE - 8/24/2020	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT 6



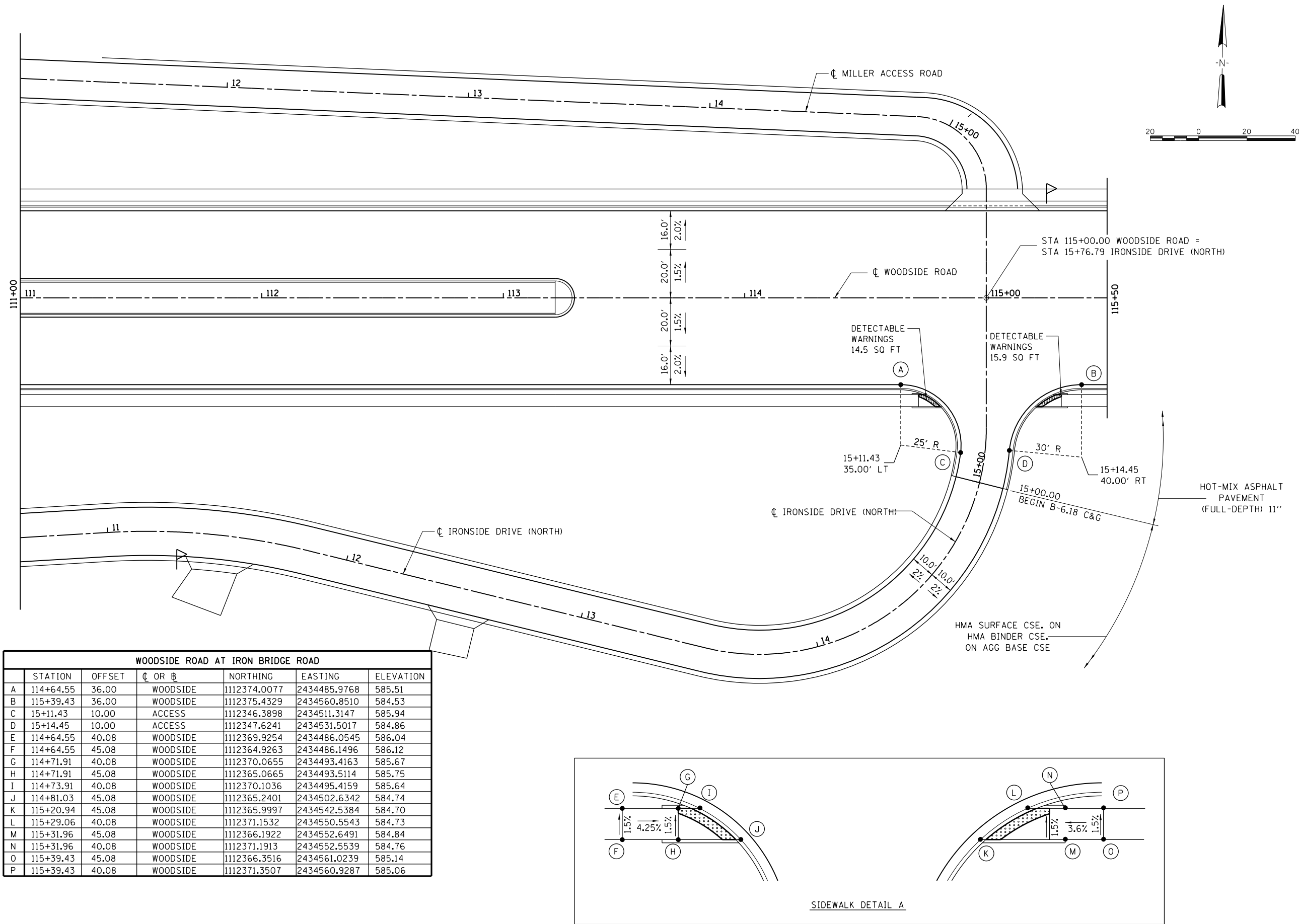
IRON BRIDGE ROAD AT TRAIL PARKING ACCESS ROAD						
	STATION	OFFSET	CL OR CL	NORTHING	EASTING	ELEVATION
TA	705+47.62	-17.46	IRON BR	1111729.102	2432985.536	605.14
TB	54+10.60	0.00	TRAIL PARKING	1111777.747	2432982.105	603.10
TC	706+33.21	21.83	IRON BR	1111814.336	2432979.764	602.18
TD	53+85.91	-14.95	TRAIL PARKING	1111761.365	2433005.259	602.47
TE	53+85.91	10.00	TRAIL PARKING	1111786.195	2433007.737	602.53
TF	53+62.75	-10.00	TRAIL PARKING	1111761.848	2433026.074	602.16
TG	53+62.75	10.00	TRAIL PARKING	1111780.762	2433032.577	602.16

WOODSIDE ROAD AT IRON BRIDGE ROAD						
	STATION	OFFSET	CL OR B	NORTHING	EASTING	ELEVATION
A	710+89.18	33.00	IRON BRIDGE	1112267.7216	2432957.1589	596.18
B	711+40.87	57.74	IRON BRIDGE	1112319.8095	2432980.2001	595.82
C	711+66.77	33.00	IRON BRIDGE	1112344.8608	2432954.7916	596.42
D	99+83.74	48.81	WOODSIDE	1112333.0171	2433005.6816	595.62
E	100+50.00	37.88	WOODSIDE	1112345.2069	2433071.7238	594.51
F	100+91.70	36.00	WOODSIDE	1112347.8796	2433113.3804	593.34
G	99+00.02	36.00	WOODSIDE	1112344.2316	2432921.7340	596.53
H	99+00.02	20.00	WOODSIDE	1112360.2287	2432921.4295	596.85
I	99+00.00	8.00	WOODSIDE	1112372.2261	2432921.1813	597.03
J	99+00.00	-20.00	WOODSIDE	1112400.2211	2432920.6483	596.85
K	99+50.00	36.00	WOODSIDE	1112345.1828	2432971.7061	596.27
L	99+50.00	20.00	WOODSIDE	1112361.1799	2432971.4016	596.59
M	99+50.00	8.00	WOODSIDE	1112373.1778	2432971.1732	596.77
N	99+50.00	-20.00	WOODSIDE	1112401.1727	2432970.6403	596.59
O	99+50.00	-36.00	WOODSIDE	1112417.1698	2432970.3358	596.27
P	100+00.00	36.00	WOODSIDE	1112346.1344	2433021.6970	595.60
Q	100+00.00	20.00	WOODSIDE	1112362.1315	2433021.3925	595.92
R	100+00.00	8.00	WOODSIDE	1112374.1294	2433021.1641	596.10
S	100+09.13	4.00	WOODSIDE	1112378.3024	2433030.2185	596.16
T	100+09.13	-20.00	WOODSIDE	1112402.2981	2433029.7617	595.92
U	100+09.13	-36.00	WOODSIDE	1112418.2952	2433029.4572	595.60
V	100+50.00	20.00	WOODSIDE	1112363.0831	2433071.3835	594.90
W	100+50.00	8.00	WOODSIDE	1112375.0810	2433071.1551	595.02
X	100+50.00	4.00	WOODSIDE	1112379.0802	2433071.0790	595.08
Y	100+50.00	-20.00	WOODSIDE	1112403.0759	2433070.6222	594.90
Z	100+50.00	-36.00	WOODSIDE	1112419.0730	2433070.3177	594.52
MA	712+35	0.00	IRON BRIDGE	1112412.271	2432920.440	597.05
MB	712+52.93	68.89	IRON BRIDGE	1112431.461	2432988.984	596.02
MC	712+74.62	-46.93	IRON BRIDGE	1112451.020	2432872.785	596.30
MD	712+70	-21.00	IRON BRIDGE	1112446.879	2432898.800	597.00
ME	712+70	0.00	IRON BRIDGE	1112447.266	2432919.796	596.95
MF	712+70	21.00	IRON BRIDGE	1112447.652	2432940.792	596.43
MG	712+88.71	45.89	IRON BRIDGE	1112466.845	2432965.333	595.81
MH	713+14.83	-33.00	IRON BRIDGE	1112491.485	2432885.977	596.26
MI	713+00	-21.00	IRON BRIDGE	1112476.874	2432898.248	596.55
MJ	713+00	0.00	IRON BRIDGE	1112477.261	2432919.244	596.86
MK	713+00	21.00	IRON BRIDGE	1112477.647	2432940.241	596.57
ML	713+50	-33.00	IRON BRIDGE	1112526.645	2432885.331	596.15
MM	713+50	-21.00	IRON BRIDGE	1112526.866	2432897.329	596.40
MN	713+50	0.00	IRON BRIDGE	1112527.252	2432918.325	596.71
MO	713+50	21.00	IRON BRIDGE	1112527.638	2432939.321	596.48
MP	713+50	35.39	IRON BRIDGE	1112527.903	2432953.713	596.26
MQ	713+96.62	-33.00	IRON BRIDGE	1112573.257	2432884.473	596.01
MR	713+96.62	0.00	IRON BRIDGE	1112573.834	2432917.468	596.57
MS	713+96.62	33.00	IRON BRIDGE	1112574.470	2432950.462	596.19
1	99+58.48	-63.54	WOODSIDE	1112444.8633	2432978.2913	595.75
2	99+67.68	-53.56	WOODSIDE	1112435.0617	2432987.6780	595.71
3	99+76.90	-63.56	WOODSIDE	1112445.2353	2432996.7060	595.94
4	99+76.90	-53.56	WOODSIDE	1112435.2371	2432996.8963	595.85
5	99+93.39	-50.57	WOODSIDE	1112432.5654	2433013.4356	596.26
6	99+96.89	-59.94	WOODSIDE	1112441.9951	2433016.7643	596.34
7	100+06.30	-43.23	WOODSIDE	1112425.4701	2433026.4847	595.60
8	100+14.35	-49.53	WOODSIDE	1112431.9252	2433034.4118	595.68
9	100+15.72	-36.00	WOODSIDE	1112418.4205	2433036.0390	595.43
10	100+39.75	-36.00	WOODSIDE	1112418.8780	2433060.0728	594.80
11	100+29.68	-40.08	WOODSIDE	1112422.7685	2433049.9250	594.70
12	100+29.68	-45.08	WOODSIDE	1112427.7676	2433049.8299	594.78
13	100+41.47	-40.08	WOODSIDE	1112422.9930	2433061.7160	594.98
14	100+41.47	-45.08	WOODSIDE	1112427.9921	2433061.6209	595.06
15	99+58.01	61.53	WOODSIDE	1112427.992	2433061.620	595.82
16	99+66.24	55.84	WOODSIDE	1112325.650	2432988.316	595.75
17	99+67.32	74.93	WOODSIDE	1112306.519	2432989.764	595.70
18	99+72.69	65.07	WOODSIDE	1112316.544	2432994.870	595.85
19	99+80.63	59.03	WOODSIDE	1112324.229	2433007.977	596.05
20	99+79.52	54.10	WOODSIDE	1112329.066	2433006.714	595.98

* = MATCH EXISTING (BUTT JT, SAW CUT 1 1/2" DEEP)



FILE NAME = Ge-1-INTERSECT_2001.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	INTERSECTION DETAIL – WOODSIDE ROAD AT IRON BRIDGE ROAD PHASE 2				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -								SANGAMON	368	117
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -		96S2002F				CONTRACT NO. 93671				
	PLOT DATE = 7/29/2024	DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP		



FILE NAME =
Ge-1-INTERSECT.2002.dgn

USER NAME = johns00944
DESIGNED -
DRAWN -
PLOT SCALE = 40.0000' / in.
PLOT DATE = 7/29/2024

DESIGNED -
DRAWN -
CHECKED -
DATE -

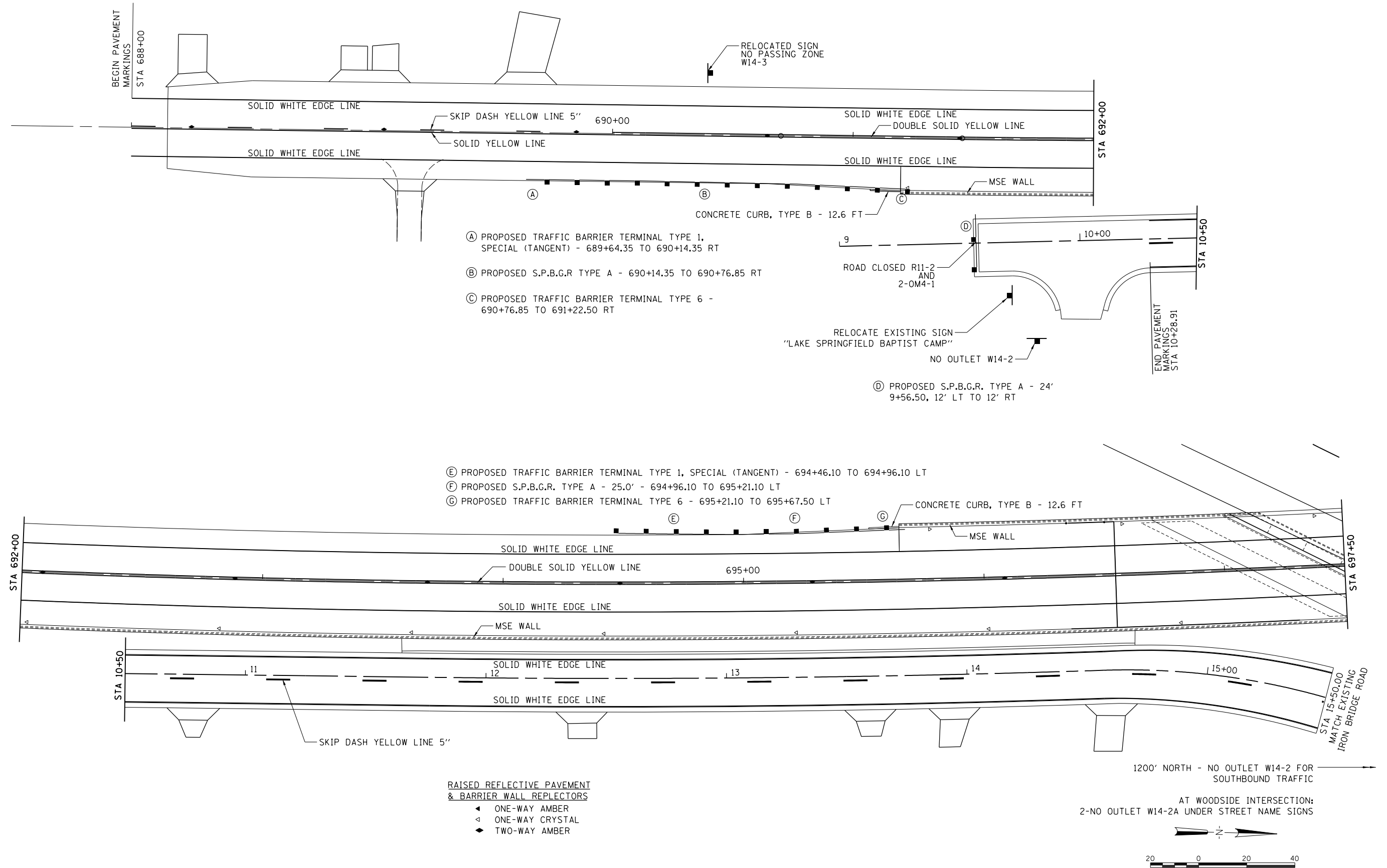
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
SANGAMON COUNTY HIGHWAY DEPARTMENT

INTERSECTION DETAIL - WOODSIDE ROAD
AT IRONSIDE DRIVE (NORTH) - PHASE 2

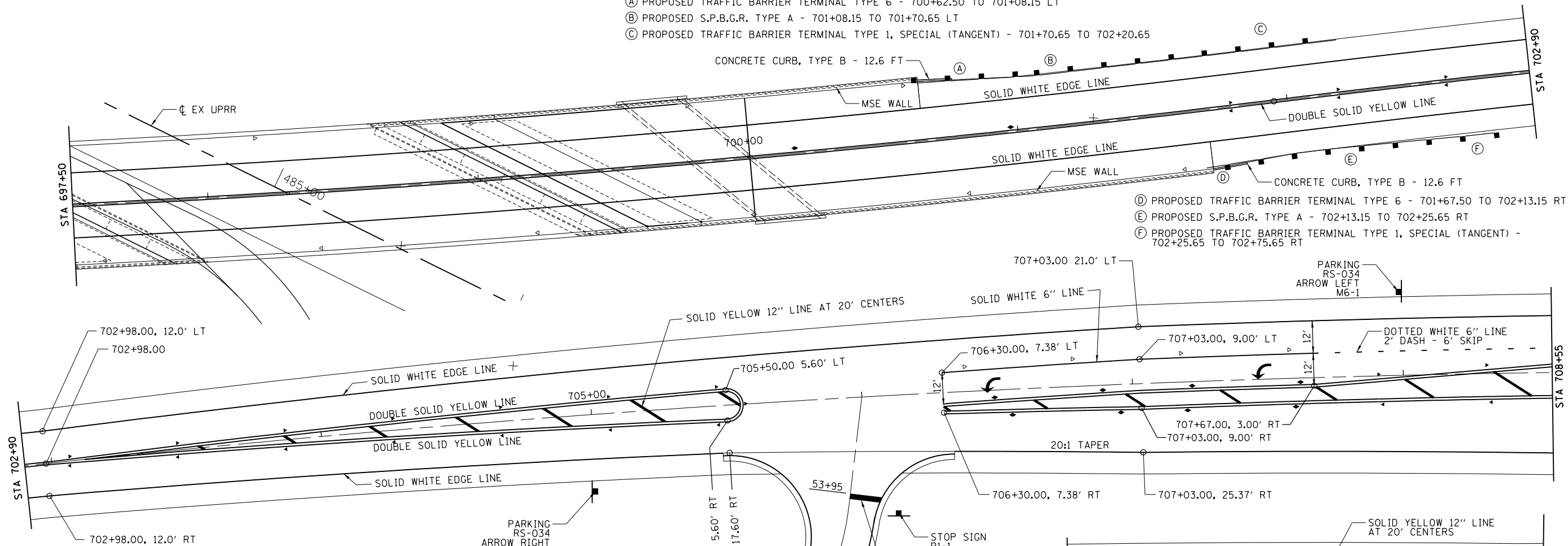
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	96S2002F	SANGAMON	368	118
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6		CONTRACT NO. 93671		
07-00164-04-FP, 07-00090-08-FP				



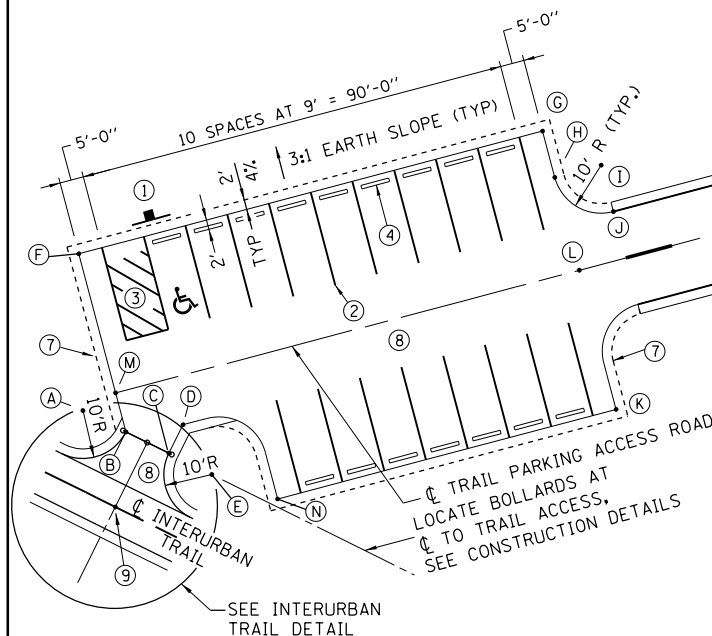
FILE NAME = Fc-1-1B20PLAN.1.dgn	USER NAME = hard02376	DESIGNED - JDS	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	SIGNING, STRIPING, AND GUARDRAIL PLAN PHASE 1 - IRON BRIDGE DETAIL SHEET	SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - RSJ	REVISED -										*	SANGAMON	368	119
		PLOT SCALE = 40.0000' / in.	CHECKED - JWM									96S2002F		CONTRACT NO.	93671	
		PLOT DATE = 9/16/2024	DATE - 8/24/2020									FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 07-00164-04-FP, 07-00090-08-FP				

- (A) PROPOSED TRAFFIC BARRIER TERMINAL TYPE 6 - 700+62.50 TO 701+08.15 LT
(B) PROPOSED S.P.B.G.R. TYPE A - 701+08.15 TO 701+70.65 LT
(C) PROPOSED TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT) - 701+70.65 TO 702+20.65



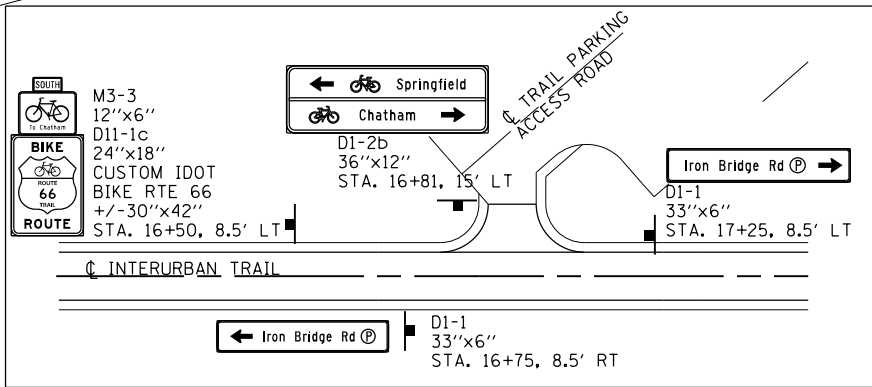
NOTES:

- ACCESSIBLE PARKING SIGN R7-1101 WITH \$250 FINE
- 5" WIDE WHITE PERMANENT PAINT PAVEMENT MARKING (TYPICAL ALL STALLS)
- 5" WIDE WHITE DIAGONAL PERMANENT PAINT PAVEMENT MARKING
- PRECAST CONCRETE PARKING BLOCK
- NOT USED
- SEE SHEET "INTERURBAN TRAIL PARKING LOT ACCESS ROAD" FOR DRAINAGE INFORMATION
- 2' WIDE EARTH SHOULDER
- HOT-MIX ASPHALT SURFACE COURSE MIX "C", N50 ON AGGREGATE BASE COURSE TYPE A, 8"
- STA 16+92.40 INTERURBAN TRAIL 10' WIDE LOT ACCESS CONNECTION

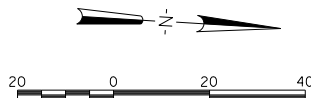


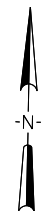
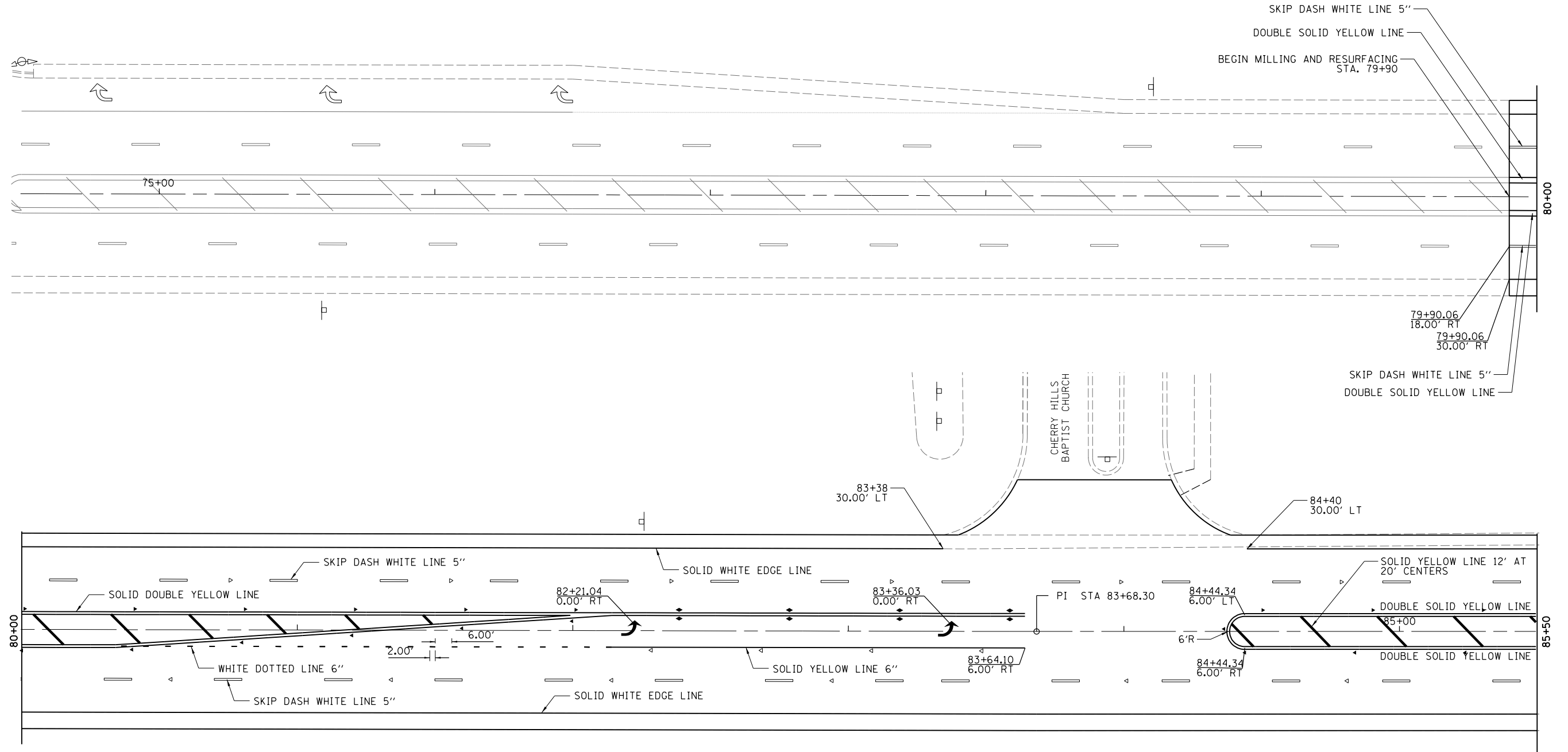
**RAISED REFLECTIVE PAVEMENT
& BARRIER WALL REFLECTORS**

- ONE-WAY AMBER
- ONE-WAY CRYSTAL
- TWO-WAY AMBER



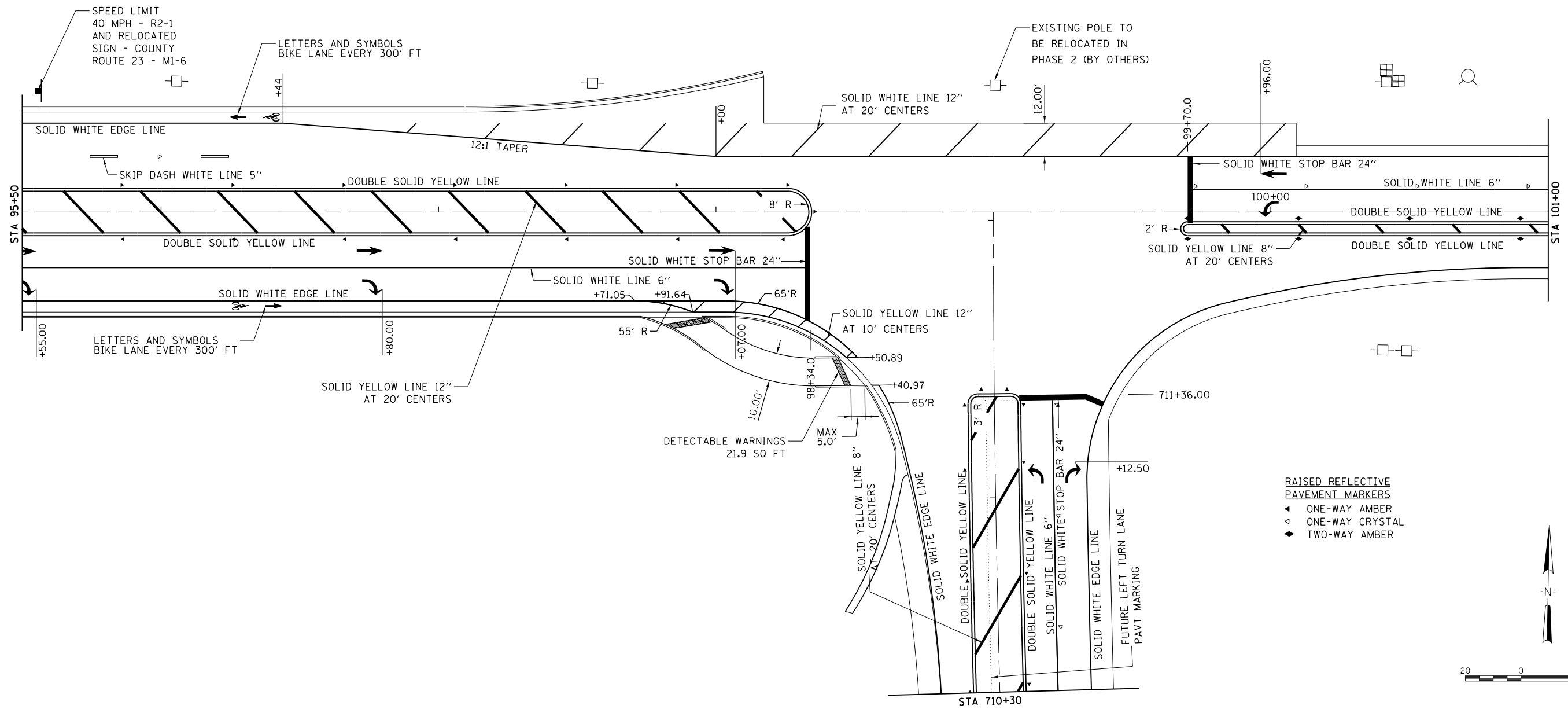
COORDINATE TABLE PARKING LOT					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEV.
A C 10' R	49+92.48	1.80' RT.	1,111,444.529	2,433,180.821	-
B	50+00	8.39' RT	1,111,453.739	2,433,184.716	596.08
C	50+07.52	14.98' RT	1,111,462.949	2,433,188.612	596.28
D	50+11.89	10.00' RT	1,111,465.529	2,433,182.511	596.31
E C 10' R	50+15.04	21.57' RT	1,111,472.159	2,433,192.507	-
F	50+00	30.00' LT	1,111,441.686	2,433,148.265	595.70
G	51+00	30.00' LT	1,111,536.629	2,433,116.870	597.50
H	51+00	20.00' LT	1,111,539.769	2,433,126.364	597.60
I C 10' R	51+10	20.00' LT	1,111,549.263	2,433,123.225	-
J	51+10	10+00 LT	1,111,552.403	2,433,132.719	597.88
K	51+00	30.00' RT	1,111,555.467	2,433,173.860	597.70
L	51+00	0.00'	1,111,546.048	2,433,145.353	597.80
M	50+00	0.00'	1,111,451.104	2,433,176.748	596.00
N	50+27	30.00'	1,111,486.158	2,433,196.755	596.19





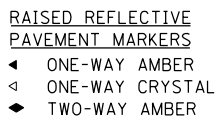
- RAISED REFLECTIVE
PAVEMENT MARKERS
- ◄ ONE-WAY AMBER
 - ◄ ONE-WAY CRYSTAL
 - ◆ TWO-WAY AMBER

FILE NAME = Fe-1-wd20PLAN.1.dgn	USER NAME = hard02376	DESIGNED - JDS	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	SIGNING, STIRPING, AND GUARDRAIL PLAN PHASE 1 – WOODSIDE DETAIL SHEET			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000' / in.	DRAWN - RSJ	REVISED -						*	SANGAMON	368	121
	PLOT DATE = 9/16/2024	CHECKED - JWM	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			96S2002F CONTRACT NO. 93671				
		DATE - 8/24/2020	REVISED -					FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 07-00164-04-FP, 07-00090-08-FP				

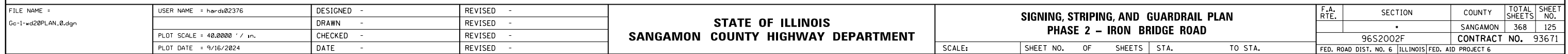


- RAISED REFLECTIVE PAVEMENT MARKERS**
- ▲ ONE-WAY AMBER
 - △ ONE-WAY CRYSTAL
 - ◆ TWO-WAY AMBER

FILE NAME = Fc-1-wd20PLAN_3.dgn	USER NAME = hard02376	DESIGNED - JDS	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	SIGNING, STRIPING, AND GUARDRAIL PLAN PHASE 1 – WOODSIDE ROAD /IRON BRIDGE JUNCTION			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - RSJ	REVISED -							SANGAMON	368	123
	PLOT SCALE = 40.0000' / in.	CHECKED - JWM	REVISED -					96S2002F		CONTRACT NO.	93671	
	PLOT DATE = 9/16/2024	DATE - 8/24/2020	REVISED -					FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP				
SCALE:					SHEET NO.	OF	SHEETS	STA.	TO STA.			

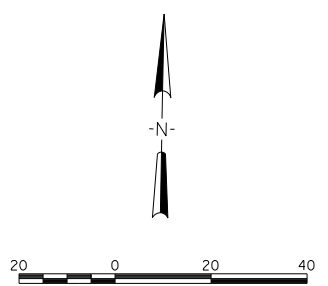
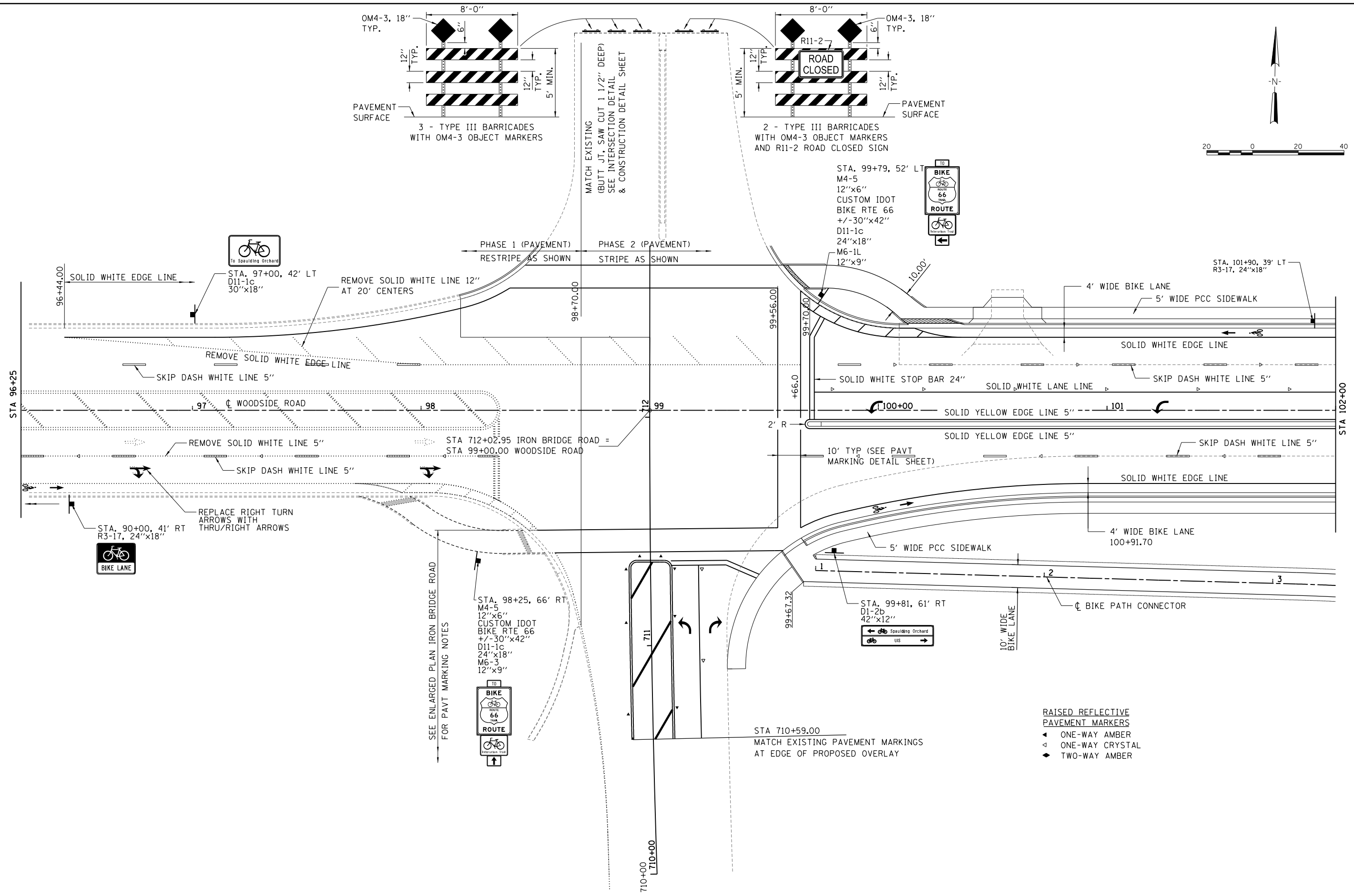


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	124
96S2002F		CONTRACT NO. 93671		
FED. ROAD DIST. NO. 6		ILLINOIS FED. AID PROJECT 6		
* 07-00164-04-FP, 07-00090-08-FP				



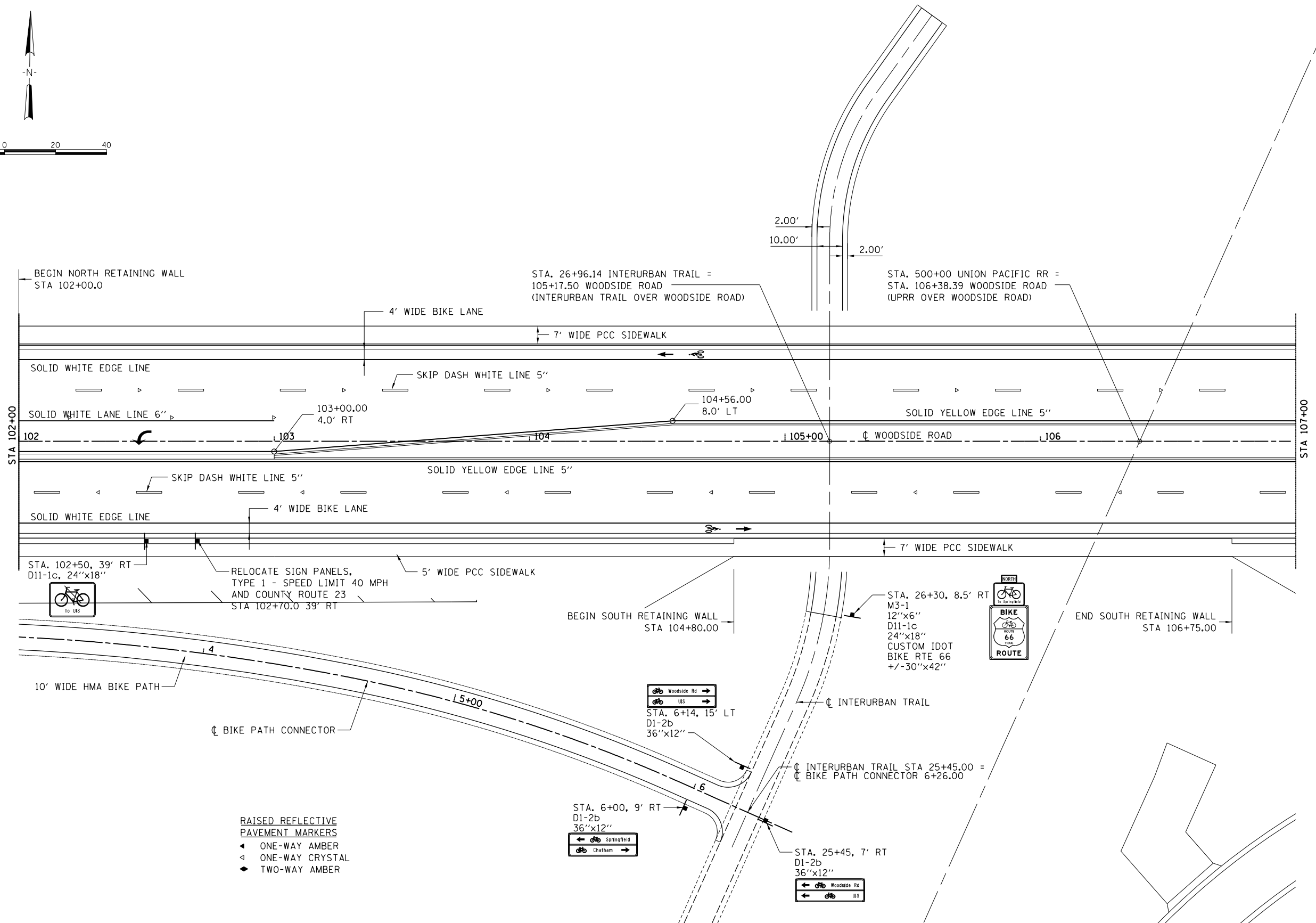
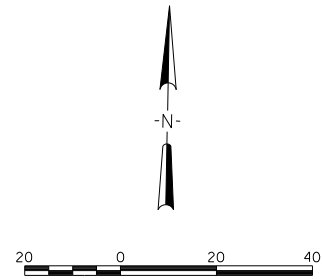
FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT 6
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* 07-00164-04-FP, 07-00090-08-FP



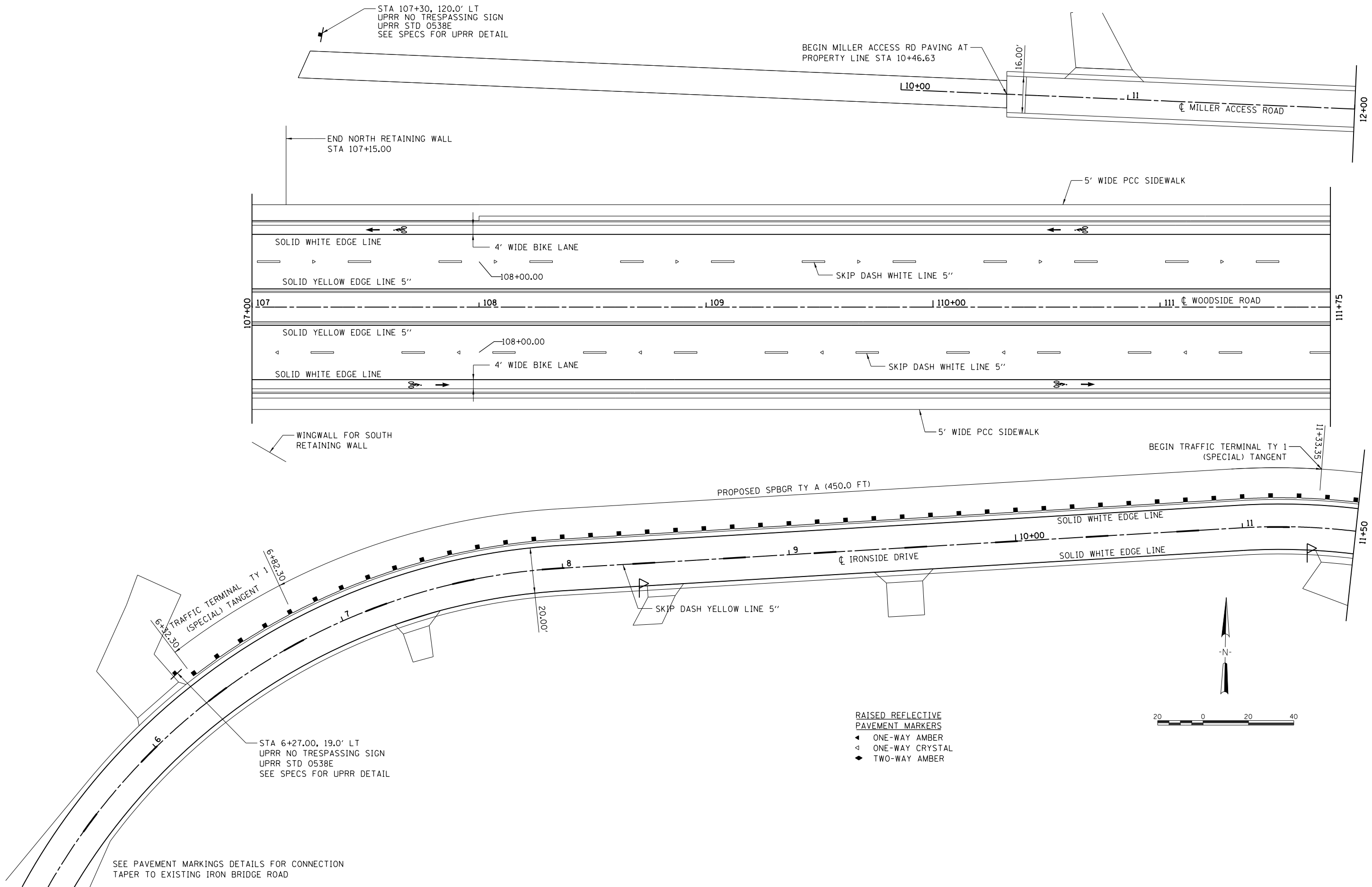
- RAISED REFLECTIVE PAVEMENT MARKERS**
- ◀ ONE-WAY AMBER
 - ◁ ONE-WAY CRYSTAL
 - ◆ TWO-WAY AMBER

FILE NAME = Ge-1-wd20PLAN.1.dgn	USER NAME = hard02376	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	SIGNING, STRIPING, AND GUARDRAIL PLAN PHASE 2 – WOODSIDE ROAD – 1				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
		DRAWN -	REVISED -							*	SANGAMON	368	126		
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -		96S2002F				CONTRACT NO. 93671						
	PLOT DATE = 9/16/2024	DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6	ILLINOIS	FED. AID PROJECT 6		
													* 07-00164-04-FP, 07-00090-08-FP		

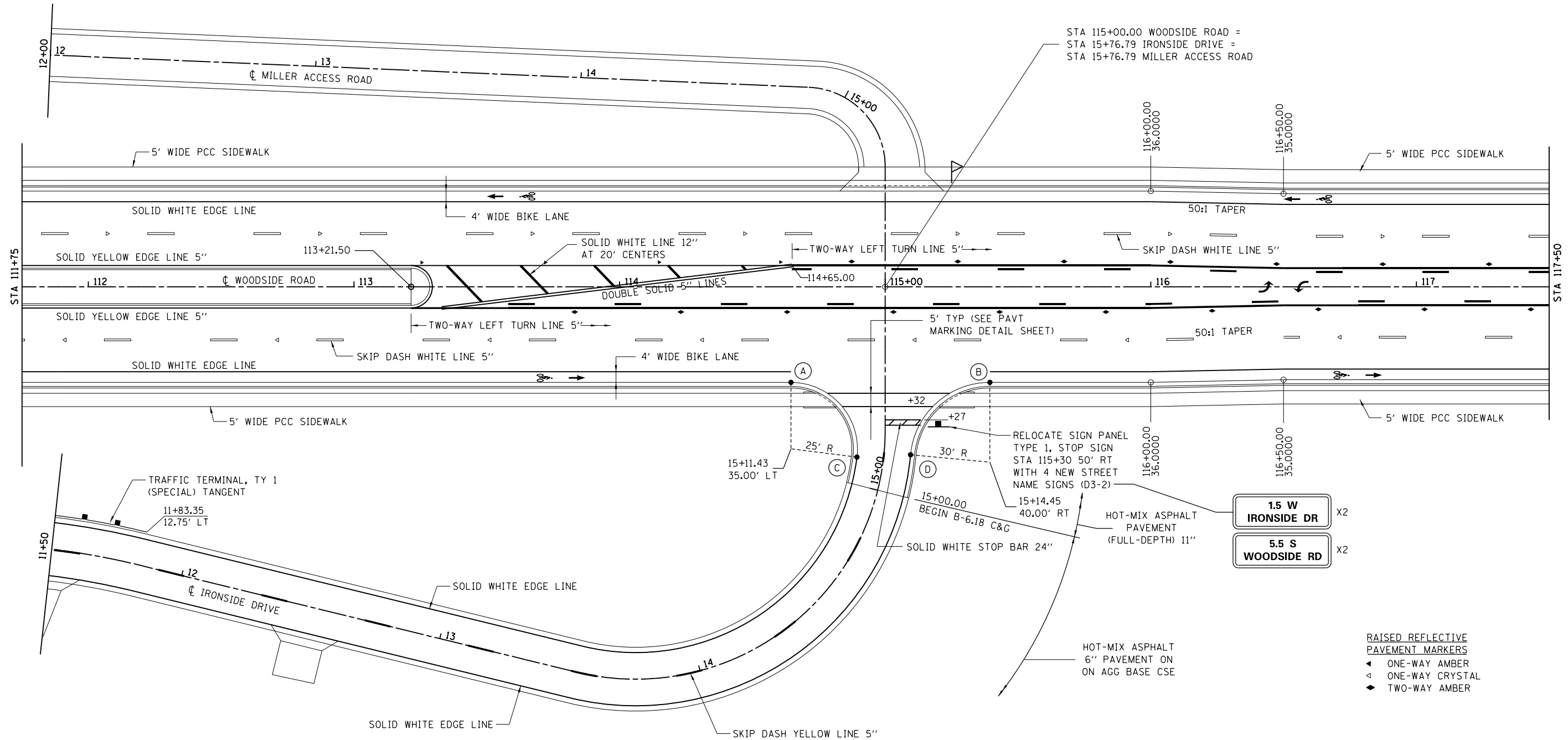


**RAISED REFLECTIVE
PAVEMENT MARKERS**
◄ ONE-WAY AMBER
◄ ONE-WAY CRYSTAL
◆ TWO-WAY AMBER

FILE NAME = Ge-1-wd20PLAN.2.dgn	USER NAME = hard02376	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	SIGNING, STRIPING, AND GUARDRAIL PLAN PHASE 2 – WOODSIDE ROAD – 2			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -						*	SANGAMON	368	127
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -					96S2002F		CONTRACT NO. 93671		
	PLOT DATE = 9/16/2024	DATE -	REVISED -					SCALE:	SHEET NO.	OF	SHEETS	STA.



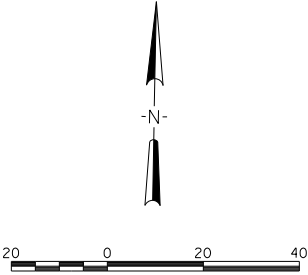
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	PLOT SCALE = 40.0000' / in.		DRAWN -	REVISED -							.	SANGAMON	368	128
	PLOT DATE = 9/16/2024		CHECKED -	REVISED -		SCALE:				96S2002F				CONTRACT NO. 93671
			DATE -	REVISED -		SHEET NO. OF SHEETS STA. TO STA.				FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP				

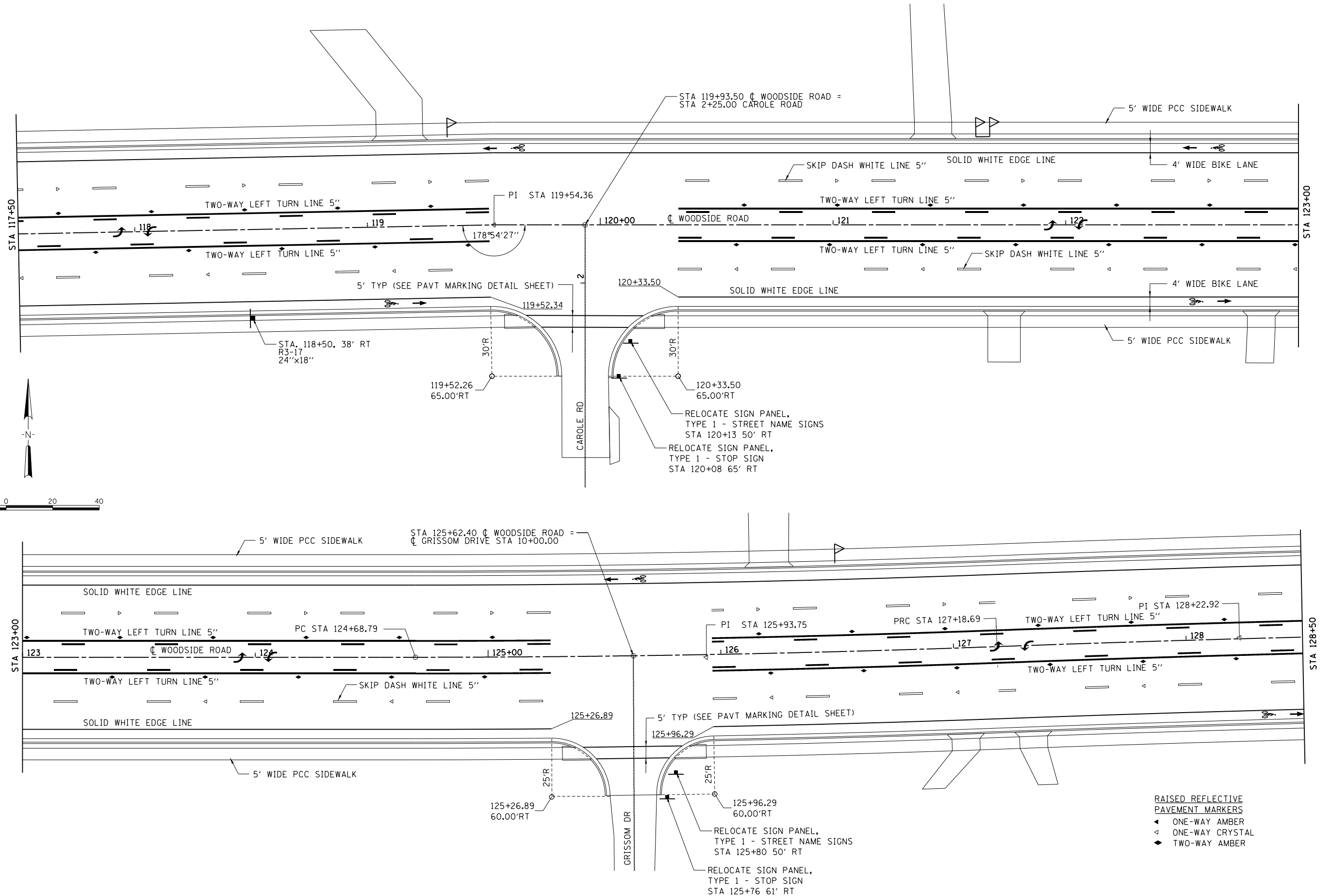
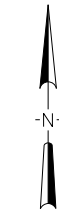


WOODSIDE ROAD AT IRON BRIDGE ROAD						
	STATION	OFFSET	CL OR BL	NORTHING	EASTING	ELEVATION
A	114+64.55	36.00	WOODSIDE	1112374.0077	2434485.9768	585.51
B	115+39.43	36.00	WOODSIDE	1112375.4329	2434560.8510	584.53
C	15+11.43	10.00	ACCESS	1112346.3898	2434511.3147	585.64
D	15+14.45	10.00	ACCESS	1112347.6241	2434531.5017	585.63

RAISED REFLECTIVE
PAVEMENT MARKERS

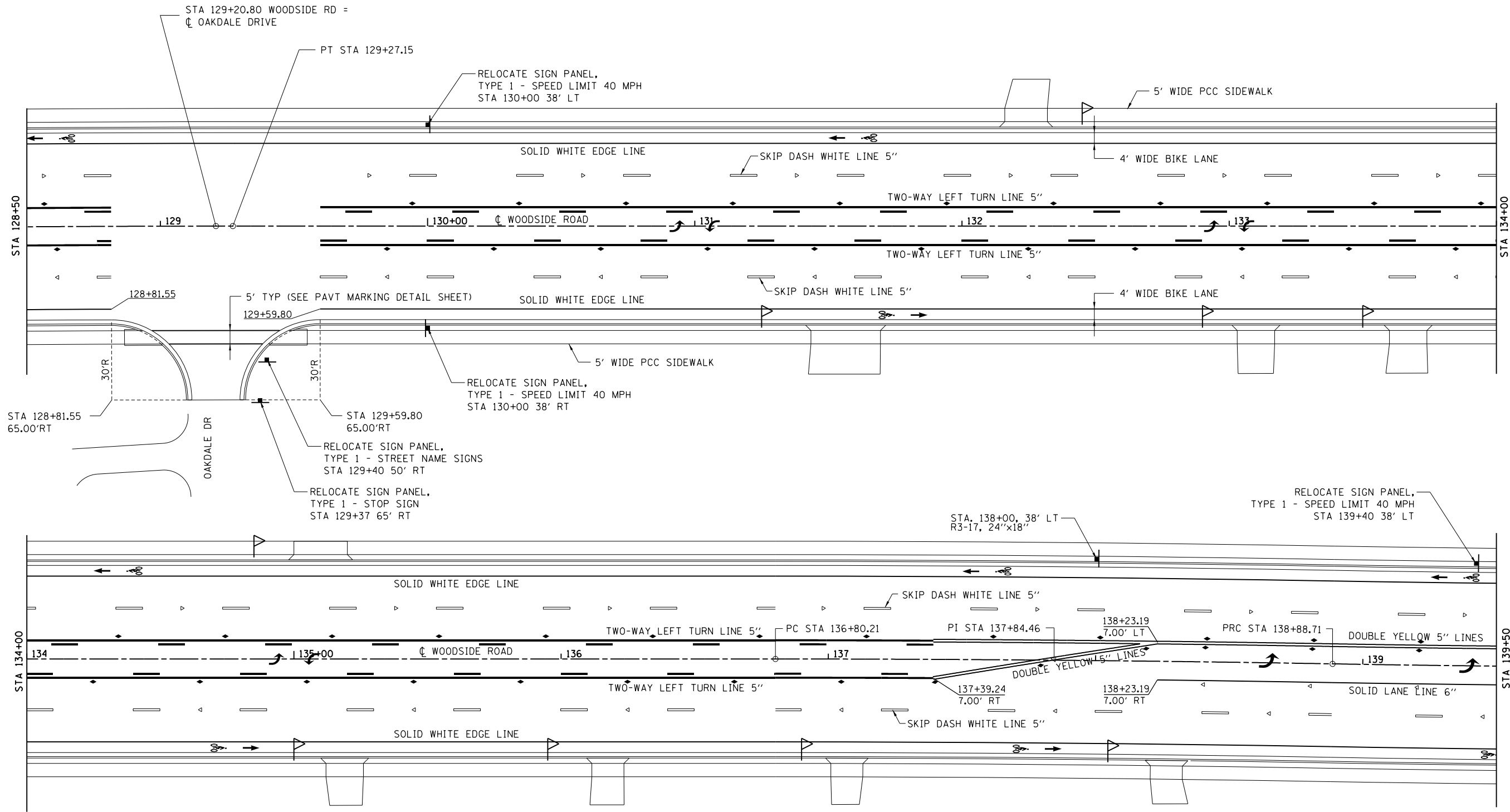
- ONE-WAY AMBER
- ONE-WAY CRYSTAL
- TWO-WAY AMBER



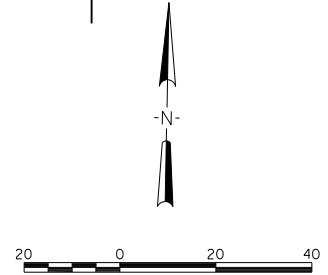


**RAISED REFLECTIVE
PAVEMENT MARKERS**
◄ ONE-WAY AMBER
◄ ONE-WAY CRYSTAL
◆ TWO-WAY AMBER

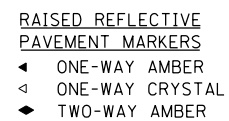
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		DRAWN -	REVISED -							.	SANGAMON	368	130
		PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -	SCALE:				SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 93671
		PLOT DATE = 9/16/2024	DATE -	REVISED -					FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP				



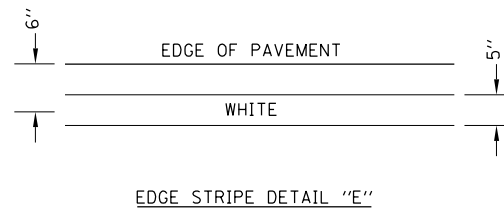
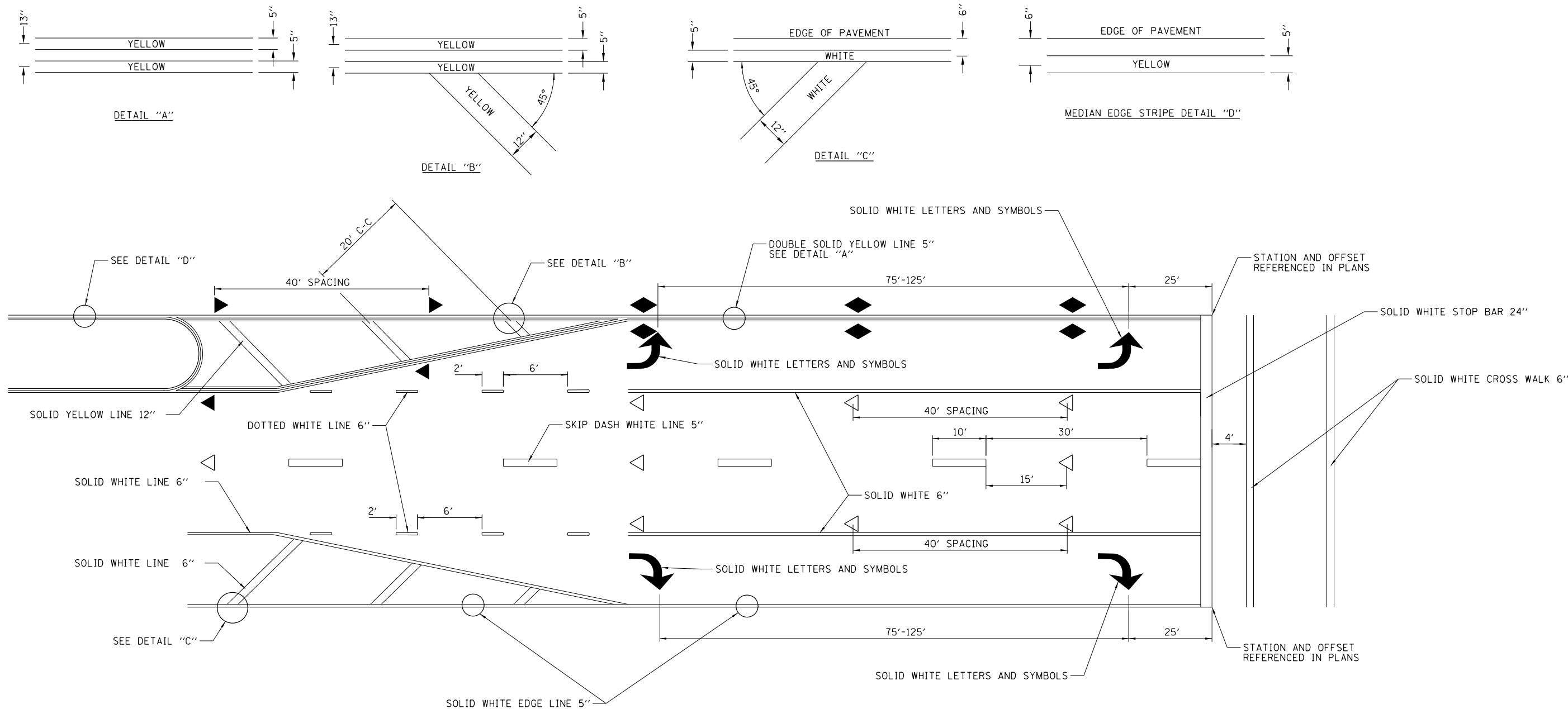
RAISED REFLECTIVE
PAVEMENT MARKERS
◀ ONE-WAY AMBER
◁ ONE-WAY CRYSTAL
◆ TWO-WAY AMBER



FILE NAME = Ge-1-wd20PLAN_6.dgn	USER NAME = hard02376	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	SIGNING, STRIPING, AND GUARDRAIL PLAN PHASE 2 – WOODSIDE ROAD – 6			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -						*	SANGAMON	368	131
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -					96S2002F		CONTRACT NO. 93671		
	PLOT DATE = 9/16/2024	DATE -	REVISED -					FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 ▪ 07-00164-04-FP, 07-00090-08-FP				
				SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.			

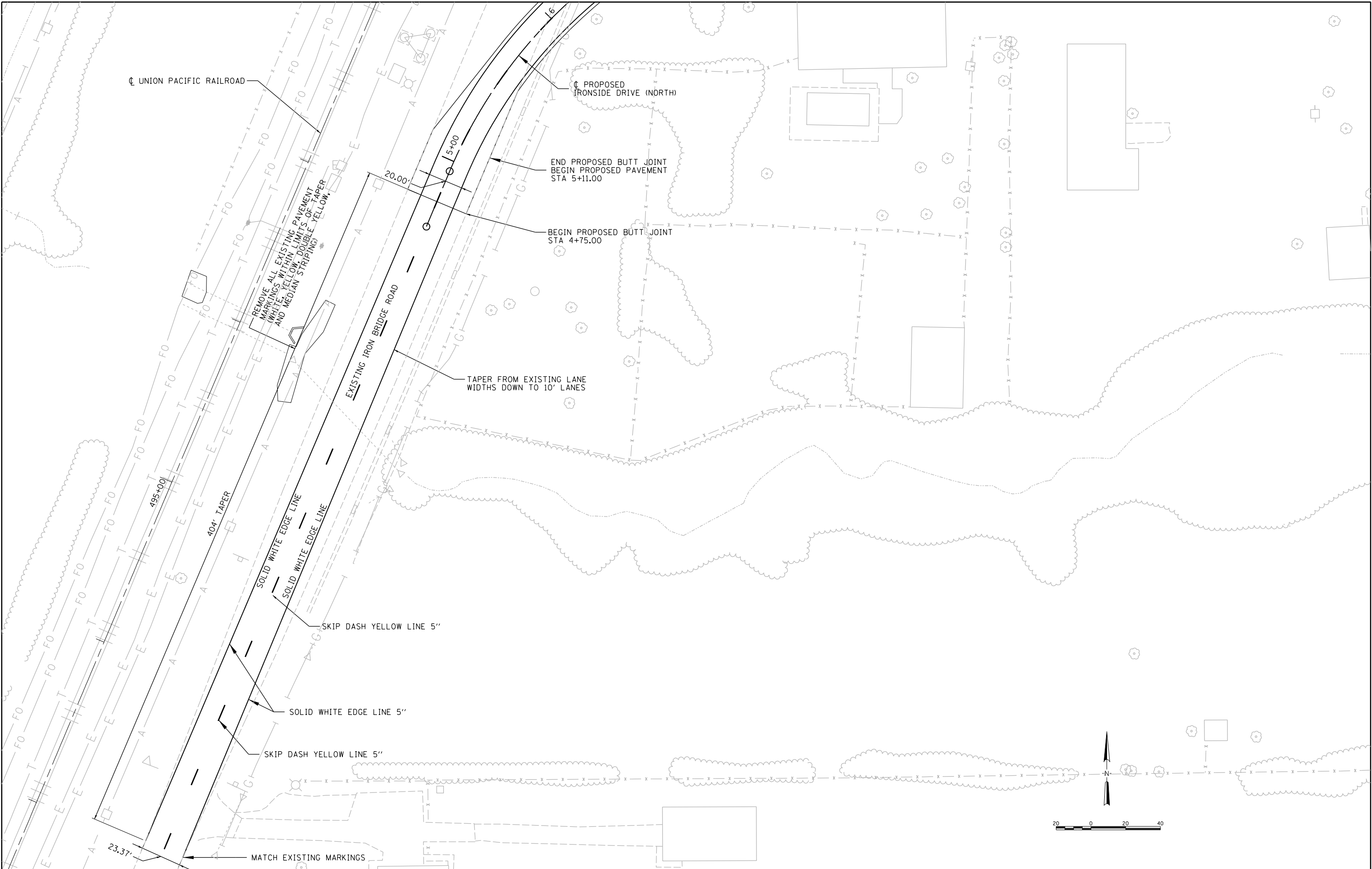


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	.	SANGAMON	368	132
96S2002F		CONTRACT NO. 93671		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6				
▪ 07-00164-04-FP, 07-00090-08-FP				



- RAISED REFLECTIVE
PAVEMENT MARKERS
- ◄ ONE-WAY AMBER
 - ◄ ONE-WAY CRYSTAL
 - ◆ TWO-WAY AMBER

FILE NAME = FGc-5-MARKDTLS.dgn	USER NAME = hard02376	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	PAVEMENT MARKING DETAILS - 1				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 100.000' / in.	DRAWN -	REVISED -									368	133
	PLOT DATE = 9/16/2024	CHECKED -	REVISED -		96S2002F				CONTRACT NO. 93671				
		DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP		



FILE NAME = FGc-5-MARKDTLS_2.dgn	USER NAME = johns00944		DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	PAVEMENT MARKING DETAILS - 2				F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.000' / in.		DRAWN -	REVISED -							.	SANGAMON	368	134
	PLOT DATE = 7/29/2024		CHECKED -	REVISED -		SCALE:				96S2002F				CONTRACT NO. 93671
			DATE -	REVISED -		SHEET NO. OF SHEETS STA. TO STA.				FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP				



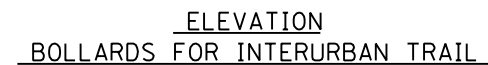
SECTION A-A

SECTION B-B

SECTION C-C



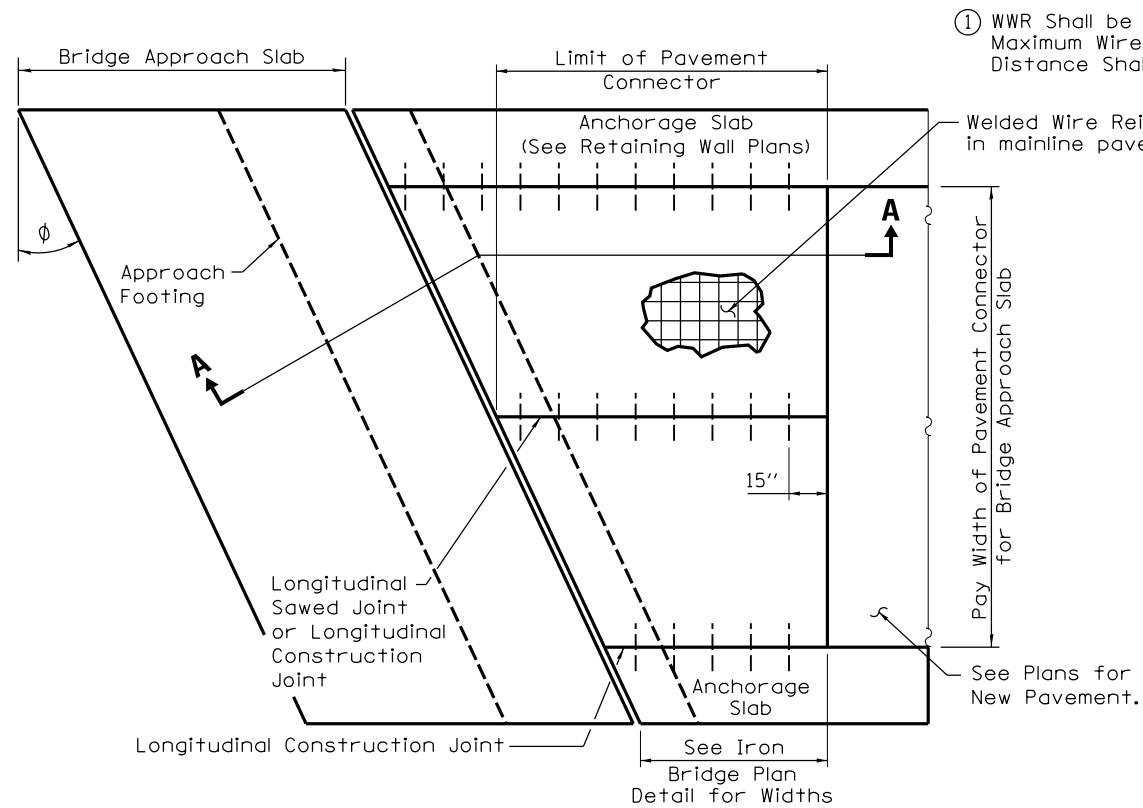
PHASE 2 - WOODSIDE RD CURB DETAIL



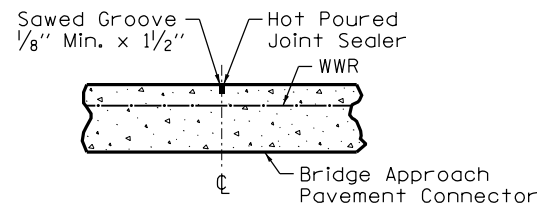
STATE OF ILLINOIS
SANGAMON COUNTY HIGHWAY DEPARTMENT

CONSTRUCTION DETAILS					
SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	135
	96S2002F	CONTRACT NO. 93671		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6				
• 07-00164-04-PP 07-00090-08-PP				

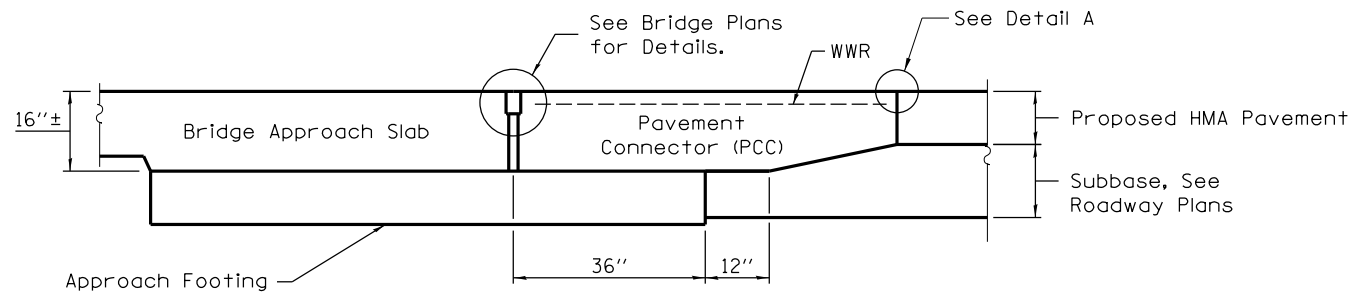


PLAN DETAIL

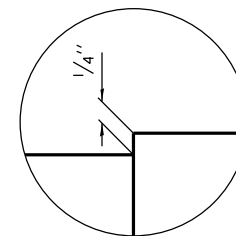


TRANSVERSE CONTROL JOINT

See Art. 420.05(c)(1) of Standard Specifications



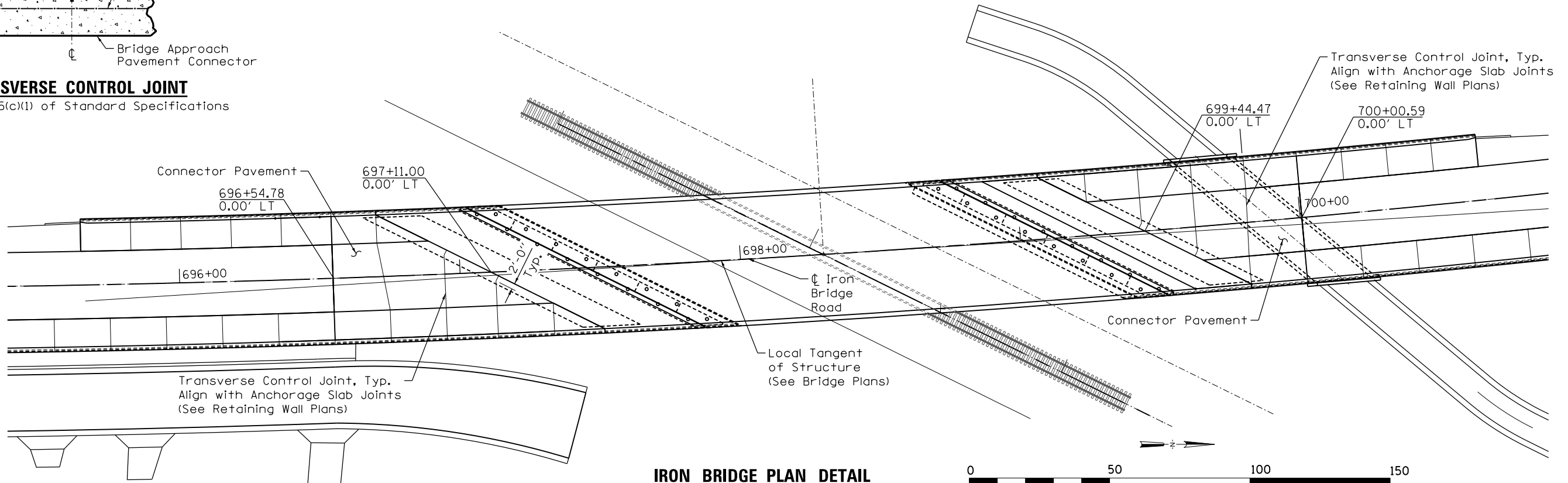
SECTION A-A



DETAIL A

GENERAL NOTES

- THICKNESS - "t" = Thickness of Pavement.
- See Standard 420001 for Pavement Joint Details Not Shown.
- See Standard 610001 for Shoulder Inlet with Curb When Required.
- See Plans for Details of Bridge Approach Slab, Approach Footing, and Joint Treatment.
- All Dimensions are Shown in Inches Unless Otherwise Shown.



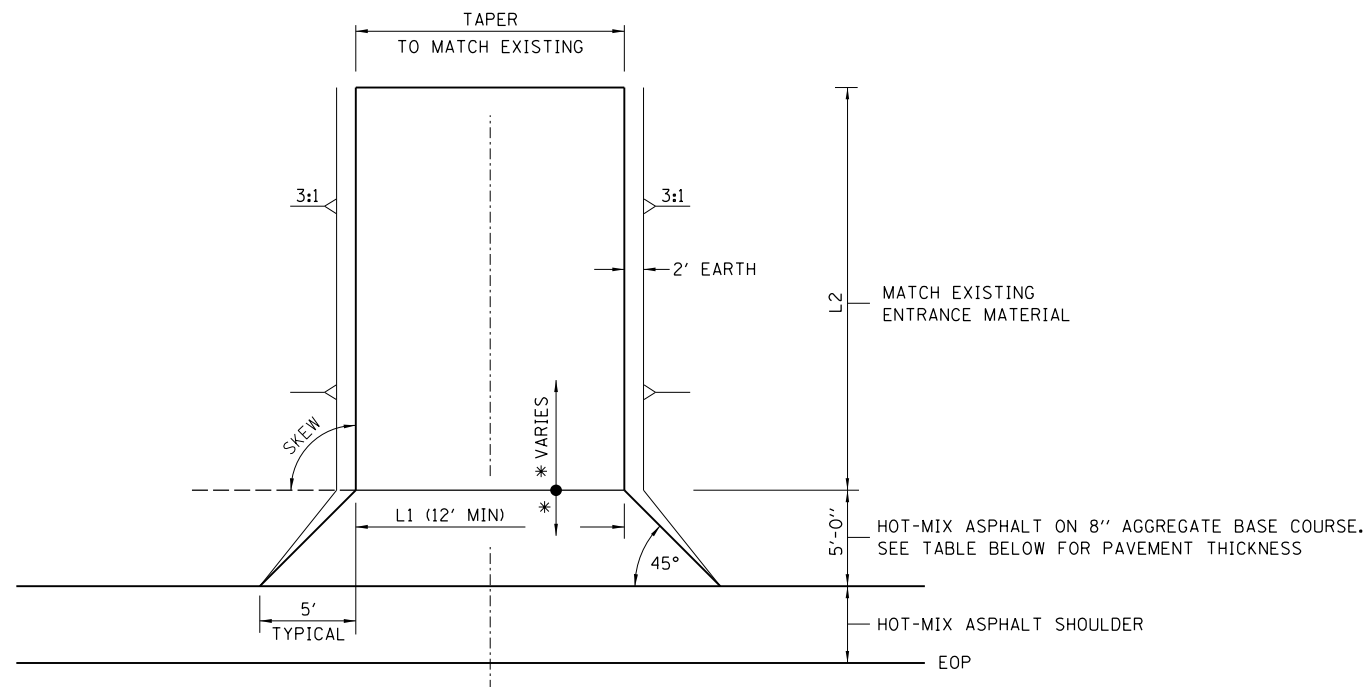
IRON BRIDGE PLAN DETAIL



SCALE IN FEET
(FOR PLAN VIEW ONLY)

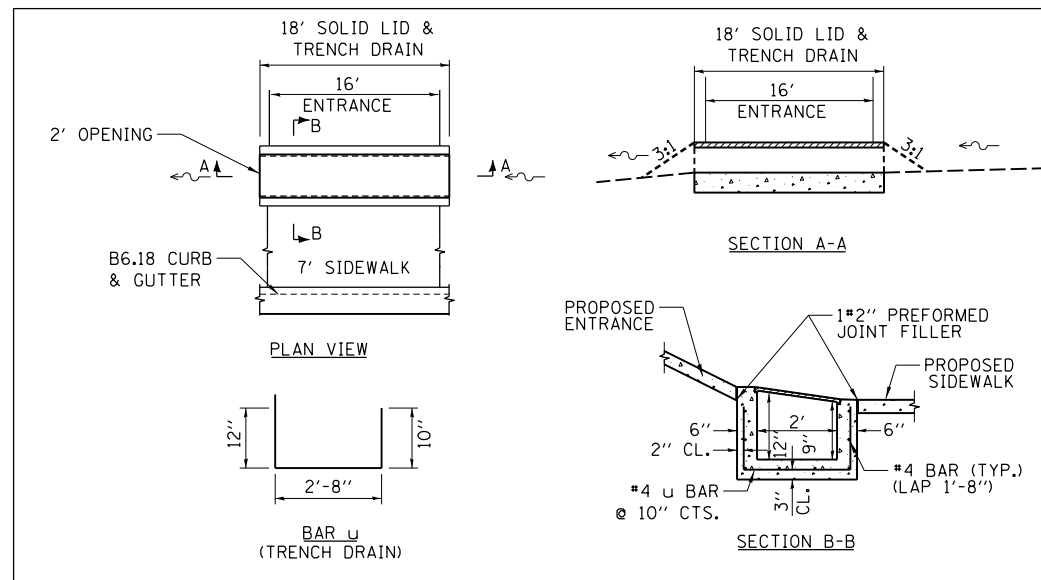
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	PLOT SCALE = 40.0000' / in.	DRAWN - JDS	REVISED -								SANGAMON	368	136
	PLOT DATE = 7/29/2024	CHECKED - JWM	REVISED -		96S2002F				CONTRACT NO. 93671				
		DATE - 8/24/2020	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.				

FED. ROAD DIST. NO. 6 [ILLINOIS] FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP



TYPICAL ENTRANCE TYPE 1
FIELD ENTRANCE / PRIVATE ENTRANCE

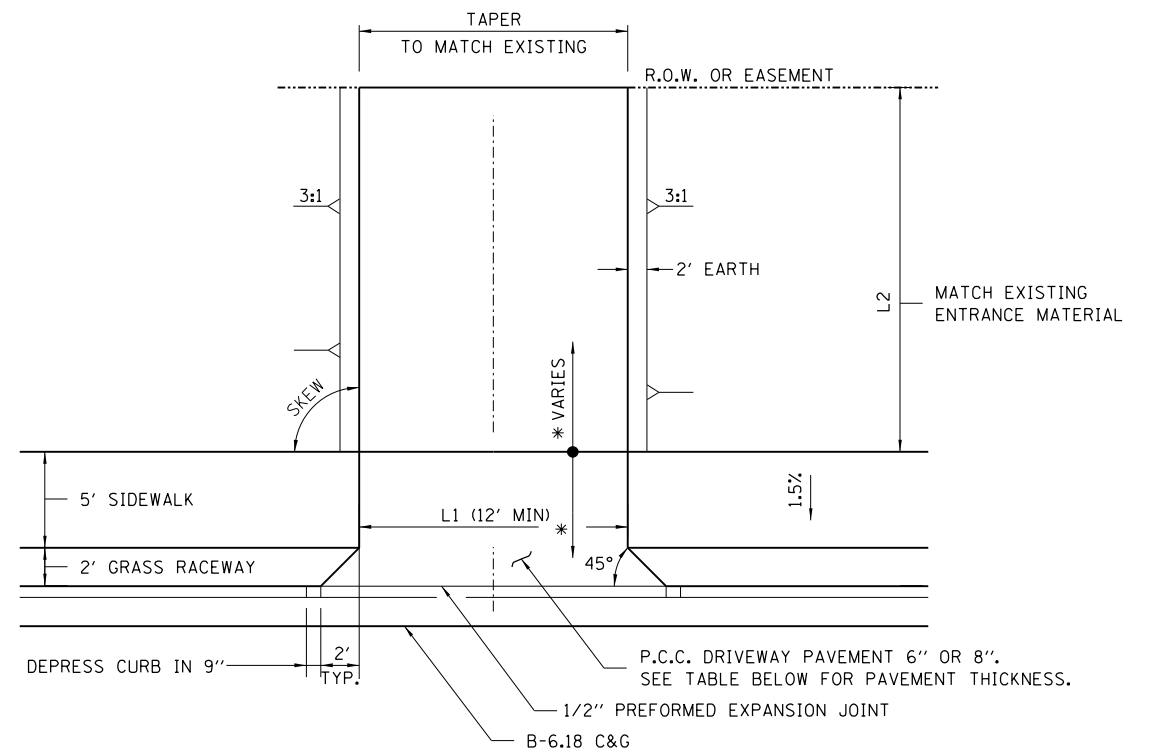
* SEE PLAN CROSS SECTIONS FOR ENTRANCE SLOPES



TRENCH DRAIN DETAIL
WOODSIDE ENT STA 121+43 LT

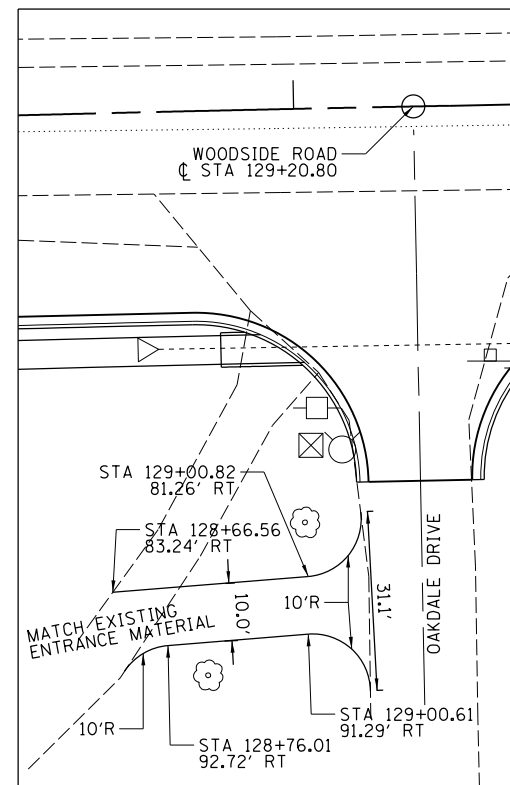
GENERAL NOTES

ENTRANCE SKEW ANGLES ARE MEASURED ON THE UPSTATION END OF THE ENTRANCE TO THE ADJACENT SIDEWALK OR SHOULDER. ALL ENTRANCE OPENINGS ARE CONSTRUCTED 90° TO THE CENTERLINE. SKEWS ARE INCLUDED BEYOND THE APRON TO CONNECT THE PROPOSED ENTRANCE TO THE EXISTING ENTRANCE.



TYPICAL ENTRANCE TYPE 2
FIELD ENTRANCE / PRIVATE ENTRANCE

* SEE PLAN CROSS SECTIONS FOR ENTRANCE SLOPES

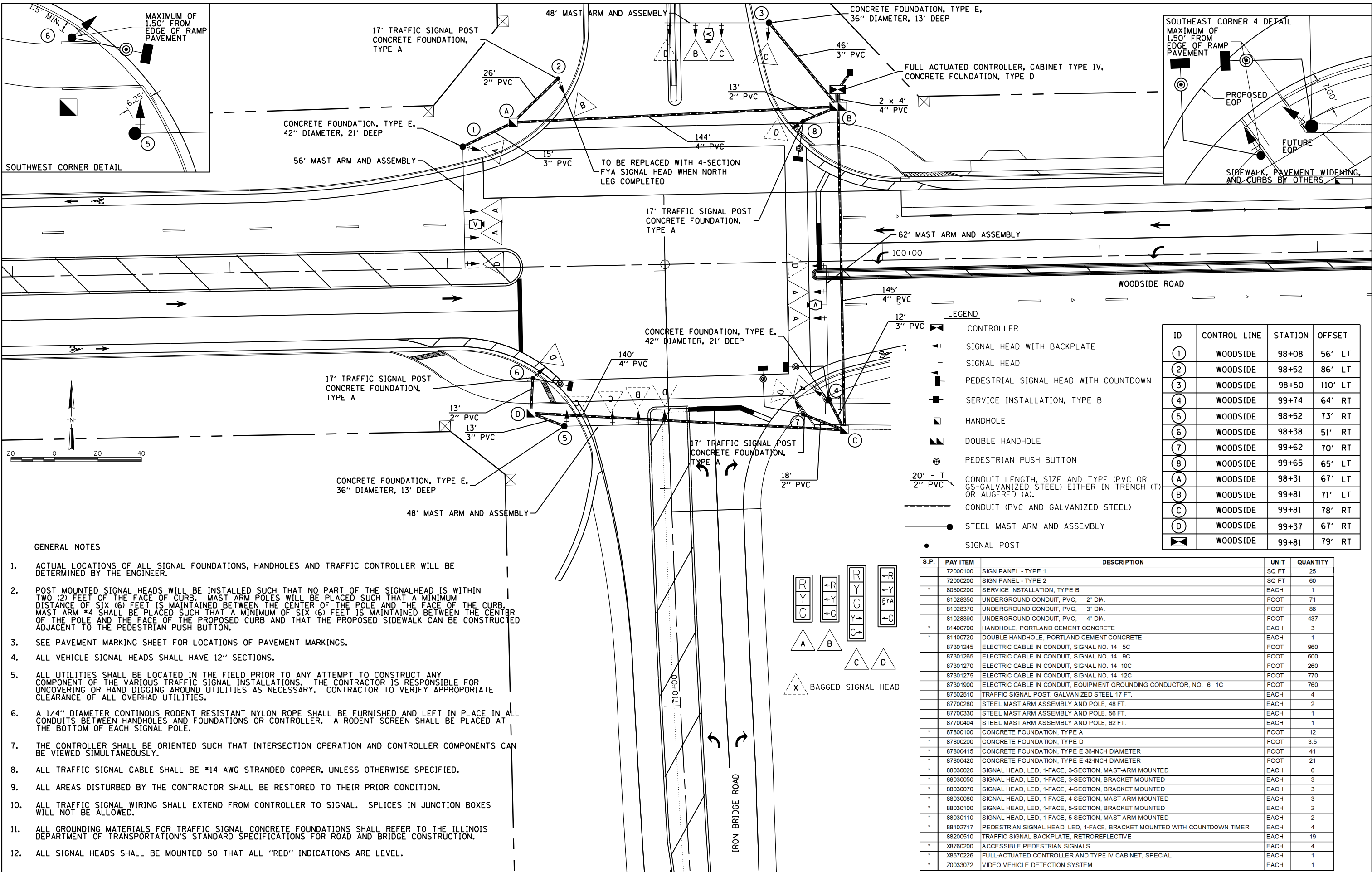


OAKDALE DRIVE ENTRANCE LEFT

PHASE 2 - ENTRANCE SCHEDULE								
ROADWAY	NOTE	STATION	LT OR RT	SKEW	TYPE	WIDTH L1	LENGTH L2	THICKNESS
IRONSIDE DRIVE (NORTH)	P.E.	7+30.82	RT	94° 43'	1	12'	13.0'	6"
IRONSIDE DRIVE (NORTH)	P.E.	8+51.51	RT	120° 03'	1	12'	13.7'	6"
IRONSIDE DRIVE (NORTH)	P.E.	9+50.00	RT	90°	1	16'	15.0'	6"
IRONSIDE DRIVE (NORTH)	P.E.	11+51.49	RT	110° 17'	1	18'	18.5'	6"
IRONSIDE DRIVE (NORTH)	P.E.	12+50.00	RT	90°	1	16'	12.7'	6"
WOODSIDE ROAD	F.E.	100+56.5	LT	90°	2	30'	4.3'	6"
WOODSIDE ROAD	P.E.	119+14.5	LT	90°	2	20'	49'	8"
WOODSIDE ROAD	P.E.	121+43	LT	87° 58'	2	16'	73'	8"
WOODSIDE ROAD	P.E.	121+73.5	RT	90°	2	14'	14.8'	6"
WOODSIDE ROAD	P.E.	122+84	RT	87° 23'	2	12'	15.2'	6"
WOODSIDE ROAD	P.E.	126+21.5	LT	90°	2	17'	25.6'	8"
WOODSIDE ROAD	P.E.	127+04	RT	49° 55'	2	12'	21'	6"
WOODSIDE ROAD	P.E.	127+34.5	RT	114° 38'	2	12'	17.0'	6"
WOODSIDE ROAD	P.E.	131+56.5	RT	90°	2	26'	11.3'	6"
WOODSIDE ROAD	P.E.	132+24	LT	96° 10'	2	16'	11'	8"
WOODSIDE ROAD	P.E.	133+10	RT	90°	2	14'	11'	6"
WOODSIDE ROAD	P.E.	133+67	RT	90°	2	14'	11'	6"
WOODSIDE ROAD	F.E.	135+10	LT	90°	2	20'	0'	8"
WOODSIDE ROAD	P.E.	135+19	RT	90°	2	14'	11'	6"
WOODSIDE ROAD	P.E.	136+17.5	RT	90°	2	12'	10.5'	6"
WOODSIDE ROAD	P.E.	137+07	RT	90°	2	12'	10.3'	6"
WOODSIDE ROAD	P.E.	138+27	RT	96° 06'	2	12'	9.3'	6"
WOODSIDE ROAD	P.E.	140+86	RT	90°	1	12'	5'	6"
WOODSIDE ROAD	F.E.	140+86	LT	90°	1	12'	10'	8"
CAROLE ROAD	P.E.	1+30.0	RT	90°	1	18.5'	NA	6"
GRISSOM DRIVE	P.E.	8+70.5	RT	90° 34'	1	13'	4'	6"
OAKDALE DRIVE	P.E.	SEE DETAIL	LT	90°	1	10'	34'	6"

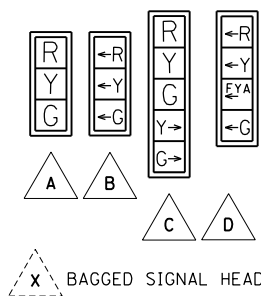
- PCC W/ WELDED WIRE REINFORCEMENT

FILE NAME = Ge-5-ENT_DTLS.dgn	USER NAME = johns00944	DESIGNED -	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	ENTRANCE DETAILS PHASE 2 – WOODSIDE ROAD			F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -						•	SANGAMON	368	138
	PLOT SCALE = 100.000 ' / 1in.	CHECKED -	REVISED -		96S2002F			CONTRACT NO. 93671				
	PLOT DATE = 7/29/2024	DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 6 ILLINOIS	FED. AID PROJECT 6	



GENERAL NOTES

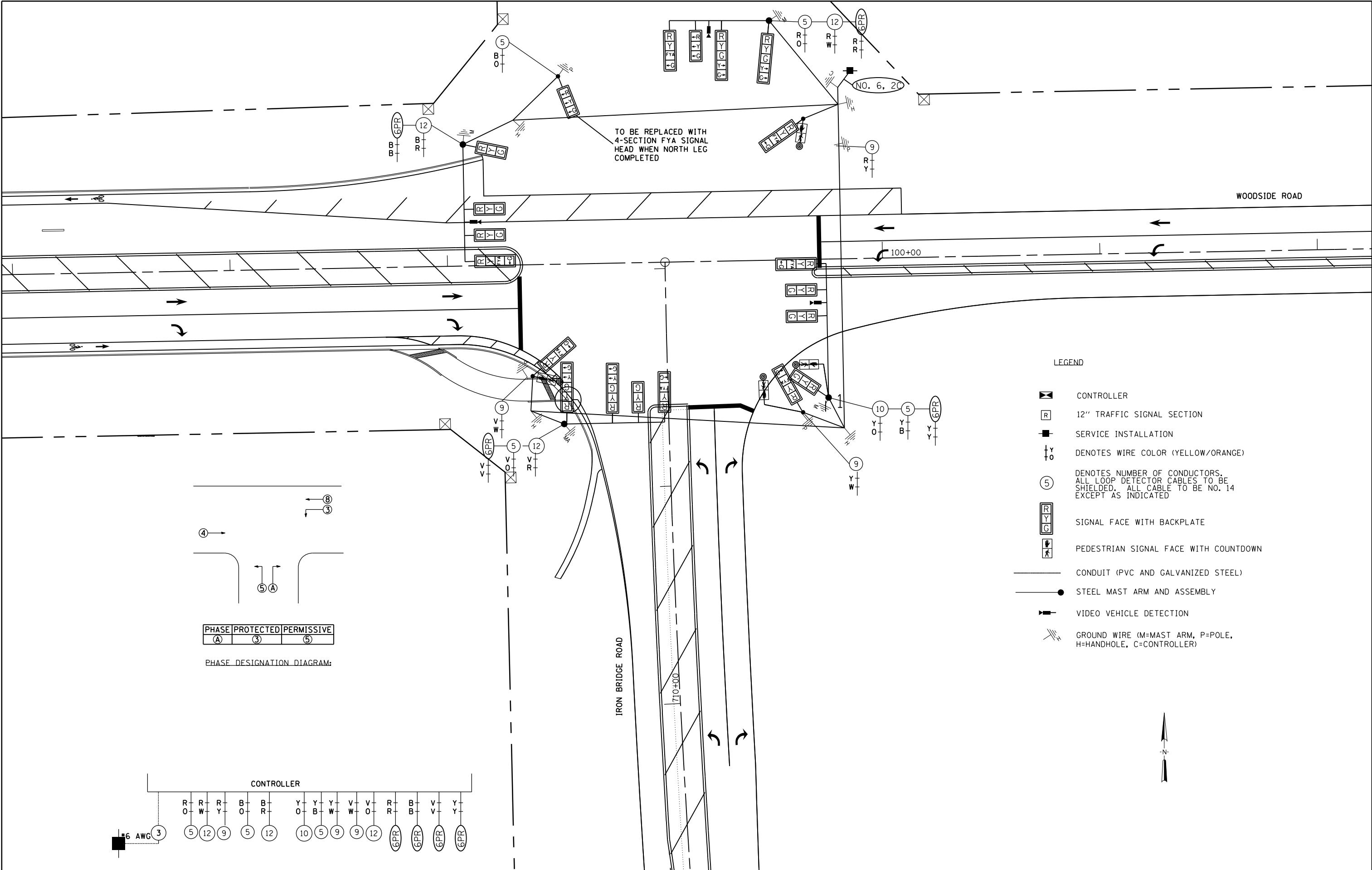
1. ACTUAL LOCATIONS OF ALL SIGNAL FOUNDATIONS, HANDHOLES AND TRAFFIC CONTROLLER WILL BE DETERMINED BY THE ENGINEER.
2. POST MOUNTED SIGNAL HEADS WILL BE INSTALLED SUCH THAT NO PART OF THE SIGNALHEAD IS WITHIN TWO (2) FEET OF THE FACE OF CURB. MAST ARM POLES WILL BE PLACED SUCH THAT A MINIMUM DISTANCE OF SIX (6) FEET IS MAINTAINED BETWEEN THE CENTER OF THE POLE AND THE FACE OF THE CURB. MAST ARM #4 SHALL BE PLACED SUCH THAT A MINIMUM OF SIX (6) FEET IS MAINTAINED BETWEEN THE CENTER OF THE POLE AND THE FACE OF THE PROPOSED CURB AND THAT THE PROPOSED SIDEWALK CAN BE CONSTRUCTED ADJACENT TO THE PEDESTRIAN PUSH BUTTON.
3. SEE PAVEMENT MARKING SHEET FOR LOCATIONS OF PAVEMENT MARKINGS.
4. ALL VEHICLE SIGNAL HEADS SHALL HAVE 12" SECTIONS.
5. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY ATTEMPT TO CONSTRUCT ANY COMPONENT OF THE VARIOUS TRAFFIC SIGNAL INSTALLATIONS. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. CONTRACTOR TO VERIFY APPROPRIATE CLEARANCE OF ALL OVERHAD UTILITIES.
6. A 1/4" DIAMETER CONTINUOUS RODENT RESISTANT NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OR CONTROLLER. A RODENT SCREEN SHALL BE PLACED AT THE BOTTOM OF EACH SIGNAL POLE.
7. THE CONTROLLER SHALL BE ORIENTED SUCH THAT INTERSECTION OPERATION AND CONTROLLER COMPONENTS CAN BE VIEWED SIMULTANEOUSLY.
8. ALL TRAFFIC SIGNAL CABLE SHALL BE #14 AWG STRANDED COPPER, UNLESS OTHERWISE SPECIFIED.
9. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR PRIOR CONDITION.
10. ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.
11. ALL GROUNDING MATERIALS FOR TRAFFIC SIGNAL CONCRETE FOUNDATIONS SHALL REFER TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
12. ALL SIGNAL HEADS SHALL BE MOUNTED SO THAT ALL "RED" INDICATIONS ARE LEVEL.



- LEGEND
- CONTROLLER
 - SIGNAL HEAD WITH BACKPLATE
 - SIGNAL HEAD
 - PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN
 - SERVICE INSTALLATION, TYPE B
 - HANDHOLE
 - DOUBLE HANDHOLE
 - PEDESTRIAN PUSH BUTTON
 - CONDUIT LENGTH, SIZE AND TYPE (PVC OR GS-GALVANIZED STEEL) EITHER IN TRENCH (T) OR AUGERED (A).
 - CONDUIT (PVC AND GALVANIZED STEEL)
 - STEEL MAST ARM AND ASSEMBLY
 - SIGNAL POST

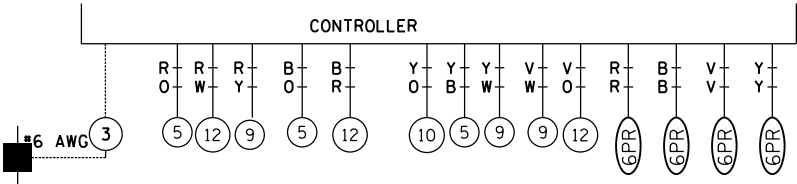
ID	CONTROL LINE	STATION	OFFSET
①	WOODSIDE	98+08	56' LT
②	WOODSIDE	98+52	86' LT
③	WOODSIDE	98+50	110' LT
④	WOODSIDE	99+74	64' RT
⑤	WOODSIDE	98+52	73' RT
⑥	WOODSIDE	98+38	51' RT
⑦	WOODSIDE	99+62	70' RT
⑧	WOODSIDE	99+65	65' LT
A	WOODSIDE	98+31	67' LT
B	WOODSIDE	99+81	71' LT
C	WOODSIDE	99+81	78' RT
D	WOODSIDE	99+37	67' RT
	WOODSIDE	99+81	79' RT

S.P.	PAY ITEM	DESCRIPTION	UNIT	QUANTITY
	72000100	SIGN PANEL - TYPE 1	SQ FT	25
	72000200	SIGN PANEL - TYPE 2	SQ FT	60
*	80500200	SERVICE INSTALLATION, TYPE B	EACH	1
	81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	71
	81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	86
	81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	437
*	81400700	HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	3
*	81400720	DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	960
	87301265	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 9C	FOOT	600
	87301270	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 10C	FOOT	280
	87301275	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 12C	FOOT	770
	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	760
	87502510	TRAFFIC SIGNAL POST, GALVANIZED STEEL 17 FT.	EACH	4
	87700280	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	2
	87700330	STEEL MAST ARM ASSEMBLY AND POLE, 56 FT.	EACH	1
	87700404	STEEL MAST ARM ASSEMBLY AND POLE, 62 FT.	EACH	1
*	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	12
*	87800200	CONCRETE FOUNDATION, TYPE D	FOOT	3.5
*	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	41
*	87800420	CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	21
*	88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
*	88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
*	88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	3
*	88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	3
*	88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
*	88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
*	88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
	88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	19
*	X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	4
*	X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
*	Z0033072	VIDEO VEHICLE DETECTION SYSTEM	EACH	1

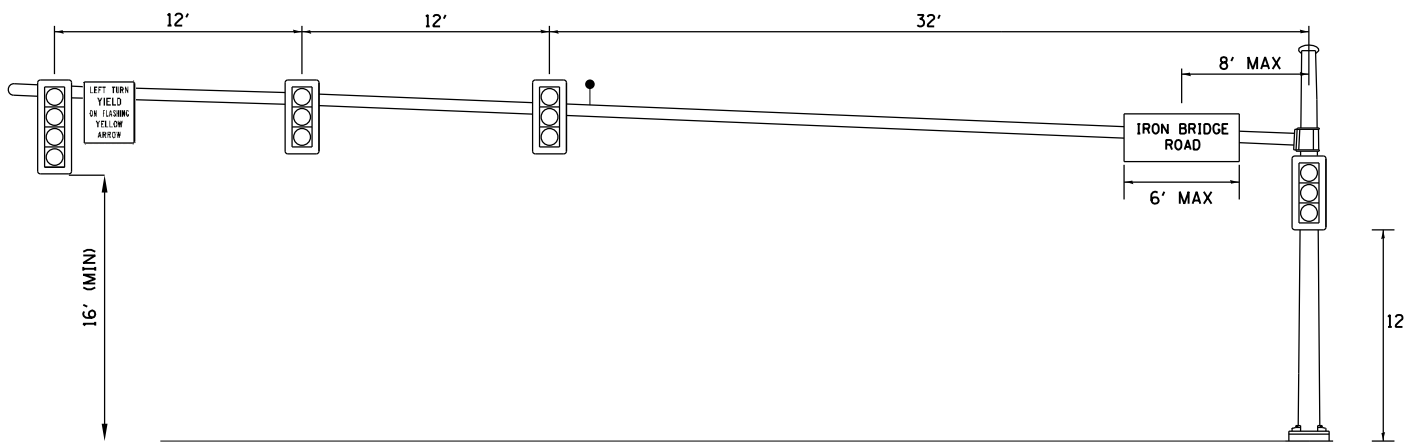


PHASE	PROTECTED	PERMISSIVE
(A)	(3)	(5)

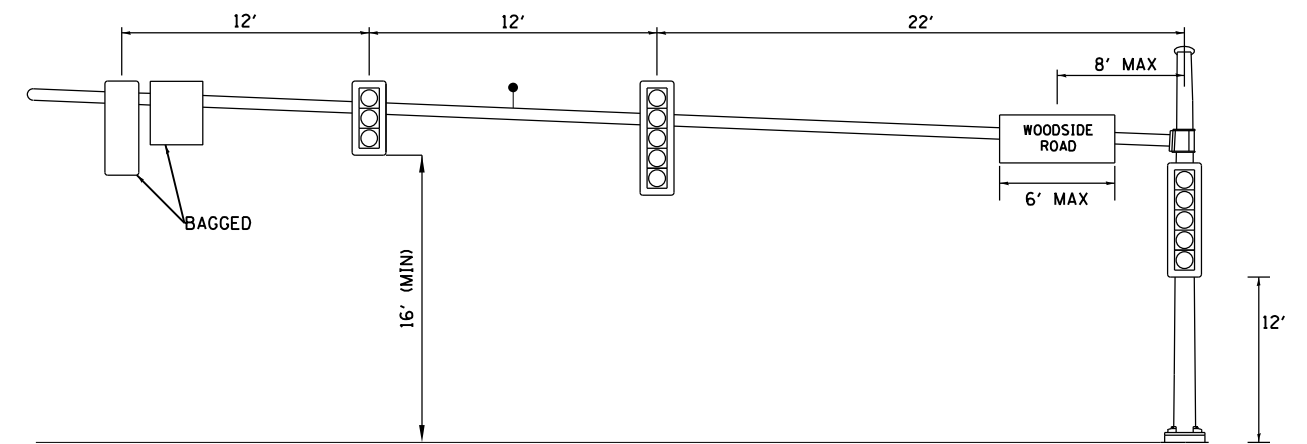
PHASE DESIGNATION DIAGRAM:



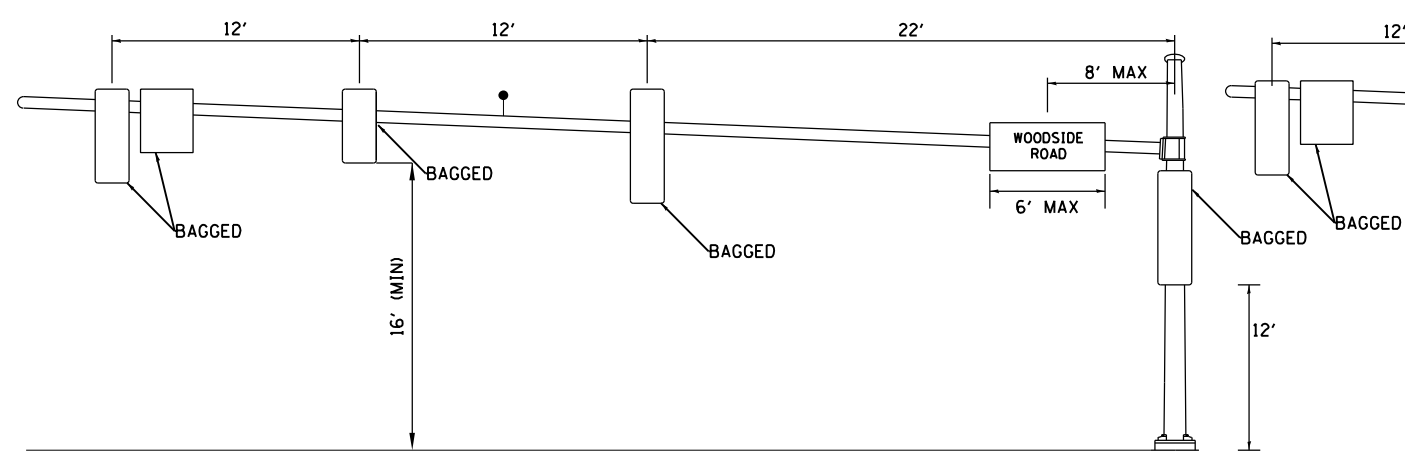
- LEGEND
- CONTROLLER
 - 12" TRAFFIC SIGNAL SECTION
 - SERVICE INSTALLATION
 - DENOTES WIRE COLOR (YELLOW/ORANGE)
 - DENOTES NUMBER OF CONDUCTORS. ALL LOOP DETECTOR CABLES TO BE SHIELDED. ALL CABLE TO BE NO. 14 EXCEPT AS INDICATED
 - SIGNAL FACE WITH BACKPLATE
 - PEDESTRIAN SIGNAL FACE WITH COUNTDOWN
 - CONDUIT (PVC AND GALVANIZED STEEL)
 - STEEL MAST ARM AND ASSEMBLY
 - VIDEO VEHICLE DETECTION
 - GROUND WIRE (M=MAST ARM, P=POLE, H=HANDHOLE, C=CONTROLLER)



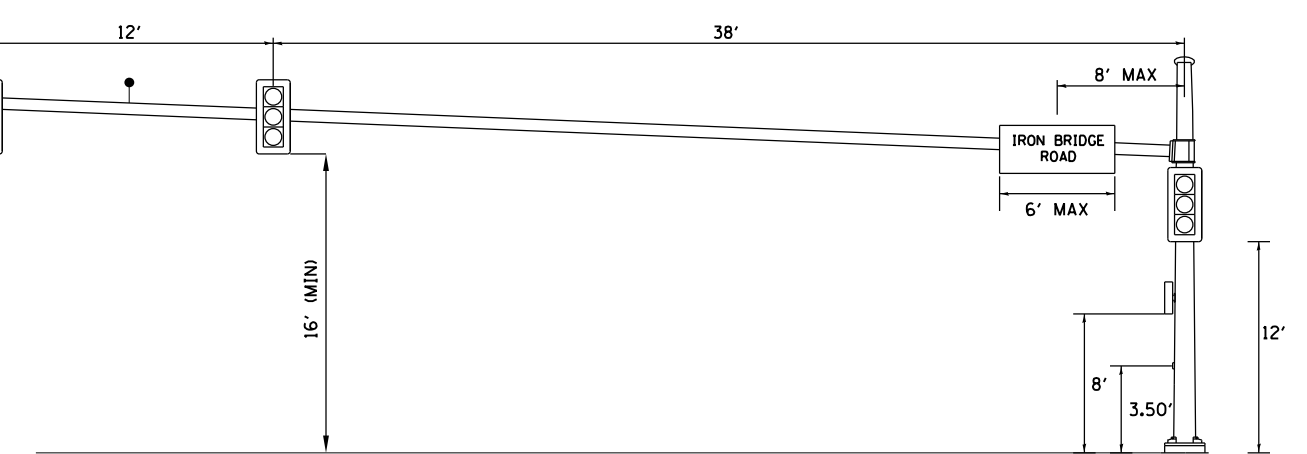
MAST ARM 1
NORTHWEST QUADRANT (WESTBOUND)



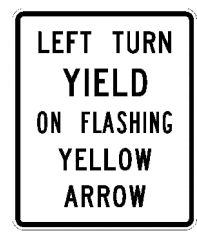
MAST ARM 3
NORTHEAST QUADRANT (NORTHBOUND)



MAST ARM 5
SOUTHWEST QUADRANT (SOUTHBOUND)



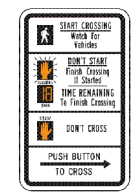
MAST ARM 4
SOUTHEAST QUADRANT (EASTBOUND)



ILLINOIS STANDARD
R 10-1109
30"X30"

SIGN PANEL TYPE I

4 REQUIRED OF ILLINOIS STANDARD R10-1109 = 6.25 SQ FT
ONLY HIGH INTENSITY SHEETING
SHALL BE USED



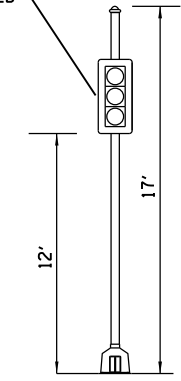
R 10-3e (L OR R)
9" X 15"

PEDESTRIAN CROSSING

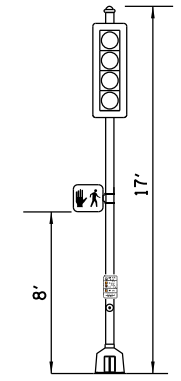
(NOT TO SCALE)

4 REQUIRED (1 LEFT AND 3 RIGHT)
TYPE B SHEETING
THE CONTRACTOR SHALL SUPPLY AND MOUNT ONE SIGN
WITH EACH PEDESTRIAN PUSH-BUTTON.
COST TO BE INCLUDED IN THE COST OF PEDESTRIAN
PUSH-BUTTON PAY ITEM.

TO BE REPLACED WITH
4-SECTION FYA SIGNAL HEAD
WHEN NORTH LEG COMPLETED

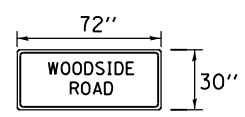


TRAFFIC SIGNAL POST 2



TRAFFIC SIGNAL POST 6, 7, 8

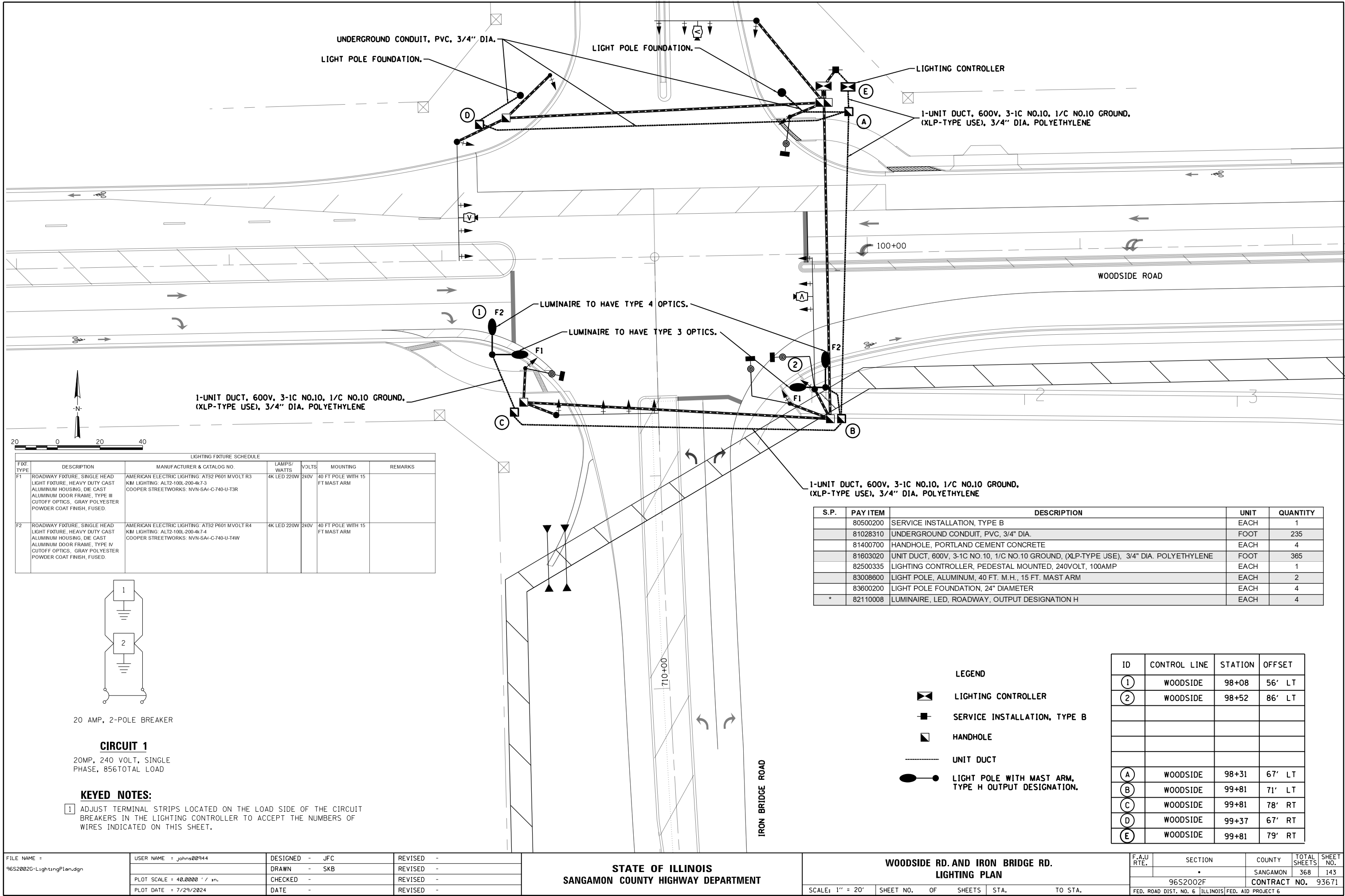
*SIGNAL HEAD BAGGED ON POSTS 7 AND 8

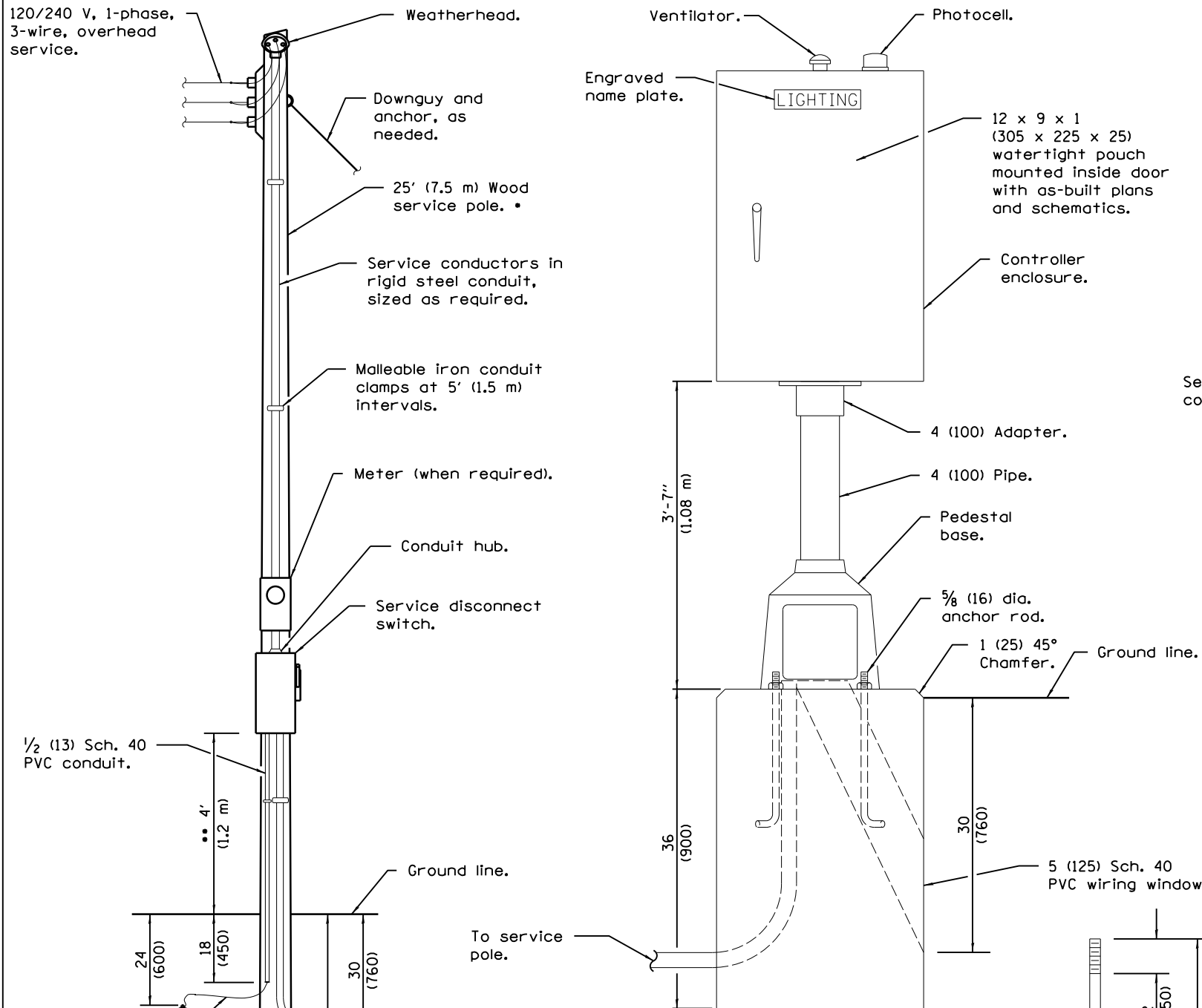


SIGN PANEL TYPE II

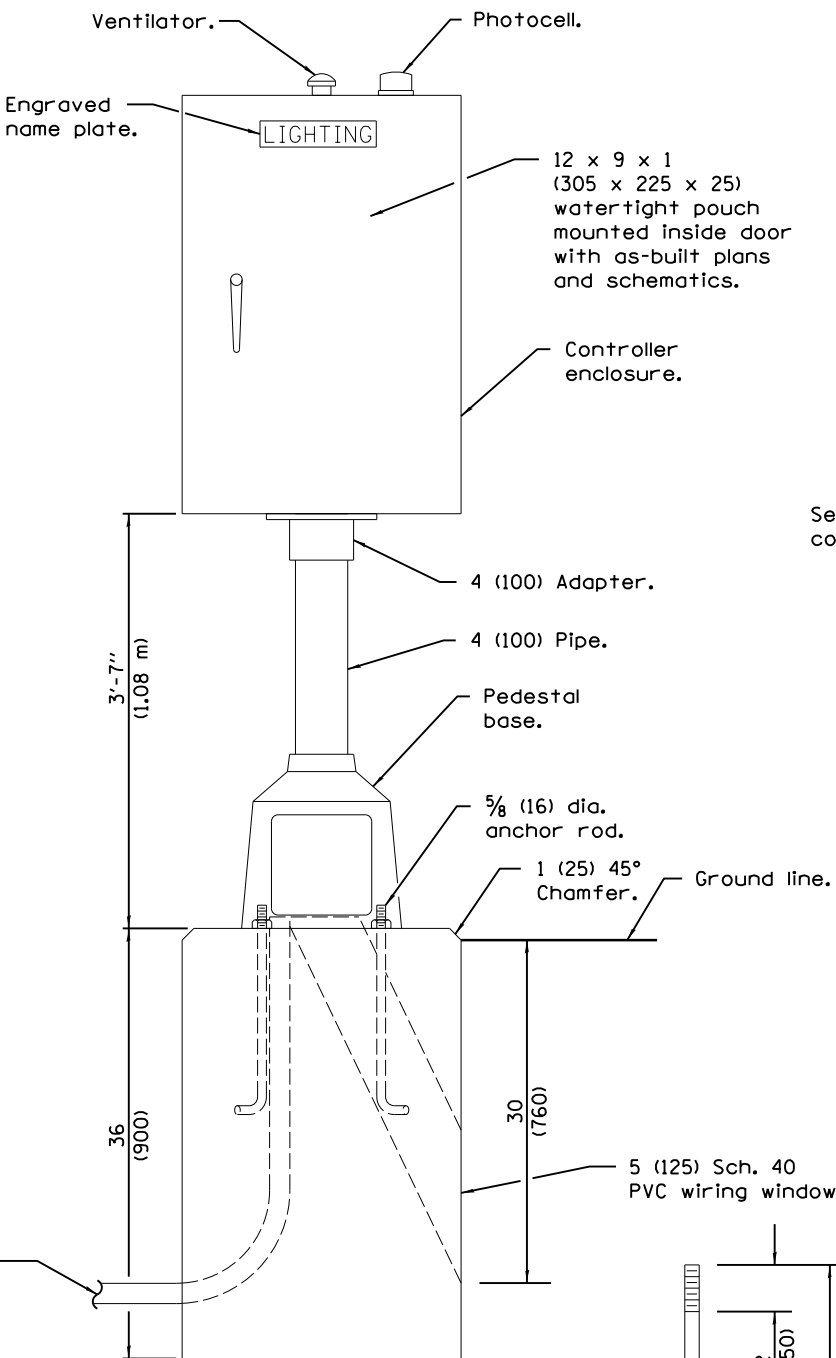
0.8" BORDER
2 REQUIRED OF WOODSIDE ROAD= 30.0 SQ FT
2 REQUIRED OF IRON BRIDGE ROAD= 30.0 SQ FT
TOTAL REQUIRED = 60.0 SQ FT
8" SERIES D LETTERS
MAST ARM MOUNTED
ONLY HIGH INTENSITY SHEETING SHALL BE USED

FILE NAME = Fc-MastArm.dgn	USER NAME = johns00944	DESIGNED - JDS	REVISED -	STATE OF ILLINOIS SANGAMON COUNTY HIGHWAY DEPARTMENT	WOODSIDE RD. AND IRON BRIDGE RD. INTERSECTION MAST ARM LOADING PLAN				F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - BWW	REVISED -							.	SANGAMON	368	141
	PLOT SCALE = 2.0000' / in.	CHECKED - TA	REVISED -							96S2002F		CONTRACT NO.	93671
	PLOT DATE = 7/29/2024	DATE - 6/9/2020	REVISED -										
					SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.	FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT 6 • 07-00164-04-FP, 07-00090-08-FP	

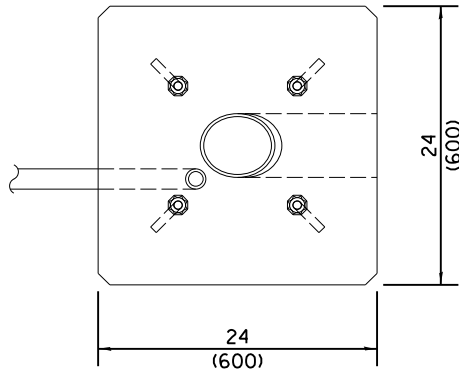




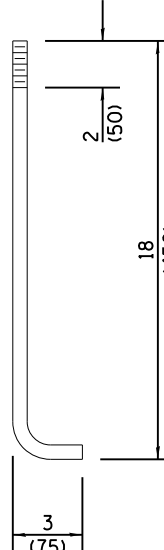
ELECTRIC SERVICE INSTALLATION
 • Size larger as needed.
 • Or as directed by Utility Company.



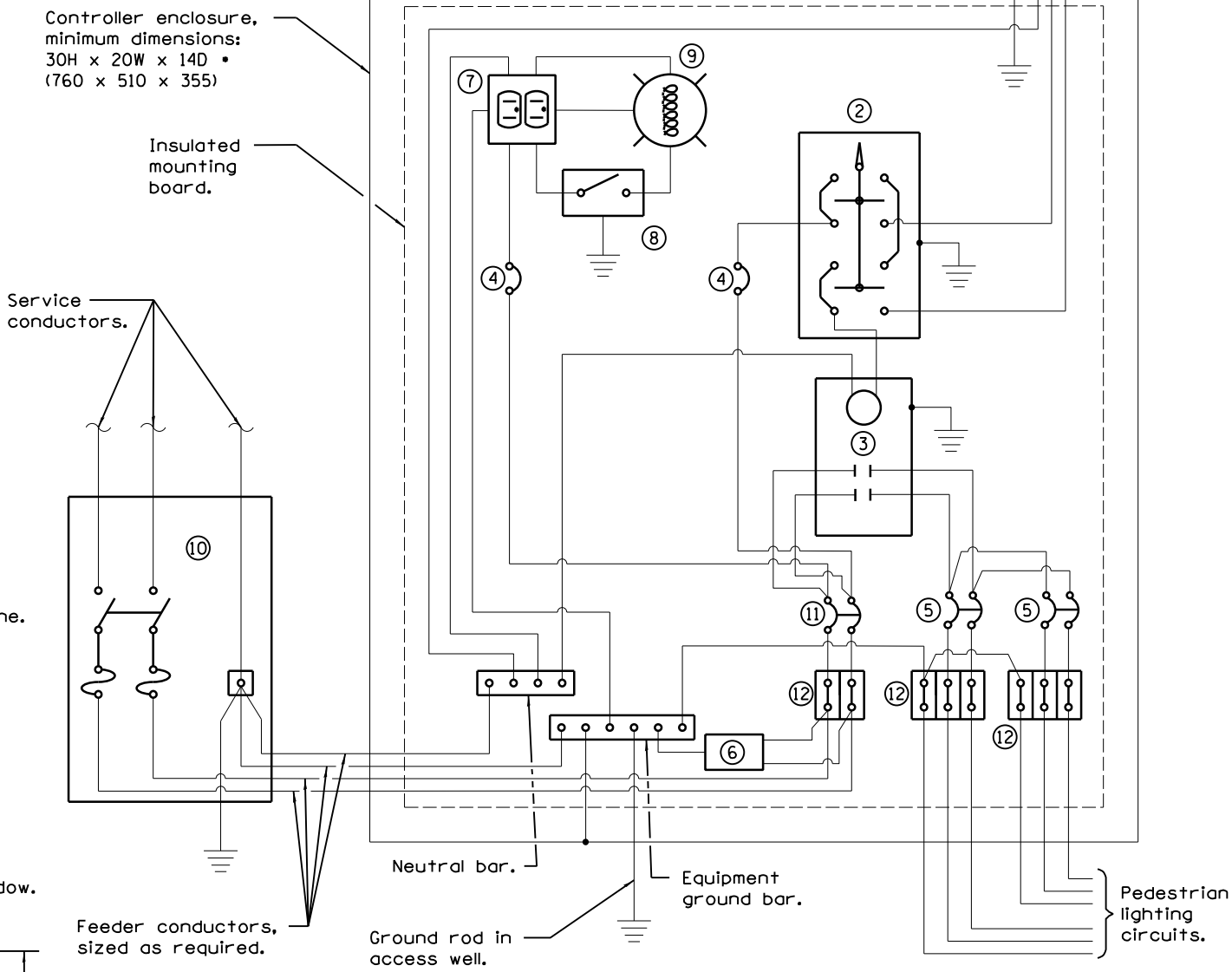
LIGHTING CONTROLLER



FOUNDATION (PLAN)
 (Work pad not shown.)



ANCHOR ROD DETAIL



CONTROL SCHEMATIC

- ① Photocell with integral surge arrester.
- ② HAND-OFF-AUTO selector switch.
- ③ 100 amp*, electrically held contactor.
- ④ 15 amp, 1-pole circuit breaker.
- ⑤ 20 amp*, 2-pole circuit breaker (two spares required but not shown).
- ⑥ Surge arrester.
- ⑦ GFCI duplex receptacle.
- ⑧ Single-pole, single-throw switch.
- ⑨ Incandescent luminaire, enclosed and gasketed with 100 watt lamp.
- ⑩ Service disconnect switch - 2-pole, 3-wire, 60 amp*, fused at 60 amp*, solid neutral in NEMA 4X enclosure having lockable external handle.
- ⑪ 60 amp*, 2-pole circuit breaker.
- ⑫ Terminal block sized for conductors as shown on plans.
- Size larger as needed.

All dimensions are in inches (millimeters) unless otherwise shown.

DESIGNED	JFC	11/18/15
DRAWN	SKB	11/18/15
REVIEWED		

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USER NAME	= johns00944
PLOT SCALE	= 0.1667' / in.
PLOT DATE	= 7/29/2024

DESIGNED	- JFC
CHECKED	-
DRAWN	- SKB
CHECKED	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

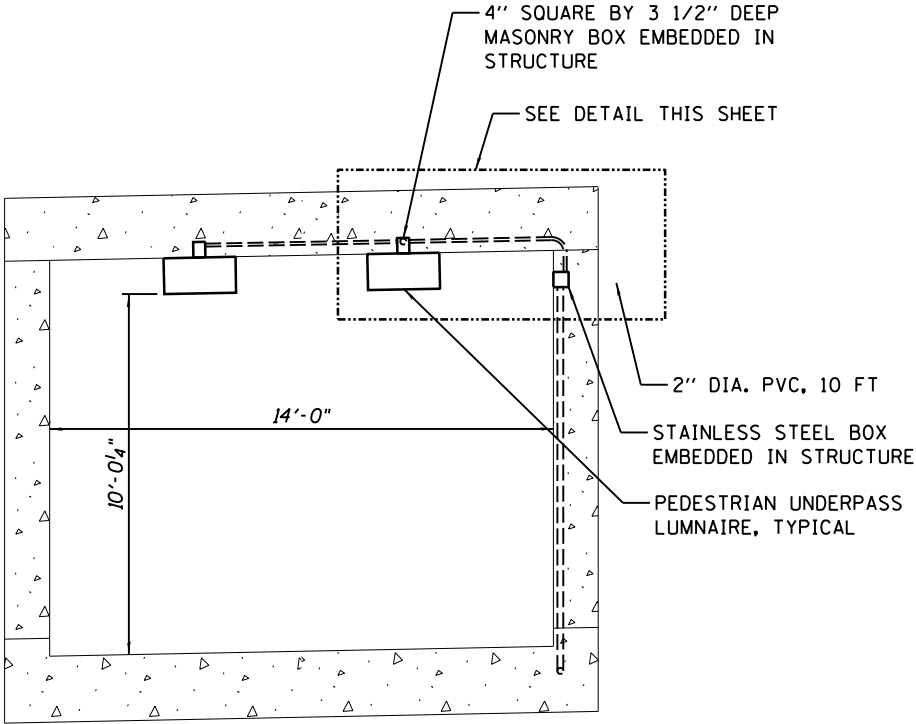
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING DETAILS - SHEET 1
 PHASE 1 & PHASE 2**

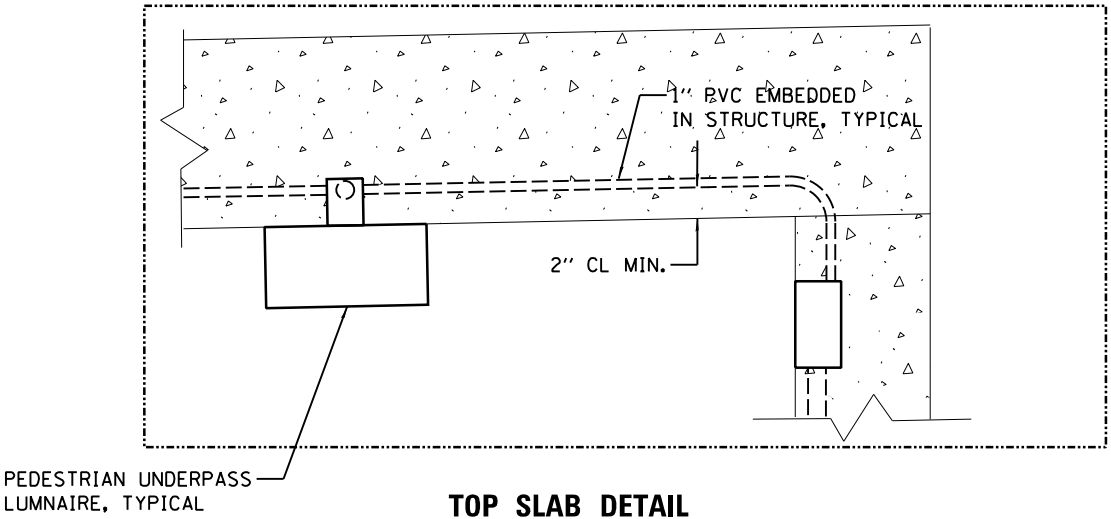
SHEET NO. 3 OF 4 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	144
CONTRACT NO.			93671	

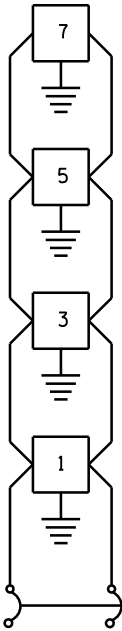
ILLINOIS FED. AID PROJECT 6
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TYPICAL SECTION THRU BOX UNDERPASS



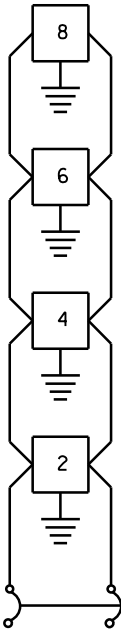
TOP SLAB DETAIL



20 AMP, 2-POLE BREAKER

CIRCUIT 1

20 AMP, 240 VOLT, SINGLE PHASE, 148 VA TOTAL LOAD



20 AMP, 2-POLE BREAKER

CIRCUIT 2

20 AMP, 240 VOLT, SINGLE PHASE, 148 VA TOTAL LOAD

KEYED NOTES:

1. ADJUST TERMINAL STRIPS LOCATED ON THE LOAD SIDE OF THE CIRCUIT BREAKERS IN THE LIGHTING CONTROLLER TO ACCEPT THE NUMBERS OF WIRES INDICATED ON THIS SHEET.

DESIGNED	JFC	11/18/15
DRAWN	SKB	11/18/15
REVIEWED		

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USER NAME = johns00944
PLOT SCALE = 0.1667' / in.
PLOT DATE = 7/29/2024

DESIGNED - JFC
CHECKED -
DRAWN - SKB
CHECKED -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS - SHEET 2
PHASE 1 & PHASE 3

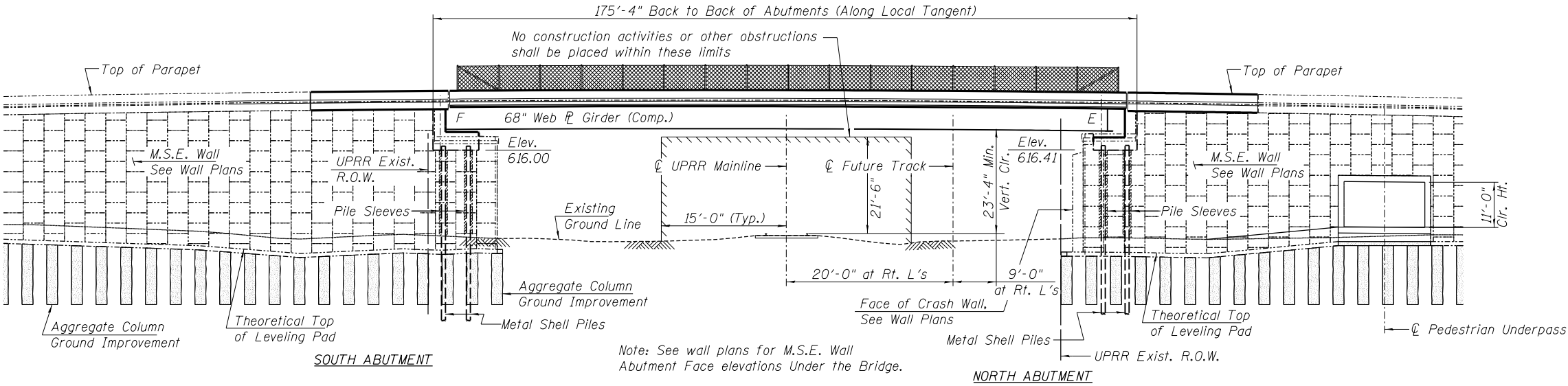
SHEET NO. 4 OF 4 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	145
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

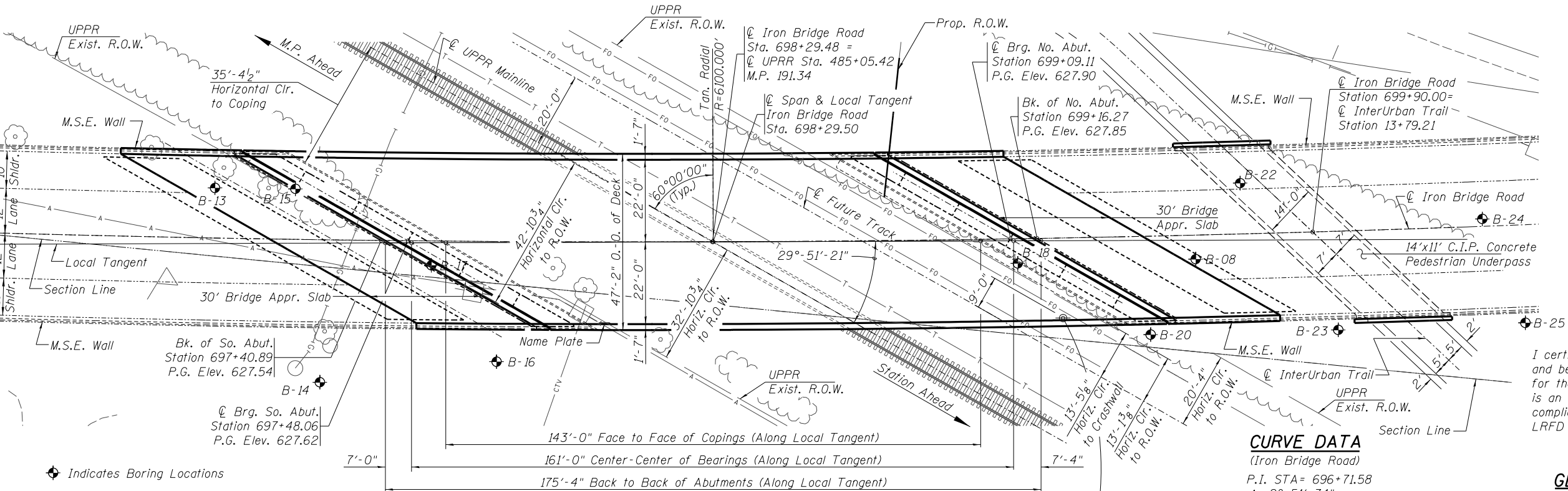
B.M. 359 - Chsld. "x" on South Cap Bolt FH - North Side of Woodside Road., Approx. 300'
West of Pedigo Lane., 6' East of Private Drive., South of Two Grain Silos. Elev=595.21
B.M. H3 - Spike Nail in South Face of PP - North Side Woodside Road - ± 325' East of Driveway
to House #1329 Woodside Road - Between Iron Bridge Road and Carole Drive. Elev=590.49

Existing Structure: None



Note: See wall plans for M.S.E. Wall
Abutment Face elevations Under the Bridge.

ELEVATION
(Looking West)



PLAN

Pt. of Min. Vert. Clr.
21.65' Rt. Sta. 699+23.84
Iron Bridge Rd. =
29.0' Lt. Sta. 485+97.95 UPRR

CURVE DATA
(Iron Bridge Road)

P.I. STA= 696+71.58
Δ= 9°-51'-34"
D= 0°-56'-21"
R= 6,100.00'
T= 526.14'
L= 1,049.69'
E= 22.65'
S.E.= 0.0%
P.C. STA= 691+45.43
P.T. STA= 701+95.12

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 Sec. (S₀₁) = 0.11
Design Spectral Acceleration at 0.2 Sec. (S₀₅) = 0.22
Soil Site Class = C

DESIGN SPECIFICATIONS

BRIDGE

2014 AASHTO LRFD Bridge
Design Specifications, 7th Edition

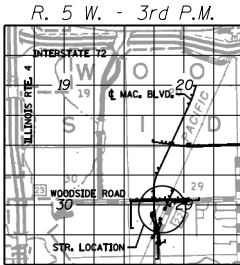
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f'_c = 4,000 psi (Superstructure Concrete)
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 Grade 50)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.



LOCATION SKETCH



Signature: *Michael N. Mendenhall*
DATE: 07/29/2024
LIC. EXP. DATE: 11/30/2024

I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Specifications.

GENERAL PLAN and ELEVATION
IRON BRIDGE ROAD over UPRR
F.A.P. 1638 - SEC. 07-00164-04-FP
SANGAMON COUNTY
STA. 698+29.67
STRUCTURE NUMBER 084-9949

DESIGNED	11/12/15
DRAWN	11/20/15
REVIEWED	11/20/15

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PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME =	johns00944
PLOT SCALE =	0.166667' / 1" =
PLOT DATE =	7/29/2024

DESIGNED	MNM
CHECKED	JWM
DRAWN	Rod
CHECKED	MNM

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN and ELEVATION
STRUCTURE NUMBER 084-9949

SHEET NO. 1 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SANGAMON	368	146
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas, unless otherwise noted. Bolts 7/8" Ø, holes 15/16" Ø, unless otherwise noted.

Calculated weight of Structural Steel, AASHTO M270 Grade 50 = 362,940lbs.
AASHTO M270 Grade 36 = 11,370 lbs.

All structural steel shall be AASHTO M 270 Grade 50, unless otherwise noted.

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

Reinforcement bars designated (E) shall be epoxy coated.

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.

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.

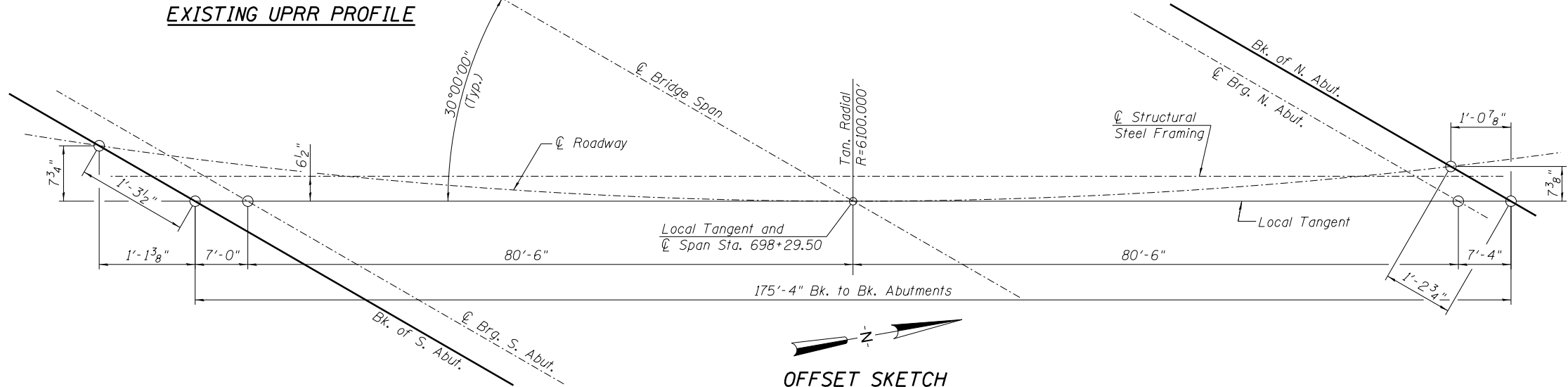
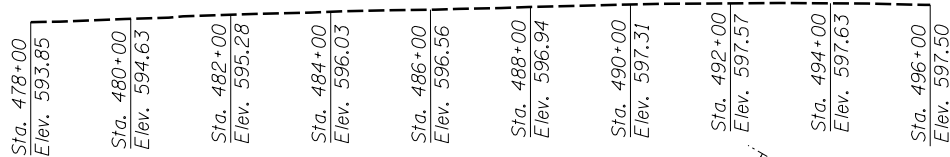
Concrete Sealer shall be applied to the backwalls, seats, step areas and front face of the South and North Abutments.

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 Reddish Brown, Munsell no. 2.5YR 3/4.

The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set either parallel to the skew or perpendicular to the centerline of bridge for striking off and screeding the concrete. Approach (and roadway) parapets may need to be poured after the deck to facilitate the bridge deck pour.

Slipforming of parapets is not allowed.

The calculated deflections of the primary girders under steel self-weight shall be used to detail cross frame connections and to erect structural steel such that the girders will be plumb within a tolerance of ±1/8" per vertical foot throughout when supporting their own weight.



INDEX OF SHEETS

- General Plan and Elevation
- General Data
- Substructure Layout
- Top of Deck Elevations (Sheet 1 of 3)
- Top of Deck Elevations (Sheet 2 of 3)
- Top of Deck Elevations (Sheet 3 of 3)
- Top of South Approach Slab Elevations
- Top of North Approach Slab Elevations
- Superstructure
- Superstructure Details (Sheet 1 of 2)
- Superstructure Details (Sheet 2 of 2)
- Bridge Fence Railing (Special) Details (Sheet 1 of 3)
- Bridge Fence Railing (Special) Details (Sheet 2 of 3)
- Bridge Fence Railing (Special) Details (Sheet 3 of 3)
- South Approach Slab
- North Approach Slab
- Approach Slab Details
- Preformed Joint Strip Seal
- Modular Swivel Expansion Joint
- Structural Steel Framing Plan
- Structural Steel Details (Sheet 1 of 2)
- Structural Steel Details (Sheet 2 of 2)
- Bearing Orientation Layout
- HLMR Expansion Pot Bearing Details - South Abutment
- HLMR Fixed Pot Bearing Details - South Abutment
- HLMR Expansion Pot Bearing Details - North Abutment
- South Abutment
- South Abutment Details
- North Abutment
- North Abutment Details
- Bar Splicer Assembly Details
- Metal Shell Pile Details
- Borings (Sheet 1 of 2)
- Borings (Sheet 2 of 2)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Structures	Cu. Yd.	52.3	232.3	284.6
Concrete Superstructure	Cu. Yd.	316.0	-	316.0
Concrete Superstructure (Approach Slab)	Cu. Yd.	138.0	-	138.0
Bridge Deck Grooving	Sq. Yd.	1089	-	1089
Protective Coat	Sq. Yd.	1344	-	1344
Furnishing and Erecting Structural Steel Bridge No. 1	L. Sum	1	-	1
Stud Shear Connectors	Each	3528	-	3528
Reinforcement Bars, Epoxy Coated	Pound	124810	25490	150300
Bar Splicers	Each	180	-	180
Furnishing Metal Shell Piles 12" x 0.250"	Foot	-	1335	1335
Driving Piles	Foot	-	1335	1335
Test Pile Metal Shells	Each	-	2	2
Name Plates	Each	1	-	1
Preformed Joint Strip Seal	Foot	90	-	90
Anchor Bolts, 1 1/2"	Each	48	-	48
Concrete Sealer	Sq. Ft.	-	2933	2933
High Load Multi-Rotational Bearings, Pot, Guided Expansion-300k	Each	9	-	9
High Load Multi-Rotational Bearings, Pot, Fixed-300k	Each	1	-	1
High Load Multi-Rotational Bearings, Pot, Non-Guided Expansion-300k	Each	2	-	2
Modular Expansion Joint - Swivel 9"	Foot	86	-	86
Bridge Fence Railing (Special)	Foot	320	-	320

UP GENERAL NOTES

The proposed grade separation project shall not increase the quantity and/or characteristics of the flow in the Railroad's ditches and/or drainage structures.

The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.

The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad.

All shoring systems that impact the Railroad's operations and/or supports the Railroad's embankment shall be designed and constructed per current Railroad Guidelines for Temporary Shoring.

All demolitions within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall be in compliance with the Railroad's Demolition Guidelines.

Erection over the Railroad's right-of-way shall be designed to cause no interruption to the Railroad's operation, enabling the track(s) to remain open to traffic per the Railroad's requirements.

Railroad requirements do not allow work within 50 feet of track centerline when a train passes the work site and all personnel must clear the area within 25 feet of the track centerline and secure all equipment.

False-work clearances shall comply with minimum construction clearances.

All permanent clearances shall be verified before project closing.

UNION PACIFIC RAILROAD
BUILT 20__ BY
SANGAMON COUNTY
SEC. 07-00164-04-FP
F.A.P. 1638 - STATION 698+29.67
STR. NO. 084-9949
LOADING HL93

NAME PLATE
See Std. 515001

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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PROFESSIONAL DESIGN FIRM LICENSE #184-001084

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	CHECKED MNM	REVISED -
PLOT SCALE = 0.166667' / 1"	DRAWN DAP	REVISED -
PLOT DATE = 7/29/2024	CHECKED JGT/MNM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

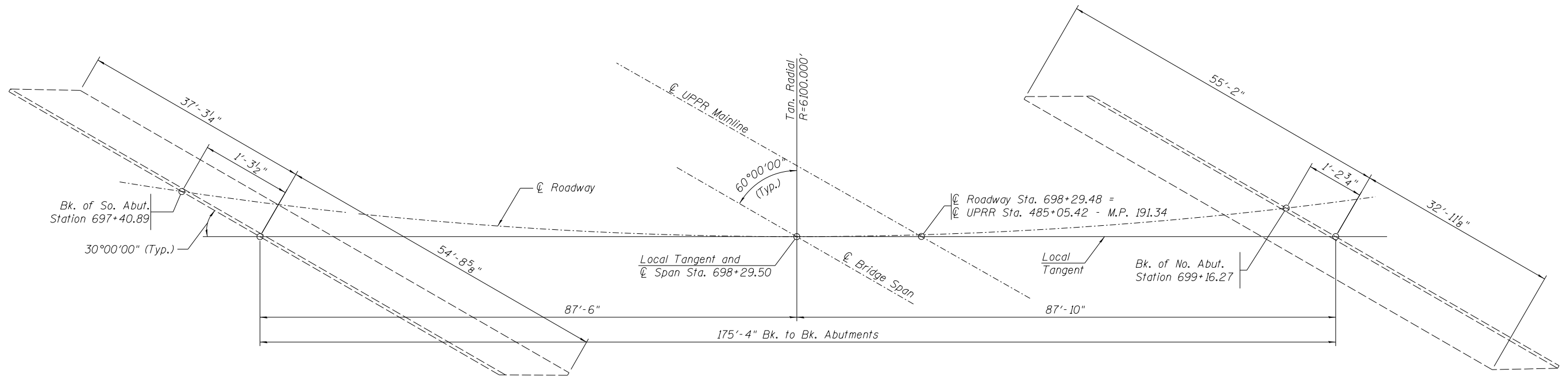
GENERAL DATA
STRUCTURE NUMBER 084-9949

SHEET NO. 2 OF 34 SHEETS

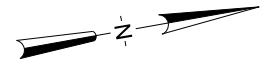
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	.	SANGAMON	368	147
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6

• 07-00164-04-FP, 07-00090-08-FP



FOOTING LAYOUT
(Scale distorted for clarity)



DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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		CHECKED	MNM	REVISED	-
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PLOT DATE =	7/29/2024	CHECKED	JGT/MNM	REVISED	-

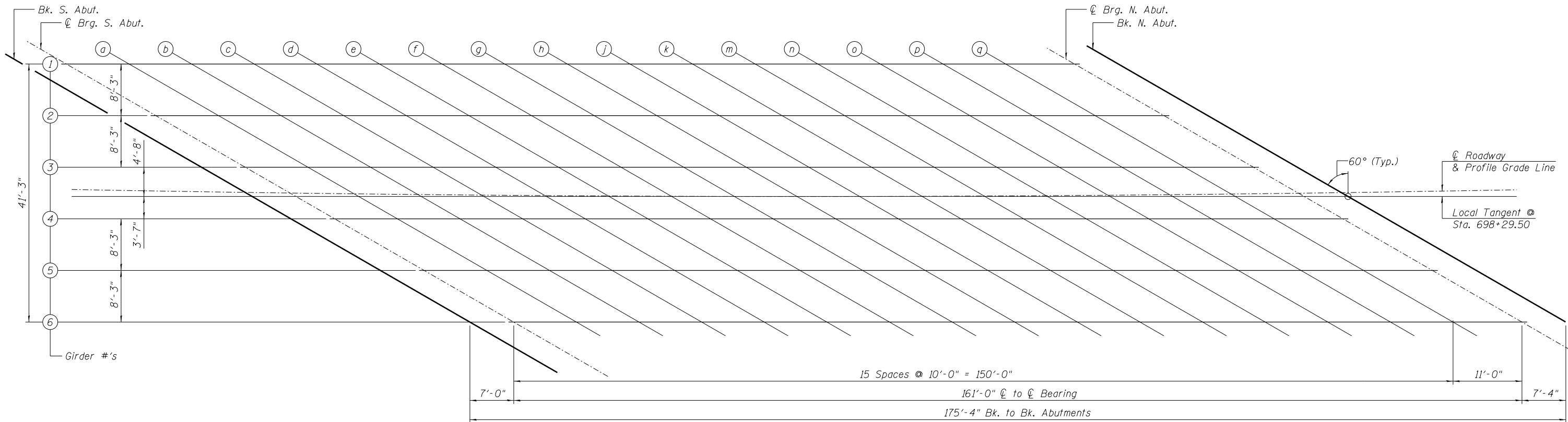
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE LAYOUT
STRUCTURE NUMBER 084-9949

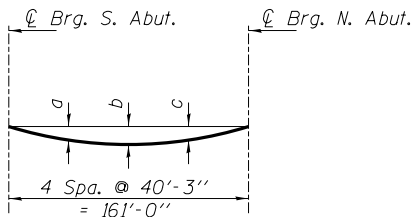
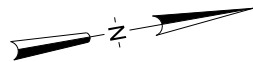
SHEET NO. 3 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	148
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP



DIAGRAMMATIC PLAN

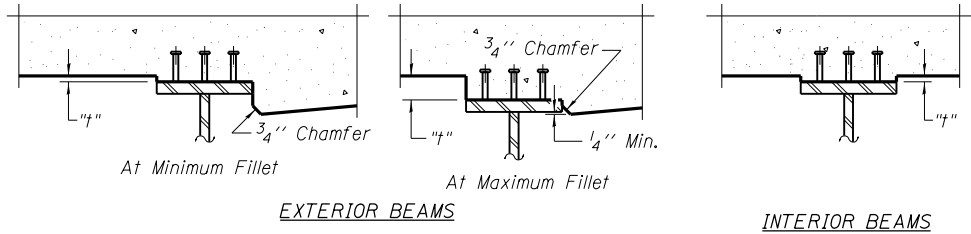


DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only.)

DEAD LOAD DEFLECTION TABLE

Girder	Deflection		
	a	b	c
1	4 ⁹ / ₁₆ "	6 ³ / ₈ "	4 ⁵ / ₈ "
2	4 ⁵ / ₁₆ "	5 ⁷ / ₈ "	4 ¹ / ₄ "
3	4 ¹ / ₈ "	5 ¹¹ / ₁₆ "	4 ¹ / ₈ "
4	4 ¹ / ₈ "	5 ¹¹ / ₁₆ "	4 ¹ / ₈ "
5	4 ³ / ₁₆ "	5 ⁹ / ₁₆ "	4 ¹ / ₄ "
6	4 ⁹ / ₁₆ "	6 ¹ / ₄ "	4 ⁹ / ₁₆ "

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 05 & 06 of 34.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 05 & 06 of 34, minus 8" slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

I:\96\jobs\96S2002F\CADD\Struct\Sheet\004.Top of Deck Elevations (Sheet 1 of 3).dgn
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USER NAME =	johns00944
PLOT SCALE =	0.166667' / 1" =
PLOT DATE =	7/29/2024

DESIGNED	JGT
CHECKED	MNM
DRAWN	DAP
CHECKED	JGT/MNM

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS (SHEET 1 OF 3)
STRUCTURE NUMBER 084-9949

SHEET NO. 4 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	149
			CONTRACT NO. 93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	697+04.92	-19.90	626.70	626.70
⌀ Brg. S. Abut.	697+11.94	-20.04	626.81	626.81
a	697+21.98	-20.22	626.95	627.06
b	697+32.01	-20.39	627.08	627.29
c	697+42.04	-20.54	627.20	627.50
d	697+52.07	-20.68	627.31	627.69
e	697+62.11	-20.80	627.40	627.85
f	697+72.14	-20.90	627.49	627.98
g	697+82.17	-20.98	627.56	628.08
h	697+92.21	-21.05	627.63	628.16
j	698+02.24	-21.11	627.68	628.20
k	698+12.28	-21.14	627.72	628.22
m	698+22.31	-21.16	627.75	628.21
n	698+32.35	-21.17	627.77	628.16
o	698+42.38	-21.15	627.78	628.10
p	698+52.42	-21.12	627.78	628.00
q	698+62.45	-21.08	627.76	627.89
⌀ Brg. N. Brg	698+73.49	-21.01	627.74	627.74
Bk. N. Abut.	698+80.85	-20.95	627.71	627.71

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	697+19.41	-11.93	627.08	627.08
⌀ Brg. S. Abut.	697+26.42	-12.05	627.17	627.17
a	697+36.44	-12.21	627.30	627.40
b	697+46.46	-12.35	627.41	627.61
c	697+56.48	-12.48	627.52	627.80
d	697+66.50	-12.59	627.61	627.96
e	697+76.52	-12.69	627.69	628.10
f	697+86.54	-12.77	627.76	628.21
g	697+96.56	-12.83	627.82	628.30
h	698+06.58	-12.87	627.87	628.35
j	698+16.60	-12.90	627.90	628.38
k	698+26.62	-12.92	627.93	628.38
m	698+36.64	-12.91	627.94	628.36
n	698+46.66	-12.89	627.95	628.30
o	698+56.69	-12.86	627.94	628.23
p	698+66.71	-12.80	627.92	628.12
q	698+76.73	-12.73	627.89	628.00
⌀ Brg. N. Brg	698+87.75	-12.64	627.85	627.85
Bk. N. Abut.	698+95.10	-12.56	627.81	627.81

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	697+33.85	-3.92	627.39	627.39
⌀ Brg. S. Abut.	697+40.86	-4.02	627.48	627.48
a	697+50.86	-4.16	627.59	627.68
b	697+60.87	-4.28	627.68	627.88
c	697+70.87	-4.39	627.77	628.05
d	697+80.88	-4.47	627.85	628.19
e	697+90.89	-4.54	627.91	628.31
f	698+00.90	-4.60	627.97	628.41
g	698+10.90	-4.64	628.01	628.48
h	698+20.91	-4.66	628.04	628.52
j	698+30.92	-4.67	628.06	628.53
k	698+40.93	-4.66	628.07	628.52
m	698+50.93	-4.63	628.07	628.47
n	698+60.94	-4.59	628.06	628.41
o	698+70.95	-4.53	628.04	628.32
p	698+80.96	-4.45	628.00	628.20
q	698+90.96	-4.36	627.96	628.06
⌀ Brg. N. Brg	699+01.97	-4.24	627.89	627.89
Bk. N. Abut.	699+09.31	-4.14	627.84	627.84

Note:
Offsets measured from ⌀ Roadway.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

I:\96\jobs\96S2002F\CADD\Struct\Sheet\005.Top of Deck Elevations (Sheet 2 of 3).dgn

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PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME =	johns00944	DESIGNED	JGT	REVISED	-
		CHECKED	MNM	REVISED	-
PLOT SCALE =	0.166667' / 1in.	DRAWN	DAP	REVISED	-
PLOT DATE =	7/29/2024	CHECKED	JGT/MNM	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS (SHEET 2 OF 3)
STRUCTURE NUMBER 084-9949

SHEET NO. 5 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	150
CONTRACT NO.			93671	
ILLINOIS FED. AID PROJECT 6				
• 07-00164-04-FP, 07-00090-08-FP				

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

Note:
Offsets measured from $\varnothing$ Roadway.

I:\96\jobs\96S2002F\CADD\Struct\Sheet\006.Top of Deck Elevations (Sheet 3 of 3).dgn



PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME = johns00944

CHECKED MNM

PLOT SCALE = 0.166667' / 1in.

PLOT DATE = 7/29/2024

DESIGNED	JGT	REVISED	-
CHECKED	MNM	REVISED	-
DRAWN	DAP	REVISED	-
CHECKED	JGT/MNM	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS (SHEET 3 OF 3)
STRUCTURE NUMBER 084-9949

SHEET NO. 6 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	151
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6

• 07-00164-04-FP, 07-00090-08-FP

$\varnothing$ ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	697+40.88	0.00	627.54	627.54
$\varnothing$ Brg. S. Abut.	697+48.06	0.00	627.62	627.62
a	697+58.28	0.00	627.72	627.82
b	697+68.47	0.00	627.82	628.01
c	697+78.63	0.00	627.90	628.17
d	697+88.76	0.00	627.97	628.31
e	697+98.87	0.00	628.03	628.42
f	698+08.94	0.00	628.07	628.51
g	698+18.98	0.00	628.11	628.57
h	698+29.00	0.00	628.13	628.60
j	698+38.99	0.00	628.14	628.61
k	698+48.95	0.00	628.14	628.58
m	698+58.88	0.00	628.13	628.53
n	698+68.78	0.00	628.11	628.46
o	698+78.66	0.00	628.08	628.36
p	698+88.51	0.00	628.04	628.23
q	698+98.33	0.00	627.98	628.09
$\varnothing$ Brg. N. Brg	699+09.13	0.00	627.91	627.91
Bk. N. Abut.	699+16.27	0.00	627.85	627.85

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	697+48.26	4.12	627.56	627.56
$\varnothing$ Brg. S. Abut.	697+55.25	4.04	627.63	627.63
a	697+65.25	3.92	627.73	627.83
b	697+75.24	3.82	627.82	628.00
c	697+85.23	3.74	627.89	628.16
d	697+95.23	3.68	627.95	628.29
e	698+05.22	3.63	628.00	628.40
f	698+15.21	3.60	628.04	628.48
g	698+25.21	3.58	628.07	628.53
h	698+35.20	3.59	628.09	628.56
j	698+45.20	3.60	628.09	628.55
k	698+55.19	3.64	628.08	628.52
m	698+65.19	3.69	628.07	628.47
n	698+75.18	3.75	628.04	628.38
o	698+85.17	3.84	627.99	628.27
p	698+95.17	3.94	627.94	628.14
q	699+05.16	4.05	627.88	627.98
$\varnothing$ Brg. N. Brg	699+16.15	4.20	627.79	627.79
Bk. N. Abut.	699+23.48	4.31	627.73	627.73

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	697+62.63	12.20	627.58	627.58
$\varnothing$ Brg. S. Abut.	697+69.61	12.13	627.64	627.64
a	697+79.59	12.04	627.73	627.82
b	697+89.57	11.96	627.79	627.99
c	697+99.55	11.91	627.85	628.13
d	698+09.53	11.87	627.90	628.25
e	698+19.52	11.84	627.93	628.34
f	698+29.50	11.83	627.95	628.40
g	698+39.48	11.84	627.97	628.44
h	698+49.46	11.87	627.97	628.45
j	698+59.44	11.91	627.95	628.43
k	698+69.42	11.96	627.93	628.38
m	698+79.40	12.04	627.90	628.31
n	698+89.38	12.13	627.85	628.21
o	698+99.36	12.23	627.79	628.08
p	699+09.34	12.36	627.72	627.92
q	699+19.32	12.50	627.64	627.75
$\varnothing$ Brg. N. Brg	699+30.29	12.67	627.53	627.53
Bk. N. Abut.	699+37.61	12.79	627.46	627.46

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	697+76.96	20.31	627.54	627.54
$\varnothing$ Brg. S. Abut.	697+83.94	20.25	627.59	627.59
a	697+93.90	20.19	627.66	627.76
b	698+03.87	20.14	627.71	627.92
c	698+13.84	20.10	627.75	628.05
d	698+23.80	20.09	627.78	628.16
e	698+33.77	20.08	627.80	628.24
f	698+43.74	20.10	627.80	628.29
g	698+53.71	20.13	627.80	628.31
h	698+63.67	20.18	627.78	628.30
j	698+73.64	20.24	627.75	628.27
k	698+83.61	20.32	627.71	628.20
m	698+93.57	20.42	627.66	628.10
n	699+03.54	20.53	627.60	627.98
o	699+13.50	20.66	627.52	627.83
p	699+23.47	20.81	627.44	627.65
q	699+33.43	20.97	627.34	627.46
$\varnothing$ Brg. N. Brg	699+44.39	21.17	627.22	627.22
Bk. N. Abut.	699+51.70	21.31	627.13	627.13

WEST GUTTER LINE

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	696+70.74	-22.00	626.06
A	696+81.24	-22.00	626.26
B	696+91.70	-22.00	626.44
Abut. End of South Appr.	697+02.14	-22.00	626.62

WEST CROWN BREAKPOINT

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	696+89.14	-12.00	626.60
A	696+99.56	-12.00	626.78
B	697+09.95	-12.00	626.94
Abut. End of South Appr.	697+20.31	-12.00	627.09

℄ ROADWAY & CROWN LINE

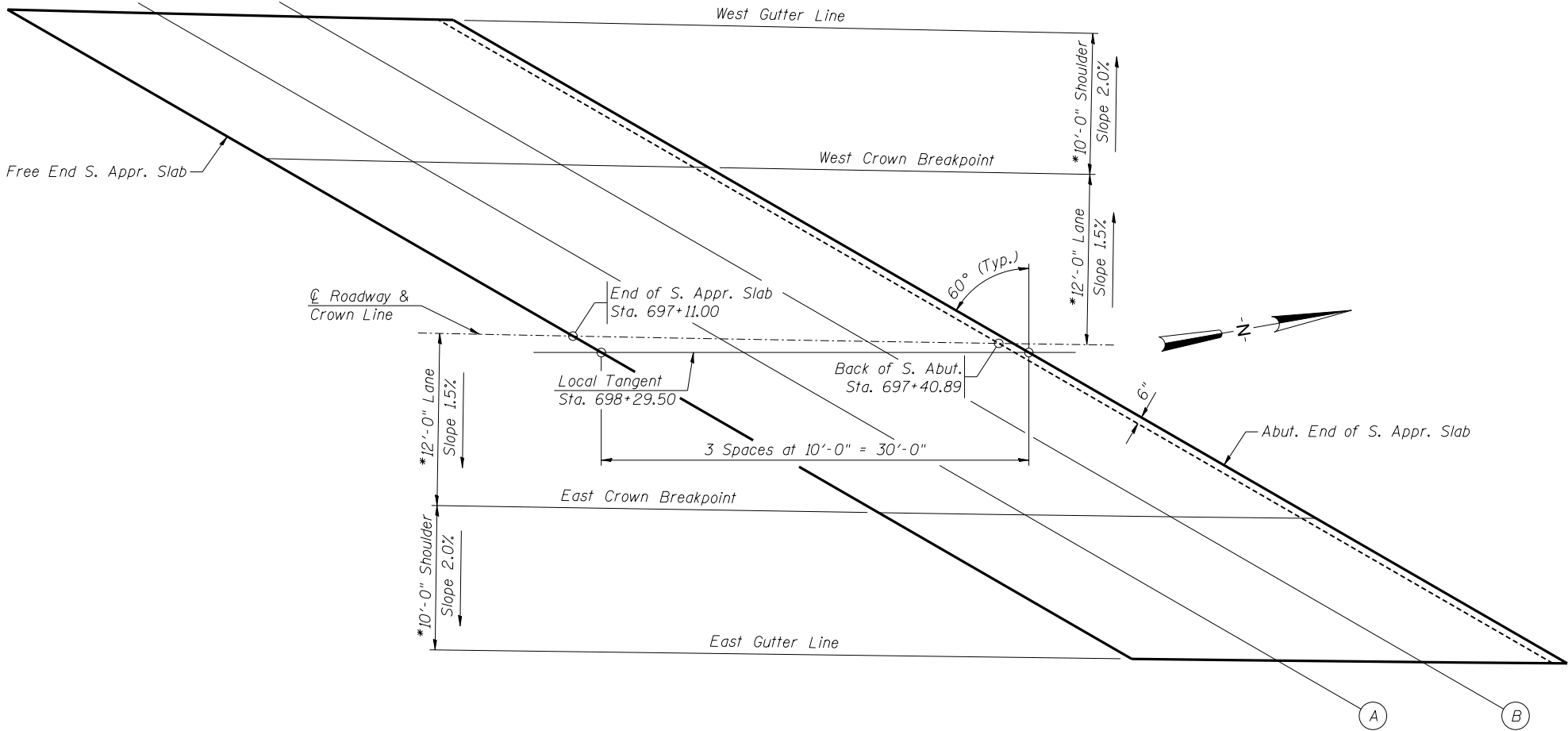
Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	697+11.00	0.00	627.14
A	697+21.34	0.00	627.29
B	697+31.64	0.00	627.42
Abut. End of South Appr.	697+41.91	0.00	627.55

EAST CROWN BREAKPOINT

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	697+32.64	12.00	627.26
A	697+42.89	12.00	627.38
B	697+53.11	12.00	627.49
Abut. End of South Appr.	697+63.29	12.00	627.59

EAST GUTTER LINE

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	697+50.50	22.00	627.26
A	697+60.68	22.00	627.37
B	697+70.83	22.00	627.46
Abut. End of South Appr.	697+80.95	22.00	627.54



PLAN

*Dimensions are measured radial to ℄ Roadway.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME =	johns00944
PLOT SCALE =	0:2.000000 'ft' / in.
PLOT DATE =	7/29/2024

DESIGNED	JGT
CHECKED	MNM
DRAWN	DAP
CHECKED	JGT/MNM

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NUMBER 084-9949

SHEET NO. 7 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	152
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

WEST GUTTER LINE

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	698+78.08	-22.00	627.70
A	698+87.96	-22.00	627.66
B	698+97.82	-22.00	627.60
Free End of North Appr.	699+07.65	-22.00	627.54

WEST CROWN BREAKPOINT

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	698+95.07	-12.00	627.82
A	699+04.90	-12.00	627.76
B	699+14.70	-12.00	627.69
Free End of North Appr.	699+24.47	-12.00	627.60

☐ ROADWAY & CROWN LINE

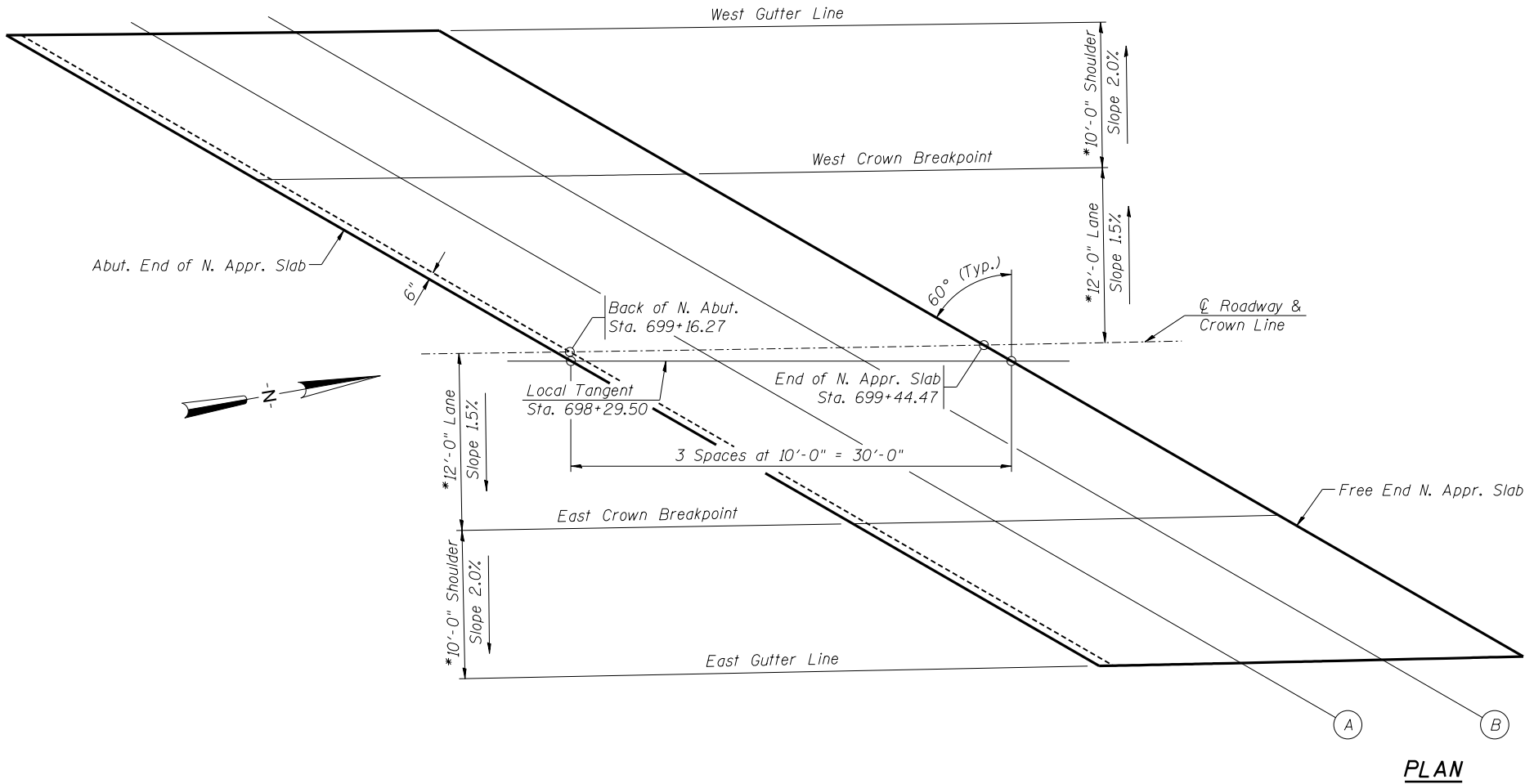
Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	699+15.30	0.00	627.86
A	699+25.05	0.00	627.78
B	699+34.77	0.00	627.68
Free End of North Appr.	699+44.47	0.00	627.58

EAST CROWN BREAKPOINT

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	699+35.33	12.00	627.50
A	699+45.01	12.00	627.39
B	699+54.66	12.00	627.28
Free End of North Appr.	699+64.28	12.00	627.15

EAST GUTTER LINE

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	699+51.88	22.00	627.11
A	699+61.50	22.00	626.99
B	699+71.09	22.00	626.86
Free End of North Appr.	699+80.66	22.00	626.72



*Dimensions are measured radial to ☐ Roadway.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME =	johns00944
PLOT SCALE =	0.166667' / 1" =
PLOT DATE =	7/29/2024

DESIGNED	JGT
CHECKED	MNM
DRAWN	DAP
CHECKED	JGT/MNM

REVISED	-
REVISED	-
REVISED	-
REVISED	-

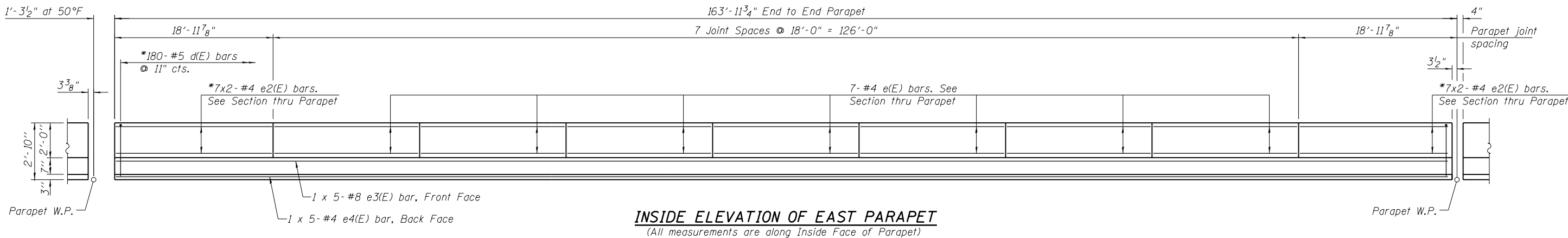
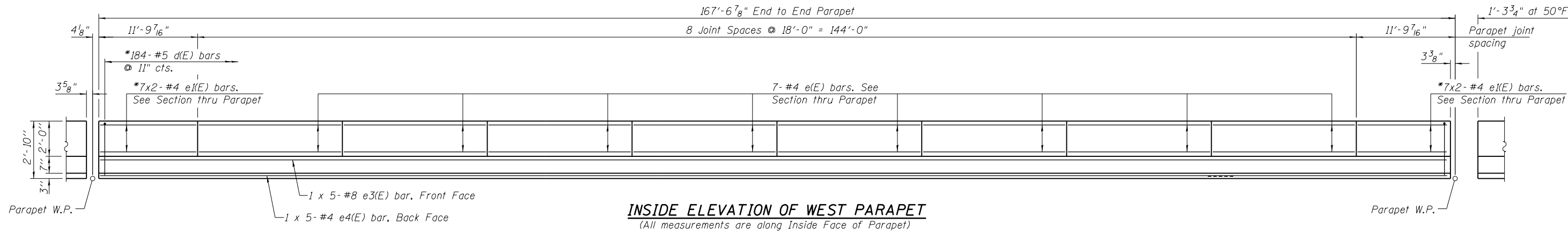
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NUMBER 084-9949

SHEET NO. 8 OF 34 SHEETS

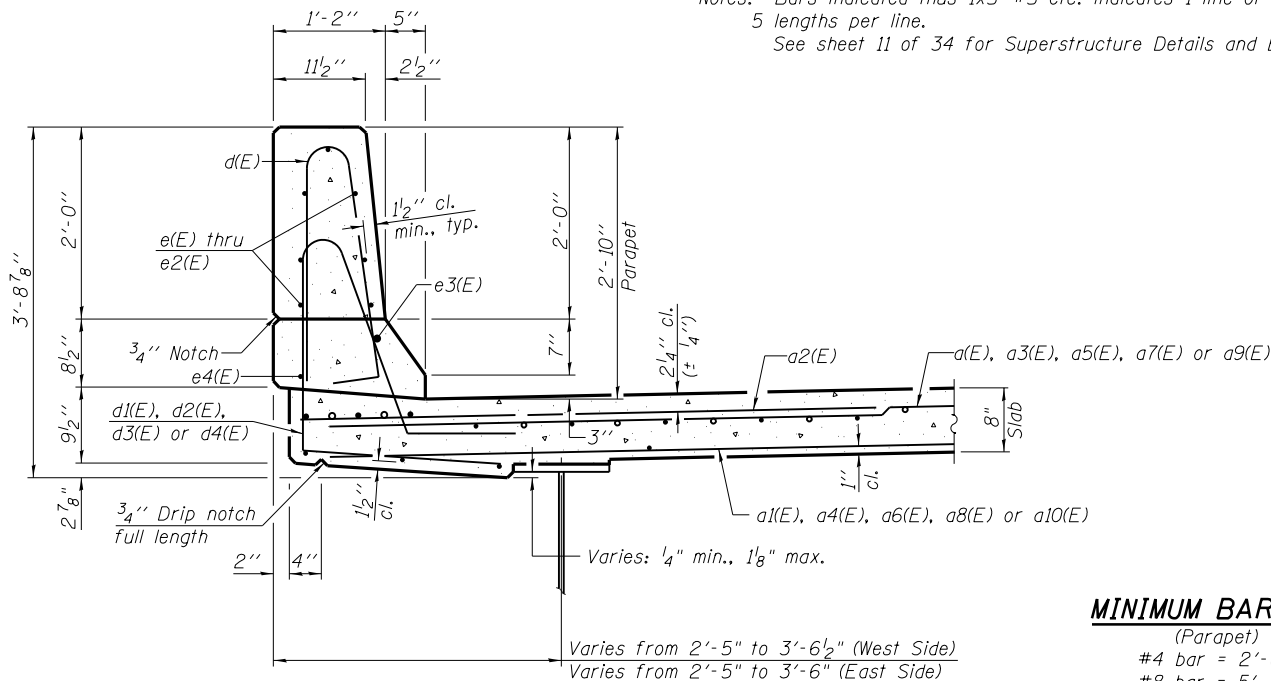
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	153
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP



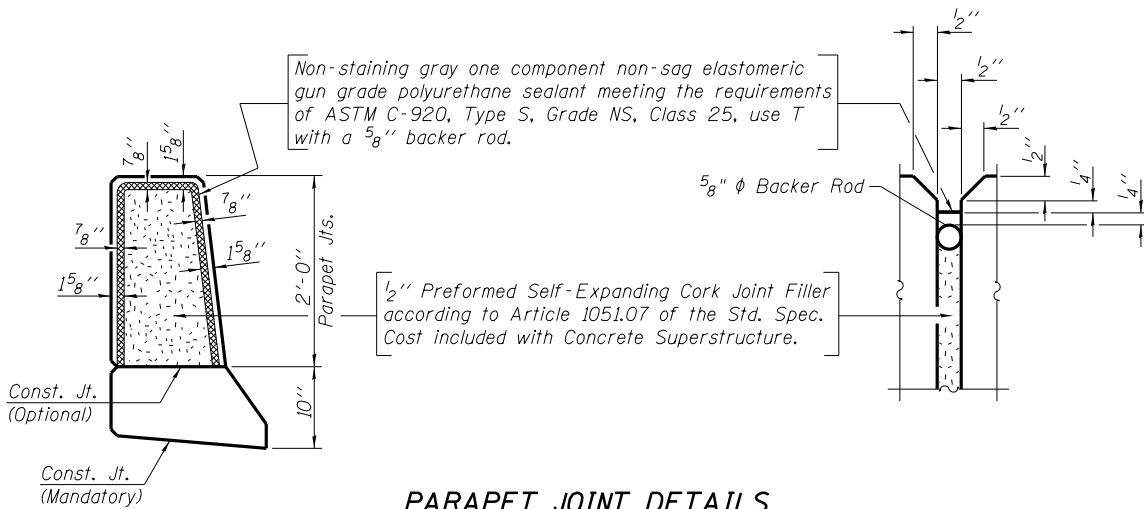
* Field bend or cut as required.

Notes: Bars indicated thus 1x5- #5 etc. indicates 1 line of bars with 5 lengths per line.
See sheet 11 of 34 for Superstructure Details and Bill of Material.



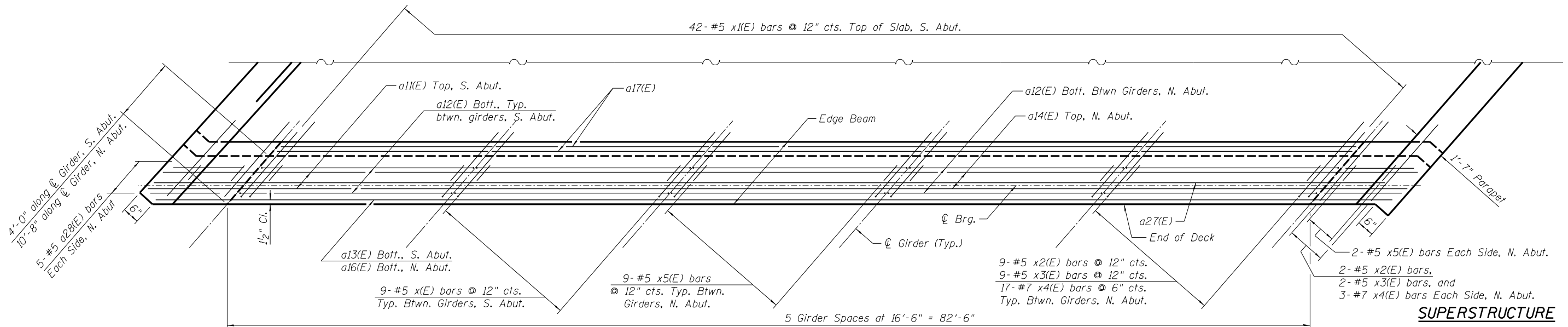
SECTION THRU PARAPET

MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-8"
#8 bar = 5'-11"



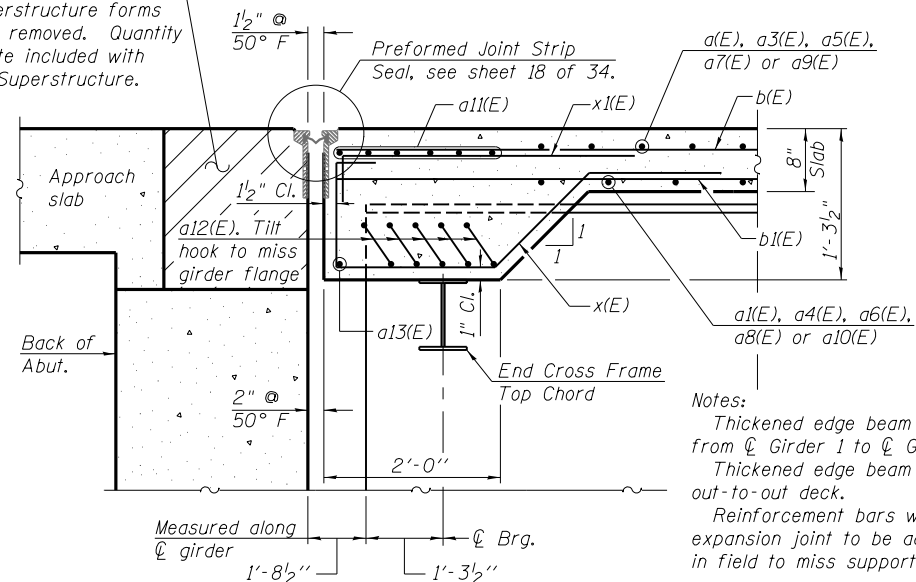
PARAPET JOINT DETAILS

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15



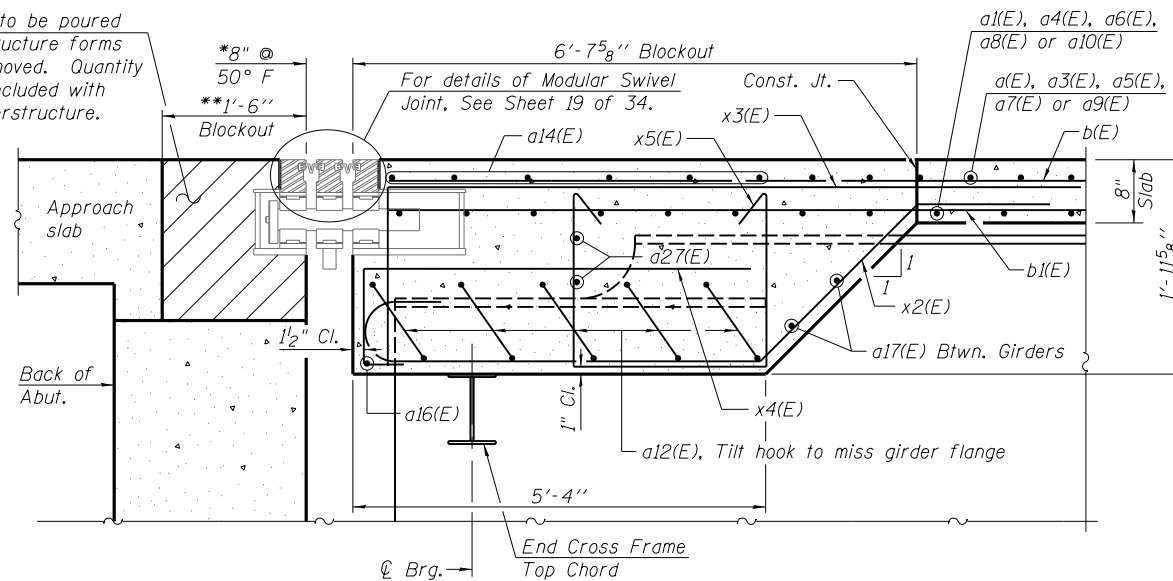
PLAN - EDGE BEAM

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



SECTION A-A

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



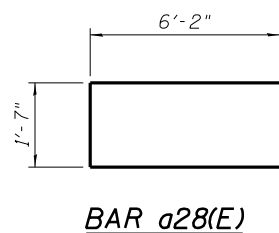
SECTION B-B

* Number of rails determined by the manufacturer.
** Contractor to verify blockout dimensions with joint manufacturer.

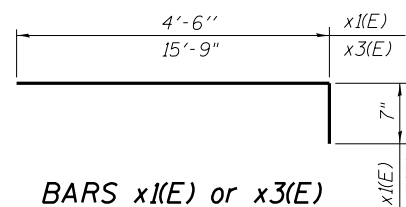
**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	189	#5	46'-2"	
a1(E)	123	#5	46'-0"	
a2(E)	718	#6	6'-6"	
a3(E)	44	#5	58'-6"	
a4(E)	28	#5	59'-0"	
a5(E)	44	#5	36'-0"	
a6(E)	28	#5	36'-10"	
a7(E)	41	#5	59'-0"	
a8(E)	27	#5	58'-8"	
a9(E)	41	#5	37'-0"	
a10(E)	27	#5	36'-0"	
a11(E)	18	#8	36'-3"	
a12(E)	50	#8	18'-0"	
a13(E)	3	#8	32'-0"	
a14(E)	18	#8	35'-0"	
a16(E)	3	#8	35'-9"	
a17(E)	10	#5	16'-0"	
a27(E)	6	#5	33'-10"	
a28(E)	10	#5	13'-11"	
b(E)	300	#5	30'-11"	
b1(E)	255	#5	36'-4"	
d(E)	364	#5	5'-7"	
d1(E)	138	#5	6'-11"	
d2(E)	48	#5	7'-3"	
d3(E)	74	#5	7'-7"	
d4(E)	104	#5	7'-11"	
e(E)	105	#4	17'-8"	
e1(E)	28	#4	8'-3"	
e2(E)	28	#4	11'-7"	
e3(E)	10	#8	38'-3"	
e4(E)	10	#4	35'-8"	
x(E)	45	#5	9'-0"	
x1(E)	42	#5	5'-1"	
x2(E)	49	#5	16'-7"	
x3(E)	49	#5	17'-3"	
x4(E)	91	#7	12'-2"	
x5(E)	49	#5	8'-3"	
Reinforcement Bars, Epoxy Coated			Pound	75000
Concrete Superstructure			Cu. Yds.	301.4

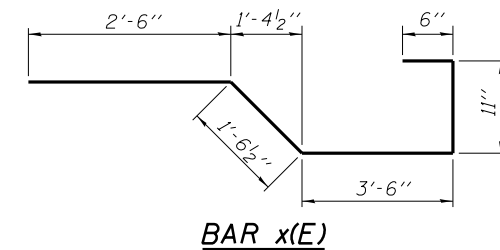
Bars indicated thus 6 x 4-#8 etc. indicates 6 lines of bars with 4 lengths per line.



BAR a28(E)



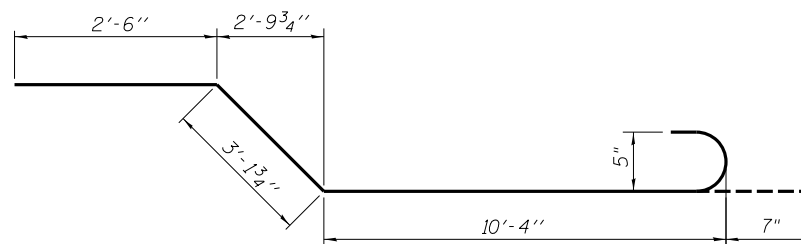
BARS x1(E) or x3(E)



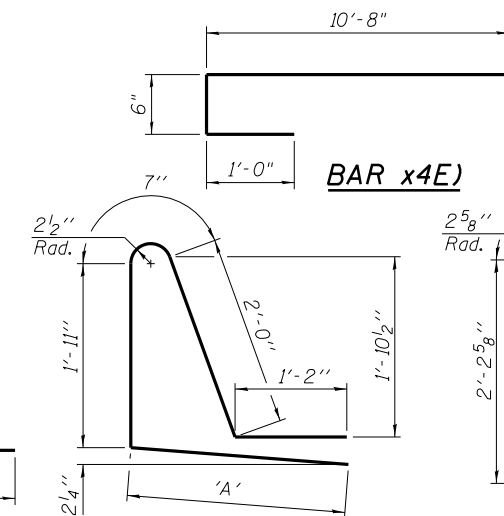
BAR x(E)

'A' Dimensions

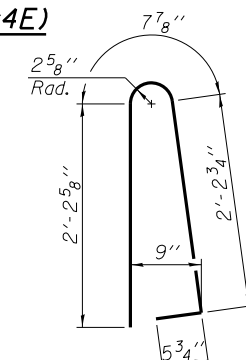
Bar	'A'
d1(E)	1'-3"
d2(E)	1'-7"
d3(E)	1'-11"
d4(E)	2'-3"



BAR x2(E)

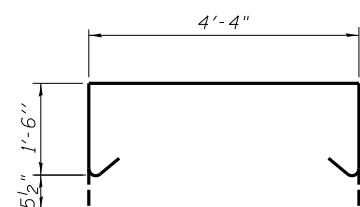


BAR x4(E)

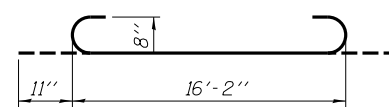


BAR d(E)

BARS d1(E) thru d4(E)



BAR x5(E)



BAR a12(E)

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

I:\96\jobs\9652002\F\CADD\Struct\Sheet\011.Superstructure Details (Sheet 2 of 2).dgn

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USER NAME : johns00944

PLOT SCALE = 0.166666' / 1"

PLOT DATE = 7/29/2024

DESIGNED JGT

CHECKED MNM

DRAWN DAP

CHECKED JGT/MNM

REVISED -

REVISED -

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

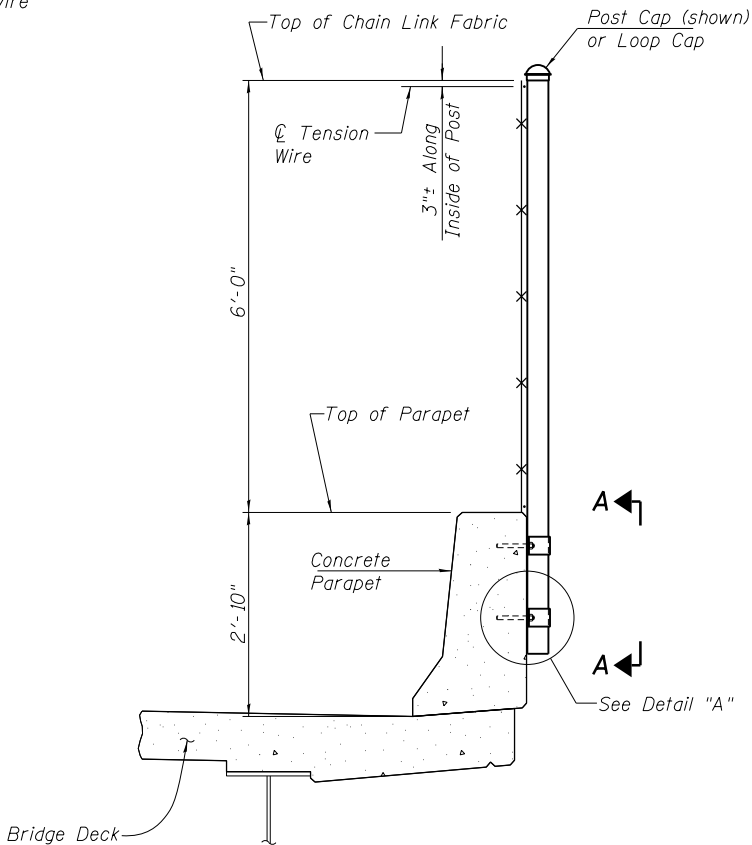
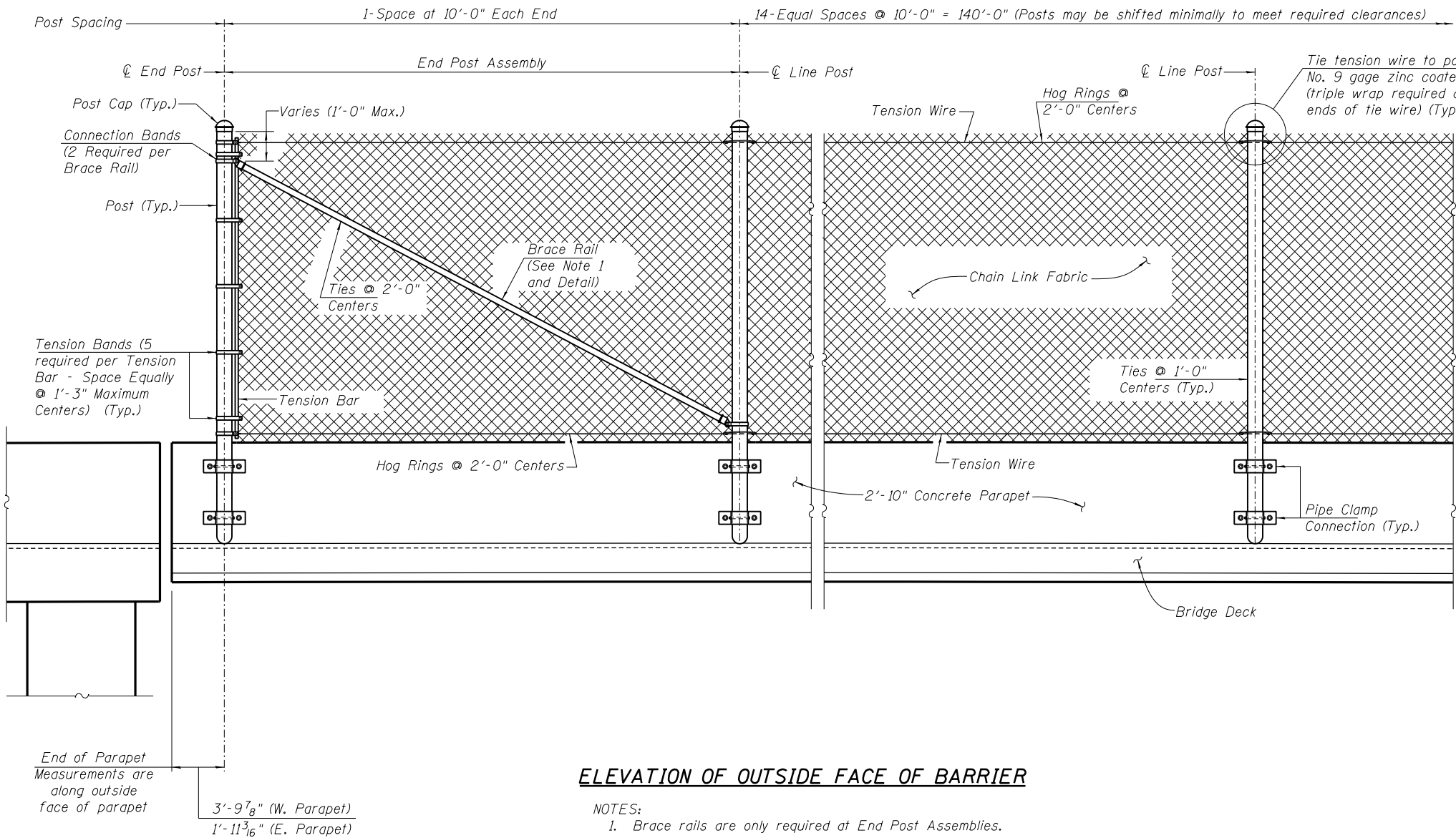
SUPERSTRUCTURE DETAILS (SHEET 2 OF 2)
STRUCTURE NUMBER 084-9949

SHEET NO. 11 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SANGAMON	368	156
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6

07-00164-04-FP, 07-00090-08-FP



FENCING NOTES

FENCE INSTALLATION:
Install posts plumb (within a tolerance of ±1¹/₂"). Use shim plates as required to achieve plumb. The required quantity and thickness of shim plates will be determined in the field. Install chain link fence in accordance with ASTM F 567, Section 509 of the Standard Specifications and Special Provision as applicable.

CONCRETE PARAPET DETAILS:
See Sheet 10 of 34 for Concrete Parapet Details.

PAYMENT:
Payment shall be for the contract unit price per foot for "Bridge Fence Railing (Special)". Payment includes posts, brace rails and bands, rail ends, combination rail ends, boulevard clamps, chain link fabric, tension wire, ties, hog rings, tension bars and bands, post and loop caps, pipe clamps, anchor rods, bolts, nuts, washers, neoprene pads, miscellaneous fence fittings and hardware and all incidental materials and labor and equipment required to complete installation of the fence.

COLOR and FINISH:
The chain link fabric, posts, fence framework, tension wire, ties and fittings, shall have a black polyvinyl chloride (PVC) coating. All non-aluminum material shall be galvanized prior to vinyl coating. See Section 1006.27 of the Standard Specifications. Hot-dip galvanize fence framework after fabrication.

BRACE RAIL DETAIL

Fabric:
Fabric shall not be spliced by pickets. Fabric splices if required only occur at posts at a minimum of 100' between splices.

Brace Rail

Tension Wire (Tie Both Ends)
Drill Holes as Required.

CROSS REFERENCE:
For Table of Fence Components, Table of Post Attachment Components, View A-A and Detail "A" see Sheet 13 of 34.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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USER NAME	= johns00944	DESIGNED	JGT	REVIS	-
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PLOT SCALE	= 0.166666 ' / in.	DRAWN	DAP	REVIS	-
PLOT DATE	= 7/29/2024	CHECKED	JGT/MNM	REVIS	-

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BRIDGE FENCE RAILING (SPECIAL) – DETAILS (Sheet 1 of 3)
STRUCTURE NUMBER 084-9949

SHEET NO. 12 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	157
CONTRACT NO. 93671				

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

TABLE OF CHAIN LINK FENCE COMPONENTS		
COMPONENT	ASTM DESIGNATION	COMPONENT INFORMATION
Posts	F 1083	Galvanized Steel Pipe - 3" NPS, Schedule 40 (3.500" Outside Diameter, 0.216" Wall Thickness)
Chain Link Fabric (2" mesh with twisted top and knuckled bottom selvage)	A 392	Zinc Coated Steel - No. 9 gage (coated wire diameter), Class 2 Coating
	A 491	Aluminum Coated Steel - No. 9 gage (coated wire diameter)
	F 668	Polyvinyl Chloride (PVC) Coated Steel - No. 9 gage Zinc Coated Wire (metallic-coated core wire diameter)
Tie Wires	F 626	Zinc Coated Steel Wire - No. 9 gage
Brace Bands	F 626	No. 12 Gage (Min. thickness) x 3/4" (Min. width) Steel Bands (Beveled or Heavy)
Tension Bars	F 626	3/16" (Min. thickness) x 3/4" (Min. width) x 5'-10" (Min. height) Steel Bars
Tension Bands	F 626	No. 14 Gage (Min. thickness) x 3/4" (Min. width) Steel Bands
Miscellaneous Fence Components	F 626	Zinc Coated Steel - (includes post or loop caps, horizontal and brace rail ends, combination rail ends, boulevard clamps and all other miscellaneous fittings & hardware)
Tension Wire	A 824 & A 817	Type II (Zinc Coated Steel Wire) - No. 7 gage, Class 4 Coating
		Type I (Aluminum Coated Steel Wire) - No. 7 gage
Hog Rings	F 626	Zinc Coated Steel Wire - No. 12 gage
Brace Rails	F 1083	Galvanized Steel Pipe - 1 1/4" NPS, Schedule 40 (1.660" Outside Diameter, 0.140" Wall Thickness)

TABLE OF POST ATTACHMENT COMPONENTS			
COMPONENT		ASTM DESIGNATION	COMPONENT INFORMATION
Pipe Clamps		A 36 or A 709 Grade 36	1/4" Steel $\mathbb{R}$
Pipe Clamp Connection	Epoxy Grouted Anchor Rods	F 1554 Grade 36	Fully threaded Headless Anchor Rods - 5/8" ϕ x 6"
	C-I-P Anchor Rods	F 1554 Grade 36	Hex Head Anchor Rods - 5/8" ϕ x 6"
Bolts		A 307	3/8" ϕ x 4 3/4" Hex Head Bolts for Pipe Clamp Connections to Posts
Nuts		A 563	Hex Nuts for Pipe Clamp and Base Plate Connections
Washers		F 436	Flat Washers for Pipe Clamp and Base Plate Connections
Neoprene Pads		-	In accordance with Standard Specification Section 1052.02(a)

POST ATTACHMENT NOTES

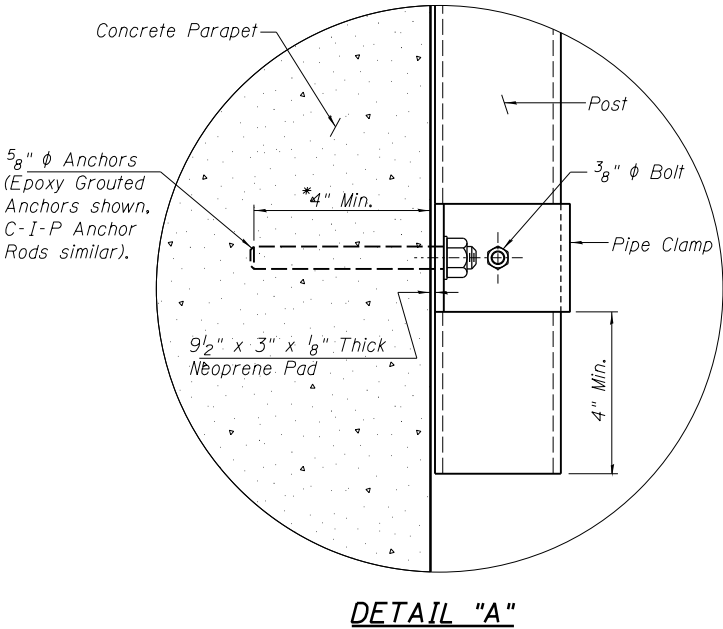
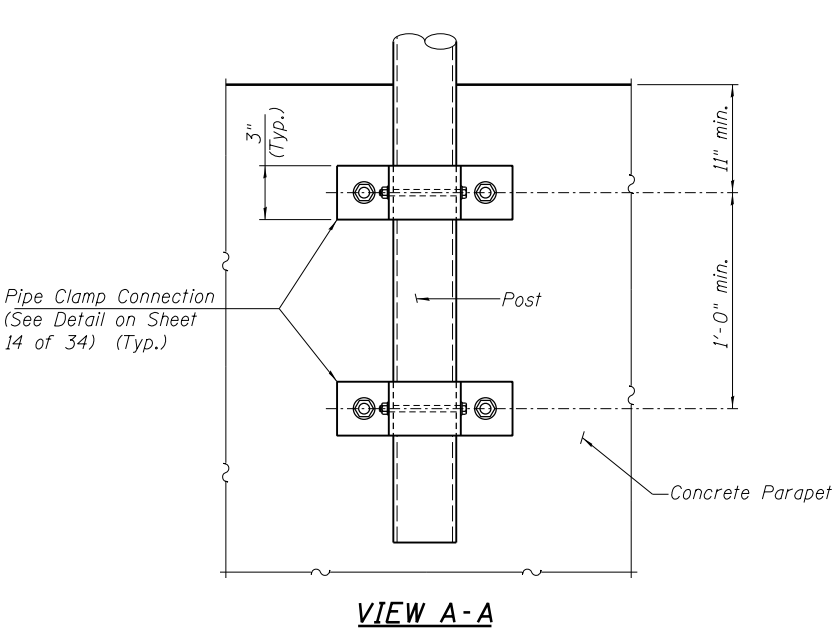
ANCHOR RODS, NUTS and WASHERS:
After the nuts have been tightened, distort the Anchor Rod threads to prevent removal of the nuts. Coat distorted threads and exposed trimmed ends of anchors with a galvanizing compound in accordance with ASTM A780.

COATINGS:
Hot-dip galvanize all Nuts, Washers, Bolts, C-I-P Anchor Rods, Epoxy Grouted Anchors according to Section 1006.09 of the Standard Specifications. Hot-dip galvanize pipe clamps in accordance with ASTM A123. See Fencing Notes on Sheet 12 of 34 for PVC coating details.

EPOXY GROUTING of ANCHOR RODS and BARS:
Chemical Adhesive Resin System for Anchor Rods and Bars shall comply with Special Provisions. Space reinforcement bars in parapet to miss anchors.

WELDING:
All welding will be in accordance with the American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1 (current edition). Weld metal will be E60XX or E70XX. Nondestructive testing of welds is not required.

CROSS REFERENCE:
For location of View A-A and Detail "A" see Sheet 12 of 34.



*The minimum embedment length shall be 6" or embedment length necessary to achieve 125% of the specified yield strength of the anchor rod or bar.

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DRAWN	DAP	11/20/15
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PLOT SCALE	=	0.166666' / 1in.
PLOT DATE	=	7/29/2024

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DRAWN	DAP	REVISED	-
CHECKED	JGT/MNM	REVISED	-

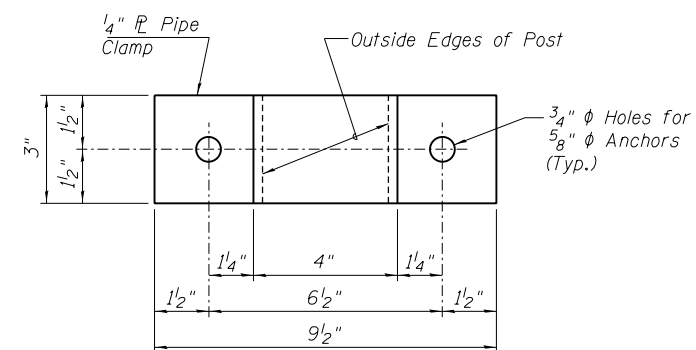
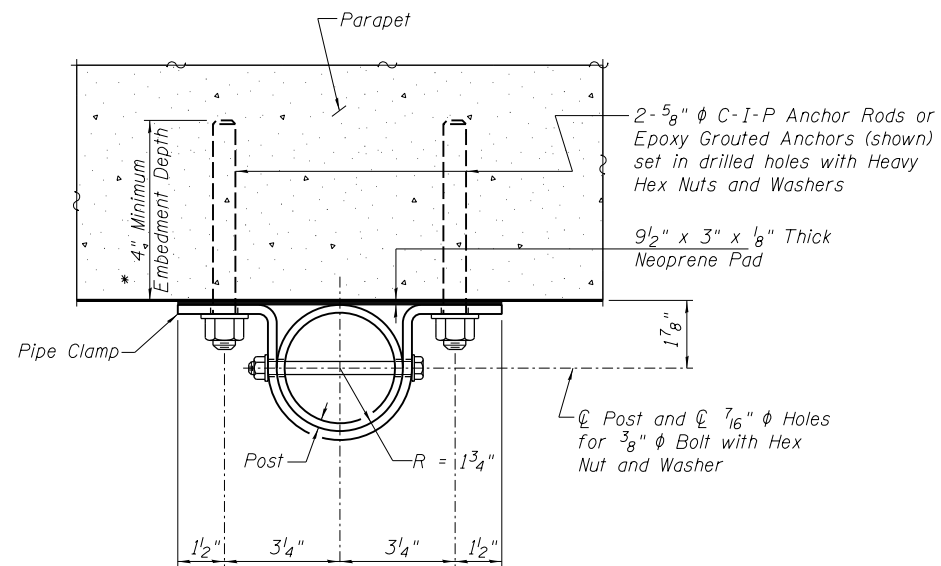
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DEPARTMENT OF TRANSPORTATION

BRIDGE FENCE RAILING (SPECIAL) – DETAILS (Sheet 2 of 3)
STRUCTURE NUMBER 084-9949

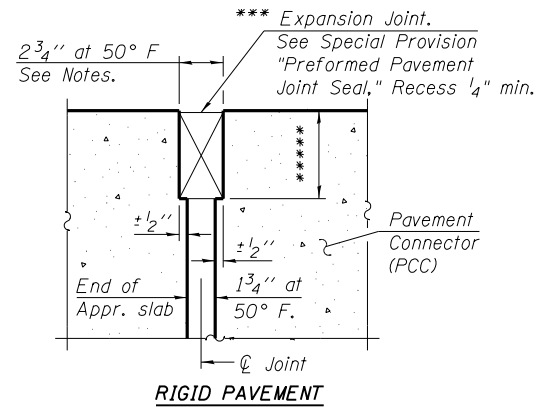
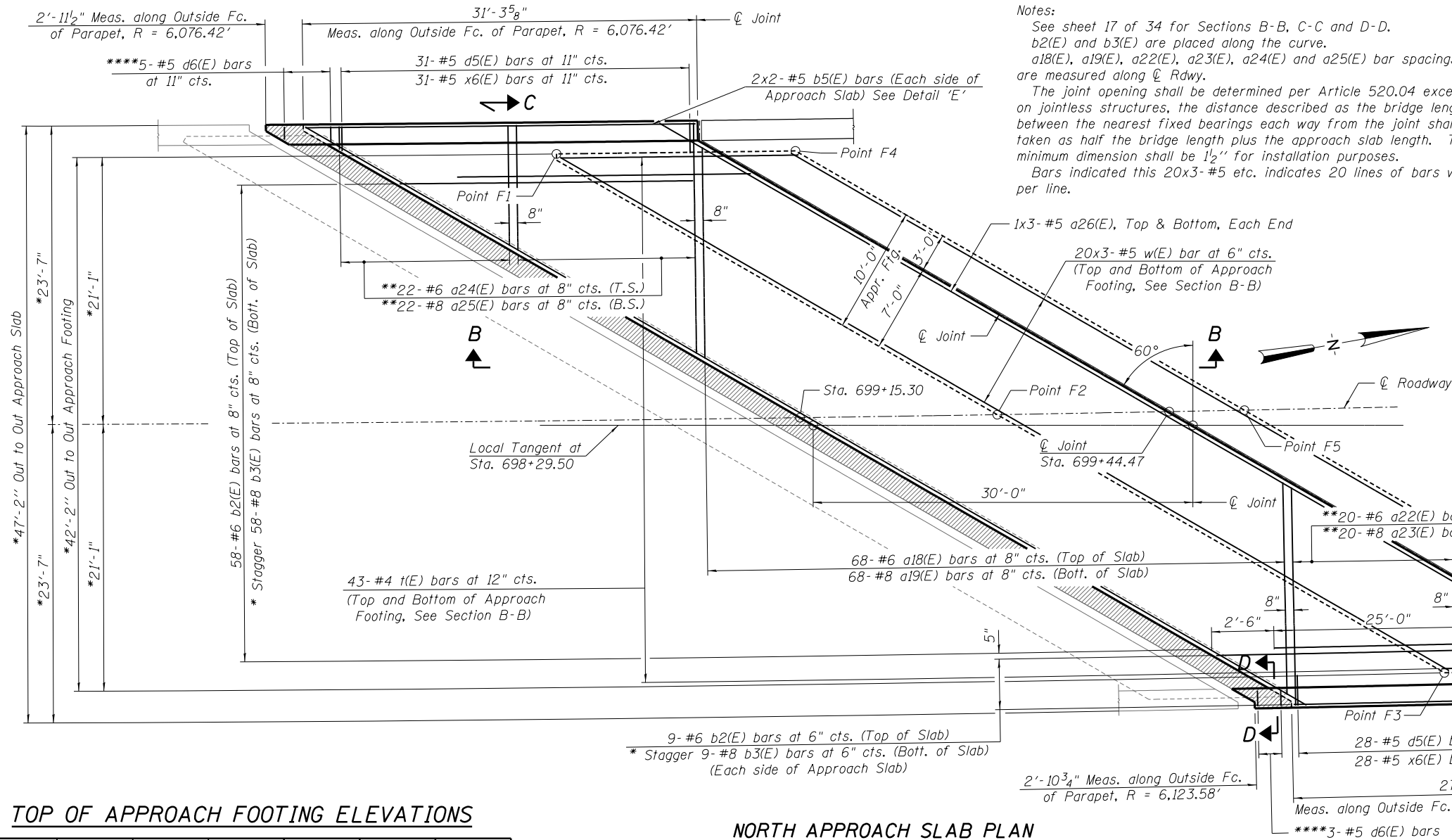
SHEET NO. 13 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	158
			CONTRACT NO. 93671	

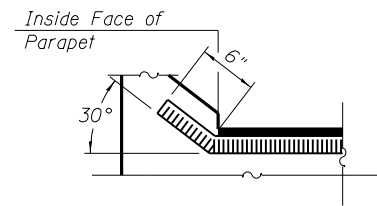
ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP



PIPE CLAMP DETAIL



DETAIL A



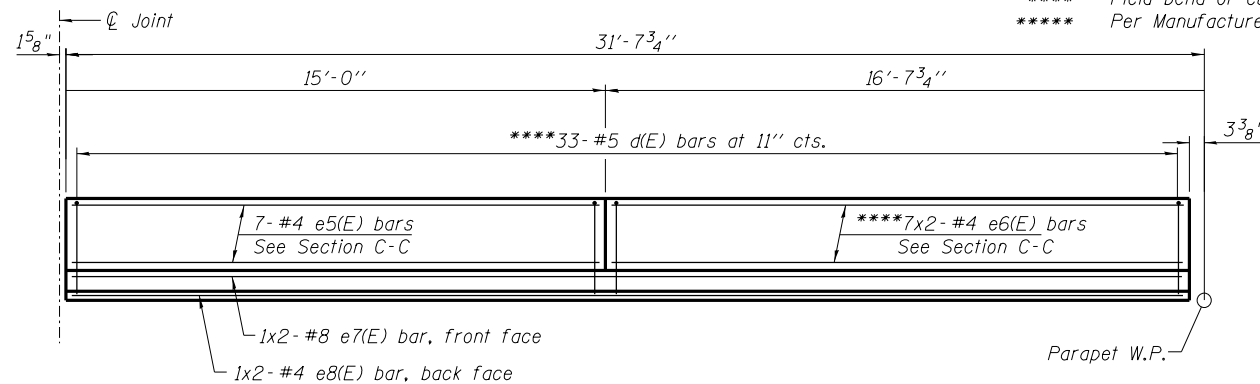
END OF SEAL

TOP OF APPROACH FOOTING ELEVATIONS

Point	F1	F2	F3	F4	F5	F6
Elevation	626.30	626.39	625.62	626.17	626.18	625.33

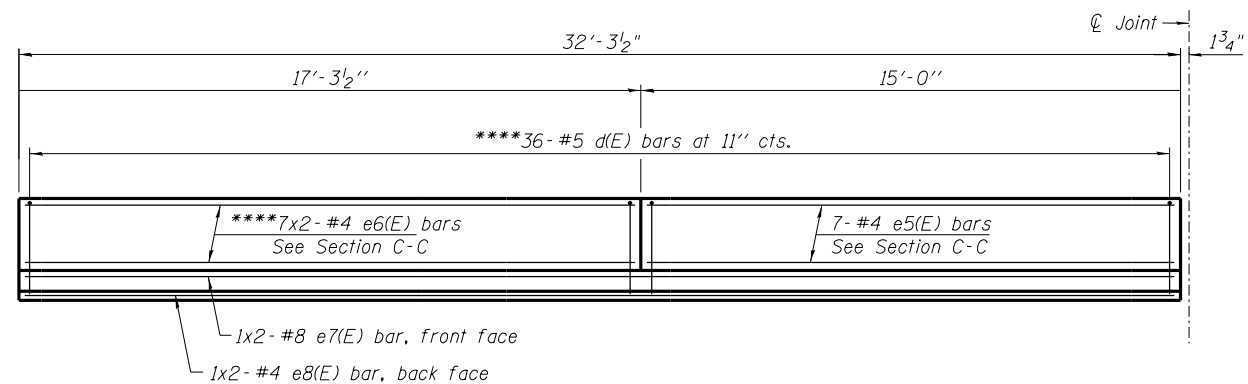
NORTH APPROACH SLAB PLAN

- * Dimensions Radial to ϕ Roadway.
- ** Order a22(E), a23(E), a24(E) and a25(E) bars full length. Cut to fit skew and use remainder of bars in same end of deck.
- *** Cost included with Concrete Superstructure. (Approach Slab)
- T.S. = Top of Slab
- B.S. = Bottom of Slab
- **** Field bend or cut as required
- ***** Per Manufacturers Recommendations



INSIDE FACE OF EAST PARAPET

Dimensions are measured along inside face of parapet.



INSIDE FACE OF WEST PARAPET

Dimensions are measured along inside face of parapet.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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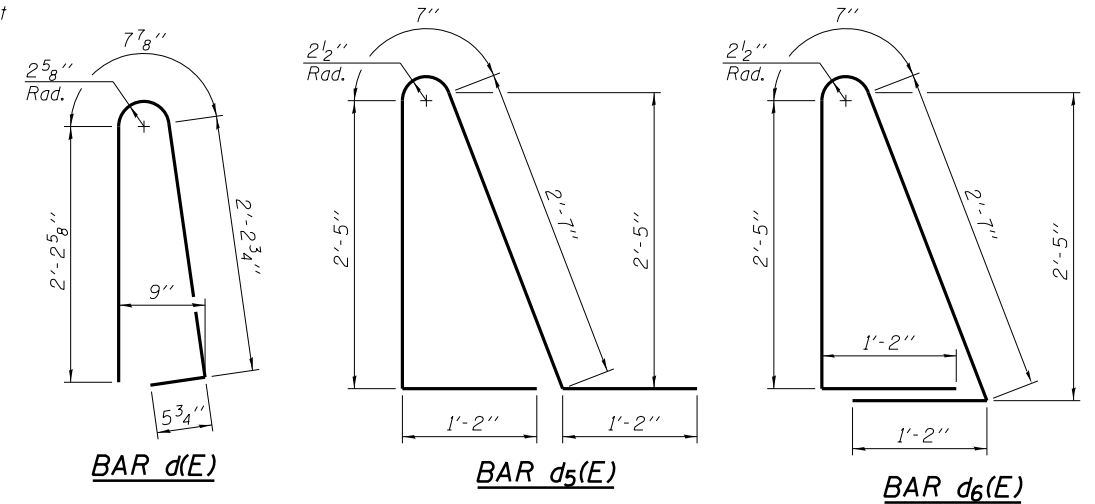
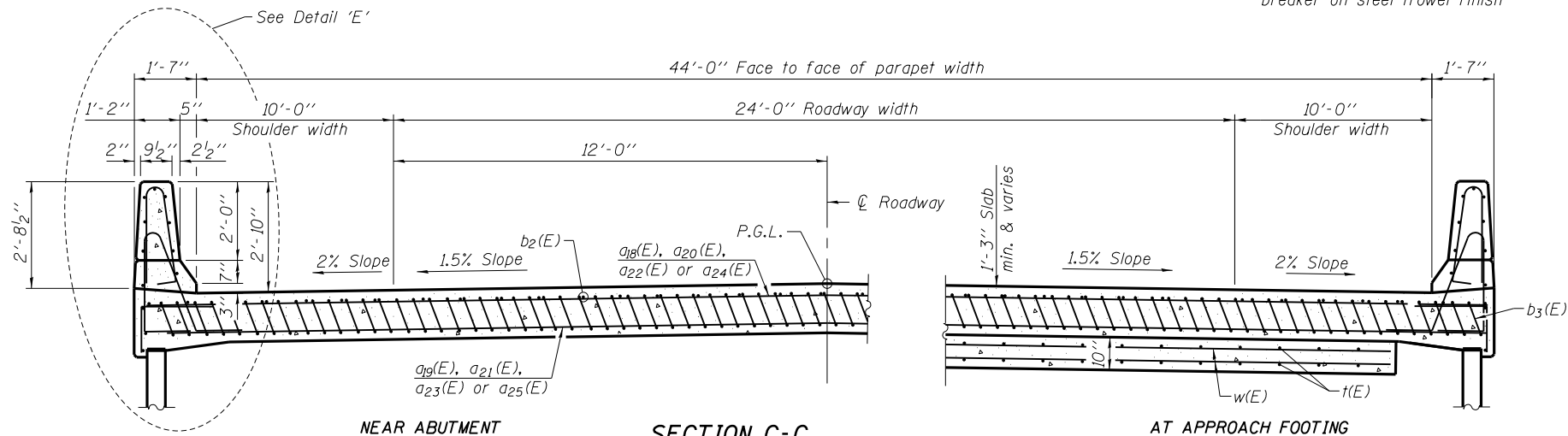
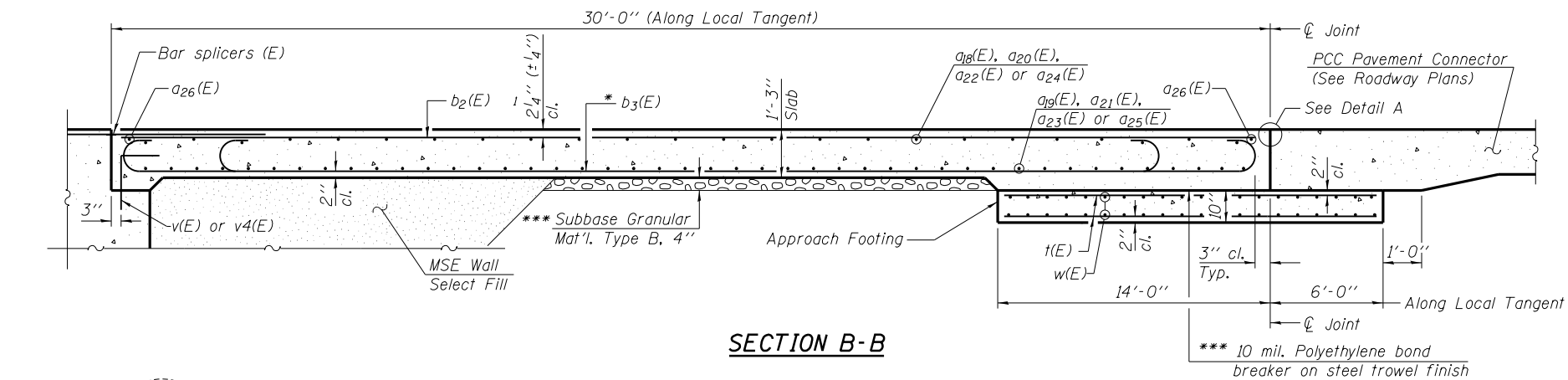
NORTH APPROACH SLAB
STRUCTURE NUMBER 084-9949

SHEET NO. 16 OF 34 SHEETS

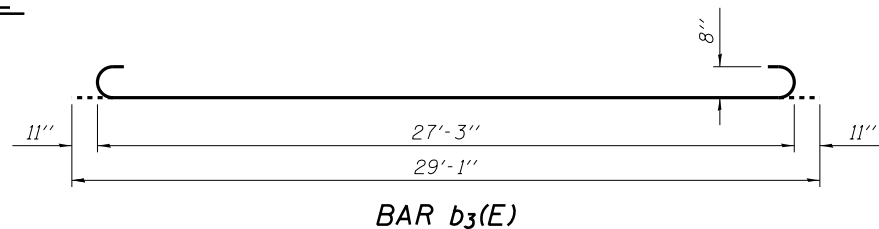
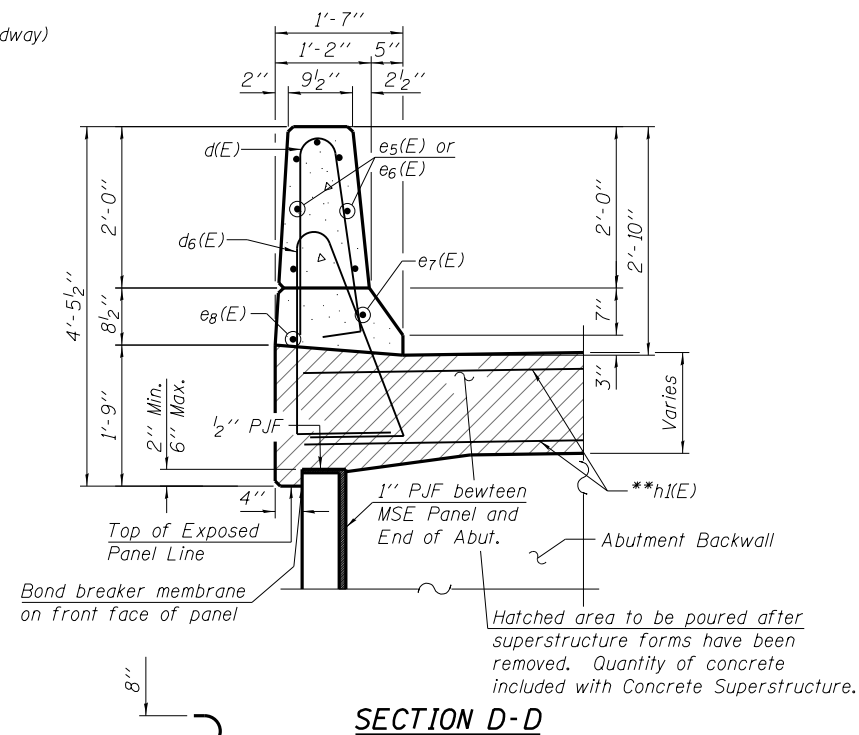
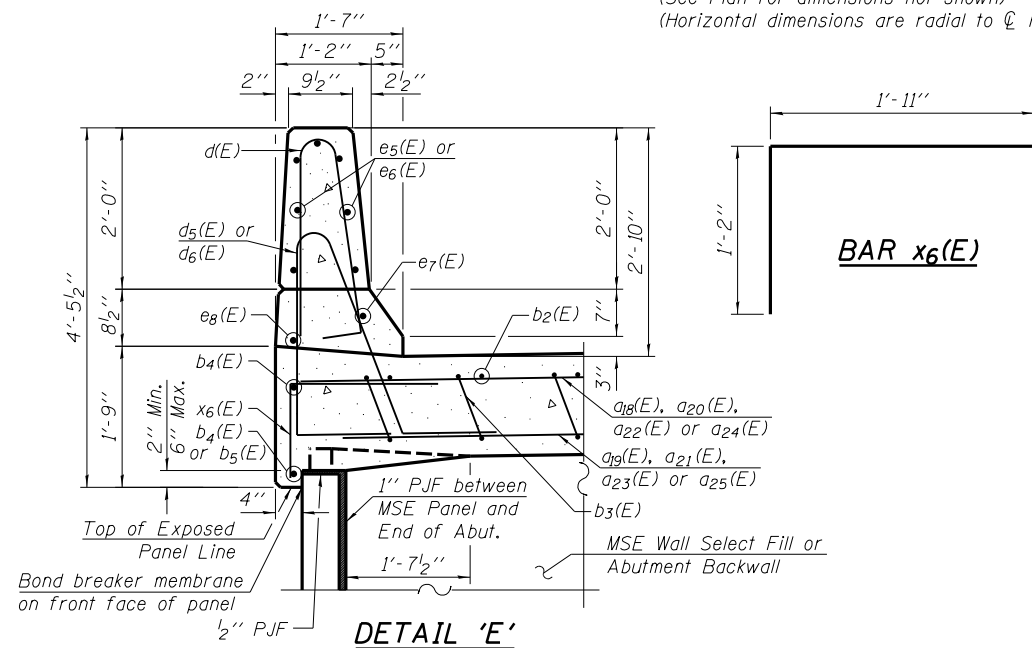
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	.	SANGAMON	368	161
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6

07-00164-04-FP, 07-00090-08-FP



* Tilt #8 $b_3(E)$ bars as required to maintain clearance.
 ** See Sheets 27 thru 30 of 34 for $h_1(E)$ bars.
 *** Cost included with Concrete Superstructure (Approach Slab).

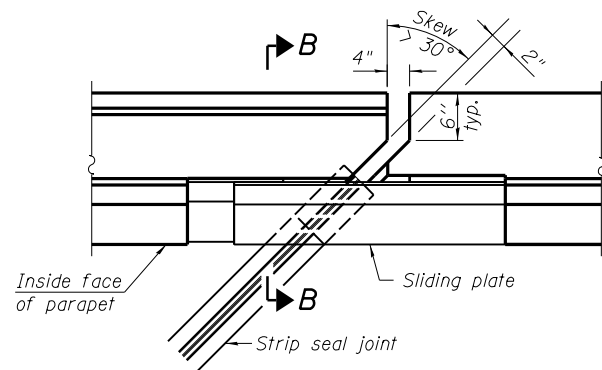


SOUTH APPROACH SLAB
BILL OF MATERIAL

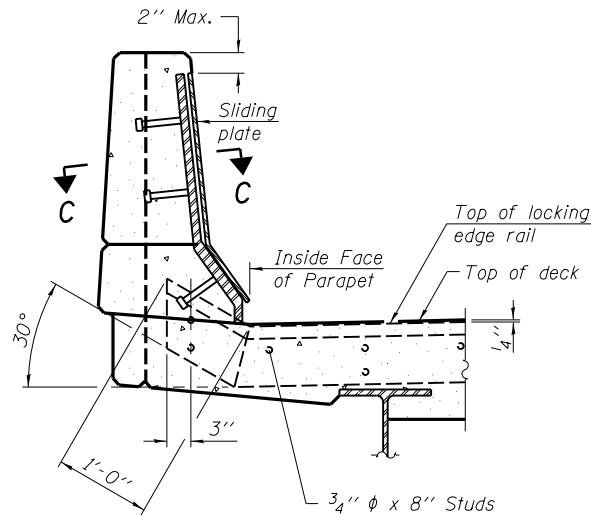
Bar	No.	Size	Length	Shape
a ₁₈ (E)	76	#6	16'-6"	—
a ₁₉ (E)	76	#8	16'-6"	—
a ₂₀ (E)	22	#6	20'-2"	—
a ₂₁ (E)	22	#8	20'-2"	—
a ₂₂ (E)	21	#6	19'-0"	—
a ₂₃ (E)	21	#8	19'-0"	—
a ₂₆ (E)	6	#5	34'-4"	—
b ₂ (E)	76	#6	29'-8"	—
b ₃ (E)	76	#8	29'-1"	—
b ₄ (E)	8	#5	17'-10"	—
d(E)	75	#5	5'-7"	⌋
d ₅ (E)	63	#5	7'-11"	⌋
d ₆ (E)	12	#5	7'-11"	⌋
e ₅ (E)	14	#4	14'-8"	—
e ₆ (E)	28	#4	11'-5"	—
e ₇ (E)	4	#8	20'-7"	—
e ₈ (E)	4	#4	18'-11"	—
f(E)	86	#4	19'-8"	—
w(E)	120	#5	31'-0"	—
x ₆ (E)	63	#5	3'-1"	└
Concrete Superstructure			Cu. Yd.	7.5
Concrete Superstructure (Approach Slab)			Cu. Yd.	71.3
Concrete Structures			Cu. Yd.	26.9
Reinforcement Bars, Epoxy Coated			Pound	25290

NORTH APPROACH SLAB
BILL OF MATERIAL

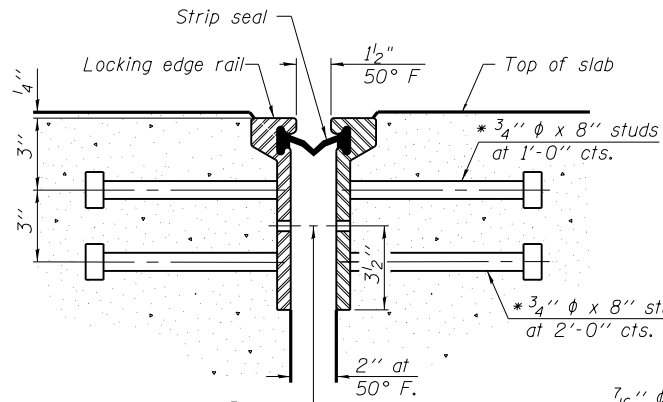
Bar	No.	Size	Length	Shape
a ₁₈ (E)	68	#6	16'-6"	=====
a ₁₉ (E)	68	#8	16'-6"	=====
a ₂₂ (E)	20	#6	19'-0"	=====
a ₂₃ (E)	20	#8	19'-0"	=====
a ₂₄ (E)	22	#6	19'-9"	=====
a ₂₅ (E)	22	#8	19'-9"	=====
a ₂₆ (E)	6	#5	34'-4"	=====
b ₂ (E)	76	#6	29'-8"	=====
b ₃ (E)	76	#8	29'-1"	=====
b ₅ (E)	8	#5	17'-2"	=====
d(E)	69	#5	5'-7"	=====
d ₅ (E)	59	#5	7'-11"	=====
d ₆ (E)	10	#5	7'-11"	=====
e ₅ (E)	14	#4	14'-8"	=====
e ₆ (E)	28	#4	11'-5"	=====
e ₇ (E)	4	#8	20'-7"	=====
e ₈ (E)	4	#4	18'-11"	=====
t(E)	86	#4	19'-8"	=====
w(E)	120	#5	31'-0"	=====
x ₆ (E)	59	#5	3'-1"	=====
Concrete Superstructure			Cu. Yd.	7.1
Concrete Superstructure (Approach Slab)			Cu. Yd.	66.7
Concrete Structures			Cu. Yd.	25.4
Reinforcement Bars, Epoxy Coated			Pound	24520



PLAN
(For skews > 30°)
Showing point block

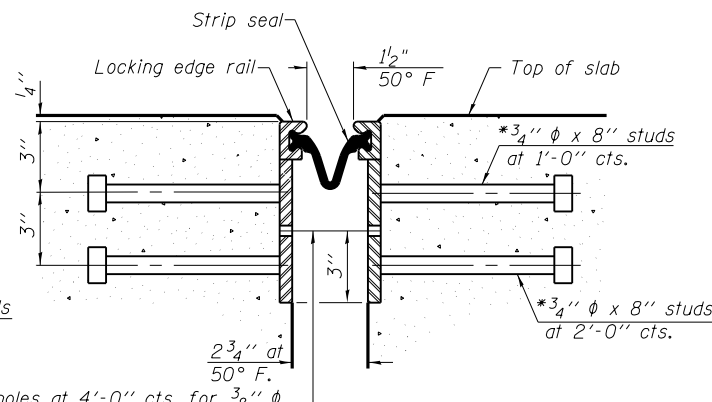


SECTION B-B



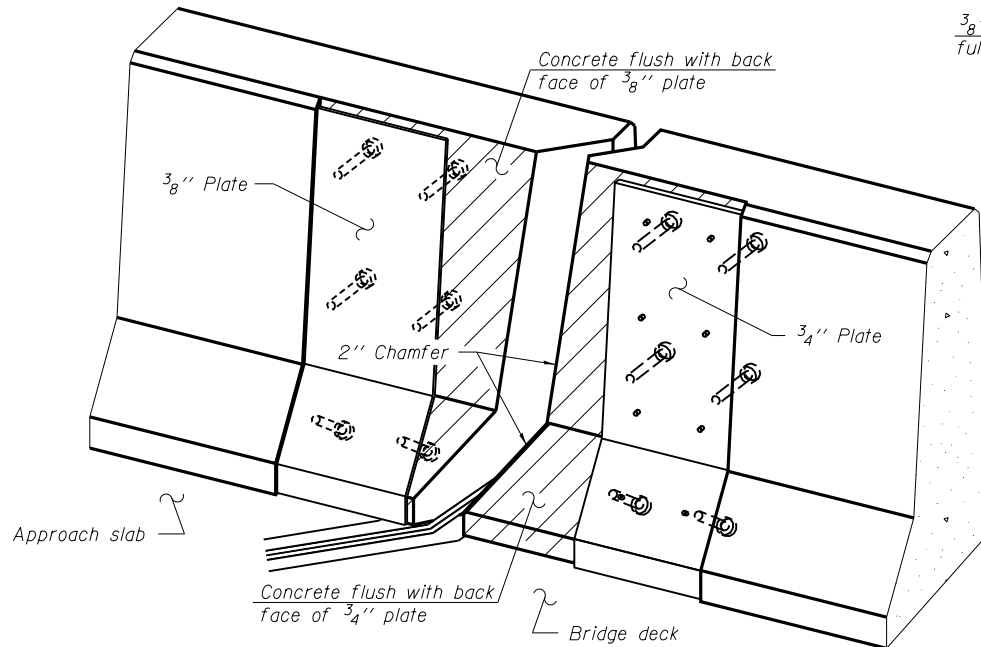
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU
ROLLED RAIL JOINT**

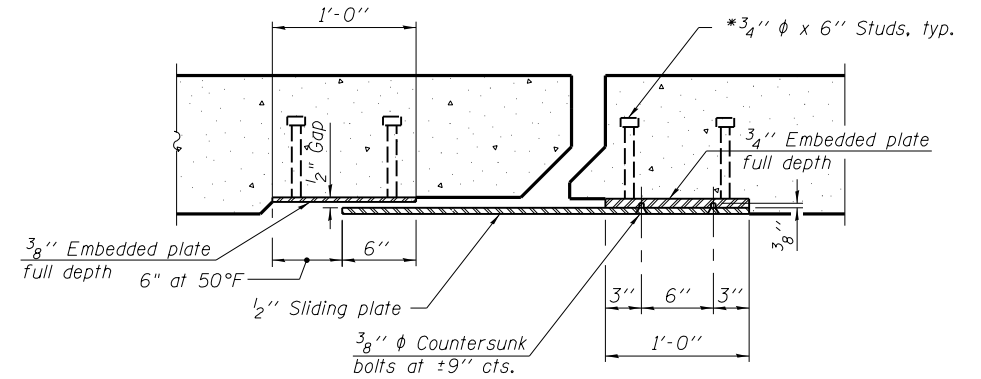


7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU
WELDED RAIL JOINT**



TRIMETRIC VIEW
(Showing back plates only)



SECTION C-C

Notes:

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

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

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

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

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

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

**ROLLED
EXTRUDED RAIL**

WELDED RAIL

**LOCKING EDGE
RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	90

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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PLOT DATE	= 7/29/2024

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REVISED	-
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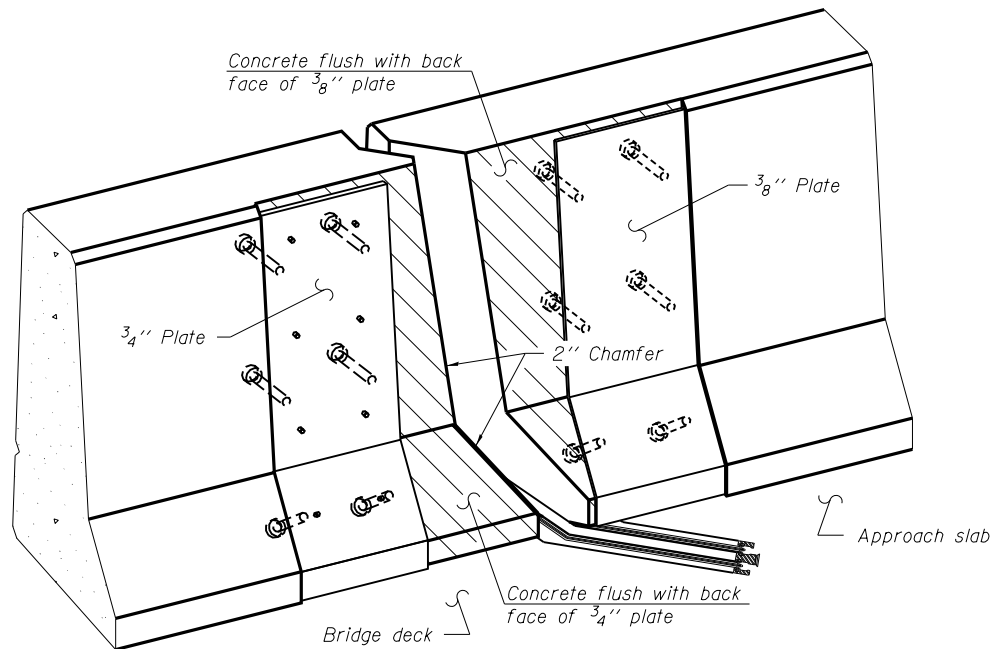
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NUMBER 084-9949

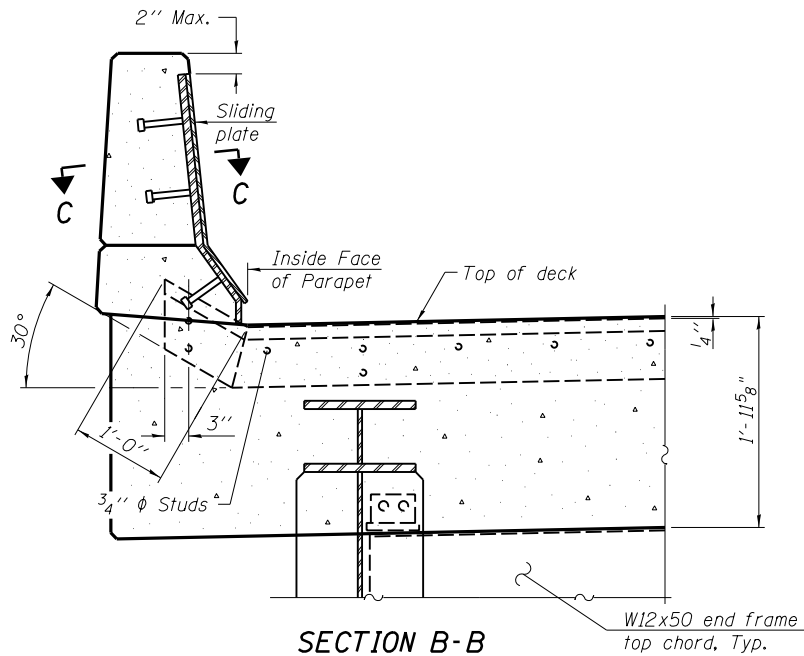
SHEET NO. 18 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	.	SANGAMON	368	163
		CONTRACT NO.	93671	

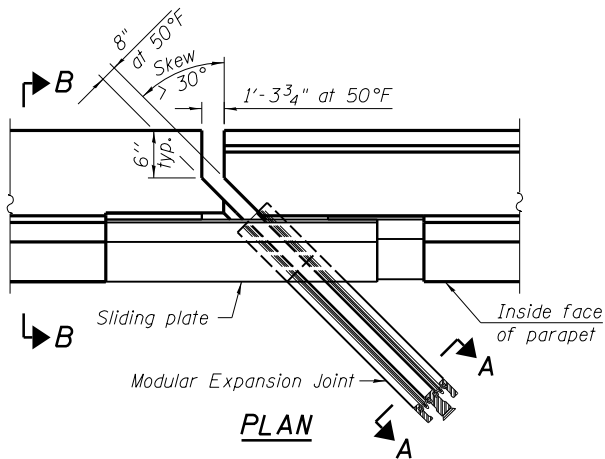
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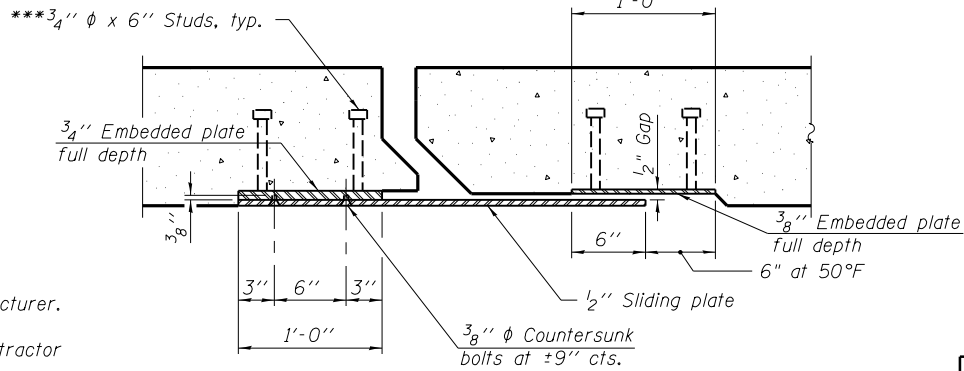
TRIMETRIC VIEW
(Showing back plates only)



SECTION B-B
(Looking North at Northwest corner of bridge)



PLAN



SECTION C-C

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

Notes:

The expansion joint device shall be a prefabricated modular assembly with multiple support bars and separator beams providing a continuous seal across the deck.

Joint openings shall be adjusted according to article 520.04 of the Standard Specifications when the concrete blockout is cast at an ambient temperature other than 50° F.

The cost of furnishing and installing the barrier plate assemblies shall be included in the cost of Modular Expansion Joints.

Countersunk bolts shall be in accordance with ASTM A-307, Grade A.

Countersunk bolts and concrete inserts shall be hot-dipped galvanized according to AASHTO M232.

The modular joints shall be fabricated to conform to the roadway profile and cross slope.

Prior to the placement of the joint blockout, the Contractor shall coordinate with the Modular Joint Manufacturer to ensure that the joint will be properly supported and that the reinforcement bars will not interfere with the joint components. Any necessary adjustments to the reinforcement layout shall be submitted to the Engineer for approval.

Concrete in hatchblock and deck blockout areas to be placed after the modular joint is fixed in position.

The support box shall be rigidly attached to top chord of cross frame by adjustable brackets, studs or shims. Cost for rigid attachments shall be included in the cost of Modular Expansion Joint.

The modular expansion joint system shall be designed to accommodate 4 inches of movement in the longitudinal direction of the bridge and 1/2 inches of movement in the transverse direction of the bridge. Values include AASHTO LRFD load factor of 1.2 for TU loads.

The details shown are intended to be schematic. The actual components of the expansion joint system may vary from those shown. This includes, but is not limited to, the number of cells, the number of support boxes, and support bar box size, however, the total required range of expansion remains unchanged regardless of the manufacturer chosen.

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint-Swivel 9"	Foot	86

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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PLOT SCALE =	0.166667' / 1"	DRAWN	DAP	REVISED	-
PLOT DATE =	7/29/2024	CHECKED	JGT/MNM	REVISED	-

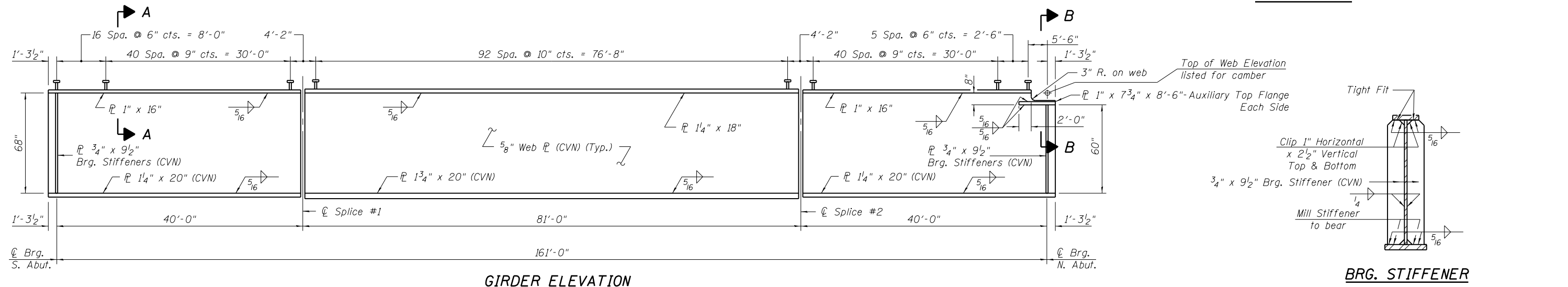
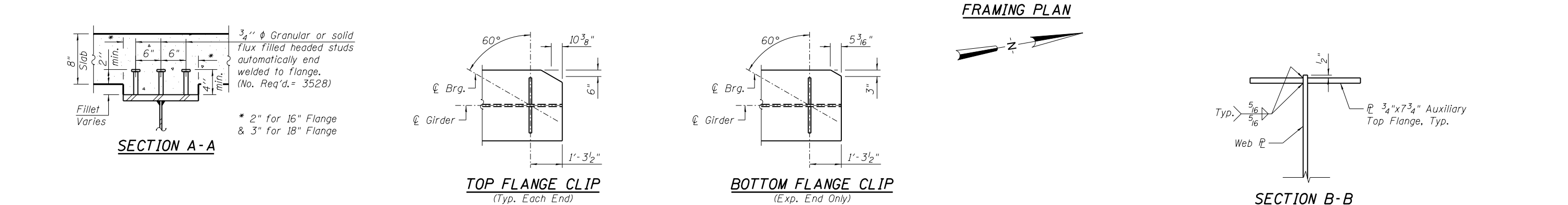
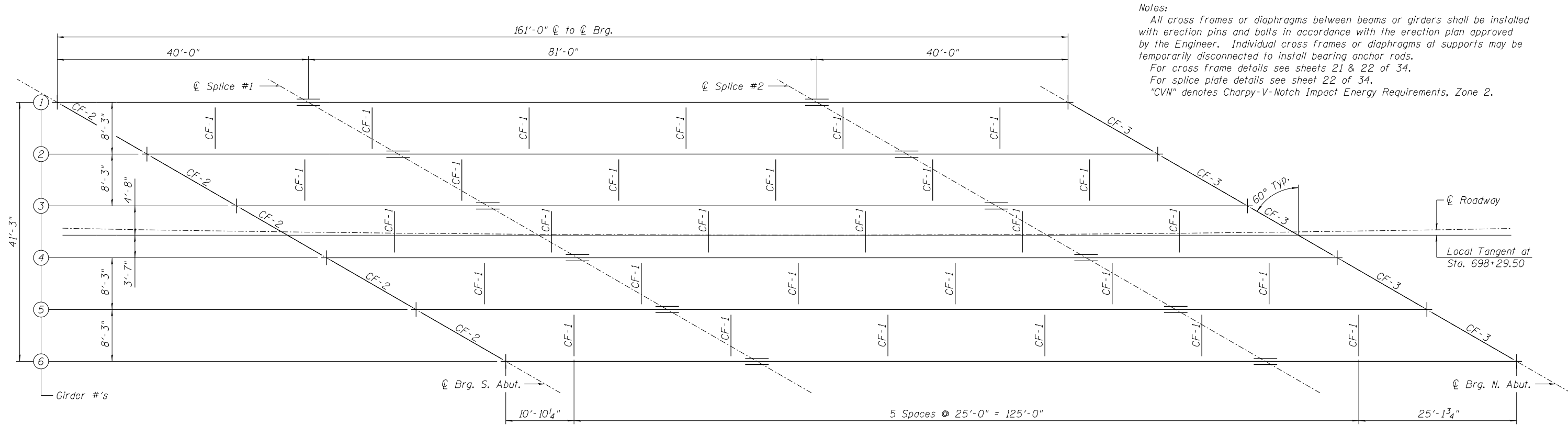
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

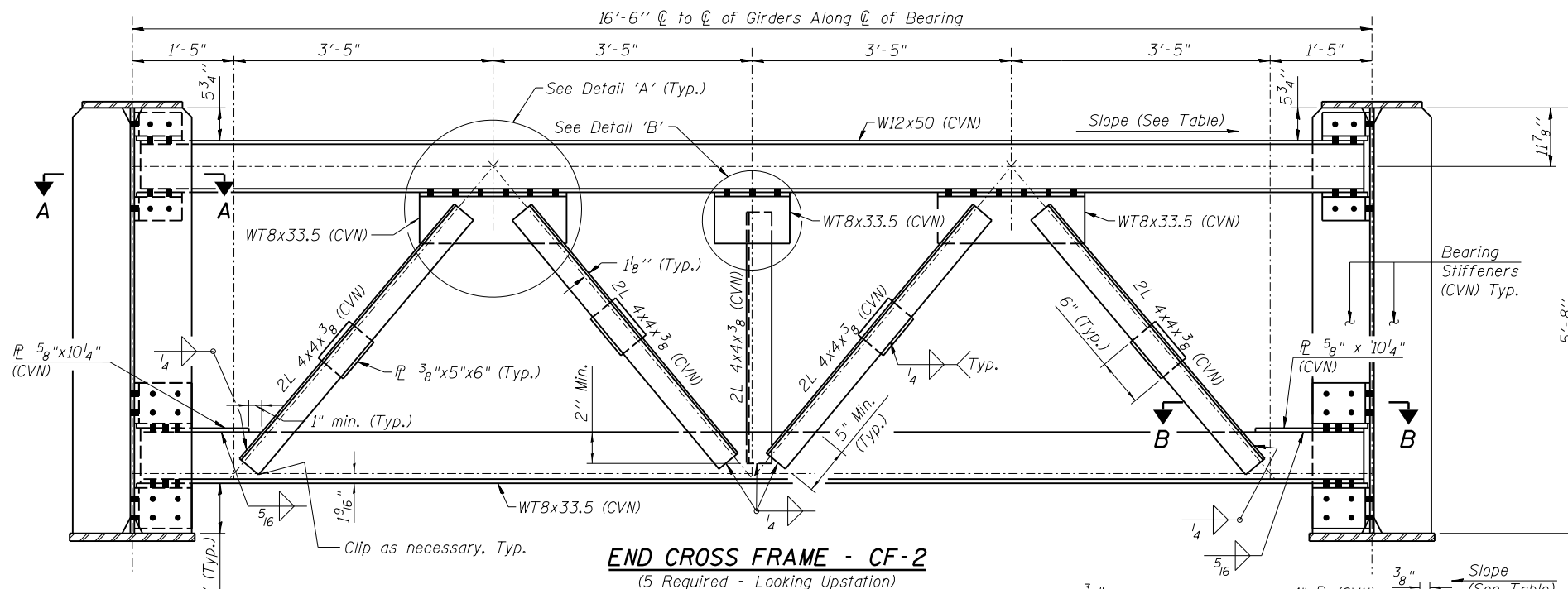
MODULAR SWIVEL EXPANSION JOINT
STRUCTURE NUMBER 084-9949

SHEET NO. 19 OF 34 SHEETS

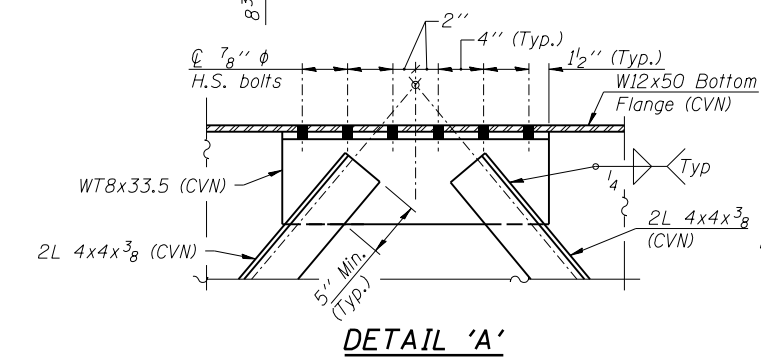
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	.	SANGAMON	368	164
		CONTRACT NO.	93671	

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• 07-00164-04-FP, 07-00090-08-FP

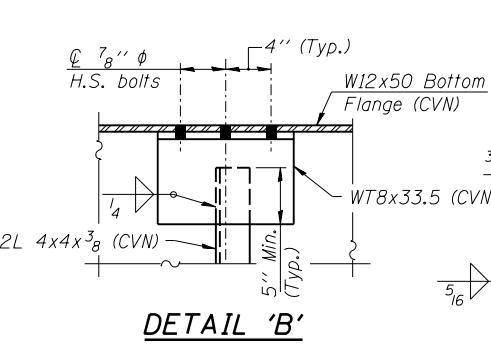




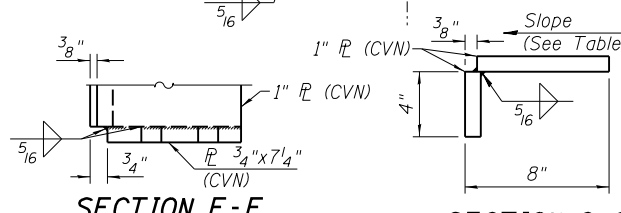
END CROSS FRAME - CF-2
(5 Required - Looking Upstation)



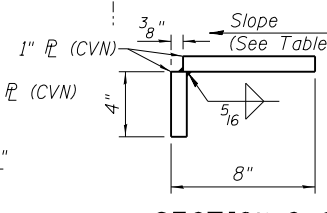
DETAIL 'A'



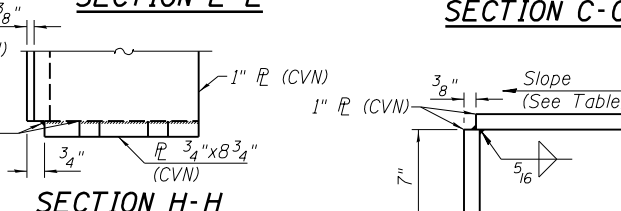
DETAIL 'B'



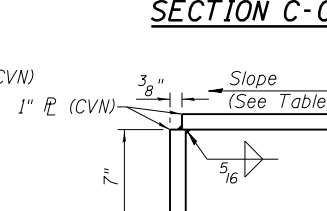
SECTION E-E



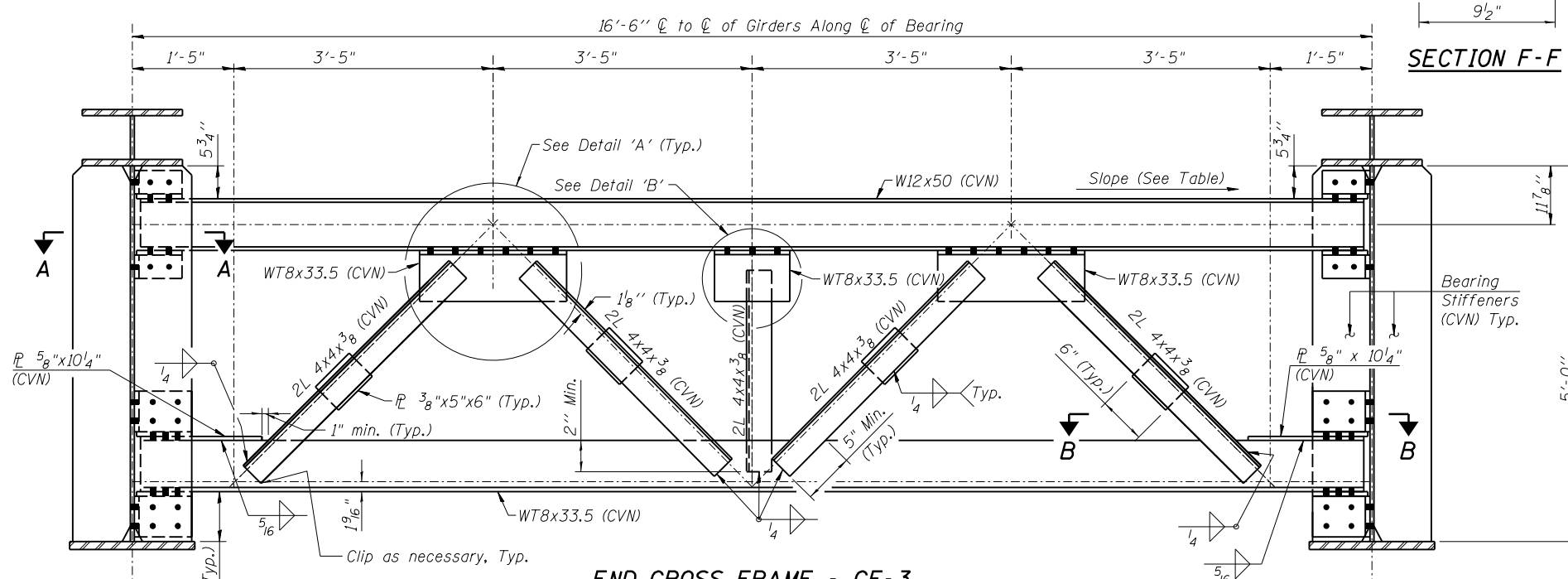
SECTION C-C



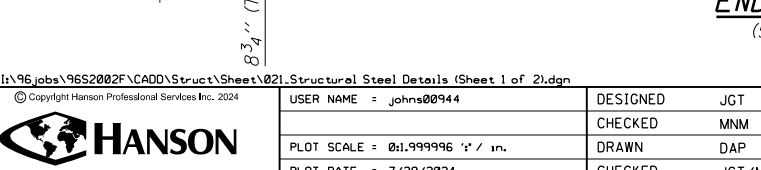
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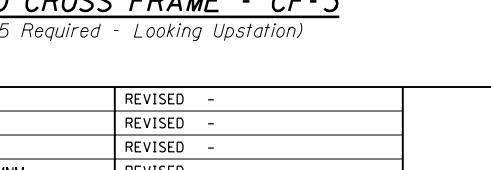
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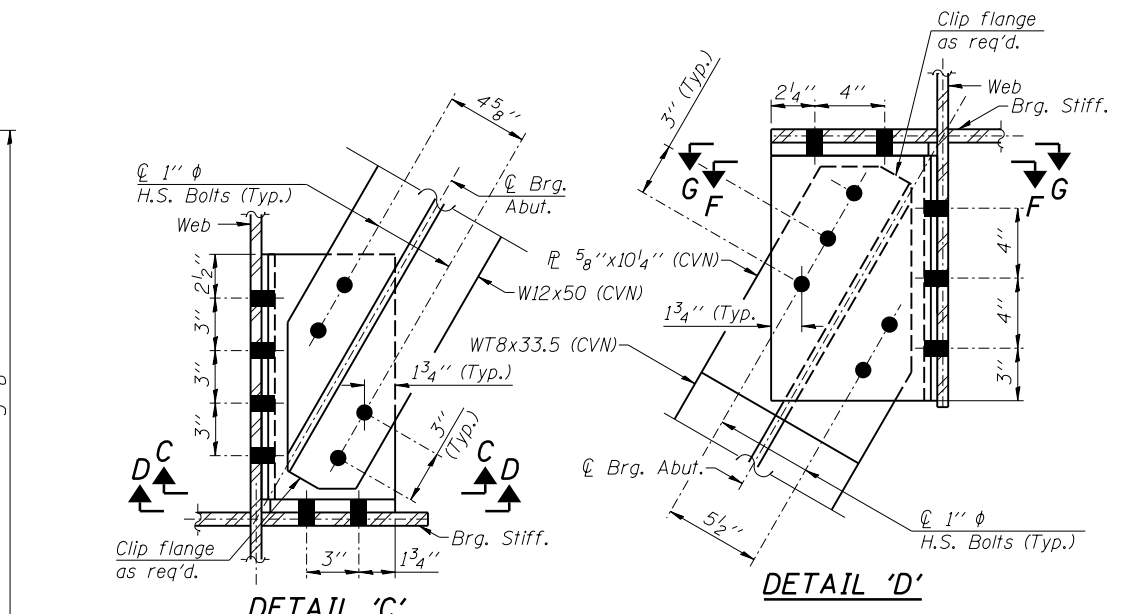
END CROSS FRAME - CF-3
(5 Required - Looking Upstation)



DETAIL 'A'



DETAIL 'B'

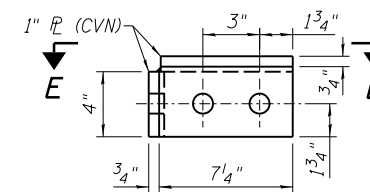


DETAIL 'C'

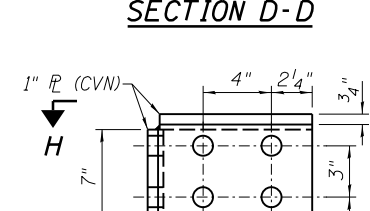
DETAIL 'D'

	Between	* S. Abut. slope	* N. Abut. slope
Girders 1-2		2.21%	0.66%
Girders 2-3		1.83%	0.29%
Girders 3-4		0.95%	-0.62%
Girders 4-5		0.07%	-1.55%
Girders 5-6		-0.32%	-1.93%

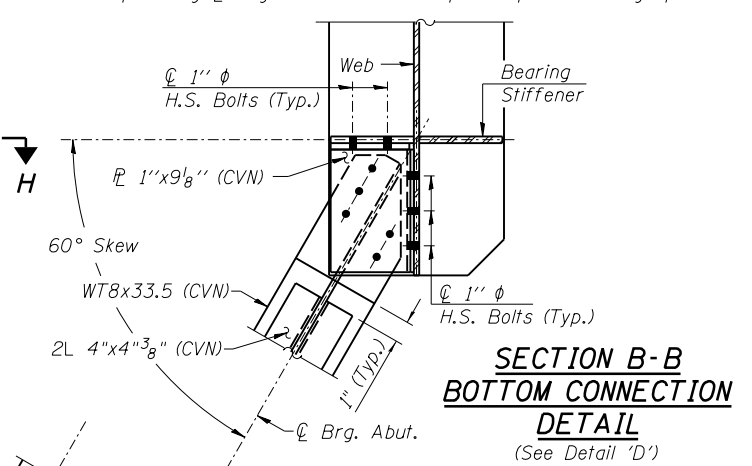
* Slope along ∇ Brg. at Abuts. "+" Slope is upward looking upstation.



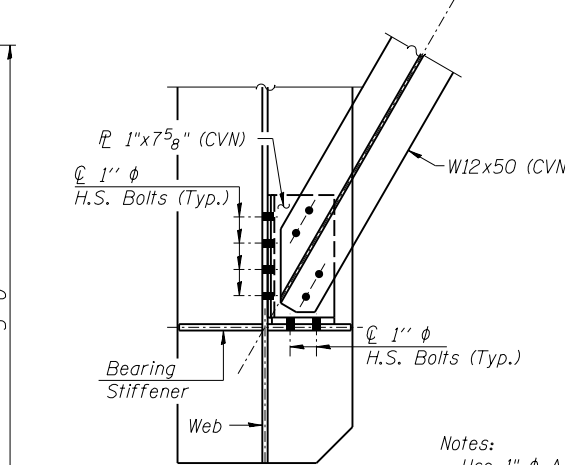
SECTION D-D



SECTION G-G



**SECTION B-B
BOTTOM CONNECTION
DETAIL**
(See Detail 'D')



**SECTION A-A
TOP CONNECTION
DETAIL**
(See Detail 'C')

Notes:
Use 1" ϕ A490 Bolts with 1 1/8" ϕ holes for all CF-2 and CF-3 connections, unless noted otherwise.
"CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
Structural Steel for the cross frames shall be:
AASHTO M270, Grade 50 - W, WT, Plates
AASHTO M270, Grade 36 - L

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DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

USER NAME :	Johns00944	DESIGNED	JGT	REVISD	-
		CHECKED	MNM	REVISD	-
PLOT SCALE :	0.1:9999996 'ft' / in.	DRAWN	DAP	REVISD	-
PLOT DATE :	7/29/2024	CHECKED	JGT/MNM	REVISD	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL DETAILS (SHEET 1 OF 2)
STRUCTURE NUMBER 084-9949**

SHEET NO. 21 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	166
		CONTRACT NO.	93671	

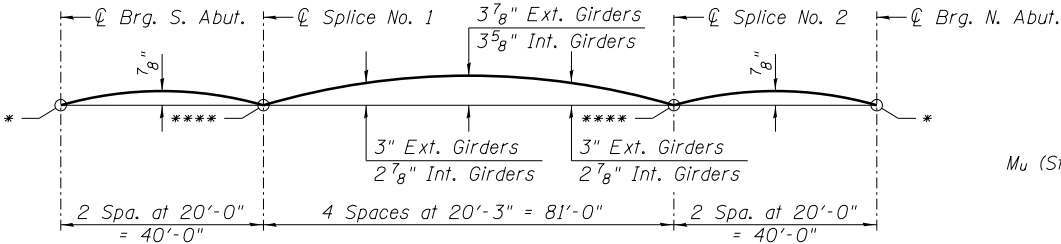
INTERIOR GIRDER MOMENT TABLE			0.5 Sp. 1
I_s	(in ⁴)		83983
$I_c(n)$	(in ⁴)		179366
$I_c(3n)$	(in ⁴)		131468
$I_c(cr)$	(in ⁴)		-
S_s	(in ³)		2680
$S_c(n)$	(in ³)		3381
$S_c(3n)$	(in ³)		3118
$S_c(cr)$	(in ³)		-
S_{xc}	(in ³)		3103
$DC1$	(k/')		1.200
M_{DC1}	('k)		3889
$DC2$	(k/')		0.150
M_{DC2}	('k)		486
DW	(k/')		0.367
M_{DW}	('k)		1189
$LLDF$			0.526
$M_L + IM$	('k)		2921
f_i (Strength I)	(ksi)		5.0
$M_u + \frac{1}{3}f_i S_{xc}$	('k)		12795
$\phi_f M_n$	('k)		16895
f_s DC1	(ksi)		17.41
f_s DC2	(ksi)		1.87
f_s DW	(ksi)		4.58
f_s (L+IM)	(ksi)		10.37
f_i (Service II)	(ksi)		5.00
$f_s + \frac{1}{2}f_i$ (Service II)	(ksi)		39.84
$0.95R_n F_{yf}$	(ksi)		47.50
V_f	(k)		40.3

GIRDER REACTION TABLE		
	Interior S. or N. Abuts.	Exterior S. or N. Abuts.
LLDF	0.832	0.832
OCF	-	1.273
R_{DC1}	(k)	96.6
R_{DC2}	(k)	12.1
R_{DW}	(k)	29.5
$R_L + IMP$	(k)	117.9
R_{Total}	(k)	256.1
		288.3

TOP OF WEB ELEVATIONS

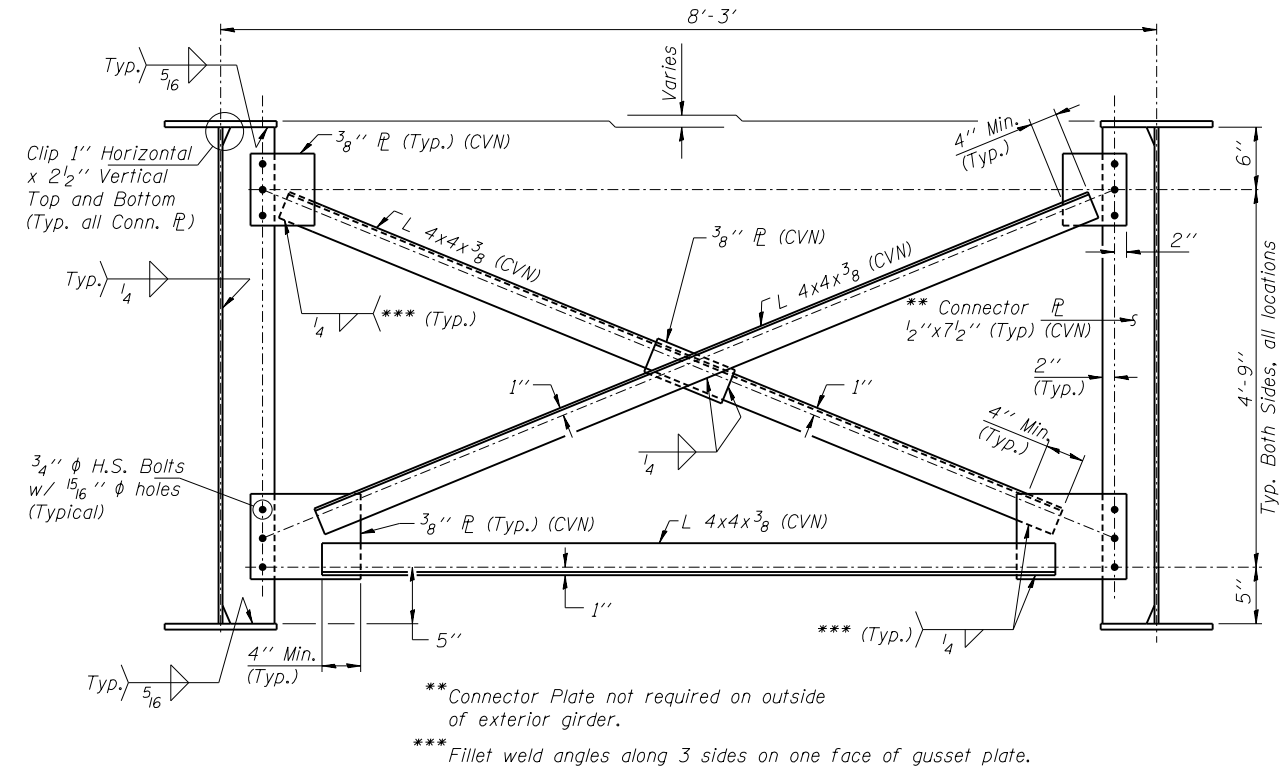
(For Fabrication Only)

	℄ Brg. S. Abut.	Splice No. 1	Splice No. 2	℄ Brg. N. Abut.
Girder 1	625.98	626.89	627.36	626.91
Girder 2	626.35	627.16	627.49	627.02
Girder 3	626.65	627.38	627.59	627.07
Girder 4	626.81	627.49	627.57	626.96
Girder 5	626.82	627.44	627.39	626.71
Girder 6	626.76	627.36	627.17	626.39



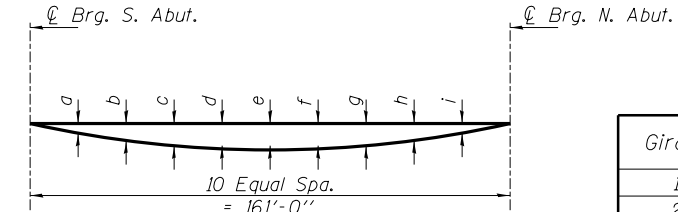
CAMBER DIAGRAM

Note: Camber includes deflections due to structural steel, deck and parapet.
* See Table for Final Top of Web Elevations at abutments.
**** Theoretical Top of Web Elevations before dead load deflections.



INTERIOR CROSS FRAME CF-1

(30 Required)



STRUCTURAL STEEL SELF-WEIGHT DEFLECTION DIAGRAM

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

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

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

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

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

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

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

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

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

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

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

$M_L + IM$: Un-factored live load moment plus dynamic load allowance (impact)(kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$

f_i : Factored calculated normal stress at edge of flange for controlling flange plate due to lateral bending, Strength I or Service II as applicable (kip-ft.).

$\phi_f M_n$: 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_{sc}

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 plus impact loads as calculated below (ksi).
 $M_L + IM / S_c(n)$ or $M_L + IM / S_c(cr)$ as applicable.

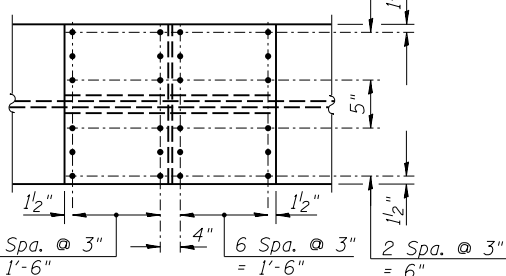
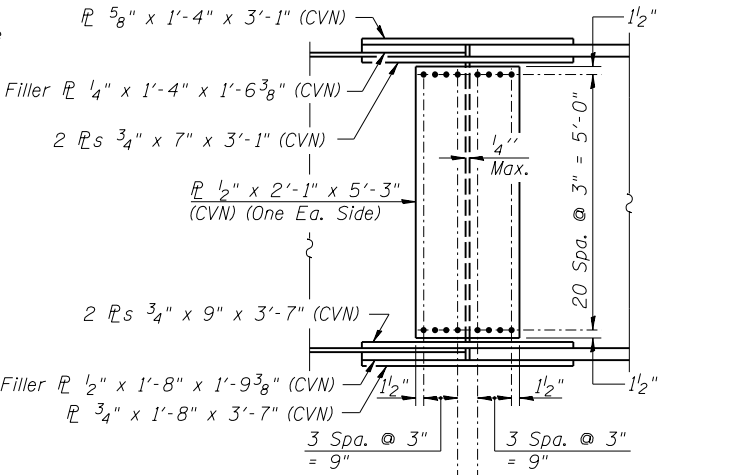
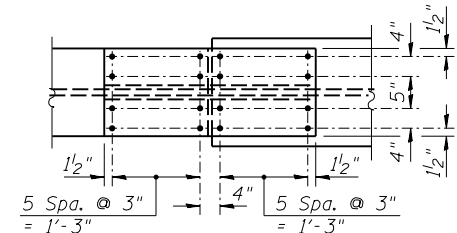
$f_s + \frac{1}{2}f_i$ (Service II): Sum of stresses as computed below (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L + IM) + \frac{1}{2}f_i$

$0.95R_n F_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

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

LLDF: Live load distribution factor

OCF: Obtuse correction factor



FIELD SPLICE DETAIL

Notes:
Use 7/8" ϕ H.S. Bolts with 15/16" ϕ holes for all Splice Connections.
Two hardened washers shall be required over all oversized holes.
"CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
All cross frames or diaphragms between beams or girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Structural Steel for the cross frames shall be:
AASHTO M270, Grade 50 - W, WT, Plates
AASHTO M270, Grade 36 - L
Top of Web Elevations at ℄ Brg. N. Abut. do not account for cope. See Girder Elevation on Sheet 20 of 34.

STRUCTURAL STEEL SELF-WEIGHT DEFLECTION TABLE

Girder	Deflection								
	a	b	c	d	e	f	g	h	i
1	3/4"	1 3/8"	1 7/8"	2 1/4"	2 3/8"	2 1/4"	1 7/8"	1 3/8"	3/4"
2	3/4"	1 1/4"	1 3/4"	2"	2 1/8"	2"	1 3/4"	1 1/4"	3/4"
3	5/8"	1 1/4"	1 3/4"	2"	2 1/8"	2"	1 3/4"	1 1/4"	5/8"
4	5/8"	1 1/4"	1 3/4"	2"	2 1/8"	2"	1 3/4"	1 1/4"	5/8"
5	3/4"	1 1/4"	1 3/4"	2"	2 1/8"	2"	1 3/4"	1 1/4"	3/4"
6	3/4"	1 3/8"	1 7/8"	2 1/4"	2 3/8"	2 1/4"	1 7/8"	1 3/8"	3/4"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS (SHEET 2 OF 2)
STRUCTURE NUMBER 084-9949

SHEET NO. 22 OF 34 SHEETS

F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
SANGAMON 368 167
CONTRACT NO. 93671

ILLINOIS FED. AID PROJECT 6
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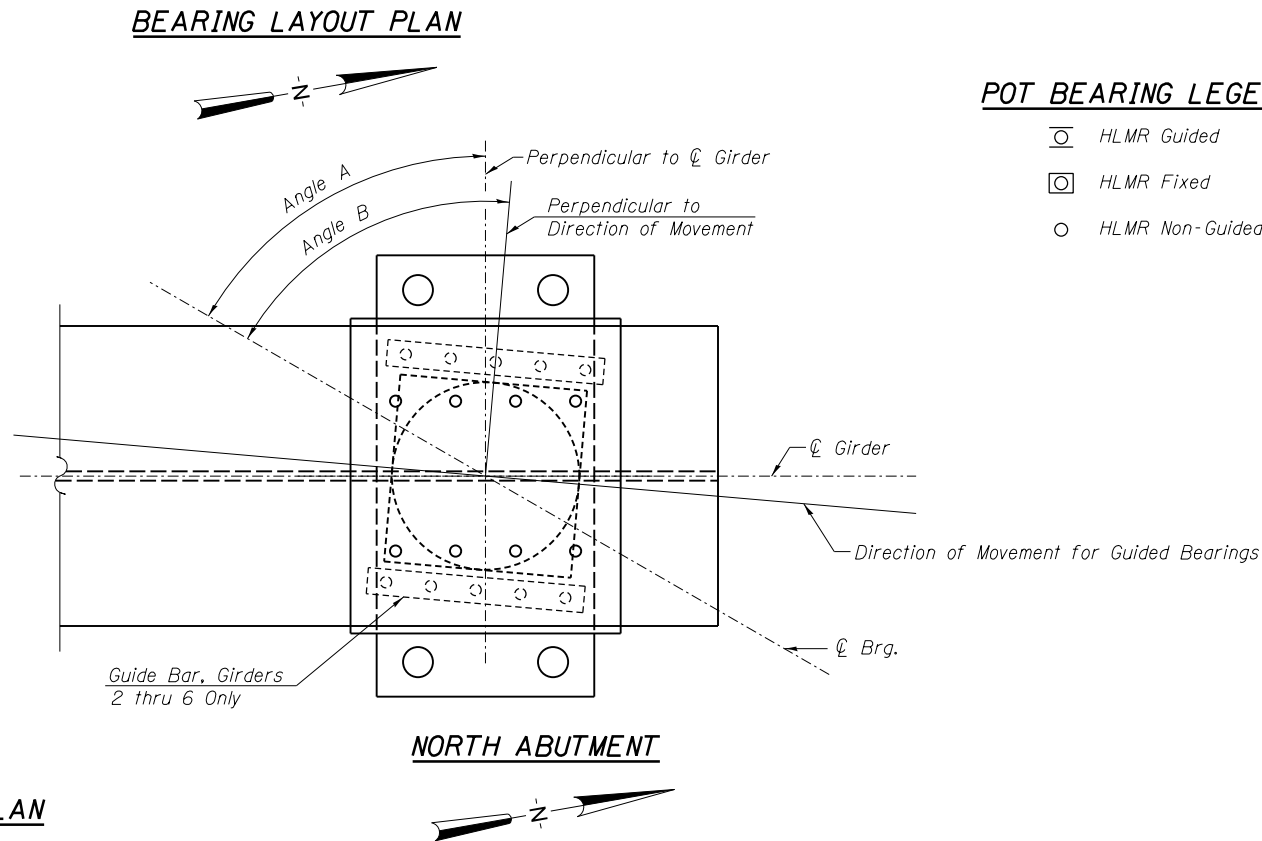
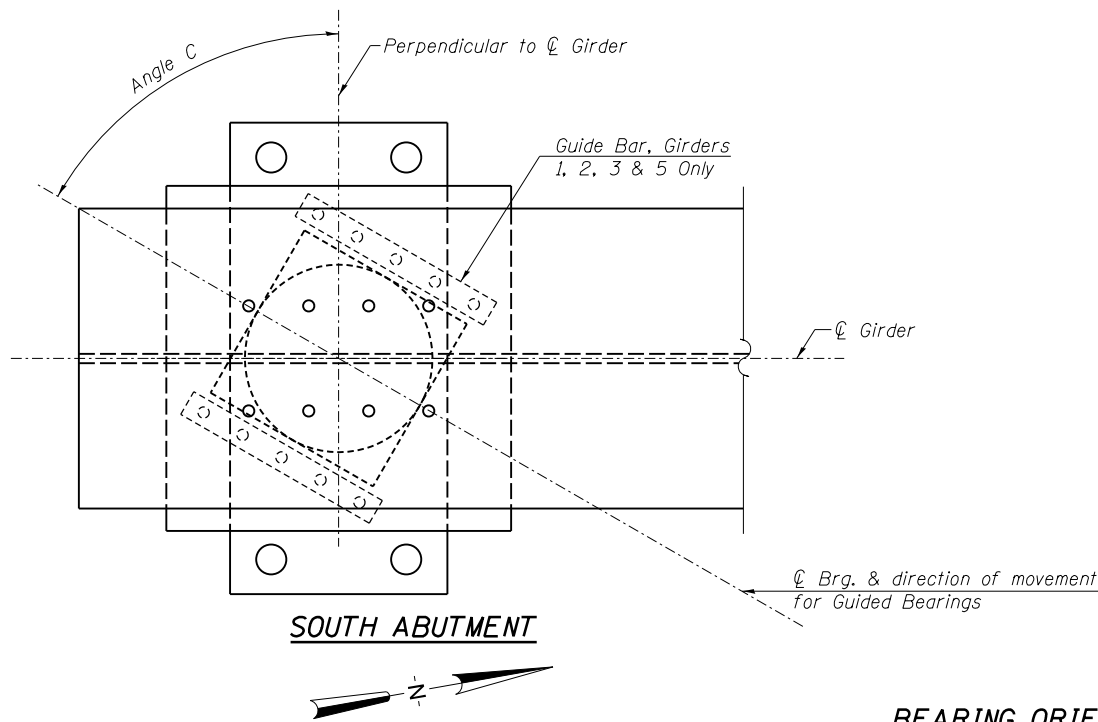
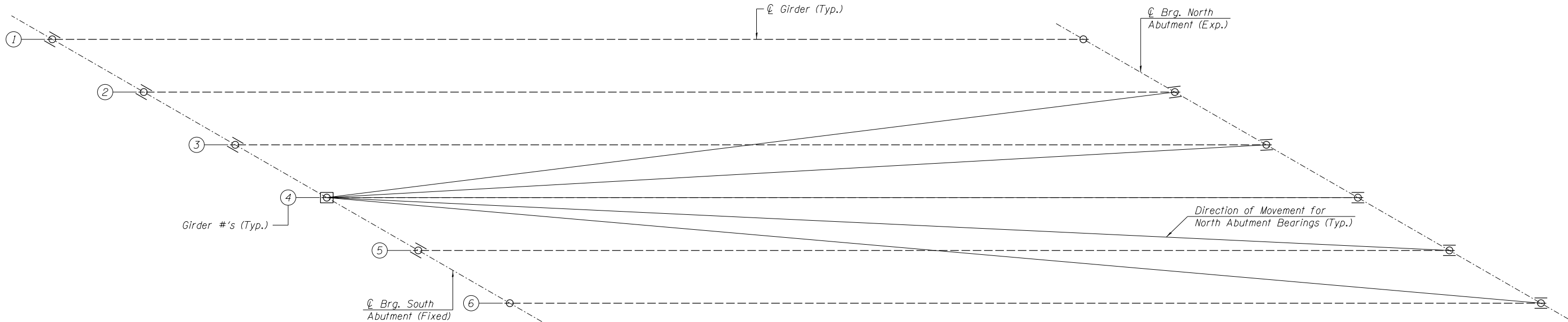
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DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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USER NAME :	johns00944	DESIGNED	JGT	REVISED	-
CHECKED	MNM	REVIS	ED	REVISED	-
PLOT SCALE :	0.1999996 ' / in.	DRAWN	DAP	REVISED	-
PLOT DATE :	7/29/2024	CHECKED	JGT/MNM	REVISED	-



POT BEARING LEGEND

- HLMR Guided
- HLMR Fixed
- HLMR Non-Guided

Girder	N. Abut.		S. Abut.
	Angle A	Angle B	Angle C
1	60°-00'-00"	N/A	60°-00'-00"
2	60°-00'-00"	52°-53'-51"	60°-00'-00"
3	60°-00'-00"	56°-46'-53"	60°-00'-00"
4	60°-00'-00"	60°-00'-00"	60°-00'-00"
5	60°-00'-00"	62°-41'-41"	60°-00'-00"
6	60°-00'-00"	64°-58'-27"	60°-00'-00"

- Notes:
- South Abutment guided bearings shall be unrestrained in a direction along the centerline of bearing. The guide bars shall be oriented parallel to the centerline of the bearing.
 - North Abutment guided bearings shall be unrestrained in the direction of movement. The guide bars shall be oriented parallel to the direction of movement.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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USER NAME :	johns00944	DESIGNED	JGT	REVISED	-
		CHECKED	MNM	REVISED	-
PLOT SCALE :	0:1.999996 'ft' / 'in.	DRAWN	DAP	REVISED	-
PLOT DATE :	7/29/2024	CHECKED	JGT/MNM	REVISED	-

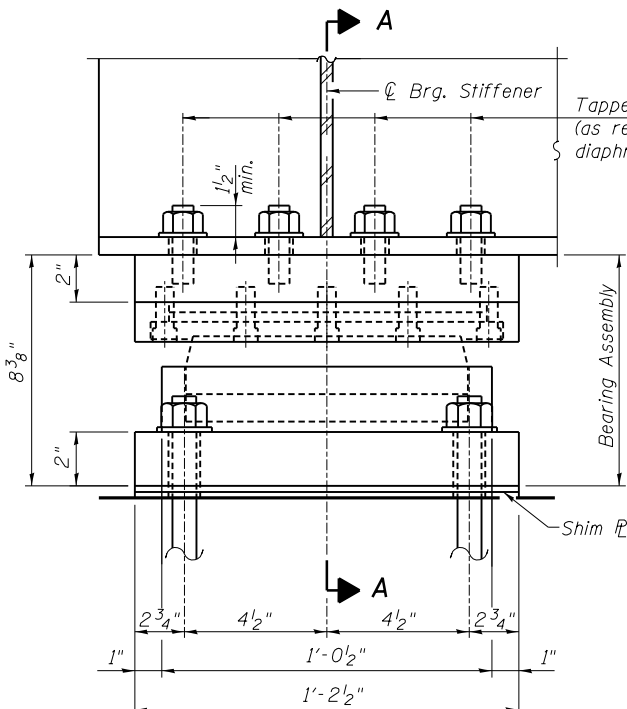
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING ORIENTATION LAYOUT
STRUCTURE NUMBER 084-9949

SHEET NO. 23 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	168
CONTRACT NO. 93671				

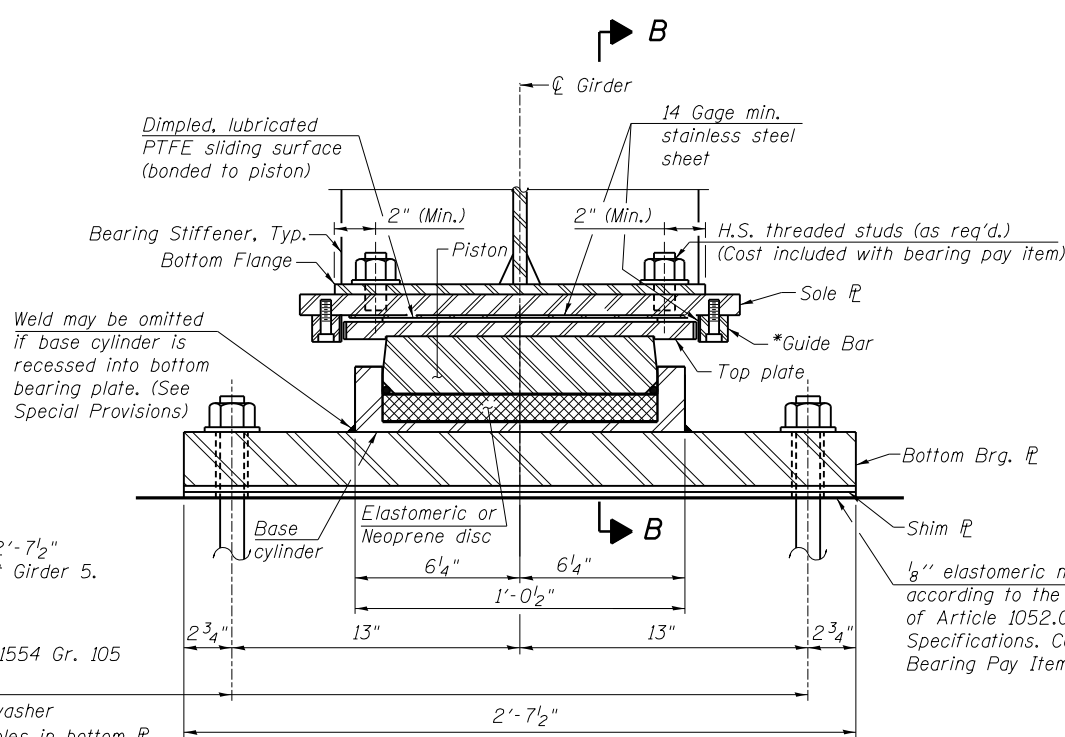
ILLINOIS FED. AID PROJECT 6
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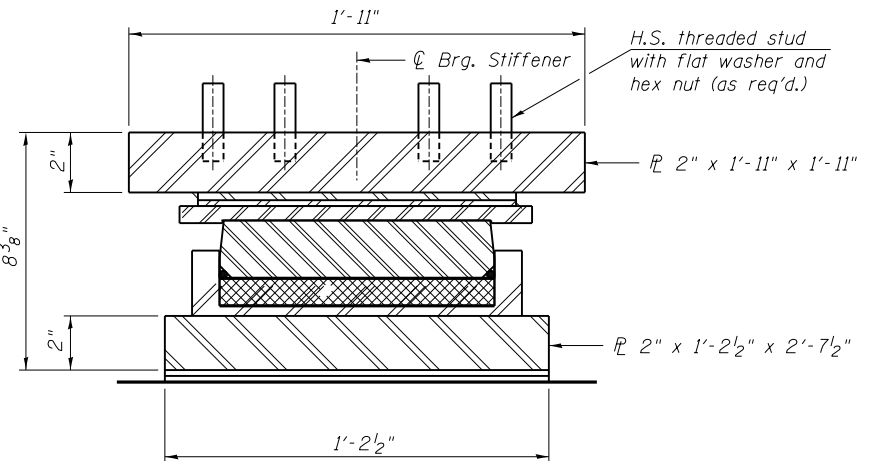
ELEVATION AT ABUTMENT
(Guide Bar not shown skewed for clarity)

Note:
Additional 3/4" x 1'-2 1/2" x 2'-7 1/2"
Shim plates are required at Girder 5.

1/2" ϕ x 1'-6" F1554 Gr. 105
anchor bolts with
3" x 3" x 5/8" ϕ washer
under nut. 2" ϕ holes in bottom ϕ



SECTION A-A
(Guide Bar not shown skewed for clarity)



SECTION B-B
(Guide Bar omitted for clarity)

POT BEARING DESIGN DATA

Girder No.		1	2	3	5	6
Bearing Type		Guided	Guided	Guided	Guided	Non-Guided
Unfactored Vertical Dead Load Reaction (R_{DC})	kips	109	109	109	109	109
Unfactored Vertical Wearing Surface Reaction (R_{DW})	kips	30	30	30	30	30
Unfactored Vertical Live Load without Impact Reaction (R_{LL})	kips	150	118	118	118	150
Maximum Strength or Extreme Event Lateral Reaction (H_u)	kips	130	120	40	300	-
Maximum Strength Limit State Rotation (θ_u according to Article 14.4.2.2)	rad	0.022	0.020	0.018	0.033	0.023
Unfactored Design Thermal Movement from 50° F (ΔT)	in.	0	0	0	0	0.04
Transverse Movement	in.	-	-	-	-	0.71
Service I Factored Lateral Reaction	kips	80	70	20	190	-
Service I Rotation	rad	0.018	0.016	0.014	0.023	0.017
SERVICE I FACTORED LONGITUDINAL MOVEMENT		in.	0.24	0.18	0.10	0.84
Service I Factored Vertical Reaction	kips	289	257	257	257	289
Strength I Factored Vertical Reaction	kips	444	388	388	388	444

Service I Load Factors = 1.0DC + 1.0DW + 1.00LL
Strength I Load Factors = 1.25DC + 1.5DW + 1.75LL + 1.2TU
Extreme Event Load Factors = 1.0EQ

BILL OF MATERIAL

Item	Unit	Total
** HLMR Bearings, Pot, Guided Expansion-300k	Each	4
** HLMR Bearings, Pot, Non-Guided Expansion-300k	Each	1
Anchor Bolts, 1 1/2"	Each	20

** The value specified in the pay item name is an approximate vertical load capacity that is use for letting and bidding purposes only. Exact bearing capacity will vary subject to final design.

* 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.

NOTES:

The Structural Steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270, Grade 50. Horizontal forces in the table are the expected applied forces. The Bearing Assembly shall be capable of transmitting 20% of the vertical design load as a horizontal force in the direction normal to the guide bars, whichever is greater.

Shim plate(s) shall be the full dimension of the bottom bearing plate. Shim plates not included in total bearing height. Cost of shims is included with Bearing Pay Items.

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

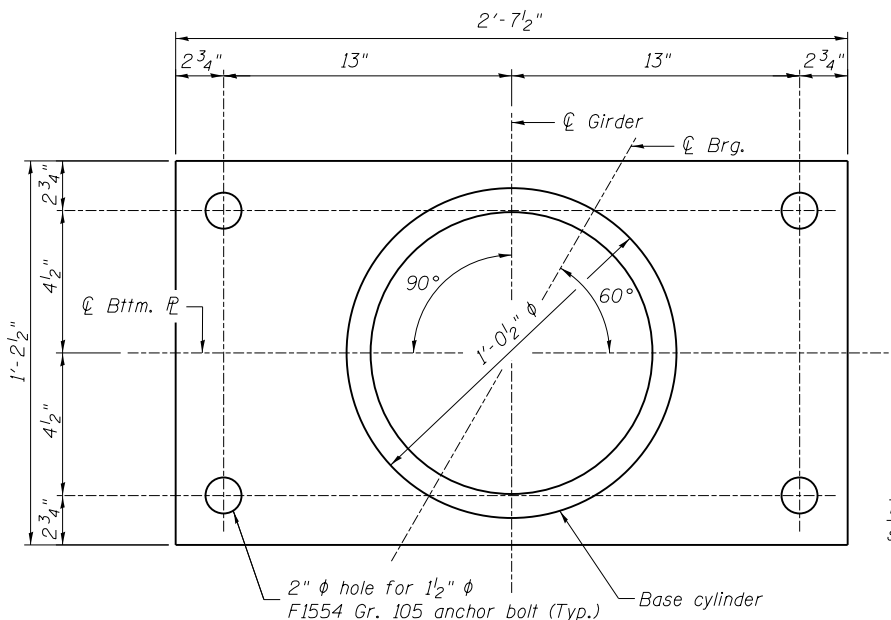
Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier or abutment concrete.

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 ASTM M314 anchor bolts may be used in lieu of ASTM F1554.

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

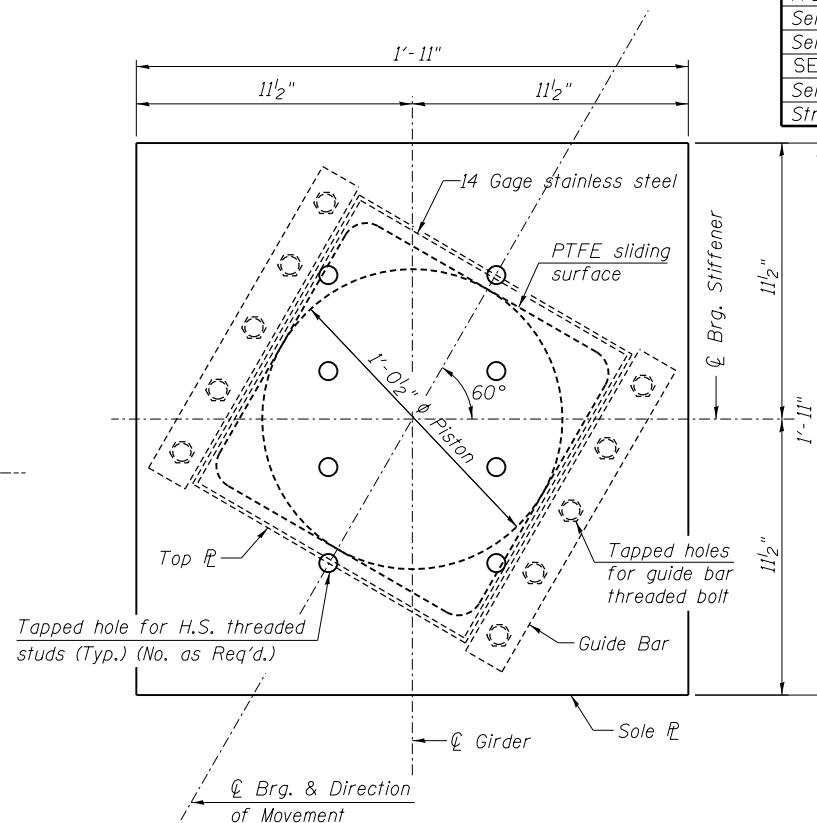
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

For Non-Guided bearing, eliminate guide bars and top plate.



**BOTTOM BEARING ϕ AND
BASE CYLINDER PLAN**

Note: See Bearing Orientation Layout
Plan sheet for orientation.



SOLE ϕ AND PISTON PLAN

Note: See Bearing Orientation Layout Plan
sheet for sole plate orientation.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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USER NAME =	johns00944	DESIGNED	JGT	REVISED	-
		CHECKED	MNM	REVISED	-
PLOT SCALE =	0.1999996 't' / in.	DRAWN	DAP	REVISED	-
PLOT DATE =	7/29/2024	CHECKED	JGT/MNM	REVISED	-

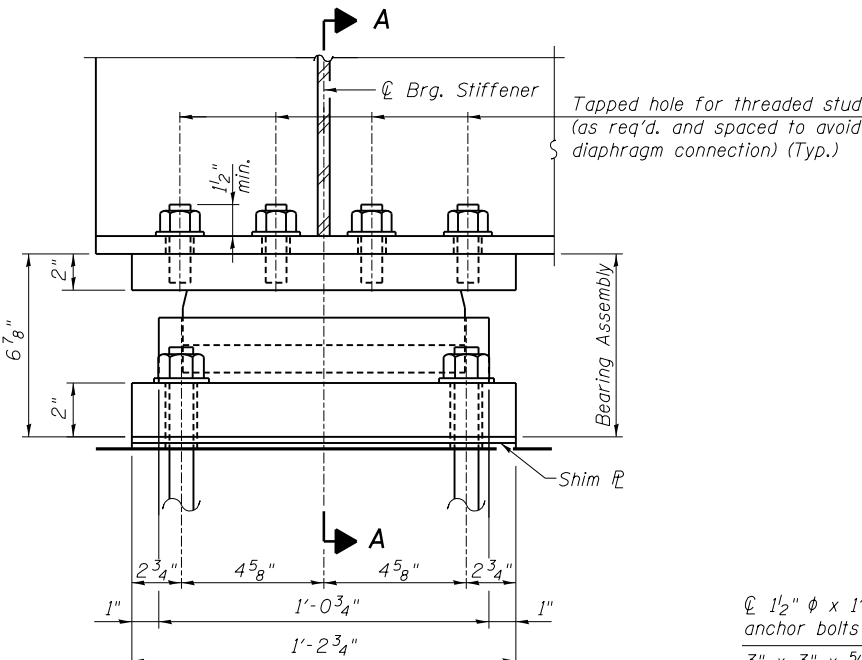
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HLMR EXPANSION POT BEARING DETAILS – SOUTH ABUTMENT
STRUCTURE NUMBER 084-9949**

SHEET NO. 24 OF 34 SHEETS

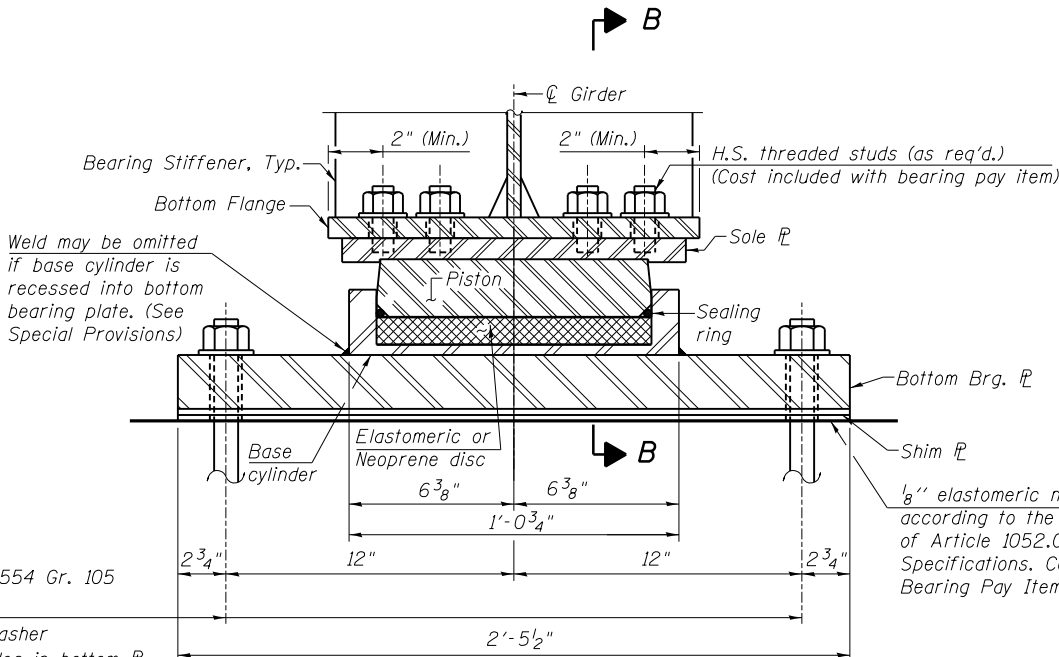
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	169
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

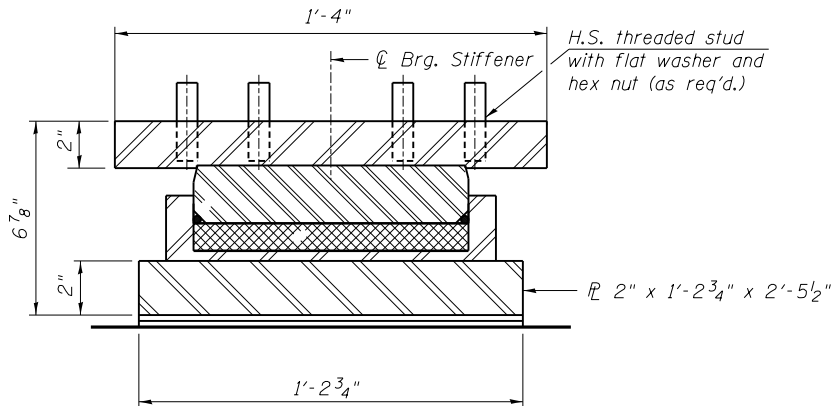


ELEVATION AT ABUTMENT

Ø 1 1/2" Ø x 1'-6" F1554 Gr. 105 anchor bolts with 3" x 3" x 5/16" plate washer under nut. 2" Ø holes in bottom plate



SECTION A-A



SECTION B-B

POT BEARING DESIGN DATA

Girder No.		4
Bearing Type		Fixed
Unfactored Vertical Dead Load Reaction (R _{DC})	kips	109
Unfactored Vertical Bearing Surface Reaction (R _{DN})	kips	30
Unfactored Vertical Live Load without Impact Reaction (R _{LL})	kips	118
Maximum Strength or Extreme Event Lateral Reaction (H _u)	kips	200
Maximum Strength Limit State Rotation (Θ _u according to Article 14.4.2.2)	rad	0.019
Service I Factored Lateral Reaction	kips	80
Service I Rotation	rad	0.013
Service I Factored Longitudinal Movement	in.	0
Service I Factored Vertical Reaction	kips	257
Strength I Factored Vertical Reaction	kips	388

Service I Load Factors = 1.0DC + 1.0DW + 1.00LL
Strength I Load Factors = 1.25DC + 1.5DW + 1.75LL + 1.2TU
Extreme Event Load Factors = 1.0EQ

BILL OF MATERIAL

Item	Unit	Total
* HLMR Bearings, Pot, Fixed-300k	Each	1
Anchor Bolts, 1 1/2"	Each	4

* The value specified in the pay item name is an approximate vertical load capacity that is use for letting and bidding purposes only. Exact bearing capacity will vary subject to final design.

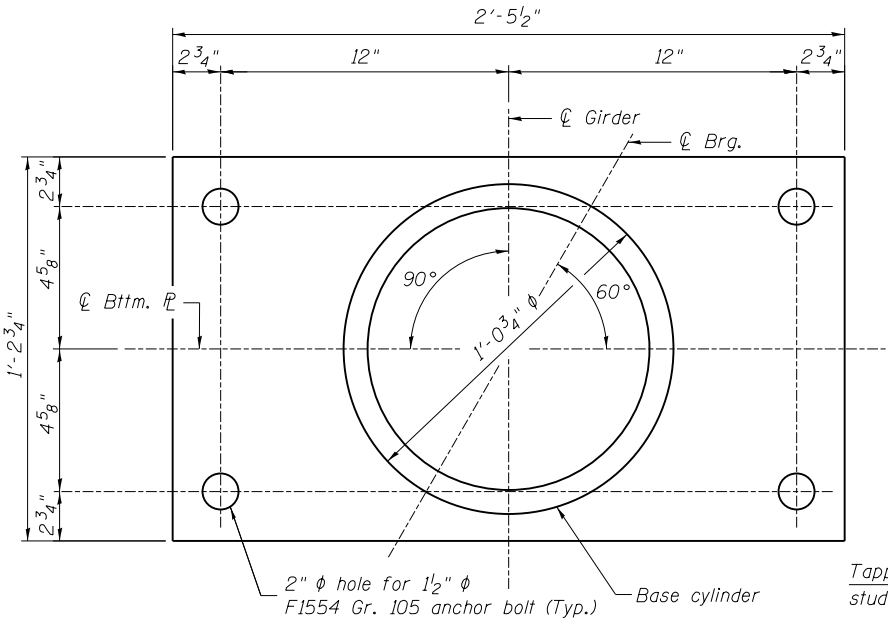
NOTES:

The Structural Steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270, Grade 50. Horizontal forces in the table are the expected applied forces. The Bearing Assembly shall be capable of transmitting 20% of the vertical design load as a horizontal force in the direction normal to the guide bars, whichever is greater. Shim plate(s) shall be the full dimension of the bottom bearing plate. Shim plates not included in total bearing height. Cost of shims is included with Bearing Pay Items. Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier or abutment concrete.

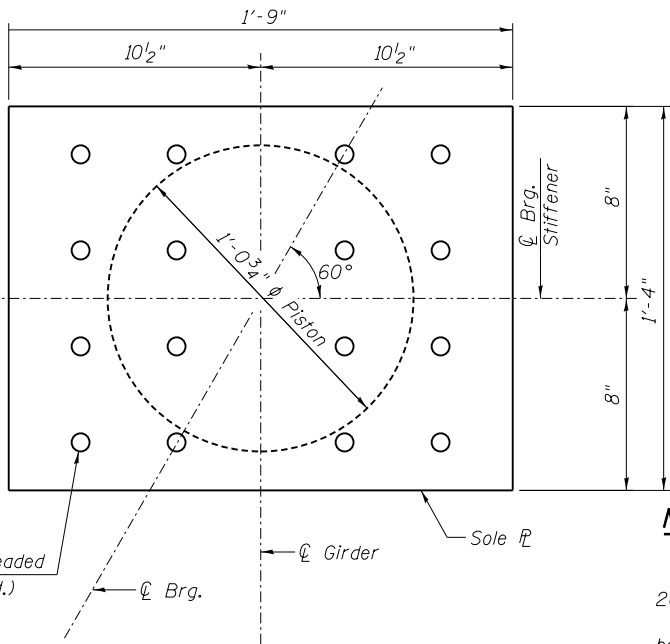
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of ASTM M314 anchor bolts may be used in lieu of ASTM F1554. Anchor bolts at HLMR Bearings may be either cast in place or installed in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



BOTTOM BEARING PLATE AND BASE CYLINDER PLAN

Note: See Bearing Orientation Layout Plan sheet for bottom plate orientation.



SOLE PLATE AND PISTON PLAN

Note: See Bearing Orientation Layout Plan sheet for sole plate orientation.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MM	11/20/15

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USER NAME : Johns00944

DESIGNED JGT

CHECKED MNM

PLOT SCALE : 0.1999996 '1' / in.

DRAWN DAP

PLOT DATE : 7/29/2024

CHECKED JGT/MNM

REVISED -

REVISED -

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

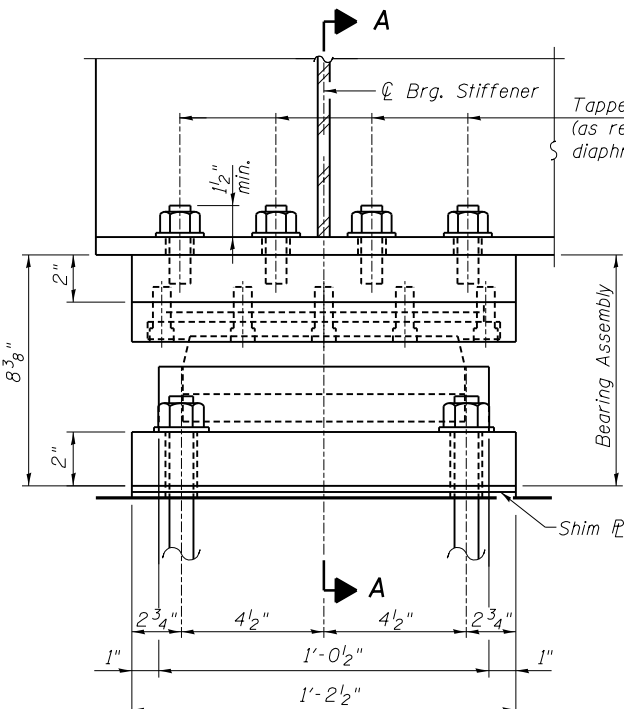
HLMR FIXED POT BEARING DETAILS - SOUTH ABUTMENT
STRUCTURE NUMBER 084-9949

SHEET NO. 25 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	170
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6

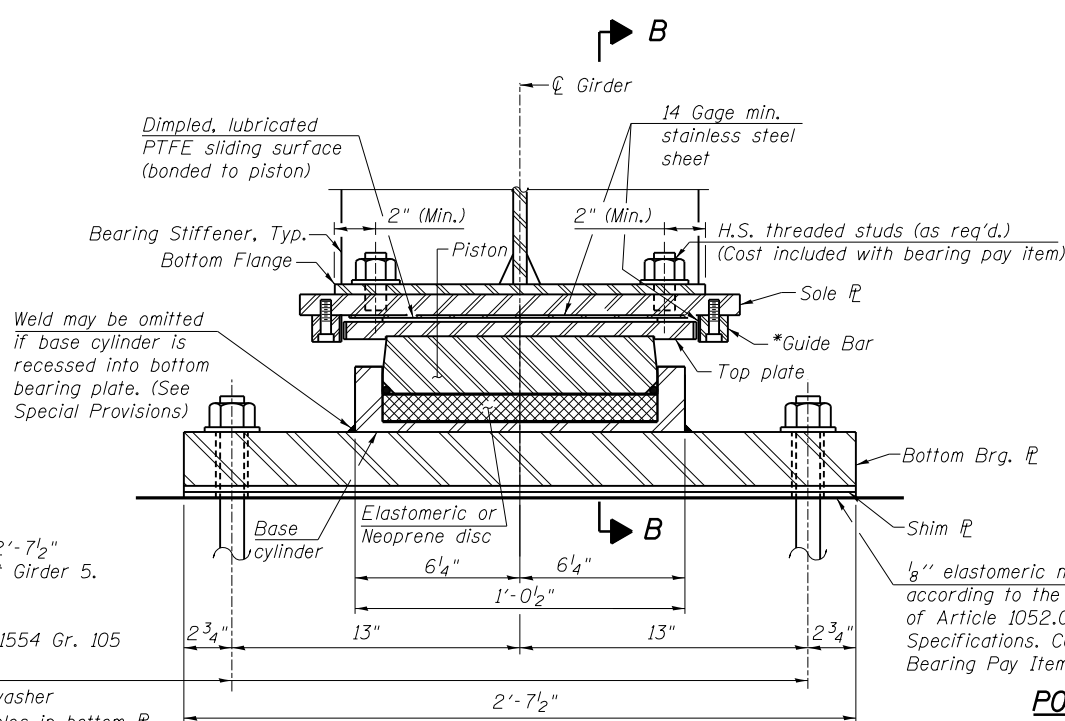
• 07-00164-04-FP, 07-00090-08-FP



ELEVATION AT ABUTMENT
(Guide Bar not shown skewed for clarity)

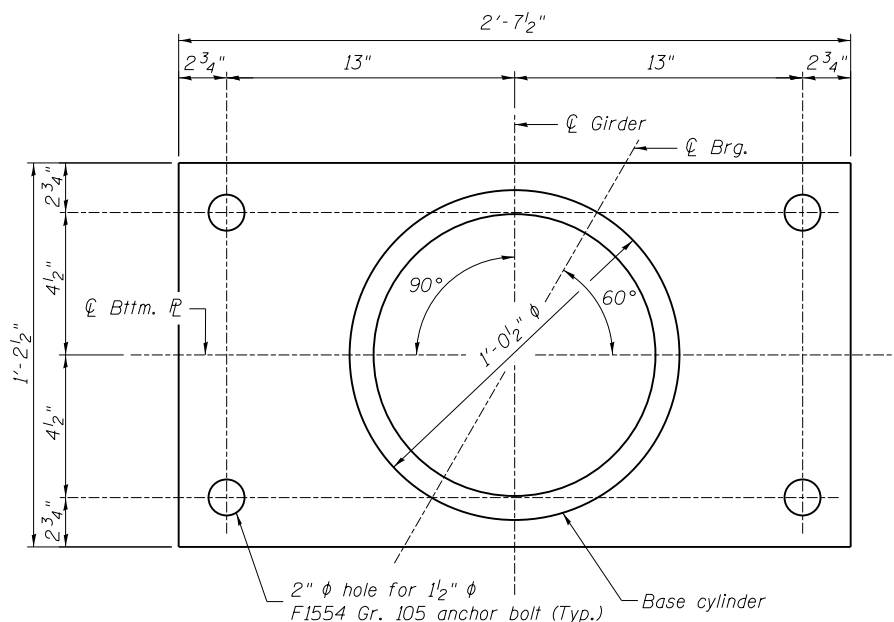
Note:
Additional 3/4" x 1'-2 1/2" x 2'-7 1/2"
Shim plates are required at Girder 5.

1/2" ϕ x 1'-6" F1554 Gr. 105
anchor bolts with
3" x 3" x 5/16" ϕ washer
under nut. 2" ϕ holes in bottom ϕ



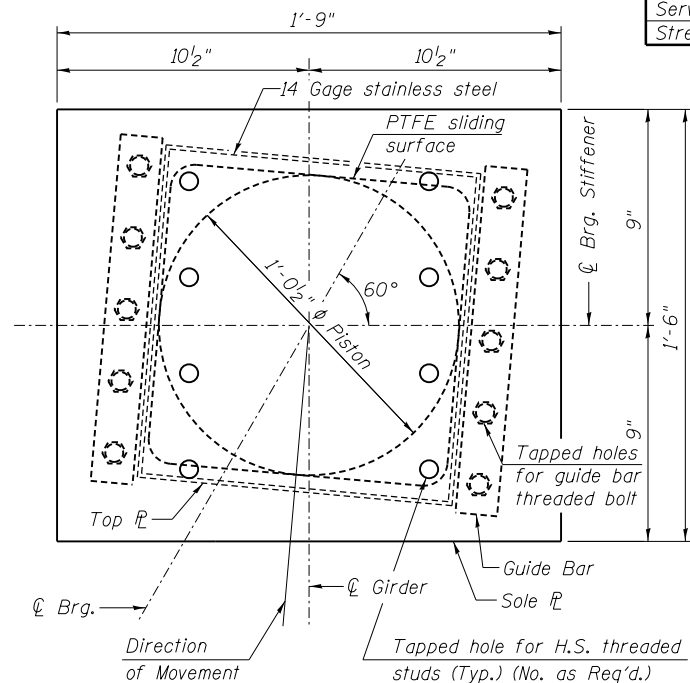
SECTION A-A
(Guide Bar not shown skewed for clarity)

* 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.



**BOTTOM BEARING ϕ AND
BASE CYLINDER PLAN**

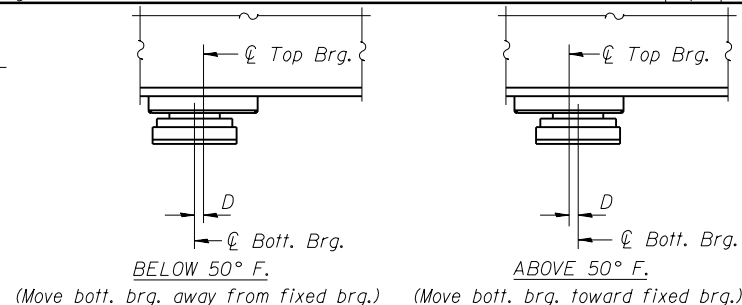
Note: See Bearing Orientation Layout Plan sheet for bottom plate orientation.



SOLE ϕ AND PISTON PLAN

Note: See Bearing Orientation Layout Plan sheet for sole plate and guide bar orientation.

Girder No.		1	2	3	4	5	6
Bearing Type		Non-Guided	Guided	Guided	Guided	Guided	Guided
Unfactored Vertical Dead Load Reaction (R_{DC})	kips	109	109	109	109	109	109
Unfactored Vertical Wearing Surface Reaction (R_{DW})	kips	30	30	30	30	30	30
Unfactored Vertical Live Load without Impact Reaction (R_{LL})	kips	150	118	118	118	118	150
Maximum Strength or Extreme Event Lateral Reaction (H_u)	kips	0	200	80	50	70	90
Maximum Strength Limit State Rotation (θ_u according to Article 14.4.2.2)	rad	0.031	0.034	0.027	0.024	0.023	0.020
Unfactored Design Thermal Movement from 50° F (ΔT)	in.	1.05	1.12	1.17	1.23	1.3	1.36
Transverse Movement	in.	0.9	-	-	-	-	-
Service I Factored Lateral Reaction	kips	-	130	50	30	30	60
Service I Rotation	rad	0.021	0.022	0.017	0.014	0.013	0.014
Service I Factored Longitudinal Movement	in.	2.79	2.59	2.52	2.49	2.49	2.48
Service I Factored Vertical Reaction	kips	289	257	257	257	257	289
Strength I Factored Vertical Reaction	kips	444	388	388	388	388	444



SETTING ANCHOR BOLTS AT EXP. BRG.

$D = \frac{1}{8}$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

NOTES:

The Structural Steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270, Grade 50. Horizontal forces in the table are the expected applied forces. The Bearing Assembly shall be capable of transmitting 20% of the vertical design load as a horizontal force in the direction normal to the guide bars, whichever is greater. Shim plate(s) shall be the full dimension of the bottom bearing plate. Shim plates not included in the total bearing height. Cost of shims is included with Bearing Pay Items. Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier or abutment concrete.

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 ASTM M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at HLMR 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.

For Non-Guided bearing, eliminate guide bars and top plate.

Service I Load Factors = 1.0DC + 1.0DW + 1.00LL
Strength I Load Factors = 1.25DC + 1.5DW + 1.75LL + 1.2TU
Extreme Event Load Factors = 1.0EQ

BILL OF MATERIAL

Item	Unit	Total
** HLMR Bearings, Pot, Guided Expansion-300k	Each	5
** HLMR Bearings, Pot, Non-Guided Expansion-300k	Each	1
Anchor Bolts, 1 1/2"	Each	24

** The value specified in the pay item name is an approximate vertical load capacity that is use for letting and bidding purposes only. Exact bearing capacity will vary subject to final design.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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PLOT SCALE	= 0:1.999996 '1' / in.
PLOT DATE	= 7/29/2024

DESIGNED	JGT
CHECKED	MNM
DRAWN	DAP
CHECKED	JGT/MNM

REVISED	-
REVISED	-
REVISED	-
REVISED	-

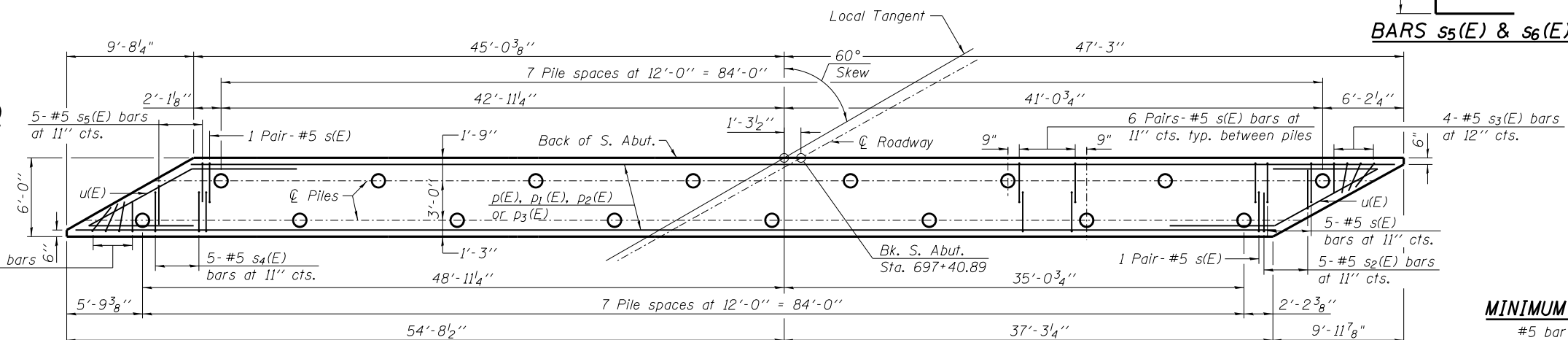
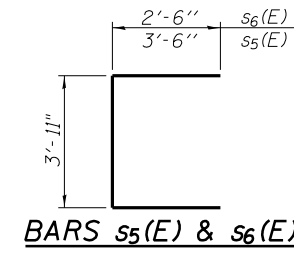
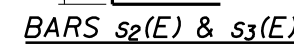
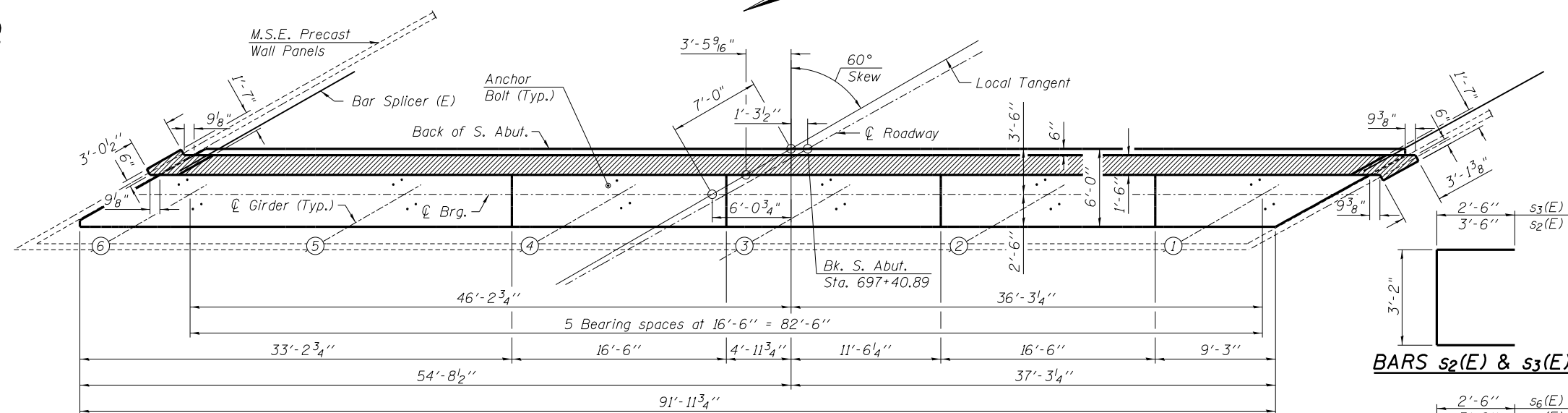
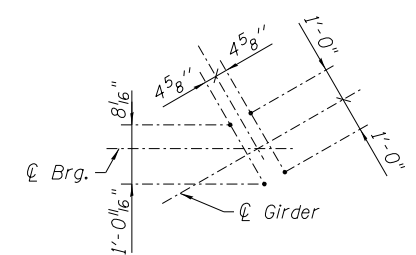
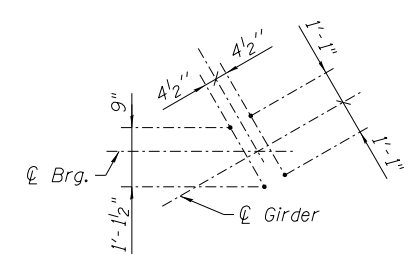
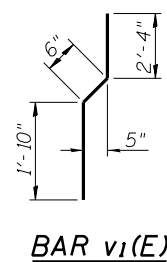
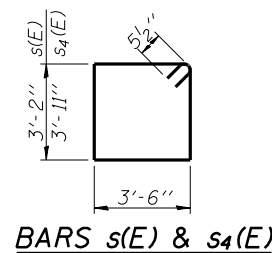
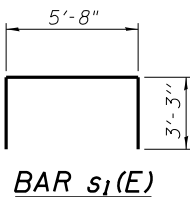
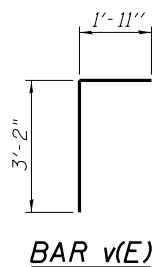
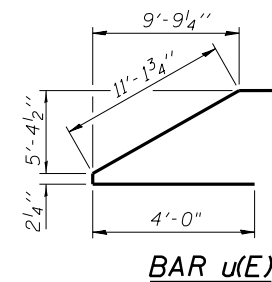
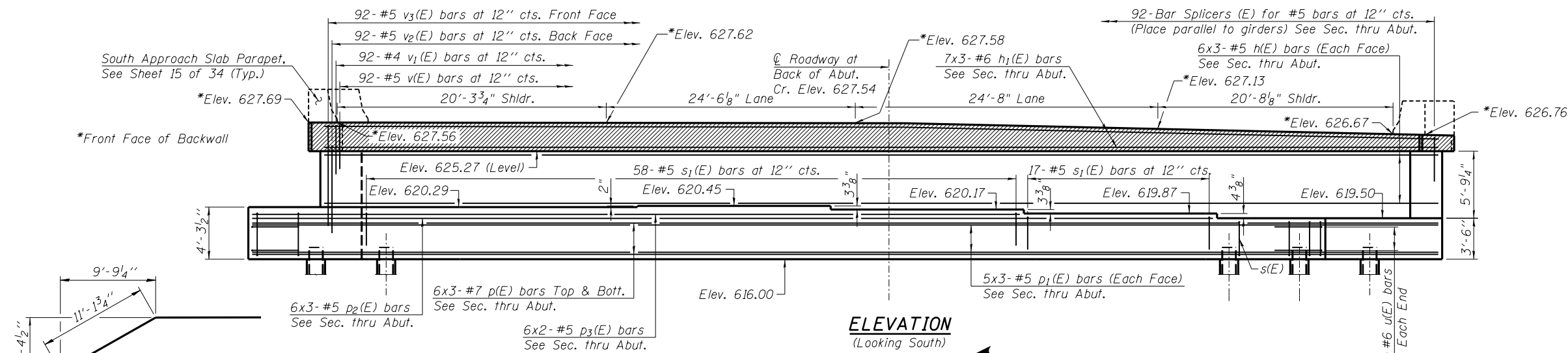
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HLMR EXPANSION POT BEARING DETAILS – NORTH ABUTMENT
STRUCTURE NUMBER 084-9949**

SHEET NO. 26 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	171
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP



ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h(E)$	36	#5	33'-2"	=====
$h_1(E)$	21	#6	33'-11"	=====
$p(E)$	36	#7	34'-7"	=====
$p_1(E)$	30	#5	33'-3"	=====
$p_2(E)$	18	#5	30'-1"	=====
$p_3(E)$	12	#5	35'-0"	=====
$s(E)$	165	#5	14'-3"	
$s_1(E)$	75	#5	12'-2"	
$s_2(E)$	5	#5	10'-2"	
$s_3(E)$	4	#5	8'-2"	
$s_4(E)$	5	#5	15'-9"	
$s_5(E)$	5	#5	10'-11"	
$s_6(E)$	4	#5	8'-11"	
$u(E)$	8	#6	19'-4"	
$v(E)$	92	#5	5'-1"	
$v_1(E)$	92	#4	4'-8"	
$v_2(E)$	92	#5	8'-2"	=====
$v_3(E)$	92	#5	10'-6"	=====

Concrete Structures	Cu. Yd.	119.4
Reinforcement Bars, Epoxy Coated	Pound	13370
Furnishing Metal Shell Piles, 12"x0.25"	Foot	705
Driving Piles	Foot	705
Test Pile, Metal Shell	Each	1
Concrete Sealer	Sq. Ft.	1512

For details of Bar Splicers, see sheet 31 of 34.
For details of piles see sheet 32 of 34.
Bars indicated thus 5x3- #5 etc. indicates 5 lines
of bars with 3 lengths per line.

PILE DATA

Type: Metal Shell 12" x 0.25"
Nominal Required Bearing: 355
Factored Resistance Available: 195
Est. Length: 47
No. Production Piles: 15
No. Test Piles: 1

MINIMUM BAR LAP

#5 bar = 3'-9"
#6 bar = 4'-0"
#7 bar = 5'-10"

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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USER NAME = johns09944	DESIGNED	JGT	REVISED	-
	CHECKED	MNM	REVISED	-
PLOT SCALE = 0:1.999996 'ft' / in.	DRAWN	DAP	REVISED	-
PLOT DATE = 7/29/2024	CHECKED	JGT/MNM	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOUTH ABUTMENT STRUCTURE NUMBER 084-9949 SHEET NO. 27 OF 34 SHEETS	
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	172
		CONTRACT NO. 93671		
ILLINOIS EED AND PROJECT 6				

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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USER NAME =	johns00944	DESIGNED	JGT	REVISED	-
		CHECKED	MNM	REVISED	-
PLOT SCALE =	0.166666' / 1" =	DRAWN	DAP	REVISED	-
PLOT DATE =	7/29/2024	CHECKED	JGT/MNM	REVISED	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

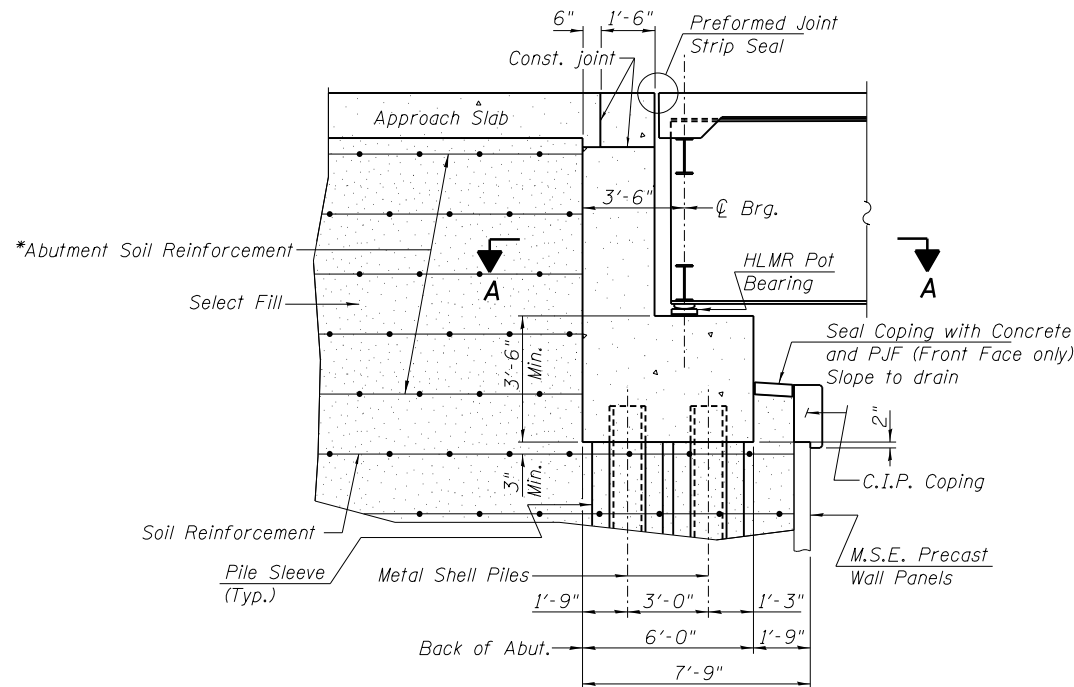
SOUTH ABUTMENT DETAILS
 STRUCTURE NUMBER 084-9949

SHEET NO. 28 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	173
		CONTRACT NO.	93671	

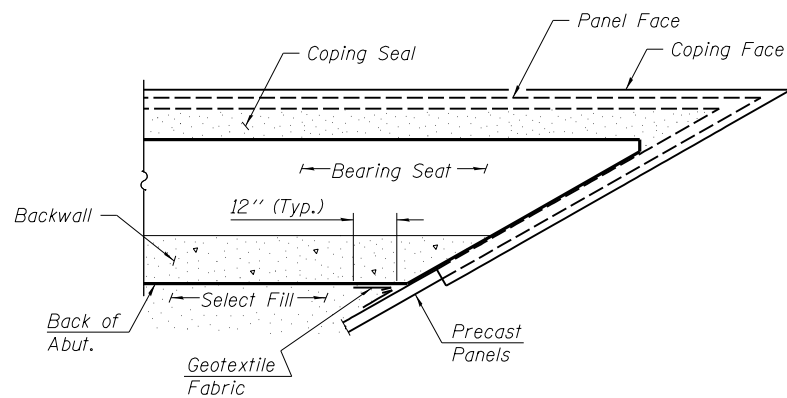
ILLINOIS FED. AID PROJECT 6
 07-00164-04-FP, 07-00090-08-FP

*The M.S.E. Wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 2.44 K/ft. of abutment. (Service)

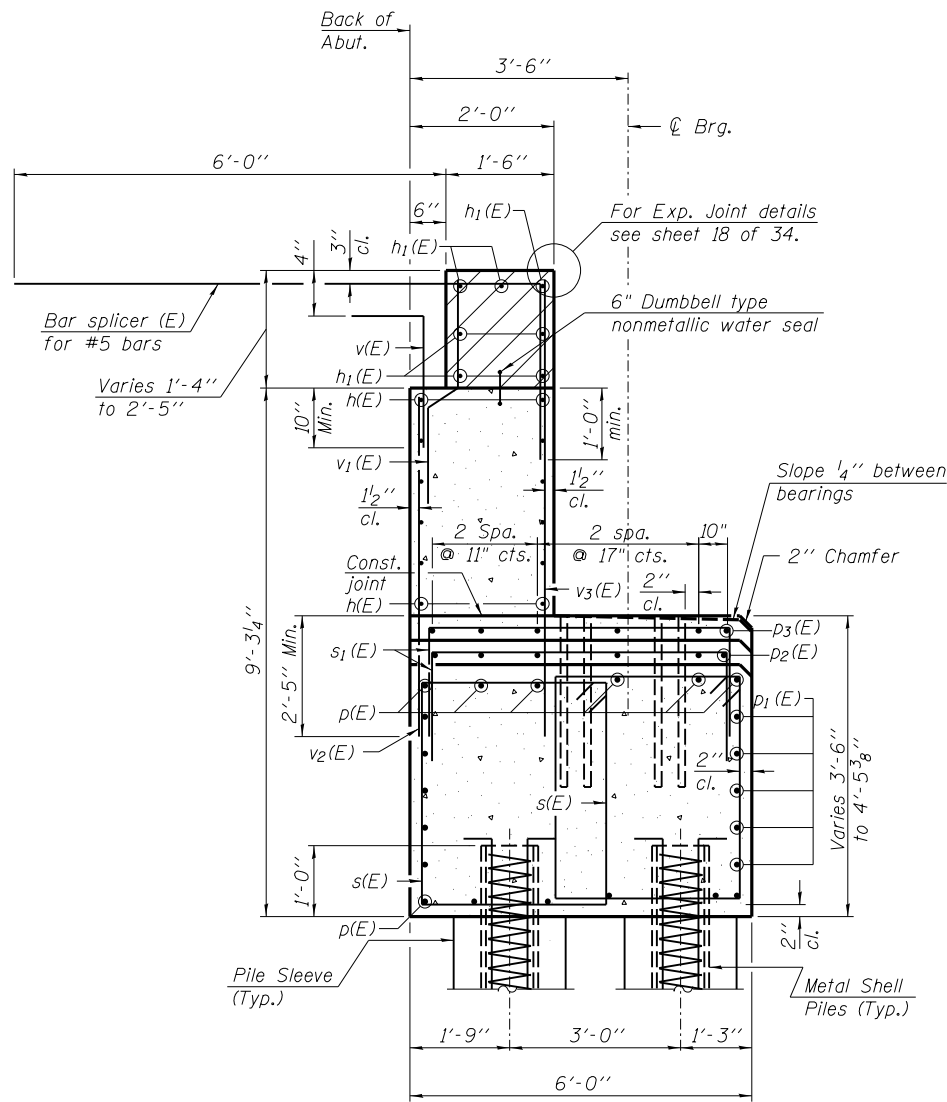


**SECTION THRU PILE SUPPORTED
 STUB ABUTMENT - SOUTH ABUTMENT**

(Horiz. dim. @ Rt. L's)

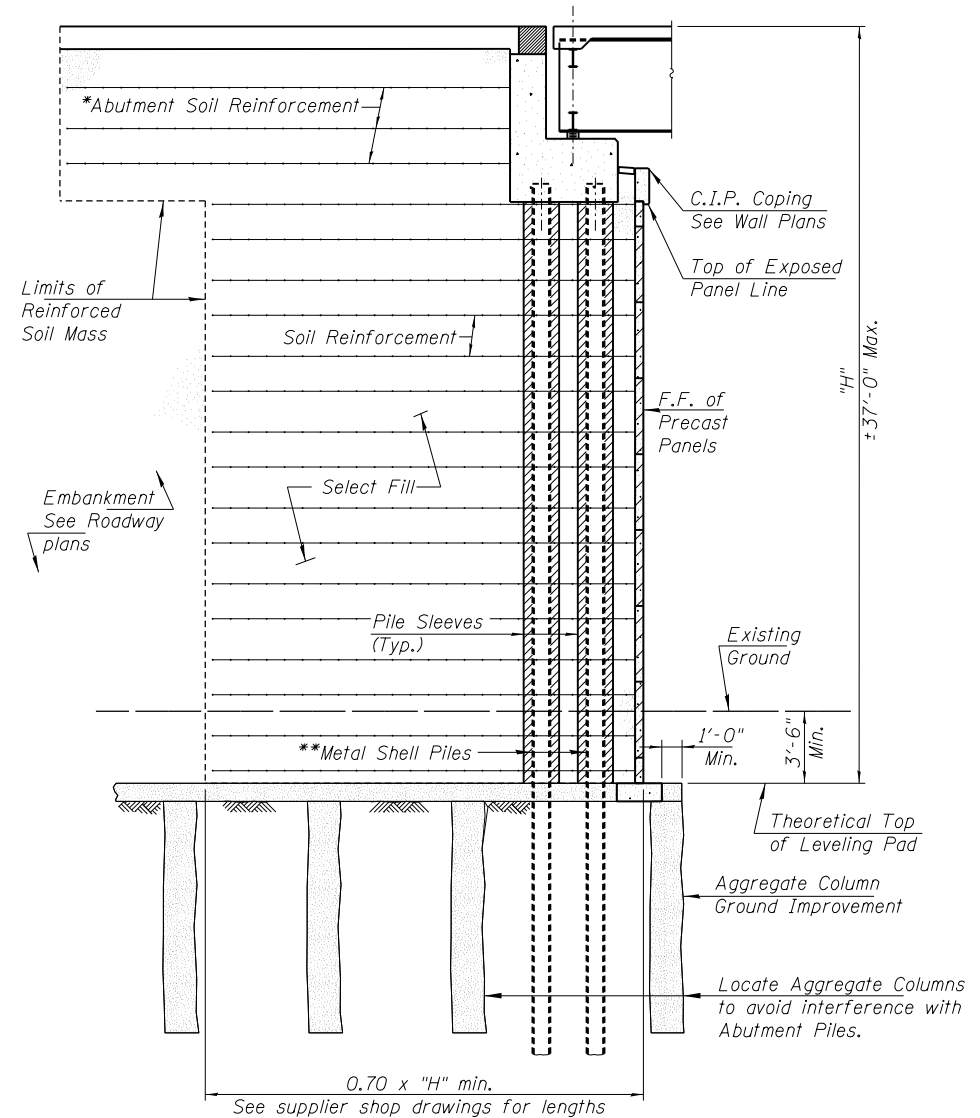


SECTION A-A



SEC. THRU ABUT.

(Horiz. Dim. @ Rt. L's)



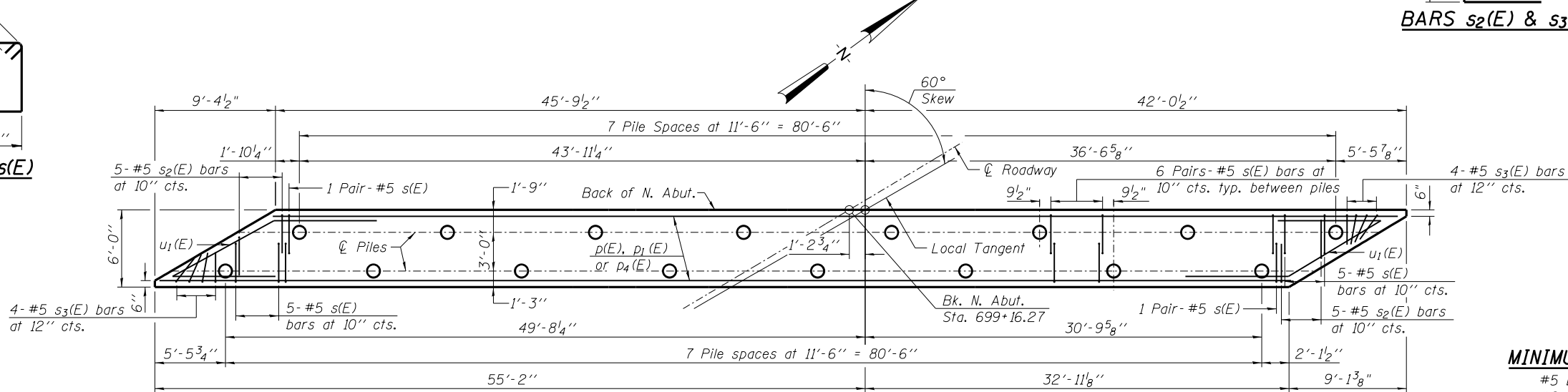
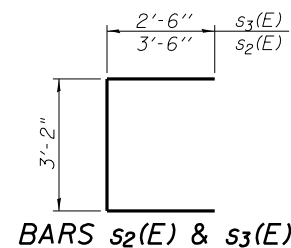
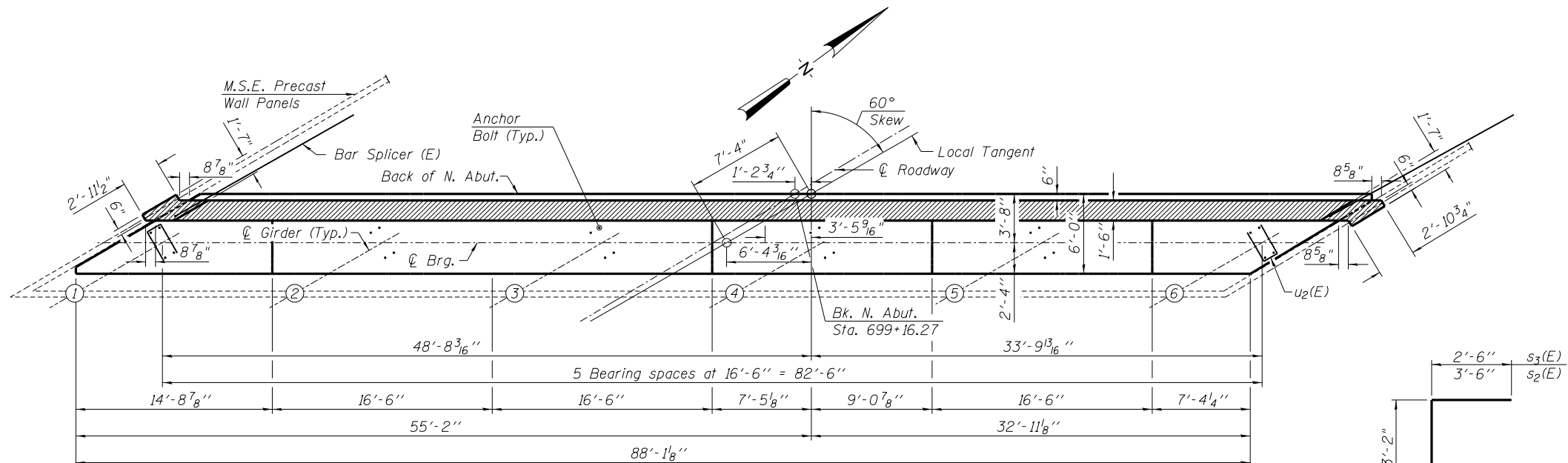
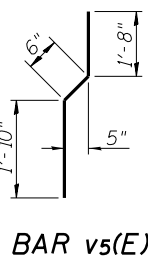
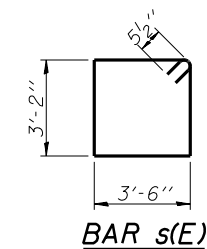
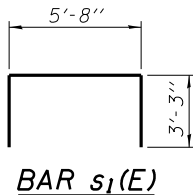
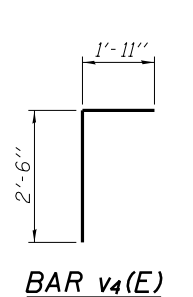
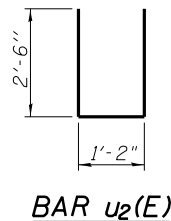
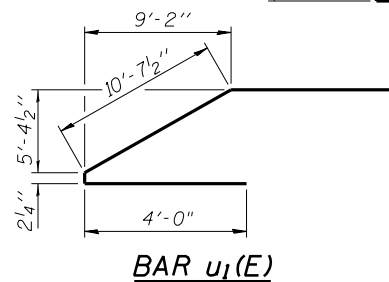
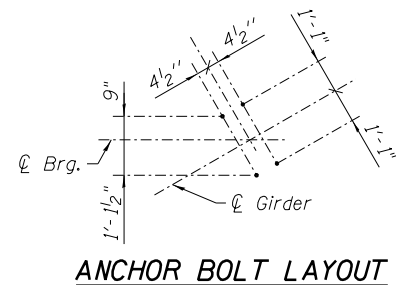
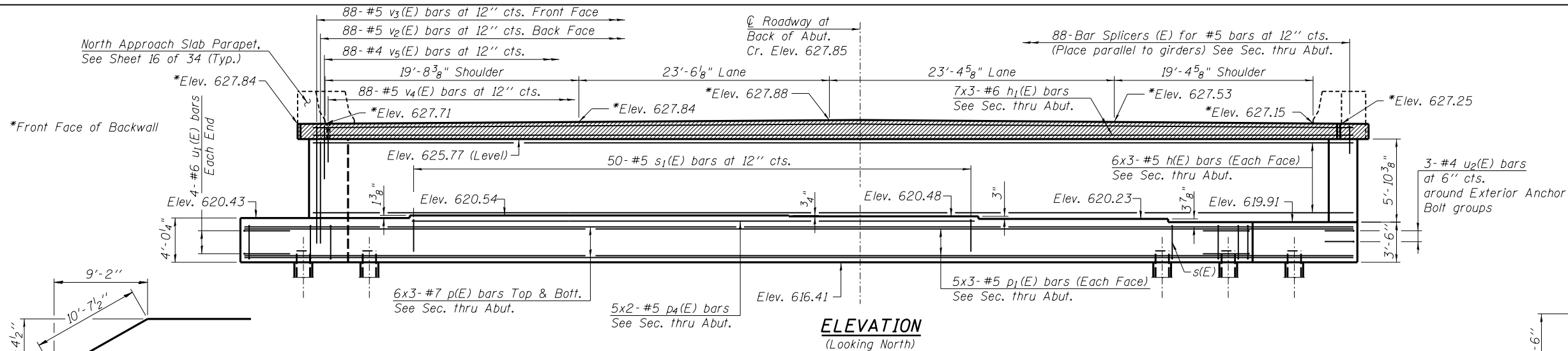
**TYPICAL M.S.E. WALL
 SECTION AT ABUTMENT**

(Section at Rt. L's)

** Drive piles after construction of M.S.E. wall and 90% Settlement thru Sleeves. The Sleeves should be filled with dry, loose sand after piles are driven. Complete pile driving after construction of MSE wall and required settlement period as determined by the Contractor's Aggregate Column Ground Improvement (ACGI) design. See Retaining Wall Plans for specific performance requirements. Piles shall be driven to final bearing after theoretical settlement remaining is 0.4 inches or less. Fill void between pile and sleeve with loose dry sand. Contractor shall have the option to drive piles after ACGI installation and before construction of MSE wall if sleeves are set around piles and piles are redriven after required settlement period. Concrete and reinforcement bars, cut flush with concrete shall be placed before redriving. Redrive each pile to not less than 1.0 inch additional penetration and not less than the required nominal driven bearing unless in the opinion of the Engineer, further driving would result in damage to the pile.

Notes:

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. See Wall Plans for Aggregate Column Ground Improvement Details.



ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#5	33'-2"	—
h1(E)	21	#6	33'-11"	—
p(E)	36	#7	34'-7"	—
p1(E)	30	#5	33'-3"	—
p4(E)	10	#5	26'-8"	—
s(E)	170	#5	14'-3"	□
s1(E)	50	#5	12'-2"	┌
s2(E)	10	#5	10'-2"	┌
s3(E)	8	#5	8'-2"	┌
u1(E)	8	#6	18'-10"	└
u2(E)	6	#4	6'-2"	└
v2(E)	88	#5	8'-2"	—
v3(E)	88	#5	10'-6"	—
v4(E)	88	#5	4'-5"	└
v5(E)	88	#4	4'-0"	└
Concrete Structures			Cu. Yd.	112.9
Reinforcement Bars, Epoxy Coated			Pound	12120
Furnishing Metal Shell Piles, 12"x0.25"			Foot	630
Driving Piles			Foot	630
Test Pile, Metal Shell			Each	1
Concrete Sealer			Sq. Ft.	1421

For details of Bar Splicers, see sheet 31 of 34.
For details of piles see sheet 32 of 34.
Bars indicated thus 5x3-#5 etc. indicates 5 lines of bars with 3 lengths per line.

MINIMUM BAR LAP

#5 bar = 3'-9"
#6 bar = 4'-0"
#7 bar = 5'-10"

PILE DATA

Type: Metal Shell 12" x 0.25"
Nominal Required Bearing: 355
Factored Resistance Available: 195
Est. Length: 42
No. Production Piles: 15
No. Test Piles: 1

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

USER NAME	: johns00944		
DESIGNED	JGT	REVIS	-
CHECKED	MNM	REVIS	-
PLOT SCALE	= 0.166666' / 1" =		
PLOT DATE	= 7/29/2024		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

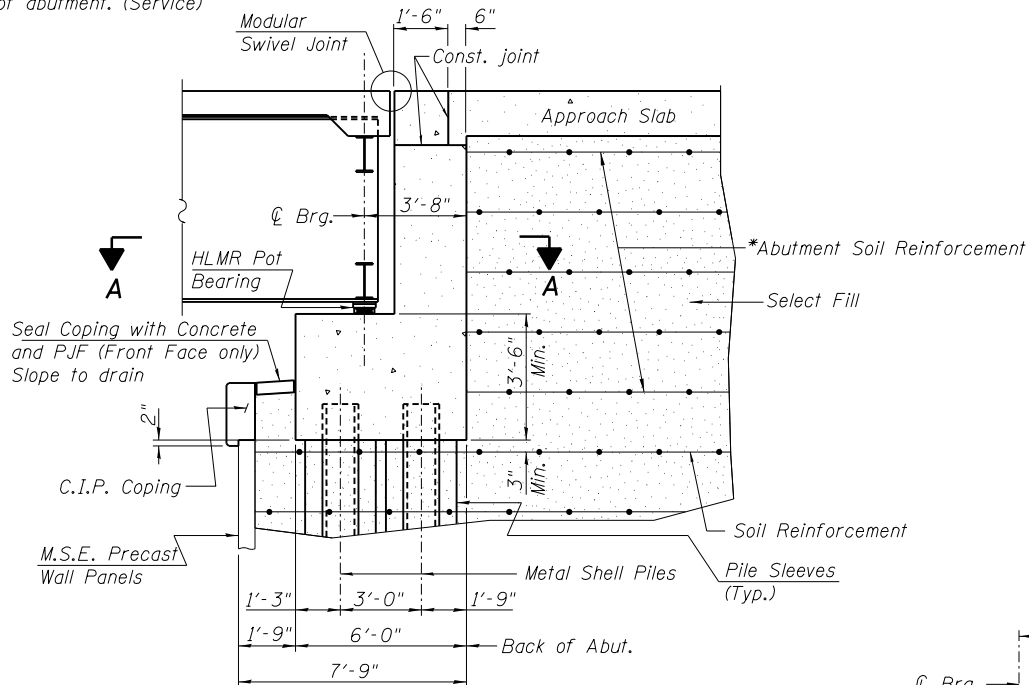
NORTH ABUTMENT
STRUCTURE NUMBER 084-9949

SHEET NO. 29 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SANGAMON	368	174
CONTRACT NO. 93671				

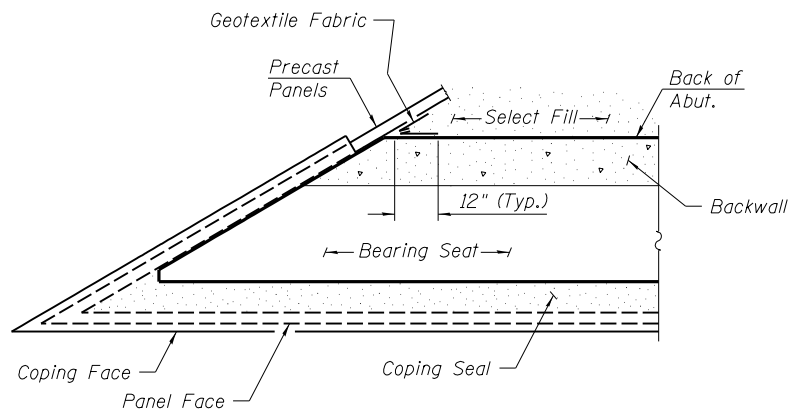
ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

*The M.S.E. Wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 2.44 K/ft. of abutment. (Service)

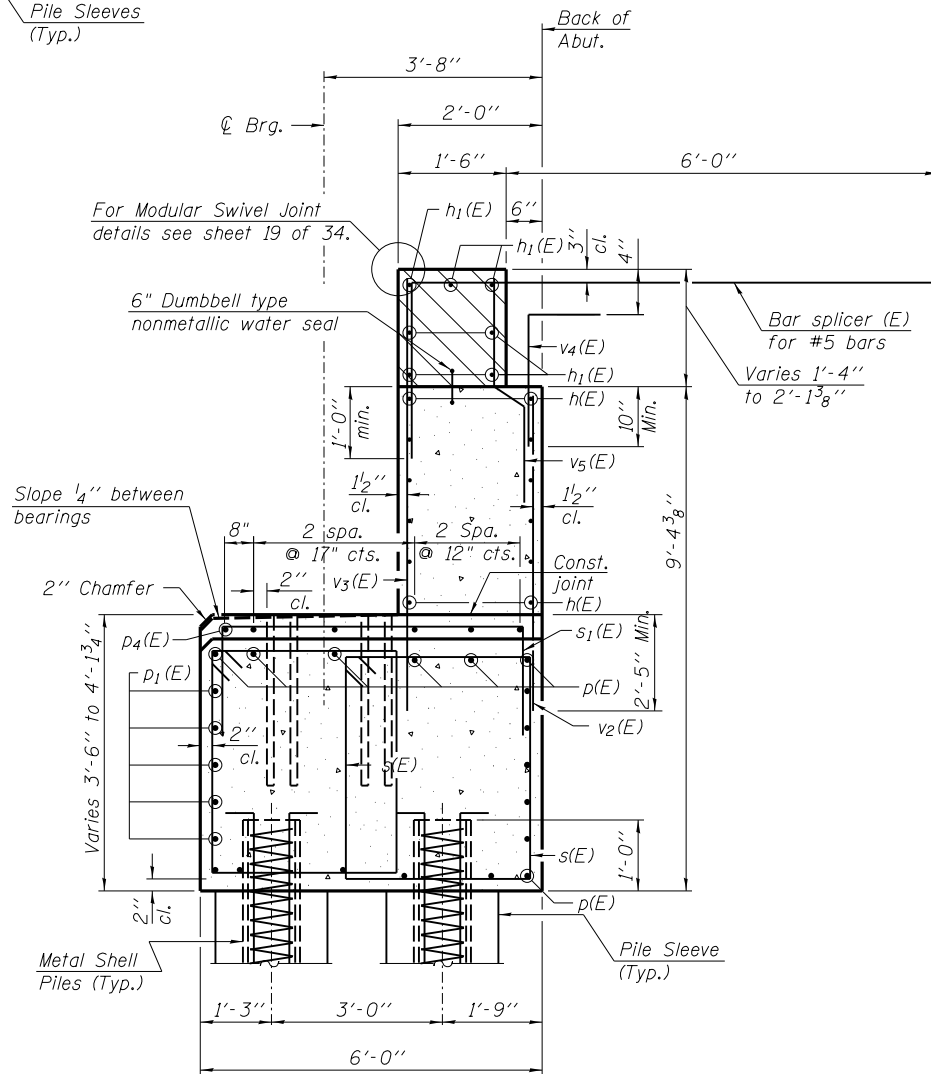


**SECTION THRU PILE SUPPORTED
STUB ABUTMENT - NORTH ABUTMENT**

(Horiz. dim. @ Rt. L's)

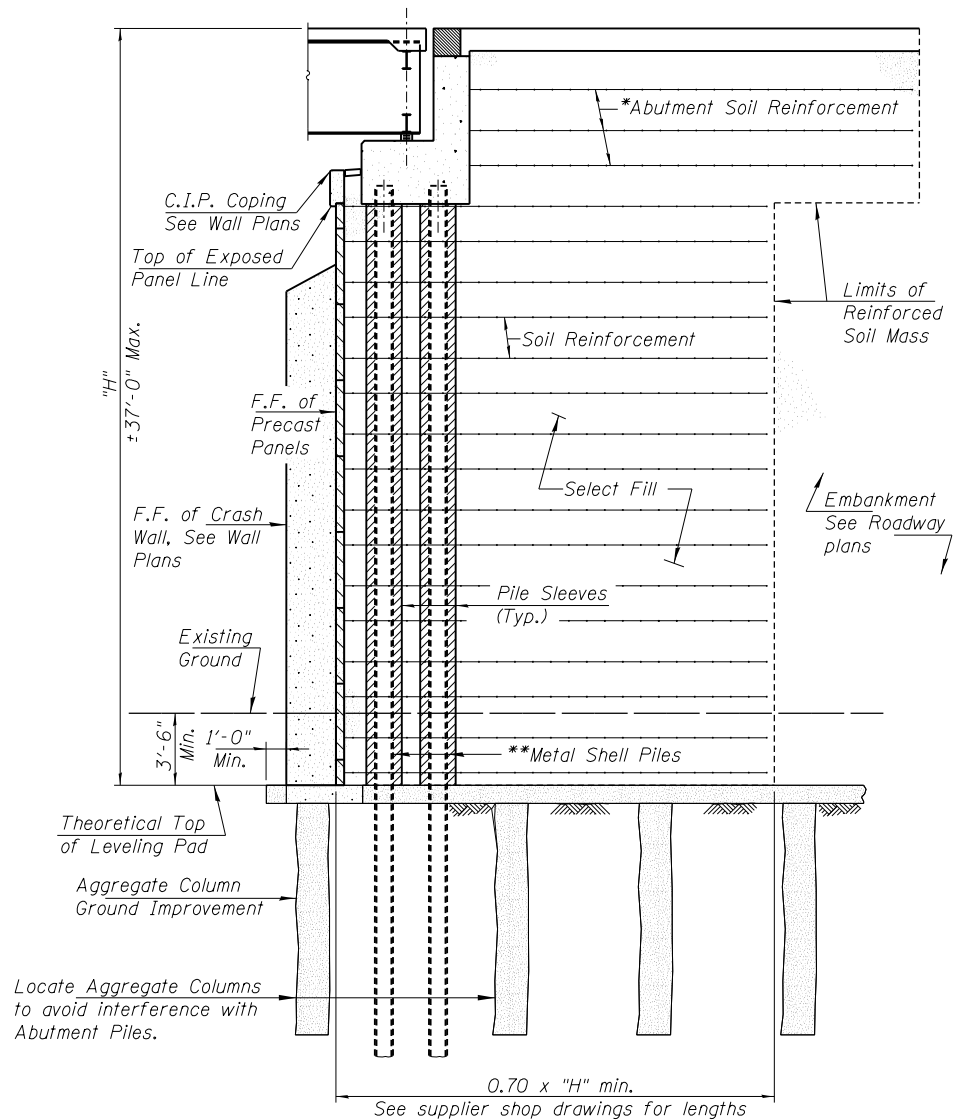


SECTION A-A



SEC. THRU ABUT.

(Horiz. Dim. @ Rt. L's)



**TYPICAL M.S.E. WALL
SECTION AT ABUTMENT**

(Section at Rt. L's)

** Drive piles after construction of M.S.E. wall and 90% Settlement thru Sleeves. The Sleeves should be filled with dry, loose sand after piles are driven. Complete pile driving after construction of MSE wall and required settlement period as determined by the Contractor's Aggregate Column Ground Improvement (ACGI) design. See Retaining Wall Plans for specific performance requirements. Piles shall be driven to final bearing after theoretical settlement remaining is 0.4 inches or less. Fill void between pile and sleeve with loose dry sand. Contractor shall have the option to drive piles after ACGI installation and before construction of MSE wall if sleeves are set around piles and piles are redriven after required settlement period. Concrete and reinforcement bars, cut flush with concrete shall be placed before redriving. Redrive each pile to not less than 1.0 inch additional penetration and not less than the required nominal driven bearing unless in the opinion of the Engineer, further driving would result in damage to the pile.

Notes:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. See Wall Plans for Aggregate Column Ground Improvement Details.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

I:\96\jobs\96S2002F\CADD\Struct\Sheet\030_North Abutment Details.dgn

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USER NAME =	johns00944
PLOT SCALE =	@1.999996 "1" / in.
PLOT DATE =	7/29/2024

DESIGNED	JGT
CHECKED	MNM
DRAWN	DAP
CHECKED	JGT/MNM

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT DETAILS
STRUCTURE NUMBER 084-9949**

SHEET NO. 30 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	175
			CONTRACT NO.	93671

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

I:\96\jobs\96S2002F\CADD\Struct\Sheet\031.Bar Splicer Assembly Details.dgn

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PROFESSIONAL DESIGN FIRM LICENSE #184-001084

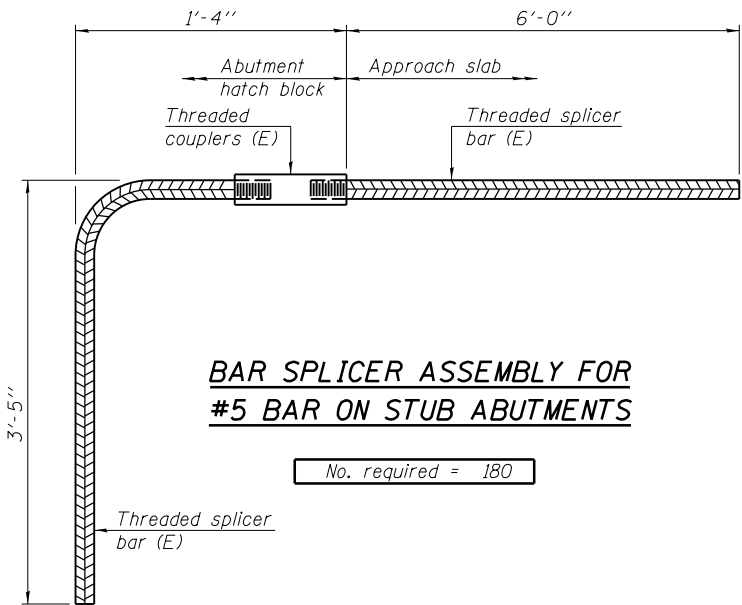
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		CHECKED	MNM	REVISED	-
PLOT SCALE =	0.166667' / 1in.	DRAWN	DAP	REVISED	-
PLOT DATE =	7/29/2024	CHECKED	JGT/MNM	REVISED	-

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

	BAR SPLICER ASSEMBLY DETAILS
	STRUCTURE NUMBER 084-9949
	SHEET NO. 31 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	176
CONTRACT NO.			93671	
ILLINOIS FED. AID PROJECT 6				

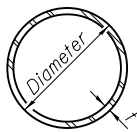
• 07-00164-04-FP, 07-00090-08-FP



**BAR SPLICER ASSEMBLY FOR
#5 BAR ON STUB ABUTMENTS**

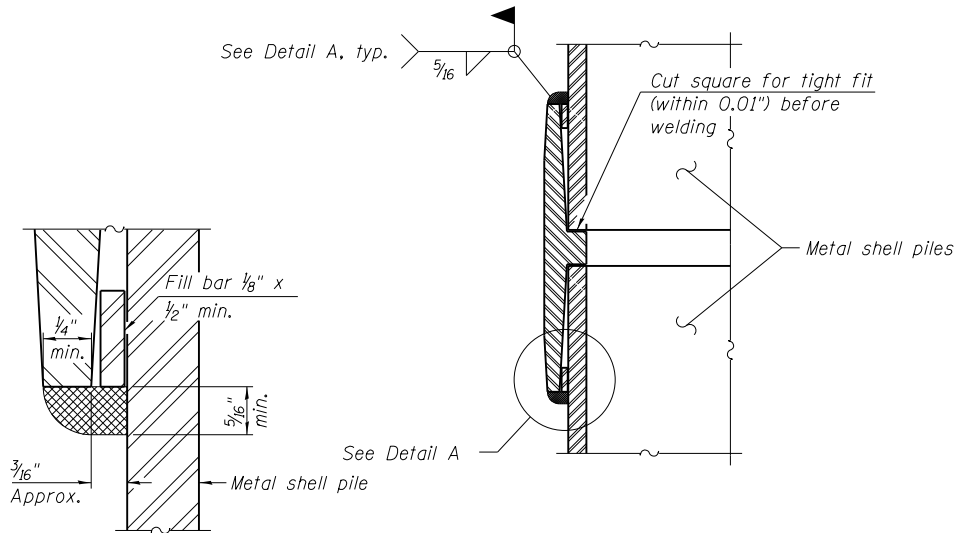
NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

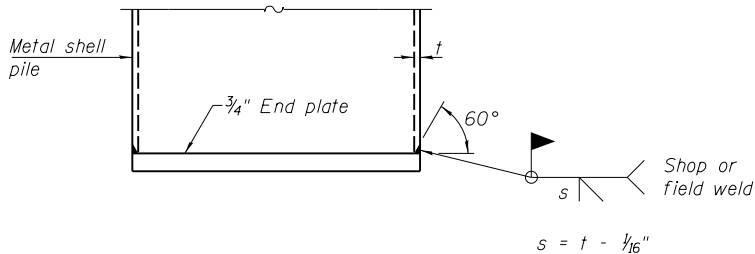


METAL SHELL PILE TABLE

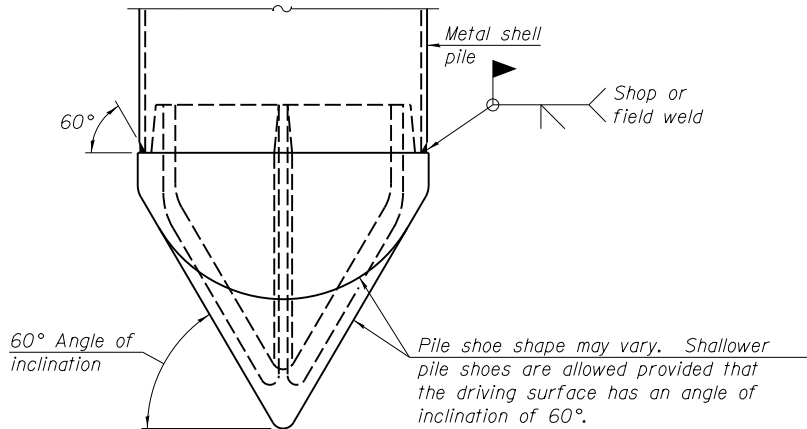
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. 3/ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A



END PLATE ATTACHMENT

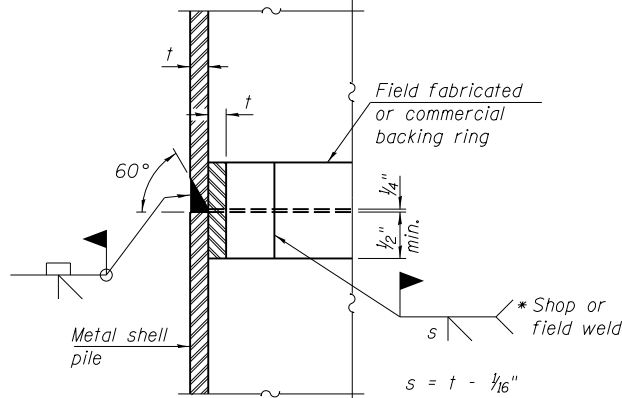


PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).

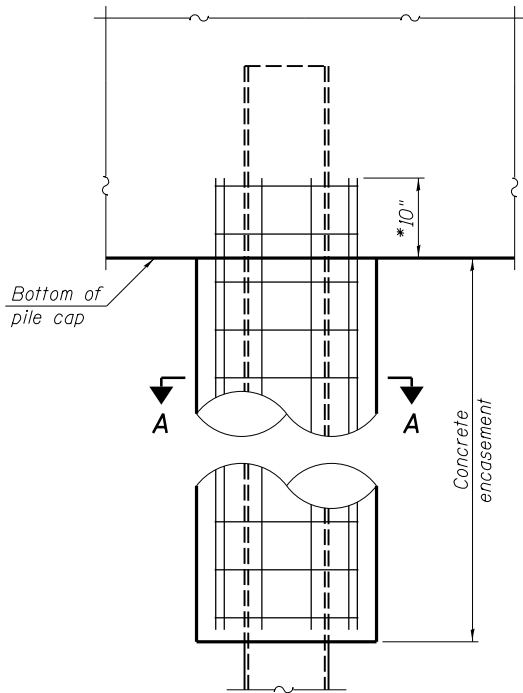
WELDED COMMERCIAL SPLICE

Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

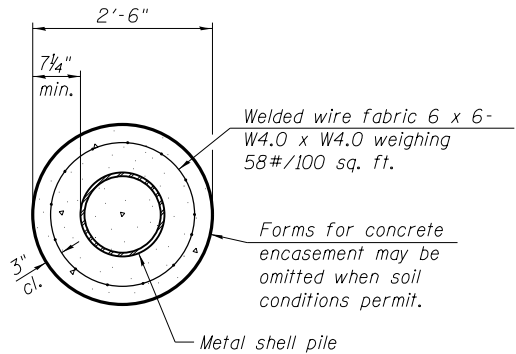


COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

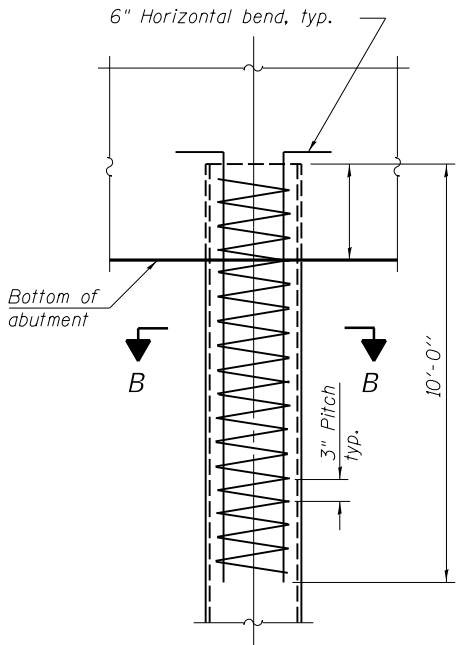


ELEVATION

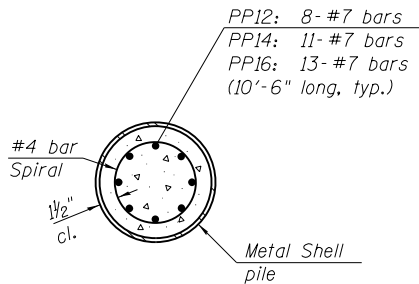


SECTION A-A

INDIVIDUAL PILE
CONCRETE ENCASEMENT
(When specified)



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS
(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

F-MS 1-1-2020
I:\96\jobs\96S2002F\CADD\Struct\Sheet\032_Metal Shell Piles.dgn



USER NAME	= johns00944
PLOT SCALE	= 0.166667 ' / 1"
PLOT DATE	= 7/29/2024

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CHECKED	MNM	REVISED	-
DRAWN	DAP	REVISED	-
CHECKED	JGT/MNM	REVISED	-

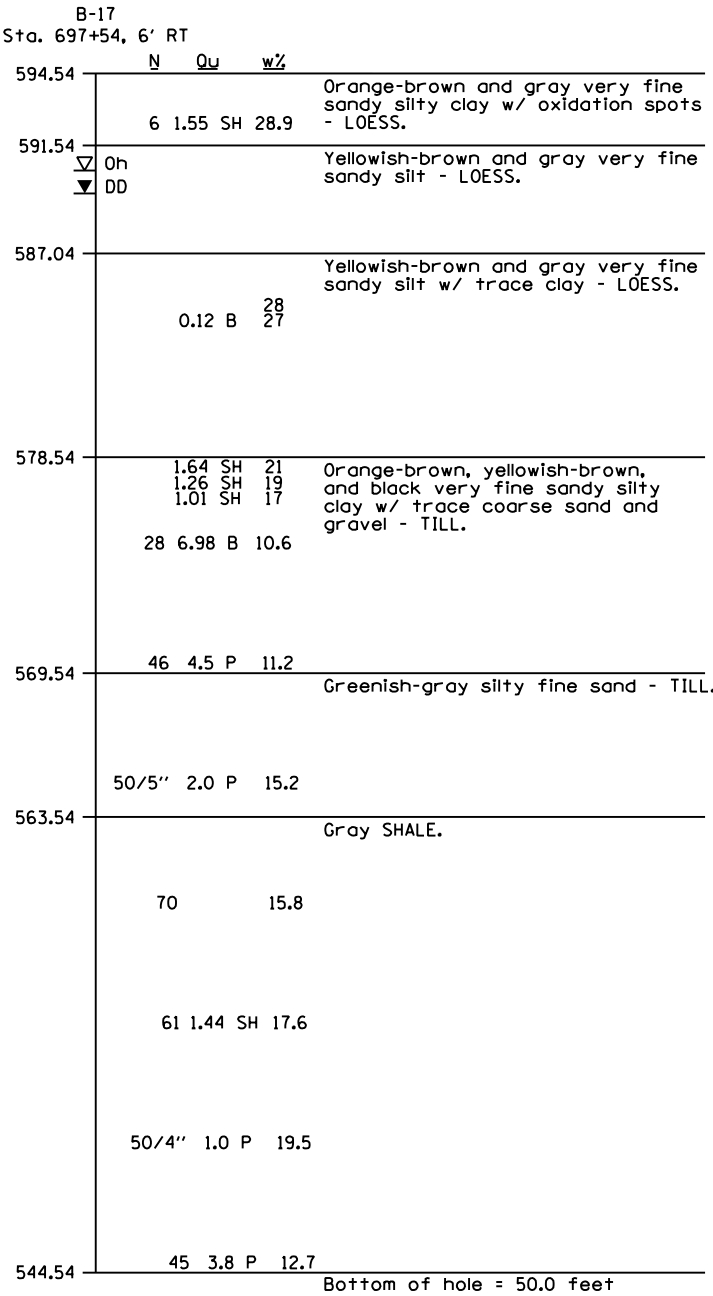
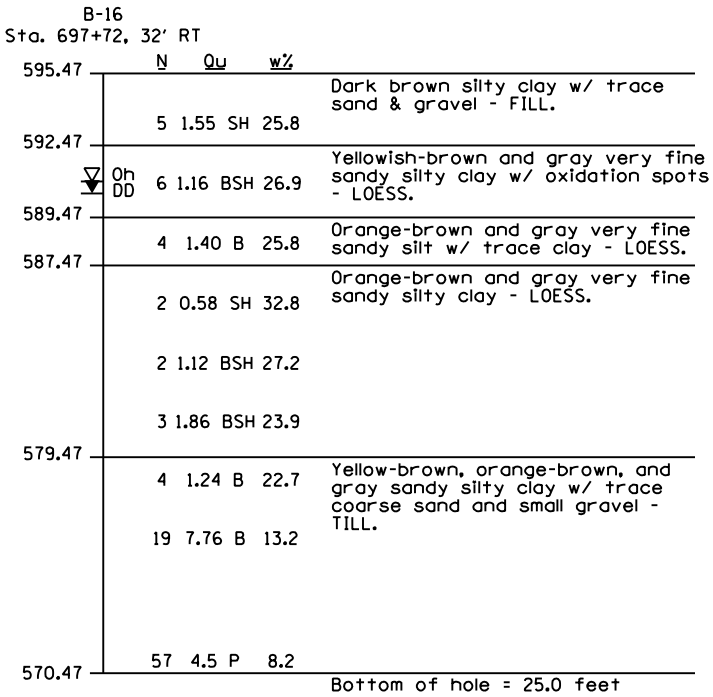
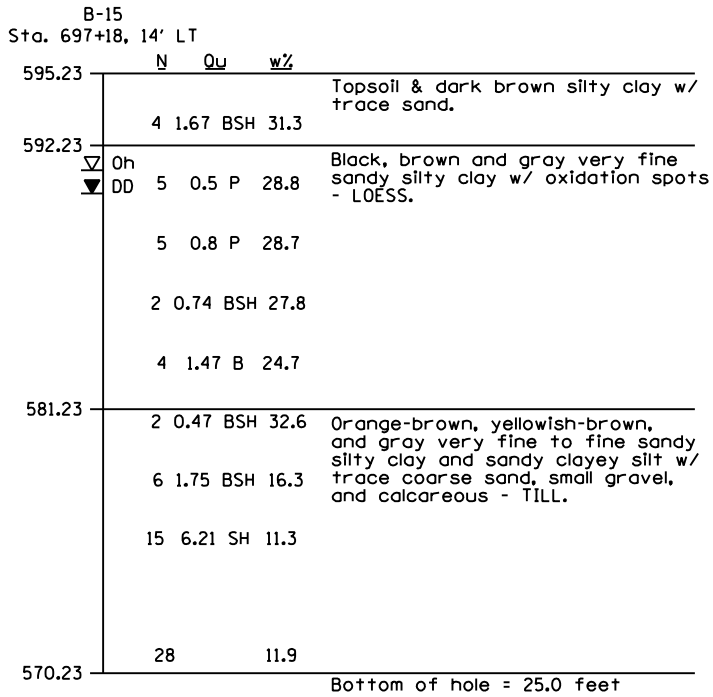
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS
STRUCTURE NUMBER 084-9949

SHEET NO. 32 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	177
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP



LEGEND

- N Standard Penetration Test N (blows/ft)
- Qu Unconfined Strength (tsf)
- w% Natural Moisture Content (%)
- Water Surface Elevation Encountered in Boring
- ▼ DD = During Drilling
- ▽ Oh = At Completion

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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USER NAME = johns00944

CHECKED MNM

PLOT SCALE = 0:2.000000 'ft' / in.

PLOT DATE = 7/29/2024

DESIGNED JGT

CHECKED MNM

DRAWN DAP

CHECKED JGT/MNM

REVISED -

REVISED -

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORINGS (SHEET 1 OF 2)
STRUCTURE NUMBER 084-9949

SHEET NO. 33 OF 34 SHEETS

F.A.P.
RTE.

SECTION

COUNTY

TOTAL
SHEETS

SHEET
NO.

SANGAMON

368

178

CONTRACT NO. 93671

ILLINOIS FED. AID PROJECT 6

07-00164-04-FP, 07-00090-08-FP

DESIGNED	JGT	11/12/15
DRAWN	DAP	11/20/15
REVIEWED	MNM	11/20/15

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PROFESSIONAL DESIGN FIRM LICENSE #184-001084

USER NAME =	johns00944	DESIGNED	JGT	REVISED	-
		CHECKED	MNM	REVISED	-
PLOT SCALE =	0:2.000000 'ft' / in.	DRAWN	DAP	REVISED	-
PLOT DATE =	7/29/2024	CHECKED	JGT/MNM	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORINGS (SHEET 2 OF 2)
STRUCTURE NUMBER 084-9949

SHEET NO. 34 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	179
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6

07-00164-04-FP, 07-00090-08-FP

B-18
Sta. 699+27, 8' RT

	N	Qu	w%	
595.44				TOPSOIL - black very fine sandy clayey silt.
	4	1.5 P	31.0	
▽ Oh				
590.94				Yellowish-brown and gray very fine sandy clayey silt - LOESS.
▼ DD				
587.94				Brown and gray very fine sandy silt w/ trace clay - LOESS.
	0.50 SH	30		
	1.41 SH	24		
	1.55 SH	22		
	0.33 SH	24		
579.44				Yellowish-brown and gray fine sandy clayey silt w/ trace coarse sand and small gravel - TILL.
	23			
	22	4.65 S	14.7	
	50/6"	3.30 S	9.3	
567.44				Greenish-gray silty very fine to fine sand - TILL.
	50/3"	20.9		
562.44				Gray SHALE.
	70	1.2 P	11.4	
	50/5"	1.0 P	19.5	
	50/4"	4.0 P	10.9	
545.44				Bottom of hole = 50.0 feet
	50/5"	10.6		

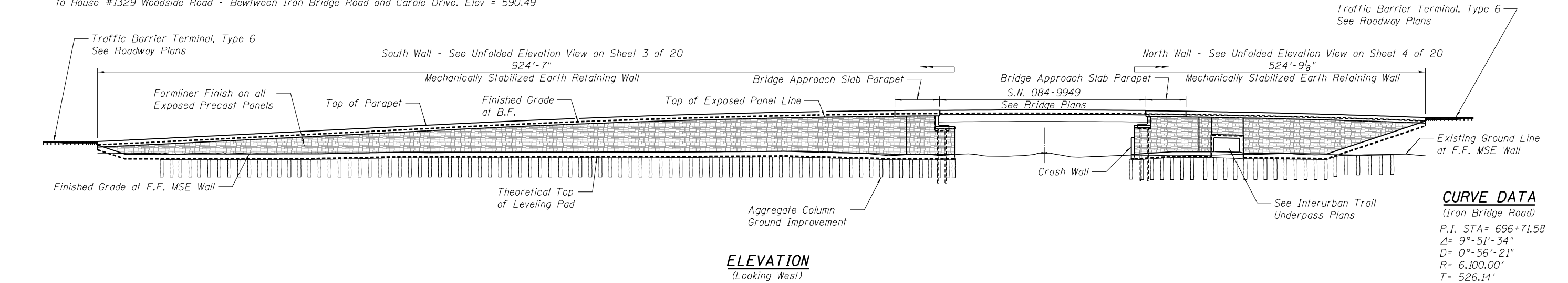
B-20
Sta. 699+43, 30' RT

	N	Qu	w%	
595.83				TOPSOIL - black very fine sandy clayey silt.
	5	0.8 P	28.1	
592.83				Orange-brown and gray very fine sandy silty clay - LOESS.
▽ Oh				
	7	1.55 B	30.2	
	5	0.93 B	29.0	
▼ DD				
	4	0.97 B	22.5	
	3	0.58 B	25.7	
582.83				Orange-brown and gray very fine sandy silty clay and sandy clayey silt w/ trace coarse sand and small gravel - TILL.
	2	1.36 S	26.2	
	1	0.58 B	18.7	
	21	2.13 S	12.1	
	50/5"		13.0	
567.83				Greenish-brown very fine silty sand - TILL.
	50/5"	14.1		
562.83				Gray clayey SHALE.
	50/5"	1.51 S	18.8	
556.90				Bottom of hole = 40.0 feet
	50/5"	6.21 S	14.4	

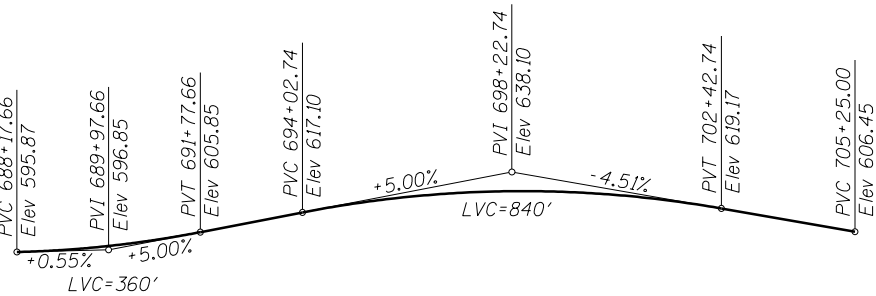
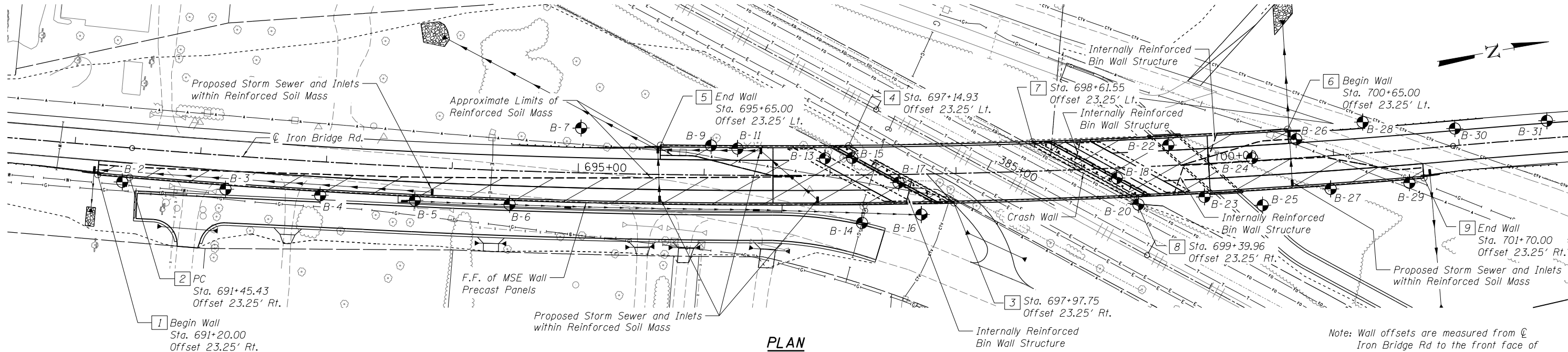
LEGEND

- N Standard Penetration Test N (blows/ft)
- Qu Unconfined Strength (tsf)
- w% Natural Moisture Content (%)
- ▼ DD Water Surface Elevation Encountered in Boring
DD = During Drilling
▽ Oh Oh = At Completion

B.M. 359 - Chsld. "x" on South Cap Bolt FH - North Side of Woodside Road., Approx. 300'
West of Pedigo Lane., 6' East of Private Drive., South of Two Grain Silos. Elev = 595.21
B.M. H3 - Spike Nail in South Face of PP - North Side Woodside Road - ± 325' East of Driveway
to House #1329 Woodside Road - Bewtween Iron Bridge Road and Carole Drive. Elev = 590.49



CURVE DATA
(Iron Bridge Road)
P.I. STA = 696+71.58
Δ = 9°-51'-34"
D = 0°-56'-21"
R = 6,100.00'
T = 526.14'
L = 1,049.69'
E = 22.65'
S.E. = N.C.
P.C. STA = 691+45.43
P.T. STA = 701+95.12



ROBERT CHANTOME
081-006048
07/29/2024
Expires November 30, 2024

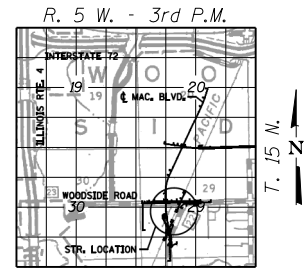
I certify that to the best of my knowledge, information and belief, this retaining wall design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

DESIGN SPECIFICATIONS
M.S.E. WALLS

2002 AASHTO
Standard Specifications
PARAPET & ANCHORAGE SLAB
2014 AASHTO LRFD Bridge
Design Specifications, 7th Edition

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)
PRECAST UNITS
f'c = 4,500 psi (Precast Panels)



GENERAL PLAN & ELEVATION
IRON BRIDGE RD. RETAINING WALL
F.A.S. 1638-SECTION 07-00164-04-FP
SANGAMON COUNTY
STATION 691+20.00 TO 701+70.00

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/2/20



USER NAME	= johns00944
PLOT SCALE	= 0.1667' / in.
PLOT DATE	= 7/29/2024

DESIGNED	- KMS	REVISD	-
CHECKED	- RGC	REVISD	-
DRAWN	- KMS	REVISD	-
CHECKED	- RGC	REVISD	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 1 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	180
CONTRACT NO.				93671

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP

<i>Control Point</i>	<i>Station</i>	<i>Offset</i>
1	691+20.00	23.25' RT
2	691+45.43	23.25' RT
3	697+97.75	23.25' RT
4	697+14.93	23.25' LT
5	695+65.00	23.25' LT
6	700+65.00	23.25' LT
7	698+61.55	23.25' LT
8	699+39.96	23.25' RT
9	701+70.00	23.25' RT

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars indicated thus 12 x 4 - #5 etc. Indicates 12 lines of bars with 4 lengths per line.
3. The MSE wall supplier is alerted to the fact that up to 3.0 inches settlement are anticipated for the MSE wall at the maximum embankment height if the wall was constructed on untreated subgrade. The Aggregate Column Ground Improvement (ACGI) is expected to reduce the anticipated settlement. The MSE wall supplier shall take appropriate measures to accommodate the settlement.
4. The Top of Exposed Panel Elevations shown on Sheets 3 and 4 are final elevations after allowing settlement. The MSE wall supplier shall provide additional panel heights to allow for the settlement of the leveling pad during installation. Settlement may vary along the length of wall. Coordinate additional panel heights to be provided with Aggregate Column Ground Improvement subcontractor design.

1. General Plan & Elevation
2. General Notes
3. MSE Unfolded Elevation - South Wall
4. MSE Unfolded Elevation - North Wall
5. MSE Details
6. Details at Pedestrian Underpass
7. Crash Wall Details
8. Anchorage Slab - South Wall (East)
9. Anchorage Slab - South Wall (West)
10. Anchorage Slab - North Wall
11. Parapet & Anchorage Slab Details
12. South Wall Ground Improvements
13. North Wall Ground Improvements
14. Subsurface Data Profile
15. Subsurface Data Profile
16. Subsurface Data Profile
17. Subsurface Data Profile
18. Subsurface Data Profile
19. Subsurface Data Profile
20. Subsurface Data Profile

ITEM	UNIT	TOTAL
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	31979
Reinforcement Bars, Epoxy Coated	Pound	96510
Structure Excavation	Cu. Yd.	2979
Concrete Structures	Cu. Yd.	576.7
Concrete Superstructure	Cu. Yd.	119.9
Aggregate Column Ground Improvement	Lump Sum	1

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/2/20

I:\96jobs\96S2002F\CADD\Struct\Sheet\96S2002F-RetainingWallPlans.dgn

FILE NAME =  © Copyright hanson Professional Services Inc. 2024	USER NAME = johns00944	DESIGNED - KMS	REVISED -
		CHECKED - RGC	REVISED -
	PLOT SCALE = 0.1667' / 1 in.	DRAWN - KMS	REVISED -
	PLOT DATE = 7/29/2024	CHECKED - RGC	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

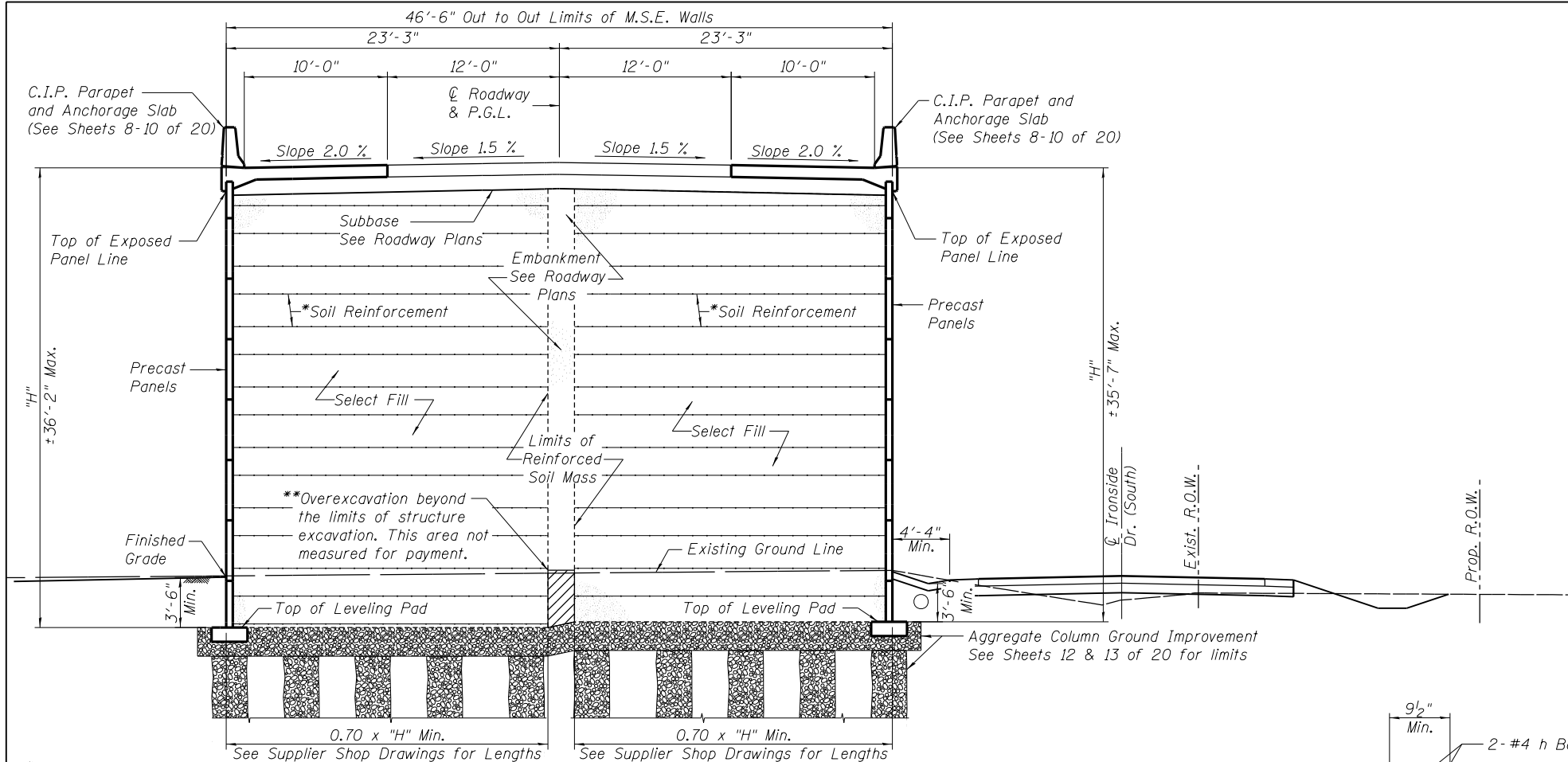
GENERAL NOTES
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 2 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	181
		CONTRACT NO. 93671		
ILLINOIS		FED. AID PROJECT 6		



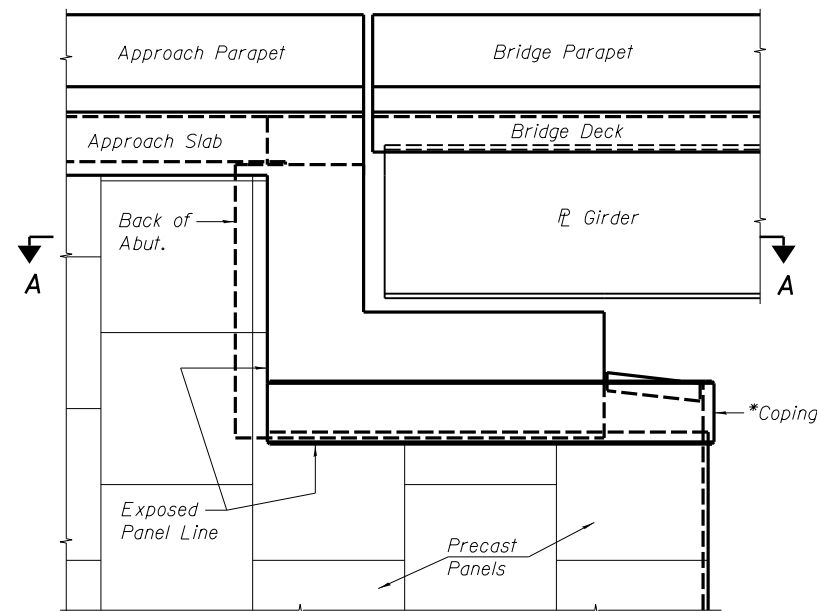
	ILLINOIS	FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP		



*The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

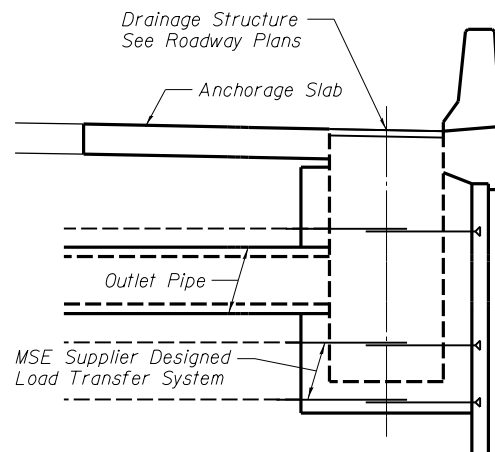
TYPICAL BACK TO BACK M.S.E. WALL SECTION

** Backfill overexcavation with same material as used for select fill.

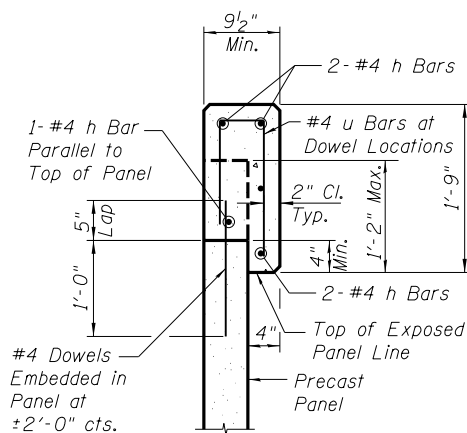


ABUTMENT END VIEW

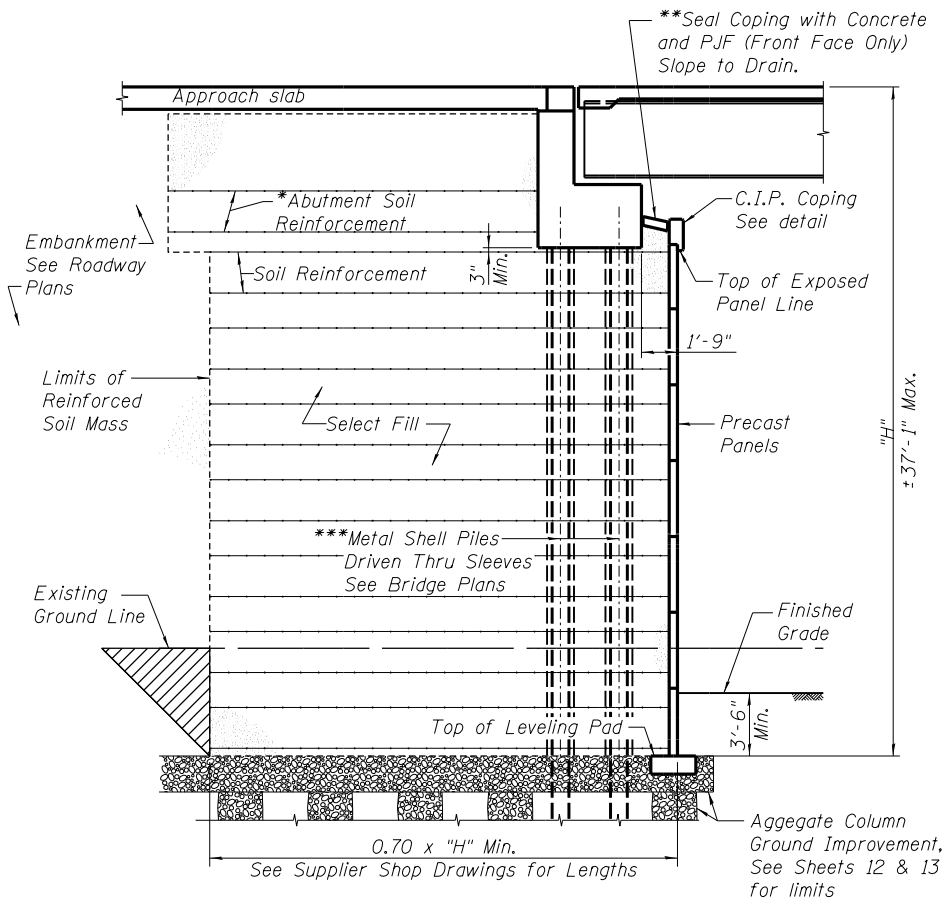
*Cost of furnishing and installing Coping is included with "Mechanically Stabilized Earth Retaining Wall."



DETAIL INLET THRU ANCHORAGE SLAB



SECTION THRU C.I.P. COPING

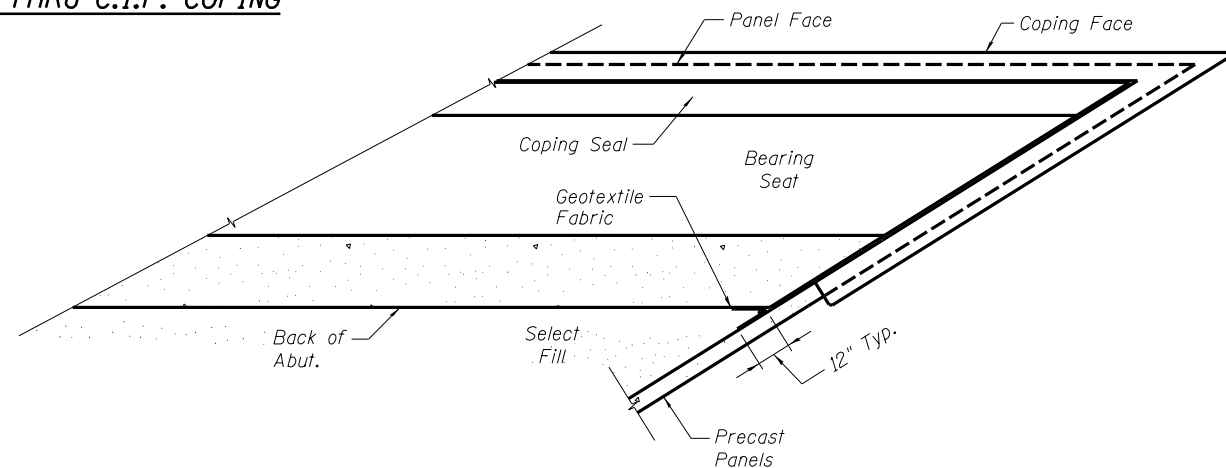


SECTION THRU ABUTMENT

*The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal force (service) of 2.44 kips/ft of abutment. Cost of furnishing and installing abutment soil reinforcement is included with "Mechanically Stabilized Earth Retaining Wall."

**Cost of placing concrete and PJF is included with "Mechanically Stabilized Earth Retaining Wall."

***Furnish and set a sleeve at each abutment pile location prior to placing select fill. Pile sleeves shall extend from the top of leveling pad to the bottom of abutment with a tolerance of +0 to -2 inches. Cost of pile sleeves and loose dry sand fill is included with "Mechanically Stabilized Earth Retaining Wall."



SECTION A-A

DESIGNED	KMS	6/30/15
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REVIEWED	RCG	6/22/20

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		CHECKED - RGC	REVISED -
		DRAWN - KMS	REVISED -
		CHECKED - RGC	REVISED -

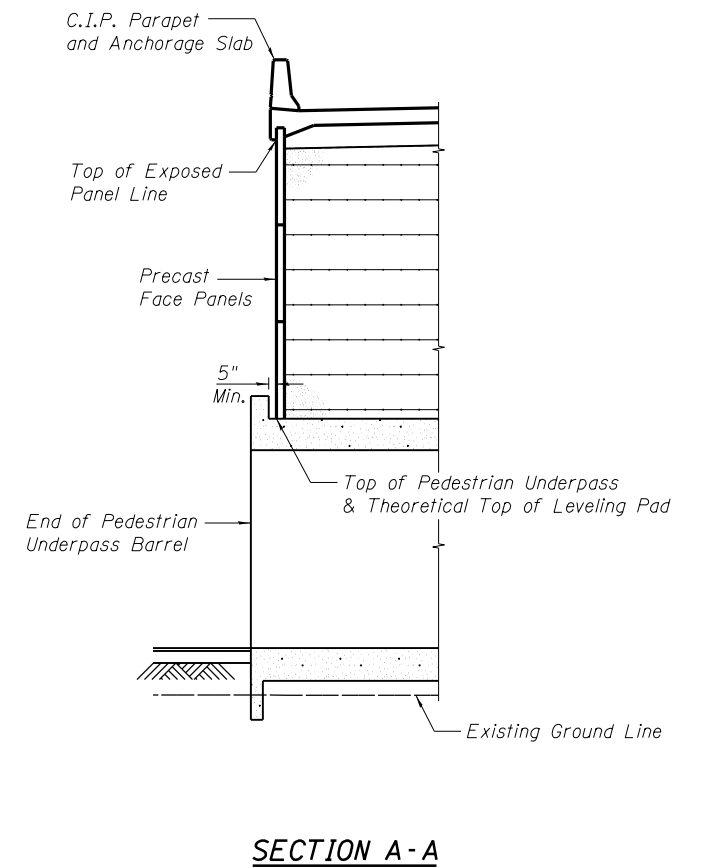
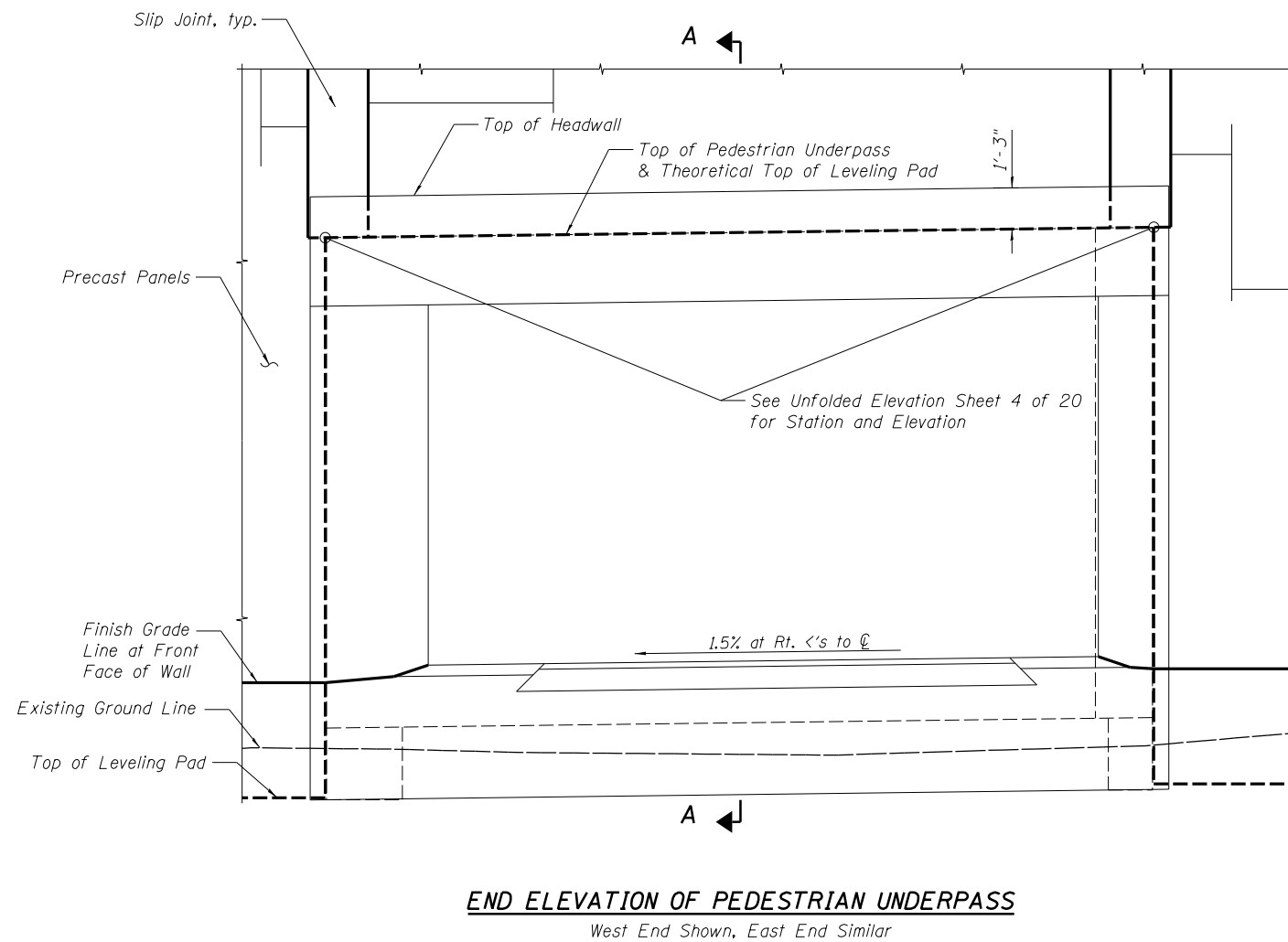
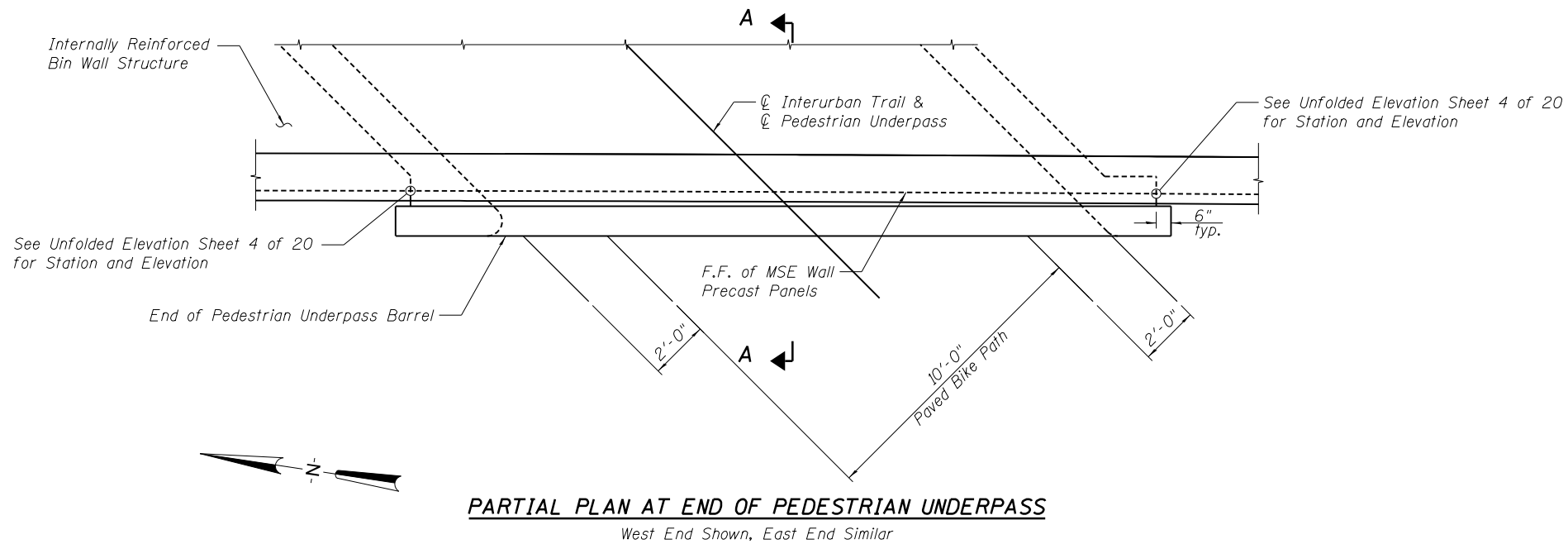
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

M.S.E. DETAILS
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 5 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SANGAMON	368	184
		CONTRACT NO.	93671	

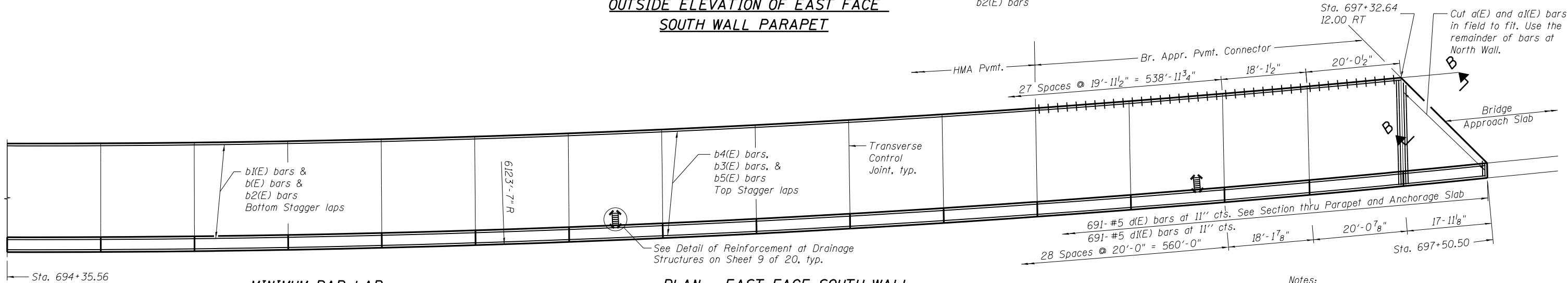
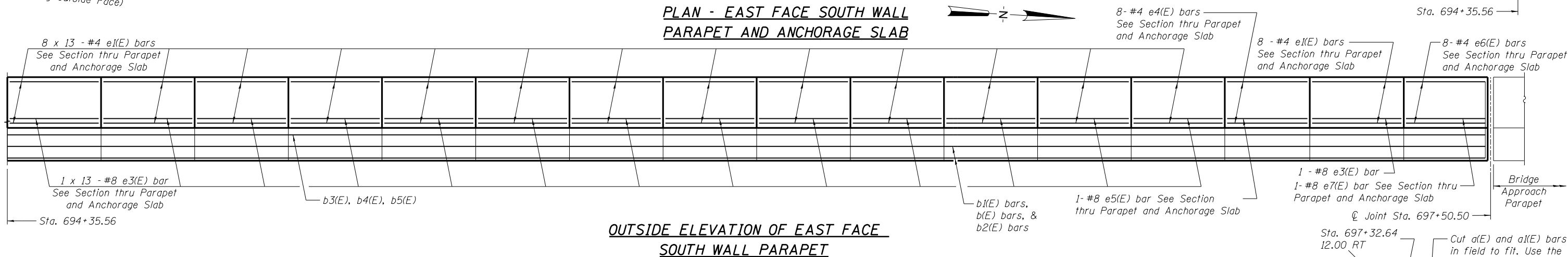
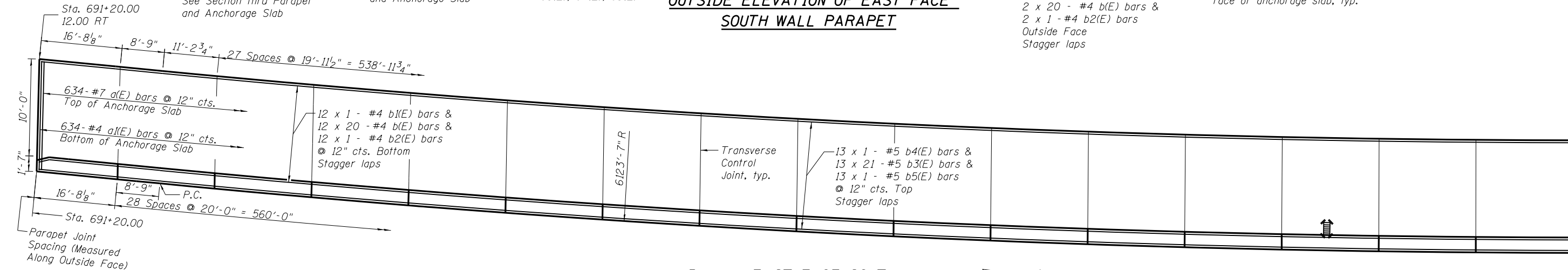
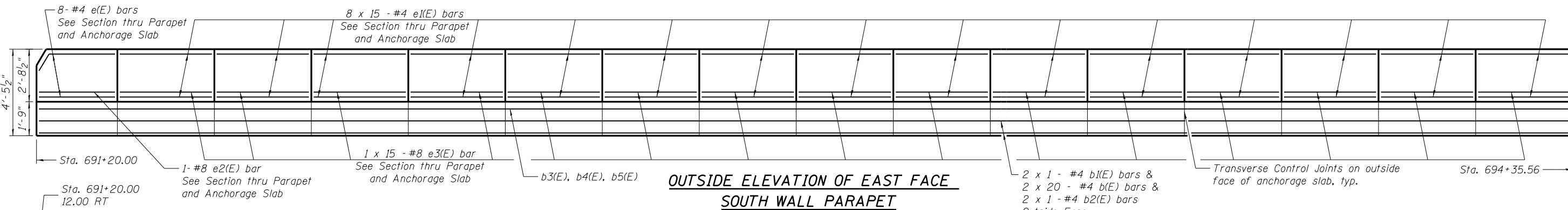
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DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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FILE NAME =  © 2004 Hanson Engineering, Inc.	USER NAME = johns00944	DESIGNED - KMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS AT PEDESTRIAN UNDERPASS IRON BRIDGE ROAD RETAINING WALL	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - RGC	REVISED -					SANGAMON	368	185
	PLOT SCALE = 0.1667' / in.	DRAWN - KMS	REVISED -					CONTRACT NO. 93671		
	PLOT DATE = 7/29/2024	CHECKED - RGC	REVISED -					ILLINOIS FED. AID PROJECT 6		
	SHEET NO. 6 OF 20 SHEETS									



MINIMUM BAR LAP

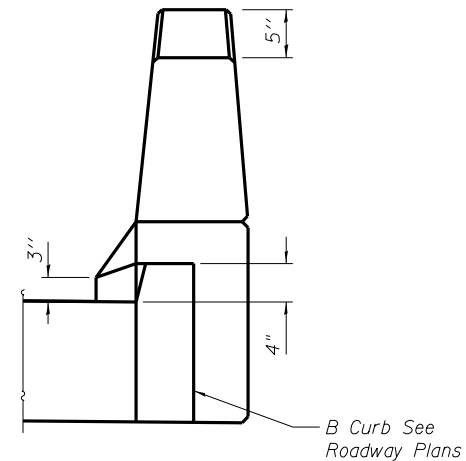
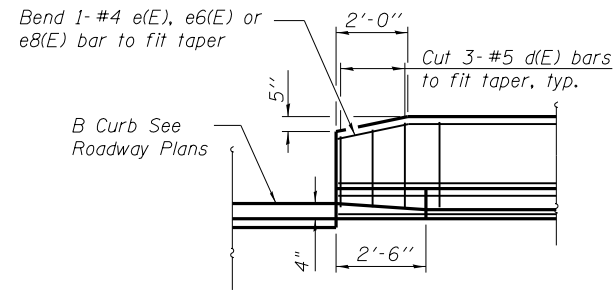
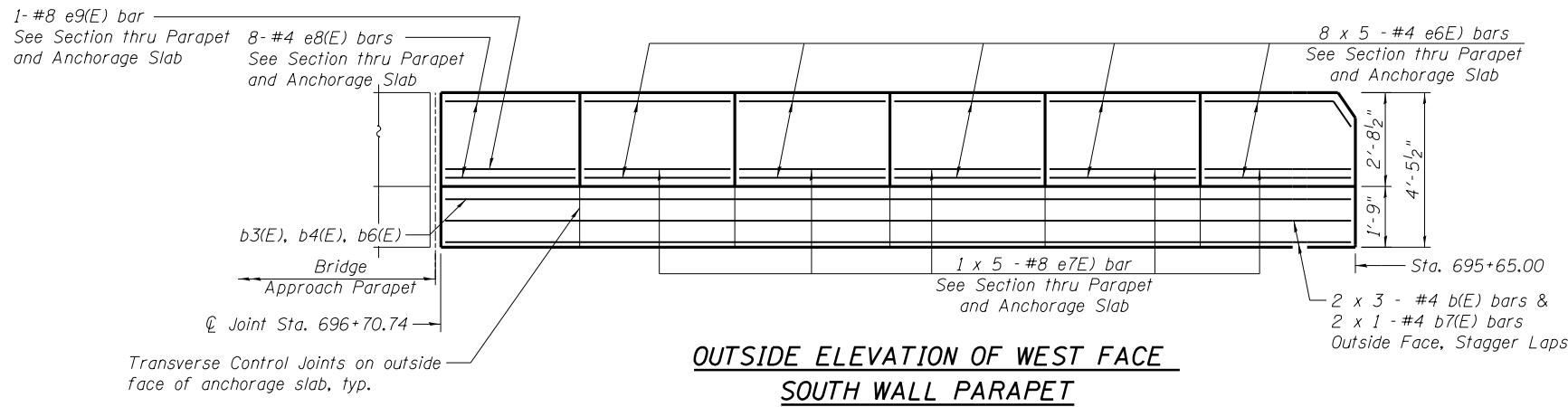
#4 Bar = 1'-10"
#5 Bar = 2'-3"

Notes:
See Sheet 9 of 20 for South Wall Bill of Material.
See Sheet 11 of 20 for Section Thru Parapet and
Anchorage Slab.

DESIGNED	KMS	6/30/15
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REVIEWED	RGC	6/22/20

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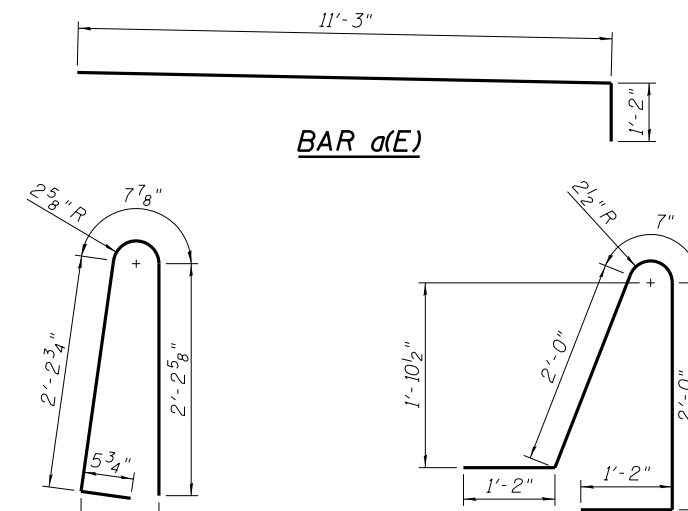
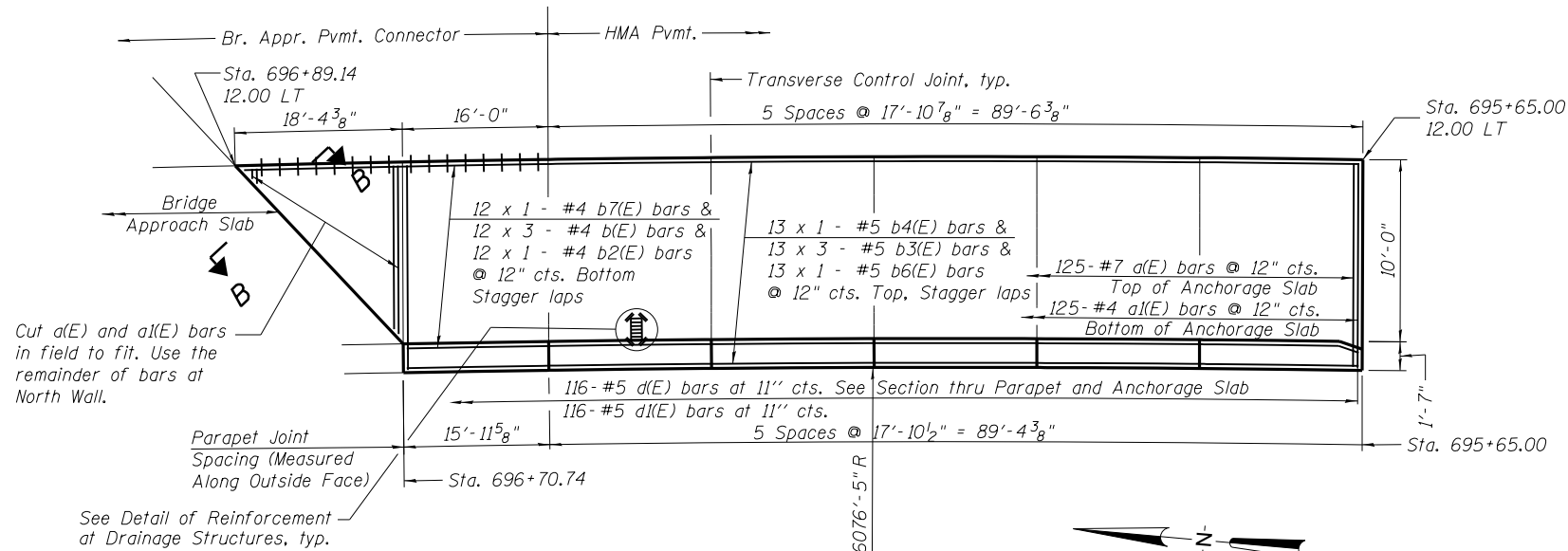
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		CHECKED - RGC	REVISED -					SANGAMON	368	187		
	PLOT SCALE = 0.1667 ' / in.	DRAWN - KMS	REVISED -					CONTRACT NO. 93671				
	PLOT DATE = 7/29/2024	CHECKED - RGC	REVISED -					ILLINOIS FED. AID PROJECT 6				
	SHEET NO. 8 OF 20 SHEETS					• 07-00164-04-FP, 07-00090-08-FP						



INSIDE VIEW

END VIEW

PARAPET END DETAIL



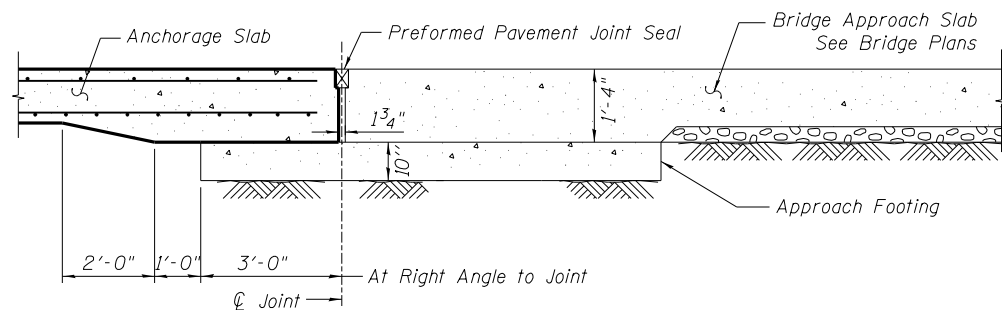
Note: See Sheet 11 of 20 for Section Thru Parapet and Anchorage Slab.

MINIMUM BAR LAP

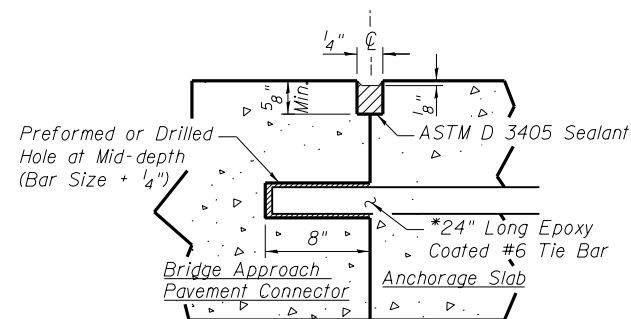
#4 Bar = 1'-10"
#5 Bar = 2'-3"

SOUTH WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	759	#7	12'-5"	
a(E)	759	#4	11'-3"	
a(E)	32	#5	2'-0"	
b(E)	322	#4	32'-0"	
b(E)	14	#4	11'-0"	
b(E)	24	#4	20'-0"	
b(E)	312	#5	31'-0"	
b(E)	26	#5	20'-0"	
b(E)	13	#5	11'-0"	
b(E)	13	#5	19'-6"	
b(E)	14	#4	15'-0"	
d(E)	807	#5	5'-7"	
d(E)	807	#5	6'-11"	
e(E)	8	#4	16'-4"	
e(E)	232	#4	19'-8"	
e(E)	1	#8	16'-4"	
e(E)	29	#8	19'-8"	
e(E)	8	#4	17'-9"	
e(E)	1	#8	17'-9"	
e(E)	48	#4	17'-6"	
e(E)	6	#8	17'-6"	
e(E)	8	#4	15'-7"	
e(E)	1	#8	15'-7"	
Reinforcement Bars, Epoxy Coated	Pound	59860		
Concrete Structures	Cu. Yd.	294.8		
Concrete Superstructure	Cu. Yd.	81.6		



SECTION B-B



Note:
The Contractor may substitute, at his option, formed-in-place tie bars provided the bar length is increased to 2'-6" and the tie bar is centered across the joint.

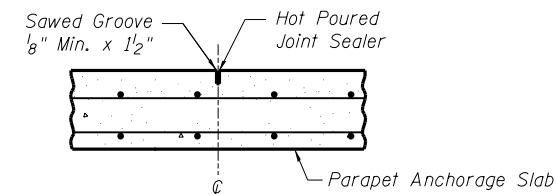
*Tie bars are included with the bridge approach pavement connector, see Roadway Plans.

LONGITUDINAL CONSTRUCTION JOINT

GROUTED-IN-PLACE TIE BAR

See Art. 420.05(b) of Standard Specifications

DETAIL OF REINFORCEMENT AT DRAINAGE STRUCTURES



TRANSVERSE CONTROL JOINT

See Art. 420.05(c)(1) of Standard Specifications

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PLOT DATE = 7/29/2024

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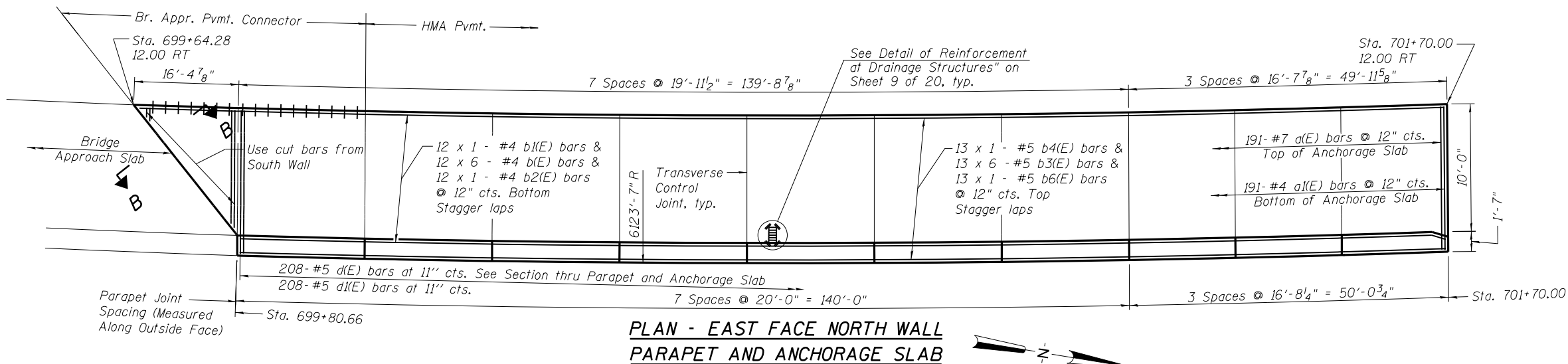
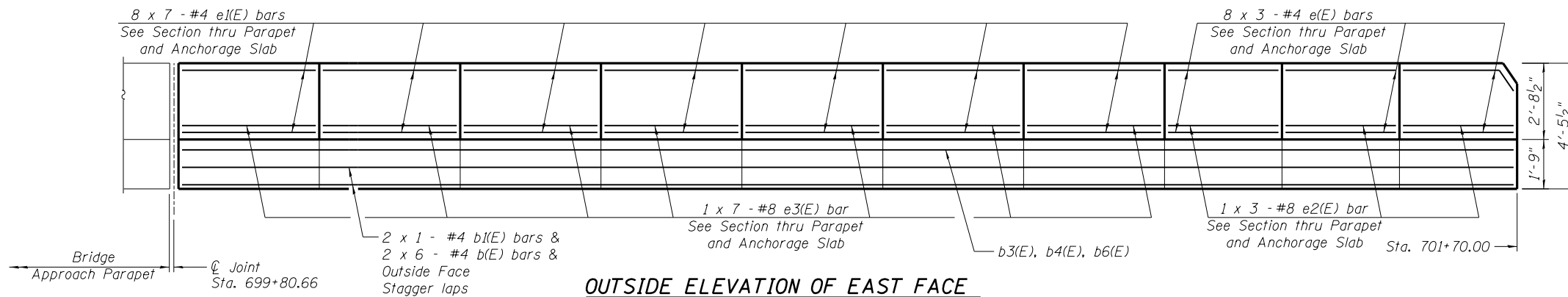
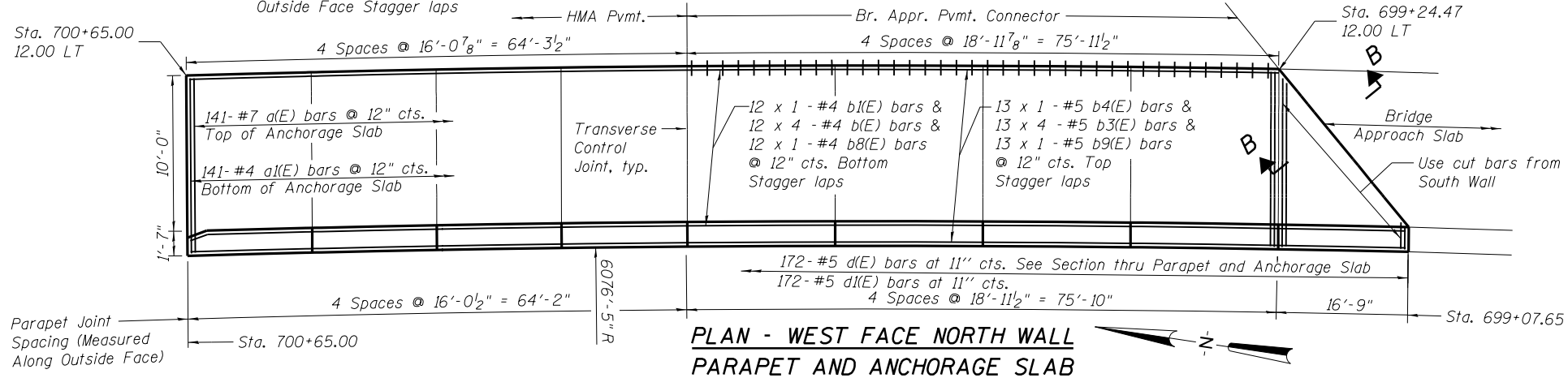
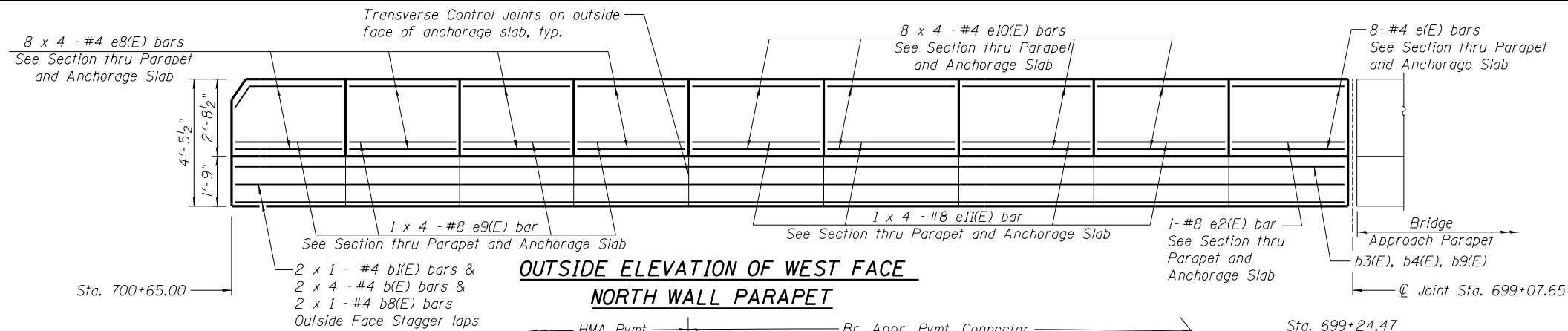
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB - SOUTH WALL (WEST)
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 9 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	.	SANGAMON	368	188
		CONTRACT NO.	93671	

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP



Note: See Sheet 11 of 20 for Section Thru Parapet and Anchorage Slab.

MINIMUM BAR LAP

#4 Bar = 1'-10"
#5 Bar = 2'-3"

NORTH WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	332	#7	12'-5"	
a1(E)	332	#4	11'-3"	
a2(E)	8	#5	2'-0"	
b(E)	140	#4	32'-0"	
b1(E)	28	#4	11'-0"	
b2(E)	12	#4	20'-0"	
b3(E)	130	#5	31'-0"	
b4(E)	26	#5	20'-0"	
b8(E)	13	#4	29'-0"	
b9(E)	14	#5	25'-0"	
b10(E)	13	#5	16'-0"	
d(E)	380	#5	5'-7"	
d1(E)	380	#5	6'-11"	
e(E)	32	#4	16'-4"	
e1(E)	56	#4	19'-8"	
e2(E)	4	#8	16'-4"	
e3(E)	7	#8	19'-8"	
e8(E)	32	#4	15'-7"	
e9(E)	4	#8	15'-7"	
e10(E)	32	#4	18'-7"	
e11(E)	4	#8	18'-7"	
Reinforcement Bars, Epoxy Coated			Pound	27550
Concrete Structures			Cu. Yd.	138.4
Concrete Superstructure			Cu. Yd.	38.3

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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USER NAME = johns00944

PLOT SCALE = 0.1667' / in.

PLOT DATE = 7/29/2024

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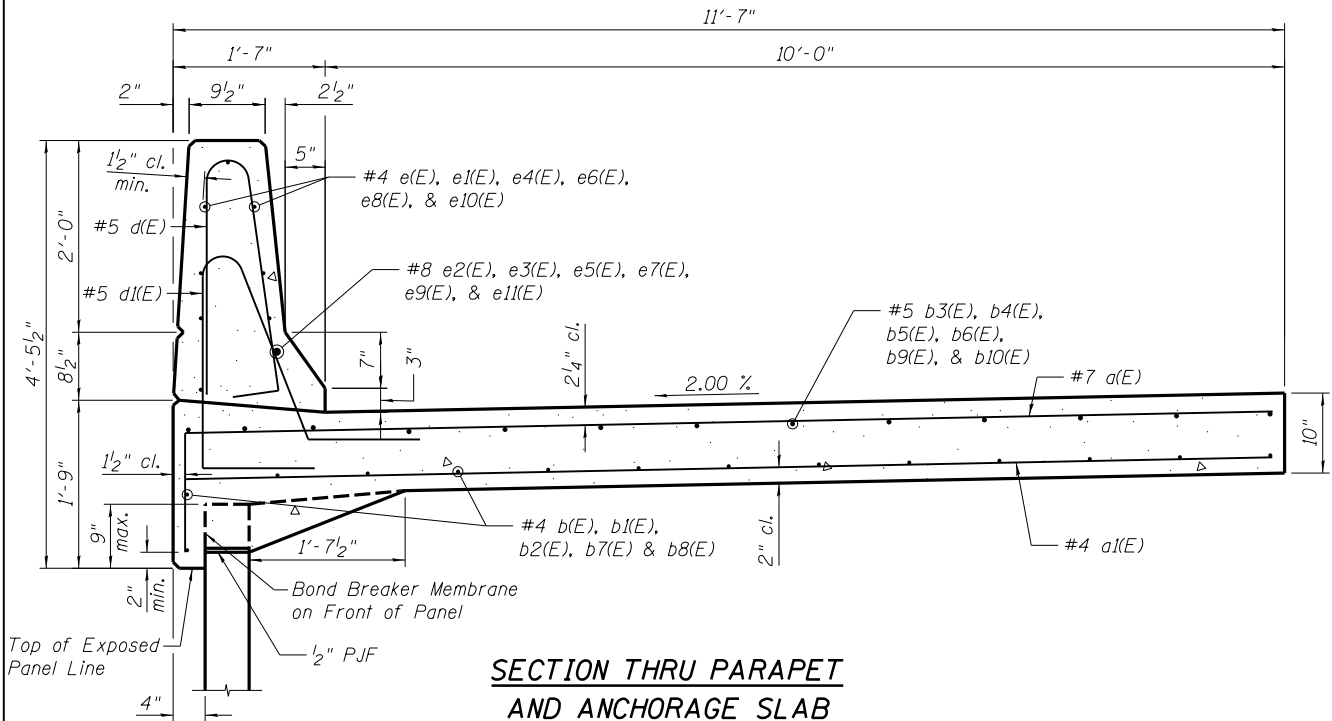
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB - NORTH WALL
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 10 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SANGAMON	368	189
CONTRACT NO. 93671				

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP



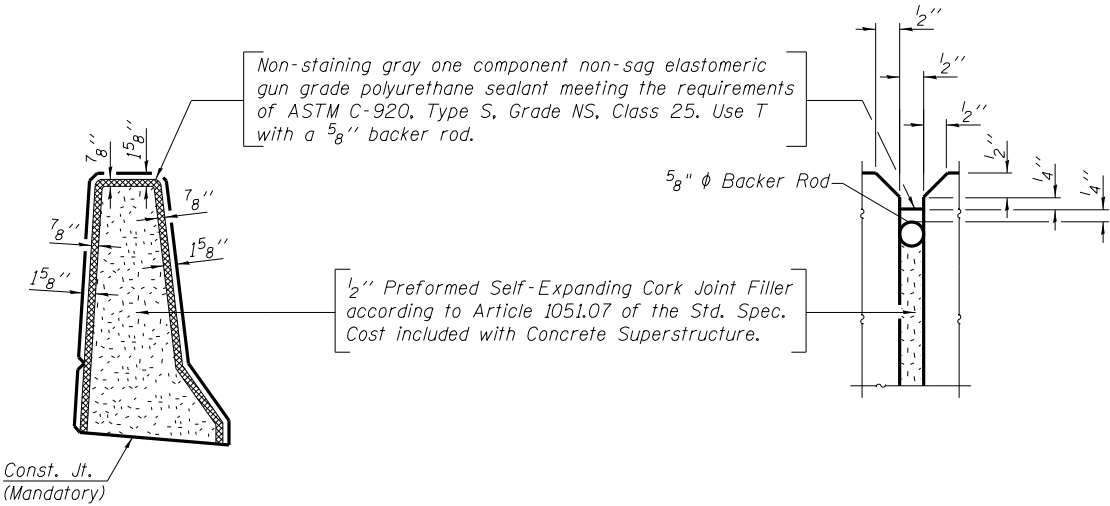
SECTION THRU PARAPET
AND ANCHORAGE SLAB

EAST FACE SOUTH WALL
ANCHORAGE SLAB ELEVATIONS

	Iron Bridge Rd. Station	Edge of Pavement Offset	Edge of Pavement Elevation	Base of Parapet Elevation
End	691+20.00	12.00 Rt.	602.99	602.79
Joint	691+36.68	12.00 Rt.	603.72	603.52
Joint	691+56.63	12.00 Rt.	604.64	604.44
Joint	691+76.56	12.00 Rt.	605.61	605.41
Joint	691+96.48	12.00 Rt.	606.61	606.41
Joint	692+16.40	12.00 Rt.	607.60	607.40
Joint	692+36.33	12.00 Rt.	608.60	608.40
Joint	692+56.25	12.00 Rt.	609.60	609.40
Joint	692+76.17	12.00 Rt.	610.59	610.39
Joint	692+96.09	12.00 Rt.	611.59	611.39
Joint	693+16.02	12.00 Rt.	612.58	612.38
Joint	693+35.94	12.00 Rt.	613.58	613.38
Joint	693+55.86	12.00 Rt.	614.58	614.38
Joint	693+75.79	12.00 Rt.	615.57	615.37
Joint	693+95.71	12.00 Rt.	616.57	616.37
Joint	694+15.63	12.00 Rt.	617.56	617.36
Joint	694+35.56	12.00 Rt.	618.50	618.30
Joint	694+55.48	12.00 Rt.	619.40	619.20
Joint	694+75.40	12.00 Rt.	620.25	620.05
Joint	694+95.32	12.00 Rt.	621.06	620.86
Joint	695+15.25	12.00 Rt.	621.83	621.63
Joint	695+35.17	12.00 Rt.	622.55	622.35
Joint	695+55.09	12.00 Rt.	623.22	623.02
Joint	695+75.02	12.00 Rt.	623.85	623.65
Joint	695+94.94	12.00 Rt.	624.44	624.24
Joint	696+14.86	12.00 Rt.	624.98	624.78
Joint	696+34.78	12.00 Rt.	625.48	625.28
Joint	696+54.71	12.00 Rt.	625.93	625.73
Joint	696+74.63	12.00 Rt.	626.33	626.13
Joint	696+94.55	12.00 Rt.	626.69	626.49
Joint	697+12.64	12.00 Rt.	626.98	626.78
Br. Appr.	697+32.64	12.00 Rt.	627.26	627.06
End Parapet	697+50.50			627.26

WEST FACE SOUTH WALL
ANCHORAGE SLAB ELEVATIONS

	Iron Bridge Rd. Station	Edge of Pavement Offset	Edge of Pavement Elevation	Base of Parapet Elevation
End	695+65.00	12.00 Lt.	623.54	623.34
Joint	695+82.94	12.00 Lt.	624.09	623.89
Joint	696+00.88	12.00 Lt.	624.61	624.41
Joint	696+18.82	12.00 Lt.	625.08	624.88
Joint	696+36.77	12.00 Lt.	625.52	625.32
Joint	696+54.71	12.00 Lt.	625.93	625.73
Joint, End Parapet	696+70.74	12.00 Lt.	626.26	626.06
Br. Appr.	696+89.14	12.00 Lt.	626.60	



PARAPET JOINT DETAILS

WEST FACE NORTH WALL
ANCHORAGE SLAB ELEVATIONS

	Iron Bridge Rd. Station	Edge of Pavement Offset	Edge of Pavement Elevation	Base of Parapet Elevation
End Parapet	699+07.65			627.54
Br. Appr.	699+24.47	12.00 Lt.	627.60	627.40
Joint	699+43.50	12.00 Lt.	627.41	627.21
Joint	699+62.53	12.00 Lt.	627.18	626.98
Joint	699+81.56	12.00 Lt.	626.90	626.70
Joint	700+00.59	12.00 Lt.	626.59	626.39
Joint	700+16.69	12.00 Lt.	626.29	626.09
Joint	700+32.79	12.00 Lt.	625.96	625.76
Joint	700+48.90	12.00 Lt.	625.60	625.40
End	700+65.00	12.00 Lt.	625.21	625.01

EAST FACE NORTH WALL
ANCHORAGE SLAB ELEVATIONS

	Iron Bridge Rd. Station	Edge of Pavement Offset	Edge of Pavement Elevation	Base of Parapet Elevation
Br. Appr.	699+64.28	12.00 Rt.	627.15	
Joint, End Parapet	699+80.66	12.00 Rt.	626.92	626.72
Joint	700+00.59	12.00 Rt.	626.59	626.39
Joint	700+20.51	12.00 Rt.	626.21	626.01
Joint	700+40.43	12.00 Rt.	625.79	625.59
Joint	700+60.36	12.00 Rt.	625.33	625.13
Joint	700+80.28	12.00 Rt.	624.82	624.62
Joint	701+00.20	12.00 Rt.	624.27	624.07
Joint	701+20.13	12.00 Rt.	623.67	623.47
Joint	701+36.75	12.00 Rt.	623.13	622.93
Joint	701+53.38	12.00 Rt.	622.57	622.37
End	701+70.00	12.00 Rt.	621.97	621.77

- Notes:
1. Stations and offsets are to the inside edge of anchorage slab.
 2. Elevations are at the top of anchorage slab along joints or transition points as indicated.
 3. Transverse control joints are at right angles to the parapet.

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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FILE NAME =  © Copyright Hanson Professional Services Inc. 2024	USER NAME = johns00944	DESIGNED - KMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PARAPET & ANCHORAGE SLAB DETAILS IRON BRIDGE ROAD RETAINING WALL	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - RGC	REVISED -								
	PLOT SCALE = 0.1667' / in.	DRAWN - KMS	REVISED -					SANGAMON	368	190	
	PLOT DATE = 7/29/2024	CHECKED - RGC	REVISED -					CONTRACT NO. 93671			
SHEET NO. 11 OF 20 SHEETS						ILLINOIS FED. AID PROJECT 6					

GROUND IMPROVEMENT PERFORMANCE REQUIREMENTS

Ground improvement performance requirements shall apply to the Iron Bridge Road pavement, including shoulders, between Sta. 691+20 and Sta. 702+00, excluding the area between the bridge abutments.

Within the limits shown on the plan view, allowable bearing pressure (F.S.=2.5) shall be equal to or greater than the equivalent uniform service bearing pressure shown. Design bearing pressure shall be interpolated between the values shown.

Aggregate column installation shall be mandatory within the allowable bearing pressure limits shown on the plan view. Columns may be installed beyond the mandatory limits as required to satisfy the other ground improvement performance requirements and the project schedule.

Minimum 12 inch thick aggregate drainage layer shall be required beneath the footprint of the Interurban Trail Underpass. Drainage layer and/or working platform in other areas shall be per the ACGI subcontractor's design.

Verification program shall include the settlement platforms and monitoring points shown in the plan view. Cost of these shall be included with AGGREGATE COLUMN GROUND IMPROVEMENT.

Minimum factor of safety for global slope stability shall be 1.5.

Settlement measured at the theoretical top of leveling pad shall not exceed 4.0 inches.

Settlement measured on the roadway after pavement construction shall not exceed 1.0 inch.

Settlement measured at the base of the bridge abutment after final driving of the piles shall not exceed 0.4 inches.

Differential settlement along the length of the M.S.E. wall shall not exceed 1.0 percent.

Differential settlement at right angles to the roadway centerline shall not exceed 0.5 percent after placement of the pavement.

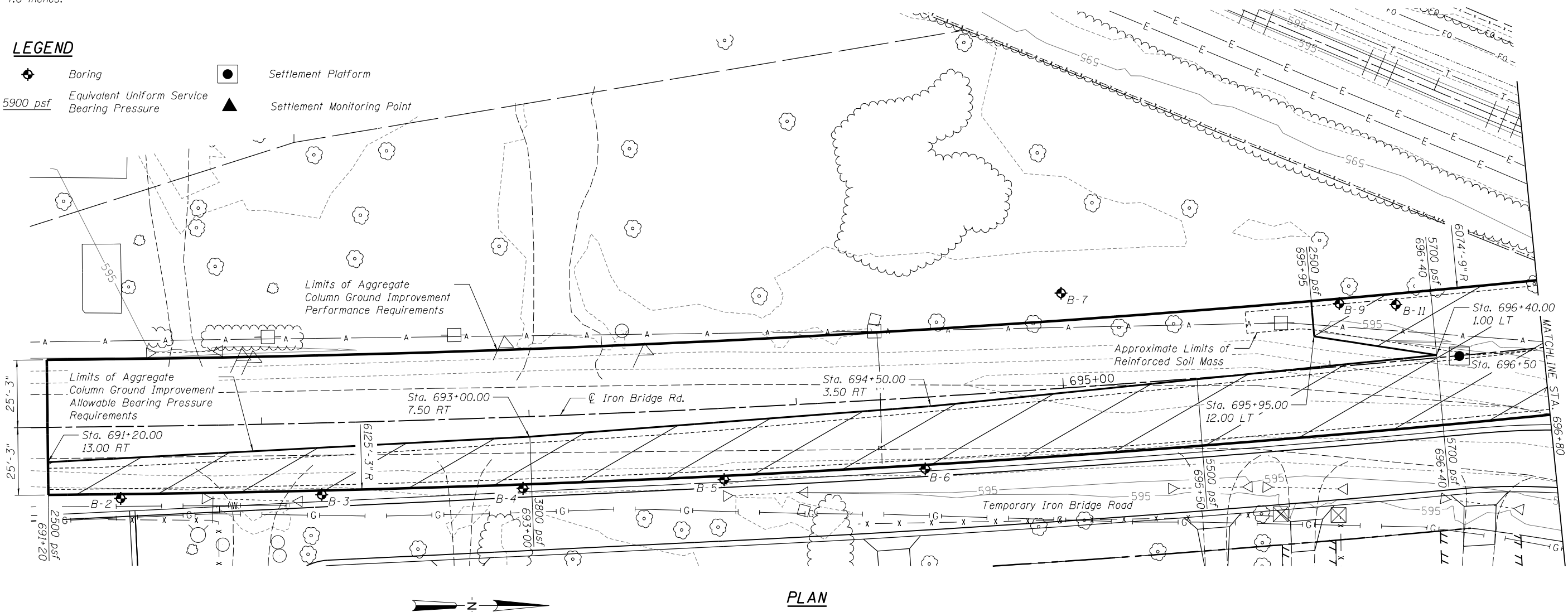
Contractor's verification program shall include monitoring points or other instrumentation to demonstrate compliance with the performance requirements shown on these plans and the construction sequencing requirements shown on sheets 28 and 30 of 34 of the bridge plans.

The assumed structure life for settlement computations shall be 75 years.

The Shop Drawings and construction procedures submittal shall indicate the sequence of construction within the limits of Aggregate Column Ground Improvement. The aggregate column installation shall be coordinated with utility removals, proposed utility installation, underpass construction, and bridge pile driving.

LEGEND

- Boring
- Settlement Platform
- 5900 psf Equivalent Uniform Service Bearing Pressure
- Settlement Monitoring Point



PLAN

DESIGNED	KMS	6/30/15
DRAWN	KMS	12/15/20
REVIEWED	RGC	12/15/20

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	PLOT DATE = 7/29/2024	CHECKED - RGC	REVISED -



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DEPARTMENT OF TRANSPORTATION

SOUTH WALL GROUND IMPROVEMENTS
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 12 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SANGAMON	368	191
CONTRACT NO. 93671				

ILLINOIS FED. AID PROJECT 6

07-00164-04-FP, 07-00090-08-FP

LEGEND



Boring

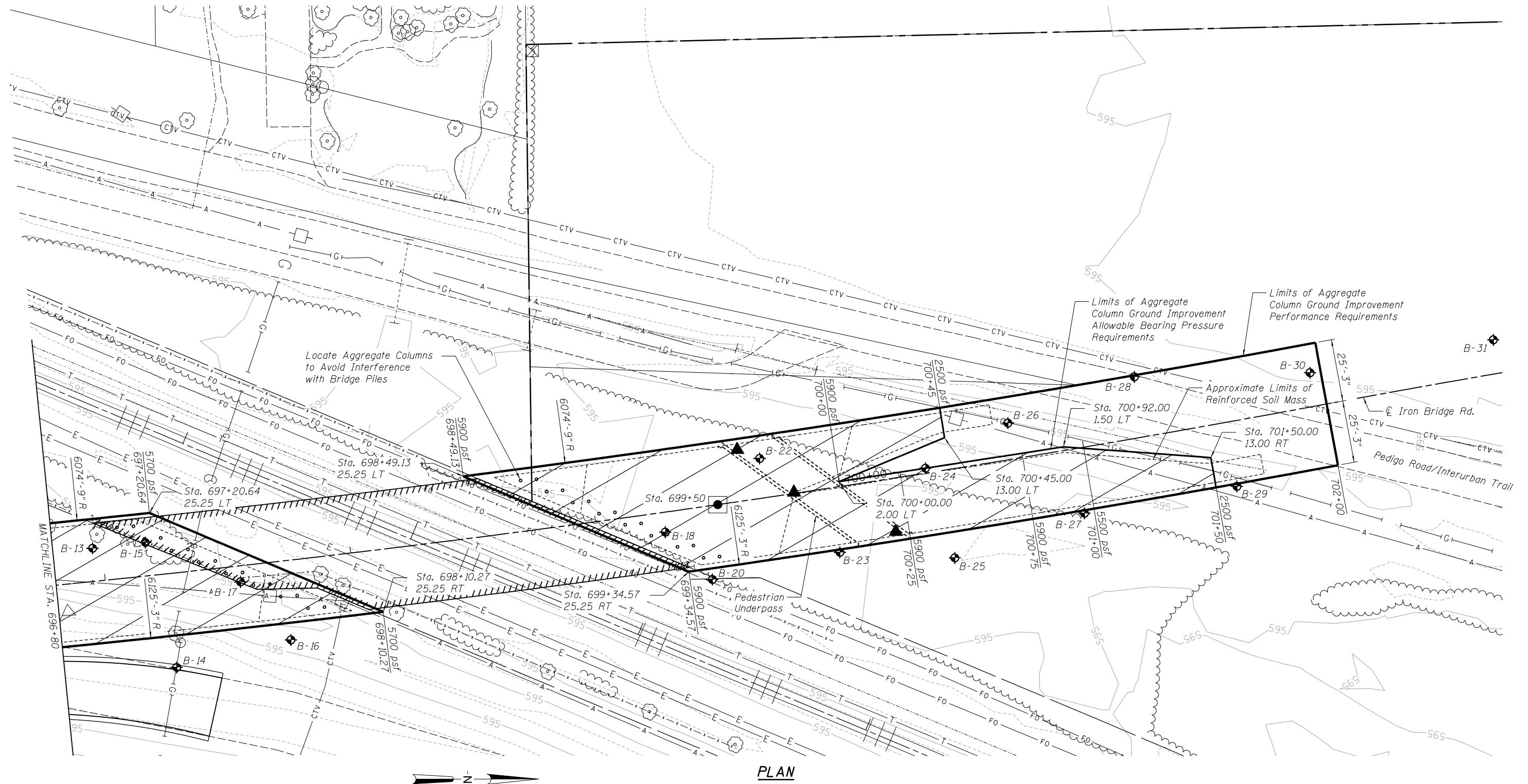


Settlement Platform

5900 psf Equivalent Uniform Service
Bearing Pressure



Settlement Monitoring Point



DESIGNED	KMS	6/30/15
DRAWN	KMS	12/15/20
REVIEWED	RGC	12/15/20

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USER NAME = johns00944

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REVISION	

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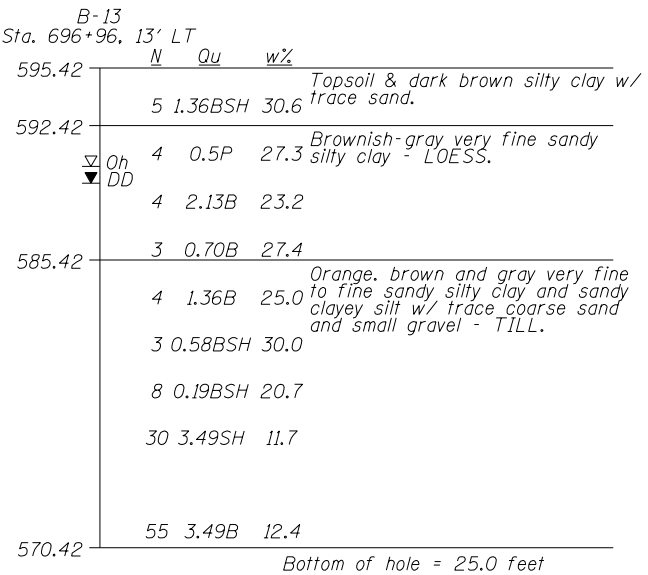
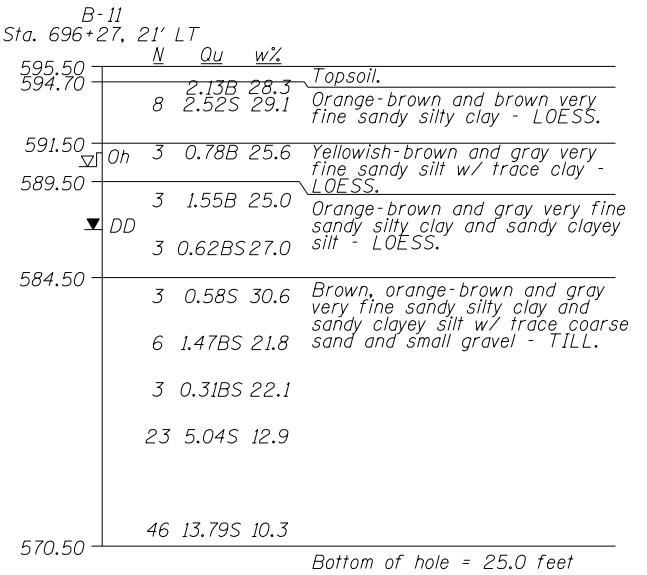
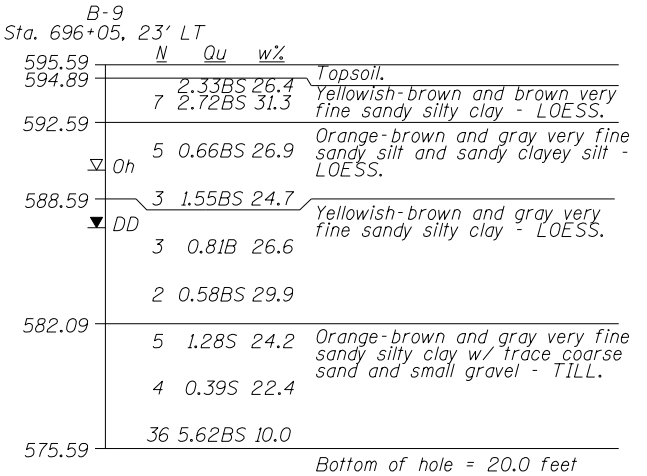
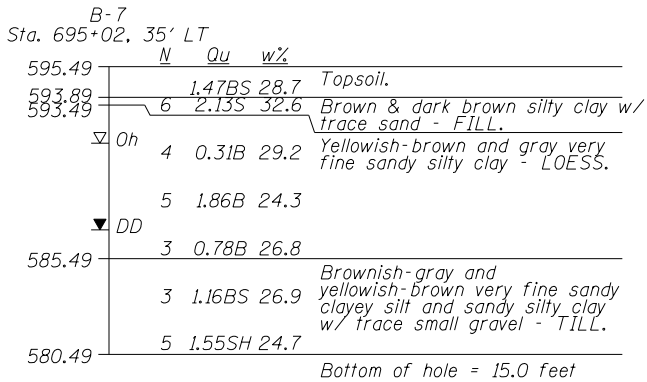
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH WALL GROUND IMPROVEMENTS
IRON BRIDGE ROAD RETAINING WALL**

SHEET NO. 13 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•	SANGAMON	368	192
		CONTRACT NO. 93671		
	ILLINOIS FED. AID PROJECT 6			

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LEGEND

N Standard Penetration Test N (blows/ft)

Qu Unconfined Strength (tsf)

w% Natural Moisture Content (%)

Water Surface Elevation Encountered in Boring

DD DD = during drilling

Oh Oh = at completion

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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PLOT DATE = 7/29/2024	CHECKED - RGC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSURFACE DATA PROFILE
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 14 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	193
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP

B-15 Sta. 697+18, 14' LT			
	N	Qu	w%
595.23	Topsoil & dark brown silty clay w/ trace sand.		
	4	1.67B	31.3
592.23	Black, brown and gray very fine sandy silty clay w/ oxidation spots - LOESS.		
▽ Oh	5	0.5P	28.8
▼ DD	5	0.8P	28.7
	2	0.74B	27.8
	4	1.47B	24.7
581.23	Orange-brown, yellowish-brown, and gray very fine to fine sandy silty clay and sandy clayey silt w/ trace coarse sand, small gravel, and calcareous - TILL.		
	2	0.47B	32.6
	6	1.75B	16.3
	15	6.21S	11.3
	28		11.9
570.23	Bottom of hole = 25.0 feet		

B-22 Sta. 699+70, 16' LT			
	N	Qu	w%
596.06	Topsoil - black very fine sandy clayey silt.		
	7	0.5P	29.4
593.06	Yellowish-brown, orange-brown, and gray very fine sandy silt to sandy clayey silt w/ oxidation spots - LOESS.		
▼ DD	6	0.78B	30.6
▼ DD	4	0.50B	30.2
	4	1.12B	23.8
	4	0.93B	26.3
583.06	Orange-brown and gray very fine to fine sandy clayey silt to sandy silty clay w/ trace coarse sand and small to large gravel - TILL.		
	5	1.16B	26.0
	3	0.62B	20.8
	55	2.33S	14.1
	50/5"	4.3P	10.9
568.06	Yellowish-brown fine sandy silt to silty fine sand - calcareous - TILL.		
	78	2.62S	18.4
564.06	Brown and gray weathered SHALE.		
	40	4.36S	15.7
558.06	Gray SHALE.		
556.06	50/5"	1.40S	14.6
	Bottom of hole = 40.0 feet		

B-24 Sta. 700+35, 2' LT			
	N	Qu	w%
595.74	Gravel topsoil.		
594.94	Dark brown very fine sandy silty clay w/ trace gravel - FILL.		
594.54	▽ Oh	6	1.31B 30.7
	7	0.78B	27.3
589.74	Yellow-brown & brown very fine sandy silty clay w/ very fine sandy silt seams and oxidized spots - LOESS.		
587.24	▼ DD	6	1.85B 26.3
	4	0.44B	29.0
	4	1.24BS	26.2
582.24	Dark brown & brownish-gray very fine sandy clayey silt w/ oxidized spots - LOESS.		
	5	1.85BS	23.5
	WOH	0.39B	24.2
577.24	Orange brown & gray very fine sandy silty clay w/ trace small gravel - TILL.		
575.74	63	2.13B	11.5
	Orange brown & gray very fine sandy clayey silt w/ trace coarse sand, small gravel, & calcareous - TILL.		
	Brown & gray very fine sandy clayey silt w/ trace coarse sand, small gravel, & calcareous - TILL.		
570.74	69	15.82S	10.3

B-26 Sta. 700+71, 15' LT			
	N	Qu	w%
594.85	Oil & chip.		
594.05	Dark brown very fine sandy silty clay - LOESS.		
▽ Oh	9	2.4BSP	30.7
591.35	Yellow brown & gray very fine sandy clayey silt and orange brown & gray very fine sandy silt w/ oxidized spots - LOESS.		
	4	0.97B	32.5
▼ DD	3	0.78B	34.0
584.85	3	0.97B	23.1
	3	1.09B	25.9
	3	1.31BS	24.7
	3	0.2P	24.0
576.35	Gray limestone - COBBLE.		
575.95	50/1"	4.5+P	
	Gray very fine sandy silt w/ some clay, trace coarse sand & small gravel, calcareous - TILL.		
	60/5"		7.0
569.85	Bottom of hole = 25.0 feet		

LEGEND

N Standard Penetration Test N (blows/ft)

Qu Unconfined Strength (tsf)

w% Natural Moisture Content (%)

▼ DD Water Surface Elevation Encountered in Boring

▼ DD DD = during drilling

▽ Oh Oh = at completion

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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PLOT DATE =	7/29/2024

DESIGNED -	KMS
CHECKED -	RGC
DRAWN -	KMS
CHECKED -	RGC

REVISED -	
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REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSURFACE DATA PROFILE
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 15 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	194
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP

B-28

Sta. 701+25, 25' LT

	N	Qu	w%	
595.40				Oil & chip.
594.10				
▽ Oh	6	2.0P	26.9	Black very fine sandy silty clay - LOESS.
591.90				
▼ DD	4	1.32B	30.1	Yellow brown & gray very fine sandy clayey silt w/ oxidized spots - LOESS.
	3	1.36B	27.8	
	3	1.36B	23.9	
	3	0.93B	28.6	
582.40				
	4	1.31B	27.9	Orange brown & gray very fine sandy silty clay w/ trace small gravel - TILL.
	3	0.66B	22.9	
576.90				
	16	1.96S	20.6	Brown & gray very fine sandy - SHALE.
574.40				Gray clayey SHALE.
	17	3.27BS	17.4	
570.40				Bottom of hole = 25.0 feet

B-30

Sta. 701+96, 14' LT

	N	Qu	w%	
594.87				Topsoil.
593.67				
▽ Oh	4	1.75B	32.1	Orange-brown and gray very fine sandy silty clay - LOESS.
	4	0.74B	31.9	
588.87	▼ DD			
	5	1.16B	28.9	Yellowish-brown and gray very fine sandy silt - LOESS.
586.87				
	4	1.16B	27.2	Brownish-gray very fine sandy silty clay w/ trace small gravel - LOESS.
	5	1.36B	27.5	
581.87				
	5	0.97B	26.3	Yellowish-brown and gray very fine sandy silty clay - TILL.
	5	1.96B	23.4	
576.87				
	46	3.22S	18.1	Yellowish-brown and gray silty fine sand - weathered SANDSTONE.
	70	4.36SP	18.6	
569.87				Bottom of hole = 25.0 feet

B-31

Sta. 702+71, 14' LT

	N	Qu	w%	
594.72				Topsoil.
593.42				
▽ Oh	7	2.06B	31.5	Dark brown & brown very fine sandy silty clay - LOESS.
592.22	▽ Oh			
	4	0.85B	30.0	Orange brown & gray very fine sandy clayey silt w/ oxidized spots - LOESS.
588.72	▼ DD			
	4	2.13B	25.2	Brown & gray very fine sandy clayey silt w/ oxidized spots - LOESS.
	3	1.16B	25.8	
583.72				
	3	1.16B	28.4	Brown & gray very fine sandy silty clay - TILL.
	4	1.09S	25.1	
578.72				
	4	0.97B	24.4	Orange brown & gray very fine sandy clayey silt w/ gray silty clayey fine sand - TILL.
576.22				
	60	2.84SP	17.7	Brown & gray silty clayey fine sand - weathered SANDSTONE.
571.22				
	30	4.5P	16.5	Brown & gray clayey SHALE.
569.72				Bottom of hole = 25.0 feet

LEGEND

N Standard Penetration Test N (blows/ft)

Qu Unconfined Strength (tsf)

w% Natural Moisture Content (%)

▼ DD Water Surface Elevation Encountered in Boring

▽ Oh DD = during drilling

▽ Oh Oh = at completion

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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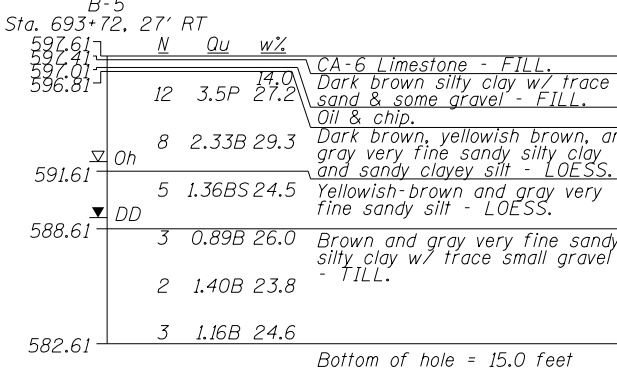
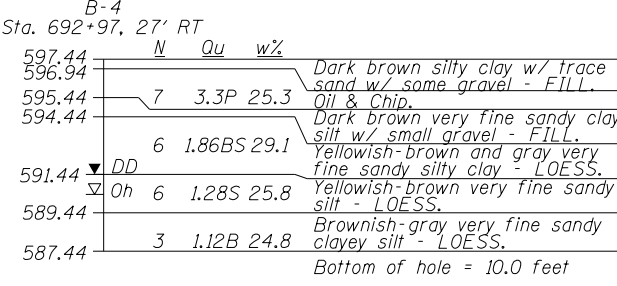
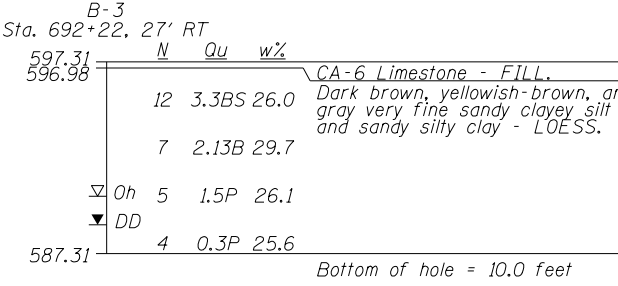
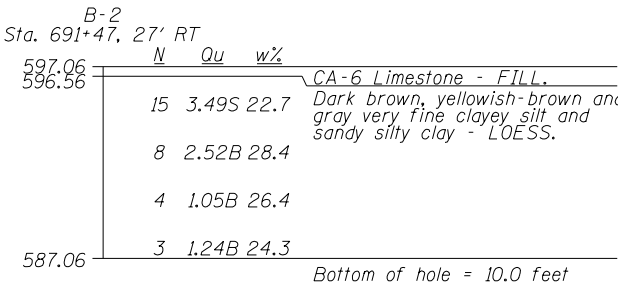
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSURFACE DATA PROFILE
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 16 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	195
		CONTRACT NO. 93671		
ILLINOIS		FED. AID PROJECT 6		

07-00164-04-FP, 07-00090-08-FP



LEGEND

N Standard Penetration Test N (blows/ft)

Qu Unconfined Strength (tsf)

w% Natural Moisture Content (%)

Water Surface Elevation Encountered in Boring

DD DD = during drilling

Oh Oh = at completion

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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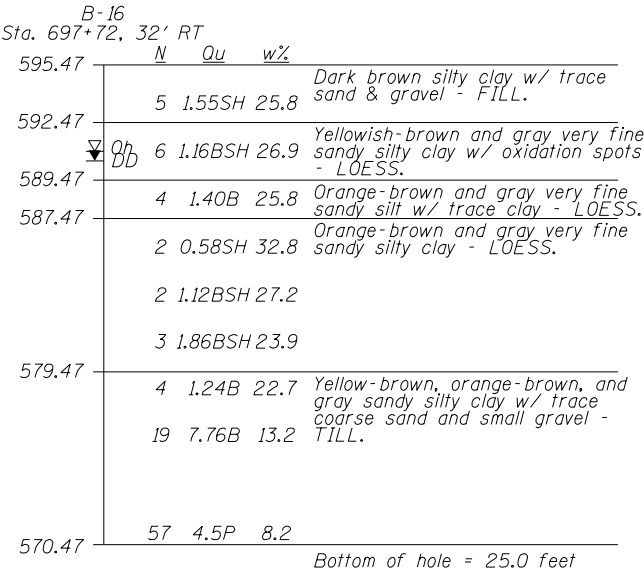
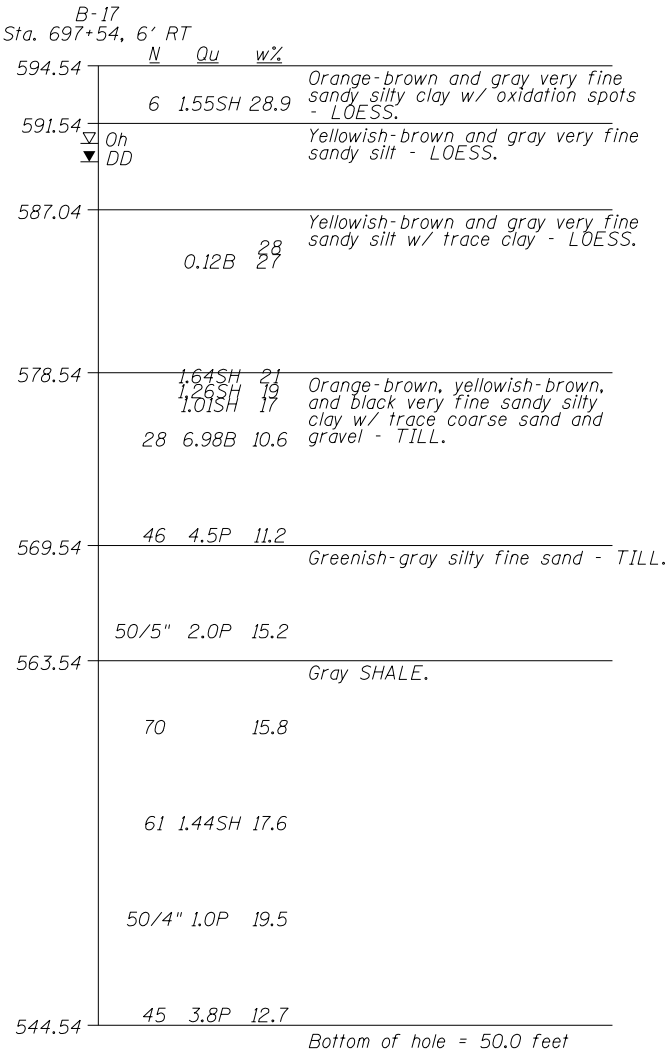
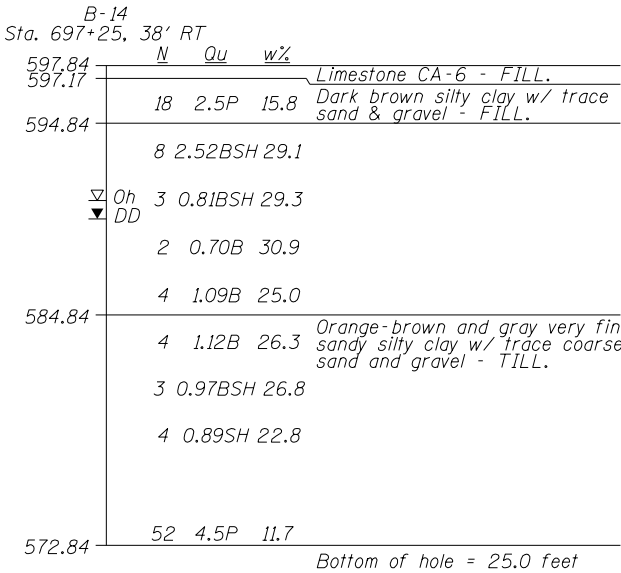
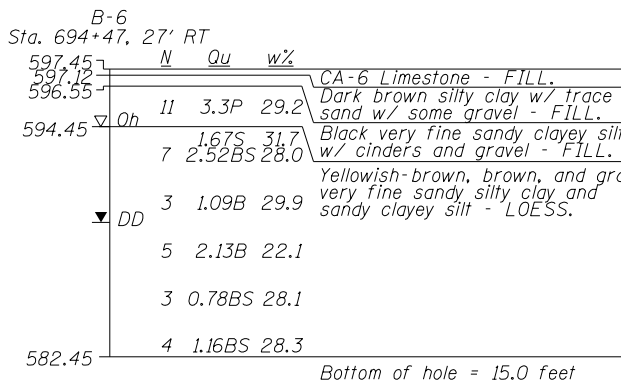
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DEPARTMENT OF TRANSPORTATION

SUBSURFACE DATA PROFILE
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 17 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	196
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP



LEGEND

N Standard Penetration Test N (blows/ft)

Qu Unconfined Strength (tsf)

w% Natural Moisture Content (%)

Water Surface Elevation Encountered in Boring

DD DD = during drilling

Oh Oh = at completion

DESIGNED	KMS	6/30/15
DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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DEPARTMENT OF TRANSPORTATION

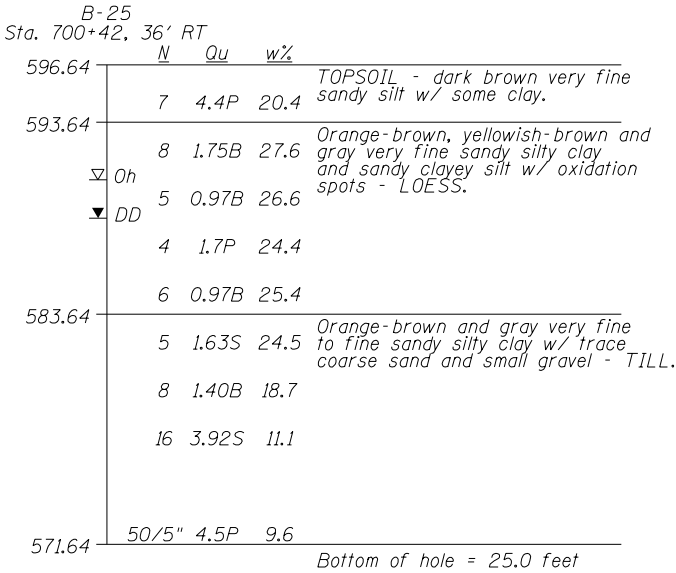
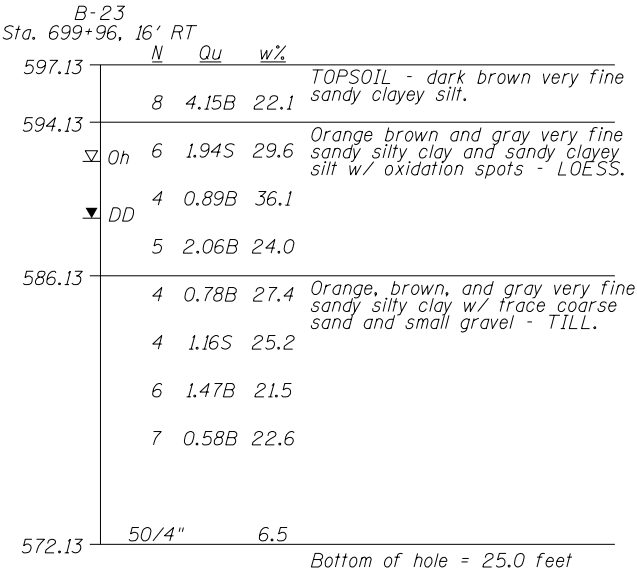
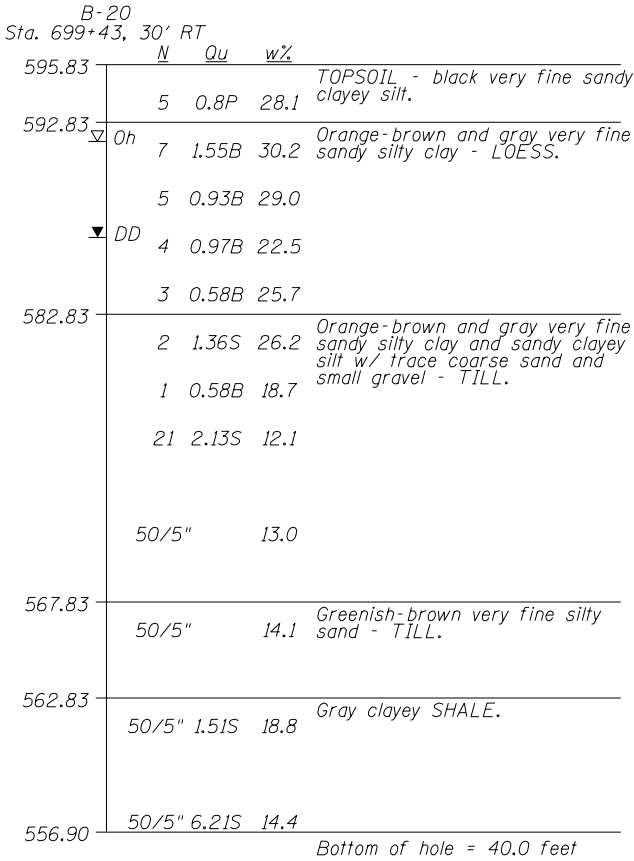
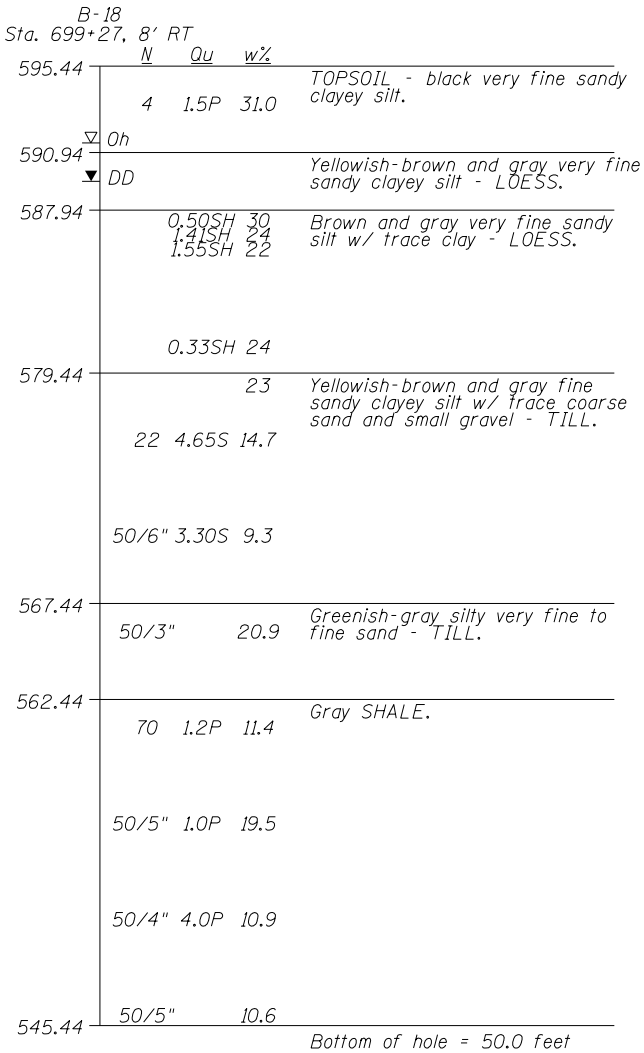
SUBSURFACE DATA PROFILE
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 18 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	197
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6

07-00164-04-FP, 07-00090-08-FP



LEGEND

N Standard Penetration Test N (blows/ft)

Qu Unconfined Strength (tsf)

w% Natural Moisture Content (%)

Water Surface Elevation Encountered in Boring

DD DD = during drilling

Oh Oh = at completion

DESIGNED	KMS	6/30/15
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REVIEWED	RGC	6/22/20

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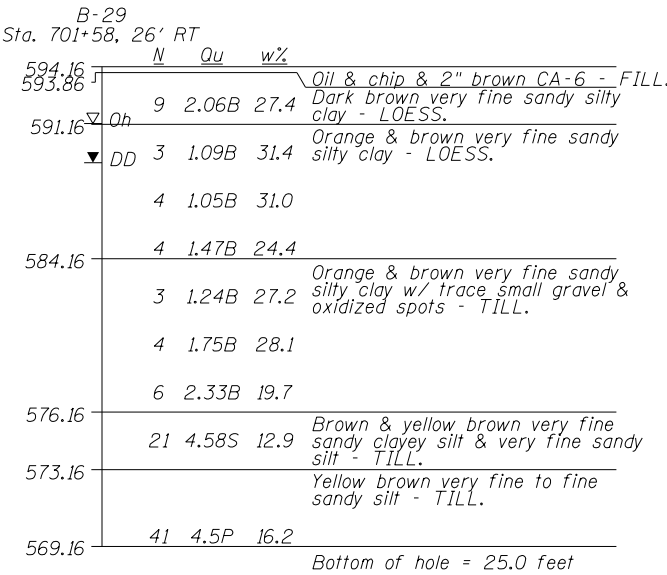
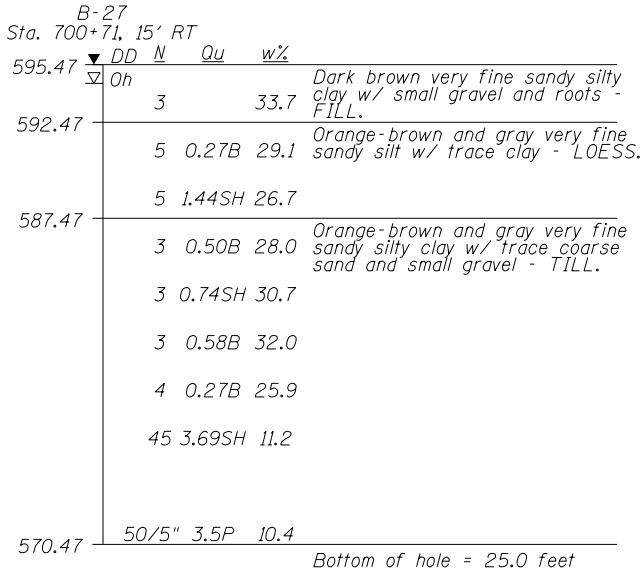
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DEPARTMENT OF TRANSPORTATION

SUBSURFACE DATA PROFILE
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 19 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	198
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP



LEGEND

N Standard Penetration Test N (blows/ft)

Qu Unconfined Strength (tsf)

w% Natural Moisture Content (%)

▼ DD Water Surface Elevation Encountered in Boring

DD DD = during drilling

▽ Oh Oh = at completion

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DRAWN	KMS	6/30/15
REVIEWED	RGC	6/22/20

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PLOT DATE =	7/29/2024

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CHECKED -	RGC
DRAWN -	KMS
CHECKED -	RGC

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REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSURFACE DATA PROFILE
IRON BRIDGE ROAD RETAINING WALL

SHEET NO. 20 OF 20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	199
CONTRACT NO.			93671	

ILLINOIS FED. AID PROJECT 6
07-00164-04-FP, 07-00090-08-FP

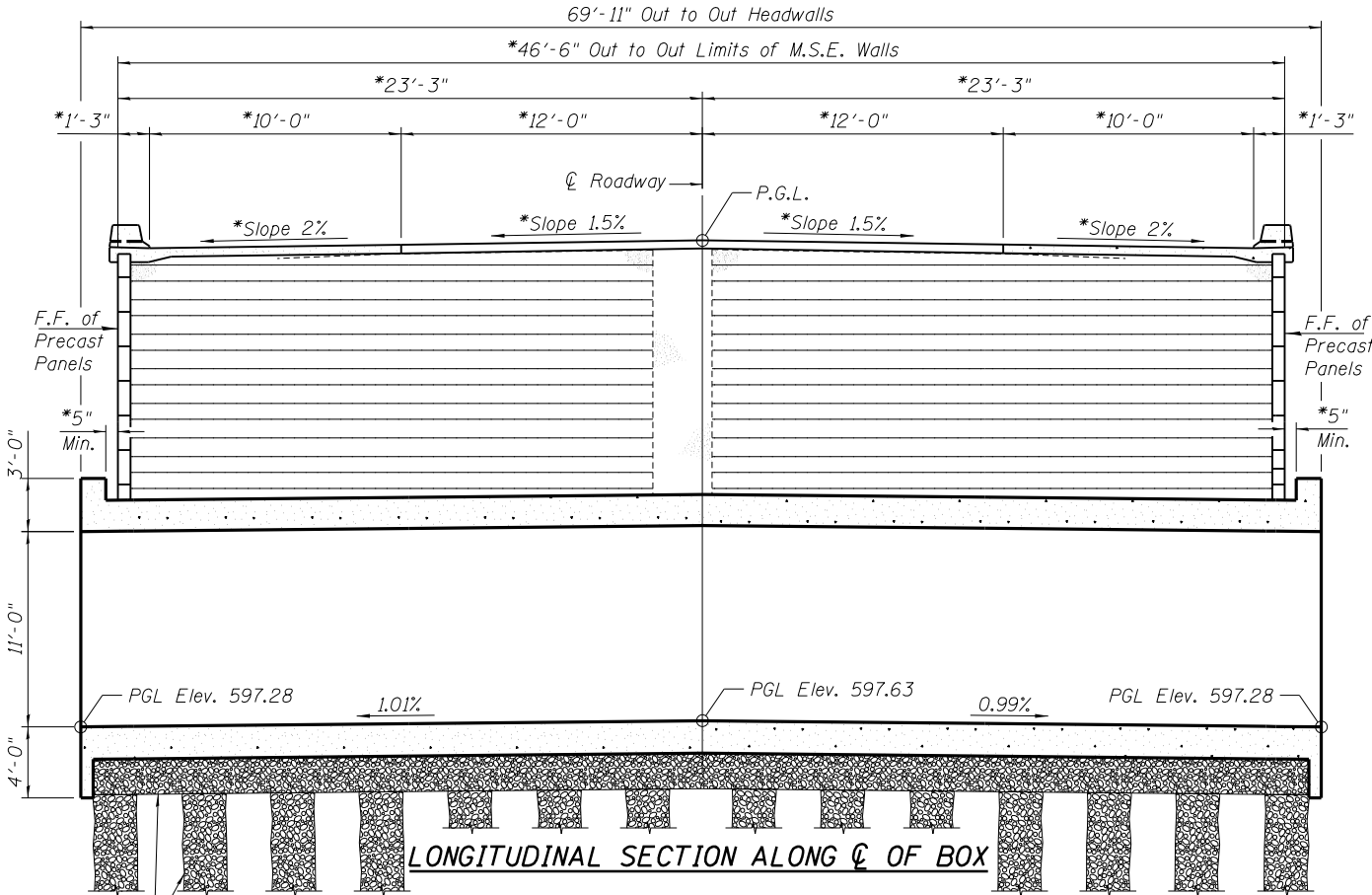
B.M. 359 - Chsld. "x" on South Cap Bolt FH - North Side of Woodside Road., Approx. 300'
West of Pedigo Lane., 6' East of Private Drive., South of Two Grain Silos. Elev = 595.21
B.M. H3 - Spike Nail in South Face of PP - North Side Woodside Road - ± 325' East of Driveway
to House #1329 Woodside Road - Between Iron Bridge Road and Carole Drive. Elev = 590.49

Existing Structure: None

*Indicates Dimensions that are at
Right Angles to ϕ of Roadway

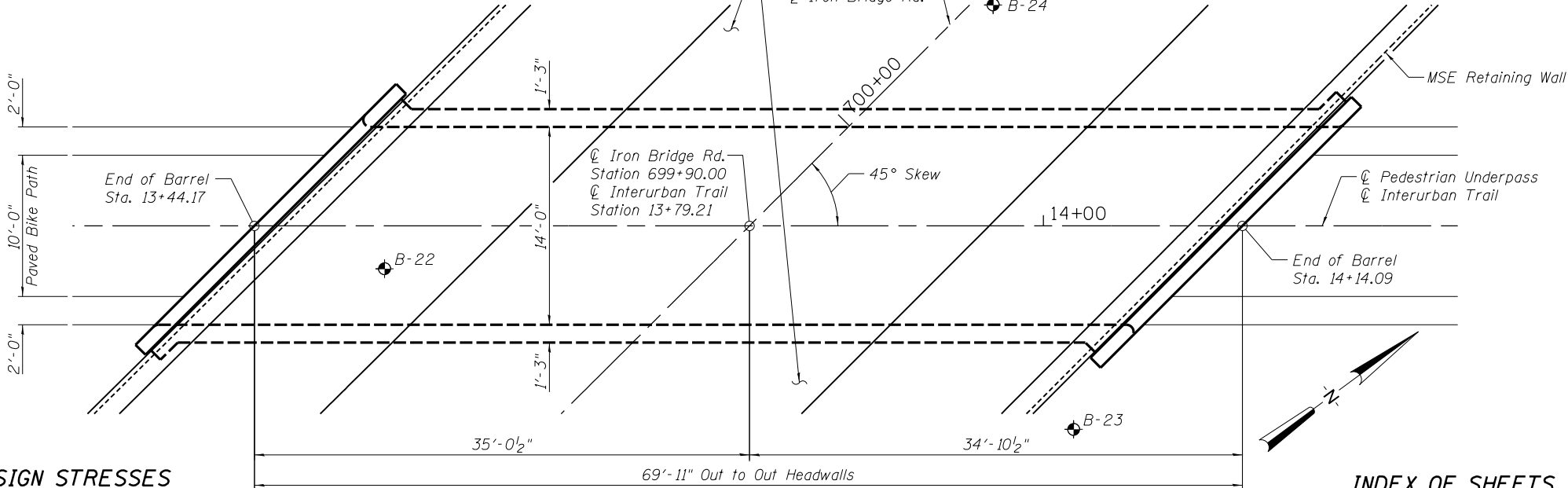
CURVE DATA

(Iron Bridge Road)
P.I. STA= 696+71.58
 Δ = 9°-51'-34"
D= 0°-56'-21"
R= 6,100.00'
T= 526.14'
L= 1,049.69'
E= 22.65'
S.E.= N.C.
P.C. STA= 691+45.43
P.T. STA= 701+95.12



Drainage Layer & Aggregate
Column Ground Improvement
See Retaining Wall Plans

Internally Tied Bin Structures
(See Retaining Wall Plans)
 ϕ Iron Bridge Rd.
B-24



DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

PLAN

DESIGN SPECIFICATIONS

BRIDGE

2014 AASHTO LRFD Bridge
Design Specifications, 7th Edition

INDEX OF SHEETS

1. GENERAL PLAN & ELEVATION
2. BARREL SECTIONS
3. END OF BARREL DETAILS
4. SUBSURFACE DATA PROFILE

GENERAL NOTES

The Top and Sides of the Pedestrian Underpass shall be waterproofed according to Article 503.18 of the Standard Specifications for Road and Bridge construction.

Nonmetallic Water Seal, Waterproofing, shall be included with the cost for 'Concrete Box Culverts'.

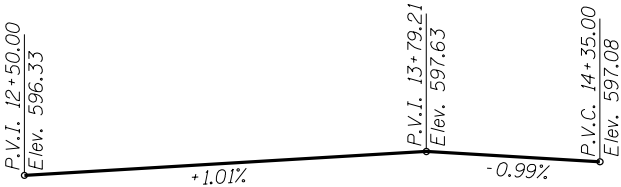
Bars indicated thus 12 x 4 - #5 etc. Indicates 12 lines of bars with 4 lengths per line.

Precast Alternative will not be allowed.

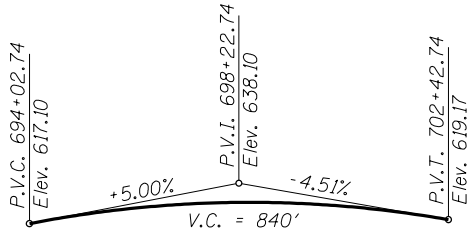
The top of the bottom slab shall be given a brushed final finish similar to that specified in Article 424.06 of the Standard Specifications. Cost shall be included with "Concrete Box Culverts".

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	40
Concrete Box Culverts	Cu. Yd.	242.4
Reinforcement Bars	Pounds	39140



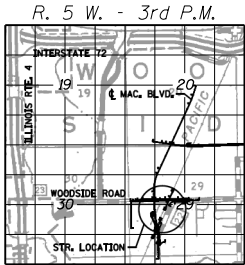
PROPOSED PROFILE GRADE - INTERURBAN TRAIL



PROPOSED PROFILE GRADE - IRON BRIDGE ROAD



Robert Chantome
07/29/2024
Expires November 30, 2024



LOCATION SKETCH

I certify that to the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications".

DESIGNED	KMS	10/27/15
DRAWN	EJM	10/27/15
REVIEWED	RCG	6/2/20

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USER NAME =	johns00944
PLOT SCALE =	0.1667' / in.
PLOT DATE =	7/29/2024

DESIGNED -	KMS
CHECKED -	RCG
DRAWN -	EJM
CHECKED -	RCG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
INTERURBAN TRAIL UNDERPASS

SHEET NO. 1 OF 4 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	SANGAMON	368	200
CONTRACT NO.				93671

ILLINOIS FED. AID PROJECT 6
• 07-00164-04-FP, 07-00090-08-FP